

ルワンダ国
インフラストラクチャー省
ルワンダエネルギーグループ

ルワンダ国
持続的な地熱エネルギー開発推進のための
電力開発計画策定支援プロジェクト
別添資料・収集資料リスト

平成28年3月
(2016年)

独立行政法人
国際協力機構(JICA)

西日本技術開発株式会社
九州電力株式会社
三菱マテリアルテクノ株式会社

別添資料

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1-2 Analysis Items (ETAP Scenario Setting)

1-3-1 Power Flow Analysis Results

(Indicated on single Line Diagrams)

1-3-2 Power Flow Analysis Alarm Lists

1-3-3 Power Flow Analysis Results (ETAP Reports)

1-4 Short Circuit Calculation Results

(Indicated on single Line Diagrams)

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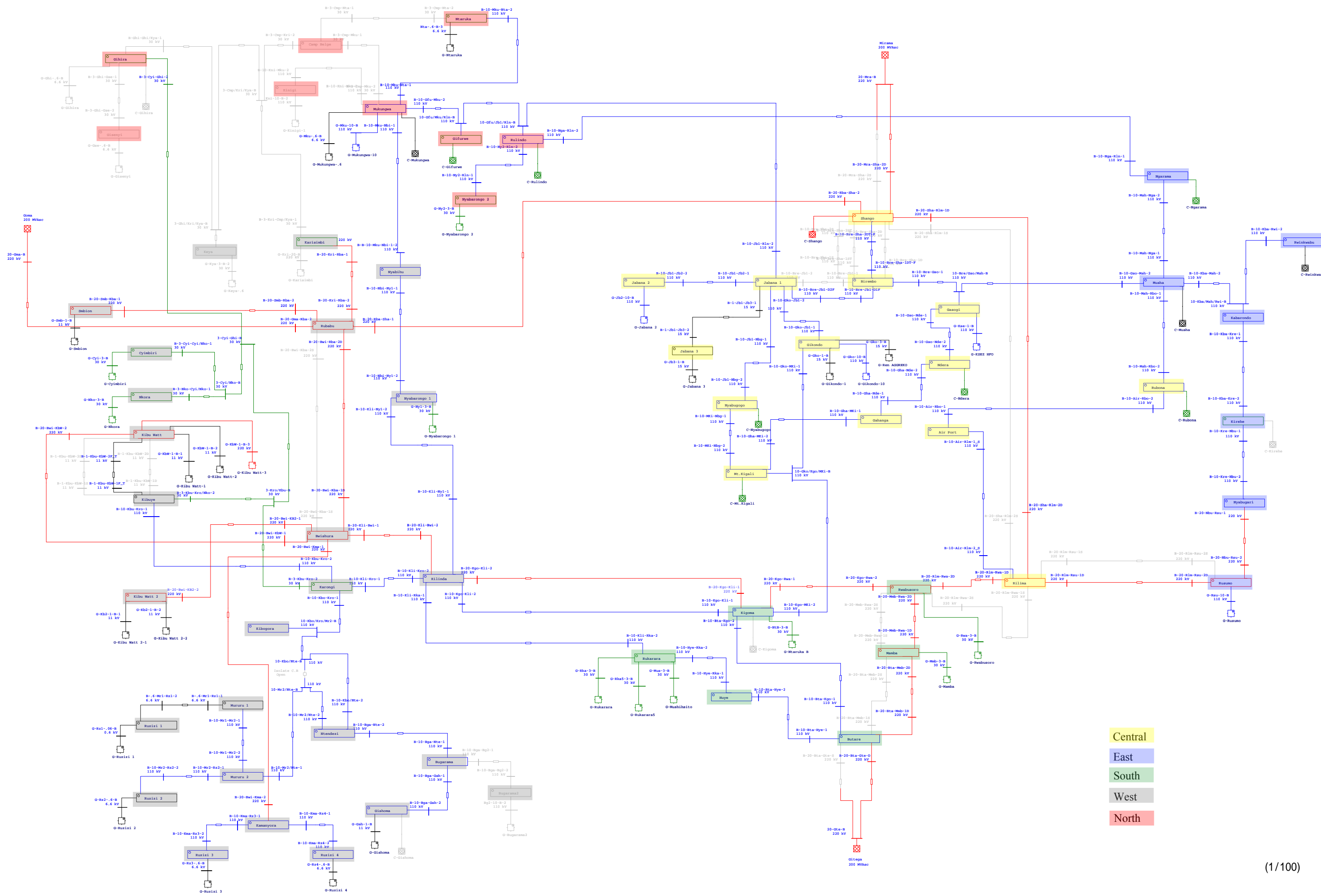
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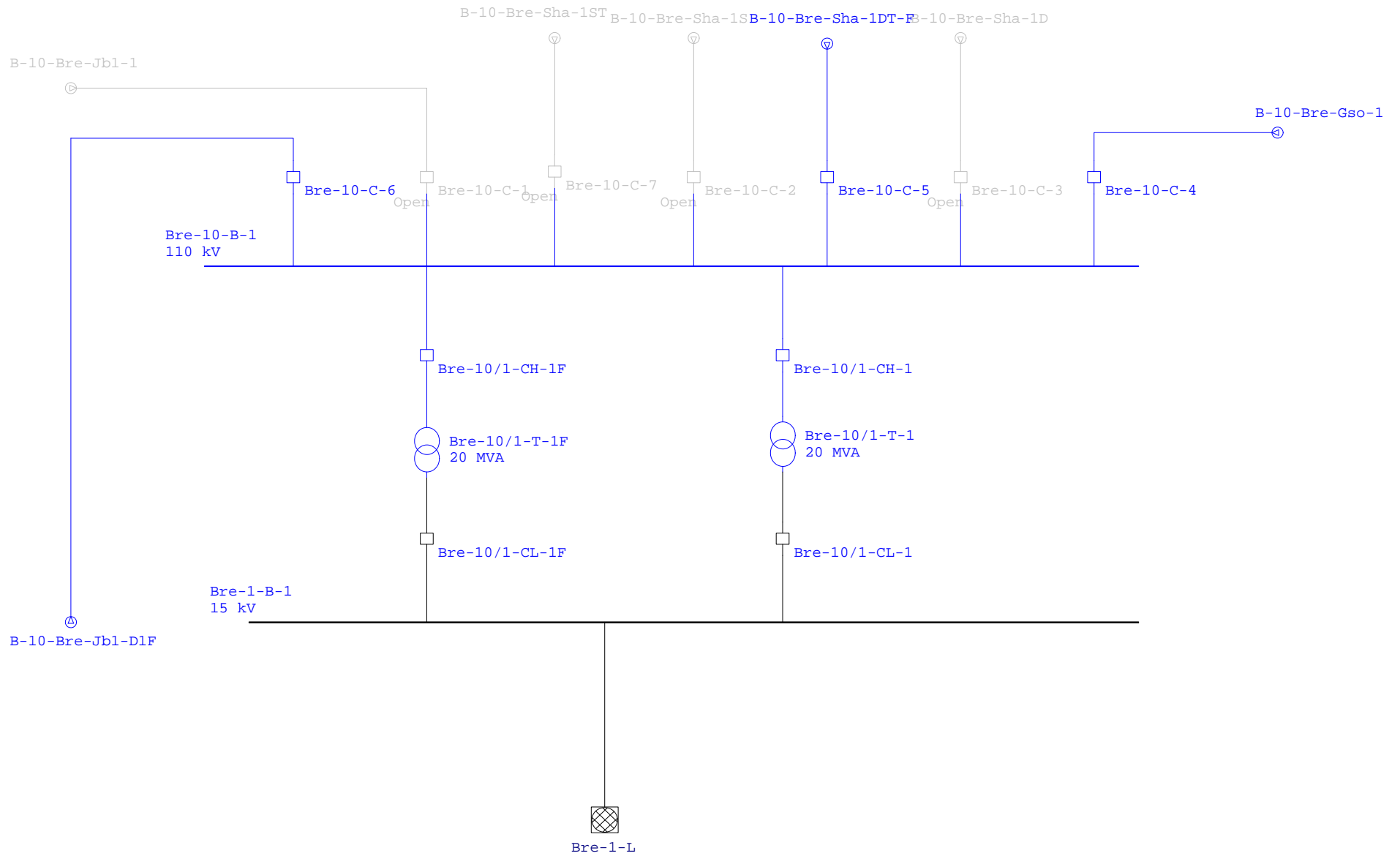
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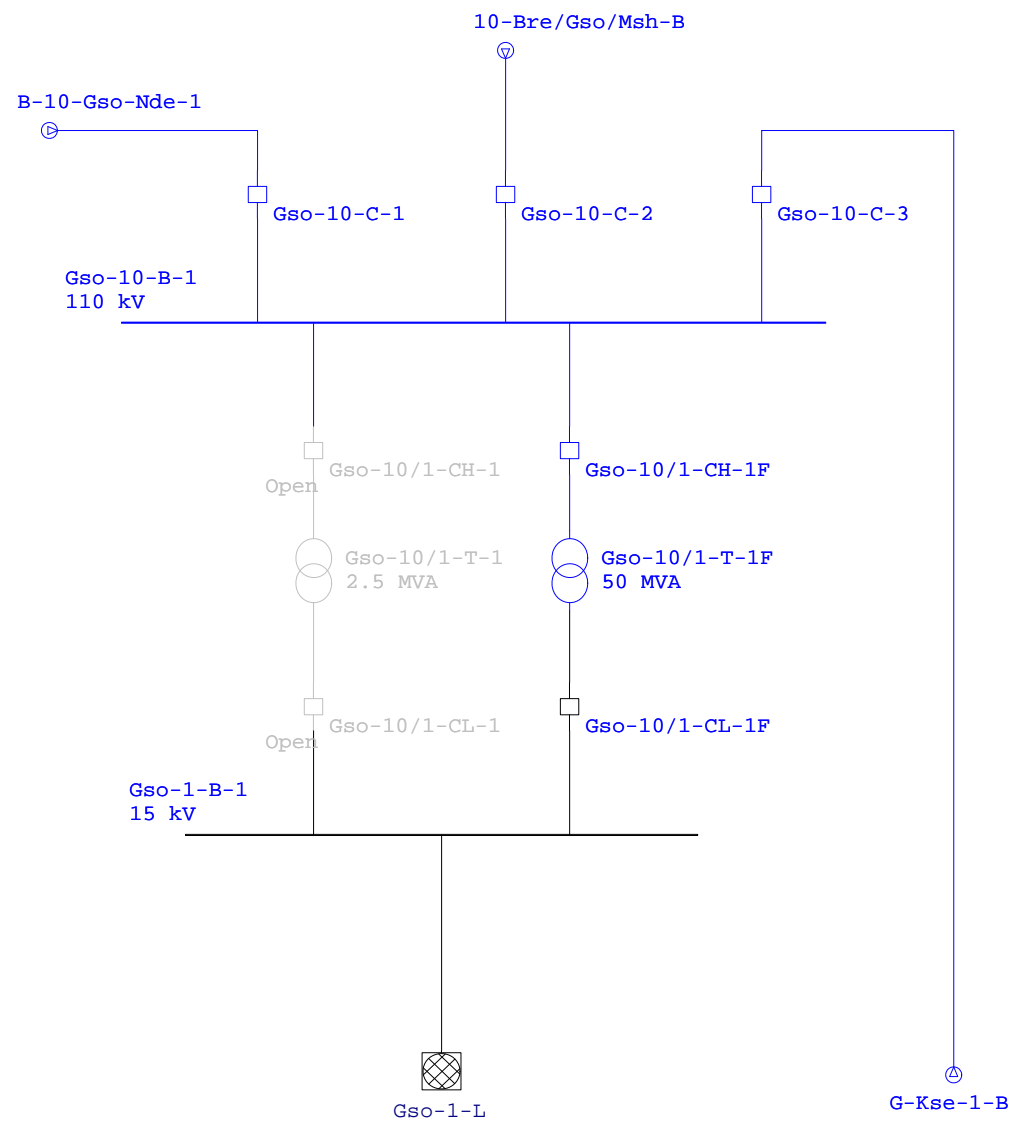


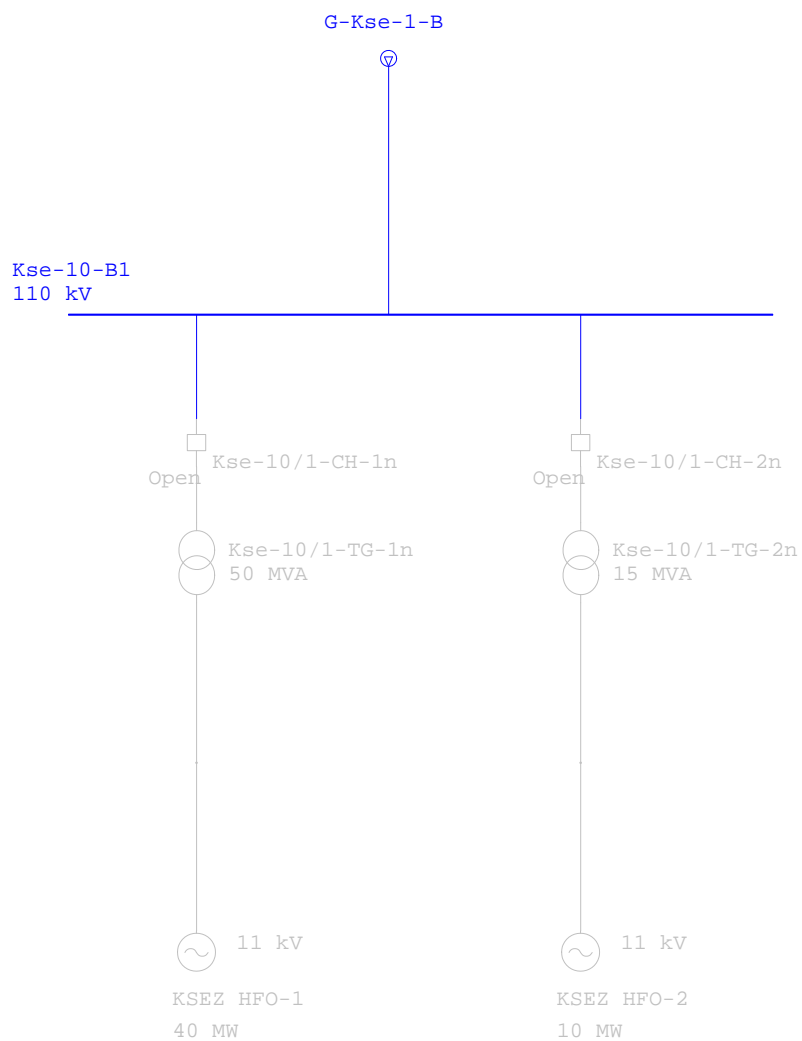
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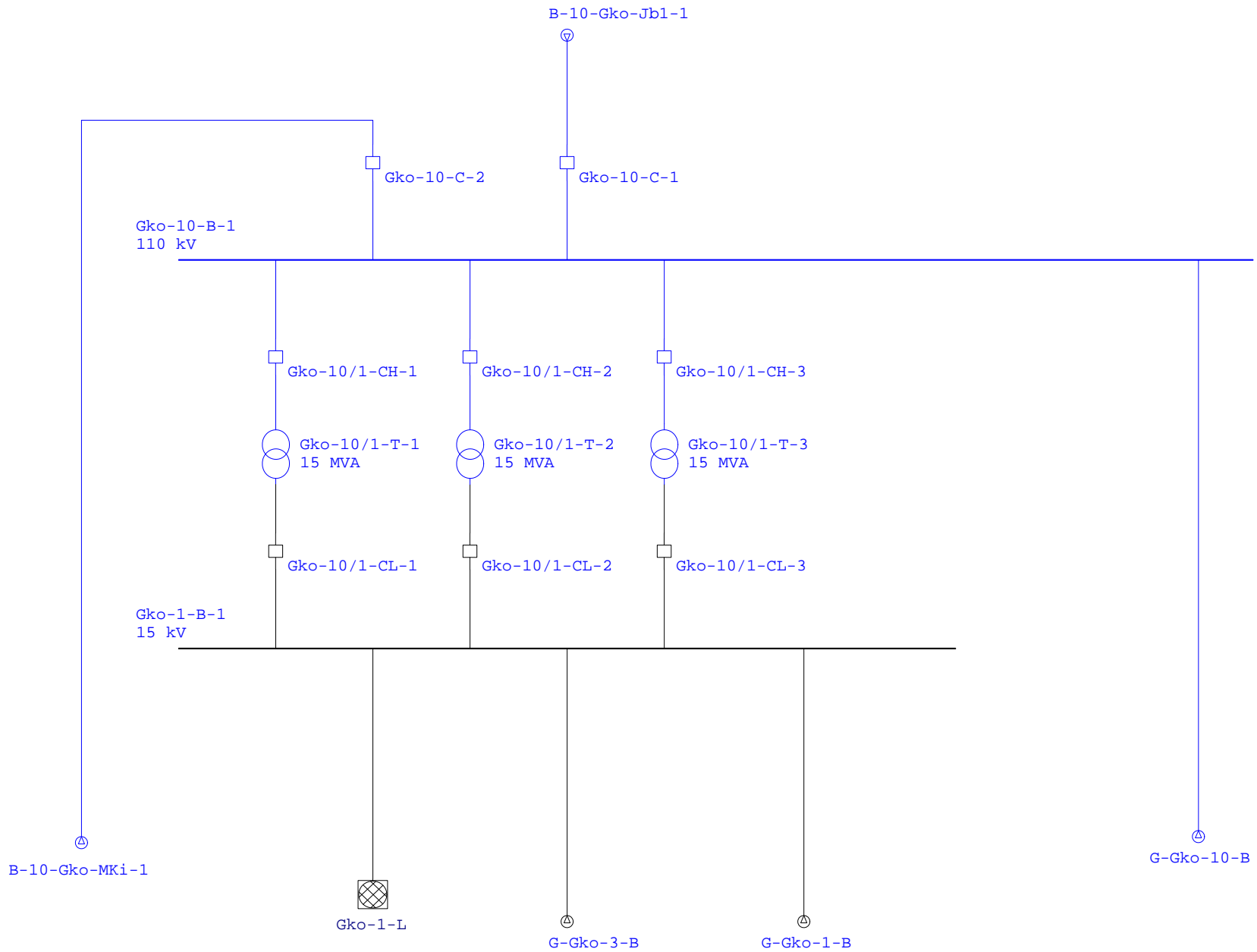


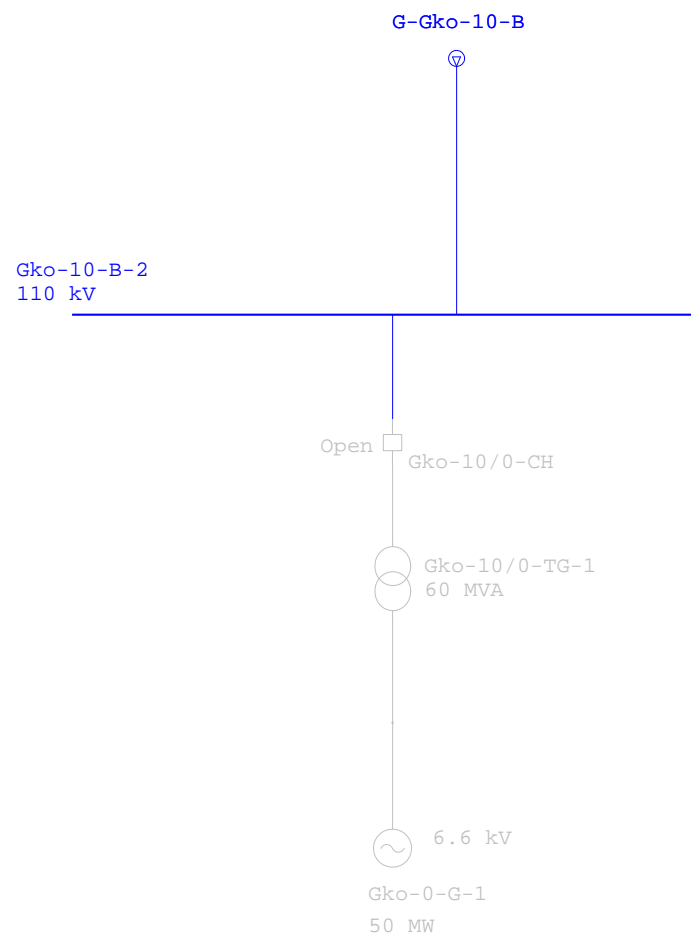
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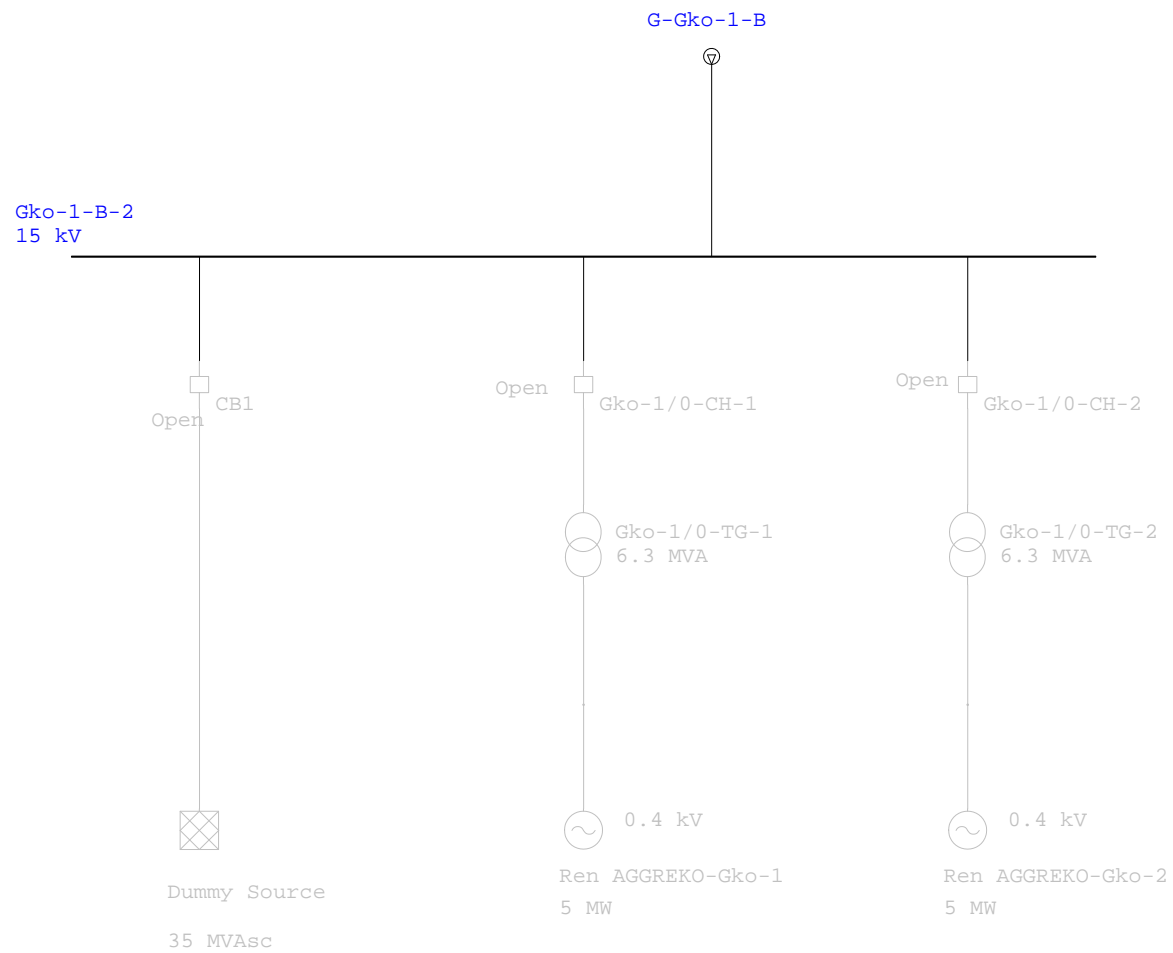


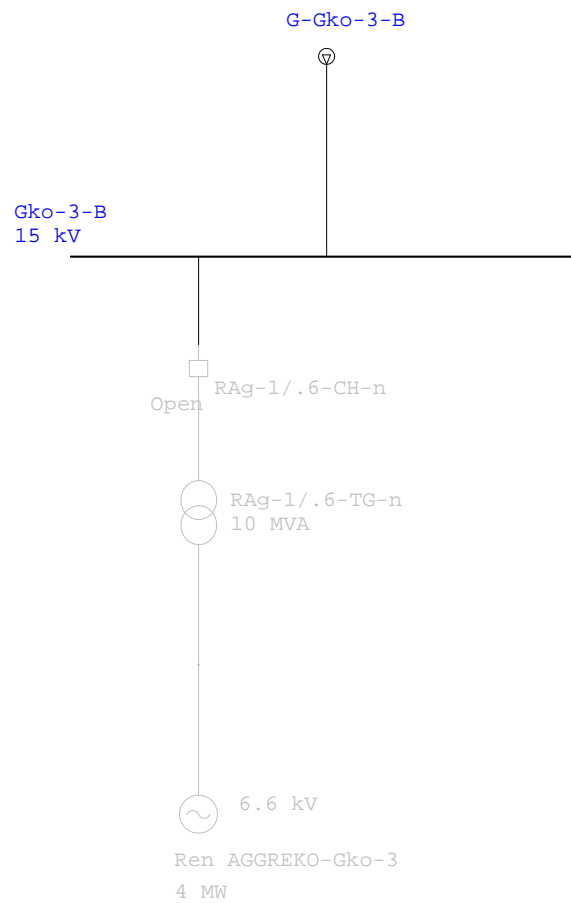
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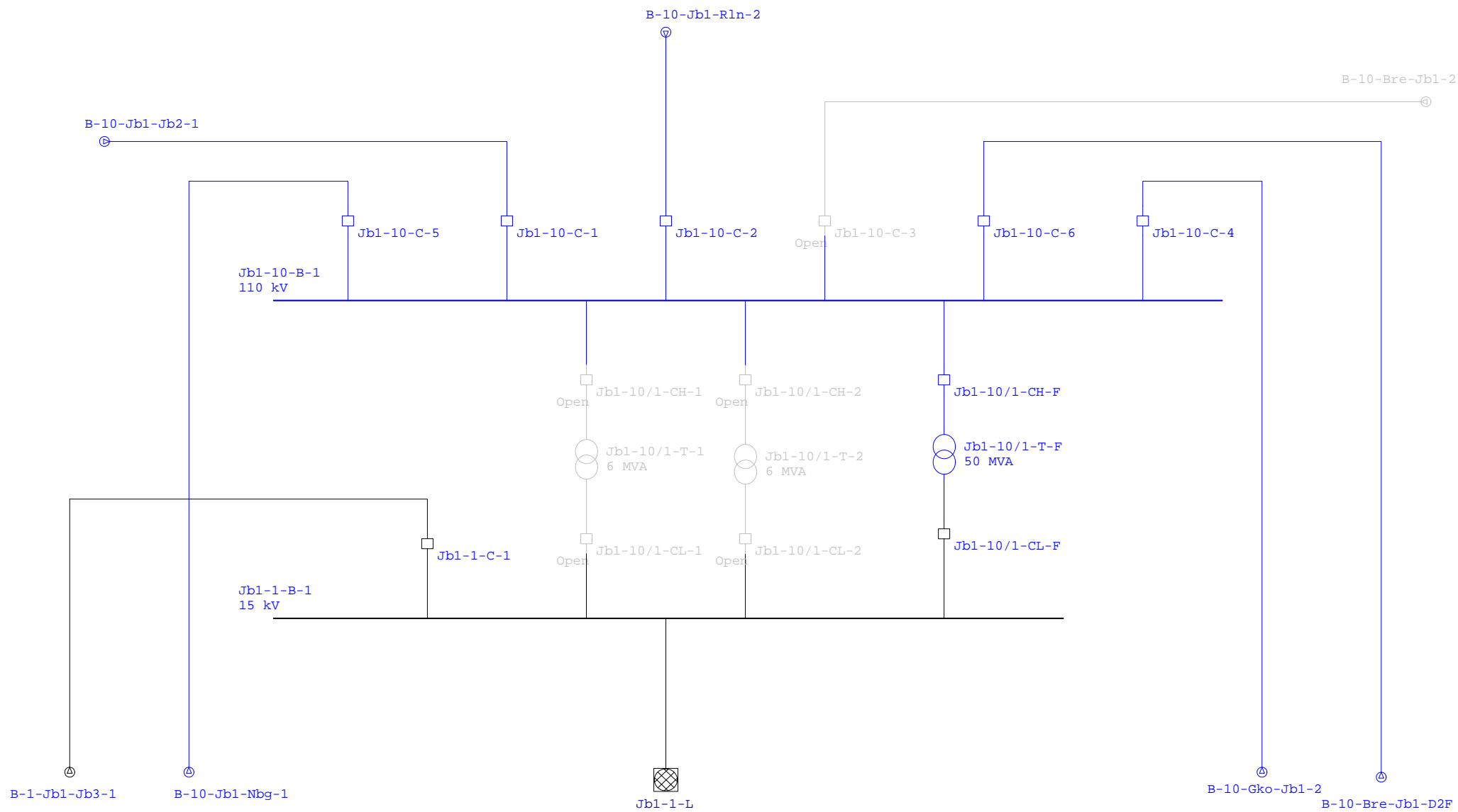


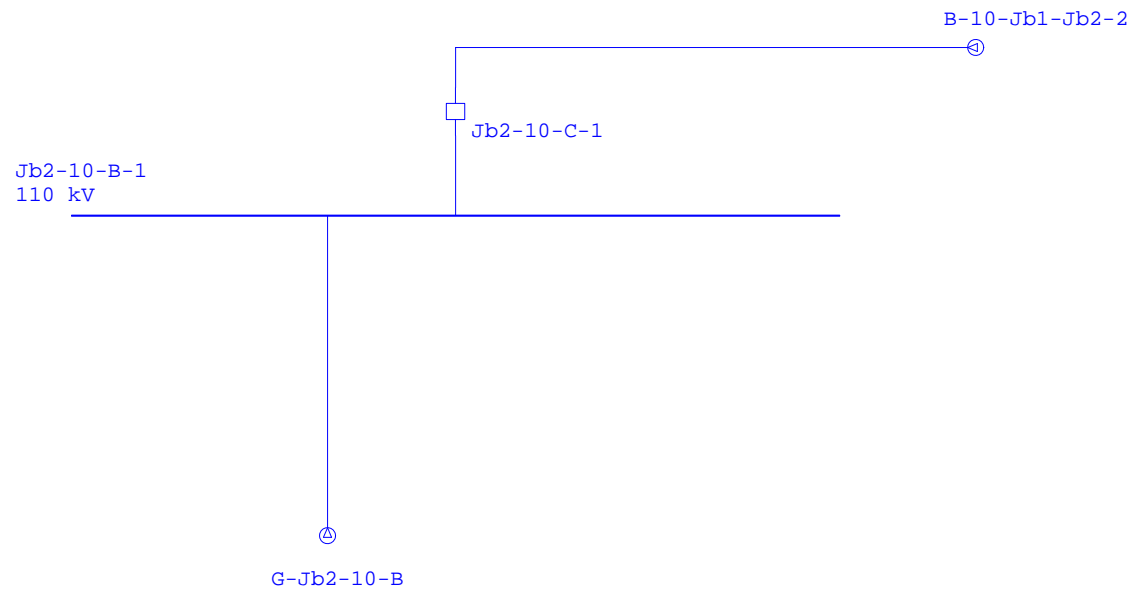
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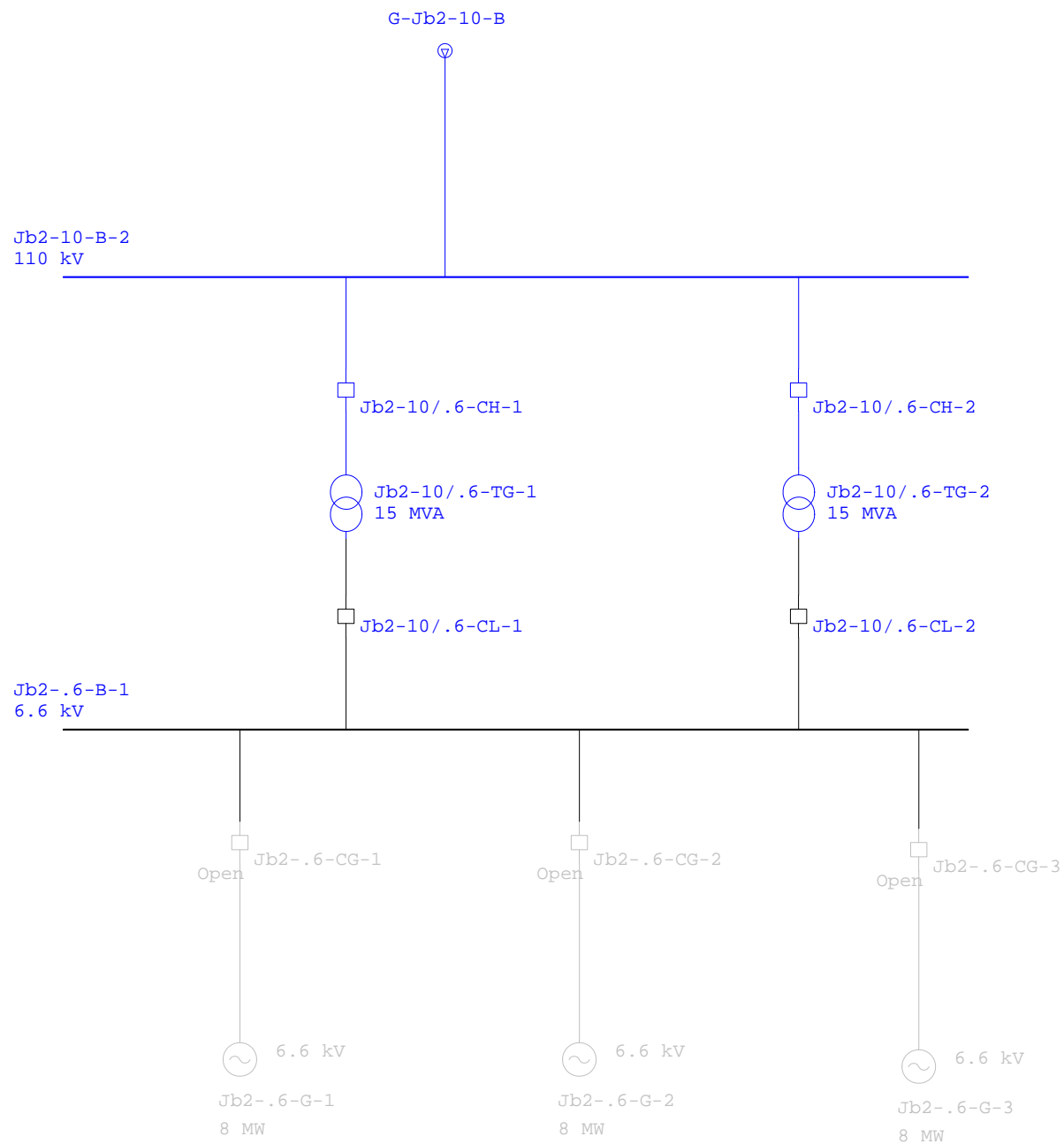


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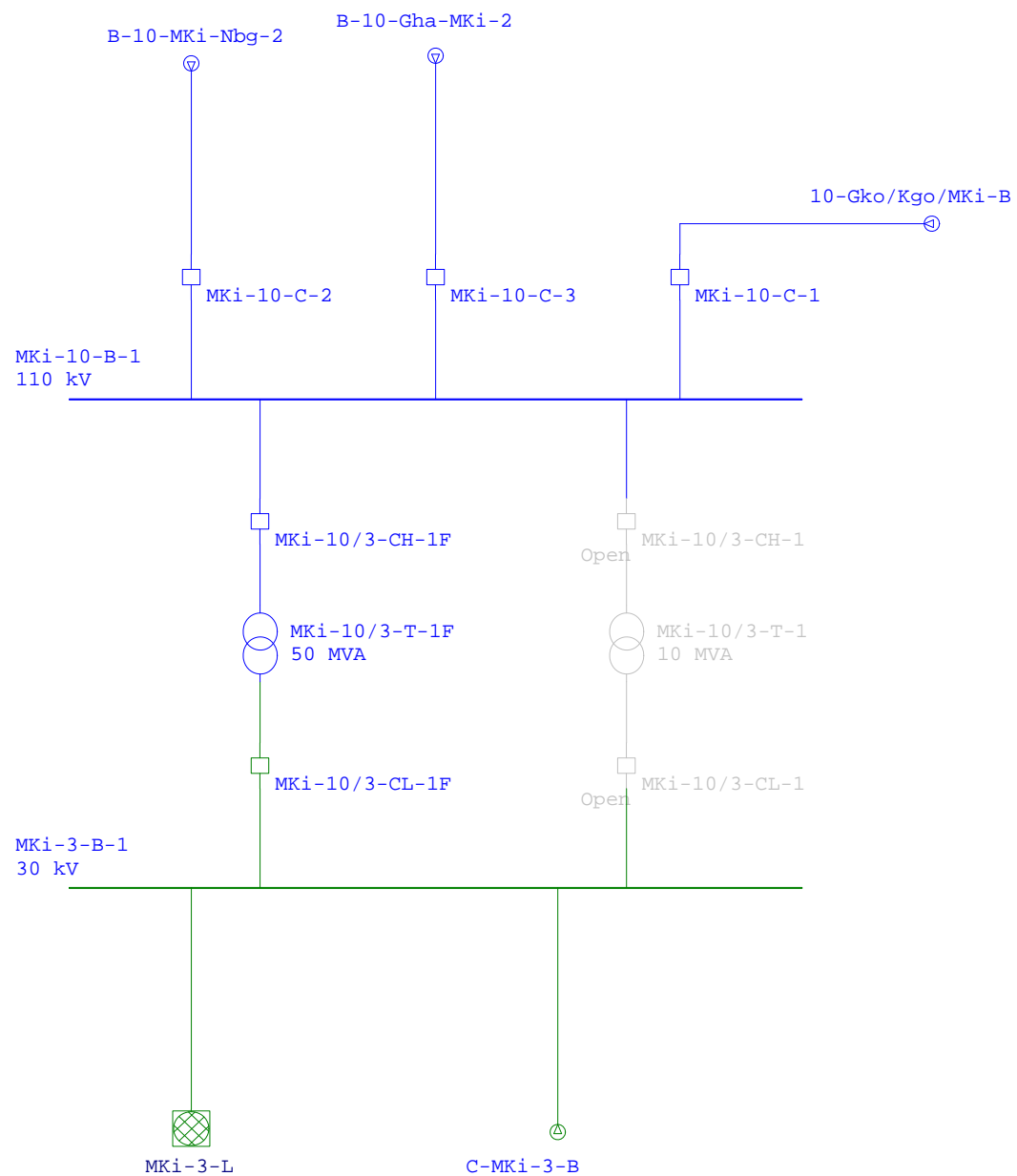


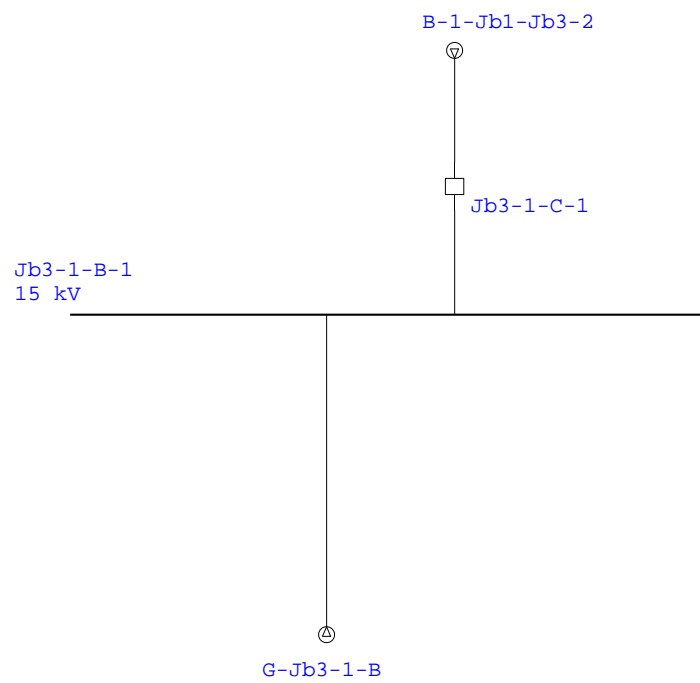


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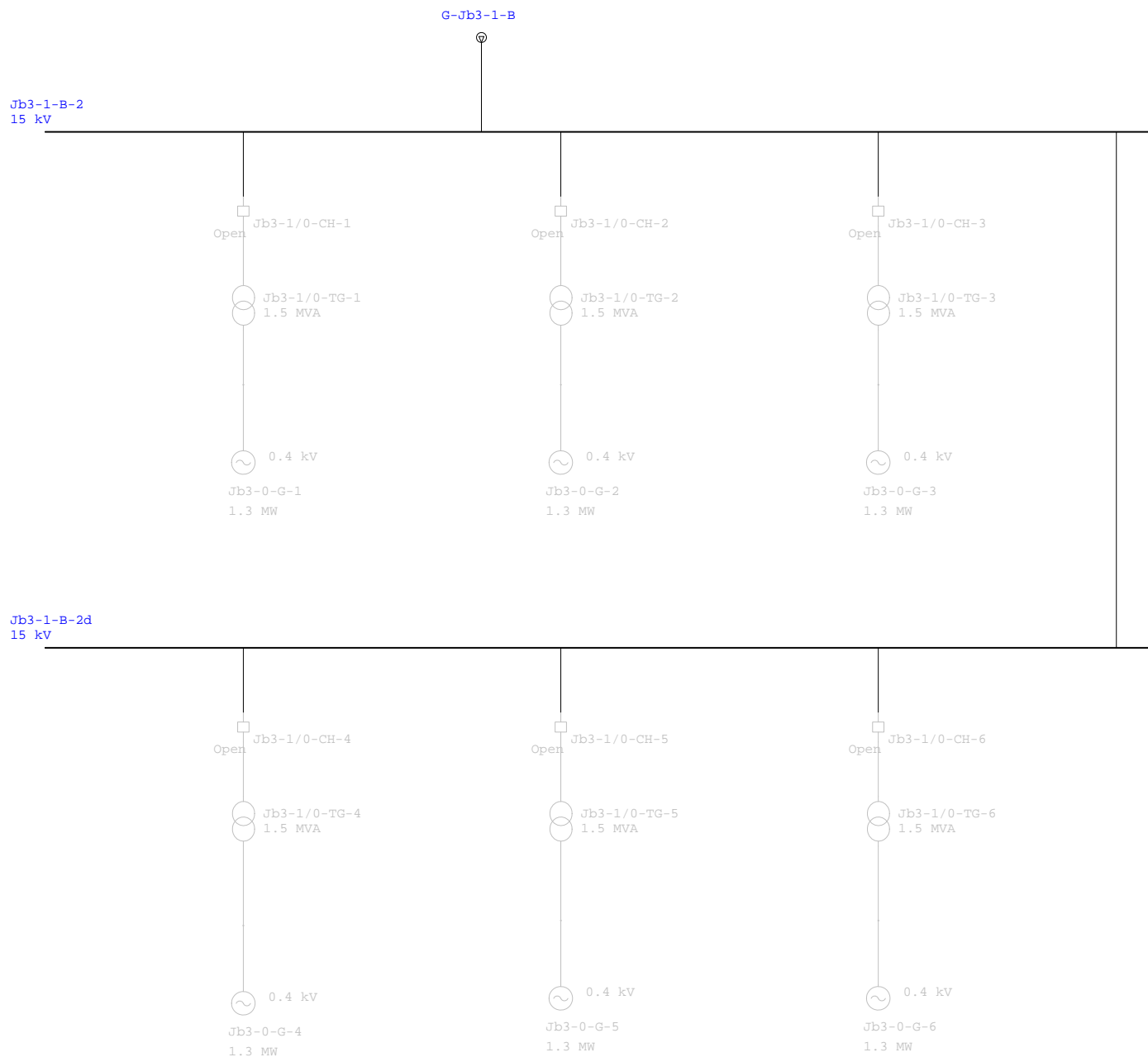


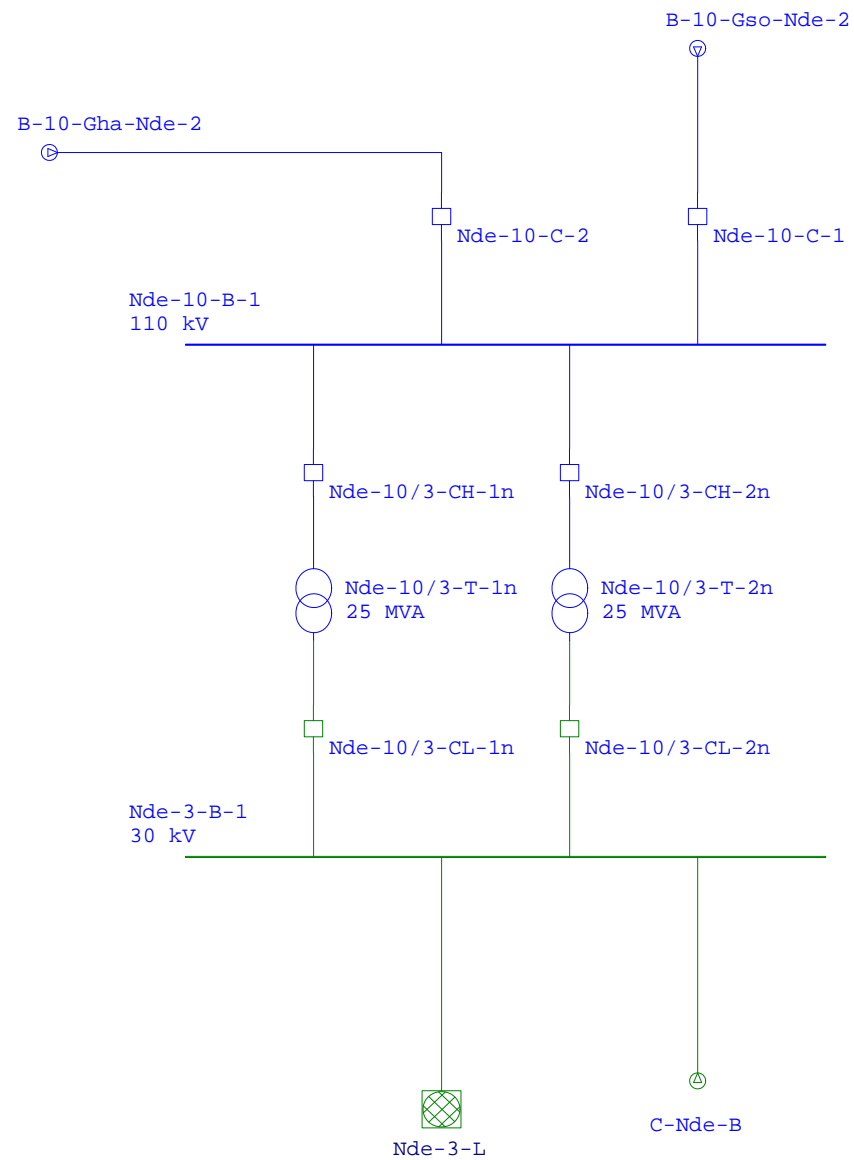
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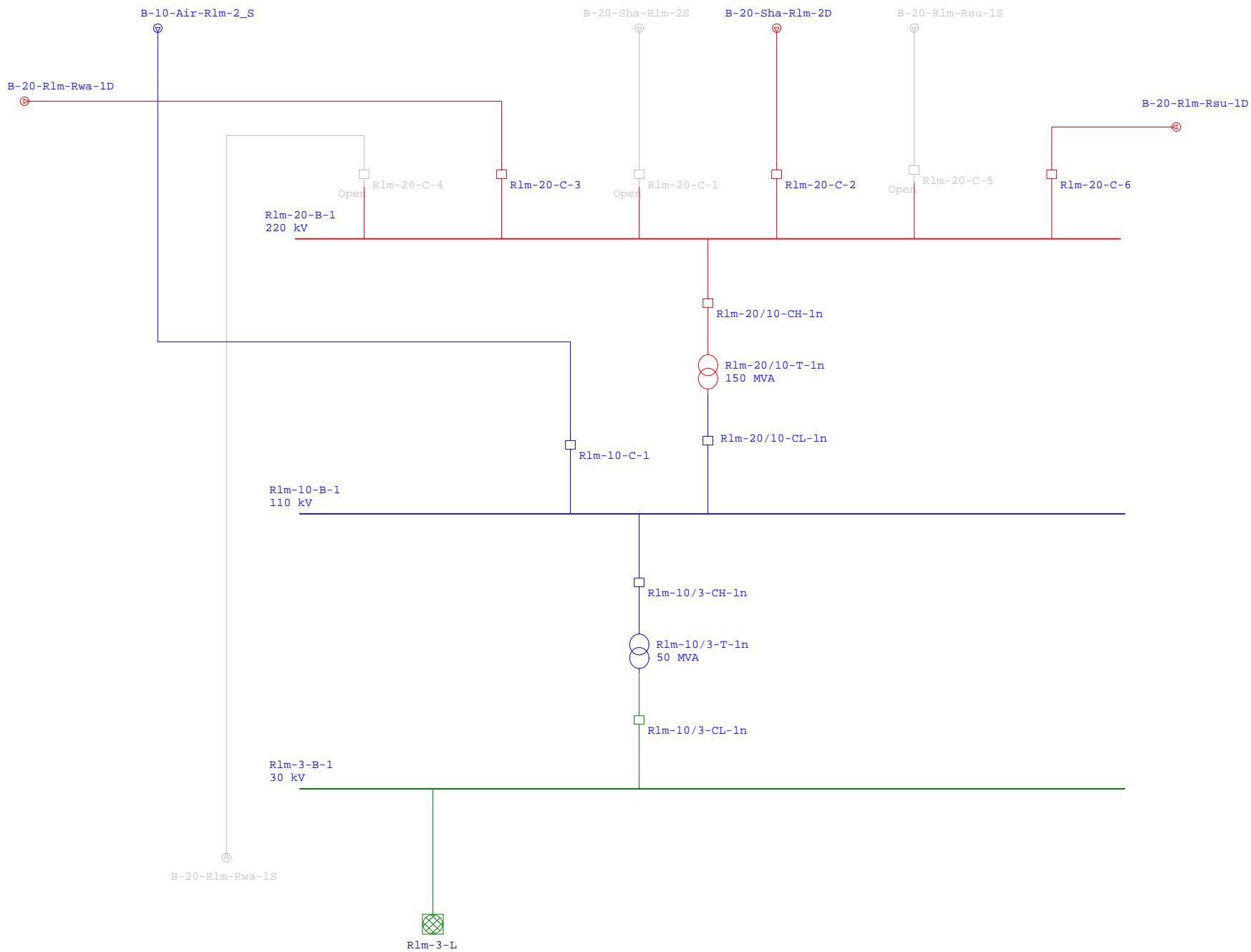


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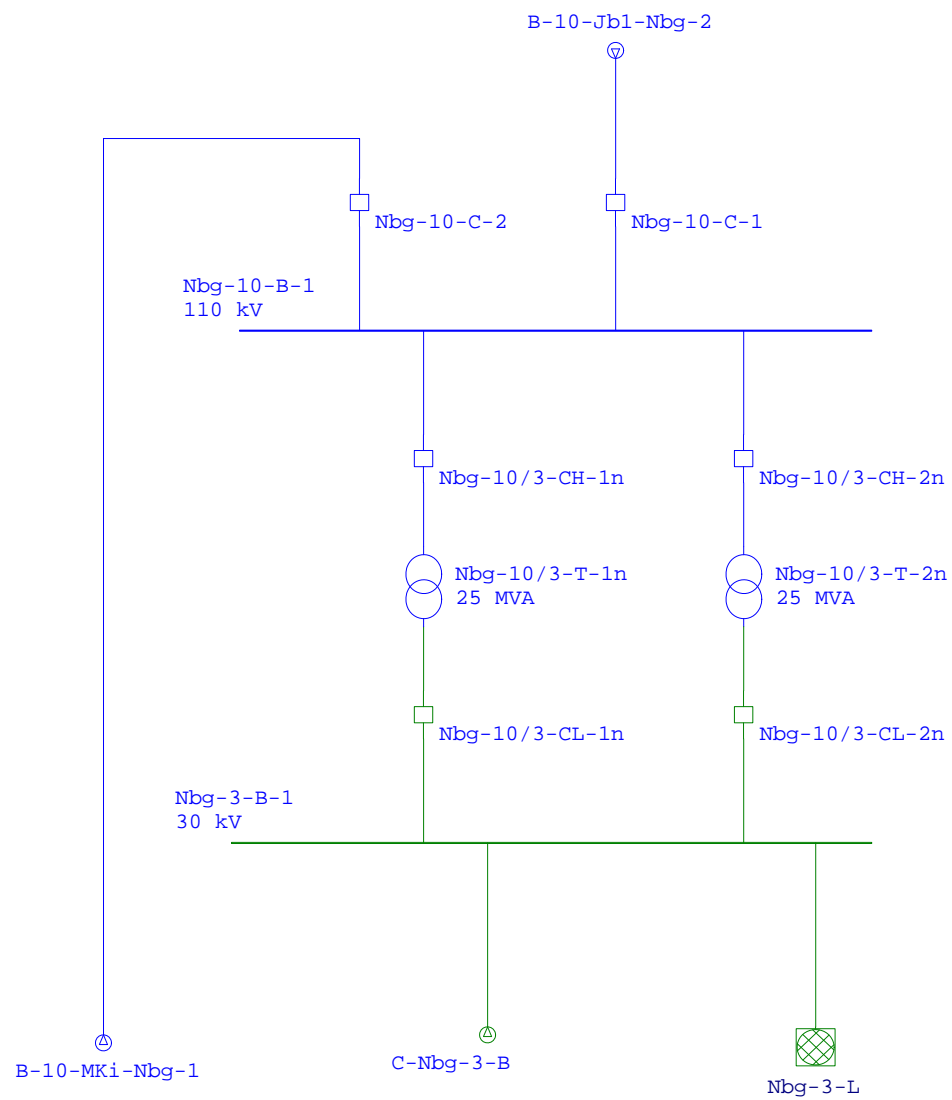




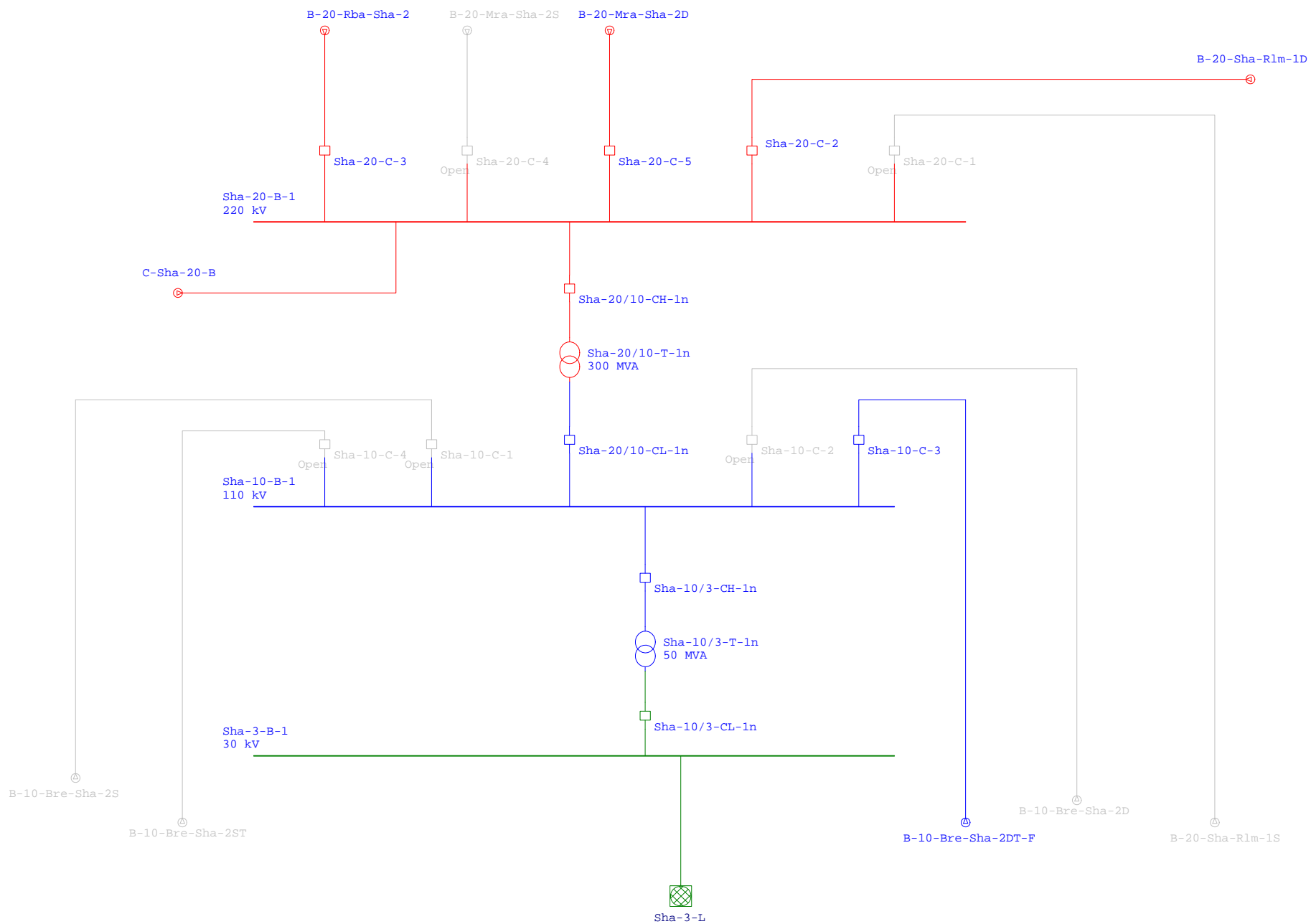
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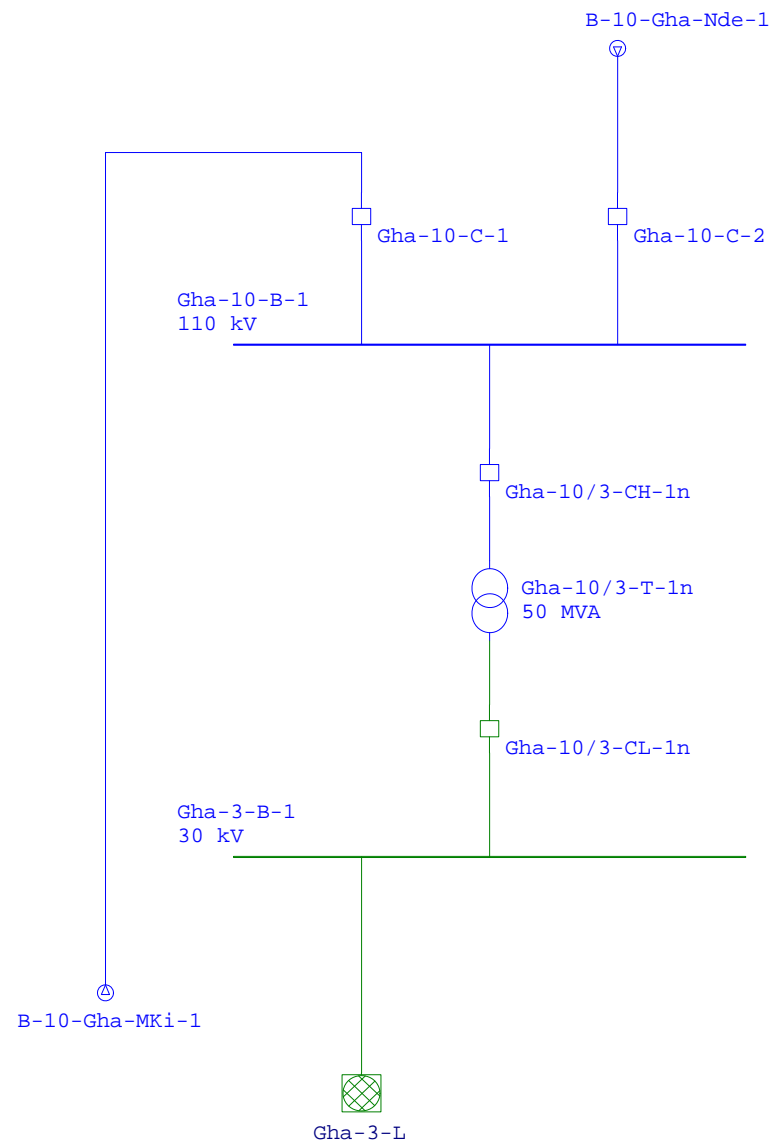
One-Line Diagram - OLV1=>Nyabugogo (Edit Mode)



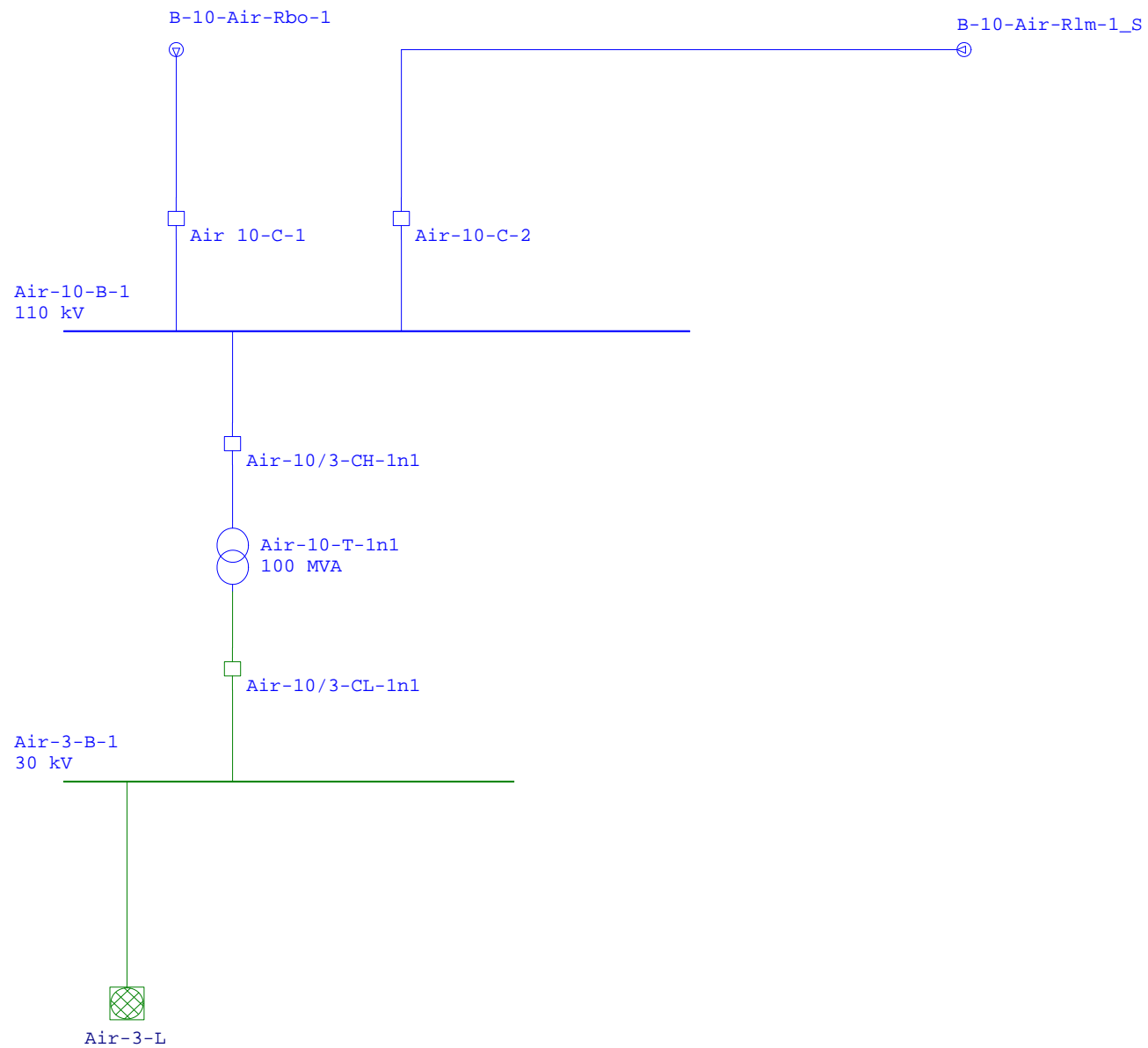
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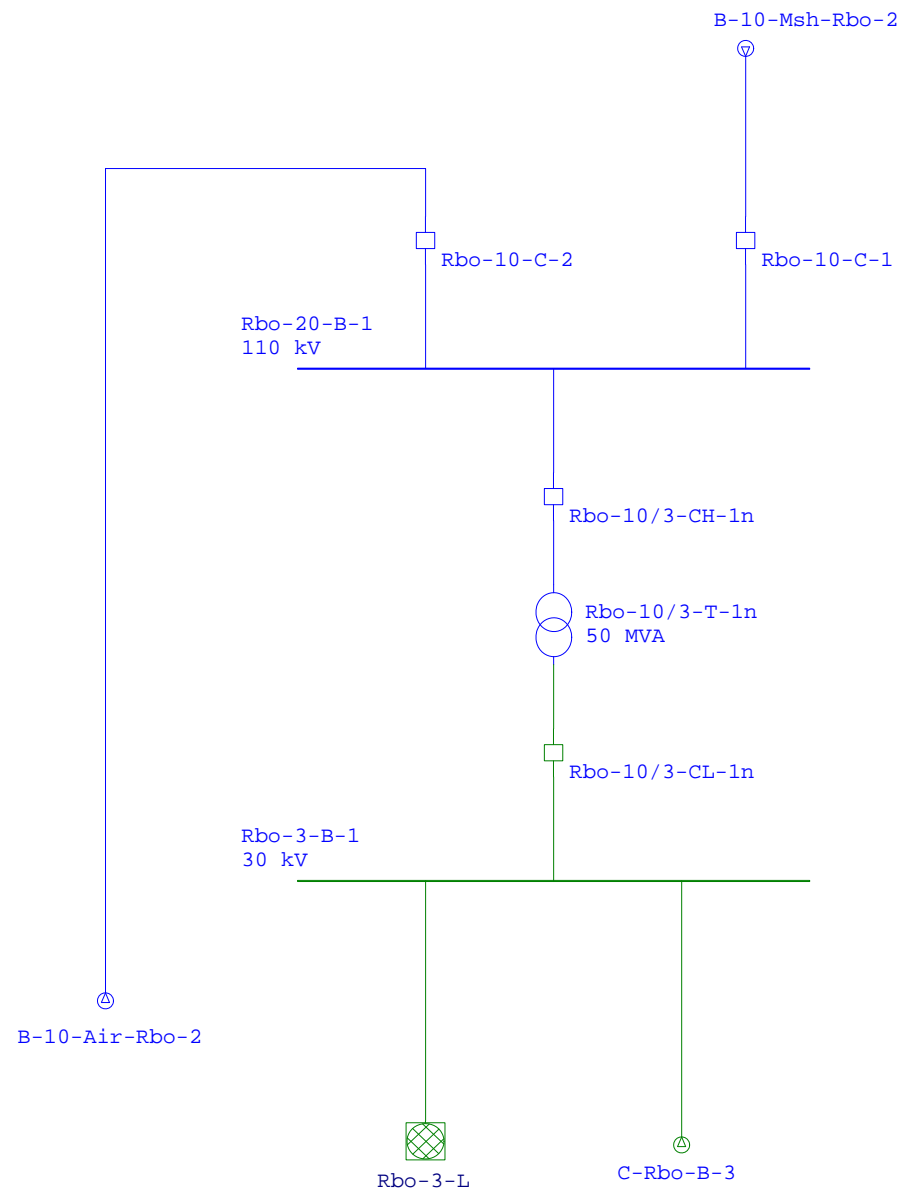


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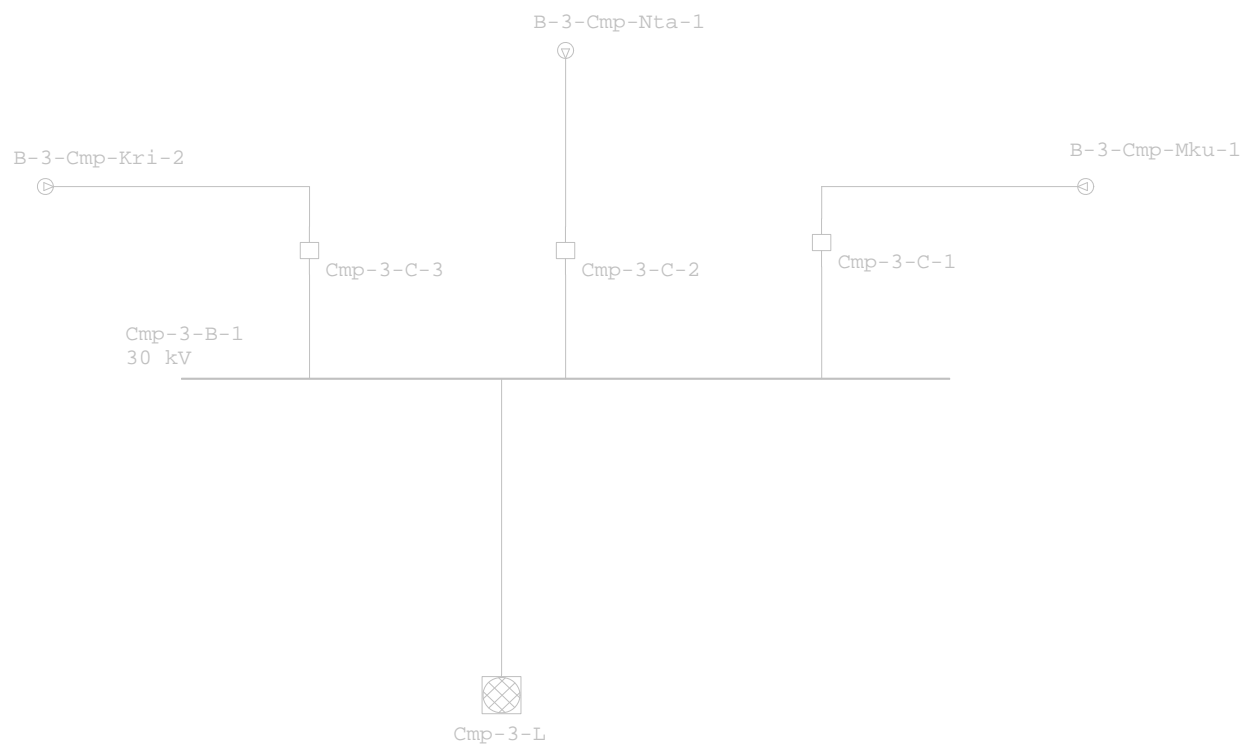


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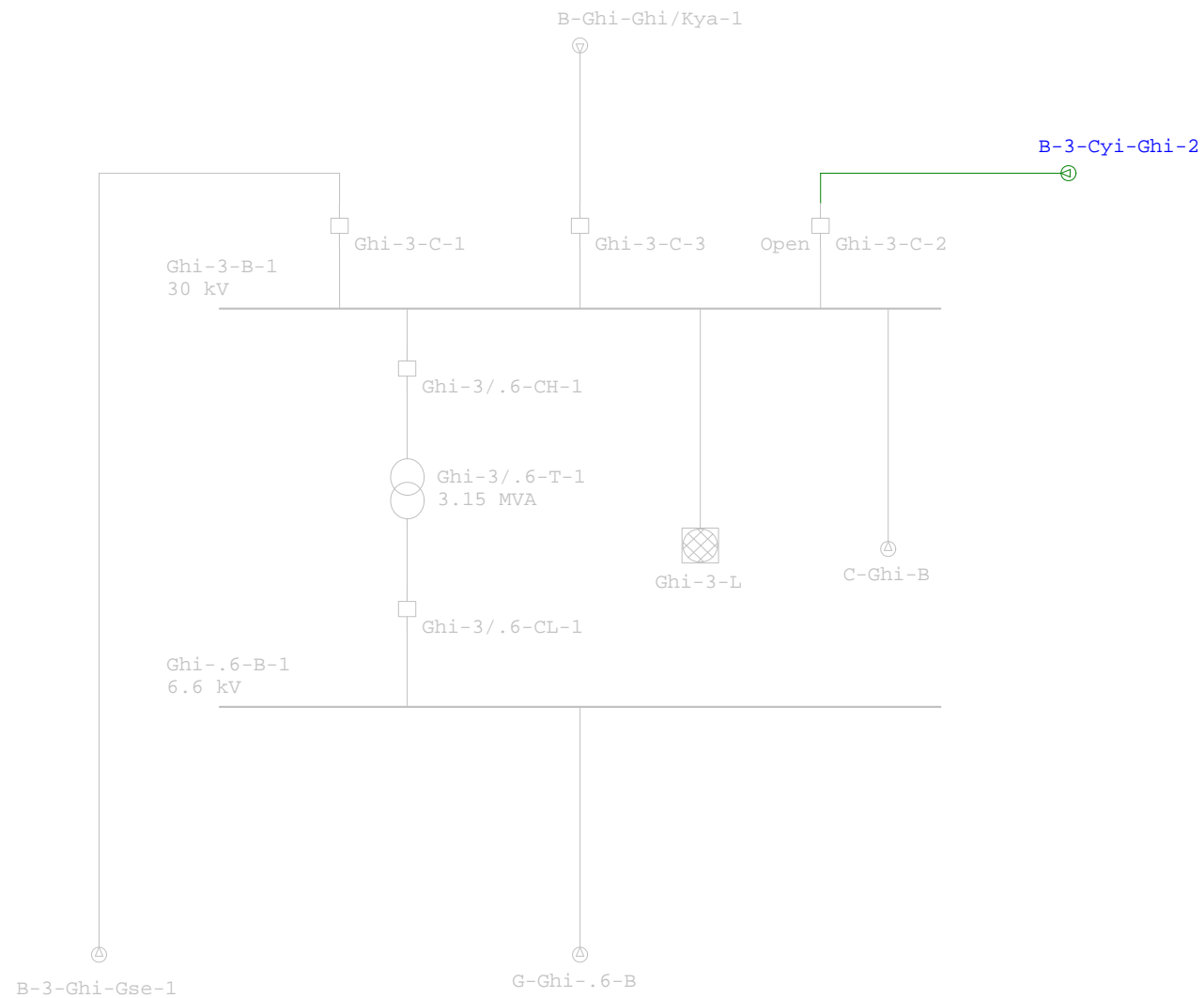


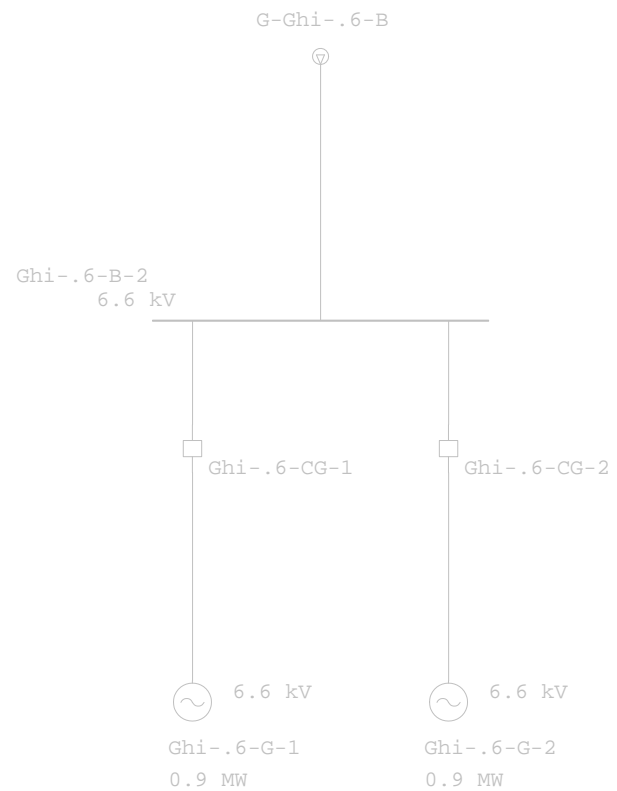


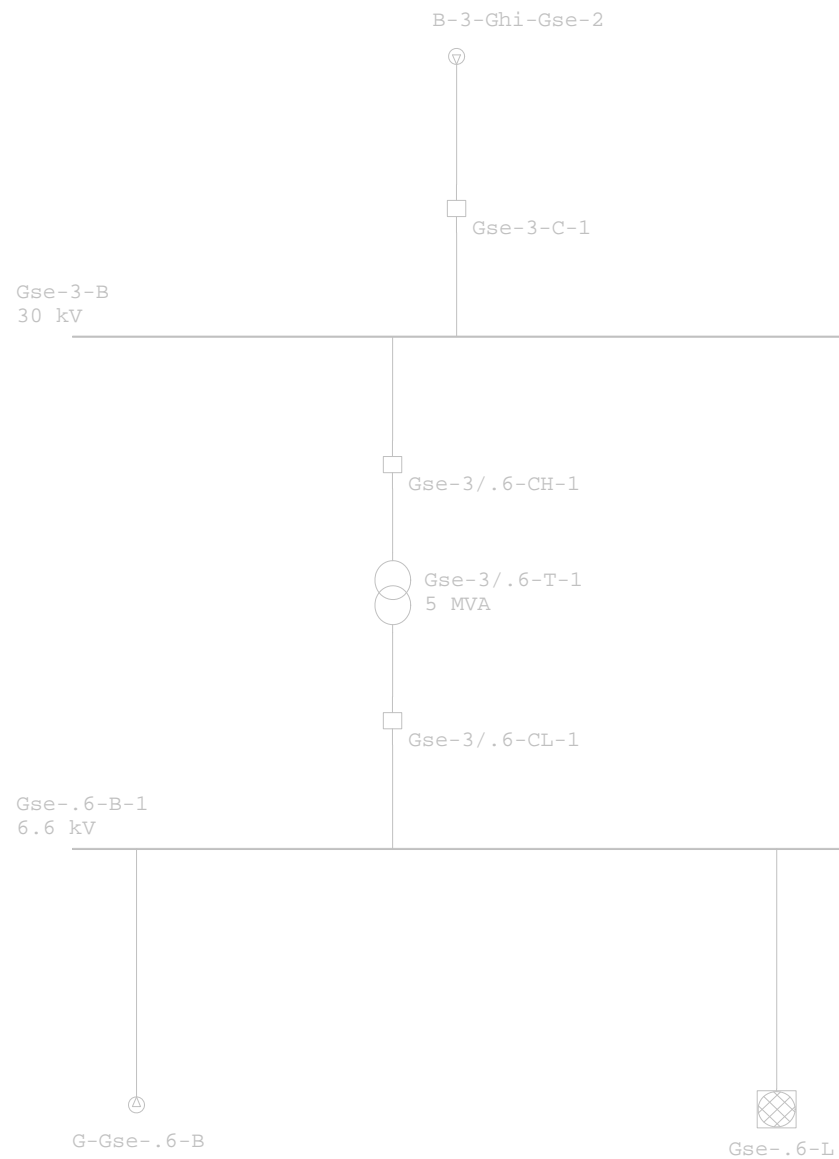
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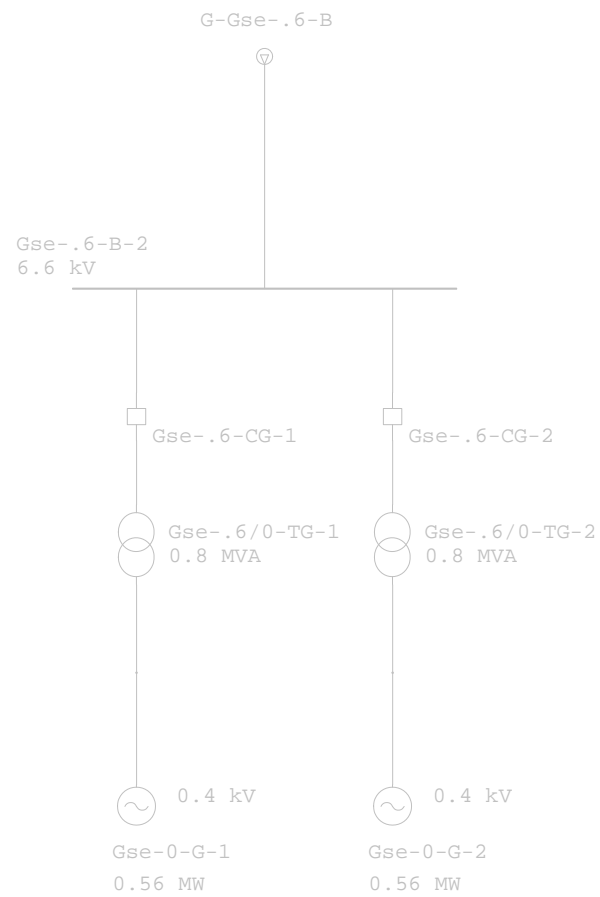


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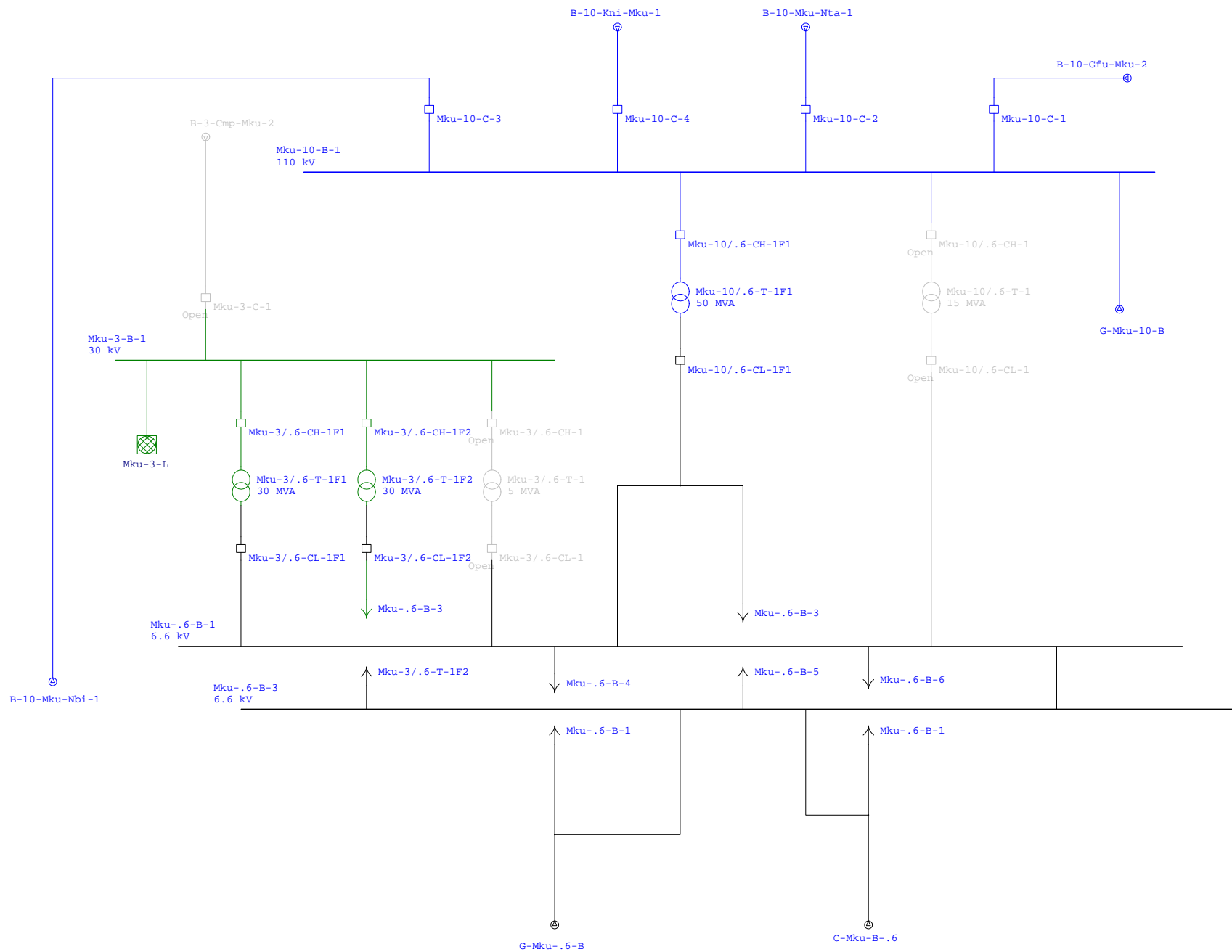


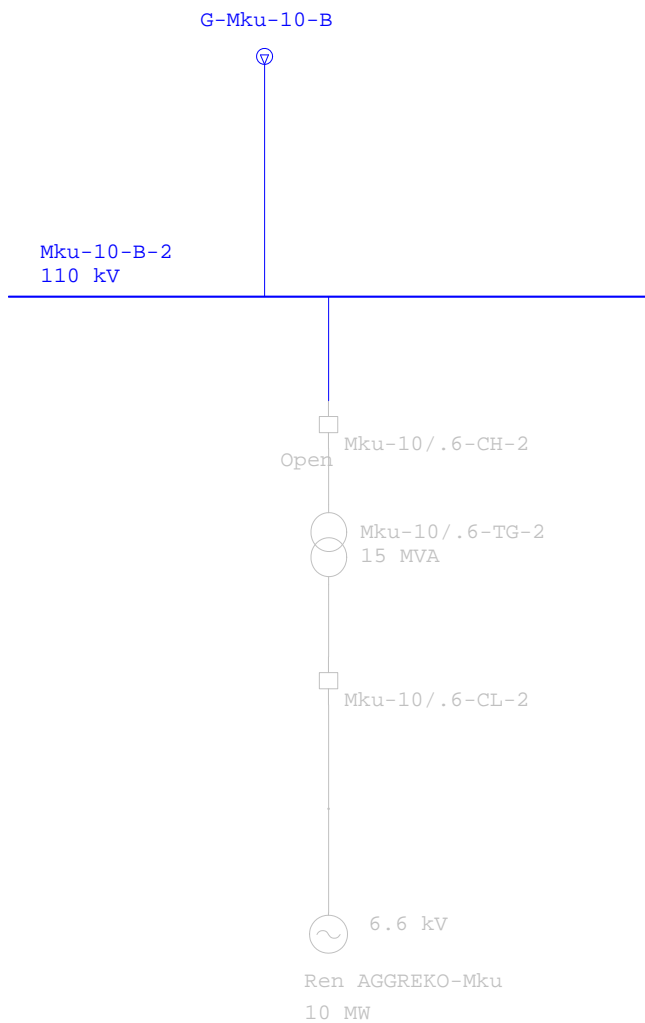


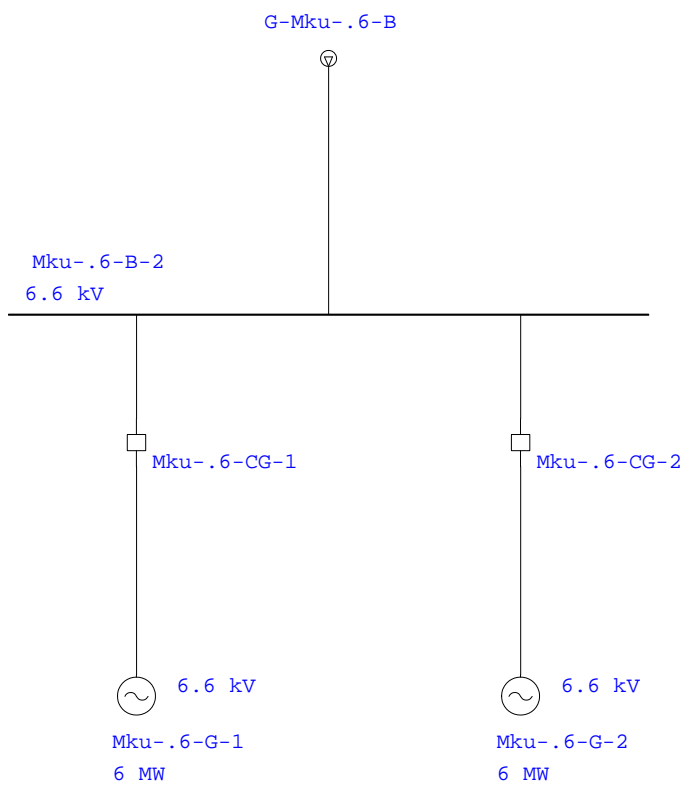




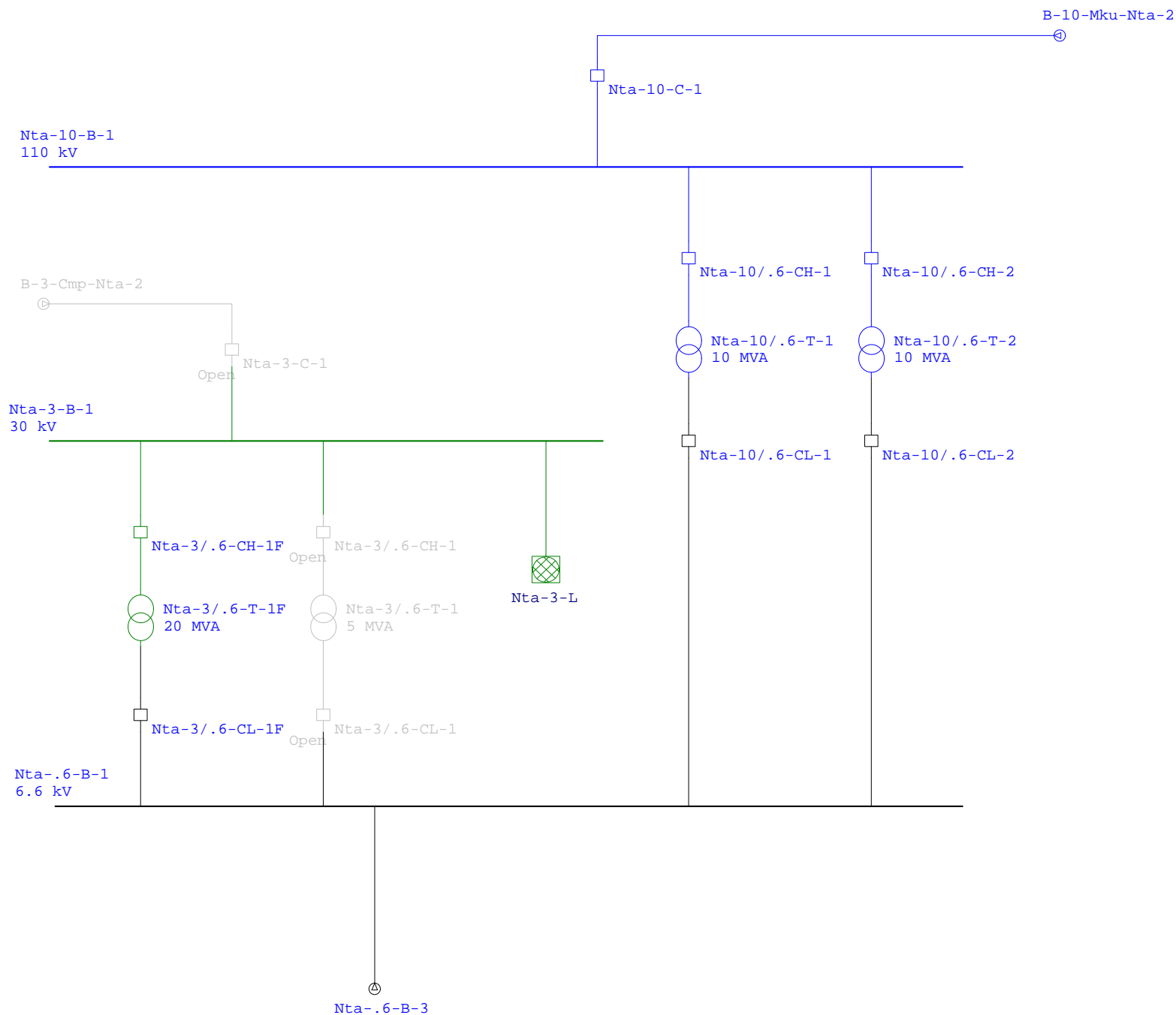
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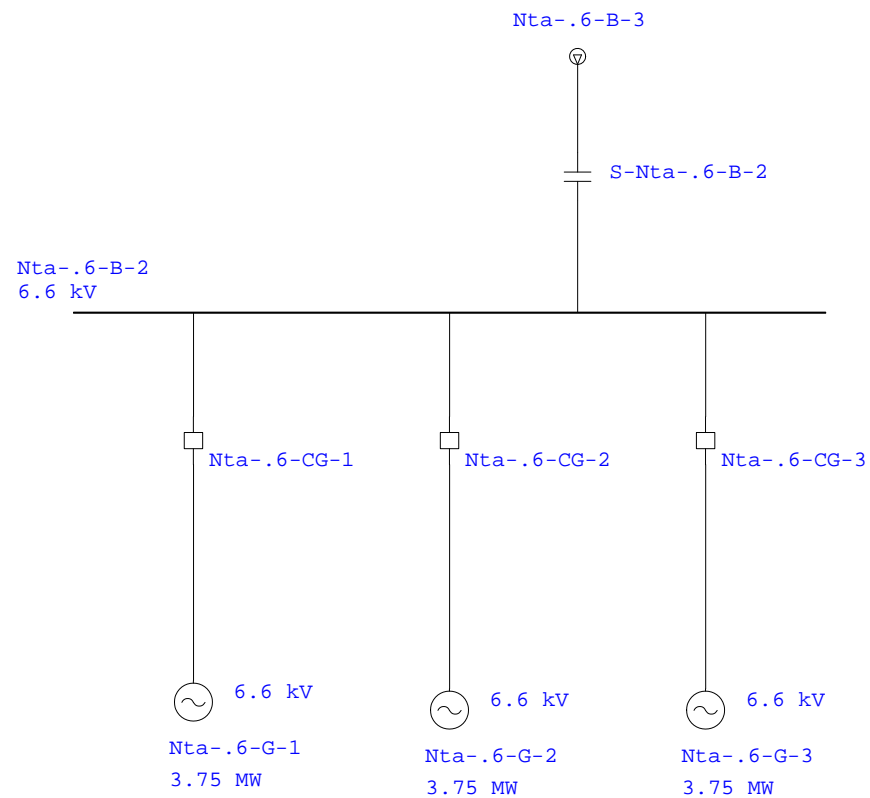


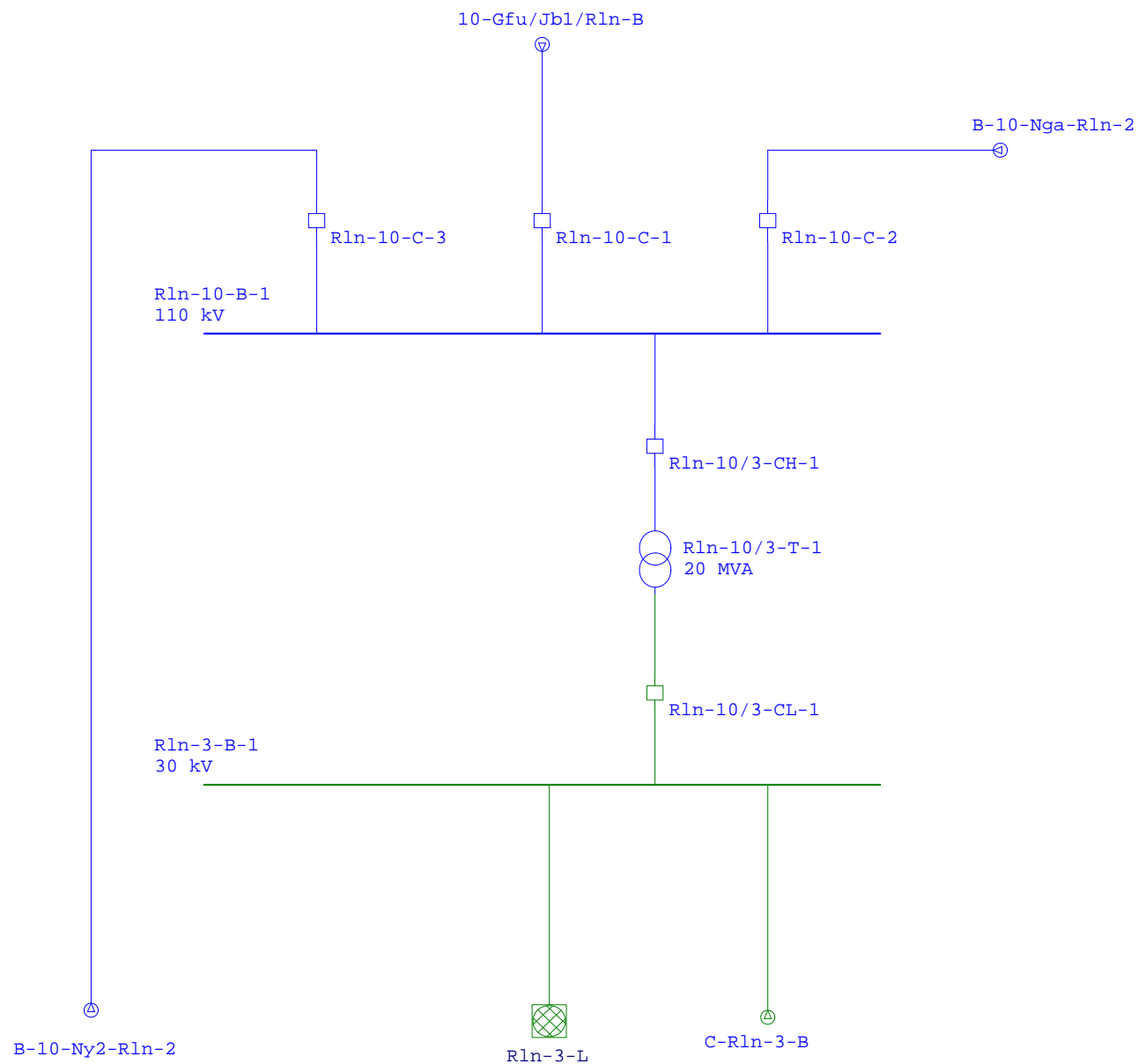




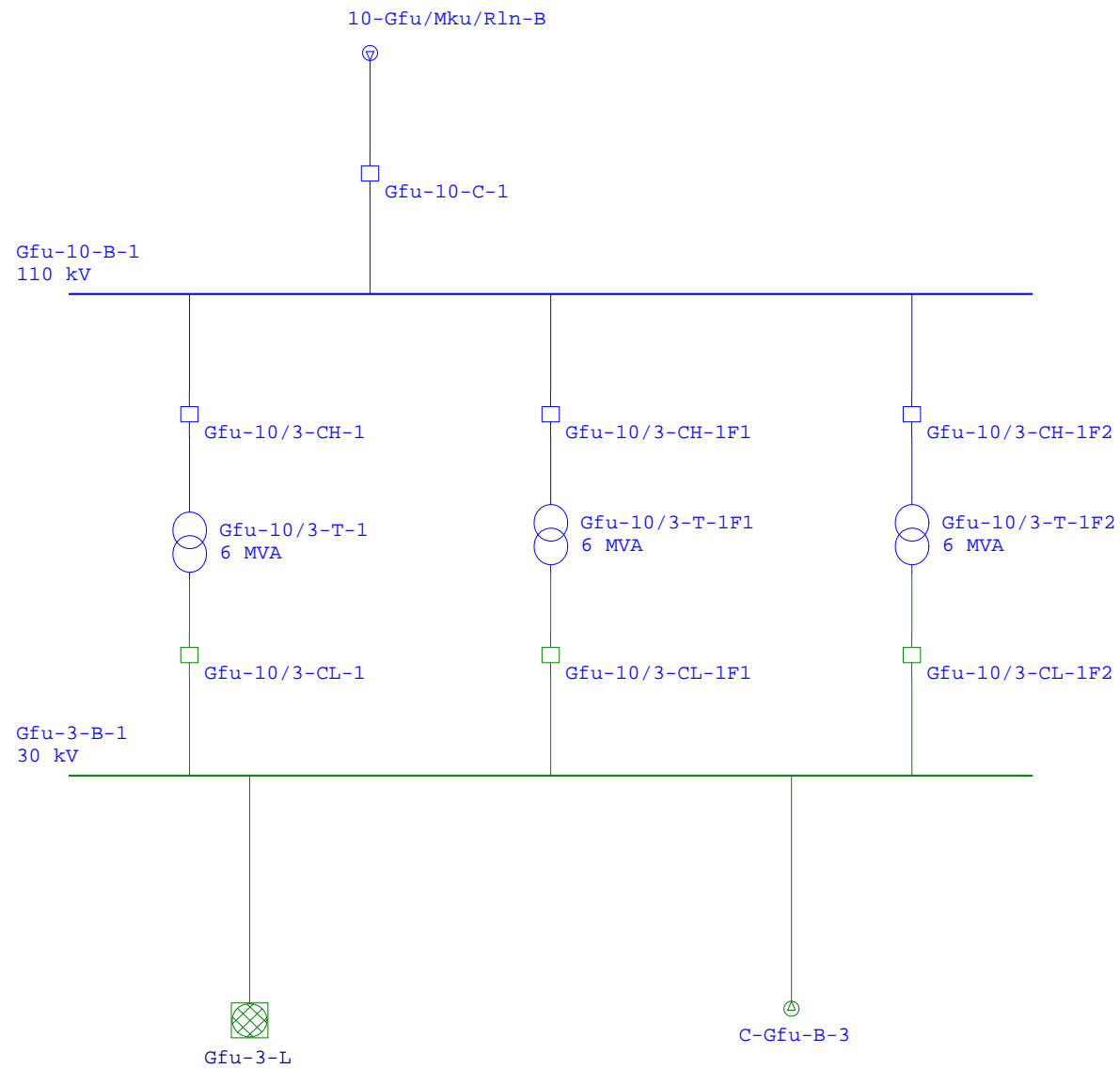
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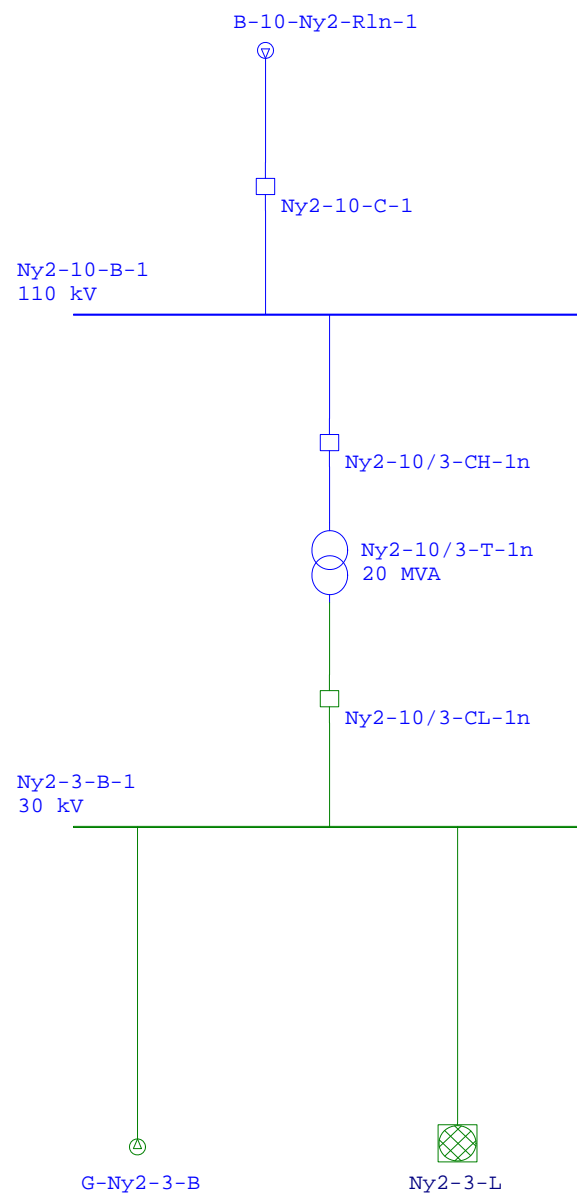


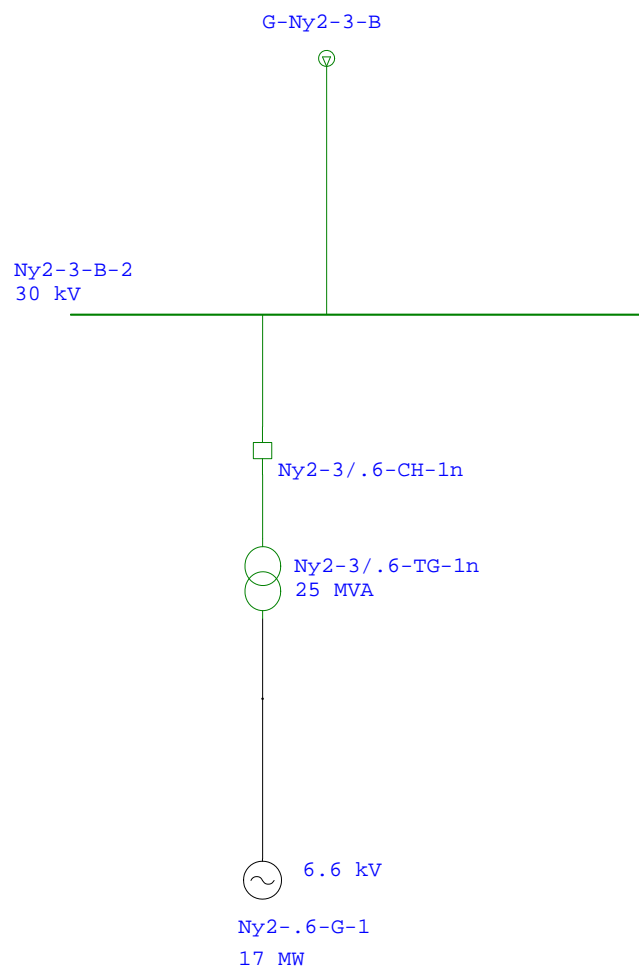


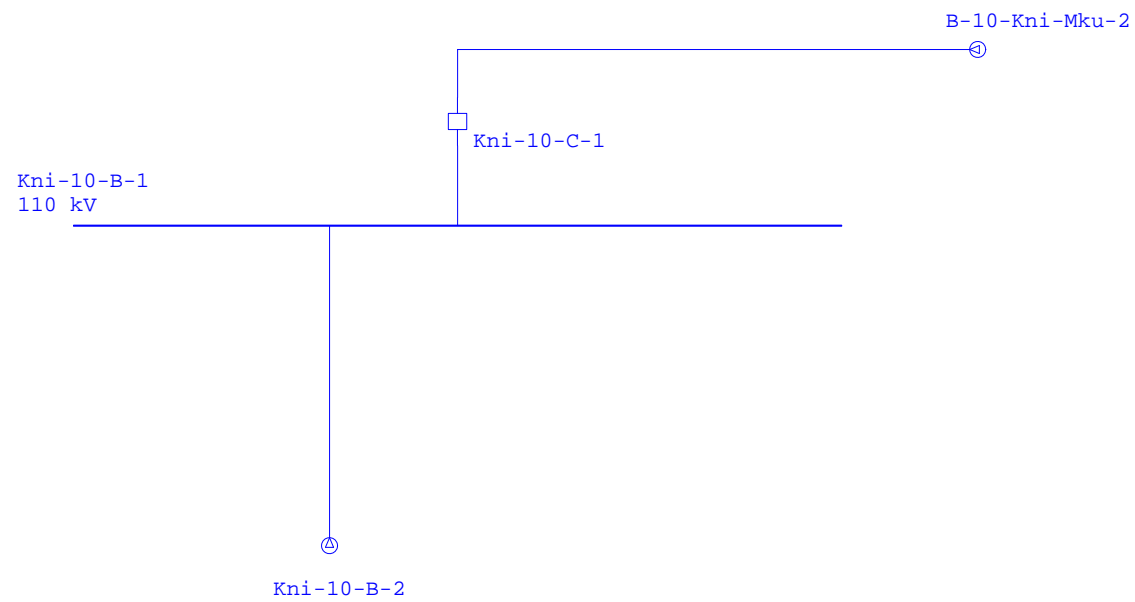


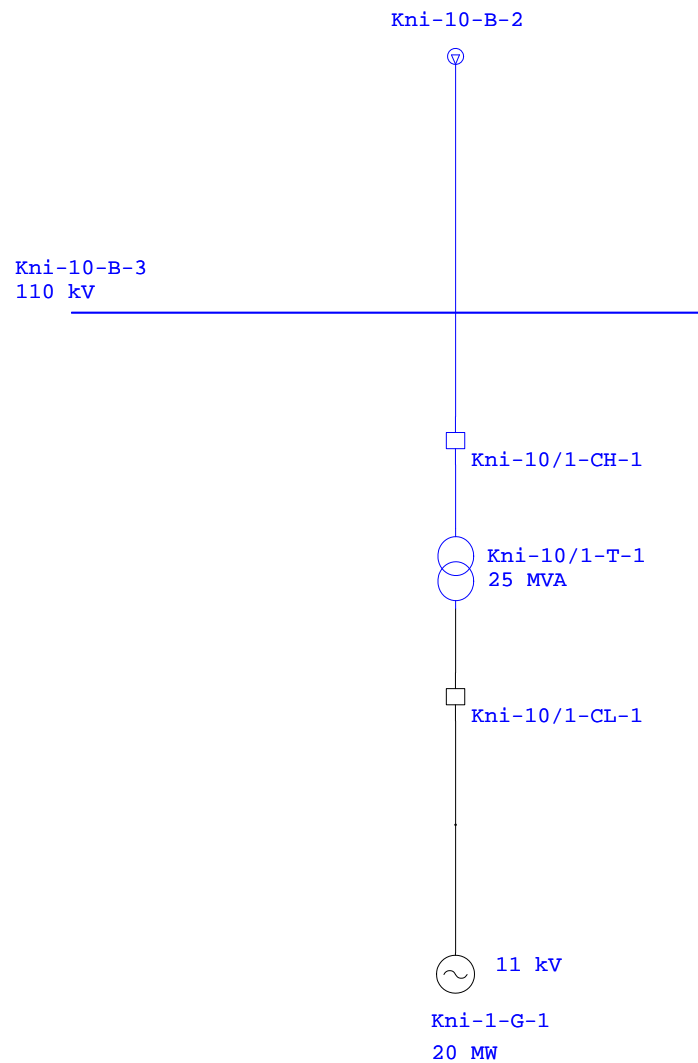
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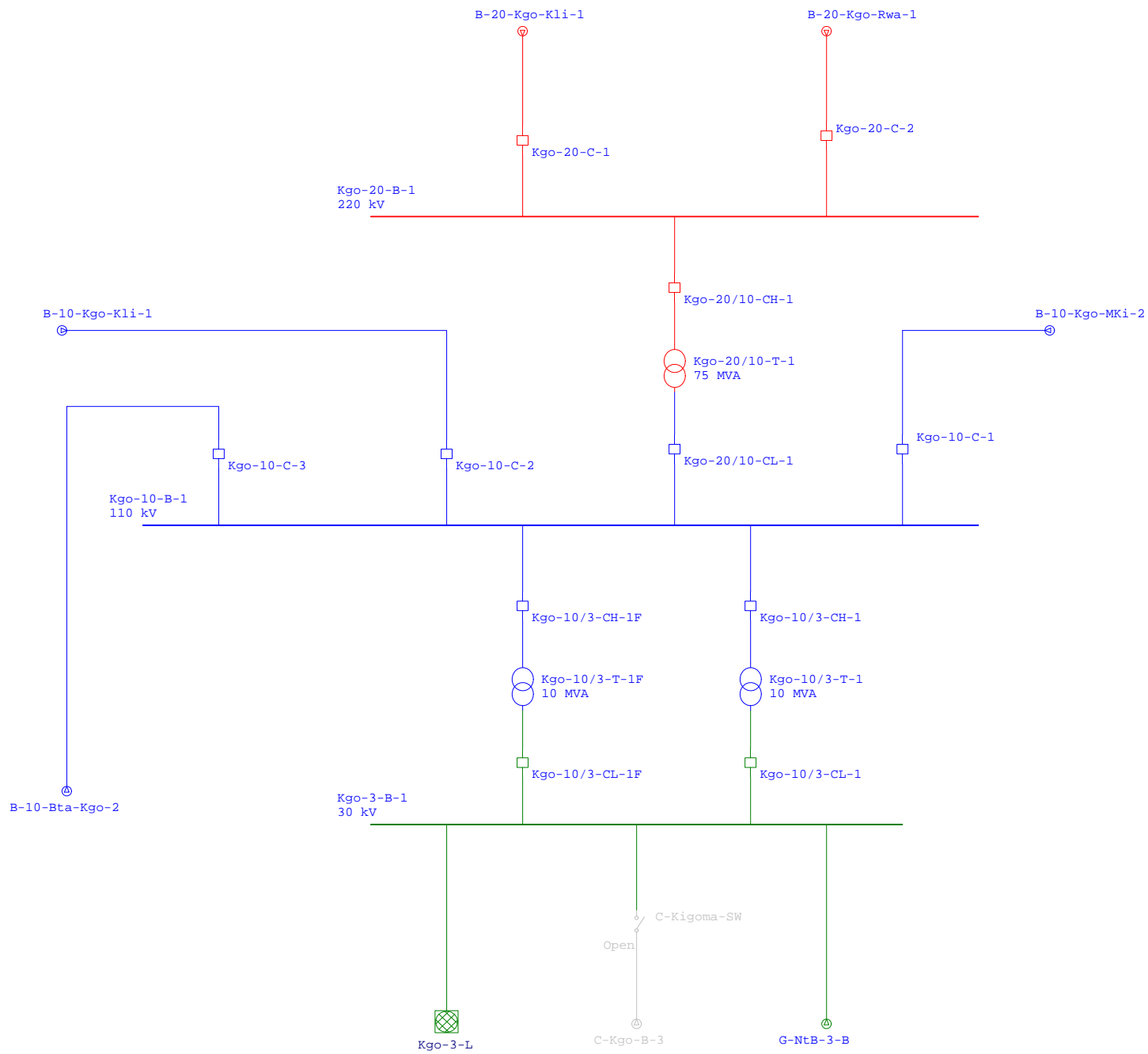


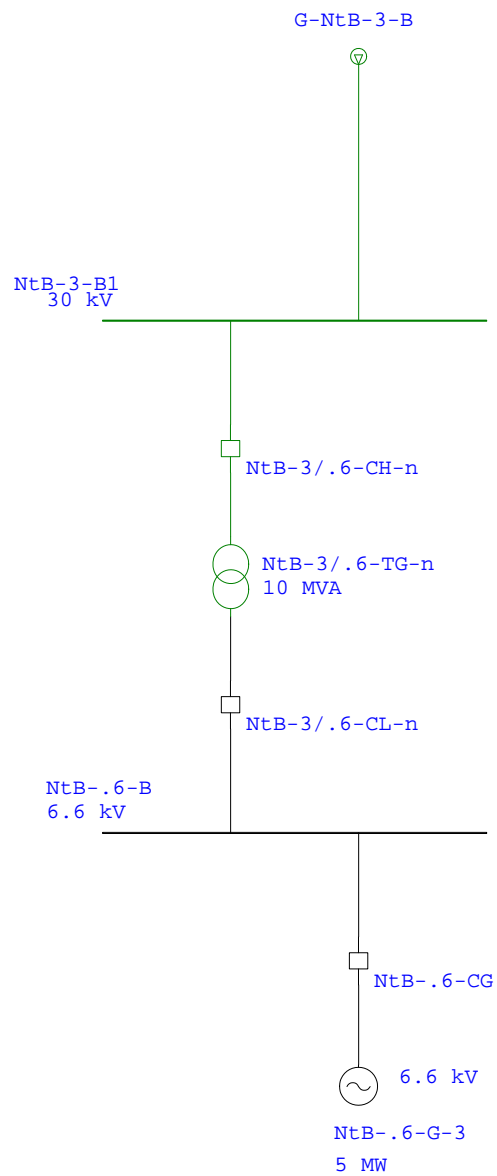




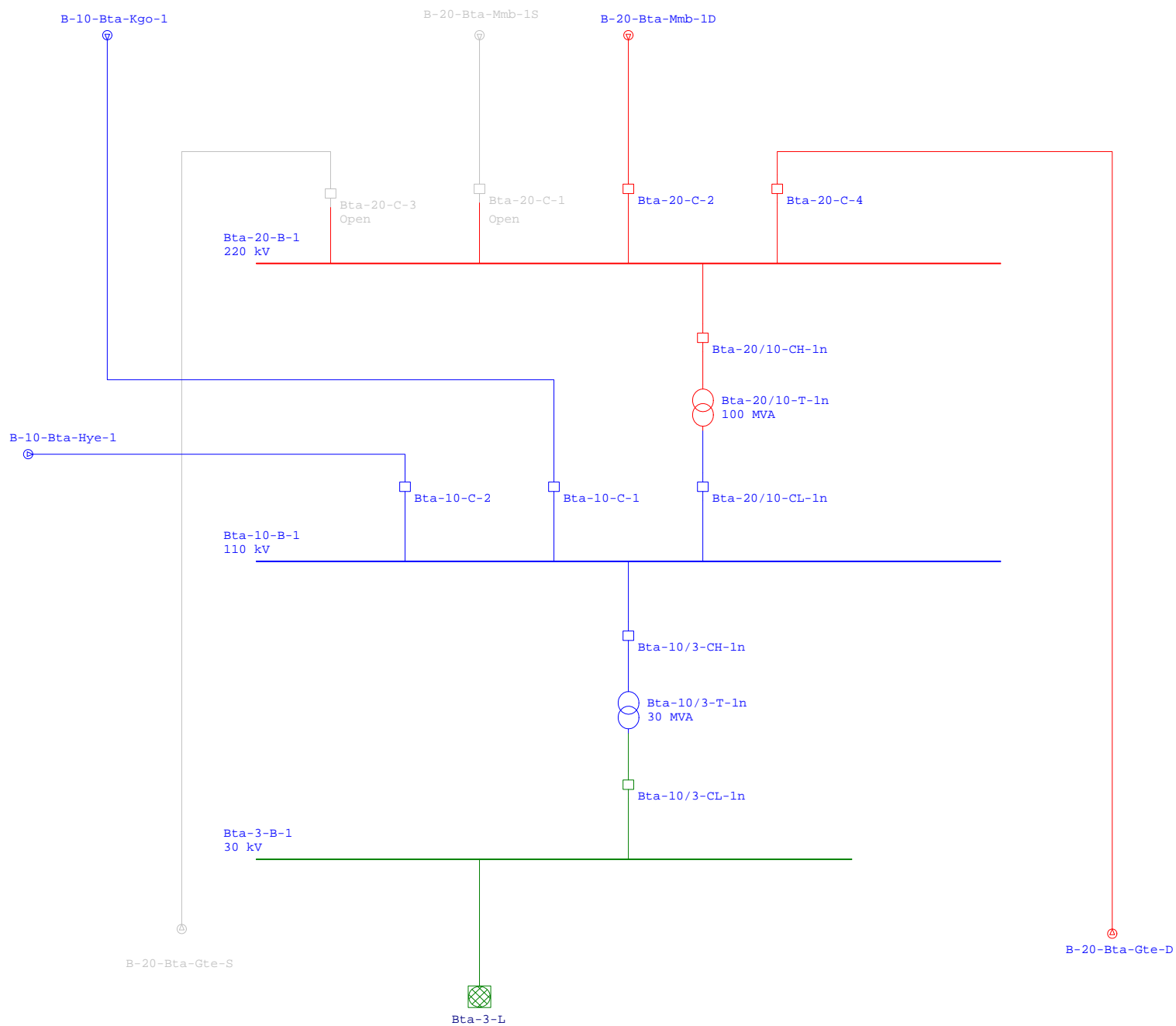


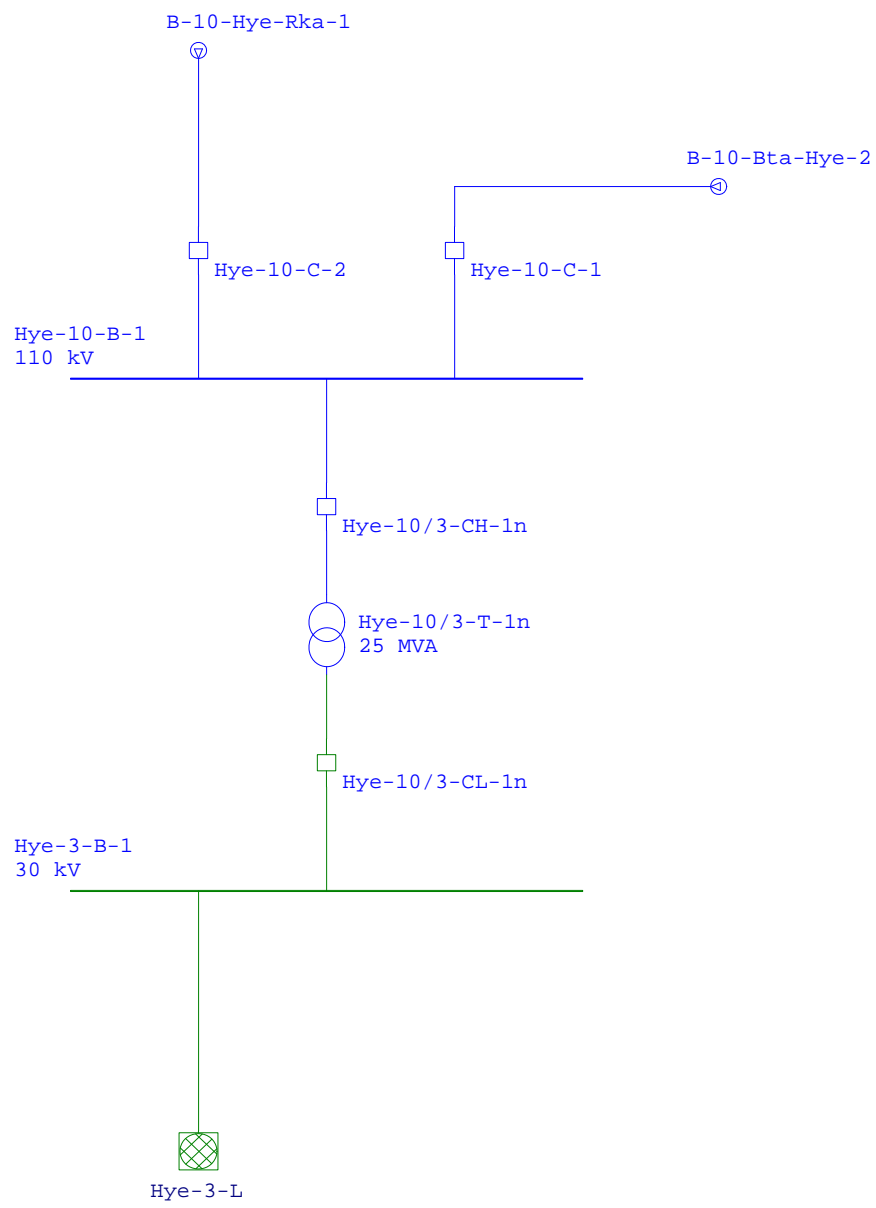
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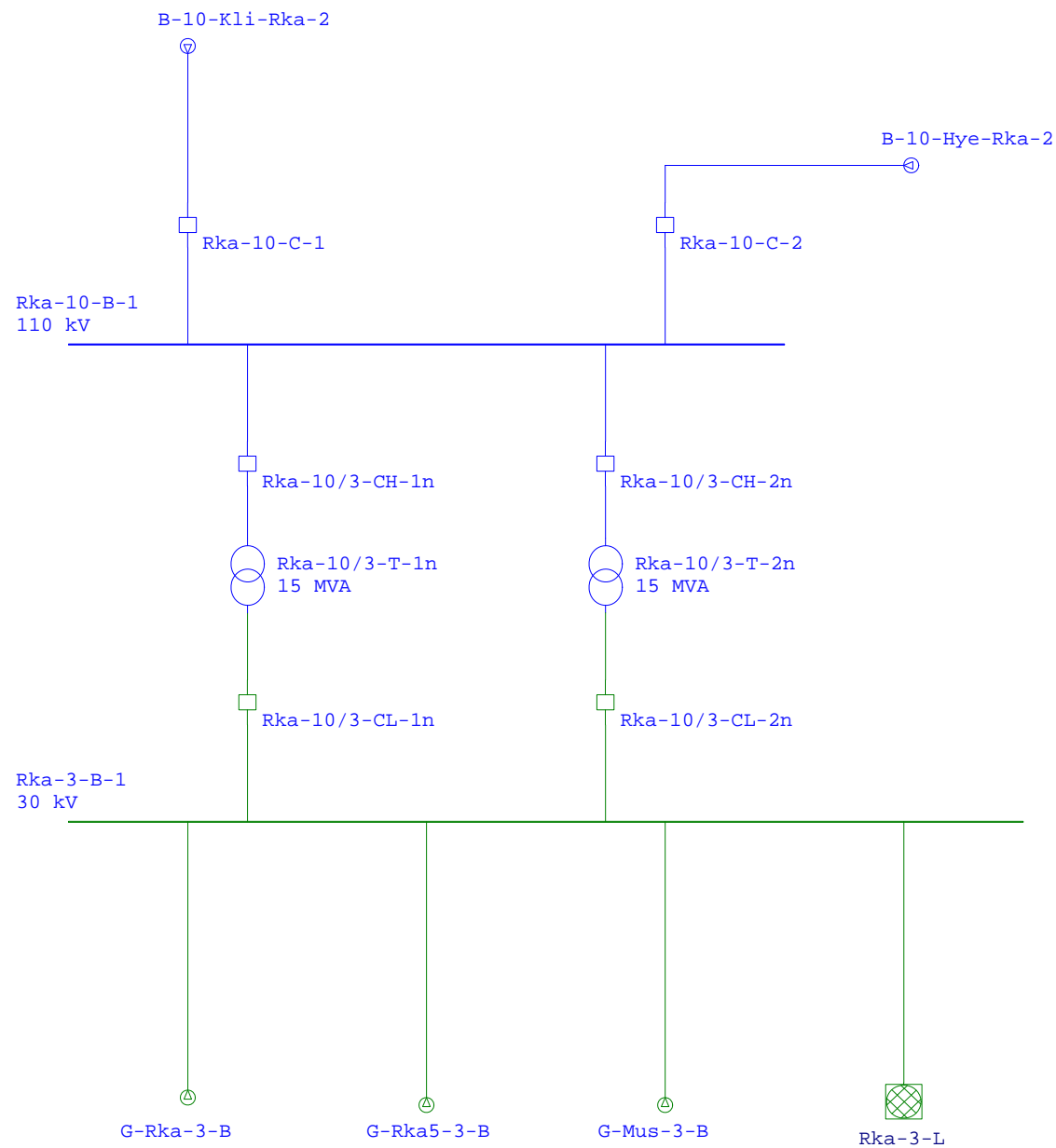


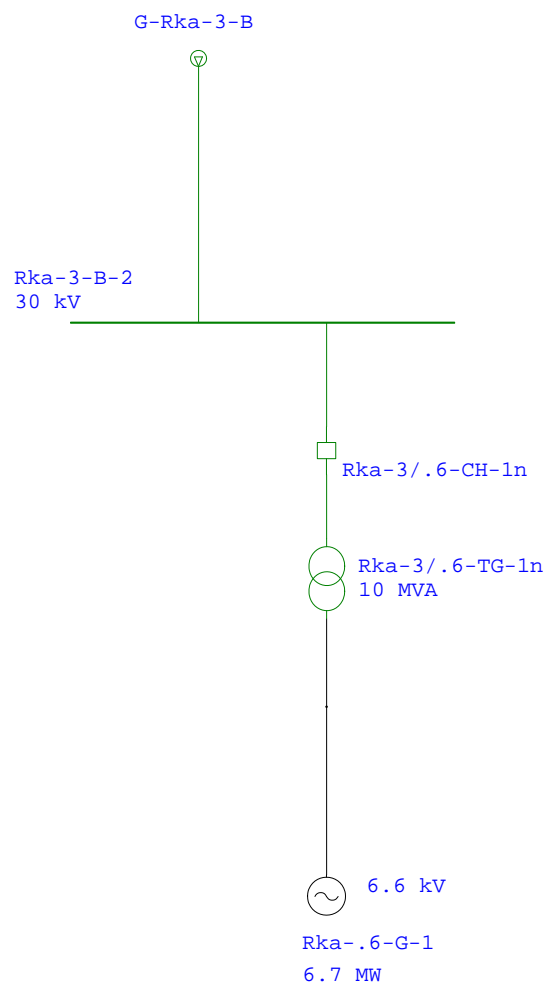
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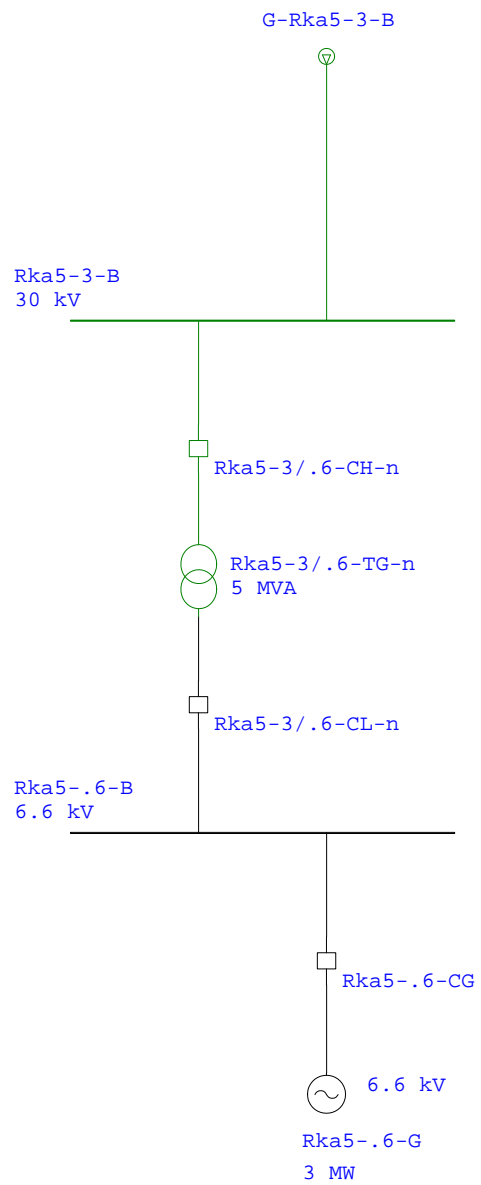


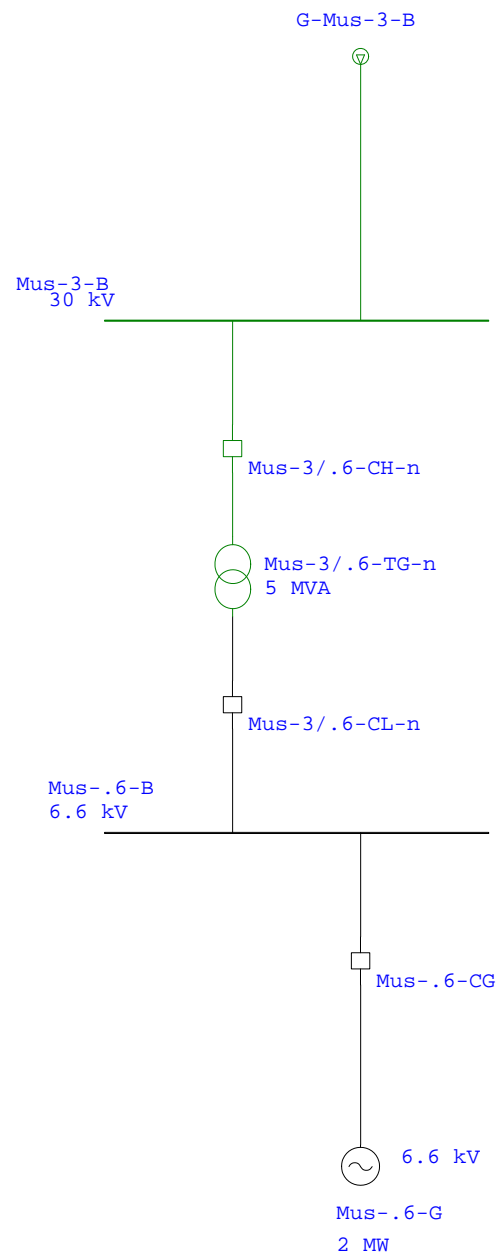


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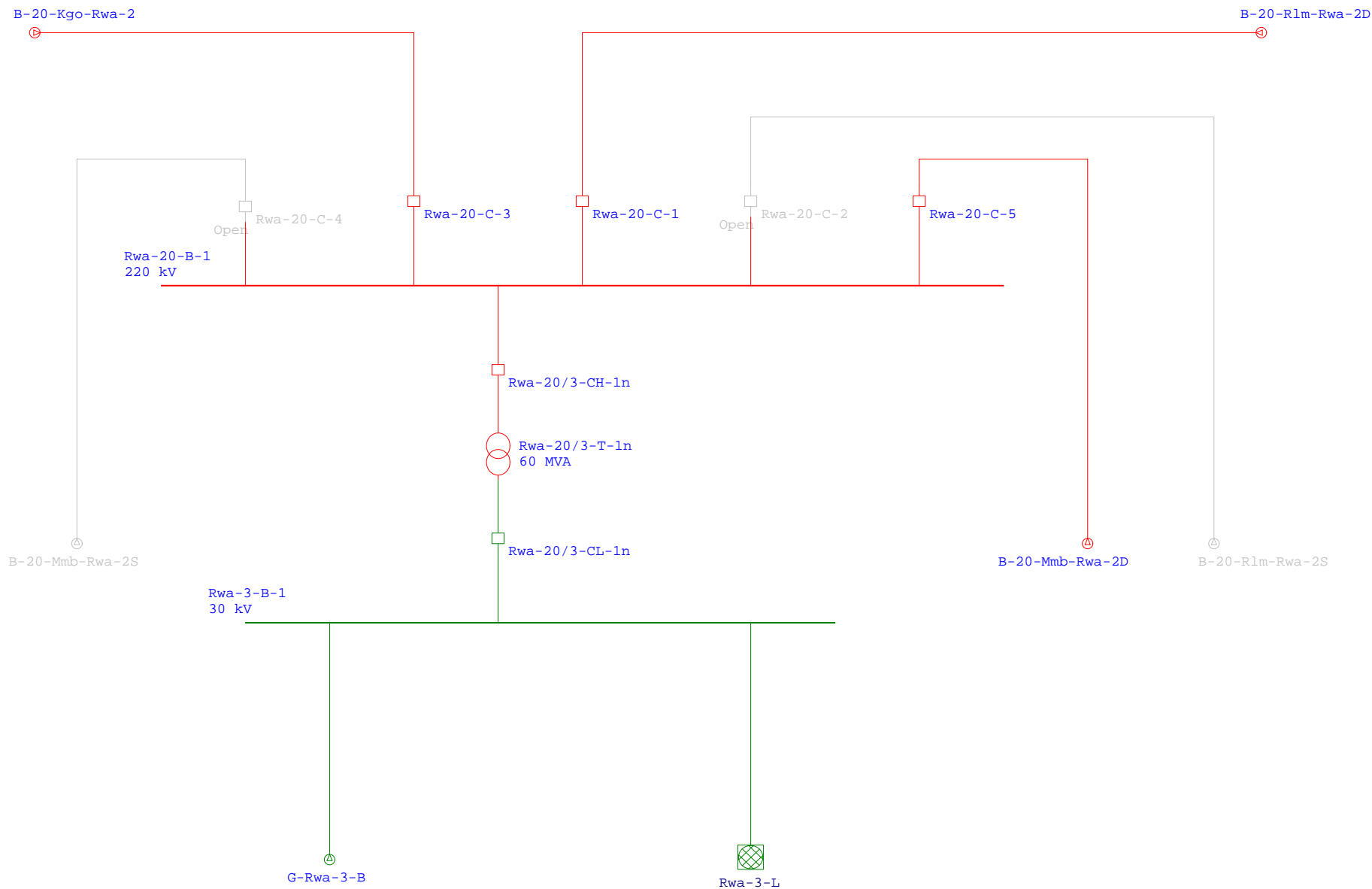


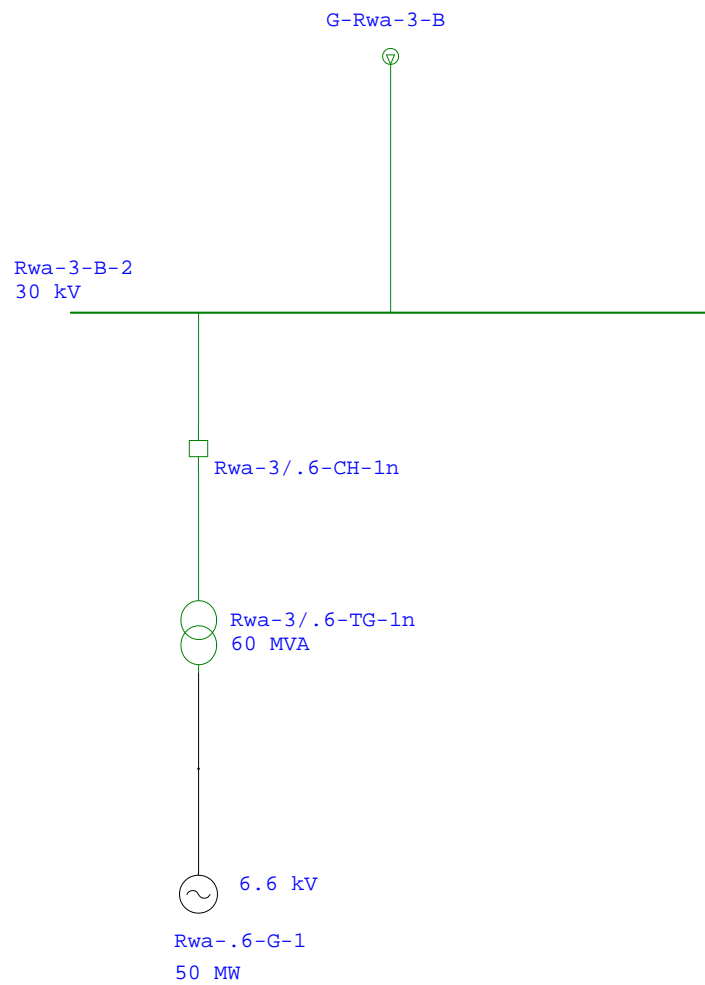




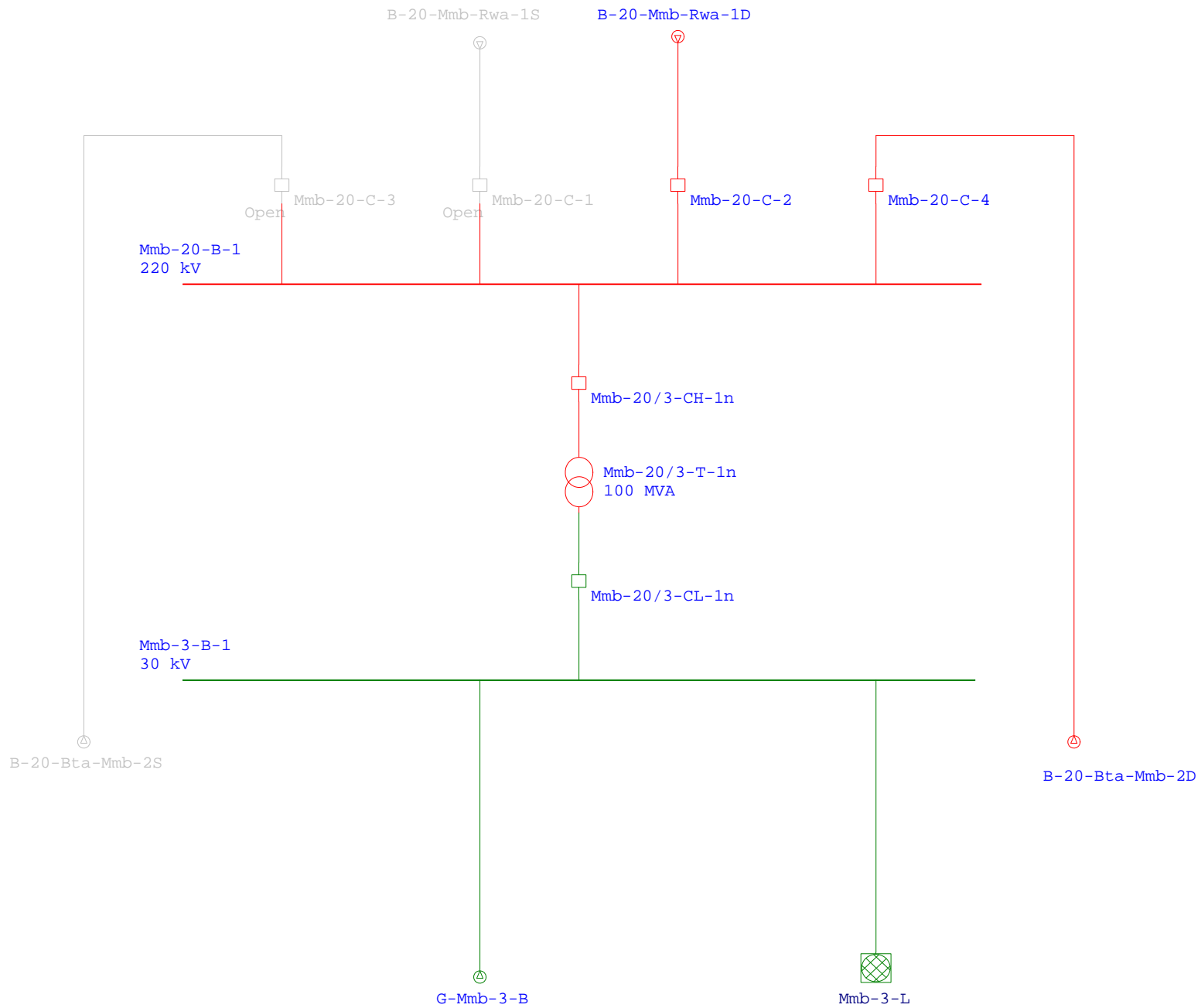


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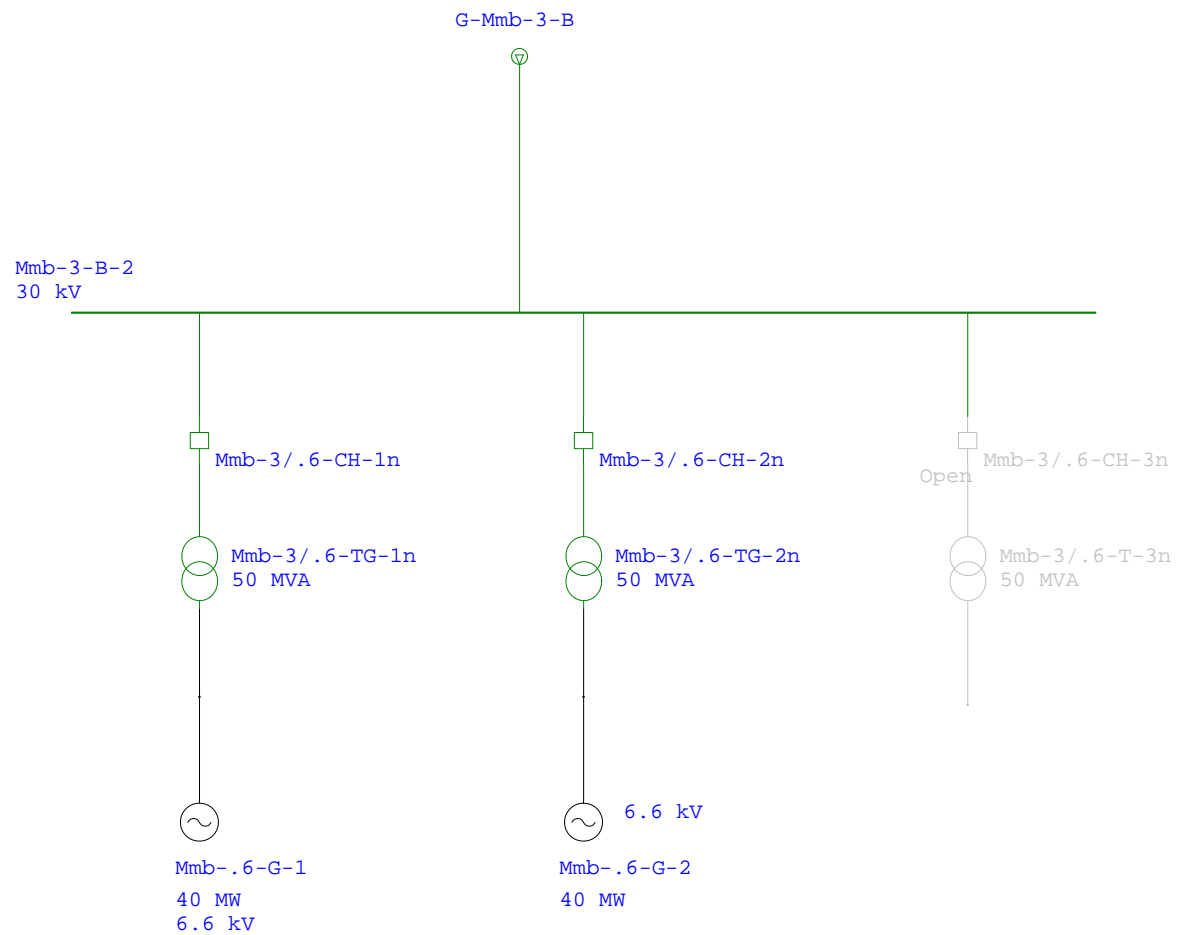




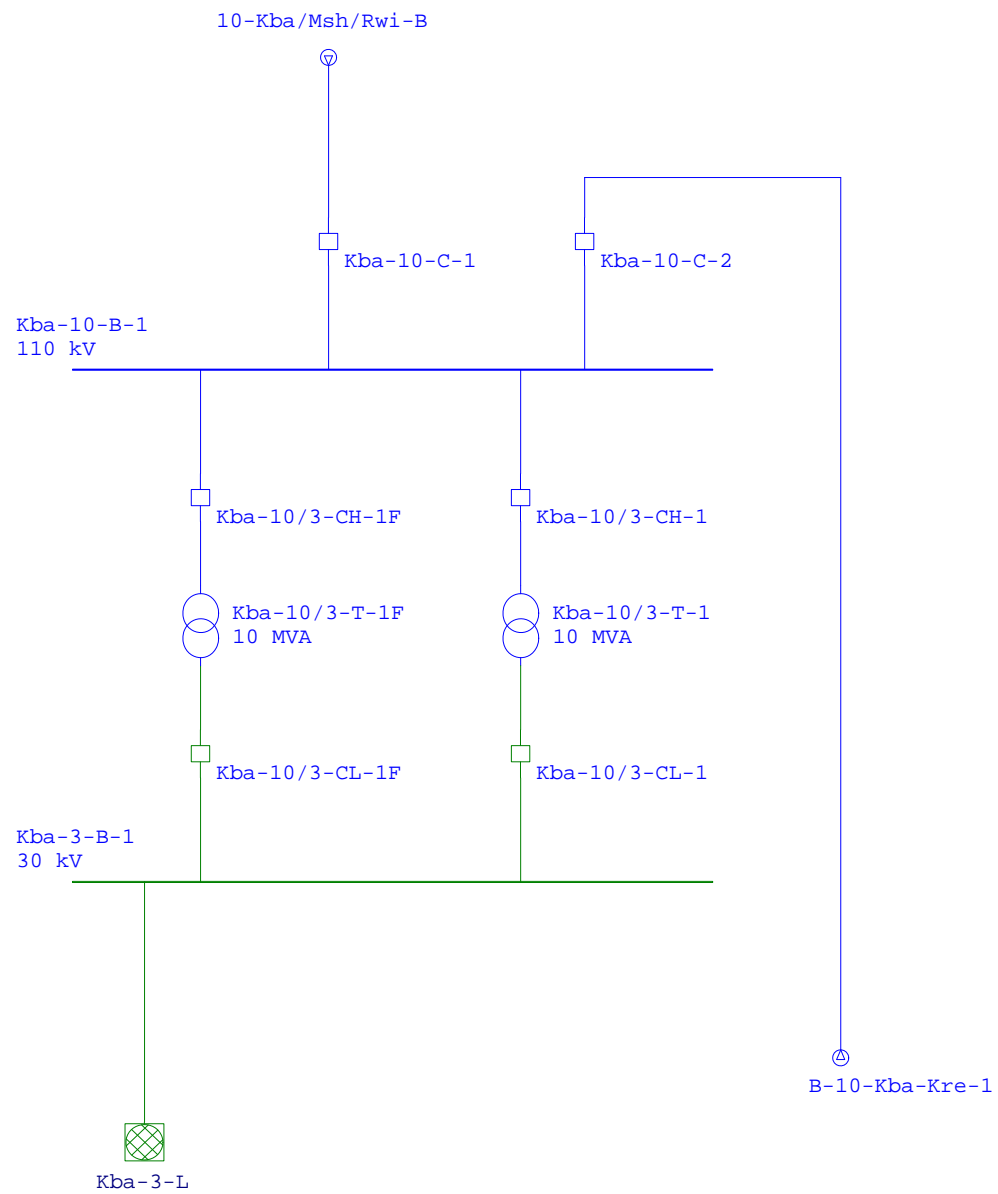
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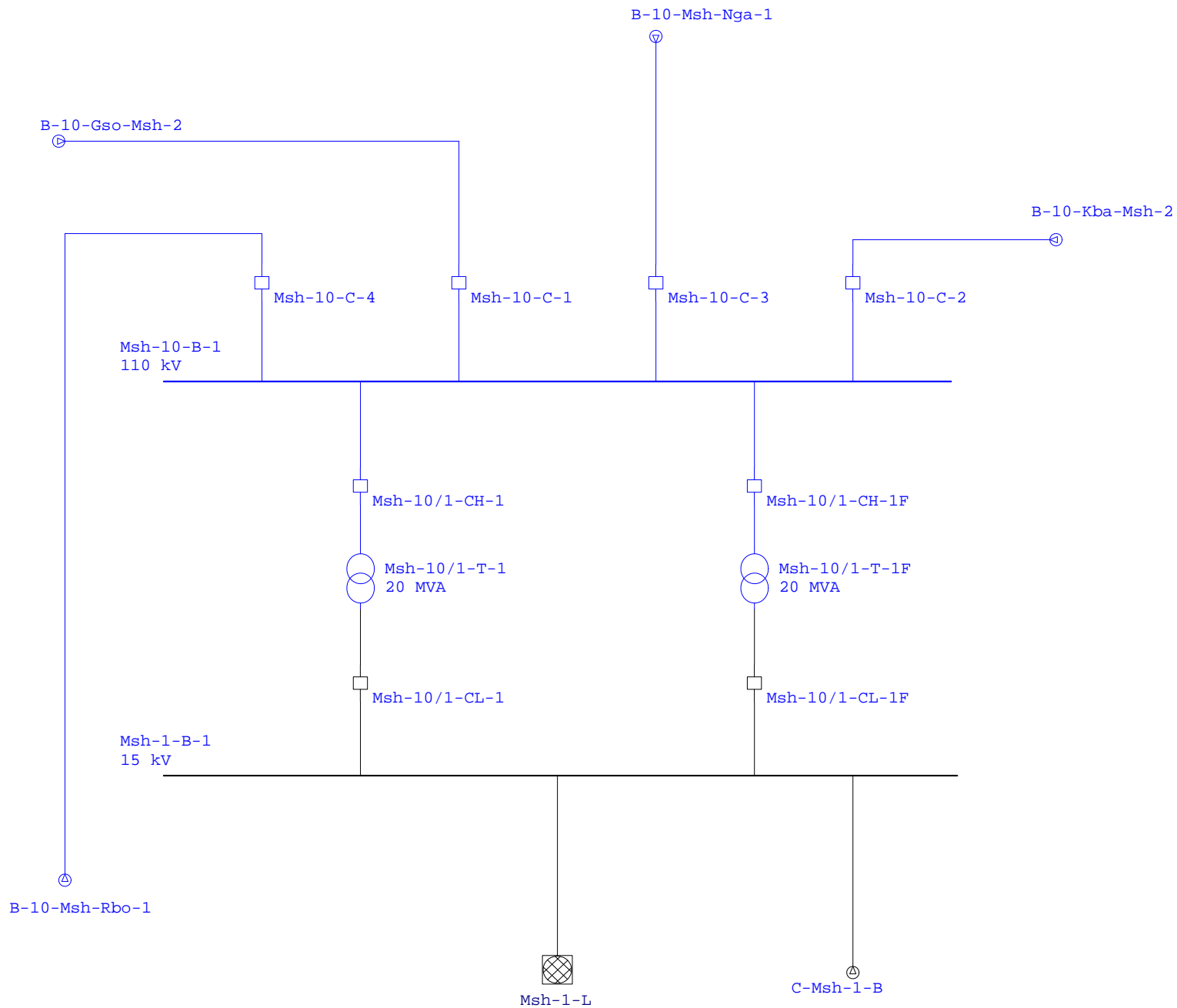
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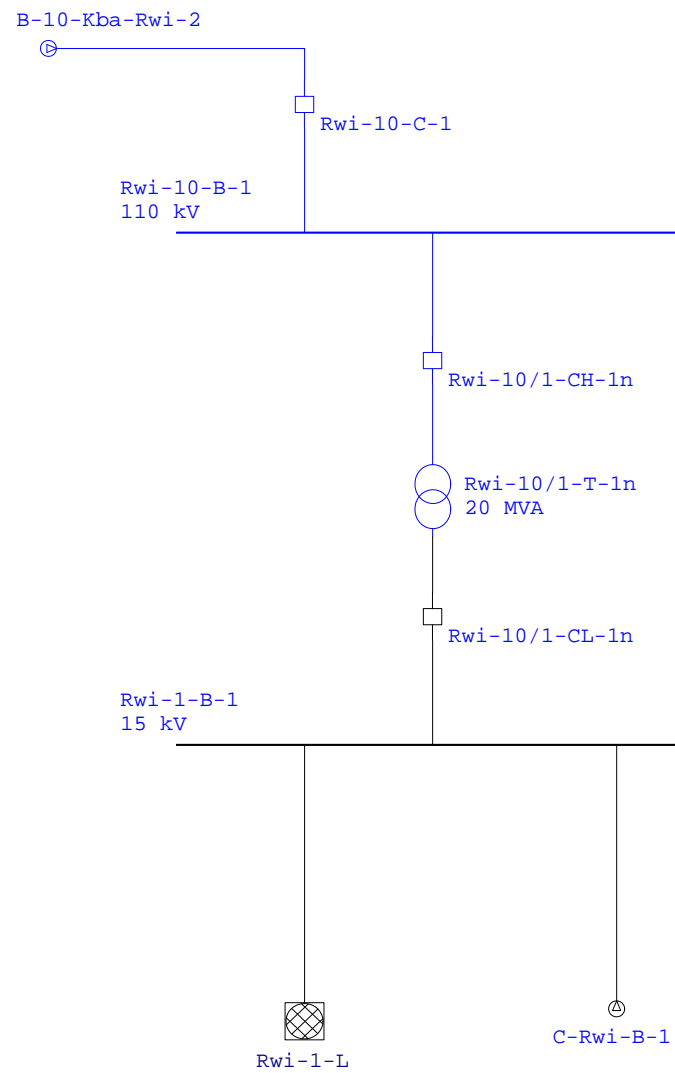
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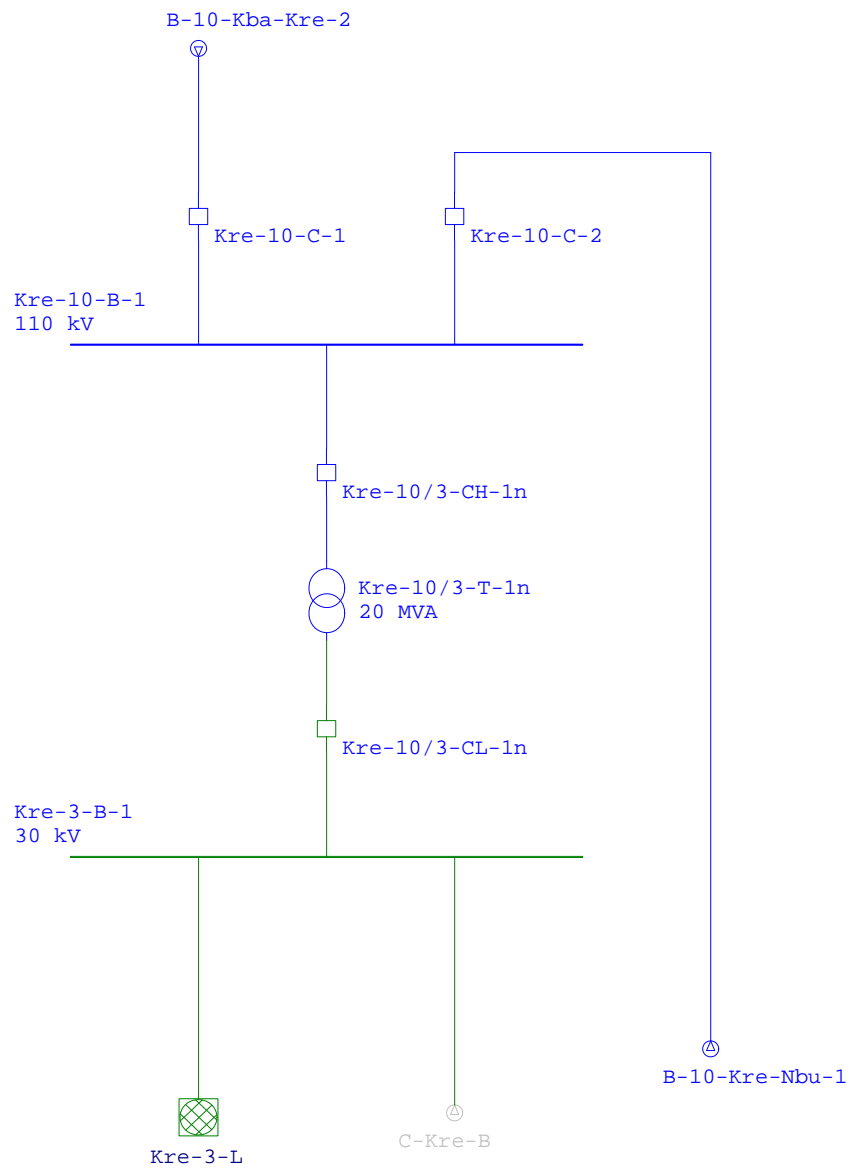


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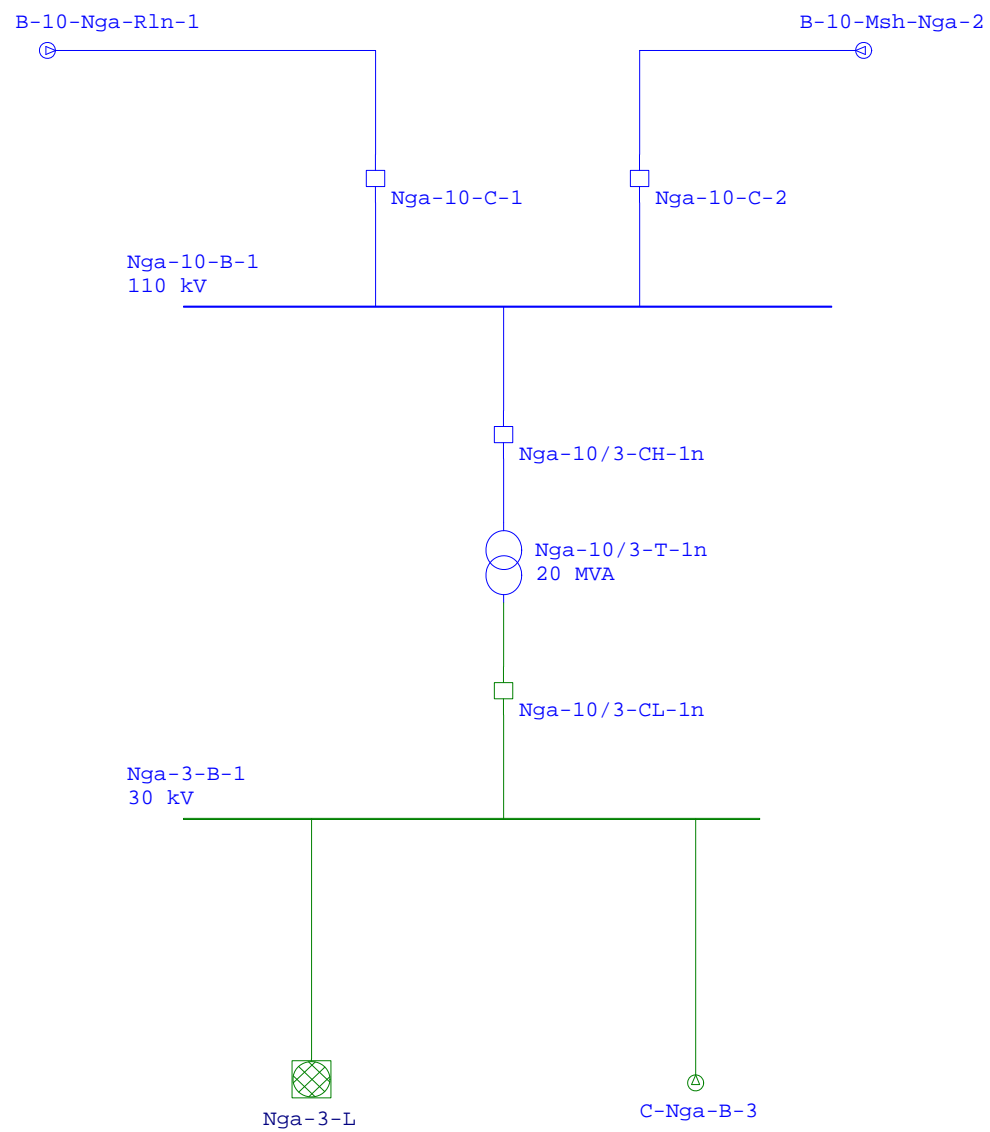


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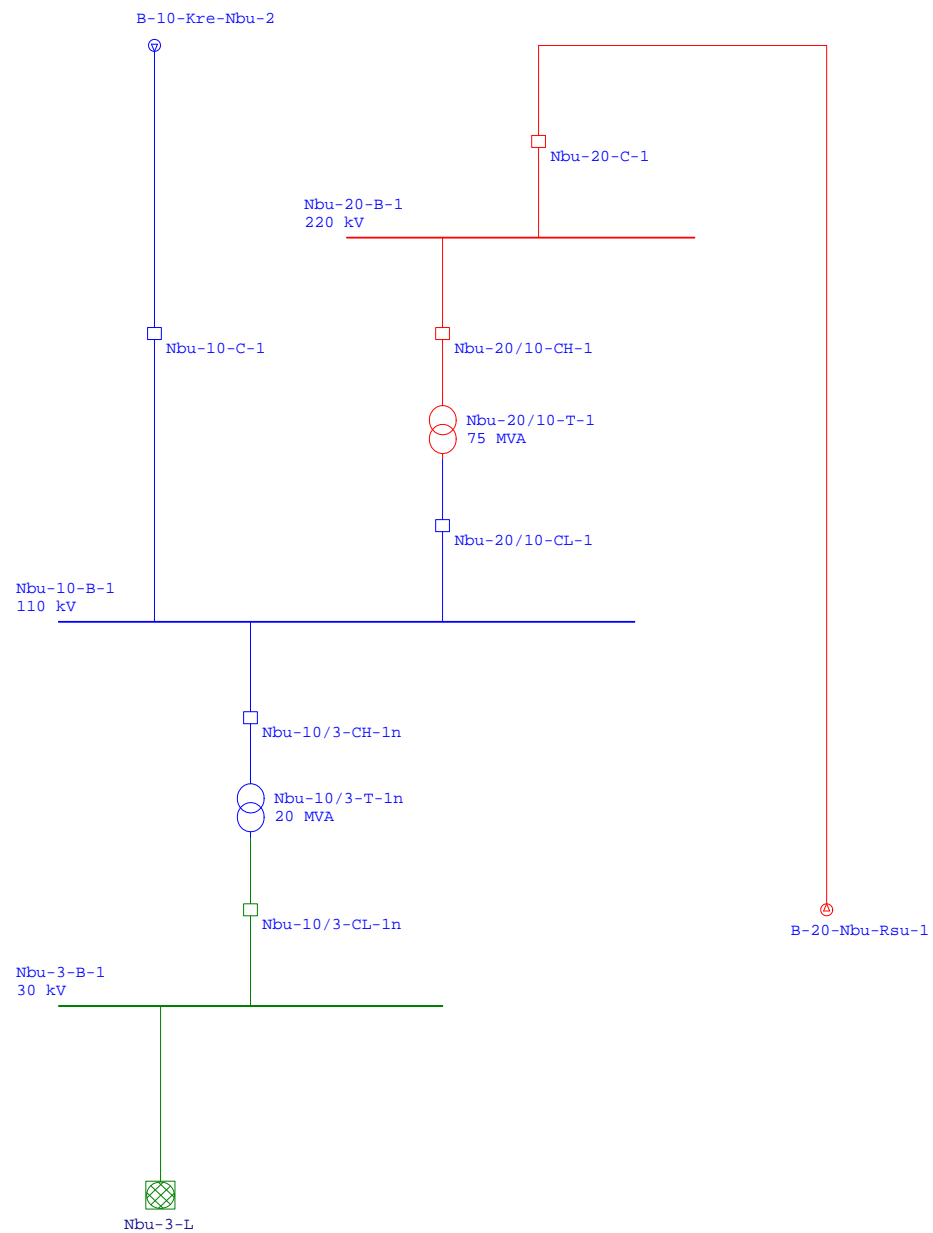




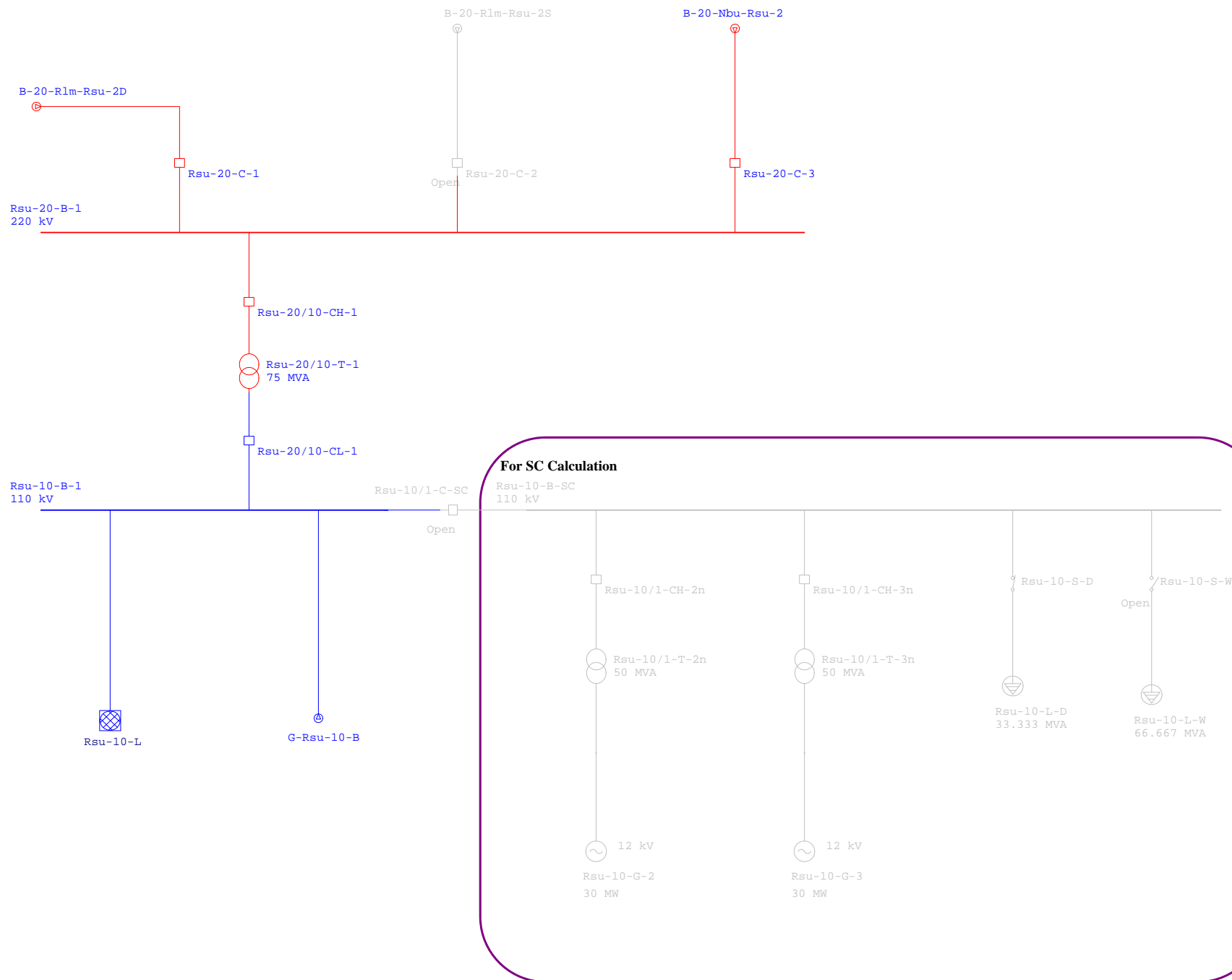
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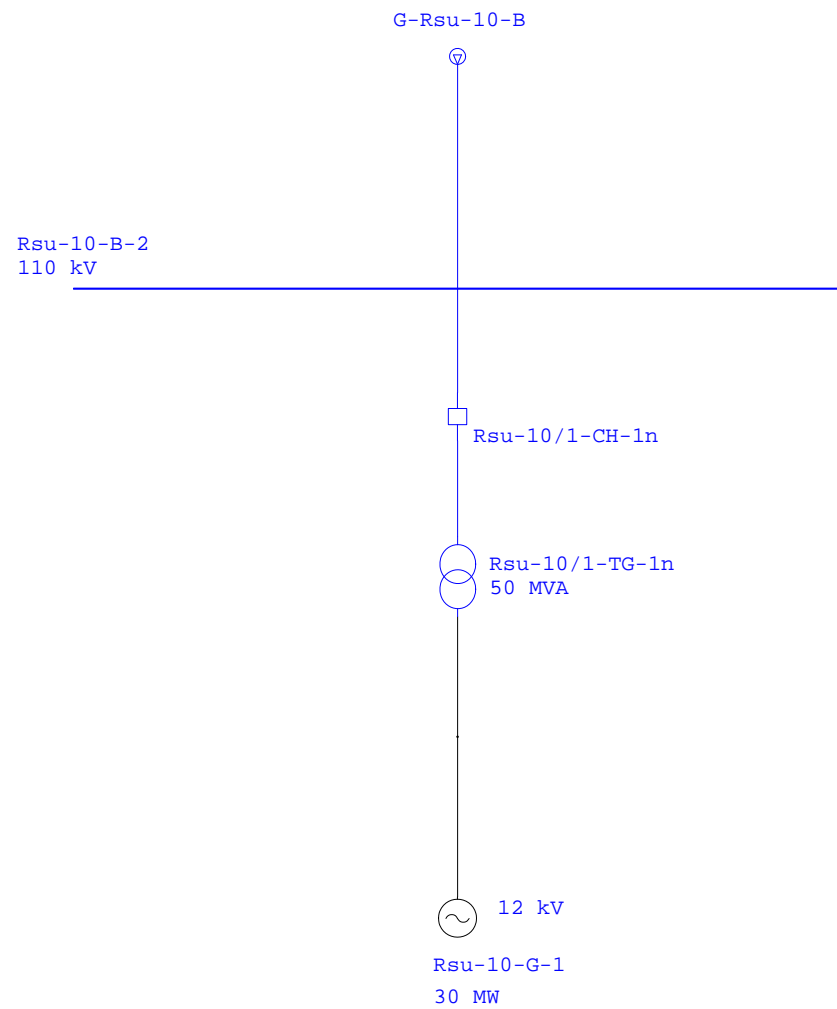


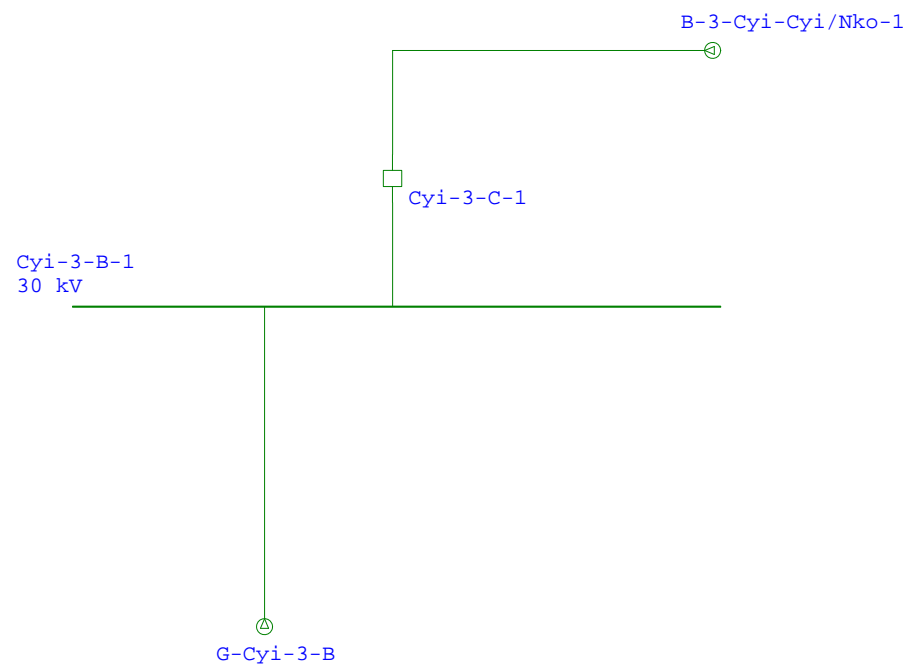
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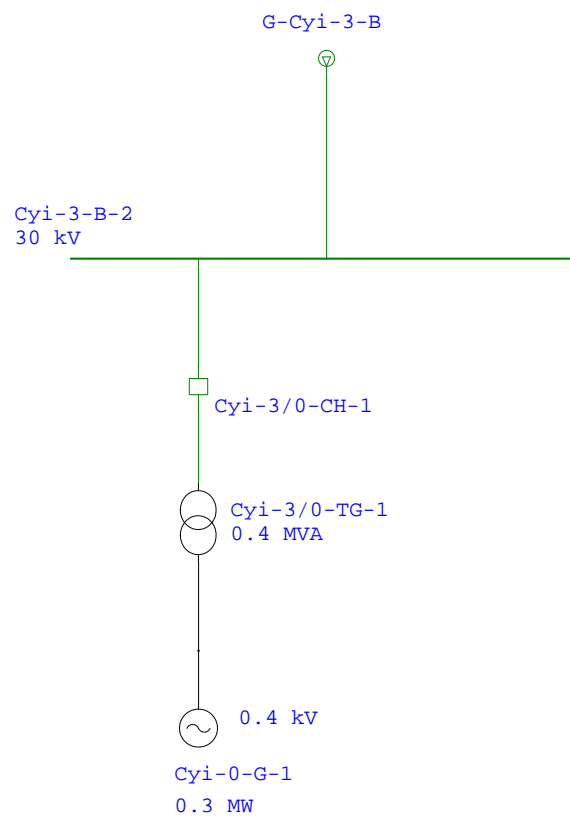


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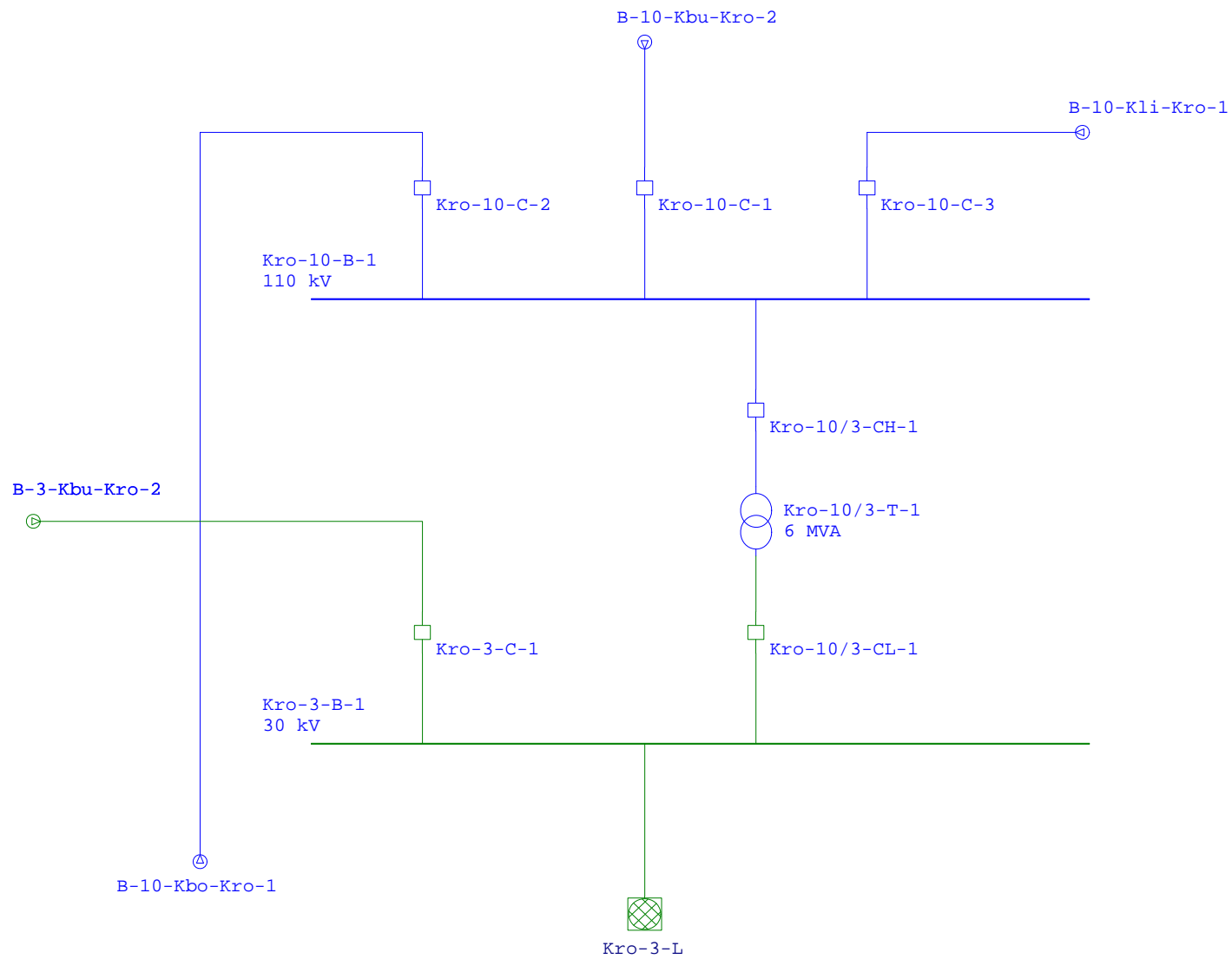




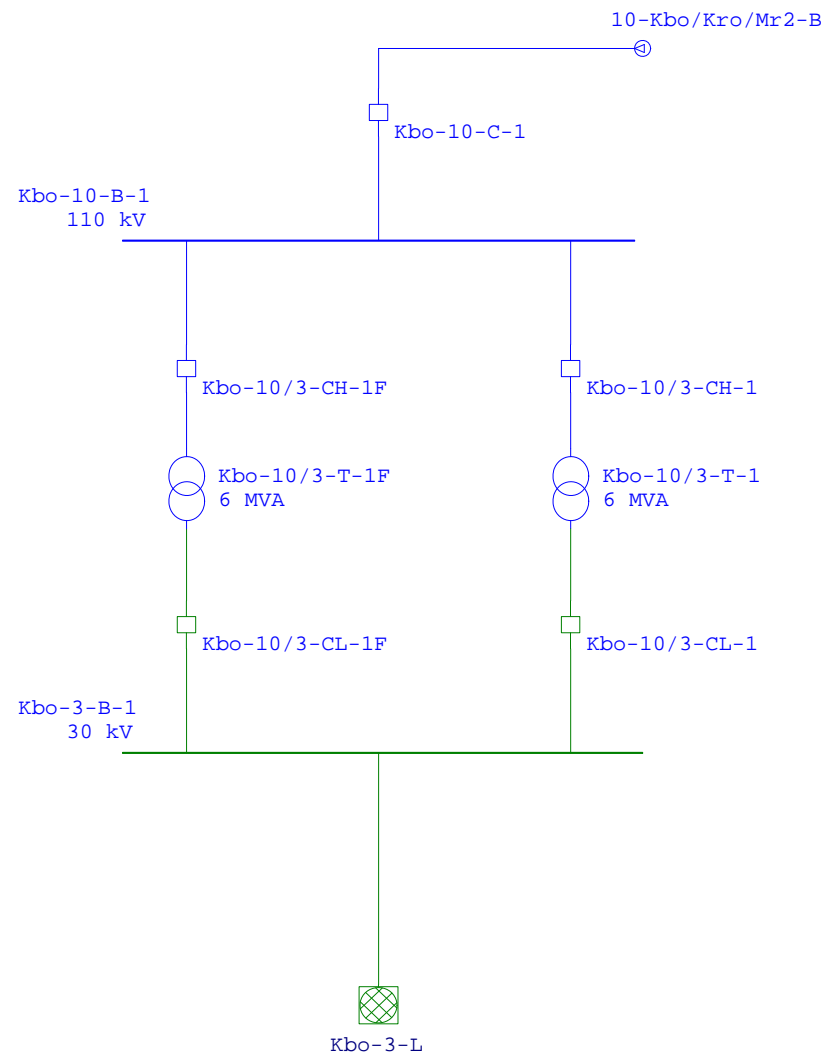




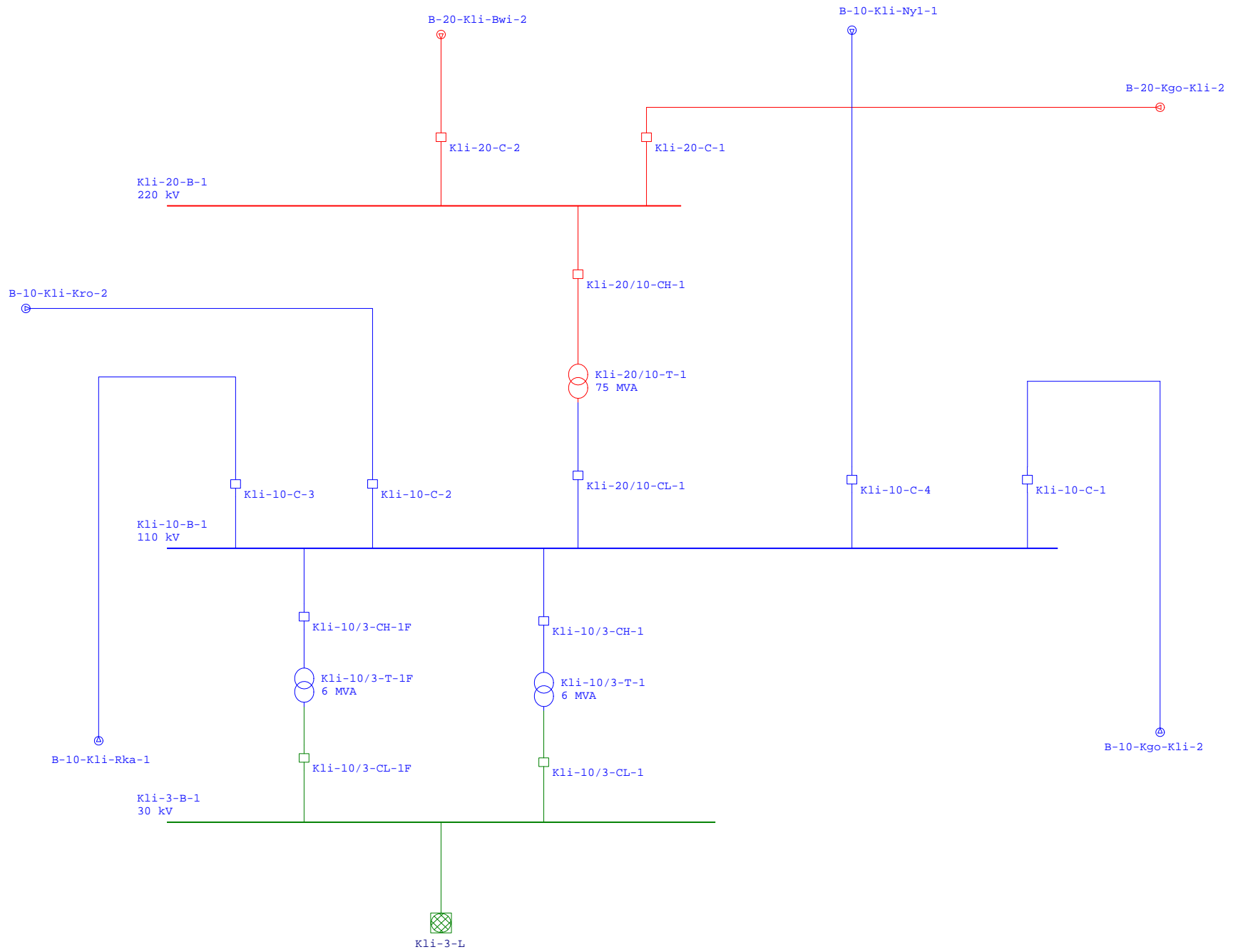
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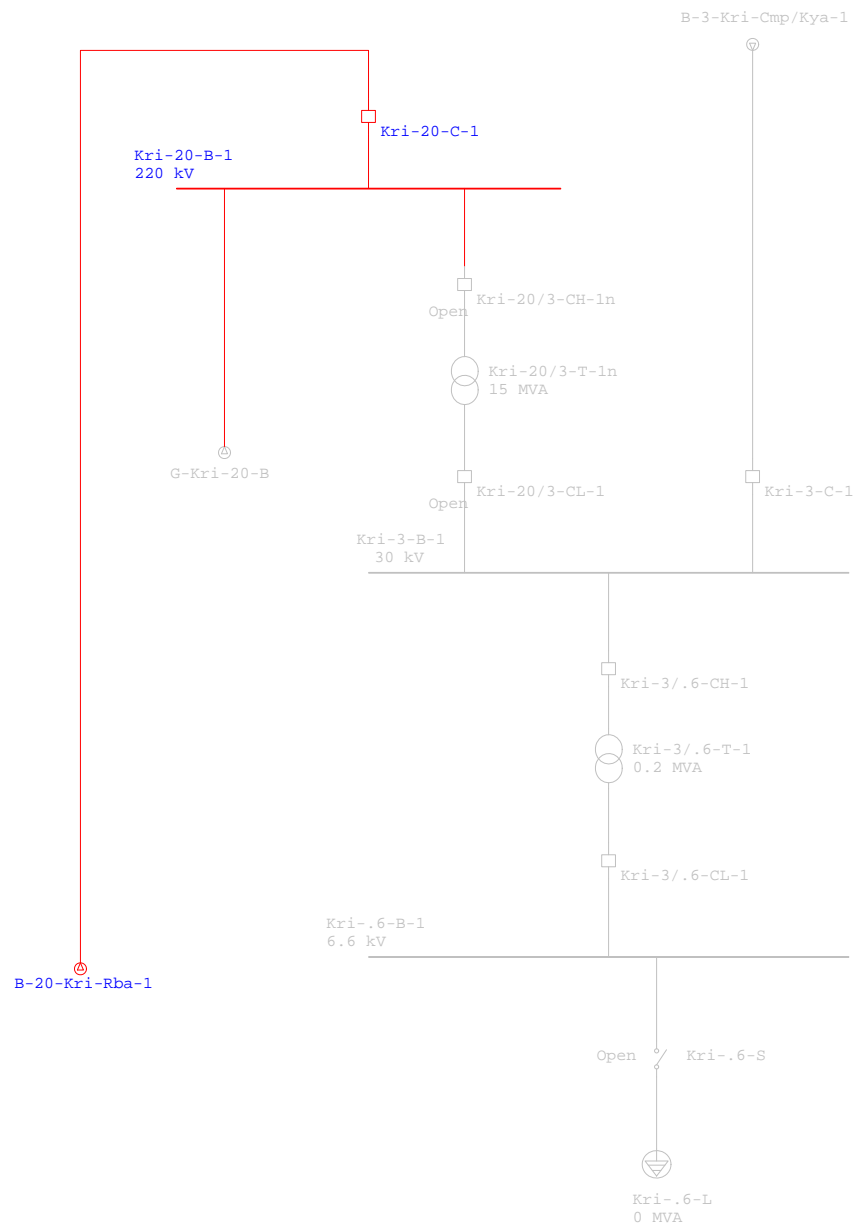
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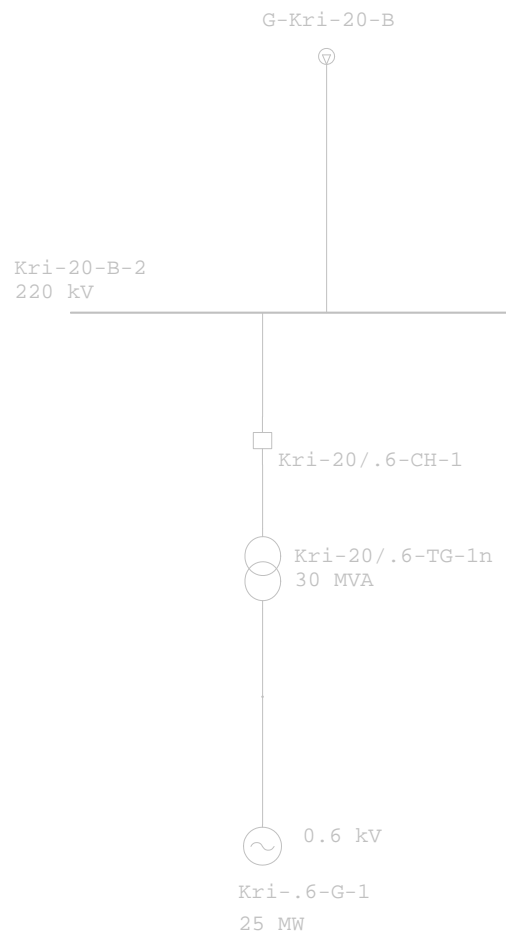


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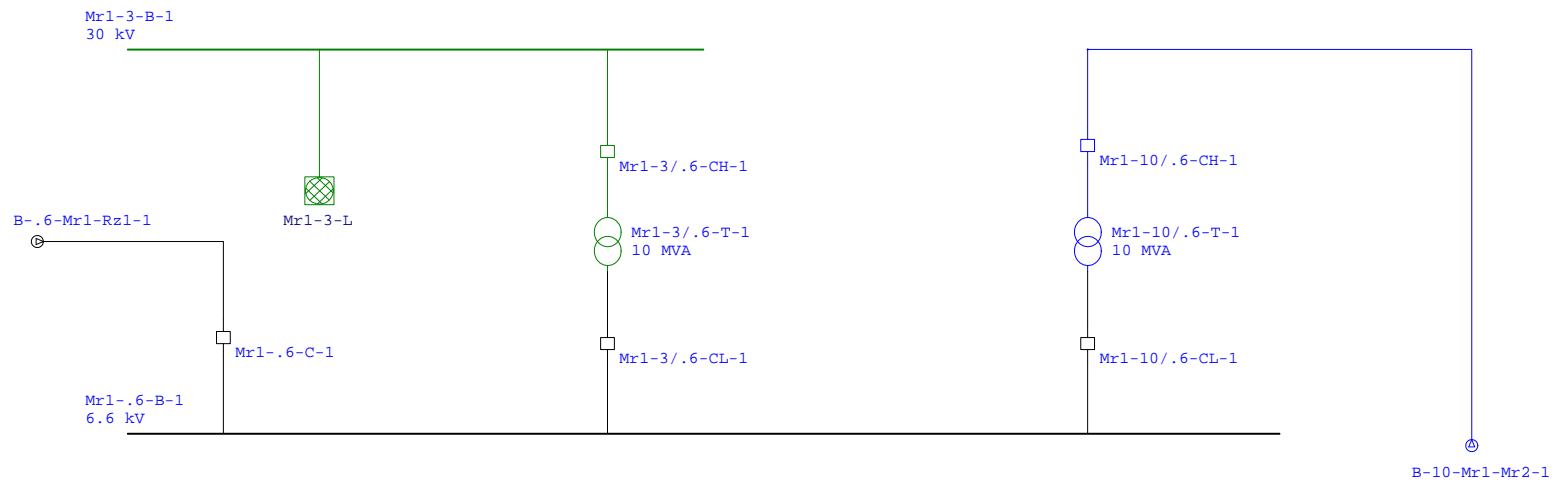


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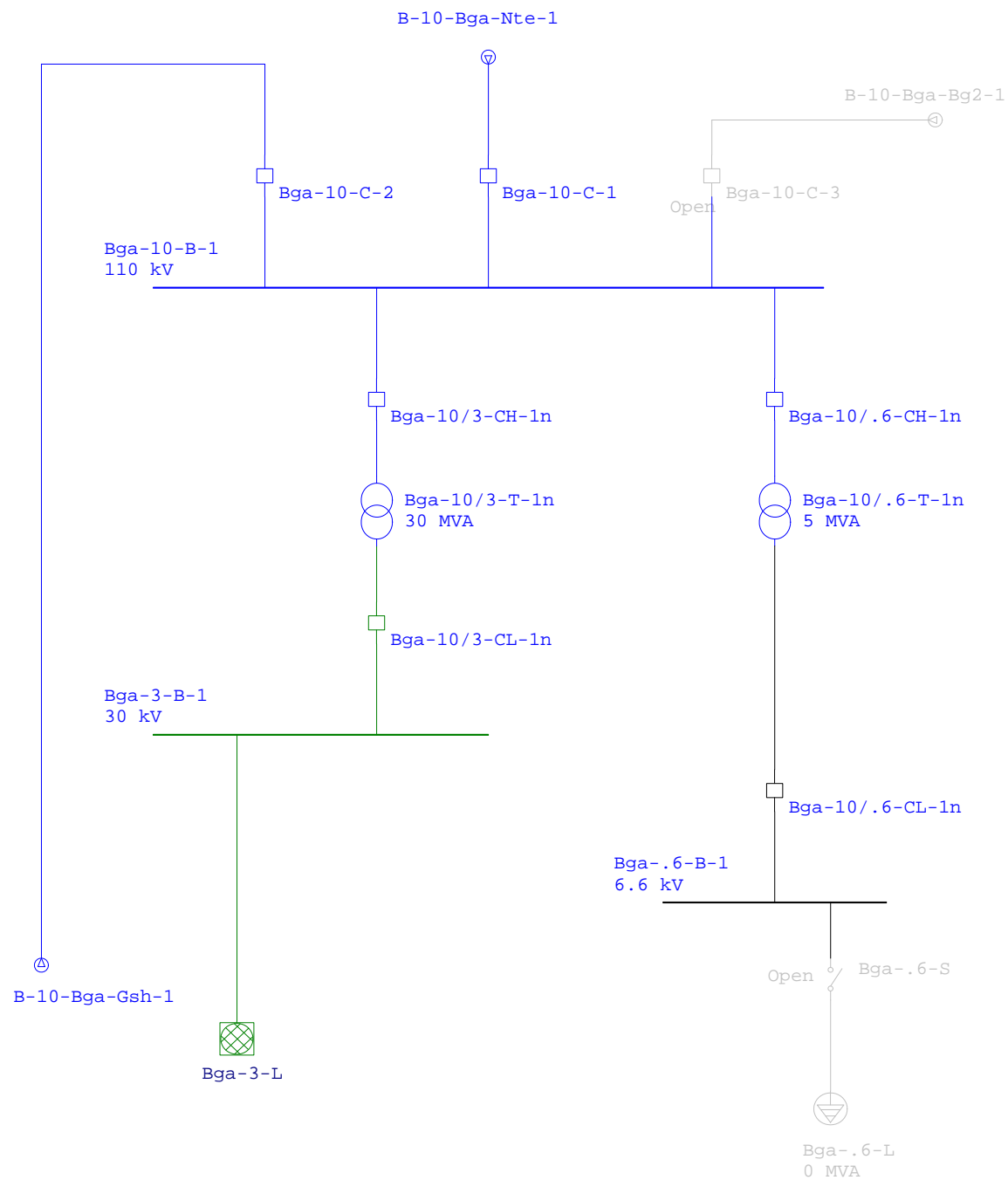




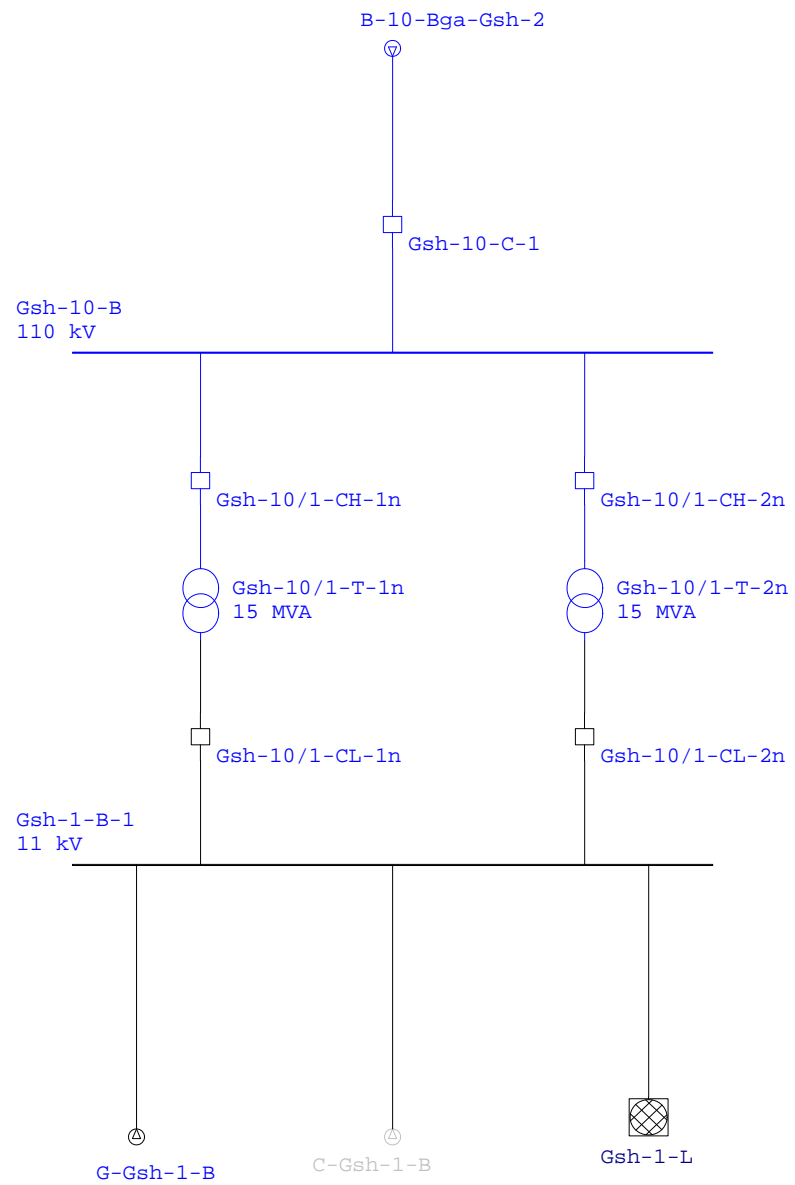
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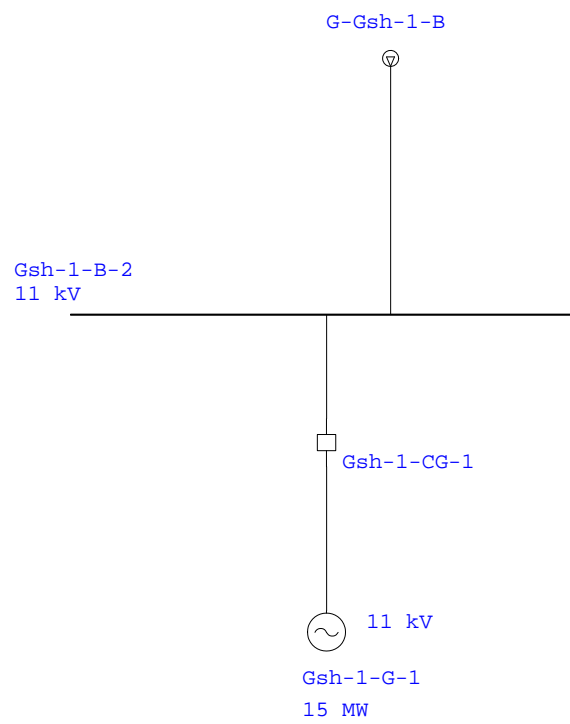


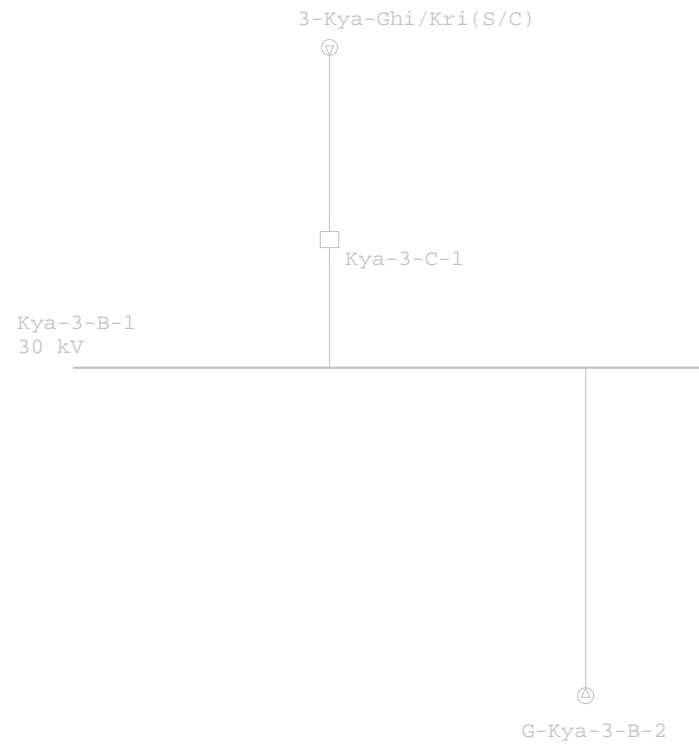
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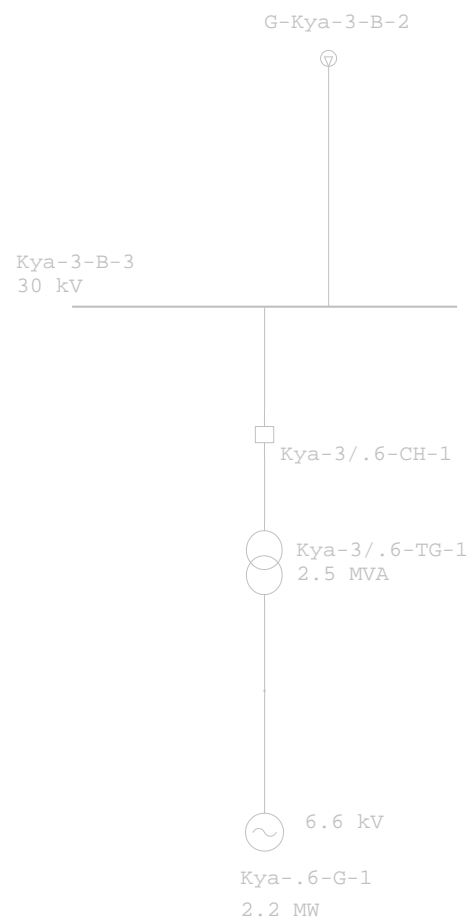


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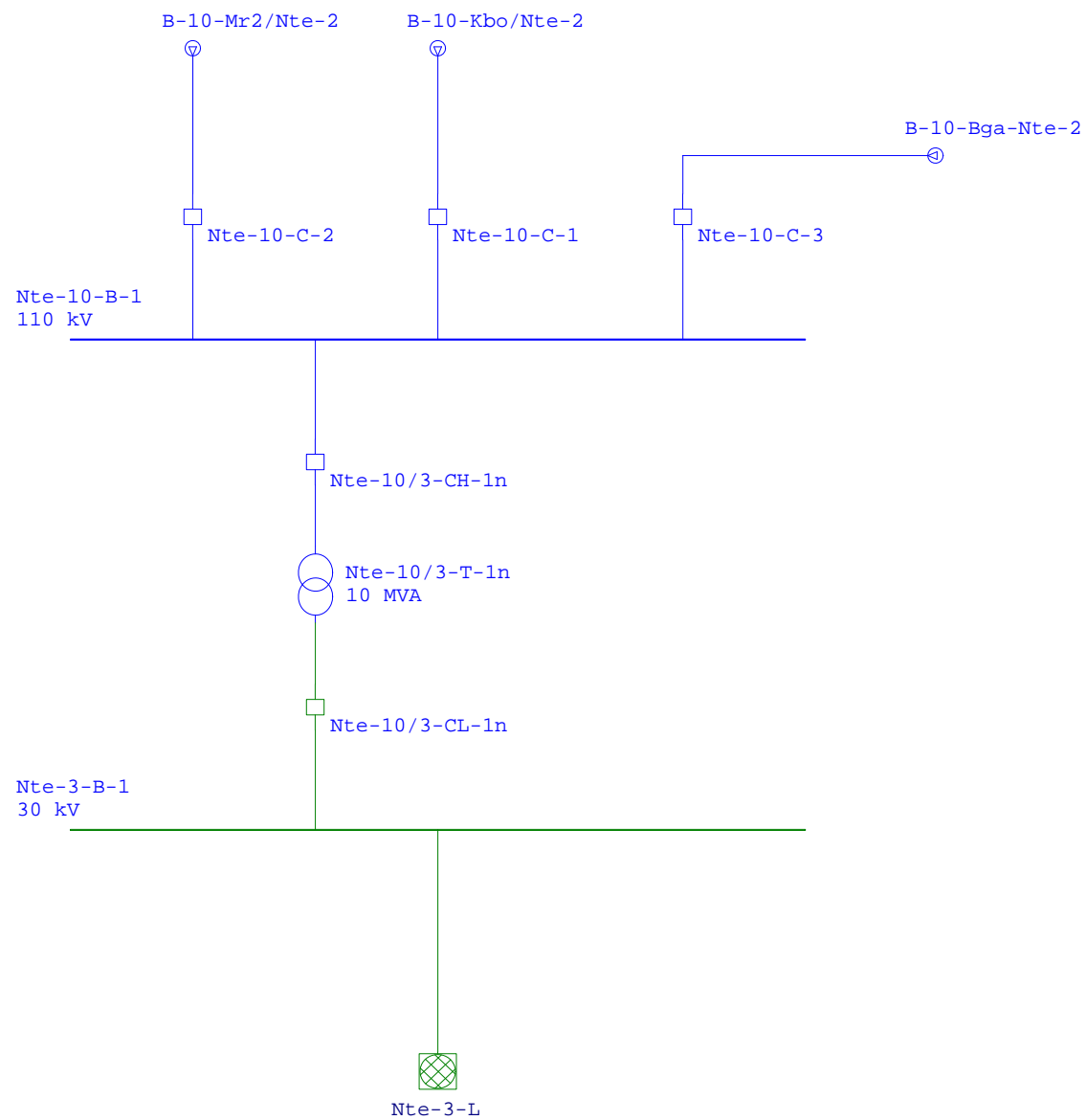




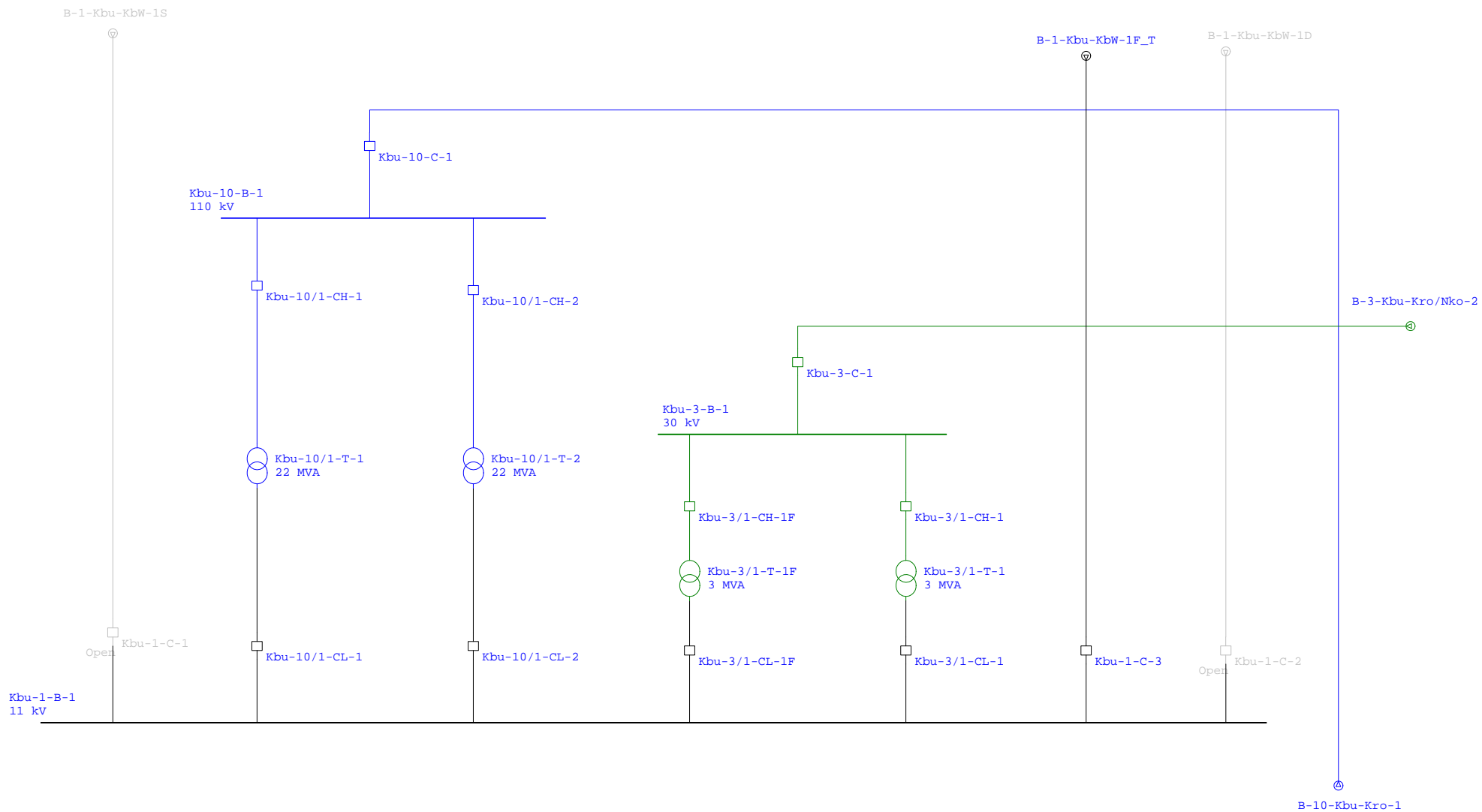


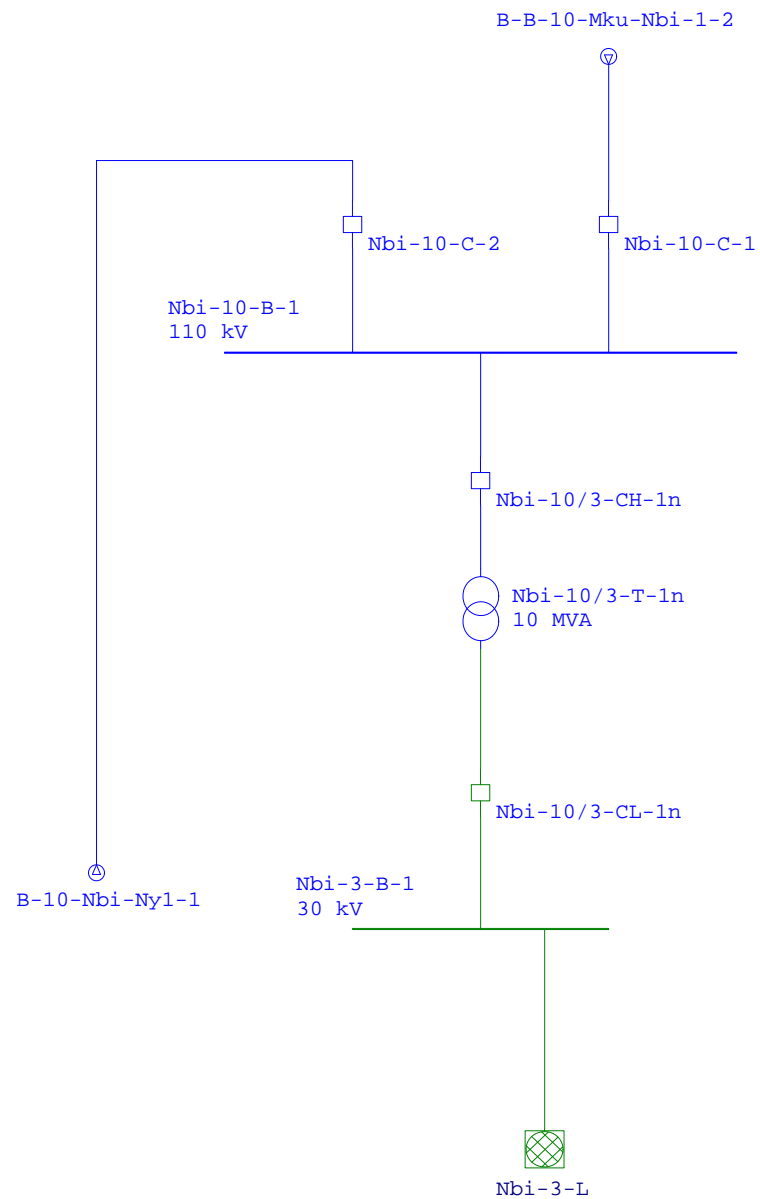


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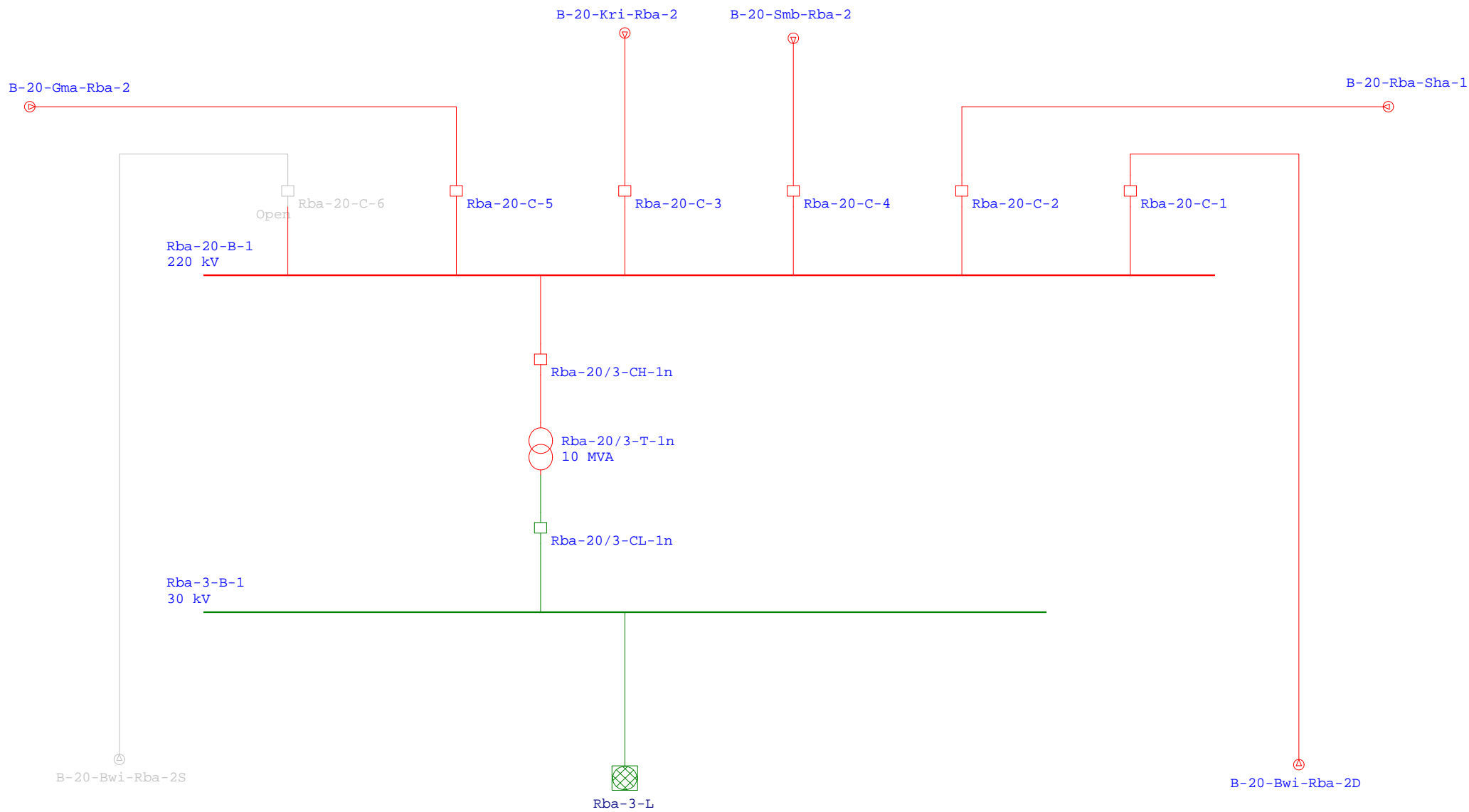


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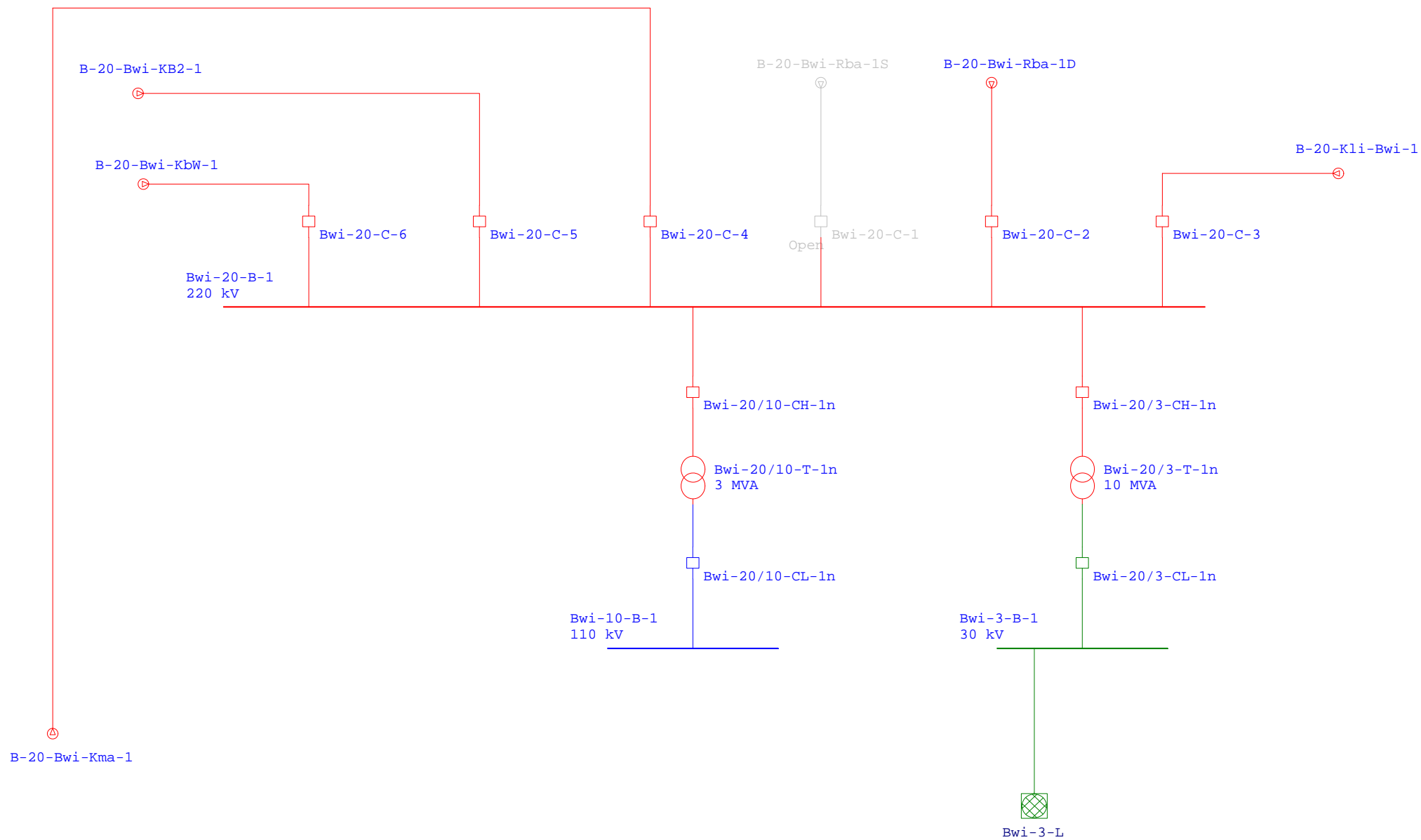




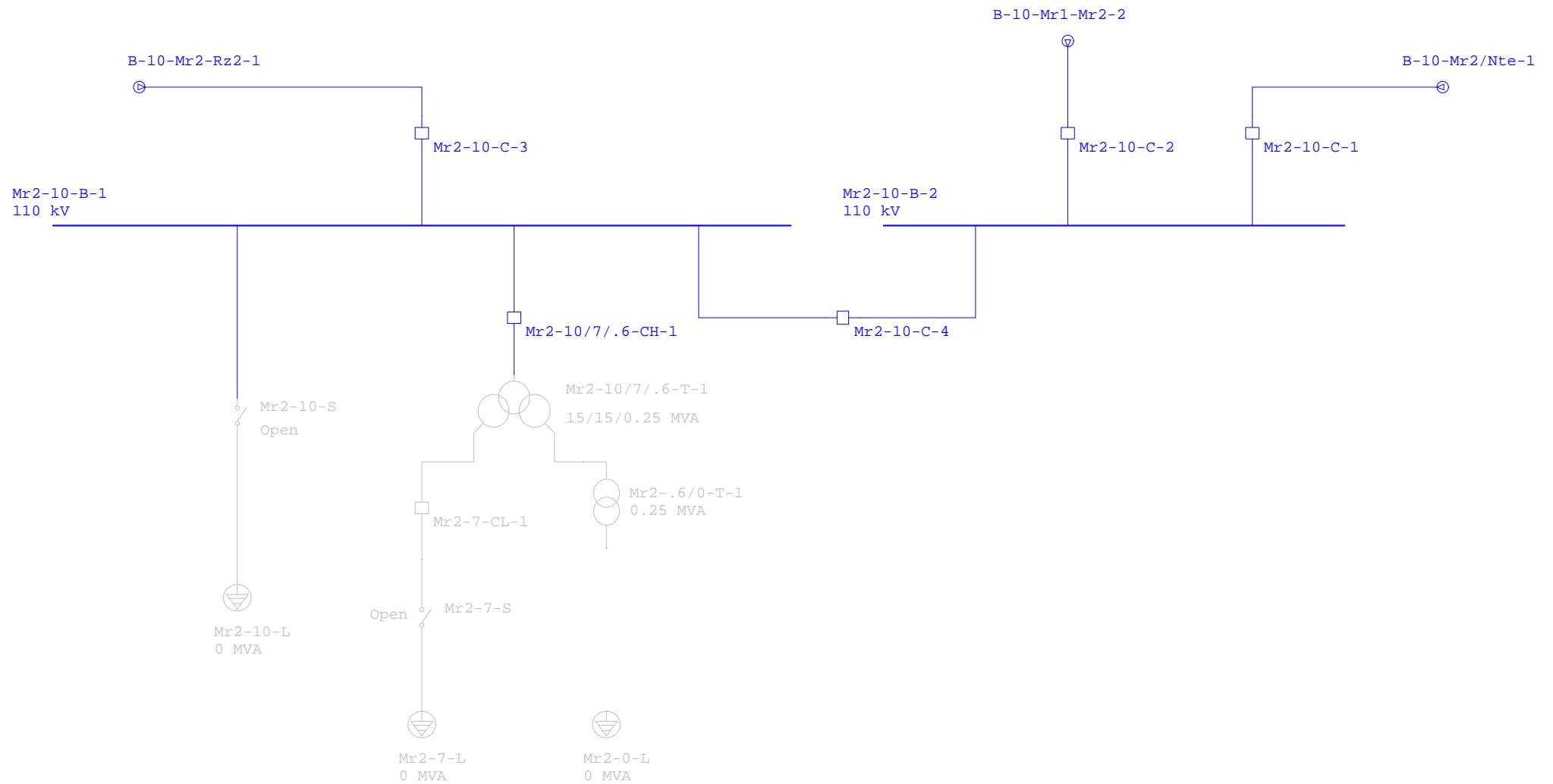
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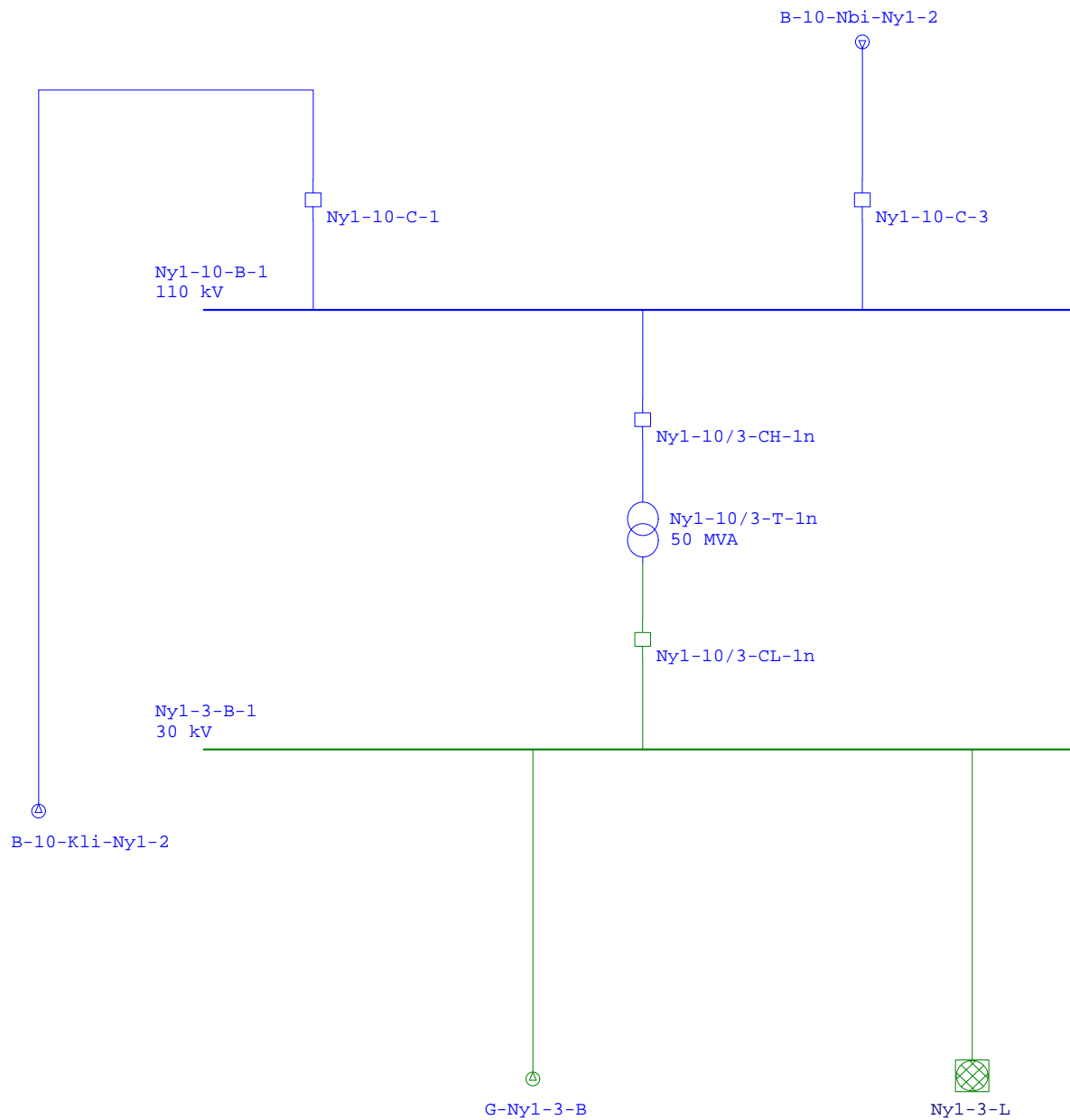
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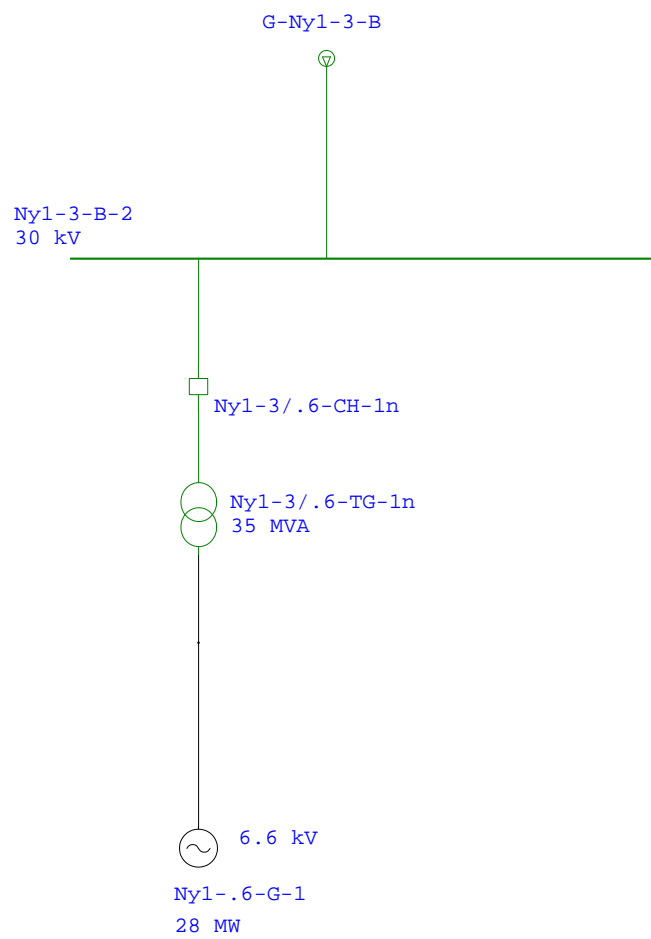


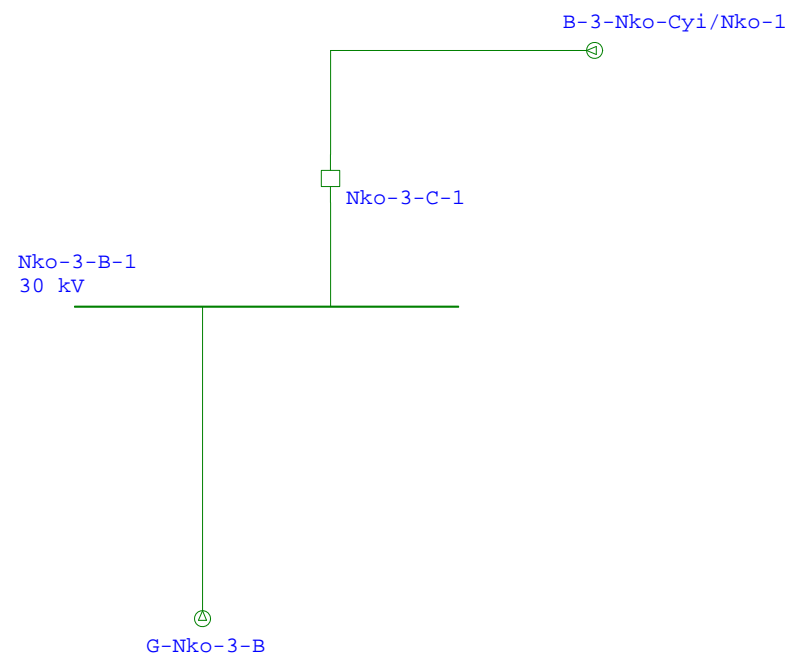
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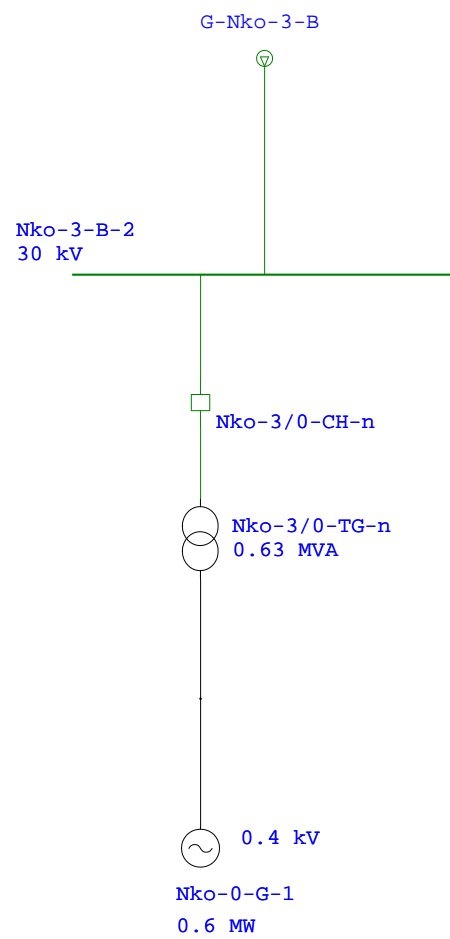


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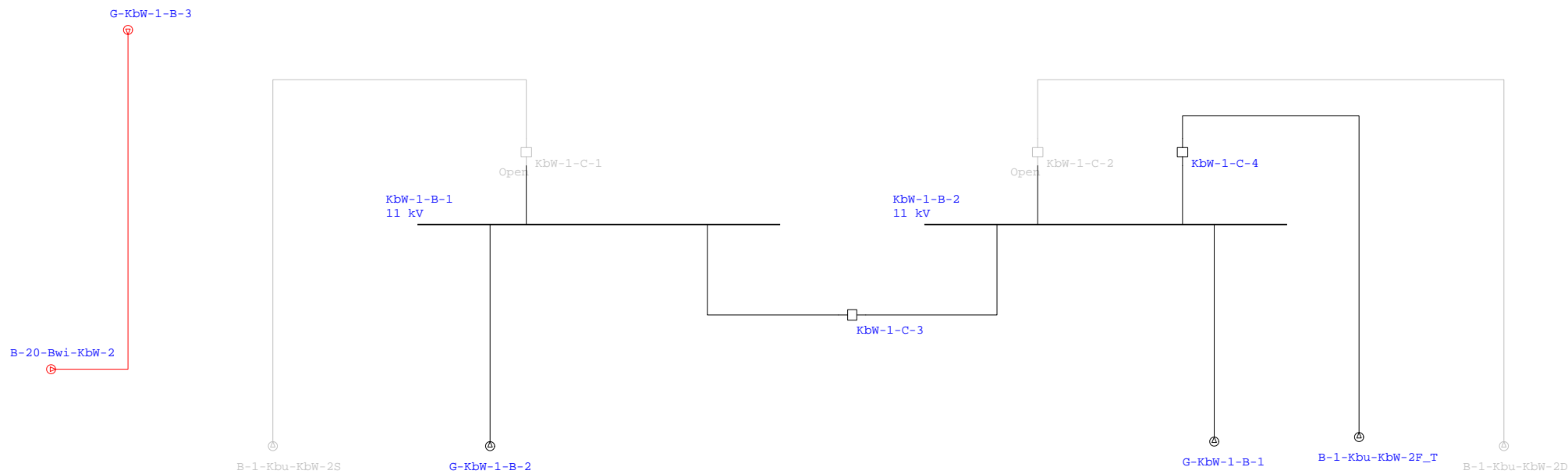


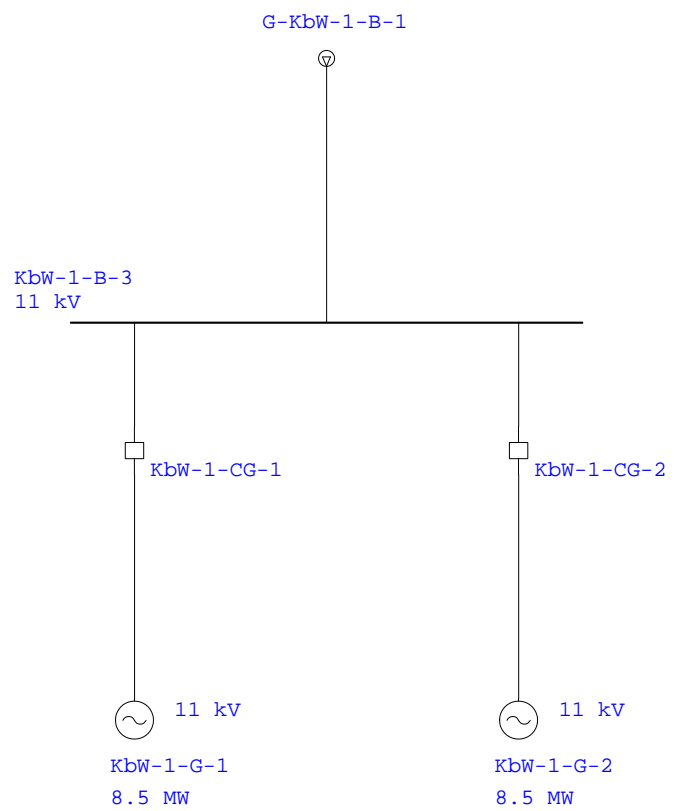


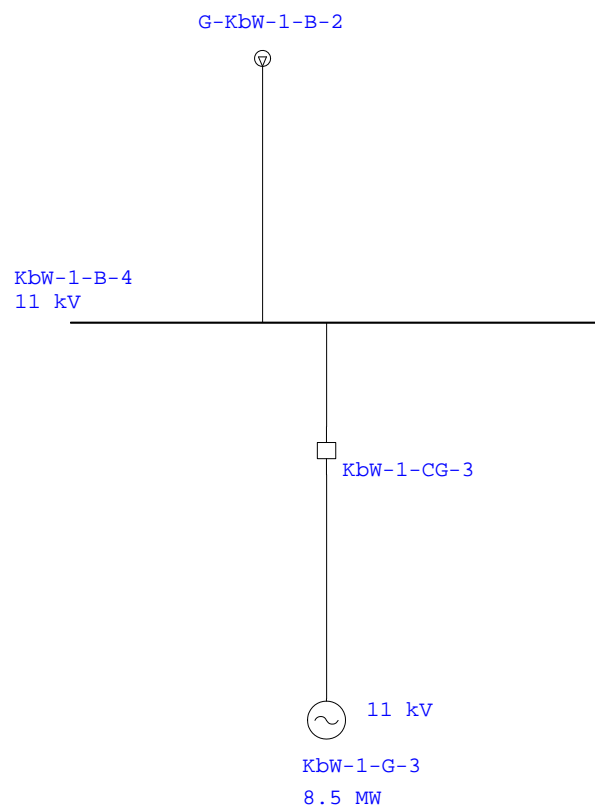




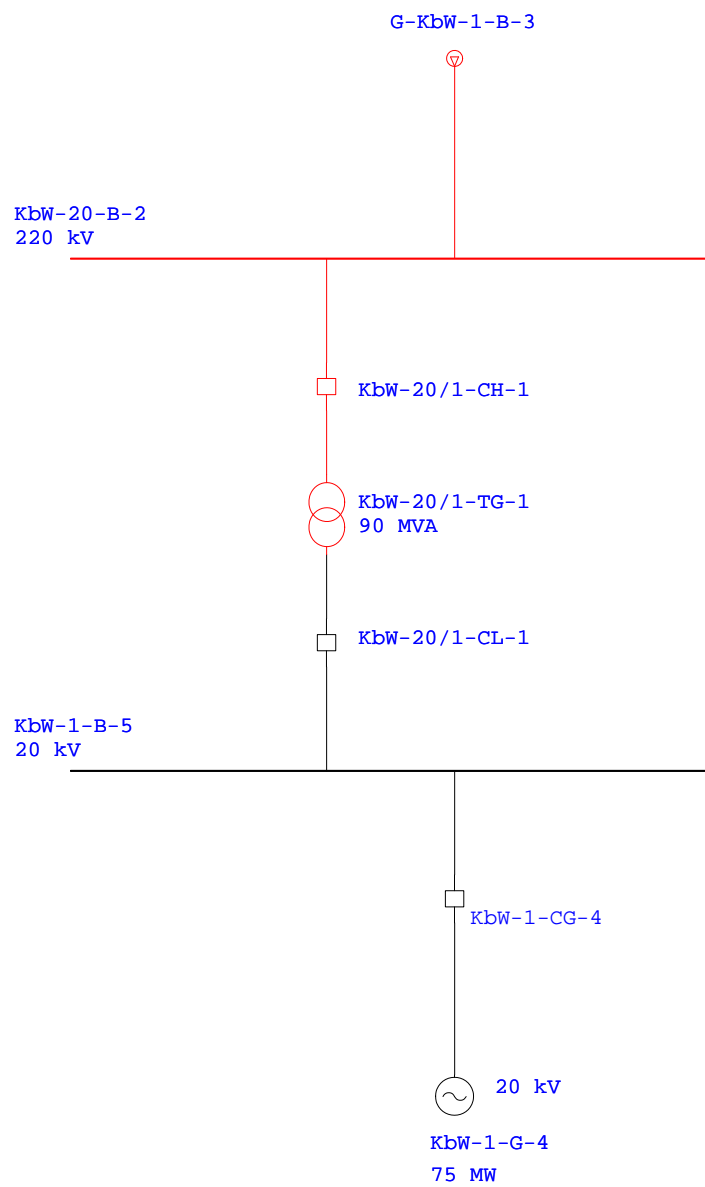
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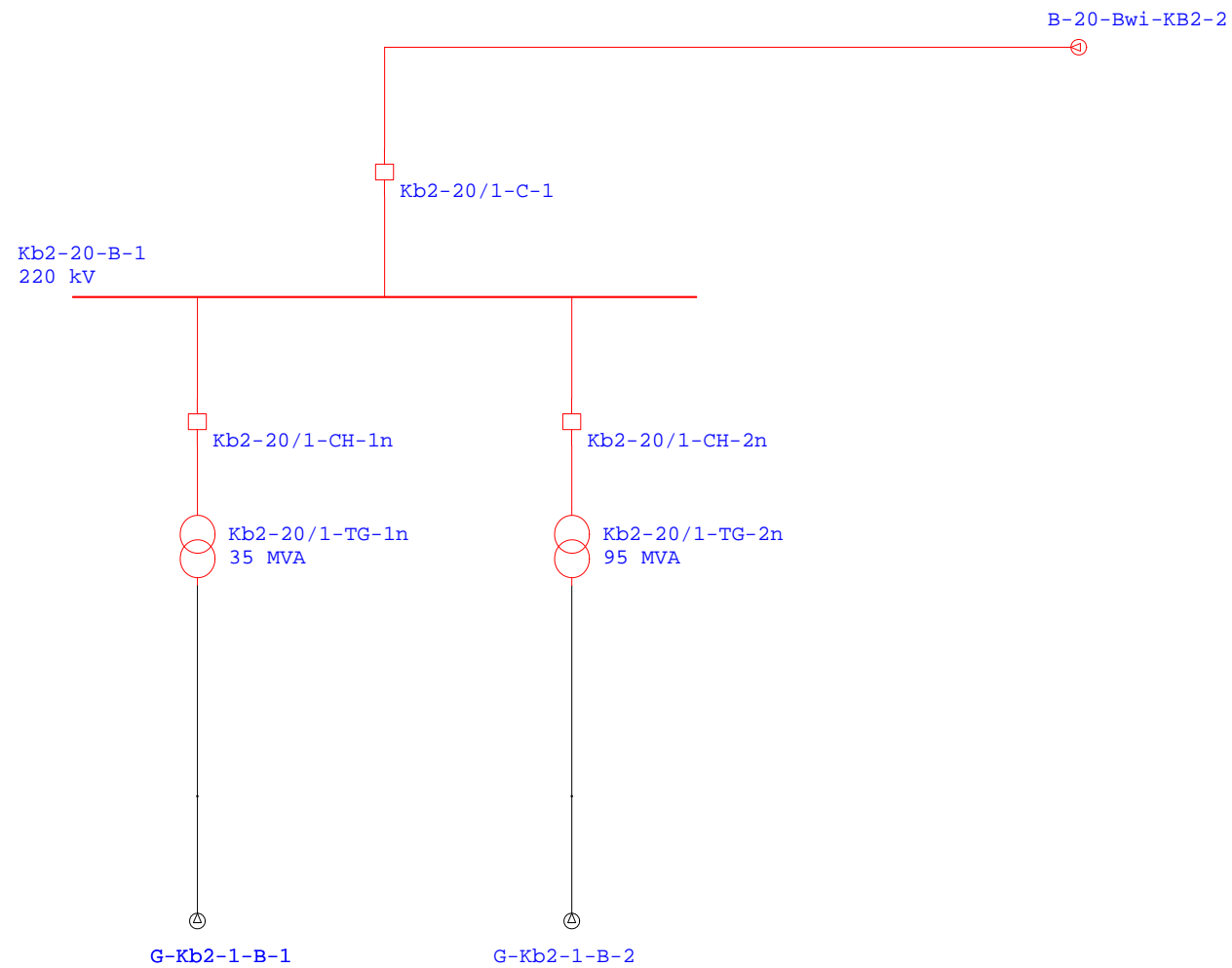


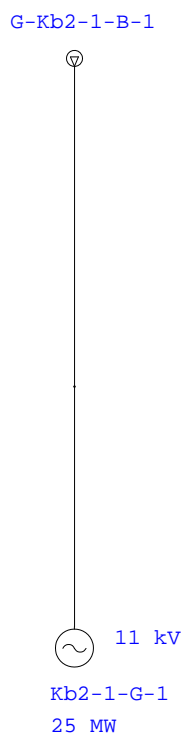


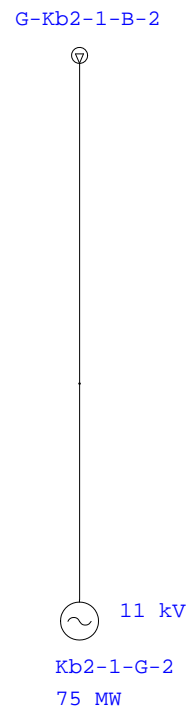


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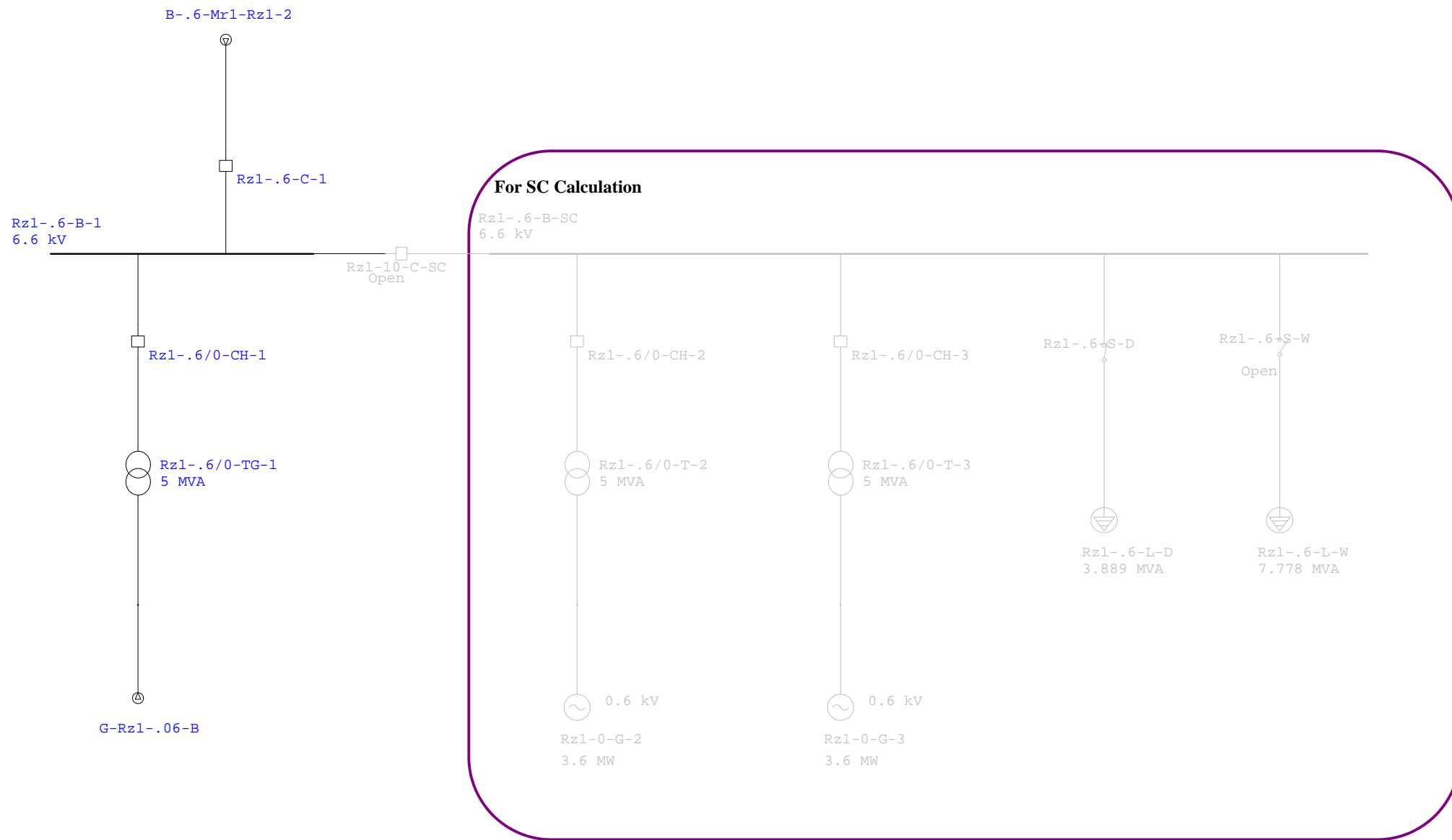




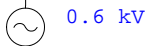




One-Line Diagram - OLV1=>Ruzizi 1 (Edit Mode)



G-Rz1-.06-B

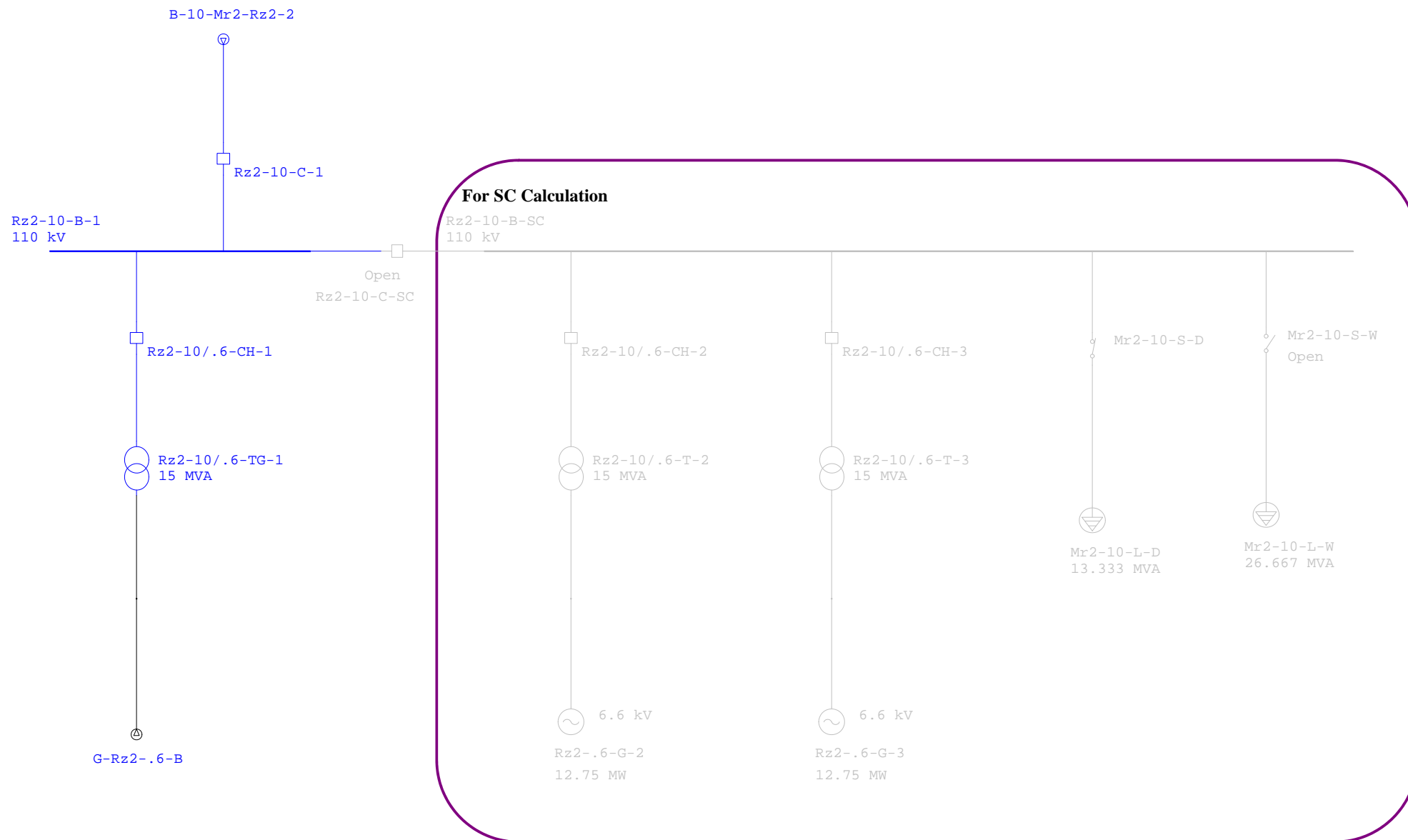


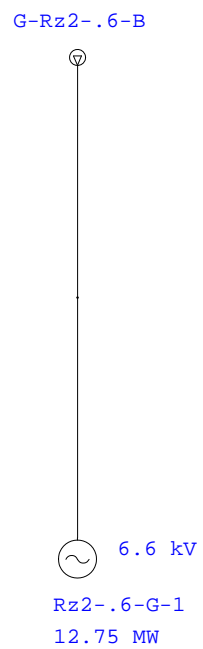
0.6 kV

Rz1-0-G-1

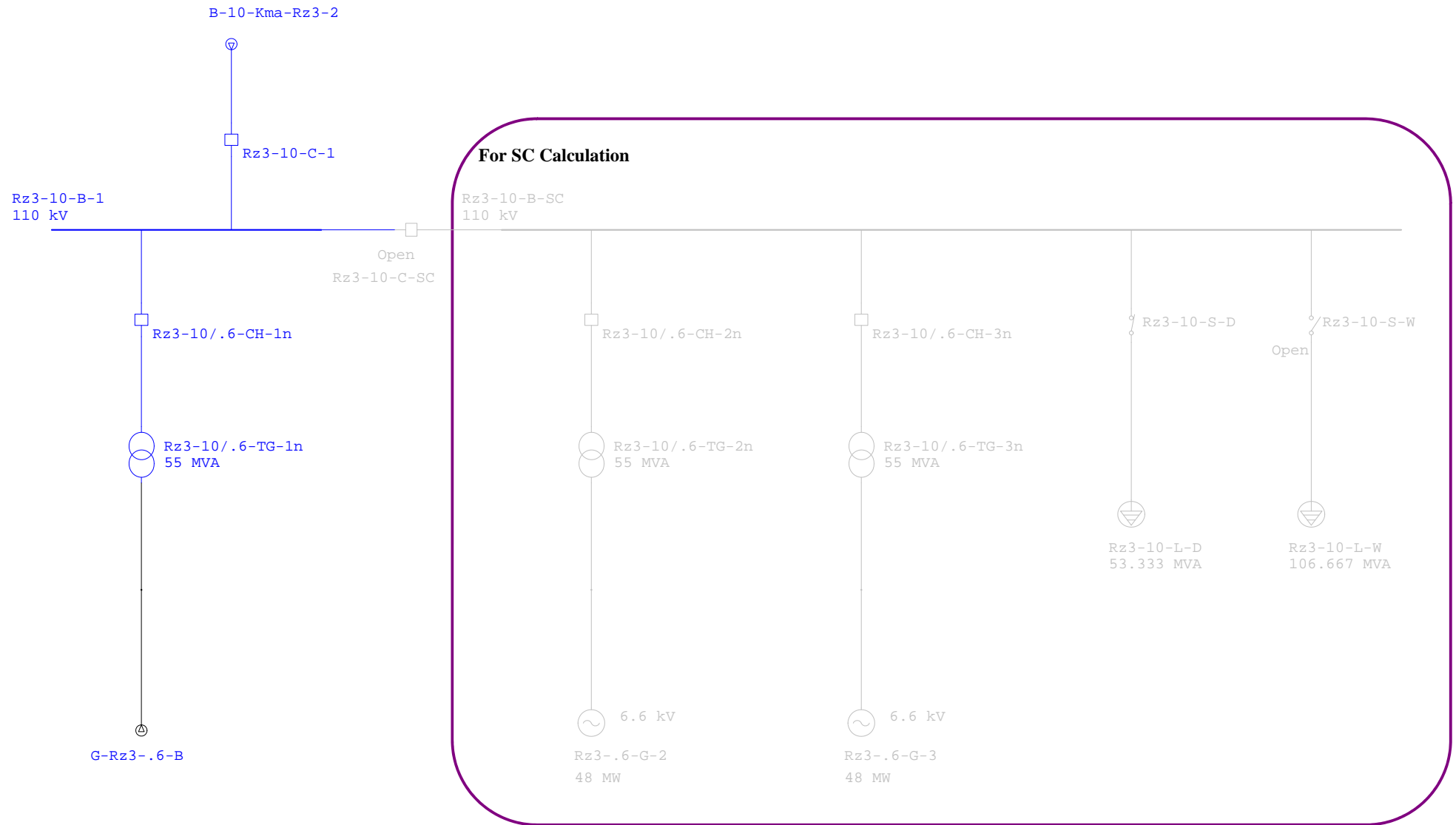
3.6 MW

One-Line Diagram - OLV1=>Ruzizi 2 (Edit Mode)





One-Line Diagram - OLV1=>Ruzizi 3 (Edit Mode)



G-Rz3-.6-B

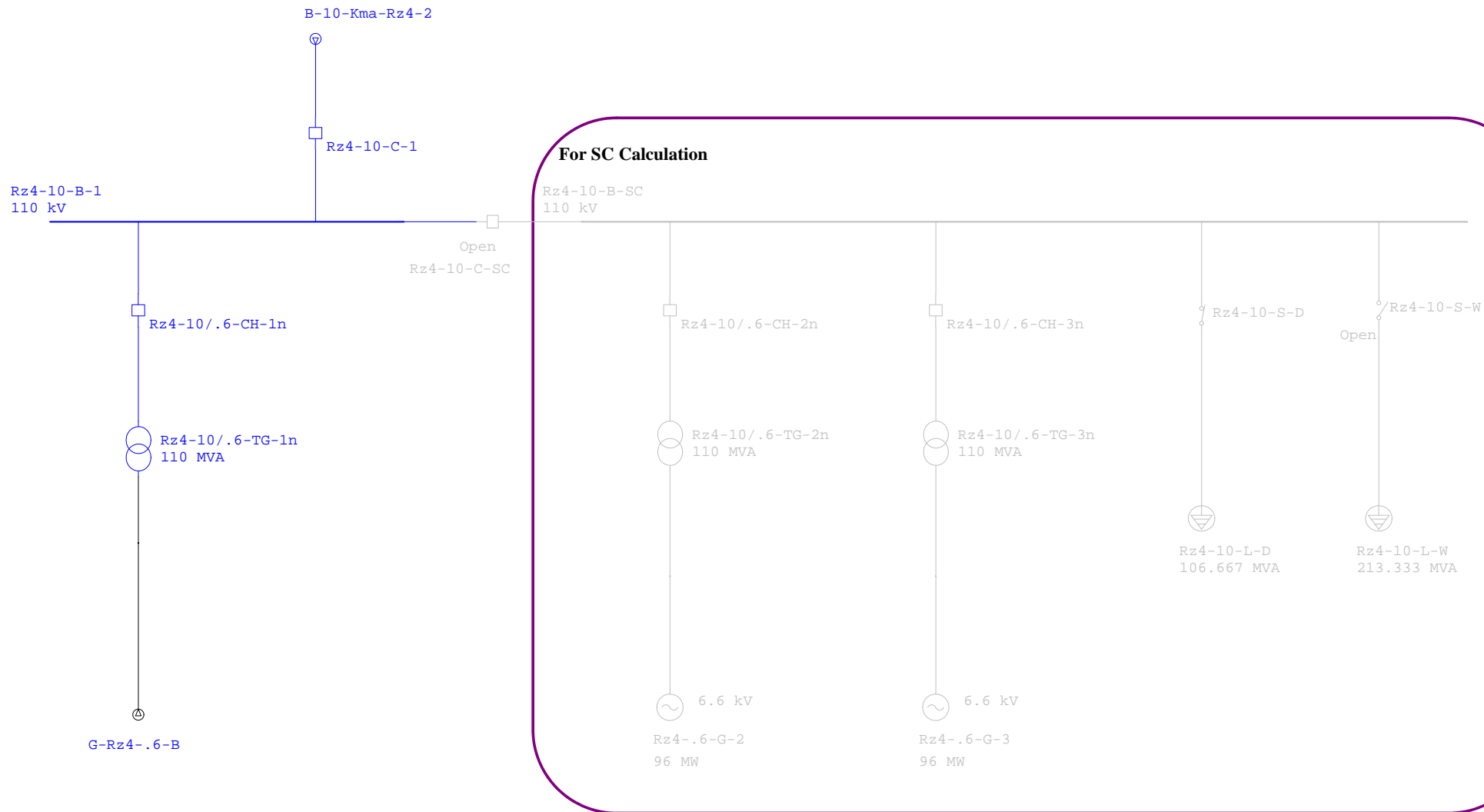


6.6 kV

Rz3-.6-G-1

48 MW

One-Line Diagram - OLV1=>Ruzizi 4 (Edit Mode)



G-Rz4-.6-B

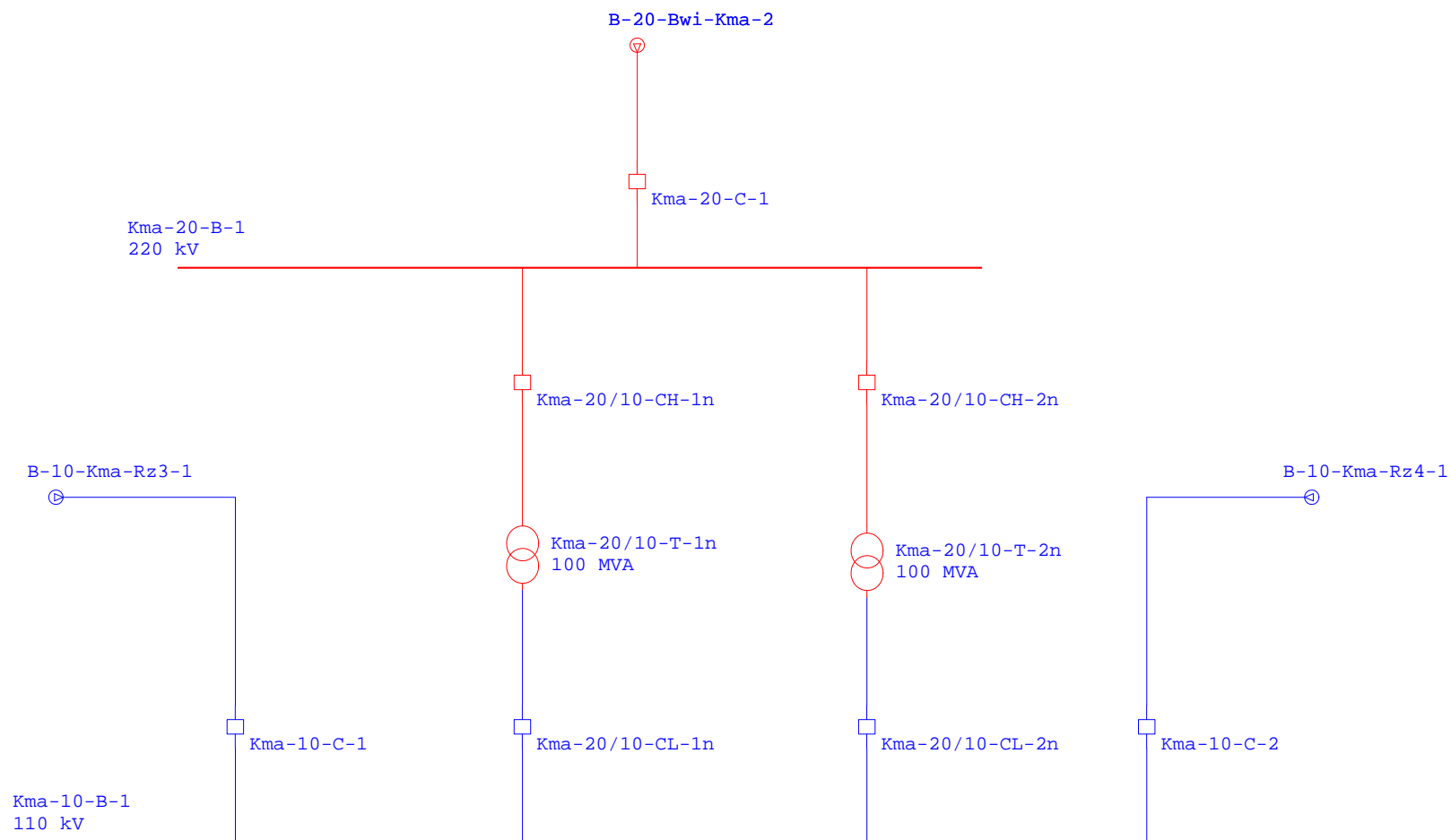


6.6 kV

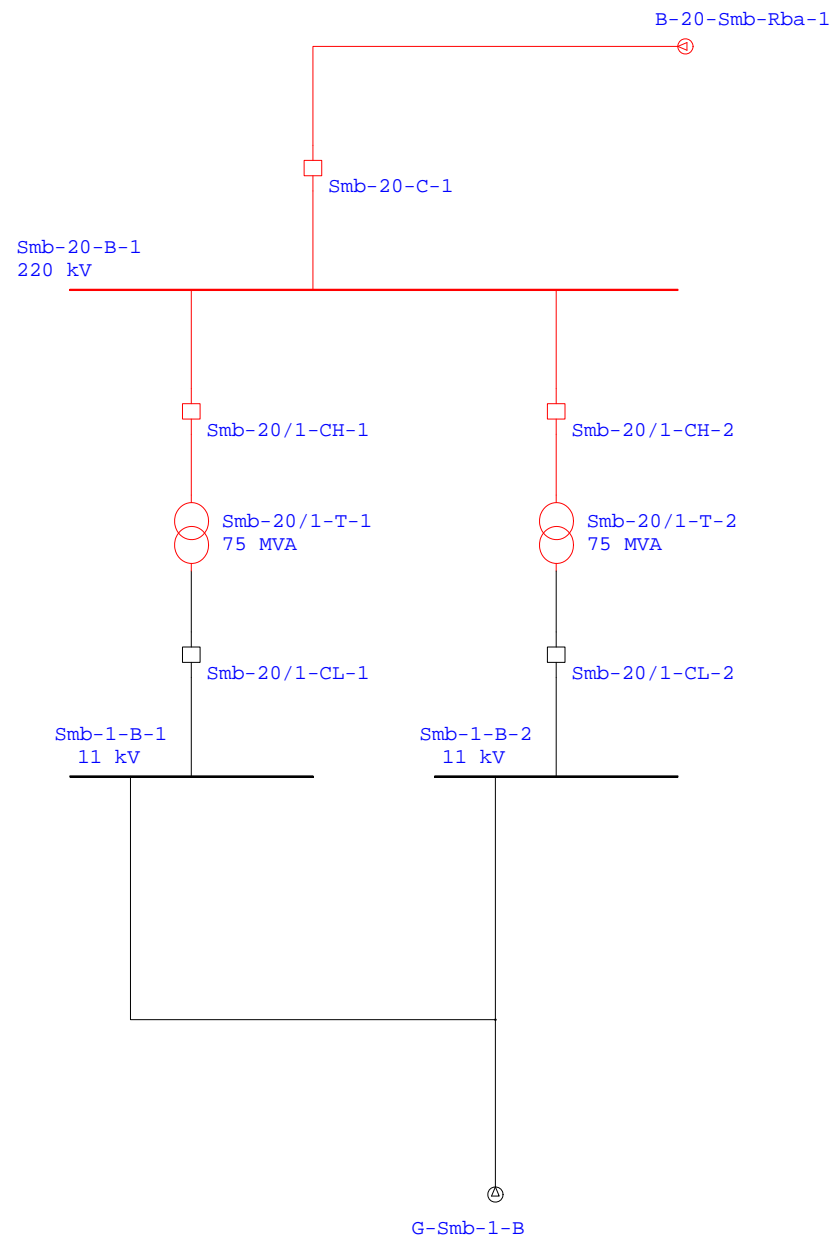
Rz4-.6-G-1

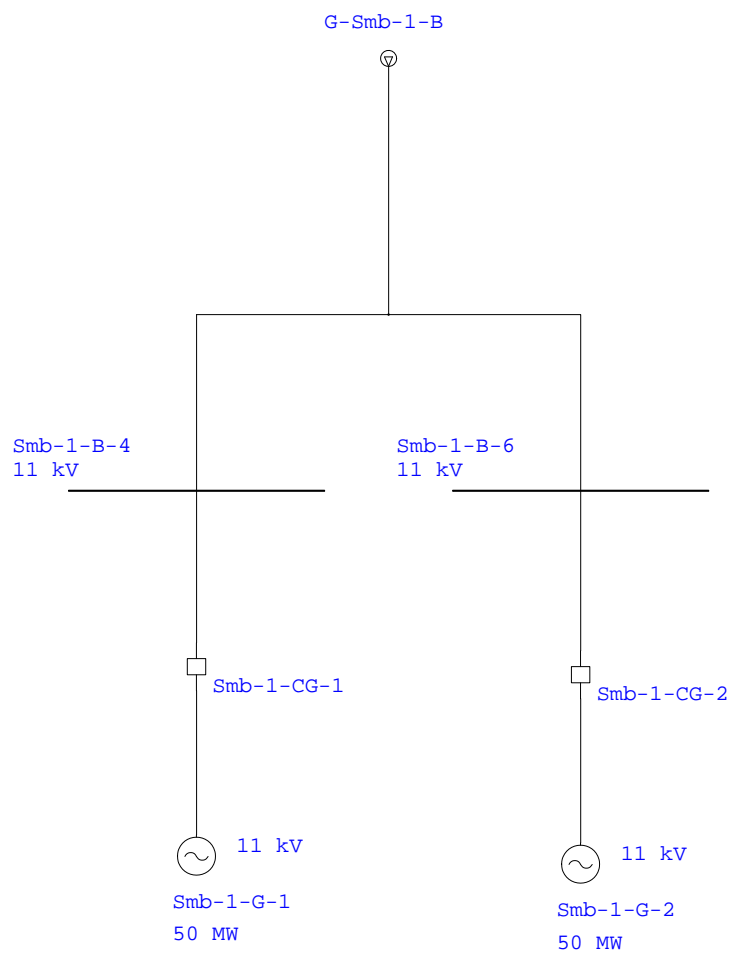
96 MW

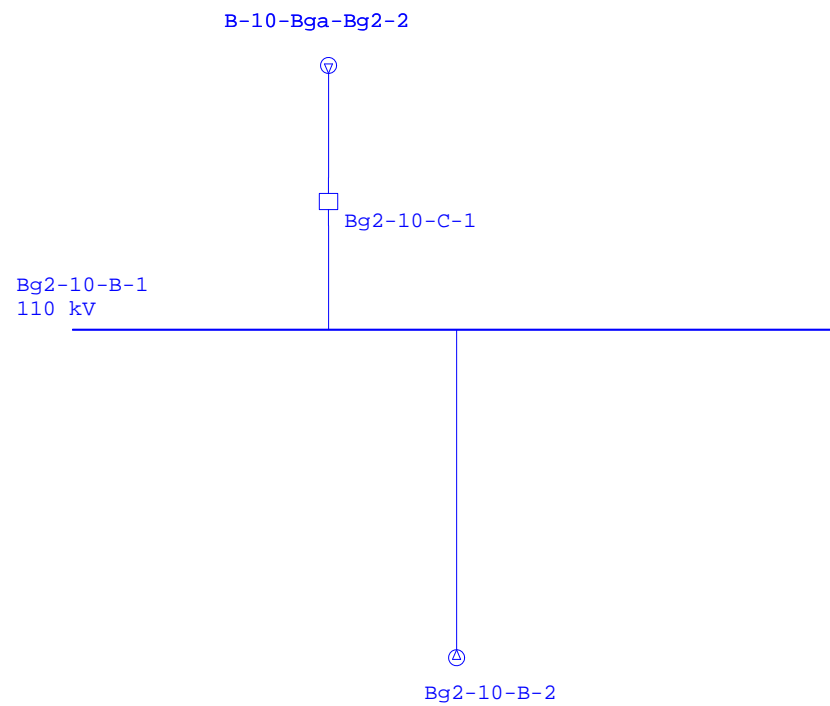
One-Line Diagram - OLV1=>Kamanyora (Edit Mode)

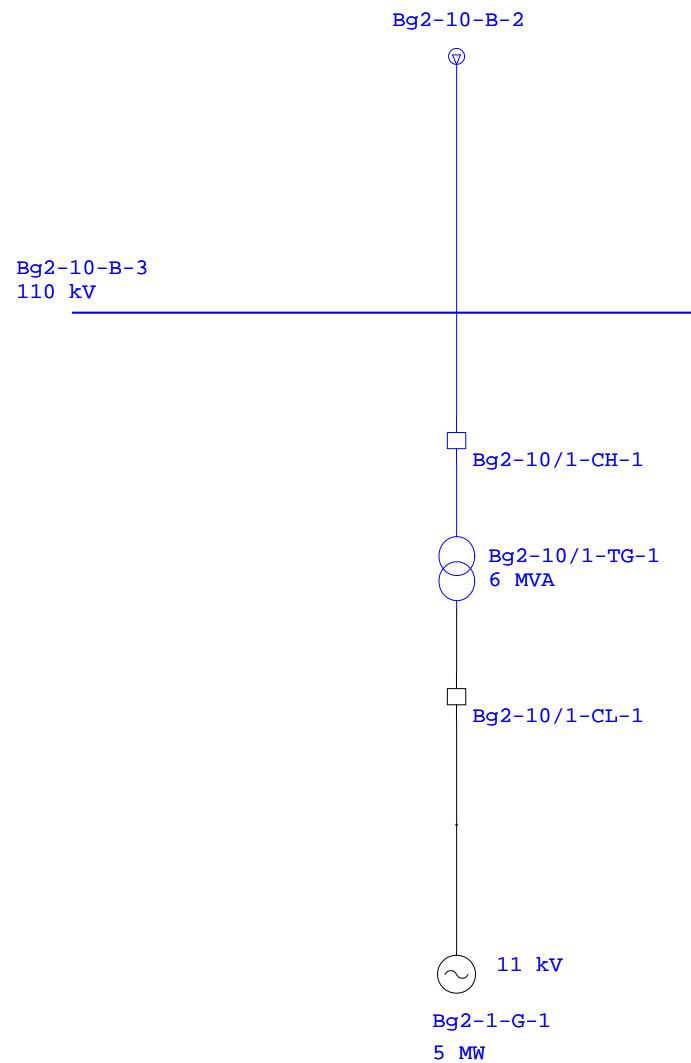


One-Line Diagram - OLV1=>Smbion (Edit Mode)









Analysis Items (ETAP Scenario Setting)

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Analysis Items (ETAP Scenario Setting)

	Scenario	ETAP Setting								Notes
		System	Presentation	Revision	Config. Status	Study Mode	Study Type	Study Case	Output Report	
Power Flow Analysis	S-LF-14D	Network Analysis	OLV1	Base	2014-Dry	LOAD FLOW	Load Flow	LF-Dry	R-LF-14D	
	S-LF-14W	Network Analysis	OLV1	Base	2014-Wet	LOAD FLOW	Load Flow	LF-Wet	R-LF-14W	
	S-LF-15D	Network Analysis	OLV1	Base	2015-Dry	LOAD FLOW	Load Flow	LF-Dry	R-LF-15D	
	S-LF-15W	Network Analysis	OLV1	Base	2015-Wet	LOAD FLOW	Load Flow	LF-Wet	R-LF-15W	
	S-LF-16D	Network Analysis	OLV1	Base	2016-Dry	LOAD FLOW	Load Flow	LF-Dry	R-LF-16D	
	S-LF-16W	Network Analysis	OLV1	Base	2016-Wet	LOAD FLOW	Load Flow	LF-Wet	R-LF-16W	
	S-LF-17D	Network Analysis	OLV1	Base	2017-Dry	LOAD FLOW	Load Flow	LF-Dry	R-LF-17D	
	S-LF-17W	Network Analysis	OLV1	Base	2017-Wet	LOAD FLOW	Load Flow	LF-Wet	R-LF-17W	
	S-LF-18D	Network Analysis	OLV1	Base	2018-Dry	LOAD FLOW	Load Flow	LF-Dry	R-LF-18D	
	S-LF-18W	Network Analysis	OLV1	Base	2018-Wet	LOAD FLOW	Load Flow	LF-Wet	R-LF-18W	
	S-LF-23D	Network Analysis	OLV1	Base	2023-Dry	LOAD FLOW	Load Flow	LF-Dry	R-LF-23D	
	S-LF-23W	Network Analysis	OLV1	Base	2023-Wet	LOAD FLOW	Load Flow	LF-Wet	R-LF-23W	
	S-LF-28D	Network Analysis	OLV1	Base	2028-Dry	LOAD FLOW	Load Flow	LF-Dry	R-LF-28D	
	S-LF-28W	Network Analysis	OLV1	Base	2028-Wet	LOAD FLOW	Load Flow	LF-Wet	R-LF-28W	
Short Circuit Calculation	S-SC-14D	Network Analysis	OLV1	Base	SC-2014-Dry	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-14D	
	S-SC-14W	Network Analysis	OLV1	Base	SC-2014-Wet	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-14W	
	S-SC-15D	Network Analysis	OLV1	Base	SC-2015-Dry	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-15D	
	S-SC-15W	Network Analysis	OLV1	Base	SC-2015-Wet	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-15W	
	S-SC-16D	Network Analysis	OLV1	Base	SC-2016-Dry	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-16D	
	S-SC-16W	Network Analysis	OLV1	Base	SC-2016-Wet	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-16W	

Analysis Items (ETAP Scenario Setting)

	Scenario	ETAP Setting								Notes
		System	Presentation	Revision	Config. Status	Study Mode	Study Type	Study Case	Output Report	
Short Circuit Calculation	S-SC-17D	Network Analysis	OLV1	Base	SC-2017-Dry	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-17D	
	S-SC-17W	Network Analysis	OLV1	Base	SC-2017-Wet	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-17W	
	S-SC-18D	Network Analysis	OLV1	Base	SC-2018-Dry	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-18D	
	S-SC-18W	Network Analysis	OLV1	Base	SC-2018-Wet	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-18W	
	S-SC-23D	Network Analysis	OLV1	Base	SC-2023-Dry	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-23D	
	S-SC-23W	Network Analysis	OLV1	Base	SC-2023-Wet	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-23W	
	S-SC-28D	Network Analysis	OLV1	Base	SC-2028-Dry	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-28D	
	S-SC-28W	Network Analysis	OLV1	Base	SC-2028-Wet	SHORT CIRCUIT	IEC Device Duty	SC	R-SC-28W	
N-1 Fault Analysis	S-N-G1-23D	Network Analysis	OLV1	Base	1-G1-23D	LOAD FLOW	Load Flow	LF-Dry	R-N1-G1-23D	Ny2-.6-G-1 =>Stop
	S-N-G1-23W	Network Analysis	OLV1	Base	1-G1-23W	LOAD FLOW	Load Flow	LF-Wet	R-N1-G1-23W	
	S-N-G1-28D	Network Analysis	OLV1	Base	1-G1-28D	LOAD FLOW	Load Flow	LF-Dry	R-N1-G1-28D	
	S-N-G1-28W	Network Analysis	OLV1	Base	1-G1-28W	LOAD FLOW	Load Flow	LF-Wet	R-N1-G1-28W	
	S-N-L1-23D	Network Analysis	OLV1	Base	1- L1-23D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL1-23D	20-Mra-Sha(D/C)
	S-N-L1-23W	Network Analysis	OLV1	Base	1- L1-23W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL1-23W	=> 20-Mra-Sha(S/C)
	S-N-L1-28D	Network Analysis	OLV1	Base	1- L1-28D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL1-28D	
	S-N-L1-28W	Network Analysis	OLV1	Base	1- L1-28W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL1-28W	
	S-N-L2-23D	Network Analysis	OLV1	Base	1- L2-23D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL2-23D	20-Sha-RIm(D/C)
	S-N-L2-23W	Network Analysis	OLV1	Base	1- L2-23W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL2-23W	=> 20-Sha-RIm(S/C)
	S-N-L2-28D	Network Analysis	OLV1	Base	1- L2-28D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL2-28D	
	S-N-L2-28W	Network Analysis	OLV1	Base	1- L2-28W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL2-28W	

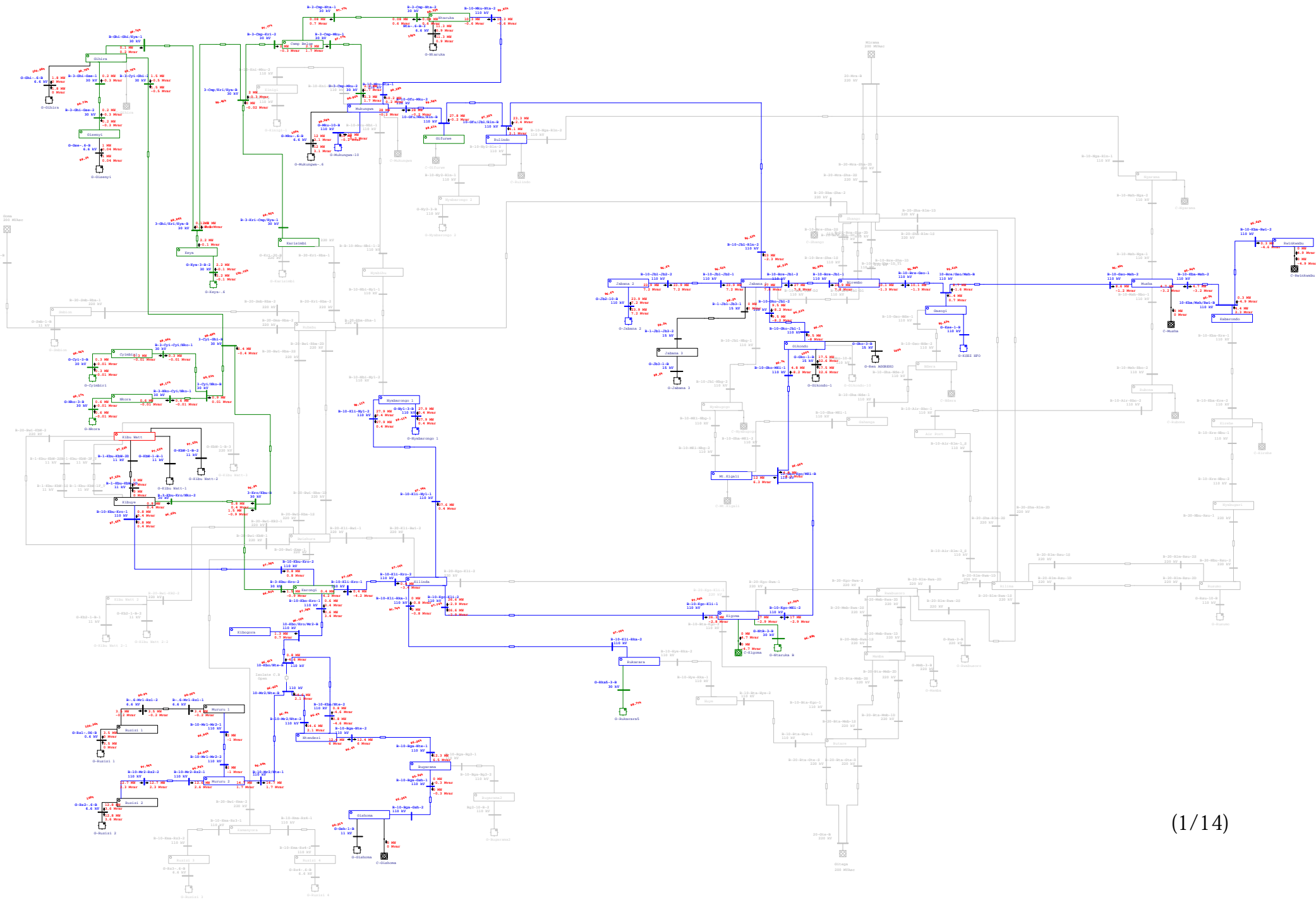
Analysis Items (ETAP Scenario Setting)

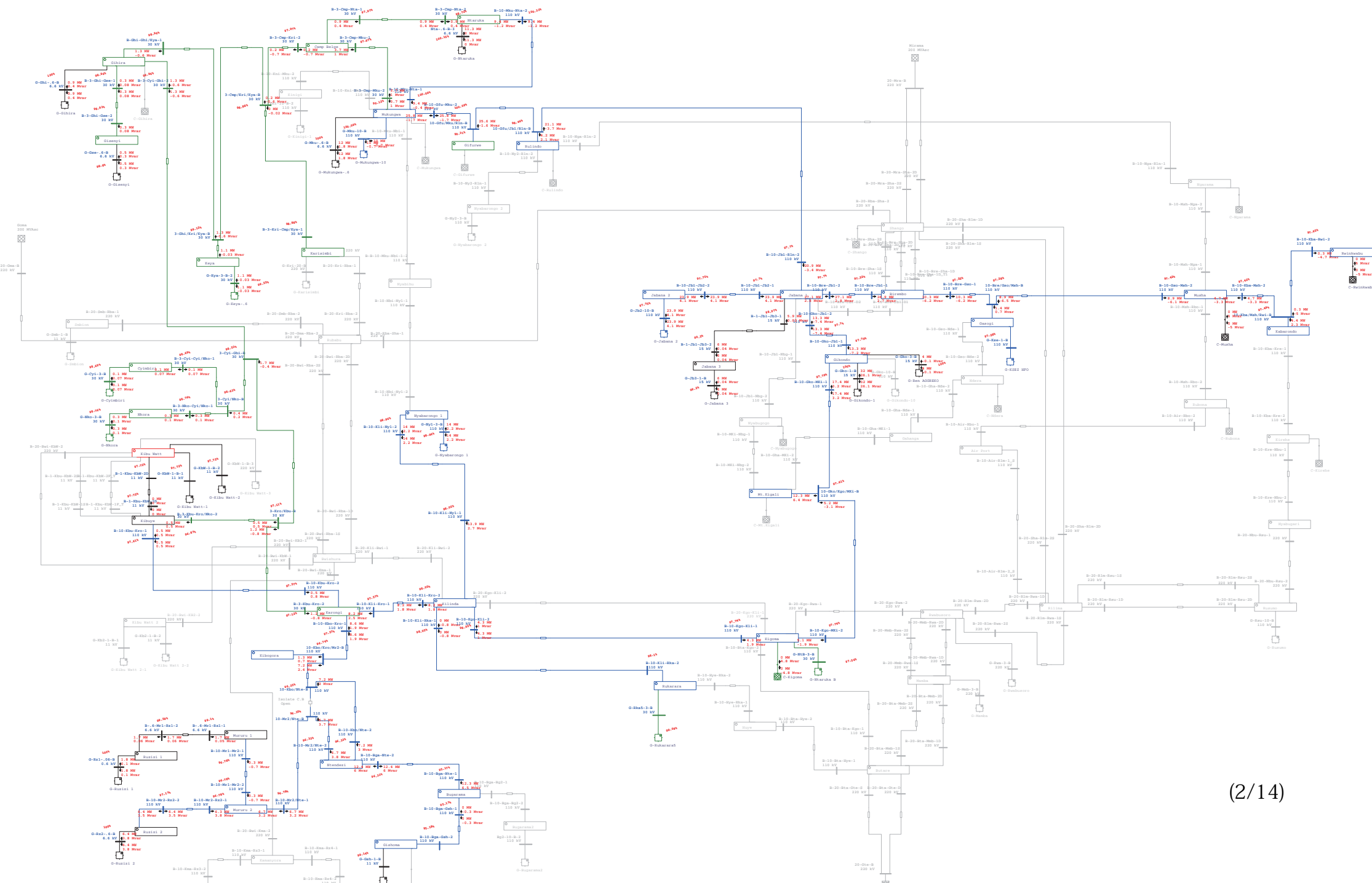
	Scenario	ETAP Setting								Notes
		System	Presentation	Revision	Config. Status	Study Mode	Study Type	Study Case	Output Report	
N-1 Fault Analysis	S-N-L3-23D	Network Analysis	OLV1	Base	1- L3-23D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL3-23D	20-RIm-Rsu(D/C)
	S-N-L3-23W	Network Analysis	OLV1	Base	1- L3-23W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL3-23W	=> 20-RIm-Rsu(S/C)
	S-N-L3-28D	Network Analysis	OLV1	Base	1- L3-28D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL3-28D	
	S-N-L3-28W	Network Analysis	OLV1	Base	1- L3-28W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL3-28W	
	S-N-L4-23D	Network Analysis	OLV1	Base	1- L4-23D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL4-23D	20-RIm-Rwa(D/C)
	S-N-L4-23W	Network Analysis	OLV1	Base	1- L4-23W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL4-23W	=> 20-RIm-Rwa(S/C)
	S-N-L4-28D	Network Analysis	OLV1	Base	1- L4-28D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL4-28D	
	S-N-L4-28W	Network Analysis	OLV1	Base	1- L4-28W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL4-28W	
	S-N-L5-23D	Network Analysis	OLV1	Base	1- L5-23D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL5-23D	20-Mmb-Rwa(D/C)
	S-N-L5-23W	Network Analysis	OLV1	Base	1- L5-23W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL5-23W	=> 20-Mmb-Rwa(S/C)
	S-N-L5-28D	Network Analysis	OLV1	Base	1- L5-28D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL5-28D	
	S-N-L5-28W	Network Analysis	OLV1	Base	1- L5-28W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL5-28W	
	S-N-L6-23D	Network Analysis	OLV1	Base	1- L6-23D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL6-23D	20-Bta-Mmb(D/C)
	S-N-L6-23W	Network Analysis	OLV1	Base	1- L6-23W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL6-23W	=> 20-Bta-Mmb(S/C)
	S-N-L6-28D	Network Analysis	OLV1	Base	1- L6-28D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL6-28D	
	S-N-L6-28W	Network Analysis	OLV1	Base	1- L6-28W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL6-28W	
	S-N-L7-23D	Network Analysis	OLV1	Base	1- L7-23D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL7-23D	20-Bta-Gte(D/C)
	S-N-L7-23W	Network Analysis	OLV1	Base	1- L7-23W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL7-23W	=> 20-Bta-Gte(S/C)
	S-N-L7-28D	Network Analysis	OLV1	Base	1- L7-28D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL7-28D	
	S-N-L7-28W	Network Analysis	OLV1	Base	1- L7-28W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL7-28W	
	S-N-L8-23D	Network Analysis	OLV1	Base	1- L8-23D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL8-23D	20-Bwi-Rba(D/C)
S-N-L8-23W	Network Analysis	OLV1	Base	1- L8-23W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL8-23W	=> 20-Bwi-Rba(S/C)	
S-N-L8-28D	Network Analysis	OLV1	Base	1- L8-28D	LOAD FLOW	Load Flow	LF-Dry	R-N1-TL8-28D		
S-N-L8-28W	Network Analysis	OLV1	Base	1- L8-28W	LOAD FLOW	Load Flow	LF-Wet	R-N1-TL8-28W		

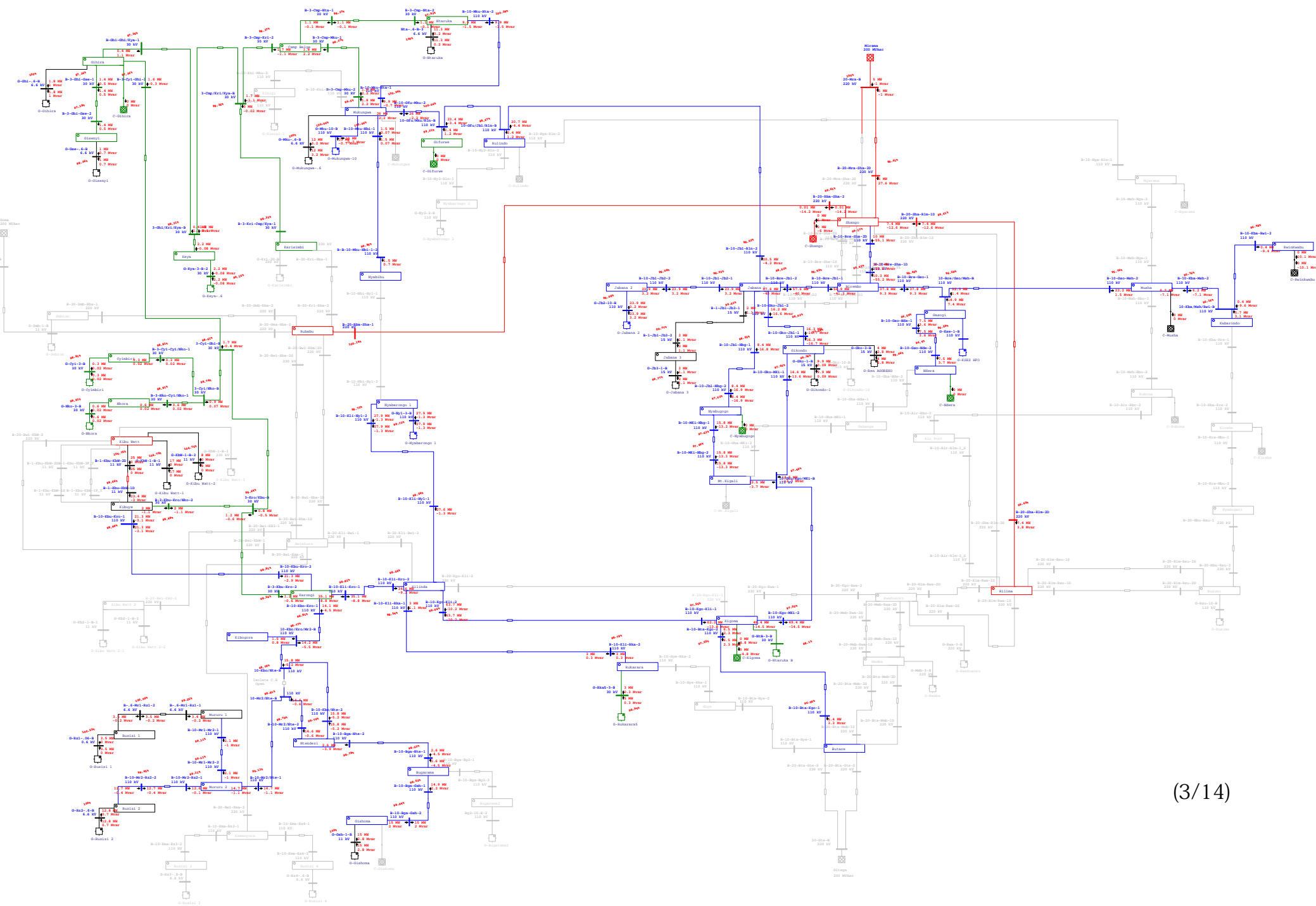
Power Flow Analysis Results (Indicated on Single Line diagrams)

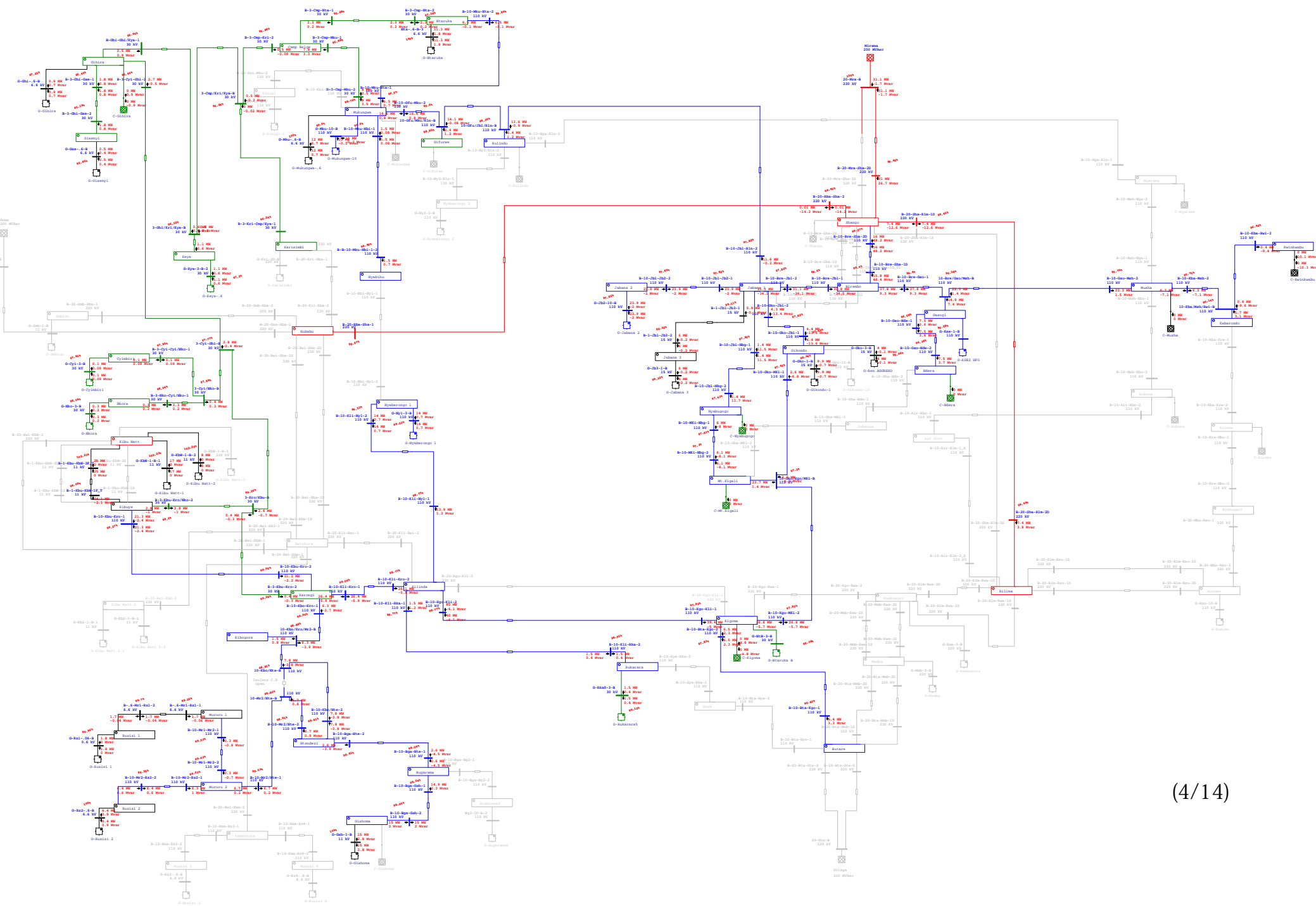
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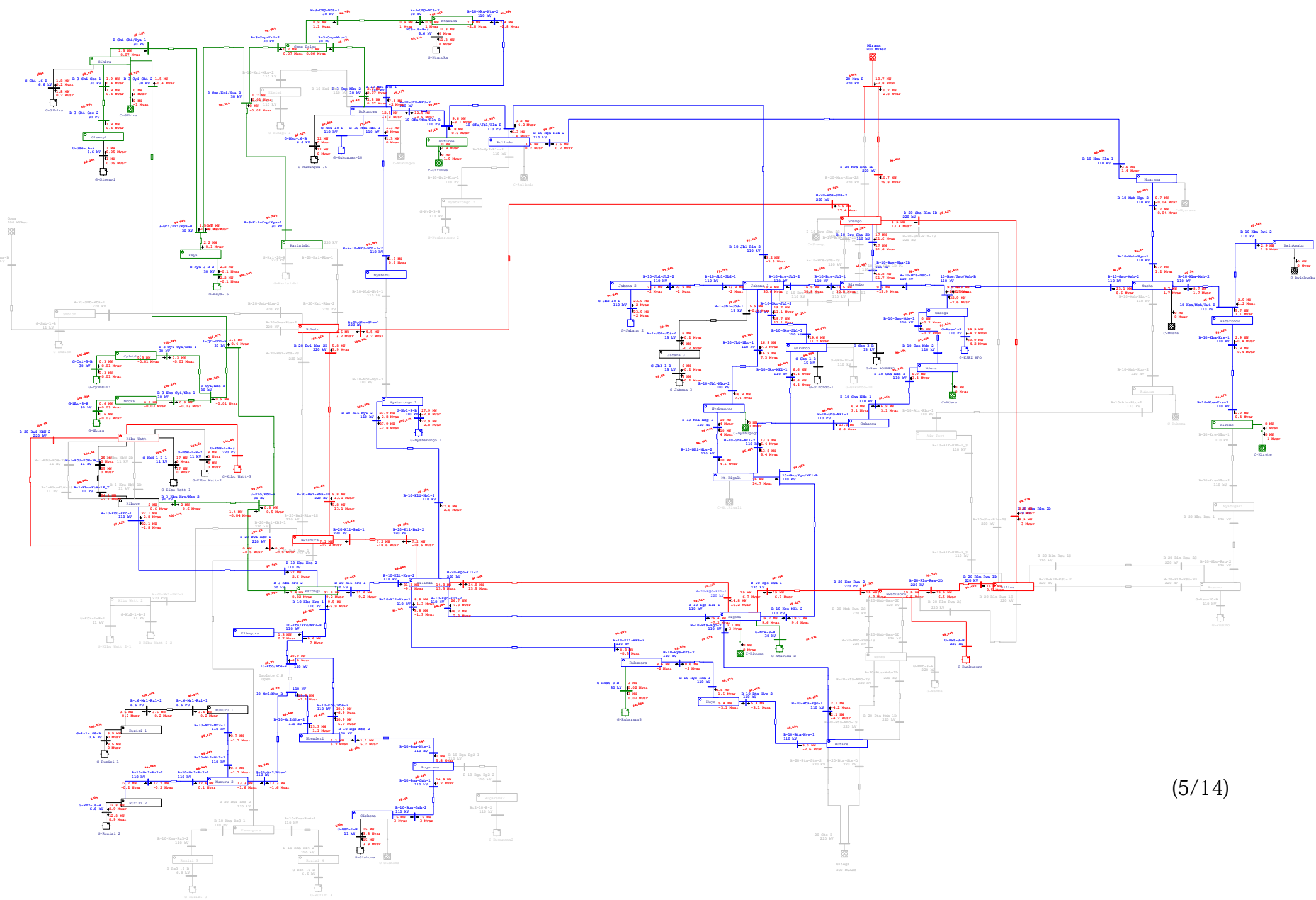
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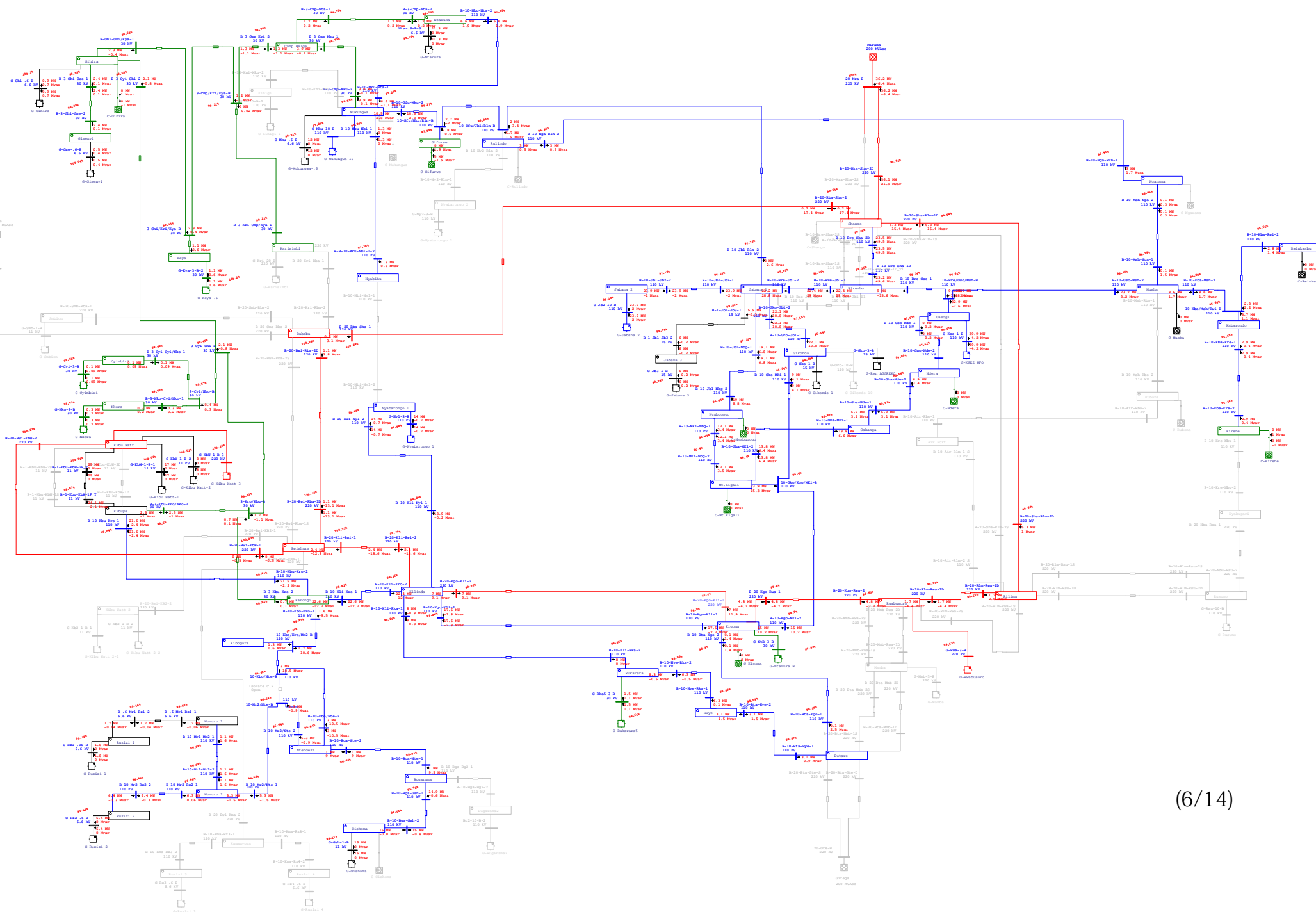






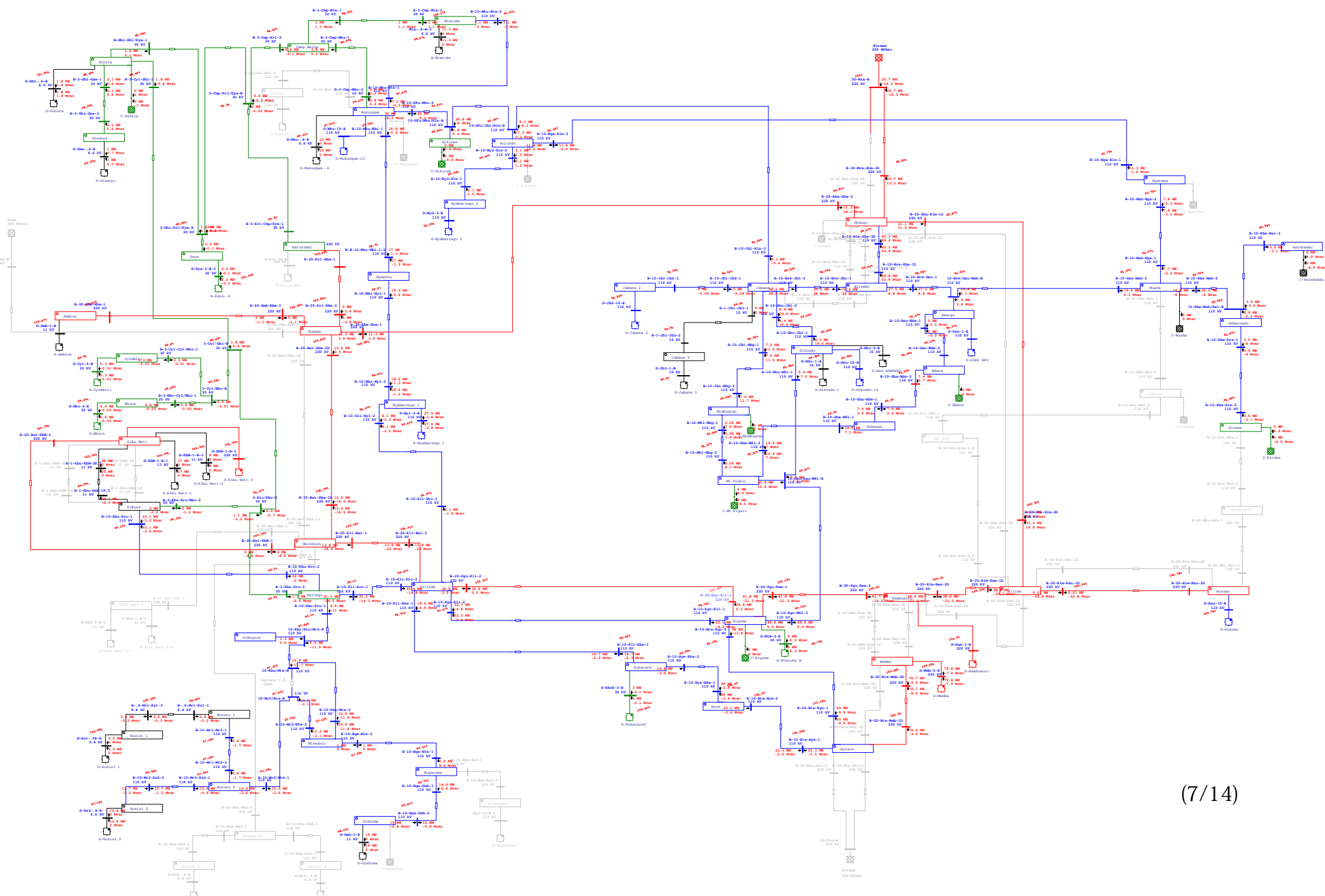


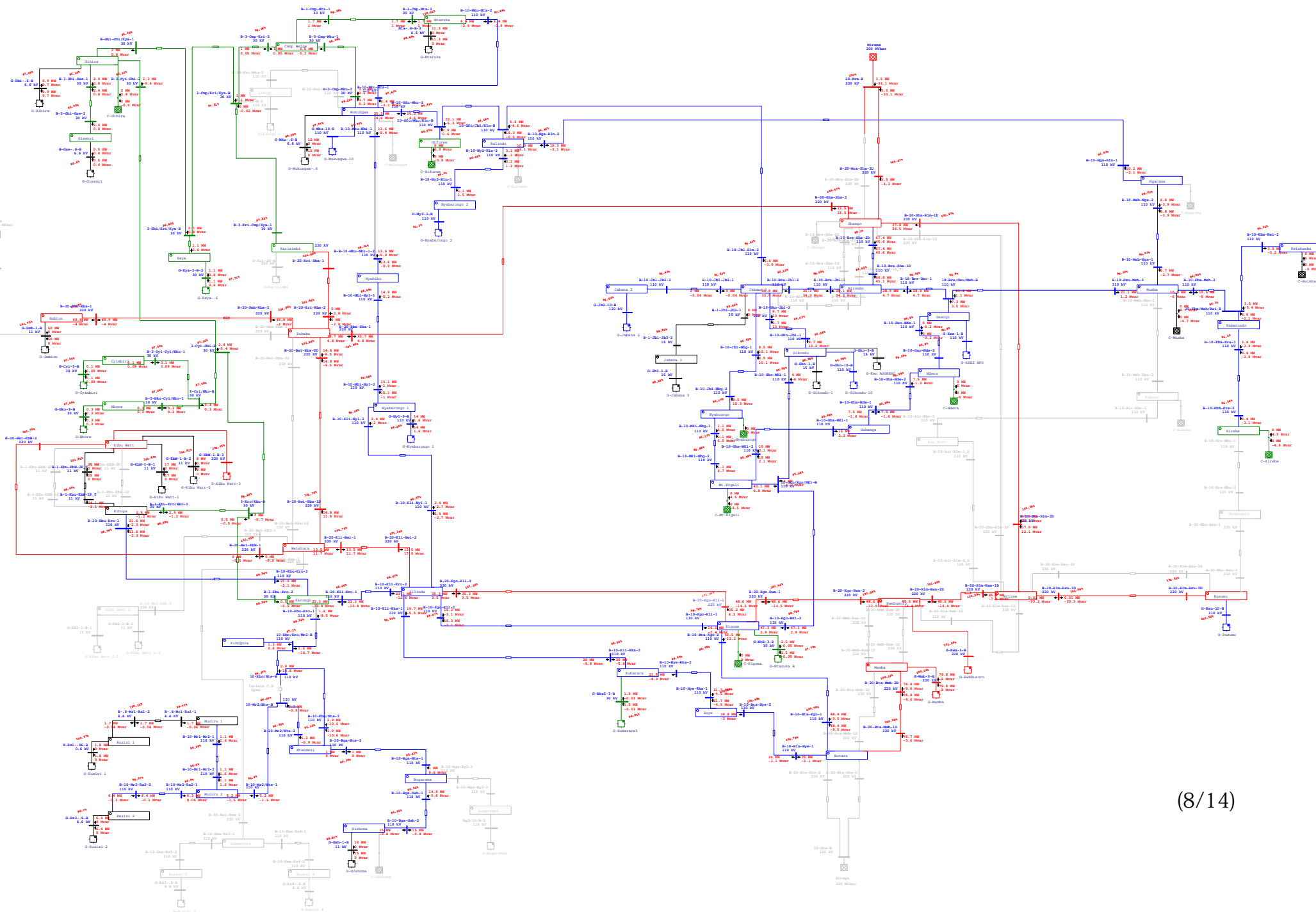


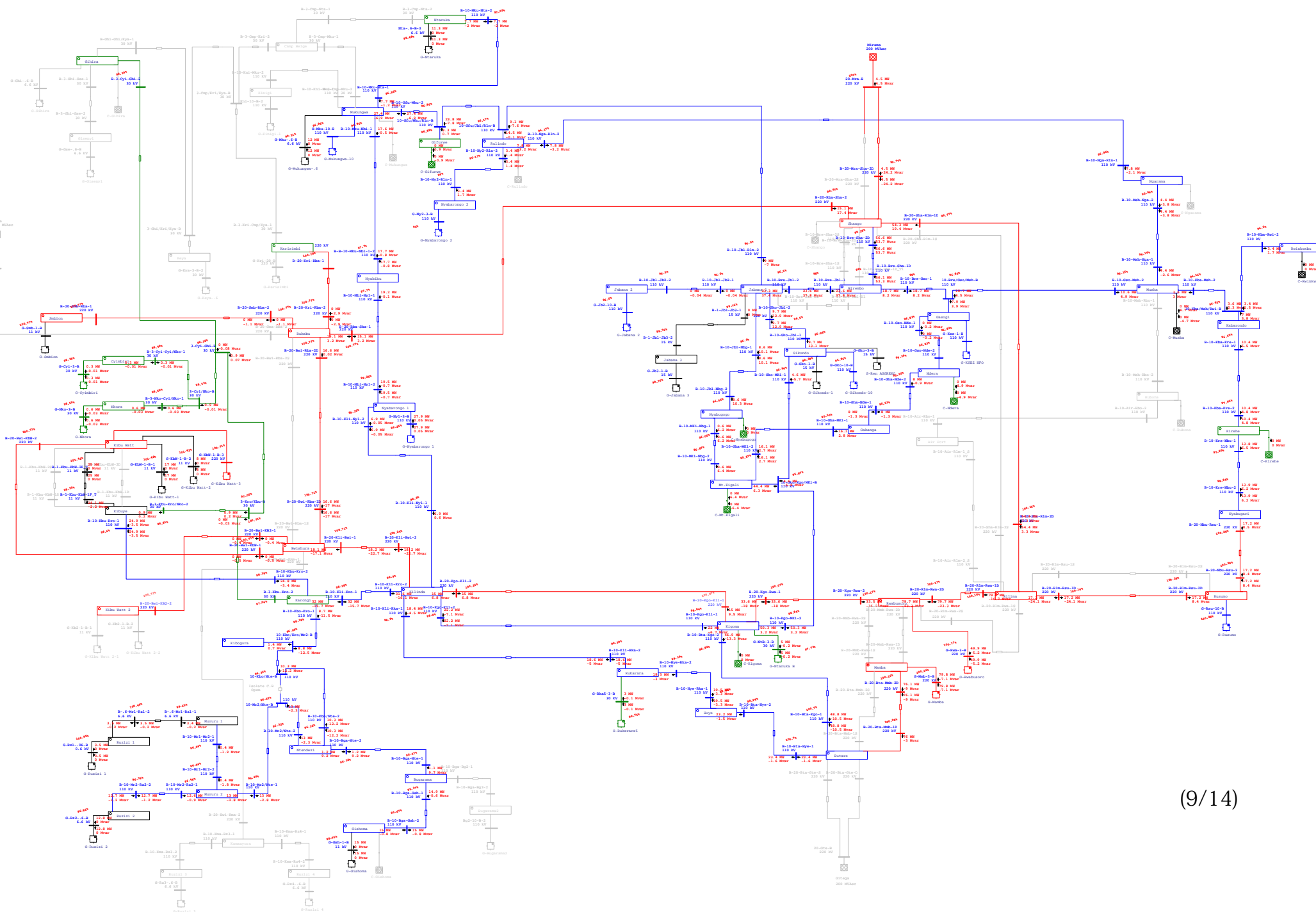


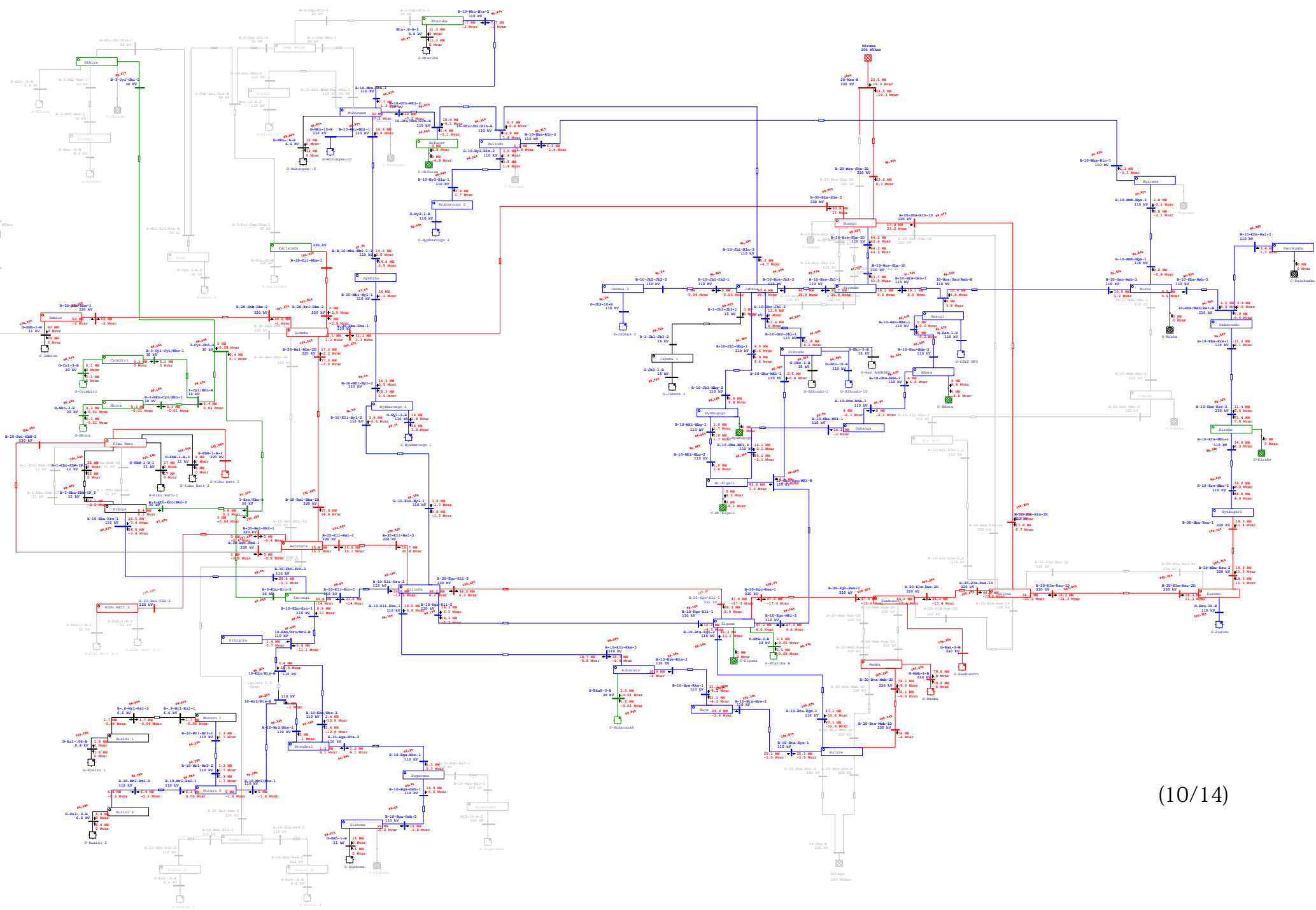
One-Line Diagram - OLV1 (Load Flow Analysis)

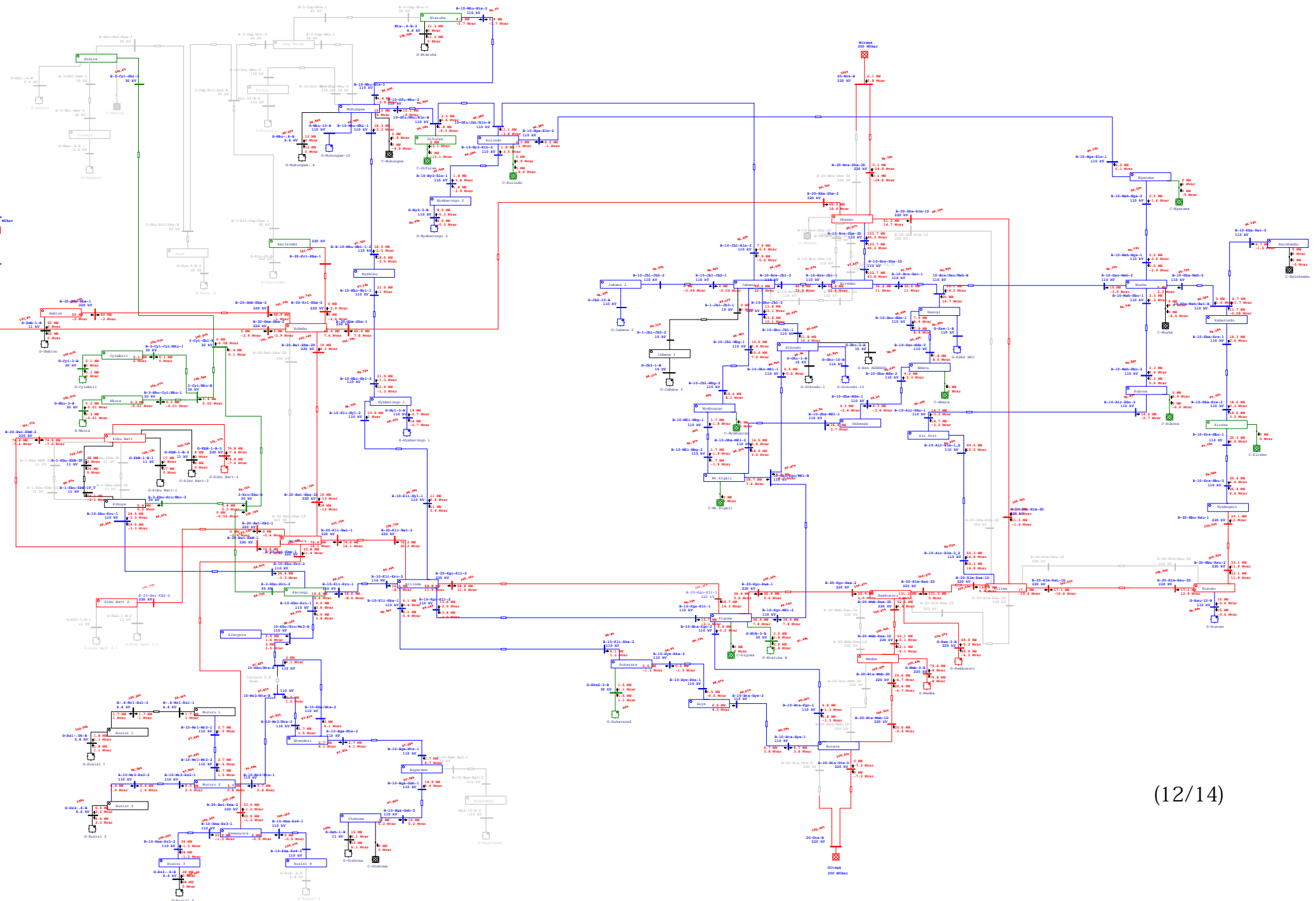
(2017年 Wet season)

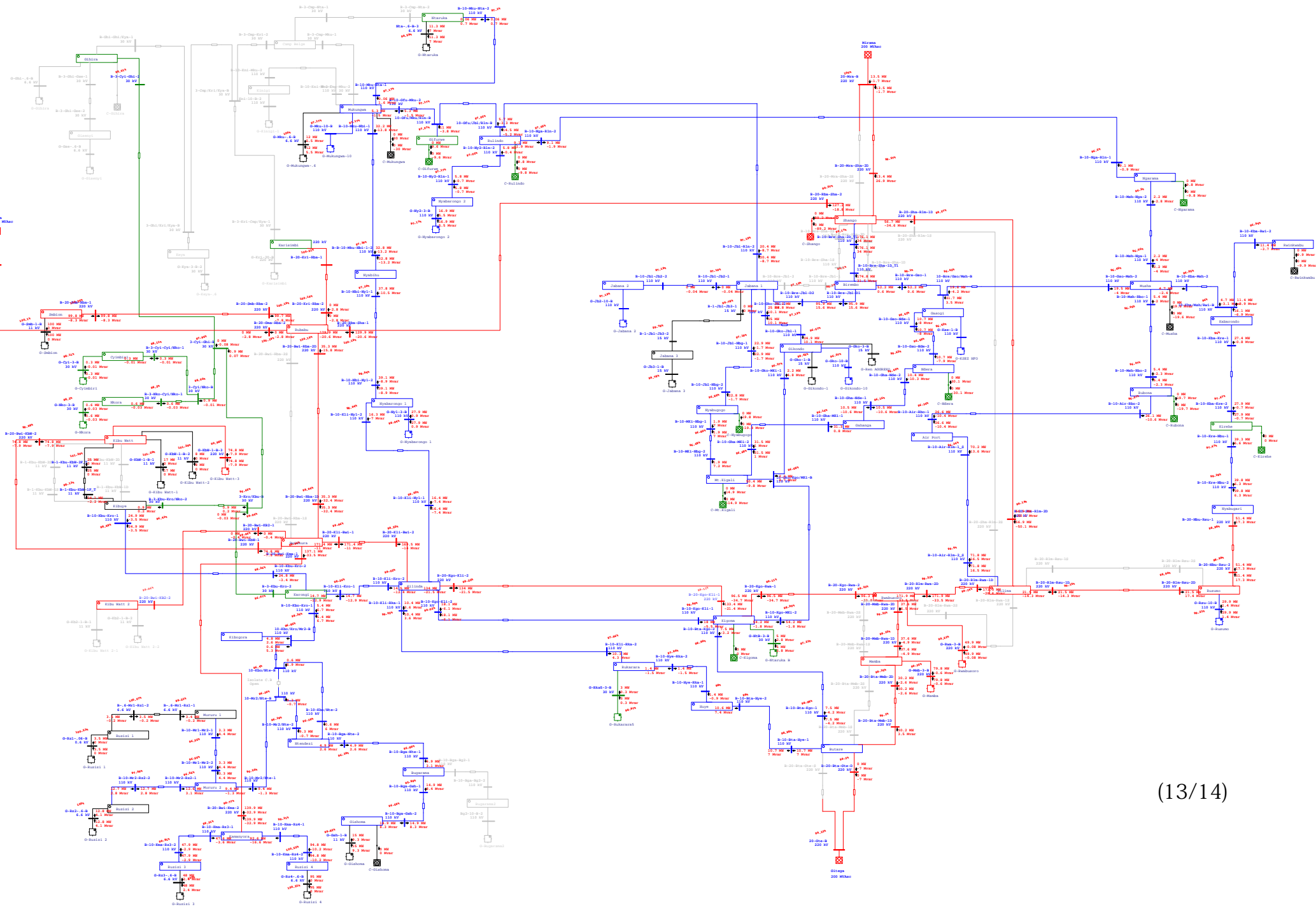












Power Flow Analysis Alarm Lists

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Alert Summary Report

% Alert Settings

	<u>Critical</u>
<u>Loading</u>	
Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0
<u>Bus Voltage</u>	
OverVoltage	105.0
UnderVoltage	95.0
<u>Generator Excitation</u>	
OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bre-10/1-T-1	Transformer	Overload	20.000	MVA	19.464	97.3	3-Phase
Gko-1-B-2	Bus	Overload	800.000	Amp	1587.331	198.4	3-Phase
Jb2-10/6-TG-1	Transformer	Overload	15.000	MVA	12.476	83.2	3-Phase
Jb2-10/6-TG-2	Transformer	Overload	15.000	MVA	12.476	83.2	3-Phase
Kgo-10/3-T-1	Transformer	Overload	10.000	MVA	9.335	93.3	3-Phase
MKi-10/3-T-1	Transformer	Overload	10.000	MVA	13.166	131.7	3-Phase
MKi-3-B-1	Bus	Under Voltage	30.000	kV	27.677	92.3	3-Phase
Rln-10/3-T-1	Transformer	Overload	3.000	MVA	4.430	147.7	3-Phase
Rln-3-B-1	Bus	Under Voltage	30.000	kV	27.043	90.1	3-Phase

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Study Case: LF-Wet

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Alert Summary Report

% Alert Settings

<u>Loading</u>	<u>Critical</u>
Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0
<u>Bus Voltage</u>	
OverVoltage	105.0
UnderVoltage	95.0
<u>Generator Excitation</u>	
OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bre-10/1-T-1	Transformer	Overload	20.000	MVA	19.351	96.8	3-Phase
Gko-1-B-2	Bus	Overload	800.000	Amp	1462.656	182.8	3-Phase
Jb1-10/1-T-1	Transformer	Overload	6.000	MVA	5.996	99.9	3-Phase
Jb1-10/1-T-2	Transformer	Overload	6.000	MVA	5.996	99.9	3-Phase
Jb2-10/6-TG-1	Transformer	Overload	15.000	MVA	13.049	87.0	3-Phase
Jb2-10/6-TG-2	Transformer	Overload	15.000	MVA	13.049	87.0	3-Phase
Kgo-10/3-T-1	Transformer	Overload	10.000	MVA	9.218	92.2	3-Phase
Kya-3/6-TG-1	Transformer	Overload	2.500	MVA	2.200	88.0	3-Phase
MKi-10/3-T-1	Transformer	Overload	10.000	MVA	12.907	129.1	3-Phase
MKi-3-B-1	Bus	Under Voltage	30.000	kV	27.364	91.2	3-Phase
Nko-3/0-TG-n	Transformer	Overload	0.630	MVA	0.601	95.3	3-Phase
Ny1-3/6-TG-1n	Transformer	Overload	35.000	MVA	28.234	80.7	3-Phase
Rln-10/3-T-1	Transformer	Overload	3.000	MVA	4.358	145.3	3-Phase
Rln-3-B-1	Bus	Under Voltage	30.000	kV	26.791	89.3	3-Phase
Rz2-10/6-TG-1	Transformer	Overload	15.000	MVA	13.274	88.5	3-Phase

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Alert Summary Report

% Alert Settings

Critical

Loading

Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0

Bus Voltage

OverVoltage	105.0
UnderVoltage	95.0

Generator Excitation

OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Kbu-3/1-T-1	Transformer	Overload	3.000	MVA	2.956	98.5	3-Phase
Nta-3/6-T-1	Transformer	Overload	5.000	MVA	4.999	100.0	3-Phase

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Alert Summary Report

% Alert Settings

Critical

Loading

Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0

Bus Voltage

OverVoltage	105.0
UnderVoltage	95.0

Generator Excitation

OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
1-Kbu-KbW(D/C)	Line	Overload	886.000	Amp	1253.636	141.5	3-Phase
Jb2-10/6-TG-1	Transformer	Overload	15.000	MVA	12.297	82.0	3-Phase
Jb2-10/6-TG-2	Transformer	Overload	15.000	MVA	12.297	82.0	3-Phase
Kya-3/6-TG-1	Transformer	Overload	2.500	MVA	2.200	88.0	3-Phase
Nko-3/0-TG-n	Transformer	Overload	0.630	MVA	0.603	95.7	3-Phase
Ny1-3/6-TG-1n	Transformer	Overload	35.000	MVA	28.054	80.2	3-Phase
Rz2-10/6-TG-1	Transformer	Overload	15.000	MVA	12.772	85.1	3-Phase

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Alert Summary Report

% Alert Settings

Critical

Loading

Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0

Bus Voltage

OverVoltage	105.0
UnderVoltage	95.0

Generator Excitation

OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Kbu-3/1-T-1	Transformer	Overload	3.000	MVA	2.669	89.0	3-Phase
Kse-10/1-TG-1n	Transformer	Overload	50.000	MVA	40.129	80.3	3-Phase

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Alert Summary Report

% Alert Settings

	<u>Critical</u>
<u>Loading</u>	
Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0
<u>Bus Voltage</u>	
OverVoltage	105.0
UnderVoltage	95.0
<u>Generator Excitation</u>	
OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Kse-10/1-TG-1n	Transformer	Overload	50.000	MVA	40.129	80.3	3-Phase
Kya-3/6-TG-1	Transformer	Overload	2.500	MVA	2.200	88.0	3-Phase
Nko-3/0-TG-n	Transformer	Overload	0.630	MVA	0.600	95.2	3-Phase
Ny1-3/6-TG-1n	Transformer	Overload	35.000	MVA	28.078	80.2	3-Phase
Rz2-10/6-TG-1	Transformer	Overload	15.000	MVA	12.784	85.2	3-Phase

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% Alert Settings

	<u>Critical</u>
<u>Loading</u>	
Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0
<u>Bus Voltage</u>	
OverVoltage	105.0
UnderVoltage	95.0
<u>Generator Excitation</u>	
OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
B-3-Ghi-Gse-2	Bus	Under Voltage	30.000	kV	28.498	95.0	3-Phase
Gse-3-B	Bus	Under Voltage	30.000	kV	28.498	95.0	3-Phase
Kbu-3/1-T-1	Transformer	Overload	3.000	MVA	2.752	91.7	3-Phase
Mmb-3/6-TG-1n	Transformer	Overload	50.000	MVA	40.112	80.2	3-Phase
Mmb-3/6-TG-2n	Transformer	Overload	50.000	MVA	40.112	80.2	3-Phase
Rln-3-B-1	Bus	Under Voltage	30.000	kV	28.435	94.8	3-Phase

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Alert Summary Report

% Alert Settings

	<u>Critical</u>
<u>Loading</u>	
Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0
<u>Bus Voltage</u>	
OverVoltage	105.0
UnderVoltage	95.0
<u>Generator Excitation</u>	
OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
B-10-Gha-Nde-2	Bus	Under Voltage	110.000	kV	104.404	94.9	3-Phase
C-MKi-3-B	Bus	Under Voltage	30.000	kV	28.488	95.0	3-Phase
Kya-3/6-TG-1	Transformer	Overload	2.500	MVA	2.200	88.0	3-Phase
MKi-3-B-1	Bus	Under Voltage	30.000	kV	28.488	95.0	3-Phase
Mmb-3/6-TG-1n	Transformer	Overload	50.000	MVA	40.109	80.2	3-Phase
Mmb-3/6-TG-2n	Transformer	Overload	50.000	MVA	40.109	80.2	3-Phase
Nde-10-B-1	Bus	Under Voltage	110.000	kV	104.404	94.9	3-Phase
Nko-3/0-TG-n	Transformer	Overload	0.630	MVA	0.600	95.2	3-Phase
Ny1-3/6-TG-1n	Transformer	Overload	35.000	MVA	28.081	80.2	3-Phase
Rln-3-B-1	Bus	Under Voltage	30.000	kV	28.418	94.7	3-Phase
Rz2-10/6-TG-1	Transformer	Overload	15.000	MVA	12.750	85.0	3-Phase

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Alert Summary Report

% Alert Settings

Critical

Loading

Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0

Bus Voltage

OverVoltage	105.0
UnderVoltage	95.0

Generator Excitation

OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Bre-10/1-T-1	Transformer	Overload	20.000	MVA	16.144	80.7	3-Phase
Mmb-3/6-TG-1n	Transformer	Overload	50.000	MVA	40.112	80.2	3-Phase
Mmb-3/6-TG-2n	Transformer	Overload	50.000	MVA	40.112	80.2	3-Phase
Rln-3-B-1	Bus	Under Voltage	30.000	kV	28.296	94.3	3-Phase

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Alert Summary Report

% Alert Settings

	<u>Critical</u>
<u>Loading</u>	
Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0
<u>Bus Voltage</u>	
OverVoltage	105.0
UnderVoltage	95.0
<u>Generator Excitation</u>	
OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Mmb-3/6-TG-1n	Transformer	Overload	50.000	MVA	40.064	80.1	3-Phase
Mmb-3/6-TG-2n	Transformer	Overload	50.000	MVA	40.064	80.1	3-Phase
Nko-3/0-TG-n	Transformer	Overload	0.630	MVA	0.600	95.2	3-Phase
Ny1-3/6-TG-1n	Transformer	Overload	35.000	MVA	28.154	80.4	3-Phase
Rln-3-B-1	Bus	Under Voltage	30.000	kV	28.287	94.3	3-Phase
Rwa-3/6-TG-1n	Transformer	Overload	60.000	MVA	50.157	83.6	3-Phase
Rz2-10/6-TG-1	Transformer	Overload	15.000	MVA	12.750	85.0	3-Phase

Project:
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Alert Summary Report

% Alert Settings

Critical

Loading

Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0

Bus Voltage

OverVoltage	105.0
UnderVoltage	95.0

Generator Excitation

OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
KbW-20/1-TG-1	Transformer	Overload	90.000	MVA	75.215	83.6	3-Phase
Mmb-3/6-TG-1n	Transformer	Overload	50.000	MVA	40.110	80.2	3-Phase
Mmb-3/6-TG-2n	Transformer	Overload	50.000	MVA	40.110	80.2	3-Phase
Rln-10/3-T-1N1	Transformer	Overload	10.000	MVA	10.057	100.6	3-Phase
Rwa-3/6-TG-1n	Transformer	Overload	60.000	MVA	50.156	83.6	3-Phase

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Alert Summary Report

% Alert Settings

	<u>Critical</u>
<u>Loading</u>	
Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0
<u>Bus Voltage</u>	
OverVoltage	105.0
UnderVoltage	95.0
<u>Generator Excitation</u>	
OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Mmb-3/6-TG-1n	Transformer	Overload	50.000	MVA	40.107	80.2	3-Phase
Mmb-3/6-TG-2n	Transformer	Overload	50.000	MVA	40.107	80.2	3-Phase
Nko-3/0-TG-n	Transformer	Overload	0.630	MVA	0.600	95.2	3-Phase
Ny1-3/6-TG-1n	Transformer	Overload	35.000	MVA	28.030	80.1	3-Phase
Rln-10/3-T-1N1	Transformer	Overload	10.000	MVA	10.227	102.3	3-Phase
Rwa-3/6-TG-1n	Transformer	Overload	60.000	MVA	50.152	83.6	3-Phase
Rz2-10/6-TG-1	Transformer	Overload	15.000	MVA	12.881	85.9	3-Phase
Rz3-10/6-TG-1n	Transformer	Overload	55.000	MVA	48.167	87.6	3-Phase

Project:
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 Contract:
 Engineer:
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Study Case: LF-Dry

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Alert Summary Report

% Alert Settings

	<u>Critical</u>
<u>Loading</u>	
Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0
<u>Bus Voltage</u>	
OverVoltage	105.0
UnderVoltage	95.0
<u>Generator Excitation</u>	
OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
Gso-10/1-T-1F	Transformer	Overload	30.000	MVA	24.266	80.9	3-Phase
KbW-20/1-TG-1	Transformer	Overload	90.000	MVA	75.231	83.6	3-Phase
Kro-10/3-T-1	Transformer	Overload	6.000	MVA	5.472	91.2	3-Phase
Mmb-3/6-TG-1n	Transformer	Overload	50.000	MVA	40.263	80.5	3-Phase
Mmb-3/6-TG-2n	Transformer	Overload	50.000	MVA	40.263	80.5	3-Phase
Rwa-3/6-TG-1n	Transformer	Overload	60.000	MVA	50.405	84.0	3-Phase

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Alert Summary Report

% Alert Settings

Critical

Loading

Bus	100.0
Cable	100.0
Reactor	100.0
Line	100.0
Transformer	80.0
Panel	100.0
Protective Device	100.0
Generator	101.0
Inverter/Charger	100.0

Bus Voltage

OverVoltage	105.0
UnderVoltage	95.0

Generator Excitation

OverExcited (Q Max.)	101.0
UnderExcited (Q Min.)	

Critical Alerts Report

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Phase Type
KbW-20/1-TG-1	Transformer	Overload	90.000	MVA	75.237	83.6	3-Phase
Kro-10/3-T-1	Transformer	Overload	6.000	MVA	5.471	91.2	3-Phase
Mmb-3/6-TG-1n	Transformer	Overload	50.000	MVA	40.175	80.3	3-Phase
Mmb-3/6-TG-2n	Transformer	Overload	50.000	MVA	40.175	80.3	3-Phase
Nko-3/0-TG-n	Transformer	Overload	0.630	MVA	0.600	95.2	3-Phase
Ny1-3/6-TG-1n	Transformer	Overload	35.000	MVA	28.253	80.7	3-Phase
Rwa-3/6-TG-1n	Transformer	Overload	60.000	MVA	50.272	83.8	3-Phase
Rz2-10/6-TG-1	Transformer	Overload	15.000	MVA	13.384	89.2	3-Phase
Rz3-10/6-TG-1n	Transformer	Overload	55.000	MVA	48.061	87.4	3-Phase
Rz4-10/6-TG-1n	Transformer	Overload	110.000	MVA	95.322	86.7	3-Phase

Power Flow Analysis Results (ETAP Reports)

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cmp/Kri/Kya-B	30.000	98.655	4.8	0	0	0	0	B-3-Cmp-Kri-2	0.051	0.403	7.9	12.5	
								B-3-Kri-Cmp/Kya-1	0.000	-0.021	0.4	0.0	
								3-Ghi/Kri/Kya-B	-0.051	-0.382	7.5	13.2	
3-Cyi/Nko-B	30.000	98.171	3.0	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.149	-0.103	3.5	82.4	
								3-Cyi-Ghi-B	0.447	0.278	10.3	84.9	
								B-3-Nko-Cyi/Nko-1	-0.298	-0.176	6.8	86.2	
3-Cyi-Ghi-B	30.000	98.055	2.9	0	0	0	0	B-3-Cyi-Ghi-2	-1.040	0.313	21.3	-95.8	
								3-Cyi/Nko-B	-0.447	-0.286	10.4	84.2	
								3-Kro/Kbu-B	1.487	-0.026	29.2	-100.0	
3-Ghi/Kri/Kya-B	30.000	98.857	4.8	0	0	0	0	B-Ghi-Ghi/Kya-1	1.039	-0.371	21.5	-94.2	
								3-Cmp/Kri/Kya-B	0.051	0.361	7.1	14.0	
								Kya-3-B-1	-1.090	0.010	21.2	100.0	
3-Kro/Kbu-B	30.000	96.277	1.3	0	0	0	0	B-3-Kbu-Kro-2	0.000	-0.027	0.5	0.0	
								B-3-Kbu-Kro/Nko-2	1.460	0.037	29.2	100.0	
								3-Cyi-Ghi-B	-1.460	-0.010	29.2	100.0	
10-Bre/Gso/Msh-B	110.000	97.240	-1.0	0	0	0	0	B-10-Bre-Gso-1	-10.294	5.834	63.9	-87.0	
								B-10-Gso-Msh-2	8.917	-6.506	59.6	-80.8	
								Gso-10-B-1	1.376	0.672	8.3	89.8	
10-Gfu/Jb1/Rln-B	110.000	98.409	1.5	0	0	0	0	B-10-Gfu/Mku/Rln-B	-25.578	1.638	136.7	-99.8	
								B-10-Jb1-Rln-2	21.388	-3.779	115.8	-98.5	
								Rln-10-B-1	4.190	2.141	25.1	89.1	
10-Gfu/Mku/Rln-B	110.000	99.277	2.7	0	0	0	0	B-10-Gfu-Mku-2	-25.839	1.670	136.9	-99.8	
								10-Gfu/Jb1/Rln-B	25.839	-1.670	136.9	-99.8	
10-Gko/Kgo/MKi-B	110.000	97.573	-0.5	0	0	0	0	B-10-Gko-MKi-1	-16.671	-3.434	91.6	97.9	
								B-10-Kgo-MKi-2	4.428	-2.972	28.7	-83.0	
								MKi-10-B-1	12.244	6.406	74.3	88.6	
10-Kba/Msh/Rwi-B	110.000	97.444	-1.8	0	0	0	0	B-10-Kba-Msh-2	-4.678	2.660	29.0	-86.9	
								B-10-Kba-Rwi-2	0.310	-4.965	26.8	-6.2	
								Kba-10-B-1	4.368	2.305	26.6	88.4	
10-Kbo/Kro/Mr2-B	110.000	96.739	-1.8	0	0	0	0	B-10-Kbo/Nte-B	7.178	2.374	41.0	94.9	
								B-10-Kbo-Kro-1	-8.516	-3.059	49.1	94.1	
								Kbo-10-B-1	1.339	0.685	8.2	89.0	
10-Kbo/Nte-B	110.000	96.344	-2.1	0	0	0	0	B-10-Kbo/Kro/Mr2-B	-7.162	-2.960	42.2	92.4	
								B-10-Kbo/Nte-2	7.162	2.960	42.2	92.4	
10-Mr2/Nte-B	110.000	96.345	-2.1	0	0	0	0	B-10-Mr2/Nte-1	-6.653	-3.744	41.6	87.1	
								B-10-Mr2/Nte-2	6.653	3.744	41.6	87.1	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-1-Jb1-Jb3-1	15.000	99.315	-0.6	0	0	0	0	B-1-Jb1-Jb3-2	-5.945	0.267	230.6	-99.9	
								Jb1-1-B-1	5.945	-0.267	230.6	-99.9	
B-1-Jb1-Jb3-2	15.000	99.530	-0.4	0	0	0	0	B-1-Jb1-Jb3-1	5.959	-0.246	230.6	-99.9	
								Jb3-1-B-1	-5.959	0.246	230.6	-99.9	
B-1-Kbu-KbW-1D	11.000	97.612	-0.9	0	0	0	0	B-1-Kbu-KbW-2D	0.000	-0.002	0.1	0.0	
								Kbu-1-B-1	0.000	0.002	0.1	0.0	
B-1-Kbu-KbW-2D	11.000	97.612	-0.9	0	0	0	0	B-1-Kbu-KbW-1D	0.000	0.000	0.0	0.0	
								KbW-1-B-2	0.000	0.000	0.0	0.0	
B-3-Cmp-Kri-2	30.000	97.873	5.0	0	0	0	0	3-Cmp/Kri/Kya-B	-0.049	-0.471	9.3	10.3	
								Cmp-3-B-1	0.049	0.471	9.3	10.3	
B-3-Cmp-Mku-1	30.000	97.873	5.0	0	0	0	0	B-3-Cmp-Mku-2	-3.483	-1.161	72.2	94.9	
								Cmp-3-B-1	3.483	1.161	72.2	94.9	
B-3-Cmp-Mku-2	30.000	99.042	5.6	0	0	0	0	B-3-Cmp-Mku-1	3.513	1.193	72.1	94.7	
								Mku-3-B-1	-3.513	-1.193	72.1	94.7	
B-3-Cmp-Nta-1	30.000	97.873	5.0	0	0	0	0	B-3-Cmp-Nta-2	-0.798	-0.465	18.2	86.4	
								Cmp-3-B-1	0.798	0.465	18.2	86.4	
B-3-Cmp-Nta-2	30.000	98.614	5.3	0	0	0	0	B-3-Cmp-Nta-1	0.802	0.439	17.8	87.8	
								Nta-3-B-1	-0.802	-0.439	17.8	87.8	
B-3-Cyi-Cyi/Nko-1	30.000	98.231	3.0	0	0	0	0	3-Cyi/Nko-B	0.149	0.089	3.4	85.8	
								Cyi-3-B-1	-0.149	-0.089	3.4	85.8	
B-3-Cyi-Ghi-2	30.000	98.644	4.2	0	0	0	0	3-Cyi-Ghi-B	1.054	-0.367	21.8	-94.4	
								Ghi-3-B-1	-1.054	0.367	21.8	-94.4	
B-3-Ghi-Gse-1	30.000	98.644	4.2	0	0	0	0	B-3-Ghi-Gse-2	0.291	0.225	7.2	79.1	
								Ghi-3-B-1	-0.291	-0.225	7.2	79.1	
B-3-Ghi-Gse-2	30.000	98.593	4.2	0	0	0	0	B-3-Ghi-Gse-1	-0.291	-0.230	7.2	78.4	
								Gse-3-B	0.291	0.230	7.2	78.4	
B-3-Kbu-Kro/Nko-2	30.000	95.967	1.0	0	0	0	0	3-Kro/Kbu-B	-1.455	-0.043	29.2	100.0	
								Kbu-3-B-1	1.455	0.043	29.2	100.0	
B-3-Kbu-Kro-2	30.000	96.286	1.3	0	0	0	0	3-Kro/Kbu-B	0.000	0.000	0.0	0.0	
B-3-Kri-Cmp/Kya-1	30.000	98.659	4.8	0	0	0	0	3-Cmp/Kri/Kya-B	0.000	0.000	0.0	0.0	
								Kri-3-B-1	0.000	0.000	0.0	0.0	
B-3-Nko-Cyi/Nko-1	30.000	98.321	3.0	0	0	0	0	3-Cyi/Nko-B	0.298	0.158	6.6	88.4	
								Nko-3-B-1	-0.298	-0.158	6.6	88.4	
B-10-Bga-Gsh-1	110.000	95.167	-2.7	0	0	0	0	B-10-Bga-Gsh-2	0.000	-0.290	1.6	0.0	
								Bga-10-B-1	0.000	0.290	1.6	0.0	
B-10-Bga-Gsh-2	110.000	95.174	-2.7	0	0	0	0	B-10-Bga-Gsh-1	0.000	0.000	0.0	0.0	
								Gsh-10-B	0.000	0.000	0.0	0.0	
B-10-Bga-Nte-1	110.000	95.167	-2.7	0	0	0	0	B-10-Bga-Nte-2	-12.327	-6.458	76.8	88.6	
								Bga-10-B-1	12.327	6.458	76.8	88.6	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Bga-Nte-2	110.000	96.330	-2.1	0	0	0	0	B-10-Bga-Nte-1	12.420	6.035	75.2	89.9	
								Nte-10-B-1	-12.420	-6.035	75.2	89.9	
B-10-Bre-Gso-1	110.000	97.174	-0.5	0	0	0	0	10-Bre/Gso/Msh-B	10.342	-6.189	65.1	-85.8	
								Bre-10-B-1	-10.342	6.189	65.1	-85.8	
B-10-Bre-Jb1-1	110.000	97.174	-0.5	0	0	0	0	B-10-Bre-Jb1-2	-26.925	-2.727	146.2	99.5	
								Bre-10-B-1	26.925	2.727	146.2	99.5	
B-10-Bre-Jb1-2	110.000	97.656	0.0	0	0	0	0	B-10-Bre-Jb1-1	27.036	2.749	146.1	99.5	
								Jb1-10-B-1	-27.036	-2.749	146.1	99.5	
B-10-Gfu-Mku-2	110.000	100.062	3.8	0	0	0	0	10-Gfu/Mku/Rln-B	26.076	-1.707	137.1	-99.8	
								Mku-10-B-1	-26.076	1.707	137.1	-99.8	
B-10-Gko-Jb1-1	110.000	97.750	-0.3	0	0	0	0	B-10-Gko-Jb1-2	-13.515	7.271	82.4	-88.1	
								Gko-10-B-1	13.515	-7.271	82.4	-88.1	
B-10-Gko-Jb1-2	110.000	97.656	0.0	0	0	0	0	B-10-Gko-Jb1-1	13.542	-7.470	83.1	-87.6	
								Jb1-10-B-1	-13.542	7.470	83.1	-87.6	
B-10-Gko-MKi-1	110.000	97.750	-0.3	0	0	0	0	10-Gko/Kgo/MKi-B	16.691	3.326	91.4	98.1	
								Gko-10-B-1	-16.691	-3.326	91.4	98.1	
B-10-Gso-Msh-2	110.000	97.373	-1.5	0	0	0	0	10-Bre/Gso/Msh-B	-8.878	6.134	58.2	-82.3	
								Msh-10-B-1	8.878	-6.134	58.2	-82.3	
B-10-Jb1-Jb2-1	110.000	97.656	0.0	0	0	0	0	B-10-Jb1-Jb2-2	-23.879	-4.223	130.3	98.5	
								Jb1-10-B-1	23.879	4.223	130.3	98.5	
B-10-Jb1-Jb2-2	110.000	97.710	0.1	0	0	0	0	B-10-Jb1-Jb2-1	23.888	4.212	130.3	98.5	
								Jb2-10-B-1	-23.888	-4.212	130.3	98.5	
B-10-Jb1-Rln-2	110.000	97.656	0.0	0	0	0	0	10-Gfu/Jb1/Rln-B	-21.128	3.533	115.1	-98.6	
								Jb1-10-B-1	21.128	-3.533	115.1	-98.6	
B-10-Kba-Msh-2	110.000	97.373	-1.5	0	0	0	0	10-Kba/Msh/Rwi-B	4.693	-3.318	31.0	-81.7	
								Msh-10-B-1	-4.693	3.318	31.0	-81.7	
B-10-Kba-Rwi-2	110.000	97.606	-1.9	0	0	0	0	10-Kba/Msh/Rwi-B	-0.306	4.739	25.5	-6.4	
								Rwi-10-B-1	0.306	-4.739	25.5	-6.4	
B-10-Kbo-Nte-2	110.000	96.330	-2.1	0	0	0	0	10-Kbo/Nte-B	-7.161	-2.973	42.2	92.4	
								Nte-10-B-1	7.161	2.973	42.2	92.4	
B-10-Kbo-Kro-1	110.000	97.565	-1.1	0	0	0	0	10-Kbo/Kro/Mr2-B	8.559	1.907	47.2	97.6	
								Kro-10-B-1	-8.559	-1.907	47.2	97.6	
B-10-Kbu-Kro-1	110.000	97.595	-1.1	0	0	0	0	B-10-Kbu-Kro-2	1.451	-0.009	7.8	100.0	
								Kbu-10-B-1	-1.451	0.009	7.8	100.0	
B-10-Kbu-Kro-2	110.000	97.565	-1.1	0	0	0	0	B-10-Kbu-Kro-1	-1.451	-0.371	8.1	96.9	
								Kro-10-B-1	1.451	0.371	8.1	96.9	
B-10-Kgo-Kli-1	110.000	97.707	-1.0	0	0	0	0	B-10-Kgo-Kli-2	-4.976	-1.745	28.3	94.4	
								Kgo-10-B-1	4.976	1.745	28.3	94.4	
B-10-Kgo-Kli-2	110.000	98.028	-0.7	0	0	0	0	B-10-Kgo-Kli-1	4.985	0.860	27.1	98.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Kli-10-B-1	-4.985	-0.860	27.1	98.5	
B-10-Kgo-MKi-2	110.000	97.707	-1.0	0	0	0	0	10-Gko/Kgo/MKi-B	-4.414	1.670	25.4	-93.5	
								Kgo-10-B-1	4.414	-1.670	25.4	-93.5	
B-10-Kli-Kro-1	110.000	97.565	-1.1	0	0	0	0	B-10-Kli-Kro-2	-8.467	-2.231	47.1	96.7	
								Kro-10-B-1	8.467	2.231	47.1	96.7	
B-10-Kli-Kro-2	110.000	98.028	-0.7	0	0	0	0	B-10-Kli-Kro-1	8.492	1.475	46.2	98.5	
								Kli-10-B-1	-8.492	-1.475	46.2	98.5	
B-10-Kli-Ny1-1	110.000	98.028	-0.7	0	0	0	0	B-10-Kli-Ny1-2	-13.877	-1.507	74.7	99.4	
								Kli-10-B-1	13.877	1.507	74.7	99.4	
B-10-Kli-Ny1-2	110.000	98.821	0.1	0	0	0	0	B-10-Kli-Ny1-1	13.973	1.010	74.4	99.7	
								Ny1-10-B-1	-13.973	-1.010	74.4	99.7	
B-10-Kli-Rka-1	110.000	98.028	-0.7	0	0	0	0	B-10-Kli-Rka-2	-0.996	-1.540	9.8	54.3	
								Kli-10-B-1	0.996	1.540	9.8	54.3	
B-10-Kli-Rka-2	110.000	98.219	-0.7	0	0	0	0	B-10-Kli-Rka-1	0.997	0.723	6.6	81.0	
								Rka-10-B-1	-0.997	-0.723	6.6	81.0	
B-10-Mku-Nta-1	110.000	100.062	3.8	0	0	0	0	B-10-Mku-Nta-2	-9.511	0.443	49.9	-99.9	
								Mku-10-B-1	9.511	-0.443	49.9	-99.9	
B-10-Mku-Nta-2	110.000	100.302	4.4	0	0	0	0	B-10-Mku-Nta-1	9.542	-1.284	50.4	-99.1	
								Nta-10-B-1	-9.542	1.284	50.4	-99.1	
B-10-Mr1-Mr2-1	110.000	96.777	-1.9	0	0	0	0	B-10-Mr1-Mr2-2	0.329	-0.663	4.0	-44.5	
								Mr1-10-B-1	-0.329	0.663	4.0	-44.5	
B-10-Mr1-Mr2-2	110.000	96.778	-1.9	0	0	0	0	B-10-Mr1-Mr2-1	-0.329	0.652	4.0	-45.0	
								Mr2-10-B-2	0.329	-0.652	4.0	-45.0	
B-10-Mr2/Nte-1	110.000	96.778	-1.9	0	0	0	0	10-Mr2/Nte-B	6.668	3.170	40.0	90.3	
								Mr2-10-B-2	-6.668	-3.170	40.0	90.3	
B-10-Mr2/Nte-2	110.000	96.330	-2.1	0	0	0	0	10-Mr2/Nte-B	-6.652	-3.757	41.6	87.1	
								Nte-10-B-1	6.652	3.757	41.6	87.1	
B-10-Mr2-Rz2-1	110.000	96.778	-1.9	0	0	0	0	B-10-Mr2-Rz2-2	-6.339	-3.821	40.1	85.6	
								Mr2-10-B-1	6.339	3.821	40.1	85.6	
B-10-Mr2-Rz2-2	110.000	97.170	-1.7	0	0	0	0	B-10-Mr2-Rz2-1	6.355	3.463	39.1	87.8	
								Rz2-10-B-1	-6.355	-3.463	39.1	87.8	
B-6-Mr1-Rz1-1	6.600	99.097	-1.7	0	0	0	0	B-6-Mr1-Rz1-2	-1.737	-0.050	153.4	100.0	
								Mr1-6-B-1	1.737	0.050	153.4	100.0	
B-6-Mr1-Rz1-2	6.600	99.586	-1.3	0	0	0	0	B-6-Mr1-Rz1-1	1.745	0.063	153.4	99.9	
								Rz1-6-B-1	-1.745	-0.063	153.4	99.9	
Bga-3-B-1	30.000	99.595	-5.5	0	0	12.310	5.962	Bga-10-B-1	-12.310	-5.962	264.3	90.0	
Bga-10-B-1	110.000	95.167	-2.7	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	12.327	6.748	77.5	87.7	-7.000
								B-10-Bga-Nte-1	-12.327	-6.458	76.8	88.6	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Bga-Gsh-1	0.000	-0.290	1.6	0.0	
Bga-6-B-1	6.600	95.167	-2.7	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
B-Ghi-Ghi/Kya-1	30.000	98.644	4.2	0	0	0	0	3-Ghi/Kri/Kya-B	-1.033	0.349	21.3	-94.7	
								Ghi-3-B-1	1.033	-0.349	21.3	-94.7	
Bre-1-B-1	15.000	98.816	-2.9	0	0	16.542	8.012	Bre-10-B-1	-8.271	-4.006	358.0	90.0	
								Bre-10-B-1	-8.271	-4.006	358.0	90.0	
Bre-10-B-1	110.000	97.174	-0.5	0	0	0	0	Bre-1-B-1	8.291	4.458	50.8	88.1	-4.000
								Bre-1-B-1	8.291	4.458	50.8	88.1	-4.000
								B-10-Bre-Jb1-1	-26.925	-2.727	146.2	99.5	
								B-10-Bre-Gso-1	10.342	-6.189	65.1	-85.8	
C-Kgo-B-3	30.000	97.507	-3.3	0	0	0.000	-4.754	Kgo-3-B-1	0.000	4.754	93.8	0.0	
Cmp-3-B-1	30.000	97.873	5.0	0	0	4.330	2.097	B-3-Cmp-Mku-1	-3.483	-1.161	72.2	94.9	
								B-3-Cmp-Nta-1	-0.798	-0.465	18.2	86.4	
								B-3-Cmp-Kri-2	-0.049	-0.471	9.3	10.3	
C-Msh-1-B	15.000	99.704	-2.7	0	0	0.000	-4.970	Msh-1-B-1	0.000	4.970	191.9	0.0	
C-Rwi-B-1	15.000	100.023	-2.0	0	0	0.000	-5.002	Rwi-1-B-1	0.000	5.002	192.5	0.0	
Cyi-3-B-1	30.000	98.231	3.0	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.149	0.089	3.4	85.8	
								G-Cyi-3-B	-0.149	-0.089	3.4	85.8	
Cyi-3-B-2	30.000	98.231	3.0	0	0	0	0	N-Cyi-04-1	-0.149	-0.089	3.4	85.8	
								G-Cyi-3-B	0.149	0.089	3.4	85.8	
G-Cyi-3-B	30.000	98.231	3.0	0	0	0	0	Cyi-3-B-1	0.149	0.089	3.4	85.8	
								Cyi-3-B-2	-0.149	-0.089	3.4	85.8	
G-Ghi-6-B	6.600	100.000	5.4	0	0	0	0	Ghi-6-B-1	0.900	0.515	90.7	86.8	
								Ghi-6-B-2	-0.900	-0.515	90.7	86.8	
G-Gko-1-B	15.000	100.000	0.0	0	0	0	0	Gko-1-B-1	31.000	26.392	1567.0	76.1	
								Gko-1-B-2	-31.000	-26.392	1567.0	76.1	
G-Gko-3-B	15.000	100.000	0.0	0	0	0	0	Gko-1-B-1	3.990	-0.133	153.7	-99.9	
								Gko-3-B	-3.990	0.133	153.7	-99.9	
G-Gse-6-B	6.600	99.253	4.0	0	0	0	0	Gse-6-B-1	0.499	0.154	46.0	95.6	
								Gse-6-B-2	-0.499	-0.154	46.0	95.6	
G-Gsh-1-B	11.000	99.139	-2.7	0	0	0	0	Gsh-1-B-1	0.000	0.000	0.0	0.0	
								Gsh-1-B-2	0.000	0.000	0.0	0.0	
Ghi-3-B-1	30.000	98.644	4.2	0	0	0.585	0.284	Ghi-6-B-1	-0.898	-0.490	20.0	87.8	
								B-3-Ghi-Gse-1	0.291	0.225	7.2	79.1	
								B-3-Cyi-Ghi-2	1.054	-0.367	21.8	-94.4	
								B-Ghi-Ghi/Kya-1	-1.033	0.349	21.3	-94.7	
Ghi-6-B-1	6.600	100.000	5.4	0	0	0	0	Ghi-3-B-1	0.900	0.515	90.7	86.8	
								G-Ghi-6-B	-0.900	-0.515	90.7	86.8	
* Ghi-6-B-2	6.600	100.000	5.4	0.900	0.515	0	0	G-Ghi-6-B	0.900	0.515	90.7	86.8	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
G-Jb2-10-B	110.000	97.710	0.1	0	0	0	0	Jb2-10-B-1	23.888	4.212	130.3	98.5	
								Jb2-10-B-2	-23.888	-4.212	130.3	98.5	
G-Jb3-1-B	15.000	99.530	-0.4	0	0	0	0	Jb3-1-B-1	5.959	-0.246	230.6	-99.9	
								Jb3-1-B-2	-5.959	0.246	230.6	-99.9	
G-KbW-1-B-1	11.000	97.612	-0.9	0	0	0	0	KbW-1-B-3	0.000	0.000	0.0	0.0	
								KbW-1-B-2	0.000	0.000	0.0	0.0	
G-KbW-1-B-2	11.000	97.612	-0.9	0	0	0	0	KbW-1-B-1	0.000	0.000	0.0	0.0	
								KbW-1-B-4	0.000	0.000	0.0	0.0	
Gko-1-B-1	15.000	100.000	0.0	0	0	31.800	15.401	Gko-10-B-1	1.063	3.619	145.2	28.2	
								Gko-10-B-1	1.063	3.619	145.2	28.2	
								Gko-10-B-1	1.063	3.619	145.2	28.2	
								G-Gko-1-B	-31.000	-26.392	1567.0	76.1	
								G-Gko-3-B	-3.990	0.133	153.7	-99.9	
* Gko-1-B-2	15.000	100.000	0.0	21.060	27.115	0	0	N-Gko-.04-1	-4.970	0.361	191.8	-99.7	
								N-Gko-.04-2	-4.970	0.361	191.8	-99.7	
								G-Gko-1-B	31.000	26.392	1567.0	76.1	
Gko-3-B	15.000	100.000	0.0	0	0	0	0	N-RAg-.6	-3.990	0.133	153.7	-99.9	
								G-Gko-3-B	3.990	-0.133	153.7	-99.9	
Gko-10-B-1	110.000	97.750	-0.3	0	0	0	0	Gko-1-B-1	-1.059	-3.532	19.8	28.7	
								Gko-1-B-1	-1.059	-3.532	19.8	28.7	
								Gko-1-B-1	-1.059	-3.532	19.8	28.7	
								B-10-Gko-Jb1-1	-13.515	7.271	82.4	-88.1	
								B-10-Gko-MKi-1	16.691	3.326	91.4	98.1	
G-Kse-1-B	110.000	97.240	-1.0	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Kya-3-B-2	30.000	99.291	5.2	0	0	0	0	Kya-3-B-1	1.095	-0.030	21.2	-100.0	
								Kya-3-B-3	-1.095	0.030	21.2	-100.0	
G-Mku-10-B	110.000	100.062	3.8	0	0	0	0	Mku-10-B-1	9.967	-0.664	52.4	-99.8	
								Mku-10-B-2	-9.967	0.664	52.4	-99.8	
G-Mku-.6-B	6.600	100.000	6.9	0	0	0	0	Mku-.6-B-4	12.000	1.989	1064.1	98.7	
								Mku-.6-B-2	-12.000	-1.989	1064.1	98.7	
G-Mus-3-B	30.000	99.470	-0.5	0	0	0	0	Mus-3-B	-0.997	-0.728	23.9	80.8	
								Rka-3-B-1	0.997	0.728	23.9	80.8	
G-Nko-3-B	30.000	98.321	3.0	0	0	0	0	Nko-3-B-1	0.298	0.158	6.6	88.4	
								Nko-3-B-2	-0.298	-0.158	6.6	88.4	
G-NtB-3-B	30.000	97.507	-3.3	0	0	0	0	Kgo-3-B-1	0.000	0.000	0.0	0.0	
								NtB-3-B1	0.000	0.000	0.0	0.0	
G-Ny1-3-B	30.000	99.218	2.1	0	0	0	0	Ny1-3-B-1	13.984	1.512	272.8	99.4	
								Ny1-3-B-2	-13.984	-1.512	272.8	99.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
G-Rka5-3-B	30.000	99.470	-0.5	0	0	0	0	Rka5-3-B	0.000	0.000	0.0	0.0	
								Rka-3-B-1	0.000	0.000	0.0	0.0	
G-Rka-3-B	30.000	99.470	-0.5	0	0	0	0	Rka-3-B-1	0.000	0.000	0.0	0.0	
								Rka-3-B-2	0.000	0.000	0.0	0.0	
G-Rz1-.06-B	0.600	100.000	0.2	0	0	0	0	N-Rz1-.06-B-1-1	1.750	0.107	1687.1	99.8	
								N-Rz1-.06-B-1-2	-1.750	-0.107	1687.1	99.8	
G-Rz2-.6-B	6.600	100.000	0.8	0	0	0	0	Rz2-.6-B-1-1	6.375	3.850	651.5	85.6	
								Rz2-.6-B-1-2	-6.375	-3.850	651.5	85.6	
Gse-3-B	30.000	98.593	4.2	0	0	0	0	Gse-6-B-1	0.291	0.230	7.2	78.4	-1.000
								B-3-Ghi-Gse-2	-0.291	-0.230	7.2	78.4	
Gse-6-B-1	6.600	99.253	4.0	0	0	0.789	0.382	Gse-3-B	-0.291	-0.228	32.6	78.6	
								G-Gse-.6-B	-0.499	-0.154	46.0	95.6	
Gse-6-B-2	6.600	99.253	4.0	0	0	0	0	N-Gse-.04-1	-0.249	-0.077	23.0	95.6	
								N-Gse-.04-2	-0.249	-0.077	23.0	95.6	
								G-Gse-.6-B	0.499	0.154	46.0	95.6	
Gsh-1-B-1	11.000	99.139	-2.7	0	0	0	0	Gsh-10-B	0.000	0.000	0.0	0.0	
								Gsh-10-B	0.000	0.000	0.0	0.0	
								G-Gsh-1-B	0.000	0.000	0.0	0.0	
Gsh-1-B-2	11.000	99.139	-2.7	0	0	0	0	G-Gsh-1-B	0.000	0.000	0.0	0.0	
Gsh-10-B	110.000	95.174	-2.7	0	0	0	0	Gsh-1-B-1	0.000	0.000	0.0	0.0	-4.000
								Gsh-1-B-1	0.000	0.000	0.0	0.0	-4.000
								B-10-Bga-Gsh-2	0.000	0.000	0.0	0.0	
Gso-1-B-1	15.000	99.048	-1.2	0	0	1.376	0.666	Gso-10-B-1	-1.376	-0.666	59.4	90.0	
Gso-10-B-1	110.000	97.240	-1.0	0	0	0	0	Gso-1-B-1	1.376	0.672	8.3	89.8	-2.000
								10-Bre/Gso/Msh-B	-1.376	-0.672	8.3	89.8	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Jb1-10-B-1	110.000	97.656	0.0	0	0	0	0	Jb1-1-B-1	4.428	5.411	37.6	63.3	-3.000
								B-10-Jb1-Jb2-1	-23.879	-4.223	130.3	98.5	
								B-10-Jb1-Rln-2	-21.128	3.533	115.1	-98.6	
								B-10-Bre-Jb1-2	27.036	2.749	146.1	99.5	
								B-10-Gko-Jb1-2	13.542	-7.470	83.1	-87.6	
Jb1-1-B-1	15.000	99.315	-0.6	0	0	10.371	5.023	Jb1-10-B-1	-4.426	-5.290	267.3	64.2	
								B-1-Jb1-Jb3-1	-5.945	0.267	230.6	-99.9	
* Jb2-.6-B-1	6.600	100.000	4.9	24.000	6.346	0	0	Jb2-10-B-2	12.000	3.173	1085.8	96.7	
								Jb2-10-B-2	12.000	3.173	1085.8	96.7	
Jb2-10-B-1	110.000	97.710	0.1	0	0	0	0	B-10-Jb1-Jb2-2	23.888	4.212	130.3	98.5	
								G-Jb2-10-B	-23.888	-4.212	130.3	98.5	
Jb2-10-B-2	110.000	97.710	0.1	0	0	0	0	Jb2-.6-B-1	-11.944	-2.106	65.1	98.5	
								Jb2-.6-B-1	-11.944	-2.106	65.1	98.5	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Jb3-1-B-1	15.000	99.530	-0.4	0	0	0	0	G-Jb2-10-B	23.888	4.212	130.3	98.5	
								B-1-Jb1-Jb3-2	5.959	-0.246	230.6	-99.9	
Jb3-1-B-2	15.000	99.530	-0.4	0	0	0	0	G-Jb3-1-B	-5.959	0.246	230.6	-99.9	
								N-Jb3-.04-1	-0.993	0.041	38.4	-99.9	
								N-Jb3-.04-2	-0.993	0.041	38.4	-99.9	
								N-Jb3-.04-3	-0.993	0.041	38.4	-99.9	
Jb3-1-B-2d	15.000	99.530	-0.4	0	0	0	0	G-Jb3-1-B	5.959	-0.246	230.6	-99.9	
								Jb3-1-B-2d	-2.980	0.123	115.3	-99.9	
								N-Jb3-.04-4	-0.993	0.041	38.4	-99.9	
								N-Jb3-.04-5	-0.993	0.041	38.4	-99.9	
								N-Jb3-.04-6	-0.993	0.041	38.4	-99.9	
Kba-3-B-1	30.000	99.398	-3.8	0	0	4.352	2.108	Jb3-1-B-2	2.980	-0.123	115.3	-99.9	
Kba-10-B-1	110.000	97.444	-1.8	0	0	0	0	Kba-10-B-1	-4.352	-2.108	93.6	90.0	
								Kba-3-B-1	4.368	2.305	26.6	88.4	-4.000
								10-Kba/Msh/Rwi-B	-4.368	-2.305	26.6	88.4	
Kbo-3-B-1	30.000	97.403	-3.1	0	0	1.335	0.647	Kbo-10-B-1	-1.335	-0.647	29.3	90.0	
Kbo-10-B-1	110.000	96.739	-1.8	0	0	0	0	Kbo-3-B-1	1.339	0.685	8.2	89.0	-2.000
								10-Kbo/Kro/Mr2-B	-1.339	-0.685	8.2	89.0	
Kbu-1-B-1	11.000	97.612	-0.9	0	0	0	0	Kbu-3-B-1	-1.451	0.005	78.0	100.0	
								Kbu-10-B-1	0.708	-0.003	38.1	100.0	
								Kbu-10-B-1	0.743	-0.001	40.0	100.0	
								B-1-Kbu-KbW-1D	0.000	-0.002	0.1	0.0	
Kbu-3-B-1	30.000	95.967	1.0	0	0	0	0	Kbu-1-B-1	1.455	0.043	29.2	100.0	-2.000
								B-3-Kbu-Kro/Nko-2	-1.455	-0.043	29.2	100.0	
Kbu-10-B-1	110.000	97.595	-1.1	0	0	0	0	Kbu-1-B-1	-0.708	0.005	3.8	100.0	
								Kbu-1-B-1	-0.743	0.003	4.0	100.0	
								B-10-Kbu-Kro-1	1.451	-0.009	7.8	100.0	
KbW-1-B-1	11.000	97.612	-0.9	0	0	0	0	KbW-1-B-2	0.000	0.000	0.0	0.0	
								G-KbW-1-B-2	0.000	0.000	0.0	0.0	
KbW-1-B-2	11.000	97.612	-0.9	0	0	0	0	B-1-Kbu-KbW-2D	0.000	0.000	0.0	0.0	
								KbW-1-B-1	0.000	0.000	0.0	0.0	
								G-KbW-1-B-1	0.000	0.000	0.0	0.0	
KbW-1-B-3	11.000	97.612	-0.9	0	0	0	0	G-KbW-1-B-1	0.000	0.000	0.0	0.0	
KbW-1-B-4	11.000	97.612	-0.9	0	0	0	0	G-KbW-1-B-2	0.000	0.000	0.0	0.0	
Kgo-3-B-1	30.000	97.507	-3.3	0	0	9.366	4.443	Kgo-10-B-1	-4.683	0.155	92.5	-99.9	
								Kgo-10-B-1	-4.683	0.155	92.5	-99.9	
								C-Kgo-B-3	0.000	-4.754	93.8	0.0	
								G-NtB-3-B	0.000	0.000	0.0	0.0	
Kgo-10-B-1	110.000	97.707	-1.0	0	0	0	0	Kgo-3-B-1	4.695	0.037	25.2	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Kgo-3-B-1	4.695	0.037	25.2	100.0	
								B-10-Kgo-MKi-2	-4.414	1.670	25.4	-93.5	
								B-10-Kgo-Kli-1	-4.976	-1.745	28.3	94.4	
Kli-3-B-1	30.000	99.593	-1.9	0	0	1.390	0.673	Kli-10-B-1	-1.390	-0.673	29.8	90.0	
Kli-10-B-1	110.000	98.028	-0.7	0	0	0	0	Kli-3-B-1	1.395	0.713	8.4	89.1	-3.000
								B-10-Kgo-Kli-2	4.985	0.860	27.1	98.5	
								B-10-Kli-Kro-2	8.492	1.475	46.2	98.5	
								B-10-Kli-Rka-1	-0.996	-1.540	9.8	54.3	
								B-10-Kli-Nyl-1	-13.877	-1.507	74.7	99.4	
Kri-3-B-1	30.000	98.659	4.8	0	0	0	0	Kri-6-B-1	0.000	0.000	0.0	0.0	
								B-3-Kri-Cmp/Kya-1	0.000	0.000	0.0	0.0	
Kri-6-B-1	6.600	98.659	4.8	0	0	0	0	Kri-3-B-1	0.000	0.000	0.0	0.0	
Kro-3-B-1	30.000	98.237	-2.4	0	0	1.356	0.657	Kro-10-B-1	-1.356	-0.657	29.5	90.0	
Kro-10-B-1	110.000	97.565	-1.1	0	0	0	0	Kro-3-B-1	1.359	0.696	8.2	89.0	-2.000
								B-10-Kbu-Kro-2	-1.451	-0.371	8.1	96.9	
								B-10-Kbo-Kro-1	8.559	1.907	47.2	97.6	
								B-10-Kli-Kro-1	-8.467	-2.231	47.1	96.7	
Kse-10-B1	110.000	97.240	-1.0	0	0	0	0	G-Kse-1-B	0.000	0.000	0.0	0.0	
Kya-3-B-1	30.000	99.291	5.2	0	0	0	0	3-Ghi/Kri/Kya-B	1.095	-0.030	21.2	-100.0	
								G-Kya-3-B-2	-1.095	0.030	21.2	-100.0	
Kya-3-B-3	30.000	99.291	5.2	0	0	0	0	N-Kya-6-1	-1.095	0.030	21.2	-100.0	
								G-Kya-3-B-2	1.095	-0.030	21.2	-100.0	
MKi-3-B-1	30.000	97.935	-2.3	0	0	12.233	5.925	MKi-10-B-1	-12.233	-5.925	267.1	90.0	
MKi-10-B-1	110.000	97.573	-0.5	0	0	0	0	MKi-3-B-1	12.244	6.406	74.3	88.6	-2.000
								10-Gko/Kgo/MKi-B	-12.244	-6.406	74.3	88.6	
Mku-3-B-1	30.000	99.042	5.6	0	0	1.867	0.904	Mku-6-B-1	-5.380	-2.098	112.2	93.2	
								B-3-Cmp-Mku-2	3.513	1.193	72.1	94.7	
Mku-10-B-1	110.000	100.062	3.8	0	0	0	0	Mku-6-B-1	-6.598	0.600	34.8	-99.6	
								B-10-Gfu-Mku-2	26.076	-1.707	137.1	-99.8	
								B-10-Mku-Nta-1	-9.511	0.443	49.9	-99.9	
								G-Mku-10-B	-9.967	0.664	52.4	-99.8	
Mku-10-B-2	110.000	100.062	3.8	0	0	0	0	N-Mku-6-1	-9.967	0.664	52.4	-99.8	
								G-Mku-10-B	9.967	-0.664	52.4	-99.8	
Mku-6-B-1	6.600	100.000	6.9	0	0	0	0	Mku-3-B-1	5.383	2.239	510.0	92.3	
								Mku-10-B-1	6.617	-0.250	579.2	-99.9	
								Mku-6-B-4	-6.000	-0.995	532.0	98.7	
								Mku-6-B-3	-3.000	-0.497	266.0	98.7	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	-3.000	-0.497	266.0	98.7	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
* Mku-6-B-2	6.600	100.000	6.9	12.000	1.989	0	0	G-Mku-6-B	12.000	1.989	1064.1	98.7	
Mku-6-B-3	6.600	100.000	6.9	0	0	0	0	Mku-6-B-4	-6.000	-0.995	532.0	98.7	
								Mku-6-B-1	3.000	0.497	266.0	98.7	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	3.000	0.497	266.0	98.7	
Mku-6-B-4	6.600	100.000	6.9	0	0	0	0	Mku-6-B-1	6.000	0.995	532.0	98.7	
								Mku-6-B-3	6.000	0.995	532.0	98.7	
								G-Mku-6-B	-12.000	-1.989	1064.1	98.7	
Mku-6-B-5	6.600	100.000	6.9	0	0	0	0	Mku-6-B-1	0.000	0.000	0.0	0.0	
								Mku-6-B-3	0.000	0.000	0.0	0.0	
Mku-6-B-6	6.600	100.000	6.9	0	0	0	0	Mku-6-B-3	-3.000	-0.497	266.0	98.7	
								Mku-6-B-1	3.000	0.497	266.0	98.7	
Mr1-6-B-1	6.600	99.097	-1.7	0	0	0	0	Mr1-10-B-1	0.329	-0.657	64.9	-44.8	
								Mr1-3-B-1	1.407	0.707	139.1	89.4	
								B-6-Mr1-Rz1-1	-1.737	-0.050	153.4	100.0	
Mr1-10-B-1	110.000	96.777	-1.9	0	0	0	0	Mr1-6-B-1	-0.329	0.663	4.0	-44.5	-3.000
								B-10-Mr1-Mr2-1	0.329	-0.663	4.0	-44.5	
Mr1-3-B-1	30.000	100.231	-2.5	0	0	1.406	0.681	Mr1-6-B-1	-1.406	-0.681	30.0	90.0	2.000
Mr2-10-B-1	110.000	96.778	-1.9	0	0	0	0	B-10-Mr2-Rz2-1	-6.339	-3.821	40.1	85.6	
								Mr2-10-B-2	6.339	3.821	40.1	85.6	
Mr2-10-B-2	110.000	96.778	-1.9	0	0	0	0	B-10-Mr2/Nte-1	6.668	3.170	40.0	90.3	
								B-10-Mr1-Mr2-2	-0.329	0.652	4.0	-45.0	
								Mr2-10-B-1	-6.339	-3.821	40.1	85.6	
Msh-1-B-1	15.000	99.704	-2.7	0	0	4.178	2.023	Msh-10-B-1	-4.178	2.947	197.4	-81.7	
								C-Msh-1-B	0.000	-4.970	191.9	0.0	
Msh-10-B-1	110.000	97.373	-1.5	0	0	0	0	Msh-1-B-1	4.184	-2.816	27.2	-83.0	-1.000
								B-10-Gso-Msh-2	-8.878	6.134	58.2	-82.3	
								B-10-Kba-Msh-2	4.693	-3.318	31.0	-81.7	
Mus-3-B	30.000	99.470	-0.5	0	0	0	0	Mus-6-B	-0.997	-0.728	23.9	80.8	
								G-Mus-3-B	0.997	0.728	23.9	80.8	
Mus-6-B	6.600	100.686	0.3	1.000	0.750	0	0	Mus-3-B	1.000	0.750	108.6	80.0	
N-Cyi-04-1	0.400	99.805	3.9	0.150	0.093	0	0	Cyi-3-B-2	0.150	0.093	255.2	85.0	
N-Gko-04-1	0.400	100.341	4.2	5.000	0.000	0	0	Gko-1-B-2	5.000	0.000	7192.4	100.0	
N-Gko-04-2	0.400	100.341	4.2	5.000	0.000	0	0	Gko-1-B-2	5.000	0.000	7192.4	100.0	
* N-Gse-04-1	0.400	100.000	4.9	0.250	0.081	0	0	Gse-6-B-2	0.250	0.081	379.4	95.1	
* N-Gse-04-2	0.400	100.000	4.9	0.250	0.081	0	0	Gse-6-B-2	0.250	0.081	379.4	95.1	
N-Jb3-04-1	0.400	100.130	2.0	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1441.5	100.0	
N-Jb3-04-2	0.400	100.130	2.0	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1441.5	100.0	
N-Jb3-04-3	0.400	100.130	2.0	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1441.5	100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
N-Jb3-.04-4	0.400	100.130	2.0	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1441.5	100.0	
N-Jb3-.04-5	0.400	100.130	2.0	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1441.5	100.0	
N-Jb3-.04-6	0.400	100.130	2.0	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1441.5	100.0	
Nko-3-B-1	30.000	98.321	3.0	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.298	0.158	6.6	88.4	
								G-Nko-3-B	-0.298	-0.158	6.6	88.4	
Nko-3-B-2	30.000	98.321	3.0	0	0	0	0	N-Nko-04-B-2	-0.298	-0.158	6.6	88.4	
								G-Nko-3-B	0.298	0.158	6.6	88.4	
N-Kya-.6-1	6.600	99.707	6.7	1.100	0.000	0	0	Kya-3-B-3	1.100	0.000	96.5	100.0	
N-Mku-.6-1	6.600	100.173	7.6	10.000	0.000	0	0	Mku-10-B-2	10.000	0.000	873.3	100.0	
* N-Nko-04-B-2	0.400	100.000	4.3	0.300	0.167	0	0	Nko-3-B-2	0.300	0.167	495.8	87.3	
* N-Ny1-.6-2	6.600	100.000	5.0	14.000	2.230	0	0	Ny1-3-B-2	14.000	2.230	1240.1	98.8	
N-RAg-.6	6.600	100.200	1.9	4.000	0.000	0	0	Gko-3-B	4.000	0.000	349.2	100.0	
N-Rz1-.06-B-1-1	0.600	100.000	0.2	0	0	0	0	Rz1-.6-B-1	1.750	0.107	1687.1	99.8	
								G-Rz1-.06-B	-1.750	-0.107	1687.1	99.8	
* N-Rz1-.06-B-1-2	0.600	100.000	0.2	1.750	0.107	0	0	G-Rz1-.06-B	1.750	0.107	1687.1	99.8	
Nta-3-B-1	30.000	98.614	5.3	0	0	0.878	0.425	Nta-.6-B-1	-1.680	-0.864	36.9	88.9	
								B-3-Cmp-Nta-2	0.802	0.439	17.8	87.8	
Nta-10-B-1	110.000	100.302	4.4	0	0	0	0	Nta-.6-B-1	-4.771	0.642	25.2	-99.1	
								Nta-.6-B-1	-4.771	0.642	25.2	-99.1	
								B-10-Mku-Nta-2	9.542	-1.284	50.4	-99.1	
Nta-.6-B-1	6.600	100.102	6.6	0	0	0	0	Nta-3-B-1	1.685	0.916	167.6	87.8	
								Nta-10-B-1	4.783	-0.458	419.9	-99.5	
								Nta-10-B-1	4.783	-0.458	419.9	-99.5	
								Nta-.6-B-3	-11.250	0.000	983.1	100.0	
Nta-.6-B-2	6.600	100.102	6.6	11.250	0.000	0	0	Nta-.6-B-3	11.250	0.000	983.1	100.0	
Nta-.6-B-3	6.600	100.102	6.6	0	0	0	0	Nta-.6-B-1	11.250	0.000	983.1	100.0	
								Nta-.6-B-2	-11.250	0.000	983.1	100.0	
NtB-3-B1	30.000	97.507	-3.3	0	0	0	0	G-NtB-3-B	0.000	0.000	0.0	0.0	
Nte-3-B-1	30.000	99.685	-2.8	0	0	1.392	0.674	Nte-10-B-1	-1.392	-0.674	29.9	90.0	
Nte-10-B-1	110.000	96.330	-2.1	0	0	0	0	Nte-3-B-1	1.394	0.694	8.5	89.5	-4.000
								B-10-Kbo/Nte-2	-7.161	-2.973	42.2	92.4	
								B-10-Mr2/Nte-2	-6.652	-3.757	41.6	87.1	
								B-10-Bga-Nte-2	12.420	6.035	75.2	89.9	
Ny1-10-B-1	110.000	98.821	0.1	0	0	0	0	Ny1-3-B-1	-13.973	-1.010	74.4	99.7	
								B-10-Kli-Ny1-2	13.973	1.010	74.4	99.7	
Ny1-3-B-1	30.000	99.218	2.1	0	0	0	0	Ny1-10-B-1	13.984	1.512	272.8	99.4	
								G-Ny1-3-B	-13.984	-1.512	272.8	99.4	
Ny1-3-B-2	30.000	99.218	2.1	0	0	0	0	N-Ny1-.6-2	-13.984	-1.512	272.8	99.4	
								G-Ny1-3-B	13.984	1.512	272.8	99.4	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Rka5-3-B	30.000	99.470	-0.5	0	0	0	0	G-Rka5-3-B	0.000	0.000	0.0	0.0	
Rka-3-B-1	30.000	99.470	-0.5	0	0	0	0	Rka-10-B-1	0.499	0.364	11.9	80.8	
								Rka-10-B-1	0.499	0.364	11.9	80.8	
								G-Rka-3-B	0.000	0.000	0.0	0.0	
								G-Rka5-3-B	0.000	0.000	0.0	0.0	
								G-Mus-3-B	-0.997	-0.728	23.9	80.8	
Rka-3-B-2	30.000	99.470	-0.5	0	0	0	0	G-Rka-3-B	0.000	0.000	0.0	0.0	
Rka-10-B-1	110.000	98.219	-0.7	0	0	0	0	Rka-3-B-1	-0.499	-0.361	3.3	81.0	-1.000
								Rka-3-B-1	-0.499	-0.361	3.3	81.0	-1.000
								B-10-Kli-Rka-2	0.997	0.723	6.6	81.0	
Rln-3-B-1	30.000	97.238	0.3	0	0	4.184	2.027	Rln-10-B-1	-4.184	-2.027	92.0	90.0	
Rln-10-B-1	110.000	98.409	1.5	0	0	0	0	Rln-3-B-1	4.190	2.141	25.1	89.1	
								10-Gfu/Jb1/Rln-B	-4.190	-2.141	25.1	89.1	
Rwi-1-B-1	15.000	100.023	-2.0	0	0	0.300	0.145	Rwi-10-B-1	-0.300	4.857	187.3	-6.2	
								C-Rwi-B-1	0.000	-5.002	192.5	0.0	
Rwi-10-B-1	110.000	97.606	-1.9	0	0	0	0	Rwi-1-B-1	0.306	-4.739	25.5	-6.4	
								B-10-Kba-Rwi-2	-0.306	4.739	25.5	-6.4	
Rz1-6-B-1	6.600	99.586	-1.3	0	0	0	0	N-Rz1-.06-B-1-1	-1.745	-0.063	153.4	99.9	
								B-.6-Mr1-Rz1-2	1.745	0.063	153.4	99.9	
Rz2-6-B-1-1	6.600	100.000	0.8	0	0	0	0	Rz2-10-B-1	6.375	3.850	651.5	85.6	
								G-Rz2-.6-B	-6.375	-3.850	651.5	85.6	
* Rz2-6-B-1-2	6.600	100.000	0.8	6.375	3.850	0	0	G-Rz2-.6-B	6.375	3.850	651.5	85.6	
Rz2-10-B-1	110.000	97.170	-1.7	0	0	0	0	Rz2-6-B-1-1	-6.355	-3.463	39.1	87.8	
								B-10-Mr2-Rz2-2	6.355	3.463	39.1	87.8	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cmp/Kri/Kya-B	30.000	99.599	11.7	0	0	0	0	B-3-Cmp-Kri-2	2.384	-0.693	48.0	-96.0	
								B-3-Kri-Cmp/Kya-1	0.000	-0.021	0.4	0.0	
								3-Ghi/Kri/Kya-B	-2.384	0.714	48.1	-95.8	
3-Cyi/Nko-B	30.000	98.574	11.7	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.297	-0.002	5.8	100.0	
								3-Cyi-Ghi-B	0.891	-0.010	17.4	100.0	
								B-3-Nko-Cyi/Nko-1	-0.594	0.012	11.6	-100.0	
3-Cyi-Ghi-B	30.000	98.459	11.6	0	0	0	0	B-3-Cyi-Ghi-2	-1.142	0.013	22.3	100.0	
								3-Cyi/Nko-B	-0.890	0.002	17.4	100.0	
								3-Kro/Kbu-B	2.033	-0.015	39.7	100.0	
3-Ghi/Kri/Kya-B	30.000	100.005	12.5	0	0	0	0	B-Ghi-Ghi/Kya-1	-0.242	0.589	12.3	-38.0	
								3-Cmp/Kri/Kya-B	2.403	-0.706	48.2	-95.9	
								Kya-3-B-1	-2.162	0.117	41.7	-99.9	
3-Kro/Kbu-B	30.000	96.048	9.3	0	0	0	0	B-3-Kbu-Kro-2	0.000	-0.027	0.5	0.0	
								B-3-Kbu-Kro/Nko-2	1.982	0.012	39.7	100.0	
								3-Cyi-Ghi-B	-1.982	0.015	39.7	100.0	
10-Bre/Gso/Msh-B	110.000	95.541	1.5	0	0	0	0	B-10-Bre-Gso-1	-10.020	0.883	55.3	-99.6	
								B-10-Gso-Msh-2	8.636	-1.559	48.2	-98.4	
								Gso-10-B-1	1.384	0.676	8.5	89.8	
10-Gfu/Jb1/Rln-B	110.000	97.487	4.0	0	0	0	0	B-10-Gfu/Mku/Rln-B	-27.701	0.190	149.1	100.0	
								B-10-Jb1-Rln-2	23.581	-2.296	127.6	-99.5	
								Rln-10-B-1	4.120	2.105	24.9	89.0	
10-Gfu/Mku/Rln-B	110.000	98.567	5.3	0	0	0	0	B-10-Gfu-Mku-2	-28.011	0.112	149.2	100.0	
								10-Gfu/Jb1/Rln-B	28.011	-0.112	149.2	100.0	
10-Gko/Kgo/MKi-B	110.000	96.457	2.2	0	0	0	0	B-10-Gko-MKi-1	6.442	-9.143	60.9	-57.6	
								B-10-Kgo-MKi-2	-18.435	2.867	101.5	-98.8	
								MKi-10-B-1	11.993	6.276	73.7	88.6	
10-Kba/Msh/Rwi-B	110.000	95.408	0.7	0	0	0	0	B-10-Kba-Msh-2	-4.671	2.547	29.3	-87.8	
								B-10-Kba-Rwi-2	0.304	-4.852	26.7	-6.3	
								Kba-10-B-1	4.367	2.305	27.2	88.4	
10-Kbo/Kro/Mr2-B	110.000	96.620	6.1	0	0	0	0	B-10-Kbo/Nte-B	-0.804	3.876	21.5	-20.3	
								B-10-Kbo-Kro-1	-0.532	-4.559	24.9	11.6	
								Kbo-10-B-1	1.336	0.684	8.2	89.0	
10-Kbo/Nte-B	110.000	96.314	6.2	0	0	0	0	B-10-Kbo/Kro/Mr2-B	0.809	-4.494	24.9	-17.7	
								B-10-Kbo/Nte-2	-0.809	4.494	24.9	-17.7	
10-Mr2/Nte-B	110.000	96.325	6.2	0	0	0	0	B-10-Mr2/Nte-1	-14.618	-2.211	80.6	98.9	
								B-10-Mr2/Nte-2	14.618	2.211	80.6	98.9	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-1-Jb1-Jb3-1	15.000	99.111	0.9	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								Jb1-1-B-1	0.000	0.000	0.0	0.0	
B-1-Jb1-Jb3-2	15.000	99.111	0.9	0	0	0	0	B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-1	0.000	0.000	0.0	0.0	
B-1-Kbu-KbW-1D	11.000	97.296	6.3	0	0	0	0	B-1-Kbu-KbW-2D	0.000	-0.002	0.1	0.0	
								Kbu-1-B-1	0.000	0.002	0.1	0.0	
B-1-Kbu-KbW-2D	11.000	97.296	6.3	0	0	0	0	B-1-Kbu-KbW-1D	0.000	0.000	0.0	0.0	
								KbW-1-B-2	0.000	0.000	0.0	0.0	
B-3-Cmp-Kri-2	30.000	98.283	9.0	0	0	0	0	3-Cmp/Kri/Kya-B	-2.319	0.722	47.6	-95.5	
								Cmp-3-B-1	2.319	-0.722	47.6	-95.5	
B-3-Cmp-Mku-1	30.000	98.283	9.0	0	0	0	0	B-3-Cmp-Mku-2	-2.119	-2.344	61.9	67.1	
								Cmp-3-B-1	2.119	2.344	61.9	67.1	
B-3-Cmp-Mku-2	30.000	99.549	9.2	0	0	0	0	B-3-Cmp-Mku-1	2.141	2.363	61.6	67.1	
								Mku-3-B-1	-2.141	-2.363	61.6	67.1	
B-3-Cmp-Nta-1	30.000	98.283	9.0	0	0	0	0	B-3-Cmp-Nta-2	0.076	-0.491	9.7	-15.3	
								Cmp-3-B-1	-0.076	0.491	9.7	-15.3	
B-3-Cmp-Nta-2	30.000	98.610	8.9	0	0	0	0	B-3-Cmp-Nta-1	-0.075	0.459	9.1	-16.1	
								Nta-3-B-1	0.075	-0.459	9.1	-16.1	
B-3-Cyi-Cyi/Nko-1	30.000	98.632	11.7	0	0	0	0	3-Cyi/Nko-B	0.297	-0.011	5.8	-99.9	
								Cyi-3-B-1	-0.297	0.011	5.8	-99.9	
B-3-Cyi-Ghi-2	30.000	99.693	12.8	0	0	0	0	3-Cyi-Ghi-B	1.157	-0.067	22.4	-99.8	
								Ghi-3-B-1	-1.157	0.067	22.4	-99.8	
B-3-Ghi-Gse-1	30.000	99.693	12.8	0	0	0	0	B-3-Ghi-Gse-2	-0.205	0.322	7.4	-53.7	
								Ghi-3-B-1	0.205	-0.322	7.4	-53.7	
B-3-Ghi-Gse-2	30.000	99.670	12.8	0	0	0	0	B-3-Ghi-Gse-1	0.205	-0.327	7.5	-53.1	
								Gse-3-B	-0.205	0.327	7.5	-53.1	
B-3-Kbu-Kro/Nko-2	30.000	95.639	8.9	0	0	0	0	3-Kro/Kbu-B	-1.974	-0.012	39.7	100.0	
								Kbu-3-B-1	1.974	0.012	39.7	100.0	
B-3-Kbu-Kro-2	30.000	96.057	9.3	0	0	0	0	3-Kro/Kbu-B	0.000	0.000	0.0	0.0	
B-3-Kri-Cmp/Kya-1	30.000	99.604	11.7	0	0	0	0	3-Cmp/Kri/Kya-B	0.000	0.000	0.0	0.0	
								Kri-3-B-1	0.000	0.000	0.0	0.0	
B-3-Nko-Cyi/Nko-1	30.000	98.725	11.8	0	0	0	0	3-Cyi/Nko-B	0.595	-0.029	11.6	-99.9	
								Nko-3-B-1	-0.595	0.029	11.6	-99.9	
B-10-Bga-Gsh-1	110.000	95.142	5.6	0	0	0	0	B-10-Bga-Gsh-2	0.000	-0.289	1.6	0.0	
								Bga-10-B-1	0.000	0.289	1.6	0.0	
B-10-Bga-Gsh-2	110.000	95.149	5.6	0	0	0	0	B-10-Bga-Gsh-1	0.000	0.000	0.0	0.0	
								Gsh-10-B	0.000	0.000	0.0	0.0	
B-10-Bga-Nte-1	110.000	95.142	5.6	0	0	0	0	B-10-Bga-Nte-2	-12.322	-6.455	76.7	88.6	
								Bga-10-B-1	12.322	6.455	76.7	88.6	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Bga-Nte-2	110.000	96.306	6.2	0	0	0	0	B-10-Bga-Nte-1	12.414	6.032	75.2	89.9	
								Nte-10-B-1	-12.414	-6.032	75.2	89.9	
B-10-Bre-Gso-1	110.000	95.802	1.9	0	0	0	0	10-Bre/Gso/Msh-B	10.055	-1.249	55.5	-99.2	
								Bre-10-B-1	-10.055	1.249	55.5	-99.2	
B-10-Bre-Jb1-1	110.000	95.802	1.9	0	0	0	0	B-10-Bre-Jb1-2	-26.844	-7.775	153.1	96.1	
								Bre-10-B-1	26.844	7.775	153.1	96.1	
B-10-Bre-Jb1-2	110.000	96.445	2.3	0	0	0	0	B-10-Bre-Jb1-1	26.966	7.825	152.8	96.0	
								Jb1-10-B-1	-26.966	-7.825	152.8	96.0	
B-10-Gfu-Mku-2	110.000	99.550	6.5	0	0	0	0	10-Gfu/Mku/Rln-B	28.292	-0.052	149.2	100.0	
								Mku-10-B-1	-28.292	0.052	149.2	100.0	
B-10-Gko-Jb1-1	110.000	96.595	2.1	0	0	0	0	B-10-Gko-Jb1-2	-9.809	7.648	67.6	-78.9	
								Gko-10-B-1	9.809	-7.648	67.6	-78.9	
B-10-Gko-Jb1-2	110.000	96.445	2.3	0	0	0	0	B-10-Gko-Jb1-1	9.827	-7.867	68.5	-78.1	
								Jb1-10-B-1	-9.827	7.867	68.5	-78.1	
B-10-Gko-MKi-1	110.000	96.595	2.1	0	0	0	0	10-Gko/Kgo/MKi-B	-6.434	9.006	60.1	-58.1	
								Gko-10-B-1	6.434	-9.006	60.1	-58.1	
B-10-Gso-Msh-2	110.000	95.348	1.1	0	0	0	0	10-Bre/Gso/Msh-B	-8.609	1.176	47.8	-99.1	
								Msh-10-B-1	8.609	-1.176	47.8	-99.1	
B-10-Jb1-Jb2-1	110.000	96.445	2.3	0	0	0	0	B-10-Jb1-Jb2-2	-23.868	-7.479	136.1	95.4	
								Jb1-10-B-1	23.868	7.479	136.1	95.4	
B-10-Jb1-Jb2-2	110.000	96.514	2.4	0	0	0	0	B-10-Jb1-Jb2-1	23.878	7.472	136.1	95.4	
								Jb2-10-B-1	-23.878	-7.472	136.1	95.4	
B-10-Jb1-Rln-2	110.000	96.445	2.3	0	0	0	0	10-Gfu/Jb1/Rln-B	-23.265	2.181	127.2	-99.6	
								Jb1-10-B-1	23.265	-2.181	127.2	-99.6	
B-10-Kba-Msh-2	110.000	95.348	1.1	0	0	0	0	10-Kba/Msh/Rwi-B	4.687	-3.176	31.2	-82.8	
								Msh-10-B-1	-4.687	3.176	31.2	-82.8	
B-10-Kba-Rwi-2	110.000	95.570	0.7	0	0	0	0	10-Kba/Msh/Rwi-B	-0.300	4.635	25.5	-6.5	
								Rwi-10-B-1	0.300	-4.635	25.5	-6.5	
B-10-Kbo-Nte-2	110.000	96.306	6.2	0	0	0	0	10-Kbo/Nte-B	0.809	-4.507	25.0	-17.7	
								Nte-10-B-1	-0.809	4.507	25.0	-17.7	
B-10-Kbo-Kro-1	110.000	97.256	6.0	0	0	0	0	10-Kbo/Kro/Mr2-B	0.540	3.312	18.1	16.1	
								Kro-10-B-1	-0.540	-3.312	18.1	16.1	
B-10-Kbu-Kro-1	110.000	97.291	6.0	0	0	0	0	B-10-Kbu-Kro-2	1.966	-0.085	10.6	-99.9	
								Kbu-10-B-1	-1.966	0.085	10.6	-99.9	
B-10-Kbu-Kro-2	110.000	97.256	6.0	0	0	0	0	B-10-Kbu-Kro-1	-1.965	-0.291	10.7	98.9	
								Kro-10-B-1	1.965	0.291	10.7	98.9	
B-10-Kgo-Kli-1	110.000	96.940	4.1	0	0	0	0	B-10-Kgo-Kli-2	-27.891	3.512	152.2	-99.2	
								Kgo-10-B-1	27.891	-3.512	152.2	-99.2	
B-10-Kgo-Kli-2	110.000	97.581	5.9	0	0	0	0	B-10-Kgo-Kli-1	28.191	-3.523	152.8	-99.2	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Kli-10-B-1	-28.191	3.523	152.8	-99.2	
B-10-Kgo-MKi-2	110.000	96.940	4.1	0	0	0	0	10-Gko/Kgo/MKi-B	18.633	-3.594	102.7	-98.2	
								Kgo-10-B-1	-18.633	3.594	102.7	-98.2	
B-10-Kli-Kro-1	110.000	97.256	6.0	0	0	0	0	B-10-Kli-Kro-2	0.074	-3.713	20.0	-2.0	
								Kro-10-B-1	-0.074	3.713	20.0	-2.0	
B-10-Kli-Kro-2	110.000	97.581	5.9	0	0	0	0	B-10-Kli-Kro-1	-0.070	2.898	15.6	-2.4	
								Kli-10-B-1	0.070	-2.898	15.6	-2.4	
B-10-Kli-Ny1-1	110.000	97.581	5.9	0	0	0	0	B-10-Kli-Ny1-2	-27.515	1.168	148.1	-99.9	
								Kli-10-B-1	27.515	-1.168	148.1	-99.9	
B-10-Kli-Ny1-2	110.000	98.804	7.6	0	0	0	0	B-10-Kli-Ny1-1	27.892	-1.084	148.3	-99.9	
								Ny1-10-B-1	-27.892	1.084	148.3	-99.9	
B-10-Kli-Rka-1	110.000	97.581	5.9	0	0	0	0	B-10-Kli-Rka-2	-1.989	-1.250	12.6	84.7	
								Kli-10-B-1	1.989	1.250	12.6	84.7	
B-10-Kli-Rka-2	110.000	97.796	6.0	0	0	0	0	B-10-Kli-Rka-1	1.992	0.443	11.0	97.6	
								Rka-10-B-1	-1.992	-0.443	11.0	97.6	
B-10-Mku-Nta-1	110.000	99.550	6.5	0	0	0	0	B-10-Mku-Nta-2	-10.381	-0.217	54.7	100.0	
								Mku-10-B-1	10.381	0.217	54.7	100.0	
B-10-Mku-Nta-2	110.000	99.891	7.1	0	0	0	0	B-10-Mku-Nta-1	10.418	-0.597	54.8	-99.8	
								Nta-10-B-1	-10.418	0.597	54.8	-99.8	
B-10-Mr1-Mr2-1	110.000	96.850	6.8	0	0	0	0	B-10-Mr1-Mr2-2	2.040	-0.983	12.3	-90.1	
								Mr1-10-B-1	-2.040	0.983	12.3	-90.1	
B-10-Mr1-Mr2-2	110.000	96.850	6.8	0	0	0	0	B-10-Mr1-Mr2-1	-2.040	0.972	12.2	-90.3	
								Mr2-10-B-2	2.040	-0.972	12.2	-90.3	
B-10-Mr2/Nte-1	110.000	96.850	6.8	0	0	0	0	10-Mr2/Nte-B	14.676	1.763	80.1	99.3	
								Mr2-10-B-2	-14.676	-1.763	80.1	99.3	
B-10-Mr2/Nte-2	110.000	96.306	6.2	0	0	0	0	10-Mr2/Nte-B	-14.616	-2.219	80.6	98.9	
								Nte-10-B-1	14.616	2.219	80.6	98.9	
B-10-Mr2-Rz2-1	110.000	96.850	6.8	0	0	0	0	B-10-Mr2-Rz2-2	-12.637	-2.736	70.1	97.7	
								Mr2-10-B-1	12.637	2.736	70.1	97.7	
B-10-Mr2-Rz2-2	110.000	97.359	7.2	0	0	0	0	B-10-Mr2-Rz2-1	12.685	2.444	69.6	98.2	
								Rz2-10-B-1	-12.685	-2.444	69.6	98.2	
B-6-Mr1-Rz1-1	6.600	98.972	8.1	0	0	0	0	B-6-Mr1-Rz1-2	-3.447	0.224	305.3	-99.8	
								Mr1-6-B-1	3.447	-0.224	305.3	-99.8	
B-6-Mr1-Rz1-2	6.600	99.816	9.0	0	0	0	0	B-6-Mr1-Rz1-1	3.480	-0.173	305.3	-99.9	
								Rz1-6-B-1	-3.480	0.173	305.3	-99.9	
Bga-3-B-1	30.000	99.569	2.8	0	0	12.304	5.959	Bga-10-B-1	-12.304	-5.959	264.2	90.0	
Bga-10-B-1	110.000	95.142	5.6	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	12.322	6.744	77.5	87.7	-7.000
								B-10-Bga-Nte-1	-12.322	-6.455	76.7	88.6	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Bga-Gsh-1	0.000	-0.289	1.6	0.0	
Bga-6-B-1	6.600	95.142	5.6	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
B-Ghi-Ghi/Kya-1	30.000	99.693	12.8	0	0	0	0	3-Ghi/Kri/Kya-B	0.244	-0.618	12.8	-36.7	
								Ghi-3-B-1	-0.244	0.618	12.8	-36.7	
Bre-1-B-1	15.000	99.496	-0.5	0	0	16.747	8.111	Bre-10-B-1	-8.374	-4.056	359.9	90.0	
								Bre-10-B-1	-8.374	-4.056	359.9	90.0	
Bre-10-B-1	110.000	95.802	1.9	0	0	0	0	Bre-1-B-1	8.394	4.512	52.2	88.1	-6.000
								Bre-1-B-1	8.394	4.512	52.2	88.1	-6.000
								B-10-Bre-Jb1-1	-26.844	-7.775	153.1	96.1	
								B-10-Bre-Gso-1	10.055	-1.249	55.5	-99.2	
C-Kgo-B-3	30.000	96.738	1.7	0	0	0.000	-4.679	Kgo-3-B-1	0.000	4.679	93.1	0.0	
Cmp-3-B-1	30.000	98.283	9.0	0	0	4.362	2.113	B-3-Cmp-Mku-1	-2.119	-2.344	61.9	67.1	
								B-3-Cmp-Nta-1	0.076	-0.491	9.7	-15.3	
								B-3-Cmp-Kri-2	-2.319	0.722	47.6	-95.5	
C-Msh-1-B	15.000	96.187	-0.1	0	0	0	0	Msh-1-B-1	0.000	0.000	0.0	0.0	
C-Rwi-B-1	15.000	98.925	0.5	0	0	0.000	-4.893	Rwi-1-B-1	0.000	4.893	190.4	0.0	
Cyi-3-B-1	30.000	98.632	11.7	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.297	-0.011	5.8	-99.9	
								G-Cyi-3-B	-0.297	0.011	5.8	-99.9	
Cyi-3-B-2	30.000	98.632	11.7	0	0	0	0	N-Cyi-04-1	-0.297	0.011	5.8	-99.9	
								G-Cyi-3-B	0.297	-0.011	5.8	-99.9	
G-Cyi-3-B	30.000	98.632	11.7	0	0	0	0	Cyi-3-B-1	0.297	-0.011	5.8	-99.9	
								Cyi-3-B-2	-0.297	0.011	5.8	-99.9	
G-Ghi-6-B	6.600	100.018	15.1	0	0	0	0	Ghi-6-B-1	1.800	0.000	157.4	100.0	
								Ghi-6-B-2	-1.800	0.000	157.4	100.0	
G-Gko-1-B	15.000	100.000	0.0	0	0	0	0	Gko-1-B-1	15.620	33.240	1413.6	42.5	
								Gko-1-B-2	-15.620	-33.240	1413.6	42.5	
G-Gko-3-B	15.000	100.000	0.0	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-3-B	0.000	0.000	0.0	0.0	
G-Gse-6-B	6.600	99.261	13.0	0	0	0	0	Gse-6-B-1	0.995	0.057	87.8	99.8	
								Gse-6-B-2	-0.995	-0.057	87.8	99.8	
G-Gsh-1-B	11.000	99.114	5.6	0	0	0	0	Gsh-1-B-1	0.000	0.000	0.0	0.0	
								Gsh-1-B-2	0.000	0.000	0.0	0.0	
Ghi-3-B-1	30.000	99.693	12.8	0	0	0.597	0.289	Ghi-6-B-1	-1.793	0.074	34.6	-99.9	
								B-3-Ghi-Gse-1	-0.205	0.322	7.4	-53.7	
								B-3-Cyi-Ghi-2	1.157	-0.067	22.4	-99.8	
								B-Ghi-Ghi/Kya-1	0.244	-0.618	12.8	-36.7	
Ghi-6-B-1	6.600	100.018	15.1	0	0	0	0	Ghi-3-B-1	1.800	0.000	157.4	100.0	
								G-Ghi-6-B	-1.800	0.000	157.4	100.0	
Ghi-6-B-2	6.600	100.018	15.1	1.800	0.000	0	0	G-Ghi-6-B	1.800	0.000	157.4	100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
G-Jb2-10-B	110.000	96.514	2.4	0	0	0	0	Jb2-10-B-1	23.878	7.472	136.1	95.4	
								Jb2-10-B-2	-23.878	-7.472	136.1	95.4	
G-Jb3-1-B	15.000	99.111	0.9	0	0	0	0	Jb3-1-B-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-2	0.000	0.000	0.0	0.0	
G-KbW-1-B-1	11.000	97.296	6.3	0	0	0	0	KbW-1-B-3	0.000	0.000	0.0	0.0	
								KbW-1-B-2	0.000	0.000	0.0	0.0	
G-KbW-1-B-2	11.000	97.296	6.3	0	0	0	0	KbW-1-B-1	0.000	0.000	0.0	0.0	
								KbW-1-B-4	0.000	0.000	0.0	0.0	
Gko-1-B-1	15.000	100.000	0.0	0	0	31.800	15.401	Gko-10-B-1	-5.393	5.946	309.0	-67.2	
								Gko-10-B-1	-5.393	5.946	309.0	-67.2	
								Gko-10-B-1	-5.393	5.946	309.0	-67.2	
								G-Gko-1-B	-15.620	-33.240	1413.6	42.5	
* Gko-1-B-2	15.000	100.000	0.0	5.680	33.963	0	0	N-Gko-.04-1	-4.970	0.361	191.8	-99.7	
								N-Gko-.04-2	-4.970	0.361	191.8	-99.7	
								G-Gko-1-B	15.620	33.240	1413.6	42.5	
								G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-3-B	15.000	100.000	0.0	0	0	0	0	G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-10-B-1	110.000	96.595	2.1	0	0	0	0	Gko-1-B-1	5.414	-5.552	42.1	-69.8	
								Gko-1-B-1	5.414	-5.552	42.1	-69.8	
								Gko-1-B-1	5.414	-5.552	42.1	-69.8	
								B-10-Gko-Jb1-1	-9.809	7.648	67.6	-78.9	
G-Kse-1-B	110.000	95.541	1.5	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Kya-3-B-2	30.000	100.808	13.3	0	0	0	0	Kya-3-B-1	2.181	-0.116	41.7	-99.9	
								Kya-3-B-3	-2.181	0.116	41.7	-99.9	
G-Mku-10-B	110.000	99.550	6.5	0	0	0	0	Mku-10-B-1	9.967	-0.158	52.6	-100.0	
								Mku-10-B-2	-9.967	0.158	52.6	-100.0	
G-Mku-6-B	6.600	100.000	10.1	0	0	0	0	Mku-6-B-4	12.000	3.790	1100.8	95.4	
								Mku-6-B-2	-12.000	-3.790	1100.8	95.4	
G-Mus-3-B	30.000	98.969	6.4	0	0	0	0	Mus-3-B	-1.993	-0.457	39.8	97.5	
								Rka-3-B-1	1.993	0.457	39.8	97.5	
G-Nko-3-B	30.000	98.725	11.8	0	0	0	0	Nko-3-B-1	0.595	-0.029	11.6	-99.9	
								Nko-3-B-2	-0.595	0.029	11.6	-99.9	
G-NtB-3-B	30.000	96.738	1.7	0	0	0	0	Kgo-3-B-1	0.000	0.000	0.0	0.0	
								NtB-3-B1	0.000	0.000	0.0	0.0	
G-Ny1-3-B	30.000	98.938	11.7	0	0	0	0	Ny1-3-B-1	27.937	0.911	543.7	99.9	
								Ny1-3-B-2	-27.937	-0.911	543.7	99.9	
G-Rka5-3-B	30.000	98.969	6.4	0	0	0	0	Rka5-3-B	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rka-3-B-1	0.000	0.000	0.0	0.0	
G-Rka-3-B	30.000	98.969	6.4	0	0	0	0	Rka-3-B-1	0.000	0.000	0.0	0.0	
								Rka-3-B-2	0.000	0.000	0.0	0.0	
G-Rz1-.06-B	0.600	100.276	11.8	0	0	0	0	N-Rz1-.06-B-1-1	3.500	0.000	3358.6	100.0	
								N-Rz1-.06-B-1-2	-3.500	0.000	3358.6	100.0	
G-Rz2-.6-B	6.600	100.000	12.4	0	0	0	0	Rz2-.6-B-1-1	12.750	3.674	1160.7	96.1	
								Rz2-.6-B-1-2	-12.750	-3.674	1160.7	96.1	
Gse-3-B	30.000	99.670	12.8	0	0	0	0	Gse-6-B-1	-0.205	0.327	7.5	-53.1	
								B-3-Ghi-Gse-2	0.205	-0.327	7.5	-53.1	
Gse-6-B-1	6.600	99.261	13.0	0	0	0.789	0.382	Gse-3-B	0.205	-0.325	33.9	-53.4	
								G-Gse-.6-B	-0.995	-0.057	87.8	99.8	
Gse-6-B-2	6.600	99.261	13.0	0	0	0	0	N-Gse-.04-1	-0.497	-0.029	43.9	99.8	
								N-Gse-.04-2	-0.497	-0.029	43.9	99.8	
								G-Gse-.6-B	0.995	0.057	87.8	99.8	
Gsh-1-B-1	11.000	99.114	5.6	0	0	0	0	Gsh-10-B	0.000	0.000	0.0	0.0	
								Gsh-10-B	0.000	0.000	0.0	0.0	
								G-Gsh-1-B	0.000	0.000	0.0	0.0	
Gsh-1-B-2	11.000	99.114	5.6	0	0	0	0	G-Gsh-1-B	0.000	0.000	0.0	0.0	
Gsh-10-B	110.000	95.149	5.6	0	0	0	0	Gsh-1-B-1	0.000	0.000	0.0	0.0	-4.000
								Gsh-1-B-1	0.000	0.000	0.0	0.0	-4.000
								B-10-Bga-Gsh-2	0.000	0.000	0.0	0.0	
Gso-1-B-1	15.000	99.345	1.3	0	0	1.384	0.670	Gso-10-B-1	-1.384	-0.670	59.6	90.0	
Gso-10-B-1	110.000	95.541	1.5	0	0	0	0	Gso-1-B-1	1.384	0.676	8.5	89.8	-4.000
								10-Bre/Gso/Msh-B	-1.384	-0.676	8.5	89.8	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Jb1-10-B-1	110.000	96.445	2.3	0	0	0	0	Jb1-1-B-1	10.340	5.340	63.3	88.9	-4.000
								B-10-Jb1-Jb2-1	-23.868	-7.479	136.1	95.4	
								B-10-Jb1-Rln-2	-23.265	2.181	127.2	-99.6	
								B-10-Bre-Jb1-2	26.966	7.825	152.8	96.0	
								B-10-Gko-Jb1-2	9.827	-7.867	68.5	-78.1	
Jb1-1-B-1	15.000	99.111	0.9	0	0	10.333	5.004	Jb1-10-B-1	-10.333	-5.004	445.9	90.0	
								B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
* Jb2-.6-B-1	6.600	100.000	7.2	24.000	9.798	0	0	Jb2-10-B-2	12.000	4.899	1133.8	92.6	
								Jb2-10-B-2	12.000	4.899	1133.8	92.6	
Jb2-10-B-1	110.000	96.514	2.4	0	0	0	0	B-10-Jb1-Jb2-2	23.878	7.472	136.1	95.4	
								G-Jb2-10-B	-23.878	-7.472	136.1	95.4	
Jb2-10-B-2	110.000	96.514	2.4	0	0	0	0	Jb2-.6-B-1	-11.939	-3.736	68.0	95.4	
								Jb2-.6-B-1	-11.939	-3.736	68.0	95.4	
								G-Jb2-10-B	23.878	7.472	136.1	95.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Jb3-1-B-1	15.000	99.111	0.9	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								G-Jb3-1-B	0.000	0.000	0.0	0.0	
Jb3-1-B-2	15.000	99.111	0.9	0	0	0	0	G-Jb3-1-B	0.000	0.000	0.0	0.0	
								Jb3-1-B-2d	0.000	0.000	0.0	0.0	
Jb3-1-B-2d	15.000	99.111	0.9	0	0	0	0	Jb3-1-B-2	0.000	0.000	0.0	0.0	
Kba-3-B-1	30.000	99.392	-1.3	0	0	4.352	2.108	Kba-10-B-1	-4.352	-2.108	93.6	90.0	
Kba-10-B-1	110.000	95.408	0.7	0	0	0	0	Kba-3-B-1	4.367	2.305	27.2	88.4	-6.000
								10-Kba/Msh/Rwi-B	-4.367	-2.305	27.2	88.4	
Kbo-3-B-1	30.000	97.282	4.8	0	0	1.332	0.645	Kbo-10-B-1	-1.332	-0.645	29.3	90.0	
Kbo-10-B-1	110.000	96.620	6.1	0	0	0	0	Kbo-3-B-1	1.336	0.684	8.2	89.0	-2.000
								10-Kbo/Kro/Mr2-B	-1.336	-0.684	8.2	89.0	
Kbu-1-B-1	11.000	97.296	6.3	0	0	0	0	Kbu-3-B-1	-1.966	0.078	106.2	-99.9	
								Kbu-10-B-1	0.959	-0.038	51.8	-99.9	
								Kbu-10-B-1	1.007	-0.038	54.4	-99.9	
								B-1-Kbu-KbW-1D	0.000	-0.002	0.1	0.0	
Kbu-3-B-1	30.000	95.639	8.9	0	0	0	0	Kbu-1-B-1	1.974	0.012	39.7	100.0	-2.000
								B-3-Kbu-Kro/Nko-2	-1.974	-0.012	39.7	100.0	
Kbu-10-B-1	110.000	97.291	6.0	0	0	0	0	Kbu-1-B-1	-0.959	0.043	5.2	-99.9	
								Kbu-1-B-1	-1.007	0.042	5.4	-99.9	
								B-10-Kbu-Kro-1	1.966	-0.085	10.6	-99.9	
KbW-1-B-1	11.000	97.296	6.3	0	0	0	0	KbW-1-B-2	0.000	0.000	0.0	0.0	
								G-KbW-1-B-2	0.000	0.000	0.0	0.0	
KbW-1-B-2	11.000	97.296	6.3	0	0	0	0	B-1-Kbu-KbW-2D	0.000	0.000	0.0	0.0	
								KbW-1-B-1	0.000	0.000	0.0	0.0	
								G-KbW-1-B-1	0.000	0.000	0.0	0.0	
KbW-1-B-3	11.000	97.296	6.3	0	0	0	0	G-KbW-1-B-1	0.000	0.000	0.0	0.0	
KbW-1-B-4	11.000	97.296	6.3	0	0	0	0	G-KbW-1-B-2	0.000	0.000	0.0	0.0	
Kgo-3-B-1	30.000	96.738	1.7	0	0	9.234	4.381	Kgo-10-B-1	-4.617	0.149	91.9	-99.9	
								Kgo-10-B-1	-4.617	0.149	91.9	-99.9	
								C-Kgo-B-3	0.000	-4.679	93.1	0.0	
								G-NtB-3-B	0.000	0.000	0.0	0.0	
Kgo-10-B-1	110.000	96.940	4.1	0	0	0	0	Kgo-3-B-1	4.629	0.041	25.1	100.0	
								Kgo-3-B-1	4.629	0.041	25.1	100.0	
								B-10-Kgo-MKi-2	18.633	-3.594	102.7	-98.2	
								B-10-Kgo-Kli-1	-27.891	3.512	152.2	-99.2	
Kli-3-B-1	30.000	99.137	4.7	0	0	1.378	0.668	Kli-10-B-1	-1.378	-0.668	29.7	90.0	
Kli-10-B-1	110.000	97.581	5.9	0	0	0	0	Kli-3-B-1	1.384	0.707	8.4	89.1	-3.000
								B-10-Kgo-Kli-2	28.191	-3.523	152.8	-99.2	
								B-10-Kli-Kro-2	-0.070	2.898	15.6	-2.4	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Kli-Rka-1	-1.989	-1.250	12.6	84.7	
								B-10-Kli-Ny1-1	-27.515	1.168	148.1	-99.9	
Kri-3-B-1	30.000	99.604	11.7	0	0	0	0	Kri-6-B-1	0.000	0.000	0.0	0.0	
								B-3-Kri-Cmp/Kya-1	0.000	0.000	0.0	0.0	
Kri-6-B-1	6.600	99.604	11.7	0	0	0	0	Kri-3-B-1	0.000	0.000	0.0	0.0	
Kro-3-B-1	30.000	97.925	4.7	0	0	1.348	0.653	Kro-10-B-1	-1.348	-0.653	29.4	90.0	
Kro-10-B-1	110.000	97.256	6.0	0	0	0	0	Kro-3-B-1	1.351	0.692	8.2	89.0	-2.000
								B-10-Kbu-Kro-2	-1.965	-0.291	10.7	98.9	
								B-10-Kbo-Kro-1	0.540	3.312	18.1	16.1	
								B-10-Kli-Kro-1	0.074	-3.713	20.0	-2.0	
Kse-10-B1	110.000	95.541	1.5	0	0	0	0	G-Kse-1-B	0.000	0.000	0.0	0.0	
Kya-3-B-1	30.000	100.808	13.3	0	0	0	0	3-Ghi/Kri/Kya-B	2.181	-0.116	41.7	-99.9	
								G-Kya-3-B-2	-2.181	0.116	41.7	-99.9	
Kya-3-B-3	30.000	100.808	13.3	0	0	0	0	N-Kya-6-1	-2.181	0.116	41.7	-99.9	
								G-Kya-3-B-2	2.181	-0.116	41.7	-99.9	
MKi-3-B-1	30.000	96.811	0.4	0	0	11.983	5.803	MKi-10-B-1	-11.983	-5.803	264.7	90.0	
MKi-10-B-1	110.000	96.457	2.2	0	0	0	0	MKi-3-B-1	11.993	6.276	73.7	88.6	-2.000
								10-Gko/Kgo/MKi-B	-11.993	-6.276	73.7	88.6	
Mku-3-B-1	30.000	99.549	9.2	0	0	1.885	0.913	Mku-6-B-1	-4.026	-3.276	100.3	77.6	1.000
								B-3-Cmp-Mku-2	2.141	2.363	61.6	67.1	
Mku-10-B-1	110.000	99.550	6.5	0	0	0	0	Mku-6-B-1	-7.945	0.111	41.9	100.0	
								B-10-Gfu-Mku-2	28.292	-0.052	149.2	100.0	
								B-10-Mku-Nta-1	-10.381	-0.217	54.7	100.0	
								G-Mku-10-B	-9.967	0.158	52.6	-100.0	
Mku-10-B-2	110.000	99.550	6.5	0	0	0	0	N-Mku-6-1	-9.967	0.158	52.6	-100.0	
								G-Mku-10-B	9.967	-0.158	52.6	-100.0	
Mku-6-B-1	6.600	100.000	10.1	0	0	0	0	Mku-3-B-1	4.028	3.392	460.6	76.5	
								Mku-10-B-1	7.972	0.398	698.2	99.9	
								Mku-6-B-4	-6.000	-1.895	550.4	95.4	
								Mku-6-B-3	-3.000	-0.947	275.2	95.4	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	-3.000	-0.947	275.2	95.4	
* Mku-6-B-2	6.600	100.000	10.1	12.000	3.790	0	0	G-Mku-6-B	12.000	3.790	1100.8	95.4	
Mku-6-B-3	6.600	100.000	10.1	0	0	0	0	Mku-6-B-4	-6.000	-1.895	550.4	95.4	
								Mku-6-B-1	3.000	0.947	275.2	95.4	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	3.000	0.947	275.2	95.4	
Mku-6-B-4	6.600	100.000	10.1	0	0	0	0	Mku-6-B-1	6.000	1.895	550.4	95.4	
								Mku-6-B-3	6.000	1.895	550.4	95.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								G-Mku-6-B	-12.000	-3.790	1100.8	95.4	
Mku-6-B-5	6.600	100.000	10.1	0	0	0	0	Mku-6-B-1	0.000	0.000	0.0	0.0	
								Mku-6-B-3	0.000	0.000	0.0	0.0	
Mku-6-B-6	6.600	100.000	10.1	0	0	0	0	Mku-6-B-3	-3.000	-0.947	275.2	95.4	
								Mku-6-B-1	3.000	0.947	275.2	95.4	
Mr1-6-B-1	6.600	98.972	8.1	0	0	0	0	Mr1-10-B-1	2.043	-0.929	198.4	-91.0	
								Mr1-3-B-1	1.404	0.706	138.9	89.4	
								B-6-Mr1-Rz1-1	-3.447	0.224	305.3	-99.8	
Mr1-10-B-1	110.000	96.850	6.8	0	0	0	0	Mr1-6-B-1	-2.040	0.983	12.3	-90.1	-3.000
								B-10-Mr1-Mr2-1	2.040	-0.983	12.3	-90.1	
Mr1-3-B-1	30.000	100.105	7.3	0	0	1.403	0.679	Mr1-6-B-1	-1.403	-0.679	30.0	90.0	2.000
Mr2-10-B-1	110.000	96.850	6.8	0	0	0	0	B-10-Mr2-Rz2-1	-12.637	-2.736	70.1	97.7	
								Mr2-10-B-2	12.637	2.736	70.1	97.7	
Mr2-10-B-2	110.000	96.850	6.8	0	0	0	0	B-10-Mr2/Nte-1	14.676	1.763	80.1	99.3	
								B-10-Mr1-Mr2-2	-2.040	0.972	12.2	-90.3	
								Mr2-10-B-1	-12.637	-2.736	70.1	97.7	
Msh-1-B-1	15.000	96.187	-0.1	0	0	3.917	1.897	Msh-10-B-1	-3.917	-1.897	174.2	90.0	
								C-Msh-1-B	0.000	0.000	0.0	0.0	
Msh-10-B-1	110.000	95.348	1.1	0	0	0	0	Msh-1-B-1	3.922	1.999	24.2	89.1	-2.000
								B-10-Gso-Msh-2	-8.609	1.176	47.8	-99.1	
								B-10-Kba-Msh-2	4.687	-3.176	31.2	-82.8	
Mus-3-B	30.000	98.969	6.4	0	0	0	0	Mus-6-B	-1.993	-0.457	39.8	97.5	
								G-Mus-3-B	1.993	0.457	39.8	97.5	
* Mus-6-B	6.600	100.000	8.0	2.000	0.518	0	0	Mus-3-B	2.000	0.518	180.7	96.8	
N-Cyi-04-1	0.400	99.479	13.9	0.300	0.000	0	0	Cyi-3-B-2	0.300	0.000	435.3	100.0	
N-Gko-04-1	0.400	100.341	4.2	5.000	0.000	0	0	Gko-1-B-2	5.000	0.000	7192.4	100.0	
N-Gko-04-2	0.400	100.341	4.2	5.000	0.000	0	0	Gko-1-B-2	5.000	0.000	7192.4	100.0	
* N-Gse-04-1	0.400	100.000	14.7	0.500	0.044	0	0	Gse-6-B-2	0.500	0.044	724.5	99.6	
* N-Gse-04-2	0.400	100.000	14.7	0.500	0.044	0	0	Gse-6-B-2	0.500	0.044	724.5	99.6	
Nko-3-B-1	30.000	98.725	11.8	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.595	-0.029	11.6	-99.9	
								G-Nko-3-B	-0.595	0.029	11.6	-99.9	
Nko-3-B-2	30.000	98.725	11.8	0	0	0	0	N-Nko-04-B-2	-0.595	0.029	11.6	-99.9	
								G-Nko-3-B	0.595	-0.029	11.6	-99.9	
N-Kya-6-1	6.600	101.557	16.4	2.200	0.000	0	0	Kya-3-B-3	2.200	0.000	189.5	100.0	
* N-Mku-6-1	6.600	100.000	10.3	10.000	0.510	0	0	Mku-10-B-2	10.000	0.510	875.9	99.9	
N-Nko-04-B-2	0.400	99.400	14.6	0.600	0.000	0	0	Nko-3-B-2	0.600	0.000	871.3	100.0	
* N-Ny1-6-2	6.600	100.000	17.4	28.000	3.761	0	0	Ny1-3-B-2	28.000	3.761	2471.4	99.1	
N-Rz1-06-B-1-1	0.600	100.276	11.8	0	0	0	0	Rz1-6-B-1	3.500	0.000	3358.6	100.0	
								G-Rz1-06-B	-3.500	0.000	3358.6	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
N-Rz1-.06-B-1-2	0.600	100.276	11.8	3.500	0.000	0	0	G-Rz1-.06-B	3.500	0.000	3358.6	100.0	
Nta-3-B-1	30.000	98.610	8.9	0	0	0.878	0.425	Nta-.6-B-1	-0.803	-0.884	23.3	67.2	
								B-3-Cmp-Nta-2	-0.075	0.459	9.1	-16.1	
Nta-10-B-1	110.000	99.891	7.1	0	0	0	0	Nta-.6-B-1	-5.209	0.299	27.4	-99.8	
								Nta-.6-B-1	-5.209	0.299	27.4	-99.8	
								B-10-Mku-Nta-2	10.418	-0.597	54.8	-99.8	
Nta-.6-B-1	6.600	100.000	9.5	0	0	0	0	Nta-3-B-1	0.805	0.905	106.0	66.4	
								Nta-10-B-1	5.223	-0.081	456.9	-100.0	
								Nta-10-B-1	5.223	-0.081	456.9	-100.0	
								Nta-.6-B-3	-11.250	-0.744	986.3	99.8	
* Nta-.6-B-2	6.600	100.000	9.5	11.250	0.744	0	0	Nta-.6-B-3	11.250	0.744	986.3	99.8	
Nta-.6-B-3	6.600	100.000	9.5	0	0	0	0	Nta-.6-B-1	11.250	0.744	986.3	99.8	
								Nta-.6-B-2	-11.250	-0.744	986.3	99.8	
NtB-3-B1	30.000	96.738	1.7	0	0	0	0	G-NtB-3-B	0.000	0.000	0.0	0.0	
Nte-3-B-1	30.000	99.660	5.5	0	0	1.391	0.674	Nte-10-B-1	-1.391	-0.674	29.9	90.0	
Nte-10-B-1	110.000	96.306	6.2	0	0	0	0	Nte-3-B-1	1.393	0.694	8.5	89.5	-4.000
								B-10-Kbo/Nte-2	0.809	-4.507	25.0	-17.7	
								B-10-Mr2/Nte-2	-14.616	-2.219	80.6	98.9	
								B-10-Bga-Nte-2	12.414	6.032	75.2	89.9	
Ny1-10-B-1	110.000	98.804	7.6	0	0	0	0	Ny1-3-B-1	-27.892	1.084	148.3	-99.9	
								B-10-Kli-Ny1-2	27.892	-1.084	148.3	-99.9	
Ny1-3-B-1	30.000	98.938	11.7	0	0	0	0	Ny1-10-B-1	27.937	0.911	543.7	99.9	
								G-Ny1-3-B	-27.937	-0.911	543.7	99.9	
Ny1-3-B-2	30.000	98.938	11.7	0	0	0	0	N-Ny1-.6-2	-27.937	-0.911	543.7	99.9	
								G-Ny1-3-B	27.937	0.911	543.7	99.9	
Rka5-3-B	30.000	98.969	6.4	0	0	0	0	G-Rka5-3-B	0.000	0.000	0.0	0.0	
Rka-3-B-1	30.000	98.969	6.4	0	0	0	0	Rka-10-B-1	0.996	0.229	19.9	97.5	
								Rka-10-B-1	0.996	0.229	19.9	97.5	
								G-Rka-3-B	0.000	0.000	0.0	0.0	
								G-Rka5-3-B	0.000	0.000	0.0	0.0	
								G-Mus-3-B	-1.993	-0.457	39.8	97.5	
Rka-3-B-2	30.000	98.969	6.4	0	0	0	0	G-Rka-3-B	0.000	0.000	0.0	0.0	
Rka-10-B-1	110.000	97.796	6.0	0	0	0	0	Rka-3-B-1	-0.996	-0.222	5.5	97.6	-1.000
								Rka-3-B-1	-0.996	-0.222	5.5	97.6	-1.000
								B-10-Kli-Rka-2	1.992	0.443	11.0	97.6	
Rln-3-B-1	30.000	96.325	2.7	0	0	4.114	1.993	Rln-10-B-1	-4.114	-1.993	91.3	90.0	
Rln-10-B-1	110.000	97.487	4.0	0	0	0	0	Rln-3-B-1	4.120	2.105	24.9	89.0	
								10-Gfu/Jb1/Rln-B	-4.120	-2.105	24.9	89.0	
Rwi-1-B-1	15.000	98.925	0.5	0	0	0.294	0.143	Rwi-10-B-1	-0.294	4.751	185.2	-6.2	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								C-Rwi-B-1	0.000	-4.893	190.4	0.0	
Rwi-10-B-1	110.000	95.570	0.7	0	0	0	0	Rwi-1-B-1	0.300	-4.635	25.5	-6.5	-1.000
								B-10-Kba-Rwi-2	-0.300	4.635	25.5	-6.5	
Rz1-6-B-1	6.600	99.816	9.0	0	0	0	0	N-Rz1-.06-B-1-1	-3.480	0.173	305.3	-99.9	
								B-.6-Mr1-Rz1-2	3.480	-0.173	305.3	-99.9	
Rz2-6-B-1-1	6.600	100.000	12.4	0	0	0	0	Rz2-10-B-1	12.750	3.674	1160.7	96.1	
								G-Rz2-.6-B	-12.750	-3.674	1160.7	96.1	
* Rz2-6-B-1-2	6.600	100.000	12.4	12.750	3.674	0	0	G-Rz2-.6-B	12.750	3.674	1160.7	96.1	
Rz2-10-B-1	110.000	97.359	7.2	0	0	0	0	Rz2-6-B-1-1	-12.685	-2.444	69.6	98.2	
								B-10-Mr2-Rz2-2	12.685	2.444	69.6	98.2	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cmp/Kri/Kya-B	30.000	97.557	5.1	0	0	0	0	B-3-Cmp-Kri-2	-0.229	-0.112	5.0	89.8	
								B-3-Kri-Cmp/Kya-1	0.000	-0.020	0.4	0.0	
								3-Ghi/Kri/Kya-B	0.229	0.132	5.2	86.6	
3-Cyi/Nko-B	30.000	98.204	7.1	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.149	-0.103	3.5	82.4	
								3-Cyi-Ghi-B	0.447	0.274	10.3	85.2	
								B-3-Nko-Cyi/Nko-1	-0.298	-0.172	6.7	86.6	
3-Cyi-Ghi-B	30.000	98.089	7.0	0	0	0	0	B-3-Cyi-Ghi-2	2.048	-0.308	40.6	-98.9	
								3-Cyi/Nko-B	-0.447	-0.283	10.4	84.5	
								3-Kro/Kbu-B	-1.602	0.591	33.5	-93.8	
3-Ghi/Kri/Kya-B	30.000	97.411	5.0	0	0	0	0	B-Ghi-Ghi/Kya-1	1.317	0.691	29.4	88.6	
								3-Cmp/Kri/Kya-B	-0.229	-0.153	5.4	83.1	
								Kya-3-B-1	-1.088	-0.537	24.0	89.7	
3-Kro/Kbu-B	30.000	98.900	9.2	0	0	0	0	B-3-Kbu-Kro-2	0.000	-0.029	0.6	0.0	
								B-3-Kbu-Kro/Nko-2	-1.638	0.644	34.2	-93.1	
								3-Cyi-Ghi-B	1.638	-0.615	34.0	-93.6	
10-Bre/Gso/Msh-B	110.000	96.432	-1.7	0	0	0	0	B-10-Bre-Gso-1	-37.163	-8.744	207.8	97.3	
								B-10-Gso-Msh-2	22.287	1.396	121.5	99.8	
								Gso-10-B-1	14.875	7.348	90.3	89.7	
10-Gfu/Jb1/Rln-B	110.000	98.393	2.0	0	0	0	0	B-10-Gfu/Mku/Rln-B	-21.340	2.010	114.3	-99.6	
								B-10-Jb1-Rln-2	18.939	-3.209	102.5	-98.6	
								Rln-10-B-1	2.401	1.199	14.3	89.5	
10-Gfu/Mku/Rln-B	110.000	99.059	3.0	0	0	0	0	B-10-Gfu-Mku-2	-23.912	0.962	126.8	-99.9	
								10-Gfu/Jb1/Rln-B	21.523	-2.202	114.6	-99.5	
								Gfu-10-B-1	2.390	1.240	14.3	88.8	
10-Gko/Kgo/MKi-B	110.000	97.185	0.9	0	0	0	0	B-10-Gko-MKi-1	3.484	-7.210	43.2	-43.5	
								B-10-Kgo-MKi-2	-27.894	6.130	154.2	-97.7	
								MKi-10-B-1	24.410	1.080	132.0	99.9	
10-Kba/Msh/Rwi-B	110.000	95.993	-3.2	0	0	0	0	B-10-Kba-Msh-2	-6.110	6.506	48.8	-68.5	
								B-10-Kba-Rwi-2	0.442	-9.570	52.4	-4.6	
								Kba-10-B-1	5.668	3.064	35.2	88.0	
10-Kbo/Kro/Mr2-B	110.000	98.835	8.7	0	0	0	0	B-10-Kbo/Nte-B	-7.805	3.039	44.5	-93.2	
								B-10-Kbo-Kro-1	6.315	-3.804	39.2	-85.7	
								Kbo-10-B-1	1.490	0.765	8.9	89.0	
10-Kbo/Nte-B	110.000	98.780	9.1	0	0	0	0	B-10-Kbo/Kro/Mr2-B	7.824	-3.647	45.9	-90.6	
								B-10-Kbo/Nte-2	-7.824	3.647	45.9	-90.6	
10-Mr2/Nte-B	110.000	98.789	9.1	0	0	0	0	B-10-Mr2/Nte-1	-6.686	-0.902	35.8	99.1	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Mr2/Nte-2	6.686	0.902	35.8	99.1	
* 20-Mra-B	220.000	100.000	0.0	22.113	1.733	0	0	B-20-Mra-Sha-2D	22.113	1.733	58.2	99.7	
B-1-Jb1-Jb3-1	15.000	98.987	-0.4	0	0	0	0	B-1-Jb1-Jb3-2	-5.945	0.269	231.4	-99.9	
								Jb1-1-B-1	5.945	-0.269	231.4	-99.9	
B-1-Jb1-Jb3-2	15.000	99.204	-0.2	0	0	0	0	B-1-Jb1-Jb3-1	5.959	-0.248	231.4	-99.9	
								Jb3-1-B-1	-5.959	0.248	231.4	-99.9	
B-1-Kbu-KbW-1F_T	11.000	98.977	11.7	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.136	2.131	1284.9	-99.6	
								Kbu-1-B-1	24.136	-2.131	1284.9	-99.6	
B-1-Kbu-KbW-2F_T	11.000	102.123	16.8	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1284.9	100.0	
								KbW-1-B-2	-25.000	0.000	1284.9	100.0	
B-3-Cmp-Kri-2	30.000	97.933	5.2	0	0	0	0	3-Cmp/Kri/Kya-B	0.230	0.042	4.6	98.3	
								Cmp-3-B-1	-0.230	-0.042	4.6	98.3	
B-3-Cmp-Mku-1	30.000	97.933	5.2	0	0	0	0	B-3-Cmp-Mku-2	-2.994	-1.073	62.5	94.1	
								Cmp-3-B-1	2.994	1.073	62.5	94.1	
B-3-Cmp-Mku-2	30.000	98.962	5.7	0	0	0	0	B-3-Cmp-Mku-1	3.017	1.094	62.4	94.0	
								Mku-3-B-1	-3.017	-1.094	62.4	94.0	
B-3-Cmp-Nta-1	30.000	97.933	5.2	0	0	0	0	B-3-Cmp-Nta-2	0.356	-0.135	7.5	-93.5	
								Cmp-3-B-1	-0.356	0.135	7.5	-93.5	
B-3-Cmp-Nta-2	30.000	97.849	5.0	0	0	0	0	B-3-Cmp-Nta-1	-0.355	0.104	7.3	-96.0	
								Nta-3-B-1	0.355	-0.104	7.3	-96.0	
B-3-Cyi-Cyi/Nko-1	30.000	98.264	7.1	0	0	0	0	3-Cyi/Nko-B	0.149	0.089	3.4	85.8	
								Cyi-3-B-1	-0.149	-0.089	3.4	85.8	
B-3-Cyi-Ghi-2	30.000	96.309	4.7	0	0	0	0	3-Cyi-Ghi-B	-1.999	0.311	40.4	-98.8	
								Ghi-3-B-1	1.999	-0.311	40.4	-98.8	
B-3-Ghi-Gse-1	30.000	96.309	4.7	0	0	0	0	B-3-Ghi-Gse-2	1.865	0.834	40.8	91.3	
								Ghi-3-B-1	-1.865	-0.834	40.8	91.3	
B-3-Ghi-Gse-2	30.000	96.055	4.6	0	0	0	0	B-3-Ghi-Gse-1	-1.862	-0.834	40.9	91.3	
								Gse-3-B	1.862	0.834	40.9	91.3	
B-3-Kbu-Kro/Nko-2	30.000	99.026	9.6	0	0	0	0	3-Kro/Kbu-B	1.644	-0.648	34.3	-93.0	
								Kbu-3-B-1	-1.644	0.648	34.3	-93.0	
B-3-Kbu-Kro-2	30.000	98.910	9.2	0	0	0	0	3-Kro/Kbu-B	0.000	0.000	0.0	0.0	
B-3-Kri-Cmp/Kya-1	30.000	97.562	5.1	0	0	0	0	3-Cmp/Kri/Kya-B	0.000	0.000	0.0	0.0	
								Kri-3-B-1	0.000	0.000	0.0	0.0	
B-3-Nko-Cyi/Nko-1	30.000	98.353	7.1	0	0	0	0	3-Cyi/Nko-B	0.298	0.154	6.6	88.8	
								Nko-3-B-1	-0.298	-0.154	6.6	88.8	
B-10-Bga-Gsh-1	110.000	98.516	9.4	0	0	0	0	B-10-Bga-Gsh-2	-14.912	-2.267	80.4	98.9	
								Bga-10-B-1	14.912	2.267	80.4	98.9	
B-10-Bga-Gsh-2	110.000	98.931	9.7	0	0	0	0	B-10-Bga-Gsh-1	14.961	2.057	80.1	99.1	
								Gsh-10-B	-14.961	-2.057	80.1	99.1	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Bga-Nte-1	110.000	98.516	9.4	0	0	0	0	B-10-Bga-Nte-2	2.630	-4.465	27.6	-50.7	
								Bga-10-B-1	-2.630	4.465	27.6	-50.7	
B-10-Bga-Nte-2	110.000	98.781	9.1	0	0	0	0	B-10-Bga-Nte-1	-2.619	3.837	24.7	-56.4	
								Nte-10-B-1	2.619	-3.837	24.7	-56.4	
B-10-Bre-Gso-1	110.000	98.254	-0.4	0	0	0	0	10-Bre/Gso/Msh-B	37.658	9.307	207.2	97.1	
								Bre-10-B-1	-37.658	-9.307	207.2	97.1	
B-10-Bre-Jb1-1	110.000	98.254	-0.4	0	0	0	0	B-10-Bre-Jb1-2	-39.560	38.003	293.0	-72.1	
								Bre-10-B-1	39.560	-38.003	293.0	-72.1	
B-10-Bre-Jb1-2	110.000	97.703	0.6	0	0	0	0	B-10-Bre-Jb1-1	40.010	-37.288	293.8	-73.2	
								Jb1-10-B-1	-40.010	37.288	293.8	-73.2	
B-10-Bre-Sha-1D	110.000	98.254	-0.4	0	0	0	0	B-10-Bre-Sha-2D	-6.870	-51.805	279.2	13.1	
								Bre-10-B-1	6.870	51.805	279.2	13.1	
B-10-Bre-Sha-2D	110.000	99.100	-0.6	0	0	0	0	B-10-Bre-Sha-1D	7.101	51.674	276.3	13.6	
								Sha-10-B-1	-7.101	-51.674	276.3	13.6	
B-10-Bta-Kgo-1	110.000	96.722	3.2	0	0	0	0	B-10-Bta-Kgo-2	-6.429	-3.327	39.3	88.8	
								Bta-10-B-1	6.429	3.327	39.3	88.8	
B-10-Bta-Kgo-2	110.000	97.717	3.7	0	0	0	0	B-10-Bta-Kgo-1	6.471	2.280	36.8	94.3	
								Kgo-10-B-1	-6.471	-2.280	36.8	94.3	
B-10-Gfu-Mku-2	110.000	99.826	4.0	0	0	0	0	10-Gfu/Mku/Rln-B	24.115	-1.065	126.9	-99.9	
								Mku-10-B-1	-24.115	1.065	126.9	-99.9	
B-10-Gko-Jb1-1	110.000	97.303	0.8	0	0	0	0	B-10-Gko-Jb1-2	5.309	-13.890	80.2	-35.7	
								Gko-10-B-1	-5.309	13.890	80.2	-35.7	
B-10-Gko-Jb1-2	110.000	97.703	0.6	0	0	0	0	B-10-Gko-Jb1-1	-5.284	13.686	78.8	-36.0	
								Jb1-10-B-1	5.284	-13.686	78.8	-36.0	
B-10-Gko-MKi-1	110.000	97.303	0.8	0	0	0	0	10-Gko/Kgo/MKi-B	-3.479	7.058	42.4	-44.2	
								Gko-10-B-1	3.479	-7.058	42.4	-44.2	
B-10-Gso-Msh-2	110.000	95.601	-2.6	0	0	0	0	10-Bre/Gso/Msh-B	-22.117	-1.489	121.7	99.8	
								Msh-10-B-1	22.117	1.489	121.7	99.8	
B-10-Gso-Nde-1	110.000	96.432	-1.7	0	0	0	0	B-10-Gso-Nde-2	7.441	3.576	44.9	90.1	
								Gso-10-B-1	-7.441	-3.576	44.9	90.1	
B-10-Gso-Nde-2	110.000	96.237	-1.8	0	0	0	0	B-10-Gso-Nde-1	-7.431	-3.733	45.4	89.4	
								Nde-10-B-1	7.431	3.733	45.4	89.4	
B-10-Jb1-Jb2-1	110.000	97.703	0.6	0	0	0	0	B-10-Jb1-Jb2-2	-23.886	1.990	128.8	-99.7	
								Jb1-10-B-1	23.886	-1.990	128.8	-99.7	
B-10-Jb1-Jb2-2	110.000	97.729	0.7	0	0	0	0	B-10-Jb1-Jb2-1	23.895	-2.002	128.8	-99.7	
								Jb2-10-B-1	-23.895	2.002	128.8	-99.7	
B-10-Jb1-Nbg-1	110.000	97.703	0.6	0	0	0	0	B-10-Jb1-Nbg-2	0.651	11.865	63.8	5.5	
								Jb1-10-B-1	-0.651	-11.865	63.8	5.5	
B-10-Jb1-Nbg-2	110.000	97.316	0.7	0	0	0	0	B-10-Jb1-Nbg-1	-0.628	-12.034	65.0	5.2	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Nbg-10-B-1	0.628	12.034	65.0	5.2	
B-10-Jb1-Rln-2	110.000	97.703	0.6	0	0	0	0	10-Gfu/Jb1/Rln-B	-18.736	2.846	101.8	-98.9	
								Jb1-10-B-1	18.736	-2.846	101.8	-98.9	
B-10-Kba-Msh-2	110.000	95.601	-2.6	0	0	0	0	10-Kba/Msh/Rwi-B	6.154	-7.083	51.5	-65.6	
								Msh-10-B-1	-6.154	7.083	51.5	-65.6	
B-10-Kba-Rwi-2	110.000	96.316	-3.3	0	0	0	0	10-Kba/Msh/Rwi-B	-0.426	9.374	51.1	-4.5	
								Rwi-10-B-1	0.426	-9.374	51.1	-4.5	
B-10-Kbo/Nte-2	110.000	98.781	9.1	0	0	0	0	10-Kbo/Nte-B	7.825	-3.660	45.9	-90.6	
								Nte-10-B-1	-7.825	3.660	45.9	-90.6	
B-10-Kbo-Kro-1	110.000	98.996	8.1	0	0	0	0	10-Kbo/Kro/Mr2-B	-6.290	2.556	36.0	-92.6	
								Kro-10-B-1	6.290	-2.556	36.0	-92.6	
B-10-Kbu-Kro-1	110.000	99.212	8.7	0	0	0	0	B-10-Kbu-Kro-2	22.424	-2.757	119.5	-99.3	
								Kbu-10-B-1	-22.424	2.757	119.5	-99.3	
B-10-Kbu-Kro-2	110.000	98.996	8.1	0	0	0	0	B-10-Kbu-Kro-1	-22.347	2.594	119.3	-99.3	
								Kro-10-B-1	22.347	-2.594	119.3	-99.3	
B-10-Kgo-Kli-1	110.000	97.717	3.7	0	0	0	0	B-10-Kgo-Kli-2	-41.132	5.420	222.8	-99.1	
								Kgo-10-B-1	41.132	-5.420	222.8	-99.1	
B-10-Kgo-Kli-2	110.000	98.684	6.4	0	0	0	0	B-10-Kgo-Kli-1	41.773	-4.432	223.4	-99.4	
								Kli-10-B-1	-41.773	4.432	223.4	-99.4	
B-10-Kgo-MKi-2	110.000	97.717	3.7	0	0	0	0	10-Gko/Kgo/MKi-B	28.351	-6.107	155.8	-97.8	
								Kgo-10-B-1	-28.351	6.107	155.8	-97.8	
B-10-Kli-Kro-1	110.000	98.996	8.1	0	0	0	0	B-10-Kli-Kro-2	27.143	-5.917	147.3	-97.7	
								Kro-10-B-1	-27.143	5.917	147.3	-97.7	
B-10-Kli-Kro-2	110.000	98.684	6.4	0	0	0	0	B-10-Kli-Kro-1	-26.890	5.821	146.3	-97.7	
								Kli-10-B-1	26.890	-5.821	146.3	-97.7	
B-10-Kli-Ny1-1	110.000	98.684	6.4	0	0	0	0	B-10-Kli-Ny1-2	-13.880	-0.610	73.9	99.9	
								Kli-10-B-1	13.880	0.610	73.9	99.9	
B-10-Kli-Ny1-2	110.000	99.384	7.2	0	0	0	0	B-10-Kli-Ny1-1	13.973	0.101	73.8	100.0	
								Ny1-10-B-1	-13.973	-0.101	73.8	100.0	
B-10-Kli-Rka-1	110.000	98.684	6.4	0	0	0	0	B-10-Kli-Rka-2	-2.489	-1.540	15.6	85.0	
								Kli-10-B-1	2.489	1.540	15.6	85.0	
B-10-Kli-Rka-2	110.000	98.958	6.6	0	0	0	0	B-10-Kli-Rka-1	2.493	0.717	13.8	96.1	
								Rka-10-B-1	-2.493	-0.717	13.8	96.1	
B-10-MKi-Nbg-1	110.000	97.316	0.7	0	0	0	0	B-10-MKi-Nbg-2	-6.813	8.295	57.9	-63.5	
								Nbg-10-B-1	6.813	-8.295	57.9	-63.5	
B-10-MKi-Nbg-2	110.000	97.185	0.9	0	0	0	0	B-10-MKi-Nbg-1	6.829	-8.440	58.6	-62.9	
								MKi-10-B-1	-6.829	8.440	58.6	-62.9	
B-10-Mku-Nbi-1	110.000	99.826	4.0	0	0	0	0	B-B-10-Mku-Nbi-1-2	1.503	0.078	7.9	99.9	
								Mku-10-B-1	-1.503	-0.078	7.9	99.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Mku-Nta-1	110.000	99.826	4.0	0	0	0	0	B-10-Mku-Nta-2	-9.144	0.120	48.1	100.0	
								Mku-10-B-1	9.144	-0.120	48.1	100.0	
B-10-Mku-Nta-2	110.000	100.088	4.6	0	0	0	0	B-10-Mku-Nta-1	9.173	-0.963	48.4	-99.5	
								Nta-10-B-1	-9.173	0.963	48.4	-99.5	
B-10-Mr1-Mr2-1	110.000	98.999	9.4	0	0	0	0	B-10-Mr1-Mr2-2	0.349	-0.736	4.3	-42.9	
								Mr1-10-B-1	-0.349	0.736	4.3	-42.9	
B-10-Mr1-Mr2-2	110.000	99.000	9.4	0	0	0	0	B-10-Mr1-Mr2-1	-0.349	0.725	4.3	-43.4	
								Mr2-10-B-2	0.349	-0.725	4.3	-43.4	
B-10-Mr2/Nte-1	110.000	99.000	9.4	0	0	0	0	10-Mr2/Nte-B	6.698	0.287	35.5	99.9	
								Mr2-10-B-2	-6.698	-0.287	35.5	99.9	
B-10-Mr2/Nte-2	110.000	98.781	9.1	0	0	0	0	10-Mr2/Nte-B	-6.686	-0.916	35.9	99.1	
								Nte-10-B-1	6.686	0.916	35.9	99.1	
B-10-Mr2-Rz2-1	110.000	99.000	9.4	0	0	0	0	B-10-Mr2-Rz2-2	-6.348	-1.012	34.1	98.8	
								Mr2-10-B-1	6.348	1.012	34.1	98.8	
B-10-Mr2-Rz2-2	110.000	99.223	9.6	0	0	0	0	B-10-Mr2-Rz2-1	6.360	0.627	33.8	99.5	
								Rz2-10-B-1	-6.360	-0.627	33.8	99.5	
B-20-Mra-Sha-2D	220.000	99.419	-0.3	0	0	0	0	20-Mra-B	-22.061	-30.138	98.6	59.1	
								Sha-20-B-1	22.061	30.138	98.6	59.1	
B-20-Rba-Sha-1	220.000	99.944	-0.3	0	0	0	0	B-20-Rba-Sha-2	0.000	0.000	0.0	0.0	
								Rba-20-B-1	0.000	0.000	0.0	0.0	
B-20-Rba-Sha-2	220.000	99.419	-0.3	0	0	0	0	B-20-Rba-Sha-1	0.008	-14.179	37.4	-0.1	
								Sha-20-B-1	-0.008	14.179	37.4	-0.1	
B-20-Sha-Rlm-1D	220.000	99.419	-0.3	0	0	0	0	B-20-Sha-Rlm-2D	7.396	-12.570	38.5	-50.7	
								Sha-20-B-1	-7.396	12.570	38.5	-50.7	
B-20-Sha-Rlm-2D	220.000	99.456	-0.4	0	0	0	0	B-20-Sha-Rlm-1D	-7.393	-3.808	21.9	88.9	
								Rlm-20-B-1	7.393	3.808	21.9	88.9	
B-6-Mr1-Rz1-1	6.600	99.251	9.6	0	0	0	0	B-6-Mr1-Rz1-2	-1.737	0.033	153.1	-100.0	
								Mr1-6-B-1	1.737	-0.033	153.1	-100.0	
B-6-Mr1-Rz1-2	6.600	99.705	10.1	0	0	0	0	B-6-Mr1-Rz1-1	1.745	-0.020	153.1	100.0	
								Rz1-6-B-1	-1.745	0.020	153.1	100.0	
B-B-10-Mku-Nbi-1-2	110.000	99.721	3.9	0	0	0	0	B-10-Mku-Nbi-1	-1.502	-0.750	8.8	89.5	
								Nbi-10-B-1	1.502	0.750	8.8	89.5	
Bga-3-B-1	30.000	98.815	6.5	0	0	12.264	5.940	Bga-10-B-1	-12.264	-5.940	265.4	90.0	
Bga-10-B-1	110.000	98.516	9.4	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	12.282	6.732	74.6	87.7	-3.000
								B-10-Bga-Nte-1	2.630	-4.465	27.6	-50.7	
								B-10-Bga-Gsh-1	-14.912	-2.267	80.4	98.9	
Bga-6-B-1	6.600	98.516	9.4	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
B-Ghi-Kri/Kya-1	30.000	96.309	4.7	0	0	0	0	3-Ghi/Kri/Kya-B	-1.306	-0.704	29.7	88.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Ghi-3-B-1	1.306	0.704	29.7	88.0	
Bre-1-B-1	15.000	99.009	-1.7	0	0	8.760	4.242	Bre-10-B-1	-4.380	-2.121	189.2	90.0	
								Bre-10-B-1	-4.380	-2.121	189.2	90.0	
Bre-10-B-1	110.000	98.254	-0.4	0	0	0	0	Bre-1-B-1	4.386	2.247	26.3	89.0	-2.000
								Bre-1-B-1	4.386	2.247	26.3	89.0	-2.000
								B-10-Bre-Jb1-1	-39.560	38.003	293.0	-72.1	
								B-10-Bre-Sha-1D	-6.870	-51.805	279.2	13.1	
								B-10-Bre-Gso-1	37.658	9.307	207.2	97.1	
Bta-3-B-1	30.000	99.352	1.7	0	0	6.424	3.112	Bta-10-B-1	-6.424	-3.112	138.3	90.0	
Bta-10-B-1	110.000	96.722	3.2	0	0	0	0	Bta-3-B-1	6.429	3.327	39.3	88.8	-4.000
								B-10-Bta-Kgo-1	-6.429	-3.327	39.3	88.8	
C-Ghi-B	30.000	96.309	4.7	0	0	0.000	-0.928	Ghi-3-B-1	0.000	0.928	18.5	0.0	
C-Kgo-B-3	30.000	98.266	2.1	0	0	0.000	-4.828	Kgo-3-B-1	0.000	4.828	94.6	0.0	
Cmp-3-B-1	30.000	97.933	5.2	0	0	2.408	1.166	B-3-Cmp-Mku-1	-2.994	-1.073	62.5	94.1	
								B-3-Cmp-Nta-1	0.356	-0.135	7.5	-93.5	
								B-3-Cmp-Kri-2	0.230	0.042	4.6	98.3	
C-Msh-1-B	15.000	95.236	-5.0	0	0	0	0	Msh-1-B-1	0.000	0.000	0.0	0.0	
C-Rwi-B-1	15.000	100.261	-3.5	0	0	0.000	-10.052	Rwi-1-B-1	0.000	10.052	385.9	0.0	
Cyi-3-B-1	30.000	98.264	7.1	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.149	0.089	3.4	85.8	
								G-Cyi-3-B	-0.149	-0.089	3.4	85.8	
Cyi-3-B-2	30.000	98.264	7.1	0	0	0	0	N-Cyi-04-1	-0.149	-0.089	3.4	85.8	
								G-Cyi-3-B	0.149	0.089	3.4	85.8	
G-Cyi-3-B	30.000	98.264	7.1	0	0	0	0	Cyi-3-B-1	0.149	0.089	3.4	85.8	
								Cyi-3-B-2	-0.149	-0.089	3.4	85.8	
Gfu-3-B-1	30.000	97.279	1.4	0	0	2.379	1.152	Gfu-10-B-1	-2.379	-1.152	52.3	90.0	
Gfu-10-B-1	110.000	99.059	3.0	0	0	0	0	Gfu-3-B-1	2.390	1.240	14.3	88.8	
								10-Gfu/Mku/Rln-B	-2.390	-1.240	14.3	88.8	
G-Ghi-6-B	6.600	98.066	5.8	0	0	0	0	Ghi-6-B-1	0.900	0.676	100.4	80.0	
								Ghi-6-B-2	-0.900	-0.676	100.4	80.0	
G-Gko-1-B	15.000	98.942	1.1	0	0	0	0	Gko-1-B-1	9.938	-0.738	387.7	-99.7	
								Gko-1-B-2	-9.938	0.738	387.7	-99.7	
G-Gko-3-B	15.000	98.942	1.1	0	0	0	0	Gko-1-B-1	3.990	-0.136	155.3	-99.9	
								Gko-3-B	-3.990	0.136	155.3	-99.9	
G-Gse-6-B	6.600	96.718	3.1	0	0	0	0	Gse-6-B-1	0.498	0.363	55.8	80.8	
								Gse-6-B-2	-0.498	-0.363	55.8	80.8	
G-Gsh-1-B	11.000	100.000	12.6	0	0	0	0	Gsh-1-B-1	15.000	2.832	801.2	98.3	
								Gsh-1-B-2	-15.000	-2.832	801.2	98.3	
Ghi-3-B-1	30.000	96.309	4.7	0	0	2.337	1.132	Ghi-6-B-1	-0.897	-0.646	22.1	81.1	
								B-3-Ghi-Gse-1	1.865	0.834	40.8	91.3	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-3-Cyi-Ghi-2	-1.999	0.311	40.4	-98.8	
								B-Ghi-Ghi/Kya-1	-1.306	-0.704	29.7	88.0	
								C-Ghi-B	0.000	-0.928	18.5	0.0	
Ghi-.6-B-1	6.600	98.066	5.8	0	0	0	0	Ghi-3-B-1	0.900	0.676	100.4	80.0	
								G-Ghi-.6-B	-0.900	-0.676	100.4	80.0	
Ghi-.6-B-2	6.600	98.066	5.8	0.900	0.676	0	0	G-Ghi-.6-B	0.900	0.676	100.4	80.0	
G-Jb2-10-B	110.000	97.729	0.7	0	0	0	0	Jb2-10-B-1	23.895	-2.002	128.8	-99.7	
								Jb2-10-B-2	-23.895	2.002	128.8	-99.7	
G-Jb3-1-B	15.000	99.204	-0.2	0	0	0	0	Jb3-1-B-1	5.959	-0.248	231.4	-99.9	
								Jb3-1-B-2	-5.959	0.248	231.4	-99.9	
G-KbW-1-B-1	11.000	102.123	16.8	0	0	0	0	KbW-1-B-3	-17.000	0.000	873.7	100.0	
								KbW-1-B-2	17.000	0.000	873.7	100.0	
G-KbW-1-B-2	11.000	102.123	16.8	0	0	0	0	KbW-1-B-1	8.000	0.000	411.2	100.0	
								KbW-1-B-4	-8.000	0.000	411.2	100.0	
Gko-1-B-1	15.000	98.942	1.1	0	0	12.093	5.857	Gko-10-B-1	0.612	-2.244	90.5	-26.3	
								Gko-10-B-1	0.612	-2.244	90.5	-26.3	
								Gko-10-B-1	0.612	-2.244	90.5	-26.3	
								G-Gko-1-B	-9.938	0.738	387.7	-99.7	
								G-Gko-3-B	-3.990	0.136	155.3	-99.9	
Gko-1-B-2	15.000	98.942	1.1	0	0	0	0	N-Gko-.04-1	-4.969	0.369	193.8	-99.7	
								N-Gko-.04-2	-4.969	0.369	193.8	-99.7	
								G-Gko-1-B	9.938	-0.738	387.7	-99.7	
Gko-3-B	15.000	98.942	1.1	0	0	0	0	N-RAg-.6	-3.990	0.136	155.3	-99.9	
								G-Gko-3-B	3.990	-0.136	155.3	-99.9	
Gko-10-B-1	110.000	97.303	0.8	0	0	0	0	Gko-1-B-1	-0.610	2.277	12.7	-25.9	-3.000
								Gko-1-B-1	-0.610	2.277	12.7	-25.9	-3.000
								Gko-1-B-1	-0.610	2.277	12.7	-25.9	-3.000
								B-10-Gko-Jb1-1	5.309	-13.890	80.2	-35.7	
								B-10-Gko-MKi-1	-3.479	7.058	42.4	-44.2	
G-Kse-1-B	110.000	96.432	-1.7	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Kya-3-B-2	30.000	98.205	5.3	0	0	0	0	Kya-3-B-1	1.094	0.520	23.7	90.3	
								Kya-3-B-3	-1.094	-0.520	23.7	90.3	
G-Mku-10-B	110.000	99.826	4.0	0	0	0	0	Mku-10-B-1	9.967	-0.572	52.5	-99.8	
								Mku-10-B-2	-9.967	0.572	52.5	-99.8	
G-Mku-.6-B	6.600	100.000	7.0	0	0	0	0	Mku-.6-B-4	12.000	2.476	1071.8	97.9	
								Mku-.6-B-2	-12.000	-2.476	1071.8	97.9	
G-Mus-3-B	30.000	99.245	7.0	0	0	0	0	Mus-3-B	-0.998	-0.404	20.9	92.7	
								Rka-3-B-1	0.998	0.404	20.9	92.7	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
G-Nko-3-B	30.000	98.353	7.1	0	0	0	0	Nko-3-B-1	0.298	0.154	6.6	88.8	
								Nko-3-B-2	-0.298	-0.154	6.6	88.8	
G-NiB-3-B	30.000	98.266	2.1	0	0	0	0	Kgo-3-B-1	0.000	0.000	0.0	0.0	
								NiB-3-B1	0.000	0.000	0.0	0.0	
G-Ny1-3-B	30.000	99.550	9.2	0	0	0	0	Ny1-3-B-1	13.984	0.595	270.6	99.9	
								Ny1-3-B-2	-13.984	-0.595	270.6	99.9	
G-Rka5-3-B	30.000	99.245	7.0	0	0	0	0	Rka5-3-B	-1.496	-0.336	29.7	97.6	
								Rka-3-B-1	1.496	0.336	29.7	97.6	
G-Rka-3-B	30.000	99.245	7.0	0	0	0	0	Rka-3-B-1	0.000	0.000	0.0	0.0	
								Rka-3-B-2	0.000	0.000	0.0	0.0	
G-Rz1-.06-B	0.600	100.000	11.5	0	0	0	0	N-Rz1-.06-B-1-1	1.750	0.023	1684.1	100.0	
								N-Rz1-.06-B-1-2	-1.750	-0.023	1684.1	100.0	
G-Rz2-.6-B	6.600	100.000	12.2	0	0	0	0	Rz2-.6-B-1-1	6.375	0.917	563.4	99.0	
								Rz2-.6-B-1-2	-6.375	-0.917	563.4	99.0	
Gse-3-B	30.000	96.055	4.6	0	0	0	0	Gse-6-B-1	1.862	0.834	40.9	91.3	-2.000
								B-3-Ghi-Gse-2	-1.862	-0.834	40.9	91.3	
Gse-6-B-1	6.600	96.718	3.1	0	0	2.355	1.140	Gse-3-B	-1.857	-0.777	182.1	92.2	
								G-Gse-.6-B	-0.498	-0.363	55.8	80.8	
Gse-6-B-2	6.600	96.718	3.1	0	0	0	0	N-Gse-.04-1	-0.249	-0.182	27.9	80.8	
								N-Gse-.04-2	-0.249	-0.182	27.9	80.8	
								G-Gse-.6-B	0.498	0.363	55.8	80.8	
Gsh-1-B-1	11.000	100.000	12.6	0	0	0	0	Gsh-10-B	7.500	1.416	400.6	98.3	
								Gsh-10-B	7.500	1.416	400.6	98.3	
								G-Gsh-1-B	-15.000	-2.832	801.2	98.3	
* Gsh-1-B-2	11.000	100.000	12.6	15.000	2.832	0	0	G-Gsh-1-B	15.000	2.832	801.2	98.3	
Gsh-10-B	110.000	98.931	9.7	0	0	0	0	Gsh-1-B-1	-7.481	-1.028	40.1	99.1	
								Gsh-1-B-1	-7.481	-1.028	40.1	99.1	
								B-10-Bga-Gsh-2	14.961	2.057	80.1	99.1	
Gso-1-B-1	15.000	99.487	-2.8	0	0	7.431	3.599	Gso-10-B-1	-7.431	-3.599	319.4	90.0	
Gso-10-B-1	110.000	96.432	-1.7	0	0	0	0	Gso-1-B-1	7.435	3.771	45.4	89.2	-4.000
								B-10-Gso-Nde-1	7.441	3.576	44.9	90.1	
								10-Bre/Gso/Msh-B	-14.875	-7.348	90.3	89.7	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Jb1-10-B-1	110.000	97.703	0.6	0	0	0	0	Jb1-1-B-1	7.245	6.901	53.8	72.4	-3.000
								B-10-Jb1-Jb2-1	-23.886	1.990	128.8	-99.7	
								B-10-Jb1-Rln-2	-18.736	2.846	101.8	-98.9	
								B-10-Bre-Jb1-2	40.010	-37.288	293.8	-73.2	
								B-10-Gko-Jb1-2	-5.284	13.686	78.8	-36.0	
								B-10-Jb1-Nbg-1	0.651	11.865	63.8	5.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Jb1-1-B-1	15.000	98.987	-0.4	0	0	13.184	6.385	Jb1-10-B-1	-7.239	-6.655	382.3	73.6	
								B-1-Jb1-Jb3-1	-5.945	0.269	231.4	-99.9	
Jb2-6-B-1	6.600	99.813	5.5	24.000	0.000	0	0	Jb2-10-B-2	12.000	0.000	1051.7	100.0	
								Jb2-10-B-2	12.000	0.000	1051.7	100.0	
Jb2-10-B-1	110.000	97.729	0.7	0	0	0	0	B-10-Jb1-Jb2-2	23.895	-2.002	128.8	-99.7	
								G-Jb2-10-B	-23.895	2.002	128.8	-99.7	
Jb2-10-B-2	110.000	97.729	0.7	0	0	0	0	Jb2-6-B-1	-11.947	1.001	64.4	-99.7	-2.000
								Jb2-6-B-1	-11.947	1.001	64.4	-99.7	-2.000
								G-Jb2-10-B	23.895	-2.002	128.8	-99.7	
Jb3-1-B-1	15.000	99.204	-0.2	0	0	0	0	B-1-Jb1-Jb3-2	5.959	-0.248	231.4	-99.9	
								G-Jb3-1-B	-5.959	0.248	231.4	-99.9	
Jb3-1-B-2	15.000	99.204	-0.2	0	0	0	0	N-Jb3-.04-1	-0.993	0.041	38.6	-99.9	
								N-Jb3-.04-2	-0.993	0.041	38.6	-99.9	
								N-Jb3-.04-3	-0.993	0.041	38.6	-99.9	
								G-Jb3-1-B	5.959	-0.248	231.4	-99.9	
								Jb3-1-B-2d	-2.979	0.124	115.7	-99.9	
Jb3-1-B-2d	15.000	99.204	-0.2	0	0	0	0	N-Jb3-.04-4	-0.993	0.041	38.6	-99.9	
								N-Jb3-.04-5	-0.993	0.041	38.6	-99.9	
								N-Jb3-.04-6	-0.993	0.041	38.6	-99.9	
								Jb3-1-B-2	2.979	-0.124	115.7	-99.9	
Kba-3-B-1	30.000	99.365	-5.7	0	0	5.642	2.733	Kba-10-B-1	-5.642	-2.733	121.4	90.0	
Kba-10-B-1	110.000	95.993	-3.2	0	0	0	0	Kba-3-B-1	5.668	3.064	35.2	88.0	-6.000
								10-Kba/Msh/Rwi-B	-5.668	-3.064	35.2	88.0	
Kbo-3-B-1	30.000	99.422	7.4	0	0	1.486	0.720	Kbo-10-B-1	-1.486	-0.720	32.0	90.0	
Kbo-10-B-1	110.000	98.835	8.7	0	0	0	0	Kbo-3-B-1	1.490	0.765	8.9	89.0	-2.000
								10-Kbo/Kro/Mr2-B	-1.490	-0.765	8.9	89.0	
Kbu-1-B-1	11.000	98.977	11.7	0	0	0	0	Kbu-3-B-1	1.650	-0.579	92.7	-94.4	
								Kbu-10-B-1	10.968	-0.772	583.0	-99.8	
								Kbu-10-B-1	11.518	-0.780	612.2	-99.8	
								B-1-Kbu-KbW-1F_T	-24.136	2.131	1284.9	-99.6	
Kbu-3-B-1	30.000	99.026	9.6	0	0	0	0	Kbu-1-B-1	-1.644	0.648	34.3	-93.0	-1.000
								B-3-Kbu-Kro/Nko-2	1.644	-0.648	34.3	-93.0	
Kbu-10-B-1	110.000	99.212	8.7	0	0	0	0	Kbu-1-B-1	-10.937	1.360	58.3	-99.2	
								Kbu-1-B-1	-11.487	1.398	61.2	-99.3	
								B-10-Kbu-Kro-1	22.424	-2.757	119.5	-99.3	
KbW-1-B-1	11.000	102.123	16.8	0	0	0	0	KbW-1-B-2	8.000	0.000	411.2	100.0	
								G-KbW-1-B-2	-8.000	0.000	411.2	100.0	
KbW-1-B-2	11.000	102.123	16.8	0	0	0	0	KbW-1-B-1	-8.000	0.000	411.2	100.0	
								B-1-Kbu-KbW-2F_T	25.000	0.000	1284.9	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								G-KbW-1-B-1	-17.000	0.000	873.7	100.0	
KbW-1-B-3	11.000	102.123	16.8	17.000	0.000	0	0	G-KbW-1-B-1	17.000	0.000	873.7	100.0	
KbW-1-B-4	11.000	102.123	16.8	8.000	0.000	0	0	G-KbW-1-B-2	8.000	0.000	411.2	100.0	
Kgo-3-B-1	30.000	98.266	2.1	0	0	6.299	3.051	Kgo-10-B-1	-3.149	0.889	64.1	-96.2	
								Kgo-10-B-1	-3.149	0.889	64.1	-96.2	
								C-Kgo-B-3	0.000	-4.828	94.6	0.0	
								G-NtB-3-B	0.000	0.000	0.0	0.0	
Kgo-10-B-1	110.000	97.717	3.7	0	0	0	0	Kgo-3-B-1	3.155	-0.796	17.5	-97.0	
								Kgo-3-B-1	3.155	-0.796	17.5	-97.0	
								B-10-Kgo-MKi-2	28.351	-6.107	155.8	-97.8	
								B-10-Kgo-Kli-1	-41.132	5.420	222.8	-99.1	
								B-10-Bta-Kgo-2	6.471	2.280	36.8	94.3	
Kli-3-B-1	30.000	99.128	5.1	0	0	1.479	0.716	Kli-10-B-1	-1.479	-0.716	31.9	90.0	
Kli-10-B-1	110.000	98.684	6.4	0	0	0	0	Kli-3-B-1	1.486	0.762	8.9	89.0	-2.000
								B-10-Kgo-Kli-2	41.773	-4.432	223.4	-99.4	
								B-10-Kli-Kro-2	-26.890	5.821	146.3	-97.7	
								B-10-Kli-Rka-1	-2.489	-1.540	15.6	85.0	
								B-10-Kli-Ny1-1	-13.880	-0.610	73.9	99.9	
Kri-3-B-1	30.000	97.562	5.1	0	0	0	0	Kri-6-B-1	0.000	0.000	0.0	0.0	
								B-3-Kri-Cmp/Kya-1	0.000	0.000	0.0	0.0	
Kri-6-B-1	6.600	97.562	5.1	0	0	0	0	Kri-3-B-1	0.000	0.000	0.0	0.0	
Kro-3-B-1	30.000	99.585	6.7	0	0	1.490	0.722	Kro-10-B-1	-1.490	-0.722	32.0	90.0	
Kro-10-B-1	110.000	98.996	8.1	0	0	0	0	Kro-3-B-1	1.494	0.767	8.9	89.0	-2.000
								B-10-Kbu-Kro-2	-22.347	2.594	119.3	-99.3	
								B-10-Kbo-Kro-1	-6.290	2.556	36.0	-92.6	
								B-10-Kli-Kro-1	27.143	-5.917	147.3	-97.7	
Kse-10-B1	110.000	96.432	-1.7	0	0	0	0	G-Kse-1-B	0.000	0.000	0.0	0.0	
Kya-3-B-1	30.000	98.205	5.3	0	0	0	0	3-Ghi/Kri/Kya-B	1.094	0.520	23.7	90.3	
								G-Kya-3-B-2	-1.094	-0.520	23.7	90.3	
Kya-3-B-3	30.000	98.205	5.3	0	0	0	0	N-Kya-6-1	-1.094	-0.520	23.7	90.3	
								G-Kya-3-B-2	1.094	0.520	23.7	90.3	
MKi-3-B-1	30.000	96.769	-1.7	0	0	17.559	8.504	MKi-10-B-1	-17.559	-8.504	388.0	90.0	
MKi-10-B-1	110.000	97.185	0.9	0	0	0	0	MKi-3-B-1	17.582	9.520	108.0	87.9	-2.000
								10-Gko/Kgo/MKi-B	-24.410	-1.080	132.0	99.9	
								B-10-MKi-Nbg-2	6.829	-8.440	58.6	-62.9	
Mku-3-B-1	30.000	98.962	5.7	0	0	2.454	1.188	Mku-6-B-1	-5.470	-2.282	115.3	92.3	
								B-3-Cmp-Mku-2	3.017	1.094	62.4	94.0	
Mku-10-B-1	110.000	99.826	4.0	0	0	0	0	Mku-6-B-1	-6.508	0.296	34.3	-99.9	
								B-10-Gfu-Mku-2	24.115	-1.065	126.9	-99.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Mku-Nta-1	-9.144	0.120	48.1	100.0	
								B-10-Mku-Nbi-1	1.503	0.078	7.9	99.9	
								G-Mku-10-B	-9.967	0.572	52.5	-99.8	
Mku-10-B-2	110.000	99.826	4.0	0	0	0	0	N-Mku-6-1	-9.967	0.572	52.5	-99.8	
								G-Mku-10-B	9.967	-0.572	52.5	-99.8	
Mku-6-B-1	6.600	100.000	7.0	0	0	0	0	Mku-3-B-1	5.474	2.432	524.0	91.4	
								Mku-10-B-1	6.526	0.044	570.9	100.0	
								Mku-6-B-4	-6.000	-1.238	535.9	97.9	
								Mku-6-B-3	-3.000	-0.619	268.0	97.9	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	-3.000	-0.619	268.0	97.9	
* Mku-6-B-2	6.600	100.000	7.0	12.000	2.476	0	0	G-Mku-6-B	12.000	2.476	1071.8	97.9	
Mku-6-B-3	6.600	100.000	7.0	0	0	0	0	Mku-6-B-4	-6.000	-1.238	535.9	97.9	
								Mku-6-B-1	3.000	0.619	268.0	97.9	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	3.000	0.619	268.0	97.9	
Mku-6-B-4	6.600	100.000	7.0	0	0	0	0	Mku-6-B-1	6.000	1.238	535.9	97.9	
								Mku-6-B-3	6.000	1.238	535.9	97.9	
								G-Mku-6-B	-12.000	-2.476	1071.8	97.9	
Mku-6-B-5	6.600	100.000	7.0	0	0	0	0	Mku-6-B-1	0.000	0.000	0.0	0.0	
								Mku-6-B-3	0.000	0.000	0.0	0.0	
Mku-6-B-6	6.600	100.000	7.0	0	0	0	0	Mku-6-B-3	-3.000	-0.619	268.0	97.9	
								Mku-6-B-1	3.000	0.619	268.0	97.9	
Mr1-6-B-1	6.600	99.251	9.6	0	0	0	0	Mr1-10-B-1	0.350	-0.730	71.3	-43.2	
								Mr1-3-B-1	1.387	0.697	136.8	89.4	
								B-6-Mr1-Rz1-1	-1.737	0.033	153.1	-100.0	
Mr1-10-B-1	110.000	98.999	9.4	0	0	0	0	Mr1-6-B-1	-0.349	0.736	4.3	-42.9	-1.000
								B-10-Mr1-Mr2-1	0.349	-0.736	4.3	-42.9	
Mr1-3-B-1	30.000	99.419	8.8	0	0	1.385	0.671	Mr1-6-B-1	-1.385	-0.671	29.8	90.0	1.000
Mr2-10-B-1	110.000	99.000	9.4	0	0	0	0	B-10-Mr2-Rz2-1	-6.348	-1.012	34.1	98.8	
								Mr2-10-B-2	6.348	1.012	34.1	98.8	
Mr2-10-B-2	110.000	99.000	9.4	0	0	0	0	B-10-Mr2/Nte-1	6.698	0.287	35.5	99.9	
								B-10-Mr1-Mr2-2	-0.349	0.725	4.3	-43.4	
								Mr2-10-B-1	-6.348	-1.012	34.1	98.8	
Msh-1-B-1	15.000	95.236	-5.0	0	0	15.920	7.711	Msh-10-B-1	-7.960	-3.855	357.5	90.0	
								Msh-10-B-1	-7.960	-3.855	357.5	90.0	
								C-Msh-1-B	0.000	0.000	0.0	0.0	
Msh-10-B-1	110.000	95.601	-2.6	0	0	0	0	Msh-1-B-1	7.982	4.286	49.7	88.1	-2.000
								Msh-1-B-1	7.982	4.286	49.7	88.1	-2.000

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Gso-Msh-2	-22.117	-1.489	121.7	99.8	
								B-10-Kba-Msh-2	6.154	-7.083	51.5	-65.6	
Mus-3-B	30.000	99.245	7.0	0	0	0	0	Mus-6-B	-0.998	-0.404	20.9	92.7	
								G-Mus-3-B	0.998	0.404	20.9	92.7	
* Mus-6-B	6.600	100.000	7.8	1.000	0.420	0	0	Mus-3-B	1.000	0.420	94.9	92.2	
Nbg-3-B-1	30.000	99.517	-0.1	0	0	7.435	3.601	Nbg-10-B-1	-3.718	-1.800	79.9	90.0	
								Nbg-10-B-1	-3.718	-1.800	79.9	90.0	
Nbg-10-B-1	110.000	97.316	0.7	0	0	0	0	Nbg-3-B-1	3.721	1.869	22.5	89.4	-3.000
								Nbg-3-B-1	3.721	1.869	22.5	89.4	-3.000
								B-10-Jb1-Nbg-2	-0.628	-12.034	65.0	5.2	
								B-10-MKi-Nbg-1	-6.813	8.295	57.9	-63.5	
Nbi-3-B-1	30.000	100.020	3.3	0	0	1.500	0.727	Nbi-10-B-1	-1.500	-0.727	32.1	90.0	
Nbi-10-B-1	110.000	99.721	3.9	0	0	0	0	Nbi-3-B-1	1.502	0.750	8.8	89.5	-1.000
								B-B-10-Mku-Nbi-1-2	-1.502	-0.750	8.8	89.5	
N-Cyi-04-1	0.400	99.837	8.0	0.150	0.093	0	0	Cyi-3-B-2	0.150	0.093	255.2	85.0	
Nde-3-B-1	30.000	99.440	-2.6	0	0	7.425	3.596	Nde-10-B-1	-3.712	-1.798	79.8	90.0	
								Nde-10-B-1	-3.712	-1.798	79.8	90.0	
Nde-10-B-1	110.000	96.237	-1.8	0	0	0	0	Nde-3-B-1	3.716	1.867	22.7	89.4	-4.000
								Nde-3-B-1	3.716	1.867	22.7	89.4	-4.000
								B-10-Gso-Nde-2	-7.431	-3.733	45.4	89.4	
N-Gko-04-1	0.400	99.281	5.3	5.000	0.000	0	0	Gko-1-B-2	5.000	0.000	7269.1	100.0	
N-Gko-04-2	0.400	99.281	5.3	5.000	0.000	0	0	Gko-1-B-2	5.000	0.000	7269.1	100.0	
N-Gse-04-1	0.400	98.150	3.9	0.250	0.188	0	0	Gse-6-B-2	0.250	0.188	460.0	79.9	
N-Gse-04-2	0.400	98.150	3.9	0.250	0.188	0	0	Gse-6-B-2	0.250	0.188	460.0	79.9	
N-Jb3-04-1	0.400	99.804	2.2	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1446.2	100.0	
N-Jb3-04-2	0.400	99.804	2.2	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1446.2	100.0	
N-Jb3-04-3	0.400	99.804	2.2	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1446.2	100.0	
N-Jb3-04-4	0.400	99.804	2.2	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1446.2	100.0	
N-Jb3-04-5	0.400	99.804	2.2	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1446.2	100.0	
N-Jb3-04-6	0.400	99.804	2.2	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1446.2	100.0	
Nko-3-B-1	30.000	98.353	7.1	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.298	0.154	6.6	88.8	
								G-Nko-3-B	-0.298	-0.154	6.6	88.8	
Nko-3-B-2	30.000	98.353	7.1	0	0	0	0	N-Nko-04-B-2	-0.298	-0.154	6.6	88.8	
								G-Nko-3-B	0.298	0.154	6.6	88.8	
* N-Kya-6-1	6.600	100.000	6.8	1.100	0.557	0	0	Kya-3-B-3	1.100	0.557	107.9	89.2	
* N-Mku-6-1	6.600	100.000	7.8	10.000	0.094	0	0	Mku-10-B-2	10.000	0.094	874.8	100.0	
* N-Nko-04-B-2	0.400	100.000	8.3	0.300	0.163	0	0	Nko-3-B-2	0.300	0.163	493.1	87.8	
* N-Ny1-6-2	6.600	100.000	12.1	14.000	1.301	0	0	Ny1-3-B-2	14.000	1.301	1230.0	99.6	
N-RAg-6	6.600	99.144	3.0	4.000	0.000	0	0	Gko-3-B	4.000	0.000	352.9	100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
N-Rz1-.06-B-1-1	0.600	100.000	11.5	0	0	0	0	Rz1-.6-B-1	1.750	0.023	1684.1	100.0	
								G-Rz1-.06-B	-1.750	-0.023	1684.1	100.0	
* N-Rz1-.06-B-1-2	0.600	100.000	11.5	1.750	0.023	0	0	G-Rz1-.06-B	1.750	0.023	1684.1	100.0	
Nta-3-B-1	30.000	97.849	5.0	0	0	2.404	1.164	Nta-.6-B-1	-2.049	-1.268	47.4	85.0	
								B-3-Cmp-Nta-2	-0.355	0.104	7.3	-96.0	
Nta-10-B-1	110.000	100.088	4.6	0	0	0	0	Nta-.6-B-1	-4.586	0.482	24.2	-99.5	
								Nta-.6-B-1	-4.586	0.482	24.2	-99.5	
								B-10-Mku-Nta-2	9.173	-0.963	48.4	-99.5	
Nta-.6-B-1	6.600	100.000	6.7	0	0	0	0	Nta-3-B-1	2.056	1.355	215.4	83.5	
								Nta-10-B-1	4.597	-0.312	403.1	-99.8	
								Nta-10-B-1	4.597	-0.312	403.1	-99.8	
								Nta-.6-B-3	-11.250	-0.731	986.2	99.8	
* Nta-.6-B-2	6.600	100.000	6.7	11.250	0.731	0	0	Nta-.6-B-3	11.250	0.731	986.2	99.8	
Nta-.6-B-3	6.600	100.000	6.7	0	0	0	0	Nta-.6-B-1	11.250	0.731	986.2	99.8	
								Nta-.6-B-2	-11.250	-0.731	986.2	99.8	
NtB-3-B1	30.000	98.266	2.1	0	0	0	0	G-NtB-3-B	0.000	0.000	0.0	0.0	
Nte-3-B-1	30.000	99.074	8.4	0	0	1.478	0.716	Nte-10-B-1	-1.478	-0.716	31.9	90.0	
Nte-10-B-1	110.000	98.781	9.1	0	0	0	0	Nte-3-B-1	1.480	0.739	8.8	89.5	-1.000
								B-10-Kbo/Nte-2	7.825	-3.660	45.9	-90.6	
								B-10-Mr2/Nte-2	-6.686	-0.916	35.9	99.1	
								B-10-Bga-Nte-2	-2.619	3.837	24.7	-56.4	
Ny1-10-B-1	110.000	99.384	7.2	0	0	0	0	Ny1-3-B-1	-13.973	-0.101	73.8	100.0	
								B-10-Kli-Ny1-2	13.973	0.101	73.8	100.0	
Ny1-3-B-1	30.000	99.550	9.2	0	0	0	0	Ny1-10-B-1	13.984	0.595	270.6	99.9	
								G-Ny1-3-B	-13.984	-0.595	270.6	99.9	
Ny1-3-B-2	30.000	99.550	9.2	0	0	0	0	N-Ny1-.6-2	-13.984	-0.595	270.6	99.9	
								G-Ny1-3-B	13.984	0.595	270.6	99.9	
Rba-3-B-1	30.000	99.944	-0.3	0	0	0	0	Rba-20-B-1	0.000	0.000	0.0	0.0	
Rba-20-B-1	220.000	99.944	-0.3	0	0	0	0	Rba-3-B-1	0.000	0.000	0.0	0.0	
								B-20-Rba-Sha-1	0.000	0.000	0.0	0.0	
* Rka5-.6-B	6.600	100.000	8.2	1.500	0.370	0	0	Rka5-3-B	1.500	0.370	135.2	97.1	
Rka5-3-B	30.000	99.245	7.0	0	0	0	0	Rka5-.6-B	-1.496	-0.336	29.7	97.6	
								G-Rka5-3-B	1.496	0.336	29.7	97.6	
Rka-3-B-1	30.000	99.245	7.0	0	0	0	0	Rka-10-B-1	1.247	0.370	25.2	95.9	
								Rka-10-B-1	1.247	0.370	25.2	95.9	
								G-Rka-3-B	0.000	0.000	0.0	0.0	
								G-Rka5-3-B	-1.496	-0.336	29.7	97.6	
								G-Mus-3-B	-0.998	-0.404	20.9	92.7	
Rka-3-B-2	30.000	99.245	7.0	0	0	0	0	G-Rka-3-B	0.000	0.000	0.0	0.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Rka-10-B-1	110.000	98.958	6.6	0	0	0	0	Rka-3-B-1	-1.246	-0.359	6.9	96.1	
								Rka-3-B-1	-1.246	-0.359	6.9	96.1	
								B-10-Kli-Rka-2	2.493	0.717	13.8	96.1	
Rlm-3-B-1	30.000	99.167	-1.8	0	0	7.388	3.578	Rlm-10-B-1	-7.388	-3.578	159.3	90.0	
Rlm-10-B-1	110.000	99.126	-0.7	0	0	0	0	Rlm-3-B-1	7.392	3.749	43.9	89.2	-1.000
								Rlm-20-B-1	-7.392	-3.749	43.9	89.2	
Rlm-20-B-1	220.000	99.456	-0.4	0	0	0	0	Rlm-10-B-1	7.393	3.808	21.9	88.9	
								B-20-Sha-Rlm-2D	-7.393	-3.808	21.9	88.9	
Rln-3-B-1	30.000	97.731	1.3	0	0	2.399	1.162	Rln-10-B-1	-2.399	-1.162	52.5	90.0	
Rln-10-B-1	110.000	98.393	2.0	0	0	0	0	Rln-3-B-1	2.401	1.199	14.3	89.5	
								10-Gfu/Jb1/Rln-B	-2.401	-1.199	14.3	89.5	
Rwi-1-B-1	15.000	100.261	-3.5	0	0	0.402	0.195	Rwi-10-B-1	-0.402	9.858	378.7	-4.1	
								C-Rwi-B-1	0.000	-10.052	385.9	0.0	
Rwi-10-B-1	110.000	96.316	-3.3	0	0	0	0	Rwi-1-B-1	0.426	-9.374	51.1	-4.5	1.000
								B-10-Kba-Rwi-2	-0.426	9.374	51.1	-4.5	
Rz1-6-B-1	6.600	99.705	10.1	0	0	0	0	N-Rz1-.06-B-1-1	-1.745	0.020	153.1	100.0	
								B-.6-Mr1-Rz1-2	1.745	-0.020	153.1	100.0	
Rz2-6-B-1-1	6.600	100.000	12.2	0	0	0	0	Rz2-10-B-1	6.375	0.917	563.4	99.0	
								G-Rz2-.6-B	-6.375	-0.917	563.4	99.0	
* Rz2-6-B-1-2	6.600	100.000	12.2	6.375	0.917	0	0	G-Rz2-.6-B	6.375	0.917	563.4	99.0	
Rz2-10-B-1	110.000	99.223	9.6	0	0	0	0	Rz2-6-B-1-1	-6.360	-0.627	33.8	99.5	
								B-10-Mr2-Rz2-2	6.360	0.627	33.8	99.5	
Sha-3-B-1	30.000	100.155	-1.6	0	0	7.521	3.643	Sha-10-B-1	-7.521	-3.643	160.6	90.0	
Sha-10-B-1	110.000	99.100	-0.6	0	0	0	0	Sha-3-B-1	7.525	3.817	44.7	89.2	-2.000
								Sha-20-B-1	-14.626	-55.490	303.9	25.5	
								B-10-Bre-Sha-2D	7.101	51.674	276.3	13.6	
Sha-20-B-1	220.000	99.419	-0.3	0	0	0	0	Sha-10-B-1	14.657	56.887	155.1	24.9	-2.000
								B-20-Sha-Rlm-1D	7.396	-12.570	38.5	-50.7	
								B-20-Rba-Sha-2	0.008	-14.179	37.4	-0.1	
								B-20-Mra-Sha-2D	-22.061	-30.138	98.6	59.1	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cmp/Kri/Kya-B	30.000	98.276	11.2	0	0	0	0	B-3-Cmp-Kri-2	2.077	-1.308	48.1	-84.6	
								B-3-Kri-Cmp/Kya-1	0.000	-0.020	0.4	0.0	
								3-Ghi/Kri/Kya-B	-2.077	1.328	48.3	-84.2	
3-Cyi/Nko-B	30.000	98.843	14.9	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.297	-0.002	5.8	100.0	
								3-Cyi-Ghi-B	0.891	0.031	17.4	99.9	
								B-3-Nko-Cyi/Nko-1	-0.594	-0.029	11.6	99.9	
3-Cyi-Ghi-B	30.000	98.720	14.8	0	0	0	0	B-3-Cyi-Ghi-2	2.026	-0.522	40.8	-96.8	
								3-Cyi/Nko-B	-0.890	-0.038	17.4	99.9	
								3-Kro/Kbu-B	-1.135	0.560	24.7	-89.7	
3-Ghi/Kri/Kya-B	30.000	98.281	12.0	0	0	0	0	B-Ghi-Ghi/Kya-1	0.064	1.244	24.4	5.1	
								3-Cmp/Kri/Kya-B	2.097	-1.319	48.5	-84.7	
								Kya-3-B-1	-2.160	0.074	42.3	-99.9	
3-Kro/Kbu-B	30.000	98.995	16.4	0	0	0	0	B-3-Kbu-Kro-2	0.000	-0.029	0.6	0.0	
								B-3-Kbu-Kro/Nko-2	-1.155	0.639	25.7	-87.5	
								3-Cyi-Ghi-B	1.155	-0.610	25.4	-88.4	
10-Bre/Gso/Msh-B	110.000	96.543	-0.8	0	0	0	0	B-10-Bre-Gso-1	-37.235	-8.756	208.0	97.3	
								B-10-Gso-Msh-2	22.328	1.393	121.6	99.8	
								Gso-10-B-1	14.906	7.363	90.4	89.7	
10-Gfu/Jb1/Rln-B	110.000	98.641	3.5	0	0	0	0	B-10-Gfu/Mku/Rln-B	-23.458	3.271	126.0	-99.0	
								B-10-Jb1-Rln-2	21.047	-4.475	114.5	-97.8	
								Rln-10-B-1	2.412	1.204	14.3	89.5	
10-Gfu/Mku/Rln-B	110.000	99.292	4.6	0	0	0	0	B-10-Gfu-Mku-2	-26.080	2.139	138.3	-99.7	
								10-Gfu/Jb1/Rln-B	23.681	-3.384	126.4	-99.0	
								Gfu-10-B-1	2.400	1.245	14.3	88.8	
10-Gko/Kgo/MKi-B	110.000	97.438	2.6	0	0	0	0	B-10-Gko-MKi-1	15.621	-14.204	113.7	-74.0	
								B-10-Kgo-MKi-2	-50.058	18.425	287.3	-93.8	
								MKi-10-B-1	34.437	-4.221	186.9	-99.3	
10-Kba/Msh/Rwi-B	110.000	96.105	-2.2	0	0	0	0	B-10-Kba-Msh-2	-6.121	6.523	48.9	-68.4	
								B-10-Kba-Rwi-2	0.443	-9.592	52.4	-4.6	
								Kba-10-B-1	5.678	3.070	35.3	88.0	
10-Kbo/Kro/Mr2-B	110.000	98.806	15.9	0	0	0	0	B-10-Kbo/Nte-B	-15.702	4.846	87.3	-95.6	
								B-10-Kbo-Kro-1	14.213	-5.611	81.2	-93.0	
								Kbo-10-B-1	1.489	0.765	8.9	89.0	
10-Kbo/Nte-B	110.000	98.822	16.6	0	0	0	0	B-10-Kbo/Kro/Mr2-B	15.773	-5.300	88.4	-94.8	
								B-10-Kbo/Nte-2	-15.773	5.300	88.4	-94.8	
10-Mr2/Nte-B	110.000	98.840	16.7	0	0	0	0	B-10-Mr2/Nte-1	-14.647	0.641	77.9	-99.9	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Mr2/Nte-2	14.647	-0.641	77.9	-99.9	
* 20-Mra-B	220.000	100.000	0.0	2.603	0.072	0	0	B-20-Mra-Sha-2D	2.603	0.072	6.8	100.0	
B-1-Jb1-Jb3-1	15.000	99.580	0.4	0	0	0	0	B-1-Jb1-Jb3-2	-1.980	-1.129	88.1	86.9	
								Jb1-1-B-1	1.980	1.129	88.1	86.9	
B-1-Jb1-Jb3-2	15.000	99.725	0.4	0	0	0	0	B-1-Jb1-Jb3-1	1.982	1.132	88.1	86.8	
								Jb3-1-B-1	-1.982	-1.132	88.1	86.8	
B-1-Kbu-KbW-1F_T	11.000	98.854	18.2	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.134	2.136	1286.4	-99.6	
								Kbu-1-B-1	24.134	-2.136	1286.4	-99.6	
B-1-Kbu-KbW-2F_T	11.000	102.003	23.3	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1286.4	100.0	
								KbW-1-B-2	-25.000	0.000	1286.4	100.0	
B-3-Cmp-Kri-2	30.000	98.301	8.3	0	0	0	0	3-Cmp/Kri/Kya-B	-2.013	1.337	47.3	-83.3	
								Cmp-3-B-1	2.013	-1.337	47.3	-83.3	
B-3-Cmp-Mku-1	30.000	98.301	8.3	0	0	0	0	B-3-Cmp-Mku-2	-1.623	-2.303	55.2	57.6	
								Cmp-3-B-1	1.623	2.303	55.2	57.6	
B-3-Cmp-Mku-2	30.000	99.444	8.4	0	0	0	0	B-3-Cmp-Mku-1	1.640	2.316	54.9	57.8	
								Mku-3-B-1	-1.640	-2.316	54.9	57.8	
B-3-Cmp-Nta-1	30.000	98.301	8.3	0	0	0	0	B-3-Cmp-Nta-2	1.211	-0.208	24.1	-98.6	
								Cmp-3-B-1	-1.211	0.208	24.1	-98.6	
B-3-Cmp-Nta-2	30.000	97.859	7.7	0	0	0	0	B-3-Cmp-Nta-1	-1.204	0.187	24.0	-98.8	
								Nta-3-B-1	1.204	-0.187	24.0	-98.8	
B-3-Cyi-Cyi/Nko-1	30.000	98.901	14.9	0	0	0	0	3-Cyi/Nko-B	0.297	-0.011	5.8	-99.9	
								Cyi-3-B-1	-0.297	0.011	5.8	-99.9	
B-3-Cyi-Ghi-2	30.000	97.364	12.3	0	0	0	0	3-Cyi-Ghi-B	-1.976	0.523	40.4	-96.7	
								Ghi-3-B-1	1.976	-0.523	40.4	-96.7	
B-3-Ghi-Gse-1	30.000	97.364	12.3	0	0	0	0	B-3-Ghi-Gse-2	1.439	0.501	30.1	94.4	
								Ghi-3-B-1	-1.439	-0.501	30.1	94.4	
B-3-Ghi-Gse-2	30.000	97.187	12.2	0	0	0	0	B-3-Ghi-Gse-1	-1.437	-0.504	30.2	94.4	
								Gse-3-B	1.437	0.504	30.2	94.4	
B-3-Kbu-Kro/Nko-2	30.000	99.025	16.7	0	0	0	0	3-Kro/Kbu-B	1.159	-0.647	25.8	-87.3	
								Kbu-3-B-1	-1.159	0.647	25.8	-87.3	
B-3-Kbu-Kro-2	30.000	99.004	16.4	0	0	0	0	3-Kro/Kbu-B	0.000	0.000	0.0	0.0	
B-3-Kri-Cmp/Kya-1	30.000	98.281	11.1	0	0	0	0	3-Cmp/Kri/Kya-B	0.000	0.000	0.0	0.0	
								Kri-3-B-1	0.000	0.000	0.0	0.0	
B-3-Nko-Cyi/Nko-1	30.000	99.011	15.0	0	0	0	0	3-Cyi/Nko-B	0.595	0.012	11.6	100.0	
								Nko-3-B-1	-0.595	-0.012	11.6	100.0	
B-10-Bga-Gsh-1	110.000	98.553	16.9	0	0	0	0	B-10-Bga-Gsh-2	-14.912	-2.171	80.3	99.0	
								Bga-10-B-1	14.912	2.171	80.3	99.0	
B-10-Bga-Gsh-2	110.000	98.964	17.3	0	0	0	0	B-10-Bga-Gsh-1	14.961	1.960	80.0	99.2	
								Gsh-10-B	-14.961	-1.960	80.0	99.2	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Bga-Nte-1	110.000	98.553	16.9	0	0	0	0	B-10-Bga-Nte-2	2.622	-4.565	28.0	-49.8	
								Bga-10-B-1	-2.622	4.565	28.0	-49.8	
B-10-Bga-Nte-2	110.000	98.827	16.7	0	0	0	0	B-10-Bga-Nte-1	-2.611	3.937	25.1	-55.3	
								Nte-10-B-1	2.611	-3.937	25.1	-55.3	
B-10-Bre-Gso-1	110.000	98.366	0.5	0	0	0	0	10-Bre/Gso/Msh-B	37.731	9.319	207.4	97.1	
								Bre-10-B-1	-37.731	-9.319	207.4	97.1	
B-10-Bre-Jb1-1	110.000	98.366	0.5	0	0	0	0	B-10-Bre-Jb1-2	-59.201	42.339	388.4	-81.3	
								Bre-10-B-1	59.201	-42.339	388.4	-81.3	
B-10-Bre-Jb1-2	110.000	97.987	2.0	0	0	0	0	B-10-Bre-Jb1-1	59.991	-40.927	389.0	-82.6	
								Jb1-10-B-1	-59.991	40.927	389.0	-82.6	
B-10-Bre-Sha-1D	110.000	98.366	0.5	0	0	0	0	B-10-Bre-Sha-2D	12.682	-56.162	307.2	-22.0	
								Bre-10-B-1	-12.682	56.162	307.2	-22.0	
B-10-Bre-Sha-2D	110.000	99.115	0.2	0	0	0	0	B-10-Bre-Sha-1D	-12.402	56.118	304.3	-21.6	
								Sha-10-B-1	12.402	-56.118	304.3	-21.6	
B-10-Bta-Kgo-1	110.000	96.499	7.5	0	0	0	0	B-10-Bta-Kgo-2	-6.403	-3.313	39.2	88.8	
								Bta-10-B-1	6.403	3.313	39.2	88.8	
B-10-Bta-Kgo-2	110.000	97.492	8.0	0	0	0	0	B-10-Bta-Kgo-1	6.444	2.271	36.8	94.3	
								Kgo-10-B-1	-6.444	-2.271	36.8	94.3	
B-10-Gfu-Mku-2	110.000	100.052	5.7	0	0	0	0	10-Gfu/Mku/Rln-B	26.322	-2.165	138.6	-99.7	
								Mku-10-B-1	-26.322	2.165	138.6	-99.7	
B-10-Gko-Jb1-1	110.000	97.615	2.4	0	0	0	0	B-10-Gko-Jb1-2	17.405	-17.079	131.1	-71.4	
								Gko-10-B-1	-17.405	17.079	131.1	-71.4	
B-10-Gko-Jb1-2	110.000	97.987	2.0	0	0	0	0	B-10-Gko-Jb1-1	-17.337	16.999	130.1	-71.4	
								Jb1-10-B-1	17.337	-16.999	130.1	-71.4	
B-10-Gko-MKi-1	110.000	97.615	2.4	0	0	0	0	10-Gko/Kgo/MKi-B	-15.591	14.128	113.1	-74.1	
								Gko-10-B-1	15.591	-14.128	113.1	-74.1	
B-10-Gso-Msh-2	110.000	95.712	-1.6	0	0	0	0	10-Bre/Gso/Msh-B	-22.158	-1.486	121.8	99.8	
								Msh-10-B-1	22.158	1.486	121.8	99.8	
B-10-Gso-Nde-1	110.000	96.543	-0.8	0	0	0	0	B-10-Gso-Nde-2	7.456	3.584	45.0	90.1	
								Gso-10-B-1	-7.456	-3.584	45.0	90.1	
B-10-Gso-Nde-2	110.000	96.348	-0.8	0	0	0	0	B-10-Gso-Nde-1	-7.447	-3.741	45.4	89.4	
								Nde-10-B-1	7.447	3.741	45.4	89.4	
B-10-Jb1-Jb2-1	110.000	97.987	2.0	0	0	0	0	B-10-Jb1-Jb2-2	-23.881	-3.321	129.1	99.0	
								Jb1-10-B-1	23.881	3.321	129.1	99.0	
B-10-Jb1-Jb2-2	110.000	98.036	2.0	0	0	0	0	B-10-Jb1-Jb2-1	23.890	3.309	129.1	99.1	
								Jb2-10-B-1	-23.890	-3.309	129.1	99.1	
B-10-Jb1-Nbg-1	110.000	97.987	2.0	0	0	0	0	B-10-Jb1-Nbg-2	-9.318	17.325	105.4	-47.4	
								Jb1-10-B-1	9.318	-17.325	105.4	-47.4	
B-10-Jb1-Nbg-2	110.000	97.583	2.3	0	0	0	0	B-10-Jb1-Nbg-1	9.379	-17.417	106.4	-47.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Nbg-10-B-1	-9.379	17.417	106.4	-47.4	
B-10-Jb1-Rln-2	110.000	97.987	2.0	0	0	0	0	10-Gfu/Jb1/Rln-B	-20.793	4.211	113.6	-98.0	
								Jb1-10-B-1	20.793	-4.211	113.6	-98.0	
B-10-Kba-Msh-2	110.000	95.712	-1.6	0	0	0	0	10-Kba/Msh/Rwi-B	6.165	-7.101	51.6	-65.6	
								Msh-10-B-1	-6.165	7.101	51.6	-65.6	
B-10-Kba-Rwi-2	110.000	96.428	-2.3	0	0	0	0	10-Kba/Msh/Rwi-B	-0.427	9.396	51.2	-4.5	
								Rwi-10-B-1	0.427	-9.396	51.2	-4.5	
B-10-Kbo/Nte-2	110.000	98.827	16.7	0	0	0	0	10-Kbo/Nte-B	15.776	-5.308	88.4	-94.8	
								Nte-10-B-1	-15.776	5.308	88.4	-94.8	
B-10-Kbo-Kro-1	110.000	98.863	14.5	0	0	0	0	10-Kbo/Kro/Mr2-B	-14.096	4.636	78.8	-95.0	
								Kro-10-B-1	14.096	-4.636	78.8	-95.0	
B-10-Kbu-Kro-1	110.000	99.085	15.1	0	0	0	0	B-10-Kbu-Kro-2	22.907	-2.788	122.2	-99.3	
								Kbu-10-B-1	-22.907	2.788	122.2	-99.3	
B-10-Kbu-Kro-2	110.000	98.863	14.5	0	0	0	0	B-10-Kbu-Kro-1	-22.827	2.636	122.0	-99.3	
								Kro-10-B-1	22.827	-2.636	122.0	-99.3	
B-10-Kgo-Kli-1	110.000	97.492	8.0	0	0	0	0	B-10-Kgo-Kli-2	-64.369	14.364	355.1	-97.6	
								Kgo-10-B-1	64.369	-14.364	355.1	-97.6	
B-10-Kgo-Kli-2	110.000	98.515	12.3	0	0	0	0	B-10-Kgo-Kli-1	65.996	-10.435	356.0	-98.8	
								Kli-10-B-1	-65.996	10.435	356.0	-98.8	
B-10-Kgo-MKi-2	110.000	97.492	8.0	0	0	0	0	10-Gko/Kgo/MKi-B	51.641	-15.051	289.6	-96.0	
								Kgo-10-B-1	-51.641	15.051	289.6	-96.0	
B-10-Kli-Kro-1	110.000	98.863	14.5	0	0	0	0	B-10-Kli-Kro-2	35.432	-8.038	192.9	-97.5	
								Kro-10-B-1	-35.432	8.038	192.9	-97.5	
B-10-Kli-Kro-2	110.000	98.515	12.3	0	0	0	0	B-10-Kli-Kro-1	-34.998	8.485	191.9	-97.2	
								Kli-10-B-1	34.998	-8.485	191.9	-97.2	
B-10-Kli-Ny1-1	110.000	98.515	12.3	0	0	0	0	B-10-Kli-Ny1-2	-27.521	2.428	147.2	-99.6	
								Kli-10-B-1	27.521	-2.428	147.2	-99.6	
B-10-Kli-Ny1-2	110.000	99.603	14.0	0	0	0	0	B-10-Kli-Ny1-1	27.893	-2.365	147.5	-99.6	
								Ny1-10-B-1	-27.893	2.365	147.5	-99.6	
B-10-Kli-Rka-1	110.000	98.515	12.3	0	0	0	0	B-10-Kli-Rka-2	-4.959	-1.238	27.2	97.0	
								Kli-10-B-1	4.959	1.238	27.2	97.0	
B-10-Kli-Rka-2	110.000	98.896	12.6	0	0	0	0	B-10-Kli-Rka-1	4.974	0.438	26.5	99.6	
								Rka-10-B-1	-4.974	-0.438	26.5	99.6	
B-10-MKi-Nbg-1	110.000	97.583	2.3	0	0	0	0	B-10-MKi-Nbg-2	-16.721	13.728	116.4	-77.3	
								Nbg-10-B-1	16.721	-13.728	116.4	-77.3	
B-10-MKi-Nbg-2	110.000	97.438	2.6	0	0	0	0	B-10-MKi-Nbg-1	16.782	-13.780	117.0	-77.3	
								MKi-10-B-1	-16.782	13.780	117.0	-77.3	
B-10-Mku-Nbi-1	110.000	100.052	5.7	0	0	0	0	B-B-10-Mku-Nbi-1-2	1.485	0.065	7.8	99.9	
								Mku-10-B-1	-1.485	-0.065	7.8	99.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Mku-Nta-1	110.000	100.052	5.7	0	0	0	0	B-10-Mku-Nta-2	-9.985	0.708	52.5	-99.7	
								Mku-10-B-1	9.985	-0.708	52.5	-99.7	
B-10-Mku-Nta-2	110.000	100.282	6.4	0	0	0	0	B-10-Mku-Nta-1	10.020	-1.539	53.1	-98.8	
								Nta-10-B-1	-10.020	1.539	53.1	-98.8	
B-10-Mr1-Mr2-1	110.000	99.140	17.3	0	0	0	0	B-10-Mr1-Mr2-2	2.056	-0.973	12.0	-90.4	
								Mr1-10-B-1	-2.056	0.973	12.0	-90.4	
B-10-Mr1-Mr2-2	110.000	99.140	17.3	0	0	0	0	B-10-Mr1-Mr2-1	-2.056	0.962	12.0	-90.6	
								Mr2-10-B-2	2.056	-0.962	12.0	-90.6	
B-10-Mr2/Nte-1	110.000	99.140	17.3	0	0	0	0	10-Mr2/Nte-B	14.702	-1.130	78.1	-99.7	
								Mr2-10-B-2	-14.702	1.130	78.1	-99.7	
B-10-Mr2/Nte-2	110.000	98.827	16.7	0	0	0	0	10-Mr2/Nte-B	-14.645	0.632	77.9	-99.9	
								Nte-10-B-1	14.645	-0.632	77.9	-99.9	
B-10-Mr2-Rz2-1	110.000	99.140	17.3	0	0	0	0	B-10-Mr2-Rz2-2	-12.645	0.168	67.0	100.0	
								Mr2-10-B-1	12.645	-0.168	67.0	100.0	
B-10-Mr2-Rz2-2	110.000	99.472	17.7	0	0	0	0	B-10-Mr2-Rz2-1	12.690	-0.486	67.0	-99.9	
								Rz2-10-B-1	-12.690	0.486	67.0	-99.9	
B-20-Mra-Sha-2D	220.000	99.597	0.0	0	0	0	0	20-Mra-B	-2.588	-28.671	75.9	9.0	
								Sha-20-B-1	2.588	28.671	75.9	9.0	
B-20-Rba-Sha-1	220.000	100.123	0.0	0	0	0	0	B-20-Rba-Sha-2	0.000	0.000	0.0	0.0	
								Rba-20-B-1	0.000	0.000	0.0	0.0	
B-20-Rba-Sha-2	220.000	99.597	0.0	0	0	0	0	B-20-Rba-Sha-1	0.008	-14.230	37.5	-0.1	
								Sha-20-B-1	-0.008	14.230	37.5	-0.1	
B-20-Sha-Rlm-1D	220.000	99.597	0.0	0	0	0	0	B-20-Sha-Rlm-2D	7.420	-12.617	38.6	-50.7	
								Sha-20-B-1	-7.420	12.617	38.6	-50.7	
B-20-Sha-Rlm-2D	220.000	99.635	-0.1	0	0	0	0	B-20-Sha-Rlm-1D	-7.417	-3.820	22.0	88.9	
								Rlm-20-B-1	7.417	3.820	22.0	88.9	
B-6-Mr1-Rz1-1	6.600	99.282	18.6	0	0	0	0	B-6-Mr1-Rz1-2	-3.448	0.222	304.4	-99.8	
								Mr1-6-B-1	3.448	-0.222	304.4	-99.8	
B-6-Mr1-Rz1-2	6.600	100.124	19.5	0	0	0	0	B-6-Mr1-Rz1-1	3.480	-0.172	304.4	-99.9	
								Rz1-6-B-1	-3.480	0.172	304.4	-99.9	
B-B-10-Mku-Nbi-1-2	110.000	99.948	5.7	0	0	0	0	B-10-Mku-Nbi-1	-1.484	-0.741	8.7	89.5	
								Nbi-10-B-1	1.484	0.741	8.7	89.5	
Bga-3-B-1	30.000	98.853	14.0	0	0	12.272	5.944	Bga-10-B-1	-12.272	-5.944	265.5	90.0	
Bga-10-B-1	110.000	98.553	16.9	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	12.290	6.736	74.6	87.7	-3.000
								B-10-Bga-Nte-1	2.622	-4.565	28.0	-49.8	
								B-10-Bga-Gsh-1	-14.912	-2.171	80.3	99.0	
Bga-6-B-1	6.600	98.553	16.9	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
B-Ghi-Kri/Kya-1	30.000	97.364	12.3	0	0	0	0	3-Ghi/Kri/Kya-B	-0.056	-1.263	25.0	4.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Ghi-3-B-1	0.056	1.263	25.0	4.4	
Bre-1-B-1	15.000	99.123	-0.7	0	0	8.776	4.250	Bre-10-B-1	-4.388	-2.125	189.3	90.0	
								Bre-10-B-1	-4.388	-2.125	189.3	90.0	
Bre-10-B-1	110.000	98.366	0.5	0	0	0	0	Bre-1-B-1	4.394	2.252	26.3	89.0	-2.000
								Bre-1-B-1	4.394	2.252	26.3	89.0	-2.000
								B-10-Bre-Jb1-1	-59.201	42.339	388.4	-81.3	
								B-10-Bre-Sha-1D	12.682	-56.162	307.2	-22.0	
								B-10-Bre-Gso-1	37.731	9.319	207.4	97.1	
Bta-3-B-1	30.000	99.123	5.9	0	0	6.398	3.099	Bta-10-B-1	-6.398	-3.099	138.0	90.0	
Bta-10-B-1	110.000	96.499	7.5	0	0	0	0	Bta-3-B-1	6.403	3.313	39.2	88.8	-4.000
								B-10-Bta-Kgo-1	-6.403	-3.313	39.2	88.8	
C-Ghi-B	30.000	97.364	12.3	0	0	0	0	Ghi-3-B-1	0.000	0.000	0.0	0.0	
C-Kgo-B-3	30.000	98.039	6.4	0	0	0.000	-4.806	Kgo-3-B-1	0.000	4.806	94.3	0.0	
Cmp-3-B-1	30.000	98.301	8.3	0	0	2.424	1.174	B-3-Cmp-Mku-1	-1.623	-2.303	55.2	57.6	
								B-3-Cmp-Nta-1	1.211	-0.208	24.1	-98.6	
								B-3-Cmp-Kri-2	-2.013	1.337	47.3	-83.3	
C-Msh-1-B	15.000	95.348	-4.0	0	0	0	0	Msh-1-B-1	0.000	0.000	0.0	0.0	
C-Rwi-B-1	15.000	100.378	-2.6	0	0	0.000	-10.076	Rwi-1-B-1	0.000	10.076	386.4	0.0	
C-Sha-20-B	220.000	99.597	0.0	0	0	0.000	-5.952	Sha-20-B-1	0.000	5.952	15.7	0.0	
Cyi-3-B-1	30.000	98.901	14.9	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.297	-0.011	5.8	-99.9	
								G-Cyi-3-B	-0.297	0.011	5.8	-99.9	
Cyi-3-B-2	30.000	98.901	14.9	0	0	0	0	N-Cyi-04-1	-0.297	0.011	5.8	-99.9	
								G-Cyi-3-B	0.297	-0.011	5.8	-99.9	
G-Cyi-3-B	30.000	98.901	14.9	0	0	0	0	Cyi-3-B-1	0.297	-0.011	5.8	-99.9	
								Cyi-3-B-2	-0.297	0.011	5.8	-99.9	
Gfu-3-B-1	30.000	97.508	3.0	0	0	2.389	1.157	Gfu-10-B-1	-2.389	-1.157	52.4	90.0	
Gfu-10-B-1	110.000	99.292	4.6	0	0	0	0	Gfu-3-B-1	2.400	1.245	14.3	88.8	
								10-Gfu/Mku/Rln-B	-2.400	-1.245	14.3	88.8	
G-Ghi-6-B	6.600	100.000	14.6	0	0	0	0	Ghi-6-B-1	1.800	1.013	180.7	87.2	
								Ghi-6-B-2	-1.800	-1.013	180.7	87.2	
G-Gko-1-B	15.000	99.022	2.6	0	0	0	0	Gko-1-B-1	9.939	0.140	386.4	100.0	
								Gko-1-B-2	-9.939	-0.140	386.4	100.0	
G-Gko-3-B	15.000	99.022	2.6	0	0	0	0	Gko-1-B-1	3.985	2.799	189.3	81.8	
								Gko-3-B	-3.985	-2.799	189.3	81.8	
G-Gse-6-B	6.600	98.361	11.2	0	0	0	0	Gse-6-B-1	0.992	0.703	108.1	81.6	
								Gse-6-B-2	-0.992	-0.703	108.1	81.6	
G-Gsh-1-B	11.000	100.000	20.1	0	0	0	0	Gsh-1-B-1	15.000	2.734	800.3	98.4	
								Gsh-1-B-2	-15.000	-2.734	800.3	98.4	
Ghi-3-B-1	30.000	97.364	12.3	0	0	2.383	1.154	Ghi-6-B-1	-1.790	-0.916	39.7	89.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-3-Ghi-Gse-1	1.439	0.501	30.1	94.4	
								B-3-Cyi-Ghi-2	-1.976	0.523	40.4	-96.7	
								B-Ghi-Ghi/Kya-1	-0.056	-1.263	25.0	4.4	
								C-Ghi-B	0.000	0.000	0.0	0.0	
Ghi-6-B-1	6.600	100.000	14.6	0	0	0	0	Ghi-3-B-1	1.800	1.013	180.7	87.2	
								G-Ghi-6-B	-1.800	-1.013	180.7	87.2	
* Ghi-6-B-2	6.600	100.000	14.6	1.800	1.013	0	0	G-Ghi-6-B	1.800	1.013	180.7	87.2	
G-Jb2-10-B	110.000	98.036	2.0	0	0	0	0	Jb2-10-B-1	23.890	3.309	129.1	99.1	
								Jb2-10-B-2	-23.890	-3.309	129.1	99.1	
G-Jb3-1-B	15.000	99.725	0.4	0	0	0	0	Jb3-1-B-1	1.982	1.132	88.1	86.8	
								Jb3-1-B-2	-1.982	-1.132	88.1	86.8	
G-KbW-1-B-1	11.000	102.003	23.3	0	0	0	0	KbW-1-B-3	-17.000	0.000	874.8	100.0	
								KbW-1-B-2	17.000	0.000	874.8	100.0	
G-KbW-1-B-2	11.000	102.003	23.3	0	0	0	0	KbW-1-B-1	8.000	0.000	411.6	100.0	
								KbW-1-B-4	-8.000	0.000	411.6	100.0	
Gko-1-B-1	15.000	99.022	2.6	0	0	12.109	5.864	Gko-10-B-1	0.605	-0.975	44.6	-52.7	
								Gko-10-B-1	0.605	-0.975	44.6	-52.7	
								Gko-10-B-1	0.605	-0.975	44.6	-52.7	
								G-Gko-1-B	-9.939	-0.140	386.4	100.0	
								G-Gko-3-B	-3.985	-2.799	189.3	81.8	
Gko-1-B-2	15.000	99.022	2.6	0	0	0	0	N-Gko-.04-1	-4.969	-0.070	193.2	100.0	
								N-Gko-.04-2	-4.969	-0.070	193.2	100.0	
								G-Gko-1-B	9.939	0.140	386.4	100.0	
Gko-3-B	15.000	99.022	2.6	0	0	0	0	N-RAg-6	-3.985	-2.799	189.3	81.8	
								G-Gko-3-B	3.985	2.799	189.3	81.8	
Gko-10-B-1	110.000	97.615	2.4	0	0	0	0	Gko-1-B-1	-0.605	0.984	6.2	-52.4	-2.000
								Gko-1-B-1	-0.605	0.984	6.2	-52.4	-2.000
								Gko-1-B-1	-0.605	0.984	6.2	-52.4	-2.000
								B-10-Gko-Jb1-1	17.405	-17.079	131.1	-71.4	
								B-10-Gko-MKi-1	-15.591	14.128	113.1	-74.1	
G-Kse-1-B	110.000	96.543	-0.8	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Kya-3-B-2	30.000	99.126	12.8	0	0	0	0	Kya-3-B-1	2.180	-0.072	42.3	-99.9	
								Kya-3-B-3	-2.180	0.072	42.3	-99.9	
G-Mku-10-B	110.000	100.052	5.7	0	0	0	0	Mku-10-B-1	9.967	-0.664	52.4	-99.8	
								Mku-10-B-2	-9.967	0.664	52.4	-99.8	
G-Mku-6-B	6.600	100.000	9.4	0	0	0	0	Mku-6-B-4	12.000	3.409	1091.3	96.2	
								Mku-6-B-2	-12.000	-3.409	1091.3	96.2	
G-Mus-3-B	30.000	99.141	13.6	0	0	0	0	Mus-3-B	-1.993	-0.337	39.2	98.6	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rka-3-B-1	1.993	0.337	39.2	98.6	
G-Nko-3-B	30.000	99.011	15.0	0	0	0	0	Nko-3-B-1	0.595	0.012	11.6	100.0	
								Nko-3-B-2	-0.595	-0.012	11.6	100.0	
G-NtB-3-B	30.000	98.039	6.4	0	0	0	0	Kgo-3-B-1	0.000	0.000	0.0	0.0	
								NtB-3-B1	0.000	0.000	0.0	0.0	
G-Ny1-3-B	30.000	99.412	18.0	0	0	0	0	Ny1-3-B-1	27.937	-0.391	540.9	100.0	
								Ny1-3-B-2	-27.937	0.391	540.9	100.0	
G-Rka5-3-B	30.000	99.141	13.6	0	0	0	0	Rka5-3-B	-2.985	-0.185	58.1	99.8	
								Rka-3-B-1	2.985	0.185	58.1	99.8	
G-Rka-3-B	30.000	99.141	13.6	0	0	0	0	Rka-3-B-1	0.000	0.000	0.0	0.0	
								Rka-3-B-2	0.000	0.000	0.0	0.0	
G-Rz1-.06-B	0.600	100.583	22.3	0	0	0	0	N-Rz1-.06-B-1-1	3.500	0.000	3348.3	100.0	
								N-Rz1-.06-B-1-2	-3.500	0.000	3348.3	100.0	
G-Rz2-.6-B	6.600	100.000	22.9	0	0	0	0	Rz2-.6-B-1-1	12.750	0.653	1116.8	99.9	
								Rz2-.6-B-1-2	-12.750	-0.653	1116.8	99.9	
Gse-3-B	30.000	97.187	12.2	0	0	0	0	Gse-.6-B-1	1.437	0.504	30.2	94.4	-2.000
								B-3-Ghi-Gse-2	-1.437	-0.504	30.2	94.4	
Gse-.6-B-1	6.600	98.361	11.2	0	0	2.427	1.175	Gse-3-B	-1.435	-0.472	134.3	95.0	
								G-Gse-.6-B	-0.992	-0.703	108.1	81.6	
Gse-.6-B-2	6.600	98.361	11.2	0	0	0	0	N-Gse-.04-1	-0.496	-0.351	54.1	81.6	
								N-Gse-.04-2	-0.496	-0.351	54.1	81.6	
								G-Gse-.6-B	0.992	0.703	108.1	81.6	
Gsh-1-B-1	11.000	100.000	20.1	0	0	0	0	Gsh-10-B	7.500	1.367	400.1	98.4	
								Gsh-10-B	7.500	1.367	400.1	98.4	
								G-Gsh-1-B	-15.000	-2.734	800.3	98.4	
* Gsh-1-B-2	11.000	100.000	20.1	15.000	2.734	0	0	G-Gsh-1-B	15.000	2.734	800.3	98.4	
Gsh-10-B	110.000	98.964	17.3	0	0	0	0	Gsh-1-B-1	-7.481	-0.980	40.0	99.2	
								Gsh-1-B-1	-7.481	-0.980	40.0	99.2	
								B-10-Bga-Gsh-2	14.961	1.960	80.0	99.2	
Gso-1-B-1	15.000	99.602	-1.8	0	0	7.446	3.606	Gso-10-B-1	-7.446	-3.606	319.7	90.0	
Gso-10-B-1	110.000	96.543	-0.8	0	0	0	0	Gso-1-B-1	7.450	3.779	45.4	89.2	-4.000
								B-10-Gso-Nde-1	7.456	3.584	45.0	90.1	
								10-Bre/Gso/Msh-B	-14.906	-7.363	90.4	89.7	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Jb1-10-B-1	110.000	97.987	2.0	0	0	0	0	Jb1-1-B-1	11.339	5.712	68.0	89.3	-3.000
								B-10-Jb1-Jb2-1	-23.881	-3.321	129.1	99.0	
								B-10-Jb1-Rln-2	-20.793	4.211	113.6	-98.0	
								B-10-Bre-Jb1-2	59.991	-40.927	389.0	-82.6	
								B-10-Gko-Jb1-2	-17.337	16.999	130.1	-71.4	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Jb1-Nbg-1	-9.318	17.325	105.4	-47.4	
Jb1-1-B-1	15.000	99.580	0.4	0	0	13.310	6.446	Jb1-10-B-1	-11.330	-5.317	483.8	90.5	
								B-1-Jb1-Jb3-1	-1.980	-1.129	88.1	86.9	
* Jb2-.6-B-1	6.600	100.000	6.8	24.000	5.405	0	0	Jb2-10-B-2	12.000	2.702	1076.0	97.6	
								Jb2-10-B-2	12.000	2.702	1076.0	97.6	
Jb2-10-B-1	110.000	98.036	2.0	0	0	0	0	B-10-Jb1-Jb2-2	23.890	3.309	129.1	99.1	
								G-Jb2-10-B	-23.890	-3.309	129.1	99.1	
Jb2-10-B-2	110.000	98.036	2.0	0	0	0	0	Jb2-.6-B-1	-11.945	-1.655	64.6	99.1	
								Jb2-.6-B-1	-11.945	-1.655	64.6	99.1	
								G-Jb2-10-B	23.890	3.309	129.1	99.1	
Jb3-1-B-1	15.000	99.725	0.4	0	0	0	0	B-1-Jb1-Jb3-2	1.982	1.132	88.1	86.8	
								G-Jb3-1-B	-1.982	-1.132	88.1	86.8	
Jb3-1-B-2	15.000	99.725	0.4	0	0	0	0	N-Jb3-.04-1	-0.991	-0.566	44.1	86.8	
								N-Jb3-.04-2	-0.991	-0.566	44.1	86.8	
								G-Jb3-1-B	1.982	1.132	88.1	86.8	
								Jb3-1-B-2d	0.000	0.000	0.0	0.0	
Jb3-1-B-2d	15.000	99.725	0.4	0	0	0	0	Jb3-1-B-2	0.000	0.000	0.0	0.0	
Kba-3-B-1	30.000	99.482	-4.8	0	0	5.653	2.738	Kba-10-B-1	-5.653	-2.738	121.5	90.0	
Kba-10-B-1	110.000	96.105	-2.2	0	0	0	0	Kba-3-B-1	5.678	3.070	35.3	88.0	-6.000
								10-Kba/Msh/Rwi-B	-5.678	-3.070	35.3	88.0	
Kbo-3-B-1	30.000	99.393	14.5	0	0	1.485	0.719	Kbo-10-B-1	-1.485	-0.719	32.0	90.0	
Kbo-10-B-1	110.000	98.806	15.9	0	0	0	0	Kbo-3-B-1	1.489	0.765	8.9	89.0	-2.000
								10-Kbo/Kro/Mr2-B	-1.489	-0.765	8.9	89.0	
Kbu-1-B-1	11.000	98.854	18.2	0	0	0	0	Kbu-3-B-1	1.162	-0.609	69.6	-88.6	
								Kbu-10-B-1	11.205	-0.760	596.3	-99.8	
								Kbu-10-B-1	11.767	-0.767	626.1	-99.8	
								B-1-Kbu-KbW-1F_T	-24.134	2.136	1286.4	-99.6	
Kbu-3-B-1	30.000	99.025	16.7	0	0	0	0	Kbu-1-B-1	-1.159	0.647	25.8	-87.3	-1.000
								B-3-Kbu-Kro/Nko-2	1.159	-0.647	25.8	-87.3	
Kbu-10-B-1	110.000	99.085	15.1	0	0	0	0	Kbu-1-B-1	-11.172	1.375	59.6	-99.3	
								Kbu-1-B-1	-11.735	1.413	62.6	-99.3	
								B-10-Kbu-Kro-1	22.907	-2.788	122.2	-99.3	
KbW-1-B-1	11.000	102.003	23.3	0	0	0	0	KbW-1-B-2	8.000	0.000	411.6	100.0	
								G-KbW-1-B-2	-8.000	0.000	411.6	100.0	
KbW-1-B-2	11.000	102.003	23.3	0	0	0	0	KbW-1-B-1	-8.000	0.000	411.6	100.0	
								B-1-Kbu-KbW-2F_T	25.000	0.000	1286.4	100.0	
								G-KbW-1-B-1	-17.000	0.000	874.8	100.0	
KbW-1-B-3	11.000	102.003	23.3	17.000	0.000	0	0	G-KbW-1-B-1	17.000	0.000	874.8	100.0	
KbW-1-B-4	11.000	102.003	23.3	8.000	0.000	0	0	G-KbW-1-B-2	8.000	0.000	411.6	100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Kgo-3-B-1	30.000	98.039	6.4	0	0	6.273	3.038	Kgo-10-B-1	-3.136	0.884	64.0	-96.3	
								Kgo-10-B-1	-3.136	0.884	64.0	-96.3	
								C-Kgo-B-3	0.000	-4.806	94.3	0.0	
								G-NtB-3-B	0.000	0.000	0.0	0.0	
Kgo-10-B-1	110.000	97.492	8.0	0	0	0	0	Kgo-3-B-1	3.142	-0.792	17.4	-97.0	
								Kgo-3-B-1	3.142	-0.792	17.4	-97.0	
								B-10-Kgo-MKi-2	51.641	-15.051	289.6	-96.0	
								B-10-Kgo-Kli-1	-64.369	14.364	355.1	-97.6	
								B-10-Bta-Kgo-2	6.444	2.271	36.8	94.3	
Kli-3-B-1	30.000	98.957	11.0	0	0	1.475	0.714	Kli-10-B-1	-1.475	-0.714	31.9	90.0	
Kli-10-B-1	110.000	98.515	12.3	0	0	0	0	Kli-3-B-1	1.482	0.760	8.9	89.0	-2.000
								B-10-Kgo-Kli-2	65.996	-10.435	356.0	-98.8	
								B-10-Kli-Kro-2	-34.998	8.485	191.9	-97.2	
								B-10-Kli-Rka-1	-4.959	-1.238	27.2	97.0	
								B-10-Kli-Ny1-1	-27.521	2.428	147.2	-99.6	
Kri-3-B-1	30.000	98.281	11.1	0	0	0	0	Kri-6-B-1	0.000	0.000	0.0	0.0	
								B-3-Kri-Cmp/Kya-1	0.000	0.000	0.0	0.0	
Kri-6-B-1	6.600	98.281	11.1	0	0	0	0	Kri-3-B-1	0.000	0.000	0.0	0.0	
Kro-3-B-1	30.000	99.450	13.1	0	0	1.487	0.720	Kro-10-B-1	-1.487	-0.720	32.0	90.0	
Kro-10-B-1	110.000	98.863	14.5	0	0	0	0	Kro-3-B-1	1.491	0.766	8.9	89.0	-2.000
								B-10-Kbu-Kro-2	-22.827	2.636	122.0	-99.3	
								B-10-Kbo-Kro-1	-14.096	4.636	78.8	-95.0	
								B-10-Kli-Kro-1	35.432	-8.038	192.9	-97.5	
Ksc-10-B1	110.000	96.543	-0.8	0	0	0	0	G-Ksc-1-B	0.000	0.000	0.0	0.0	
Kya-3-B-1	30.000	99.126	12.8	0	0	0	0	3-Ghi/Kri/Kya-B	2.180	-0.072	42.3	-99.9	
								G-Kya-3-B-2	-2.180	0.072	42.3	-99.9	
Kya-3-B-3	30.000	99.126	12.8	0	0	0	0	N-Kya-6-1	-2.180	0.072	42.3	-99.9	
								G-Kya-3-B-2	2.180	-0.072	42.3	-99.9	
MKi-3-B-1	30.000	97.025	0.0	0	0	17.632	8.540	MKi-10-B-1	-17.632	-8.540	388.6	90.0	
MKi-10-B-1	110.000	97.438	2.6	0	0	0	0	MKi-3-B-1	17.655	9.559	108.1	87.9	-2.000
								10-Gko/Kgo/MKi-B	-34.437	4.221	186.9	-99.3	
								B-10-MKi-Nbg-2	16.782	-13.780	117.0	-77.3	
Mku-3-B-1	30.000	99.444	8.4	0	0	2.475	1.199	Mku-6-B-1	-4.116	-3.514	104.7	76.0	1.000
								B-3-Cmp-Mku-2	1.640	2.316	54.9	57.8	
Mku-10-B-1	110.000	100.052	5.7	0	0	0	0	Mku-6-B-1	-7.856	0.728	41.4	-99.6	
								B-10-Gfu-Mku-2	26.322	-2.165	138.6	-99.7	
								B-10-Mku-Nta-1	-9.985	0.708	52.5	-99.7	
								B-10-Mku-Nbi-1	1.485	0.065	7.8	99.9	
								G-Mku-10-B	-9.967	0.664	52.4	-99.8	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Mku-10-B-2	110.000	100.052	5.7	0	0	0	0	N-Mku-6-1	-9.967	0.664	52.4	-99.8	
								G-Mku-10-B	9.967	-0.664	52.4	-99.8	
Mku-6-B-1	6.600	100.000	9.4	0	0	0	0	Mku-3-B-1	4.118	3.640	480.8	74.9	
								Mku-10-B-1	7.882	-0.231	689.8	-100.0	
								Mku-6-B-4	-6.000	-1.705	545.6	96.2	
								Mku-6-B-3	-3.000	-0.852	272.8	96.2	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	-3.000	-0.852	272.8	96.2	
* Mku-6-B-2	6.600	100.000	9.4	12.000	3.409	0	0	G-Mku-6-B	12.000	3.409	1091.3	96.2	
Mku-6-B-3	6.600	100.000	9.4	0	0	0	0	Mku-6-B-4	-6.000	-1.705	545.6	96.2	
								Mku-6-B-1	3.000	0.852	272.8	96.2	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	3.000	0.852	272.8	96.2	
Mku-6-B-4	6.600	100.000	9.4	0	0	0	0	Mku-6-B-1	6.000	1.705	545.6	96.2	
								Mku-6-B-3	6.000	1.705	545.6	96.2	
								G-Mku-6-B	-12.000	-3.409	1091.3	96.2	
Mku-6-B-5	6.600	100.000	9.4	0	0	0	0	Mku-6-B-1	0.000	0.000	0.0	0.0	
								Mku-6-B-3	0.000	0.000	0.0	0.0	
Mku-6-B-6	6.600	100.000	9.4	0	0	0	0	Mku-6-B-3	-3.000	-0.852	272.8	96.2	
								Mku-6-B-1	3.000	0.852	272.8	96.2	
Mr1-6-B-1	6.600	99.282	18.6	0	0	0	0	Mr1-10-B-1	2.060	-0.919	198.7	-91.3	
								Mr1-3-B-1	1.388	0.697	136.8	89.4	
								B-6-Mr1-Rz1-1	-3.448	0.222	304.4	-99.8	
Mr1-10-B-1	110.000	99.140	17.3	0	0	0	0	Mr1-6-B-1	-2.056	0.973	12.0	-90.4	-1.000
								B-10-Mr1-Mr2-1	2.056	-0.973	12.0	-90.4	
Mr1-3-B-1	30.000	99.450	17.8	0	0	1.386	0.671	Mr1-6-B-1	-1.386	-0.671	29.8	90.0	1.000
Mr2-10-B-1	110.000	99.140	17.3	0	0	0	0	B-10-Mr2-Rz2-1	-12.645	0.168	67.0	100.0	
								Mr2-10-B-2	12.645	-0.168	67.0	100.0	
Mr2-10-B-2	110.000	99.140	17.3	0	0	0	0	B-10-Mr2/Nte-1	14.702	-1.130	78.1	-99.7	
								B-10-Mr1-Mr2-2	-2.056	0.962	12.0	-90.6	
								Mr2-10-B-1	-12.645	0.168	67.0	100.0	
Msh-1-B-1	15.000	95.348	-4.0	0	0	15.950	7.725	Msh-10-B-1	-7.975	-3.862	357.7	90.0	
								Msh-10-B-1	-7.975	-3.862	357.7	90.0	
								C-Msh-1-B	0.000	0.000	0.0	0.0	
Msh-10-B-1	110.000	95.712	-1.6	0	0	0	0	Msh-1-B-1	7.996	4.294	49.8	88.1	-2.000
								Msh-1-B-1	7.996	4.294	49.8	88.1	-2.000
								B-10-Gso-Msh-2	-22.158	-1.486	121.8	99.8	
								B-10-Kba-Msh-2	6.165	-7.101	51.6	-65.6	
Mus-3-B	30.000	99.141	13.6	0	0	0	0	Mus-6-B	-1.993	-0.337	39.2	98.6	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								G-Mus-3-B	1.993	0.337	39.2	98.6	
* Mus-6-B	6.600	100.000	15.2	2.000	0.397	0	0	Mus-3-B	2.000	0.397	178.4	98.1	
Nbg-3-B-1	30.000	98.772	1.4	0	0	7.335	3.553	Nbg-10-B-1	-3.668	-1.776	79.4	90.0	
								Nbg-10-B-1	-3.668	-1.776	79.4	90.0	
Nbg-10-B-1	110.000	97.583	2.3	0	0	0	0	Nbg-3-B-1	3.671	1.844	22.1	89.4	-2.000
								Nbg-3-B-1	3.671	1.844	22.1	89.4	-2.000
								B-10-Jb1-Nbg-2	9.379	-17.417	106.4	-47.4	
								B-10-MKi-Nbg-1	-16.721	13.728	116.4	-77.3	
Nbi-3-B-1	30.000	99.244	5.0	0	0	1.482	0.718	Nbi-10-B-1	-1.482	-0.718	31.9	90.0	
Nbi-10-B-1	110.000	99.948	5.7	0	0	0	0	Nbi-3-B-1	1.484	0.741	8.7	89.5	
								B-B-10-Mku-Nbi-1-2	-1.484	-0.741	8.7	89.5	
N-Cyi-04-1	0.400	99.746	17.0	0.300	0.000	0	0	Cyi-3-B-2	0.300	0.000	434.1	100.0	
Nde-3-B-1	30.000	99.555	-1.7	0	0	7.440	3.603	Nde-10-B-1	-3.720	-1.802	79.9	90.0	
								Nde-10-B-1	-3.720	-1.802	79.9	90.0	
Nde-10-B-1	110.000	96.348	-0.8	0	0	0	0	Nde-3-B-1	3.723	1.871	22.7	89.4	-4.000
								Nde-3-B-1	3.723	1.871	22.7	89.4	-4.000
								B-10-Gso-Nde-2	-7.447	-3.741	45.4	89.4	
* N-Gko-04-1	0.400	100.000	6.8	5.000	0.436	0	0	Gko-1-B-2	5.000	0.436	7244.3	99.6	
* N-Gko-04-2	0.400	100.000	6.8	5.000	0.436	0	0	Gko-1-B-2	5.000	0.436	7244.3	99.6	
N-Gse-04-1	0.400	101.120	12.7	0.500	0.375	0	0	Gse-6-B-2	0.500	0.375	892.1	80.0	
N-Gse-04-2	0.400	101.120	12.7	0.500	0.375	0	0	Gse-6-B-2	0.500	0.375	892.1	80.0	
N-Jb3-04-1	0.400	102.806	2.5	1.000	0.620	0	0	Jb3-1-B-2	1.000	0.620	1651.9	85.0	
N-Jb3-04-2	0.400	102.806	2.5	1.000	0.620	0	0	Jb3-1-B-2	1.000	0.620	1651.9	85.0	
Nko-3-B-1	30.000	99.011	15.0	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.595	0.012	11.6	100.0	
								G-Nko-3-B	-0.595	-0.012	11.6	100.0	
Nko-3-B-2	30.000	99.011	15.0	0	0	0	0	N-Nko-04-B-2	-0.595	-0.012	11.6	100.0	
								G-Nko-3-B	0.595	0.012	11.6	100.0	
* N-Kya-6-1	6.600	100.000	16.0	2.200	0.048	0	0	Kya-3-B-3	2.200	0.048	192.5	100.0	
N-Mku-6-1	6.600	100.163	9.6	10.000	0.000	0	0	Mku-10-B-2	10.000	0.000	873.3	100.0	
* N-Nko-04-B-2	0.400	100.000	17.7	0.600	0.040	0	0	Nko-3-B-2	0.600	0.040	868.0	99.8	
* N-Ny1-6-2	6.600	100.000	23.8	28.000	2.430	0	0	Ny1-3-B-2	28.000	2.430	2458.6	99.6	
N-RAg-6	6.600	101.683	4.4	4.000	3.000	0	0	Gko-3-B	4.000	3.000	430.1	80.0	
N-Rz1-06-B-1-1	0.600	100.583	22.3	0	0	0	0	Rz1-6-B-1	3.500	0.000	3348.3	100.0	
								G-Rz1-06-B	-3.500	0.000	3348.3	100.0	
N-Rz1-06-B-1-2	0.600	100.583	22.3	3.500	0.000	0	0	G-Rz1-06-B	3.500	0.000	3348.3	100.0	
Nta-3-B-1	30.000	97.859	7.7	0	0	2.405	1.165	Nta-6-B-1	-1.201	-1.352	35.6	66.4	
								B-3-Cmp-Nta-2	-1.204	0.187	24.0	-98.8	
Nta-10-B-1	110.000	100.282	6.4	0	0	0	0	Nta-6-B-1	-5.010	0.769	26.5	-98.8	
								Nta-6-B-1	-5.010	0.769	26.5	-98.8	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Mku-Nta-2	10.020	-1.539	53.1	-98.8	
Nta-6-B-1	6.600	100.000	8.7	0	0	0	0	Nta-3-B-1	1.205	1.400	161.6	65.2	
								Nta-10-B-1	5.023	-0.565	442.1	-99.4	
								Nta-10-B-1	5.023	-0.565	442.1	-99.4	
								Nta-6-B-3	-11.250	-0.270	984.4	100.0	
* Nta-6-B-2	6.600	100.000	8.7	11.250	0.270	0	0	Nta-6-B-3	11.250	0.270	984.4	100.0	
Nta-6-B-3	6.600	100.000	8.7	0	0	0	0	Nta-6-B-1	11.250	0.270	984.4	100.0	
								Nta-6-B-2	-11.250	-0.270	984.4	100.0	
NtB-3-B1	30.000	98.039	6.4	0	0	0	0	G-NtB-3-B	0.000	0.000	0.0	0.0	
Nte-3-B-1	30.000	99.121	16.0	0	0	1.479	0.716	Nte-10-B-1	-1.479	-0.716	31.9	90.0	
Nte-10-B-1	110.000	98.827	16.7	0	0	0	0	Nte-3-B-1	1.481	0.739	8.8	89.5	-1.000
								B-10-Kbo/Nte-2	15.776	-5.308	88.4	-94.8	
								B-10-Mr2/Nte-2	-14.645	0.632	77.9	-99.9	
								B-10-Bga-Nte-2	-2.611	3.937	25.1	-55.3	
Ny1-10-B-1	110.000	99.603	14.0	0	0	0	0	Ny1-3-B-1	-27.893	2.365	147.5	-99.6	
								B-10-Kli-Ny1-2	27.893	-2.365	147.5	-99.6	
Ny1-3-B-1	30.000	99.412	18.0	0	0	0	0	Ny1-10-B-1	27.937	-0.391	540.9	100.0	
								G-Ny1-3-B	-27.937	0.391	540.9	100.0	
Ny1-3-B-2	30.000	99.412	18.0	0	0	0	0	N-Ny1-6-2	-27.937	0.391	540.9	100.0	
								G-Ny1-3-B	27.937	-0.391	540.9	100.0	
Rba-3-B-1	30.000	100.123	0.0	0	0	0	0	Rba-20-B-1	0.000	0.000	0.0	0.0	
Rba-20-B-1	220.000	100.123	0.0	0	0	0	0	Rba-3-B-1	0.000	0.000	0.0	0.0	
								B-20-Rba-Sha-1	0.000	0.000	0.0	0.0	
* Rka5-6-B	6.600	100.000	16.0	3.000	0.314	0	0	Rka5-3-B	3.000	0.314	263.9	99.5	
Rka5-3-B	30.000	99.141	13.6	0	0	0	0	Rka5-6-B	-2.985	-0.185	58.1	99.8	
								G-Rka5-3-B	2.985	0.185	58.1	99.8	
Rka-3-B-1	30.000	99.141	13.6	0	0	0	0	Rka-10-B-1	2.489	0.261	48.6	99.5	
								Rka-10-B-1	2.489	0.261	48.6	99.5	
								G-Rka-3-B	0.000	0.000	0.0	0.0	
								G-Rka5-3-B	-2.985	-0.185	58.1	99.8	
								G-Mus-3-B	-1.993	-0.337	39.2	98.6	
Rka-3-B-2	30.000	99.141	13.6	0	0	0	0	G-Rka-3-B	0.000	0.000	0.0	0.0	
Rka-10-B-1	110.000	98.896	12.6	0	0	0	0	Rka-3-B-1	-2.487	-0.219	13.2	99.6	
								Rka-3-B-1	-2.487	-0.219	13.2	99.6	
								B-10-Kli-Rka-2	4.974	0.438	26.5	99.6	
Rlm-3-B-1	30.000	99.345	-1.5	0	0	7.412	3.590	Rlm-10-B-1	-7.412	-3.590	159.5	90.0	
Rlm-10-B-1	110.000	99.304	-0.4	0	0	0	0	Rlm-3-B-1	7.416	3.762	43.9	89.2	-1.000
								Rlm-20-B-1	-7.416	-3.762	43.9	89.2	
Rlm-20-B-1	220.000	99.635	-0.1	0	0	0	0	Rlm-10-B-1	7.417	3.820	22.0	88.9	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-20-Sha-Rlm-2D	-7.417	-3.820	22.0	88.9	
Rln-3-B-1	30.000	97.978	2.8	0	0	2.410	1.167	Rln-10-B-1	-2.410	-1.167	52.6	90.0	
Rln-10-B-1	110.000	98.641	3.5	0	0	0	0	Rln-3-B-1	2.412	1.204	14.3	89.5	
								10-Gfu/Jb1/Rln-B	-2.412	-1.204	14.3	89.5	
Rwi-1-B-1	15.000	100.378	-2.6	0	0	0.403	0.195	Rwi-10-B-1	-0.403	9.881	379.2	-4.1	
								C-Rwi-B-1	0.000	-10.076	386.4	0.0	
Rwi-10-B-1	110.000	96.428	-2.3	0	0	0	0	Rwi-1-B-1	0.427	-9.396	51.2	-4.5	1.000
								B-10-Kba-Rwi-2	-0.427	9.396	51.2	-4.5	
Rz1-6-B-1	6.600	100.124	19.5	0	0	0	0	N-Rz1-.06-B-1-1	-3.480	0.172	304.4	-99.9	
								B-.6-Mr1-Rz1-2	3.480	-0.172	304.4	-99.9	
Rz2-6-B-1-1	6.600	100.000	22.9	0	0	0	0	Rz2-10-B-1	12.750	0.653	1116.8	99.9	
								G-Rz2-.6-B	-12.750	-0.653	1116.8	99.9	
* Rz2-6-B-1-2	6.600	100.000	22.9	12.750	0.653	0	0	G-Rz2-.6-B	12.750	0.653	1116.8	99.9	
Rz2-10-B-1	110.000	99.472	17.7	0	0	0	0	Rz2-6-B-1-1	-12.690	0.486	67.0	-99.9	
								B-10-Mr2-Rz2-2	12.690	-0.486	67.0	-99.9	
Sha-3-B-1	30.000	100.170	-0.9	0	0	7.523	3.644	Sha-10-B-1	-7.523	-3.644	160.6	90.0	
Sha-10-B-1	110.000	99.115	0.2	0	0	0	0	Sha-3-B-1	7.527	3.818	44.7	89.2	-2.000
								Sha-20-B-1	4.875	-59.936	318.4	-8.1	
								B-10-Bre-Sha-2D	-12.402	56.118	304.3	-21.6	
Sha-20-B-1	220.000	99.597	0.0	0	0	0	0	Sha-10-B-1	-4.841	61.469	162.5	-7.9	-2.000
								C-Sha-20-B	0.000	-5.952	15.7	0.0	
								B-20-Sha-Rlm-1D	7.420	-12.617	38.6	-50.7	
								B-20-Rba-Sha-2	0.008	-14.230	37.5	-0.1	
								B-20-Mra-Sha-2D	-2.588	-28.671	75.9	9.0	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cyi/Nko-B	30.000	98.232	7.6	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.149	-0.011	2.9	99.8	
								3-Cyi-Ghi-B	0.448	0.021	8.8	99.9	
								B-3-Nko-Cyi/Nko-1	-0.299	-0.010	5.9	99.9	
3-Cyi-Ghi-B	30.000	98.168	7.6	0	0	0	0	B-3-Cyi-Ghi-2	0.000	-0.077	1.5	0.0	
								3-Cyi/Nko-B	-0.448	-0.029	8.8	99.8	
								3-Kro/Kbu-B	0.448	0.106	9.0	97.3	
3-Kro/Kbu-B	30.000	97.357	7.2	0	0	0	0	B-3-Kbu-Kro-2	0.000	-0.028	0.5	0.0	
								B-3-Kbu-Kro/Nko-2	0.445	0.209	9.7	90.5	
								3-Cyi-Ghi-B	-0.445	-0.182	9.5	92.6	
10-Bre/Gso/Msh-B	110.000	97.276	-0.4	0	0	0	0	B-10-Bre-Gso-1	8.964	-16.557	101.6	-47.6	
								B-10-Gso-Msh-2	24.015	8.979	138.3	93.7	
								Gso-10-B-1	-32.979	7.577	182.6	-97.5	
10-Gfu/Jb1/Rln-B	110.000	96.213	-0.9	0	0	0	0	10-Gfu/Mku/Rln-B	-6.382	5.221	45.0	-77.4	
								B-10-Jb1-Rln-2	0.935	-6.332	34.9	-14.6	
								Rln-10-B-1	5.448	1.110	30.3	98.0	
10-Gfu/Mku/Rln-B	110.000	96.021	-0.5	0	0	0	0	B-10-Gfu-Mku-2	-9.130	6.142	60.1	-83.0	
								10-Gfu/Jb1/Rln-B	6.412	-5.698	46.9	-74.7	
								Gfu-10-B-1	2.719	-0.444	15.1	-98.7	
10-Gko/Kgo/MKi-B	110.000	96.151	-1.6	0	0	0	0	B-10-Gko-MKi-1	-8.090	-3.405	47.9	92.2	
								B-10-Kgo-MKi-2	-16.746	-12.521	114.1	80.1	
								MKi-10-B-1	24.837	15.927	161.1	84.2	
10-Kba/Msh/Rwi-B	110.000	95.245	-1.6	0	0	0	0	B-10-Kba-Msh-2	-8.617	-2.297	49.1	96.6	
								B-10-Kba-Rwi-2	2.872	1.220	17.2	92.0	
								Kba-10-B-1	5.745	1.077	32.2	98.3	
10-Kbo/Kro/Mr2-B	110.000	97.278	3.0	0	0	0	0	10-Kbo/Nte-B	-2.983	9.961	56.1	-28.7	
								B-10-Kbo-Kro-1	1.726	-10.602	58.0	-16.1	
								Kbo-10-B-1	1.257	0.641	7.6	89.1	
10-Kbo/Nte-B	110.000	96.561	3.3	0	0	0	0	10-Kbo/Kro/Mr2-B	3.014	-10.509	59.4	-27.6	
								B-10-Kbo/Nte-2	-3.014	10.509	59.4	-27.6	
								B-10-Mr2/Nte-1	-5.261	0.892	29.0	-98.6	
10-Mr2/Nte-B	110.000	96.546	3.3	0	0	0	0	B-10-Mr2/Nte-2	5.261	-0.892	29.0	-98.6	
* 20-Mra-B	220.000	100.000	0.0	31.020	0.073	0	0	B-20-Mra-Sha-2D	31.020	0.073	81.4	100.0	
B-1-Jb1-Jb3-1	15.000	99.205	-2.1	0	0	0	0	B-1-Jb1-Jb3-2	-5.945	0.268	230.9	-99.9	
								Jb1-1-B-1	5.945	-0.268	230.9	-99.9	
B-1-Jb1-Jb3-2	15.000	99.421	-1.9	0	0	0	0	B-1-Jb1-Jb3-1	5.959	-0.246	230.9	-99.9	
								Jb3-1-B-1	-5.959	0.246	230.9	-99.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-1-Kbu-KbW-1F_T	11.000	98.615	6.6	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.130	2.146	1289.3	-99.6	
								Kbu-1-B-1	24.130	-2.146	1289.3	-99.6	
B-1-Kbu-KbW-2F_T	11.000	101.769	11.7	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1289.3	100.0	
								KbW-1-B-2	-25.000	0.000	1289.3	100.0	
B-3-Cyi-Cyi/Nko-1	30.000	98.263	7.6	0	0	0	0	3-Cyi/Nko-B	0.149	-0.003	2.9	-100.0	
								Cyi-3-B-1	-0.149	0.003	2.9	-100.0	
B-3-Cyi-Ghi-2	30.000	98.237	7.5	0	0	0	0	3-Cyi-Ghi-B	0.000	0.000	0.0	0.0	
B-3-Kbu-Kro/Nko-2	30.000	97.199	7.1	0	0	0	0	3-Kro/Kbu-B	-0.444	-0.222	9.8	89.5	
								Kbu-3-B-1	0.444	0.222	9.8	89.5	
B-3-Kbu-Kro-2	30.000	97.366	7.2	0	0	0	0	3-Kro/Kbu-B	0.000	0.000	0.0	0.0	
B-3-Nko-Cyi/Nko-1	30.000	98.313	7.7	0	0	0	0	3-Cyi/Nko-B	0.299	-0.007	5.9	-100.0	
								Nko-3-B-1	-0.299	0.007	5.9	-100.0	
B-10-Bga-Gsh-1	110.000	95.623	3.5	0	0	0	0	B-10-Bga-Gsh-2	-14.910	0.577	81.9	-99.9	
								Bga-10-B-1	14.910	-0.577	81.9	-99.9	
B-10-Bga-Gsh-2	110.000	95.923	3.9	0	0	0	0	B-10-Bga-Gsh-1	14.962	-0.764	82.0	-99.9	
								Gsh-10-B	-14.962	0.764	82.0	-99.9	
B-10-Bga-Nte-1	110.000	95.623	3.5	0	0	0	0	B-10-Bga-Nte-2	-0.927	-9.538	52.6	9.7	
								Bga-10-B-1	0.927	9.538	52.6	9.7	
B-10-Bga-Nte-2	110.000	96.543	3.3	0	0	0	0	B-10-Bga-Nte-1	0.969	9.006	49.2	10.7	
								Nte-10-B-1	-0.969	-9.006	49.2	10.7	
B-10-Bre-Gso-1	110.000	98.083	-1.0	0	0	0	0	10-Bre/Gso/Msh-B	-8.848	16.338	99.4	-47.6	
								Bre-10-B-1	8.848	-16.338	99.4	-47.6	
B-10-Bre-Jb1-1	110.000	98.083	-1.0	0	0	0	0	B-10-Bre-Jb1-2	21.479	30.534	199.8	57.5	
								Bre-10-B-1	-21.479	-30.534	199.8	57.5	
B-10-Bre-Jb1-2	110.000	96.844	-1.2	0	0	0	0	B-10-Bre-Jb1-1	-21.270	-30.311	200.7	57.4	
								Jb1-10-B-1	21.270	30.311	200.7	57.4	
B-10-Bre-Sha-1D	110.000	98.083	-1.0	0	0	0	0	B-10-Bre-Sha-2D	-22.501	-51.960	303.0	39.7	
								Bre-10-B-1	22.501	51.960	303.0	39.7	
B-10-Bre-Sha-2D	110.000	99.064	-1.1	0	0	0	0	B-10-Bre-Sha-1D	22.774	51.906	300.3	40.2	
								Sha-10-B-1	-22.774	-51.906	300.3	40.2	
B-10-Bta-Hye-1	110.000	98.694	-0.1	0	0	0	0	B-10-Bta-Hye-2	-4.594	1.557	25.8	-94.7	
								Bta-10-B-1	4.594	-1.557	25.8	-94.7	
B-10-Bta-Hye-2	110.000	98.727	0.1	0	0	0	0	B-10-Bta-Hye-1	4.603	-2.096	26.9	-91.0	
								Hye-10-B-1	-4.603	2.096	26.9	-91.0	
B-10-Bta-Kgo-1	110.000	98.694	-0.1	0	0	0	0	B-10-Bta-Kgo-2	1.391	-3.161	18.4	-40.3	
								Bta-10-B-1	-1.391	3.161	18.4	-40.3	
B-10-Bta-Kgo-2	110.000	99.008	-0.4	0	0	0	0	B-10-Bta-Kgo-1	-1.384	2.005	12.9	-56.8	
								Kgo-10-B-1	1.384	-2.005	12.9	-56.8	
B-10-Gfu-Mku-2	110.000	95.881	0.1	0	0	0	0	10-Gfu/Mku/Rln-B	9.177	-6.530	61.7	-81.5	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-10-B-1	-9.177	6.530	61.7	-81.5	
B-10-Gha-MKi-1	110.000	95.720	-1.8	0	0	0	0	B-10-Gha-MKi-2	-13.825	-6.589	84.0	90.3	
								Gha-10-B-1	13.825	6.589	84.0	90.3	
B-10-Gha-MKi-2	110.000	96.151	-1.6	0	0	0	0	B-10-Gha-MKi-1	13.864	6.457	83.5	90.7	
								MKi-10-B-1	-13.864	-6.457	83.5	90.7	
B-10-Gha-Nde-1	110.000	95.720	-1.8	0	0	0	0	B-10-Gha-Nde-2	6.970	3.122	41.9	91.3	
								Gha-10-B-1	-6.970	-3.122	41.9	91.3	
B-10-Gha-Nde-2	110.000	95.302	-2.0	0	0	0	0	B-10-Gha-Nde-1	-6.951	-3.484	42.8	89.4	
								Nde-10-B-1	6.951	3.484	42.8	89.4	
B-10-Gko-Jb1-1	110.000	96.272	-1.5	0	0	0	0	B-10-Gko-Jb1-2	-21.069	-9.965	127.1	90.4	
								Gko-10-B-1	21.069	9.965	127.1	90.4	
B-10-Gko-Jb1-2	110.000	96.844	-1.2	0	0	0	0	B-10-Gko-Jb1-1	21.133	9.881	126.4	90.6	
								Jb1-10-B-1	-21.133	-9.881	126.4	90.6	
B-10-Gko-MKi-1	110.000	96.272	-1.5	0	0	0	0	10-Gko/Kgo/MKi-B	8.096	3.260	47.6	92.8	
								Gko-10-B-1	-8.096	-3.260	47.6	92.8	
B-10-Gso-Msh-2	110.000	95.886	-1.2	0	0	0	0	10-Bre/Gso/Msh-B	-23.793	-8.972	139.2	93.6	
								Msh-10-B-1	23.793	8.972	139.2	93.6	
B-10-Gso-Nde-1	110.000	97.276	-0.4	0	0	0	0	B-10-Gso-Nde-2	0.000	-0.179	1.0	0.0	
								Gso-10-B-1	0.000	0.179	1.0	0.0	
B-10-Gso-Nde-2	110.000	97.279	-0.4	0	0	0	0	B-10-Gso-Nde-1	0.000	0.000	0.0	0.0	
B-10-Hye-Rka-1	110.000	98.727	0.1	0	0	0	0	B-10-Hye-Rka-2	-7.809	0.494	41.6	-99.8	
								Hye-10-B-1	7.809	-0.494	41.6	-99.8	
B-10-Hye-Rka-2	110.000	98.993	0.5	0	0	0	0	B-10-Hye-Rka-1	7.835	-1.064	41.9	-99.1	
								Rka-10-B-1	-7.835	1.064	41.9	-99.1	
B-10-Jb1-Jb2-1	110.000	96.844	-1.2	0	0	0	0	B-10-Jb1-Jb2-2	-23.884	2.027	129.9	-99.6	
								Jb1-10-B-1	23.884	-2.027	129.9	-99.6	
B-10-Jb1-Jb2-2	110.000	96.870	-1.1	0	0	0	0	B-10-Jb1-Jb2-1	23.893	-2.037	129.9	-99.6	
								Jb2-10-B-1	-23.893	2.037	129.9	-99.6	
B-10-Jb1-Nbg-1	110.000	96.844	-1.2	0	0	0	0	B-10-Jb1-Nbg-2	18.138	6.125	103.8	94.7	
								Jb1-10-B-1	-18.138	-6.125	103.8	94.7	
B-10-Jb1-Nbg-2	110.000	96.366	-1.4	0	0	0	0	B-10-Jb1-Nbg-1	-18.079	-6.215	104.1	94.6	
								Nbg-10-B-1	18.079	6.215	104.1	94.6	
B-10-Jb1-Rln-2	110.000	96.844	-1.2	0	0	0	0	10-Gfu/Jb1/Rln-B	-0.914	5.619	30.9	-16.0	
								Jb1-10-B-1	0.914	-5.619	30.9	-16.0	
B-10-Kba-Kre-1	110.000	95.245	-1.6	0	0	0	0	B-10-Kba-Kre-2	2.896	-0.385	16.1	-99.1	
								Kba-10-B-1	-2.896	0.385	16.1	-99.1	
B-10-Kba-Kre-2	110.000	95.054	-1.9	0	0	0	0	B-10-Kba-Kre-1	-2.890	-0.446	16.1	98.8	
								Kre-10-B-1	2.890	0.446	16.1	98.8	
B-10-Kba-Msh-2	110.000	95.886	-1.2	0	0	0	0	10-Kba/Msh/Rwi-B	8.658	1.718	48.3	98.1	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Msh-10-B-1	-8.658	-1.718	48.3	98.1	
B-10-Kba-Rwi-2	110.000	95.149	-1.7	0	0	0	0	10-Kba/Msh/Rwi-B	-2.870	-1.440	17.7	89.4	
								Rwi-10-B-1	2.870	1.440	17.7	89.4	
B-10-Kbo/Nte-2	110.000	96.543	3.3	0	0	0	0	10-Kbo/Nte-B	3.015	-10.520	59.5	-27.6	
								Nte-10-B-1	-3.015	10.520	59.5	-27.6	
B-10-Kbo-Kro-1	110.000	98.726	2.5	0	0	0	0	10-Kbo/Kro/Mr2-B	-1.672	9.463	51.1	-17.4	
								Kro-10-B-1	1.672	-9.463	51.1	-17.4	
B-10-Kbu-Kro-1	110.000	98.944	3.2	0	0	0	0	B-10-Kbu-Kro-2	24.499	-3.382	131.2	-99.1	
								Kbu-10-B-1	-24.499	3.382	131.2	-99.1	
B-10-Kbu-Kro-2	110.000	98.726	2.5	0	0	0	0	B-10-Kbu-Kro-1	-24.407	3.267	130.9	-99.1	
								Kro-10-B-1	24.407	-3.267	130.9	-99.1	
B-10-Kgo-Kli-1	110.000	99.008	-0.4	0	0	0	0	B-10-Kgo-Kli-2	-19.350	4.285	105.1	-97.6	
								Kgo-10-B-1	19.350	-4.285	105.1	-97.6	
B-10-Kgo-Kli-2	110.000	99.219	0.9	0	0	0	0	B-10-Kgo-Kli-1	19.494	-4.795	106.2	-97.1	
								Kli-10-B-1	-19.494	4.795	106.2	-97.1	
B-10-Kgo-MKi-2	110.000	99.008	-0.4	0	0	0	0	10-Gko/Kgo/MKi-B	16.985	11.890	109.9	81.9	
								Kgo-10-B-1	-16.985	-11.890	109.9	81.9	
B-10-Kli-Kro-1	110.000	98.726	2.5	0	0	0	0	B-10-Kli-Kro-2	24.787	-13.389	149.8	-88.0	
								Kro-10-B-1	-24.787	13.389	149.8	-88.0	
B-10-Kli-Kro-2	110.000	99.219	0.9	0	0	0	0	B-10-Kli-Kro-1	-24.527	13.310	147.6	-87.9	
								Kli-10-B-1	24.527	-13.310	147.6	-87.9	
B-10-Kli-Ny1-1	110.000	99.219	0.9	0	0	0	0	B-10-Kli-Ny1-2	-13.881	0.130	73.4	100.0	
								Kli-10-B-1	13.881	-0.130	73.4	100.0	
B-10-Kli-Ny1-2	110.000	99.843	1.7	0	0	0	0	B-10-Kli-Ny1-1	13.974	-0.648	73.5	-99.9	
								Ny1-10-B-1	-13.974	0.648	73.5	-99.9	
B-10-Kli-Rka-1	110.000	99.219	0.9	0	0	0	0	B-10-Kli-Rka-2	5.201	-0.993	28.0	-98.2	
								Kli-10-B-1	-5.201	0.993	28.0	-98.2	
B-10-Kli-Rka-2	110.000	98.993	0.5	0	0	0	0	B-10-Kli-Rka-1	-5.186	0.188	27.5	-99.9	
								Rka-10-B-1	5.186	-0.188	27.5	-99.9	
B-10-MKi-Nbg-1	110.000	96.366	-1.4	0	0	0	0	B-10-MKi-Nbg-2	11.120	2.728	62.4	97.1	
								Nbg-10-B-1	-11.120	-2.728	62.4	97.1	
B-10-MKi-Nbg-2	110.000	96.151	-1.6	0	0	0	0	B-10-MKi-Nbg-1	-11.103	-2.864	62.6	96.8	
								MKi-10-B-1	11.103	2.864	62.6	96.8	
B-10-Mku-Nbi-1	110.000	95.881	0.1	0	0	0	0	B-B-10-Mku-Nbi-1-2	1.283	0.017	7.0	100.0	
								Mku-10-B-1	-1.283	-0.017	7.0	100.0	
B-10-Mku-Nta-1	110.000	95.881	0.1	0	0	0	0	B-10-Mku-Nta-2	-8.263	0.986	45.6	-99.3	
								Mku-10-B-1	8.263	-0.986	45.6	-99.3	
B-10-Mku-Nta-2	110.000	96.032	0.6	0	0	0	0	B-10-Mku-Nta-1	8.289	-1.765	46.3	-97.8	
								Nta-10-B-1	-8.289	1.765	46.3	-97.8	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Mr1-Mr2-1	110.000	96.587	3.6	0	0	0	0	B-10-Mr1-Mr2-2	-1.079	-1.561	10.3	56.9	
								Mr1-10-B-1	1.079	1.561	10.3	56.9	
B-10-Mr1-Mr2-2	110.000	96.590	3.6	0	0	0	0	B-10-Mr1-Mr2-1	1.079	1.550	10.3	57.1	
								Mr2-10-B-2	-1.079	-1.550	10.3	57.1	
B-10-Mr2/Nte-1	110.000	96.590	3.6	0	0	0	0	10-Mr2/Nte-B	5.268	-1.488	29.7	-96.2	
								Mr2-10-B-2	-5.268	1.488	29.7	-96.2	
B-10-Mr2/Nte-2	110.000	96.543	3.3	0	0	0	0	10-Mr2/Nte-B	-5.260	0.879	29.0	-98.6	
								Nte-10-B-1	5.260	-0.879	29.0	-98.6	
B-10-Mr2-Rz2-1	110.000	96.590	3.6	0	0	0	0	B-10-Mr2-Rz2-2	-6.347	-0.062	34.5	100.0	
								Mr2-10-B-1	6.347	0.062	34.5	100.0	
B-10-Mr2-Rz2-2	110.000	96.764	3.8	0	0	0	0	B-10-Mr2-Rz2-1	6.359	-0.303	34.5	-99.9	
								Rz2-10-B-1	-6.359	0.303	34.5	-99.9	
B-10-Msh-Nga-1	110.000	95.886	-1.2	0	0	0	0	B-10-Msh-Nga-2	0.087	-0.775	4.3	-11.2	
								Msh-10-B-1	-0.087	0.775	4.3	-11.2	
B-10-Msh-Nga-2	110.000	95.905	-1.2	0	0	0	0	B-10-Msh-Nga-1	-0.087	-0.498	2.8	17.2	
								Nga-10-B-1	0.087	0.498	2.8	17.2	
B-10-Nga-Rln-1	110.000	95.905	-1.2	0	0	0	0	B-10-Nga-Rln-2	-2.770	-0.936	16.0	94.7	
								Nga-10-B-1	2.770	0.936	16.0	94.7	
B-10-Nga-Rln-2	110.000	96.213	-0.9	0	0	0	0	B-10-Nga-Rln-1	2.777	-0.230	15.2	-99.7	
								Rln-10-B-1	-2.777	0.230	15.2	-99.7	
B-20-Bwi-KbW-1	220.000	100.050	-0.4	0	0	0	0	B-20-Bwi-KbW-2	0.000	-0.499	1.3	0.0	
								Bwi-20-B-1	0.000	0.499	1.3	0.0	
B-20-Bwi-KbW-2	220.000	100.050	-0.4	0	0	0	0	B-20-Bwi-KbW-1	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
B-20-Bwi-Rba-1D	220.000	100.050	-0.4	0	0	0	0	B-20-Bwi-Rba-2D	2.194	-13.719	36.4	-15.8	
								Bwi-20-B-1	-2.194	13.719	36.4	-15.8	
B-20-Bwi-Rba-2D	220.000	100.123	-0.5	0	0	0	0	B-20-Bwi-Rba-1D	-2.193	-3.099	10.0	57.8	
								Rba-20-B-1	2.193	3.099	10.0	57.8	
B-20-Kgo-Kli-1	220.000	99.386	-0.4	0	0	0	0	B-20-Kgo-Kli-2	-8.895	-13.275	42.2	55.7	
								Kgo-20-B-1	8.895	13.275	42.2	55.7	
B-20-Kgo-Kli-2	220.000	99.585	-0.3	0	0	0	0	B-20-Kgo-Kli-1	8.902	10.547	36.4	64.5	
								Kli-20-B-1	-8.902	-10.547	36.4	64.5	
B-20-Kgo-Rwa-1	220.000	99.386	-0.4	0	0	0	0	B-20-Kgo-Rwa-2	8.076	-7.932	29.9	-71.3	
								Kgo-20-B-1	-8.076	7.932	29.9	-71.3	
B-20-Kgo-Rwa-2	220.000	99.437	-0.4	0	0	0	0	B-20-Kgo-Rwa-1	-8.073	6.093	26.7	-79.8	
								Rwa-20-B-1	8.073	-6.093	26.7	-79.8	
B-20-Kli-Bwi-1	220.000	100.050	-0.4	0	0	0	0	B-20-Kli-Bwi-2	-3.482	13.577	36.8	-24.8	
								Bwi-20-B-1	3.482	-13.577	36.8	-24.8	
B-20-Kli-Bwi-2	220.000	99.585	-0.3	0	0	0	0	B-20-Kli-Bwi-1	3.500	-19.238	51.5	-17.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Kli-20-B-1	-3.500	19.238	51.5	-17.9	
B-20-Mra-Sha-2D	220.000	99.402	-0.4	0	0	0	0	20-Mra-B	-30.938	-28.362	110.8	73.7	
								Sha-20-B-1	30.938	28.362	110.8	73.7	
B-20-Rba-Sha-1	220.000	100.123	-0.5	0	0	0	0	B-20-Rba-Sha-2	0.903	2.458	6.9	34.5	
								Rba-20-B-1	-0.903	-2.458	6.9	34.5	
B-20-Rba-Sha-2	220.000	99.402	-0.4	0	0	0	0	B-20-Rba-Sha-1	-0.888	-16.629	44.0	5.3	
								Sha-20-B-1	0.888	16.629	44.0	5.3	
B-20-Rlm-Rwa-1D	220.000	99.456	-0.4	0	0	0	0	B-20-Rlm-Rwa-2D	-4.924	0.688	13.1	-99.0	
								Rlm-20-B-1	4.924	-0.688	13.1	-99.0	
B-20-Rlm-Rwa-2D	220.000	99.437	-0.4	0	0	0	0	B-20-Rlm-Rwa-1D	4.924	-7.644	24.0	-54.2	
								Rwa-20-B-1	-4.924	7.644	24.0	-54.2	
B-20-Sha-Rlm-1D	220.000	99.402	-0.4	0	0	0	0	B-20-Sha-Rlm-2D	1.988	-12.151	32.5	-16.1	
								Sha-20-B-1	-1.988	12.151	32.5	-16.1	
B-20-Sha-Rlm-2D	220.000	99.456	-0.4	0	0	0	0	B-20-Sha-Rlm-1D	-1.987	-4.233	12.3	42.5	
								Rlm-20-B-1	1.987	4.233	12.3	42.5	
B-6-Mr1-Rz1-1	6.600	98.921	3.0	0	0	0	0	B-6-Mr1-Rz1-2	-1.737	0.057	153.7	-99.9	
								Mr1-6-B-1	1.737	-0.057	153.7	-99.9	
B-6-Mr1-Rz1-2	6.600	99.366	3.4	0	0	0	0	B-6-Mr1-Rz1-1	1.745	-0.044	153.7	-100.0	
								Rz1-6-B-1	-1.745	0.044	153.7	-100.0	
B-B-10-Mku-Nbi-1-2	110.000	95.790	0.0	0	0	0	0	B-10-Mku-Nbi-1	-1.282	-0.637	7.8	89.5	
								Nbi-10-B-1	1.282	0.637	7.8	89.5	
Bga-3-B-1	30.000	99.250	-0.2	0	0	15.809	7.657	Bga-10-B-1	-15.809	-7.657	340.6	90.0	
Bga-10-B-1	110.000	95.623	3.5	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	15.838	8.961	99.9	87.0	-7.000
								B-10-Bga-Nte-1	-0.927	-9.538	52.6	9.7	
								B-10-Bga-Gsh-1	-14.910	0.577	81.9	-99.9	
Bga-6-B-1	6.600	95.623	3.5	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
Bre-1-B-1	15.000	99.717	-2.5	0	0	9.855	4.773	Bre-10-B-1	-4.928	-2.387	211.3	90.0	
								Bre-10-B-1	-4.928	-2.387	211.3	90.0	
Bre-10-B-1	110.000	98.083	-1.0	0	0	0	0	Bre-1-B-1	4.935	2.544	29.7	88.9	-3.000
								Bre-1-B-1	4.935	2.544	29.7	88.9	-3.000
								B-10-Bre-Jb1-1	21.479	30.534	199.8	57.5	
								B-10-Bre-Sha-1D	-22.501	-51.960	303.0	39.7	
								B-10-Bre-Gso-1	-8.848	16.338	99.4	-47.6	
Bta-3-B-1	30.000	100.024	-0.9	0	0	3.201	1.551	Bta-10-B-1	-3.201	-1.551	68.4	90.0	
Bta-10-B-1	110.000	98.694	-0.1	0	0	0	0	Bta-3-B-1	3.203	1.603	19.0	89.4	-2.000
								B-10-Bta-Kgo-1	1.391	-3.161	18.4	-40.3	
								B-10-Bta-Hye-1	-4.594	1.557	25.8	-94.7	
Bwi-3-B-1	30.000	99.440	-1.0	0	0	1.287	0.623	Bwi-20-B-1	-1.287	-0.623	27.7	90.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bwi-10-B-1	110.000	100.050	-0.4	0	0	0	0	Bwi-20-B-1	0.000	0.000	0.0	0.0	
Bwi-20-B-1	220.000	100.050	-0.4	0	0	0	0	Bwi-10-B-1	0.000	0.000	0.0	0.0	
								Bwi-3-B-1	1.288	0.640	3.8	89.5	
								B-20-Bwi-Rba-1D	2.194	-13.719	36.4	-15.8	
								B-20-Kli-Bwi-1	-3.482	13.577	36.8	-24.8	
								B-20-Bwi-KbW-1	0.000	-0.499	1.3	0.0	
C-Gfu-B-3	30.000	96.234	-2.5	0	0	0.000	-1.852	Gfu-3-B-1	0.000	1.852	37.0	0.0	
C-Kre-B	30.000	99.772	-2.7	0	0	0.000	-0.995	Kre-3-B-1	0.000	0.995	19.2	0.0	
C-Msh-1-B	15.000	95.675	-3.4	0	0	0	0	Msh-1-B-1	0.000	0.000	0.0	0.0	
C-Rwi-B-1	15.000	99.377	-2.5	0	0	0	0	Rwi-1-B-1	0.000	0.000	0.0	0.0	
Cyi-3-B-1	30.000	98.263	7.6	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.149	-0.003	2.9	-100.0	
								G-Cyi-3-B	-0.149	0.003	2.9	-100.0	
Cyi-3-B-2	30.000	98.263	7.6	0	0	0	0	N-Cyi-04-1	-0.149	0.003	2.9	-100.0	
								G-Cyi-3-B	0.149	-0.003	2.9	-100.0	
G-Cyi-3-B	30.000	98.263	7.6	0	0	0	0	Cyi-3-B-1	0.149	-0.003	2.9	-100.0	
								Cyi-3-B-2	-0.149	0.003	2.9	-100.0	
Gfu-3-B-1	30.000	96.234	-2.5	0	0	2.707	1.311	Gfu-10-B-1	-2.707	0.541	55.2	-98.1	
								C-Gfu-B-3	0.000	-1.852	37.0	0.0	
Gfu-10-B-1	110.000	96.021	-0.5	0	0	0	0	Gfu-3-B-1	2.719	-0.444	15.1	-98.7	
								10-Gfu/Mku/Rln-B	-2.719	0.444	15.1	-98.7	
G-Gko-1-B	15.000	98.812	-3.0	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-1-B-2	0.000	0.000	0.0	0.0	
G-Gko-3-B	15.000	98.812	-3.0	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-3-B	0.000	0.000	0.0	0.0	
G-Gsh-1-B	11.000	99.013	6.8	0	0	0	0	Gsh-1-B-1	15.000	0.000	795.1	100.0	
								Gsh-1-B-2	-15.000	0.000	795.1	100.0	
Gha-3-B-1	30.000	98.815	-2.8	0	0	6.852	3.318	Gha-10-B-1	-6.852	-3.318	148.3	90.0	
Gha-10-B-1	110.000	95.720	-1.8	0	0	0	0	Gha-3-B-1	6.855	3.467	42.1	89.2	-4.000
								B-10-Gha-MKi-1	-13.825	-6.589	84.0	90.3	
								B-10-Gha-Nde-1	6.970	3.122	41.9	91.3	
G-Jb2-10-B	110.000	96.870	-1.1	0	0	0	0	Jb2-10-B-1	23.893	-2.037	129.9	-99.6	
								Jb2-10-B-2	-23.893	2.037	129.9	-99.6	
G-Jb3-1-B	15.000	99.421	-1.9	0	0	0	0	Jb3-1-B-1	5.959	-0.246	230.9	-99.9	
								Jb3-1-B-2	-5.959	0.246	230.9	-99.9	
G-KbW-1-B-1	11.000	101.769	11.7	0	0	0	0	KbW-1-B-3	-17.000	0.000	876.8	100.0	
								KbW-1-B-2	17.000	0.000	876.8	100.0	
G-KbW-1-B-2	11.000	101.769	11.7	0	0	0	0	KbW-1-B-1	8.000	0.000	412.6	100.0	
								KbW-1-B-4	-8.000	0.000	412.6	100.0	
G-KbW-1-B-3	220.000	100.050	-0.4	0	0	0	0	B-20-Bwi-KbW-2	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								KbW-20-B-2	0.000	0.000	0.0	0.0	
Gko-1-B-1	15.000	98.812	-3.0	0	0	12.951	6.272	Gko-10-B-1	-4.317	-2.091	186.8	90.0	
								Gko-10-B-1	-4.317	-2.091	186.8	90.0	
								Gko-10-B-1	-4.317	-2.091	186.8	90.0	
								G-Gko-1-B	0.000	0.000	0.0	0.0	
								G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-1-B-2	15.000	98.812	-3.0	0	0	0	0	G-Gko-1-B	0.000	0.000	0.0	0.0	
Gko-3-B	15.000	98.812	-3.0	0	0	0	0	G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-10-B-1	110.000	96.272	-1.5	0	0	0	0	Gko-1-B-1	4.324	2.235	26.5	88.8	-4.000
								Gko-1-B-1	4.324	2.235	26.5	88.8	-4.000
								Gko-1-B-1	4.324	2.235	26.5	88.8	-4.000
								B-10-Gko-Jb1-1	-21.069	-9.965	127.1	90.4	
								B-10-Gko-MKi-1	8.096	3.260	47.6	92.8	
G-Kse-1-B	110.000	97.276	-0.4	0	0	0	0	Gso-10-B-1	39.905	-4.254	216.5	-99.4	
								Kse-10-B1	-39.905	4.254	216.5	-99.4	
G-Mku-10-B	110.000	95.881	0.1	0	0	0	0	Mku-10-B-1	0.000	0.000	0.0	0.0	
								Mku-10-B-2	0.000	0.000	0.0	0.0	
G-Mku-6-B	6.600	98.924	1.2	0	0	0	0	Mku-6-B-4	12.000	0.000	1061.1	100.0	
								Mku-6-B-2	-12.000	0.000	1061.1	100.0	
G-Mus-3-B	30.000	99.749	1.0	0	0	0	0	Mus-3-B	-0.997	-0.728	23.8	80.8	
								Rka-3-B-1	0.997	0.728	23.8	80.8	
G-Nko-3-B	30.000	98.313	7.7	0	0	0	0	Nko-3-B-1	0.299	-0.007	5.9	-100.0	
								Nko-3-B-2	-0.299	0.007	5.9	-100.0	
G-NtB-3-B	30.000	97.932	-1.5	0	0	0	0	Kgo-3-B-1	0.000	0.000	0.0	0.0	
								NtB-3-B1	0.000	0.000	0.0	0.0	
G-Ny1-3-B	30.000	99.820	3.7	0	0	0	0	Ny1-3-B-1	13.984	-0.157	269.6	100.0	
								Ny1-3-B-2	-13.984	0.157	269.6	100.0	
G-Rka5-3-B	30.000	99.749	1.0	0	0	0	0	Rka5-3-B	-1.496	0.032	28.9	-100.0	
								Rka-3-B-1	1.496	-0.032	28.9	-100.0	
G-Rka-3-B	30.000	99.749	1.0	0	0	0	0	Rka-3-B-1	3.343	-0.003	64.5	100.0	
								Rka-3-B-2	-3.343	0.003	64.5	100.0	
G-Rwa-3-B	30.000	99.099	-0.8	0	0	0	0	Rwa-3-B-1	0.000	0.000	0.0	0.0	
								Rwa-3-B-2	0.000	0.000	0.0	0.0	
G-Rz1-.06-B	0.600	99.629	4.8	0	0	0	0	N-Rz1-.06-B-1-1	1.750	0.000	1690.2	100.0	
								N-Rz1-.06-B-1-2	-1.750	0.000	1690.2	100.0	
G-Rz2-.6-B	6.600	96.896	6.5	0	0	0	0	Rz2-.6-B-1-1	6.375	0.000	575.5	100.0	
								Rz2-.6-B-1-2	-6.375	0.000	575.5	100.0	
Gsh-1-B-1	11.000	99.013	6.8	0	0	0	0	Gsh-10-B	7.500	0.000	397.6	100.0	
								Gsh-10-B	7.500	0.000	397.6	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								G-Gsh-1-B	-15.000	0.000	795.1	100.0	
Gsh-1-B-2	11.000	99.013	6.8	15.000	0.000	0	0	G-Gsh-1-B	15.000	0.000	795.1	100.0	
Gsh-10-B	110.000	95.923	3.9	0	0	0	0	Gsh-1-B-1	-7.481	0.382	41.0	-99.9	-3.000
								Gsh-1-B-1	-7.481	0.382	41.0	-99.9	-3.000
								B-10-Bga-Gsh-2	14.962	-0.764	82.0	-99.9	
Gso-1-B-1	15.000	99.388	-1.4	0	0	6.923	3.353	Gso-10-B-1	-6.923	-3.353	297.9	90.0	
Gso-10-B-1	110.000	97.276	-0.4	0	0	0	0	Gso-1-B-1	6.926	3.503	41.9	89.2	-3.000
								B-10-Gso-Nde-1	0.000	-0.179	1.0	0.0	
								10-Bre/Gso/Msh-B	32.979	-7.577	182.6	-97.5	
								G-Kse-1-B	-39.905	4.254	216.5	-99.4	
Hye-3-B-1	30.000	100.050	-0.6	0	0	3.203	1.551	Hye-10-B-1	-3.203	-1.551	68.5	90.0	
Hye-10-B-1	110.000	98.727	0.1	0	0	0	0	Hye-3-B-1	3.205	1.602	19.1	89.5	-2.000
								B-10-Bta-Hye-2	4.603	-2.096	26.9	-91.0	
								B-10-Hye-Rka-1	-7.809	0.494	41.6	-99.8	
Jb1-10-B-1	110.000	96.844	-1.2	0	0	0	0	Jb1-1-B-1	6.797	6.659	51.6	71.4	-4.000
								B-10-Jb1-Jb2-1	-23.884	2.027	129.9	-99.6	
								B-10-Jb1-Rln-2	-0.914	5.619	30.9	-16.0	
								B-10-Bre-Jb1-2	-21.270	-30.311	200.7	57.4	
								B-10-Gko-Jb1-2	21.133	9.881	126.4	90.6	
								B-10-Jb1-Nbg-1	18.138	6.125	103.8	94.7	
Jb1-1-B-1	15.000	99.205	-2.1	0	0	12.737	6.169	Jb1-10-B-1	-6.792	-6.437	363.0	72.6	
								B-1-Jb1-Jb3-1	-5.945	0.268	230.9	-99.9	
Jb2-6-B-1	6.600	98.932	3.8	24.000	0.000	0	0	Jb2-10-B-2	12.000	0.000	1061.1	100.0	
								Jb2-10-B-2	12.000	0.000	1061.1	100.0	
Jb2-10-B-1	110.000	96.870	-1.1	0	0	0	0	B-10-Jb1-Jb2-2	23.893	-2.037	129.9	-99.6	
								G-Jb2-10-B	-23.893	2.037	129.9	-99.6	
Jb2-10-B-2	110.000	96.870	-1.1	0	0	0	0	Jb2-6-B-1	-11.946	1.019	65.0	-99.6	-2.000
								Jb2-6-B-1	-11.946	1.019	65.0	-99.6	-2.000
								G-Jb2-10-B	23.893	-2.037	129.9	-99.6	
Jb3-1-B-1	15.000	99.421	-1.9	0	0	0	0	B-1-Jb1-Jb3-2	5.959	-0.246	230.9	-99.9	
								G-Jb3-1-B	-5.959	0.246	230.9	-99.9	
Jb3-1-B-2	15.000	99.421	-1.9	0	0	0	0	N-Jb3-.04-1	-0.993	0.041	38.5	-99.9	
								N-Jb3-.04-2	-0.993	0.041	38.5	-99.9	
								N-Jb3-.04-3	-0.993	0.041	38.5	-99.9	
								G-Jb3-1-B	5.959	-0.246	230.9	-99.9	
								Jb3-1-B-2d	-2.979	0.123	115.4	-99.9	
Jb3-1-B-2d	15.000	99.421	-1.9	0	0	0	0	N-Jb3-.04-4	-0.993	0.041	38.5	-99.9	
								N-Jb3-.04-5	-0.993	0.041	38.5	-99.9	
								N-Jb3-.04-6	-0.993	0.041	38.5	-99.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Jb3-1-B-2	2.979	-0.123	115.4	-99.9	
Kba-3-B-1	30.000	98.888	-3.0	0	0	2.842	1.377	Kba-10-B-1	-2.842	-1.377	61.5	90.0	
Kba-10-B-1	110.000	95.245	-1.6	0	0	0	0	Kba-3-B-1	2.849	1.461	17.6	89.0	-5.000
								10-Kba/Msh/Rwi-B	-5.745	-1.077	32.2	98.3	
								B-10-Kba-Kre-1	2.896	-0.385	16.1	-99.1	
Kbo-3-B-1	30.000	98.042	1.8	0	0	1.255	0.608	Kbo-10-B-1	-1.255	-0.608	27.4	90.0	
Kbo-10-B-1	110.000	97.278	3.0	0	0	0	0	Kbo-3-B-1	1.257	0.641	7.6	89.1	-2.000
								10-Kbo/Kro/Mr2-B	-1.257	-0.641	7.6	89.1	
Kbu-1-B-1	11.000	98.615	6.6	0	0	0	0	Kbu-3-B-1	-0.444	-0.216	26.3	89.9	
								Kbu-10-B-1	11.986	-0.957	640.0	-99.7	
								Kbu-10-B-1	12.588	-0.972	672.0	-99.7	
								B-1-Kbu-KbW-1F_T	-24.130	2.146	1289.3	-99.6	
Kbu-3-B-1	30.000	97.199	7.1	0	0	0	0	Kbu-1-B-1	0.444	0.222	9.8	89.5	-2.000
								B-3-Kbu-Kro/Nko-2	-0.444	-0.222	9.8	89.5	
Kbu-10-B-1	110.000	98.944	3.2	0	0	0	0	Kbu-1-B-1	-11.949	1.666	64.0	-99.0	
								Kbu-1-B-1	-12.551	1.716	67.2	-99.1	
								B-10-Kbu-Kro-1	24.499	-3.382	131.2	-99.1	
KbW-1-B-1	11.000	101.769	11.7	0	0	0	0	KbW-1-B-2	8.000	0.000	412.6	100.0	
								G-KbW-1-B-2	-8.000	0.000	412.6	100.0	
KbW-1-B-2	11.000	101.769	11.7	0	0	0	0	KbW-1-B-1	-8.000	0.000	412.6	100.0	
								B-1-Kbu-KbW-2F_T	25.000	0.000	1289.3	100.0	
								G-KbW-1-B-1	-17.000	0.000	876.8	100.0	
KbW-1-B-3	11.000	101.769	11.7	17.000	0.000	0	0	G-KbW-1-B-1	17.000	0.000	876.8	100.0	
KbW-1-B-4	11.000	101.769	11.7	8.000	0.000	0	0	G-KbW-1-B-2	8.000	0.000	412.6	100.0	
KbW-1-B-5	20.000	100.050	-0.4	0	0	0	0	KbW-20-B-2	0.000	0.000	0.0	0.0	
KbW-20-B-2	220.000	100.050	-0.4	0	0	0	0	KbW-1-B-5	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
Kgo-3-B-1	30.000	97.932	-1.5	0	0	4.546	2.202	Kgo-10-B-1	-2.273	-1.101	49.6	90.0	
								Kgo-10-B-1	-2.273	-1.101	49.6	90.0	
								G-NiB-3-B	0.000	0.000	0.0	0.0	
Kgo-10-B-1	110.000	99.008	-0.4	0	0	0	0	Kgo-3-B-1	2.277	1.156	13.5	89.2	
								Kgo-3-B-1	2.277	1.156	13.5	89.2	
								Kgo-20-B-1	-0.803	-20.492	108.7	3.9	
								B-10-Kgo-MKi-2	16.985	11.890	109.9	81.9	
								B-10-Kgo-Kli-1	-19.350	4.285	105.1	-97.6	
								B-10-Bta-Kgo-2	-1.384	2.005	12.9	-56.8	
Kgo-20-B-1	220.000	99.386	-0.4	0	0	0	0	Kgo-10-B-1	0.819	21.207	56.0	3.9	-3.000
								B-20-Kgo-Kli-1	-8.895	-13.275	42.2	55.7	
								B-20-Kgo-Rwa-1	8.076	-7.932	29.9	-71.3	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Kli-3-B-1	30.000	99.880	-0.2	0	0	1.297	0.628	Kli-10-B-1	-1.297	-0.628	27.8	90.0	
Kli-10-B-1	110.000	99.219	0.9	0	0	0	0	Kli-3-B-1	1.302	0.663	7.7	89.1	-2.000
								Kli-20-B-1	12.411	-8.314	79.0	-83.1	
								B-10-Kgo-Kli-2	19.494	-4.795	106.2	-97.1	
								B-10-Kli-Kro-2	-24.527	13.310	147.6	-87.9	
								B-10-Kli-Rka-1	5.201	-0.993	28.0	-98.2	
								B-10-Kli-Ny1-1	-13.881	0.130	73.4	100.0	
Kli-20-B-1	220.000	99.585	-0.3	0	0	0	0	Kli-10-B-1	-12.402	8.692	39.9	-81.9	-1.000
								B-20-Kgo-Kli-2	8.902	10.547	36.4	64.5	
								B-20-Kli-Bwi-2	3.500	-19.238	51.5	-17.9	
Kre-3-B-1	30.000	99.772	-2.7	0	0	2.888	1.399	Kre-10-B-1	-2.888	-0.403	56.2	99.0	
								C-Kre-B	0.000	-0.995	19.2	0.0	
Kre-10-B-1	110.000	95.054	-1.9	0	0	0	0	Kre-3-B-1	2.890	0.446	16.1	98.8	-5.000
								B-10-Kba-Kre-2	-2.890	-0.446	16.1	98.8	
Kro-3-B-1	30.000	99.505	1.4	0	0	1.288	0.624	Kro-10-B-1	-1.288	-0.624	27.7	90.0	
Kro-10-B-1	110.000	98.726	2.5	0	0	0	0	Kro-3-B-1	1.291	0.658	7.7	89.1	-2.000
								B-10-Kbu-Kro-2	-24.407	3.267	130.9	-99.1	
								B-10-Kbo-Kro-1	-1.672	9.463	51.1	-17.4	
								B-10-Kli-Kro-1	24.787	-13.389	149.8	-88.0	
Kse-1-B-1	11.000	96.957	5.7	40.000	0.000	0	0	Kse-10-B1	40.000	0.000	2165.3	100.0	
Kse-10-B1	110.000	97.276	-0.4	0	0	0	0	Kse-1-B-1	-39.905	4.254	216.5	-99.4	
								G-Kse-1-B	39.905	-4.254	216.5	-99.4	
MKi-3-B-1	30.000	95.008	-4.9	0	0	22.039	10.674	MKi-10-B-1	-22.039	-10.674	496.0	90.0	
MKi-10-B-1	110.000	96.151	-1.6	0	0	0	0	MKi-3-B-1	22.076	12.334	138.0	87.3	-2.000
								10-Gko/Kgo/MKi-B	-24.837	-15.927	161.1	84.2	
								B-10-MKi-Nbg-2	-11.103	-2.864	62.6	96.8	
								B-10-Gha-MKi-2	13.864	6.457	83.5	90.7	
Mku-3-B-1	30.000	97.670	-1.2	0	0	9.777	4.735	Mku-6-B-1	-9.777	-4.735	214.1	90.0	1.000
Mku-10-B-1	110.000	95.881	0.1	0	0	0	0	Mku-6-B-1	-2.197	5.527	32.6	-36.9	-7.000
								B-10-Gfu-Mku-2	9.177	-6.530	61.7	-81.5	
								B-10-Mku-Nta-1	-8.263	0.986	45.6	-99.3	
								B-10-Mku-Nbi-1	1.283	0.017	7.0	100.0	
								G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-10-B-2	110.000	95.881	0.1	0	0	0	0	G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-6-B-1	6.600	98.924	1.2	0	0	0	0	Mku-3-B-1	9.789	5.261	982.7	88.1	
								Mku-10-B-1	2.211	-5.261	504.6	-38.7	
								Mku-6-B-4	-6.000	0.000	530.6	100.0	
								Mku-6-B-3	-3.000	0.000	265.3	100.0	
								Mku-6-B-5	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-6-B-6	-3.000	0.000	265.3	100.0	
Mku-6-B-2	6.600	98.924	1.2	12.000	0.000	0	0	G-Mku-6-B	12.000	0.000	1061.1	100.0	
Mku-6-B-3	6.600	98.924	1.2	0	0	0	0	Mku-6-B-4	-6.000	0.000	530.6	100.0	
								Mku-6-B-1	3.000	0.000	265.3	100.0	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	3.000	0.000	265.3	100.0	
Mku-6-B-4	6.600	98.924	1.2	0	0	0	0	Mku-6-B-1	6.000	0.000	530.6	100.0	
								Mku-6-B-3	6.000	0.000	530.6	100.0	
								G-Mku-6-B	-12.000	0.000	1061.1	100.0	
Mku-6-B-5	6.600	98.924	1.2	0	0	0	0	Mku-6-B-1	0.000	0.000	0.0	0.0	
								Mku-6-B-3	0.000	0.000	0.0	0.0	
Mku-6-B-6	6.600	98.924	1.2	0	0	0	0	Mku-6-B-3	-3.000	0.000	265.3	100.0	
								Mku-6-B-1	3.000	0.000	265.3	100.0	
Mr1-6-B-1	6.600	98.921	3.0	0	0	0	0	Mr1-10-B-1	-1.076	-1.524	165.0	57.7	
								Mr1-3-B-1	2.813	1.467	280.6	88.7	
								B-6-Mr1-Rz1-1	-1.737	0.057	153.7	-99.9	
Mr1-10-B-1	110.000	96.587	3.6	0	0	0	0	Mr1-6-B-1	1.079	1.561	10.3	56.9	-4.000
								B-10-Mr1-Mr2-1	-1.079	-1.561	10.3	56.9	
Mr1-3-B-1	30.000	100.140	1.3	0	0	2.806	1.359	Mr1-6-B-1	-2.806	-1.359	59.9	90.0	3.000
Mr2-10-B-1	110.000	96.590	3.6	0	0	0	0	B-10-Mr2-Rz2-1	-6.347	-0.062	34.5	100.0	
								Mr2-10-B-2	6.347	0.062	34.5	100.0	
Mr2-10-B-2	110.000	96.590	3.6	0	0	0	0	B-10-Mr2/Nte-1	5.268	-1.488	29.7	-96.2	
								B-10-Mr1-Mr2-2	1.079	1.550	10.3	57.1	
								Mr2-10-B-1	-6.347	-0.062	34.5	100.0	
Msh-1-B-1	15.000	95.675	-3.4	0	0	15.010	7.270	Msh-10-B-1	-7.505	-3.635	335.5	90.0	
								Msh-10-B-1	-7.505	-3.635	335.5	90.0	
								C-Msh-1-B	0.000	0.000	0.0	0.0	
Msh-10-B-1	110.000	95.886	-1.2	0	0	0	0	Msh-1-B-1	7.524	4.014	46.7	88.2	-2.000
								Msh-1-B-1	7.524	4.014	46.7	88.2	-2.000
								B-10-Gso-Msh-2	-23.793	-8.972	139.2	93.6	
								B-10-Kba-Msh-2	8.658	1.718	48.3	98.1	
								B-10-Msh-Nga-1	0.087	-0.775	4.3	-11.2	
Mus-3-B	30.000	99.749	1.0	0	0	0	0	Mus-6-B	-0.997	-0.728	23.8	80.8	
								G-Mus-3-B	0.997	0.728	23.8	80.8	
Mus-6-B	6.600	100.961	1.8	1.000	0.750	0	0	Mus-3-B	1.000	0.750	108.3	80.0	
Nbg-3-B-1	30.000	99.627	-2.2	0	0	6.953	3.368	Nbg-10-B-1	-3.477	-1.684	74.6	90.0	
								Nbg-10-B-1	-3.477	-1.684	74.6	90.0	
Nbg-10-B-1	110.000	96.366	-1.4	0	0	0	0	Nbg-3-B-1	3.480	1.744	21.2	89.4	-4.000
								Nbg-3-B-1	3.480	1.744	21.2	89.4	-4.000

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Jb1-Nbg-2	-18.079	-6.215	104.1	94.6	
								B-10-MKi-Nbg-1	11.120	2.728	62.4	97.1	
Nbi-3-B-1	30.000	99.172	-0.6	0	0	1.281	0.620	Nbi-10-B-1	-1.281	-0.620	27.6	90.0	
Nbi-10-B-1	110.000	95.790	0.0	0	0	0	0	Nbi-3-B-1	1.282	0.637	7.8	89.5	-4.000
								B-B-10-Mku-Nbi-1-2	-1.282	-0.637	7.8	89.5	
N-Cyi-04-1	0.400	98.706	8.7	0.150	0.000	0	0	Cyi-3-B-2	0.150	0.000	219.3	100.0	
Nde-3-B-1	30.000	99.564	-2.8	0	0	6.945	3.364	Nde-10-B-1	-3.473	-1.682	74.6	90.0	
								Nde-10-B-1	-3.473	-1.682	74.6	90.0	
Nde-10-B-1	110.000	95.302	-2.0	0	0	0	0	Nde-3-B-1	3.476	1.742	21.4	89.4	-5.000
								Nde-3-B-1	3.476	1.742	21.4	89.4	-5.000
								B-10-Gha-Nde-2	-6.951	-3.484	42.8	89.4	
Nga-3-B-1	30.000	99.123	-2.0	0	0	2.854	1.382	Nga-10-B-1	-2.854	-1.382	61.6	90.0	
Nga-10-B-1	110.000	95.905	-1.2	0	0	0	0	Nga-3-B-1	2.857	1.434	17.5	89.4	-4.000
								B-10-Nga-Rln-1	-2.770	-0.936	16.0	94.7	
								B-10-Msh-Nga-2	-0.087	-0.498	2.8	17.2	
N-Jb3-04-1	0.400	100.021	0.5	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1443.1	100.0	
N-Jb3-04-2	0.400	100.021	0.5	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1443.1	100.0	
N-Jb3-04-3	0.400	100.021	0.5	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1443.1	100.0	
N-Jb3-04-4	0.400	100.021	0.5	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1443.1	100.0	
N-Jb3-04-5	0.400	100.021	0.5	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1443.1	100.0	
N-Jb3-04-6	0.400	100.021	0.5	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1443.1	100.0	
Nko-3-B-1	30.000	98.313	7.7	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.299	-0.007	5.9	-100.0	
								G-Nko-3-B	-0.299	0.007	5.9	-100.0	
Nko-3-B-2	30.000	98.313	7.7	0	0	0	0	N-Nko-04-B-2	-0.299	0.007	5.9	-100.0	
								G-Nko-3-B	0.299	-0.007	5.9	-100.0	
N-Nko-04-B-2	0.400	98.681	9.1	0.300	0.000	0	0	Nko-3-B-2	0.300	0.000	438.8	100.0	
* N-Nyl-6-2	6.600	100.000	6.6	14.000	0.544	0	0	Nyl-3-B-2	14.000	0.544	1225.6	99.9	
* N-Rka-6-2	6.600	100.000	2.6	3.350	0.090	0	0	Rka-3-B-2	3.350	0.090	293.2	100.0	
N-Rz1-.06-B-1-1	0.600	99.629	4.8	0	0	0	0	Rz1-.6-B-1	1.750	0.000	1690.2	100.0	
								G-Rz1-.06-B	-1.750	0.000	1690.2	100.0	
N-Rz1-.06-B-1-2	0.600	99.629	4.8	1.750	0.000	0	0	G-Rz1-.06-B	1.750	0.000	1690.2	100.0	
Nta-3-B-1	30.000	100.763	1.7	0	0	2.940	1.424	Nta-.6-B-1	-2.940	-1.424	62.4	90.0	2.000
Nta-10-B-1	110.000	96.032	0.6	0	0	0	0	Nta-.6-B-1	-4.145	0.883	23.2	-97.8	-4.000
								Nta-.6-B-1	-4.145	0.883	23.2	-97.8	-4.000
								B-10-Mku-Nta-2	8.289	-1.765	46.3	-97.8	
Nta-.6-B-1	6.600	99.592	2.6	0	0	0	0	Nta-3-B-1	2.943	1.479	289.3	89.4	
								Nta-10-B-1	4.154	-0.739	370.6	-98.5	
								Nta-10-B-1	4.154	-0.739	370.6	-98.5	
								Nta-.6-B-3	-11.250	0.000	988.2	100.0	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Nta-6-B-2	6.600	99.592	2.6	11.250	0.000	0	0	Nta-6-B-3	11.250	0.000	988.2	100.0	
Nta-6-B-3	6.600	99.592	2.6	0	0	0	0	Nta-6-B-1	11.250	0.000	988.2	100.0	
								Nta-6-B-2	-11.250	0.000	988.2	100.0	
NtB-3-B1	30.000	97.932	-1.5	0	0	0	0	G-NtB-3-B	0.000	0.000	0.0	0.0	
Nte-3-B-1	30.000	98.921	2.7	0	0	1.275	0.617	Nte-10-B-1	-1.275	-0.617	27.6	90.0	
Nte-10-B-1	110.000	96.543	3.3	0	0	0	0	Nte-3-B-1	1.276	0.635	7.7	89.5	-3.000
								B-10-Kbo/Nte-2	3.015	-10.520	59.5	-27.6	
								B-10-Mr2/Nte-2	-5.260	0.879	29.0	-98.6	
								B-10-Bga-Nte-2	0.969	9.006	49.2	10.7	
Ny1-10-B-1	110.000	99.843	1.7	0	0	0	0	Ny1-3-B-1	-13.974	0.648	73.5	-99.9	
								B-10-Kli-Ny1-2	13.974	-0.648	73.5	-99.9	
Ny1-3-B-1	30.000	99.820	3.7	0	0	0	0	Ny1-10-B-1	13.984	-0.157	269.6	100.0	
								G-Ny1-3-B	-13.984	0.157	269.6	100.0	
Ny1-3-B-2	30.000	99.820	3.7	0	0	0	0	N-Ny1-6-2	-13.984	0.157	269.6	100.0	
								G-Ny1-3-B	13.984	-0.157	269.6	100.0	
Rba-3-B-1	30.000	99.513	-1.1	0	0	1.289	0.624	Rba-20-B-1	-1.289	-0.624	27.7	90.0	
Rba-20-B-1	220.000	100.123	-0.5	0	0	0	0	Rba-3-B-1	1.290	0.641	3.8	89.5	
								B-20-Bwi-Rba-2D	-2.193	-3.099	10.0	57.8	
								B-20-Rba-Sha-1	0.903	2.458	6.9	34.5	
Rka5-6-B	6.600	99.977	2.3	1.500	0.000	0	0	Rka5-3-B	1.500	0.000	131.2	100.0	
Rka5-3-B	30.000	99.749	1.0	0	0	0	0	Rka5-6-B	-1.496	0.032	28.9	-100.0	
								G-Rka5-3-B	1.496	-0.032	28.9	-100.0	
Rka-3-B-1	30.000	99.749	1.0	0	0	3.186	1.543	Rka-10-B-1	1.325	-0.425	26.9	-95.2	
								Rka-10-B-1	1.325	-0.425	26.9	-95.2	
								G-Rka-3-B	-3.343	0.003	64.5	100.0	
								G-Rka5-3-B	-1.496	0.032	28.9	-100.0	
								G-Mus-3-B	-0.997	-0.728	23.8	80.8	
Rka-3-B-2	30.000	99.749	1.0	0	0	0	0	N-Rka-6-2	-3.343	0.003	64.5	100.0	
								G-Rka-3-B	3.343	-0.003	64.5	100.0	
Rka-10-B-1	110.000	98.993	0.5	0	0	0	0	Rka-3-B-1	-1.325	0.438	7.4	-94.9	-1.000
								Rka-3-B-1	-1.325	0.438	7.4	-94.9	-1.000
								B-10-Kli-Rka-2	-5.186	0.188	27.5	-99.9	
								B-10-Hye-Rka-2	7.835	-1.064	41.9	-99.1	
Rlm-3-B-1	30.000	99.253	-1.8	0	0	6.906	3.345	Rlm-10-B-1	-6.906	-3.345	148.8	90.0	
Rlm-10-B-1	110.000	99.147	-0.8	0	0	0	0	Rlm-3-B-1	6.910	3.494	41.0	89.2	-1.000
								Rlm-20-B-1	-6.910	-3.494	41.0	89.2	
Rlm-20-B-1	220.000	99.456	-0.4	0	0	0	0	Rlm-10-B-1	6.911	3.545	20.5	89.0	
								B-20-Sha-Rlm-2D	-1.987	-4.233	12.3	42.5	
								B-20-Rlm-Rwa-1D	-4.924	0.688	13.1	-99.0	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Rln-3-B-1	30.000	95.458	-1.7	0	0	2.668	1.292	Rln-10-B-1	-2.668	-1.292	59.8	90.0	
Rln-10-B-1	110.000	96.213	-0.9	0	0	0	0	Rln-3-B-1	2.671	1.340	16.3	89.4	
								10-Gfu/Jb1/Rln-B	-5.448	-1.110	30.3	98.0	
								B-10-Nga-Rln-2	2.777	-0.230	15.2	-99.7	
Rwa-3-B-1	30.000	99.099	-0.8	0	0	3.148	1.525	Rwa-20-B-1	-3.148	-1.525	67.9	90.0	
								G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-3-B-2	30.000	99.099	-0.8	0	0	0	0	G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-20-B-1	220.000	99.437	-0.4	0	0	0	0	Rwa-3-B-1	3.149	1.551	9.3	89.7	
								B-20-Rlm-Rwa-2D	4.924	-7.644	24.0	-54.2	
								B-20-Kgo-Rwa-2	-8.073	6.093	26.7	-79.8	
Rwi-1-B-1	15.000	99.377	-2.5	0	0	2.868	1.389	Rwi-10-B-1	-2.868	-1.389	123.4	90.0	
								C-Rwi-B-1	0.000	0.000	0.0	0.0	
Rwi-10-B-1	110.000	95.149	-1.7	0	0	0	0	Rwi-1-B-1	2.870	1.440	17.7	89.4	-5.000
								B-10-Kba-Rwi-2	-2.870	-1.440	17.7	89.4	
Rz1-6-B-1	6.600	99.366	3.4	0	0	0	0	N-Rz1-.06-B-1-1	-1.745	0.044	153.7	-100.0	
								B-6-Mr1-Rz1-2	1.745	-0.044	153.7	-100.0	
Rz2-6-B-1-1	6.600	96.896	6.5	0	0	0	0	Rz2-10-B-1	6.375	0.000	575.5	100.0	
								G-Rz2-.6-B	-6.375	0.000	575.5	100.0	
Rz2-6-B-1-2	6.600	96.896	6.5	6.375	0.000	0	0	G-Rz2-.6-B	6.375	0.000	575.5	100.0	
Rz2-10-B-1	110.000	96.764	3.8	0	0	0	0	Rz2-6-B-1-1	-6.359	0.303	34.5	-99.9	
								B-10-Mr2-Rz2-2	6.359	-0.303	34.5	-99.9	
Sha-3-B-1	30.000	100.183	-2.1	0	0	7.023	3.401	Sha-10-B-1	-7.023	-3.401	149.9	90.0	
Sha-10-B-1	110.000	99.064	-1.1	0	0	0	0	Sha-3-B-1	7.026	3.553	41.7	89.2	-2.000
								Sha-20-B-1	-29.800	-55.459	333.6	47.3	
								B-10-Bre-Sha-2D	22.774	51.906	300.3	40.2	
Sha-20-B-1	220.000	99.402	-0.4	0	0	0	0	Sha-10-B-1	29.838	57.141	170.2	46.3	-2.000
								B-20-Sha-Rlm-1D	1.988	-12.151	32.5	-16.1	
								B-20-Rba-Sha-2	-0.888	-16.629	44.0	5.3	
								B-20-Mra-Sha-2D	-30.938	-28.362	110.8	73.7	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cyi/Nko-B	30.000	101.600	11.3	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.297	-0.004	5.6	100.0	
								3-Cyi-Ghi-B	0.892	-0.005	16.9	100.0	
								B-3-Nko-Cyi/Nko-1	-0.595	0.009	11.3	-100.0	
3-Cyi-Ghi-B	30.000	101.488	11.2	0	0	0	0	B-3-Cyi-Ghi-2	0.000	-0.082	1.6	0.0	
								3-Cyi/Nko-B	-0.891	-0.003	16.9	100.0	
								3-Kro/Kbu-B	0.891	0.085	17.0	99.6	
3-Kro/Kbu-B	30.000	100.230	10.4	0	0	0	0	B-3-Kbu-Kro-2	0.000	-0.029	0.6	0.0	
								B-3-Kbu-Kro/Nko-2	0.882	0.184	17.3	97.9	
								3-Cyi-Ghi-B	-0.882	-0.155	17.2	98.5	
10-Bre/Gso/Msh-B	110.000	97.488	0.4	0	0	0	0	B-10-Bre-Gso-1	9.725	-16.373	102.5	-51.1	
								B-10-Gso-Msh-2	23.228	8.802	133.7	93.5	
								Gso-10-B-1	-32.952	7.571	182.0	-97.5	
10-Gfu/Jb1/Rln-B	110.000	96.682	0.0	0	0	0	0	10-Gfu/Mku/Rln-B	-9.102	3.660	53.3	-92.8	
								B-10-Jb1-Rln-2	2.784	-4.963	30.9	-48.9	
								Rln-10-B-1	6.318	1.302	35.0	97.9	
10-Gfu/Mku/Rln-B	110.000	96.727	0.6	0	0	0	0	B-10-Gfu-Mku-2	-11.897	4.574	69.2	-93.3	
								10-Gfu/Jb1/Rln-B	9.142	-4.121	54.4	-91.2	
								Gfu-10-B-1	2.755	-0.453	15.1	-98.7	
10-Gko/Kgo/MKi-B	110.000	96.312	-0.6	0	0	0	0	B-10-Gko-MKi-1	-5.294	-5.228	40.5	71.2	
								B-10-Kgo-MKi-2	-21.786	-8.812	128.1	92.7	
								MKi-10-B-1	27.080	14.040	166.2	88.8	
10-Kba/Msh/Rwi-B	110.000	95.498	-0.8	0	0	0	0	B-10-Kba-Msh-2	-8.604	-2.300	48.9	96.6	
								B-10-Kba-Rwi-2	2.886	1.226	17.2	92.0	
								Kba-10-B-1	5.718	1.074	32.0	98.3	
10-Kbo/Kro/Mr2-B	110.000	99.023	6.2	0	0	0	0	10-Kbo/Nte-B	-11.108	6.555	68.4	-86.1	
								B-10-Kbo-Kro-1	9.834	-7.205	64.6	-80.7	
								Kbo-10-B-1	1.275	0.650	7.6	89.1	
10-Kbo/Nte-B	110.000	98.788	6.7	0	0	0	0	10-Kbo/Kro/Mr2-B	11.152	-7.090	70.2	-84.4	
								B-10-Kbo/Nte-2	-11.152	7.090	70.2	-84.4	
10-Mr2/Nte-B	110.000	98.796	6.8	0	0	0	0	B-10-Mr2/Nte-1	-13.257	1.193	70.7	-99.6	
								B-10-Mr2/Nte-2	13.257	-1.193	70.7	-99.6	
* 20-Mra-B	220.000	100.000	0.0	0.686	0.238	0	0	B-20-Mra-Sha-2D	0.686	0.238	1.9	94.5	
B-1-Jb1-Jb3-1	15.000	99.420	-1.2	0	0	0	0	B-1-Jb1-Jb3-2	-5.945	0.267	230.4	-99.9	
								Jb1-1-B-1	5.945	-0.267	230.4	-99.9	
B-1-Jb1-Jb3-2	15.000	99.635	-1.0	0	0	0	0	B-1-Jb1-Jb3-1	5.959	-0.245	230.4	-99.9	
								Jb3-1-B-1	-5.959	0.245	230.4	-99.9	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-1-Kbu-KbW-1F_T	11.000	99.427	9.1	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.143	2.113	1279.4	-99.6	
								Kbu-1-B-1	24.143	-2.113	1279.4	-99.6	
B-1-Kbu-KbW-2F_T	11.000	102.562	14.2	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1279.4	100.0	
								KbW-1-B-2	-25.000	0.000	1279.4	100.0	
B-3-Cyi-Cyi/Nko-1	30.000	101.657	11.4	0	0	0	0	3-Cyi/Nko-B	0.297	-0.010	5.6	-99.9	
								Cyi-3-B-1	-0.297	0.010	5.6	-99.9	
B-3-Cyi-Ghi-2	30.000	101.558	11.2	0	0	0	0	3-Cyi-Ghi-B	0.000	0.000	0.0	0.0	
B-3-Kbu-Kro/Nko-2	30.000	99.999	10.2	0	0	0	0	3-Kro/Kbu-B	-0.880	-0.196	17.3	97.6	
								Kbu-3-B-1	0.880	0.196	17.3	97.6	
B-3-Kbu-Kro-2	30.000	100.239	10.4	0	0	0	0	3-Kro/Kbu-B	0.000	0.000	0.0	0.0	
B-3-Nko-Cyi/Nko-1	30.000	101.747	11.5	0	0	0	0	3-Cyi/Nko-B	0.596	-0.027	11.3	-99.9	
								Nko-3-B-1	-0.596	0.027	11.3	-99.9	
B-10-Bga-Gsh-1	110.000	98.234	6.9	0	0	0	0	B-10-Bga-Gsh-2	-14.910	-2.995	81.3	98.0	
								Bga-10-B-1	14.910	2.995	81.3	98.0	
B-10-Bga-Gsh-2	110.000	98.682	7.2	0	0	0	0	B-10-Bga-Gsh-1	14.960	2.789	80.9	98.3	
								Gsh-10-B	-14.960	-2.789	80.9	98.3	
B-10-Bga-Nte-1	110.000	98.234	6.9	0	0	0	0	B-10-Bga-Nte-2	-0.805	-5.899	31.8	13.5	
								Bga-10-B-1	0.805	5.899	31.8	13.5	
B-10-Bga-Nte-2	110.000	98.785	6.8	0	0	0	0	B-10-Bga-Nte-1	0.819	5.280	28.4	15.3	
								Nte-10-B-1	-0.819	-5.280	28.4	15.3	
B-10-Bre-Gso-1	110.000	98.257	-0.3	0	0	0	0	10-Bre/Gso/Msh-B	-9.606	16.157	100.4	-51.1	
								Bre-10-B-1	9.606	-16.157	100.4	-51.1	
B-10-Bre-Jb1-1	110.000	98.257	-0.3	0	0	0	0	B-10-Bre-Jb1-2	14.626	32.799	191.8	40.7	
								Bre-10-B-1	-14.626	-32.799	191.8	40.7	
B-10-Bre-Jb1-2	110.000	97.051	-0.3	0	0	0	0	B-10-Bre-Jb1-1	-14.433	-32.609	192.9	40.5	
								Jb1-10-B-1	14.433	32.609	192.9	40.5	
B-10-Bre-Sha-1D	110.000	98.257	-0.3	0	0	0	0	B-10-Bre-Sha-2D	-14.756	-53.976	298.9	26.4	
								Bre-10-B-1	14.756	53.976	298.9	26.4	
B-10-Bre-Sha-2D	110.000	99.202	-0.4	0	0	0	0	B-10-Bre-Sha-1D	15.022	53.906	296.1	26.8	
								Sha-10-B-1	-15.022	-53.906	296.1	26.8	
B-10-Bta-Hye-1	110.000	98.798	1.8	0	0	0	0	B-10-Bta-Hye-2	-8.336	1.901	45.4	-97.5	
								Bta-10-B-1	8.336	-1.901	45.4	-97.5	
B-10-Bta-Hye-2	110.000	98.948	2.2	0	0	0	0	B-10-Bta-Hye-1	8.365	-2.402	46.2	-96.1	
								Hye-10-B-1	-8.365	2.402	46.2	-96.1	
B-10-Bta-Kgo-1	110.000	98.798	1.8	0	0	0	0	B-10-Bta-Kgo-2	5.186	-3.478	33.2	-83.0	
								Bta-10-B-1	-5.186	3.478	33.2	-83.0	
B-10-Bta-Kgo-2	110.000	98.864	1.2	0	0	0	0	B-10-Bta-Kgo-1	-5.157	2.367	30.1	-90.9	
								Kgo-10-B-1	5.157	-2.367	30.1	-90.9	
B-10-Gfu-Mku-2	110.000	96.805	1.2	0	0	0	0	10-Gfu/Mku/Rln-B	11.958	-4.941	70.2	-92.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-10-B-1	-11.958	4.941	70.2	-92.4	
B-10-Gha-MKi-1	110.000	95.881	-0.8	0	0	0	0	B-10-Gha-MKi-2	-13.867	-6.608	84.1	90.3	
								Gha-10-B-1	13.867	6.608	84.1	90.3	
B-10-Gha-MKi-2	110.000	96.312	-0.6	0	0	0	0	B-10-Gha-MKi-1	13.906	6.476	83.6	90.7	
								MKi-10-B-1	-13.906	-6.476	83.6	90.7	
B-10-Gha-Nde-1	110.000	95.881	-0.8	0	0	0	0	B-10-Gha-Nde-2	6.991	3.131	41.9	91.3	
								Gha-10-B-1	-6.991	-3.131	41.9	91.3	
B-10-Gha-Nde-2	110.000	95.462	-1.0	0	0	0	0	B-10-Gha-Nde-1	-6.972	-3.494	42.9	89.4	
								Nde-10-B-1	6.972	3.494	42.9	89.4	
B-10-Gko-Jb1-1	110.000	96.451	-0.6	0	0	0	0	B-10-Gko-Jb1-2	-18.310	-11.803	118.5	84.1	
								Gko-10-B-1	18.310	11.803	118.5	84.1	
B-10-Gko-Jb1-2	110.000	97.051	-0.3	0	0	0	0	B-10-Gko-Jb1-1	18.365	11.693	117.7	84.4	
								Jb1-10-B-1	-18.365	-11.693	117.7	84.4	
B-10-Gko-MKi-1	110.000	96.451	-0.6	0	0	0	0	10-Gko/Kgo/MKi-B	5.298	5.078	39.9	72.2	
								Gko-10-B-1	-5.298	-5.078	39.9	72.2	
B-10-Gso-Msh-2	110.000	96.138	-0.4	0	0	0	0	10-Bre/Gso/Msh-B	-23.020	-8.826	134.6	93.4	
								Msh-10-B-1	23.020	8.826	134.6	93.4	
B-10-Gso-Nde-1	110.000	97.488	0.4	0	0	0	0	B-10-Gso-Nde-2	0.000	-0.180	1.0	0.0	
								Gso-10-B-1	0.000	0.180	1.0	0.0	
B-10-Gso-Nde-2	110.000	97.490	0.4	0	0	0	0	B-10-Gso-Nde-1	0.000	0.000	0.0	0.0	
B-10-Hye-Rka-1	110.000	98.948	2.2	0	0	0	0	B-10-Hye-Rka-2	-11.525	0.823	61.3	-99.7	
								Hye-10-B-1	11.525	-0.823	61.3	-99.7	
B-10-Hye-Rka-2	110.000	99.347	2.8	0	0	0	0	B-10-Hye-Rka-1	11.583	-1.332	61.6	-99.3	
								Rka-10-B-1	-11.583	1.332	61.6	-99.3	
B-10-Jb1-Jb2-1	110.000	97.051	-0.3	0	0	0	0	B-10-Jb1-Jb2-2	-23.884	2.018	129.6	-99.6	
								Jb1-10-B-1	23.884	-2.018	129.6	-99.6	
B-10-Jb1-Jb2-2	110.000	97.078	-0.2	0	0	0	0	B-10-Jb1-Jb2-1	23.893	-2.029	129.6	-99.6	
								Jb2-10-B-1	-23.893	2.029	129.6	-99.6	
B-10-Jb1-Nbg-1	110.000	97.051	-0.3	0	0	0	0	B-10-Jb1-Nbg-2	15.879	7.983	96.1	89.3	
								Jb1-10-B-1	-15.879	-7.983	96.1	89.3	
B-10-Jb1-Nbg-2	110.000	96.550	-0.5	0	0	0	0	B-10-Jb1-Nbg-1	-15.828	-8.092	96.6	89.0	
								Nbg-10-B-1	15.828	8.092	96.6	89.0	
B-10-Jb1-Rln-2	110.000	97.051	-0.3	0	0	0	0	10-Gfu/Jb1/Rln-B	-2.767	4.235	27.4	-54.7	
								Jb1-10-B-1	2.767	-4.235	27.4	-54.7	
B-10-Kba-Kre-1	110.000	95.498	-0.8	0	0	0	0	B-10-Kba-Kre-2	2.856	-0.394	15.8	-99.1	
								Kba-10-B-1	-2.856	0.394	15.8	-99.1	
B-10-Kba-Kre-2	110.000	95.311	-1.1	0	0	0	0	B-10-Kba-Kre-1	-2.850	-0.441	15.9	98.8	
								Kre-10-B-1	2.850	0.441	15.9	98.8	
B-10-Kba-Msh-2	110.000	96.138	-0.4	0	0	0	0	10-Kba/Msh/Rwi-B	8.645	1.717	48.1	98.1	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Msh-10-B-1	-8.645	-1.717	48.1	98.1	
B-10-Kba-Rwi-2	110.000	95.402	-0.9	0	0	0	0	10-Kba/Msh/Rwi-B	-2.884	-1.447	17.8	89.4	
								Rwi-10-B-1	2.884	1.447	17.8	89.4	
B-10-Kbo/Nte-2	110.000	98.785	6.8	0	0	0	0	10-Kbo/Nte-B	11.154	-7.100	70.3	-84.4	
								Nte-10-B-1	-11.154	7.100	70.3	-84.4	
B-10-Kbo-Kro-1	110.000	99.530	5.1	0	0	0	0	10-Kbo/Kro/Mr2-B	-9.762	6.084	60.7	-84.9	
								Kro-10-B-1	9.762	-6.084	60.7	-84.9	
B-10-Kbu-Kro-1	110.000	99.752	5.8	0	0	0	0	B-10-Kbu-Kro-2	24.946	-3.416	132.5	-99.1	
								Kbu-10-B-1	-24.946	3.416	132.5	-99.1	
B-10-Kbu-Kro-2	110.000	99.530	5.1	0	0	0	0	B-10-Kbu-Kro-1	-24.851	3.300	132.2	-99.1	
								Kro-10-B-1	24.851	-3.300	132.2	-99.1	
B-10-Kgo-Kli-1	110.000	98.864	1.2	0	0	0	0	B-10-Kgo-Kli-2	-29.206	4.461	156.9	-98.9	
								Kgo-10-B-1	29.206	-4.461	156.9	-98.9	
B-10-Kgo-Kli-2	110.000	99.440	3.1	0	0	0	0	B-10-Kgo-Kli-1	29.524	-4.452	157.6	-98.9	
								Kli-10-B-1	-29.524	4.452	157.6	-98.9	
B-10-Kgo-MKi-2	110.000	98.864	1.2	0	0	0	0	10-Gko/Kgo/MKi-B	22.091	8.380	125.4	93.5	
								Kgo-10-B-1	-22.091	-8.380	125.4	93.5	
B-10-Kli-Kro-1	110.000	99.530	5.1	0	0	0	0	B-10-Kli-Kro-2	33.327	-10.040	183.5	-95.7	
								Kro-10-B-1	-33.327	10.040	183.5	-95.7	
B-10-Kli-Kro-2	110.000	99.440	3.1	0	0	0	0	B-10-Kli-Kro-1	-32.934	10.348	182.2	-95.4	
								Kli-10-B-1	32.934	-10.348	182.2	-95.4	
B-10-Kli-Ny1-1	110.000	99.440	3.1	0	0	0	0	B-10-Kli-Ny1-2	-27.524	3.700	146.6	-99.1	
								Kli-10-B-1	27.524	-3.700	146.6	-99.1	
B-10-Kli-Ny1-2	110.000	100.394	4.7	0	0	0	0	B-10-Kli-Ny1-1	27.894	-3.655	147.1	-99.2	
								Ny1-10-B-1	-27.894	3.655	147.1	-99.2	
B-10-Kli-Rka-1	110.000	99.440	3.1	0	0	0	0	B-10-Kli-Rka-2	3.105	-1.127	17.4	-94.0	
								Kli-10-B-1	-3.105	1.127	17.4	-94.0	
B-10-Kli-Rka-2	110.000	99.347	2.8	0	0	0	0	B-10-Kli-Rka-1	-3.099	0.297	16.4	-99.5	
								Rka-10-B-1	3.099	-0.297	16.4	-99.5	
B-10-MKi-Nbg-1	110.000	96.550	-0.5	0	0	0	0	B-10-MKi-Nbg-2	8.974	4.656	55.0	88.8	
								Nbg-10-B-1	-8.974	-4.656	55.0	88.8	
B-10-MKi-Nbg-2	110.000	96.312	-0.6	0	0	0	0	B-10-MKi-Nbg-1	-8.960	-4.801	55.4	88.1	
								MKi-10-B-1	8.960	4.801	55.4	88.1	
B-10-Mku-Nbi-1	110.000	96.805	1.2	0	0	0	0	B-B-10-Mku-Nbi-1-2	1.281	0.004	6.9	100.0	
								Mku-10-B-1	-1.281	-0.004	6.9	100.0	
B-10-Mku-Nta-1	110.000	96.805	1.2	0	0	0	0	B-10-Mku-Nta-2	-8.268	0.967	45.1	-99.3	
								Mku-10-B-1	8.268	-0.967	45.1	-99.3	
B-10-Mku-Nta-2	110.000	96.956	1.8	0	0	0	0	B-10-Mku-Nta-1	8.294	-1.764	45.9	-97.8	
								Nta-10-B-1	-8.294	1.764	45.9	-97.8	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Mr1-Mr2-1	110.000	99.017	7.4	0	0	0	0	B-10-Mr1-Mr2-2	0.657	-1.709	9.7	-35.9	
								Mr1-10-B-1	-0.657	1.709	9.7	-35.9	
B-10-Mr1-Mr2-2	110.000	99.019	7.4	0	0	0	0	B-10-Mr1-Mr2-1	-0.657	1.697	9.6	-36.1	
								Mr2-10-B-2	0.657	-1.697	9.6	-36.1	
B-10-Mr2/Nte-1	110.000	99.019	7.4	0	0	0	0	10-Mr2/Nte-B	13.302	-1.709	71.1	-99.2	
								Mr2-10-B-2	-13.302	1.709	71.1	-99.2	
B-10-Mr2/Nte-2	110.000	98.785	6.8	0	0	0	0	10-Mr2/Nte-B	-13.256	1.182	70.7	-99.6	
								Nte-10-B-1	13.256	-1.182	70.7	-99.6	
B-10-Mr2-Rz2-1	110.000	99.019	7.4	0	0	0	0	B-10-Mr2-Rz2-2	-12.645	0.011	67.0	100.0	
								Mr2-10-B-1	12.645	-0.011	67.0	100.0	
B-10-Mr2-Rz2-2	110.000	99.361	7.8	0	0	0	0	B-10-Mr2-Rz2-1	12.690	-0.328	67.1	-100.0	
								Rz2-10-B-1	-12.690	0.328	67.1	-100.0	
B-10-Msh-Nga-1	110.000	96.138	-0.4	0	0	0	0	B-10-Msh-Nga-2	-0.735	-0.952	6.6	61.1	
								Msh-10-B-1	0.735	0.952	6.6	61.1	
B-10-Msh-Nga-2	110.000	96.269	-0.3	0	0	0	0	B-10-Msh-Nga-1	0.736	-0.328	4.4	-91.4	
								Nga-10-B-1	-0.736	0.328	4.4	-91.4	
B-10-Nga-Rln-1	110.000	96.269	-0.3	0	0	0	0	B-10-Nga-Rln-2	-3.612	-1.116	20.6	95.5	
								Nga-10-B-1	3.612	1.116	20.6	95.5	
B-10-Nga-Rln-2	110.000	96.682	0.0	0	0	0	0	B-10-Nga-Rln-1	3.624	-0.050	19.7	100.0	
								Rln-10-B-1	-3.624	0.050	19.7	100.0	
B-20-Bwi-KbW-1	220.000	100.383	0.3	0	0	0	0	B-20-Bwi-KbW-2	0.000	-0.502	1.3	0.0	
								Bwi-20-B-1	0.000	0.502	1.3	0.0	
B-20-Bwi-KbW-2	220.000	100.384	0.3	0	0	0	0	B-20-Bwi-KbW-1	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
B-20-Bwi-Rba-1D	220.000	100.383	0.3	0	0	0	0	B-20-Bwi-Rba-2D	7.784	-13.614	41.0	-49.6	
								Bwi-20-B-1	-7.784	13.614	41.0	-49.6	
B-20-Bwi-Rba-2D	220.000	100.431	0.2	0	0	0	0	B-20-Bwi-Rba-1D	-7.781	-3.303	22.1	92.0	
								Rba-20-B-1	7.781	3.303	22.1	92.0	
B-20-Kgo-Kli-1	220.000	99.761	0.4	0	0	0	0	B-20-Kgo-Kli-2	-17.400	-11.428	54.8	83.6	
								Kgo-20-B-1	17.400	11.428	54.8	83.6	
B-20-Kgo-Kli-2	220.000	99.959	0.5	0	0	0	0	B-20-Kgo-Kli-1	17.413	8.705	51.1	89.4	
								Kli-20-B-1	-17.413	-8.705	51.1	89.4	
B-20-Kgo-Rwa-1	220.000	99.761	0.4	0	0	0	0	B-20-Kgo-Rwa-2	25.116	-6.712	68.4	-96.6	
								Kgo-20-B-1	-25.116	6.712	68.4	-96.6	
B-20-Kgo-Rwa-2	220.000	99.764	0.3	0	0	0	0	B-20-Kgo-Rwa-1	-25.102	4.913	67.3	-98.1	
								Rwa-20-B-1	25.102	-4.913	67.3	-98.1	
B-20-Kli-Bwi-1	220.000	100.383	0.3	0	0	0	0	B-20-Kli-Bwi-2	-9.080	13.472	42.5	-55.9	
								Bwi-20-B-1	9.080	-13.472	42.5	-55.9	
B-20-Kli-Bwi-2	220.000	99.959	0.5	0	0	0	0	B-20-Kli-Bwi-1	9.103	-19.155	55.7	-42.9	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Kli-20-B-1	-9.103	19.155	55.7	-42.9	
B-20-Mra-Sha-2D	220.000	99.606	0.0	0	0	0	0	20-Mra-B	-0.671	-28.840	76.0	2.3	
								Sha-20-B-1	0.671	28.840	76.0	2.3	
B-20-Rba-Sha-1	220.000	100.431	0.2	0	0	0	0	B-20-Rba-Sha-2	6.484	2.658	18.3	92.5	
								Rba-20-B-1	-6.484	-2.658	18.3	92.5	
B-20-Rba-Sha-2	220.000	99.606	0.0	0	0	0	0	B-20-Rba-Sha-1	-6.462	-16.870	47.6	35.8	
								Sha-20-B-1	6.462	16.870	47.6	35.8	
B-20-Rlm-Rwa-1D	220.000	99.746	0.2	0	0	0	0	B-20-Rlm-Rwa-2D	-21.926	-0.497	57.7	100.0	
								Rlm-20-B-1	21.926	0.497	57.7	100.0	
B-20-Rlm-Rwa-2D	220.000	99.764	0.3	0	0	0	0	B-20-Rlm-Rwa-1D	21.934	-6.473	60.2	-95.9	
								Rwa-20-B-1	-21.934	6.473	60.2	-95.9	
B-20-Sha-Rlm-1D	220.000	99.606	0.0	0	0	0	0	B-20-Sha-Rlm-2D	-14.969	-13.363	52.9	74.6	
								Sha-20-B-1	14.969	13.363	52.9	74.6	
B-20-Sha-Rlm-2D	220.000	99.746	0.2	0	0	0	0	B-20-Sha-Rlm-1D	14.979	-3.066	40.2	-98.0	
								Rlm-20-B-1	-14.979	3.066	40.2	-98.0	
B-6-Mr1-Rz1-1	6.600	99.311	7.8	0	0	0	0	B-6-Mr1-Rz1-2	-3.448	0.222	304.3	-99.8	
								Mr1-6-B-1	3.448	-0.222	304.3	-99.8	
B-6-Mr1-Rz1-2	6.600	100.153	8.7	0	0	0	0	B-6-Mr1-Rz1-1	3.480	-0.172	304.3	-99.9	
								Rz1-6-B-1	-3.480	0.172	304.3	-99.9	
B-B-10-Mku-Nbi-1-2	110.000	96.715	1.1	0	0	0	0	B-10-Mku-Nbi-1	-1.280	-0.637	7.8	89.5	
								Nbi-10-B-1	1.280	0.637	7.8	89.5	
Bga-3-B-1	30.000	98.766	3.2	0	0	15.686	7.597	Bga-10-B-1	-15.686	-7.597	339.6	90.0	
Bga-10-B-1	110.000	98.234	6.9	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	15.715	8.894	96.5	87.0	-4.000
								B-10-Bga-Nte-1	-0.805	-5.899	31.8	13.5	
								B-10-Bga-Gsh-1	-14.910	-2.995	81.3	98.0	
Bga-6-B-1	6.600	98.234	6.9	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
Bre-1-B-1	15.000	98.870	-1.7	0	0	9.722	4.709	Bre-10-B-1	-4.861	-2.354	210.3	90.0	
								Bre-10-B-1	-4.861	-2.354	210.3	90.0	
Bre-10-B-1	110.000	98.257	-0.3	0	0	0	0	Bre-1-B-1	4.868	2.510	29.3	88.9	-2.000
								Bre-1-B-1	4.868	2.510	29.3	88.9	-2.000
								B-10-Bre-Jb1-1	14.626	32.799	191.8	40.7	
								B-10-Bre-Sha-1D	-14.756	-53.976	298.9	26.4	
								B-10-Bre-Gso-1	-9.606	16.157	100.4	-51.1	
Bta-3-B-1	30.000	99.117	1.0	0	0	3.149	1.525	Bta-10-B-1	-3.149	-1.525	67.9	90.0	
Bta-10-B-1	110.000	98.798	1.8	0	0	0	0	Bta-3-B-1	3.150	1.577	18.7	89.4	-1.000
								B-10-Bta-Kgo-1	5.186	-3.478	33.2	-83.0	
								B-10-Bta-Hye-1	-8.336	1.901	45.4	-97.5	
Bwi-3-B-1	30.000	99.771	-0.3	0	0	1.295	0.627	Bwi-20-B-1	-1.295	-0.627	27.7	90.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bwi-10-B-1	110.000	100.383	0.3	0	0	0	0	Bwi-20-B-1	0.000	0.000	0.0	0.0	
Bwi-20-B-1	220.000	100.383	0.3	0	0	0	0	Bwi-10-B-1	0.000	0.000	0.0	0.0	
								Bwi-3-B-1	1.296	0.644	3.8	89.5	
								B-20-Bwi-Rba-1D	7.784	-13.614	41.0	-49.6	
								B-20-Kli-Bwi-1	-9.080	13.472	42.5	-55.9	
								B-20-Bwi-KbW-1	0.000	-0.502	1.3	0.0	
C-Gfu-B-3	30.000	96.945	-1.4	0	0	0.000	-1.880	Gfu-3-B-1	0.000	1.880	37.3	0.0	
C-Kre-B	30.000	98.999	-1.9	0	0	0.000	-0.980	Kre-3-B-1	0.000	0.980	19.1	0.0	
C-Msh-1-B	15.000	95.929	-2.6	0	0	0	0	Msh-1-B-1	0.000	0.000	0.0	0.0	
C-Rwi-B-1	15.000	99.642	-1.7	0	0	0	0	Rwi-1-B-1	0.000	0.000	0.0	0.0	
Cyi-3-B-1	30.000	101.657	11.4	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.297	-0.010	5.6	-99.9	
								G-Cyi-3-B	-0.297	0.010	5.6	-99.9	
Cyi-3-B-2	30.000	101.657	11.4	0	0	0	0	N-Cyi-04-1	-0.297	0.010	5.6	-99.9	
								G-Cyi-3-B	0.297	-0.010	5.6	-99.9	
G-Cyi-3-B	30.000	101.657	11.4	0	0	0	0	Cyi-3-B-1	0.297	-0.010	5.6	-99.9	
								Cyi-3-B-2	-0.297	0.010	5.6	-99.9	
Gfu-3-B-1	30.000	96.945	-1.4	0	0	2.743	1.328	Gfu-10-B-1	-2.743	0.551	55.5	-98.0	
								C-Gfu-B-3	0.000	-1.880	37.3	0.0	
Gfu-10-B-1	110.000	96.727	0.6	0	0	0	0	Gfu-3-B-1	2.755	-0.453	15.1	-98.7	
								10-Gfu/Mku/Rln-B	-2.755	0.453	15.1	-98.7	
G-Gko-1-B	15.000	98.997	-2.1	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-1-B-2	0.000	0.000	0.0	0.0	
G-Gko-3-B	15.000	98.997	-2.1	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-3-B	0.000	0.000	0.0	0.0	
G-Gsh-1-B	11.000	100.000	10.1	0	0	0	0	Gsh-1-B-1	15.000	3.580	809.4	97.3	
								Gsh-1-B-2	-15.000	-3.580	809.4	97.3	
Gha-3-B-1	30.000	98.982	-1.8	0	0	6.872	3.328	Gha-10-B-1	-6.872	-3.328	148.5	90.0	
Gha-10-B-1	110.000	95.881	-0.8	0	0	0	0	Gha-3-B-1	6.876	3.477	42.2	89.2	-4.000
								B-10-Gha-MKi-1	-13.867	-6.608	84.1	90.3	
								B-10-Gha-Nde-1	6.991	3.131	41.9	91.3	
G-Jb2-10-B	110.000	97.078	-0.2	0	0	0	0	Jb2-10-B-1	23.893	-2.029	129.6	-99.6	
								Jb2-10-B-2	-23.893	2.029	129.6	-99.6	
G-Jb3-1-B	15.000	99.635	-1.0	0	0	0	0	Jb3-1-B-1	5.959	-0.245	230.4	-99.9	
								Jb3-1-B-2	-5.959	0.245	230.4	-99.9	
G-KbW-1-B-1	11.000	102.562	14.2	0	0	0	0	KbW-1-B-3	-17.000	0.000	870.0	100.0	
								KbW-1-B-2	17.000	0.000	870.0	100.0	
G-KbW-1-B-2	11.000	102.562	14.2	0	0	0	0	KbW-1-B-1	8.000	0.000	409.4	100.0	
								KbW-1-B-4	-8.000	0.000	409.4	100.0	
G-KbW-1-B-3	220.000	100.384	0.3	0	0	0	0	B-20-Bwi-KbW-2	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								KbW-20-B-2	0.000	0.000	0.0	0.0	
Gko-1-B-1	15.000	98.997	-2.1	0	0	12.989	6.291	Gko-10-B-1	-4.330	-2.097	187.0	90.0	
								Gko-10-B-1	-4.330	-2.097	187.0	90.0	
								Gko-10-B-1	-4.330	-2.097	187.0	90.0	
								G-Gko-1-B	0.000	0.000	0.0	0.0	
								G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-1-B-2	15.000	98.997	-2.1	0	0	0	0	G-Gko-1-B	0.000	0.000	0.0	0.0	
Gko-3-B	15.000	98.997	-2.1	0	0	0	0	G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-10-B-1	110.000	96.451	-0.6	0	0	0	0	Gko-1-B-1	4.337	2.242	26.6	88.8	-4.000
								Gko-1-B-1	4.337	2.242	26.6	88.8	-4.000
								Gko-1-B-1	4.337	2.242	26.6	88.8	-4.000
								B-10-Gko-Jb1-1	-18.310	-11.803	118.5	84.1	
								B-10-Gko-MKi-1	5.298	5.078	39.9	72.2	
G-Kse-1-B	110.000	97.488	0.4	0	0	0	0	Gso-10-B-1	39.906	-4.235	216.1	-99.4	
								Kse-10-B1	-39.906	4.235	216.1	-99.4	
G-Mku-10-B	110.000	96.805	1.2	0	0	0	0	Mku-10-B-1	0.000	0.000	0.0	0.0	
								Mku-10-B-2	0.000	0.000	0.0	0.0	
G-Mku-6-B	6.600	99.076	3.6	0	0	0	0	Mku-6-B-4	12.000	0.000	1059.5	100.0	
								Mku-6-B-2	-12.000	0.000	1059.5	100.0	
G-Mus-3-B	30.000	99.183	4.5	0	0	0	0	Mus-3-B	-1.993	-0.308	39.1	98.8	
								Rka-3-B-1	1.993	0.308	39.1	98.8	
G-Nko-3-B	30.000	101.747	11.5	0	0	0	0	Nko-3-B-1	0.596	-0.027	11.3	-99.9	
								Nko-3-B-2	-0.596	0.027	11.3	-99.9	
G-NtB-3-B	30.000	97.790	0.1	0	0	0	0	Kgo-3-B-1	0.000	0.000	0.0	0.0	
								NtB-3-B1	0.000	0.000	0.0	0.0	
G-Ny1-3-B	30.000	99.882	8.7	0	0	0	0	Ny1-3-B-1	27.938	-1.692	539.3	-99.8	
								Ny1-3-B-2	-27.938	1.692	539.3	-99.8	
G-Rka5-3-B	30.000	99.183	4.5	0	0	0	0	Rka5-3-B	-2.985	-0.156	58.0	99.9	
								Rka-3-B-1	2.985	0.156	58.0	99.9	
G-Rka-3-B	30.000	99.183	4.5	0	0	0	0	Rka-3-B-1	6.671	0.274	129.5	99.9	
								Rka-3-B-2	-6.671	-0.274	129.5	99.9	
G-Rwa-3-B	30.000	99.425	-0.1	0	0	0	0	Rwa-3-B-1	0.000	0.000	0.0	0.0	
								Rwa-3-B-2	0.000	0.000	0.0	0.0	
G-Rz1-.06-B	0.600	100.612	11.5	0	0	0	0	N-Rz1-.06-B-1-1	3.500	0.000	3347.4	100.0	
								N-Rz1-.06-B-1-2	-3.500	0.000	3347.4	100.0	
G-Rz2-.6-B	6.600	100.000	12.9	0	0	0	0	Rz2-.6-B-1-1	12.750	0.813	1117.6	99.8	
								Rz2-.6-B-1-2	-12.750	-0.813	1117.6	99.8	
Gsh-1-B-1	11.000	100.000	10.1	0	0	0	0	Gsh-10-B	7.500	1.790	404.7	97.3	
								Gsh-10-B	7.500	1.790	404.7	97.3	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								G-Gsh-1-B	-15.000	-3.580	809.4	97.3	
* Gsh-1-B-2	11.000	100.000	10.1	15.000	3.580	0	0	G-Gsh-1-B	15.000	3.580	809.4	97.3	
Gsh-10-B	110.000	98.682	7.2	0	0	0	0	Gsh-1-B-1	-7.480	-1.394	40.5	98.3	
								Gsh-1-B-1	-7.480	-1.394	40.5	98.3	
								B-10-Bga-Gsh-2	14.960	2.789	80.9	98.3	
Gso-1-B-1	15.000	99.605	-0.6	0	0	6.950	3.366	Gso-10-B-1	-6.950	-3.366	298.4	90.0	
Gso-10-B-1	110.000	97.488	0.4	0	0	0	0	Gso-1-B-1	6.954	3.516	42.0	89.2	-3.000
								B-10-Gso-Nde-1	0.000	-0.180	1.0	0.0	
								10-Bre/Gso/Msh-B	32.952	-7.571	182.0	-97.5	
								G-Kse-1-B	-39.906	4.235	216.1	-99.4	
Hye-3-B-1	30.000	99.261	1.5	0	0	3.158	1.529	Hye-10-B-1	-3.158	-1.529	68.0	90.0	
Hye-10-B-1	110.000	98.948	2.2	0	0	0	0	Hye-3-B-1	3.160	1.579	18.7	89.5	-1.000
								B-10-Bta-Hye-2	8.365	-2.402	46.2	-96.1	
								B-10-Hye-Rka-1	-11.525	0.823	61.3	-99.7	
Jb1-10-B-1	110.000	97.051	-0.3	0	0	0	0	Jb1-1-B-1	6.840	6.680	51.7	71.5	-4.000
								B-10-Jb1-Jb2-1	-23.884	2.018	129.6	-99.6	
								B-10-Jb1-Rln-2	-2.767	4.235	27.4	-54.7	
								B-10-Bre-Jb1-2	-14.433	-32.609	192.9	40.5	
								B-10-Gko-Jb1-2	18.365	11.693	117.7	84.4	
								B-10-Jb1-Nbg-1	15.879	7.983	96.1	89.3	
Jb1-1-B-1	15.000	99.420	-1.2	0	0	12.781	6.190	Jb1-10-B-1	-6.835	-6.457	364.0	72.7	
								B-1-Jb1-Jb3-1	-5.945	0.267	230.4	-99.9	
Jb2-6-B-1	6.600	99.145	4.6	24.000	0.000	0	0	Jb2-10-B-2	12.000	0.000	1058.8	100.0	
								Jb2-10-B-2	12.000	0.000	1058.8	100.0	
Jb2-10-B-1	110.000	97.078	-0.2	0	0	0	0	B-10-Jb1-Jb2-2	23.893	-2.029	129.6	-99.6	
								G-Jb2-10-B	-23.893	2.029	129.6	-99.6	
Jb2-10-B-2	110.000	97.078	-0.2	0	0	0	0	Jb2-6-B-1	-11.947	1.014	64.8	-99.6	-2.000
								Jb2-6-B-1	-11.947	1.014	64.8	-99.6	-2.000
								G-Jb2-10-B	23.893	-2.029	129.6	-99.6	
Jb3-1-B-1	15.000	99.635	-1.0	0	0	0	0	B-1-Jb1-Jb3-2	5.959	-0.245	230.4	-99.9	
								G-Jb3-1-B	-5.959	0.245	230.4	-99.9	
Jb3-1-B-2	15.000	99.635	-1.0	0	0	0	0	N-Jb3-.04-1	-0.993	0.041	38.4	-99.9	
								N-Jb3-.04-2	-0.993	0.041	38.4	-99.9	
								N-Jb3-.04-3	-0.993	0.041	38.4	-99.9	
								G-Jb3-1-B	5.959	-0.245	230.4	-99.9	
								Jb3-1-B-2d	-2.980	0.123	115.2	-99.9	
Jb3-1-B-2d	15.000	99.635	-1.0	0	0	0	0	N-Jb3-.04-4	-0.993	0.041	38.4	-99.9	
								N-Jb3-.04-5	-0.993	0.041	38.4	-99.9	
								N-Jb3-.04-6	-0.993	0.041	38.4	-99.9	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Jb3-1-B-2	2.980	-0.123	115.2	-99.9	
Kba-3-B-1	30.000	99.152	-2.2	0	0	2.856	1.383	Kba-10-B-1	-2.856	-1.383	61.6	90.0	
Kba-10-B-1	110.000	95.498	-0.8	0	0	0	0	Kba-3-B-1	2.862	1.468	17.7	89.0	-5.000
								10-Kba/Msh/Rwi-B	-5.718	-1.074	32.0	98.3	
								B-10-Kba-Kre-1	2.856	-0.394	15.8	-99.1	
Kbo-3-B-1	30.000	98.795	5.0	0	0	1.272	0.616	Kbo-10-B-1	-1.272	-0.616	27.5	90.0	
Kbo-10-B-1	110.000	99.023	6.2	0	0	0	0	Kbo-3-B-1	1.275	0.650	7.6	89.1	-1.000
								10-Kbo/Kro/Mr2-B	-1.275	-0.650	7.6	89.1	
Kbu-1-B-1	11.000	99.427	9.1	0	0	0	0	Kbu-3-B-1	-0.878	-0.178	47.3	98.0	
								Kbu-10-B-1	12.204	-0.960	646.3	-99.7	
								Kbu-10-B-1	12.817	-0.974	678.6	-99.7	
								B-1-Kbu-KbW-1F_T	-24.143	2.113	1279.4	-99.6	
Kbu-3-B-1	30.000	99.999	10.2	0	0	0	0	Kbu-1-B-1	0.880	0.196	17.3	97.6	
								B-3-Kbu-Kro/Nko-2	-0.880	-0.196	17.3	97.6	
Kbu-10-B-1	110.000	99.752	5.8	0	0	0	0	Kbu-1-B-1	-12.166	1.683	64.6	-99.1	
								Kbu-1-B-1	-12.779	1.733	67.9	-99.1	
								B-10-Kbu-Kro-1	24.946	-3.416	132.5	-99.1	
KbW-1-B-1	11.000	102.562	14.2	0	0	0	0	KbW-1-B-2	8.000	0.000	409.4	100.0	
								G-KbW-1-B-2	-8.000	0.000	409.4	100.0	
KbW-1-B-2	11.000	102.562	14.2	0	0	0	0	KbW-1-B-1	-8.000	0.000	409.4	100.0	
								B-1-Kbu-KbW-2F_T	25.000	0.000	1279.4	100.0	
								G-KbW-1-B-1	-17.000	0.000	870.0	100.0	
KbW-1-B-3	11.000	102.562	14.2	17.000	0.000	0	0	G-KbW-1-B-1	17.000	0.000	870.0	100.0	
KbW-1-B-4	11.000	102.562	14.2	8.000	0.000	0	0	G-KbW-1-B-2	8.000	0.000	409.4	100.0	
KbW-1-B-5	20.000	100.384	0.3	0	0	0	0	KbW-20-B-2	0.000	0.000	0.0	0.0	
KbW-20-B-2	220.000	100.384	0.3	0	0	0	0	KbW-1-B-5	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
Kgo-3-B-1	30.000	97.790	0.1	0	0	4.536	2.197	Kgo-10-B-1	-2.268	-1.098	49.6	90.0	
								Kgo-10-B-1	-2.268	-1.098	49.6	90.0	
								G-NiB-3-B	0.000	0.000	0.0	0.0	
Kgo-10-B-1	110.000	98.864	1.2	0	0	0	0	Kgo-3-B-1	2.271	1.154	13.5	89.2	
								Kgo-3-B-1	2.271	1.154	13.5	89.2	
								Kgo-20-B-1	7.730	-17.515	101.6	-40.4	
								B-10-Kgo-MKi-2	22.091	8.380	125.4	93.5	
								B-10-Kgo-Kli-1	-29.206	4.461	156.9	-98.9	
								B-10-Bta-Kgo-2	-5.157	2.367	30.1	-90.9	
Kgo-20-B-1	220.000	99.761	0.4	0	0	0	0	Kgo-10-B-1	-7.716	18.140	51.9	-39.1	-2.000
								B-20-Kgo-Kli-1	-17.400	-11.428	54.8	83.6	
								B-20-Kgo-Rwa-1	25.116	-6.712	68.4	-96.6	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Kli-3-B-1	30.000	99.089	1.9	0	0	1.279	0.619	Kli-10-B-1	-1.279	-0.619	27.6	90.0	
Kli-10-B-1	110.000	99.440	3.1	0	0	0	0	Kli-3-B-1	1.284	0.653	7.6	89.1	-1.000
								Kli-20-B-1	26.545	-9.123	148.2	-94.6	
								B-10-Kgo-Kli-2	29.524	-4.452	157.6	-98.9	
								B-10-Kli-Kro-2	-32.934	10.348	182.2	-95.4	
								B-10-Kli-Rka-1	3.105	-1.127	17.4	-94.0	
								B-10-Kli-Ny1-1	-27.524	3.700	146.6	-99.1	
Kli-20-B-1	220.000	99.959	0.5	0	0	0	0	Kli-10-B-1	-26.516	10.450	74.8	-93.0	-1.000
								B-20-Kgo-Kli-2	17.413	8.705	51.1	89.4	
								B-20-Kli-Bwi-2	9.103	-19.155	55.7	-42.9	
Kre-3-B-1	30.000	98.999	-1.9	0	0	2.848	1.379	Kre-10-B-1	-2.848	-0.399	55.9	99.0	
								C-Kre-B	0.000	-0.980	19.1	0.0	
Kre-10-B-1	110.000	95.311	-1.1	0	0	0	0	Kre-3-B-1	2.850	0.441	15.9	98.8	-4.000
								B-10-Kba-Kre-2	-2.850	-0.441	15.9	98.8	
Kro-3-B-1	30.000	99.302	3.9	0	0	1.284	0.622	Kro-10-B-1	-1.284	-0.622	27.6	90.0	
Kro-10-B-1	110.000	99.530	5.1	0	0	0	0	Kro-3-B-1	1.287	0.656	7.6	89.1	-1.000
								B-10-Kbu-Kro-2	-24.851	3.300	132.2	-99.1	
								B-10-Kbo-Kro-1	-9.762	6.084	60.7	-84.9	
								B-10-Kli-Kro-1	33.327	-10.040	183.5	-95.7	
Kse-1-B-1	11.000	97.172	6.4	40.000	0.000	0	0	Kse-10-B1	40.000	0.000	2160.6	100.0	
Kse-10-B1	110.000	97.488	0.4	0	0	0	0	Kse-1-B-1	-39.906	4.235	216.1	-99.4	
								G-Kse-1-B	39.906	-4.235	216.1	-99.4	
MKi-3-B-1	30.000	95.170	-4.0	0	0	22.098	10.702	MKi-10-B-1	-22.098	-10.702	496.5	90.0	
MKi-10-B-1	110.000	96.312	-0.6	0	0	0	0	MKi-3-B-1	22.135	12.366	138.2	87.3	-2.000
								10-Gko/Kgo/MKi-B	-27.080	-14.040	166.2	88.8	
								B-10-MKi-Nbg-2	-8.960	-4.801	55.4	88.1	
								B-10-Gha-MKi-2	13.906	6.476	83.6	90.7	
Mku-3-B-1	30.000	98.491	1.8	0	0	7.006	3.393	Mku-6-B-1	-7.006	-3.393	152.1	90.0	1.000
Mku-10-B-1	110.000	96.805	1.2	0	0	0	0	Mku-6-B-1	-4.972	3.970	34.5	-78.1	-5.000
								B-10-Gfu-Mku-2	11.958	-4.941	70.2	-92.4	
								B-10-Mku-Nta-1	-8.268	0.967	45.1	-99.3	
								B-10-Mku-Nbi-1	1.281	0.004	6.9	100.0	
								G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-10-B-2	110.000	96.805	1.2	0	0	0	0	G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-6-B-1	6.600	99.076	3.6	0	0	0	0	Mku-3-B-1	7.012	3.659	698.3	88.7	
								Mku-10-B-1	4.988	-3.659	546.2	-80.6	
								Mku-6-B-4	-6.000	0.000	529.8	100.0	
								Mku-6-B-3	-3.000	0.000	264.9	100.0	
								Mku-6-B-5	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-6-B-6	-3.000	0.000	264.9	100.0	
Mku-6-B-2	6.600	99.076	3.6	12.000	0.000	0	0	G-Mku-6-B	12.000	0.000	1059.5	100.0	
Mku-6-B-3	6.600	99.076	3.6	0	0	0	0	Mku-6-B-4	-6.000	0.000	529.8	100.0	
								Mku-6-B-1	3.000	0.000	264.9	100.0	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	3.000	0.000	264.9	100.0	
Mku-6-B-4	6.600	99.076	3.6	0	0	0	0	Mku-6-B-1	6.000	0.000	529.8	100.0	
								Mku-6-B-3	6.000	0.000	529.8	100.0	
								G-Mku-6-B	-12.000	0.000	1059.5	100.0	
Mku-6-B-5	6.600	99.076	3.6	0	0	0	0	Mku-6-B-1	0.000	0.000	0.0	0.0	
								Mku-6-B-3	0.000	0.000	0.0	0.0	
Mku-6-B-6	6.600	99.076	3.6	0	0	0	0	Mku-6-B-3	-3.000	0.000	264.9	100.0	
								Mku-6-B-1	3.000	0.000	264.9	100.0	
Mr1-6-B-1	6.600	99.311	7.8	0	0	0	0	Mr1-10-B-1	0.659	-1.674	158.5	-36.6	
								Mr1-3-B-1	2.788	1.452	276.9	88.7	
								B-6-Mr1-Rz1-1	-3.448	0.222	304.3	-99.8	
Mr1-10-B-1	110.000	99.017	7.4	0	0	0	0	Mr1-6-B-1	-0.657	1.709	9.7	-35.9	-2.000
								B-10-Mr1-Mr2-1	0.657	-1.709	9.7	-35.9	
Mr1-3-B-1	30.000	99.589	6.2	0	0	2.782	1.347	Mr1-6-B-1	-2.782	-1.347	59.7	90.0	2.000
Mr2-10-B-1	110.000	99.019	7.4	0	0	0	0	B-10-Mr2-Rz2-1	-12.645	0.011	67.0	100.0	
								Mr2-10-B-2	12.645	-0.011	67.0	100.0	
Mr2-10-B-2	110.000	99.019	7.4	0	0	0	0	B-10-Mr2-Nte-1	13.302	-1.709	71.1	-99.2	
								B-10-Mr1-Mr2-2	-0.657	1.697	9.6	-36.1	
								Mr2-10-B-1	-12.645	0.011	67.0	100.0	
Msh-1-B-1	15.000	95.929	-2.6	0	0	15.073	7.300	Msh-10-B-1	-7.536	-3.650	336.0	90.0	
								Msh-10-B-1	-7.536	-3.650	336.0	90.0	
								C-Msh-1-B	0.000	0.000	0.0	0.0	
Msh-10-B-1	110.000	96.138	-0.4	0	0	0	0	Msh-1-B-1	7.555	4.030	46.8	88.2	-2.000
								Msh-1-B-1	7.555	4.030	46.8	88.2	-2.000
								B-10-Gso-Msh-2	-23.020	-8.826	134.6	93.4	
								B-10-Kba-Msh-2	8.645	1.717	48.1	98.1	
								B-10-Msh-Nga-1	-0.735	-0.952	6.6	61.1	
Mus-3-B	30.000	99.183	4.5	0	0	0	0	Mus-6-B	-1.993	-0.308	39.1	98.8	
								G-Mus-3-B	1.993	0.308	39.1	98.8	
* Mus-6-B	6.600	100.000	6.1	2.000	0.367	0	0	Mus-3-B	2.000	0.367	177.9	98.4	
Nbg-3-B-1	30.000	98.787	-1.3	0	0	6.848	3.317	Nbg-10-B-1	-3.424	-1.658	74.1	90.0	
								Nbg-10-B-1	-3.424	-1.658	74.1	90.0	
Nbg-10-B-1	110.000	96.550	-0.5	0	0	0	0	Nbg-3-B-1	3.427	1.718	20.8	89.4	-3.000
								Nbg-3-B-1	3.427	1.718	20.8	89.4	-3.000

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Jb1-Nbg-2	-15.828	-8.092	96.6	89.0	
								B-10-MKi-Nbg-1	8.974	4.656	55.0	88.8	
Nbi-3-B-1	30.000	99.098	0.5	0	0	1.279	0.619	Nbi-10-B-1	-1.279	-0.619	27.6	90.0	
Nbi-10-B-1	110.000	96.715	1.1	0	0	0	0	Nbi-3-B-1	1.280	0.637	7.8	89.5	-3.000
								B-B-10-Mku-Nbi-1-2	-1.280	-0.637	7.8	89.5	
N-Cyi-04-1	0.400	102.482	13.4	0.300	0.000	0	0	Cyi-3-B-2	0.300	0.000	422.5	100.0	
Nde-3-B-1	30.000	99.732	-1.8	0	0	6.966	3.374	Nde-10-B-1	-3.483	-1.687	74.7	90.0	
								Nde-10-B-1	-3.483	-1.687	74.7	90.0	
Nde-10-B-1	110.000	95.462	-1.0	0	0	0	0	Nde-3-B-1	3.486	1.747	21.4	89.4	-5.000
								Nde-3-B-1	3.486	1.747	21.4	89.4	-5.000
								B-10-Gha-Nde-2	-6.972	-3.494	42.9	89.4	
Nga-3-B-1	30.000	99.499	-1.1	0	0	2.874	1.392	Nga-10-B-1	-2.874	-1.392	61.8	90.0	
Nga-10-B-1	110.000	96.269	-0.3	0	0	0	0	Nga-3-B-1	2.876	1.443	17.5	89.4	-4.000
								B-10-Nga-Rln-1	-3.612	-1.116	20.6	95.5	
								B-10-Msh-Nga-2	0.736	-0.328	4.4	-91.4	
N-Jb3-04-1	0.400	100.234	1.3	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1440.0	100.0	
N-Jb3-04-2	0.400	100.234	1.3	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1440.0	100.0	
N-Jb3-04-3	0.400	100.234	1.3	1.000	0.000	0	0	Jb3-1-B-2	1.000	0.000	1440.0	100.0	
N-Jb3-04-4	0.400	100.234	1.3	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1440.0	100.0	
N-Jb3-04-5	0.400	100.234	1.3	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1440.0	100.0	
N-Jb3-04-6	0.400	100.234	1.3	1.000	0.000	0	0	Jb3-1-B-2d	1.000	0.000	1440.0	100.0	
Nko-3-B-1	30.000	101.747	11.5	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.596	-0.027	11.3	-99.9	
								G-Nko-3-B	-0.596	0.027	11.3	-99.9	
Nko-3-B-2	30.000	101.747	11.5	0	0	0	0	N-Nko-04-B-2	-0.596	0.027	11.3	-99.9	
								G-Nko-3-B	0.596	-0.027	11.3	-99.9	
N-Nko-04-B-2	0.400	102.408	14.0	0.600	0.000	0	0	Nko-3-B-2	0.600	0.000	845.7	100.0	
* N-Nyl-6-2	6.600	100.000	14.4	28.000	1.112	0	0	Nyl-3-B-2	28.000	1.112	2451.3	99.9	
* N-Rka-6-2	6.600	100.000	7.7	6.700	0.651	0	0	Rka-3-B-2	6.700	0.651	588.9	99.5	
N-Rz1-06-B-1-1	0.600	100.612	11.5	0	0	0	0	Rz1-6-B-1	3.500	0.000	3347.4	100.0	
								G-Rz1-06-B	-3.500	0.000	3347.4	100.0	
N-Rz1-06-B-1-2	0.600	100.612	11.5	3.500	0.000	0	0	G-Rz1-06-B	3.500	0.000	3347.4	100.0	
Nta-3-B-1	30.000	100.684	2.9	0	0	2.936	1.422	Nta-6-B-1	-2.936	-1.422	62.4	90.0	2.000
Nta-10-B-1	110.000	96.956	1.8	0	0	0	0	Nta-6-B-1	-4.147	0.882	23.0	-97.8	-3.000
								Nta-6-B-1	-4.147	0.882	23.0	-97.8	-3.000
								B-10-Mku-Nta-2	8.294	-1.764	45.9	-97.8	
Nta-6-B-1	6.600	99.513	3.7	0	0	0	0	Nta-3-B-1	2.939	1.476	289.1	89.4	
								Nta-10-B-1	4.156	-0.738	371.0	-98.5	
								Nta-10-B-1	4.156	-0.738	371.0	-98.5	
								Nta-6-B-3	-11.250	0.000	988.9	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Nta-6-B-2	6.600	99.513	3.7	11.250	0.000	0	0	Nta-6-B-3	11.250	0.000	988.9	100.0	
Nta-6-B-3	6.600	99.513	3.7	0	0	0	0	Nta-6-B-1	11.250	0.000	988.9	100.0	
								Nta-6-B-2	-11.250	0.000	988.9	100.0	
NtB-3-B1	30.000	97.790	0.1	0	0	0	0	G-NtB-3-B	0.000	0.000	0.0	0.0	
Nte-3-B-1	30.000	99.174	6.2	0	0	1.281	0.620	Nte-10-B-1	-1.281	-0.620	27.6	90.0	
Nte-10-B-1	110.000	98.785	6.8	0	0	0	0	Nte-3-B-1	1.282	0.637	7.6	89.5	-1.000
								B-10-Kbo/Nte-2	11.154	-7.100	70.3	-84.4	
								B-10-Mr2/Nte-2	-13.256	1.182	70.7	-99.6	
								B-10-Bga-Nte-2	0.819	5.280	28.4	15.3	
Ny1-10-B-1	110.000	100.394	4.7	0	0	0	0	Ny1-3-B-1	-27.894	3.655	147.1	-99.2	
								B-10-Kli-Ny1-2	27.894	-3.655	147.1	-99.2	
Ny1-3-B-1	30.000	99.882	8.7	0	0	0	0	Ny1-10-B-1	27.938	-1.692	539.3	-99.8	
								G-Ny1-3-B	-27.938	1.692	539.3	-99.8	
Ny1-3-B-2	30.000	99.882	8.7	0	0	0	0	N-Ny1-6-2	-27.938	1.692	539.3	-99.8	
								G-Ny1-3-B	27.938	-1.692	539.3	-99.8	
Rba-3-B-1	30.000	99.819	-0.4	0	0	1.296	0.628	Rba-20-B-1	-1.296	-0.628	27.8	90.0	
Rba-20-B-1	220.000	100.431	0.2	0	0	0	0	Rba-3-B-1	1.297	0.645	3.8	89.5	
								B-20-Bwi-Rba-2D	-7.781	-3.303	22.1	92.0	
								B-20-Rba-Sha-1	6.484	2.658	18.3	92.5	
* Rka5-6-B	6.600	100.000	6.9	3.000	0.285	0	0	Rka5-3-B	3.000	0.285	263.6	99.6	
Rka5-3-B	30.000	99.183	4.5	0	0	0	0	Rka5-6-B	-2.985	-0.156	58.0	99.9	
								G-Rka5-3-B	2.985	0.156	58.0	99.9	
Rka-3-B-1	30.000	99.183	4.5	0	0	3.153	1.527	Rka-10-B-1	4.248	-0.394	82.8	-99.6	
								Rka-10-B-1	4.248	-0.394	82.8	-99.6	
								G-Rka-3-B	-6.671	-0.274	129.5	99.9	
								G-Rka5-3-B	-2.985	-0.156	58.0	99.9	
								G-Mus-3-B	-1.993	-0.308	39.1	98.8	
Rka-3-B-2	30.000	99.183	4.5	0	0	0	0	N-Rka-6-2	-6.671	-0.274	129.5	99.9	
								G-Rka-3-B	6.671	0.274	129.5	99.9	
Rka-10-B-1	110.000	99.347	2.8	0	0	0	0	Rka-3-B-1	-4.242	0.518	22.6	-99.3	
								Rka-3-B-1	-4.242	0.518	22.6	-99.3	
								B-10-Kli-Rka-2	-3.099	0.297	16.4	-99.5	
								B-10-Hye-Rka-2	11.583	-1.332	61.6	-99.3	
Rlm-3-B-1	30.000	99.544	-1.1	0	0	6.943	3.362	Rlm-10-B-1	-6.943	-3.362	149.1	90.0	
Rlm-10-B-1	110.000	99.437	-0.2	0	0	0	0	Rlm-3-B-1	6.946	3.513	41.1	89.2	-1.000
								Rlm-20-B-1	-6.946	-3.513	41.1	89.2	
Rlm-20-B-1	220.000	99.746	0.2	0	0	0	0	Rlm-10-B-1	6.947	3.564	20.5	89.0	
								B-20-Sha-Rlm-2D	14.979	-3.066	40.2	-98.0	
								B-20-Rlm-Rwa-1D	-21.926	-0.497	57.7	100.0	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Rln-3-B-1	30.000	95.924	-0.8	0	0	2.692	1.304	Rln-10-B-1	-2.692	-1.304	60.0	90.0	
Rln-10-B-1	110.000	96.682	0.0	0	0	0	0	Rln-3-B-1	2.694	1.352	16.4	89.4	
								10-Gfu/Jb1/Rln-B	-6.318	-1.302	35.0	97.9	
								B-10-Nga-Rln-2	3.624	-0.050	19.7	100.0	
Rwa-3-B-1	30.000	99.425	-0.1	0	0	3.167	1.534	Rwa-20-B-1	-3.167	-1.534	68.1	90.0	
								G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-3-B-2	30.000	99.425	-0.1	0	0	0	0	G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-20-B-1	220.000	99.764	0.3	0	0	0	0	Rwa-3-B-1	3.168	1.560	9.3	89.7	
								B-20-Rlm-Rwa-2D	21.934	-6.473	60.2	-95.9	
								B-20-Kgo-Rwa-2	-25.102	4.913	67.3	-98.1	
Rwi-1-B-1	15.000	99.642	-1.7	0	0	2.881	1.395	Rwi-10-B-1	-2.881	-1.395	123.7	90.0	
								C-Rwi-B-1	0.000	0.000	0.0	0.0	
Rwi-10-B-1	110.000	95.402	-0.9	0	0	0	0	Rwi-1-B-1	2.884	1.447	17.8	89.4	-5.000
								B-10-Kba-Rwi-2	-2.884	-1.447	17.8	89.4	
Rz1-6-B-1	6.600	100.153	8.7	0	0	0	0	N-Rz1-.06-B-1-1	-3.480	0.172	304.3	-99.9	
								B-6-Mr1-Rz1-2	3.480	-0.172	304.3	-99.9	
Rz2-6-B-1-1	6.600	100.000	12.9	0	0	0	0	Rz2-10-B-1	12.750	0.813	1117.6	99.8	
								G-Rz2-.6-B	-12.750	-0.813	1117.6	99.8	
* Rz2-6-B-1-2	6.600	100.000	12.9	12.750	0.813	0	0	G-Rz2-.6-B	12.750	0.813	1117.6	99.8	
Rz2-10-B-1	110.000	99.361	7.8	0	0	0	0	Rz2-6-B-1-1	-12.690	0.328	67.1	-100.0	
								B-10-Mr2-Rz2-2	12.690	-0.328	67.1	-100.0	
Sha-3-B-1	30.000	100.323	-1.4	0	0	7.041	3.410	Sha-10-B-1	-7.041	-3.410	150.1	90.0	
Sha-10-B-1	110.000	99.202	-0.4	0	0	0	0	Sha-3-B-1	7.044	3.562	41.8	89.2	-2.000
								Sha-20-B-1	-22.066	-57.468	325.7	35.8	
								B-10-Bre-Sha-2D	15.022	53.906	296.1	26.8	
Sha-20-B-1	220.000	99.606	0.0	0	0	0	0	Sha-10-B-1	22.101	59.072	166.2	35.0	-2.000
								B-20-Sha-Rlm-1D	-14.969	-13.363	52.9	74.6	
								B-20-Rba-Sha-2	-6.462	-16.870	47.6	35.8	
								B-20-Mra-Sha-2D	-0.671	-28.840	76.0	2.3	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cyi/Nko-B	30.000	98.762	8.8	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.149	-0.072	3.2	90.1	
								3-Cyi-Ghi-B	0.448	0.178	9.4	92.9	
								B-3-Nko-Cyi/Nko-1	-0.298	-0.106	6.2	94.2	
3-Cyi-Ghi-B	30.000	98.667	8.8	0	0	0	0	B-3-Cyi-Ghi-2	0.000	-0.077	1.5	0.0	
								3-Cyi/Nko-B	-0.447	-0.186	9.5	92.3	
								3-Kro/Kbu-B	0.447	0.264	10.1	86.1	
3-Kro/Kbu-B	30.000	97.563	8.5	0	0	0	0	B-3-Kbu-Kro-2	0.000	-0.028	0.5	0.0	
								B-3-Kbu-Kro/Nko-2	0.444	0.366	11.4	77.1	
								3-Cyi-Ghi-B	-0.444	-0.339	11.0	79.5	
10-Bre/Gso/Msh-B	110.000	96.943	-4.0	0	0	0	0	B-10-Bre-Gso-1	-29.029	-5.066	159.5	98.5	
								B-10-Gso-Msh-2	21.661	1.507	117.6	99.8	
								Gso-10-B-1	7.367	3.559	44.3	90.0	
10-Gfu/Jb1/Rln-B	110.000	96.304	-2.6	0	0	0	0	10-Gfu/Mku/Rln-B	-20.440	7.237	118.2	-94.3	
								B-10-Jb1-Rln-2	4.512	-6.249	42.0	-58.5	
								Rln-10-B-1	15.927	-0.987	87.0	-99.8	
10-Gfu/Mku/Rln-B	110.000	96.525	-1.4	0	0	0	0	B-10-Gfu-Mku-2	-23.502	6.795	133.0	-96.1	
								10-Gfu/Jb1/Rln-B	20.636	-7.374	119.2	-94.2	
								Gfu-10-B-1	2.865	0.579	15.9	98.0	
10-Gko/Kgo/MKi-B	110.000	96.067	-3.1	0	0	0	0	B-10-Gko-MKi-1	3.892	-6.422	41.0	-51.8	
								B-10-Kgo-MKi-2	-45.571	-0.202	249.0	100.0	
								MKi-10-B-1	41.679	6.624	230.6	98.8	
10-Kba/Msh/Rwi-B	110.000	96.203	-5.6	0	0	0	0	B-10-Kba-Msh-2	-10.500	5.601	64.9	-88.2	
								B-10-Kba-Rwi-2	3.495	-3.394	26.6	-71.7	
								Kba-10-B-1	7.005	-2.208	40.1	-95.4	
10-Kbo/Kro/Mr2-B	110.000	97.036	4.4	0	0	0	0	10-Kbo/Nte-B	-2.904	10.017	56.4	-27.8	
								B-10-Kbo-Kro-1	1.653	-10.656	58.3	-15.3	
								Kbo-10-B-1	1.252	0.638	7.6	89.1	
10-Kbo/Nte-B	110.000	96.311	4.7	0	0	0	0	10-Kbo/Kro/Mr2-B	2.935	-10.561	59.7	-26.8	
								B-10-Kbo/Nte-2	-2.935	10.561	59.7	-26.8	
10-Mr2/Nte-B	110.000	96.296	4.7	0	0	0	0	B-10-Mr2/Nte-1	-5.225	0.917	28.9	-98.5	
								B-10-Mr2/Nte-2	5.225	-0.917	28.9	-98.5	
* 20-Mra-B	220.000	100.000	0.0	49.383	-19.789	0	0	B-20-Mra-Sha-2D	49.383	-19.789	139.6	-92.8	
B-1-Jb1-Jb3-1	15.000	99.018	-5.0	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								Jb1-1-B-1	0.000	0.000	0.0	0.0	
B-1-Jb1-Jb3-2	15.000	99.018	-5.0	0	0	0	0	B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-1	0.000	0.000	0.0	0.0	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-1-Kbu-KbW-1F_T	11.000	98.430	8.0	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.127	2.153	1291.6	-99.6	
								Kbu-1-B-1	24.127	-2.153	1291.6	-99.6	
B-1-Kbu-KbW-2F_T	11.000	101.588	13.1	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1291.6	100.0	
								KbW-1-B-2	-25.000	0.000	1291.6	100.0	
B-3-Cyi-Cyi/Nko-1	30.000	98.812	8.9	0	0	0	0	3-Cyi/Nko-B	0.149	0.058	3.1	93.1	
								Cyi-3-B-1	-0.149	-0.058	3.1	93.1	
B-3-Cyi-Ghi-2	30.000	98.736	8.8	0	0	0	0	3-Cyi-Ghi-B	0.000	0.000	0.0	0.0	
B-3-Kbu-Kro/Nko-2	30.000	97.356	8.5	0	0	0	0	3-Kro/Kbu-B	-0.443	-0.379	11.5	76.0	
								Kbu-3-B-1	0.443	0.379	11.5	76.0	
B-3-Kbu-Kro-2	30.000	97.572	8.5	0	0	0	0	3-Kro/Kbu-B	0.000	0.000	0.0	0.0	
B-3-Nko-Cyi/Nko-1	30.000	98.882	8.9	0	0	0	0	3-Cyi/Nko-B	0.299	0.088	6.1	95.9	
								Nko-3-B-1	-0.299	-0.088	6.1	95.9	
B-10-Bga-Gsh-1	110.000	95.368	4.9	0	0	0	0	B-10-Bga-Gsh-2	-14.911	0.567	82.1	-99.9	
								Bga-10-B-1	14.911	-0.567	82.1	-99.9	
B-10-Bga-Gsh-2	110.000	95.669	5.3	0	0	0	0	B-10-Bga-Gsh-1	14.962	-0.752	82.2	-99.9	
								Gsh-10-B	-14.962	0.752	82.2	-99.9	
B-10-Bga-Nte-1	110.000	95.368	4.9	0	0	0	0	B-10-Bga-Nte-2	-0.952	-9.552	52.8	9.9	
								Bga-10-B-1	0.952	9.552	52.8	9.9	
B-10-Bga-Nte-2	110.000	96.293	4.7	0	0	0	0	B-10-Bga-Nte-1	0.994	9.024	49.5	10.9	
								Nte-10-B-1	-0.994	-9.024	49.5	10.9	
B-10-Bre-Gso-1	110.000	98.233	-2.9	0	0	0	0	10-Bre/Gso/Msh-B	29.321	5.209	159.1	98.5	
								Bre-10-B-1	-29.321	-5.209	159.1	98.5	
B-10-Bre-Jb1-1	110.000	98.233	-2.9	0	0	0	0	B-10-Bre-Jb1-2	27.640	36.428	244.3	60.4	
								Bre-10-B-1	-27.640	-36.428	244.3	60.4	
B-10-Bre-Jb1-2	110.000	96.728	-3.1	0	0	0	0	B-10-Bre-Jb1-1	-27.327	-35.992	245.2	60.5	
								Jb1-10-B-1	27.327	35.992	245.2	60.5	
B-10-Bre-Sha-1D	110.000	98.233	-2.9	0	0	0	0	B-10-Bre-Sha-2D	-68.803	-47.817	447.7	82.1	
								Bre-10-B-1	68.803	47.817	447.7	82.1	
B-10-Bre-Sha-2D	110.000	99.541	-2.6	0	0	0	0	B-10-Bre-Sha-1D	69.402	48.351	446.0	82.1	
								Sha-10-B-1	-69.402	-48.351	446.0	82.1	
B-10-Bta-Hye-1	110.000	99.905	6.5	0	0	0	0	B-10-Bta-Hye-2	23.794	-5.996	128.9	-97.0	
								Bta-10-B-1	-23.794	5.996	128.9	-97.0	
B-10-Bta-Hye-2	110.000	99.469	5.3	0	0	0	0	B-10-Bta-Hye-1	-23.567	5.893	128.2	-97.0	
								Hye-10-B-1	23.567	-5.893	128.2	-97.0	
B-10-Bta-Kgo-1	110.000	99.905	6.5	0	0	0	0	B-10-Bta-Kgo-2	49.382	-14.967	271.1	-95.7	
								Bta-10-B-1	-49.382	14.967	271.1	-95.7	
B-10-Bta-Kgo-2	110.000	98.756	1.2	0	0	0	0	B-10-Bta-Kgo-1	-47.284	18.093	269.1	-93.4	
								Kgo-10-B-1	47.284	-18.093	269.1	-93.4	
B-10-Gfu-Mku-2	110.000	96.872	-0.3	0	0	0	0	10-Gfu/Mku/Rln-B	23.726	-6.826	133.8	-96.1	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-10-B-1	-23.726	6.826	133.8	-96.1	
B-10-Gha-MKi-1	110.000	95.767	-3.4	0	0	0	0	B-10-Gha-MKi-2	-14.701	-2.147	81.4	98.9	
								Gha-10-B-1	14.701	2.147	81.4	98.9	
B-10-Gha-MKi-2	110.000	96.067	-3.1	0	0	0	0	B-10-Gha-MKi-1	14.738	2.011	81.3	99.1	
								MKi-10-B-1	-14.738	-2.011	81.3	99.1	
B-10-Gha-Nde-1	110.000	95.767	-3.4	0	0	0	0	B-10-Gha-Nde-2	7.358	-1.577	41.2	-97.8	
								Gha-10-B-1	-7.358	1.577	41.2	-97.8	
B-10-Gha-Nde-2	110.000	95.631	-3.7	0	0	0	0	B-10-Gha-Nde-1	-7.341	1.212	40.8	-98.7	
								Nde-10-B-1	7.341	-1.212	40.8	-98.7	
B-10-Gko-Jb1-1	110.000	96.168	-3.2	0	0	0	0	B-10-Gko-Jb1-2	-9.867	-13.401	90.8	59.3	
								Gko-10-B-1	9.867	13.401	90.8	59.3	
B-10-Gko-Jb1-2	110.000	96.728	-3.1	0	0	0	0	B-10-Gko-Jb1-1	9.899	13.224	89.6	59.9	
								Jb1-10-B-1	-9.899	-13.224	89.6	59.9	
B-10-Gko-MKi-1	110.000	96.168	-3.2	0	0	0	0	10-Gko/Kgo/MKi-B	-3.888	6.273	40.3	-52.7	
								Gko-10-B-1	3.888	-6.273	40.3	-52.7	
B-10-Gso-Msh-2	110.000	96.128	-4.8	0	0	0	0	10-Bre/Gso/Msh-B	-21.502	-1.627	117.7	99.7	
								Msh-10-B-1	21.502	1.627	117.7	99.7	
B-10-Gso-Nde-1	110.000	96.943	-4.0	0	0	0	0	B-10-Gso-Nde-2	0.000	-0.178	1.0	0.0	
								Gso-10-B-1	0.000	0.178	1.0	0.0	
B-10-Gso-Nde-2	110.000	96.945	-4.0	0	0	0	0	B-10-Gso-Nde-1	0.000	0.000	0.0	0.0	
B-10-Hye-Rka-1	110.000	99.469	5.3	0	0	0	0	B-10-Hye-Rka-2	20.418	-7.465	114.7	-93.9	
								Hye-10-B-1	-20.418	7.465	114.7	-93.9	
B-10-Hye-Rka-2	110.000	99.247	4.1	0	0	0	0	B-10-Hye-Rka-1	-20.218	7.244	113.6	-94.1	
								Rka-10-B-1	20.218	-7.244	113.6	-94.1	
B-10-Jb1-Jb2-1	110.000	96.728	-3.1	0	0	0	0	B-10-Jb1-Jb2-2	0.000	-0.036	0.2	0.0	
								Jb1-10-B-1	0.000	0.036	0.2	0.0	
B-10-Jb1-Jb2-2	110.000	96.728	-3.1	0	0	0	0	B-10-Jb1-Jb2-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-1	0.000	0.000	0.0	0.0	
B-10-Jb1-Nbg-1	110.000	96.728	-3.1	0	0	0	0	B-10-Jb1-Nbg-2	8.706	10.310	73.2	64.5	
								Jb1-10-B-1	-8.706	-10.310	73.2	64.5	
B-10-Jb1-Nbg-2	110.000	96.262	-3.2	0	0	0	0	B-10-Jb1-Nbg-1	-8.676	-10.460	74.1	63.8	
								Nbg-10-B-1	8.676	10.460	74.1	63.8	
B-10-Jb1-Rln-2	110.000	96.728	-3.1	0	0	0	0	10-Gfu/Jb1/Rln-B	-4.481	5.559	38.7	-62.8	
								Jb1-10-B-1	4.481	-5.559	38.7	-62.8	
B-10-Kba-Kre-1	110.000	96.203	-5.6	0	0	0	0	B-10-Kba-Kre-2	3.520	-4.016	29.1	-65.9	
								Kba-10-B-1	-3.520	4.016	29.1	-65.9	
B-10-Kba-Kre-2	110.000	96.450	-6.0	0	0	0	0	B-10-Kba-Kre-1	-3.504	3.187	25.8	-74.0	
								Kre-10-B-1	3.504	-3.187	25.8	-74.0	
B-10-Kba-Msh-2	110.000	96.128	-4.8	0	0	0	0	10-Kba/Msh/Rwi-B	10.575	-6.118	66.7	-86.6	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Msh-10-B-1	-10.575	6.118	66.7	-86.6	
B-10-Kba-Rwi-2	110.000	96.258	-5.7	0	0	0	0	10-Kba/Msh/Rwi-B	-3.491	3.173	25.7	-74.0	
								Rwi-10-B-1	3.491	-3.173	25.7	-74.0	
B-10-Kbo/Nte-2	110.000	96.293	4.7	0	0	0	0	10-Kbo/Nte-B	2.937	-10.572	59.8	-26.8	
								Nte-10-B-1	-2.937	10.572	59.8	-26.8	
B-10-Kbo-Kro-1	110.000	98.500	3.9	0	0	0	0	10-Kbo/Kro/Mr2-B	-1.598	9.525	51.5	-16.5	
								Kro-10-B-1	1.598	-9.525	51.5	-16.5	
B-10-Kbu-Kro-1	110.000	98.725	4.6	0	0	0	0	B-10-Kbu-Kro-2	24.494	-3.239	131.4	-99.1	
								Kbu-10-B-1	-24.494	3.239	131.4	-99.1	
B-10-Kbu-Kro-2	110.000	98.500	3.9	0	0	0	0	B-10-Kbu-Kro-1	-24.402	3.126	131.1	-99.2	
								Kro-10-B-1	24.402	-3.126	131.1	-99.2	
B-10-Kgo-Kli-1	110.000	98.756	1.2	0	0	0	0	B-10-Kgo-Kli-2	-16.728	3.146	90.5	-98.3	
								Kgo-10-B-1	16.728	-3.146	90.5	-98.3	
B-10-Kgo-Kli-2	110.000	98.989	2.3	0	0	0	0	B-10-Kgo-Kli-1	16.835	-3.762	91.5	-97.6	
								Kli-10-B-1	-16.835	3.762	91.5	-97.6	
B-10-Kgo-MKi-2	110.000	98.756	1.2	0	0	0	0	10-Gko/Kgo/MKi-B	46.749	2.373	248.8	99.9	
								Kgo-10-B-1	-46.749	-2.373	248.8	99.9	
B-10-Kli-Kro-1	110.000	98.500	3.9	0	0	0	0	B-10-Kli-Kro-2	24.713	-13.307	149.6	-88.0	
								Kro-10-B-1	-24.713	13.307	149.6	-88.0	
B-10-Kli-Kro-2	110.000	98.989	2.3	0	0	0	0	B-10-Kli-Kro-1	-24.454	13.230	147.4	-88.0	
								Kli-10-B-1	24.454	-13.230	147.4	-88.0	
B-10-Kli-Ny1-1	110.000	98.989	2.3	0	0	0	0	B-10-Kli-Ny1-2	3.056	-0.190	16.2	-99.8	
								Kli-10-B-1	-3.056	0.190	16.2	-99.8	
B-10-Kli-Ny1-2	110.000	98.828	2.1	0	0	0	0	B-10-Kli-Ny1-1	-3.051	-0.500	16.4	98.7	
								Ny1-10-B-1	3.051	0.500	16.4	98.7	
B-10-Kli-Rka-1	110.000	98.989	2.3	0	0	0	0	B-10-Kli-Rka-2	-22.570	8.800	128.4	-93.2	
								Kli-10-B-1	22.570	-8.800	128.4	-93.2	
B-10-Kli-Rka-2	110.000	99.247	4.1	0	0	0	0	B-10-Kli-Rka-1	22.911	-8.936	130.1	-93.2	
								Rka-10-B-1	-22.911	8.936	130.1	-93.2	
B-10-MKi-Nbg-1	110.000	96.262	-3.2	0	0	0	0	B-10-MKi-Nbg-2	1.241	6.725	37.3	18.2	
								Nbg-10-B-1	-1.241	-6.725	37.3	18.2	
B-10-MKi-Nbg-2	110.000	96.067	-3.1	0	0	0	0	B-10-MKi-Nbg-1	-1.235	-6.884	38.2	17.7	
								MKi-10-B-1	1.235	6.884	38.2	17.7	
B-10-Mku-Nbi-1	110.000	96.872	-0.3	0	0	0	0	B-B-10-Mku-Nbi-1-2	-14.153	-0.171	76.7	100.0	
								Mku-10-B-1	14.153	0.171	76.7	100.0	
B-10-Mku-Nta-1	110.000	96.872	-0.3	0	0	0	0	B-10-Mku-Nta-2	-8.069	1.055	44.1	-99.2	
								Mku-10-B-1	8.069	-1.055	44.1	-99.2	
B-10-Mku-Nta-2	110.000	97.006	0.3	0	0	0	0	B-10-Mku-Nta-1	8.094	-1.856	44.9	-97.5	
								Nta-10-B-1	-8.094	1.856	44.9	-97.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Mr1-Mr2-1	110.000	96.334	4.9	0	0	0	0	B-10-Mr1-Mr2-2	-1.115	-1.579	10.5	57.7	
								Mr1-10-B-1	1.115	1.579	10.5	57.7	
B-10-Mr1-Mr2-2	110.000	96.337	4.9	0	0	0	0	B-10-Mr1-Mr2-1	1.115	1.569	10.5	57.9	
								Mr2-10-B-2	-1.115	-1.569	10.5	57.9	
B-10-Mr2/Nte-1	110.000	96.337	4.9	0	0	0	0	10-Mr2/Nte-B	5.232	-1.511	29.7	-96.1	
								Mr2-10-B-2	-5.232	1.511	29.7	-96.1	
B-10-Mr2/Nte-2	110.000	96.293	4.7	0	0	0	0	10-Mr2/Nte-B	-5.224	0.905	28.9	-98.5	
								Nte-10-B-1	5.224	-0.905	28.9	-98.5	
B-10-Mr2-Rz2-1	110.000	96.337	4.9	0	0	0	0	B-10-Mr2-Rz2-2	-6.347	-0.058	34.6	100.0	
								Mr2-10-B-1	6.347	0.058	34.6	100.0	
B-10-Mr2-Rz2-2	110.000	96.511	5.2	0	0	0	0	B-10-Mr2-Rz2-1	6.359	-0.304	34.6	-99.9	
								Rz2-10-B-1	-6.359	0.304	34.6	-99.9	
B-10-Msh-Nga-1	110.000	96.128	-4.8	0	0	0	0	B-10-Msh-Nga-2	-6.402	3.227	39.1	-89.3	
								Msh-10-B-1	6.402	-3.227	39.1	-89.3	
B-10-Msh-Nga-2	110.000	95.995	-3.8	0	0	0	0	B-10-Msh-Nga-1	6.458	-4.391	42.7	-82.7	
								Nga-10-B-1	-6.458	4.391	42.7	-82.7	
B-10-Nbi-Ny1-1	110.000	97.521	0.5	0	0	0	0	B-10-Nbi-Ny1-2	-15.525	-0.362	83.6	100.0	
								Nbi-10-B-1	15.525	0.362	83.6	100.0	
B-10-Nbi-Ny1-2	110.000	98.828	2.1	0	0	0	0	B-10-Nbi-Ny1-1	15.733	-0.410	83.6	-100.0	
								Ny1-10-B-1	-15.733	0.410	83.6	-100.0	
B-10-Nga-Rln-1	110.000	95.995	-3.8	0	0	0	0	B-10-Nga-Rln-2	-9.902	2.650	56.0	-96.6	
								Nga-10-B-1	9.902	-2.650	56.0	-96.6	
B-10-Nga-Rln-2	110.000	96.304	-2.6	0	0	0	0	B-10-Nga-Rln-1	10.002	-3.628	58.0	-94.0	
								Rln-10-B-1	-10.002	3.628	58.0	-94.0	
B-10-Ny2-Rln-1	110.000	96.154	-2.7	0	0	0	0	B-10-Ny2-Rln-2	-3.065	-1.542	18.7	89.3	
								Ny2-10-B-1	3.065	1.542	18.7	89.3	
B-10-Ny2-Rln-2	110.000	96.304	-2.6	0	0	0	0	B-10-Ny2-Rln-1	3.068	1.203	18.0	93.1	
								Rln-10-B-1	-3.068	-1.203	18.0	93.1	
B-20-Bta-Mmb-1D	220.000	96.197	12.1	0	0	0	0	B-20-Bta-Mmb-2D	-76.463	11.647	211.0	-98.9	
								Bta-20-B-1	76.463	-11.647	211.0	-98.9	
B-20-Bta-Mmb-2D	220.000	96.231	12.4	0	0	0	0	B-20-Bta-Mmb-1D	76.562	-17.058	213.9	-97.6	
								Mmb-20-B-1	-76.562	17.058	213.9	-97.6	
B-20-Bwi-KbW-1	220.000	100.612	-0.5	0	0	0	0	B-20-Bwi-KbW-2	0.000	-0.505	1.3	0.0	
								Bwi-20-B-1	0.000	0.505	1.3	0.0	
B-20-Bwi-KbW-2	220.000	100.613	-0.5	0	0	0	0	B-20-Bwi-KbW-1	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
B-20-Bwi-Rba-1D	220.000	100.612	-0.5	0	0	0	0	B-20-Bwi-Rba-2D	8.950	-16.934	50.0	-46.7	
								Bwi-20-B-1	-8.950	16.934	50.0	-46.7	
B-20-Bwi-Rba-2D	220.000	100.707	-0.6	0	0	0	0	B-20-Bwi-Rba-1D	-8.944	-0.059	23.3	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rba-20-B-1	8.944	0.059	23.3	100.0	
B-20-Kgo-Kli-1	220.000	100.003	-0.3	0	0	0	0	B-20-Kgo-Kli-2	-15.508	-4.740	42.6	95.6	
								Kgo-20-B-1	15.508	4.740	42.6	95.6	
B-20-Kgo-Kli-2	220.000	100.099	-0.2	0	0	0	0	B-20-Kgo-Kli-1	15.515	1.984	41.0	99.2	
								Kli-20-B-1	-15.515	-1.984	41.0	99.2	
B-20-Kgo-Rwa-1	220.000	100.003	-0.3	0	0	0	0	B-20-Kgo-Rwa-2	30.793	-22.656	100.3	-80.5	
								Kgo-20-B-1	-30.793	22.656	100.3	-80.5	
B-20-Kgo-Rwa-2	220.000	100.148	-0.5	0	0	0	0	B-20-Kgo-Rwa-1	-30.763	20.917	97.5	-82.7	
								Rwa-20-B-1	30.763	-20.917	97.5	-82.7	
B-20-Kli-Bwi-1	220.000	100.612	-0.5	0	0	0	0	B-20-Kli-Bwi-2	-10.251	16.791	51.3	-52.1	
								Bwi-20-B-1	10.251	-16.791	51.3	-52.1	
B-20-Kli-Bwi-2	220.000	100.099	-0.2	0	0	0	0	B-20-Kli-Bwi-1	10.283	-22.454	64.7	-41.6	
								Kli-20-B-1	-10.283	22.454	64.7	-41.6	
B-20-Kri-Rba-1	220.000	100.727	-0.6	0	0	0	0	B-20-Kri-Rba-2	0.000	0.000	0.0	0.0	
								Kri-20-B-1	0.000	0.000	0.0	0.0	
B-20-Kri-Rba-2	220.000	100.707	-0.6	0	0	0	0	B-20-Kri-Rba-1	0.000	-2.870	7.5	0.0	
								Rba-20-B-1	0.000	2.870	7.5	0.0	
B-20-Mra-Sha-2D	220.000	99.809	-0.8	0	0	0	0	20-Mra-B	-49.212	-8.272	131.2	98.6	
								Sha-20-B-1	49.212	8.272	131.2	98.6	
B-20-Rba-Sha-1	220.000	100.707	-0.6	0	0	0	0	B-20-Rba-Sha-2	7.640	3.387	21.8	91.4	
								Rba-20-B-1	-7.640	-3.387	21.8	91.4	
B-20-Rba-Sha-2	220.000	99.809	-0.8	0	0	0	0	B-20-Rba-Sha-1	-7.613	-17.645	50.5	39.6	
								Sha-20-B-1	7.613	17.645	50.5	39.6	
B-20-Rlm-Rsu-1D	220.000	100.224	-0.6	0	0	0	0	B-20-Rlm-Rsu-2D	0.013	-32.713	85.7	0.0	
								Rlm-20-B-1	-0.013	32.713	85.7	0.0	
B-20-Rlm-Rsu-2D	220.000	100.659	-0.7	0	0	0	0	B-20-Rlm-Rsu-1D	0.000	0.000	0.0	0.0	
								Rsu-20-B-1	0.000	0.000	0.0	0.0	
B-20-Rlm-Rwa-1D	220.000	100.224	-0.6	0	0	0	0	B-20-Rlm-Rwa-2D	-27.654	15.448	82.9	-87.3	
								Rlm-20-B-1	27.654	-15.448	82.9	-87.3	
B-20-Rlm-Rwa-2D	220.000	100.148	-0.5	0	0	0	0	B-20-Rlm-Rwa-1D	27.673	-22.438	93.4	-77.7	
								Rwa-20-B-1	-27.673	22.438	93.4	-77.7	
B-20-Sha-Rlm-1D	220.000	99.809	-0.8	0	0	0	0	B-20-Sha-Rlm-2D	-20.243	-29.919	95.0	56.0	
								Sha-20-B-1	20.243	29.919	95.0	56.0	
B-20-Sha-Rlm-2D	220.000	100.224	-0.6	0	0	0	0	B-20-Sha-Rlm-1D	20.278	13.474	63.8	83.3	
								Rlm-20-B-1	-20.278	-13.474	63.8	83.3	
B-20-Smb-Rba-1	220.000	100.710	-0.6	0	0	0	0	B-20-Smb-Rba-2	0.000	0.000	0.0	0.0	
								Smb-20-B-1	0.000	0.000	0.0	0.0	
B-20-Smb-Rba-2	220.000	100.707	-0.6	0	0	0	0	B-20-Smb-Rba-1	0.000	-1.107	2.9	0.0	
								Rba-20-B-1	0.000	1.107	2.9	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-6-Mr1-Rz1-1	6.600	99.706	4.3	0	0	0	0	B-6-Mr1-Rz1-2	-1.737	0.056	152.5	-99.9	
								Mr1-6-B-1	1.737	-0.056	152.5	-99.9	
B-6-Mr1-Rz1-2	6.600	100.148	4.7	0	0	0	0	B-6-Mr1-Rz1-1	1.745	-0.043	152.5	-100.0	
								Rz1-6-B-1	-1.745	0.043	152.5	-100.0	
B-B-10-Mku-Nbi-1-2	110.000	97.521	0.5	0	0	0	0	B-10-Mku-Nbi-1	14.249	-0.273	76.7	-100.0	
								Nbi-10-B-1	-14.249	0.273	76.7	-100.0	
Bga-3-B-1	30.000	98.958	1.2	0	0	15.833	7.668	Bga-10-B-1	-15.833	-7.668	342.1	90.0	
Bga-10-B-1	110.000	95.368	4.9	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	15.862	8.985	100.3	87.0	-7.000
								B-10-Bga-Nte-1	-0.952	-9.552	52.8	9.9	
								B-10-Bga-Gsh-1	-14.911	0.567	82.1	-99.9	
Bga-6-B-1	6.600	95.368	4.9	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
Bre-1-B-1	15.000	99.583	-4.7	0	0	11.821	5.725	Bre-10-B-1	-5.910	-2.863	253.8	90.0	
								Bre-10-B-1	-5.910	-2.863	253.8	90.0	
Bre-10-B-1	110.000	98.233	-2.9	0	0	0	0	Bre-1-B-1	5.921	3.090	35.7	88.7	-3.000
								Bre-1-B-1	5.921	3.090	35.7	88.7	-3.000
								B-10-Bre-Jb1-1	27.640	36.428	244.3	60.4	
								B-10-Bre-Sha-1D	-68.803	-47.817	447.7	82.1	
								B-10-Bre-Gso-1	29.321	5.209	159.1	98.5	
Bta-3-B-1	30.000	100.250	5.8	0	0	3.114	1.508	Bta-10-B-1	-3.114	-1.508	66.4	90.0	
Bta-10-B-1	110.000	99.905	6.5	0	0	0	0	Bta-3-B-1	3.115	1.558	18.3	89.4	-1.000
								Bta-20-B-1	-76.291	19.406	413.6	-96.9	
								B-10-Bta-Kgo-1	49.382	-14.967	271.1	-95.7	
								B-10-Bta-Hyc-1	23.794	-5.996	128.9	-97.0	
Bta-20-B-1	220.000	96.197	12.1	0	0	0	0	Bta-10-B-1	76.463	-11.647	211.0	-98.9	-2.000
								B-20-Bta-Mmb-1D	-76.463	11.647	211.0	-98.9	
Bwi-3-B-1	30.000	100.000	-1.0	0	0	1.300	0.630	Bwi-20-B-1	-1.300	-0.630	27.8	90.0	
Bwi-10-B-1	110.000	100.612	-0.5	0	0	0	0	Bwi-20-B-1	0.000	0.000	0.0	0.0	
Bwi-20-B-1	220.000	100.612	-0.5	0	0	0	0	Bwi-10-B-1	0.000	0.000	0.0	0.0	
								Bwi-3-B-1	1.301	0.647	3.8	89.5	
								B-20-Bwi-Rba-1D	8.950	-16.934	50.0	-46.7	
								B-20-Kli-Bwi-1	-10.251	16.791	51.3	-52.1	
								B-20-Bwi-KbW-1	0.000	-0.505	1.3	0.0	
C-Gfu-B-3	30.000	95.464	-3.5	0	0	0.000	-0.911	Gfu-3-B-1	0.000	0.911	18.4	0.0	
C-Kre-B	30.000	99.964	-7.1	0	0	0.000	-4.996	Kre-3-B-1	0.000	4.996	96.2	0.0	
C-MKi-3-B	30.000	95.203	-7.4	0	0	0.000	-4.532	MKi-3-B-1	0.000	4.532	91.6	0.0	
C-Msh-1-B	15.000	96.817	-7.4	0	0	0.000	-4.687	Msh-1-B-1	0.000	4.687	186.3	0.0	
C-Nde-B	30.000	98.771	-4.6	0	0	0.000	-4.878	Nde-3-B-1	0.000	4.878	95.0	0.0	
C-Rwi-B-1	15.000	99.764	-6.8	0	0	0.000	-4.976	Rwi-1-B-1	0.000	4.976	192.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Cyi-3-B-1	30.000	98.812	8.9	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.149	0.058	3.1	93.1	
								G-Cyi-3-B	-0.149	-0.058	3.1	93.1	
Cyi-3-B-2	30.000	98.812	8.9	0	0	0	0	N-Cyi-04-1	-0.149	-0.058	3.1	93.1	
								G-Cyi-3-B	0.149	0.058	3.1	93.1	
G-Cyi-3-B	30.000	98.812	8.9	0	0	0	0	Cyi-3-B-1	0.149	0.058	3.1	93.1	
								Cyi-3-B-2	-0.149	-0.058	3.1	93.1	
Gfu-3-B-1	30.000	95.464	-3.5	0	0	2.853	1.382	Gfu-10-B-1	-2.853	-0.470	58.3	98.7	
								C-Gfu-B-3	0.000	-0.911	18.4	0.0	
Gfu-10-B-1	110.000	96.525	-1.4	0	0	0	0	Gfu-3-B-1	2.865	0.579	15.9	98.0	
								10-Gfu/Mku/Rln-B	-2.865	-0.579	15.9	98.0	
G-Gko-1-B	15.000	99.683	-4.8	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-1-B-2	0.000	0.000	0.0	0.0	
G-Gko-3-B	15.000	99.683	-4.8	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-3-B	0.000	0.000	0.0	0.0	
G-Gko-10-B	110.000	96.168	-3.2	0	0	0	0	Gko-10-B-1	0.000	0.000	0.0	0.0	
								Gko-10-B-2	0.000	0.000	0.0	0.0	
G-Gsh-1-B	11.000	99.779	8.2	0	0	0	0	Gsh-1-B-1	15.000	0.000	789.0	100.0	
								Gsh-1-B-2	-15.000	0.000	789.0	100.0	
Gha-3-B-1	30.000	98.800	-4.5	0	0	7.339	3.554	Gha-10-B-1	-7.339	-3.554	158.8	90.0	
								Gha-10-B-1	7.343	3.725	45.1	89.2	-4.000
Gha-10-B-1	110.000	95.767	-3.4	0	0	0	0	B-10-Gha-MKi-1	-14.701	-2.147	81.4	98.9	
								B-10-Gha-Nde-1	7.358	-1.577	41.2	-97.8	
G-Jb2-10-B	110.000	96.728	-3.1	0	0	0	0	Jb2-10-B-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
G-Jb3-1-B	15.000	99.018	-5.0	0	0	0	0	Jb3-1-B-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-2	0.000	0.000	0.0	0.0	
G-KbW-1-B-1	11.000	101.588	13.1	0	0	0	0	KbW-1-B-3	-17.000	0.000	878.3	100.0	
								KbW-1-B-2	17.000	0.000	878.3	100.0	
G-KbW-1-B-2	11.000	101.588	13.1	0	0	0	0	KbW-1-B-1	8.000	0.000	413.3	100.0	
								KbW-1-B-4	-8.000	0.000	413.3	100.0	
G-KbW-1-B-3	220.000	100.613	-0.5	0	0	0	0	B-20-Bwi-KbW-2	0.000	0.000	0.0	0.0	
								KbW-20-B-2	0.000	0.000	0.0	0.0	
Gko-1-B-1	15.000	99.683	-4.8	0	0	13.730	6.650	Gko-10-B-1	-4.577	-2.217	196.4	90.0	
								Gko-10-B-1	-4.577	-2.217	196.4	90.0	
								Gko-10-B-1	-4.577	-2.217	196.4	90.0	
								G-Gko-1-B	0.000	0.000	0.0	0.0	
Gko-1-B-2	15.000	99.683	-4.8	0	0	0	0	G-Gko-1-B	0.000	0.000	0.0	0.0	
								G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-3-B	15.000	99.683	-4.8	0	0	0	0	G-Gko-3-B	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Gko-10-B-1	110.000	96.168	-3.2	0	0	0	0	Gko-1-B-1	4.585	2.376	28.2	88.8	-5.000
								Gko-1-B-1	4.585	2.376	28.2	88.8	-5.000
								Gko-1-B-1	4.585	2.376	28.2	88.8	-5.000
								B-10-Gko-Jb1-1	-9.867	-13.401	90.8	59.3	
								B-10-Gko-MKi-1	-3.888	6.273	40.3	-52.7	
Gko-10-B-2	110.000	96.168	-3.2	0	0	0	0	G-Gko-10-B	0.000	0.000	0.0	0.0	
G-Kse-1-B	110.000	96.943	-4.0	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Mku-10-B	110.000	96.872	-0.3	0	0	0	0	Mku-10-B-1	0.000	0.000	0.0	0.0	
								Mku-10-B-2	0.000	0.000	0.0	0.0	
G-Mku-6-B	6.600	99.676	0.5	0	0	0	0	Mku-6-B-4	12.000	0.000	1053.1	100.0	
								Mku-6-B-2	-12.000	0.000	1053.1	100.0	
G-Mmb-3-B	30.000	99.853	17.8	0	0	0	0	Mmb-3-B-1	79.821	-8.067	1546.3	-99.5	
								Mmb-3-B-2	-79.821	8.067	1546.3	-99.5	
G-Mus-3-B	30.000	100.765	4.6	0	0	0	0	Mus-3-B	-0.998	0.014	19.1	100.0	
								Rka-3-B-1	0.998	-0.014	19.1	100.0	
G-Nko-3-B	30.000	98.882	8.9	0	0	0	0	Nko-3-B-1	0.299	0.088	6.1	95.9	
								Nko-3-B-2	-0.299	-0.088	6.1	95.9	
G-NtB-3-B	30.000	97.762	0.7	0	0	0	0	Kgo-3-B-1	2.496	-0.054	49.1	-100.0	
								NtB-3-B1	-2.496	0.054	49.1	-100.0	
G-Ny1-3-B	30.000	99.720	3.9	0	0	0	0	Ny1-3-B-1	13.984	0.122	269.9	100.0	
								Ny1-3-B-2	-13.984	-0.122	269.9	100.0	
G-Ny2-3-B	30.000	99.326	-3.5	0	0	0	0	Ny2-3-B-1	0.000	0.000	0.0	0.0	
								Ny2-3-B-2	0.000	0.000	0.0	0.0	
G-Rka5-3-B	30.000	100.765	4.6	0	0	0	0	Rka5-3-B	-1.496	0.031	28.6	-100.0	
								Rka-3-B-1	1.496	-0.031	28.6	-100.0	
G-Rka-3-B	30.000	100.765	4.6	0	0	0	0	Rka-3-B-1	3.343	-0.092	63.9	-100.0	
								Rka-3-B-2	-3.343	0.092	63.9	-100.0	
G-Rsu-10-B	110.000	100.659	-0.7	0	0	0	0	Rsu-10-B-1	0.000	0.000	0.0	0.0	
								Rsu-10-B-2	0.000	0.000	0.0	0.0	
G-Rwa-3-B	30.000	99.819	-0.9	0	0	0	0	Rwa-3-B-1	0.000	0.000	0.0	0.0	
								Rwa-3-B-2	0.000	0.000	0.0	0.0	
G-Rz1-.06-B	0.600	100.409	6.2	0	0	0	0	N-Rz1-.06-B-1-1	1.750	0.000	1677.1	100.0	
								N-Rz1-.06-B-1-2	-1.750	0.000	1677.1	100.0	
G-Rz2-.6-B	6.600	96.644	7.9	0	0	0	0	Rz2-.6-B-1-1	6.375	0.000	577.0	100.0	
								Rz2-.6-B-1-2	-6.375	0.000	577.0	100.0	
Gsh-1-B-1	11.000	99.779	8.2	0	0	0	0	Gsh-10-B	7.500	0.000	394.5	100.0	
								Gsh-10-B	7.500	0.000	394.5	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								G-Gsh-1-B	-15.000	0.000	789.0	100.0	
Gsh-1-B-2	11.000	99.779	8.2	15.000	0.000	0	0	G-Gsh-1-B	15.000	0.000	789.0	100.0	
Gsh-10-B	110.000	95.669	5.3	0	0	0	0	Gsh-1-B-1	-7.481	0.376	41.1	-99.9	-4.000
								Gsh-1-B-1	-7.481	0.376	41.1	-99.9	-4.000
								B-10-Bga-Gsh-2	14.962	-0.752	82.2	-99.9	
G-Smb-1-B	11.000	100.710	-0.6	0	0	0	0	N-Smb-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2N	0.000	0.000	0.0	0.0	
Gso-1-B-1	15.000	98.982	-5.0	0	0	7.363	3.566	Gso-10-B-1	-7.363	-3.566	318.1	90.0	
Gso-10-B-1	110.000	96.943	-4.0	0	0	0	0	Gso-1-B-1	7.367	3.737	44.7	89.2	-3.000
								B-10-Gso-Nde-1	0.000	-0.178	1.0	0.0	
								10-Bre/Gso/Msh-B	-7.367	-3.559	44.3	90.0	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Hye-3-B-1	30.000	100.826	4.6	0	0	3.146	1.524	Hye-10-B-1	-3.146	-1.524	66.7	90.0	
Hye-10-B-1	110.000	99.469	5.3	0	0	0	0	Hye-3-B-1	3.149	1.572	18.6	89.5	-2.000
								B-10-Bta-Hye-2	-23.567	5.893	128.2	-97.0	
								B-10-Hye-Rka-1	20.418	-7.465	114.7	-93.9	
Jb1-10-B-1	110.000	96.728	-3.1	0	0	0	0	Jb1-1-B-1	13.203	6.936	80.9	88.5	-4.000
								B-10-Jb1-Jb2-1	0.000	-0.036	0.2	0.0	
								B-10-Jb1-Rln-2	-4.481	5.559	38.7	-62.8	
								B-10-Bre-Jb1-2	-27.327	-35.992	245.2	60.5	
								B-10-Gko-Jb1-2	9.899	13.224	89.6	59.9	
								B-10-Jb1-Nbg-1	8.706	10.310	73.2	64.5	
Jb1-1-B-1	15.000	99.018	-5.0	0	0	13.190	6.388	Jb1-10-B-1	-13.190	-6.388	569.7	90.0	
								B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
Jb2-6-B-1	6.600	99.720	-3.1	0	0	0	0	Jb2-10-B-2	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
Jb2-10-B-1	110.000	96.728	-3.1	0	0	0	0	B-10-Jb1-Jb2-2	0.000	0.000	0.0	0.0	
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb2-10-B-2	110.000	96.728	-3.1	0	0	0	0	Jb2-6-B-1	0.000	0.000	0.0	0.0	-3.000
								Jb2-6-B-1	0.000	0.000	0.0	0.0	-3.000
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb3-1-B-1	15.000	99.018	-5.0	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								G-Jb3-1-B	0.000	0.000	0.0	0.0	
Jb3-1-B-2	15.000	99.018	-5.0	0	0	0	0	G-Jb3-1-B	0.000	0.000	0.0	0.0	
								Jb3-1-B-2d	0.000	0.000	0.0	0.0	
Jb3-1-B-2d	15.000	99.018	-5.0	0	0	0	0	Jb3-1-B-2	0.000	0.000	0.0	0.0	
Kba-3-B-1	30.000	99.597	-7.2	0	0	3.475	1.683	Kba-10-B-1	-3.475	-1.683	74.6	90.0	
Kba-10-B-1	110.000	96.203	-5.6	0	0	0	0	Kba-3-B-1	3.484	1.808	21.4	88.8	-5.000
								10-Kba/Msh/Rwi-B	-7.005	2.208	40.1	-95.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Kba-Kre-1	3.520	-4.016	29.1	-65.9	
Kbo-3-B-1	30.000	97.798	3.2	0	0	1.249	0.605	Kbo-10-B-1	-1.249	-0.605	27.3	90.0	
Kbo-10-B-1	110.000	97.036	4.4	0	0	0	0	Kbo-3-B-1	1.252	0.638	7.6	89.1	-2.000
								10-Kbo/Kro/Mr2-B	-1.252	-0.638	7.6	89.1	
Kbu-1-B-1	11.000	98.430	8.0	0	0	0	0	Kbu-3-B-1	-0.442	-0.371	30.8	76.6	
								Kbu-10-B-1	11.984	-0.886	640.8	-99.7	
								Kbu-10-B-1	12.585	-0.897	672.8	-99.7	
								B-1-Kbu-KbW-1F_T	-24.127	2.153	1291.6	-99.6	
Kbu-3-B-1	30.000	97.356	8.5	0	0	0	0	Kbu-1-B-1	0.443	0.379	11.5	76.0	-2.000
								B-3-Kbu-Kro/Nko-2	-0.443	-0.379	11.5	76.0	
Kbu-10-B-1	110.000	98.725	4.6	0	0	0	0	Kbu-1-B-1	-11.946	1.596	64.1	-99.1	
								Kbu-1-B-1	-12.548	1.643	67.3	-99.2	
								B-10-Kbu-Kro-1	24.494	-3.239	131.4	-99.1	
KbW-1-B-1	11.000	101.588	13.1	0	0	0	0	KbW-1-B-2	8.000	0.000	413.3	100.0	
								G-KbW-1-B-2	-8.000	0.000	413.3	100.0	
KbW-1-B-2	11.000	101.588	13.1	0	0	0	0	KbW-1-B-1	-8.000	0.000	413.3	100.0	
								B-1-Kbu-KbW-2F_T	25.000	0.000	1291.6	100.0	
								G-KbW-1-B-1	-17.000	0.000	878.3	100.0	
KbW-1-B-3	11.000	101.588	13.1	17.000	0.000	0	0	G-KbW-1-B-1	17.000	0.000	878.3	100.0	
KbW-1-B-4	11.000	101.588	13.1	8.000	0.000	0	0	G-KbW-1-B-2	8.000	0.000	413.3	100.0	
KbW-1-B-5	20.000	100.613	-0.5	0	0	0	0	KbW-20-B-2	0.000	0.000	0.0	0.0	
KbW-20-B-2	220.000	100.613	-0.5	0	0	0	0	KbW-1-B-5	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
Kgo-3-B-1	30.000	97.762	0.7	0	0	4.437	2.149	Kgo-10-B-1	-0.971	-1.102	28.9	66.1	
								Kgo-10-B-1	-0.971	-1.102	28.9	66.1	
								G-NtB-3-B	-2.496	0.054	49.1	-100.0	
Kgo-10-B-1	110.000	98.756	1.2	0	0	0	0	Kgo-3-B-1	0.972	1.120	7.9	65.5	
								Kgo-3-B-1	0.972	1.120	7.9	65.5	
								Kgo-20-B-1	15.320	-25.853	159.7	-51.0	
								B-10-Kgo-MKi-2	46.749	2.373	248.8	99.9	
								B-10-Kgo-Kli-1	-16.728	3.146	90.5	-98.3	
								B-10-Bta-Kgo-2	-47.284	18.093	269.1	-93.4	
Kgo-20-B-1	220.000	100.003	-0.3	0	0	0	0	Kgo-10-B-1	-15.286	27.396	82.3	-48.7	-3.000
								B-20-Kgo-Kli-1	-15.508	-4.740	42.6	95.6	
								B-20-Kgo-Rwa-1	30.793	-22.656	100.3	-80.5	
Kli-3-B-1	30.000	99.648	1.1	0	0	1.292	0.626	Kli-10-B-1	-1.292	-0.626	27.7	90.0	
Kli-10-B-1	110.000	98.989	2.3	0	0	0	0	Kli-3-B-1	1.297	0.660	7.7	89.1	-2.000
								Kli-20-B-1	25.837	-18.738	169.2	-81.0	
								B-10-Kgo-Kli-2	16.835	-3.762	91.5	-97.6	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Kli-Kro-2	-24.454	13.230	147.4	-88.0	
								B-10-Kli-Rka-1	-22.570	8.800	128.4	-93.2	
								B-10-Kli-Nyl-1	3.056	-0.190	16.2	-99.8	
Kli-20-B-1	220.000	100.099	-0.2	0	0	0	0	Kli-10-B-1	-25.798	20.470	86.3	-78.3	-2.000
								B-20-Kgo-Kli-2	15.515	1.984	41.0	99.2	
								B-20-Kli-Bwi-2	10.283	-22.454	64.7	-41.6	
Kre-3-B-1	30.000	99.964	-7.1	0	0	3.498	1.694	Kre-10-B-1	-3.498	3.302	92.6	-72.7	
								C-Kre-B	0.000	-4.996	96.2	0.0	
Kre-10-B-1	110.000	96.450	-6.0	0	0	0	0	Kre-3-B-1	3.504	-3.187	25.8	-74.0	-2.000
								B-10-Kba-Kre-2	-3.504	3.187	25.8	-74.0	
Kri-20-B-1	220.000	100.727	-0.6	0	0	0	0	B-20-Kri-Rba-1	0.000	0.000	0.0	0.0	
Kro-3-B-1	30.000	99.277	2.7	0	0	1.283	0.621	Kro-10-B-1	-1.283	-0.621	27.6	90.0	
Kro-10-B-1	110.000	98.500	3.9	0	0	0	0	Kro-3-B-1	1.286	0.656	7.7	89.1	-2.000
								B-10-Kbu-Kro-2	-24.402	3.126	131.1	-99.2	
								B-10-Kbo-Kro-1	-1.598	9.525	51.5	-16.5	
								B-10-Kli-Kro-1	24.713	-13.307	149.6	-88.0	
Kse-10-B1	110.000	96.943	-4.0	0	0	0	0	G-Kse-1-B	0.000	0.000	0.0	0.0	
MKi-3-B-1	30.000	95.203	-7.4	0	0	28.123	13.621	MKi-10-B-1	-28.123	-9.089	597.4	95.2	
								C-MKi-3-B	0.000	-4.532	91.6	0.0	
MKi-10-B-1	110.000	96.067	-3.1	0	0	0	0	MKi-3-B-1	28.176	11.497	166.3	92.6	-2.000
								10-Gko/Kgo/MKi-B	-41.679	-6.624	230.6	98.8	
								B-10-MKi-Nbg-2	-1.235	-6.884	38.2	17.7	
								B-10-Gha-MKi-2	14.738	2.011	81.3	99.1	
Mku-3-B-1	30.000	98.281	-2.0	0	0	10.469	5.070	Mku-6-B-1	-10.469	-5.070	227.8	90.0	1.000
Mku-10-B-1	110.000	96.872	-0.3	0	0	0	0	Mku-6-B-1	-1.504	5.942	33.2	-24.5	-7.000
								B-10-Gfu-Mku-2	23.726	-6.826	133.8	-96.1	
								B-10-Mku-Nta-1	-8.069	1.055	44.1	-99.2	
								B-10-Mku-Nbi-1	-14.153	-0.171	76.7	100.0	
								G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-10-B-2	110.000	96.872	-0.3	0	0	0	0	G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-6-B-1	6.600	99.676	0.5	0	0	0	0	Mku-3-B-1	10.482	5.665	1045.7	88.0	
								Mku-10-B-1	1.518	-5.665	514.7	-25.9	
								Mku-6-B-4	-6.000	0.000	526.6	100.0	
								Mku-6-B-3	-3.000	0.000	263.3	100.0	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	-3.000	0.000	263.3	100.0	
Mku-6-B-2	6.600	99.676	0.5	12.000	0.000	0	0	G-Mku-6-B	12.000	0.000	1053.1	100.0	
Mku-6-B-3	6.600	99.676	0.5	0	0	0	0	Mku-6-B-4	-6.000	0.000	526.6	100.0	
								Mku-6-B-1	3.000	0.000	263.3	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	3.000	0.000	263.3	100.0	
Mku-6-B-4	6.600	99.676	0.5	0	0	0	0	Mku-6-B-1	6.000	0.000	526.6	100.0	
								Mku-6-B-3	6.000	0.000	526.6	100.0	
								G-Mku-6-B	-12.000	0.000	1053.1	100.0	
Mku-6-B-5	6.600	99.676	0.5	0	0	0	0	Mku-6-B-1	0.000	0.000	0.0	0.0	
								Mku-6-B-3	0.000	0.000	0.0	0.0	
Mku-6-B-6	6.600	99.676	0.5	0	0	0	0	Mku-6-B-3	-3.000	0.000	263.3	100.0	
								Mku-6-B-1	3.000	0.000	263.3	100.0	
Mmb-3-B-1	30.000	99.853	17.8	0	0	3.092	1.497	Mmb-20-B-1	76.729	-9.565	1490.3	-99.2	
								G-Mmb-3-B	-79.821	8.067	1546.3	-99.5	
Mmb-3-B-2	30.000	99.853	17.8	0	0	0	0	N-Mmb-6-1	-39.910	4.034	773.1	-99.5	
								N-Mmb-6-2	-39.910	4.034	773.1	-99.5	
								G-Mmb-3-B	79.821	-8.067	1546.3	-99.5	
Mmb-20-B-1	220.000	96.231	12.4	0	0	0	0	Mmb-3-B-1	-76.562	17.058	213.9	-97.6	-5.000
								B-20-Bta-Mmb-2D	76.562	-17.058	213.9	-97.6	
Mr1-6-B-1	6.600	99.706	4.3	0	0	0	0	Mr1-10-B-1	-1.112	-1.541	166.8	58.5	
								Mr1-3-B-1	2.849	1.485	281.9	88.7	
								B-6-Mr1-Rz1-1	-1.737	0.056	152.5	-99.9	
Mr1-10-B-1	110.000	96.334	4.9	0	0	0	0	Mr1-6-B-1	1.115	1.579	10.5	57.7	-5.000
								B-10-Mr1-Mr2-1	-1.115	-1.579	10.5	57.7	
Mr1-3-B-1	30.000	100.940	2.6	0	0	2.842	1.377	Mr1-6-B-1	-2.842	-1.377	60.2	90.0	3.000
Mr2-10-B-1	110.000	96.337	4.9	0	0	0	0	B-10-Mr2-Rz2-1	-6.347	-0.058	34.6	100.0	
								Mr2-10-B-2	6.347	0.058	34.6	100.0	
Mr2-10-B-2	110.000	96.337	4.9	0	0	0	0	B-10-Mr2/Nte-1	5.232	-1.511	29.7	-96.1	
								B-10-Mr1-Mr2-2	1.115	1.569	10.5	57.9	
								Mr2-10-B-1	-6.347	-0.058	34.6	100.0	
Msh-1-B-1	15.000	96.817	-7.4	0	0	17.288	8.373	Msh-10-B-1	-8.644	-1.843	351.4	97.8	
								Msh-10-B-1	-8.644	-1.843	351.4	97.8	
								C-Msh-1-B	0.000	-4.687	186.3	0.0	
Msh-10-B-1	110.000	96.128	-4.8	0	0	0	0	Msh-1-B-1	8.665	2.259	48.9	96.8	-2.000
								Msh-1-B-1	8.665	2.259	48.9	96.8	-2.000
								B-10-Gso-Msh-2	-21.502	-1.627	117.7	99.7	
								B-10-Kba-Msh-2	10.575	-6.118	66.7	-86.6	
								B-10-Msh-Nga-1	-6.402	3.227	39.1	-89.3	
Mus-3-B	30.000	100.765	4.6	0	0	0	0	Mus-6-B	-0.998	0.014	19.1	100.0	
								G-Mus-3-B	0.998	-0.014	19.1	100.0	
Mus-6-B	6.600	100.920	5.4	1.000	0.000	0	0	Mus-3-B	1.000	0.000	86.7	100.0	
Nbg-3-B-1	30.000	99.465	-4.0	0	0	7.428	3.598	Nbg-10-B-1	-3.714	-1.799	79.8	90.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Nbg-10-B-1	-3.714	-1.799	79.8	90.0	
Nbg-10-B-1	110.000	96.262	-3.2	0	0	0	0	Nbg-3-B-1	3.717	1.868	22.7	89.4	-4.000
								Nbg-3-B-1	3.717	1.868	22.7	89.4	-4.000
								B-10-Jb1-Nbg-2	-8.676	-10.460	74.1	63.8	
								B-10-MKi-Nbg-1	1.241	6.725	37.3	18.2	
Nbi-3-B-1	30.000	98.904	-0.1	0	0	1.274	0.617	Nbi-10-B-1	-1.274	-0.617	27.6	90.0	
Nbi-10-B-1	110.000	97.521	0.5	0	0	0	0	Nbi-3-B-1	1.276	0.634	7.7	89.5	-2.000
								B-B-10-Mku-Nbi-1-2	14.249	-0.273	76.7	-100.0	
								B-10-Nbi-Nyl-1	-15.525	-0.362	83.6	100.0	
* N-Cyi-04-1	0.400	100.000	9.8	0.150	0.062	0	0	Cyi-3-B-2	0.150	0.062	234.0	92.5	
Nde-3-B-1	30.000	98.771	-4.6	0	0	7.335	3.553	Nde-10-B-1	-3.668	0.663	72.6	-98.4	
								Nde-10-B-1	-3.668	0.663	72.6	-98.4	
								C-Nde-B	0.000	-4.878	95.0	0.0	
Nde-10-B-1	110.000	95.631	-3.7	0	0	0	0	Nde-3-B-1	3.670	-0.606	20.4	-98.7	-3.000
								Nde-3-B-1	3.670	-0.606	20.4	-98.7	-3.000
								B-10-Gha-Nde-2	-7.341	1.212	40.8	-98.7	
Nga-3-B-1	30.000	99.054	-4.8	0	0	3.441	1.666	Nga-10-B-1	-3.441	-1.666	74.3	90.0	
Nga-10-B-1	110.000	95.995	-3.8	0	0	0	0	Nga-3-B-1	3.444	1.741	21.1	89.2	-4.000
								B-10-Nga-RIn-1	-9.902	2.650	56.0	-96.6	
								B-10-Msh-Nga-2	6.458	-4.391	42.7	-82.7	
Nko-3-B-1	30.000	98.882	8.9	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.299	0.088	6.1	95.9	
								G-Nko-3-B	-0.299	-0.088	6.1	95.9	
Nko-3-B-2	30.000	98.882	8.9	0	0	0	0	N-Nko-04-B-2	-0.299	-0.088	6.1	95.9	
								G-Nko-3-B	0.299	0.088	6.1	95.9	
N-Mmb-.6-1	6.600	99.570	23.6	40.000	0.000	0	0	Mmb-3-B-2	40.000	0.000	3514.2	100.0	
N-Mmb-.6-2	6.600	99.570	23.6	40.000	0.000	0	0	Mmb-3-B-2	40.000	0.000	3514.2	100.0	
* N-Nko-04-B-2	0.400	100.000	10.2	0.300	0.096	0	0	Nko-3-B-2	0.300	0.096	454.6	95.2	
* N-Nyl-.6-2	6.600	100.000	6.8	14.000	0.824	0	0	Nyl-3-B-2	14.000	0.824	1226.8	99.8	
N-Rka-.6-2	6.600	100.939	6.2	3.350	0.000	0	0	Rka-3-B-2	3.350	0.000	290.3	100.0	
N-Rz1-.06-B-1-1	0.600	100.409	6.2	0	0	0	0	Rz1-.6-B-1	1.750	0.000	1677.1	100.0	
								G-Rz1-.06-B	-1.750	0.000	1677.1	100.0	
N-Rz1-.06-B-1-2	0.600	100.409	6.2	1.750	0.000	0	0	G-Rz1-.06-B	1.750	0.000	1677.1	100.0	
N-Smb-1	11.000	100.710	-0.6	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2	0.000	0.000	0.0	0.0	
								G-Smb-1-B	0.000	0.000	0.0	0.0	
Nta-3-B-1	30.000	100.634	1.3	0	0	3.135	1.519	Nta-.6-B-1	-3.135	-1.519	66.6	90.0	2.000
Nta-10-B-1	110.000	97.006	0.3	0	0	0	0	Nta-.6-B-1	-4.047	0.928	22.5	-97.5	-3.000
								Nta-.6-B-1	-4.047	0.928	22.5	-97.5	-3.000
								B-10-Mku-Nta-2	8.094	-1.856	44.9	-97.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Nta-6-B-1	6.600	99.521	2.2	0	0	0	0	Nta-3-B-1	3.139	1.581	308.9	89.3	
								Nta-10-B-1	4.056	-0.790	363.2	-98.2	
								Nta-10-B-1	4.056	-0.790	363.2	-98.2	
								Nta-6-B-3	-11.250	0.000	988.9	100.0	
Nta-6-B-2	6.600	99.521	2.2	11.250	0.000	0	0	Nta-6-B-3	11.250	0.000	988.9	100.0	
Nta-6-B-3	6.600	99.521	2.2	0	0	0	0	Nta-6-B-1	11.250	0.000	988.9	100.0	
								Nta-6-B-2	-11.250	0.000	988.9	100.0	
NtB-3-B1	30.000	97.762	0.7	0	0	0	0	NtB-6-B	-2.496	0.054	49.1	-100.0	
								G-NtB-3-B	2.496	-0.054	49.1	-100.0	
NtB-6-B	6.600	97.903	2.0	2.500	0.000	0	0	NtB-3-B1	2.500	0.000	223.4	100.0	
Nte-3-B-1	30.000	99.693	4.1	0	0	1.293	0.626	Nte-10-B-1	-1.293	-0.626	27.7	90.0	
Nte-10-B-1	110.000	96.293	4.7	0	0	0	0	Nte-3-B-1	1.294	0.643	7.9	89.5	-4.000
								B-10-Kbo/Nte-2	2.937	-10.572	59.8	-26.8	
								B-10-Mr2/Nte-2	-5.224	0.905	28.9	-98.5	
								B-10-Bga-Nte-2	0.994	9.024	49.5	10.9	
Nyl-10-B-1	110.000	98.828	2.1	0	0	0	0	Nyl-3-B-1	-12.682	0.910	67.5	-99.7	-1.000
								B-10-Kli-Nyl-2	-3.051	-0.500	16.4	98.7	
								B-10-Nbi-Nyl-2	15.733	-0.410	83.6	-100.0	
Nyl-3-B-1	30.000	99.720	3.9	0	0	1.293	0.626	Nyl-10-B-1	12.691	-0.504	245.1	-99.9	
								G-Nyl-3-B	-13.984	-0.122	269.9	100.0	
Nyl-3-B-2	30.000	99.720	3.9	0	0	0	0	N-Nyl1-.6-2	-13.984	-0.122	269.9	100.0	
								G-Nyl1-3-B	13.984	0.122	269.9	100.0	
Nyl-10-B-1	110.000	96.154	-2.7	0	0	0	0	Nyl-2-3-B-1	3.065	1.542	18.7	89.3	-4.000
								B-10-Nyl2-Rln-1	-3.065	-1.542	18.7	89.3	
Nyl-2-3-B-1	30.000	99.326	-3.5	0	0	3.063	1.483	Nyl-2-10-B-1	-3.063	-1.483	65.9	90.0	
								G-Nyl2-3-B	0.000	0.000	0.0	0.0	
Nyl-2-3-B-2	30.000	99.326	-3.5	0	0	0	0	G-Nyl2-3-B	0.000	0.000	0.0	0.0	
Rba-3-B-1	30.000	100.093	-1.1	0	0	1.302	0.631	Rba-20-B-1	-1.302	-0.631	27.8	90.0	
Rba-20-B-1	220.000	100.707	-0.6	0	0	0	0	Rba-3-B-1	1.304	0.648	3.8	89.5	
								B-20-Bwi-Rba-2D	-8.944	-0.059	23.3	100.0	
								B-20-Rba-Sha-1	7.640	3.387	21.8	91.4	
								B-20-Kri-Rba-2	0.000	-2.870	7.5	0.0	
								B-20-Smb-Rba-2	0.000	-1.107	2.9	0.0	
Rka5-.6-B	6.600	100.991	5.8	1.500	0.000	0	0	Rka5-3-B	1.500	0.000	129.9	100.0	
Rka5-3-B	30.000	100.765	4.6	0	0	0	0	Rka5-.6-B	-1.496	0.031	28.6	-100.0	
								G-Rka5-3-B	1.496	-0.031	28.6	-100.0	
Rka-3-B-1	30.000	100.765	4.6	0	0	3.143	1.522	Rka-10-B-1	1.347	-0.830	30.2	-85.2	
								Rka-10-B-1	1.347	-0.830	30.2	-85.2	
								G-Rka-3-B	-3.343	0.092	63.9	-100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								G-Rka5-3-B	-1.496	0.031	28.6	-100.0	
								G-Mus-3-B	-0.998	0.014	19.1	100.0	
Rka-3-B-2	30.000	100.765	4.6	0	0	0	0	N-Rka-6-2	-3.343	0.092	63.9	-100.0	
								G-Rka-3-B	3.343	-0.092	63.9	-100.0	
Rka-10-B-1	110.000	99.247	4.1	0	0	0	0	Rka-3-B-1	-1.347	0.846	8.4	-84.7	-2.000
								Rka-3-B-1	-1.347	0.846	8.4	-84.7	-2.000
								B-10-Kli-Rka-2	22.911	-8.936	130.1	-93.2	
								B-10-Hye-Rka-2	-20.218	7.244	113.6	-94.1	
Rlm-3-B-1	30.000	98.938	-2.0	0	0	7.357	3.563	Rlm-10-B-1	-7.357	-3.563	159.0	90.0	
Rlm-10-B-1	110.000	99.897	-1.0	0	0	0	0	Rlm-3-B-1	7.361	3.734	43.4	89.2	
								Rlm-20-B-1	-7.361	-3.734	43.4	89.2	
Rlm-20-B-1	220.000	100.224	-0.6	0	0	0	0	Rlm-10-B-1	7.362	3.791	21.7	88.9	
								B-20-Sha-Rlm-2D	20.278	13.474	63.8	83.3	
								B-20-Rlm-Rwa-1D	-27.654	15.448	82.9	-87.3	
								B-20-Rlm-Rsu-1D	0.013	-32.713	85.7	0.0	
Rln-3-B-1	30.000	95.496	-3.5	0	0	2.854	1.382	Rln-10-B-1	-2.854	-1.382	63.9	90.0	
Rln-10-B-1	110.000	96.304	-2.6	0	0	0	0	Rln-3-B-1	2.857	1.437	17.4	89.3	
								10-Gfu/Jb1/Rln-B	-15.927	0.987	87.0	-99.8	
								B-10-Nga-Rln-2	10.002	-3.628	58.0	-94.0	
								B-10-Ny2-Rln-2	3.068	1.203	18.0	93.1	
Rsu-10-B-1	110.000	100.659	-0.7	0	0	0	0	Rsu-20-B-1	0.000	0.000	0.0	0.0	
								G-Rsu-10-B	0.000	0.000	0.0	0.0	
Rsu-10-B-2	110.000	100.659	-0.7	0	0	0	0	G-Rsu-10-B	0.000	0.000	0.0	0.0	
Rsu-20-B-1	220.000	100.659	-0.7	0	0	0	0	Rsu-10-B-1	0.000	0.000	0.0	0.0	
								B-20-Rlm-Rsu-2D	0.000	0.000	0.0	0.0	
Rwa-3-B-1	30.000	99.819	-0.9	0	0	3.090	1.497	Rwa-20-B-1	-3.090	-1.497	66.2	90.0	
								G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-3-B-2	30.000	99.819	-0.9	0	0	0	0	G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-20-B-1	220.000	100.148	-0.5	0	0	0	0	Rwa-3-B-1	3.090	1.521	9.0	89.7	
								B-20-Rlm-Rwa-2D	27.673	-22.438	93.4	-77.7	
								B-20-Kgo-Rwa-2	-30.763	20.917	97.5	-82.7	
Rwi-1-B-1	15.000	99.764	-6.8	0	0	3.485	1.688	Rwi-10-B-1	-3.485	3.288	184.9	-72.7	
								C-Rwi-B-1	0.000	-4.976	192.0	0.0	
Rwi-10-B-1	110.000	96.258	-5.7	0	0	0	0	Rwi-1-B-1	3.491	-3.173	25.7	-74.0	-2.000
								B-10-Kba-Rwi-2	-3.491	3.173	25.7	-74.0	
Rz1-6-B-1	6.600	100.148	4.7	0	0	0	0	N-Rz1-.06-B-1-1	-1.745	0.043	152.5	-100.0	
								B-.6-Mr1-Rz1-2	1.745	-0.043	152.5	-100.0	
Rz2-6-B-1-1	6.600	96.644	7.9	0	0	0	0	Rz2-10-B-1	6.375	0.000	577.0	100.0	
								G-Rz2-.6-B	-6.375	0.000	577.0	100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Rz2-6-B-1-2	6.600	96.644	7.9	6.375	0.000	0	0	G-Rz2-6-B	6.375	0.000	577.0	100.0	
Rz2-10-B-1	110.000	96.511	5.2	0	0	0	0	Rz2-6-B-1-1	-6.359	0.304	34.6	-99.9	
								B-10-Mr2-Rz2-2	6.359	-0.304	34.6	-99.9	
Sha-3-B-1	30.000	100.601	-3.6	0	0	7.581	3.672	Sha-10-B-1	-7.581	-3.672	161.1	90.0	
Sha-10-B-1	110.000	99.541	-2.6	0	0	0	0	Sha-3-B-1	7.585	3.847	44.8	89.2	-2.000
								Sha-20-B-1	-76.987	-52.198	490.4	82.8	
								B-10-Bre-Sha-2D	69.402	48.351	446.0	82.1	
Sha-20-B-1	220.000	99.809	-0.8	0	0	0	0	Sha-10-B-1	77.068	55.835	250.2	81.0	-2.000
								B-20-Sha-Rlm-1D	-20.243	-29.919	95.0	56.0	
								B-20-Rba-Sha-2	-7.613	-17.645	50.5	39.6	
								B-20-Mra-Sha-2D	-49.212	-8.272	131.2	98.6	
Smb-1-B-1	11.000	100.710	-0.6	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	
Smb-1-B-2	11.000	100.710	-0.6	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	
Smb-1-B-2N	11.000	100.710	-0.6	0	0	0	0	G-Smb-1-B	0.000	0.000	0.0	0.0	
								Smb-1-B-4	0.000	0.000	0.0	0.0	
								Smb-1-B-6	0.000	0.000	0.0	0.0	
Smb-1-B-4	11.000	100.710	-0.6	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-1-B-6	11.000	100.710	-0.6	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-20-B-1	220.000	100.710	-0.6	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2	0.000	0.000	0.0	0.0	
								B-20-Smb-Rba-1	0.000	0.000	0.0	0.0	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cyi/Nko-B	30.000	99.205	12.8	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.297	-0.003	5.8	100.0	
								3-Cyi-Ghi-B	0.891	-0.009	17.3	100.0	
								B-3-Nko-Cyi/Nko-1	-0.594	0.011	11.5	-100.0	
3-Cyi-Ghi-B	30.000	99.090	12.7	0	0	0	0	B-3-Cyi-Ghi-2	0.000	-0.078	1.5	0.0	
								3-Cyi/Nko-B	-0.890	0.001	17.3	100.0	
								3-Kro/Kbu-B	0.890	0.077	17.4	99.6	
3-Kro/Kbu-B	30.000	97.822	11.8	0	0	0	0	B-3-Kbu-Kro-2	0.000	-0.028	0.5	0.0	
								B-3-Kbu-Kro/Nko-2	0.881	0.171	17.6	98.2	
								3-Cyi-Ghi-B	-0.881	-0.143	17.6	98.7	
10-Bre/Gso/Msh-B	110.000	96.943	-2.9	0	0	0	0	B-10-Bre-Gso-1	-27.258	-9.060	155.5	94.9	
								B-10-Gso-Msh-2	19.891	5.501	111.7	96.4	
								Gso-10-B-1	7.367	3.559	44.3	90.0	
10-Gfu/Jb1/Rln-B	110.000	96.567	-1.1	0	0	0	0	B-10-Gfu/Mku/Rln-B	-26.700	7.789	151.2	-96.0	
								B-10-Jb1-Rln-2	9.236	-7.407	64.3	-78.0	
								Rln-10-B-1	17.464	-0.382	94.9	-100.0	
10-Gfu/Mku/Rln-B	110.000	97.003	0.4	0	0	0	0	B-10-Gfu-Mku-2	-29.912	7.093	166.3	-97.3	
								10-Gfu/Jb1/Rln-B	27.021	-7.676	152.0	-96.2	
								Gfu-10-B-1	2.891	0.583	16.0	98.0	
10-Gko/Kgo/MKi-B	110.000	96.105	-1.9	0	0	0	0	B-10-Gko-MKi-1	6.225	-9.066	60.1	-56.6	
								B-10-Kgo-MKi-2	-49.865	-0.035	272.3	100.0	
								MKi-10-B-1	43.640	9.101	243.5	97.9	
10-Kba/Msh/Rwi-B	110.000	95.996	-4.4	0	0	0	0	B-10-Kba-Msh-2	-10.590	5.712	65.8	-88.0	
								B-10-Kba-Rwi-2	3.547	-3.447	27.0	-71.7	
								Kba-10-B-1	7.044	-2.265	40.5	-95.2	
10-Kbo/Kro/Mr2-B	110.000	97.895	7.7	0	0	0	0	B-10-Kbo/Nte-B	-10.841	11.300	84.0	-69.2	
								B-10-Kbo-Kro-1	9.569	-11.948	82.1	-62.5	
								Kbo-10-B-1	1.272	0.648	7.7	89.1	
10-Kbo/Nte-B	110.000	97.288	8.4	0	0	0	0	B-10-Kbo/Kro/Mr2-B	10.908	-11.749	86.5	-68.0	
								B-10-Kbo/Nte-2	-10.908	11.749	86.5	-68.0	
10-Mr2/Nte-B	110.000	97.284	8.4	0	0	0	0	B-10-Mr2/Nte-1	-13.189	2.128	72.1	-98.7	
								B-10-Mr2/Nte-2	13.189	-2.128	72.1	-98.7	
* 20-Mra-B	220.000	100.000	0.0	17.542	1.505	0	0	B-20-Mra-Sha-2D	17.542	1.505	46.2	99.6	
B-1-Jb1-Jb3-1	15.000	99.160	-3.8	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								Jb1-1-B-1	0.000	0.000	0.0	0.0	
B-1-Jb1-Jb3-2	15.000	99.160	-3.8	0	0	0	0	B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-1	0.000	0.000	0.0	0.0	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-1-Kbu-KbW-1F_T	11.000	99.039	10.6	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.137	2.128	1284.1	-99.6	
								Kbu-1-B-1	24.137	-2.128	1284.1	-99.6	
B-1-Kbu-KbW-2F_T	11.000	102.184	15.6	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1284.1	100.0	
								KbW-1-B-2	-25.000	0.000	1284.1	100.0	
B-3-Cyi-Cyi/Nko-1	30.000	99.263	12.9	0	0	0	0	3-Cyi/Nko-B	0.297	-0.011	5.8	-99.9	
								Cyi-3-B-1	-0.297	0.011	5.8	-99.9	
B-3-Cyi-Ghi-2	30.000	99.160	12.7	0	0	0	0	3-Cyi-Ghi-B	0.000	0.000	0.0	0.0	
B-3-Kbu-Kro/Nko-2	30.000	97.589	11.7	0	0	0	0	3-Kro/Kbu-B	-0.879	-0.181	17.7	97.9	
								Kbu-3-B-1	0.879	0.181	17.7	97.9	
B-3-Kbu-Kro-2	30.000	97.831	11.8	0	0	0	0	3-Kro/Kbu-B	0.000	0.000	0.0	0.0	
B-3-Nko-Cyi/Nko-1	30.000	99.355	13.0	0	0	0	0	3-Cyi/Nko-B	0.595	-0.028	11.5	-99.9	
								Nko-3-B-1	-0.595	0.028	11.5	-99.9	
B-10-Bga-Gsh-1	110.000	96.362	8.6	0	0	0	0	B-10-Bga-Gsh-2	-14.912	0.559	81.3	-99.9	
								Bga-10-B-1	14.912	-0.559	81.3	-99.9	
B-10-Bga-Gsh-2	110.000	96.660	9.0	0	0	0	0	B-10-Bga-Gsh-1	14.962	-0.752	81.3	-99.9	
								Gsh-10-B	-14.962	0.752	81.3	-99.9	
B-10-Bga-Nte-1	110.000	96.362	8.6	0	0	0	0	B-10-Bga-Nte-2	-0.942	-9.539	52.2	9.8	
								Bga-10-B-1	0.942	9.539	52.2	9.8	
B-10-Bga-Nte-2	110.000	97.275	8.4	0	0	0	0	B-10-Bga-Nte-1	0.983	8.996	48.8	10.9	
								Nte-10-B-1	-0.983	-8.996	48.8	10.9	
B-10-Bre-Gso-1	110.000	98.439	-2.0	0	0	0	0	10-Bre/Gso/Msh-B	27.535	9.171	154.7	94.9	
								Bre-10-B-1	-27.535	-9.171	154.7	94.9	
B-10-Bre-Jb1-1	110.000	98.439	-2.0	0	0	0	0	B-10-Bre-Jb1-2	19.000	42.991	250.6	40.4	
								Bre-10-B-1	-19.000	-42.991	250.6	40.4	
B-10-Bre-Jb1-2	110.000	96.866	-1.9	0	0	0	0	B-10-Bre-Jb1-1	-18.670	-42.522	251.6	40.2	
								Jb1-10-B-1	18.670	42.522	251.6	40.2	
B-10-Bre-Sha-1D	110.000	98.439	-2.0	0	0	0	0	B-10-Bre-Sha-2D	-58.416	-58.362	440.3	70.7	
								Bre-10-B-1	58.416	58.362	440.3	70.7	
B-10-Bre-Sha-2D	110.000	99.816	-1.7	0	0	0	0	B-10-Bre-Sha-1D	58.995	58.856	438.2	70.8	
								Sha-10-B-1	-58.995	-58.856	438.2	70.8	
B-10-Bta-Hye-1	110.000	100.358	8.5	0	0	0	0	B-10-Bta-Hye-2	20.515	-5.910	111.7	-96.1	
								Bta-10-B-1	-20.515	5.910	111.7	-96.1	
B-10-Bta-Hye-2	110.000	100.035	7.4	0	0	0	0	B-10-Bta-Hye-1	-20.345	5.684	110.8	-96.3	
								Hye-10-B-1	20.345	-5.684	110.8	-96.3	
B-10-Bta-Kgo-1	110.000	100.358	8.5	0	0	0	0	B-10-Bta-Kgo-2	52.665	-15.273	286.8	-96.0	
								Bta-10-B-1	-52.665	15.273	286.8	-96.0	
B-10-Bta-Kgo-2	110.000	99.054	2.8	0	0	0	0	B-10-Bta-Kgo-1	-50.316	18.906	284.8	-93.6	
								Kgo-10-B-1	50.316	-18.906	284.8	-93.6	
B-10-Gfu-Mku-2	110.000	97.567	1.9	0	0	0	0	10-Gfu/Mku/Rln-B	30.262	-6.871	166.9	-97.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-10-B-1	-30.262	6.871	166.9	-97.5	
B-10-Gha-MKi-1	110.000	95.637	-2.1	0	0	0	0	B-10-Gha-MKi-2	-14.911	-7.161	90.8	90.1	
								Gha-10-B-1	14.911	7.161	90.8	90.1	
B-10-Gha-MKi-2	110.000	96.105	-1.9	0	0	0	0	B-10-Gha-MKi-1	14.956	7.043	90.3	90.5	
								MKi-10-B-1	-14.956	-7.043	90.3	90.5	
B-10-Gha-Nde-1	110.000	95.637	-2.1	0	0	0	0	B-10-Gha-Nde-2	7.447	3.375	44.9	91.1	
								Gha-10-B-1	-7.447	-3.375	44.9	91.1	
B-10-Gha-Nde-2	110.000	95.189	-2.3	0	0	0	0	B-10-Gha-Nde-1	-7.425	-3.730	45.8	89.4	
								Nde-10-B-1	7.425	3.730	45.8	89.4	
B-10-Gko-Jb1-1	110.000	96.243	-2.0	0	0	0	0	B-10-Gko-Jb1-2	-7.556	-16.066	96.8	42.6	
								Gko-10-B-1	7.556	16.066	96.8	42.6	
B-10-Gko-Jb1-2	110.000	96.866	-1.9	0	0	0	0	B-10-Gko-Jb1-1	7.592	15.902	95.5	43.1	
								Jb1-10-B-1	-7.592	-15.902	95.5	43.1	
B-10-Gko-MKi-1	110.000	96.243	-2.0	0	0	0	0	10-Gko/Kgo/MKi-B	-6.217	8.930	59.3	-57.1	
								Gko-10-B-1	6.217	-8.930	59.3	-57.1	
B-10-Gso-Msh-2	110.000	95.914	-3.5	0	0	0	0	10-Bre/Gso/Msh-B	-19.746	-5.650	112.4	96.1	
								Msh-10-B-1	19.746	5.650	112.4	96.1	
B-10-Gso-Nde-1	110.000	96.943	-2.9	0	0	0	0	B-10-Gso-Nde-2	0.000	-0.178	1.0	0.0	
								Gso-10-B-1	0.000	0.178	1.0	0.0	
B-10-Gso-Nde-2	110.000	96.945	-2.9	0	0	0	0	B-10-Gso-Nde-1	0.000	0.000	0.0	0.0	
B-10-Hye-Rka-1	110.000	100.035	7.4	0	0	0	0	B-10-Hye-Rka-2	17.221	-7.243	98.0	-92.2	
								Hye-10-B-1	-17.221	7.243	98.0	-92.2	
B-10-Hye-Rka-2	110.000	99.924	6.4	0	0	0	0	B-10-Hye-Rka-1	-17.076	6.903	96.7	-92.7	
								Rka-10-B-1	17.076	-6.903	96.7	-92.7	
B-10-Jb1-Jb2-1	110.000	96.866	-1.9	0	0	0	0	B-10-Jb1-Jb2-2	0.000	-0.036	0.2	0.0	
								Jb1-10-B-1	0.000	0.036	0.2	0.0	
B-10-Jb1-Jb2-2	110.000	96.866	-1.9	0	0	0	0	B-10-Jb1-Jb2-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-1	0.000	0.000	0.0	0.0	
B-10-Jb1-Nbg-1	110.000	96.866	-1.9	0	0	0	0	B-10-Jb1-Nbg-2	7.003	12.897	79.5	47.7	
								Jb1-10-B-1	-7.003	-12.897	79.5	47.7	
B-10-Jb1-Nbg-2	110.000	96.344	-1.9	0	0	0	0	B-10-Jb1-Nbg-1	-6.968	-13.038	80.5	47.1	
								Nbg-10-B-1	6.968	13.038	80.5	47.1	
B-10-Jb1-Rln-2	110.000	96.866	-1.9	0	0	0	0	10-Gfu/Jb1/Rln-B	-9.159	6.807	61.8	-80.3	
								Jb1-10-B-1	9.159	-6.807	61.8	-80.3	
B-10-Kba-Kre-1	110.000	95.996	-4.4	0	0	0	0	B-10-Kba-Kre-2	3.573	-4.066	29.6	-66.0	
								Kba-10-B-1	-3.573	4.066	29.6	-66.0	
B-10-Kba-Kre-2	110.000	96.248	-4.8	0	0	0	0	B-10-Kba-Kre-1	-3.555	3.242	26.2	-73.9	
								Kre-10-B-1	3.555	-3.242	26.2	-73.9	
B-10-Kba-Msh-2	110.000	95.914	-3.5	0	0	0	0	10-Kba/Msh/Rwi-B	10.668	-6.223	67.6	-86.4	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Msh-10-B-1	-10.668	6.223	67.6	-86.4	
B-10-Kba-Rwi-2	110.000	96.052	-4.5	0	0	0	0	10-Kba/Msh/Rwi-B	-3.542	3.228	26.2	-73.9	
								Rwi-10-B-1	3.542	-3.228	26.2	-73.9	
B-10-Kbo/Nte-2	110.000	97.275	8.4	0	0	0	0	10-Kbo/Nte-B	10.910	-11.758	86.5	-68.0	
								Nte-10-B-1	-10.910	11.758	86.5	-68.0	
B-10-Kbo-Kro-1	110.000	99.154	6.5	0	0	0	0	10-Kbo/Kro/Mr2-B	-9.454	10.977	76.7	-65.3	
								Kro-10-B-1	9.454	-10.977	76.7	-65.3	
B-10-Kbu-Kro-1	110.000	99.374	7.2	0	0	0	0	B-10-Kbu-Kro-2	24.938	-3.457	133.0	-99.1	
								Kbu-10-B-1	-24.938	3.457	133.0	-99.1	
B-10-Kbu-Kro-2	110.000	99.154	6.5	0	0	0	0	B-10-Kbu-Kro-1	-24.843	3.347	132.7	-99.1	
								Kro-10-B-1	24.843	-3.347	132.7	-99.1	
B-10-Kgo-Kli-1	110.000	99.054	2.8	0	0	0	0	B-10-Kgo-Kli-2	-24.280	3.289	129.8	-99.1	
								Kgo-10-B-1	24.280	-3.289	129.8	-99.1	
B-10-Kgo-Kli-2	110.000	99.559	4.4	0	0	0	0	B-10-Kgo-Kli-1	24.498	-3.580	130.5	-98.9	
								Kli-10-B-1	-24.498	3.580	130.5	-98.9	
B-10-Kgo-MKi-2	110.000	99.054	2.8	0	0	0	0	10-Gko/Kgo/MKi-B	51.274	2.890	272.1	99.8	
								Kgo-10-B-1	-51.274	-2.890	272.1	99.8	
B-10-Kli-Kro-1	110.000	99.154	6.5	0	0	0	0	B-10-Kli-Kro-2	32.996	-14.987	191.8	-91.0	
								Kro-10-B-1	-32.996	14.987	191.8	-91.0	
B-10-Kli-Kro-2	110.000	99.559	4.4	0	0	0	0	B-10-Kli-Kro-1	-32.568	15.402	189.9	-90.4	
								Kli-10-B-1	32.568	-15.402	189.9	-90.4	
B-10-Kli-Ny1-1	110.000	99.559	4.4	0	0	0	0	B-10-Kli-Ny1-2	-6.922	2.750	39.3	-92.9	
								Kli-10-B-1	6.922	-2.750	39.3	-92.9	
B-10-Kli-Ny1-2	110.000	99.589	4.9	0	0	0	0	B-10-Kli-Ny1-1	6.950	-3.402	40.8	-89.8	
								Ny1-10-B-1	-6.950	3.402	40.8	-89.8	
B-10-Kli-Rka-1	110.000	99.559	4.4	0	0	0	0	B-10-Kli-Rka-2	-25.181	9.220	141.4	-93.9	
								Kli-10-B-1	25.181	-9.220	141.4	-93.9	
B-10-Kli-Rka-2	110.000	99.924	6.4	0	0	0	0	B-10-Kli-Rka-1	25.594	-9.219	142.9	-94.1	
								Rka-10-B-1	-25.594	9.219	142.9	-94.1	
B-10-MKi-Nbg-1	110.000	96.344	-1.9	0	0	0	0	B-10-MKi-Nbg-2	-0.478	9.297	50.7	-5.1	
								Nbg-10-B-1	0.478	-9.297	50.7	-5.1	
B-10-MKi-Nbg-2	110.000	96.105	-1.9	0	0	0	0	B-10-MKi-Nbg-1	0.490	-9.445	51.7	-5.2	
								MKi-10-B-1	-0.490	9.445	51.7	-5.2	
B-10-Mku-Nbi-1	110.000	97.567	1.9	0	0	0	0	B-B-10-Mku-Nbi-1-2	-17.844	1.543	96.4	-99.6	
								Mku-10-B-1	17.844	-1.543	96.4	-99.6	
B-10-Mku-Nta-1	110.000	97.567	1.9	0	0	0	0	B-10-Mku-Nta-2	-8.084	1.030	43.8	-99.2	
								Mku-10-B-1	8.084	-1.030	43.8	-99.2	
B-10-Mku-Nta-2	110.000	97.702	2.4	0	0	0	0	B-10-Mku-Nta-1	8.108	-1.845	44.7	-97.5	
								Nta-10-B-1	-8.108	1.845	44.7	-97.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Mr1-Mr2-1	110.000	97.437	9.0	0	0	0	0	B-10-Mr1-Mr2-2	0.595	-1.741	9.9	-32.3	
								Mr1-10-B-1	-0.595	1.741	9.9	-32.3	
B-10-Mr1-Mr2-2	110.000	97.439	9.0	0	0	0	0	B-10-Mr1-Mr2-1	-0.595	1.730	9.9	-32.5	
								Mr2-10-B-2	0.595	-1.730	9.9	-32.5	
B-10-Mr2/Nte-1	110.000	97.439	9.0	0	0	0	0	10-Mr2/Nte-B	13.236	-2.618	72.7	-98.1	
								Mr2-10-B-2	-13.236	2.618	72.7	-98.1	
B-10-Mr2/Nte-2	110.000	97.275	8.4	0	0	0	0	10-Mr2/Nte-B	-13.187	2.118	72.1	-98.7	
								Nte-10-B-1	13.187	-2.118	72.1	-98.7	
B-10-Mr2-Rz2-1	110.000	97.439	9.0	0	0	0	0	B-10-Mr2-Rz2-2	-12.641	0.888	68.3	-99.8	
								Mr2-10-B-1	12.641	-0.888	68.3	-99.8	
B-10-Mr2-Rz2-2	110.000	97.736	9.5	0	0	0	0	B-10-Mr2-Rz2-1	12.687	-1.188	68.4	-99.6	
								Rz2-10-B-1	-12.687	1.188	68.4	-99.6	
B-10-Msh-Nga-1	110.000	95.914	-3.5	0	0	0	0	B-10-Msh-Nga-2	-7.865	2.724	45.5	-94.5	
								Msh-10-B-1	7.865	-2.724	45.5	-94.5	
B-10-Msh-Nga-2	110.000	96.025	-2.4	0	0	0	0	B-10-Msh-Nga-1	7.938	-3.849	48.2	-90.0	
								Nga-10-B-1	-7.938	3.849	48.2	-90.0	
B-10-Nbi-Ny1-1	110.000	98.225	2.9	0	0	0	0	B-10-Nbi-Ny1-2	-19.312	1.227	103.4	-99.8	
								Nbi-10-B-1	19.312	-1.227	103.4	-99.8	
B-10-Nbi-Ny1-2	110.000	99.589	4.9	0	0	0	0	B-10-Nbi-Ny1-1	19.633	-1.786	103.9	-99.6	
								Ny1-10-B-1	-19.633	1.786	103.9	-99.6	
B-10-Nga-Rln-1	110.000	96.025	-2.4	0	0	0	0	B-10-Nga-Rln-2	-11.384	2.107	63.3	-98.3	
								Nga-10-B-1	11.384	-2.107	63.3	-98.3	
B-10-Nga-Rln-2	110.000	96.567	-1.1	0	0	0	0	B-10-Nga-Rln-1	11.510	-3.036	64.7	-96.7	
								Rln-10-B-1	-11.510	3.036	64.7	-96.7	
B-10-Ny2-Rln-1	110.000	96.416	-1.1	0	0	0	0	B-10-Ny2-Rln-2	-3.081	-1.549	18.8	89.3	
								Ny2-10-B-1	3.081	1.549	18.8	89.3	
B-10-Ny2-Rln-2	110.000	96.567	-1.1	0	0	0	0	B-10-Ny2-Rln-1	3.084	1.209	18.0	93.1	
								Rln-10-B-1	-3.084	-1.209	18.0	93.1	
B-20-Bta-Mmb-1D	220.000	95.633	14.0	0	0	0	0	B-20-Bta-Mmb-2D	-76.492	11.908	212.4	-98.8	
								Bta-20-B-1	76.492	-11.908	212.4	-98.8	
B-20-Bta-Mmb-2D	220.000	95.666	14.3	0	0	0	0	B-20-Bta-Mmb-1D	76.592	-17.247	215.4	-97.6	
								Mmb-20-B-1	-76.592	17.247	215.4	-97.6	
B-20-Bwi-KbW-1	220.000	100.123	0.4	0	0	0	0	B-20-Bwi-KbW-2	0.000	-0.500	1.3	0.0	
								Bwi-20-B-1	0.000	0.500	1.3	0.0	
B-20-Bwi-KbW-2	220.000	100.123	0.4	0	0	0	0	B-20-Bwi-KbW-1	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
B-20-Bwi-Rba-1D	220.000	100.123	0.4	0	0	0	0	B-20-Bwi-Rba-2D	14.246	-19.425	63.1	-59.1	
								Bwi-20-B-1	-14.246	19.425	63.1	-59.1	
B-20-Bwi-Rba-2D	220.000	100.236	0.3	0	0	0	0	B-20-Bwi-Rba-1D	-14.233	2.621	37.9	-98.3	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rba-20-B-1	14.233	-2.621	37.9	-98.3	
B-20-Kgo-Kli-1	220.000	99.523	0.6	0	0	0	0	B-20-Kgo-Kli-2	-23.184	0.501	61.1	-100.0	
								Kgo-20-B-1	23.184	-0.501	61.1	-100.0	
B-20-Kgo-Kli-2	220.000	99.569	0.8	0	0	0	0	B-20-Kgo-Kli-1	23.201	-3.187	61.7	-99.1	
								Kli-20-B-1	-23.201	3.187	61.7	-99.1	
B-20-Kgo-Rwa-1	220.000	99.523	0.6	0	0	0	0	B-20-Kgo-Rwa-2	46.979	-30.235	147.3	-84.1	
								Kgo-20-B-1	-46.979	30.235	147.3	-84.1	
B-20-Kgo-Rwa-2	220.000	99.708	0.3	0	0	0	0	B-20-Kgo-Rwa-1	-46.914	28.674	144.7	-85.3	
								Rwa-20-B-1	46.914	-28.674	144.7	-85.3	
B-20-Kli-Bwi-1	220.000	100.123	0.4	0	0	0	0	B-20-Kli-Bwi-2	-15.536	19.283	64.9	-62.7	
								Bwi-20-B-1	15.536	-19.283	64.9	-62.7	
B-20-Kli-Bwi-2	220.000	99.569	0.8	0	0	0	0	B-20-Kli-Bwi-1	15.583	-24.815	77.2	-53.2	
								Kli-20-B-1	-15.583	24.815	77.2	-53.2	
B-20-Kri-Rba-1	220.000	100.256	0.3	0	0	0	0	B-20-Kri-Rba-2	0.000	0.000	0.0	0.0	
								Kri-20-B-1	0.000	0.000	0.0	0.0	
B-20-Kri-Rba-2	220.000	100.236	0.3	0	0	0	0	B-20-Kri-Rba-1	0.000	-2.843	7.4	0.0	
								Rba-20-B-1	0.000	2.843	7.4	0.0	
B-20-Mra-Sha-2D	220.000	99.456	-0.2	0	0	0	0	20-Mra-B	-17.503	-29.972	91.6	50.4	
								Sha-20-B-1	17.503	29.972	91.6	50.4	
B-20-Rba-Sha-1	220.000	100.236	0.3	0	0	0	0	B-20-Rba-Sha-2	12.940	0.676	33.9	99.9	
								Rba-20-B-1	-12.940	-0.676	33.9	99.9	
B-20-Rba-Sha-2	220.000	99.456	-0.2	0	0	0	0	B-20-Rba-Sha-1	-12.903	-14.772	51.8	65.8	
								Sha-20-B-1	12.903	14.772	51.8	65.8	
B-20-Rlm-Rsu-1D	220.000	99.808	0.1	0	0	0	0	B-20-Rlm-Rsu-2D	0.013	-32.442	85.3	0.0	
								Rlm-20-B-1	-0.013	32.442	85.3	0.0	
B-20-Rlm-Rsu-2D	220.000	100.242	0.0	0	0	0	0	B-20-Rlm-Rsu-1D	0.000	0.000	0.0	0.0	
								Rsu-20-B-1	0.000	0.000	0.0	0.0	
B-20-Rlm-Rwa-1D	220.000	99.808	0.1	0	0	0	0	B-20-Rlm-Rwa-2D	-43.803	23.353	130.5	-88.2	
								Rlm-20-B-1	43.803	-23.353	130.5	-88.2	
B-20-Rlm-Rwa-2D	220.000	99.708	0.3	0	0	0	0	B-20-Rlm-Rwa-1D	43.848	-30.184	140.1	-82.4	
								Rwa-20-B-1	-43.848	30.184	140.1	-82.4	
B-20-Sha-Rlm-1D	220.000	99.456	-0.2	0	0	0	0	B-20-Sha-Rlm-2D	-36.289	-21.479	111.3	86.1	
								Sha-20-B-1	36.289	21.479	111.3	86.1	
B-20-Sha-Rlm-2D	220.000	99.808	0.1	0	0	0	0	B-20-Sha-Rlm-1D	36.350	5.257	96.6	99.0	
								Rlm-20-B-1	-36.350	-5.257	96.6	99.0	
B-20-Smb-Rba-1	220.000	100.239	0.3	0	0	0	0	B-20-Smb-Rba-2	0.000	0.000	0.0	0.0	
								Smb-20-B-1	0.000	0.000	0.0	0.0	
B-20-Smb-Rba-2	220.000	100.236	0.3	0	0	0	0	B-20-Smb-Rba-1	0.000	-1.096	2.9	0.0	
								Rba-20-B-1	0.000	1.096	2.9	0.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-6-Mr1-Rz1-1	6.600	99.740	9.5	0	0	0	0	B-6-Mr1-Rz1-2	-3.448	0.220	303.0	-99.8	
								Mr1-6-B-1	3.448	-0.220	303.0	-99.8	
B-6-Mr1-Rz1-2	6.600	100.579	10.3	0	0	0	0	B-6-Mr1-Rz1-1	3.480	-0.170	303.0	-99.9	
								Rz1-6-B-1	-3.480	0.170	303.0	-99.9	
B-B-10-Mku-Nbi-1-2	110.000	98.225	2.9	0	0	0	0	B-10-Mku-Nbi-1	17.995	-1.882	96.7	-99.5	
								Nbi-10-B-1	-17.995	1.882	96.7	-99.5	
Bga-3-B-1	30.000	98.925	4.9	0	0	15.825	7.664	Bga-10-B-1	-15.825	-7.664	342.1	90.0	
Bga-10-B-1	110.000	96.362	8.6	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	15.854	8.980	99.2	87.0	-6.000
								B-10-Bga-Nte-1	-0.942	-9.539	52.2	9.8	
								B-10-Bga-Gsh-1	-14.912	0.559	81.3	-99.9	
Bga-6-B-1	6.600	96.362	8.6	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
Bre-1-B-1	15.000	99.794	-3.7	0	0	11.861	5.744	Bre-10-B-1	-5.930	-2.872	254.1	90.0	
								Bre-10-B-1	-5.930	-2.872	254.1	90.0	
Bre-10-B-1	110.000	98.439	-2.0	0	0	0	0	Bre-1-B-1	5.941	3.100	35.7	88.7	-3.000
								Bre-1-B-1	5.941	3.100	35.7	88.7	-3.000
								B-10-Bre-Jb1-1	19.000	42.991	250.6	40.4	
								B-10-Bre-Sha-1D	-58.416	-58.362	440.3	70.7	
								B-10-Bre-Gso-1	27.535	9.171	154.7	94.9	
Bta-3-B-1	30.000	100.706	7.7	0	0	3.140	1.521	Bta-10-B-1	-3.140	-1.521	66.7	90.0	
Bta-10-B-1	110.000	100.358	8.5	0	0	0	0	Bta-3-B-1	3.141	1.571	18.4	89.4	-1.000
								Bta-20-B-1	-76.321	19.613	412.1	-96.9	
								B-10-Bta-Kgo-1	52.665	-15.273	286.8	-96.0	
								B-10-Bta-Hye-1	20.515	-5.910	111.7	-96.1	
Bta-20-B-1	220.000	95.633	14.0	0	0	0	0	Bta-10-B-1	76.492	-11.908	212.4	-98.8	-3.000
								B-20-Bta-Mmb-1D	-76.492	11.908	212.4	-98.8	
Bwi-3-B-1	30.000	99.512	-0.2	0	0	1.289	0.624	Bwi-20-B-1	-1.289	-0.624	27.7	90.0	
Bwi-10-B-1	110.000	100.123	0.4	0	0	0	0	Bwi-20-B-1	0.000	0.000	0.0	0.0	
Bwi-20-B-1	220.000	100.123	0.4	0	0	0	0	Bwi-10-B-1	0.000	0.000	0.0	0.0	
								Bwi-3-B-1	1.290	0.641	3.8	89.5	
								B-20-Bwi-Rba-1D	14.246	-19.425	63.1	-59.1	
								B-20-Kli-Bwi-1	-15.536	19.283	64.9	-62.7	
								B-20-Bwi-KbW-1	0.000	-0.500	1.3	0.0	
C-Gfu-B-3	30.000	95.939	-1.6	0	0	0.000	-0.920	Gfu-3-B-1	0.000	0.920	18.5	0.0	
C-Kre-B	30.000	100.784	-5.9	0	0	0.000	-5.079	Kre-3-B-1	0.000	5.079	97.0	0.0	
C-MKi-3-B	30.000	95.241	-6.1	0	0	0.000	-4.535	MKi-3-B-1	0.000	4.535	91.6	0.0	
C-Msh-1-B	15.000	95.414	-6.1	0	0	0	0	Msh-1-B-1	0.000	0.000	0.0	0.0	
C-Nde-B	30.000	99.392	-3.1	0	0	0	0	Nde-3-B-1	0.000	0.000	0.0	0.0	
C-Rwi-B-1	15.000	100.579	-5.5	0	0	0.000	-5.058	Rwi-1-B-1	0.000	5.058	193.6	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Cyi-3-B-1	30.000	99.263	12.9	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.297	-0.011	5.8	-99.9	
								G-Cyi-3-B	-0.297	0.011	5.8	-99.9	
Cyi-3-B-2	30.000	99.263	12.9	0	0	0	0	N-Cyi-04-1	-0.297	0.011	5.8	-99.9	
								G-Cyi-3-B	0.297	-0.011	5.8	-99.9	
G-Cyi-3-B	30.000	99.263	12.9	0	0	0	0	Cyi-3-B-1	0.297	-0.011	5.8	-99.9	
Gfu-3-B-1	30.000	95.939	-1.6	0	0	2.878	1.394	Gfu-10-B-1	-2.878	-0.473	58.5	98.7	
								C-Gfu-B-3	0.000	-0.920	18.5	0.0	
Gfu-10-B-1	110.000	97.003	0.4	0	0	0	0	Gfu-3-B-1	2.891	0.583	16.0	98.0	
								10-Gfu/Mku/Rln-B	-2.891	-0.583	16.0	98.0	
G-Gko-1-B	15.000	99.761	-3.5	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-1-B-2	0.000	0.000	0.0	0.0	
G-Gko-3-B	15.000	99.761	-3.5	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-3-B	0.000	0.000	0.0	0.0	
G-Gko-10-B	110.000	96.243	-2.0	0	0	0	0	Gko-10-B-1	0.000	0.000	0.0	0.0	
								Gko-10-B-2	0.000	0.000	0.0	0.0	
G-Gsh-1-B	11.000	99.774	11.9	0	0	0	0	Gsh-1-B-1	15.000	0.000	789.1	100.0	
								Gsh-1-B-2	-15.000	0.000	789.1	100.0	
Gha-3-B-1	30.000	99.707	-3.1	0	0	7.460	3.613	Gha-10-B-1	-7.460	-3.613	160.0	90.0	
Gha-10-B-1	110.000	95.637	-2.1	0	0	0	0	Gha-3-B-1	7.464	3.786	45.9	89.2	-5.000
								B-10-Gha-MKi-1	-14.911	-7.161	90.8	90.1	
								B-10-Gha-Nde-1	7.447	3.375	44.9	91.1	
G-Jb2-10-B	110.000	96.866	-1.9	0	0	0	0	Jb2-10-B-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
G-Jb3-1-B	15.000	99.160	-3.8	0	0	0	0	Jb3-1-B-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-2	0.000	0.000	0.0	0.0	
G-KbW-1-B-1	11.000	102.184	15.6	0	0	0	0	KbW-1-B-3	-17.000	0.000	873.2	100.0	
								KbW-1-B-2	17.000	0.000	873.2	100.0	
G-KbW-1-B-2	11.000	102.184	15.6	0	0	0	0	KbW-1-B-1	8.000	0.000	410.9	100.0	
								KbW-1-B-4	-8.000	0.000	410.9	100.0	
G-KbW-1-B-3	220.000	100.123	0.4	0	0	0	0	B-20-Bwi-KbW-2	0.000	0.000	0.0	0.0	
								KbW-20-B-2	0.000	0.000	0.0	0.0	
Gko-1-B-1	15.000	99.761	-3.5	0	0	13.747	6.658	Gko-10-B-1	-4.582	-2.219	196.4	90.0	
								Gko-10-B-1	-4.582	-2.219	196.4	90.0	
								Gko-10-B-1	-4.582	-2.219	196.4	90.0	
								G-Gko-1-B	0.000	0.000	0.0	0.0	
								G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-1-B-2	15.000	99.761	-3.5	0	0	0	0	G-Gko-1-B	0.000	0.000	0.0	0.0	
Gko-3-B	15.000	99.761	-3.5	0	0	0	0	G-Gko-3-B	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Gko-10-B-1	110.000	96.243	-2.0	0	0	0	0	Gko-1-B-1	4.591	2.379	28.2	88.8	-5.000
								Gko-1-B-1	4.591	2.379	28.2	88.8	-5.000
								Gko-1-B-1	4.591	2.379	28.2	88.8	-5.000
								B-10-Gko-Jb1-1	-7.556	-16.066	96.8	42.6	
								B-10-Gko-MKi-1	-6.217	8.930	59.3	-57.1	
Gko-10-B-2	110.000	96.243	-2.0	0	0	0	0	G-Gko-10-B	0.000	0.000	0.0	0.0	
G-Kse-1-B	110.000	96.943	-2.9	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Mku-10-B	110.000	97.567	1.9	0	0	0	0	Mku-10-B-1	0.000	0.000	0.0	0.0	
								Mku-10-B-2	0.000	0.000	0.0	0.0	
G-Mku-6-B	6.600	99.599	3.9	0	0	0	0	Mku-6-B-4	12.000	0.000	1054.0	100.0	
								Mku-6-B-2	-12.000	0.000	1054.0	100.0	
G-Mmb-3-B	30.000	99.233	19.8	0	0	0	0	Mmb-3-B-1	79.818	-8.170	1556.1	-99.5	
								Mmb-3-B-2	-79.818	8.170	1556.1	-99.5	
G-Mus-3-B	30.000	100.350	8.0	0	0	0	0	Mus-3-B	-1.993	0.056	38.2	-100.0	
								Rka-3-B-1	1.993	-0.056	38.2	-100.0	
G-Nko-3-B	30.000	99.355	13.0	0	0	0	0	Nko-3-B-1	0.595	-0.028	11.5	-99.9	
								Nko-3-B-2	-0.595	0.028	11.5	-99.9	
G-NtB-3-B	30.000	98.058	3.0	0	0	0	0	Kgo-3-B-1	4.983	-0.215	97.9	-99.9	
								NtB-3-B1	-4.983	0.215	97.9	-99.9	
G-Ny1-3-B	30.000	100.705	8.6	0	0	0	0	Ny1-3-B-1	27.938	-2.775	536.5	-99.5	
								Ny1-3-B-2	-27.938	2.775	536.5	-99.5	
G-Ny2-3-B	30.000	99.598	-2.0	0	0	0	0	Ny2-3-B-1	0.000	0.000	0.0	0.0	
								Ny2-3-B-2	0.000	0.000	0.0	0.0	
G-Rka5-3-B	30.000	100.350	8.0	0	0	0	0	Rka5-3-B	-2.985	0.126	57.3	-99.9	
								Rka-3-B-1	2.985	-0.126	57.3	-99.9	
G-Rka-3-B	30.000	100.350	8.0	0	0	0	0	Rka-3-B-1	6.672	-0.369	128.1	-99.8	
								Rka-3-B-2	-6.672	0.369	128.1	-99.8	
G-Rsu-10-B	110.000	100.242	0.0	0	0	0	0	Rsu-10-B-1	0.000	0.000	0.0	0.0	
								Rsu-10-B-2	0.000	0.000	0.0	0.0	
G-Rwa-3-B	30.000	99.381	-0.1	0	0	0	0	Rwa-3-B-1	0.000	0.000	0.0	0.0	
								Rwa-3-B-2	0.000	0.000	0.0	0.0	
G-Rz1-.06-B	0.600	101.037	13.1	0	0	0	0	N-Rz1-.06-B-1-1	3.500	0.000	3333.3	100.0	
								N-Rz1-.06-B-1-2	-3.500	0.000	3333.3	100.0	
G-Rz2-.6-B	6.600	97.790	14.8	0	0	0	0	Rz2-.6-B-1-1	12.750	0.000	1140.5	100.0	
								Rz2-.6-B-1-2	-12.750	0.000	1140.5	100.0	
Gsh-1-B-1	11.000	99.774	11.9	0	0	0	0	Gsh-10-B	7.500	0.000	394.5	100.0	
								Gsh-10-B	7.500	0.000	394.5	100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								G-Gsh-1-B	-15.000	0.000	789.1	100.0	
Gsh-1-B-2	11.000	99.774	11.9	15.000	0.000	0	0	G-Gsh-1-B	15.000	0.000	789.1	100.0	
Gsh-10-B	110.000	96.660	9.0	0	0	0	0	Gsh-1-B-1	-7.481	0.376	40.7	-99.9	-3.000
								Gsh-1-B-1	-7.481	0.376	40.7	-99.9	-3.000
								B-10-Bga-Gsh-2	14.962	-0.752	81.3	-99.9	
G-Smb-1-B	11.000	100.239	0.3	0	0	0	0	N-Smb-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2N	0.000	0.000	0.0	0.0	
Gso-1-B-1	15.000	98.982	-3.9	0	0	7.363	3.566	Gso-10-B-1	-7.363	-3.566	318.1	90.0	
Gso-10-B-1	110.000	96.943	-2.9	0	0	0	0	Gso-1-B-1	7.367	3.737	44.7	89.2	-3.000
								B-10-Gso-Nde-1	0.000	-0.178	1.0	0.0	
								10-Bre/Gso/Msh-B	-7.367	-3.559	44.3	90.0	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Hye-3-B-1	30.000	100.375	6.7	0	0	3.121	1.512	Hye-10-B-1	-3.121	-1.512	66.5	90.0	
Hye-10-B-1	110.000	100.035	7.4	0	0	0	0	Hye-3-B-1	3.123	1.559	18.3	89.5	-1.000
								B-10-Bta-Hye-2	-20.345	5.684	110.8	-96.3	
								B-10-Hye-Rka-1	17.221	-7.243	98.0	-92.2	
Jb1-10-B-1	110.000	96.866	-1.9	0	0	0	0	Jb1-1-B-1	13.233	6.951	81.0	88.5	-4.000
								B-10-Jb1-Jb2-1	0.000	-0.036	0.2	0.0	
								B-10-Jb1-Rln-2	-9.159	6.807	61.8	-80.3	
								B-10-Bre-Jb1-2	-18.670	-42.522	251.6	40.2	
								B-10-Gko-Jb1-2	7.592	15.902	95.5	43.1	
								B-10-Jb1-Nbg-1	7.003	12.897	79.5	47.7	
Jb1-1-B-1	15.000	99.160	-3.8	0	0	13.221	6.403	Jb1-10-B-1	-13.221	-6.403	570.2	90.0	
								B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
Jb2-6-B-1	6.600	99.862	-1.9	0	0	0	0	Jb2-10-B-2	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
Jb2-10-B-1	110.000	96.866	-1.9	0	0	0	0	B-10-Jb1-Jb2-2	0.000	0.000	0.0	0.0	
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb2-10-B-2	110.000	96.866	-1.9	0	0	0	0	Jb2-6-B-1	0.000	0.000	0.0	0.0	-3.000
								Jb2-6-B-1	0.000	0.000	0.0	0.0	-3.000
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb3-1-B-1	15.000	99.160	-3.8	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								G-Jb3-1-B	0.000	0.000	0.0	0.0	
Jb3-1-B-2	15.000	99.160	-3.8	0	0	0	0	G-Jb3-1-B	0.000	0.000	0.0	0.0	
								Jb3-1-B-2d	0.000	0.000	0.0	0.0	
Jb3-1-B-2d	15.000	99.160	-3.8	0	0	0	0	Jb3-1-B-2	0.000	0.000	0.0	0.0	
Kba-3-B-1	30.000	99.382	-6.0	0	0	3.461	1.676	Kba-10-B-1	-3.461	-1.676	74.5	90.0	
Kba-10-B-1	110.000	95.996	-4.4	0	0	0	0	Kba-3-B-1	3.471	1.801	21.4	88.8	-5.000
								10-Kba/Msh/Rwi-B	-7.044	2.265	40.5	-95.2	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Kba-Kre-1	3.573	-4.066	29.6	-66.0	
Kbo-3-B-1	30.000	98.666	6.5	0	0	1.269	0.615	Kbo-10-B-1	-1.269	-0.615	27.5	90.0	
Kbo-10-B-1	110.000	97.895	7.7	0	0	0	0	Kbo-3-B-1	1.272	0.648	7.7	89.1	-2.000
								10-Kbo/Kro/Mr2-B	-1.272	-0.648	7.7	89.1	
Kbu-1-B-1	11.000	99.039	10.6	0	0	0	0	Kbu-3-B-1	-0.878	-0.163	47.3	98.3	
								Kbu-10-B-1	12.201	-0.975	648.7	-99.7	
								Kbu-10-B-1	12.814	-0.990	681.1	-99.7	
								B-1-Kbu-KbW-1F_T	-24.137	2.128	1284.1	-99.6	
Kbu-3-B-1	30.000	97.589	11.7	0	0	0	0	Kbu-1-B-1	0.879	0.181	17.7	97.9	-2.000
								B-3-Kbu-Kro/Nko-2	-0.879	-0.181	17.7	97.9	
Kbu-10-B-1	110.000	99.374	7.2	0	0	0	0	Kbu-1-B-1	-12.163	1.703	64.9	-99.0	
								Kbu-1-B-1	-12.775	1.754	68.1	-99.1	
								B-10-Kbu-Kro-1	24.938	-3.457	133.0	-99.1	
KbW-1-B-1	11.000	102.184	15.6	0	0	0	0	KbW-1-B-2	8.000	0.000	410.9	100.0	
								G-KbW-1-B-2	-8.000	0.000	410.9	100.0	
KbW-1-B-2	11.000	102.184	15.6	0	0	0	0	KbW-1-B-1	-8.000	0.000	410.9	100.0	
								B-1-Kbu-KbW-2F_T	25.000	0.000	1284.1	100.0	
								G-KbW-1-B-1	-17.000	0.000	873.2	100.0	
KbW-1-B-3	11.000	102.184	15.6	17.000	0.000	0	0	G-KbW-1-B-1	17.000	0.000	873.2	100.0	
KbW-1-B-4	11.000	102.184	15.6	8.000	0.000	0	0	G-KbW-1-B-2	8.000	0.000	410.9	100.0	
KbW-1-B-5	20.000	100.123	0.4	0	0	0	0	KbW-20-B-2	0.000	0.000	0.0	0.0	
KbW-20-B-2	220.000	100.123	0.4	0	0	0	0	KbW-1-B-5	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
Kgo-3-B-1	30.000	98.058	3.0	0	0	4.458	2.159	Kgo-10-B-1	0.262	-1.187	23.9	-21.6	
								Kgo-10-B-1	0.262	-1.187	23.9	-21.6	
								G-NtB-3-B	-4.983	0.215	97.9	-99.9	
Kgo-10-B-1	110.000	99.054	2.8	0	0	0	0	Kgo-3-B-1	-0.262	1.200	6.5	-21.3	
								Kgo-3-B-1	-0.262	1.200	6.5	-21.3	
								Kgo-20-B-1	23.845	-27.485	192.8	-65.5	
								B-10-Kgo-MKi-2	51.274	2.890	272.1	99.8	
								B-10-Kgo-Kli-1	-24.280	3.289	129.8	-99.1	
								B-10-Bta-Kgo-2	-50.316	18.906	284.8	-93.6	
Kgo-20-B-1	220.000	99.523	0.6	0	0	0	0	Kgo-10-B-1	-23.795	29.734	100.4	-62.5	-4.000
								B-20-Kgo-Kli-1	-23.184	0.501	61.1	-100.0	
								B-20-Kgo-Rwa-1	46.979	-30.235	147.3	-84.1	
Kli-3-B-1	30.000	100.224	3.3	0	0	1.305	0.632	Kli-10-B-1	-1.305	-0.632	27.8	90.0	
Kli-10-B-1	110.000	99.559	4.4	0	0	0	0	Kli-3-B-1	1.310	0.667	7.7	89.1	-2.000
								Kli-20-B-1	38.863	-24.457	242.1	-84.6	
								B-10-Kgo-Kli-2	24.498	-3.580	130.5	-98.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Kli-Kro-2	-32.568	15.402	189.9	-90.4	
								B-10-Kli-Rka-1	-25.181	9.220	141.4	-93.9	
								B-10-Kli-Nyl-1	-6.922	2.750	39.3	-92.9	
Kli-20-B-1	220.000	99.569	0.8	0	0	0	0	Kli-10-B-1	-38.784	28.002	126.1	-81.1	-4.000
								B-20-Kgo-Kli-2	23.201	-3.187	61.7	-99.1	
								B-20-Kli-Bwi-2	15.583	-24.815	77.2	-53.2	
Kre-3-B-1	30.000	100.784	-5.9	0	0	3.550	1.719	Kre-10-B-1	-3.550	3.360	93.3	-72.6	
								C-Kre-B	0.000	-5.079	97.0	0.0	
Kre-10-B-1	110.000	96.248	-4.8	0	0	0	0	Kre-3-B-1	3.555	-3.242	26.2	-73.9	-3.000
								B-10-Kba-Kre-2	-3.555	3.242	26.2	-73.9	
Kri-20-B-1	220.000	100.256	0.3	0	0	0	0	B-20-Kri-Rba-1	0.000	0.000	0.0	0.0	
Kro-3-B-1	30.000	99.937	5.4	0	0	1.299	0.629	Kro-10-B-1	-1.299	-0.629	27.8	90.0	
Kro-10-B-1	110.000	99.154	6.5	0	0	0	0	Kro-3-B-1	1.301	0.663	7.7	89.1	-2.000
								B-10-Kbu-Kro-2	-24.843	3.347	132.7	-99.1	
								B-10-Kbo-Kro-1	-9.454	10.977	76.7	-65.3	
								B-10-Kli-Kro-1	32.996	-14.987	191.8	-91.0	
Kse-10-B1	110.000	96.943	-2.9	0	0	0	0	G-Kse-1-B	0.000	0.000	0.0	0.0	
MKi-3-B-1	30.000	95.241	-6.1	0	0	28.140	13.629	MKi-10-B-1	-28.140	-9.094	597.6	95.2	
								C-MKi-3-B	0.000	-4.535	91.6	0.0	
MKi-10-B-1	110.000	96.105	-1.9	0	0	0	0	MKi-3-B-1	28.194	11.503	166.3	92.6	-2.000
								10-Gko/Kgo/MKi-B	-43.640	-9.101	243.5	97.9	
								B-10-MKi-Nbg-2	0.490	-9.445	51.7	-5.2	
								B-10-Gha-MKi-2	14.956	7.043	90.3	90.5	
Mku-3-B-1	30.000	98.879	2.0	0	0	7.643	3.702	Mku-6-B-1	-7.643	-3.702	165.3	90.0	1.000
Mku-10-B-1	110.000	97.567	1.9	0	0	0	0	Mku-6-B-1	-4.335	4.298	32.8	-71.0	-5.000
								B-10-Gfu-Mku-2	30.262	-6.871	166.9	-97.5	
								B-10-Mku-Nta-1	-8.084	1.030	43.8	-99.2	
								B-10-Mku-Nbi-1	-17.844	1.543	96.4	-99.6	
								G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-10-B-2	110.000	97.567	1.9	0	0	0	0	G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-6-B-1	6.600	99.599	3.9	0	0	0	0	Mku-3-B-1	7.650	4.015	758.9	88.5	
								Mku-10-B-1	4.350	-4.015	519.9	-73.5	
								Mku-6-B-4	-6.000	0.000	527.0	100.0	
								Mku-6-B-3	-3.000	0.000	263.5	100.0	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	-3.000	0.000	263.5	100.0	
Mku-6-B-2	6.600	99.599	3.9	12.000	0.000	0	0	G-Mku-6-B	12.000	0.000	1054.0	100.0	
Mku-6-B-3	6.600	99.599	3.9	0	0	0	0	Mku-6-B-4	-6.000	0.000	527.0	100.0	
								Mku-6-B-1	3.000	0.000	263.5	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	3.000	0.000	263.5	100.0	
Mku-6-B-4	6.600	99.599	3.9	0	0	0	0	Mku-6-B-1	6.000	0.000	527.0	100.0	
								Mku-6-B-3	6.000	0.000	527.0	100.0	
								G-Mku-6-B	-12.000	0.000	1054.0	100.0	
Mku-6-B-5	6.600	99.599	3.9	0	0	0	0	Mku-6-B-1	0.000	0.000	0.0	0.0	
								Mku-6-B-3	0.000	0.000	0.0	0.0	
Mku-6-B-6	6.600	99.599	3.9	0	0	0	0	Mku-6-B-3	-3.000	0.000	263.5	100.0	
								Mku-6-B-1	3.000	0.000	263.5	100.0	
Mmb-3-B-1	30.000	99.233	19.8	0	0	3.057	1.481	Mmb-20-B-1	76.761	-9.651	1500.4	-99.2	
								G-Mmb-3-B	-79.818	8.170	1556.1	-99.5	
Mmb-3-B-2	30.000	99.233	19.8	0	0	0	0	N-Mmb-6-1	-39.909	4.085	778.0	-99.5	
								N-Mmb-6-2	-39.909	4.085	778.0	-99.5	
								G-Mmb-3-B	79.818	-8.170	1556.1	-99.5	
Mmb-20-B-1	220.000	95.666	14.3	0	0	0	0	Mmb-3-B-1	-76.592	17.247	215.4	-97.6	-5.000
								B-20-Bta-Mmb-2D	76.592	-17.247	215.4	-97.6	
Mr1-6-B-1	6.600	99.740	9.5	0	0	0	0	Mr1-10-B-1	0.597	-1.707	158.6	-33.0	
								Mr1-3-B-1	2.851	1.486	282.0	88.7	
								B-6-Mr1-Rz1-1	-3.448	0.220	303.0	-99.8	
Mr1-10-B-1	110.000	97.437	9.0	0	0	0	0	Mr1-6-B-1	-0.595	1.741	9.9	-32.3	-4.000
								B-10-Mr1-Mr2-1	0.595	-1.741	9.9	-32.3	
Mr1-3-B-1	30.000	100.975	7.8	0	0	2.844	1.377	Mr1-6-B-1	-2.844	-1.377	60.2	90.0	3.000
Mr2-10-B-1	110.000	97.439	9.0	0	0	0	0	B-10-Mr2-Rz2-1	-12.641	0.888	68.3	-99.8	
								Mr2-10-B-2	12.641	-0.888	68.3	-99.8	
Mr2-10-B-2	110.000	97.439	9.0	0	0	0	0	B-10-Mr2/Nte-1	13.236	-2.618	72.7	-98.1	
								B-10-Mr1-Mr2-2	-0.595	1.730	9.9	-32.5	
								Mr2-10-B-1	-12.641	0.888	68.3	-99.8	
Msh-1-B-1	15.000	95.414	-6.1	0	0	16.895	8.183	Msh-10-B-1	-8.448	-4.091	378.6	90.0	
								Msh-10-B-1	-8.448	-4.091	378.6	90.0	
								C-Msh-1-B	0.000	0.000	0.0	0.0	
Msh-10-B-1	110.000	95.914	-3.5	0	0	0	0	Msh-1-B-1	8.472	4.575	52.7	88.0	-2.000
								Msh-1-B-1	8.472	4.575	52.7	88.0	-2.000
								B-10-Gso-Msh-2	-19.746	-5.650	112.4	96.1	
								B-10-Kba-Msh-2	10.668	-6.223	67.6	-86.4	
								B-10-Msh-Nga-1	-7.865	2.724	45.5	-94.5	
Mus-3-B	30.000	100.350	8.0	0	0	0	0	Mus-6-B	-1.993	0.056	38.2	-100.0	
								G-Mus-3-B	1.993	-0.056	38.2	-100.0	
Mus-6-B	6.600	100.643	9.6	2.000	0.000	0	0	Mus-3-B	2.000	0.000	173.8	100.0	
Nbg-3-B-1	30.000	99.551	-2.8	0	0	7.439	3.603	Nbg-10-B-1	-3.720	-1.802	79.9	90.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Nbg-10-B-1	110.000	96.344	-1.9	0	0	0	0	Nbg-10-B-1	-3.720	-1.802	79.9	90.0	
								Nbg-3-B-1	3.723	1.870	22.7	89.4	-4.000
								Nbg-3-B-1	3.723	1.870	22.7	89.4	-4.000
								B-10-Jb1-Nbg-2	-6.968	-13.038	80.5	47.1	
								B-10-MKi-Nbg-1	-0.478	9.297	50.7	-5.1	
Nbi-3-B-1	30.000	100.647	2.3	0	0	1.315	0.637	Nbi-10-B-1	-1.315	-0.637	27.9	90.0	
Nbi-10-B-1	110.000	98.225	2.9	0	0	0	0	Nbi-3-B-1	1.317	0.655	7.9	89.5	-3.000
								B-B-10-Mku-Nbi-1-2	17.995	-1.882	96.7	-99.5	
								B-10-Nbi-Ny1-1	-19.312	1.227	103.4	-99.8	
N-Cyi-04-1	0.400	100.105	15.0	0.300	0.000	0	0	Cyi-3-B-2	0.300	0.000	432.6	100.0	
Nde-3-B-1	30.000	99.392	-3.1	0	0	7.418	3.593	Nde-10-B-1	-3.709	-1.796	79.8	90.0	
								Nde-10-B-1	-3.709	-1.796	79.8	90.0	
								C-Nde-B	0.000	0.000	0.0	0.0	
Nde-10-B-1	110.000	95.189	-2.3	0	0	0	0	Nde-3-B-1	3.713	1.865	22.9	89.4	-5.000
								Nde-3-B-1	3.713	1.865	22.9	89.4	-5.000
								B-10-Gha-Nde-2	-7.425	-3.730	45.8	89.4	
Nga-3-B-1	30.000	99.084	-3.4	0	0	3.443	1.667	Nga-10-B-1	-3.443	-1.667	74.3	90.0	
Nga-10-B-1	110.000	96.025	-2.4	0	0	0	0	Nga-3-B-1	3.446	1.742	21.1	89.2	-4.000
								B-10-Nga-RIn-1	-11.384	2.107	63.3	-98.3	
								B-10-Msh-Nga-2	7.938	-3.849	48.2	-90.0	
Nko-3-B-1	30.000	99.355	13.0	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.595	-0.028	11.5	-99.9	
								G-Nko-3-B	-0.595	0.028	11.5	-99.9	
Nko-3-B-2	30.000	99.355	13.0	0	0	0	0	N-Nko-04-B-2	-0.595	0.028	11.5	-99.9	
								G-Nko-3-B	0.595	-0.028	11.5	-99.9	
N-Mmb-.6-1	6.600	98.942	25.7	40.000	0.000	0	0	Mmb-3-B-2	40.000	0.000	3536.5	100.0	
N-Mmb-.6-2	6.600	98.942	25.7	40.000	0.000	0	0	Mmb-3-B-2	40.000	0.000	3536.5	100.0	
N-Nko-04-B-2	0.400	100.027	15.7	0.600	0.000	0	0	Nko-3-B-2	0.600	0.000	865.8	100.0	
N-Ny1-.6-2	6.600	100.433	14.3	28.000	0.000	0	0	Ny1-3-B-2	28.000	0.000	2438.8	100.0	
N-Rka-.6-2	6.600	100.624	11.2	6.700	0.000	0	0	Rka-3-B-2	6.700	0.000	582.5	100.0	
N-Rz1-.06-B-1-1	0.600	101.037	13.1	0	0	0	0	Rz1-.6-B-1	3.500	0.000	3333.3	100.0	
								G-Rz1-.06-B	-3.500	0.000	3333.3	100.0	
N-Rz1-.06-B-1-2	0.600	101.037	13.1	3.500	0.000	0	0	G-Rz1-.06-B	3.500	0.000	3333.3	100.0	
N-Smb-1	11.000	100.239	0.3	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2	0.000	0.000	0.0	0.0	
								G-Smb-1-B	0.000	0.000	0.0	0.0	
Nta-3-B-1	30.000	100.390	3.4	0	0	3.122	1.512	Nta-.6-B-1	-3.122	-1.512	66.5	90.0	1.000
Nta-10-B-1	110.000	97.702	2.4	0	0	0	0	Nta-.6-B-1	-4.054	0.922	22.3	-97.5	-3.000
								Nta-.6-B-1	-4.054	0.922	22.3	-97.5	-3.000
								B-10-Mku-Nta-2	8.108	-1.845	44.7	-97.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Nta-6-B-1	6.600	100.246	4.3	0	0	0	0	Nta-3-B-1	3.125	1.573	305.3	89.3	
								Nta-10-B-1	4.063	-0.786	361.1	-98.2	
								Nta-10-B-1	4.063	-0.786	361.1	-98.2	
								Nta-6-B-3	-11.250	0.000	981.7	100.0	
Nta-6-B-2	6.600	100.246	4.3	11.250	0.000	0	0	Nta-6-B-3	11.250	0.000	981.7	100.0	
Nta-6-B-3	6.600	100.246	4.3	0	0	0	0	Nta-6-B-1	11.250	0.000	981.7	100.0	
								Nta-6-B-2	-11.250	0.000	981.7	100.0	
NtB-3-B1	30.000	98.058	3.0	0	0	0	0	NtB-6-B	-4.983	0.215	97.9	-99.9	
								G-NtB-3-B	4.983	-0.215	97.9	-99.9	
NtB-6-B	6.600	98.292	5.5	5.000	0.000	0	0	NtB-3-B1	5.000	0.000	445.0	100.0	
Nte-3-B-1	30.000	99.672	7.8	0	0	1.292	0.626	Nte-10-B-1	-1.292	-0.626	27.7	90.0	
Nte-10-B-1	110.000	97.275	8.4	0	0	0	0	Nte-3-B-1	1.294	0.643	7.8	89.5	-3.000
								B-10-Kbo/Nte-2	10.910	-11.758	86.5	-68.0	
								B-10-Mr2/Nte-2	-13.187	2.118	72.1	-98.7	
								B-10-Bga-Nte-2	0.983	8.996	48.8	10.9	
Nyl-10-B-1	110.000	99.589	4.9	0	0	0	0	Nyl-3-B-1	-26.582	5.188	142.7	-98.1	-2.000
								B-10-Kli-Nyl1-2	6.950	-3.402	40.8	-89.8	
								B-10-Nbi-Nyl1-2	19.633	-1.786	103.9	-99.6	
Nyl-3-B-1	30.000	100.705	8.6	0	0	1.317	0.638	Nyl-10-B-1	26.622	-3.413	512.9	-99.2	
								G-Nyl1-3-B	-27.938	2.775	536.5	-99.5	
Nyl-3-B-2	30.000	100.705	8.6	0	0	0	0	N-Nyl1-6-2	-27.938	2.775	536.5	-99.5	
								G-Nyl1-3-B	27.938	-2.775	536.5	-99.5	
Nyl-10-B-1	110.000	96.416	-1.1	0	0	0	0	Nyl-3-B-1	3.081	1.549	18.8	89.3	-4.000
								B-10-Ny2-Rln-1	-3.081	-1.549	18.8	89.3	
Nyl-3-B-1	30.000	99.598	-2.0	0	0	3.078	1.491	Nyl-10-B-1	-3.078	-1.491	66.1	90.0	
								G-Nyl2-3-B	0.000	0.000	0.0	0.0	
Nyl-3-B-2	30.000	99.598	-2.0	0	0	0	0	G-Nyl2-3-B	0.000	0.000	0.0	0.0	
Rba-3-B-1	30.000	99.625	-0.3	0	0	1.291	0.625	Rba-20-B-1	-1.291	-0.625	27.7	90.0	
Rba-20-B-1	220.000	100.236	0.3	0	0	0	0	Rba-3-B-1	1.293	0.643	3.8	89.5	
								B-20-Bwi-Rba-2D	-14.233	2.621	37.9	-98.3	
								B-20-Rba-Sha-1	12.940	0.676	33.9	99.9	
								B-20-Kri-Rba-2	0.000	-2.843	7.4	0.0	
								B-20-Smb-Rba-2	0.000	-1.096	2.9	0.0	
Rka5-6-B	6.600	100.759	10.4	3.000	0.000	0	0	Rka5-3-B	3.000	0.000	260.5	100.0	
Rka5-3-B	30.000	100.350	8.0	0	0	0	0	Rka5-6-B	-2.985	0.126	57.3	-99.9	
								G-Rka5-3-B	2.985	-0.126	57.3	-99.9	
Rka-3-B-1	30.000	100.350	8.0	0	0	3.120	1.511	Rka-10-B-1	4.265	-1.031	84.2	-97.2	
								Rka-10-B-1	4.265	-1.031	84.2	-97.2	
								G-Rka-3-B	-6.672	0.369	128.1	-99.8	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								G-Rka5-3-B	-2.985	0.126	57.3	-99.9	
								G-Mus-3-B	-1.993	0.056	38.2	-100.0	
Rka-3-B-2	30.000	100.350	8.0	0	0	0	0	N-Rka-6-2	-6.672	0.369	128.1	-99.8	
								G-Rka-3-B	6.672	-0.369	128.1	-99.8	
Rka-10-B-1	110.000	99.924	6.4	0	0	0	0	Rka-3-B-1	-4.259	1.158	23.2	-96.5	-1.000
								Rka-3-B-1	-4.259	1.158	23.2	-96.5	-1.000
								B-10-Kli-Rka-2	25.594	-9.219	142.9	-94.1	
								B-10-Hye-Rka-2	-17.076	6.903	96.7	-92.7	
Rlm-3-B-1	30.000	99.518	-1.3	0	0	7.435	3.601	Rlm-10-B-1	-7.435	-3.601	159.8	90.0	
Rlm-10-B-1	110.000	99.476	-0.3	0	0	0	0	Rlm-3-B-1	7.439	3.773	44.0	89.2	-1.000
								Rlm-20-B-1	-7.439	-3.773	44.0	89.2	
Rlm-20-B-1	220.000	99.808	0.1	0	0	0	0	Rlm-10-B-1	7.440	3.832	22.0	88.9	
								B-20-Sha-Rlm-2D	36.350	5.257	96.6	99.0	
								B-20-Rlm-Rwa-1D	-43.803	23.353	130.5	-88.2	
								B-20-Rlm-Rsu-1D	0.013	-32.442	85.3	0.0	
Rln-3-B-1	30.000	95.756	-1.9	0	0	2.868	1.389	Rln-10-B-1	-2.868	-1.389	64.1	90.0	
Rln-10-B-1	110.000	96.567	-1.1	0	0	0	0	Rln-3-B-1	2.871	1.444	17.5	89.3	
								10-Gfu/Jb1/Rln-B	-17.464	0.382	94.9	-100.0	
								B-10-Nga-Rln-2	11.510	-3.036	64.7	-96.7	
								B-10-Ny2-Rln-2	3.084	1.209	18.0	93.1	
Rsu-10-B-1	110.000	100.242	0.0	0	0	0	0	Rsu-20-B-1	0.000	0.000	0.0	0.0	
								G-Rsu-10-B	0.000	0.000	0.0	0.0	
Rsu-10-B-2	110.000	100.242	0.0	0	0	0	0	G-Rsu-10-B	0.000	0.000	0.0	0.0	
Rsu-20-B-1	220.000	100.242	0.0	0	0	0	0	Rsu-10-B-1	0.000	0.000	0.0	0.0	
								B-20-Rlm-Rsu-2D	0.000	0.000	0.0	0.0	
Rwa-3-B-1	30.000	99.381	-0.1	0	0	3.066	1.485	Rwa-20-B-1	-3.066	-1.485	66.0	90.0	
								G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-3-B-2	30.000	99.381	-0.1	0	0	0	0	G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-20-B-1	220.000	99.708	0.3	0	0	0	0	Rwa-3-B-1	3.066	1.509	9.0	89.7	
								B-20-Rlm-Rwa-2D	43.848	-30.184	140.1	-82.4	
								B-20-Kgo-Rwa-2	-46.914	28.674	144.7	-85.3	
Rwi-1-B-1	15.000	100.579	-5.5	0	0	3.537	1.713	Rwi-10-B-1	-3.537	3.345	186.3	-72.6	
								C-Rwi-B-1	0.000	-5.058	193.6	0.0	
Rwi-10-B-1	110.000	96.052	-4.5	0	0	0	0	Rwi-1-B-1	3.542	-3.228	26.2	-73.9	-3.000
								B-10-Kba-Rwi-2	-3.542	3.228	26.2	-73.9	
Rz1-6-B-1	6.600	100.579	10.3	0	0	0	0	N-Rz1-.06-B-1-1	-3.480	0.170	303.0	-99.9	
								B-.6-Mr1-Rz1-2	3.480	-0.170	303.0	-99.9	
Rz2-6-B-1-1	6.600	97.790	14.8	0	0	0	0	Rz2-10-B-1	12.750	0.000	1140.5	100.0	
								G-Rz2-.6-B	-12.750	0.000	1140.5	100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Rz2-6-B-1-2	6.600	97.790	14.8	12.750	0.000	0	0	G-Rz2-6-B	12.750	0.000	1140.5	100.0	
Rz2-10-B-1	110.000	97.736	9.5	0	0	0	0	Rz2-6-B-1-1	-12.687	1.188	68.4	-99.6	
								B-10-Mr2-Rz2-2	12.687	-1.188	68.4	-99.6	
Sha-3-B-1	30.000	100.880	-2.8	0	0	7.619	3.690	Sha-10-B-1	-7.619	-3.690	161.5	90.0	
Sha-10-B-1	110.000	99.816	-1.7	0	0	0	0	Sha-3-B-1	7.623	3.866	44.9	89.2	-2.000
								Sha-20-B-1	-66.618	-62.722	481.1	72.8	
								B-10-Bre-Sha-2D	58.995	58.856	438.2	70.8	
Sha-20-B-1	220.000	99.456	-0.2	0	0	0	0	Sha-10-B-1	66.696	66.223	248.0	71.0	-3.000
								B-20-Sha-Rlm-1D	-36.289	-21.479	111.3	86.1	
								B-20-Rba-Sha-2	-12.903	-14.772	51.8	65.8	
								B-20-Mra-Sha-2D	-17.503	-29.972	91.6	50.4	
Smb-1-B-1	11.000	100.239	0.3	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	
Smb-1-B-2	11.000	100.239	0.3	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	
Smb-1-B-2N	11.000	100.239	0.3	0	0	0	0	G-Smb-1-B	0.000	0.000	0.0	0.0	
								Smb-1-B-4	0.000	0.000	0.0	0.0	
								Smb-1-B-6	0.000	0.000	0.0	0.0	
Smb-1-B-4	11.000	100.239	0.3	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-1-B-6	11.000	100.239	0.3	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-20-B-1	220.000	100.239	0.3	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2	0.000	0.000	0.0	0.0	
								B-20-Smb-Rba-1	0.000	0.000	0.0	0.0	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cyi/Nko-B	30.000	98.862	9.4	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.149	-0.064	3.2	91.9	
								3-Cyi-Ghi-B	0.448	0.158	9.2	94.3	
								B-3-Nko-Cyi/Nko-1	-0.298	-0.094	6.1	95.4	
3-Cyi-Ghi-B	30.000	98.770	9.3	0	0	0	0	B-3-Cyi-Ghi-2	0.000	-0.078	1.5	0.0	
								3-Cyi/Nko-B	-0.447	-0.167	9.3	93.7	
								3-Kro/Kbu-B	0.447	0.244	9.9	87.8	
3-Kro/Kbu-B	30.000	97.704	9.0	0	0	0	0	B-3-Kbu-Kro-2	0.000	-0.028	0.5	0.0	
								B-3-Kbu-Kro/Nko-2	0.444	0.347	11.1	78.7	
								3-Cyi-Ghi-B	-0.444	-0.320	10.8	81.2	
10-Bre/Gso/Msh-B	110.000	96.736	-2.8	0	0	0	0	B-10-Bre-Gso-1	-18.947	-10.153	116.6	88.1	
								B-10-Gso-Msh-2	10.883	6.225	68.0	86.8	
								Gso-10-B-1	8.064	3.928	48.7	89.9	
10-Gfu/Jb1/Rln-B	110.000	96.369	-2.0	0	0	0	0	B-10-Gfu/Mku/Rln-B	-18.532	4.526	103.9	-97.1	
								B-10-Jb1-Rln-2	5.503	-6.171	45.0	-66.6	
								Rln-10-B-1	13.029	1.645	71.5	99.2	
10-Gfu/Mku/Rln-B	110.000	96.731	-0.9	0	0	0	0	B-10-Gfu-Mku-2	-22.099	7.817	127.2	-94.3	
								10-Gfu/Jb1/Rln-B	18.684	-4.757	104.6	-96.9	
								Gfu-10-B-1	3.415	-3.061	24.9	-74.5	
10-Gko/Kgo/MKi-B	110.000	96.278	-2.6	0	0	0	0	B-10-Gko-MKi-1	2.887	-1.878	18.8	-83.8	
								B-10-Kgo-MKi-2	-46.669	-0.379	254.4	100.0	
								MKi-10-B-1	43.782	2.257	239.0	99.9	
10-Kba/Msh/Rwi-B	110.000	96.553	-2.9	0	0	0	0	B-10-Kba-Msh-2	4.441	3.436	30.5	79.1	
								B-10-Kba-Rwi-2	3.378	1.479	20.0	91.6	
								Kba-10-B-1	-7.819	-4.914	50.2	84.7	
10-Kbo/Kro/Mr2-B	110.000	97.122	4.8	0	0	0	0	B-10-Kbo/Nte-B	-2.319	10.379	57.5	-21.8	
								B-10-Kbo-Kro-1	0.877	-11.120	60.3	-7.9	
								Kbo-10-B-1	1.442	0.741	8.8	88.9	
10-Kbo/Nte-B	110.000	96.354	5.1	0	0	0	0	B-10-Kbo/Kro/Mr2-B	2.352	-10.920	60.8	-21.1	
								B-10-Kbo/Nte-2	-2.352	10.920	60.8	-21.1	
10-Mr2/Nte-B	110.000	96.337	5.1	0	0	0	0	B-10-Mr2/Nte-1	-5.032	1.033	28.0	-98.0	
								B-10-Mr2/Nte-2	5.032	-1.033	28.0	-98.0	
* 20-Mra-B	220.000	100.000	0.0	19.383	1.171	0	0	B-20-Mra-Sha-2D	19.383	1.171	51.0	99.8	
B-1-Jb1-Jb3-1	15.000	98.940	-4.5	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								Jb1-1-B-1	0.000	0.000	0.0	0.0	
B-1-Jb1-Jb3-2	15.000	98.940	-4.5	0	0	0	0	B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-1	0.000	0.000	0.0	0.0	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-1-Kbu-KbW-1F_T	11.000	98.623	8.5	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.130	2.145	1289.2	-99.6	
								Kbu-1-B-1	24.130	-2.145	1289.2	-99.6	
B-1-Kbu-KbW-2F_T	11.000	101.777	13.5	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1289.2	100.0	
								KbW-1-B-2	-25.000	0.000	1289.2	100.0	
B-3-Cyi-Cyi/Nko-1	30.000	98.909	9.4	0	0	0	0	3-Cyi/Nko-B	0.149	0.051	3.1	94.7	
								Cyi-3-B-1	-0.149	-0.051	3.1	94.7	
B-3-Cyi-Ghi-2	30.000	98.839	9.3	0	0	0	0	3-Cyi-Ghi-B	0.000	0.000	0.0	0.0	
B-3-Kbu-Kro/Nko-2	30.000	97.503	9.0	0	0	0	0	3-Kro/Kbu-B	-0.443	-0.360	11.3	77.7	
								Kbu-3-B-1	0.443	0.360	11.3	77.7	
B-3-Kbu-Kro-2	30.000	97.713	9.0	0	0	0	0	3-Kro/Kbu-B	0.000	0.000	0.0	0.0	
B-3-Nko-Cyi/Nko-1	30.000	98.977	9.4	0	0	0	0	3-Cyi/Nko-B	0.299	0.076	6.0	96.9	
								Nko-3-B-1	-0.299	-0.076	6.0	96.9	
B-10-Bga-Gsh-1	110.000	95.388	5.3	0	0	0	0	B-10-Bga-Gsh-2	-14.910	0.582	82.1	-99.9	
								Bga-10-B-1	14.910	-0.582	82.1	-99.9	
B-10-Bga-Gsh-2	110.000	95.687	5.7	0	0	0	0	B-10-Bga-Gsh-1	14.962	-0.768	82.2	-99.9	
								Gsh-10-B	-14.962	0.768	82.2	-99.9	
B-10-Bga-Nte-1	110.000	95.388	5.3	0	0	0	0	B-10-Bga-Nte-2	-1.143	-9.692	53.7	11.7	
								Bga-10-B-1	1.143	9.692	53.7	11.7	
B-10-Bga-Nte-2	110.000	96.334	5.1	0	0	0	0	B-10-Bga-Nte-1	1.187	9.166	50.4	12.8	
								Nte-10-B-1	-1.187	-9.166	50.4	12.8	
B-10-Bre-Gso-1	110.000	98.030	-2.2	0	0	0	0	10-Bre/Gso/Msh-B	19.102	10.017	115.5	88.6	
								Bre-10-B-1	-19.102	-10.017	115.5	88.6	
B-10-Bre-Jb1-1	110.000	98.030	-2.2	0	0	0	0	B-10-Bre-Jb1-2	29.759	28.530	220.7	72.2	
								Bre-10-B-1	-29.759	-28.530	220.7	72.2	
B-10-Bre-Jb1-2	110.000	96.730	-2.5	0	0	0	0	B-10-Bre-Jb1-1	-29.503	-28.212	221.5	72.3	
								Jb1-10-B-1	29.503	28.212	221.5	72.3	
B-10-Bre-Sha-1D	110.000	98.030	-2.2	0	0	0	0	B-10-Bre-Sha-2D	-62.683	-45.852	415.8	80.7	
								Bre-10-B-1	62.683	45.852	415.8	80.7	
B-10-Bre-Sha-2D	110.000	99.258	-1.9	0	0	0	0	B-10-Bre-Sha-1D	63.199	46.239	414.1	80.7	
								Sha-10-B-1	-63.199	-46.239	414.1	80.7	
B-10-Bta-Hye-1	110.000	100.047	7.0	0	0	0	0	B-10-Bta-Hye-2	23.893	-6.196	129.5	-96.8	
								Bta-10-B-1	-23.893	6.196	129.5	-96.8	
B-10-Bta-Hye-2	110.000	99.623	5.8	0	0	0	0	B-10-Bta-Hye-1	-23.664	6.095	128.7	-96.8	
								Hye-10-B-1	23.664	-6.095	128.7	-96.8	
B-10-Bta-Kgo-1	110.000	100.047	7.0	0	0	0	0	B-10-Bta-Kgo-2	48.147	-15.458	265.3	-95.2	
								Bta-10-B-1	-48.147	15.458	265.3	-95.2	
B-10-Bta-Kgo-2	110.000	99.060	1.7	0	0	0	0	B-10-Bta-Kgo-1	-46.139	18.394	263.2	-92.9	
								Kgo-10-B-1	46.139	-18.394	263.2	-92.9	
B-10-Gfu-Mku-2	110.000	96.949	0.2	0	0	0	0	10-Gfu/Mku/Rln-B	22.304	-7.888	128.1	-94.3	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-10-B-1	-22.304	7.888	128.1	-94.3	
B-10-Gha-MKi-1	110.000	96.094	-3.0	0	0	0	0	B-10-Gha-MKi-2	-16.007	2.069	88.2	-99.2	
								Gha-10-B-1	16.007	-2.069	88.2	-99.2	
B-10-Gha-MKi-2	110.000	96.278	-2.6	0	0	0	0	B-10-Gha-MKi-1	16.050	-2.193	88.3	-99.1	
								MKi-10-B-1	-16.050	2.193	88.3	-99.1	
B-10-Gha-Nde-1	110.000	96.094	-3.0	0	0	0	0	B-10-Gha-Nde-2	8.039	-6.125	55.2	-79.5	
								Gha-10-B-1	-8.039	6.125	55.2	-79.5	
B-10-Gha-Nde-2	110.000	96.220	-3.4	0	0	0	0	B-10-Gha-Nde-1	-8.007	5.784	53.9	-81.1	
								Nde-10-B-1	8.007	-5.784	53.9	-81.1	
B-10-Gko-Jb1-1	110.000	96.294	-2.7	0	0	0	0	B-10-Gko-Jb1-2	-11.482	-9.186	80.1	78.1	
								Gko-10-B-1	11.482	9.186	80.1	78.1	
B-10-Gko-Jb1-2	110.000	96.730	-2.5	0	0	0	0	B-10-Gko-Jb1-1	11.507	8.987	79.2	78.8	
								Jb1-10-B-1	-11.507	-8.987	79.2	78.8	
B-10-Gko-MKi-1	110.000	96.294	-2.7	0	0	0	0	10-Gko/Kgo/MKi-B	-2.887	1.719	18.3	-85.9	
								Gko-10-B-1	2.887	-1.719	18.3	-85.9	
B-10-Gso-Msh-2	110.000	95.947	-3.1	0	0	0	0	10-Bre/Gso/Msh-B	-10.829	-6.559	69.3	85.5	
								Msh-10-B-1	10.829	6.559	69.3	85.5	
B-10-Gso-Nde-1	110.000	96.736	-2.8	0	0	0	0	B-10-Gso-Nde-2	0.000	-0.177	1.0	0.0	
								Gso-10-B-1	0.000	0.177	1.0	0.0	
B-10-Gso-Nde-2	110.000	96.739	-2.8	0	0	0	0	B-10-Gso-Nde-1	0.000	0.000	0.0	0.0	
B-10-Hye-Rka-1	110.000	99.623	5.8	0	0	0	0	B-10-Hye-Rka-2	19.904	-7.983	113.0	-92.8	
								Hye-10-B-1	-19.904	7.983	113.0	-92.8	
B-10-Hye-Rka-2	110.000	99.468	4.6	0	0	0	0	B-10-Hye-Rka-1	-19.710	7.747	111.8	-93.1	
								Rka-10-B-1	19.710	-7.747	111.8	-93.1	
B-10-Jb1-Jb2-1	110.000	96.730	-2.5	0	0	0	0	B-10-Jb1-Jb2-2	0.000	-0.036	0.2	0.0	
								Jb1-10-B-1	0.000	0.036	0.2	0.0	
B-10-Jb1-Jb2-2	110.000	96.730	-2.5	0	0	0	0	B-10-Jb1-Jb2-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-1	0.000	0.000	0.0	0.0	
B-10-Jb1-Nbg-1	110.000	96.730	-2.5	0	0	0	0	B-10-Jb1-Nbg-2	9.685	6.507	63.3	83.0	
								Jb1-10-B-1	-9.685	-6.507	63.3	83.0	
B-10-Jb1-Nbg-2	110.000	96.369	-2.6	0	0	0	0	B-10-Jb1-Nbg-1	-9.663	-6.673	64.0	82.3	
								Nbg-10-B-1	9.663	6.673	64.0	82.3	
B-10-Jb1-Rln-2	110.000	96.730	-2.5	0	0	0	0	10-Gfu/Jb1/Rln-B	-5.466	5.491	42.0	-70.6	
								Jb1-10-B-1	5.466	-5.491	42.0	-70.6	
B-10-Kba-Kre-1	110.000	96.553	-2.9	0	0	0	0	B-10-Kba-Kre-2	-11.164	-6.648	70.6	85.9	
								Kba-10-B-1	11.164	6.648	70.6	85.9	
B-10-Kba-Kre-2	110.000	98.082	-2.3	0	0	0	0	B-10-Kba-Kre-1	11.272	5.987	68.3	88.3	
								Kre-10-B-1	-11.272	-5.987	68.3	88.3	
B-10-Kba-Msh-2	110.000	95.947	-3.1	0	0	0	0	10-Kba/Msh/Rwi-B	-4.423	-4.073	32.9	73.6	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Msh-10-B-1	4.423	4.073	32.9	73.6	
B-10-Kba-Rwi-2	110.000	96.441	-3.0	0	0	0	0	10-Kba/Msh/Rwi-B	-3.376	-1.704	20.6	89.3	
								Rwi-10-B-1	3.376	1.704	20.6	89.3	
B-10-Kbo/Nte-2	110.000	96.334	5.1	0	0	0	0	10-Kbo/Nte-B	2.353	-10.931	60.9	-21.0	
								Nte-10-B-1	-2.353	10.931	60.9	-21.0	
B-10-Kbo-Kro-1	110.000	98.695	4.4	0	0	0	0	10-Kbo/Kro/Mr2-B	-0.818	9.998	53.3	-8.2	
								Kro-10-B-1	0.818	-9.998	53.3	-8.2	
B-10-Kbu-Kro-1	110.000	98.920	5.1	0	0	0	0	B-10-Kbu-Kro-2	24.498	-3.244	131.1	-99.1	
								Kbu-10-B-1	-24.498	3.244	131.1	-99.1	
B-10-Kbu-Kro-2	110.000	98.695	4.4	0	0	0	0	B-10-Kbu-Kro-1	-24.406	3.129	130.9	-99.2	
								Kro-10-B-1	24.406	-3.129	130.9	-99.2	
B-10-Kgo-Kli-1	110.000	99.060	1.7	0	0	0	0	B-10-Kgo-Kli-2	-16.396	3.235	88.6	-98.1	
								Kgo-10-B-1	16.396	-3.235	88.6	-98.1	
B-10-Kgo-Kli-2	110.000	99.270	2.8	0	0	0	0	B-10-Kgo-Kli-1	16.498	-3.869	89.6	-97.4	
								Kli-10-B-1	-16.498	3.869	89.6	-97.4	
B-10-Kgo-MKi-2	110.000	99.060	1.7	0	0	0	0	10-Gko/Kgo/MKi-B	47.899	2.697	254.2	99.8	
								Kgo-10-B-1	-47.899	-2.697	254.2	99.8	
B-10-Kli-Kro-1	110.000	98.695	4.4	0	0	0	0	B-10-Kli-Kro-2	23.740	-13.890	146.3	-86.3	
								Kro-10-B-1	-23.740	13.890	146.3	-86.3	
B-10-Kli-Kro-2	110.000	99.270	2.8	0	0	0	0	B-10-Kli-Kro-1	-23.492	13.773	144.0	-86.3	
								Kli-10-B-1	23.492	-13.773	144.0	-86.3	
B-10-Kli-Ny1-1	110.000	99.270	2.8	0	0	0	0	B-10-Kli-Ny1-2	3.894	0.379	20.7	99.5	
								Kli-10-B-1	-3.894	-0.379	20.7	99.5	
B-10-Kli-Ny1-2	110.000	99.013	2.6	0	0	0	0	B-10-Kli-Ny1-1	-3.887	-1.067	21.4	96.4	
								Ny1-10-B-1	3.887	1.067	21.4	96.4	
B-10-Kli-Rka-1	110.000	99.270	2.8	0	0	0	0	B-10-Kli-Rka-2	-21.526	8.760	122.9	-92.6	
								Kli-10-B-1	21.526	-8.760	122.9	-92.6	
B-10-Kli-Rka-2	110.000	99.468	4.6	0	0	0	0	B-10-Kli-Rka-1	21.838	-8.959	124.6	-92.5	
								Rka-10-B-1	-21.838	8.959	124.6	-92.5	
B-10-Kre-Nbu-1	110.000	98.082	-2.3	0	0	0	0	B-10-Kre-Nbu-2	-14.625	-7.680	88.4	88.5	
								Kre-10-B-1	14.625	7.680	88.4	88.5	
B-10-Kre-Nbu-2	110.000	99.081	-1.9	0	0	0	0	B-10-Kre-Nbu-1	14.716	7.387	87.2	89.4	
								Nbu-10-B-1	-14.716	-7.387	87.2	89.4	
B-10-MKi-Nbg-1	110.000	96.369	-2.6	0	0	0	0	B-10-MKi-Nbg-2	1.626	2.624	16.8	52.7	
								Nbg-10-B-1	-1.626	-2.624	16.8	52.7	
B-10-MKi-Nbg-2	110.000	96.278	-2.6	0	0	0	0	B-10-MKi-Nbg-1	-1.625	-2.794	17.6	50.3	
								MKi-10-B-1	1.625	2.794	17.6	50.3	
B-10-Mku-Nbi-1	110.000	96.949	0.2	0	0	0	0	B-B-10-Mku-Nbi-1-2	-14.542	-0.230	78.7	100.0	
								Mku-10-B-1	14.542	0.230	78.7	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Mku-Nta-1	110.000	96.949	0.2	0	0	0	0	B-10-Mku-Nta-2	-7.677	1.233	42.1	-98.7	
								Mku-10-B-1	7.677	-1.233	42.1	-98.7	
B-10-Mku-Nta-2	110.000	97.050	0.7	0	0	0	0	B-10-Mku-Nta-1	7.700	-2.042	43.1	-96.7	
								Nta-10-B-1	-7.700	2.042	43.1	-96.7	
B-10-Mr1-Mr2-1	110.000	96.361	5.3	0	0	0	0	B-10-Mr1-Mr2-2	-1.308	-1.697	11.7	61.1	
								Mr1-10-B-1	1.308	1.697	11.7	61.1	
B-10-Mr1-Mr2-2	110.000	96.365	5.3	0	0	0	0	B-10-Mr1-Mr2-1	1.308	1.686	11.6	61.3	
								Mr2-10-B-2	-1.308	-1.686	11.6	61.3	
B-10-Mr2/Nte-1	110.000	96.365	5.3	0	0	0	0	10-Mr2/Nte-B	5.039	-1.628	28.8	-95.2	
								Mr2-10-B-2	-5.039	1.628	28.8	-95.2	
B-10-Mr2/Nte-2	110.000	96.334	5.1	0	0	0	0	10-Mr2/Nte-B	-5.032	1.020	28.0	-98.0	
								Nte-10-B-1	5.032	-1.020	28.0	-98.0	
B-10-Mr2-Rz2-1	110.000	96.365	5.3	0	0	0	0	B-10-Mr2-Rz2-2	-6.347	-0.058	34.6	100.0	
								Mr2-10-B-1	6.347	0.058	34.6	100.0	
B-10-Mr2-Rz2-2	110.000	96.538	5.6	0	0	0	0	B-10-Mr2-Rz2-1	6.359	-0.304	34.6	-99.9	
								Rz2-10-B-1	-6.359	0.304	34.6	-99.9	
B-10-Msh-Nga-1	110.000	95.947	-3.1	0	0	0	0	B-10-Msh-Nga-2	-2.951	0.725	16.6	-97.1	
								Msh-10-B-1	2.951	-0.725	16.6	-97.1	
B-10-Msh-Nga-2	110.000	95.965	-2.7	0	0	0	0	B-10-Msh-Nga-1	2.961	-1.977	19.5	-83.2	
								Nga-10-B-1	-2.961	1.977	19.5	-83.2	
B-10-Nbi-Ny1-1	110.000	97.622	1.0	0	0	0	0	B-10-Nbi-Ny1-2	-16.142	-0.544	86.8	99.9	
								Nbi-10-B-1	16.142	0.544	86.8	99.9	
B-10-Nbi-Ny1-2	110.000	99.013	2.6	0	0	0	0	B-10-Nbi-Ny1-1	16.367	-0.197	86.8	100.0	
								Ny1-10-B-1	-16.367	0.197	86.8	100.0	
B-10-Nga-Rln-1	110.000	95.965	-2.7	0	0	0	0	B-10-Nga-Rln-2	-6.307	0.289	34.5	-99.9	
								Nga-10-B-1	6.307	-0.289	34.5	-99.9	
B-10-Nga-Rln-2	110.000	96.369	-2.0	0	0	0	0	B-10-Nga-Rln-1	6.344	-1.395	35.4	-97.7	
								Rln-10-B-1	-6.344	1.395	35.4	-97.7	
B-10-Ny2-Rln-1	110.000	96.198	-2.0	0	0	0	0	B-10-Ny2-Rln-2	-3.458	-1.747	21.1	89.2	
								Ny2-10-B-1	3.458	1.747	21.1	89.2	
B-10-Ny2-Rln-2	110.000	96.369	-2.0	0	0	0	0	B-10-Ny2-Rln-1	3.461	1.410	20.4	92.6	
								Rln-10-B-1	-3.461	-1.410	20.4	92.6	
B-20-Bta-Mmb-1D	220.000	96.283	12.5	0	0	0	0	B-20-Bta-Mmb-2D	-75.930	12.128	209.6	-98.7	
								Bta-20-B-1	75.930	-12.128	209.6	-98.7	
B-20-Bta-Mmb-2D	220.000	96.313	12.8	0	0	0	0	B-20-Bta-Mmb-1D	76.028	-17.554	212.6	-97.4	
								Mmb-20-B-1	-76.028	17.554	212.6	-97.4	
B-20-Bwi-KB2-1	220.000	100.079	0.3	0	0	0	0	B-20-Bwi-KB2-2	0.000	-0.405	1.1	0.0	
								Bwi-20-B-1	0.000	0.405	1.1	0.0	
B-20-Bwi-KB2-2	220.000	100.079	0.3	0	0	0	0	B-20-Bwi-KB2-1	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Kb2-20-B-1	0.000	0.000	0.0	0.0	
B-20-Bwi-KbW-1	220.000	100.079	0.3	0	0	0	0	B-20-Bwi-KbW-2	0.000	-0.499	1.3	0.0	
								Bwi-20-B-1	0.000	0.499	1.3	0.0	
B-20-Bwi-KbW-2	220.000	100.079	0.3	0	0	0	0	B-20-Bwi-KbW-1	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
B-20-Bwi-Rba-1D	220.000	100.079	0.3	0	0	0	0	B-20-Bwi-Rba-2D	12.518	-19.373	60.5	-54.3	
								Bwi-20-B-1	-12.518	19.373	60.5	-54.3	
B-20-Bwi-Rba-2D	220.000	100.198	0.2	0	0	0	0	B-20-Bwi-Rba-1D	-12.506	2.575	33.4	-97.9	
								Rba-20-B-1	12.506	-2.575	33.4	-97.9	
B-20-Kgo-Kli-1	220.000	99.406	0.6	0	0	0	0	B-20-Kgo-Kli-2	-9.040	-6.434	29.3	81.5	
								Kgo-20-B-1	9.040	6.434	29.3	81.5	
B-20-Kgo-Kli-2	220.000	99.508	0.6	0	0	0	0	B-20-Kgo-Kli-1	9.044	3.691	25.8	92.6	
								Kli-20-B-1	-9.044	-3.691	25.8	92.6	
B-20-Kgo-Rwa-1	220.000	99.406	0.6	0	0	0	0	B-20-Kgo-Rwa-2	21.203	-21.862	80.4	-69.6	
								Kgo-20-B-1	-21.203	21.862	80.4	-69.6	
B-20-Kgo-Rwa-2	220.000	99.564	0.4	0	0	0	0	B-20-Kgo-Rwa-1	-21.184	20.094	77.0	-72.6	
								Rwa-20-B-1	21.184	-20.094	77.0	-72.6	
B-20-Kli-Bwi-1	220.000	100.079	0.3	0	0	0	0	B-20-Kli-Bwi-2	-14.003	19.535	63.0	-58.3	
								Bwi-20-B-1	14.003	-19.535	63.0	-58.3	
B-20-Kli-Bwi-2	220.000	99.508	0.6	0	0	0	0	B-20-Kli-Bwi-1	14.048	-25.071	75.8	-48.9	
								Kli-20-B-1	-14.048	25.071	75.8	-48.9	
B-20-Kri-Rba-1	220.000	100.219	0.2	0	0	0	0	B-20-Kri-Rba-2	0.000	0.000	0.0	0.0	
								Kri-20-B-1	0.000	0.000	0.0	0.0	
B-20-Kri-Rba-2	220.000	100.198	0.2	0	0	0	0	B-20-Kri-Rba-1	0.000	-2.841	7.4	0.0	
								Rba-20-B-1	0.000	2.841	7.4	0.0	
B-20-Mra-Sha-2D	220.000	99.452	-0.2	0	0	0	0	20-Mra-B	-19.341	-29.621	93.3	54.7	
								Sha-20-B-1	19.341	29.621	93.3	54.7	
B-20-Nbu-Rsu-1	220.000	99.713	-0.2	0	0	0	0	B-20-Nbu-Rsu-2	-18.085	-9.774	54.1	88.0	
								Nbu-20-B-1	18.085	9.774	54.1	88.0	
B-20-Nbu-Rsu-2	220.000	99.718	-0.2	0	0	0	0	B-20-Nbu-Rsu-1	18.085	9.708	54.0	88.1	
								Rsu-20-B-1	-18.085	-9.708	54.0	88.1	
B-20-Rba-Sha-1	220.000	100.198	0.2	0	0	0	0	B-20-Rba-Sha-2	11.018	0.618	28.9	99.8	
								Rba-20-B-1	-11.018	-0.618	28.9	99.8	
B-20-Rba-Sha-2	220.000	99.452	-0.2	0	0	0	0	B-20-Rba-Sha-1	-10.989	-14.743	48.5	59.8	
								Sha-20-B-1	10.989	14.743	48.5	59.8	
B-20-Rlm-Rsu-1D	220.000	99.636	0.1	0	0	0	0	B-20-Rlm-Rsu-2D	18.103	-22.480	76.0	-62.7	
								Rlm-20-B-1	-18.103	22.480	76.0	-62.7	
B-20-Rlm-Rsu-2D	220.000	99.718	-0.2	0	0	0	0	B-20-Rlm-Rsu-1D	-18.085	-9.708	54.0	88.1	
								Rsu-20-B-1	18.085	9.708	54.0	88.1	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-20-Rlm-Rwa-1D	220.000	99.636	0.1	0	0	0	0	B-20-Rlm-Rwa-2D	-67.248	25.261	189.2	-93.6	
								Rlm-20-B-1	67.248	-25.261	189.2	-93.6	
B-20-Rlm-Rwa-2D	220.000	99.564	0.4	0	0	0	0	B-20-Rlm-Rwa-1D	67.339	-31.891	196.4	-90.4	
								Rwa-20-B-1	-67.339	31.891	196.4	-90.4	
B-20-Sha-Rlm-1D	220.000	99.452	-0.2	0	0	0	0	B-20-Sha-Rlm-2D	-41.081	-9.243	111.1	97.6	
								Sha-20-B-1	41.081	9.243	111.1	97.6	
B-20-Sha-Rlm-2D	220.000	99.636	0.1	0	0	0	0	B-20-Sha-Rlm-1D	41.149	-6.919	109.9	-98.6	
								Rlm-20-B-1	-41.149	6.919	109.9	-98.6	
B-20-Smb-Rba-1	220.000	100.201	0.2	0	0	0	0	B-20-Smb-Rba-2	0.000	0.000	0.0	0.0	
								Smb-20-B-1	0.000	0.000	0.0	0.0	
B-20-Smb-Rba-2	220.000	100.198	0.2	0	0	0	0	B-20-Smb-Rba-1	0.000	-1.096	2.9	0.0	
								Rba-20-B-1	0.000	1.096	2.9	0.0	
B-6-Mr1-Rz1-1	6.600	99.603	4.6	0	0	0	0	B-6-Mr1-Rz1-2	-1.737	0.056	152.6	-99.9	
								Mr1-6-B-1	1.737	-0.056	152.6	-99.9	
B-6-Mr1-Rz1-2	6.600	100.046	5.1	0	0	0	0	B-6-Mr1-Rz1-1	1.745	-0.043	152.6	-100.0	
								Rz1-6-B-1	-1.745	0.043	152.6	-100.0	
B-B-10-Mku-Nbi-1-2	110.000	97.622	1.0	0	0	0	0	B-10-Mku-Nbi-1	14.642	-0.204	78.7	100.0	
								Nbi-10-B-1	-14.642	0.204	78.7	100.0	
Bga-3-B-1	30.000	98.933	1.6	0	0	16.023	7.760	Bga-10-B-1	-16.023	-7.760	346.3	90.0	
Bga-10-B-1	110.000	95.388	5.3	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	16.053	9.109	101.6	87.0	-7.000
								B-10-Bga-Nte-1	-1.143	-9.692	53.7	11.7	
								B-10-Bga-Gsb-1	-14.910	0.582	82.1	-99.9	
Bga-6-B-1	6.600	95.388	5.3	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
Bre-1-B-1	15.000	99.073	-4.2	0	0	13.793	6.680	Bre-10-B-1	-6.897	-3.340	297.7	90.0	
								Bre-10-B-1	-6.897	-3.340	297.7	90.0	
Bre-10-B-1	110.000	98.030	-2.2	0	0	0	0	Bre-1-B-1	6.911	3.653	41.9	88.4	-3.000
								Bre-1-B-1	6.911	3.653	41.9	88.4	-3.000
								B-10-Bre-Jb1-1	29.759	28.530	220.7	72.2	
								B-10-Bre-Sha-1D	-62.683	-45.852	415.8	80.7	
								B-10-Bre-Gso-1	19.102	10.017	115.5	88.6	
Bta-3-B-1	30.000	100.263	6.1	0	0	3.718	1.800	Bta-10-B-1	-3.718	-1.800	79.3	90.0	
Bta-10-B-1	110.000	100.047	7.0	0	0	0	0	Bta-3-B-1	3.719	1.871	21.8	89.3	-1.000
								Bta-20-B-1	-75.760	19.782	410.8	-96.8	
								B-10-Bta-Kgo-1	48.147	-15.458	265.3	-95.2	
								B-10-Bta-Hye-1	23.893	-6.196	129.5	-96.8	
Bta-20-B-1	220.000	96.283	12.5	0	0	0	0	Bta-10-B-1	75.930	-12.128	209.6	-98.7	-2.000
								B-20-Bta-Mmb-1D	-75.930	12.128	209.6	-98.7	
Bwi-3-B-1	30.000	99.374	-0.4	0	0	1.483	0.718	Bwi-20-B-1	-1.483	-0.718	31.9	90.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bwi-10-B-1	110.000	100.079	0.3	0	0	0	0	Bwi-20-B-1	0.000	0.000	0.0	0.0	
Bwi-20-B-1	220.000	100.079	0.3	0	0	0	0	Bwi-10-B-1	0.000	0.000	0.0	0.0	
								Bwi-3-B-1	1.485	0.741	4.4	89.5	
								B-20-Bwi-Rba-1D	12.518	-19.373	60.5	-54.3	
								B-20-Kli-Bwi-1	-14.003	19.535	63.0	-58.3	
								B-20-Bwi-KB2-1	0.000	-0.405	1.1	0.0	
								B-20-Bwi-KbW-1	0.000	-0.499	1.3	0.0	
C-Gfu-B-3	30.000	98.384	-2.3	0	0	0.000	-4.840	Gfu-3-B-1	0.000	4.840	94.7	0.0	
C-MKi-3-B	30.000	96.520	-7.1	0	0	0.000	-9.316	MKi-3-B-1	0.000	9.316	185.8	0.0	
C-Msh-1-B	15.000	95.253	-5.8	0	0	0	0	Msh-1-B-1	0.000	0.000	0.0	0.0	
C-Nde-B	30.000	99.294	-4.3	0	0	0.000	-9.859	Nde-3-B-1	0.000	9.859	191.1	0.0	
C-Rwi-B-1	15.000	99.542	-3.9	0	0	0	0	Rwi-1-B-1	0.000	0.000	0.0	0.0	
Cyi-3-B-1	30.000	98.909	9.4	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.149	0.051	3.1	94.7	
								G-Cyi-3-B	-0.149	-0.051	3.1	94.7	
Cyi-3-B-2	30.000	98.909	9.4	0	0	0	0	N-Cyi-04-1	-0.149	-0.051	3.1	94.7	
								G-Cyi-3-B	0.149	0.051	3.1	94.7	
G-Cyi-3-B	30.000	98.909	9.4	0	0	0	0	Cyi-3-B-1	0.149	0.051	3.1	94.7	
								Cyi-3-B-2	-0.149	-0.051	3.1	94.7	
Gfu-3-B-1	30.000	98.384	-2.3	0	0	3.399	1.646	Gfu-10-B-1	-1.700	1.597	45.6	-72.9	
								Gfu-10-B-1	-1.700	1.597	45.6	-72.9	
								C-Gfu-B-3	0.000	-4.840	94.7	0.0	
Gfu-10-B-1	110.000	96.731	-0.9	0	0	0	0	Gfu-3-B-1	1.707	-1.530	12.4	-74.5	
								Gfu-3-B-1	1.707	-1.530	12.4	-74.5	
								10-Gfu/Mku/Rln-B	-3.415	3.061	24.9	-74.5	
G-Gko-1-B	15.000	99.746	-4.3	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-1-B-2	0.000	0.000	0.0	0.0	
G-Gko-3-B	15.000	99.746	-4.3	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-3-B	0.000	0.000	0.0	0.0	
G-Gko-10-B	110.000	96.294	-2.7	0	0	0	0	Gko-10-B-1	0.000	0.000	0.0	0.0	
								Gko-10-B-2	0.000	0.000	0.0	0.0	
G-Gsh-1-B	11.000	98.770	8.6	0	0	0	0	Gsh-1-B-1	15.000	0.000	797.1	100.0	
								Gsh-1-B-2	-15.000	0.000	797.1	100.0	
Gha-3-B-1	30.000	99.060	-4.1	0	0	7.964	3.857	Gha-10-B-1	-7.964	-3.857	171.9	90.0	
Gha-10-B-1	110.000	96.094	-3.0	0	0	0	0	Gha-3-B-1	7.968	4.056	48.8	89.1	-4.000
								B-10-Gha-MKi-1	-16.007	2.069	88.2	-99.2	
								B-10-Gha-Nde-1	8.039	-6.125	55.2	-79.5	
G-Jb2-10-B	110.000	96.730	-2.5	0	0	0	0	Jb2-10-B-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
G-Jb3-1-B	15.000	98.940	-4.5	0	0	0	0	Jb3-1-B-1	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Jb3-1-B-2	0.000	0.000	0.0	0.0	
G-KbW-1-B-1	11.000	101.777	13.5	0	0	0	0	KbW-1-B-3	-17.000	0.000	876.7	100.0	
								KbW-1-B-2	17.000	0.000	876.7	100.0	
G-KbW-1-B-2	11.000	101.777	13.5	0	0	0	0	KbW-1-B-1	8.000	0.000	412.6	100.0	
								KbW-1-B-4	-8.000	0.000	412.6	100.0	
G-KbW-1-B-3	220.000	100.079	0.3	0	0	0	0	B-20-Bwi-KbW-2	0.000	0.000	0.0	0.0	
								KbW-20-B-2	0.000	0.000	0.0	0.0	
Gko-1-B-1	15.000	99.746	-4.3	0	0	14.341	6.946	Gko-10-B-1	-4.780	-2.315	205.0	90.0	
								Gko-10-B-1	-4.780	-2.315	205.0	90.0	
								Gko-10-B-1	-4.780	-2.315	205.0	90.0	
								G-Gko-1-B	0.000	0.000	0.0	0.0	
								G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-1-B-2	15.000	99.746	-4.3	0	0	0	0	G-Gko-1-B	0.000	0.000	0.0	0.0	
Gko-3-B	15.000	99.746	-4.3	0	0	0	0	G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-10-B-1	110.000	96.294	-2.7	0	0	0	0	Gko-1-B-1	4.790	2.489	29.4	88.7	-5.000
								Gko-1-B-1	4.790	2.489	29.4	88.7	-5.000
								Gko-1-B-1	4.790	2.489	29.4	88.7	-5.000
								B-10-Gko-Jb1-1	-11.482	-9.186	80.1	78.1	
								B-10-Gko-MKi-1	-2.887	1.719	18.3	-85.9	
								G-Gko-10-B	0.000	0.000	0.0	0.0	
Gko-10-B-2	110.000	96.294	-2.7	0	0	0	0	G-Gko-10-B	0.000	0.000	0.0	0.0	
G-Kse-1-B	110.000	96.736	-2.8	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Mku-10-B	110.000	96.949	0.2	0	0	0	0	Mku-10-B-1	0.000	0.000	0.0	0.0	
								Mku-10-B-2	0.000	0.000	0.0	0.0	
G-Mku-6-B	6.600	98.974	0.4	0	0	0	0	Mku-6-B-4	12.000	0.000	1060.6	100.0	
								Mku-6-B-2	-12.000	0.000	1060.6	100.0	
G-Mmb-3-B	30.000	98.810	18.3	0	0	0	0	Mmb-3-B-1	79.817	-8.241	1562.8	-99.5	
								Mmb-3-B-2	-79.817	8.241	1562.8	-99.5	
G-Mus-3-B	30.000	100.109	5.0	0	0	0	0	Mus-3-B	-0.997	-0.728	23.7	80.8	
								Rka-3-B-1	0.997	0.728	23.7	80.8	
G-Nko-3-B	30.000	98.977	9.4	0	0	0	0	Nko-3-B-1	0.299	0.076	6.0	96.9	
								Nko-3-B-2	-0.299	-0.076	6.0	96.9	
G-NiB-3-B	30.000	97.950	1.2	0	0	0	0	Kgo-3-B-1	2.496	-0.054	49.0	-100.0	
								NiB-3-B1	-2.496	0.054	49.0	-100.0	
G-Ny1-3-B	30.000	99.816	4.4	0	0	0	0	Ny1-3-B-1	13.984	-0.146	269.6	100.0	
								Ny1-3-B-2	-13.984	0.146	269.6	100.0	
G-Ny2-3-B	30.000	99.264	-3.0	0	0	0	0	Ny2-3-B-1	0.000	0.000	0.0	0.0	
								Ny2-3-B-2	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
G-Rka5-3-B	30.000	100.109	5.0	0	0	0	0	Rka5-3-B	-1.496	0.032	28.8	-100.0	
								Rka-3-B-1	1.496	-0.032	28.8	-100.0	
G-Rka-3-B	30.000	100.109	5.0	0	0	0	0	Rka-3-B-1	3.343	-0.093	64.3	-100.0	
								Rka-3-B-2	-3.343	0.093	64.3	-100.0	
G-Rsu-10-B	110.000	99.718	-0.2	0	0	0	0	Rsu-10-B-1	0.000	0.000	0.0	0.0	
								Rsu-10-B-2	0.000	0.000	0.0	0.0	
G-Rwa-3-B	30.000	98.808	6.0	0	0	0	0	Rwa-3-B-1	49.881	-5.370	977.1	-99.4	
								Rwa-3-B-2	-49.881	5.370	977.1	-99.4	
G-Rz1-.06-B	0.600	100.307	6.5	0	0	0	0	N-Rz1-.06-B-1-1	1.750	0.000	1678.8	100.0	
								N-Rz1-.06-B-1-2	-1.750	0.000	1678.8	100.0	
G-Rz2-.6-B	6.600	96.671	8.3	0	0	0	0	Rz2-.6-B-1-1	6.375	0.000	576.9	100.0	
								Rz2-.6-B-1-2	-6.375	0.000	576.9	100.0	
Gsh-1-B-1	11.000	98.770	8.6	0	0	0	0	Gsh-10-B	7.500	0.000	398.6	100.0	
								Gsh-10-B	7.500	0.000	398.6	100.0	
								G-Gsh-1-B	-15.000	0.000	797.1	100.0	
Gsh-1-B-2	11.000	98.770	8.6	15.000	0.000	0	0	G-Gsh-1-B	15.000	0.000	797.1	100.0	
Gsh-10-B	110.000	95.687	5.7	0	0	0	0	Gsh-1-B-1	-7.481	0.384	41.1	-99.9	-3.000
								Gsh-1-B-1	-7.481	0.384	41.1	-99.9	-3.000
								B-10-Bga-Gsh-2	14.962	-0.768	82.2	-99.9	
G-Smb-1-B	11.000	100.201	0.2	0	0	0	0	N-Smb-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2N	0.000	0.000	0.0	0.0	
Gso-1-B-1	15.000	99.724	-3.9	0	0	8.060	3.904	Gso-10-B-1	-8.060	-3.904	345.6	90.0	
Gso-10-B-1	110.000	96.736	-2.8	0	0	0	0	Gso-1-B-1	8.064	4.105	49.1	89.1	-4.000
								B-10-Gso-Nde-1	0.000	-0.177	1.0	0.0	
								10-Bre/Gso/Msh-B	-8.064	-3.928	48.7	89.9	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Hye-3-B-1	30.000	100.851	4.9	0	0	3.757	1.820	Hye-10-B-1	-3.757	-1.820	79.7	90.0	
Hye-10-B-1	110.000	99.623	5.8	0	0	0	0	Hye-3-B-1	3.760	1.888	22.2	89.4	-2.000
								B-10-Bta-Hye-2	-23.664	6.095	128.7	-96.8	
								B-10-Hye-Rka-1	19.904	-7.983	113.0	-92.8	
Jb1-10-B-1	110.000	96.730	-2.5	0	0	0	0	Jb1-1-B-1	13.777	7.263	84.5	88.5	-4.000
								B-10-Jb1-Jb2-1	0.000	-0.036	0.2	0.0	
								B-10-Jb1-Rln-2	-5.466	5.491	42.0	-70.6	
								B-10-Bre-Jb1-2	-29.503	-28.212	221.5	72.3	
								B-10-Gko-Jb1-2	11.507	8.987	79.2	78.8	
								B-10-Jb1-Nbg-1	9.685	6.507	63.3	83.0	
Jb1-1-B-1	15.000	98.940	-4.5	0	0	13.764	6.666	Jb1-10-B-1	-13.764	-6.666	594.9	90.0	
								B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
Jb2-.6-B-1	6.600	99.721	-2.5	0	0	0	0	Jb2-10-B-2	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
Jb2-10-B-1	110.000	96.730	-2.5	0	0	0	0	B-10-Jb1-Jb2-2	0.000	0.000	0.0	0.0	
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb2-10-B-2	110.000	96.730	-2.5	0	0	0	0	Jb2-.6-B-1	0.000	0.000	0.0	0.0	-3.000
								Jb2-.6-B-1	0.000	0.000	0.0	0.0	-3.000
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb3-1-B-1	15.000	98.940	-4.5	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								G-Jb3-1-B	0.000	0.000	0.0	0.0	
Jb3-1-B-2	15.000	98.940	-4.5	0	0	0	0	G-Jb3-1-B	0.000	0.000	0.0	0.0	
								Jb3-1-B-2d	0.000	0.000	0.0	0.0	
Jb3-1-B-2d	15.000	98.940	-4.5	0	0	0	0	Jb3-1-B-2	0.000	0.000	0.0	0.0	
Kb2-20-B-1	220.000	100.079	0.3	0	0	0	0	B-20-Bwi-KB2-2	0.000	0.000	0.0	0.0	
Kba-3-B-1	30.000	98.964	-4.5	0	0	3.337	1.616	Kba-10-B-1	-3.337	-1.616	72.1	90.0	
Kba-10-B-1	110.000	96.553	-2.9	0	0	0	0	Kba-3-B-1	3.346	1.733	20.5	88.8	-4.000
								10-Kba/Msh/Rwi-B	7.819	4.914	50.2	84.7	
								B-10-Kba-Kre-1	-11.164	-6.648	70.6	85.9	
Kbo-3-B-1	30.000	97.695	3.5	0	0	1.438	0.697	Kbo-10-B-1	-1.438	-0.697	31.5	90.0	
Kbo-10-B-1	110.000	97.122	4.8	0	0	0	0	Kbo-3-B-1	1.442	0.741	8.8	88.9	-2.000
								10-Kbo/Kro/Mr2-B	-1.442	-0.741	8.8	88.9	
Kbu-1-B-1	11.000	98.623	8.5	0	0	0	0	Kbu-3-B-1	-0.443	-0.352	30.1	78.2	
								Kbu-10-B-1	11.986	-0.891	639.6	-99.7	
								Kbu-10-B-1	12.587	-0.902	671.6	-99.7	
								B-1-Kbu-KbW-1F_T	-24.130	2.145	1289.2	-99.6	
Kbu-3-B-1	30.000	97.503	9.0	0	0	0	0	Kbu-1-B-1	0.443	0.360	11.3	77.7	-2.000
								B-3-Kbu-Kro/Nko-2	-0.443	-0.360	11.3	77.7	
Kbu-10-B-1	110.000	98.920	5.1	0	0	0	0	Kbu-1-B-1	-11.948	1.598	64.0	-99.1	
								Kbu-1-B-1	-12.550	1.645	67.2	-99.2	
								B-10-Kbu-Kro-1	24.498	-3.244	131.1	-99.1	
KbW-1-B-1	11.000	101.777	13.5	0	0	0	0	KbW-1-B-2	8.000	0.000	412.6	100.0	
								G-KbW-1-B-2	-8.000	0.000	412.6	100.0	
KbW-1-B-2	11.000	101.777	13.5	0	0	0	0	KbW-1-B-1	-8.000	0.000	412.6	100.0	
								B-1-Kbu-KbW-2F_T	25.000	0.000	1289.2	100.0	
								G-KbW-1-B-1	-17.000	0.000	876.7	100.0	
KbW-1-B-3	11.000	101.777	13.5	17.000	0.000	0	0	G-KbW-1-B-1	17.000	0.000	876.7	100.0	
KbW-1-B-4	11.000	101.777	13.5	8.000	0.000	0	0	G-KbW-1-B-2	8.000	0.000	412.6	100.0	
KbW-1-B-5	20.000	100.079	0.3	0	0	0	0	KbW-20-B-2	0.000	0.000	0.0	0.0	
KbW-20-B-2	220.000	100.079	0.3	0	0	0	0	KbW-1-B-5	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
Kgo-3-B-1	30.000	97.950	1.2	0	0	4.934	2.390	Kgo-10-B-1	-1.219	-1.222	33.9	70.6	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Kgo-10-B-1	110.000	99.060	1.7	0	0	0	0	Kgo-10-B-1	-1.219	-1.222	33.9	70.6	
								G-NtB-3-B	-2.496	0.054	49.0	-100.0	
								Kgo-3-B-1	1.221	1.248	9.3	69.9	
								Kgo-3-B-1	1.221	1.248	9.3	69.9	
								Kgo-20-B-1	12.195	-26.822	156.1	-41.4	
								B-10-Kgo-MKi-2	47.899	2.697	254.2	99.8	
								B-10-Kgo-Kli-1	-16.396	3.235	88.6	-98.1	
Kgo-20-B-1	220.000	99.406	0.6	0	0	0	0	B-10-Bta-Kgo-2	-46.139	18.394	263.2	-92.9	
								Kgo-10-B-1	-12.162	28.296	81.3	-39.5	-4.000
								B-20-Kgo-Kli-1	-9.040	-6.434	29.3	81.5	
								B-20-Kgo-Rwa-1	21.203	-21.862	80.4	-69.6	
Kli-3-B-1	30.000	99.721	1.5	0	0	1.492	0.723	Kli-10-B-1	-1.492	-0.723	32.0	90.0	
Kli-10-B-1	110.000	99.270	2.8	0	0	0	0	Kli-3-B-1	1.499	0.768	8.9	89.0	-2.000
								Kli-20-B-1	23.126	-19.812	161.0	-75.9	
								B-10-Kgo-Kli-2	16.498	-3.869	89.6	-97.4	
								B-10-Kli-Kro-2	-23.492	13.773	144.0	-86.3	
								B-10-Kli-Rka-1	-21.526	8.760	122.9	-92.6	
								B-10-Kli-Ny1-1	3.894	0.379	20.7	99.5	
								Kli-10-B-1	-23.091	21.380	83.0	-73.4	-3.000
								B-20-Kgo-Kli-2	9.044	3.691	25.8	92.6	
Kli-20-B-1	220.000	99.508	0.6	0	0	0	0	B-20-Kli-Bwi-2	14.048	-25.071	75.8	-48.9	
								Kre-3-B-1	3.353	1.693	20.1	89.3	-2.000
								B-10-Kba-Kre-2	11.272	5.987	68.3	88.3	
Kre-10-B-1	110.000	98.082	-2.3	0	0	0	0	B-10-Kre-Nbu-1	-14.625	-7.680	88.4	88.5	
								B-20-Kri-Rba-1	0.000	0.000	0.0	0.0	
Kri-20-B-1	220.000	100.219	0.2	0	0	0	0	Kro-10-B-1	-1.481	-0.717	31.9	90.0	
Kro-3-B-1	30.000	99.283	3.1	0	0	1.481	0.717	Kro-10-B-1	-1.481	-0.717	31.9	90.0	
								Kro-3-B-1	1.484	0.763	8.9	89.0	-2.000
								B-10-Kbu-Kro-2	-24.406	3.129	130.9	-99.2	
								B-10-Kbo-Kro-1	-0.818	9.998	53.3	-8.2	
								B-10-Kli-Kro-1	23.740	-13.890	146.3	-86.3	
Kse-10-B1	110.000	96.736	-2.8	0	0	0	0	G-Kse-1-B	0.000	0.000	0.0	0.0	
MKi-3-B-1	30.000	96.520	-7.1	0	0	29.304	14.192	MKi-10-B-1	-29.304	-4.876	592.3	98.6	
								C-MKi-3-B	0.000	-9.316	185.8	0.0	
								MKi-3-B-1	29.356	7.244	164.8	97.1	-2.000
MKi-10-B-1	110.000	96.278	-2.6	0	0	0	0	10-Gko/Kgo/MKi-B	-43.782	-2.257	239.0	99.9	
								B-10-MKi-Nbg-2	-1.625	-2.794	17.6	50.3	
								B-10-Gha-MKi-2	16.050	-2.193	88.3	-99.1	
Mku-3-B-1	30.000	97.201	-2.6	0	0	11.879	5.753	Mku-6-B-1	-11.879	-5.753	261.3	90.0	1.000

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap	
Mku-10-B-1	110.000	96.949	0.2	0	0	0	0	Mku-6-B-1	-0.085	6.885	37.3	-1.2	-7.000	
								B-10-Gfu-Mku-2	22.304	-7.888	128.1	-94.3		
								B-10-Mku-Nta-1	-7.677	1.233	42.1	-98.7		
								B-10-Mku-Nbi-1	-14.542	-0.230	78.7	100.0		
								G-Mku-10-B	0.000	0.000	0.0	0.0		
Mku-10-B-2	110.000	96.949	0.2	0	0	0	0	G-Mku-10-B	0.000	0.000	0.0	0.0		
Mku-6-B-1	6.600	98.974	0.4	0	0	0	0	Mku-3-B-1	11.896	6.537	1199.7	87.6		
								Mku-10-B-1	0.104	-6.537	577.8	-1.6		
								Mku-6-B-4	-6.000	0.000	530.3	100.0		
								Mku-6-B-3	-3.000	0.000	265.2	100.0		
								Mku-6-B-5	0.000	0.000	0.0	0.0		
								Mku-6-B-6	-3.000	0.000	265.2	100.0		
Mku-6-B-2	6.600	98.974	0.4	12.000	0.000	0	0	G-Mku-6-B	12.000	0.000	1060.6	100.0		
Mku-6-B-3	6.600	98.974	0.4	0	0	0	0	Mku-6-B-4	-6.000	0.000	530.3	100.0		
								Mku-6-B-1	3.000	0.000	265.2	100.0		
								Mku-6-B-5	0.000	0.000	0.0	0.0		
								Mku-6-B-6	3.000	0.000	265.2	100.0		
Mku-6-B-4	6.600	98.974	0.4	0	0	0	0	Mku-6-B-1	6.000	0.000	530.3	100.0		
								Mku-6-B-3	6.000	0.000	530.3	100.0		
								G-Mku-6-B	-12.000	0.000	1060.6	100.0		
Mku-6-B-5	6.600	98.974	0.4	0	0	0	0	Mku-6-B-1	0.000	0.000	0.0	0.0		
								Mku-6-B-3	0.000	0.000	0.0	0.0		
Mku-6-B-6	6.600	98.974	0.4	0	0	0	0	Mku-6-B-3	-3.000	0.000	265.2	100.0		
								Mku-6-B-1	3.000	0.000	265.2	100.0		
Mmb-3-B-1	30.000	98.810	18.3	0	0	3.621	1.754	Mmb-20-B-1	76.196	-9.995	1496.8	-99.2		
								G-Mmb-3-B	-79.817	8.241	1562.8	-99.5		
Mmb-3-B-2	30.000	98.810	18.3	0	0	0	0	N-Mmb-6-1	-39.908	4.121	781.4	-99.5		
								N-Mmb-6-2	-39.908	4.121	781.4	-99.5		
								G-Mmb-3-B	79.817	-8.241	1562.8	-99.5		
Mmb-20-B-1	220.000	96.313	12.8	0	0	0	0	Mmb-3-B-1	-76.028	17.554	212.6	-97.4	-4.000	
								B-20-Bta-Mmb-2D	76.028	-17.554	212.6	-97.4		
Mr1-6-B-1	6.600	99.603	4.6	0	0	0	0	Mr1-10-B-1	-1.305	-1.650	184.8	62.0		
								Mr1-3-B-1	3.042	1.594	301.6	88.6		
								B-6-Mr1-Rz1-1	-1.737	0.056	152.6	-99.9		
Mr1-10-B-1	110.000	96.361	5.3	0	0	0	0	Mr1-6-B-1	1.308	1.697	11.7	61.1	-5.000	
								B-10-Mr1-Mr2-1	-1.308	-1.697	11.7	61.1		
Mr1-3-B-1	30.000	100.708	2.8	0	0	3.034	1.469	Mr1-6-B-1	-3.034	-1.469	64.4	90.0	3.000	
Mr2-10-B-1	110.000	96.365	5.3	0	0	0	0	B-10-Mr2-Rz2-1	-6.347	-0.058	34.6	100.0		
								Mr2-10-B-2	6.347	0.058	34.6	100.0		

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Mr2-10-B-2	110.000	96.365	5.3	0	0	0	0	B-10-Mr2/Nte-1	5.039	-1.628	28.8	-95.2	
								B-10-Mr1-Mr2-2	1.308	1.686	11.6	61.3	
								Mr2-10-B-1	-6.347	-0.058	34.6	100.0	
Msh-1-B-1	15.000	95.253	-5.8	0	0	18.147	8.789	Msh-10-B-1	-9.073	-4.394	407.4	90.0	
								Msh-10-B-1	-9.073	-4.394	407.4	90.0	
								C-Msh-1-B	0.000	0.000	0.0	0.0	
Msh-10-B-1	110.000	95.947	-3.1	0	0	0	0	Msh-1-B-1	9.101	4.954	56.7	87.8	-2.000
								Msh-1-B-1	9.101	4.954	56.7	87.8	-2.000
								B-10-Gso-Msh-2	-10.829	-6.559	69.3	85.5	
								B-10-Kba-Msh-2	-4.423	-4.073	32.9	73.6	
								B-10-Msh-Nga-1	-2.951	0.725	16.6	-97.1	
Mus-3-B	30.000	100.109	5.0	0	0	0	0	Mus-6-B	-0.997	-0.728	23.7	80.8	
								G-Mus-3-B	0.997	0.728	23.7	80.8	
Mus-6-B	6.600	101.317	5.7	1.000	0.750	0	0	Mus-3-B	1.000	0.750	107.9	80.0	
Nbg-3-B-1	30.000	99.511	-3.5	0	0	8.029	3.889	Nbg-10-B-1	-4.014	-1.944	86.3	90.0	
								Nbg-10-B-1	-4.014	-1.944	86.3	90.0	
Nbg-10-B-1	110.000	96.369	-2.6	0	0	0	0	Nbg-3-B-1	4.018	2.025	24.5	89.3	-4.000
								Nbg-3-B-1	4.018	2.025	24.5	89.3	-4.000
								B-10-Jb1-Nbg-2	-9.663	-6.673	64.0	82.3	
								B-10-MKi-Nbg-1	1.626	2.624	16.8	52.7	
Nbi-3-B-1	30.000	99.934	0.3	0	0	1.498	0.726	Nbi-10-B-1	-1.498	-0.726	32.1	90.0	
Nbi-10-B-1	110.000	97.622	1.0	0	0	0	0	Nbi-3-B-1	1.500	0.749	9.0	89.5	-3.000
								B-B-10-Mku-Nbi-1-2	14.642	-0.204	78.7	100.0	
								B-10-Nbi-Ny1-1	-16.142	-0.544	86.8	99.9	
Nbu-3-B-1	30.000	99.167	-2.8	0	0	3.349	1.622	Nbu-10-B-1	-3.349	-1.622	72.2	90.0	
Nbu-10-B-1	110.000	99.081	-1.9	0	0	0	0	Nbu-3-B-1	3.353	1.692	19.9	89.3	-1.000
								Nbu-20-B-1	-18.069	-9.080	107.1	89.4	
								B-10-Kre-Nbu-2	14.716	7.387	87.2	89.4	
Nbu-20-B-1	220.000	99.713	-0.2	0	0	0	0	Nbu-10-B-1	18.085	9.774	54.1	88.0	-1.000
								B-20-Nbu-Rsu-1	-18.085	-9.774	54.1	88.0	
* N-Cyi-04-1	0.400	100.000	10.3	0.150	0.054	0	0	Cyi-3-B-2	0.150	0.054	229.9	94.2	
Nde-3-B-1	30.000	99.294	-4.3	0	0	7.997	3.873	Nde-10-B-1	-3.999	2.993	96.8	-80.1	
								Nde-10-B-1	-3.999	2.993	96.8	-80.1	
								C-Nde-B	0.000	-9.859	191.1	0.0	
Nde-10-B-1	110.000	96.220	-3.4	0	0	0	0	Nde-3-B-1	4.004	-2.892	26.9	-81.1	-2.000
								Nde-3-B-1	4.004	-2.892	26.9	-81.1	-2.000
								B-10-Gha-Nde-2	-8.007	5.784	53.9	-81.1	
Nga-3-B-1	30.000	99.049	-3.6	0	0	3.342	1.619	Nga-10-B-1	-3.342	-1.619	72.2	90.0	
Nga-10-B-1	110.000	95.965	-2.7	0	0	0	0	Nga-3-B-1	3.346	1.689	20.5	89.3	-4.000

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Nga-Rln-1	-6.307	0.289	34.5	-99.9	
								B-10-Msh-Nga-2	2.961	-1.977	19.5	-83.2	
Nko-3-B-1	30.000	98.977	9.4	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.299	0.076	6.0	96.9	
								G-Nko-3-B	-0.299	-0.076	6.0	96.9	
Nko-3-B-2	30.000	98.977	9.4	0	0	0	0	N-Nko-04-B-2	-0.299	-0.076	6.0	96.9	
								G-Nko-3-B	0.299	0.076	6.0	96.9	
N-Mmb-.6-1	6.600	98.513	24.2	40.000	0.000	0	0	Mmb-3-B-2	40.000	0.000	3551.9	100.0	
N-Mmb-.6-2	6.600	98.513	24.2	40.000	0.000	0	0	Mmb-3-B-2	40.000	0.000	3551.9	100.0	
* N-Nko-04-B-2	0.400	100.000	10.7	0.300	0.084	0	0	Nko-3-B-2	0.300	0.084	449.6	96.3	
* N-Ny1-.6-2	6.600	100.000	7.3	14.000	0.555	0	0	Ny1-3-B-2	14.000	0.555	1225.6	99.9	
N-Rka-.6-2	6.600	100.284	6.6	3.350	0.000	0	0	Rka-3-B-2	3.350	0.000	292.2	100.0	
N-Rwa-.6-2	6.600	98.475	12.1	50.000	0.000	0	0	Rwa-3-B-2	50.000	0.000	4441.6	100.0	
N-Rz1-.06-B-1-1	0.600	100.307	6.5	0	0	0	0	Rz1-.6-B-1	1.750	0.000	1678.8	100.0	
								G-Rz1-.06-B	-1.750	0.000	1678.8	100.0	
N-Rz1-.06-B-1-2	0.600	100.307	6.5	1.750	0.000	0	0	G-Rz1-.06-B	1.750	0.000	1678.8	100.0	
N-Smb-1	11.000	100.201	0.2	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2	0.000	0.000	0.0	0.0	
								G-Smb-1-B	0.000	0.000	0.0	0.0	
Nta-3-B-1	30.000	100.476	1.5	0	0	3.530	1.710	Nta-.6-B-1	-3.530	-1.710	75.1	90.0	2.000
Nta-10-B-1	110.000	97.050	0.7	0	0	0	0	Nta-.6-B-1	-3.850	1.021	21.5	-96.7	-3.000
								Nta-.6-B-1	-3.850	1.021	21.5	-96.7	-3.000
								B-10-Mku-Nta-2	7.700	-2.042	43.1	-96.7	
Nta-.6-B-1	6.600	99.477	2.5	0	0	0	0	Nta-3-B-1	3.534	1.789	348.3	89.2	
								Nta-10-B-1	3.858	-0.894	348.3	-97.4	
								Nta-10-B-1	3.858	-0.894	348.3	-97.4	
								Nta-.6-B-3	-11.250	0.000	989.3	100.0	
Nta-.6-B-2	6.600	99.477	2.5	11.250	0.000	0	0	Nta-.6-B-3	11.250	0.000	989.3	100.0	
Nta-.6-B-3	6.600	99.477	2.5	0	0	0	0	Nta-.6-B-1	11.250	0.000	989.3	100.0	
								Nta-.6-B-2	-11.250	0.000	989.3	100.0	
NtB-3-B1	30.000	97.950	1.2	0	0	0	0	NtB-.6-B	-2.496	0.054	49.0	-100.0	
								G-NtB-3-B	2.496	-0.054	49.0	-100.0	
NtB-.6-B	6.600	98.091	2.4	2.500	0.000	0	0	NtB-3-B1	2.500	0.000	223.0	100.0	
Nte-3-B-1	30.000	99.642	4.4	0	0	1.490	0.722	Nte-10-B-1	-1.490	-0.722	32.0	90.0	
Nte-10-B-1	110.000	96.334	5.1	0	0	0	0	Nte-3-B-1	1.492	0.745	9.1	89.5	-4.000
								B-10-Kbo/Nte-2	2.353	-10.931	60.9	-21.0	
								B-10-Mr2/Nte-2	-5.032	1.020	28.0	-98.0	
								B-10-Bga-Nte-2	1.187	9.166	50.4	12.8	
Ny1-10-B-1	110.000	99.013	2.6	0	0	0	0	Ny1-3-B-1	-12.481	1.264	66.5	-99.5	-1.000
								B-10-Kli-Ny1-2	-3.887	-1.067	21.4	96.4	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Nbi-Ny1-2	16.367	-0.197	86.8	100.0	
Ny1-3-B-1	30.000	99.816	4.4	0	0	1.495	0.724	Ny1-10-B-1	12.489	-0.870	241.4	-99.8	
								G-Ny1-3-B	-13.984	0.146	269.6	100.0	
Ny1-3-B-2	30.000	99.816	4.4	0	0	0	0	N-Ny1-6-2	-13.984	0.146	269.6	100.0	
								G-Ny1-3-B	13.984	-0.146	269.6	100.0	
Ny2-10-B-1	110.000	96.198	-2.0	0	0	0	0	Ny2-3-B-1	3.458	1.747	21.1	89.2	-4.000
								B-10-Ny2-Rln-1	-3.458	-1.747	21.1	89.2	
Ny2-3-B-1	30.000	99.264	-3.0	0	0	3.454	1.673	Ny2-10-B-1	-3.454	-1.673	74.4	90.0	
								G-Ny2-3-B	0.000	0.000	0.0	0.0	
Ny2-3-B-2	30.000	99.264	-3.0	0	0	0	0	G-Ny2-3-B	0.000	0.000	0.0	0.0	
Rba-3-B-1	30.000	99.493	-0.5	0	0	1.486	0.720	Rba-20-B-1	-1.486	-0.720	31.9	90.0	
Rba-20-B-1	220.000	100.198	0.2	0	0	0	0	Rba-3-B-1	1.488	0.743	4.4	89.5	
								B-20-Bwi-Rba-2D	-12.506	2.575	33.4	-97.9	
								B-20-Rba-Sha-1	11.018	0.618	28.9	99.8	
								B-20-Kri-Rba-2	0.000	-2.841	7.4	0.0	
								B-20-Smb-Rba-2	0.000	-1.096	2.9	0.0	
Rka5-6-B	6.600	100.336	6.2	1.500	0.000	0	0	Rka5-3-B	1.500	0.000	130.8	100.0	
Rka5-3-B	30.000	100.109	5.0	0	0	0	0	Rka5-6-B	-1.496	0.032	28.8	-100.0	
								G-Rka5-3-B	1.496	-0.032	28.8	-100.0	
Rka-3-B-1	30.000	100.109	5.0	0	0	3.707	1.796	Rka-10-B-1	1.065	-0.596	23.5	-87.3	
								Rka-10-B-1	1.065	-0.596	23.5	-87.3	
								G-Rka-3-B	-3.343	0.093	64.3	-100.0	
								G-Rka5-3-B	-1.496	0.032	28.8	-100.0	
								G-Mus-3-B	-0.997	-0.728	23.7	80.8	
Rka-3-B-2	30.000	100.109	5.0	0	0	0	0	N-Rka-6-2	-3.343	0.093	64.3	-100.0	
								G-Rka-3-B	3.343	-0.093	64.3	-100.0	
Rka-10-B-1	110.000	99.468	4.6	0	0	0	0	Rka-3-B-1	-1.064	0.606	6.5	-86.9	-1.000
								Rka-3-B-1	-1.064	0.606	6.5	-86.9	-1.000
								B-10-Kli-Rka-2	21.838	-8.959	124.6	-92.5	
								B-10-Hye-Rka-2	-19.710	7.747	111.8	-93.1	
Rlm-3-B-1	30.000	99.241	-1.4	0	0	7.990	3.870	Rlm-10-B-1	-7.990	-3.870	172.2	90.0	
Rlm-10-B-1	110.000	99.277	-0.3	0	0	0	0	Rlm-3-B-1	7.994	4.070	47.4	89.1	-1.000
								Rlm-20-B-1	-7.994	-4.070	47.4	89.1	
Rlm-20-B-1	220.000	99.636	0.1	0	0	0	0	Rlm-10-B-1	7.996	4.138	23.7	88.8	
								B-20-Sha-Rlm-2D	41.149	-6.919	109.9	-98.6	
								B-20-Rlm-Rwa-1D	-67.248	25.261	189.2	-93.6	
								B-20-Rlm-Rsu-1D	18.103	-22.480	76.0	-62.7	
Rln-3-B-1	30.000	95.455	-2.9	0	0	3.220	1.560	Rln-10-B-1	-3.220	-1.560	72.1	90.0	
Rln-10-B-1	110.000	96.369	-2.0	0	0	0	0	Rln-3-B-1	3.224	1.630	19.7	89.2	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								10-Gfu/Jb1/Rln-B	-13.029	-1.645	71.5	99.2	
								B-10-Nga-Rln-2	6.344	-1.395	35.4	-97.7	
								B-10-Ny2-Rln-2	3.461	1.410	20.4	92.6	
Rsu-10-B-1	110.000	99.718	-0.2	0	0	0	0	Rsu-20-B-1	0.000	0.000	0.0	0.0	
								G-Rsu-10-B	0.000	0.000	0.0	0.0	
Rsu-10-B-2	110.000	99.718	-0.2	0	0	0	0	G-Rsu-10-B	0.000	0.000	0.0	0.0	
Rsu-20-B-1	220.000	99.718	-0.2	0	0	0	0	Rsu-10-B-1	0.000	0.000	0.0	0.0	
								B-20-Rlm-Rsu-2D	-18.085	-9.708	54.0	88.1	
								B-20-Nbu-Rsu-2	18.085	9.708	54.0	88.1	
Rwa-3-B-1	30.000	98.808	6.0	0	0	3.621	1.754	Rwa-20-B-1	46.260	-7.123	911.6	-98.8	
								G-Rwa-3-B	-49.881	5.370	977.1	-99.4	
Rwa-3-B-2	30.000	98.808	6.0	0	0	0	0	N-Rwa-6-2	-49.881	5.370	977.1	-99.4	
								G-Rwa-3-B	49.881	-5.370	977.1	-99.4	
Rwa-20-B-1	220.000	99.564	0.4	0	0	0	0	Rwa-3-B-1	-46.156	11.797	125.6	-96.9	-1.000
								B-20-Rlm-Rwa-2D	67.339	-31.891	196.4	-90.4	
								B-20-Kgo-Rwa-2	-21.184	20.094	77.0	-72.6	
Rwi-1-B-1	15.000	99.542	-3.9	0	0	3.372	1.633	Rwi-10-B-1	-3.372	-1.633	144.9	90.0	
								C-Rwi-B-1	0.000	0.000	0.0	0.0	
Rwi-10-B-1	110.000	96.441	-3.0	0	0	0	0	Rwi-1-B-1	3.376	1.704	20.6	89.3	-4.000
								B-10-Kba-Rwi-2	-3.376	-1.704	20.6	89.3	
Rz1-6-B-1	6.600	100.046	5.1	0	0	0	0	N-Rz1-.06-B-1-1	-1.745	0.043	152.6	-100.0	
								B-.6-Mr1-Rz1-2	1.745	-0.043	152.6	-100.0	
Rz2-6-B-1-1	6.600	96.671	8.3	0	0	0	0	Rz2-10-B-1	6.375	0.000	576.9	100.0	
								G-Rz2-.6-B	-6.375	0.000	576.9	100.0	
Rz2-6-B-1-2	6.600	96.671	8.3	6.375	0.000	0	0	G-Rz2-.6-B	6.375	0.000	576.9	100.0	
Rz2-10-B-1	110.000	96.538	5.6	0	0	0	0	Rz2-.6-B-1-1	-6.359	0.304	34.6	-99.9	
								B-10-Mr2-Rz2-2	6.359	-0.304	34.6	-99.9	
Sha-3-B-1	30.000	100.237	-3.0	0	0	8.135	3.940	Sha-10-B-1	-8.135	-3.940	173.5	90.0	
Sha-10-B-1	110.000	99.258	-1.9	0	0	0	0	Sha-3-B-1	8.139	4.143	48.3	89.1	-2.000
								Sha-20-B-1	-71.339	-50.382	461.8	81.7	
								B-10-Bre-Sha-2D	63.199	46.239	414.1	80.7	
Sha-20-B-1	220.000	99.452	-0.2	0	0	0	0	Sha-10-B-1	71.410	53.607	235.6	80.0	-2.000
								B-20-Sha-Rlm-1D	-41.081	-9.243	111.1	97.6	
								B-20-Rba-Sha-2	-10.989	-14.743	48.5	59.8	
								B-20-Mra-Sha-2D	-19.341	-29.621	93.3	54.7	
Smb-1-B-1	11.000	100.201	0.2	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	
Smb-1-B-2	11.000	100.201	0.2	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Smb-1-B-2N	11.000	100.201	0.2	0	0	0	0	G-Smb-1-B	0.000	0.000	0.0	0.0	
								Smb-1-B-4	0.000	0.000	0.0	0.0	
								Smb-1-B-6	0.000	0.000	0.0	0.0	
Smb-1-B-4	11.000	100.201	0.2	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-1-B-6	11.000	100.201	0.2	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-20-B-1	220.000	100.201	0.2	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2	0.000	0.000	0.0	0.0	
								B-20-Smb-Rba-1	0.000	0.000	0.0	0.0	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cyi/Nko-B	30.000	98.469	12.4	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.297	-0.002	5.8	100.0	
								3-Cyi-Ghi-B	0.891	-0.010	17.4	100.0	
								B-3-Nko-Cyi/Nko-1	-0.594	0.012	11.6	-100.0	
3-Cyi-Ghi-B	30.000	98.353	12.3	0	0	0	0	B-3-Cyi-Ghi-2	0.000	-0.077	1.5	0.0	
								3-Cyi/Nko-B	-0.890	0.003	17.4	100.0	
								3-Kro/Kbu-B	0.890	0.074	17.5	99.7	
3-Kro/Kbu-B	30.000	97.081	11.4	0	0	0	0	B-3-Kbu-Kro-2	0.000	-0.027	0.5	0.0	
								B-3-Kbu-Kro/Nko-2	0.880	0.166	17.8	98.3	
								3-Cyi-Ghi-B	-0.880	-0.139	17.7	98.8	
10-Bre/Gso/Msh-B	110.000	96.690	-2.9	0	0	0	0	B-10-Bre-Gso-1	-18.855	-7.411	110.0	93.1	
								B-10-Gso-Msh-2	10.798	3.487	61.6	95.2	
								Gso-10-B-1	8.057	3.924	48.6	89.9	
10-Gfu/Jb1/Rln-B	110.000	96.032	-1.4	0	0	0	0	10-Gfu/Mku/Rln-B	-24.278	8.076	139.8	-94.9	
								B-10-Jb1-Rln-2	9.535	-7.650	66.8	-78.0	
								Rln-10-B-1	14.743	-0.426	80.6	-100.0	
10-Gfu/Mku/Rln-B	110.000	96.346	-0.1	0	0	0	0	B-10-Gfu-Mku-2	-27.795	7.329	156.6	-96.7	
								10-Gfu/Jb1/Rln-B	24.552	-8.050	140.8	-95.0	
								Gfu-10-B-1	3.242	0.721	18.1	97.6	
10-Gko/Kgo/MKi-B	110.000	95.741	-2.4	0	0	0	0	B-10-Gko-MKi-1	4.657	-5.308	38.7	-66.0	
								B-10-Kgo-MKi-2	-49.055	-1.380	269.0	100.0	
								MKi-10-B-1	44.398	6.688	246.1	98.9	
10-Kba/Msh/Rwi-B	110.000	96.658	-3.1	0	0	0	0	B-10-Kba-Msh-2	3.194	3.689	26.5	65.5	
								B-10-Kba-Rwi-2	3.385	1.482	20.1	91.6	
								Kba-10-B-1	-6.579	-5.170	45.4	78.6	
10-Kbo/Kro/Mr2-B	110.000	97.026	7.1	0	0	0	0	10-Kbo/Nte-B	-10.237	11.744	84.3	-65.7	
								B-10-Kbo-Kro-1	8.797	-12.484	82.6	-57.6	
								Kbo-10-B-1	1.440	0.740	8.8	88.9	
10-Kbo/Nte-B	110.000	96.363	7.8	0	0	0	0	10-Kbo/Kro/Mr2-B	10.304	-12.180	86.9	-64.6	
								B-10-Kbo/Nte-2	-10.304	12.180	86.9	-64.6	
								B-10-Mr2/Nte-1	-12.992	2.285	71.9	-98.5	
10-Mr2/Nte-B	110.000	96.357	7.8	0	0	0	0	B-10-Mr2/Nte-2	12.992	-2.285	71.9	-98.5	
								B-20-Mra-Sha-2D	36.278	-3.529	95.7	-99.5	
								B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
B-1-Jb1-Jb3-1	15.000	99.589	-4.3	0	0	0	0	Jb1-1-B-1	0.000	0.000	0.0	0.0	
								B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
B-1-Jb1-Jb3-2	15.000	99.589	-4.3	0	0	0	0	B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-1	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-1-Kbu-KbW-1F_T	11.000	98.289	10.1	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.124	2.159	1293.4	-99.6	
								Kbu-1-B-1	24.124	-2.159	1293.4	-99.6	
B-1-Kbu-KbW-2F_T	11.000	101.450	15.2	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1293.4	100.0	
								KbW-1-B-2	-25.000	0.000	1293.4	100.0	
B-3-Cyi-Cyi/Nko-1	30.000	98.526	12.4	0	0	0	0	3-Cyi/Nko-B	0.297	-0.011	5.8	-99.9	
								Cyi-3-B-1	-0.297	0.011	5.8	-99.9	
B-3-Cyi-Ghi-2	30.000	98.422	12.2	0	0	0	0	3-Cyi-Ghi-B	0.000	0.000	0.0	0.0	
B-3-Kbu-Kro/Nko-2	30.000	96.849	11.2	0	0	0	0	3-Kro/Kbu-B	-0.879	-0.177	17.8	98.0	
								Kbu-3-B-1	0.879	0.177	17.8	98.0	
B-3-Kbu-Kro-2	30.000	97.090	11.4	0	0	0	0	3-Kro/Kbu-B	0.000	0.000	0.0	0.0	
B-3-Nko-Cyi/Nko-1	30.000	98.619	12.5	0	0	0	0	3-Cyi/Nko-B	0.595	-0.029	11.6	-99.9	
								Nko-3-B-1	-0.595	0.029	11.6	-99.9	
B-10-Bga-Gsh-1	110.000	95.402	8.0	0	0	0	0	B-10-Bga-Gsh-2	-14.910	0.582	82.1	-99.9	
								Bga-10-B-1	14.910	-0.582	82.1	-99.9	
B-10-Bga-Gsh-2	110.000	95.702	8.4	0	0	0	0	B-10-Bga-Gsh-1	14.962	-0.768	82.2	-99.9	
								Gsh-10-B	-14.962	0.768	82.2	-99.9	
B-10-Bga-Nte-1	110.000	95.402	8.0	0	0	0	0	B-10-Bga-Nte-2	-1.147	-9.693	53.7	11.8	
								Bga-10-B-1	1.147	9.693	53.7	11.8	
B-10-Bga-Nte-2	110.000	96.349	7.8	0	0	0	0	B-10-Bga-Nte-1	1.191	9.168	50.4	12.9	
								Nte-10-B-1	-1.191	-9.168	50.4	12.9	
B-10-Bre-Gso-1	110.000	97.798	-2.3	0	0	0	0	10-Bre/Gso/Msh-B	18.993	7.241	109.1	93.4	
								Bre-10-B-1	-18.993	-7.241	109.1	93.4	
B-10-Bre-Jb1-1	110.000	97.798	-2.3	0	0	0	0	B-10-Bre-Jb1-2	22.827	36.800	232.4	52.7	
								Bre-10-B-1	-22.827	-36.800	232.4	52.7	
B-10-Bre-Jb1-2	110.000	96.345	-2.3	0	0	0	0	B-10-Bre-Jb1-1	-22.543	-36.423	233.4	52.6	
								Jb1-10-B-1	22.543	36.423	233.4	52.6	
B-10-Bre-Sha-1D	110.000	97.798	-2.3	0	0	0	0	B-10-Bre-Sha-2D	-55.589	-51.319	406.0	73.5	
								Bre-10-B-1	55.589	51.319	406.0	73.5	
B-10-Bre-Sha-2D	110.000	99.052	-2.0	0	0	0	0	B-10-Bre-Sha-1D	56.081	51.664	404.0	73.5	
								Sha-10-B-1	-56.081	-51.664	404.0	73.5	
B-10-Bta-Hye-1	110.000	100.750	7.5	0	0	0	0	B-10-Bta-Hye-2	20.675	-2.152	108.3	-99.5	
								Bta-10-B-1	-20.675	2.152	108.3	-99.5	
B-10-Bta-Hye-2	110.000	100.130	6.6	0	0	0	0	B-10-Bta-Hye-1	-20.514	1.904	108.0	-99.6	
								Hye-10-B-1	20.514	-1.904	108.0	-99.6	
B-10-Bta-Kgo-1	110.000	100.750	7.5	0	0	0	0	B-10-Bta-Kgo-2	51.374	-11.312	274.1	-97.7	
								Bta-10-B-1	-51.374	11.312	274.1	-97.7	
B-10-Bta-Kgo-2	110.000	98.862	2.2	0	0	0	0	B-10-Bta-Kgo-1	-49.226	14.528	272.5	-95.9	
								Kgo-10-B-1	49.226	-14.528	272.5	-95.9	
B-10-Gfu-Mku-2	110.000	96.816	1.3	0	0	0	0	10-Gfu/Mku/Rln-B	28.106	-7.181	157.3	-96.9	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-10-B-1	-28.106	7.181	157.3	-96.9	
B-10-Gha-MKi-1	110.000	95.396	-2.7	0	0	0	0	B-10-Gha-MKi-2	-16.041	-2.799	89.6	98.5	
								Gha-10-B-1	16.041	2.799	89.6	98.5	
B-10-Gha-MKi-2	110.000	95.741	-2.4	0	0	0	0	B-10-Gha-MKi-1	16.085	2.680	89.4	98.6	
								MKi-10-B-1	-16.085	-2.680	89.4	98.6	
B-10-Gha-Nde-1	110.000	95.396	-2.7	0	0	0	0	B-10-Gha-Nde-2	8.027	-1.281	44.7	-98.8	
								Gha-10-B-1	-8.027	1.281	44.7	-98.8	
B-10-Gha-Nde-2	110.000	95.221	-3.0	0	0	0	0	B-10-Gha-Nde-1	-8.006	0.925	44.4	-99.3	
								Nde-10-B-1	8.006	-0.925	44.4	-99.3	
B-10-Gko-Jb1-1	110.000	95.814	-2.4	0	0	0	0	B-10-Gko-Jb1-2	-9.600	-12.567	86.6	60.7	
								Gko-10-B-1	9.600	12.567	86.6	60.7	
B-10-Gko-Jb1-2	110.000	96.345	-2.3	0	0	0	0	B-10-Gko-Jb1-1	9.629	12.383	85.5	61.4	
								Jb1-10-B-1	-9.629	-12.383	85.5	61.4	
B-10-Gko-MKi-1	110.000	95.814	-2.4	0	0	0	0	10-Gko/Kgo/MKi-B	-4.654	5.158	38.1	-67.0	
								Gko-10-B-1	4.654	-5.158	38.1	-67.0	
B-10-Gso-Msh-2	110.000	96.088	-3.2	0	0	0	0	10-Bre/Gso/Msh-B	-10.754	-3.842	62.4	94.2	
								Msh-10-B-1	10.754	3.842	62.4	94.2	
B-10-Gso-Nde-1	110.000	96.690	-2.9	0	0	0	0	B-10-Gso-Nde-2	0.000	-0.177	1.0	0.0	
								Gso-10-B-1	0.000	0.177	1.0	0.0	
B-10-Gso-Nde-2	110.000	96.692	-2.9	0	0	0	0	B-10-Gso-Nde-1	0.000	0.000	0.0	0.0	
B-10-Hye-Rka-1	110.000	100.130	6.6	0	0	0	0	B-10-Hye-Rka-2	16.788	-3.775	90.2	-97.6	
								Hye-10-B-1	-16.788	3.775	90.2	-97.6	
B-10-Hye-Rka-2	110.000	99.734	5.7	0	0	0	0	B-10-Hye-Rka-1	-16.664	3.390	89.5	-98.0	
								Rka-10-B-1	16.664	-3.390	89.5	-98.0	
B-10-Jb1-Jb2-1	110.000	96.345	-2.3	0	0	0	0	B-10-Jb1-Jb2-2	0.000	-0.036	0.2	0.0	
								Jb1-10-B-1	0.000	0.036	0.2	0.0	
B-10-Jb1-Jb2-2	110.000	96.345	-2.3	0	0	0	0	B-10-Jb1-Jb2-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-1	0.000	0.000	0.0	0.0	
B-10-Jb1-Nbg-1	110.000	96.345	-2.3	0	0	0	0	B-10-Jb1-Nbg-2	8.444	9.667	69.9	65.8	
								Jb1-10-B-1	-8.444	-9.667	69.9	65.8	
B-10-Jb1-Nbg-2	110.000	95.902	-2.4	0	0	0	0	B-10-Jb1-Nbg-1	-8.417	-9.821	70.8	65.1	
								Nbg-10-B-1	8.417	9.821	70.8	65.1	
B-10-Jb1-Rln-2	110.000	96.345	-2.3	0	0	0	0	10-Gfu/Jb1/Rln-B	-9.451	7.071	64.3	-80.1	
								Jb1-10-B-1	9.451	-7.071	64.3	-80.1	
B-10-Kba-Kre-1	110.000	96.658	-3.1	0	0	0	0	B-10-Kba-Kre-2	-9.931	-6.907	65.7	82.1	
								Kba-10-B-1	9.931	6.907	65.7	82.1	
B-10-Kba-Kre-2	110.000	98.139	-2.6	0	0	0	0	B-10-Kba-Kre-1	10.024	6.214	63.1	85.0	
								Kre-10-B-1	-10.024	-6.214	63.1	85.0	
B-10-Kba-Msh-2	110.000	96.088	-3.2	0	0	0	0	10-Kba/Msh/Rwi-B	-3.181	-4.336	29.4	59.1	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Msh-10-B-1	3.181	4.336	29.4	59.1	
B-10-Kba-Rwi-2	110.000	96.545	-3.2	0	0	0	0	10-Kba/Msh/Rwi-B	-3.382	-1.707	20.6	89.3	
								Rwi-10-B-1	3.382	1.707	20.6	89.3	
B-10-Kbo/Nte-2	110.000	96.349	7.8	0	0	0	0	10-Kbo/Nte-B	10.307	-12.188	87.0	-64.6	
								Nte-10-B-1	-10.307	12.188	87.0	-64.6	
B-10-Kbo-Kro-1	110.000	98.419	6.0	0	0	0	0	10-Kbo/Kro/Mr2-B	-8.681	11.537	77.0	-60.1	
								Kro-10-B-1	8.681	-11.537	77.0	-60.1	
B-10-Kbu-Kro-1	110.000	98.638	6.6	0	0	0	0	B-10-Kbu-Kro-2	24.924	-3.515	133.9	-99.0	
								Kbu-10-B-1	-24.924	3.515	133.9	-99.0	
B-10-Kbu-Kro-2	110.000	98.419	6.0	0	0	0	0	B-10-Kbu-Kro-1	-24.828	3.414	133.7	-99.1	
								Kro-10-B-1	24.828	-3.414	133.7	-99.1	
B-10-Kgo-Kli-1	110.000	98.862	2.2	0	0	0	0	B-10-Kgo-Kli-2	-23.612	7.201	131.1	-95.7	
								Kgo-10-B-1	23.612	-7.201	131.1	-95.7	
B-10-Kgo-Kli-2	110.000	98.929	3.9	0	0	0	0	B-10-Kgo-Kli-1	23.835	-7.468	132.5	-95.4	
								Kli-10-B-1	-23.835	7.468	132.5	-95.4	
B-10-Kgo-MKi-2	110.000	98.862	2.2	0	0	0	0	10-Gko/Kgo/MKi-B	50.429	4.139	268.6	99.7	
								Kgo-10-B-1	-50.429	-4.139	268.6	99.7	
B-10-Kli-Kro-1	110.000	98.419	6.0	0	0	0	0	B-10-Kli-Kro-2	32.032	-15.710	190.3	-89.8	
								Kro-10-B-1	-32.032	15.710	190.3	-89.8	
B-10-Kli-Kro-2	110.000	98.929	3.9	0	0	0	0	B-10-Kli-Kro-1	-31.611	16.115	188.2	-89.1	
								Kli-10-B-1	31.611	-16.115	188.2	-89.1	
B-10-Kli-Ny1-1	110.000	98.929	3.9	0	0	0	0	B-10-Kli-Ny1-2	-6.833	1.765	37.4	-96.8	
								Kli-10-B-1	6.833	-1.765	37.4	-96.8	
B-10-Kli-Ny1-2	110.000	99.051	4.3	0	0	0	0	B-10-Kli-Ny1-1	6.858	-2.415	38.5	-94.3	
								Ny1-10-B-1	-6.858	2.415	38.5	-94.3	
B-10-Kli-Rka-1	110.000	98.929	3.9	0	0	0	0	B-10-Kli-Rka-2	-24.290	4.953	131.5	-98.0	
								Kli-10-B-1	24.290	-4.953	131.5	-98.0	
B-10-Kli-Rka-2	110.000	99.734	5.7	0	0	0	0	B-10-Kli-Rka-1	24.646	-5.063	132.4	-98.0	
								Rka-10-B-1	-24.646	5.063	132.4	-98.0	
B-10-Kre-Nbu-1	110.000	98.139	-2.6	0	0	0	0	B-10-Kre-Nbu-2	-13.380	-7.908	83.1	86.1	
								Kre-10-B-1	13.380	7.908	83.1	86.1	
B-10-Kre-Nbu-2	110.000	99.111	-2.2	0	0	0	0	B-10-Kre-Nbu-1	13.461	7.593	81.8	87.1	
								Nbu-10-B-1	-13.461	-7.593	81.8	87.1	
B-10-MKi-Nbg-1	110.000	95.902	-2.4	0	0	0	0	B-10-MKi-Nbg-2	0.450	5.807	31.9	7.7	
								Nbg-10-B-1	-0.450	-5.807	31.9	7.7	
B-10-MKi-Nbg-2	110.000	95.741	-2.4	0	0	0	0	B-10-MKi-Nbg-1	-0.445	-5.968	32.8	7.4	
								MKi-10-B-1	0.445	5.968	32.8	7.4	
B-10-Mku-Nbi-1	110.000	96.816	1.3	0	0	0	0	B-B-10-Mku-Nbi-1-2	-17.612	0.790	95.6	-99.9	
								Mku-10-B-1	17.612	-0.790	95.6	-99.9	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Mku-Nta-1	110.000	96.816	1.3	0	0	0	0	B-10-Mku-Nta-2	-7.686	1.233	42.2	-98.7	
								Mku-10-B-1	7.686	-1.233	42.2	-98.7	
B-10-Mku-Nta-2	110.000	96.917	1.8	0	0	0	0	B-10-Mku-Nta-1	7.709	-2.039	43.2	-96.7	
								Nta-10-B-1	-7.709	2.039	43.2	-96.7	
B-10-Mr1-Mr2-1	110.000	96.495	8.4	0	0	0	0	B-10-Mr1-Mr2-2	0.400	-1.853	10.3	-21.1	
								Mr1-10-B-1	-0.400	1.853	10.3	-21.1	
B-10-Mr1-Mr2-2	110.000	96.498	8.4	0	0	0	0	B-10-Mr1-Mr2-1	-0.400	1.843	10.3	-21.2	
								Mr2-10-B-2	0.400	-1.843	10.3	-21.2	
B-10-Mr2/Nte-1	110.000	96.498	8.4	0	0	0	0	10-Mr2/Nte-B	13.038	-2.763	72.5	-97.8	
								Mr2-10-B-2	-13.038	2.763	72.5	-97.8	
B-10-Mr2/Nte-2	110.000	96.349	7.8	0	0	0	0	10-Mr2/Nte-B	-12.990	2.275	71.8	-98.5	
								Nte-10-B-1	12.990	-2.275	71.8	-98.5	
B-10-Mr2-Rz2-1	110.000	96.498	8.4	0	0	0	0	B-10-Mr2-Rz2-2	-12.639	0.921	68.9	-99.7	
								Mr2-10-B-1	12.639	-0.921	68.9	-99.7	
B-10-Mr2-Rz2-2	110.000	96.795	8.9	0	0	0	0	B-10-Mr2-Rz2-1	12.686	-1.212	69.1	-99.5	
								Rz2-10-B-1	-12.686	1.212	69.1	-99.5	
B-10-Msh-Nga-1	110.000	96.088	-3.2	0	0	0	0	B-10-Msh-Nga-2	-4.660	2.889	29.9	-85.0	
								Msh-10-B-1	4.660	-2.889	29.9	-85.0	
B-10-Msh-Nga-2	110.000	95.850	-2.5	0	0	0	0	B-10-Msh-Nga-1	4.694	-4.094	34.1	-75.4	
								Nga-10-B-1	-4.694	4.094	34.1	-75.4	
B-10-Nbi-Ny1-1	110.000	97.541	2.3	0	0	0	0	B-10-Nbi-Ny1-2	-19.231	0.390	103.5	-100.0	
								Nbi-10-B-1	19.231	-0.390	103.5	-100.0	
B-10-Nbi-Ny1-2	110.000	99.051	4.3	0	0	0	0	B-10-Nbi-Ny1-1	19.551	-0.934	103.7	-99.9	
								Ny1-10-B-1	-19.551	0.934	103.7	-99.9	
B-10-Nga-Rln-1	110.000	95.850	-2.5	0	0	0	0	B-10-Nga-Rln-2	-8.032	2.409	45.9	-95.8	
								Nga-10-B-1	8.032	-2.409	45.9	-95.8	
B-10-Nga-Rln-2	110.000	96.032	-1.4	0	0	0	0	B-10-Nga-Rln-1	8.100	-3.447	48.1	-92.0	
								Rln-10-B-1	-8.100	3.447	48.1	-92.0	
B-10-Ny2-Rln-1	110.000	95.861	-1.5	0	0	0	0	B-10-Ny2-Rln-2	-3.436	-1.736	21.1	89.2	
								Ny2-10-B-1	3.436	1.736	21.1	89.2	
B-10-Ny2-Rln-2	110.000	96.032	-1.4	0	0	0	0	B-10-Ny2-Rln-1	3.440	1.402	20.3	92.6	
								Rln-10-B-1	-3.440	-1.402	20.3	92.6	
B-20-Bta-Mmb-1D	220.000	99.965	12.9	0	0	0	0	B-20-Bta-Mmb-2D	-75.908	4.373	199.6	-99.8	
								Bta-20-B-1	75.908	-4.373	199.6	-99.8	
B-20-Bta-Mmb-2D	220.000	100.037	13.2	0	0	0	0	B-20-Bta-Mmb-1D	75.996	-10.291	201.2	-99.1	
								Mmb-20-B-1	-75.996	10.291	201.2	-99.1	
B-20-Bwi-KB2-1	220.000	100.204	0.0	0	0	0	0	B-20-Bwi-KB2-2	0.000	-0.406	1.1	0.0	
								Bwi-20-B-1	0.000	0.406	1.1	0.0	
B-20-Bwi-KB2-2	220.000	100.205	0.0	0	0	0	0	B-20-Bwi-KB2-1	0.000	0.000	0.0	0.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Kb2-20-B-1	0.000	0.000	0.0	0.0	
B-20-Bwi-KbW-1	220.000	100.204	0.0	0	0	0	0	B-20-Bwi-KbW-2	0.000	-0.501	1.3	0.0	
								Bwi-20-B-1	0.000	0.501	1.3	0.0	
B-20-Bwi-KbW-2	220.000	100.205	0.0	0	0	0	0	B-20-Bwi-KbW-1	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
B-20-Bwi-Rba-1D	220.000	100.204	0.0	0	0	0	0	B-20-Bwi-Rba-2D	11.886	-17.990	56.5	-55.1	
								Bwi-20-B-1	-11.886	17.990	56.5	-55.1	
B-20-Bwi-Rba-2D	220.000	100.305	-0.2	0	0	0	0	B-20-Bwi-Rba-1D	-11.876	1.146	31.2	-99.5	
								Rba-20-B-1	11.876	-1.146	31.2	-99.5	
B-20-Kgo-Kli-1	220.000	99.507	0.1	0	0	0	0	B-20-Kgo-Kli-2	-23.913	-7.453	66.1	95.5	
								Kgo-20-B-1	23.913	7.453	66.1	95.5	
B-20-Kgo-Kli-2	220.000	99.670	0.3	0	0	0	0	B-20-Kgo-Kli-1	23.932	4.776	64.3	98.1	
								Kli-20-B-1	-23.932	-4.776	64.3	98.1	
B-20-Kgo-Rwa-1	220.000	99.507	0.1	0	0	0	0	B-20-Kgo-Rwa-2	46.334	-23.288	136.8	-89.3	
								Kgo-20-B-1	-46.334	23.288	136.8	-89.3	
B-20-Kgo-Rwa-2	220.000	99.627	-0.2	0	0	0	0	B-20-Kgo-Rwa-1	-46.278	21.689	134.6	-90.5	
								Rwa-20-B-1	46.278	-21.689	134.6	-90.5	
B-20-Kli-Bwi-1	220.000	100.204	0.0	0	0	0	0	B-20-Kli-Bwi-2	-13.374	18.153	59.1	-59.3	
								Bwi-20-B-1	13.374	-18.153	59.1	-59.3	
B-20-Kli-Bwi-2	220.000	99.670	0.3	0	0	0	0	B-20-Kli-Bwi-1	13.414	-23.729	71.8	-49.2	
								Kli-20-B-1	-13.414	23.729	71.8	-49.2	
B-20-Kri-Rba-1	220.000	100.325	-0.2	0	0	0	0	B-20-Kri-Rba-2	0.000	0.000	0.0	0.0	
								Kri-20-B-1	0.000	0.000	0.0	0.0	
B-20-Kri-Rba-2	220.000	100.305	-0.2	0	0	0	0	B-20-Kri-Rba-1	0.000	-2.847	7.4	0.0	
								Rba-20-B-1	0.000	2.847	7.4	0.0	
B-20-Mra-Sha-2D	220.000	99.463	-0.5	0	0	0	0	20-Mra-B	-36.179	-24.707	115.6	82.6	
								Sha-20-B-1	36.179	24.707	115.6	82.6	
B-20-Nbu-Rsu-1	220.000	99.766	-0.7	0	0	0	0	B-20-Nbu-Rsu-2	-16.829	-9.913	51.4	86.2	
								Nbu-20-B-1	16.829	9.913	51.4	86.2	
B-20-Nbu-Rsu-2	220.000	99.770	-0.7	0	0	0	0	B-20-Nbu-Rsu-1	16.830	9.847	51.3	86.3	
								Rsu-20-B-1	-16.830	-9.847	51.3	86.3	
B-20-Rba-Sha-1	220.000	100.305	-0.2	0	0	0	0	B-20-Rba-Sha-2	10.385	2.054	27.7	98.1	
								Rba-20-B-1	-10.385	-2.054	27.7	98.1	
B-20-Rba-Sha-2	220.000	99.463	-0.5	0	0	0	0	B-20-Rba-Sha-1	-10.354	-16.187	50.7	53.9	
								Sha-20-B-1	10.354	16.187	50.7	53.9	
B-20-Rlm-Rsu-1D	220.000	99.685	-0.4	0	0	0	0	B-20-Rlm-Rsu-2D	16.845	-22.386	73.8	-60.1	
								Rlm-20-B-1	-16.845	22.386	73.8	-60.1	
B-20-Rlm-Rsu-2D	220.000	99.770	-0.7	0	0	0	0	B-20-Rlm-Rsu-1D	-16.830	-9.847	51.3	86.3	
								Rsu-20-B-1	16.830	9.847	51.3	86.3	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-20-Rlm-Rwa-1D	220.000	99.685	-0.4	0	0	0	0	B-20-Rlm-Rwa-2D	-42.590	16.648	120.4	-93.1	
								Rlm-20-B-1	42.590	-16.648	120.4	-93.1	
B-20-Rlm-Rwa-2D	220.000	99.627	-0.2	0	0	0	0	B-20-Rlm-Rwa-1D	42.628	-23.491	128.2	-87.6	
								Rwa-20-B-1	-42.628	23.491	128.2	-87.6	
B-20-Sha-Rlm-1D	220.000	99.463	-0.5	0	0	0	0	B-20-Sha-Rlm-2D	-17.725	-17.968	66.6	70.2	
								Sha-20-B-1	17.725	17.968	66.6	70.2	
B-20-Sha-Rlm-2D	220.000	99.685	-0.4	0	0	0	0	B-20-Sha-Rlm-1D	17.742	1.597	46.9	99.6	
								Rlm-20-B-1	-17.742	-1.597	46.9	99.6	
B-20-Smb-Rba-1	220.000	100.308	-0.2	0	0	0	0	B-20-Smb-Rba-2	0.000	0.000	0.0	0.0	
								Smb-20-B-1	0.000	0.000	0.0	0.0	
B-20-Smb-Rba-2	220.000	100.305	-0.2	0	0	0	0	B-20-Smb-Rba-1	0.000	-1.098	2.9	0.0	
								Rba-20-B-1	0.000	1.098	2.9	0.0	
B-6-Mr1-Rz1-1	6.600	99.689	8.7	0	0	0	0	B-6-Mr1-Rz1-2	-3.448	0.221	303.2	-99.8	
								Mr1-6-B-1	3.448	-0.221	303.2	-99.8	
B-6-Mr1-Rz1-2	6.600	100.528	9.6	0	0	0	0	B-6-Mr1-Rz1-1	3.480	-0.171	303.2	-99.9	
								Rz1-6-B-1	-3.480	0.171	303.2	-99.9	
B-B-10-Mku-Nbi-1-2	110.000	97.541	2.3	0	0	0	0	B-10-Mku-Nbi-1	17.760	-1.124	95.8	-99.8	
								Nbi-10-B-1	-17.760	1.124	95.8	-99.8	
Bga-3-B-1	30.000	98.948	4.3	0	0	16.027	7.762	Bga-10-B-1	-16.027	-7.762	346.4	90.0	
Bga-10-B-1	110.000	95.402	8.0	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	16.057	9.111	101.6	87.0	-7.000
								B-10-Bga-Nte-1	-1.147	-9.693	53.7	11.8	
								B-10-Bga-Gsb-1	-14.910	0.582	82.1	-99.9	
Bga-6-B-1	6.600	95.402	8.0	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
Bre-1-B-1	15.000	98.836	-4.3	0	0	13.741	6.655	Bre-10-B-1	-6.870	-3.327	297.3	90.0	
								Bre-10-B-1	-6.870	-3.327	297.3	90.0	
Bre-10-B-1	110.000	97.798	-2.3	0	0	0	0	Bre-1-B-1	6.885	3.639	41.8	88.4	-3.000
								Bre-1-B-1	6.885	3.639	41.8	88.4	-3.000
								B-10-Bre-Jb1-1	22.827	36.800	232.4	52.7	
								B-10-Bre-Sha-1D	-55.589	-51.319	406.0	73.5	
								B-10-Bre-Gso-1	18.993	7.241	109.1	93.4	
Bta-3-B-1	30.000	99.958	6.7	0	0	3.697	1.791	Bta-10-B-1	-3.697	-1.791	79.1	90.0	
Bta-10-B-1	110.000	100.750	7.5	0	0	0	0	Bta-3-B-1	3.699	1.861	21.6	89.3	
								Bta-20-B-1	-75.748	11.603	399.2	-98.8	
								B-10-Bta-Kgo-1	51.374	-11.312	274.1	-97.7	
								B-10-Bta-Hye-1	20.675	-2.152	108.3	-99.5	
Bta-20-B-1	220.000	99.965	12.9	0	0	0	0	Bta-10-B-1	75.908	-4.373	199.6	-99.8	
								B-20-Bta-Mmb-1D	-75.908	4.373	199.6	-99.8	
Bwi-3-B-1	30.000	99.499	-0.7	0	0	1.487	0.720	Bwi-20-B-1	-1.487	-0.720	31.9	90.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Bwi-10-B-1	110.000	100.204	0.0	0	0	0	0	Bwi-20-B-1	0.000	0.000	0.0	0.0	
Bwi-20-B-1	220.000	100.204	0.0	0	0	0	0	Bwi-10-B-1	0.000	0.000	0.0	0.0	
								Bwi-3-B-1	1.488	0.743	4.4	89.5	
								B-20-Bwi-Rba-1D	11.886	-17.990	56.5	-55.1	
								B-20-Kli-Bwi-1	-13.374	18.153	59.1	-59.3	
								B-20-Bwi-KB2-1	0.000	-0.406	1.1	0.0	
								B-20-Bwi-KbW-1	0.000	-0.501	1.3	0.0	
C-Gfu-B-3	30.000	95.688	-1.2	0	0	0.000	-0.916	Gfu-3-B-1	0.000	0.916	18.4	0.0	
C-MKi-3-B	30.000	95.259	-6.8	0	0	0.000	-6.352	MKi-3-B-1	0.000	6.352	128.3	0.0	
C-Msh-1-B	15.000	96.578	-6.0	0	0	0.000	-4.664	Msh-1-B-1	0.000	4.664	185.9	0.0	
C-Nde-B	30.000	99.307	-3.9	0	0	0.000	-4.931	Nde-3-B-1	0.000	4.931	95.6	0.0	
C-Rwi-B-1	15.000	99.650	-4.1	0	0	0	0	Rwi-1-B-1	0.000	0.000	0.0	0.0	
Cyi-3-B-1	30.000	98.526	12.4	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.297	-0.011	5.8	-99.9	
								G-Cyi-3-B	-0.297	0.011	5.8	-99.9	
Cyi-3-B-2	30.000	98.526	12.4	0	0	0	0	N-Cyi-04-1	-0.297	0.011	5.8	-99.9	
								G-Cyi-3-B	0.297	-0.011	5.8	-99.9	
G-Cyi-3-B	30.000	98.526	12.4	0	0	0	0	Cyi-3-B-1	0.297	-0.011	5.8	-99.9	
								Cyi-3-B-2	-0.297	0.011	5.8	-99.9	
Gfu-3-B-1	30.000	95.688	-1.2	0	0	3.234	1.566	Gfu-10-B-1	-1.617	-0.325	33.2	98.0	
								Gfu-10-B-1	-1.617	-0.325	33.2	98.0	
								C-Gfu-B-3	0.000	-0.916	18.4	0.0	
Gfu-10-B-1	110.000	96.346	-0.1	0	0	0	0	Gfu-3-B-1	1.621	0.361	9.0	97.6	
								Gfu-3-B-1	1.621	0.361	9.0	97.6	
								10-Gfu/Mku/Rln-B	-3.242	-0.721	18.1	97.6	
G-Gko-1-B	15.000	99.246	-4.1	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-1-B-2	0.000	0.000	0.0	0.0	
G-Gko-3-B	15.000	99.246	-4.1	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-3-B	0.000	0.000	0.0	0.0	
G-Gko-10-B	110.000	95.814	-2.4	0	0	0	0	Gko-10-B-1	0.000	0.000	0.0	0.0	
								Gko-10-B-2	0.000	0.000	0.0	0.0	
G-Gsh-1-B	11.000	98.785	11.3	0	0	0	0	Gsh-1-B-1	15.000	0.000	797.0	100.0	
								Gsh-1-B-2	-15.000	0.000	797.0	100.0	
Gha-3-B-1	30.000	99.377	-3.8	0	0	8.009	3.879	Gha-10-B-1	-8.009	-3.879	172.3	90.0	
Gha-10-B-1	110.000	95.396	-2.7	0	0	0	0	Gha-3-B-1	8.014	4.080	49.5	89.1	-5.000
								B-10-Gha-MKi-1	-16.041	-2.799	89.6	98.5	
								B-10-Gha-Nde-1	8.027	-1.281	44.7	-98.8	
G-Jb2-10-B	110.000	96.345	-2.3	0	0	0	0	Jb2-10-B-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
G-Jb3-1-B	15.000	99.589	-4.3	0	0	0	0	Jb3-1-B-1	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Jb3-1-B-2	0.000	0.000	0.0	0.0	
G-KbW-1-B-1	11.000	101.450	15.2	0	0	0	0	KbW-1-B-3	-17.000	0.000	879.5	100.0	
								KbW-1-B-2	17.000	0.000	879.5	100.0	
G-KbW-1-B-2	11.000	101.450	15.2	0	0	0	0	KbW-1-B-1	8.000	0.000	413.9	100.0	
								KbW-1-B-4	-8.000	0.000	413.9	100.0	
G-KbW-1-B-3	220.000	100.205	0.0	0	0	0	0	B-20-Bwi-KbW-2	0.000	0.000	0.0	0.0	
								KbW-20-B-2	0.000	0.000	0.0	0.0	
Gko-1-B-1	15.000	99.246	-4.1	0	0	14.227	6.890	Gko-10-B-1	-4.742	-2.297	204.4	90.0	
								Gko-10-B-1	-4.742	-2.297	204.4	90.0	
								Gko-10-B-1	-4.742	-2.297	204.4	90.0	
								G-Gko-1-B	0.000	0.000	0.0	0.0	
								G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-1-B-2	15.000	99.246	-4.1	0	0	0	0	G-Gko-1-B	0.000	0.000	0.0	0.0	
Gko-3-B	15.000	99.246	-4.1	0	0	0	0	G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-10-B-1	110.000	95.814	-2.4	0	0	0	0	Gko-1-B-1	4.751	2.469	29.3	88.7	-5.000
								Gko-1-B-1	4.751	2.469	29.3	88.7	-5.000
								Gko-1-B-1	4.751	2.469	29.3	88.7	-5.000
								B-10-Gko-Jb1-1	-9.600	-12.567	86.6	60.7	
								B-10-Gko-MKi-1	-4.654	5.158	38.1	-67.0	
								G-Gko-10-B	0.000	0.000	0.0	0.0	
Gko-10-B-2	110.000	95.814	-2.4	0	0	0	0	G-Gko-10-B	0.000	0.000	0.0	0.0	
G-Kse-1-B	110.000	96.690	-2.9	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Mku-10-B	110.000	96.816	1.3	0	0	0	0	Mku-10-B-1	0.000	0.000	0.0	0.0	
								Mku-10-B-2	0.000	0.000	0.0	0.0	
G-Mku-6-B	6.600	99.138	2.7	0	0	0	0	Mku-6-B-4	12.000	0.000	1058.9	100.0	
								Mku-6-B-2	-12.000	0.000	1058.9	100.0	
G-Mmb-3-B	30.000	99.420	18.7	0	0	0	0	Mmb-3-B-1	79.821	-1.173	1545.3	-100.0	
								Mmb-3-B-2	-79.821	1.173	1545.3	-100.0	
G-Mus-3-B	30.000	99.345	7.2	0	0	0	0	Mus-3-B	-1.993	-0.196	38.8	99.5	
								Rka-3-B-1	1.993	0.196	38.8	99.5	
G-Nko-3-B	30.000	98.619	12.5	0	0	0	0	Nko-3-B-1	0.595	-0.029	11.6	-99.9	
								Nko-3-B-2	-0.595	0.029	11.6	-99.9	
G-NiB-3-B	30.000	97.755	2.3	0	0	0	0	Kgo-3-B-1	4.983	-0.217	98.2	-99.9	
								NiB-3-B1	-4.983	0.217	98.2	-99.9	
G-Ny1-3-B	30.000	99.582	8.1	0	0	0	0	Ny1-3-B-1	27.937	-0.859	540.2	-100.0	
								Ny1-3-B-2	-27.937	0.859	540.2	-100.0	
G-Ny2-3-B	30.000	98.915	-2.5	0	0	0	0	Ny2-3-B-1	0.000	0.000	0.0	0.0	
								Ny2-3-B-2	0.000	0.000	0.0	0.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
G-Rka5-3-B	30.000	99.345	7.2	0	0	0	0	Rka5-3-B	-2.985	-0.043	57.8	100.0	
								Rka-3-B-1	2.985	0.043	57.8	100.0	
G-Rka-3-B	30.000	99.345	7.2	0	0	0	0	Rka-3-B-1	6.671	0.082	129.2	100.0	
								Rka-3-B-2	-6.671	-0.082	129.2	100.0	
G-Rsu-10-B	110.000	99.770	-0.7	0	0	0	0	Rsu-10-B-1	0.000	0.000	0.0	0.0	
								Rsu-10-B-2	0.000	0.000	0.0	0.0	
G-Rwa-3-B	30.000	99.236	-0.6	0	0	0	0	Rwa-3-B-1	0.000	0.000	0.0	0.0	
								Rwa-3-B-2	0.000	0.000	0.0	0.0	
G-Rz1-.06-B	0.600	100.986	12.4	0	0	0	0	N-Rz1-.06-B-1-1	3.500	0.000	3335.0	100.0	
								N-Rz1-.06-B-1-2	-3.500	0.000	3335.0	100.0	
G-Rz2-.6-B	6.600	96.841	14.3	0	0	0	0	Rz2-.6-B-1-1	12.750	0.000	1151.7	100.0	
								Rz2-.6-B-1-2	-12.750	0.000	1151.7	100.0	
Gsh-1-B-1	11.000	98.785	11.3	0	0	0	0	Gsh-10-B	7.500	0.000	398.5	100.0	
								Gsh-10-B	7.500	0.000	398.5	100.0	
								G-Gsh-1-B	-15.000	0.000	797.0	100.0	
Gsh-1-B-2	11.000	98.785	11.3	15.000	0.000	0	0	G-Gsh-1-B	15.000	0.000	797.0	100.0	
Gsh-10-B	110.000	95.702	8.4	0	0	0	0	Gsh-1-B-1	-7.481	0.384	41.1	-99.9	-3.000
								Gsh-1-B-1	-7.481	0.384	41.1	-99.9	-3.000
								B-10-Bga-Gsh-2	14.962	-0.768	82.2	-99.9	
G-Smb-1-B	11.000	100.308	-0.2	0	0	0	0	N-Smb-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2N	0.000	0.000	0.0	0.0	
Gso-1-B-1	15.000	99.676	-4.0	0	0	8.053	3.900	Gso-10-B-1	-8.053	-3.900	345.5	90.0	
Gso-10-B-1	110.000	96.690	-2.9	0	0	0	0	Gso-1-B-1	8.057	4.102	49.1	89.1	-4.000
								B-10-Gso-Nde-1	0.000	-0.177	1.0	0.0	
								10-Bre/Gso/Msh-B	-8.057	-3.924	48.6	89.9	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Hye-3-B-1	30.000	100.339	5.8	0	0	3.723	1.803	Hye-10-B-1	-3.723	-1.803	79.3	90.0	
Hye-10-B-1	110.000	100.130	6.6	0	0	0	0	Hye-3-B-1	3.726	1.871	21.9	89.4	-1.000
								B-10-Bta-Hye-2	-20.514	1.904	108.0	-99.6	
								B-10-Hye-Rka-1	16.788	-3.775	90.2	-97.6	
Jb1-10-B-1	110.000	96.345	-2.3	0	0	0	0	Jb1-1-B-1	13.921	7.338	85.7	88.5	-5.000
								B-10-Jb1-Jb2-1	0.000	-0.036	0.2	0.0	
								B-10-Jb1-Rln-2	-9.451	7.071	64.3	-80.1	
								B-10-Bre-Jb1-2	-22.543	-36.423	233.4	52.6	
								B-10-Gko-Jb1-2	9.629	12.383	85.5	61.4	
								B-10-Jb1-Nbg-1	8.444	9.667	69.9	65.8	
Jb1-1-B-1	15.000	99.589	-4.3	0	0	13.908	6.736	Jb1-10-B-1	-13.908	-6.736	597.3	90.0	
								B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
Jb2-.6-B-1	6.600	99.325	-2.3	0	0	0	0	Jb2-10-B-2	0.000	0.000	0.0	0.0	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
Jb2-10-B-1	110.000	96.345	-2.3	0	0	0	0	B-10-Jb1-Jb2-2	0.000	0.000	0.0	0.0	
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb2-10-B-2	110.000	96.345	-2.3	0	0	0	0	Jb2-.6-B-1	0.000	0.000	0.0	0.0	-3.000
								Jb2-.6-B-1	0.000	0.000	0.0	0.0	-3.000
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb3-1-B-1	15.000	99.589	-4.3	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								G-Jb3-1-B	0.000	0.000	0.0	0.0	
Jb3-1-B-2	15.000	99.589	-4.3	0	0	0	0	G-Jb3-1-B	0.000	0.000	0.0	0.0	
								Jb3-1-B-2d	0.000	0.000	0.0	0.0	
Jb3-1-B-2d	15.000	99.589	-4.3	0	0	0	0	Jb3-1-B-2	0.000	0.000	0.0	0.0	
Kb2-20-B-1	220.000	100.205	0.0	0	0	0	0	B-20-Bwi-KB2-2	0.000	0.000	0.0	0.0	
Kba-3-B-1	30.000	99.072	-4.7	0	0	3.343	1.619	Kba-10-B-1	-3.343	-1.619	72.2	90.0	
Kba-10-B-1	110.000	96.658	-3.1	0	0	0	0	Kba-3-B-1	3.352	1.736	20.5	88.8	-4.000
								10-Kba/Msh/Rwi-B	6.579	5.170	45.4	78.6	
								B-10-Kba-Kre-1	-9.931	-6.907	65.7	82.1	
Kbo-3-B-1	30.000	97.598	5.8	0	0	1.436	0.695	Kbo-10-B-1	-1.436	-0.695	31.5	90.0	
Kbo-10-B-1	110.000	97.026	7.1	0	0	0	0	Kbo-3-B-1	1.440	0.740	8.8	88.9	-2.000
								10-Kbo/Kro/Mr2-B	-1.440	-0.740	8.8	88.9	
Kbu-1-B-1	11.000	98.289	10.1	0	0	0	0	Kbu-3-B-1	-0.877	-0.159	47.6	98.4	
								Kbu-10-B-1	12.195	-0.992	653.3	-99.7	
								Kbu-10-B-1	12.807	-1.008	686.0	-99.7	
								B-1-Kbu-KbW-1F_T	-24.124	2.159	1293.4	-99.6	
Kbu-3-B-1	30.000	96.849	11.2	0	0	0	0	Kbu-1-B-1	0.879	0.177	17.8	98.0	-2.000
								B-3-Kbu-Kro/Nko-2	-0.879	-0.177	17.8	98.0	
Kbu-10-B-1	110.000	98.638	6.6	0	0	0	0	Kbu-1-B-1	-12.156	1.731	65.3	-99.0	
								Kbu-1-B-1	-12.768	1.784	68.6	-99.0	
								B-10-Kbu-Kro-1	24.924	-3.515	133.9	-99.0	
KbW-1-B-1	11.000	101.450	15.2	0	0	0	0	KbW-1-B-2	8.000	0.000	413.9	100.0	
								G-KbW-1-B-2	-8.000	0.000	413.9	100.0	
KbW-1-B-2	11.000	101.450	15.2	0	0	0	0	KbW-1-B-1	-8.000	0.000	413.9	100.0	
								B-1-Kbu-KbW-2F_T	25.000	0.000	1293.4	100.0	
								G-KbW-1-B-1	-17.000	0.000	879.5	100.0	
KbW-1-B-3	11.000	101.450	15.2	17.000	0.000	0	0	G-KbW-1-B-1	17.000	0.000	879.5	100.0	
KbW-1-B-4	11.000	101.450	15.2	8.000	0.000	0	0	G-KbW-1-B-2	8.000	0.000	413.9	100.0	
KbW-1-B-5	20.000	100.205	0.0	0	0	0	0	KbW-20-B-2	0.000	0.000	0.0	0.0	
KbW-20-B-2	220.000	100.205	0.0	0	0	0	0	KbW-1-B-5	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
Kgo-3-B-1	30.000	97.755	2.3	0	0	4.919	2.382	Kgo-10-B-1	0.032	-1.300	25.6	-2.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Kgo-10-B-1	110.000	98.862	2.2	0	0	0	0	Kgo-10-B-1	0.032	-1.300	25.6	-2.5	
								G-NtB-3-B	-4.983	0.217	98.2	-99.9	
								Kgo-3-B-1	-0.031	1.314	7.0	-2.4	
								Kgo-3-B-1	-0.031	1.314	7.0	-2.4	
								Kgo-20-B-1	22.471	-28.497	192.7	-61.9	
								B-10-Kgo-MKi-2	50.429	4.139	268.6	99.7	
Kgo-20-B-1	220.000	99.507	0.1	0	0	0	0	B-10-Kgo-Kli-1	-23.612	7.201	131.1	-95.7	
								B-10-Bta-Kgo-2	-49.226	14.528	272.5	-95.9	
								Kgo-10-B-1	-22.421	30.742	100.3	-58.9	-4.000
								B-20-Kgo-Kli-1	-23.913	-7.453	66.1	95.5	
								B-20-Kgo-Rwa-1	46.334	-23.288	136.8	-89.3	
								Kli-3-B-1	-1.483	-0.718	31.9	90.0	
Kli-10-B-1	110.000	98.929	3.9	0	0	0	0	Kli-10-B-1	1.490	0.764	8.9	89.0	-2.000
								Kli-20-B-1	37.409	-16.128	216.1	-91.8	
								B-10-Kgo-Kli-2	23.835	-7.468	132.5	-95.4	
								B-10-Kli-Kro-2	-31.611	16.115	188.2	-89.1	
								B-10-Kli-Rka-1	-24.290	4.953	131.5	-98.0	
								B-10-Kli-Ny1-1	-6.833	1.765	37.4	-96.8	
Kli-20-B-1	220.000	99.670	0.3	0	0	0	0	Kli-10-B-1	-37.346	18.953	110.3	-89.2	-2.000
								B-20-Kgo-Kli-2	23.932	4.776	64.3	98.1	
								B-20-Kli-Bwi-2	13.414	-23.729	71.8	-49.2	
								Kre-3-B-1	-3.353	-1.624	72.3	90.0	
								Kre-10-B-1	3.356	1.694	20.1	89.3	-2.000
								B-10-Kba-Kre-2	10.024	6.214	63.1	85.0	
Kri-20-B-1	220.000	100.325	-0.2	0	0	0	0	B-10-Kre-Nbu-1	-13.380	-7.908	83.1	86.1	
								B-20-Kri-Rba-1	0.000	0.000	0.0	0.0	
								Kro-3-B-1	-1.473	-0.714	31.8	90.0	
								Kro-10-B-1	1.477	0.759	8.9	89.0	-2.000
								B-10-Kbu-Kro-2	-24.828	3.414	133.7	-99.1	
								B-10-Kbo-Kro-1	-8.681	11.537	77.0	-60.1	
Kse-10-B1	110.000	96.690	-2.9	0	0	0	0	B-10-Kli-Kro-1	32.032	-15.710	190.3	-89.8	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
								MKi-3-B-1	-28.704	-7.550	599.6	96.7	
								C-MKi-3-B	0.000	-6.352	128.3	0.0	
								MKi-10-B-1	28.758	9.976	166.9	94.5	-2.000
								MKi-3-B-1	-44.398	-6.688	246.1	98.9	
MKi-10-B-1	110.000	95.741	-2.4	0	0	0	0	B-10-MKi-Nbg-2	-0.445	-5.968	32.8	7.4	
								B-10-Gha-MKi-2	16.085	2.680	89.4	98.6	
								Mku-3-B-1	-9.168	-4.440	200.0	90.0	1.000

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Mku-10-B-1	110.000	96.816	1.3	0	0	0	0	Mku-6-B-1	-2.808	5.159	31.8	-47.8	-6.000
								B-10-Gfu-Mku-2	28.106	-7.181	157.3	-96.9	
								B-10-Mku-Nta-1	-7.686	1.233	42.2	-98.7	
								B-10-Mku-Nbi-1	-17.612	0.790	95.6	-99.9	
								G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-10-B-2	110.000	96.816	1.3	0	0	0	0	G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-6-B-1	6.600	99.138	2.7	0	0	0	0	Mku-3-B-1	9.178	4.899	918.0	88.2	
								Mku-10-B-1	2.822	-4.899	498.9	-49.9	
								Mku-6-B-4	-6.000	0.000	529.4	100.0	
								Mku-6-B-3	-3.000	0.000	264.7	100.0	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	-3.000	0.000	264.7	100.0	
Mku-6-B-2	6.600	99.138	2.7	12.000	0.000	0	0	G-Mku-6-B	12.000	0.000	1058.9	100.0	
Mku-6-B-3	6.600	99.138	2.7	0	0	0	0	Mku-6-B-4	-6.000	0.000	529.4	100.0	
								Mku-6-B-1	3.000	0.000	264.7	100.0	
								Mku-6-B-5	0.000	0.000	0.0	0.0	
								Mku-6-B-6	3.000	0.000	264.7	100.0	
Mku-6-B-4	6.600	99.138	2.7	0	0	0	0	Mku-6-B-1	6.000	0.000	529.4	100.0	
								Mku-6-B-3	6.000	0.000	529.4	100.0	
								G-Mku-6-B	-12.000	0.000	1058.9	100.0	
Mku-6-B-5	6.600	99.138	2.7	0	0	0	0	Mku-6-B-1	0.000	0.000	0.0	0.0	
								Mku-6-B-3	0.000	0.000	0.0	0.0	
Mku-6-B-6	6.600	99.138	2.7	0	0	0	0	Mku-6-B-3	-3.000	0.000	264.7	100.0	
								Mku-6-B-1	3.000	0.000	264.7	100.0	
Mmb-3-B-1	30.000	99.420	18.7	0	0	3.661	1.773	Mmb-20-B-1	76.159	-2.947	1475.4	-99.9	
								G-Mmb-3-B	-79.821	1.173	1545.3	-100.0	
Mmb-3-B-2	30.000	99.420	18.7	0	0	0	0	N-Mmb-6-1	-39.910	0.587	772.6	-100.0	
								N-Mmb-6-2	-39.910	0.587	772.6	-100.0	
								G-Mmb-3-B	79.821	-1.173	1545.3	-100.0	
Mmb-20-B-1	220.000	100.037	13.2	0	0	0	0	Mmb-3-B-1	-75.996	10.291	201.2	-99.1	
								B-20-Bta-Mmb-2D	75.996	-10.291	201.2	-99.1	
Mr1-6-B-1	6.600	99.689	8.7	0	0	0	0	Mr1-10-B-1	0.402	-1.817	163.3	-21.6	
								Mr1-3-B-1	3.046	1.596	301.8	88.6	
								B-6-Mr1-Rz1-1	-3.448	0.221	303.2	-99.8	
Mr1-10-B-1	110.000	96.495	8.4	0	0	0	0	Mr1-6-B-1	-0.400	1.853	10.3	-21.1	-5.000
								B-10-Mr1-Mr2-1	0.400	-1.853	10.3	-21.1	
Mr1-3-B-1	30.000	100.795	6.9	0	0	3.038	1.472	Mr1-6-B-1	-3.038	-1.472	64.5	90.0	3.000
Mr2-10-B-1	110.000	96.498	8.4	0	0	0	0	B-10-Mr2-Rz2-1	-12.639	0.921	68.9	-99.7	
								Mr2-10-B-2	12.639	-0.921	68.9	-99.7	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Mr2-10-B-2	110.000	96.498	8.4	0	0	0	0	B-10-Mr2/Nte-1	13.038	-2.763	72.5	-97.8	
								B-10-Mr1-Mr2-2	-0.400	1.843	10.3	-21.2	
								Mr2-10-B-1	-12.639	0.921	68.9	-99.7	
Msh-1-B-1	15.000	96.578	-6.0	0	0	18.545	8.982	Msh-10-B-1	-9.273	-2.159	379.4	97.4	
								Msh-10-B-1	-9.273	-2.159	379.4	97.4	
								C-Msh-1-B	0.000	-4.664	185.9	0.0	
Msh-10-B-1	110.000	96.088	-3.2	0	0	0	0	Msh-1-B-1	9.297	2.644	52.8	96.2	-2.000
								Msh-1-B-1	9.297	2.644	52.8	96.2	-2.000
								B-10-Gso-Msh-2	-10.754	-3.842	62.4	94.2	
								B-10-Kba-Msh-2	-3.181	-4.336	29.4	59.1	
Mus-3-B	30.000	99.345	7.2	0	0	0	0	Mus-6-B	-1.993	-0.196	38.8	99.5	
								G-Mus-3-B	1.993	0.196	38.8	99.5	
* Mus-6-B	6.600	100.000	8.8	2.000	0.254	0	0	Mus-3-B	2.000	0.254	176.4	99.2	
Nbg-3-B-1	30.000	99.027	-3.3	0	0	7.959	3.855	Nbg-10-B-1	-3.979	-1.927	85.9	90.0	
								Nbg-10-B-1	-3.979	-1.927	85.9	90.0	
Nbg-10-B-1	110.000	95.902	-2.4	0	0	0	0	Nbg-3-B-1	3.983	2.007	24.4	89.3	-4.000
								Nbg-3-B-1	3.983	2.007	24.4	89.3	-4.000
								B-10-Jb1-Nbg-2	-8.417	-9.821	70.8	65.1	
								B-10-MKi-Nbg-1	0.450	5.807	31.9	7.7	
Nbi-3-B-1	30.000	98.830	1.6	0	0	1.469	0.711	Nbi-10-B-1	-1.469	-0.711	31.8	90.0	
Nbi-10-B-1	110.000	97.541	2.3	0	0	0	0	Nbi-3-B-1	1.470	0.734	8.8	89.5	-2.000
								B-B-10-Mku-Nbi-1-2	17.760	-1.124	95.8	-99.8	
								B-10-Nbi-Ny1-1	-19.231	0.390	103.5	-100.0	
Nbu-3-B-1	30.000	99.197	-3.2	0	0	3.351	1.623	Nbu-10-B-1	-3.351	-1.623	72.2	90.0	
Nbu-10-B-1	110.000	99.111	-2.2	0	0	0	0	Nbu-3-B-1	3.355	1.693	19.9	89.3	-1.000
								Nbu-20-B-1	-16.815	-9.287	101.7	87.5	
								B-10-Kre-Nbu-2	13.461	7.593	81.8	87.1	
Nbu-20-B-1	220.000	99.766	-0.7	0	0	0	0	Nbu-10-B-1	16.829	9.913	51.4	86.2	-1.000
								B-20-Nbu-Rsu-1	-16.829	-9.913	51.4	86.2	
N-Cyi-04-1	0.400	99.374	14.6	0.300	0.000	0	0	Cyi-3-B-2	0.300	0.000	435.7	100.0	
Nde-3-B-1	30.000	99.307	-3.9	0	0	7.999	3.874	Nde-10-B-1	-4.000	0.528	78.2	-99.1	
								Nde-10-B-1	-4.000	0.528	78.2	-99.1	
								C-Nde-B	0.000	-4.931	95.6	0.0	
Nde-10-B-1	110.000	95.221	-3.0	0	0	0	0	Nde-3-B-1	4.003	-0.462	22.2	-99.3	-4.000
								Nde-3-B-1	4.003	-0.462	22.2	-99.3	-4.000
								B-10-Gha-Nde-2	-8.006	0.925	44.4	-99.3	
Nga-3-B-1	30.000	98.931	-3.4	0	0	3.335	1.615	Nga-10-B-1	-3.335	-1.615	72.1	90.0	
Nga-10-B-1	110.000	95.850	-2.5	0	0	0	0	Nga-3-B-1	3.338	1.685	20.5	89.3	-4.000

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Nga-Rln-1	-8.032	2.409	45.9	-95.8	
								B-10-Msh-Nga-2	4.694	-4.094	34.1	-75.4	
Nko-3-B-1	30.000	98.619	12.5	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.595	-0.029	11.6	-99.9	
								G-Nko-3-B	-0.595	0.029	11.6	-99.9	
Nko-3-B-2	30.000	98.619	12.5	0	0	0	0	N-Nko-04-B-2	-0.595	0.029	11.6	-99.9	
								G-Nko-3-B	0.595	-0.029	11.6	-99.9	
* N-Mmb-.6-1	6.600	100.000	24.5	40.000	3.442	0	0	Mmb-3-B-2	40.000	3.442	3512.0	99.6	
* N-Mmb-.6-2	6.600	100.000	24.5	40.000	3.442	0	0	Mmb-3-B-2	40.000	3.442	3512.0	99.6	
N-Nko-04-B-2	0.400	99.294	15.3	0.600	0.000	0	0	Nko-3-B-2	0.600	0.000	872.2	100.0	
* N-Ny1-.6-2	6.600	100.000	13.9	28.000	1.954	0	0	Ny1-3-B-2	28.000	1.954	2455.3	99.8	
* N-Rka-.6-2	6.600	100.000	10.4	6.700	0.458	0	0	Rka-3-B-2	6.700	0.458	587.5	99.8	
N-Rz1-.06-B-1-1	0.600	100.986	12.4	0	0	0	0	Rz1-.6-B-1	3.500	0.000	3335.0	100.0	
								G-Rz1-.06-B	-3.500	0.000	3335.0	100.0	
N-Rz1-.06-B-1-2	0.600	100.986	12.4	3.500	0.000	0	0	G-Rz1-.06-B	3.500	0.000	3335.0	100.0	
N-Smb-1	11.000	100.308	-0.2	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2	0.000	0.000	0.0	0.0	
								G-Smb-1-B	0.000	0.000	0.0	0.0	
Nta-3-B-1	30.000	100.339	2.6	0	0	3.521	1.705	Nta-.6-B-1	-3.521	-1.705	75.0	90.0	2.000
Nta-10-B-1	110.000	96.917	1.8	0	0	0	0	Nta-.6-B-1	-3.854	1.019	21.6	-96.7	-3.000
								Nta-.6-B-1	-3.854	1.019	21.6	-96.7	-3.000
								B-10-Mku-Nta-2	7.709	-2.039	43.2	-96.7	
Nta-.6-B-1	6.600	99.342	3.6	0	0	0	0	Nta-3-B-1	3.525	1.784	347.9	89.2	
								Nta-10-B-1	3.862	-0.892	349.1	-97.4	
								Nta-10-B-1	3.862	-0.892	349.1	-97.4	
								Nta-.6-B-3	-11.250	0.000	990.6	100.0	
Nta-.6-B-2	6.600	99.342	3.6	11.250	0.000	0	0	Nta-.6-B-3	11.250	0.000	990.6	100.0	
Nta-.6-B-3	6.600	99.342	3.6	0	0	0	0	Nta-.6-B-1	11.250	0.000	990.6	100.0	
								Nta-.6-B-2	-11.250	0.000	990.6	100.0	
NtB-3-B1	30.000	97.755	2.3	0	0	0	0	NtB-.6-B	-4.983	0.217	98.2	-99.9	
								G-NtB-3-B	4.983	-0.217	98.2	-99.9	
NtB-.6-B	6.600	97.990	4.8	5.000	0.000	0	0	NtB-3-B1	5.000	0.000	446.4	100.0	
Nte-3-B-1	30.000	99.657	7.1	0	0	1.491	0.722	Nte-10-B-1	-1.491	-0.722	32.0	90.0	
Nte-10-B-1	110.000	96.349	7.8	0	0	0	0	Nte-3-B-1	1.493	0.745	9.1	89.5	-4.000
								B-10-Kbo/Nte-2	10.307	-12.188	87.0	-64.6	
								B-10-Mr2/Nte-2	-12.990	2.275	71.8	-98.5	
								B-10-Bga-Nte-2	1.191	9.168	50.4	12.9	
Ny1-10-B-1	110.000	99.051	4.3	0	0	0	0	Ny1-3-B-1	-26.409	3.349	141.1	-99.2	-1.000
								B-10-Kli-Ny1-2	6.858	-2.415	38.5	-94.3	
								B-10-Nbi-Ny1-2	19.551	-0.934	103.7	-99.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Ny1-3-B-1	30.000	99.582	8.1	0	0	1.489	0.721	Ny1-10-B-1	26.449	-1.580	512.1	-99.8	
								G-Ny1-3-B	-27.937	0.859	540.2	-100.0	
Ny1-3-B-2	30.000	99.582	8.1	0	0	0	0	N-Ny1-.6-2	-27.937	0.859	540.2	-100.0	
								G-Ny1-3-B	27.937	-0.859	540.2	-100.0	
Ny2-10-B-1	110.000	95.861	-1.5	0	0	0	0	Ny2-3-B-1	3.436	1.736	21.1	89.2	-4.000
								B-10-Ny2-Rln-1	-3.436	-1.736	21.1	89.2	
Ny2-3-B-1	30.000	98.915	-2.5	0	0	3.432	1.662	Ny2-10-B-1	-3.432	-1.662	74.2	90.0	
								G-Ny2-3-B	0.000	0.000	0.0	0.0	
Ny2-3-B-2	30.000	98.915	-2.5	0	0	0	0	G-Ny2-3-B	0.000	0.000	0.0	0.0	
Rba-3-B-1	30.000	99.599	-0.8	0	0	1.489	0.721	Rba-20-B-1	-1.489	-0.721	32.0	90.0	
Rba-20-B-1	220.000	100.305	-0.2	0	0	0	0	Rba-3-B-1	1.491	0.744	4.4	89.5	
								B-20-Bwi-Rba-2D	-11.876	1.146	31.2	-99.5	
								B-20-Rba-Sha-1	10.385	2.054	27.7	98.1	
								B-20-Kri-Rba-2	0.000	-2.847	7.4	0.0	
								B-20-Smb-Rba-2	0.000	-1.098	2.9	0.0	
* Rka5-.6-B	6.600	100.000	9.7	3.000	0.172	0	0	Rka5-3-B	3.000	0.172	262.9	99.8	
Rka5-3-B	30.000	99.345	7.2	0	0	0	0	Rka5-.6-B	-2.985	-0.043	57.8	100.0	
								G-Rka5-3-B	2.985	0.043	57.8	100.0	
Rka-3-B-1	30.000	99.345	7.2	0	0	3.657	1.771	Rka-10-B-1	3.996	-0.725	78.7	-98.4	
								Rka-10-B-1	3.996	-0.725	78.7	-98.4	
								G-Rka-3-B	-6.671	-0.082	129.2	100.0	
								G-Rka5-3-B	-2.985	-0.043	57.8	100.0	
								G-Mus-3-B	-1.993	-0.196	38.8	99.5	
Rka-3-B-2	30.000	99.345	7.2	0	0	0	0	N-Rka-.6-2	-6.671	-0.082	129.2	100.0	
								G-Rka-3-B	6.671	0.082	129.2	100.0	
Rka-10-B-1	110.000	99.734	5.7	0	0	0	0	Rka-3-B-1	-3.991	0.836	21.5	-97.9	
								Rka-3-B-1	-3.991	0.836	21.5	-97.9	
								B-10-Kli-Rka-2	24.646	-5.063	132.4	-98.0	
								B-10-Hye-Rka-2	-16.664	3.390	89.5	-98.0	
Rln-3-B-1	30.000	99.290	-1.9	0	0	7.997	3.873	Rln-10-B-1	-7.997	-3.873	172.2	90.0	
Rln-10-B-1	110.000	99.326	-0.8	0	0	0	0	Rln-3-B-1	8.001	4.073	47.4	89.1	-1.000
								Rln-20-B-1	-8.001	-4.073	47.4	89.1	
Rln-20-B-1	220.000	99.685	-0.4	0	0	0	0	Rln-10-B-1	8.003	4.141	23.7	88.8	
								B-20-Sha-Rln-2D	17.742	1.597	46.9	99.6	
								B-20-Rln-Rwa-1D	-42.590	16.648	120.4	-93.1	
								B-20-Rln-Rsu-1D	16.845	-22.386	73.8	-60.1	
Rln-3-B-1	30.000	95.120	-2.4	0	0	3.200	1.550	Rln-10-B-1	-3.200	-1.550	71.9	90.0	
Rln-10-B-1	110.000	96.032	-1.4	0	0	0	0	Rln-3-B-1	3.204	1.620	19.6	89.2	
								10-Gfu/Jb1/Rln-B	-14.743	0.426	80.6	-100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Nga-RIn-2	8.100	-3.447	48.1	-92.0	
								B-10-Ny2-RIn-2	3.440	1.402	20.3	92.6	
Rsu-10-B-1	110.000	99.770	-0.7	0	0	0	0	Rsu-20-B-1	0.000	0.000	0.0	0.0	
								G-Rsu-10-B	0.000	0.000	0.0	0.0	
Rsu-10-B-2	110.000	99.770	-0.7	0	0	0	0	G-Rsu-10-B	0.000	0.000	0.0	0.0	
Rsu-20-B-1	220.000	99.770	-0.7	0	0	0	0	Rsu-10-B-1	0.000	0.000	0.0	0.0	
								B-20-RIm-Rsu-2D	-16.830	-9.847	51.3	86.3	
								B-20-Nbu-Rsu-2	16.830	9.847	51.3	86.3	
Rwa-3-B-1	30.000	99.236	-0.6	0	0	3.649	1.767	Rwa-20-B-1	-3.649	-1.767	78.6	90.0	
								G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-3-B-2	30.000	99.236	-0.6	0	0	0	0	G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-20-B-1	220.000	99.627	-0.2	0	0	0	0	Rwa-3-B-1	3.650	1.802	10.7	89.7	
								B-20-RIm-Rwa-2D	42.628	-23.491	128.2	-87.6	
								B-20-Kgo-Rwa-2	-46.278	21.689	134.6	-90.5	
Rwi-1-B-1	15.000	99.650	-4.1	0	0	3.379	1.636	Rwi-10-B-1	-3.379	-1.636	145.0	90.0	
								C-Rwi-B-1	0.000	0.000	0.0	0.0	
Rwi-10-B-1	110.000	96.545	-3.2	0	0	0	0	Rwi-1-B-1	3.382	1.707	20.6	89.3	-4.000
								B-10-Kba-Rwi-2	-3.382	-1.707	20.6	89.3	
Rz1-6-B-1	6.600	100.528	9.6	0	0	0	0	N-Rz1-.06-B-1-1	-3.480	0.171	303.2	-99.9	
								B-.6-Mr1-Rz1-2	3.480	-0.171	303.2	-99.9	
Rz2-6-B-1-1	6.600	96.841	14.3	0	0	0	0	Rz2-10-B-1	12.750	0.000	1151.7	100.0	
								G-Rz2-.6-B	-12.750	0.000	1151.7	100.0	
Rz2-6-B-1-2	6.600	96.841	14.3	12.750	0.000	0	0	G-Rz2-.6-B	12.750	0.000	1151.7	100.0	
Rz2-10-B-1	110.000	96.795	8.9	0	0	0	0	Rz2-.6-B-1-1	-12.686	1.212	69.1	-99.5	
								B-10-Mr2-Rz2-2	12.686	-1.212	69.1	-99.5	
Sha-3-B-1	30.000	100.028	-3.1	0	0	8.104	3.925	Sha-10-B-1	-8.104	-3.925	173.2	90.0	
Sha-10-B-1	110.000	99.052	-2.0	0	0	0	0	Sha-3-B-1	8.109	4.128	48.2	89.1	-2.000
								Sha-20-B-1	-64.190	-55.791	450.7	75.5	
								B-10-Bre-Sha-2D	56.081	51.664	404.0	73.5	
Sha-20-B-1	220.000	99.463	-0.5	0	0	0	0	Sha-10-B-1	64.258	58.862	229.9	73.7	-2.000
								B-20-Sha-RIm-1D	-17.725	-17.968	66.6	70.2	
								B-20-Rba-Sha-2	-10.354	-16.187	50.7	53.9	
								B-20-Mra-Sha-2D	-36.179	-24.707	115.6	82.6	
Smb-1-B-1	11.000	100.308	-0.2	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	
Smb-1-B-2	11.000	100.308	-0.2	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	
Smb-1-B-2N	11.000	100.308	-0.2	0	0	0	0	G-Smb-1-B	0.000	0.000	0.0	0.0	
								Smb-1-B-4	0.000	0.000	0.0	0.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Smb-1-B-6	0.000	0.000	0.0	0.0	
Smb-1-B-4	11.000	100.308	-0.2	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-1-B-6	11.000	100.308	-0.2	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-20-B-1	220.000	100.308	-0.2	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2	0.000	0.000	0.0	0.0	
								B-20-Smb-Rba-1	0.000	0.000	0.0	0.0	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cyi/Nko-B	30.000	99.412	1.2	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.149	-0.011	2.9	99.7	
								3-Cyi-Ghi-B	0.448	0.022	8.7	99.9	
								B-3-Nko-Cyi/Nko-1	-0.299	-0.011	5.8	99.9	
3-Cyi-Ghi-B	30.000	99.349	1.2	0	0	0	0	B-3-Cyi-Ghi-2	0.000	-0.079	1.5	0.0	
								3-Cyi/Nko-B	-0.448	-0.031	8.7	99.8	
								3-Kro/Kbu-B	0.448	0.109	8.9	97.2	
3-Kro/Kbu-B	30.000	98.539	0.8	0	0	0	0	B-3-Kbu-Kro-2	2.386	-0.406	47.3	-98.6	
								B-3-Kbu-Kro/Nko-2	-1.941	0.593	39.6	-95.6	
								3-Cyi-Ghi-B	-0.445	-0.187	9.4	92.2	
10-Bre/Gso/Msh-B	110.000	95.867	-5.4	0	0	0	0	B-10-Bre-Gso-1	-35.519	-8.813	200.4	97.1	
								B-10-Gso-Msh-2	15.331	-6.238	90.6	-92.6	
								Gso-10-B-1	20.188	15.051	137.9	80.2	
10-Gfu/Jb1/Rln-B	110.000	96.498	-5.6	0	0	0	0	B-10-Gfu/Mku/Rln-B	-3.404	-1.046	19.4	95.6	
								B-10-Jb1-Rln-2	-7.763	5.443	51.6	-81.9	
								Rln-10-B-1	11.167	-4.397	65.3	-93.0	
10-Gfu/Mku/Rln-B	110.000	96.697	-5.5	0	0	0	0	B-10-Gfu-Mku-2	-10.197	8.726	72.8	-76.0	
								10-Gfu/Jb1/Rln-B	3.409	0.514	18.7	98.9	
								Gfu-10-B-1	6.788	-9.239	62.2	-59.2	
10-Gko/Kgo/MKi-B	110.000	95.842	-5.0	0	0	0	0	B-10-Gko-MKi-1	6.169	-0.157	33.8	-100.0	
								B-10-Kgo-MKi-2	-35.172	-7.599	197.1	97.7	
								MKi-10-B-1	29.003	7.755	164.4	96.6	
10-Kba/Msh/Rwi-B	110.000	96.316	-6.0	0	0	0	0	B-10-Kba-Msh-2	4.838	2.580	29.9	88.2	
								B-10-Kba-Rwi-2	6.707	-1.723	37.7	-96.9	
								Kba-10-B-1	-11.544	-0.857	63.1	99.7	
10-Kbo/Kro/Mr2-B	110.000	98.058	-0.1	0	0	0	0	B-10-Kbo/Nte-B	1.978	3.194	20.1	52.7	
								B-10-Kbo-Kro-1	-4.844	-4.750	36.3	71.4	
								Kbo-10-B-1	2.866	1.556	17.5	87.9	
10-Kbo/Nte-B	110.000	97.737	-0.2	0	0	0	0	B-10-Kbo/Kro/Mr2-B	-1.974	-3.833	23.2	45.8	
								B-10-Kbo/Nte-2	1.974	3.833	23.2	45.8	
10-Mr2/Nte-B	110.000	97.734	-0.2	0	0	0	0	B-10-Mr2/Nte-1	-3.687	-1.565	21.5	92.1	
								B-10-Mr2/Nte-2	3.687	1.565	21.5	92.1	
20-Gma-B	220.000	100.999	1.4	0	0	0	0	B-20-Gma-Rba-2	0.000	0.000	0.0	0.0	
20-Gte-B	220.000	99.941	0.0	0	0	0	0	B-20-Bta-Gte-D	0.000	0.000	0.0	0.0	
* 20-Mra-B	220.000	100.000	0.0	48.713	-3.208	0	0	B-20-Mra-Sha-2D	48.713	-3.208	128.1	-99.8	
Air-3-B-1	30.000	99.416	-7.4	0	0	34.872	16.889	Air-10-B-1	-34.872	-16.889	750.1	90.0	
Air-10-B-1	110.000	96.643	-5.0	0	0	0	0	Air-3-B-1	34.914	18.788	215.3	88.1	-5.000

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Air-Rbo-1	14.638	-1.704	80.0	-99.3	
								B-10-Air-Rlm-1_S	-49.552	-17.084	284.7	94.5	
B-1-Jb1-Jb3-1	15.000	98.952	-7.4	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								Jb1-1-B-1	0.000	0.000	0.0	0.0	
B-1-Jb1-Jb3-2	15.000	98.952	-7.4	0	0	0	0	B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-1	0.000	0.000	0.0	0.0	
B-1-Kbu-KbW-1F_T	11.000	98.889	3.8	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.134	2.134	1286.0	-99.6	
								Kbu-1-B-1	24.134	-2.134	1286.0	-99.6	
B-1-Kbu-KbW-2F_T	11.000	102.037	8.8	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1286.0	100.0	
								KbW-1-B-2	-25.000	0.000	1286.0	100.0	
B-3-Cyi-Cyi/Nko-1	30.000	99.443	1.3	0	0	0	0	3-Cyi/Nko-B	0.149	-0.003	2.9	-100.0	
								Cyi-3-B-1	-0.149	0.003	2.9	-100.0	
B-3-Cyi-Ghi-2	30.000	99.418	1.2	0	0	0	0	3-Cyi-Ghi-B	0.000	0.000	0.0	0.0	
B-3-Kbu-Kro/Nko-2	30.000	98.742	1.2	0	0	0	0	3-Kro/Kbu-B	1.949	-0.594	39.7	-95.7	
								Kbu-3-B-1	-1.949	0.594	39.7	-95.7	
B-3-Kbu-Kro-2	30.000	97.814	-0.2	0	0	0	0	3-Kro/Kbu-B	-2.361	0.417	47.2	-98.5	
								Kro-3-B-1	2.361	-0.417	47.2	-98.5	
B-3-Nko-Cyi/Nko-1	30.000	99.492	1.3	0	0	0	0	3-Cyi/Nko-B	0.299	-0.007	5.8	-100.0	
								Nko-3-B-1	-0.299	0.007	5.8	-100.0	
B-10-Air-Rbo-1	110.000	96.643	-5.0	0	0	0	0	B-10-Air-Rbo-2	14.638	-1.704	80.0	-99.3	
								Air-10-B-1	-14.638	1.704	80.0	-99.3	
B-10-Air-Rbo-2	110.000	95.932	-6.1	0	0	0	0	B-10-Air-Rbo-1	-14.502	1.158	79.6	-99.7	
								Rbo-20-B-1	14.502	-1.158	79.6	-99.7	
B-10-Air-Rlm-1_S	110.000	96.643	-5.0	0	0	0	0	B-10-Air-Rlm-2_S	-49.552	-17.084	284.7	94.5	
								Air-10-B-1	49.552	17.084	284.7	94.5	
B-10-Air-Rlm-2_S	110.000	99.221	-3.5	0	0	0	0	B-10-Air-Rlm-1_S	50.409	18.419	283.9	93.9	
								Rlm-10-B-1	-50.409	-18.419	283.9	93.9	
B-10-Bga-Gsh-1	110.000	97.214	-0.2	0	0	0	0	B-10-Bga-Gsh-2	-14.900	-5.587	85.9	93.6	
								Bga-10-B-1	14.900	5.587	85.9	93.6	
B-10-Bga-Gsh-2	110.000	97.782	0.1	0	0	0	0	B-10-Bga-Gsh-1	14.956	5.399	85.3	94.1	
								Gsh-10-B	-14.956	-5.399	85.3	94.1	
B-10-Bga-Nte-1	110.000	97.214	-0.2	0	0	0	0	B-10-Bga-Nte-2	-2.678	-4.509	28.3	51.1	
								Bga-10-B-1	2.678	4.509	28.3	51.1	
B-10-Bga-Nte-2	110.000	97.727	-0.2	0	0	0	0	B-10-Bga-Nte-1	2.690	3.898	25.4	56.8	
								Nte-10-B-1	-2.690	-3.898	25.4	56.8	
B-10-Bre-Gso-1	110.000	97.648	-4.2	0	0	0	0	10-Bre/Gso/Msh-B	35.980	9.310	199.8	96.8	
								Bre-10-B-1	-35.980	-9.310	199.8	96.8	
B-10-Bre-Jb1-1	110.000	97.648	-4.2	0	0	0	0	B-10-Bre-Jb1-2	49.637	21.342	290.4	91.9	
								Bre-10-B-1	-49.637	-21.342	290.4	91.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Bre-Jb1-2	110.000	96.273	-4.9	0	0	0	0	B-10-Bre-Jb1-1	-49.195	-20.639	290.9	92.2	
								Jb1-10-B-1	49.195	20.639	290.9	92.2	
B-10-Bre-Sha-1D	110.000	97.648	-4.2	0	0	0	0	B-10-Bre-Sha-2D	-103.606	-40.397	597.7	93.2	
								Bre-10-B-1	103.606	40.397	597.7	93.2	
B-10-Bre-Sha-2D	110.000	99.150	-3.5	0	0	0	0	B-10-Bre-Sha-1D	104.675	41.792	596.6	92.9	
								Sha-10-B-1	-104.675	-41.792	596.6	92.9	
B-10-Bta-Hye-1	110.000	99.239	-1.2	0	0	0	0	B-10-Bta-Hye-2	4.299	3.426	29.1	78.2	
								Bta-10-B-1	-4.299	-3.426	29.1	78.2	
B-10-Bta-Hye-2	110.000	98.785	-1.3	0	0	0	0	B-10-Bta-Hye-1	-4.287	-3.962	31.0	73.4	
								Hye-10-B-1	4.287	3.962	31.0	73.4	
B-10-Bta-Kgo-1	110.000	99.239	-1.2	0	0	0	0	B-10-Bta-Kgo-2	6.273	-2.368	35.5	-93.6	
								Bta-10-B-1	-6.273	2.368	35.5	-93.6	
B-10-Bta-Kgo-2	110.000	99.037	-1.9	0	0	0	0	B-10-Bta-Kgo-1	-6.239	1.261	33.7	-98.0	
								Kgo-10-B-1	6.239	-1.261	33.7	-98.0	
B-10-Gfu-Mku-2	110.000	96.408	-4.8	0	0	0	0	B-10-Gfu/Mku/Rln-B	10.266	-9.075	74.6	-74.9	
								Mku-10-B-1	-10.266	9.075	74.6	-74.9	
B-10-Gha-MKi-1	110.000	95.478	-5.3	0	0	0	0	B-10-Gha-MKi-2	-16.217	-3.319	91.0	98.0	
								Gha-10-B-1	16.217	3.319	91.0	98.0	
B-10-Gha-MKi-2	110.000	95.842	-5.0	0	0	0	0	B-10-Gha-MKi-1	16.263	3.203	90.8	98.1	
								MKi-10-B-1	-16.263	-3.203	90.8	98.1	
B-10-Gha-Nde-1	110.000	95.478	-5.3	0	0	0	0	B-10-Gha-Nde-2	4.146	-2.981	28.1	-81.2	
								Gha-10-B-1	-4.146	2.981	28.1	-81.2	
B-10-Gha-Nde-2	110.000	95.526	-5.5	0	0	0	0	B-10-Gha-Nde-1	-4.138	2.597	26.8	-84.7	
								Nde-10-B-1	4.138	-2.597	26.8	-84.7	
B-10-Gko-Jb1-1	110.000	95.802	-5.1	0	0	0	0	B-10-Gko-Jb1-2	-12.424	-9.856	86.9	78.3	
								Gko-10-B-1	12.424	9.856	86.9	78.3	
B-10-Gko-Jb1-2	110.000	96.273	-4.9	0	0	0	0	B-10-Gko-Jb1-1	12.454	9.674	86.0	79.0	
								Jb1-10-B-1	-12.454	-9.674	86.0	79.0	
B-10-Gko-MKi-1	110.000	95.802	-5.1	0	0	0	0	B-10-Gko/Kgo/MKi-B	-6.166	0.005	33.8	100.0	
								Gko-10-B-1	6.166	-0.005	33.8	100.0	
B-10-Gso-Msh-2	110.000	95.776	-6.2	0	0	0	0	B-10-Bre/Gso/Msh-B	-15.238	5.990	89.7	-93.1	
								Msh-10-B-1	15.238	-5.990	89.7	-93.1	
B-10-Gso-Nde-1	110.000	95.867	-5.4	0	0	0	0	B-10-Gso-Nde-2	8.028	8.705	64.8	67.8	
								Gso-10-B-1	-8.028	-8.705	64.8	67.8	
B-10-Gso-Nde-2	110.000	95.526	-5.5	0	0	0	0	B-10-Gso-Nde-1	-8.009	-8.839	65.5	67.1	
								Nde-10-B-1	8.009	8.839	65.5	67.1	
B-10-Hye-Rka-1	110.000	98.785	-1.3	0	0	0	0	B-10-Hye-Rka-2	-2.827	0.270	15.1	-99.5	
								Hye-10-B-1	2.827	-0.270	15.1	-99.5	
B-10-Hye-Rka-2	110.000	98.856	-1.2	0	0	0	0	B-10-Hye-Rka-1	2.830	-0.887	15.7	-95.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rka-10-B-1	-2.830	0.887	15.7	-95.4	
B-10-Jb1-Jb2-1	110.000	96.273	-4.9	0	0	0	0	B-10-Jb1-Jb2-2	0.000	-0.036	0.2	0.0	
								Jb1-10-B-1	0.000	0.036	0.2	0.0	
B-10-Jb1-Jb2-2	110.000	96.273	-4.9	0	0	0	0	B-10-Jb1-Jb2-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-1	0.000	0.000	0.0	0.0	
B-10-Jb1-Nbg-1	110.000	96.273	-4.9	0	0	0	0	B-10-Jb1-Nbg-2	11.006	7.410	72.3	83.0	
								Jb1-10-B-1	-11.006	-7.410	72.3	83.0	
B-10-Jb1-Nbg-2	110.000	95.862	-5.0	0	0	0	0	B-10-Jb1-Nbg-1	-10.977	-7.560	73.0	82.4	
								Nbg-10-B-1	10.977	7.560	73.0	82.4	
B-10-Jb1-Rln-2	110.000	96.273	-4.9	0	0	0	0	10-Gfu/Jb1/Rln-B	7.817	-6.085	54.0	-78.9	
								Jb1-10-B-1	-7.817	6.085	54.0	-78.9	
B-10-Kba-Kre-1	110.000	96.316	-6.0	0	0	0	0	B-10-Kba-Kre-2	-18.185	-4.512	102.1	97.1	
								Kba-10-B-1	18.185	4.512	102.1	97.1	
B-10-Kba-Kre-2	110.000	98.035	-4.7	0	0	0	0	B-10-Kba-Kre-1	18.415	4.106	101.0	97.6	
								Kre-10-B-1	-18.415	-4.106	101.0	97.6	
B-10-Kba-Msh-2	110.000	95.776	-6.2	0	0	0	0	10-Kba/Msh/Rwi-B	-4.821	-3.217	31.8	83.2	
								Msh-10-B-1	4.821	3.217	31.8	83.2	
B-10-Kba-Rwi-2	110.000	96.258	-6.1	0	0	0	0	10-Kba/Msh/Rwi-B	-6.698	1.511	37.4	-97.5	
								Rwi-10-B-1	6.698	-1.511	37.4	-97.5	
B-10-Kbo/Nte-2	110.000	97.727	-0.2	0	0	0	0	10-Kbo/Nte-B	-1.974	-3.846	23.2	45.7	
								Nte-10-B-1	1.974	3.846	23.2	45.7	
B-10-Kbo-Kro-1	110.000	98.934	0.2	0	0	0	0	10-Kbo/Kro/Mr2-B	4.865	3.499	31.8	81.2	
								Kro-10-B-1	-4.865	-3.499	31.8	81.2	
B-10-Kbu-Kro-1	110.000	99.144	0.8	0	0	0	0	B-10-Kbu-Kro-2	22.117	-2.808	118.0	-99.2	
								Kbu-10-B-1	-22.117	2.808	118.0	-99.2	
B-10-Kbu-Kro-2	110.000	98.934	0.2	0	0	0	0	B-10-Kbu-Kro-1	-22.042	2.639	117.8	-99.3	
								Kro-10-B-1	22.042	-2.639	117.8	-99.3	
B-10-Kgo-Kli-1	110.000	99.037	-1.9	0	0	0	0	B-10-Kgo-Kli-2	-14.602	3.550	79.6	-97.2	
								Kgo-10-B-1	14.602	-3.550	79.6	-97.2	
B-10-Kgo-Kli-2	110.000	99.146	-0.9	0	0	0	0	B-10-Kgo-Kli-1	14.685	-4.240	80.9	-96.1	
								Kli-10-B-1	-14.685	4.240	80.9	-96.1	
B-10-Kgo-MKi-2	110.000	99.037	-1.9	0	0	0	0	10-Gko/Kgo/MKi-B	35.905	8.442	195.5	97.3	
								Kgo-10-B-1	-35.905	-8.442	195.5	97.3	
B-10-Kli-Kro-1	110.000	98.934	0.2	0	0	0	0	B-10-Kli-Kro-2	16.650	-8.013	98.0	-90.1	
								Kro-10-B-1	-16.650	8.013	98.0	-90.1	
B-10-Kli-Kro-2	110.000	99.146	-0.9	0	0	0	0	B-10-Kli-Kro-1	-16.539	7.489	96.1	-91.1	
								Kli-10-B-1	16.539	-7.489	96.1	-91.1	
B-10-Kli-Ny1-1	110.000	99.146	-0.9	0	0	0	0	B-10-Kli-Ny1-2	10.584	0.363	56.1	99.9	
								Kli-10-B-1	-10.584	-0.363	56.1	99.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Kli-Ny1-2	110.000	98.577	-1.5	0	0	0	0	B-10-Kli-Ny1-1	-10.530	-0.950	56.3	99.6	
								Ny1-10-B-1	10.530	0.950	56.3	99.6	
B-10-Kli-Rka-1	110.000	99.146	-0.9	0	0	0	0	B-10-Kli-Rka-2	4.107	0.081	21.7	100.0	
								Kli-10-B-1	-4.107	-0.081	21.7	100.0	
B-10-Kli-Rka-2	110.000	98.856	-1.2	0	0	0	0	B-10-Kli-Rka-1	-4.097	-0.896	22.3	97.7	
								Rka-10-B-1	4.097	0.896	22.3	97.7	
B-10-Kma-Rz3-1	110.000	100.505	7.0	0	0	0	0	B-10-Kma-Rz3-2	-23.896	1.276	125.0	-99.9	
								Kma-10-B-1	23.896	-1.276	125.0	-99.9	
B-10-Kma-Rz3-2	110.000	100.768	7.6	0	0	0	0	B-10-Kma-Rz3-1	23.971	-1.290	125.0	-99.9	
								Rz3-10-B-1	-23.971	1.290	125.0	-99.9	
B-10-Kma-Rz4-1	110.000	100.505	7.0	0	0	0	0	B-10-Kma-Rz4-2	-46.914	3.711	245.8	-99.7	
								Kma-10-B-1	46.914	-3.711	245.8	-99.7	
B-10-Kma-Rz4-2	110.000	101.400	9.1	0	0	0	0	B-10-Kma-Rz4-1	47.445	-2.494	245.9	-99.9	
								Rz4-10-B-1	-47.445	2.494	245.9	-99.9	
B-10-Kre-Nbu-1	110.000	98.035	-4.7	0	0	0	0	B-10-Kre-Nbu-2	-25.162	-7.645	140.8	95.7	
								Kre-10-B-1	25.162	7.645	140.8	95.7	
B-10-Kre-Nbu-2	110.000	99.391	-3.9	0	0	0	0	B-10-Kre-Nbu-1	25.396	7.644	140.1	95.8	
								Nbu-10-B-1	-25.396	-7.644	140.1	95.8	
B-10-MKi-Nbg-1	110.000	95.862	-5.0	0	0	0	0	B-10-MKi-Nbg-2	-1.247	1.278	9.8	-69.8	
								Nbg-10-B-1	1.247	-1.278	9.8	-69.8	
B-10-MKi-Nbg-2	110.000	95.842	-5.0	0	0	0	0	B-10-MKi-Nbg-1	1.247	-1.448	10.5	-65.2	
								MKi-10-B-1	-1.247	1.448	10.5	-65.2	
B-10-Mku-Nbi-1	110.000	96.408	-4.8	0	0	0	0	B-10-Mku-Nbi-1-2	-18.017	2.362	98.9	-99.2	
								Mku-10-B-1	18.017	-2.362	98.9	-99.2	
B-10-Mku-Nta-1	110.000	96.408	-4.8	0	0	0	0	B-10-Mku-Nta-2	-4.526	2.839	29.1	-84.7	
								Mku-10-B-1	4.526	-2.839	29.1	-84.7	
B-10-Mku-Nta-2	110.000	96.222	-4.5	0	0	0	0	B-10-Mku-Nta-1	4.537	-3.668	31.8	-77.8	
								Nta-10-B-1	-4.537	3.668	31.8	-77.8	
B-10-Mr1-Mr2-1	110.000	97.917	0.0	0	0	0	0	B-10-Mr1-Mr2-2	-2.654	-1.462	16.2	87.6	
								Mr1-10-B-1	2.654	1.462	16.2	87.6	
B-10-Mr1-Mr2-2	110.000	97.921	0.0	0	0	0	0	B-10-Mr1-Mr2-1	2.655	1.451	16.2	87.7	
								Mr2-10-B-2	-2.655	-1.451	16.2	87.7	
B-10-Mr2/Nte-1	110.000	97.921	0.0	0	0	0	0	10-Mr2/Nte-B	3.691	0.941	20.4	96.9	
								Mr2-10-B-2	-3.691	-0.941	20.4	96.9	
B-10-Mr2/Nte-2	110.000	97.727	-0.2	0	0	0	0	10-Mr2/Nte-B	-3.686	-1.578	21.5	91.9	
								Nte-10-B-1	3.686	1.578	21.5	91.9	
B-10-Mr2-Rz2-1	110.000	97.921	0.0	0	0	0	0	B-10-Mr2-Rz2-2	-6.345	-2.392	36.3	93.6	
								Mr2-10-B-1	6.345	2.392	36.3	93.6	
B-10-Mr2-Rz2-2	110.000	98.226	0.1	0	0	0	0	B-10-Mr2-Rz2-1	6.358	2.019	35.6	95.3	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rz2-10-B-1	-6.358	-2.019	35.6	95.3	
B-10-Msh-Nga-1	110.000	95.776	-6.2	0	0	0	0	B-10-Msh-Nga-2	0.417	-2.480	13.8	-16.6	
								Msh-10-B-1	-0.417	2.480	13.8	-16.6	
B-10-Msh-Nga-2	110.000	96.099	-6.3	0	0	0	0	B-10-Msh-Nga-1	-0.414	1.214	7.0	-32.3	
								Nga-10-B-1	0.414	-1.214	7.0	-32.3	
B-10-Msh-Rbo-1	110.000	95.776	-6.2	0	0	0	0	B-10-Msh-Rbo-2	-2.236	-2.718	19.3	63.5	
								Msh-10-B-1	2.236	2.718	19.3	63.5	
B-10-Msh-Rbo-2	110.000	95.932	-6.1	0	0	0	0	B-10-Msh-Rbo-1	2.239	2.448	18.1	67.5	
								Rbo-20-B-1	-2.239	-2.448	18.1	67.5	
B-10-Nbi-Nyl-1	110.000	97.007	-3.7	0	0	0	0	B-10-Nbi-Nyl-2	-21.164	1.132	114.7	-99.9	
								Nbi-10-B-1	21.164	-1.132	114.7	-99.9	
B-10-Nbi-Nyl-2	110.000	98.577	-1.5	0	0	0	0	B-10-Nbi-Nyl-1	21.558	-1.513	115.1	-99.8	
								Nyl-10-B-1	-21.558	1.513	115.1	-99.8	
B-10-Nga-Rln-1	110.000	96.099	-6.3	0	0	0	0	B-10-Nga-Rln-2	-6.264	0.291	34.3	-99.9	
								Nga-10-B-1	6.264	-0.291	34.3	-99.9	
B-10-Nga-Rln-2	110.000	96.498	-5.6	0	0	0	0	B-10-Nga-Rln-1	6.301	-1.402	35.1	-97.6	
								Rln-10-B-1	-6.301	1.402	35.1	-97.6	
B-10-Ny2-Rln-1	110.000	96.365	-5.5	0	0	0	0	B-10-Ny2-Rln-2	1.816	-3.597	21.9	-45.1	
								Ny2-10-B-1	-1.816	3.597	21.9	-45.1	
B-10-Ny2-Rln-2	110.000	96.498	-5.6	0	0	0	0	B-10-Ny2-Rln-1	-1.812	3.259	20.3	-48.6	
								Rln-10-B-1	1.812	-3.259	20.3	-48.6	
B-20-Bta-Gte-D	220.000	99.917	0.0	0	0	0	0	20-Gte-B	0.000	-7.119	18.7	0.0	
								Bta-20-B-1	0.000	7.119	18.7	0.0	
B-20-Bta-Mmb-1D	220.000	99.917	0.0	0	0	0	0	B-20-Bta-Mmb-2D	-17.750	1.899	46.9	-99.4	
								Bta-20-B-1	17.750	-1.899	46.9	-99.4	
B-20-Bta-Mmb-2D	220.000	99.915	0.1	0	0	0	0	B-20-Bta-Mmb-1D	17.755	-8.123	51.3	-90.9	
								Mmb-20-B-1	-17.755	8.123	51.3	-90.9	
B-20-Bwi-KB2-1	220.000	101.058	2.0	0	0	0	0	B-20-Bwi-KB2-2	0.000	-0.413	1.1	0.0	
								Bwi-20-B-1	0.000	0.413	1.1	0.0	
B-20-Bwi-KB2-2	220.000	101.058	2.0	0	0	0	0	B-20-Bwi-KB2-1	0.000	0.000	0.0	0.0	
								Kb2-20-B-1	0.000	0.000	0.0	0.0	
B-20-Bwi-KbW-1	220.000	101.058	2.0	0	0	0	0	B-20-Bwi-KbW-2	-74.798	7.323	195.2	-99.5	
								Bwi-20-B-1	74.798	-7.323	195.2	-99.5	
B-20-Bwi-KbW-2	220.000	101.080	2.1	0	0	0	0	B-20-Bwi-KbW-1	74.829	-7.690	195.3	-99.5	
								G-KbW-1-B-3	-74.829	7.690	195.3	-99.5	
B-20-Bwi-Kma-1	220.000	101.058	2.0	0	0	0	0	B-20-Bwi-Kma-2	-70.069	-1.588	182.0	100.0	
								Bwi-20-B-1	70.069	1.588	182.0	100.0	
B-20-Bwi-Kma-2	220.000	101.822	4.5	0	0	0	0	B-20-Bwi-Kma-1	70.741	-8.104	183.5	-99.4	
								Kma-20-B-1	-70.741	8.104	183.5	-99.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-20-Bwi-Rba-1D	220.000	101.058	2.0	0	0	0	0	B-20-Bwi-Rba-2D	56.810	-17.961	154.7	-95.3	
								Bwi-20-B-1	-56.810	17.961	154.7	-95.3	
B-20-Bwi-Rba-2D	220.000	100.978	1.4	0	0	0	0	B-20-Bwi-Rba-1D	-56.678	1.328	147.3	-100.0	
								Rba-20-B-1	56.678	-1.328	147.3	-100.0	
B-20-Gma-Rba-2	220.000	100.978	1.4	0	0	0	0	20-Gma-B	0.000	-2.885	7.5	0.0	
								Rba-20-B-1	0.000	2.885	7.5	0.0	
B-20-Kgo-Kli-1	220.000	99.772	0.0	0	0	0	0	B-20-Kgo-Kli-2	-68.628	-11.107	182.9	98.7	
								Kgo-20-B-1	68.628	11.107	182.9	98.7	
B-20-Kgo-Kli-2	220.000	100.131	0.6	0	0	0	0	B-20-Kgo-Kli-1	68.779	9.012	181.8	99.2	
								Kli-20-B-1	-68.779	-9.012	181.8	99.2	
B-20-Kgo-Rwa-1	220.000	99.772	0.0	0	0	0	0	B-20-Kgo-Rwa-2	47.707	-5.706	126.4	-99.3	
								Kgo-20-B-1	-47.707	5.706	126.4	-99.3	
B-20-Kgo-Rwa-2	220.000	99.718	-0.2	0	0	0	0	B-20-Kgo-Rwa-1	-47.659	4.065	125.9	-99.6	
								Rwa-20-B-1	47.659	-4.065	125.9	-99.6	
B-20-Kli-Bwi-1	220.000	101.058	2.0	0	0	0	0	B-20-Kli-Bwi-2	85.070	11.104	222.8	99.2	
								Bwi-20-B-1	-85.070	-11.104	222.8	99.2	
B-20-Kli-Bwi-2	220.000	100.131	0.6	0	0	0	0	B-20-Kli-Bwi-1	-84.599	-14.785	225.1	98.5	
								Kli-20-B-1	84.599	14.785	225.1	98.5	
B-20-Kri-Rba-1	220.000	100.999	1.4	0	0	0	0	B-20-Kri-Rba-2	0.000	0.000	0.0	0.0	
								Kri-20-B-1	0.000	0.000	0.0	0.0	
B-20-Kri-Rba-2	220.000	100.978	1.4	0	0	0	0	B-20-Kri-Rba-1	0.000	-2.885	7.5	0.0	
								Rba-20-B-1	0.000	2.885	7.5	0.0	
B-20-Mmb-Rwa-1D	220.000	99.915	0.1	0	0	0	0	B-20-Mmb-Rwa-2D	54.810	-2.013	144.1	-99.9	
								Mmb-20-B-1	-54.810	2.013	144.1	-99.9	
B-20-Mmb-Rwa-2D	220.000	99.718	-0.2	0	0	0	0	B-20-Mmb-Rwa-1D	-54.724	-9.404	146.1	98.6	
								Rwa-20-B-1	54.724	9.404	146.1	98.6	
B-20-Mra-Sha-2D	220.000	99.372	-0.7	0	0	0	0	20-Mra-B	-48.540	-24.719	143.9	89.1	
								Sha-20-B-1	48.540	24.719	143.9	89.1	
B-20-Nbu-Rsu-1	220.000	99.488	-0.9	0	0	0	0	B-20-Nbu-Rsu-2	-32.103	-13.082	91.4	92.6	
								Nbu-20-B-1	32.103	13.082	91.4	92.6	
B-20-Nbu-Rsu-2	220.000	99.495	-0.9	0	0	0	0	B-20-Nbu-Rsu-1	32.104	13.020	91.4	92.7	
								Rsu-20-B-1	-32.104	-13.020	91.4	92.7	
B-20-Rba-Sha-1	220.000	100.978	1.4	0	0	0	0	B-20-Rba-Sha-2	53.695	4.022	139.9	99.7	
								Rba-20-B-1	-53.695	-4.022	139.9	99.7	
B-20-Rba-Sha-2	220.000	99.372	-0.7	0	0	0	0	B-20-Rba-Sha-1	-53.221	-16.211	146.9	95.7	
								Sha-20-B-1	53.221	16.211	146.9	95.7	
B-20-Rlm-Rsu-1D	220.000	99.523	-0.6	0	0	0	0	B-20-Rlm-Rsu-2D	17.140	-18.130	65.8	-68.7	
								Rlm-20-B-1	-17.140	18.130	65.8	-68.7	
B-20-Rlm-Rsu-2D	220.000	99.495	-0.9	0	0	0	0	B-20-Rlm-Rsu-1D	-17.125	-13.968	58.3	77.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rsu-20-B-1	17.125	13.968	58.3	77.5	
B-20-Rlm-Rwa-1D	220.000	99.523	-0.6	0	0	0	0	B-20-Rlm-Rwa-2D	-95.159	-8.174	251.8	99.6	
								Rlm-20-B-1	95.159	8.174	251.8	99.6	
B-20-Rlm-Rwa-2D	220.000	99.718	-0.2	0	0	0	0	B-20-Rlm-Rwa-1D	95.315	1.787	250.9	100.0	
								Rwa-20-B-1	-95.315	-1.787	250.9	100.0	
B-20-Sha-Rlm-1D	220.000	99.372	-0.7	0	0	0	0	B-20-Sha-Rlm-2D	-15.281	-14.011	54.8	73.7	
								Sha-20-B-1	15.281	14.011	54.8	73.7	
B-20-Sha-Rlm-2D	220.000	99.523	-0.6	0	0	0	0	B-20-Sha-Rlm-1D	15.292	-2.340	40.8	-98.8	
								Rlm-20-B-1	-15.292	2.340	40.8	-98.8	
B-20-Smb-Rba-1	220.000	100.981	1.4	0	0	0	0	B-20-Smb-Rba-2	0.000	0.000	0.0	0.0	
								Smb-20-B-1	0.000	0.000	0.0	0.0	
B-20-Smb-Rba-2	220.000	100.978	1.4	0	0	0	0	B-20-Smb-Rba-1	0.000	-1.113	2.9	0.0	
								Rba-20-B-1	0.000	1.113	2.9	0.0	
B-6-Mr1-Rz1-1	6.600	99.291	-1.6	0	0	0	0	B-6-Mr1-Rz1-2	-1.732	-1.010	176.7	86.4	
								Mr1-6-B-1	1.732	1.010	176.7	86.4	
B-6-Mr1-Rz1-2	6.600	100.179	-1.3	0	0	0	0	B-6-Mr1-Rz1-1	1.743	1.027	176.7	86.2	
								Rz1-6-B-1	-1.743	-1.027	176.7	86.2	
B-B-10-Mku-Nbi-1-2	110.000	97.007	-3.7	0	0	0	0	B-10-Mku-Nbi-1	18.177	-2.667	99.4	-98.9	
								Nbi-10-B-1	-18.177	2.667	99.4	-98.9	
Bga-3-B-1	30.000	99.441	-4.2	0	0	17.542	8.496	Bga-10-B-1	-17.542	-8.496	377.2	90.0	
Bga-10-B-1	110.000	97.214	-0.2	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	17.578	10.096	109.4	86.7	-6.000
								B-10-Bga-Nte-1	-2.678	-4.509	28.3	51.1	
								B-10-Bga-Gsh-1	-14.900	-5.587	85.9	93.6	
Bga-6-B-1	6.600	97.214	-0.2	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
Bre-1-B-1	15.000	99.106	-6.8	0	0	17.941	8.689	Bre-10-B-1	-8.970	-4.345	387.1	90.0	
								Bre-10-B-1	-8.970	-4.345	387.1	90.0	
Bre-10-B-1	110.000	97.648	-4.2	0	0	0	0	Bre-1-B-1	8.994	4.873	55.0	87.9	-4.000
								Bre-1-B-1	8.994	4.873	55.0	87.9	-4.000
								B-10-Bre-Jb1-1	49.637	21.342	290.4	91.9	
								B-10-Bre-Sha-1D	-103.606	-40.397	597.7	93.2	
								B-10-Bre-Gso-1	35.980	9.310	199.8	96.8	
Bta-3-B-1	30.000	99.706	-2.9	0	0	7.162	3.469	Bta-10-B-1	-7.162	-3.469	153.6	90.0	
Bta-10-B-1	110.000	99.239	-1.2	0	0	0	0	Bta-3-B-1	7.168	3.734	42.7	88.7	-2.000
								Bta-20-B-1	-17.741	-4.792	97.2	96.5	
								B-10-Bta-Kgo-1	6.273	-2.368	35.5	-93.6	
								B-10-Bta-Hye-1	4.299	3.426	29.1	78.2	
Bta-20-B-1	220.000	99.917	0.0	0	0	0	0	Bta-10-B-1	17.750	5.221	48.6	95.9	
								B-20-Bta-Mmb-1D	-17.750	1.899	46.9	-99.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-20-Bta-Gte-D	0.000	-7.119	18.7	0.0	
Bwi-3-B-1	30.000	99.632	0.6	0	0	2.980	1.443	Bwi-20-B-1	-2.980	-1.443	64.0	90.0	
Bwi-10-B-1	110.000	101.058	2.0	0	0	0	0	Bwi-20-B-1	0.000	0.000	0.0	0.0	
Bwi-20-B-1	220.000	101.058	2.0	0	0	0	0	Bwi-10-B-1	0.000	0.000	0.0	0.0	
								Bwi-3-B-1	2.987	1.535	8.7	88.9	
								B-20-Bwi-Rba-1D	56.810	-17.961	154.7	-95.3	
								B-20-Kli-Bwi-1	85.070	11.104	222.8	99.2	
								B-20-Bwi-Kma-1	-70.069	-1.588	182.0	100.0	
								B-20-Bwi-KB2-1	0.000	-0.413	1.1	0.0	
								B-20-Bwi-KbW-1	-74.798	7.323	195.2	-99.5	
C-Gfu-B-3	30.000	100.193	-7.3	0	0	0.000	-13.050	Gfu-3-B-1	0.000	13.050	250.7	0.0	
C-Gsh-1-B	11.000	100.000	3.0	0	0	0	0	Gsh-1-B-1	0.000	0.000	0.0	0.0	
C-MKi-3-B	30.000	96.243	-6.7	0	0	0	0	MKi-3-B-1	0.000	0.000	0.0	0.0	
C-Mku-B-6	6.600	99.439	-6.6	0	0	0.000	-9.888	Mku-6-B-6	0.000	9.888	869.9	0.0	
C-Msh-1-B	15.000	96.992	-9.5	0	0	0.000	-9.407	Msh-1-B-1	0.000	9.407	373.3	0.0	
C-Nde-B	30.000	99.221	-6.8	0	0	0	0	Nde-3-B-1	0.000	0.000	0.0	0.0	
C-Nga-B-3	30.000	99.719	-8.3	0	0	0.000	-4.972	Nga-3-B-1	0.000	4.972	96.0	0.0	
C-Rbo-B-3	30.000	99.790	-7.9	0	0	0.000	-9.958	Rbo-3-B-1	0.000	9.958	192.0	0.0	
C-Rln-3-B	30.000	99.627	-7.7	0	0	0.000	-9.926	Rln-3-B-1	0.000	9.926	191.7	0.0	
C-Rwi-B-1	15.000	99.886	-8.1	0	0	0.000	-4.989	Rwi-1-B-1	0.000	4.989	192.2	0.0	
Cyi-3-B-1	30.000	99.443	1.3	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.149	-0.003	2.9	-100.0	
								G-Cyi-3-B	-0.149	0.003	2.9	-100.0	
Cyi-3-B-2	30.000	99.443	1.3	0	0	0	0	N-Cyi-04-1	-0.149	0.003	2.9	-100.0	
								G-Cyi-3-B	0.149	-0.003	2.9	-100.0	
G-Cyi-3-B	30.000	99.443	1.3	0	0	0	0	Cyi-3-B-1	0.149	-0.003	2.9	-100.0	
								Cyi-3-B-2	-0.149	0.003	2.9	-100.0	
Gfu-3-B-1	30.000	100.193	-7.3	0	0	6.723	3.256	Gfu-10-B-1	-2.241	3.265	76.1	-56.6	
								Gfu-10-B-1	-2.241	3.265	76.1	-56.6	
								Gfu-10-B-1	-2.241	3.265	76.1	-56.6	
								C-Gfu-B-3	0.000	-13.050	250.7	0.0	
Gfu-10-B-1	110.000	96.697	-5.5	0	0	0	0	Gfu-3-B-1	2.263	-3.080	20.7	-59.2	
								Gfu-3-B-1	2.263	-3.080	20.7	-59.2	
								Gfu-3-B-1	2.263	-3.080	20.7	-59.2	
								10-Gfu/Mku/Rln-B	-6.788	9.239	62.2	-59.2	
G-Gko-1-B	15.000	99.813	-7.1	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-1-B-2	0.000	0.000	0.0	0.0	
G-Gko-3-B	15.000	99.813	-7.1	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-3-B	0.000	0.000	0.0	0.0	
G-Gko-10-B	110.000	95.802	-5.1	0	0	0	0	Gko-10-B-1	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Gko-10-B-2	0.000	0.000	0.0	0.0	
G-Gsh-1-B	11.000	100.000	3.0	0	0	0	0	Gsh-1-B-1	15.000	6.279	853.5	92.2	
								Gsh-1-B-2	-15.000	-6.279	853.5	92.2	
Gha-3-B-1	30.000	98.914	-7.0	0	0	12.061	5.841	Gha-10-B-1	-12.061	-5.841	260.7	90.0	
Gha-10-B-1	110.000	95.478	-5.3	0	0	0	0	Gha-3-B-1	12.071	6.300	74.9	88.7	-5.000
								B-10-Gha-MKi-1	-16.217	-3.319	91.0	98.0	
								B-10-Gha-Nde-1	4.146	-2.981	28.1	-81.2	
G-Jb2-10-B	110.000	96.273	-4.9	0	0	0	0	Jb2-10-B-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
G-Jb3-1-B	15.000	98.952	-7.4	0	0	0	0	Jb3-1-B-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-2	0.000	0.000	0.0	0.0	
G-KbW-1-B-1	11.000	102.037	8.8	0	0	0	0	KbW-1-B-3	-17.000	0.000	874.5	100.0	
								KbW-1-B-2	17.000	0.000	874.5	100.0	
G-KbW-1-B-2	11.000	102.037	8.8	0	0	0	0	KbW-1-B-1	8.000	0.000	411.5	100.0	
								KbW-1-B-4	-8.000	0.000	411.5	100.0	
G-KbW-1-B-3	220.000	101.080	2.1	0	0	0	0	B-20-Bwi-KbW-2	74.829	-7.690	195.3	-99.5	
								KbW-20-B-2	-74.829	7.690	195.3	-99.5	
Gko-1-B-1	15.000	99.813	-7.1	0	0	18.544	8.981	Gko-10-B-1	-6.181	-2.994	264.9	90.0	
								Gko-10-B-1	-6.181	-2.994	264.9	90.0	
								Gko-10-B-1	-6.181	-2.994	264.9	90.0	
								G-Gko-1-B	0.000	0.000	0.0	0.0	
								G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-1-B-2	15.000	99.813	-7.1	0	0	0	0	G-Gko-1-B	0.000	0.000	0.0	0.0	
Gko-3-B	15.000	99.813	-7.1	0	0	0	0	G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-10-B-1	110.000	95.802	-5.1	0	0	0	0	Gko-1-B-1	6.197	3.284	38.4	88.4	-6.000
								Gko-1-B-1	6.197	3.284	38.4	88.4	-6.000
								Gko-1-B-1	6.197	3.284	38.4	88.4	-6.000
								B-10-Gko-Jb1-1	-12.424	-9.856	86.9	78.3	
								B-10-Gko-MKi-1	-6.166	0.005	33.8	100.0	
								G-Gko-10-B	0.000	0.000	0.0	0.0	
Gko-10-B-2	110.000	95.802	-5.1	0	0	0	0	G-Gko-10-B	0.000	0.000	0.0	0.0	
G-Kse-1-B	110.000	95.867	-5.4	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Mku-10-B	110.000	96.408	-4.8	0	0	0	0	Mku-10-B-1	0.000	0.000	0.0	0.0	
								Mku-10-B-2	0.000	0.000	0.0	0.0	
G-Mku-6-B	6.600	99.439	-6.6	0	0	0	0	Mku-6-B-4	12.000	0.000	1055.7	100.0	
								Mku-6-B-2	-12.000	0.000	1055.7	100.0	
G-Mmb-3-B	30.000	99.267	5.4	0	0	0	0	Mmb-3-B-1	79.820	0.025	1547.5	100.0	
								Mmb-3-B-2	-79.820	-0.025	1547.5	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
G-Mus-3-B	30.000	99.239	-1.4	0	0	0	0	Mus-3-B	-0.997	-0.728	23.9	80.8	
								Rka-3-B-1	0.997	0.728	23.9	80.8	
G-Nko-3-B	30.000	99.492	1.3	0	0	0	0	Nko-3-B-1	0.299	-0.007	5.8	-100.0	
								Nko-3-B-2	-0.299	0.007	5.8	-100.0	
G-NtB-3-B	30.000	97.902	-3.3	0	0	0	0	Kgo-3-B-1	2.494	1.793	60.4	81.2	
								NtB-3-B1	-2.494	-1.793	60.4	81.2	
G-Ny1-3-B	30.000	99.054	0.1	0	0	0	0	Ny1-3-B-1	13.984	-0.713	272.0	-99.9	
								Ny1-3-B-2	-13.984	0.713	272.0	-99.9	
G-Ny2-3-B	30.000	99.716	-4.9	0	0	0	0	Ny2-3-B-1	8.486	-0.290	163.9	-99.9	
								Ny2-3-B-2	-8.486	0.290	163.9	-99.9	
G-Rka5-3-B	30.000	99.239	-1.4	0	0	0	0	Rka5-3-B	-1.496	-0.340	29.8	97.5	
								Rka-3-B-1	1.496	0.340	29.8	97.5	
G-Rka-3-B	30.000	99.239	-1.4	0	0	0	0	Rka-3-B-1	3.342	0.604	65.9	98.4	
								Rka-3-B-2	-3.342	-0.604	65.9	98.4	
G-Rsu-10-B	110.000	99.423	0.6	0	0	0	0	Rsu-10-B-1	14.987	-0.569	79.2	-99.9	
								Rsu-10-B-2	-14.987	0.569	79.2	-99.9	
G-Rwa-3-B	30.000	98.954	-1.1	0	0	0	0	Rwa-3-B-1	0.000	0.000	0.0	0.0	
								Rwa-3-B-2	0.000	0.000	0.0	0.0	
G-Rz1-.06-B	0.600	101.951	0.0	0	0	0	0	N-Rz1-.06-B-1-1	1.750	1.085	1943.4	85.0	
								N-Rz1-.06-B-1-2	-1.750	-1.085	1943.4	85.0	
G-Rz2-.6-B	6.600	100.000	2.7	0	0	0	0	Rz2-.6-B-1-1	6.375	2.341	594.1	93.9	
								Rz2-.6-B-1-2	-6.375	-2.341	594.1	93.9	
G-Rz3-.6-B	6.600	100.742	10.7	0	0	0	0	Rz3-.6-B-1-1	24.000	0.000	2084.0	100.0	
								N-Rz4-.6-1	-24.000	0.000	2084.0	100.0	
G-Rz4-.6-B	6.600	101.378	12.1	0	0	0	0	Rz4-.6-B-1-1	47.500	0.000	4098.7	100.0	
								Rz4-.6-B-1-2	-47.500	0.000	4098.7	100.0	
Gsh-1-B-1	11.000	100.000	3.0	0	0	0	0	Gsh-10-B	7.500	3.140	426.7	92.2	
								Gsh-10-B	7.500	3.140	426.7	92.2	
								G-Gsh-1-B	-15.000	-6.279	853.5	92.2	
								C-Gsh-1-B	0.000	0.000	0.0	0.0	
* Gsh-1-B-2	11.000	100.000	3.0	15.000	6.279	0	0	G-Gsh-1-B	15.000	6.279	853.5	92.2	
Gsh-10-B	110.000	97.782	0.1	0	0	0	0	Gsh-1-B-1	-7.478	-2.699	42.7	94.1	
								Gsh-1-B-1	-7.478	-2.699	42.7	94.1	
								B-10-Bga-Gsh-2	14.956	5.399	85.3	94.1	
G-Smb-1-B	11.000	100.981	1.4	0	0	0	0	N-Smb-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2N	0.000	0.000	0.0	0.0	
Gso-1-B-1	15.000	99.318	-7.1	0	0	12.150	5.884	Gso-10-B-1	-12.150	-5.884	523.2	90.0	
Gso-10-B-1	110.000	95.867	-5.4	0	0	0	0	Gso-1-B-1	12.160	6.346	75.1	88.7	-5.000
								B-10-Gso-Nde-1	8.028	8.705	64.8	67.8	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								10-Bre/Gso/Msh-B	-20.188	-15.051	137.9	80.2	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Hye-3-B-1	30.000	99.235	-2.9	0	0	7.101	3.439	Hye-10-B-1	-7.101	-3.439	153.0	90.0	
Hye-10-B-1	110.000	98.785	-1.3	0	0	0	0	Hye-3-B-1	7.114	3.692	42.6	88.8	-2.000
								B-10-Bta-Hye-2	-4.287	-3.962	31.0	73.4	
								B-10-Hye-Rka-1	-2.827	0.270	15.1	-99.5	
Jb1-10-B-1	110.000	96.273	-4.9	0	0	0	0	Jb1-1-B-1	17.919	9.677	111.0	88.0	-5.000
								B-10-Jb1-Jb2-1	0.000	-0.036	0.2	0.0	
								B-10-Jb1-Rln-2	7.817	-6.085	54.0	-78.9	
								B-10-Bre-Jb1-2	-49.195	-20.639	290.9	92.2	
								B-10-Gko-Jb1-2	12.454	9.674	86.0	79.0	
								B-10-Jb1-Nbg-1	11.006	7.410	72.3	83.0	
Jb1-1-B-1	15.000	98.952	-7.4	0	0	17.896	8.668	Jb1-10-B-1	-17.896	-8.667	773.5	90.0	
								B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
Jb2-6-B-1	6.600	99.251	-4.9	0	0	0	0	Jb2-10-B-2	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
Jb2-10-B-1	110.000	96.273	-4.9	0	0	0	0	B-10-Jb1-Jb2-2	0.000	0.000	0.0	0.0	
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb2-10-B-2	110.000	96.273	-4.9	0	0	0	0	Jb2-6-B-1	0.000	0.000	0.0	0.0	-3.000
								Jb2-6-B-1	0.000	0.000	0.0	0.0	-3.000
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb3-1-B-1	15.000	98.952	-7.4	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								G-Jb3-1-B	0.000	0.000	0.0	0.0	
Jb3-1-B-2	15.000	98.952	-7.4	0	0	0	0	G-Jb3-1-B	0.000	0.000	0.0	0.0	
								Jb3-1-B-2d	0.000	0.000	0.0	0.0	
Jb3-1-B-2d	15.000	98.952	-7.4	0	0	0	0	Jb3-1-B-2	0.000	0.000	0.0	0.0	
Kb2-20-B-1	220.000	101.058	2.0	0	0	0	0	B-20-Bwi-KB2-2	0.000	0.000	0.0	0.0	
Kba-3-B-1	30.000	99.214	-8.9	0	0	6.606	3.199	Kba-10-B-1	-6.606	-3.199	142.4	90.0	
Kba-10-B-1	110.000	96.316	-6.0	0	0	0	0	Kba-3-B-1	6.641	3.655	41.3	87.6	-6.000
								10-Kba/Msh/Rwi-B	11.544	0.857	63.1	99.7	
								B-10-Kba-Kre-1	-18.185	-4.512	102.1	97.1	
Kbo-3-B-1	30.000	97.200	-2.8	0	0	2.851	1.381	Kbo-10-B-1	-2.851	-1.381	62.7	90.0	
Kbo-10-B-1	110.000	98.058	-0.1	0	0	0	0	Kbo-3-B-1	2.866	1.556	17.5	87.9	-2.000
								10-Kbo/Kro/Mr2-B	-2.866	-1.556	17.5	87.9	
Kbu-1-B-1	11.000	98.889	3.8	0	0	0	0	Kbu-3-B-1	1.957	-0.502	107.2	-96.9	
								Kbu-10-B-1	10.817	-0.811	575.8	-99.7	
								Kbu-10-B-1	11.360	-0.822	604.5	-99.7	
								B-1-Kbu-KbW-1F_T	-24.134	2.134	1286.0	-99.6	
Kbu-3-B-1	30.000	98.742	1.2	0	0	0	0	Kbu-1-B-1	-1.949	0.594	39.7	-95.7	-1.000

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-3-Kbu-Kro/Nko-2	1.949	-0.594	39.7	-95.7	
Kbu-10-B-1	110.000	99.144	0.8	0	0	0	0	Kbu-1-B-1	-10.787	1.384	57.6	-99.2	
								Kbu-1-B-1	-11.330	1.424	60.5	-99.2	
								B-10-Kbu-Kro-1	22.117	-2.808	118.0	-99.2	
Kbw-1-B-1	11.000	102.037	8.8	0	0	0	0	Kbw-1-B-2	8.000	0.000	411.5	100.0	
								G-Kbw-1-B-2	-8.000	0.000	411.5	100.0	
Kbw-1-B-2	11.000	102.037	8.8	0	0	0	0	Kbw-1-B-1	-8.000	0.000	411.5	100.0	
								B-1-Kbu-Kbw-2F_T	25.000	0.000	1286.0	100.0	
								G-Kbw-1-B-1	-17.000	0.000	874.5	100.0	
Kbw-1-B-3	11.000	102.037	8.8	17.000	0.000	0	0	G-Kbw-1-B-1	17.000	0.000	874.5	100.0	
Kbw-1-B-4	11.000	102.037	8.8	8.000	0.000	0	0	G-Kbw-1-B-2	8.000	0.000	411.5	100.0	
Kbw-1-B-5	20.000	100.780	7.9	75.000	0.000	0	0	Kbw-20-B-2	75.000	0.000	2148.3	100.0	
Kbw-20-B-2	220.000	101.080	2.1	0	0	0	0	Kbw-1-B-5	-74.829	7.690	195.3	-99.5	
								G-Kbw-1-B-3	74.829	-7.690	195.3	-99.5	
Kgo-3-B-1	30.000	97.902	-3.3	0	0	8.314	4.027	Kgo-10-B-1	-2.910	-1.117	61.3	93.4	
								Kgo-10-B-1	-2.910	-1.117	61.3	93.4	
								G-NtB-3-B	-2.494	-1.793	60.4	81.2	
Kgo-10-B-1	110.000	99.037	-1.9	0	0	0	0	Kgo-3-B-1	2.916	1.201	16.7	92.5	
								Kgo-3-B-1	2.916	1.201	16.7	92.5	
								Kgo-20-B-1	-20.895	-15.655	138.4	80.0	
								B-10-Kgo-MKi-2	35.905	8.442	195.5	97.3	
								B-10-Kgo-Kli-1	-14.602	3.550	79.6	-97.2	
								B-10-Bta-Kgo-2	-6.239	1.261	33.7	-98.0	
Kgo-20-B-1	220.000	99.772	0.0	0	0	0	0	Kgo-10-B-1	20.921	16.813	70.6	77.9	-2.000
								B-20-Kgo-Kli-1	-68.628	-11.107	182.9	98.7	
								B-20-Kgo-Rwa-1	47.707	-5.706	126.4	-99.3	
Kli-3-B-1	30.000	99.030	-3.5	0	0	2.948	1.428	Kli-10-B-1	-2.948	-1.428	63.7	90.0	
Kli-10-B-1	110.000	99.146	-0.9	0	0	0	0	Kli-3-B-1	2.974	1.608	17.9	88.0	-3.000
								Kli-20-B-1	-15.810	-5.301	88.3	94.8	
								B-10-Kgo-Kli-2	14.685	-4.240	80.9	-96.1	
								B-10-Kli-Kro-2	-16.539	7.489	96.1	-91.1	
								B-10-Kli-Rka-1	4.107	0.081	21.7	100.0	
								B-10-Kli-Ny1-1	10.584	0.363	56.1	99.9	
Kli-20-B-1	220.000	100.131	0.6	0	0	0	0	Kli-10-B-1	15.820	5.773	44.1	93.9	
								B-20-Kgo-Kli-2	68.779	9.012	181.8	99.2	
								B-20-Kli-Bwi-2	-84.599	-14.785	225.1	98.5	
Kma-10-B-1	110.000	100.505	7.0	0	0	0	0	Kma-20-B-1	35.405	-2.494	185.4	-99.8	
								Kma-20-B-1	35.405	-2.494	185.4	-99.8	
								B-10-Kma-Rz3-1	-23.896	1.276	125.0	-99.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Kma-20-B-1	220.000	101.822	4.5	0	0	0	0	B-10-Kma-Rz4-1	-46.914	3.711	245.8	-99.7	
								Kma-10-B-1	-35.370	4.052	91.8	-99.4	1.000
								Kma-10-B-1	-35.370	4.052	91.8	-99.4	1.000
Kre-3-B-1	30.000	100.275	-6.6	0	0	6.733	3.261	B-20-Bwi-Kma-2	70.741	-8.104	183.5	-99.4	
								Kre-10-B-1	-6.733	-3.261	143.6	90.0	
Kre-10-B-1	110.000	98.035	-4.7	0	0	0	0	Kre-3-B-1	6.747	3.539	40.8	88.6	-4.000
								B-10-Kba-Kre-2	18.415	4.106	101.0	97.6	
								B-10-Kre-Nbu-1	-25.162	-7.645	140.8	95.7	
Kri-20-B-1	220.000	100.999	1.4	0	0	0	0	B-20-Kri-Rba-1	0.000	0.000	0.0	0.0	
Kro-3-B-1	30.000	97.814	-0.2	0	0	2.883	1.396	Kro-10-B-1	-0.522	-1.813	37.1	27.7	
								B-3-Kbu-Kro-2	-2.361	0.417	47.2	-98.5	
								Kro-3-B-1	0.527	1.875	10.3	27.1	-2.000
Kro-10-B-1	110.000	98.934	0.2	0	0	0	0	B-10-Kbu-Kro-2	-22.042	2.639	117.8	-99.3	
								B-10-Kbo-Kro-1	4.865	3.499	31.8	81.2	
								B-10-Kli-Kro-1	16.650	-8.013	98.0	-90.1	
Kse-10-B1	110.000	95.867	-5.4	0	0	0	0	G-Kse-1-B	0.000	0.000	0.0	0.0	
MKi-3-B-1	30.000	96.243	-6.7	0	0	11.484	5.562	MKi-10-B-1	-11.484	-5.562	255.1	90.0	
								C-MKi-3-B	0.000	0.000	0.0	0.0	
								MKi-3-B-1	11.494	6.001	71.0	88.6	-2.000
MKi-10-B-1	110.000	95.842	-5.0	0	0	0	0	10-Gko/Kgo/MKi-B	-29.003	-7.755	164.4	96.6	
								B-10-MKi-Nbg-2	1.247	-1.448	10.5	-65.2	
								B-10-Gha-MKi-2	16.263	3.203	90.8	98.1	
Mku-3-B-1	30.000	97.626	-9.5	0	0	24.232	11.736	Mku-6-B-1	-12.116	-5.868	265.4	90.0	1.000
								Mku-6-B-3	-12.116	-5.868	265.4	90.0	1.000
Mku-10-B-1	110.000	96.408	-4.8	0	0	0	0	Mku-6-B-5	12.277	3.875	70.1	95.4	-4.000
								B-10-Gfu-Mku-2	10.266	-9.075	74.6	-74.9	
								B-10-Mku-Nta-1	-4.526	2.839	29.1	-84.7	
Mku-10-B-2	110.000	96.408	-4.8	0	0	0	0	B-10-Mku-Nbi-1	-18.017	2.362	98.9	-99.2	
								G-Mku-10-B	0.000	0.000	0.0	0.0	
								G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-6-B-1	6.600	99.439	-6.6	0	0	0	0	Mku-3-B-1	12.134	6.676	1218.3	87.6	
								Mku-6-B-4	-6.000	0.000	527.8	100.0	
								Mku-6-B-3	0.000	-2.472	217.5	0.0	
								Mku-6-B-5	-6.134	-1.732	560.7	96.2	
								Mku-6-B-6	0.000	-2.472	217.5	0.0	
Mku-6-B-2	6.600	99.439	-6.6	12.000	0.000	0	0	G-Mku-6-B	12.000	0.000	1055.7	100.0	
Mku-6-B-3	6.600	99.439	-6.6	0	0	0	0	Mku-3-B-1	12.134	6.676	1218.3	87.6	
								Mku-6-B-4	-6.000	0.000	527.8	100.0	
								Mku-6-B-1	0.000	2.472	217.5	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-6-B-5	-6.134	-1.732	560.7	96.2	
								Mku-6-B-6	0.000	-7.416	652.4	0.0	
Mku-6-B-4	6.600	99.439	-6.6	0	0	0	0	Mku-6-B-1	6.000	0.000	527.8	100.0	
								Mku-6-B-3	6.000	0.000	527.8	100.0	
								G-Mku-6-B	-12.000	0.000	1055.7	100.0	
Mku-6-B-5	6.600	99.439	-6.6	0	0	0	0	Mku-10-B-1	-12.268	-3.464	1121.4	96.2	
								Mku-6-B-1	6.134	1.732	560.7	96.2	
								Mku-6-B-3	6.134	1.732	560.7	96.2	
Mku-6-B-6	6.600	99.439	-6.6	0	0	0	0	C-Mku-B-6	0.000	-9.888	869.9	0.0	
								Mku-6-B-3	0.000	7.416	652.4	0.0	
								Mku-6-B-1	0.000	2.472	217.5	0.0	
Mmb-3-B-1	30.000	99.267	5.4	0	0	7.105	3.441	Mmb-20-B-1	72.715	-3.416	1411.3	-99.9	
								G-Mmb-3-B	-79.820	-0.025	1547.5	100.0	
Mmb-3-B-2	30.000	99.267	5.4	0	0	0	0	N-Mmb-6-1	-39.910	-0.013	773.7	100.0	
								N-Mmb-6-2	-39.910	-0.013	773.7	100.0	
								G-Mmb-3-B	79.820	0.025	1547.5	100.0	
Mmb-20-B-1	220.000	99.915	0.1	0	0	0	0	Mmb-3-B-1	-72.566	10.136	192.4	-99.0	
								B-20-Mmb-Rwa-1D	54.810	-2.013	144.1	-99.9	
								B-20-Bta-Mmb-2D	17.755	-8.123	51.3	-90.9	
Mr1-6-B-1	6.600	99.291	-1.6	0	0	0	0	Mr1-10-B-1	-2.649	-1.368	262.6	88.9	
								Mr1-3-B-1	4.381	2.378	439.2	87.9	
								B-6-Mr1-Rz1-1	-1.732	-1.010	176.7	86.4	
Mr1-10-B-1	110.000	97.917	0.0	0	0	0	0	Mr1-6-B-1	2.654	1.462	16.2	87.6	-3.000
								B-10-Mr1-Mr2-1	-2.654	-1.462	16.2	87.6	
Mr1-3-B-1	30.000	99.493	-4.2	0	0	4.364	2.114	Mr1-6-B-1	-4.364	-2.114	93.8	90.0	3.000
Mr2-10-B-1	110.000	97.921	0.0	0	0	0	0	B-10-Mr2-Rz2-1	-6.345	-2.392	36.3	93.6	
								Mr2-10-B-2	6.345	2.392	36.3	93.6	
Mr2-10-B-2	110.000	97.921	0.0	0	0	0	0	B-10-Mr2/Nte-1	3.691	0.941	20.4	96.9	
								B-10-Mr1-Mr2-2	2.655	1.451	16.2	87.7	
								Mr2-10-B-1	-6.345	-2.392	36.3	93.6	
Msh-1-B-1	15.000	96.992	-9.5	0	0	21.814	10.565	Msh-10-B-1	-10.907	-0.579	433.4	99.9	
								Msh-10-B-1	-10.907	-0.579	433.4	99.9	
								C-Msh-1-B	0.000	-9.407	373.3	0.0	
Msh-10-B-1	110.000	95.776	-6.2	0	0	0	0	Msh-1-B-1	10.939	1.212	60.3	99.4	-2.000
								Msh-1-B-1	10.939	1.212	60.3	99.4	-2.000
								B-10-Gso-Msh-2	-15.238	5.990	89.7	-93.1	
								B-10-Kba-Msh-2	-4.821	-3.217	31.8	83.2	
								B-10-Msh-Nga-1	0.417	-2.480	13.8	-16.6	
								B-10-Msh-Rbo-1	-2.236	-2.718	19.3	63.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap	
Mus-3-B	30.000	99.239	-1.4	0	0	0	0	Mus-6-B	-0.997	-0.728	23.9	80.8		
								G-Mus-3-B	0.997	0.728	23.9	80.8		
Mus-6-B	6.600	100.458	-0.7	1.000	0.750	0	0	Mus-3-B	1.000	0.750	108.8	80.0		
Nbg-3-B-1	30.000	99.571	-6.4	0	0	12.205	5.911	Nbg-10-B-1	-6.103	-2.956	131.1	90.0		
								Nbg-10-B-1	-6.103	-2.956	131.1	90.0		
Nbg-10-B-1	110.000	95.862	-5.0	0	0	0	0	Nbg-3-B-1	6.112	3.141	37.6	88.9	-5.000	
								Nbg-3-B-1	6.112	3.141	37.6	88.9	-5.000	
								B-10-Jb1-Nbg-2	-10.977	-7.560	73.0	82.4		
								B-10-MKi-Nbg-1	-1.247	1.278	9.8	-69.8		
Nbi-3-B-1	30.000	99.623	-5.1	0	0	2.980	1.443	Nbi-10-B-1	-2.980	-1.443	64.0	90.0		
Nbi-10-B-1	110.000	97.007	-3.7	0	0	0	0	Nbi-3-B-1	2.987	1.535	18.2	88.9	-4.000	
								B-B-10-Mku-Nbi-1-2	18.177	-2.667	99.4	-98.9		
								B-10-Nbi-Ny1-1	-21.164	1.132	114.7	-99.9		
Nbu-3-B-1	30.000	99.585	-5.7	0	0	6.650	3.221	Nbu-10-B-1	-6.650	-3.221	142.8	90.0		
Nbu-10-B-1	110.000	99.391	-3.9	0	0	0	0	Nbu-3-B-1	6.664	3.496	39.7	88.6	-2.000	
								Nbu-20-B-1	-32.060	-11.139	179.2	94.5		
								B-10-Kre-Nbu-2	25.396	7.644	140.1	95.8		
Nbu-20-B-1	220.000	99.488	-0.9	0	0	0	0	Nbu-10-B-1	32.103	13.082	91.4	92.6	-2.000	
								B-20-Nbu-Rsu-1	-32.103	-13.082	91.4	92.6		
N-Cyi-04-1	0.400	99.881	2.3	0.150	0.000	0	0	Cyi-3-B-2	0.150	0.000	216.8	100.0		
Nde-3-B-1	30.000	99.221	-6.8	0	0	12.128	5.874	Nde-10-B-1	-6.064	-2.937	130.7	90.0		
								Nde-10-B-1	-6.064	-2.937	130.7	90.0		
								C-Nde-B	0.000	0.000	0.0	0.0		
Nde-10-B-1	110.000	95.526	-5.5	0	0	0	0	Nde-3-B-1	6.073	3.121	37.5	88.9	-5.000	
								Nde-3-B-1	6.073	3.121	37.5	88.9	-5.000	
								B-10-Gso-Nde-2	-8.009	-8.839	65.5	67.1		
								B-10-Gha-Nde-2	-4.138	2.597	26.8	-84.7		
Nga-3-B-1	30.000	99.719	-8.3	0	0	6.666	3.229	Nga-10-B-1	-6.666	1.743	133.0	-96.7		
								C-Nga-B-3	0.000	-4.972	96.0	0.0		
Nga-10-B-1	110.000	96.099	-6.3	0	0	0	0	Nga-3-B-1	6.678	-1.505	37.4	-97.6	-3.000	
								B-10-Nga-RIn-1	-6.264	0.291	34.3	-99.9		
								B-10-Msh-Nga-2	-0.414	1.214	7.0	-32.3		
Nko-3-B-1	30.000	99.492	1.3	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.299	-0.007	5.8	-100.0		
								G-Nko-3-B	-0.299	0.007	5.8	-100.0		
Nko-3-B-2	30.000	99.492	1.3	0	0	0	0	N-Nko-04-B-2	-0.299	0.007	5.8	-100.0		
								G-Nko-3-B	0.299	-0.007	5.8	-100.0		
* N-Mmb-6-1	6.600	100.000	11.1	40.000	4.053	0	0	Mmb-3-B-2	40.000	4.053	3517.0	99.5		
* N-Mmb-6-2	6.600	100.000	11.1	40.000	4.053	0	0	Mmb-3-B-2	40.000	4.053	3517.0	99.5		
N-Nko-04-B-2	0.400	99.856	2.7	0.300	0.000	0	0	Nko-3-B-2	0.300	0.000	433.6	100.0		

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap	
N-Ny1-6-2	6.600	99.038	3.0	14.000	0.000	0	0	Ny1-3-B-2	14.000	0.000	1236.6	100.0		
N-Ny2-6-1	6.600	99.828	-3.0	8.500	0.000	0	0	Ny2-3-B-2	8.500	0.000	744.8	100.0		
* N-Rka-6-2	6.600	100.000	0.2	3.350	0.702	0	0	Rka-3-B-2	3.350	0.702	299.4	97.9		
N-Rsu-1-1	12.000	99.436	2.8	15.000	0.000	0	0	Rsu-10-B-2	15.000	0.000	725.8	100.0		
N-Rz1-06-B-1-1	0.600	101.951	0.0	0	0	0	0	Rz1-6-B-1	1.750	1.085	1943.4	85.0		
								G-Rz1-06-B	-1.750	-1.085	1943.4	85.0		
N-Rz1-06-B-1-2	0.600	101.951	0.0	1.750	1.085	0	0	G-Rz1-06-B	1.750	1.085	1943.4	85.0		
N-Rz4-6-1	6.600	100.742	10.7	24.000	0.000	0	0	G-Rz3-6-B	24.000	0.000	2084.0	100.0		
N-Smb-1	11.000	100.981	1.4	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0		
								Smb-1-B-2	0.000	0.000	0.0	0.0		
								G-Smb-1-B	0.000	0.000	0.0	0.0		
Nta-3-B-1	30.000	99.914	-5.3	0	0	6.690	3.240	Nta-6-B-1	-6.690	-3.240	143.2	90.0	3.000	
Nta-10-B-1	110.000	96.222	-4.5	0	0	0	0	Nta-6-B-1	-2.269	1.834	15.9	-77.8	-4.000	
								Nta-6-B-1	-2.269	1.834	15.9	-77.8	-4.000	
								B-10-Mku-Nta-2	4.537	-3.668	31.8	-77.8		
Nta-6-B-1	6.600	98.902	-3.4	0	0	0	0	Nta-3-B-1	6.704	3.533	670.3	88.5		
								Nta-10-B-1	2.273	-1.767	254.6	-79.0		
								Nta-10-B-1	2.273	-1.767	254.6	-79.0		
								Nta-6-B-3	-11.250	0.000	995.1	100.0		
Nta-6-B-2	6.600	98.902	-3.4	11.250	0.000	0	0	Nta-6-B-3	11.250	0.000	995.1	100.0		
Nta-6-B-3	6.600	98.902	-3.4	0	0	0	0	Nta-6-B-1	11.250	0.000	995.1	100.0		
								Nta-6-B-2	-11.250	0.000	995.1	100.0		
NtB-3-B1	30.000	97.902	-3.3	0	0	0	0	NtB-6-B	-2.494	-1.793	60.4	81.2		
								G-NtB-3-B	2.494	1.793	60.4	81.2		
NtB-6-B	6.600	99.610	-2.1	2.500	1.875	0	0	NtB-3-B1	2.500	1.875	274.4	80.0		
Nte-3-B-1	30.000	99.327	-1.5	0	0	2.964	1.435	Nte-10-B-1	-2.964	-1.435	63.8	90.0		
Nte-10-B-1	110.000	97.727	-0.2	0	0	0	0	Nte-3-B-1	2.971	1.527	17.9	88.9	-3.000	
								B-10-Kbo/Nte-2	-1.974	-3.846	23.2	45.7		
								B-10-Mr2/Nte-2	-3.686	-1.578	21.5	91.9		
								B-10-Bga-Nte-2	2.690	3.898	25.4	56.8		
Ny1-10-B-1	110.000	98.577	-1.5	0	0	0	0	Ny1-3-B-1	-11.028	2.464	60.2	-97.6	-1.000	
								B-10-Kli-Ny1-2	-10.530	-0.950	56.3	99.6		
								B-10-Nbi-Ny1-2	21.558	-1.513	115.1	-99.8		
Ny1-3-B-1	30.000	99.054	0.1	0	0	2.949	1.428	Ny1-10-B-1	11.035	-2.142	218.4	-98.2		
								G-Ny1-3-B	-13.984	0.713	272.0	-99.9		
Ny1-3-B-2	30.000	99.054	0.1	0	0	0	0	N-Ny1-6-2	-13.984	0.713	272.0	-99.9		
								G-Ny1-3-B	13.984	-0.713	272.0	-99.9		
Ny2-10-B-1	110.000	96.365	-5.5	0	0	0	0	Ny2-3-B-1	-1.816	3.597	21.9	-45.1	-5.000	
								B-10-Ny2-Rln-1	1.816	-3.597	21.9	-45.1		

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Ny2-3-B-1	30.000	99.716	-4.9	0	0	6.666	3.228	Ny2-10-B-1	1.820	-3.518	76.4	-45.9	
								G-Ny2-3-B	-8.486	0.290	163.9	-99.9	
Ny2-3-B-2	30.000	99.716	-4.9	0	0	0	0	N-Ny2-.6-1	-8.486	0.290	163.9	-99.9	
								G-Ny2-3-B	8.486	-0.290	163.9	-99.9	
Rba-3-B-1	30.000	99.553	0.1	0	0	2.976	1.441	Rba-20-B-1	-2.976	-1.441	63.9	90.0	
Rba-20-B-1	220.000	100.978	1.4	0	0	0	0	Rba-3-B-1	2.983	1.533	8.7	88.9	
								B-20-Bwi-Rba-2D	-56.678	1.328	147.3	-100.0	
								B-20-Rba-Sha-1	53.695	4.022	139.9	99.7	
								B-20-Kri-Rba-2	0.000	-2.885	7.5	0.0	
								B-20-Smb-Rba-2	0.000	-1.113	2.9	0.0	
								B-20-Gma-Rba-2	0.000	-2.885	7.5	0.0	
Rbo-3-B-1	30.000	99.790	-7.9	0	0	12.254	5.935	Rbo-20-B-1	-12.254	4.023	248.7	-95.0	
								C-Rbo-B-3	0.000	-9.958	192.0	0.0	
Rbo-20-B-1	110.000	95.932	-6.1	0	0	0	0	Rbo-3-B-1	12.263	-3.606	69.9	-95.9	-3.000
								B-10-Msh-Rbo-2	2.239	2.448	18.1	67.5	
								B-10-Air-Rbo-2	-14.502	1.158	79.6	-99.7	
* Rka5-.6-B	6.600	100.000	-0.2	1.500	0.374	0	0	Rka5-3-B	1.500	0.374	135.2	97.0	
Rka5-3-B	30.000	99.239	-1.4	0	0	0	0	Rka5-.6-B	-1.496	-0.340	29.8	97.5	
								G-Rka5-3-B	1.496	0.340	29.8	97.5	
Rka-3-B-1	30.000	99.239	-1.4	0	0	7.102	3.440	Rka-10-B-1	-0.633	-0.884	21.1	58.2	
								Rka-10-B-1	-0.633	-0.884	21.1	58.2	
								G-Rka-3-B	-3.342	-0.604	65.9	98.4	
								G-Rka5-3-B	-1.496	-0.340	29.8	97.5	
								G-Mus-3-B	-0.997	-0.728	23.9	80.8	
Rka-3-B-2	30.000	99.239	-1.4	0	0	0	0	N-Rka-.6-2	-3.342	-0.604	65.9	98.4	
								G-Rka-3-B	3.342	0.604	65.9	98.4	
Rka-10-B-1	110.000	98.856	-1.2	0	0	0	0	Rka-3-B-1	0.633	0.892	5.8	57.9	-1.000
								Rka-3-B-1	0.633	0.892	5.8	57.9	-1.000
								B-10-Kli-Rka-2	-4.097	-0.896	22.3	97.7	
								B-10-Hye-Rka-2	2.830	-0.887	15.7	-95.4	
Rlm-3-B-1	30.000	99.647	-5.2	0	0	12.222	5.919	Rlm-10-B-1	-12.222	-5.919	262.3	90.0	
Rlm-10-B-1	110.000	99.221	-3.5	0	0	0	0	Rlm-3-B-1	12.232	6.384	73.0	88.7	-2.000
								Rlm-20-B-1	-62.641	-24.803	356.4	93.0	
								B-10-Air-Rlm-2_S	50.409	18.419	283.9	93.9	
Rlm-20-B-1	220.000	99.523	-0.6	0	0	0	0	Rlm-10-B-1	62.727	28.644	181.8	91.0	-2.000
								B-20-Sha-Rlm-2D	15.292	-2.340	40.8	-98.8	
								B-20-Rlm-Rwa-1D	-95.159	-8.174	251.8	99.6	
								B-20-Rlm-Rsu-1D	17.140	-18.130	65.8	-68.7	
Rln-3-B-1	30.000	99.627	-7.7	0	0	6.655	3.223	Rln-10-B-1	-6.655	6.702	182.5	-70.5	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Rln-10-B-1	110.000	96.498	-5.6	0	0	0	0	C-Rln-3-B	0.000	-9.926	191.7	0.0	
								Rln-3-B-1	6.678	-6.254	49.8	-73.0	
								10-Gfu/Jb1/Rln-B	-11.167	4.397	65.3	-93.0	
								B-10-Nga-Rln-2	6.301	-1.402	35.1	-97.6	
								B-10-Ny2-Rln-2	-1.812	3.259	20.3	-48.6	
Rsu-10-B-1	110.000	99.423	0.6	0	0	0	0	Rsu-20-B-1	14.987	-0.569	79.2	-99.9	
								G-Rsu-10-B	-14.987	0.569	79.2	-99.9	
Rsu-10-B-2	110.000	99.423	0.6	0	0	0	0	N-Rsu-1-1	-14.987	0.569	79.2	-99.9	
								G-Rsu-10-B	14.987	-0.569	79.2	-99.9	
Rsu-20-B-1	220.000	99.495	-0.9	0	0	0	0	Rsu-10-B-1	-14.979	0.948	39.6	-99.8	
								B-20-Rlm-Rsu-2D	-17.125	-13.968	58.3	77.5	
								B-20-Nbu-Rsu-2	32.104	13.020	91.4	92.7	
Rwa-3-B-1	30.000	98.954	-1.1	0	0	7.065	3.422	Rwa-20-B-1	-7.065	-3.422	152.7	90.0	
								G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-3-B-2	30.000	98.954	-1.1	0	0	0	0	G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-20-B-1	220.000	99.718	-0.2	0	0	0	0	Rwa-3-B-1	7.068	3.553	20.8	89.3	
								B-20-Rlm-Rwa-2D	95.315	1.787	250.9	100.0	
								B-20-Kgo-Rwa-2	-47.659	4.065	125.9	-99.6	
								B-20-Mmb-Rwa-2D	-54.724	-9.404	146.1	98.6	
Rwi-1-B-1	15.000	99.886	-8.1	0	0	6.686	3.238	Rwi-10-B-1	-6.686	1.750	266.3	-96.7	
								C-Rwi-B-1	0.000	-4.989	192.2	0.0	
Rwi-10-B-1	110.000	96.258	-6.1	0	0	0	0	Rwi-1-B-1	6.698	-1.511	37.4	-97.5	-3.000
								B-10-Kba-Rwi-2	-6.698	1.511	37.4	-97.5	
Rz1-6-B-1	6.600	100.179	-1.3	0	0	0	0	N-Rz1-.06-B-1-1	-1.743	-1.027	176.7	86.2	
								B-.6-Mr1-Rz1-2	1.743	1.027	176.7	86.2	
Rz2-6-B-1-1	6.600	100.000	2.7	0	0	0	0	Rz2-10-B-1	6.375	2.341	594.1	93.9	
								G-Rz2-.6-B	-6.375	-2.341	594.1	93.9	
* Rz2-6-B-1-2	6.600	100.000	2.7	6.375	2.341	0	0	G-Rz2-.6-B	6.375	2.341	594.1	93.9	
Rz2-10-B-1	110.000	98.226	0.1	0	0	0	0	Rz2-6-B-1-1	-6.358	-2.019	35.6	95.3	
								B-10-Mr2-Rz2-2	6.358	2.019	35.6	95.3	
Rz3-6-B-1-1	6.600	100.742	10.7	0	0	0	0	Rz3-10-B-1	24.000	0.000	2084.0	100.0	
								G-Rz3-.6-B	-24.000	0.000	2084.0	100.0	
Rz3-10-B-1	110.000	100.768	7.6	0	0	0	0	Rz3-6-B-1-1	-23.971	1.290	125.0	-99.9	
								B-10-Kma-Rz3-2	23.971	-1.290	125.0	-99.9	
Rz4-6-B-1-1	6.600	101.378	12.1	0	0	0	0	Rz4-10-B-1	47.500	0.000	4098.7	100.0	
								G-Rz4-.6-B	-47.500	0.000	4098.7	100.0	
Rz4-6-B-1-2	6.600	101.378	12.1	47.500	0.000	0	0	G-Rz4-.6-B	47.500	0.000	4098.7	100.0	
Rz4-10-B-1	110.000	101.400	9.1	0	0	0	0	Rz4-6-B-1-1	-47.445	2.494	245.9	-99.9	
								B-10-Kma-Rz4-2	47.445	-2.494	245.9	-99.9	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Sha-3-B-1	30.000	99.576	-5.2	0	0	12.206	5.912	Sha-10-B-1	-12.206	-5.912	262.1	90.0	
Sha-10-B-1	110.000	99.150	-3.5	0	0	0	0	Sha-3-B-1	12.217	6.375	72.9	88.7	-2.000
								Sha-20-B-1	-116.892	-48.168	669.3	92.5	
								B-10-Brc-Sha-2D	104.675	41.792	596.6	92.9	
Sha-20-B-1	220.000	99.372	-0.7	0	0	0	0	Sha-10-B-1	117.042	54.941	341.5	90.5	-2.000
								B-20-Sha-Rlm-1D	-15.281	-14.011	54.8	73.7	
								B-20-Rba-Sha-2	-53.221	-16.211	146.9	95.7	
								B-20-Mra-Sha-2D	-48.540	-24.719	143.9	89.1	
Smb-1-B-1	11.000	100.981	1.4	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	
Smb-1-B-2	11.000	100.981	1.4	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	
Smb-1-B-2N	11.000	100.981	1.4	0	0	0	0	G-Smb-1-B	0.000	0.000	0.0	0.0	
								Smb-1-B-4	0.000	0.000	0.0	0.0	
								Smb-1-B-6	0.000	0.000	0.0	0.0	
Smb-1-B-4	11.000	100.981	1.4	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-1-B-6	11.000	100.981	1.4	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-20-B-1	220.000	100.981	1.4	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2	0.000	0.000	0.0	0.0	
								B-20-Smb-Rba-1	0.000	0.000	0.0	0.0	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cyi/Nko-B	30.000	101.493	2.7	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.297	-0.004	5.6	100.0	
								3-Cyi-Ghi-B	0.892	-0.005	16.9	100.0	
								B-3-Nko-Cyi/Nko-1	-0.595	0.009	11.3	-100.0	
3-Cyi-Ghi-B	30.000	101.380	2.6	0	0	0	0	B-3-Cyi-Ghi-2	0.000	-0.082	1.6	0.0	
								3-Cyi/Nko-B	-0.891	-0.002	16.9	100.0	
								3-Kro/Kbu-B	0.891	0.084	17.0	99.6	
3-Kro/Kbu-B	30.000	100.122	1.8	0	0	0	0	B-3-Kbu-Kro-2	2.686	-0.236	51.8	-99.6	
								B-3-Kbu-Kro/Nko-2	-1.804	0.390	35.5	-97.7	
								3-Cyi-Ghi-B	-0.882	-0.154	17.2	98.5	
10-Bre/Gso/Msh-B	110.000	95.934	-4.4	0	0	0	0	B-10-Bre-Gso-1	-33.627	-9.873	191.7	96.0	
								B-10-Gso-Msh-2	14.402	-5.591	84.5	-93.2	
								Gso-10-B-1	19.225	15.464	135.0	77.9	
10-Gfu/Jb1/Rln-B	110.000	97.066	-3.8	0	0	0	0	B-10-Gfu/Mku/Rln-B	-7.202	0.349	39.0	-99.9	
								B-10-Jb1-Rln-2	1.426	4.733	26.7	28.8	
								Rln-10-B-1	5.777	-5.082	41.6	-75.1	
10-Gfu/Mku/Rln-B	110.000	97.303	-3.5	0	0	0	0	B-10-Gfu-Mku-2	-13.662	2.330	74.8	-98.6	
								10-Gfu/Jb1/Rln-B	7.223	-0.855	39.2	-99.3	
								Gfu-10-B-1	6.439	-1.476	35.6	-97.5	
10-Gko/Kgo/MKi-B	110.000	95.920	-3.9	0	0	0	0	B-10-Gko-MKi-1	5.769	-1.219	32.3	-97.8	
								B-10-Kgo-MKi-2	-35.519	-5.363	196.6	98.9	
								MKi-10-B-1	29.750	6.582	166.7	97.6	
10-Kba/Msh/Rwi-B	110.000	96.185	-4.9	0	0	0	0	B-10-Kba-Msh-2	4.073	1.158	23.1	96.2	
								B-10-Kba-Rwi-2	6.690	-1.717	37.7	-96.9	
								Kba-10-B-1	-10.763	0.560	58.8	-99.9	
10-Kbo/Kro/Mr2-B	110.000	100.057	-0.3	0	0	0	0	10-Kbo/Nte-B	9.274	-5.673	57.0	-85.3	
								B-10-Kbo-Kro-1	-12.245	4.059	67.7	-94.9	
								Kbo-10-B-1	2.972	1.613	17.7	87.9	
10-Kbo/Nte-B	110.000	100.228	-0.8	0	0	0	0	10-Kbo/Kro/Mr2-B	-9.245	5.077	55.2	-87.7	
								B-10-Kbo/Nte-2	9.245	-5.077	55.2	-87.7	
10-Mr2/Nte-B	110.000	100.234	-0.8	0	0	0	0	B-10-Mr2/Nte-1	-11.595	2.950	62.6	-96.9	
								B-10-Mr2/Nte-2	11.595	-2.950	62.6	-96.9	
20-Gma-B	220.000	100.469	2.1	0	0	0	0	B-20-Gma-Rba-2	0.000	0.000	0.0	0.0	
20-Gte-B	220.000	100.061	0.9	0	0	0	0	B-20-Bta-Gte-D	0.000	0.000	0.0	0.0	
* 20-Mra-B	220.000	100.000	0.0	13.714	1.441	0	0	B-20-Mra-Sha-2D	13.714	1.441	36.2	99.5	
Air-3-B-1	30.000	99.503	-6.5	0	0	34.921	16.913	Air-10-B-1	-34.921	-16.913	750.5	90.0	
Air-10-B-1	110.000	96.726	-4.1	0	0	0	0	Air-3-B-1	34.963	18.813	215.4	88.1	-5.000

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Air-Rbo-1	13.269	-0.895	72.2	-99.8	
								B-10-Air-Rlm-1_S	-48.232	-17.918	279.2	93.7	
B-1-Jb1-Jb3-1	15.000	99.091	-6.3	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								Jb1-1-B-1	0.000	0.000	0.0	0.0	
B-1-Jb1-Jb3-2	15.000	99.091	-6.3	0	0	0	0	B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-1	0.000	0.000	0.0	0.0	
B-1-Kbu-KbW-1F_T	11.000	99.907	4.5	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.151	2.093	1273.5	-99.6	
								Kbu-1-B-1	24.151	-2.093	1273.5	-99.6	
B-1-Kbu-KbW-2F_T	11.000	103.031	9.4	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1273.6	100.0	
								KbW-1-B-2	-25.000	0.000	1273.6	100.0	
B-3-Cyi-Cyi/Nko-1	30.000	101.550	2.8	0	0	0	0	3-Cyi/Nko-B	0.297	-0.010	5.6	-99.9	
								Cyi-3-B-1	-0.297	0.010	5.6	-99.9	
B-3-Cyi-Ghi-2	30.000	101.451	2.6	0	0	0	0	3-Cyi-Ghi-B	0.000	0.000	0.0	0.0	
B-3-Kbu-Kro/Nko-2	30.000	100.356	2.1	0	0	0	0	3-Kro/Kbu-B	1.811	-0.394	35.5	-97.7	
								Kbu-3-B-1	-1.811	0.394	35.5	-97.7	
B-3-Kbu-Kro-2	30.000	99.176	0.7	0	0	0	0	3-Kro/Kbu-B	-2.656	0.253	51.8	-99.5	
								Kro-3-B-1	2.656	-0.253	51.8	-99.5	
B-3-Nko-Cyi/Nko-1	30.000	101.640	2.9	0	0	0	0	3-Cyi/Nko-B	0.596	-0.027	11.3	-99.9	
								Nko-3-B-1	-0.596	0.027	11.3	-99.9	
B-10-Air-Rbo-1	110.000	96.726	-4.1	0	0	0	0	B-10-Air-Rbo-2	13.269	-0.895	72.2	-99.8	
								Air-10-B-1	-13.269	0.895	72.2	-99.8	
B-10-Air-Rbo-2	110.000	95.994	-5.1	0	0	0	0	B-10-Air-Rbo-1	-13.158	0.296	72.0	-100.0	
								Rbo-20-B-1	13.158	-0.296	72.0	-100.0	
B-10-Air-Rlm-1_S	110.000	96.726	-4.1	0	0	0	0	B-10-Air-Rlm-2_S	-48.232	-17.918	279.2	93.7	
								Air-10-B-1	48.232	17.918	279.2	93.7	
B-10-Air-Rlm-2_S	110.000	99.311	-2.7	0	0	0	0	B-10-Air-Rlm-1_S	49.056	19.186	278.4	93.1	
								Rlm-10-B-1	-49.056	-19.186	278.4	93.1	
B-10-Bga-Gsh-1	110.000	100.291	-1.9	0	0	0	0	B-10-Bga-Gsh-2	0.145	-19.301	101.0	-0.8	
								Bga-10-B-1	-0.145	19.301	101.0	-0.8	
B-10-Bga-Gsh-2	110.000	101.117	-2.2	0	0	0	0	B-10-Bga-Gsh-1	-0.068	19.135	99.3	-0.4	
								Gsh-10-B	0.068	-19.135	99.3	-0.4	
B-10-Bga-Nte-1	110.000	100.291	-1.9	0	0	0	0	B-10-Bga-Nte-2	-17.716	9.209	104.5	-88.7	
								Bga-10-B-1	17.716	-9.209	104.5	-88.7	
B-10-Bga-Nte-2	110.000	100.229	-0.8	0	0	0	0	B-10-Bga-Nte-1	17.894	-9.516	106.1	-88.3	
								Nte-10-B-1	-17.894	9.516	106.1	-88.3	
B-10-Bre-Gso-1	110.000	97.720	-3.2	0	0	0	0	10-Bre/Gso/Msb-B	34.049	10.288	191.0	95.7	
								Bre-10-B-1	-34.049	-10.288	191.0	95.7	
B-10-Bre-Jb1-1	110.000	97.720	-3.2	0	0	0	0	B-10-Bre-Jb1-2	40.780	23.519	252.8	86.6	
								Bre-10-B-1	-40.780	-23.519	252.8	86.6	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Bre-Jb1-2	110.000	96.407	-3.8	0	0	0	0	B-10-Bre-Jb1-1	-40.445	-23.036	253.4	86.9	
								Jb1-10-B-1	40.445	23.036	253.4	86.9	
B-10-Bre-Sha-1D	110.000	97.720	-3.2	0	0	0	0	B-10-Bre-Sha-2D	-92.839	-43.565	550.8	90.5	
								Bre-10-B-1	92.839	43.565	550.8	90.5	
B-10-Bre-Sha-2D	110.000	99.176	-2.6	0	0	0	0	B-10-Bre-Sha-1D	93.747	44.665	549.6	90.3	
								Sha-10-B-1	-93.747	-44.665	549.6	90.3	
B-10-Bta-Hye-1	110.000	99.255	-0.1	0	0	0	0	B-10-Bta-Hye-2	0.460	2.667	14.3	17.0	
								Bta-10-B-1	-0.460	-2.667	14.3	17.0	
B-10-Bta-Hye-2	110.000	99.007	-0.1	0	0	0	0	B-10-Bta-Hye-1	-0.457	-3.223	17.3	14.0	
								Hye-10-B-1	0.457	3.223	17.3	14.0	
B-10-Bta-Kgo-1	110.000	99.255	-0.1	0	0	0	0	B-10-Bta-Kgo-2	6.080	-0.608	32.3	-99.5	
								Bta-10-B-1	-6.080	0.608	32.3	-99.5	
B-10-Bta-Kgo-2	110.000	98.778	-0.7	0	0	0	0	B-10-Bta-Kgo-1	-6.050	-0.505	32.3	99.7	
								Kgo-10-B-1	6.050	0.505	32.3	99.7	
B-10-Gfu-Mku-2	110.000	97.608	-2.8	0	0	0	0	B-10-Gfu/Mku/Rln-B	13.733	-2.684	75.2	-98.1	
								Mku-10-B-1	-13.733	2.684	75.2	-98.1	
B-10-Gha-MKi-1	110.000	95.553	-4.2	0	0	0	0	B-10-Gha-MKi-2	-17.231	-2.936	96.0	98.6	
								Gha-10-B-1	17.231	2.936	96.0	98.6	
B-10-Gha-MKi-2	110.000	95.920	-3.9	0	0	0	0	B-10-Gha-MKi-1	17.282	2.830	95.8	98.7	
								MKi-10-B-1	-17.282	-2.830	95.8	98.7	
B-10-Gha-Nde-1	110.000	95.553	-4.2	0	0	0	0	B-10-Gha-Nde-2	5.143	-3.372	33.8	-83.6	
								Gha-10-B-1	-5.143	3.372	33.8	-83.6	
B-10-Gha-Nde-2	110.000	95.595	-4.4	0	0	0	0	B-10-Gha-Nde-1	-5.131	2.995	32.6	-86.4	
								Nde-10-B-1	5.131	-2.995	32.6	-86.4	
B-10-Gko-Jb1-1	110.000	95.904	-4.0	0	0	0	0	B-10-Gko-Jb1-2	-12.541	-10.771	90.5	75.9	
								Gko-10-B-1	12.541	10.771	90.5	75.9	
B-10-Gko-Jb1-2	110.000	96.407	-3.8	0	0	0	0	B-10-Gko-Jb1-1	12.573	10.595	89.5	76.5	
								Jb1-10-B-1	-12.573	-10.595	89.5	76.5	
B-10-Gko-MKi-1	110.000	95.904	-4.0	0	0	0	0	B-10-Gko/Kgo/MKi-B	-5.767	1.066	32.1	-98.3	
								Gko-10-B-1	5.767	-1.066	32.1	-98.3	
B-10-Gso-Msh-2	110.000	95.829	-5.1	0	0	0	0	B-10-Bre/Gso/Msh-B	-14.321	5.317	83.7	-93.7	
								Msh-10-B-1	14.321	-5.317	83.7	-93.7	
B-10-Gso-Nde-1	110.000	95.934	-4.4	0	0	0	0	B-10-Gso-Nde-2	7.049	9.110	63.0	61.2	
								Gso-10-B-1	-7.049	-9.110	63.0	61.2	
B-10-Gso-Nde-2	110.000	95.595	-4.4	0	0	0	0	B-10-Gso-Nde-1	-7.031	-9.246	63.8	60.5	
								Nde-10-B-1	7.031	9.246	63.8	60.5	
B-10-Hye-Rka-1	110.000	99.007	-0.1	0	0	0	0	B-10-Hye-Rka-2	-6.686	-0.484	35.5	99.7	
								Hye-10-B-1	6.686	0.484	35.5	99.7	
B-10-Hye-Rka-2	110.000	99.309	0.3	0	0	0	0	B-10-Hye-Rka-1	6.705	-0.105	35.4	-100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rka-10-B-1	-6.705	0.105	35.4	-100.0	
B-10-Jb1-Jb2-1	110.000	96.407	-3.8	0	0	0	0	B-10-Jb1-Jb2-2	0.000	-0.036	0.2	0.0	
								Jb1-10-B-1	0.000	0.036	0.2	0.0	
B-10-Jb1-Jb2-2	110.000	96.407	-3.8	0	0	0	0	B-10-Jb1-Jb2-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-1	0.000	0.000	0.0	0.0	
B-10-Jb1-Nbg-1	110.000	96.407	-3.8	0	0	0	0	B-10-Jb1-Nbg-2	11.322	8.238	76.2	80.9	
								Jb1-10-B-1	-11.322	-8.238	76.2	80.9	
B-10-Jb1-Nbg-2	110.000	95.965	-3.9	0	0	0	0	B-10-Jb1-Nbg-1	-11.290	-8.383	76.9	80.3	
								Nbg-10-B-1	11.290	8.383	76.9	80.3	
B-10-Jb1-Rln-2	110.000	96.407	-3.8	0	0	0	0	10-Gfu/Jb1/Rln-B	-1.410	-5.459	30.7	25.0	
								Jb1-10-B-1	1.410	5.459	30.7	25.0	
B-10-Kba-Kre-1	110.000	96.185	-4.9	0	0	0	0	B-10-Kba-Kre-2	-17.387	-3.086	96.4	98.5	
								Kba-10-B-1	17.387	3.086	96.4	98.5	
B-10-Kba-Kre-2	110.000	97.668	-3.6	0	0	0	0	B-10-Kba-Kre-1	17.593	2.634	95.6	98.9	
								Kre-10-B-1	-17.593	-2.634	95.6	98.9	
B-10-Kba-Msh-2	110.000	95.829	-5.1	0	0	0	0	10-Kba/Msh/Rwi-B	-4.063	-1.808	24.4	91.4	
								Msh-10-B-1	4.063	1.808	24.4	91.4	
B-10-Kba-Rwi-2	110.000	96.128	-5.0	0	0	0	0	10-Kba/Msh/Rwi-B	-6.682	1.506	37.4	-97.6	
								Rwi-10-B-1	6.682	-1.506	37.4	-97.6	
B-10-Kbo/Nte-2	110.000	100.229	-0.8	0	0	0	0	10-Kbo/Nte-B	-9.244	5.064	55.2	-87.7	
								Nte-10-B-1	9.244	-5.064	55.2	-87.7	
B-10-Kbo-Kro-1	110.000	99.985	0.9	0	0	0	0	10-Kbo/Kro/Mr2-B	12.332	-5.156	70.2	-92.3	
								Kro-10-B-1	-12.332	5.156	70.2	-92.3	
B-10-Kbu-Kro-1	110.000	100.189	1.5	0	0	0	0	B-10-Kbu-Kro-2	22.274	-2.944	117.7	-99.1	
								Kbu-10-B-1	-22.274	2.944	117.7	-99.1	
B-10-Kbu-Kro-2	110.000	99.985	0.9	0	0	0	0	B-10-Kbu-Kro-1	-22.200	2.765	117.4	-99.2	
								Kro-10-B-1	22.200	-2.765	117.4	-99.2	
B-10-Kgo-Kli-1	110.000	98.778	-0.7	0	0	0	0	B-10-Kgo-Kli-2	-17.643	-1.833	94.3	99.5	
								Kgo-10-B-1	17.643	1.833	94.3	99.5	
B-10-Kgo-Kli-2	110.000	99.575	0.4	0	0	0	0	B-10-Kgo-Kli-1	17.757	1.233	93.8	99.8	
								Kli-10-B-1	-17.757	-1.233	93.8	99.8	
B-10-Kgo-MKi-2	110.000	98.778	-0.7	0	0	0	0	10-Gko/Kgo/MKi-B	36.250	6.202	195.4	98.6	
								Kgo-10-B-1	-36.250	-6.202	195.4	98.6	
B-10-Kli-Kro-1	110.000	99.985	0.9	0	0	0	0	B-10-Kli-Kro-2	9.564	0.657	50.3	99.8	
								Kro-10-B-1	-9.564	-0.657	50.3	99.8	
B-10-Kli-Kro-2	110.000	99.575	0.4	0	0	0	0	B-10-Kli-Kro-1	-9.534	-1.434	50.8	98.9	
								Kli-10-B-1	9.534	1.434	50.8	98.9	
B-10-Kli-Ny1-1	110.000	99.575	0.4	0	0	0	0	B-10-Kli-Ny1-2	-2.741	0.098	14.5	-99.9	
								Kli-10-B-1	2.741	-0.098	14.5	-99.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Kli-Ny1-2	110.000	99.661	0.5	0	0	0	0	B-10-Kli-Ny1-1	2.745	-0.800	15.1	-96.0	
								Ny1-10-B-1	-2.745	0.800	15.1	-96.0	
B-10-Kli-Rka-1	110.000	99.575	0.4	0	0	0	0	B-10-Kli-Rka-2	2.111	0.838	12.0	92.9	
								Kli-10-B-1	-2.111	-0.838	12.0	92.9	
B-10-Kli-Rka-2	110.000	99.309	0.3	0	0	0	0	B-10-Kli-Rka-1	-2.107	-1.673	14.2	78.3	
								Rka-10-B-1	2.107	1.673	14.2	78.3	
B-10-Kma-Rz3-1	110.000	98.908	13.0	0	0	0	0	B-10-Kma-Rz3-2	-47.575	2.118	252.7	-99.9	
								Kma-10-B-1	47.575	-2.118	252.7	-99.9	
B-10-Kma-Rz3-2	110.000	99.473	14.2	0	0	0	0	B-10-Kma-Rz3-1	47.883	-1.387	252.8	-100.0	
								Rz3-10-B-1	-47.883	1.387	252.8	-100.0	
B-10-Kma-Rz4-1	110.000	98.908	13.0	0	0	0	0	B-10-Kma-Rz4-2	-92.582	16.773	499.3	-98.4	
								Kma-10-B-1	92.582	-16.773	499.3	-98.4	
B-10-Kma-Rz4-2	110.000	100.143	17.4	0	0	0	0	B-10-Kma-Rz4-1	94.771	-10.295	499.6	-99.4	
								Rz4-10-B-1	-94.771	10.295	499.6	-99.4	
B-10-Kre-Nbu-1	110.000	97.668	-3.6	0	0	0	0	B-10-Kre-Nbu-2	-24.170	-6.085	133.9	97.0	
								Kre-10-B-1	24.170	6.085	133.9	97.0	
B-10-Kre-Nbu-2	110.000	98.889	-2.8	0	0	0	0	B-10-Kre-Nbu-1	24.382	6.043	133.3	97.1	
								Nbu-10-B-1	-24.382	-6.043	133.3	97.1	
B-10-MKi-Nbg-1	110.000	95.965	-3.9	0	0	0	0	B-10-MKi-Nbg-2	-0.957	2.089	12.6	-41.7	
								Nbg-10-B-1	0.957	-2.089	12.6	-41.7	
B-10-MKi-Nbg-2	110.000	95.920	-3.9	0	0	0	0	B-10-MKi-Nbg-1	0.958	-2.258	13.4	-39.1	
								MKi-10-B-1	-0.958	2.258	13.4	-39.1	
B-10-Mku-Nbi-1	110.000	97.608	-2.8	0	0	0	0	B-10-Mku-Nbi-1-2	-18.678	3.006	101.7	-98.7	
								Mku-10-B-1	18.678	-3.006	101.7	-98.7	
B-10-Mku-Nta-1	110.000	97.608	-2.8	0	0	0	0	B-10-Mku-Nta-2	-4.656	-4.235	33.8	74.0	
								Mku-10-B-1	4.656	4.235	33.8	74.0	
B-10-Mku-Nta-2	110.000	98.174	-2.6	0	0	0	0	B-10-Mku-Nta-1	4.669	3.381	30.8	81.0	
								Nta-10-B-1	-4.669	-3.381	30.8	81.0	
B-10-Mr1-Mr2-1	110.000	100.278	-0.2	0	0	0	0	B-10-Mr1-Mr2-2	-1.017	-2.731	15.3	34.9	
								Mr1-10-B-1	1.017	2.731	15.3	34.9	
B-10-Mr1-Mr2-2	110.000	100.283	-0.2	0	0	0	0	B-10-Mr1-Mr2-1	1.017	2.719	15.2	35.0	
								Mr2-10-B-2	-1.017	-2.719	15.2	35.0	
B-10-Mr2/Nte-1	110.000	100.283	-0.2	0	0	0	0	10-Mr2/Nte-B	11.630	-3.512	63.6	-95.7	
								Mr2-10-B-2	-11.630	3.512	63.6	-95.7	
B-10-Mr2/Nte-2	110.000	100.229	-0.8	0	0	0	0	10-Mr2/Nte-B	-11.593	2.939	62.6	-96.9	
								Nte-10-B-1	11.593	-2.939	62.6	-96.9	
B-10-Mr2-Rz2-1	110.000	100.283	-0.2	0	0	0	0	B-10-Mr2-Rz2-2	-12.647	0.793	66.3	-99.8	
								Mr2-10-B-1	12.647	-0.793	66.3	-99.8	
B-10-Mr2-Rz2-2	110.000	100.576	0.2	0	0	0	0	B-10-Mr2-Rz2-1	12.691	-1.122	66.5	-99.6	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rz2-10-B-1	-12.691	1.122	66.5	-99.6	
B-10-Msh-Nga-1	110.000	95.829	-5.1	0	0	0	0	B-10-Msh-Nga-2	-2.635	-2.348	19.3	74.7	
								Msh-10-B-1	2.635	2.348	19.3	74.7	
B-10-Msh-Nga-2	110.000	96.417	-4.9	0	0	0	0	B-10-Msh-Nga-1	2.645	1.090	15.6	92.5	
								Nga-10-B-1	-2.645	-1.090	15.6	92.5	
B-10-Msh-Rbo-1	110.000	95.829	-5.1	0	0	0	0	B-10-Msh-Rbo-2	-0.878	-3.585	20.2	23.8	
								Msh-10-B-1	0.878	3.585	20.2	23.8	
B-10-Msh-Rbo-2	110.000	95.994	-5.1	0	0	0	0	B-10-Msh-Rbo-1	0.881	3.315	18.8	25.7	
								Rbo-20-B-1	-0.881	-3.315	18.8	25.7	
B-10-Nbi-Nyl-1	110.000	98.170	-1.7	0	0	0	0	B-10-Nbi-Nyl-2	-21.787	1.797	116.9	-99.7	
								Nbi-10-B-1	21.787	-1.797	116.9	-99.7	
B-10-Nbi-Nyl-2	110.000	99.661	0.5	0	0	0	0	B-10-Nbi-Nyl-1	22.197	-2.172	117.5	-99.5	
								Nyl-10-B-1	-22.197	2.172	117.5	-99.5	
B-10-Nga-Rln-1	110.000	96.417	-4.9	0	0	0	0	B-10-Nga-Rln-2	-9.240	0.389	50.3	-99.9	
								Nga-10-B-1	9.240	-0.389	50.3	-99.9	
B-10-Nga-Rln-2	110.000	97.066	-3.8	0	0	0	0	B-10-Nga-Rln-1	9.319	-1.425	51.0	-98.9	
								Rln-10-B-1	-9.319	1.425	51.0	-98.9	
B-10-Ny2-Rln-1	110.000	97.180	-3.5	0	0	0	0	B-10-Ny2-Rln-2	10.321	-2.965	58.0	-96.1	
								Ny2-10-B-1	-10.321	2.965	58.0	-96.1	
B-10-Ny2-Rln-2	110.000	97.066	-3.8	0	0	0	0	B-10-Ny2-Rln-1	-10.291	2.675	57.5	-96.8	
								Rln-10-B-1	10.291	-2.675	57.5	-96.8	
B-20-Bta-Gte-D	220.000	100.038	0.9	0	0	0	0	20-Gte-B	0.000	-7.137	18.7	0.0	
								Bta-20-B-1	0.000	7.137	18.7	0.0	
B-20-Bta-Mmb-1D	220.000	100.038	0.9	0	0	0	0	B-20-Bta-Mmb-2D	-13.717	1.061	36.1	-99.7	
								Bta-20-B-1	13.717	-1.061	36.1	-99.7	
B-20-Bta-Mmb-2D	220.000	100.035	0.9	0	0	0	0	B-20-Bta-Mmb-1D	13.720	-7.309	40.8	-88.3	
								Mmb-20-B-1	-13.720	7.309	40.8	-88.3	
B-20-Bwi-KB2-1	220.000	100.398	2.7	0	0	0	0	B-20-Bwi-KB2-2	0.000	-0.407	1.1	0.0	
								Bwi-20-B-1	0.000	0.407	1.1	0.0	
B-20-Bwi-KB2-2	220.000	100.398	2.7	0	0	0	0	B-20-Bwi-KB2-1	0.000	0.000	0.0	0.0	
								Kb2-20-B-1	0.000	0.000	0.0	0.0	
B-20-Bwi-KbW-1	220.000	100.398	2.7	0	0	0	0	B-20-Bwi-KbW-2	0.000	-0.502	1.3	0.0	
								Bwi-20-B-1	0.000	0.502	1.3	0.0	
B-20-Bwi-KbW-2	220.000	100.399	2.7	0	0	0	0	B-20-Bwi-KbW-1	0.000	0.000	0.0	0.0	
								G-KbW-1-B-3	0.000	0.000	0.0	0.0	
B-20-Bwi-Kma-1	220.000	100.398	2.7	0	0	0	0	B-20-Bwi-Kma-2	-137.078	31.967	367.9	-97.4	
								Bwi-20-B-1	137.078	-31.967	367.9	-97.4	
B-20-Bwi-Kma-2	220.000	100.298	8.0	0	0	0	0	B-20-Bwi-Kma-1	139.873	-31.666	375.2	-97.5	
								Kma-20-B-1	-139.873	31.666	375.2	-97.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-20-Bwi-Rba-1D	220.000	100.398	2.7	0	0	0	0	B-20-Bwi-Rba-2D	57.821	-26.561	166.3	-90.9	
								Bwi-20-B-1	-57.821	26.561	166.3	-90.9	
B-20-Bwi-Rba-2D	220.000	100.449	2.1	0	0	0	0	B-20-Bwi-Rba-1D	-57.673	10.190	153.0	-98.5	
								Rba-20-B-1	57.673	-10.190	153.0	-98.5	
B-20-Gma-Rba-2	220.000	100.449	2.1	0	0	0	0	20-Gma-B	0.000	-2.855	7.5	0.0	
								Rba-20-B-1	0.000	2.855	7.5	0.0	
B-20-Kgo-Kli-1	220.000	99.868	0.8	0	0	0	0	B-20-Kgo-Kli-2	-65.202	2.316	171.4	-99.9	
								Kgo-20-B-1	65.202	-2.316	171.4	-99.9	
B-20-Kgo-Kli-2	220.000	100.024	1.4	0	0	0	0	B-20-Kgo-Kli-1	65.336	-4.489	171.8	-99.8	
								Kli-20-B-1	-65.336	4.489	171.8	-99.8	
B-20-Kgo-Rwa-1	220.000	99.868	0.8	0	0	0	0	B-20-Kgo-Rwa-2	49.305	-8.704	131.6	-98.5	
								Kgo-20-B-1	-49.305	8.704	131.6	-98.5	
B-20-Kgo-Rwa-2	220.000	99.841	0.6	0	0	0	0	B-20-Kgo-Rwa-1	-49.253	7.077	130.8	-99.0	
								Rwa-20-B-1	49.253	-7.077	130.8	-99.0	
B-20-Kli-Bwi-1	220.000	100.398	2.7	0	0	0	0	B-20-Kli-Bwi-2	76.304	-6.014	200.1	-99.7	
								Bwi-20-B-1	-76.304	6.014	200.1	-99.7	
B-20-Kli-Bwi-2	220.000	100.024	1.4	0	0	0	0	B-20-Kli-Bwi-1	-75.930	1.936	199.3	-100.0	
								Kli-20-B-1	75.930	-1.936	199.3	-100.0	
B-20-Kri-Rba-1	220.000	100.469	2.1	0	0	0	0	B-20-Kri-Rba-2	0.000	0.000	0.0	0.0	
								Kri-20-B-1	0.000	0.000	0.0	0.0	
B-20-Kri-Rba-2	220.000	100.449	2.1	0	0	0	0	B-20-Kri-Rba-1	0.000	-2.855	7.5	0.0	
								Rba-20-B-1	0.000	2.855	7.5	0.0	
B-20-Mmb-Rwa-1D	220.000	100.035	0.9	0	0	0	0	B-20-Mmb-Rwa-2D	58.838	-3.301	154.6	-99.8	
								Mmb-20-B-1	-58.838	3.301	154.6	-99.8	
B-20-Mmb-Rwa-2D	220.000	99.841	0.6	0	0	0	0	B-20-Mmb-Rwa-1D	-58.740	-8.097	155.9	99.1	
								Rwa-20-B-1	58.740	8.097	155.9	99.1	
B-20-Mra-Sha-2D	220.000	99.484	-0.1	0	0	0	0	20-Mra-B	-13.683	-29.948	86.9	41.6	
								Sha-20-B-1	13.683	29.948	86.9	41.6	
B-20-Nbu-Rsu-1	220.000	99.733	0.2	0	0	0	0	B-20-Nbu-Rsu-2	-31.025	-11.297	86.9	94.0	
								Nbu-20-B-1	31.025	11.297	86.9	94.0	
B-20-Nbu-Rsu-2	220.000	99.740	0.2	0	0	0	0	B-20-Nbu-Rsu-1	31.026	11.234	86.8	94.0	
								Rsu-20-B-1	-31.026	-11.234	86.8	94.0	
B-20-Rba-Sha-1	220.000	100.449	2.1	0	0	0	0	B-20-Rba-Sha-2	54.718	-4.898	143.5	-99.6	
								Rba-20-B-1	-54.718	4.898	143.5	-99.6	
B-20-Rba-Sha-2	220.000	99.484	-0.1	0	0	0	0	B-20-Rba-Sha-1	-54.241	-7.217	144.3	99.1	
								Sha-20-B-1	54.241	7.217	144.3	99.1	
B-20-Rlm-Rsu-1D	220.000	99.665	0.2	0	0	0	0	B-20-Rlm-Rsu-2D	1.110	-19.144	50.5	-5.8	
								Rlm-20-B-1	-1.110	19.144	50.5	-5.8	
B-20-Rlm-Rsu-2D	220.000	99.740	0.2	0	0	0	0	B-20-Rlm-Rsu-1D	-1.109	-13.156	34.7	8.4	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rsu-20-B-1	1.109	13.156	34.7	8.4	
B-20-Rlm-Rwa-1D	220.000	99.665	0.2	0	0	0	0	B-20-Rlm-Rwa-2D	-100.735	-3.796	265.4	99.9	
								Rlm-20-B-1	100.735	3.796	265.4	99.9	
B-20-Rlm-Rwa-2D	220.000	99.841	0.6	0	0	0	0	B-20-Rlm-Rwa-1D	100.909	-2.541	265.3	-100.0	
								Rwa-20-B-1	-100.909	2.541	265.3	-100.0	
B-20-Sha-Rlm-1D	220.000	99.484	-0.1	0	0	0	0	B-20-Sha-Rlm-2D	-38.175	-9.840	104.0	96.8	
								Sha-20-B-1	38.175	9.840	104.0	96.8	
B-20-Sha-Rlm-2D	220.000	99.665	0.2	0	0	0	0	B-20-Sha-Rlm-1D	38.234	-6.368	102.1	-98.6	
								Rlm-20-B-1	-38.234	6.368	102.1	-98.6	
B-20-Smb-Rba-1	220.000	100.452	2.1	0	0	0	0	B-20-Smb-Rba-2	0.000	0.000	0.0	0.0	
								Smb-20-B-1	0.000	0.000	0.0	0.0	
B-20-Smb-Rba-2	220.000	100.449	2.1	0	0	0	0	B-20-Smb-Rba-1	0.000	-1.101	2.9	0.0	
								Rba-20-B-1	0.000	1.101	2.9	0.0	
B-6-Mr1-Rz1-1	6.600	99.467	-0.7	0	0	0	0	B-6-Mr1-Rz1-2	-3.448	0.221	303.8	-99.8	
								Mr1-6-B-1	3.448	-0.221	303.8	-99.8	
B-6-Mr1-Rz1-2	6.600	100.307	0.1	0	0	0	0	B-6-Mr1-Rz1-1	3.480	-0.171	303.8	-99.9	
								Rz1-6-B-1	-3.480	0.171	303.8	-99.9	
B-B-10-Mku-Nbi-1-2	110.000	98.170	-1.7	0	0	0	0	B-10-Mku-Nbi-1	18.847	-3.308	102.3	-98.5	
								Nbi-10-B-1	-18.847	3.308	102.3	-98.5	
Bga-3-B-1	30.000	99.415	-6.0	0	0	17.535	8.493	Bga-10-B-1	-17.535	-8.493	377.2	90.0	
Bga-10-B-1	110.000	100.291	-1.9	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	17.570	10.092	106.0	86.7	-3.000
								B-10-Bga-Nte-1	-17.716	9.209	104.5	-88.7	
								B-10-Bga-Gsb-1	0.145	-19.301	101.0	-0.8	
Bga-6-B-1	6.600	100.291	-1.9	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
Bre-1-B-1	15.000	99.180	-5.9	0	0	17.962	8.700	Bre-10-B-1	-8.981	-4.350	387.3	90.0	
								Bre-10-B-1	-8.981	-4.350	387.3	90.0	
Bre-10-B-1	110.000	97.720	-3.2	0	0	0	0	Bre-1-B-1	9.005	4.879	55.0	87.9	-4.000
								Bre-1-B-1	9.005	4.879	55.0	87.9	-4.000
								B-10-Bre-Jb1-1	40.780	23.519	252.8	86.6	
								B-10-Bre-Sha-1D	-92.839	-43.565	550.8	90.5	
								B-10-Bre-Gso-1	34.049	10.288	191.0	95.7	
Bta-3-B-1	30.000	99.722	-1.8	0	0	7.164	3.470	Bta-10-B-1	-7.164	-3.470	153.6	90.0	
Bta-10-B-1	110.000	99.255	-0.1	0	0	0	0	Bta-3-B-1	7.170	3.735	42.8	88.7	-2.000
								Bta-20-B-1	-13.710	-5.794	78.7	92.1	
								B-10-Bta-Kgo-1	6.080	-0.608	32.3	-99.5	
								B-10-Bta-Hye-1	0.460	2.667	14.3	17.0	
Bta-20-B-1	220.000	100.038	0.9	0	0	0	0	Bta-10-B-1	13.717	6.075	39.4	91.4	
								B-20-Bta-Mmb-1D	-13.717	1.061	36.1	-99.7	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-20-Bta-Gte-D	0.000	-7.137	18.7	0.0	
Bwi-3-B-1	30.000	98.979	1.3	0	0	2.945	1.426	Bwi-20-B-1	-2.945	-1.426	63.6	90.0	
Bwi-10-B-1	110.000	100.398	2.7	0	0	0	0	Bwi-20-B-1	0.000	0.000	0.0	0.0	
Bwi-20-B-1	220.000	100.398	2.7	0	0	0	0	Bwi-10-B-1	0.000	0.000	0.0	0.0	
								Bwi-3-B-1	2.952	1.517	8.7	88.9	
								B-20-Bwi-Rba-1D	57.821	-26.561	166.3	-90.9	
								B-20-Kli-Bwi-1	76.304	-6.014	200.1	-99.7	
								B-20-Bwi-Kma-1	-137.078	31.967	367.9	-97.4	
								B-20-Bwi-KB2-1	0.000	-0.407	1.1	0.0	
								B-20-Bwi-KbW-1	0.000	-0.502	1.3	0.0	
C-Gfu-B-3	30.000	97.631	-5.1	0	0	0.000	-4.766	Gfu-3-B-1	0.000	4.766	93.9	0.0	
C-Gsh-1-B	11.000	101.243	-2.4	0	0	0.000	-20.500	Gsh-1-B-1	0.000	20.500	1062.8	0.0	
C-MKi-3-B	30.000	96.322	-5.6	0	0	0	0	MKi-3-B-1	0.000	0.000	0.0	0.0	
C-Mku-B-6	6.600	99.630	-4.2	0	0	0	0	Mku-6-B-6	0.000	0.000	0.0	0.0	
C-Msh-1-B	15.000	97.046	-8.4	0	0	0.000	-9.418	Msh-1-B-1	0.000	9.418	373.5	0.0	
C-Nde-B	30.000	99.293	-5.8	0	0	0	0	Nde-3-B-1	0.000	0.000	0.0	0.0	
C-Nga-B-3	30.000	99.026	-6.8	0	0	0.000	-4.903	Nga-3-B-1	0.000	4.903	95.3	0.0	
C-Rbo-B-3	30.000	99.855	-6.9	0	0	0.000	-9.971	Rbo-3-B-1	0.000	9.971	192.2	0.0	
C-Rln-3-B	30.000	100.216	-5.9	0	0	0.000	-10.043	Rln-3-B-1	0.000	10.043	192.9	0.0	
C-Rwi-B-1	15.000	99.750	-7.0	0	0	0.000	-4.975	Rwi-1-B-1	0.000	4.975	192.0	0.0	
C-Sha-20-B	220.000	99.484	-0.1	0	0	0.000	-9.897	Sha-20-B-1	0.000	9.897	26.1	0.0	
Cyi-3-B-1	30.000	101.550	2.8	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.297	-0.010	5.6	-99.9	
								G-Cyi-3-B	-0.297	0.010	5.6	-99.9	
Cyi-3-B-2	30.000	101.550	2.8	0	0	0	0	N-Cyi-04-1	-0.297	0.010	5.6	-99.9	
								G-Cyi-3-B	0.297	-0.010	5.6	-99.9	
G-Cyi-3-B	30.000	101.550	2.8	0	0	0	0	Cyi-3-B-1	0.297	-0.010	5.6	-99.9	
								Cyi-3-B-2	-0.297	0.010	5.6	-99.9	
Gfu-3-B-1	30.000	97.631	-5.1	0	0	6.418	3.108	Gfu-10-B-1	-2.139	0.553	43.6	-96.8	
								Gfu-10-B-1	-2.139	0.553	43.6	-96.8	
								Gfu-10-B-1	-2.139	0.553	43.6	-96.8	
								C-Gfu-B-3	0.000	-4.766	93.9	0.0	
Gfu-10-B-1	110.000	97.303	-3.5	0	0	0	0	Gfu-3-B-1	2.146	-0.492	11.9	-97.5	
								Gfu-3-B-1	2.146	-0.492	11.9	-97.5	
								Gfu-3-B-1	2.146	-0.492	11.9	-97.5	
								10-Gfu/Mku/Rln-B	-6.439	1.476	35.6	-97.5	
G-Gko-1-B	15.000	98.860	-6.0	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-1-B-2	0.000	0.000	0.0	0.0	
G-Gko-3-B	15.000	98.860	-6.0	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-3-B	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
G-Gko-10-B	110.000	95.904	-4.0	0	0	0	0	Gko-10-B-1	0.000	0.000	0.0	0.0	
								Gko-10-B-2	0.000	0.000	0.0	0.0	
G-Gsh-1-B	11.000	101.243	-2.4	0	0	0	0	Gsh-1-B-1	0.000	0.000	0.0	0.0	
								Gsh-1-B-2	0.000	0.000	0.0	0.0	
Gha-3-B-1	30.000	98.992	-5.9	0	0	12.078	5.850	Gha-10-B-1	-12.078	-5.850	260.9	90.0	
Gha-10-B-1	110.000	95.553	-4.2	0	0	0	0	Gha-3-B-1	12.088	6.309	74.9	88.7	-5.000
								B-10-Gha-MKi-1	-17.231	-2.936	96.0	98.6	
								B-10-Gha-Nde-1	5.143	-3.372	33.8	-83.6	
G-Jb2-10-B	110.000	96.407	-3.8	0	0	0	0	Jb2-10-B-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
G-Jb3-1-B	15.000	99.091	-6.3	0	0	0	0	Jb3-1-B-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-2	0.000	0.000	0.0	0.0	
G-KbW-1-B-1	11.000	103.031	9.4	0	0	0	0	KbW-1-B-3	-17.000	0.000	866.0	100.0	
								KbW-1-B-2	17.000	0.000	866.0	100.0	
G-KbW-1-B-2	11.000	103.031	9.4	0	0	0	0	KbW-1-B-1	8.000	0.000	407.5	100.0	
								KbW-1-B-4	-8.000	0.000	407.5	100.0	
G-KbW-1-B-3	220.000	100.399	2.7	0	0	0	0	B-20-Bwi-KbW-2	0.000	0.000	0.0	0.0	
								KbW-20-B-2	0.000	0.000	0.0	0.0	
Gko-1-B-1	15.000	98.860	-6.0	0	0	18.263	8.845	Gko-10-B-1	-6.088	-2.948	263.3	90.0	
								Gko-10-B-1	-6.088	-2.948	263.3	90.0	
								Gko-10-B-1	-6.088	-2.948	263.3	90.0	
								G-Gko-1-B	0.000	0.000	0.0	0.0	
								G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-1-B-2	15.000	98.860	-6.0	0	0	0	0	G-Gko-1-B	0.000	0.000	0.0	0.0	
Gko-3-B	15.000	98.860	-6.0	0	0	0	0	G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-10-B-1	110.000	95.904	-4.0	0	0	0	0	Gko-1-B-1	6.103	3.235	37.8	88.4	-5.000
								Gko-1-B-1	6.103	3.235	37.8	88.4	-5.000
								Gko-1-B-1	6.103	3.235	37.8	88.4	-5.000
								B-10-Gko-Jb1-1	-12.541	-10.771	90.5	75.9	
								B-10-Gko-MKi-1	-5.767	1.066	32.1	-98.3	
Gko-10-B-2	110.000	95.904	-4.0	0	0	0	0	G-Gko-10-B	0.000	0.000	0.0	0.0	
G-Kse-1-B	110.000	95.934	-4.4	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Mku-10-B	110.000	97.608	-2.8	0	0	0	0	Mku-10-B-1	0.000	0.000	0.0	0.0	
								Mku-10-B-2	0.000	0.000	0.0	0.0	
G-Mku-6-B	6.600	99.630	-4.2	0	0	0	0	Mku-6-B-4	12.000	8.064	1269.4	83.0	
								Mku-6-B-2	-12.000	-8.064	1269.4	83.0	
G-Mmb-3-B	30.000	99.328	6.2	0	0	0	0	Mmb-3-B-1	79.821	-0.449	1546.6	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mmb-3-B-2	-79.821	0.449	1546.6	100.0	
G-Mus-3-B	30.000	98.802	1.2	0	0	0	0	Mus-3-B	-1.993	-0.572	40.4	96.1	
								Rka-3-B-1	1.993	0.572	40.4	96.1	
G-Nko-3-B	30.000	101.640	2.9	0	0	0	0	Nko-3-B-1	0.596	-0.027	11.3	-99.9	
								Nko-3-B-2	-0.596	0.027	11.3	-99.9	
G-NtB-3-B	30.000	97.842	-1.5	0	0	0	0	Kgo-3-B-1	4.981	2.054	106.0	92.4	
								NtB-3-B1	-4.981	-2.054	106.0	92.4	
G-Ny1-3-B	30.000	99.253	4.2	0	0	0	0	Ny1-3-B-1	27.937	0.048	541.7	100.0	
								Ny1-3-B-2	-27.937	-0.048	541.7	100.0	
G-Ny2-3-B	30.000	99.103	-0.5	0	0	0	0	Ny2-3-B-1	16.942	0.802	329.4	99.9	
								Ny2-3-B-2	-16.942	-0.802	329.4	99.9	
G-Rka5-3-B	30.000	98.802	1.2	0	0	0	0	Rka5-3-B	-2.984	-0.420	58.7	99.0	
								Rka-3-B-1	2.984	0.420	58.7	99.0	
G-Rka-3-B	30.000	98.802	1.2	0	0	0	0	Rka-3-B-1	6.670	0.724	130.7	99.4	
								Rka-3-B-2	-6.670	-0.724	130.7	99.4	
G-Rsu-10-B	110.000	99.655	3.0	0	0	0	0	Rsu-10-B-1	29.950	-0.418	157.8	100.0	
								Rsu-10-B-2	-29.950	0.418	157.8	100.0	
G-Rwa-3-B	30.000	99.076	-0.3	0	0	0	0	Rwa-3-B-1	0.000	0.000	0.0	0.0	
								Rwa-3-B-2	0.000	0.000	0.0	0.0	
G-Rz1-.06-B	0.600	100.766	2.9	0	0	0	0	N-Rz1-.06-B-1-1	3.500	0.000	3342.3	100.0	
								N-Rz1-.06-B-1-2	-3.500	0.000	3342.3	100.0	
G-Rz2-.6-B	6.600	100.651	5.2	0	0	0	0	Rz2-.6-B-1-1	12.750	0.000	1108.1	100.0	
								Rz2-.6-B-1-2	-12.750	0.000	1108.1	100.0	
G-Rz3-.6-B	6.600	100.000	20.5	0	0	0	0	Rz3-.6-B-1-1	48.000	3.882	4212.6	99.7	
								N-Rz4-.6-1	-48.000	-3.882	4212.6	99.7	
G-Rz4-.6-B	6.600	99.798	23.6	0	0	0	0	Rz4-.6-B-1-1	95.000	0.000	8327.2	100.0	
								Rz4-.6-B-1-2	-95.000	0.000	8327.2	100.0	
Gsh-1-B-1	11.000	101.243	-2.4	0	0	0	0	Gsh-10-B	0.000	10.250	531.4	0.0	
								Gsh-10-B	0.000	10.250	531.4	0.0	
								G-Gsh-1-B	0.000	0.000	0.0	0.0	
								C-Gsh-1-B	0.000	-20.500	1062.8	0.0	
Gsh-1-B-2	11.000	101.243	-2.4	0	0	0	0	G-Gsh-1-B	0.000	0.000	0.0	0.0	
Gsh-10-B	110.000	101.117	-2.2	0	0	0	0	Gsh-1-B-1	0.034	-9.568	49.7	-0.4	7.000
								Gsh-1-B-1	0.034	-9.568	49.7	-0.4	7.000
								B-10-Bga-Gsh-2	-0.068	19.135	99.3	-0.4	
G-Smb-1-B	11.000	100.452	2.1	0	0	0	0	N-Smb-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2N	0.000	0.000	0.0	0.0	
Gso-1-B-1	15.000	99.388	-6.1	0	0	12.165	5.892	Gso-10-B-1	-12.165	-5.892	523.5	90.0	
Gso-10-B-1	110.000	95.934	-4.4	0	0	0	0	Gso-1-B-1	12.175	6.354	75.1	88.7	-5.000

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Gso-Nde-1	7.049	9.110	63.0	61.2	
								10-Bre/Gso/Msh-B	-19.225	-15.464	135.0	77.9	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Hye-3-B-1	30.000	99.459	-1.6	0	0	7.130	3.453	Hye-10-B-1	-7.130	-3.453	153.3	90.0	
Hye-10-B-1	110.000	99.007	-0.1	0	0	0	0	Hye-3-B-1	7.143	3.707	42.7	88.8	-2.000
								B-10-Bta-Hye-2	-0.457	-3.223	17.3	14.0	
								B-10-Hye-Rka-1	-6.686	-0.484	35.5	99.7	
Jb1-10-B-1	110.000	96.407	-3.8	0	0	0	0	Jb1-1-B-1	17.959	9.698	111.1	88.0	-5.000
								B-10-Jb1-Jb2-1	0.000	-0.036	0.2	0.0	
								B-10-Jb1-Rln-2	-1.410	-5.459	30.7	25.0	
								B-10-Bre-Jb1-2	-40.445	-23.036	253.4	86.9	
								B-10-Gko-Jb1-2	12.573	10.595	89.5	76.5	
								B-10-Jb1-Nbg-1	11.322	8.238	76.2	80.9	
Jb1-1-B-1	15.000	99.091	-6.3	0	0	17.937	8.687	Jb1-10-B-1	-17.937	-8.687	774.1	90.0	
								B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
Jb2-6-B-1	6.600	99.389	-3.8	0	0	0	0	Jb2-10-B-2	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
Jb2-10-B-1	110.000	96.407	-3.8	0	0	0	0	B-10-Jb1-Jb2-2	0.000	0.000	0.0	0.0	
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb2-10-B-2	110.000	96.407	-3.8	0	0	0	0	Jb2-6-B-1	0.000	0.000	0.0	0.0	-3.000
								Jb2-6-B-1	0.000	0.000	0.0	0.0	-3.000
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb3-1-B-1	15.000	99.091	-6.3	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								G-Jb3-1-B	0.000	0.000	0.0	0.0	
Jb3-1-B-2	15.000	99.091	-6.3	0	0	0	0	G-Jb3-1-B	0.000	0.000	0.0	0.0	
								Jb3-1-B-2d	0.000	0.000	0.0	0.0	
Jb3-1-B-2d	15.000	99.091	-6.3	0	0	0	0	Jb3-1-B-2	0.000	0.000	0.0	0.0	
Kb2-20-B-1	220.000	100.398	2.7	0	0	0	0	B-20-Bwi-KB2-2	0.000	0.000	0.0	0.0	
Kba-3-B-1	30.000	99.078	-7.9	0	0	6.589	3.191	Kba-10-B-1	-6.589	-3.191	142.2	90.0	
Kba-10-B-1	110.000	96.185	-4.9	0	0	0	0	Kba-3-B-1	6.624	3.646	41.3	87.6	-6.000
								10-Kba/Msh/Rwi-B	10.763	-0.560	58.8	-99.9	
								B-10-Kba-Kre-1	-17.387	-3.086	96.4	98.5	
Kbo-3-B-1	30.000	99.194	-3.0	0	0	2.957	1.432	Kbo-10-B-1	-2.957	-1.432	63.7	90.0	
Kbo-10-B-1	110.000	100.057	-0.3	0	0	0	0	Kbo-3-B-1	2.972	1.613	17.7	87.9	-2.000
								10-Kbo/Kro/Mr2-B	-2.972	-1.613	17.7	87.9	
Kbu-1-B-1	11.000	99.907	4.5	0	0	0	0	Kbu-3-B-1	1.817	-0.319	96.9	-98.5	
								Kbu-10-B-1	10.893	-0.880	574.2	-99.7	
								Kbu-10-B-1	11.441	-0.894	602.9	-99.7	
								B-1-Kbu-KbW-1F_T	-24.151	2.093	1273.5	-99.6	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Kbu-3-B-1	30.000	100.356	2.1	0	0	0	0	Kbu-1-B-1	-1.811	0.394	35.5	-97.7	
								B-3-Kbu-Kro/Nko-2	1.811	-0.394	35.5	-97.7	
Kbu-10-B-1	110.000	100.189	1.5	0	0	0	0	Kbu-1-B-1	-10.863	1.451	57.4	-99.1	
								Kbu-1-B-1	-11.411	1.493	60.3	-99.2	
								B-10-Kbu-Kro-1	22.274	-2.944	117.7	-99.1	
KbW-1-B-1	11.000	103.031	9.4	0	0	0	0	KbW-1-B-2	8.000	0.000	407.5	100.0	
								G-KbW-1-B-2	-8.000	0.000	407.5	100.0	
KbW-1-B-2	11.000	103.031	9.4	0	0	0	0	KbW-1-B-1	-8.000	0.000	407.5	100.0	
								B-1-Kbu-KbW-2F_T	25.000	0.000	1273.6	100.0	
								G-KbW-1-B-1	-17.000	0.000	866.0	100.0	
KbW-1-B-3	11.000	103.031	9.4	17.000	0.000	0	0	G-KbW-1-B-1	17.000	0.000	866.0	100.0	
KbW-1-B-4	11.000	103.031	9.4	8.000	0.000	0	0	G-KbW-1-B-2	8.000	0.000	407.5	100.0	
KbW-1-B-5	20.000	100.399	2.7	0	0	0	0	KbW-20-B-2	0.000	0.000	0.0	0.0	
								KbW-1-B-5	0.000	0.000	0.0	0.0	
KbW-20-B-2	220.000	100.399	2.7	0	0	0	0	G-KbW-1-B-3	0.000	0.000	0.0	0.0	
								Kgo-10-B-1	-1.663	-0.984	38.0	86.1	
								Kgo-10-B-1	-1.663	-0.984	38.0	86.1	
Kgo-3-B-1	30.000	97.842	-1.5	0	0	8.306	4.023	Kgo-10-B-1	-1.663	-0.984	38.0	86.1	
								Kgo-10-B-1	-1.663	-0.984	38.0	86.1	
								G-NtB-3-B	-4.981	-2.054	106.0	92.4	
Kgo-10-B-1	110.000	98.778	-0.7	0	0	0	0	Kgo-3-B-1	1.665	1.017	10.4	85.3	
								Kgo-3-B-1	1.665	1.017	10.4	85.3	
								Kgo-20-B-1	-15.886	-5.898	90.0	93.7	
								B-10-Kgo-MKi-2	36.250	6.202	195.4	98.6	
								B-10-Kgo-Kli-1	-17.643	-1.833	94.3	99.5	
								B-10-Bta-Kgo-2	-6.050	-0.505	32.3	99.7	
								B-20-Kgo-Kli-1	-65.202	2.316	171.4	-99.9	
Kgo-20-B-1	220.000	99.868	0.8	0	0	0	0	Kgo-10-B-1	15.897	6.389	45.0	92.8	
								B-20-Kgo-Kli-1	-49.305	-8.704	131.6	-98.5	
								B-20-Kgo-Rwa-1	49.305	-8.704	131.6	-98.5	
Kli-3-B-1	30.000	99.461	-2.2	0	0	2.971	1.439	Kli-10-B-1	-2.971	-1.439	63.9	90.0	
Kli-10-B-1	110.000	99.575	0.4	0	0	0	0	Kli-3-B-1	2.997	1.621	18.0	88.0	-3.000
								Kli-20-B-1	-10.590	-2.356	57.2	97.6	
								B-10-Kgo-Kli-2	17.757	1.233	93.8	99.8	
								B-10-Kli-Kro-2	-9.534	-1.434	50.8	98.9	
								B-10-Kli-Rka-1	2.111	0.838	12.0	92.9	
								B-10-Kli-Ny1-1	-2.741	0.098	14.5	-99.9	
Kli-20-B-1	220.000	100.024	1.4	0	0	0	0	Kli-10-B-1	10.594	2.554	28.6	97.2	
								B-20-Kgo-Kli-2	65.336	-4.489	171.8	-99.8	
								B-20-Kli-Bwi-2	-75.930	1.936	199.3	-100.0	
Kma-10-B-1	110.000	98.908	13.0	0	0	0	0	Kma-20-B-1	70.078	-9.445	375.2	-99.1	
								Kma-20-B-1	70.078	-9.445	375.2	-99.1	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap							
Kma-20-B-1	220.000	100.298	8.0	0	0	0	0	B-10-Kma-Rz3-1	-47.575	2.118	252.7	-99.9								
								B-10-Kma-Rz4-1	-92.582	16.773	499.3	-98.4								
								Kma-10-B-1	-69.937	15.833	187.6	-97.5								
								Kma-10-B-1	-69.937	15.833	187.6	-97.5								
								B-20-Bwi-Kma-2	139.873	-31.666	375.2	-97.5								
Kre-3-B-1	30.000	98.865	-5.5	0	0	6.564	3.179	Kre-10-B-1	-6.564	-3.179	142.0	90.0								
Kre-10-B-1	110.000	97.668	-3.6	0	0	0	0	Kre-3-B-1	6.578	3.451	39.9	88.6	-3.000							
Kri-20-B-1	220.000	100.469	2.1	0	0	0	0	B-10-Kba-Kre-2	17.593	2.634	95.6	98.9								
								B-10-Kre-Nbu-1	-24.170	-6.085	133.9	97.0								
								B-20-Kri-Rba-1	0.000	0.000	0.0	0.0								
Kro-3-B-1	30.000	99.176	0.7	0	0	2.956	1.432	Kro-10-B-1	-0.300	-1.685	33.2	17.5								
Kro-10-B-1	110.000	99.985	0.9	0	0	0	0	B-3-Kbu-Kro-2	-2.656	0.253	51.8	-99.5								
								Kro-3-B-1	0.304	1.734	9.2	17.3	-2.000							
								B-10-Kbu-Kro-2	-22.200	2.765	117.4	-99.2								
								B-10-Kbo-Kro-1	12.332	-5.156	70.2	-92.3								
								B-10-Kli-Kro-1	9.564	0.657	50.3	99.8								
Kse-10-B1	110.000	95.934	-4.4	0	0	0	0	G-Kse-1-B	0.000	0.000	0.0	0.0								
MKi-10-B-1	110.000	95.920	-3.9	0	0	0	0	MKi-10-B-1	-11.501	-5.570	255.3	90.0								
								C-MKi-3-B	0.000	0.000	0.0	0.0								
								MKi-3-B-1	11.510	6.010	71.1	88.6	-2.000							
								10-Gko/Kgo/MKi-B	-29.750	-6.582	166.7	97.6								
								B-10-MKi-Nbg-2	0.958	-2.258	13.4	-39.1								
Mku-3-B-1	30.000	98.155	-6.8	0	0	21.566	10.445	Mku-6-B-1	-10.783	-5.223	234.9	90.0	1.000							
								Mku-6-B-3	-10.783	-5.223	234.9	90.0	1.000							
								Mku-10-B-1	110.000	97.608	-2.8	0	0	0	Mku-6-B-5	9.600	3.913	55.7	92.6	-3.000
								B-10-Gfu-Mku-2	13.733	-2.684	75.2	-98.1								
								B-10-Mku-Nta-1	-4.656	-4.235	33.8	74.0								
Mku-10-B-2	110.000	97.608	-2.8	0	0	0	0	B-10-Mku-Nbi-1	-18.678	3.006	101.7	-98.7								
								G-Mku-10-B	0.000	0.000	0.0	0.0								
								G-Mku-10-B	0.000	0.000	0.0	0.0								
								Mku-3-B-1	10.797	5.856	1078.5	87.9								
								Mku-6-B-4	-6.000	-4.032	634.7	83.0								
Mku-6-B-2	6.600	99.630	-4.2	0	0	0	0	Mku-6-B-3	0.000	0.000	0.0	0.0								
								Mku-6-B-5	-4.797	-1.824	450.6	93.5								
								Mku-6-B-6	0.000	0.000	0.0	0.0								
								G-Mku-6-B	12.000	8.064	1269.4	83.0								
								Mku-3-B-1	10.797	5.856	1078.5	87.9								
Mku-6-B-3	6.600	99.630	-4.2	0	0	0	0	Mku-6-B-4	-6.000	-4.032	634.7	83.0								

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-6-B-1	0.000	0.000	0.0	0.0	
								Mku-6-B-5	-4.797	-1.824	450.6	93.5	
								Mku-6-B-6	0.000	0.000	0.0	0.0	
Mku-6-B-4	6.600	99.630	-4.2	0	0	0	0	Mku-6-B-1	6.000	4.032	634.7	83.0	
								Mku-6-B-3	6.000	4.032	634.7	83.0	
								G-Mku-6-B	-12.000	-8.064	1269.4	83.0	
Mku-6-B-5	6.600	99.630	-4.2	0	0	0	0	Mku-10-B-1	-9.595	-3.647	901.2	93.5	
								Mku-6-B-1	4.797	1.824	450.6	93.5	
								Mku-6-B-3	4.797	1.824	450.6	93.5	
Mku-6-B-6	6.600	99.630	-4.2	0	0	0	0	C-Mku-B-6	0.000	0.000	0.0	0.0	
								Mku-6-B-3	0.000	0.000	0.0	0.0	
								Mku-6-B-1	0.000	0.000	0.0	0.0	
Mmb-3-B-1	30.000	99.328	6.2	0	0	7.113	3.445	Mmb-20-B-1	72.707	-3.895	1410.7	-99.9	
								G-Mmb-3-B	-79.821	0.449	1546.6	100.0	
Mmb-3-B-2	30.000	99.328	6.2	0	0	0	0	N-Mmb-6-1	-39.910	0.225	773.3	100.0	
								N-Mmb-6-2	-39.910	0.225	773.3	100.0	
								G-Mmb-3-B	79.821	-0.449	1546.6	100.0	
Mmb-20-B-1	220.000	100.035	0.9	0	0	0	0	Mmb-3-B-1	-72.558	10.610	192.4	-98.9	
								B-20-Mmb-Rwa-1D	58.838	-3.301	154.6	-99.8	
								B-20-Bta-Mmb-2D	13.720	-7.309	40.8	-88.3	
Mr1-6-B-1	6.600	99.467	-0.7	0	0	0	0	Mr1-10-B-1	-1.011	-2.646	249.1	35.7	
								Mr1-3-B-1	4.459	2.424	446.4	87.9	
								B-6-Mr1-Rz1-1	-3.448	0.221	303.8	-99.8	
Mr1-10-B-1	110.000	100.278	-0.2	0	0	0	0	Mr1-6-B-1	1.017	2.731	15.3	34.9	-2.000
								B-10-Mr1-Mr2-1	-1.017	-2.731	15.3	34.9	
Mr1-3-B-1	30.000	100.594	-3.4	0	0	4.442	2.151	Mr1-6-B-1	-4.442	-2.151	94.4	90.0	4.000
Mr2-10-B-1	110.000	100.283	-0.2	0	0	0	0	B-10-Mr2-Rz2-1	-12.647	0.793	66.3	-99.8	
								Mr2-10-B-2	12.647	-0.793	66.3	-99.8	
Mr2-10-B-2	110.000	100.283	-0.2	0	0	0	0	B-10-Mr2/Nte-1	11.630	-3.512	63.6	-95.7	
								B-10-Mr1-Mr2-2	1.017	2.719	15.2	35.0	
								Mr2-10-B-1	-12.647	0.793	66.3	-99.8	
Msh-1-B-1	15.000	97.046	-8.4	0	0	21.834	10.575	Msh-10-B-1	-10.917	-0.578	433.6	99.9	
								Msh-10-B-1	-10.917	-0.578	433.6	99.9	
								C-Msh-1-B	0.000	-9.418	373.5	0.0	
Msh-10-B-1	110.000	95.829	-5.1	0	0	0	0	Msh-1-B-1	10.948	1.212	60.3	99.4	-2.000
								Msh-1-B-1	10.948	1.212	60.3	99.4	-2.000
								B-10-Gso-Msh-2	-14.321	5.317	83.7	-93.7	
								B-10-Kba-Msh-2	-4.063	-1.808	24.4	91.4	
								B-10-Msh-Nga-1	-2.635	-2.348	19.3	74.7	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap	
								B-10-Msh-Rbo-1	-0.878	-3.585	20.2	23.8		
Mus-3-B	30.000	98.802	1.2	0	0	0	0	Mus-6-B	-1.993	-0.572	40.4	96.1		
								G-Mus-3-B	1.993	0.572	40.4	96.1		
* Mus-6-B	6.600	100.000	2.8	2.000	0.635	0	0	Mus-3-B	2.000	0.635	183.5	95.3		
Nbg-3-B-1	30.000	99.678	-5.3	0	0	12.229	5.923	Nbg-10-B-1	-6.114	-2.961	131.2	90.0		
								Nbg-10-B-1	-6.114	-2.961	131.2	90.0		
Nbg-10-B-1	110.000	95.965	-3.9	0	0	0	0	Nbg-3-B-1	6.124	3.147	37.7	88.9	-5.000	
								Nbg-3-B-1	6.124	3.147	37.7	88.9	-5.000	
								B-10-Jb1-Nbg-2	-11.290	-8.383	76.9	80.3		
								B-10-MKi-Nbg-1	-0.957	2.089	12.6	-41.7		
Nbi-3-B-1	30.000	98.757	-3.1	0	0	2.933	1.421	Nbi-10-B-1	-2.933	-1.421	63.5	90.0		
Nbi-10-B-1	110.000	98.170	-1.7	0	0	0	0	Nbi-3-B-1	2.940	1.511	17.7	88.9	-2.000	
								B-B-10-Mku-Nbi-1-2	18.847	-3.308	102.3	-98.5		
								B-10-Nbi-Nyl-1	-21.787	1.797	116.9	-99.7		
Nbu-3-B-1	30.000	99.081	-4.6	0	0	6.590	3.192	Nbu-10-B-1	-6.590	-3.192	142.2	90.0		
Nbu-10-B-1	110.000	98.889	-2.8	0	0	0	0	Nbu-3-B-1	6.603	3.464	39.6	88.6	-2.000	
								Nbu-20-B-1	-30.985	-9.507	172.0	95.6		
								B-10-Kre-Nbu-2	24.382	6.043	133.3	97.1		
Nbu-20-B-1	220.000	99.733	0.2	0	0	0	0	Nbu-10-B-1	31.025	11.297	86.9	94.0	-1.000	
								B-20-Nbu-Rsu-1	-31.025	-11.297	86.9	94.0		
N-Cyi-04-1	0.400	102.376	4.8	0.300	0.000	0	0	Cyi-3-B-2	0.300	0.000	423.0	100.0		
Nde-3-B-1	30.000	99.293	-5.8	0	0	12.144	5.882	Nde-10-B-1	-6.072	-2.941	130.8	90.0		
								Nde-10-B-1	-6.072	-2.941	130.8	90.0		
								C-Nde-B	0.000	0.000	0.0	0.0		
Nde-10-B-1	110.000	95.595	-4.4	0	0	0	0	Nde-3-B-1	6.081	3.125	37.5	88.9	-5.000	
								Nde-3-B-1	6.081	3.125	37.5	88.9	-5.000	
								B-10-Gso-Nde-2	-7.031	-9.246	63.8	60.5		
								B-10-Gha-Nde-2	-5.131	2.995	32.6	-86.4		
Nga-3-B-1	30.000	99.026	-6.8	0	0	6.583	3.188	Nga-10-B-1	-6.583	1.715	132.2	-96.8		
								C-Nga-B-3	0.000	-4.903	95.3	0.0		
Nga-10-B-1	110.000	96.417	-4.9	0	0	0	0	Nga-3-B-1	6.595	-1.479	36.8	-97.6	-2.000	
								B-10-Nga-RIn-1	-9.240	0.389	50.3	-99.9		
								B-10-Msh-Nga-2	2.645	1.090	15.6	92.5		
Nko-3-B-1	30.000	101.640	2.9	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.596	-0.027	11.3	-99.9		
								G-Nko-3-B	-0.596	0.027	11.3	-99.9		
Nko-3-B-2	30.000	101.640	2.9	0	0	0	0	N-Nko-04-B-2	-0.596	0.027	11.3	-99.9		
								G-Nko-3-B	0.596	-0.027	11.3	-99.9		
* N-Mmb-6-1	6.600	100.000	11.9	40.000	3.811	0	0	Mmb-3-B-2	40.000	3.811	3514.9	99.5		
* N-Mmb-6-2	6.600	100.000	11.9	40.000	3.811	0	0	Mmb-3-B-2	40.000	3.811	3514.9	99.5		

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
N-Nko-04-B-2	0.400	102.302	5.5	0.600	0.000	0	0	Nko-3-B-2	0.600	0.000	846.5	100.0	
* N-Ny1-6-2	6.600	100.000	9.9	28.000	2.877	0	0	Ny1-3-B-2	28.000	2.877	2462.3	99.5	
* N-Ny2-6-1	6.600	100.000	3.4	17.000	1.972	0	0	Ny2-3-B-2	17.000	1.972	1497.1	99.3	
* N-Rka-6-2	6.600	100.000	4.4	6.700	1.108	0	0	Rka-3-B-2	6.700	1.108	594.1	98.7	
* N-Rsu-1-1	12.000	100.000	7.3	30.000	1.840	0	0	Rsu-10-B-2	30.000	1.840	1446.1	99.8	
N-Rz1-06-B-1-1	0.600	100.766	2.9	0	0	0	0	Rz1-6-B-1	3.500	0.000	3342.3	100.0	
								G-Rz1-06-B	-3.500	0.000	3342.3	100.0	
N-Rz1-06-B-1-2	0.600	100.766	2.9	3.500	0.000	0	0	G-Rz1-06-B	3.500	0.000	3342.3	100.0	
* N-Rz4-6-1	6.600	100.000	20.5	48.000	3.882	0	0	G-Rz3-6-B	48.000	3.882	4212.6	99.7	
N-Smb-1	11.000	100.452	2.1	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2	0.000	0.000	0.0	0.0	
								G-Smb-1-B	0.000	0.000	0.0	0.0	
Nta-3-B-1	30.000	98.820	-3.5	0	0	6.559	3.176	Nta-6-B-1	-6.559	-3.176	141.9	90.0	1.000
Nta-10-B-1	110.000	98.174	-2.6	0	0	0	0	Nta-6-B-1	-2.335	-1.690	15.4	81.0	
								Nta-6-B-1	-2.335	-1.690	15.4	81.0	
								B-10-Mku-Nta-2	4.669	3.381	30.8	81.0	
Nta-6-B-1	6.600	99.684	-1.6	0	0	0	0	Nta-3-B-1	6.572	3.453	651.5	88.5	
								Nta-10-B-1	2.339	1.759	256.8	79.9	
								Nta-10-B-1	2.339	1.759	256.8	79.9	
								Nta-6-B-3	-11.250	-6.972	1161.5	85.0	
Nta-6-B-2	6.600	99.684	-1.6	11.250	6.972	0	0	Nta-6-B-3	11.250	6.972	1161.5	85.0	
Nta-6-B-3	6.600	99.684	-1.6	0	0	0	0	Nta-6-B-1	11.250	6.972	1161.5	85.0	
								Nta-6-B-2	-11.250	-6.972	1161.5	85.0	
NtB-3-B1	30.000	97.842	-1.5	0	0	0	0	NtB-6-B	-4.981	-2.054	106.0	92.4	
								G-NtB-3-B	4.981	2.054	106.0	92.4	
* NtB-6-B	6.600	100.000	0.9	5.000	2.306	0	0	NtB-3-B1	5.000	2.306	481.7	90.8	
Nte-3-B-1	30.000	98.812	-2.1	0	0	2.936	1.422	Nte-10-B-1	-2.936	-1.422	63.5	90.0	
Nte-10-B-1	110.000	100.229	-0.8	0	0	0	0	Nte-3-B-1	2.943	1.513	17.3	88.9	
								B-10-Kbo/Nte-2	-9.244	5.064	55.2	-87.7	
								B-10-Mr2/Nte-2	-11.593	2.939	62.6	-96.9	
								B-10-Bga-Nte-2	17.894	-9.516	106.1	-88.3	
Ny1-10-B-1	110.000	99.661	0.5	0	0	0	0	Ny1-3-B-1	-24.942	2.973	132.3	-99.3	
								B-10-Kli-Ny1-2	2.745	-0.800	15.1	-96.0	
								B-10-Nbi-Ny1-2	22.197	-2.172	117.5	-99.5	
Ny1-3-B-1	30.000	99.253	4.2	0	0	2.960	1.434	Ny1-10-B-1	24.977	-1.385	485.1	-99.8	
								G-Ny1-3-B	-27.937	-0.048	541.7	100.0	
Ny1-3-B-2	30.000	99.253	4.2	0	0	0	0	N-Ny1-6-2	-27.937	-0.048	541.7	100.0	
								G-Ny1-3-B	27.937	0.048	541.7	100.0	
Ny2-10-B-1	110.000	97.180	-3.5	0	0	0	0	Ny2-3-B-1	-10.321	2.965	58.0	-96.1	-3.000

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Ny2-Rln-1	10.321	-2.965	58.0	-96.1	
Ny2-3-B-1	30.000	99.103	-0.5	0	0	6.592	3.193	Ny2-10-B-1	10.349	-2.391	206.3	-97.4	
								G-Ny2-3-B	-16.942	-0.802	329.4	99.9	
Ny2-3-B-2	30.000	99.103	-0.5	0	0	0	0	N-Ny2-.6-1	-16.942	-0.802	329.4	99.9	
								G-Ny2-3-B	16.942	0.802	329.4	99.9	
Rba-3-B-1	30.000	99.029	0.8	0	0	2.948	1.428	Rba-20-B-1	-2.948	-1.428	63.7	90.0	
Rba-20-B-1	220.000	100.449	2.1	0	0	0	0	Rba-3-B-1	2.955	1.519	8.7	88.9	
								B-20-Bwi-Rba-2D	-57.673	10.190	153.0	-98.5	
								B-20-Rba-Sha-1	54.718	-4.898	143.5	-99.6	
								B-20-Kri-Rba-2	0.000	-2.855	7.5	0.0	
								B-20-Smb-Rba-2	0.000	-1.101	2.9	0.0	
								B-20-Gma-Rba-2	0.000	-2.855	7.5	0.0	
Rbo-3-B-1	30.000	99.855	-6.9	0	0	12.268	5.942	Rbo-20-B-1	-12.268	4.029	248.9	-95.0	
								C-Rbo-B-3	0.000	-9.971	192.2	0.0	
Rbo-20-B-1	110.000	95.994	-5.1	0	0	0	0	Rbo-3-B-1	12.277	-3.611	70.0	-95.9	-3.000
								B-10-Msh-Rbo-2	0.881	3.315	18.8	25.7	
								B-10-Air-Rbo-2	-13.158	0.296	72.0	-100.0	
* Rka5-.6-B	6.600	100.000	3.6	3.000	0.552	0	0	Rka5-3-B	3.000	0.552	266.8	98.3	
Rka5-3-B	30.000	98.802	1.2	0	0	0	0	Rka5-.6-B	-2.984	-0.420	58.7	99.0	
								G-Rka5-3-B	2.984	0.420	58.7	99.0	
Rka-3-B-1	30.000	98.802	1.2	0	0	7.046	3.412	Rka-10-B-1	2.301	-0.848	47.8	-93.8	
								Rka-10-B-1	2.301	-0.848	47.8	-93.8	
								G-Rka-3-B	-6.670	-0.724	130.7	99.4	
								G-Rka5-3-B	-2.984	-0.420	58.7	99.0	
								G-Mus-3-B	-1.993	-0.572	40.4	96.1	
Rka-3-B-2	30.000	98.802	1.2	0	0	0	0	N-Rka-.6-2	-6.670	-0.724	130.7	99.4	
								G-Rka-3-B	6.670	0.724	130.7	99.4	
Rka-10-B-1	110.000	99.309	0.3	0	0	0	0	Rka-3-B-1	-2.299	0.889	13.0	-93.3	
								Rka-3-B-1	-2.299	0.889	13.0	-93.3	
								B-10-Kli-Rka-2	-2.107	-1.673	14.2	78.3	
								B-10-Hye-Rka-2	6.705	-0.105	35.4	-100.0	
Rlm-3-B-1	30.000	99.738	-4.4	0	0	12.242	5.929	Rlm-10-B-1	-12.242	-5.929	262.5	90.0	
Rlm-10-B-1	110.000	99.311	-2.7	0	0	0	0	Rlm-3-B-1	12.252	6.394	73.0	88.7	-2.000
								Rlm-20-B-1	-61.308	-25.580	351.1	92.3	
								B-10-Air-Rlm-2_S	49.056	19.186	278.4	93.1	
Rlm-20-B-1	220.000	99.665	0.2	0	0	0	0	Rlm-10-B-1	61.391	29.308	179.1	90.2	-2.000
								B-20-Sha-Rlm-2D	38.234	-6.368	102.1	-98.6	
								B-20-Rlm-Rwa-1D	-100.735	-3.796	265.4	99.9	
								B-20-Rlm-Rsu-1D	1.110	-19.144	50.5	-5.8	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Rln-3-B-1	30.000	100.216	-5.9	0	0	6.726	3.258	Rln-10-B-1	-6.726	6.786	183.5	-70.4	
								C-Rln-3-B	0.000	-10.043	192.9	0.0	
Rln-10-B-1	110.000	97.066	-3.8	0	0	0	0	Rln-3-B-1	6.749	-6.332	50.0	-72.9	
								10-Gfu/Jb1/Rln-B	-5.777	5.082	41.6	-75.1	
								B-10-Nga-Rln-2	9.319	-1.425	51.0	-98.9	
								B-10-Ny2-Rln-2	-10.291	2.675	57.5	-96.8	
Rsu-10-B-1	110.000	99.655	3.0	0	0	0	0	Rsu-20-B-1	29.950	-0.418	157.8	100.0	
								G-Rsu-10-B	-29.950	0.418	157.8	100.0	
Rsu-10-B-2	110.000	99.655	3.0	0	0	0	0	N-Rsu-1-1	-29.950	0.418	157.8	100.0	
								G-Rsu-10-B	29.950	-0.418	157.8	100.0	
Rsu-20-B-1	220.000	99.740	0.2	0	0	0	0	Rsu-10-B-1	-29.916	1.923	78.9	-99.8	
								B-20-Rlm-Rsu-2D	-1.109	-13.156	34.7	8.4	
								B-20-Nbu-Rsu-2	31.026	11.234	86.8	94.0	
Rwa-3-B-1	30.000	99.076	-0.3	0	0	7.081	3.429	Rwa-20-B-1	-7.081	-3.429	152.8	90.0	
								G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-3-B-2	30.000	99.076	-0.3	0	0	0	0	G-Rwa-3-B	0.000	0.000	0.0	0.0	
Rwa-20-B-1	220.000	99.841	0.6	0	0	0	0	Rwa-3-B-1	7.084	3.561	20.8	89.3	
								B-20-Rlm-Rwa-2D	100.909	-2.541	265.3	-100.0	
								B-20-Kgo-Rwa-2	-49.253	7.077	130.8	-99.0	
								B-20-Mmb-Rwa-2D	-58.740	-8.097	155.9	99.1	
Rwi-1-B-1	15.000	99.750	-7.0	0	0	6.670	3.230	Rwi-10-B-1	-6.670	1.745	266.0	-96.7	
								C-Rwi-B-1	0.000	-4.975	192.0	0.0	
Rwi-10-B-1	110.000	96.128	-5.0	0	0	0	0	Rwi-1-B-1	6.682	-1.506	37.4	-97.6	-3.000
								B-10-Kba-Rwi-2	-6.682	1.506	37.4	-97.6	
Rz1-6-B-1	6.600	100.307	0.1	0	0	0	0	N-Rz1-.06-B-1-1	-3.480	0.171	303.8	-99.9	
								B-.6-Mr1-Rz1-2	3.480	-0.171	303.8	-99.9	
Rz2-6-B-1-1	6.600	100.651	5.2	0	0	0	0	Rz2-10-B-1	12.750	0.000	1108.1	100.0	
								G-Rz2-.6-B	-12.750	0.000	1108.1	100.0	
Rz2-6-B-1-2	6.600	100.651	5.2	12.750	0.000	0	0	G-Rz2-.6-B	12.750	0.000	1108.1	100.0	
Rz2-10-B-1	110.000	100.576	0.2	0	0	0	0	Rz2-.6-B-1-1	-12.691	1.122	66.5	-99.6	
								B-10-Mr2-Rz2-2	12.691	-1.122	66.5	-99.6	
Rz3-6-B-1-1	6.600	100.000	20.5	0	0	0	0	Rz3-10-B-1	48.000	3.882	4212.6	99.7	
								G-Rz3-.6-B	-48.000	-3.882	4212.6	99.7	
Rz3-10-B-1	110.000	99.473	14.2	0	0	0	0	Rz3-.6-B-1-1	-47.883	1.387	252.8	-100.0	
								B-10-Kma-Rz3-2	47.883	-1.387	252.8	-100.0	
Rz4-6-B-1-1	6.600	99.798	23.6	0	0	0	0	Rz4-10-B-1	95.000	0.000	8327.2	100.0	
								G-Rz4-.6-B	-95.000	0.000	8327.2	100.0	
Rz4-6-B-1-2	6.600	99.798	23.6	95.000	0.000	0	0	G-Rz4-.6-B	95.000	0.000	8327.2	100.0	
Rz4-10-B-1	110.000	100.143	17.4	0	0	0	0	Rz4-.6-B-1-1	-94.771	10.295	499.6	-99.4	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Kma-Rz4-2	94.771	-10.295	499.6	-99.4	
Sha-3-B-1	30.000	99.602	-4.3	0	0	12.212	5.915	Sha-10-B-1	-12.212	-5.915	262.2	90.0	
Sha-10-B-1	110.000	99.176	-2.6	0	0	0	0	Sha-3-B-1	12.222	6.378	73.0	88.7	-2.000
								Sha-20-B-1	-105.969	-51.044	622.5	90.1	
								B-10-Bre-Sha-2D	93.747	44.665	549.6	90.3	
Sha-20-B-1	220.000	99.484	-0.1	0	0	0	0	Sha-10-B-1	106.099	56.903	317.6	88.1	-2.000
								C-Sha-20-B	0.000	-9.897	26.1	0.0	
								B-20-Sha-Rlm-1D	-38.175	-9.840	104.0	96.8	
								B-20-Rba-Sha-2	-54.241	-7.217	144.3	99.1	
								B-20-Mra-Sha-2D	-13.683	-29.948	86.9	41.6	
Smb-1-B-1	11.000	100.452	2.1	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	
Smb-1-B-2	11.000	100.452	2.1	0	0	0	0	Smb-20-B-1	0.000	0.000	0.0	0.0	
								N-Smb-1	0.000	0.000	0.0	0.0	
Smb-1-B-2N	11.000	100.452	2.1	0	0	0	0	G-Smb-1-B	0.000	0.000	0.0	0.0	
								Smb-1-B-4	0.000	0.000	0.0	0.0	
								Smb-1-B-6	0.000	0.000	0.0	0.0	
Smb-1-B-4	11.000	100.452	2.1	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-1-B-6	11.000	100.452	2.1	0	0	0	0	Smb-1-B-2N	0.000	0.000	0.0	0.0	
Smb-20-B-1	220.000	100.452	2.1	0	0	0	0	Smb-1-B-1	0.000	0.000	0.0	0.0	
								Smb-1-B-2	0.000	0.000	0.0	0.0	
								B-20-Smb-Rba-1	0.000	0.000	0.0	0.0	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cyi/Nko-B	30.000	97.821	-0.3	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.149	-0.102	3.6	82.4	
								3-Cyi-Ghi-B	0.447	0.296	10.5	83.4	
								B-3-Nko-Cyi/Nko-1	-0.298	-0.194	7.0	83.9	
3-Cyi-Ghi-B	30.000	97.701	-0.3	0	0	0	0	B-3-Cyi-Ghi-2	0.000	-0.076	1.5	0.0	
								3-Cyi/Nko-B	-0.447	-0.304	10.6	82.7	
								3-Kro/Kbu-B	0.447	0.380	11.6	76.2	
3-Kro/Kbu-B	30.000	96.368	-0.5	0	0	0	0	B-3-Kbu-Kro-2	3.595	-0.434	72.3	-99.3	
								B-3-Kbu-Kro/Nko-2	-3.153	0.886	65.4	-96.3	
								3-Cyi-Ghi-B	-0.442	-0.451	12.6	70.0	
10-Bre/Gso/Msh-B	110.000	96.063	-8.3	0	0	0	0	B-10-Bre-Gso-1	-52.998	-4.176	290.5	99.7	
								B-10-Gso-Msh-2	21.212	-4.854	118.9	-97.5	
								Gso-10-B-1	31.786	9.030	180.5	96.2	
10-Gfu/Jb1/Rln-B	110.000	96.458	-9.3	0	0	0	0	B-10-Gfu/Mku/Rln-B	9.185	-4.295	55.2	-90.6	
								B-10-Jb1-Rln-2	-29.498	8.944	167.7	-95.7	
								Rln-10-B-1	20.313	-4.649	113.4	-97.5	
10-Gfu/Mku/Rln-B	110.000	96.425	-9.9	0	0	0	0	B-10-Gfu-Mku-2	-1.727	-0.120	9.4	99.8	
								10-Gfu/Jb1/Rln-B	-9.143	3.840	54.0	-92.2	
								Gfu-10-B-1	10.870	-3.720	62.5	-94.6	
10-Gko/Kgo/MKi-B	110.000	96.512	-7.4	0	0	0	0	B-10-Gko-MKi-1	1.738	3.140	19.5	48.4	
								B-10-Kgo-MKi-2	-50.907	4.144	277.8	-99.7	
								MKi-10-B-1	49.169	-7.285	270.3	-98.9	
10-Kba/Msh/Rwi-B	110.000	95.665	-8.9	0	0	0	0	B-10-Kba-Msh-2	4.769	-2.875	30.6	-85.6	
								B-10-Kba-Rwi-2	11.323	-3.844	65.6	-94.7	
								Kba-10-B-1	-16.092	6.719	95.7	-92.3	
10-Kbo/Kro/Mr2-B	110.000	96.677	-2.2	0	0	0	0	B-10-Kbo/Nte-B	8.427	2.785	48.2	94.9	
								B-10-Kbo-Kro-1	-13.211	-5.341	77.4	92.7	
								Kbo-10-B-1	4.783	2.556	29.4	88.2	
10-Kbo/Nte-B	110.000	96.217	-2.6	0	0	0	0	B-10-Kbo/Kro/Mr2-B	-8.406	-3.353	49.4	92.9	
								B-10-Kbo/Nte-2	8.406	3.353	49.4	92.9	
								B-10-Mr2/Nte-1	-1.444	-1.834	12.7	61.9	
10-Mr2/Nte-B	110.000	96.207	-2.6	0	0	0	0	B-10-Mr2/Nte-2	1.444	1.834	12.7	61.9	
20-Gma-B	220.000	100.743	5.5	0	0	0	0	B-20-Gma-Rba-2	0.000	0.000	0.0	0.0	
20-Gte-B	220.000	99.174	0.9	0	0	0	0	B-20-Bta-Gte-D	0.000	0.000	0.0	0.0	
* 20-Mra-B	220.000	100.000	0.0	28.444	10.595	0	0	B-20-Mra-Sha-2D	28.444	10.595	79.7	93.7	
Air-3-B-1	30.000	99.299	-9.6	0	0	43.310	20.976	Air-10-B-1	-43.310	-20.976	932.7	90.0	
Air-10-B-1	110.000	96.070	-6.6	0	0	0	0	Air-3-B-1	43.375	23.911	270.6	87.6	-6.000

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Air-Rbo-1	27.817	-10.506	162.5	-93.6	
								B-10-Air-Rlm-1_S	-71.192	-13.405	395.8	98.3	
B-1-Jb1-Jb3-1	15.000	99.697	-10.7	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								Jb1-1-B-1	0.000	0.000	0.0	0.0	
B-1-Jb1-Jb3-2	15.000	99.697	-10.7	0	0	0	0	B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-1	0.000	0.000	0.0	0.0	
B-1-Kbu-KbW-1F_T	11.000	98.109	2.3	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.121	2.167	1295.6	-99.6	
								Kbu-1-B-1	24.121	-2.167	1295.6	-99.6	
B-1-Kbu-KbW-2F_T	11.000	101.274	7.5	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1295.7	100.0	
								KbW-1-B-2	-25.000	0.000	1295.7	100.0	
B-3-Cyi-Cyi/Nko-1	30.000	97.881	-0.2	0	0	0	0	3-Cyi/Nko-B	0.149	0.089	3.4	85.8	
								Cyi-3-B-1	-0.149	-0.089	3.4	85.8	
B-3-Cyi-Ghi-2	30.000	97.769	-0.3	0	0	0	0	3-Cyi-Ghi-B	0.000	0.000	0.0	0.0	
B-3-Kbu-Kro/Nko-2	30.000	96.733	0.2	0	0	0	0	3-Kro/Kbu-B	3.176	-0.863	65.5	-96.5	
								Kbu-3-B-1	-3.176	0.863	65.5	-96.5	
B-3-Kbu-Kro-2	30.000	95.147	-2.0	0	0	0	0	3-Kro/Kbu-B	-3.537	0.498	72.2	-99.0	
								Kro-3-B-1	3.537	-0.498	72.2	-99.0	
B-3-Nko-Cyi/Nko-1	30.000	97.980	-0.2	0	0	0	0	3-Cyi/Nko-B	0.298	0.176	6.8	86.1	
								Nko-3-B-1	-0.298	-0.176	6.8	86.1	
B-10-Air-Rbo-1	110.000	96.070	-6.6	0	0	0	0	B-10-Air-Rbo-2	27.817	-10.506	162.5	-93.6	
								Air-10-B-1	-27.817	10.506	162.5	-93.6	
B-10-Air-Rbo-2	110.000	95.724	-9.1	0	0	0	0	B-10-Air-Rbo-1	-27.259	10.833	160.8	-92.9	
								Rbo-20-B-1	27.259	-10.833	160.8	-92.9	
B-10-Air-Rlm-1_S	110.000	96.070	-6.6	0	0	0	0	B-10-Air-Rlm-2_S	-71.192	-13.405	395.8	98.3	
								Air-10-B-1	71.192	13.405	395.8	98.3	
B-10-Air-Rlm-2_S	110.000	99.141	-4.3	0	0	0	0	B-10-Air-Rlm-1_S	72.851	16.390	395.3	97.6	
								Rlm-10-B-1	-72.851	-16.390	395.3	97.6	
B-10-Bga-Gsh-1	110.000	95.712	-2.8	0	0	0	0	B-10-Bga-Gsh-2	-14.881	-8.410	93.7	87.1	
								Bga-10-B-1	14.881	8.410	93.7	87.1	
B-10-Bga-Gsh-2	110.000	96.417	-2.5	0	0	0	0	B-10-Bga-Gsh-1	14.948	8.252	92.9	87.5	
								Gsh-10-B	-14.948	-8.252	92.9	87.5	
B-10-Bga-Nte-1	110.000	95.712	-2.8	0	0	0	0	B-10-Bga-Nte-2	-4.821	-3.116	31.5	84.0	
								Bga-10-B-1	4.821	3.116	31.5	84.0	
B-10-Bga-Nte-2	110.000	96.202	-2.6	0	0	0	0	B-10-Bga-Nte-1	4.836	2.531	29.8	88.6	
								Nte-10-B-1	-4.836	-2.531	29.8	88.6	
B-10-Bre-Gso-1	110.000	98.141	-6.3	0	0	0	0	10-Bre/Gso/Msb-B	53.968	5.716	290.2	99.4	
								Bre-10-B-1	-53.968	-5.716	290.2	99.4	
B-10-Bre-Jb1-D1F	110.000	98.141	-6.3	0	0	0	0	B-10-Bre-Jb1-D2F	106.609	18.912	579.1	98.5	
								Bre-10-B-1	-106.609	-18.912	579.1	98.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Bre-Jb1-D2F	110.000	97.111	-7.0	0	0	0	0	B-10-Bre-Jb1-D1F	-105.731	-17.788	579.5	98.6	
								Jb1-10-B-1	105.731	17.788	579.5	98.6	
B-10-Bre-Sha-1DT-F	110.000	98.141	-6.3	0	0	0	0	B-10-Bre-Sha-2DT-F	-187.312	-39.842	1024.2	97.8	
								Bre-10-B-1	187.312	39.842	1024.2	97.8	
B-10-Bre-Sha-2DT-F	110.000	99.356	-5.2	0	0	0	0	B-10-Bre-Sha-1DT-F	188.885	42.910	1023.2	97.5	
								Sha-10-B-1	-188.885	-42.910	1023.2	97.5	
B-10-Bta-Hye-1	110.000	99.024	-1.5	0	0	0	0	B-10-Bta-Hye-2	12.565	4.906	71.5	93.1	
								Bta-10-B-1	-12.565	-4.906	71.5	93.1	
B-10-Bta-Hye-2	110.000	98.140	-2.0	0	0	0	0	B-10-Bta-Hye-1	-12.493	-5.317	72.6	92.0	
								Hye-10-B-1	12.493	5.317	72.6	92.0	
B-10-Bta-Kgo-1	110.000	99.024	-1.5	0	0	0	0	B-10-Bta-Kgo-2	9.177	-3.971	53.0	-91.8	
								Bta-10-B-1	-9.177	3.971	53.0	-91.8	
B-10-Bta-Kgo-2	110.000	98.861	-2.5	0	0	0	0	B-10-Bta-Kgo-1	-9.099	2.957	50.8	-95.1	
								Kgo-10-B-1	9.099	-2.957	50.8	-95.1	
B-10-Gfu-Mku-2	110.000	96.478	-9.8	0	0	0	0	B-10-Gfu/Mku/Rln-B	1.728	-0.367	9.6	-97.8	
								Mku-10-B-1	-1.728	0.367	9.6	-97.8	
B-10-Gha-MKi-1	110.000	95.874	-8.0	0	0	0	0	B-10-Gha-MKi-2	-30.722	-4.629	170.1	98.9	
								Gha-10-B-1	30.722	4.629	170.1	98.9	
B-10-Gha-MKi-2	110.000	96.512	-7.4	0	0	0	0	B-10-Gha-MKi-1	30.881	4.743	169.9	98.8	
								MKi-10-B-1	-30.881	-4.743	169.9	98.8	
B-10-Gha-Nde-1	110.000	95.874	-8.0	0	0	0	0	B-10-Gha-Nde-2	9.986	-6.744	66.0	-82.9	
								Gha-10-B-1	-9.986	6.744	66.0	-82.9	
B-10-Gha-Nde-2	110.000	95.982	-8.5	0	0	0	0	B-10-Gha-Nde-1	-9.941	6.432	64.7	-84.0	
								Nde-10-B-1	9.941	-6.432	64.7	-84.0	
B-10-Gko-Jb1-1	110.000	96.436	-7.5	0	0	0	0	B-10-Gko-Jb1-2	-25.333	-11.617	151.7	90.9	
								Gko-10-B-1	25.333	11.617	151.7	90.9	
B-10-Gko-Jb1-2	110.000	97.111	-7.0	0	0	0	0	B-10-Gko-Jb1-1	25.424	11.612	151.1	91.0	
								Jb1-10-B-1	-25.424	-11.612	151.1	91.0	
B-10-Gko-MKi-1	110.000	96.436	-7.5	0	0	0	0	B-10-Gko/Kgo/MKi-B	-1.737	-3.300	20.3	46.6	
								Gko-10-B-1	1.737	3.300	20.3	46.6	
B-10-Gso-Msh-2	110.000	95.690	-9.2	0	0	0	0	B-10-Bre/Gso/Msh-B	-21.050	4.746	118.4	-97.6	
								Msh-10-B-1	21.050	-4.746	118.4	-97.6	
B-10-Gso-Nde-1	110.000	96.063	-8.3	0	0	0	0	B-10-Gso-Nde-2	10.976	-2.382	61.4	-97.7	
								Gso-10-B-1	-10.976	2.382	61.4	-97.7	
B-10-Gso-Nde-2	110.000	95.982	-8.5	0	0	0	0	B-10-Gso-Nde-1	-10.959	2.242	61.2	-98.0	
								Nde-10-B-1	10.959	-2.242	61.2	-98.0	
B-10-Hye-Rka-1	110.000	98.140	-2.0	0	0	0	0	B-10-Hye-Rka-2	0.456	-1.213	6.9	-35.2	
								Hye-10-B-1	-0.456	1.213	6.9	-35.2	
B-10-Hye-Rka-2	110.000	98.200	-2.0	0	0	0	0	B-10-Hye-Rka-1	-0.455	0.597	4.0	-60.6	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rka-10-B-1	0.455	-0.597	4.0	-60.6	
B-10-Jb1-Jb2-1	110.000	97.111	-7.0	0	0	0	0	B-10-Jb1-Jb2-2	0.000	-0.036	0.2	0.0	
								Jb1-10-B-1	0.000	0.036	0.2	0.0	
B-10-Jb1-Jb2-2	110.000	97.111	-7.0	0	0	0	0	B-10-Jb1-Jb2-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-1	0.000	0.000	0.0	0.0	
B-10-Jb1-Nbg-1	110.000	97.111	-7.0	0	0	0	0	B-10-Jb1-Nbg-2	23.439	-0.406	126.7	-100.0	
								Jb1-10-B-1	-23.439	0.406	126.7	-100.0	
B-10-Jb1-Nbg-2	110.000	96.762	-7.5	0	0	0	0	B-10-Jb1-Nbg-1	-23.352	0.372	126.7	-100.0	
								Nbg-10-B-1	23.352	-0.372	126.7	-100.0	
B-10-Jb1-Rln-2	110.000	97.111	-7.0	0	0	0	0	10-Gfu/Jb1/Rln-B	30.049	-8.572	168.9	-96.2	
								Jb1-10-B-1	-30.049	8.572	168.9	-96.2	
B-10-Kba-Kre-1	110.000	95.665	-8.9	0	0	0	0	B-10-Kba-Kre-2	-27.344	0.636	150.1	-100.0	
								Kba-10-B-1	27.344	-0.636	150.1	-100.0	
B-10-Kba-Kre-2	110.000	97.352	-6.7	0	0	0	0	B-10-Kba-Kre-1	27.848	-0.470	150.2	-100.0	
								Kre-10-B-1	-27.848	0.470	150.2	-100.0	
B-10-Kba-Msh-2	110.000	95.690	-9.2	0	0	0	0	10-Kba/Msh/Rwi-B	-4.754	2.241	28.8	-90.5	
								Msh-10-B-1	4.754	-2.241	28.8	-90.5	
B-10-Kba-Rwi-2	110.000	95.604	-9.2	0	0	0	0	10-Kba/Msh/Rwi-B	-11.298	3.670	65.2	-95.1	
								Rwi-10-B-1	11.298	-3.670	65.2	-95.1	
B-10-Kbo/Nte-2	110.000	96.202	-2.6	0	0	0	0	10-Kbo/Nte-B	-8.405	-3.365	49.4	92.8	
								Nte-10-B-1	8.405	3.365	49.4	92.8	
B-10-Kbo-Kro-1	110.000	98.111	-1.2	0	0	0	0	10-Kbo/Kro/Mr2-B	13.316	4.372	75.0	95.0	
								Kro-10-B-1	-13.316	-4.372	75.0	95.0	
B-10-Kbu-Kro-1	110.000	98.318	-0.6	0	0	0	0	B-10-Kbu-Kro-2	20.881	-2.489	112.3	-99.3	
								Kbu-10-B-1	-20.881	2.489	112.3	-99.3	
B-10-Kbu-Kro-2	110.000	98.111	-1.2	0	0	0	0	B-10-Kbu-Kro-1	-20.813	2.305	112.0	-99.4	
								Kro-10-B-1	20.813	-2.305	112.0	-99.4	
B-10-Kgo-Kli-1	110.000	98.861	-2.5	0	0	0	0	B-10-Kgo-Kli-2	-11.905	4.143	66.9	-94.4	
								Kgo-10-B-1	11.905	-4.143	66.9	-94.4	
B-10-Kgo-Kli-2	110.000	98.807	-1.7	0	0	0	0	B-10-Kgo-Kli-1	11.964	-4.899	68.7	-92.5	
								Kli-10-B-1	-11.964	4.899	68.7	-92.5	
B-10-Kgo-MKi-2	110.000	98.861	-2.5	0	0	0	0	10-Gko/Kgo/MKi-B	52.376	-1.114	278.1	-100.0	
								Kgo-10-B-1	-52.376	1.114	278.1	-100.0	
B-10-Kli-Kro-1	110.000	98.111	-1.2	0	0	0	0	B-10-Kli-Kro-2	6.355	-9.598	61.6	-55.2	
								Kro-10-B-1	-6.355	9.598	61.6	-55.2	
B-10-Kli-Kro-2	110.000	98.807	-1.7	0	0	0	0	B-10-Kli-Kro-1	-6.313	8.879	57.9	-57.9	
								Kli-10-B-1	6.313	-8.879	57.9	-57.9	
B-10-Kli-Ny1-1	110.000	98.807	-1.7	0	0	0	0	B-10-Kli-Ny1-2	28.588	-7.526	157.0	-96.7	
								Kli-10-B-1	-28.588	7.526	157.0	-96.7	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Kli-Ny1-2	110.000	98.194	-3.5	0	0	0	0	B-10-Kli-Ny1-1	-28.167	7.696	156.1	-96.5	
								Ny1-10-B-1	28.167	-7.696	156.1	-96.5	
B-10-Kli-Rka-1	110.000	98.807	-1.7	0	0	0	0	B-10-Kli-Rka-2	5.711	2.000	32.1	94.4	
								Kli-10-B-1	-5.711	-2.000	32.1	94.4	
B-10-Kli-Rka-2	110.000	98.200	-2.0	0	0	0	0	B-10-Kli-Rka-1	-5.689	-2.781	33.8	89.8	
								Rka-10-B-1	5.689	2.781	33.8	89.8	
B-10-Kma-Rz3-1	110.000	100.150	11.0	0	0	0	0	B-10-Kma-Rz3-2	-23.895	1.289	125.4	-99.9	
								Kma-10-B-1	23.895	-1.289	125.4	-99.9	
B-10-Kma-Rz3-2	110.000	100.413	11.6	0	0	0	0	B-10-Kma-Rz3-1	23.971	-1.299	125.5	-99.9	
								Rz3-10-B-1	-23.971	1.299	125.5	-99.9	
B-10-Kma-Rz4-1	110.000	100.150	11.0	0	0	0	0	B-10-Kma-Rz4-2	-46.910	3.744	246.6	-99.7	
								Kma-10-B-1	46.910	-3.744	246.6	-99.7	
B-10-Kma-Rz4-2	110.000	101.046	13.1	0	0	0	0	B-10-Kma-Rz4-1	47.444	-2.512	246.8	-99.9	
								Rz4-10-B-1	-47.444	2.512	246.8	-99.9	
B-10-Kre-Nbu-1	110.000	97.352	-6.7	0	0	0	0	B-10-Kre-Nbu-2	-39.144	-5.774	213.3	98.9	
								Kre-10-B-1	39.144	5.774	213.3	98.9	
B-10-Kre-Nbu-2	110.000	99.079	-5.3	0	0	0	0	B-10-Kre-Nbu-1	39.683	6.404	212.9	98.7	
								Nbu-10-B-1	-39.683	-6.404	212.9	98.7	
B-10-MKi-Nbg-1	110.000	96.762	-7.5	0	0	0	0	B-10-MKi-Nbg-2	2.530	8.262	46.9	29.3	
								Nbg-10-B-1	-2.530	-8.262	46.9	29.3	
B-10-MKi-Nbg-2	110.000	96.512	-7.4	0	0	0	0	B-10-MKi-Nbg-1	-2.520	-8.415	47.8	28.7	
								MKi-10-B-1	2.520	8.415	47.8	28.7	
B-10-Mku-Nbi-1	110.000	96.478	-9.8	0	0	0	0	B-10-Mku-Nbi-1-2	-30.317	12.924	179.3	-92.0	
								Mku-10-B-1	30.317	-12.924	179.3	-92.0	
B-10-Mku-Nta-1	110.000	96.478	-9.8	0	0	0	0	B-10-Mku-Nta-2	0.166	-1.473	8.1	-11.2	
								Mku-10-B-1	-0.166	1.473	8.1	-11.2	
B-10-Mku-Nta-2	110.000	96.583	-9.8	0	0	0	0	B-10-Mku-Nta-1	-0.166	0.606	3.4	-26.4	
								Nta-10-B-1	0.166	-0.606	3.4	-26.4	
B-10-Mr1-Mr2-1	110.000	96.352	-2.5	0	0	0	0	B-10-Mr1-Mr2-2	-4.890	-3.123	31.6	84.3	
								Mr1-10-B-1	4.890	3.123	31.6	84.3	
B-10-Mr1-Mr2-2	110.000	96.361	-2.5	0	0	0	0	B-10-Mr1-Mr2-1	4.890	3.113	31.6	84.4	
								Mr2-10-B-2	-4.890	-3.113	31.6	84.4	
B-10-Mr2/Nte-1	110.000	96.361	-2.5	0	0	0	0	10-Mr2/Nte-B	1.446	1.222	10.3	76.4	
								Mr2-10-B-2	-1.446	-1.222	10.3	76.4	
B-10-Mr2/Nte-2	110.000	96.202	-2.6	0	0	0	0	10-Mr2/Nte-B	-1.444	-1.847	12.8	61.6	
								Nte-10-B-1	1.444	1.847	12.8	61.6	
B-10-Mr2-Rz2-1	110.000	96.361	-2.5	0	0	0	0	B-10-Mr2-Rz2-2	-6.336	-4.334	41.8	82.5	
								Mr2-10-B-1	6.336	4.334	41.8	82.5	
B-10-Mr2-Rz2-2	110.000	96.784	-2.4	0	0	0	0	B-10-Mr2-Rz2-1	6.353	3.982	40.7	84.7	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rz2-10-B-1	-6.353	-3.982	40.7	84.7	
B-10-Msh-Nga-1	110.000	95.690	-9.2	0	0	0	0	B-10-Msh-Nga-2	4.956	-4.695	37.4	-72.6	
								Msh-10-B-1	-4.956	4.695	37.4	-72.6	
B-10-Msh-Nga-2	110.000	96.023	-10.1	0	0	0	0	B-10-Msh-Nga-1	-4.915	3.507	33.0	-81.4	
								Nga-10-B-1	4.915	-3.507	33.0	-81.4	
B-10-Msh-Rbo-1	110.000	95.690	-9.2	0	0	0	0	B-10-Msh-Rbo-2	-6.269	2.118	36.3	-94.7	
								Msh-10-B-1	6.269	-2.118	36.3	-94.7	
B-10-Msh-Rbo-2	110.000	95.724	-9.1	0	0	0	0	B-10-Msh-Rbo-1	6.278	-2.373	36.8	-93.5	
								Rbo-20-B-1	-6.278	2.373	36.8	-93.5	
B-10-Nbi-Nyl-1	110.000	96.687	-7.7	0	0	0	0	B-10-Nbi-Nyl-2	-35.902	9.771	202.0	-96.5	
								Nbi-10-B-1	35.902	-9.771	202.0	-96.5	
B-10-Nbi-Nyl-2	110.000	98.194	-3.5	0	0	0	0	B-10-Nbi-Nyl-1	37.131	-8.430	203.5	-97.5	
								Nyl-10-B-1	-37.131	8.430	203.5	-97.5	
B-10-Nga-Rln-1	110.000	96.023	-10.1	0	0	0	0	B-10-Nga-Rln-2	-6.472	0.201	35.4	-100.0	
								Nga-10-B-1	6.472	-0.201	35.4	-100.0	
B-10-Nga-Rln-2	110.000	96.458	-9.3	0	0	0	0	B-10-Nga-Rln-1	6.511	-1.306	36.1	-98.0	
								Rln-10-B-1	-6.511	1.306	36.1	-98.0	
B-10-Ny2-Rln-1	110.000	96.361	-9.4	0	0	0	0	B-10-Ny2-Rln-2	-2.822	-0.629	15.7	97.6	
								Ny2-10-B-1	2.822	0.629	15.7	97.6	
B-10-Ny2-Rln-2	110.000	96.458	-9.3	0	0	0	0	B-10-Ny2-Rln-1	2.824	0.288	15.4	99.5	
								Rln-10-B-1	-2.824	-0.288	15.4	99.5	
B-20-Bta-Gte-D	220.000	99.151	0.9	0	0	0	0	20-Gte-B	0.000	-7.011	18.6	0.0	
								Bta-20-B-1	0.000	7.011	18.6	0.0	
B-20-Bta-Mmb-1D	220.000	99.151	0.9	0	0	0	0	B-20-Bta-Mmb-2D	-33.767	-1.992	89.5	99.8	
								Bta-20-B-1	33.767	1.992	89.5	99.8	
B-20-Bta-Mmb-2D	220.000	99.196	1.0	0	0	0	0	B-20-Bta-Mmb-1D	33.784	-4.092	90.0	-99.3	
								Mmb-20-B-1	-33.784	4.092	90.0	-99.3	
B-20-Bwi-KB2-1	220.000	100.709	6.0	0	0	0	0	B-20-Bwi-KB2-2	-99.743	9.333	261.1	-99.6	
								Bwi-20-B-1	99.743	-9.333	261.1	-99.6	
B-20-Bwi-KB2-2	220.000	100.735	6.1	0	0	0	0	B-20-Bwi-KB2-1	99.788	-9.538	261.2	-99.5	
								Kb2-20-B-1	-99.788	9.538	261.2	-99.5	
B-20-Bwi-KbW-1	220.000	100.709	6.0	0	0	0	0	B-20-Bwi-KbW-2	-74.797	7.381	195.9	-99.5	
								Bwi-20-B-1	74.797	-7.381	195.9	-99.5	
B-20-Bwi-KbW-2	220.000	100.731	6.1	0	0	0	0	B-20-Bwi-KbW-1	74.828	-7.744	196.0	-99.5	
								G-KbW-1-B-3	-74.828	7.744	196.0	-99.5	
B-20-Bwi-Kma-1	220.000	100.709	6.0	0	0	0	0	B-20-Bwi-Kma-2	-70.059	-1.411	182.6	100.0	
								Bwi-20-B-1	70.059	1.411	182.6	100.0	
B-20-Bwi-Kma-2	220.000	101.468	8.5	0	0	0	0	B-20-Bwi-Kma-1	70.736	-8.171	184.2	-99.3	
								Kma-20-B-1	-70.736	8.171	184.2	-99.3	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-20-Bwi-Rba-1D	220.000	100.709	6.0	0	0	0	0	B-20-Bwi-Rba-2D	44.492	-20.842	128.0	-90.6	
								Bwi-20-B-1	-44.492	20.842	128.0	-90.6	
B-20-Bwi-Rba-2D	220.000	100.723	5.5	0	0	0	0	B-20-Bwi-Rba-1D	-44.407	4.133	116.2	-99.6	
								Rba-20-B-1	44.407	-4.133	116.2	-99.6	
B-20-Gma-Rba-2	220.000	100.723	5.5	0	0	0	0	20-Gma-B	0.000	-2.870	7.5	0.0	
								Rba-20-B-1	0.000	2.870	7.5	0.0	
B-20-Kgo-Kli-1	220.000	99.092	1.4	0	0	0	0	B-20-Kgo-Kli-2	-146.845	7.467	389.4	-99.9	
								Kgo-20-B-1	146.845	-7.467	389.4	-99.9	
B-20-Kgo-Kli-2	220.000	99.451	2.7	0	0	0	0	B-20-Kgo-Kli-1	147.534	-7.061	389.8	-99.9	
								Kli-20-B-1	-147.534	7.061	389.8	-99.9	
B-20-Kgo-Rwa-1	220.000	99.092	1.4	0	0	0	0	B-20-Kgo-Rwa-2	104.994	-21.645	283.9	-97.9	
								Kgo-20-B-1	-104.994	21.645	283.9	-97.9	
B-20-Kgo-Rwa-2	220.000	99.076	0.8	0	0	0	0	B-20-Kgo-Rwa-1	-104.749	20.928	282.9	-98.1	
								Rwa-20-B-1	104.749	-20.928	282.9	-98.1	
B-20-Kli-Bwi-1	220.000	100.709	6.0	0	0	0	0	B-20-Kli-Bwi-2	195.053	2.837	508.3	100.0	
								Bwi-20-B-1	-195.053	-2.837	508.3	100.0	
B-20-Kli-Bwi-2	220.000	99.451	2.7	0	0	0	0	B-20-Kli-Bwi-1	-192.625	2.500	508.3	100.0	
								Kli-20-B-1	192.625	-2.500	508.3	100.0	
B-20-Kri-Rba-1	220.000	100.743	5.5	0	0	0	0	B-20-Kri-Rba-2	0.000	0.000	0.0	0.0	
								Kri-20-B-1	0.000	0.000	0.0	0.0	
B-20-Kri-Rba-2	220.000	100.723	5.5	0	0	0	0	B-20-Kri-Rba-1	0.000	-2.870	7.5	0.0	
								Rba-20-B-1	0.000	2.870	7.5	0.0	
B-20-Mmb-Rwa-1D	220.000	99.196	1.0	0	0	0	0	B-20-Mmb-Rwa-2D	34.067	-3.700	90.7	-99.4	
								Mmb-20-B-1	-34.067	3.700	90.7	-99.4	
B-20-Mmb-Rwa-2D	220.000	99.076	0.8	0	0	0	0	B-20-Mmb-Rwa-1D	-34.033	-7.758	92.5	97.5	
								Rwa-20-B-1	34.033	7.758	92.5	97.5	
B-20-Mra-Sha-2D	220.000	99.140	-0.3	0	0	0	0	20-Mra-B	-28.345	-38.739	127.1	59.1	
								Sha-20-B-1	28.345	38.739	127.1	59.1	
B-20-Nbu-Rsu-1	220.000	98.717	-0.4	0	0	0	0	B-20-Nbu-Rsu-2	-51.231	-17.440	143.9	94.7	
								Nbu-20-B-1	51.231	17.440	143.9	94.7	
B-20-Nbu-Rsu-2	220.000	98.727	-0.4	0	0	0	0	B-20-Nbu-Rsu-1	51.233	17.384	143.8	94.7	
								Rsu-20-B-1	-51.233	-17.384	143.8	94.7	
B-20-Rba-Sha-1	220.000	100.723	5.5	0	0	0	0	B-20-Rba-Sha-2	139.048	-8.765	363.0	-99.8	
								Rba-20-B-1	-139.048	8.765	363.0	-99.8	
B-20-Rba-Sha-2	220.000	99.140	-0.3	0	0	0	0	B-20-Rba-Sha-1	-135.990	8.474	360.7	-99.8	
								Sha-20-B-1	135.990	-8.474	360.7	-99.8	
B-20-Rlm-Rsu-1D	220.000	98.894	0.1	0	0	0	0	B-20-Rlm-Rsu-2D	36.321	-16.197	105.5	-91.3	
								Rlm-20-B-1	-36.321	16.197	105.5	-91.3	
B-20-Rlm-Rsu-2D	220.000	98.727	-0.4	0	0	0	0	B-20-Rlm-Rsu-1D	-36.255	-15.172	104.5	92.2	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rsu-20-B-1	36.255	15.172	104.5	92.2	
B-20-Rlm-Rwa-1D	220.000	98.894	0.1	0	0	0	0	B-20-Rlm-Rwa-2D	-176.173	16.062	469.4	-99.6	
								Rlm-20-B-1	176.173	-16.062	469.4	-99.6	
B-20-Rlm-Rwa-2D	220.000	99.076	0.8	0	0	0	0	B-20-Rlm-Rwa-1D	176.719	-20.867	471.3	-99.3	
								Rwa-20-B-1	-176.719	20.867	471.3	-99.3	
B-20-Sha-Rlm-1D	220.000	99.140	-0.3	0	0	0	0	B-20-Sha-Rlm-2D	-45.888	19.963	132.5	-91.7	
								Sha-20-B-1	45.888	-19.963	132.5	-91.7	
B-20-Sha-Rlm-2D	220.000	98.894	0.1	0	0	0	0	B-20-Sha-Rlm-1D	46.006	-35.763	154.6	-79.0	
								Rlm-20-B-1	-46.006	35.763	154.6	-79.0	
B-20-Smb-Rba-1	220.000	100.800	5.9	0	0	0	0	B-20-Smb-Rba-2	99.817	-8.225	260.8	-99.7	
								Smb-20-B-1	-99.817	8.225	260.8	-99.7	
B-20-Smb-Rba-2	220.000	100.723	5.5	0	0	0	0	B-20-Smb-Rba-1	-99.697	7.670	260.5	-99.7	
								Rba-20-B-1	99.697	-7.670	260.5	-99.7	
B-6-Mr1-Rz1-1	6.600	99.113	-5.3	0	0	0	0	B-6-Mr1-Rz1-2	-1.732	-1.010	177.0	86.4	
								Mr1-6-B-1	1.732	1.010	177.0	86.4	
B-6-Mr1-Rz1-2	6.600	100.003	-5.0	0	0	0	0	B-6-Mr1-Rz1-1	1.743	1.027	177.0	86.2	
								Rz1-6-B-1	-1.743	-1.027	177.0	86.2	
B-B-10-Mku-Nbi-1-2	110.000	96.687	-7.7	0	0	0	0	B-10-Mku-Nbi-1	30.844	-12.475	180.6	-92.7	
								Nbi-10-B-1	-30.844	12.475	180.6	-92.7	
Bga-3-B-1	30.000	99.550	-7.2	0	0	19.658	9.521	Bga-10-B-1	-19.658	-9.521	422.2	90.0	
Bga-10-B-1	110.000	95.712	-2.8	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	19.702	11.526	125.2	86.3	-8.000
								B-10-Bga-Nte-1	-4.821	-3.116	31.5	84.0	
								B-10-Bga-Gsb-1	-14.881	-8.410	93.7	87.1	
Bga-6-B-1	6.600	95.712	-2.8	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
Bre-1-B-1	15.000	99.370	-10.1	0	0	26.630	12.897	Bre-10-B-1	-13.315	-6.449	573.0	90.0	
								Bre-10-B-1	-13.315	-6.449	573.0	90.0	
Bre-10-B-1	110.000	98.141	-6.3	0	0	0	0	Bre-1-B-1	13.368	7.607	82.3	86.9	-5.000
								Bre-1-B-1	13.368	7.607	82.3	86.9	-5.000
								B-10-Bre-Gso-1	53.968	5.716	290.2	99.4	
								B-10-Bre-Sha-1DT-F	-187.312	-39.842	1024.2	97.8	
								B-10-Bre-Jb1-D1F	106.609	18.912	579.1	98.5	
Bta-3-B-1	30.000	99.424	-4.3	0	0	11.975	5.800	Bta-10-B-1	-11.975	-5.800	257.5	90.0	
Bta-10-B-1	110.000	99.024	-1.5	0	0	0	0	Bta-3-B-1	11.992	6.546	72.4	87.8	-3.000
								Bta-20-B-1	-33.733	-7.481	183.1	97.6	
								B-10-Bta-Kgo-1	9.177	-3.971	53.0	-91.8	
								B-10-Bta-Hye-1	12.565	4.906	71.5	93.1	
Bta-20-B-1	220.000	99.151	0.9	0	0	0	0	Bta-10-B-1	33.767	9.003	92.5	96.6	-1.000
								B-20-Bta-Mmb-1D	-33.767	-1.992	89.5	99.8	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-20-Bta-Gte-D	0.000	-7.011	18.6	0.0	
Bwi-3-B-1	30.000	99.276	3.7	0	0	5.034	2.438	Bwi-20-B-1	-5.034	-2.438	108.4	90.0	
Bwi-10-B-1	110.000	100.709	6.0	0	0	0	0	Bwi-20-B-1	0.000	0.000	0.0	0.0	
Bwi-20-B-1	220.000	100.709	6.0	0	0	0	0	Bwi-10-B-1	0.000	0.000	0.0	0.0	
								Bwi-3-B-1	5.054	2.702	14.9	88.2	-1.000
								B-20-Bwi-Rba-1D	44.492	-20.842	128.0	-90.6	
								B-20-Kli-Bwi-1	195.053	2.837	508.3	100.0	
								B-20-Bwi-Kma-1	-70.059	-1.411	182.6	100.0	
								B-20-Bwi-KB2-1	-99.743	9.333	261.1	-99.6	
								B-20-Bwi-KbW-1	-74.797	7.381	195.9	-99.5	
C-Gfu-B-3	30.000	97.534	-12.6	0	0	0.000	-9.513	Gfu-3-B-1	0.000	9.513	187.7	0.0	
C-MKi-3-B	30.000	99.422	-10.5	0	0	0.000	-14.827	MKi-3-B-1	0.000	14.827	287.0	0.0	
C-Mku-B-6	6.600	99.464	-14.1	0	0	0.000	-29.679	Mku-6-B-6	0.000	29.679	2610.2	0.0	
C-Msh-1-B	15.000	98.672	-13.3	0	0	0.000	-19.472	Msh-1-B-1	0.000	19.472	759.6	0.0	
C-Nbg-3-B	30.000	99.386	-10.0	0	0	0.000	-19.755	Nbg-3-B-1	0.000	19.755	382.5	0.0	
C-Nde-B	30.000	99.591	-11.0	0	0	0.000	-19.837	Nde-3-B-1	0.000	19.837	383.3	0.0	
C-Nga-B-3	30.000	99.756	-13.4	0	0	0.000	-9.951	Nga-3-B-1	0.000	9.951	192.0	0.0	
C-Rbo-B-3	30.000	99.870	-12.2	0	0	0.000	-19.948	Rbo-3-B-1	0.000	19.948	384.4	0.0	
C-Rln-3-B	30.000	98.223	-12.7	0	0	0.000	-9.648	Rln-3-B-1	0.000	9.648	189.0	0.0	
C-Rwi-B-1	15.000	99.318	-12.5	0	0	0.000	-9.864	Rwi-1-B-1	0.000	9.864	382.3	0.0	
C-Sha-20-B	220.000	99.140	-0.3	0	0	0.000	-63.886	Sha-20-B-1	0.000	63.886	169.1	0.0	
Cyi-3-B-1	30.000	97.881	-0.2	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.149	0.089	3.4	85.8	
								G-Cyi-3-B	-0.149	-0.089	3.4	85.8	
Cyi-3-B-2	30.000	97.881	-0.2	0	0	0	0	N-Cyi-04-1	-0.149	-0.089	3.4	85.8	
								G-Cyi-3-B	0.149	0.089	3.4	85.8	
G-Cyi-3-B	30.000	97.881	-0.2	0	0	0	0	Cyi-3-B-1	0.149	0.089	3.4	85.8	
								Cyi-3-B-2	-0.149	-0.089	3.4	85.8	
Gfu-3-B-1	30.000	97.534	-12.6	0	0	10.805	5.233	Gfu-10-B-1	-3.602	1.427	76.4	-93.0	
								Gfu-10-B-1	-3.602	1.427	76.4	-93.0	
								Gfu-10-B-1	-3.602	1.427	76.4	-93.0	
								C-Gfu-B-3	0.000	-9.513	187.7	0.0	
Gfu-10-B-1	110.000	96.425	-9.9	0	0	0	0	Gfu-3-B-1	3.623	-1.240	20.8	-94.6	
								Gfu-3-B-1	3.623	-1.240	20.8	-94.6	
								Gfu-3-B-1	3.623	-1.240	20.8	-94.6	
								10-Gfu/Mku/Rln-B	-10.870	3.720	62.5	-94.6	
G-Gko-1-B	15.000	99.477	-10.5	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-1-B-2	0.000	0.000	0.0	0.0	
G-Gko-3-B	15.000	99.477	-10.5	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-3-B	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
G-Gko-10-B	110.000	96.436	-7.5	0	0	0	0	Gko-10-B-1	0.000	0.000	0.0	0.0	
								Gko-10-B-2	0.000	0.000	0.0	0.0	
G-Gsh-1-B	11.000	99.651	0.4	0	0	0	0	Gsh-1-B-1	15.000	9.296	929.5	85.0	
								Gsh-1-B-2	-15.000	-9.296	929.5	85.0	
Gha-3-B-1	30.000	99.221	-10.9	0	0	20.707	10.029	Gha-10-B-1	-20.707	-10.029	446.3	90.0	
Gha-10-B-1	110.000	95.874	-8.0	0	0	0	0	Gha-3-B-1	20.736	11.373	129.5	87.7	-6.000
								B-10-Gha-MKi-1	-30.722	-4.629	170.1	98.9	
								B-10-Gha-Nde-1	9.986	-6.744	66.0	-82.9	
G-Jb2-10-B	110.000	97.111	-7.0	0	0	0	0	Jb2-10-B-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
G-Jb3-1-B	15.000	99.697	-10.7	0	0	0	0	Jb3-1-B-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-2	0.000	0.000	0.0	0.0	
G-Kb2-1-B-1	11.000	100.540	11.1	0	0	0	0	Kb2-1-B-1-1	25.000	0.000	1305.1	100.0	
								Kb2-1-B-1-2	-25.000	0.000	1305.1	100.0	
G-Kb2-1-B-2	11.000	100.473	11.7	0	0	0	0	Kb2-1-B-2-1	75.000	0.000	3917.9	100.0	
								Kb2-1-B-2-2	-75.000	0.000	3917.9	100.0	
G-KbW-1-B-1	11.000	101.274	7.5	0	0	0	0	KbW-1-B-3	-17.000	0.000	881.0	100.0	
								KbW-1-B-2	17.000	0.000	881.0	100.0	
G-KbW-1-B-2	11.000	101.274	7.5	0	0	0	0	KbW-1-B-1	8.000	0.000	414.6	100.0	
								KbW-1-B-4	-8.000	0.000	414.6	100.0	
G-KbW-1-B-3	220.000	100.731	6.1	0	0	0	0	B-20-Bwi-KbW-2	74.828	-7.744	196.0	-99.5	
								KbW-20-B-2	-74.828	7.744	196.0	-99.5	
Gko-1-B-1	15.000	99.477	-10.5	0	0	26.973	13.064	Gko-10-B-1	-8.991	-4.355	386.5	90.0	
								Gko-10-B-1	-8.991	-4.355	386.5	90.0	
								Gko-10-B-1	-8.991	-4.355	386.5	90.0	
								G-Gko-1-B	0.000	0.000	0.0	0.0	
								G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-1-B-2	15.000	99.477	-10.5	0	0	0	0	G-Gko-1-B	0.000	0.000	0.0	0.0	
Gko-3-B	15.000	99.477	-10.5	0	0	0	0	G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-10-B-1	110.000	96.436	-7.5	0	0	0	0	Gko-1-B-1	9.023	4.972	56.1	87.6	-6.000
								Gko-1-B-1	9.023	4.972	56.1	87.6	-6.000
								Gko-1-B-1	9.023	4.972	56.1	87.6	-6.000
								B-10-Gko-Jb1-1	-25.333	-11.617	151.7	90.9	
								B-10-Gko-MKi-1	-1.737	-3.300	20.3	46.6	
								G-Gko-10-B	0.000	0.000	0.0	0.0	
Gko-10-B-2	110.000	96.436	-7.5	0	0	0	0	G-Gko-10-B	0.000	0.000	0.0	0.0	
G-Kse-1-B	110.000	96.063	-8.3	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Mku-10-B	110.000	96.478	-9.8	0	0	0	0	Mku-10-B-1	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-10-B-2	0.000	0.000	0.0	0.0	
G-Mku-6-B	6.600	99.464	-14.1	0	0	0	0	Mku-6-B-4	12.000	8.064	1271.5	83.0	
								Mku-6-B-2	-12.000	-8.064	1271.5	83.0	
G-Mmb-3-B	30.000	98.777	6.0	0	0	0	0	Mmb-3-B-1	79.818	3.863	1556.9	99.9	
								Mmb-3-B-2	-79.818	-3.863	1556.9	99.9	
G-Mus-3-B	30.000	99.397	-3.2	0	0	0	0	Mus-3-B	-0.997	-0.728	23.9	80.8	
								Rka-3-B-1	0.997	0.728	23.9	80.8	
G-Nko-3-B	30.000	97.980	-0.2	0	0	0	0	Nko-3-B-1	0.298	0.176	6.8	86.1	
								Nko-3-B-2	-0.298	-0.176	6.8	86.1	
G-NtB-3-B	30.000	96.570	-5.1	0	0	0	0	Kgo-3-B-1	2.494	1.791	61.2	81.2	
								NtB-3-B1	-2.494	-1.791	61.2	81.2	
G-Ny1-3-B	30.000	99.077	-2.2	0	0	0	0	Ny1-3-B-1	13.984	1.900	274.1	99.1	
								Ny1-3-B-2	-13.984	-1.900	274.1	99.1	
G-Ny2-3-B	30.000	100.003	-10.2	0	0	0	0	Ny2-3-B-1	8.481	4.885	188.4	86.7	
								Ny2-3-B-2	-8.481	-4.885	188.4	86.7	
G-Rka5-3-B	30.000	99.397	-3.2	0	0	0	0	Rka5-3-B	-1.494	-1.076	35.7	81.1	
								Rka-3-B-1	1.494	1.076	35.7	81.1	
G-Rka-3-B	30.000	99.397	-3.2	0	0	0	0	Rka-3-B-1	3.340	1.950	74.9	86.4	
								Rka-3-B-2	-3.340	-1.950	74.9	86.4	
G-Rsu-10-B	110.000	99.189	1.0	0	0	0	0	Rsu-10-B-1	14.987	2.604	80.5	98.5	
								Rsu-10-B-2	-14.987	-2.604	80.5	98.5	
G-Rwa-3-B	30.000	98.968	5.4	0	0	0	0	Rwa-3-B-1	49.882	1.171	970.3	100.0	
								Rwa-3-B-2	-49.882	-1.171	970.3	100.0	
G-Rz1-.06-B	0.600	101.778	-3.7	0	0	0	0	N-Rz1-.06-B-1-1	1.750	1.085	1946.7	85.0	
								N-Rz1-.06-B-1-2	-1.750	-1.085	1946.7	85.0	
G-Rz2-.6-B	6.600	100.000	0.2	0	0	0	0	Rz2-.6-B-1-1	6.375	4.401	677.7	82.3	
								Rz2-.6-B-1-2	-6.375	-4.401	677.7	82.3	
G-Rz3-.6-B	6.600	100.387	14.7	0	0	0	0	Rz3-.6-B-1-1	24.000	0.000	2091.4	100.0	
								N-Rz4-.6-1	-24.000	0.000	2091.4	100.0	
G-Rz4-.6-B	6.600	101.024	16.1	0	0	0	0	Rz4-.6-B-1-1	47.500	0.000	4113.1	100.0	
								Rz4-.6-B-1-2	-47.500	0.000	4113.1	100.0	
Gsh-1-B-1	11.000	99.651	0.4	0	0	0	0	Gsh-10-B	7.500	4.648	464.7	85.0	
								Gsh-10-B	7.500	4.648	464.7	85.0	
								G-Gsh-1-B	-15.000	-9.296	929.5	85.0	
Gsh-1-B-2	11.000	99.651	0.4	15.000	9.296	0	0	G-Gsh-1-B	15.000	9.296	929.5	85.0	
Gsh-10-B	110.000	96.417	-2.5	0	0	0	0	Gsh-1-B-1	-7.474	-4.126	46.5	87.5	
								Gsh-1-B-1	-7.474	-4.126	46.5	87.5	
								B-10-Bga-Gsh-2	14.948	8.252	92.9	87.5	
G-Smb-1-B	11.000	100.643	10.6	0	0	0	0	N-Smb-1	100.000	0.000	5215.1	100.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Smb-1-B-2N	-100.000	0.000	5215.1	100.0	
Gso-1-B-1	15.000	99.417	-11.2	0	0	20.780	10.064	Gso-10-B-1	-20.780	-10.064	893.9	90.0	
Gso-10-B-1	110.000	96.063	-8.3	0	0	0	0	Gso-1-B-1	20.810	11.413	129.7	87.7	-6.000
								B-10-Gso-Nde-1	10.976	-2.382	61.4	-97.7	
								10-Bre/Gso/Msh-B	-31.786	-9.030	180.5	96.2	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Hye-3-B-1	30.000	99.547	-4.6	0	0	12.002	5.813	Hye-10-B-1	-12.002	-5.813	257.8	90.0	
Hye-10-B-1	110.000	98.140	-2.0	0	0	0	0	Hye-3-B-1	12.037	6.530	73.2	87.9	-4.000
								B-10-Bta-Hye-2	-12.493	-5.317	72.6	92.0	
								B-10-Hye-Rka-1	0.456	-1.213	6.9	-35.2	
Jb1-10-B-1	110.000	97.111	-7.0	0	0	0	0	Jb1-1-B-1	26.819	15.190	166.6	87.0	-6.000
								B-10-Jb1-Jb2-1	0.000	-0.036	0.2	0.0	
								B-10-Jb1-Rln-2	30.049	-8.572	168.9	-96.2	
								B-10-Gko-Jb1-2	25.424	11.612	151.1	91.0	
								B-10-Jb1-Nbg-1	23.439	-0.406	126.7	-100.0	
								B-10-Bre-Jb1-D2F	-105.731	-17.788	579.5	98.6	
Jb1-1-B-1	15.000	99.697	-10.7	0	0	26.770	12.965	Jb1-10-B-1	-26.770	-12.965	1148.3	90.0	
								B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
Jb2-6-B-1	6.600	100.115	-7.0	0	0	0	0	Jb2-10-B-2	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
Jb2-10-B-1	110.000	97.111	-7.0	0	0	0	0	B-10-Jb1-Jb2-2	0.000	0.000	0.0	0.0	
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb2-10-B-2	110.000	97.111	-7.0	0	0	0	0	Jb2-6-B-1	0.000	0.000	0.0	0.0	-3.000
								Jb2-6-B-1	0.000	0.000	0.0	0.0	-3.000
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb3-1-B-1	15.000	99.697	-10.7	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								G-Jb3-1-B	0.000	0.000	0.0	0.0	
Jb3-1-B-2	15.000	99.697	-10.7	0	0	0	0	G-Jb3-1-B	0.000	0.000	0.0	0.0	
								Jb3-1-B-2d	0.000	0.000	0.0	0.0	
Jb3-1-B-2d	15.000	99.697	-10.7	0	0	0	0	Jb3-1-B-2	0.000	0.000	0.0	0.0	
Kb2-1-B-1-1	11.000	100.540	11.1	0	0	0	0	Kb2-20-B-1	25.000	0.000	1305.1	100.0	
								G-Kb2-1-B-1	-25.000	0.000	1305.1	100.0	
Kb2-1-B-1-2	11.000	100.540	11.1	25.000	0.000	0	0	G-Kb2-1-B-1	25.000	0.000	1305.1	100.0	
Kb2-1-B-2-1	11.000	100.473	11.7	0	0	0	0	Kb2-20-B-1	75.000	0.000	3917.9	100.0	
								G-Kb2-1-B-2	-75.000	0.000	3917.9	100.0	
Kb2-1-B-2-2	11.000	100.473	11.7	75.000	0.000	0	0	G-Kb2-1-B-2	75.000	0.000	3917.9	100.0	
Kb2-20-B-1	220.000	100.735	6.1	0	0	0	0	Kb2-1-B-1-1	-24.951	2.208	65.3	-99.6	
								Kb2-1-B-2-1	-74.837	7.330	195.9	-99.5	
								B-20-Bwi-KB2-2	99.788	-9.538	261.2	-99.5	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap	
Kba-3-B-1	30.000	99.028	-11.4	0	0	11.201	5.425	Kba-10-B-1	-5.601	-2.713	120.9	90.0		
								Kba-10-B-1	-5.601	-2.713	120.9	90.0		
Kba-10-B-1	110.000	95.665	-8.9	0	0	0	0	Kba-3-B-1	5.626	3.041	35.1	88.0	-6.000	
								Kba-3-B-1	5.626	3.041	35.1	88.0	-6.000	
								10-Kba/Msh/Rwi-B	16.092	-6.719	95.7	-92.3		
								B-10-Kba-Kre-1	-27.344	0.636	150.1	-100.0		
Kbo-3-B-1	30.000	96.251	-4.5	0	0	4.762	2.307	Kbo-10-B-1	-2.381	-1.153	52.9	90.0		
								Kbo-10-B-1	-2.381	-1.153	52.9	90.0		
Kbo-10-B-1	110.000	96.677	-2.2	0	0	0	0	Kbo-3-B-1	2.392	1.278	14.7	88.2	-2.000	
								Kbo-3-B-1	2.392	1.278	14.7	88.2	-2.000	
								10-Kbo/Kro/Mr2-B	-4.783	-2.556	29.4	88.2		
Kbu-1-B-1	11.000	98.109	2.3	0	0	0	0	Kbu-3-B-1	1.593	-0.371	87.5	-97.4		
								Kbu-3-B-1	1.593	-0.371	87.5	-97.4		
								Kbu-10-B-1	10.212	-0.709	547.6	-99.8		
								Kbu-10-B-1	10.724	-0.716	575.0	-99.8		
								B-1-Kbu-KbW-1F_T	-24.121	2.167	1295.6	-99.6		
Kbu-3-B-1	30.000	96.733	0.2	0	0	0	0	Kbu-1-B-1	-1.588	0.432	32.7	-96.5	-2.000	
								Kbu-1-B-1	-1.588	0.432	32.7	-96.5	-2.000	
								B-3-Kbu-Kro/Nko-2	3.176	-0.863	65.5	-96.5		
Kbu-10-B-1	110.000	98.318	-0.6	0	0	0	0	Kbu-1-B-1	-10.184	1.228	54.8	-99.3		
								Kbu-1-B-1	-10.697	1.261	57.5	-99.3		
								B-10-Kbu-Kro-1	20.881	-2.489	112.3	-99.3		
KbW-1-B-1	11.000	101.274	7.5	0	0	0	0	KbW-1-B-2	8.000	0.000	414.6	100.0		
								G-KbW-1-B-2	-8.000	0.000	414.6	100.0		
KbW-1-B-2	11.000	101.274	7.5	0	0	0	0	KbW-1-B-1	-8.000	0.000	414.6	100.0		
								B-1-Kbu-KbW-2F_T	25.000	0.000	1295.7	100.0		
								G-KbW-1-B-1	-17.000	0.000	881.0	100.0		
KbW-1-B-3	11.000	101.274	7.5	17.000	0.000	0	0	G-KbW-1-B-1	17.000	0.000	881.0	100.0		
KbW-1-B-4	11.000	101.274	7.5	8.000	0.000	0	0	G-KbW-1-B-2	8.000	0.000	414.6	100.0		
KbW-1-B-5	20.000	100.427	12.0	75.000	0.000	0	0	KbW-20-B-2	75.000	0.000	2155.9	100.0		
KbW-20-B-2	220.000	100.731	6.1	0	0	0	0	KbW-1-B-5	-74.828	7.744	196.0	-99.5		
								G-KbW-1-B-3	74.828	-7.744	196.0	-99.5		
Kgo-3-B-1	30.000	96.570	-5.1	0	0	12.866	6.231	Kgo-10-B-1	-5.186	-2.220	112.4	91.9		
								Kgo-10-B-1	-5.186	-2.220	112.4	91.9		
								G-NtB-3-B	-2.494	-1.791	61.2	81.2		
Kgo-10-B-1	110.000	98.861	-2.5	0	0	0	0	Kgo-3-B-1	5.204	2.505	30.7	90.1		
								Kgo-3-B-1	5.204	2.505	30.7	90.1		
								Kgo-20-B-1	-41.780	-10.996	229.4	96.7		
								B-10-Kgo-MKi-2	52.376	-1.114	278.1	-100.0		

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Kgo-20-B-1	220.000	99.092	1.4	0	0	0	0	B-10-Kgo-Kli-1	-11.905	4.143	66.9	-94.4	
								B-10-Bta-Kgo-2	-9.099	2.957	50.8	-95.1	
								Kgo-10-B-1	41.851	14.178	117.0	94.7	-2.000
								B-20-Kgo-Kli-1	-146.845	7.467	389.4	-99.9	
Kli-3-B-1	30.000	99.206	-3.9	0	0	5.027	2.387	B-20-Kgo-Rwa-1	104.994	-21.645	283.9	-97.9	
								Kli-10-B-1	-2.514	-1.194	54.0	90.3	
								Kli-10-B-1	-2.514	-1.194	54.0	90.3	
								Kli-3-B-1	2.532	1.323	15.2	88.6	-3.000
Kli-10-B-1	110.000	98.807	-1.7	0	0	0	0	Kli-3-B-1	2.532	1.323	15.2	88.6	-3.000
								Kli-20-B-1	-45.014	-1.100	239.2	100.0	
								B-10-Kgo-Kli-2	11.964	-4.899	68.7	-92.5	
								B-10-Kli-Kro-2	-6.313	8.879	57.9	-57.9	
Kli-20-B-1	220.000	99.451	2.7	0	0	0	0	B-10-Kli-Rka-1	5.711	2.000	32.1	94.4	
								B-10-Kli-Ny1-1	28.588	-7.526	157.0	-96.7	
								Kli-10-B-1	45.091	4.561	119.6	99.5	
								B-20-Kgo-Kli-2	147.534	-7.061	389.8	-99.9	
Kma-10-B-1	110.000	100.150	11.0	0	0	0	0	B-20-Kli-Bwi-2	-192.625	2.500	508.3	100.0	
								Kma-20-B-1	35.403	-2.516	186.0	-99.7	
								Kma-20-B-1	35.403	-2.516	186.0	-99.7	
								B-10-Kma-Rz3-1	-23.895	1.289	125.4	-99.9	
Kma-20-B-1	220.000	101.468	8.5	0	0	0	0	B-10-Kma-Rz4-1	-46.910	3.744	246.6	-99.7	
								Kma-10-B-1	-35.368	4.086	92.1	-99.3	1.000
								Kma-10-B-1	-35.368	4.086	92.1	-99.3	1.000
								B-20-Bwi-Kma-2	70.736	-8.171	184.2	-99.3	
Kre-3-B-1	30.000	99.302	-9.8	0	0	11.257	5.452	Kre-10-B-1	-11.257	-5.452	242.4	90.0	
Kre-10-B-1	110.000	97.352	-6.7	0	0	0	0	Kre-3-B-1	11.297	6.244	69.6	87.5	-5.000
								B-10-Kba-Kre-2	27.848	-0.470	150.2	-100.0	
								B-10-Kre-Nbu-1	-39.144	-5.774	213.3	98.9	
								B-20-Kri-Rba-1	0.000	0.000	0.0	0.0	
Kri-20-B-1	220.000	100.743	5.5	0	0	0	0	Kro-10-B-1	-1.129	-2.758	60.3	37.9	
Kro-3-B-1	30.000	95.147	-2.0	0	0	4.665	2.260	B-3-Kbu-Kro-2	-3.537	0.498	72.2	-99.0	
								Kro-10-B-1	1.142	2.920	16.8	36.4	-2.000
								B-10-Kbu-Kro-2	-20.813	2.305	112.0	-99.4	
								B-10-Kbo-Kro-1	13.316	4.372	75.0	95.0	
Kro-10-B-1	110.000	98.111	-1.2	0	0	0	0	B-10-Kli-Kro-1	6.355	-9.598	61.6	-55.2	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
								MKi-10-B-1	-20.782	4.762	412.7	-97.5	
								C-MKi-3-B	0.000	-14.827	287.0	0.0	
Kse-10-B1	110.000	96.063	-8.3	0	0	0	0	MKi-3-B-1	20.808	-3.612	114.9	-98.5	-2.000
MKi-3-B-1	30.000	99.422	-10.5	0	0	20.782	10.065						
MKi-10-B-1	110.000	96.512	-7.4	0	0	0	0						

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								10-Gko/Kgo/MKi-B	-49.169	7.285	270.3	-98.9	
								B-10-MKi-Nbg-2	-2.520	-8.415	47.8	28.7	
								B-10-Gha-MKi-2	30.881	4.743	169.9	98.8	
Mku-3-B-1	30.000	95.531	-19.1	0	0	40.263	19.500	Mku-6-B-1	-20.132	-9.750	450.6	90.0	1.000
								Mku-6-B-3	-20.132	-9.750	450.6	90.0	1.000
Mku-10-B-1	110.000	96.478	-9.8	0	0	0	0	Mku-6-B-5	28.422	-11.084	166.0	-93.2	
								B-10-Gfu-Mku-2	1.728	-0.367	9.6	-97.8	
								B-10-Mku-Nta-1	0.166	-1.473	8.1	-11.2	
								B-10-Mku-Nbi-1	-30.317	12.924	179.3	-92.0	
								G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-10-B-2	110.000	96.478	-9.8	0	0	0	0	G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-6-B-1	6.600	99.464	-14.1	0	0	0	0	Mku-3-B-1	20.183	12.080	2068.8	85.8	
								Mku-6-B-4	-6.000	-4.032	635.8	83.0	
								Mku-6-B-3	0.000	-7.420	652.6	0.0	
								Mku-6-B-5	-14.183	6.792	1383.1	-90.2	
								Mku-6-B-6	0.000	-7.420	652.6	0.0	
Mku-6-B-2	6.600	99.464	-14.1	12.000	8.064	0	0	G-Mku-6-B	12.000	8.064	1271.5	83.0	
Mku-6-B-3	6.600	99.464	-14.1	0	0	0	0	Mku-3-B-1	20.183	12.080	2068.8	85.8	
								Mku-6-B-4	-6.000	-4.032	635.8	83.0	
								Mku-6-B-1	0.000	7.420	652.6	0.0	
								Mku-6-B-5	-14.183	6.792	1383.1	-90.2	
								Mku-6-B-6	0.000	-22.259	1957.7	0.0	
Mku-6-B-4	6.600	99.464	-14.1	0	0	0	0	Mku-6-B-1	6.000	4.032	635.8	83.0	
								Mku-6-B-3	6.000	4.032	635.8	83.0	
								G-Mku-6-B	-12.000	-8.064	1271.5	83.0	
Mku-6-B-5	6.600	99.464	-14.1	0	0	0	0	Mku-10-B-1	-28.367	13.583	2766.1	-90.2	
								Mku-6-B-1	14.183	-6.792	1383.1	-90.2	
								Mku-6-B-3	14.183	-6.792	1383.1	-90.2	
Mku-6-B-6	6.600	99.464	-14.1	0	0	0	0	C-Mku-B-6	0.000	-29.679	2610.2	0.0	
								Mku-6-B-3	0.000	22.259	1957.7	0.0	
								Mku-6-B-1	0.000	7.420	652.6	0.0	
Mmb-3-B-1	30.000	98.777	6.0	0	0	11.835	5.732	Mmb-20-B-1	67.983	-1.869	1325.0	-100.0	
								G-Mmb-3-B	-79.818	-3.863	1556.9	99.9	
Mmb-3-B-2	30.000	98.777	6.0	0	0	0	0	N-Mmb-6-1	-39.909	-1.932	778.5	99.9	
								N-Mmb-6-2	-39.909	-1.932	778.5	99.9	
								G-Mmb-3-B	79.818	3.863	1556.9	99.9	
Mmb-20-B-1	220.000	99.196	1.0	0	0	0	0	Mmb-3-B-1	-67.851	7.793	180.7	-99.3	
								B-20-Mmb-Rwa-1D	34.067	-3.700	90.7	-99.4	
								B-20-Bta-Mmb-2D	33.784	-4.092	90.0	-99.3	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Mr1-6-B-1	6.600	99.113	-5.3	0	0	0	0	Mr1-10-B-1	-4.869	-2.787	495.2	86.8	
								Mr1-3-B-1	6.601	3.797	672.1	86.7	
								B-6-Mr1-Rz1-1	-1.732	-1.010	177.0	86.4	
Mr1-10-B-1	110.000	96.352	-2.5	0	0	0	0	Mr1-6-B-1	4.890	3.123	31.6	84.3	-6.000
								B-10-Mr1-Mr2-1	-4.890	-3.123	31.6	84.3	
Mr1-3-B-1	30.000	99.646	-9.4	0	0	6.563	3.178	Mr1-6-B-1	-6.563	-3.178	140.8	90.0	5.000
Mr2-10-B-1	110.000	96.361	-2.5	0	0	0	0	B-10-Mr2-Rz2-1	-6.336	-4.334	41.8	82.5	
								Mr2-10-B-2	6.336	4.334	41.8	82.5	
Mr2-10-B-2	110.000	96.361	-2.5	0	0	0	0	B-10-Mr2/Nte-1	1.446	1.222	10.3	76.4	
								B-10-Mr1-Mr2-2	4.890	3.113	31.6	84.4	
								Mr2-10-B-1	-6.336	-4.334	41.8	82.5	
Msh-1-B-1	15.000	98.672	-13.3	0	0	27.017	13.085	Msh-10-B-1	-13.509	3.194	541.5	-97.3	
								Msh-10-B-1	-13.509	3.194	541.5	-97.3	
								C-Msh-1-B	0.000	-19.472	759.6	0.0	
Msh-10-B-1	110.000	95.690	-9.2	0	0	0	0	Msh-1-B-1	13.558	-2.205	75.3	-98.7	-2.000
								Msh-1-B-1	13.558	-2.205	75.3	-98.7	-2.000
								B-10-Gso-Msh-2	-21.050	4.746	118.4	-97.6	
								B-10-Kba-Msh-2	-4.754	2.241	28.8	-90.5	
								B-10-Msh-Nga-1	4.956	-4.695	37.4	-72.6	
								B-10-Msh-Rbo-1	-6.269	2.118	36.3	-94.7	
Mus-3-B	30.000	99.397	-3.2	0	0	0	0	Mus-6-B	-0.997	-0.728	23.9	80.8	
								G-Mus-3-B	0.997	0.728	23.9	80.8	
Mus-6-B	6.600	100.613	-2.4	1.000	0.750	0	0	Mus-3-B	1.000	0.750	108.7	80.0	
Nbg-3-B-1	30.000	99.386	-10.0	0	0	20.769	10.059	Nbg-10-B-1	-10.384	4.848	221.9	-90.6	
								Nbg-10-B-1	-10.384	4.848	221.9	-90.6	
								C-Nbg-3-B	0.000	-19.755	382.5	0.0	
Nbg-10-B-1	110.000	96.762	-7.5	0	0	0	0	Nbg-3-B-1	10.411	-4.317	61.1	-92.4	-1.000
								Nbg-3-B-1	10.411	-4.317	61.1	-92.4	-1.000
								B-10-Jb1-Nbg-2	-23.352	0.372	126.7	-100.0	
								B-10-MKi-Nbg-1	2.530	8.262	46.9	29.3	
Nbi-3-B-1	30.000	99.325	-10.0	0	0	5.038	2.440	Nbi-10-B-1	-5.038	-2.440	108.5	90.0	
Nbi-10-B-1	110.000	96.687	-7.7	0	0	0	0	Nbi-3-B-1	5.059	2.705	31.1	88.2	-5.000
								B-B-10-Mku-Nbi-1-2	30.844	-12.475	180.6	-92.7	
								B-10-Nbi-Ny1-1	-35.902	9.771	202.0	-96.5	
Nbu-3-B-1	30.000	100.015	-8.3	0	0	11.403	5.523	Nbu-10-B-1	-11.403	-5.523	243.8	90.0	
Nbu-10-B-1	110.000	99.079	-5.3	0	0	0	0	Nbu-3-B-1	11.443	6.324	69.3	87.5	-4.000
								Nbu-20-B-1	-51.126	-12.728	279.1	97.0	
								B-10-Kre-Nbu-2	39.683	6.404	212.9	98.7	
Nbu-20-B-1	220.000	98.717	-0.4	0	0	0	0	Nbu-10-B-1	51.231	17.440	143.9	94.7	-3.000

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-20-Nbu-Rsu-1	-51.231	-17.440	143.9	94.7	
N-Cyi-04-1	0.400	99.460	0.7	0.150	0.093	0	0	Cyi-3-B-2	0.150	0.093	256.1	85.0	
Nde-3-B-1	30.000	99.591	-11.0	0	0	20.846	10.096	Nde-10-B-1	-10.423	4.870	222.3	-90.6	
								Nde-10-B-1	-10.423	4.870	222.3	-90.6	
								C-Nde-B	0.000	-19.837	383.3	0.0	
Nde-10-B-1	110.000	95.982	-8.5	0	0	0	0	Nde-3-B-1	10.450	-4.337	61.9	-92.4	-2.000
								Nde-3-B-1	10.450	-4.337	61.9	-92.4	-2.000
								B-10-Gso-Nde-2	-10.959	2.242	61.2	-98.0	
								B-10-Gha-Nde-2	-9.941	6.432	64.7	-84.0	
Nga-3-B-1	30.000	99.756	-13.4	0	0	11.350	5.497	Nga-10-B-1	-11.350	4.454	235.2	-93.1	
								C-Nga-B-3	0.000	-9.951	192.0	0.0	
Nga-10-B-1	110.000	96.023	-10.1	0	0	0	0	Nga-3-B-1	11.387	-3.708	65.5	-95.1	-2.000
								B-10-Nga-Rln-1	-6.472	0.201	35.4	-100.0	
								B-10-Msh-Nga-2	-4.915	3.507	33.0	-81.4	
Nko-3-B-1	30.000	97.980	-0.2	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.298	0.176	6.8	86.1	
								G-Nko-3-B	-0.298	-0.176	6.8	86.1	
Nko-3-B-2	30.000	97.980	-0.2	0	0	0	0	N-Nko-04-B-2	-0.298	-0.176	6.8	86.1	
								G-Nko-3-B	0.298	0.176	6.8	86.1	
* N-Mmb-6-1	6.600	100.000	11.8	40.000	6.021	0	0	Mmb-3-B-2	40.000	6.021	3538.5	98.9	
* N-Mmb-6-2	6.600	100.000	11.8	40.000	6.021	0	0	Mmb-3-B-2	40.000	6.021	3538.5	98.9	
N-Nko-04-B-2	0.400	99.808	1.0	0.300	0.186	0	0	Nko-3-B-2	0.300	0.186	510.5	85.0	
* N-Ny1-6-2	6.600	100.000	0.7	14.000	2.624	0	0	Ny1-3-B-2	14.000	2.624	1246.0	98.3	
N-Ny2-6-1	6.600	102.177	-8.4	8.500	5.268	0	0	Ny2-3-B-2	8.500	5.268	856.1	85.0	
N-Rka-6-2	6.600	101.280	-1.6	3.350	2.076	0	0	Rka-3-B-2	3.350	2.076	340.4	85.0	
* N-Rsu-1-1	12.000	100.000	3.2	15.000	3.192	0	0	Rsu-10-B-2	15.000	3.192	737.9	97.8	
* N-Rwa-6-2	6.600	100.000	11.4	50.000	6.465	0	0	Rwa-3-B-2	50.000	6.465	4410.3	99.2	
N-Rz1-.06-B-1-1	0.600	101.778	-3.7	0	0	0	0	Rz1-.6-B-1	1.750	1.085	1946.7	85.0	
								G-Rz1-.06-B	-1.750	-1.085	1946.7	85.0	
N-Rz1-.06-B-1-2	0.600	101.778	-3.7	1.750	1.085	0	0	G-Rz1-.06-B	1.750	1.085	1946.7	85.0	
N-Rz4-6-1	6.600	100.387	14.7	24.000	0.000	0	0	G-Rz3-.6-B	24.000	0.000	2091.4	100.0	
N-Smb-1	11.000	100.643	10.6	0	0	0	0	Smb-1-B-1	50.000	0.000	2607.6	100.0	
								Smb-1-B-2	50.000	0.000	2607.6	100.0	
								G-Smb-1-B	-100.000	0.000	5215.1	100.0	
Nta-3-B-1	30.000	100.359	-13.2	0	0	11.373	5.508	Nta-.6-B-1	-11.373	-5.508	242.3	90.0	4.000
Nta-10-B-1	110.000	96.583	-9.8	0	0	0	0	Nta-.6-B-1	0.083	-0.303	1.7	-26.4	-3.000
								Nta-.6-B-1	0.083	-0.303	1.7	-26.4	-3.000
								B-10-Mku-Nta-2	-0.166	0.606	3.4	-26.4	
Nta-.6-B-1	6.600	99.809	-9.9	0	0	0	0	Nta-3-B-1	11.416	6.365	1145.5	87.3	
								Nta-10-B-1	-0.083	0.304	27.6	-26.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Nta-10-B-1	-0.083	0.304	27.6	-26.4	
								Nta-6-B-3	-11.250	-6.972	1160.0	85.0	
Nta-6-B-2	6.600	99.809	-9.9	11.250	6.972	0	0	Nta-6-B-3	11.250	6.972	1160.0	85.0	
Nta-6-B-3	6.600	99.809	-9.9	0	0	0	0	Nta-6-B-1	11.250	6.972	1160.0	85.0	
								Nta-6-B-2	-11.250	-6.972	1160.0	85.0	
NtB-3-B1	30.000	96.570	-5.1	0	0	0	0	NtB-6-B	-2.494	-1.791	61.2	81.2	
								G-NtB-3-B	2.494	1.791	61.2	81.2	
NtB-6-B	6.600	98.300	-3.9	2.500	1.875	0	0	NtB-3-B1	2.500	1.875	278.1	80.0	
Nte-3-B-1	30.000	98.824	-4.9	0	0	4.993	2.418	Nte-10-B-1	-4.993	-2.418	108.0	90.0	
Nte-10-B-1	110.000	96.202	-2.6	0	0	0	0	Nte-3-B-1	5.013	2.680	31.0	88.2	-5.000
								B-10-Kbo/Nte-2	-8.405	-3.365	49.4	92.8	
								B-10-Mr2/Nte-2	-1.444	-1.847	12.8	61.6	
								B-10-Bga-Nte-2	4.836	2.531	29.8	88.6	
Ny1-10-B-1	110.000	98.194	-3.5	0	0	0	0	Ny1-3-B-1	-8.964	0.735	48.1	-99.7	-1.000
								B-10-Kli-Ny1-2	-28.167	7.696	156.1	-96.5	
								B-10-Nbi-Ny1-2	37.131	-8.430	203.5	-97.5	
Ny1-3-B-1	30.000	99.077	-2.2	0	0	5.016	2.429	Ny1-10-B-1	8.968	-0.529	174.5	-99.8	
								G-Ny1-3-B	-13.984	-1.900	274.1	99.1	
Ny1-3-B-2	30.000	99.077	-2.2	0	0	0	0	N-Ny1-6-2	-13.984	-1.900	274.1	99.1	
								G-Ny1-3-B	13.984	1.900	274.1	99.1	
Ny2-10-B-1	110.000	96.361	-9.4	0	0	0	0	Ny2-3-B-1	2.822	0.629	15.7	97.6	-4.000
								B-10-Ny2-Rln-1	-2.822	-0.629	15.7	97.6	
Ny2-3-B-1	30.000	100.003	-10.2	0	0	11.301	5.473	Ny2-10-B-1	-2.820	-0.588	55.4	97.9	
								G-Ny2-3-B	-8.481	-4.885	188.4	86.7	
Ny2-3-B-2	30.000	100.003	-10.2	0	0	0	0	N-Ny2-6-1	-8.481	-4.885	188.4	86.7	
								G-Ny2-3-B	8.481	4.885	188.4	86.7	
Rba-3-B-1	30.000	99.289	3.3	0	0	5.035	2.439	Rba-20-B-1	-5.035	-2.439	108.4	90.0	
Rba-20-B-1	220.000	100.723	5.5	0	0	0	0	Rba-3-B-1	5.055	2.703	14.9	88.2	-1.000
								B-20-Bwi-Rba-2D	-44.407	4.133	116.2	-99.6	
								B-20-Rba-Sha-1	139.048	-8.765	363.0	-99.8	
								B-20-Kri-Rba-2	0.000	-2.870	7.5	0.0	
								B-20-Smb-Rba-2	-99.697	7.670	260.5	-99.7	
								B-20-Gma-Rba-2	0.000	-2.870	7.5	0.0	
Rbo-3-B-1	30.000	99.870	-12.2	0	0	20.951	10.147	Rbo-20-B-1	-20.951	9.801	445.7	-90.6	
								C-Rbo-B-3	0.000	-19.948	384.4	0.0	
Rbo-20-B-1	110.000	95.724	-9.1	0	0	0	0	Rbo-3-B-1	20.981	-8.460	124.0	-92.7	-2.000
								B-10-Msh-Rbo-2	6.278	-2.373	36.8	-93.5	
								B-10-Air-Rbo-2	-27.259	10.833	160.8	-92.9	
Rka5-6-B	6.600	101.205	-2.1	1.500	1.125	0	0	Rka5-3-B	1.500	1.125	162.1	80.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Rka5-3-B	30.000	99.397	-3.2	0	0	0	0	Rka5-.6-B	-1.494	-1.076	35.7	81.1	
								G-Rka5-3-B	1.494	1.076	35.7	81.1	
Rka-3-B-1	30.000	99.397	-3.2	0	0	11.969	5.797	Rka-10-B-1	-3.069	-1.021	62.6	94.9	
								Rka-10-B-1	-3.069	-1.021	62.6	94.9	
								G-Rka-3-B	-3.340	-1.950	74.9	86.4	
								G-Rka5-3-B	-1.494	-1.076	35.7	81.1	
								G-Mus-3-B	-0.997	-0.728	23.9	80.8	
Rka-3-B-2	30.000	99.397	-3.2	0	0	0	0	N-Rka-.6-2	-3.340	-1.950	74.9	86.4	
								G-Rka-3-B	3.340	1.950	74.9	86.4	
Rka-10-B-1	110.000	98.200	-2.0	0	0	0	0	Rka-3-B-1	3.072	1.092	17.4	94.2	-2.000
								Rka-3-B-1	3.072	1.092	17.4	94.2	-2.000
								B-10-Kli-Rka-2	-5.689	-2.781	33.8	89.8	
								B-10-Hye-Rka-2	-0.455	0.597	4.0	-60.6	
Rlm-3-B-1	30.000	99.430	-7.2	0	0	20.785	10.067	Rlm-10-B-1	-20.785	-10.067	447.0	90.0	
Rlm-10-B-1	110.000	99.141	-4.3	0	0	0	0	Rlm-3-B-1	20.815	11.415	125.7	87.7	-3.000
								Rlm-20-B-1	-93.666	-27.805	517.3	95.9	
								B-10-Air-Rlm-2_S	72.851	16.390	395.3	97.6	
Rlm-20-B-1	220.000	98.894	0.1	0	0	0	0	Rlm-10-B-1	93.846	35.897	266.6	93.4	-3.000
								B-20-Sha-Rlm-2D	46.006	-35.763	154.6	-79.0	
								B-20-Rlm-Rwa-1D	-176.173	16.062	469.4	-99.6	
								B-20-Rlm-Rsu-1D	36.321	-16.197	105.5	-91.3	
Rln-3-B-1	30.000	98.223	-12.7	0	0	10.942	5.299	Rln-10-B-1	-10.942	4.348	230.7	-92.9	
								C-Rln-3-B	0.000	-9.648	189.0	0.0	
Rln-10-B-1	110.000	96.458	-9.3	0	0	0	0	Rln-3-B-1	10.978	-3.631	62.9	-94.9	
								10-Gfu/Jb1/Rln-B	-20.313	4.649	113.4	-97.5	
								B-10-Nga-Rln-2	6.511	-1.306	36.1	-98.0	
								B-10-Ny2-Rln-2	2.824	0.288	15.4	99.5	
Rsu-10-B-1	110.000	99.189	1.0	0	0	0	0	Rsu-20-B-1	14.987	2.604	80.5	98.5	
								G-Rsu-10-B	-14.987	-2.604	80.5	98.5	
Rsu-10-B-2	110.000	99.189	1.0	0	0	0	0	N-Rsu-1-1	-14.987	-2.604	80.5	98.5	
								G-Rsu-10-B	14.987	2.604	80.5	98.5	
Rsu-20-B-1	220.000	98.727	-0.4	0	0	0	0	Rsu-10-B-1	-14.978	-2.213	40.2	98.9	
								B-20-Rlm-Rsu-2D	-36.255	-15.172	104.5	92.2	
								B-20-Nbu-Rsu-2	51.233	17.384	143.8	94.7	
Rwa-3-B-1	30.000	98.968	5.4	0	0	11.876	5.752	Rwa-20-B-1	38.006	-4.581	744.4	-99.3	
								G-Rwa-3-B	-49.882	-1.171	970.3	100.0	
Rwa-3-B-2	30.000	98.968	5.4	0	0	0	0	N-Rwa-.6-2	-49.882	-1.171	970.3	100.0	
								G-Rwa-3-B	49.882	1.171	970.3	100.0	
Rwa-20-B-1	220.000	99.076	0.8	0	0	0	0	Rwa-3-B-1	-37.937	7.697	102.5	-98.0	-1.000

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-20-Rlm-Rwa-2D	176.719	-20.867	471.3	-99.3	
								B-20-Kgo-Rwa-2	-104.749	20.928	282.9	-98.1	
								B-20-Mmb-Rwa-2D	-34.033	-7.758	92.5	97.5	
Rwi-1-B-1	15.000	99.318	-12.5	0	0	11.261	5.454	Rwi-10-B-1	-11.261	4.410	468.7	-93.1	
								C-Rwi-B-1	0.000	-9.864	382.3	0.0	
Rwi-10-B-1	110.000	95.604	-9.2	0	0	0	0	Rwi-1-B-1	11.298	-3.670	65.2	-95.1	-2.000
								B-10-Kba-Rwi-2	-11.298	3.670	65.2	-95.1	
Rz1-6-B-1	6.600	100.003	-5.0	0	0	0	0	N-Rz1-.06-B-1-1	-1.743	-1.027	177.0	86.2	
								B-.6-Mr1-Rz1-2	1.743	1.027	177.0	86.2	
Rz2-6-B-1-1	6.600	100.000	0.2	0	0	0	0	Rz2-10-B-1	6.375	4.401	677.7	82.3	
								G-Rz2-.6-B	-6.375	-4.401	677.7	82.3	
* Rz2-6-B-1-2	6.600	100.000	0.2	6.375	4.401	0	0	G-Rz2-.6-B	6.375	4.401	677.7	82.3	
Rz2-10-B-1	110.000	96.784	-2.4	0	0	0	0	Rz2-.6-B-1-1	-6.353	-3.982	40.7	84.7	
								B-10-Mr2-Rz2-2	6.353	3.982	40.7	84.7	
Rz3-6-B-1-1	6.600	100.387	14.7	0	0	0	0	Rz3-10-B-1	24.000	0.000	2091.4	100.0	
								G-Rz3-.6-B	-24.000	0.000	2091.4	100.0	
Rz3-10-B-1	110.000	100.413	11.6	0	0	0	0	Rz3-.6-B-1-1	-23.971	1.299	125.5	-99.9	
								B-10-Kma-Rz3-2	23.971	-1.299	125.5	-99.9	
Rz4-6-B-1-1	6.600	101.024	16.1	0	0	0	0	Rz4-10-B-1	47.500	0.000	4113.1	100.0	
								G-Rz4-.6-B	-47.500	0.000	4113.1	100.0	
Rz4-6-B-1-2	6.600	101.024	16.1	47.500	0.000	0	0	G-Rz4-.6-B	47.500	0.000	4113.1	100.0	
Rz4-10-B-1	110.000	101.046	13.1	0	0	0	0	Rz4-.6-B-1-1	-47.444	2.512	246.8	-99.9	
								B-10-Kma-Rz4-2	47.444	-2.512	246.8	-99.9	
Sha-3-B-1	30.000	99.647	-8.1	0	0	20.867	10.106	Sha-10-B-1	-20.867	-10.106	447.8	90.0	
Sha-10-B-1	110.000	99.356	-5.2	0	0	0	0	Sha-3-B-1	20.897	11.459	125.9	87.7	-3.000
								Sha-20-B-1	-209.782	-54.370	1144.8	96.8	
								B-10-Bre-Sha-2DT-F	188.885	42.910	1023.2	97.5	
Sha-20-B-1	220.000	99.140	-0.3	0	0	0	0	Sha-10-B-1	210.222	74.188	590.1	94.3	-3.000
								C-Sha-20-B	0.000	-63.886	169.1	0.0	
								B-20-Sha-Rlm-1D	-45.888	19.963	132.5	-91.7	
								B-20-Rba-Sha-2	-135.990	8.474	360.7	-99.8	
								B-20-Mra-Sha-2D	-28.345	-38.739	127.1	59.1	
Smb-1-B-1	11.000	100.643	10.6	0	0	0	0	Smb-20-B-1	50.000	0.000	2607.6	100.0	
								N-Smb-1	-50.000	0.000	2607.6	100.0	
Smb-1-B-2	11.000	100.643	10.6	0	0	0	0	Smb-20-B-1	50.000	0.000	2607.6	100.0	
								N-Smb-1	-50.000	0.000	2607.6	100.0	
Smb-1-B-2N	11.000	100.643	10.6	0	0	0	0	G-Smb-1-B	100.000	0.000	5215.1	100.0	
								Smb-1-B-4	-50.000	0.000	2607.6	100.0	
								Smb-1-B-6	-50.000	0.000	2607.6	100.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Smb-1-B-4	11.000	100.643	10.6	50.000	0.000	0	0	Smb-1-B-2N	50.000	0.000	2607.6	100.0	
Smb-1-B-6	11.000	100.643	10.6	50.000	0.000	0	0	Smb-1-B-2N	50.000	0.000	2607.6	100.0	
Smb-20-B-1	220.000	100.800	5.9	0	0	0	0	Smb-1-B-1	-49.909	4.113	130.4	-99.7	
								Smb-1-B-2	-49.909	4.113	130.4	-99.7	
								B-20-Smb-Rba-1	99.817	-8.225	260.8	-99.7	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
3-Cyi/Nko-B	30.000	98.146	2.9	0	0	0	0	B-3-Cyi-Cyi/Nko-1	-0.297	-0.077	6.0	96.8	
								3-Cyi-Ghi-B	0.891	0.189	17.9	97.8	
								B-3-Nko-Cyi/Nko-1	-0.594	-0.111	11.9	98.3	
3-Cyi-Ghi-B	30.000	97.990	2.8	0	0	0	0	B-3-Cyi-Ghi-2	0.000	-0.076	1.5	0.0	
								3-Cyi/Nko-B	-0.890	-0.196	17.9	97.7	
								3-Kro/Kbu-B	0.890	0.272	18.3	95.6	
3-Kro/Kbu-B	30.000	96.338	2.0	0	0	0	0	B-3-Kbu-Kro-2	3.776	-0.479	76.0	-99.2	
								B-3-Kbu-Kro/Nko-2	-2.898	0.814	60.1	-96.3	
								3-Cyi-Ghi-B	-0.879	-0.334	18.8	93.5	
10-Bre/Gso/Msh-B	110.000	96.282	-7.6	0	0	0	0	B-10-Bre-Gso-1	-50.818	0.488	277.0	100.0	
								B-10-Gso-Msh-2	19.423	-4.155	108.3	-97.8	
								Gso-10-B-1	31.395	3.667	172.3	99.3	
10-Gfu/Jb1/Rln-B	110.000	96.681	-7.7	0	0	0	0	10-Gfu/Mku/Rln-B	4.831	-3.658	32.9	-79.7	
								B-10-Jb1-Rln-2	-19.296	6.160	110.0	-95.3	
								Rln-10-B-1	14.466	-2.502	79.7	-98.5	
10-Gfu/Mku/Rln-B	110.000	96.766	-8.0	0	0	0	0	B-10-Gfu-Mku-2	-6.124	0.607	33.4	-99.5	
								10-Gfu/Jb1/Rln-B	-4.816	3.144	31.2	-83.7	
								Gfu-10-B-1	10.940	-3.751	62.7	-94.6	
10-Gko/Kgo/MKi-B	110.000	96.535	-6.6	0	0	0	0	B-10-Gko-MKi-1	2.712	4.575	28.9	51.0	
								B-10-Kgo-MKi-2	-53.650	5.558	293.3	-99.5	
								MKi-10-B-1	50.938	-10.133	282.4	-98.1	
10-Kba/Msh/Rwi-B	110.000	95.899	-8.1	0	0	0	0	B-10-Kba-Msh-2	4.650	-2.779	29.6	-85.8	
								B-10-Kba-Rwi-2	11.373	-3.866	65.7	-94.7	
								Kba-10-B-1	-16.023	6.645	94.9	-92.4	
10-Kbo/Kro/Mr2-B	110.000	96.722	0.8	0	0	0	0	10-Kbo/Nte-B	0.543	5.179	28.3	10.4	
								B-10-Kbo-Kro-1	-5.330	-7.738	51.0	56.7	
								Kbo-10-B-1	4.787	2.558	29.5	88.2	
10-Kbo/Nte-B	110.000	96.280	0.9	0	0	0	0	10-Kbo/Kro/Mr2-B	-0.535	-5.788	31.7	9.2	
								B-10-Kbo/Nte-2	0.535	5.788	31.7	9.2	
10-Mr2/Nte-B	110.000	96.276	0.9	0	0	0	0	B-10-Mr2/Nte-1	-9.343	0.588	51.0	-99.8	
								B-10-Mr2/Nte-2	9.343	-0.588	51.0	-99.8	
20-Gma-B	220.000	100.251	5.7	0	0	0	0	B-20-Gma-Rba-2	0.000	0.000	0.0	0.0	
20-Gte-B	220.000	99.325	1.5	0	0	0	0	B-20-Bta-Gte-D	0.000	0.000	0.0	0.0	
* 20-Mra-B	220.000	100.000	0.0	3.084	1.593	0	0	B-20-Mra-Sha-2D	3.084	1.593	9.1	88.9	
Air-3-B-1	30.000	99.535	-8.9	0	0	43.475	21.056	Air-10-B-1	-43.475	-21.056	934.0	90.0	
Air-10-B-1	110.000	96.296	-5.9	0	0	0	0	Air-3-B-1	43.540	23.999	271.0	87.6	-6.000

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Air-Rbo-1	26.520	-9.976	154.4	-93.6	
								B-10-Air-Rlm-1_S	-70.061	-14.023	389.4	98.1	
B-1-Jb1-Jb3-1	15.000	99.623	-9.9	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								Jb1-1-B-1	0.000	0.000	0.0	0.0	
B-1-Jb1-Jb3-2	15.000	99.623	-9.9	0	0	0	0	B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-1	0.000	0.000	0.0	0.0	
B-1-Kbu-KbW-1F_T	11.000	98.087	4.6	0	0	0	0	B-1-Kbu-KbW-2F_T	-24.121	2.168	1295.9	-99.6	
								Kbu-1-B-1	24.121	-2.168	1295.9	-99.6	
B-1-Kbu-KbW-2F_T	11.000	101.253	9.7	0	0	0	0	B-1-Kbu-KbW-1F_T	25.000	0.000	1295.9	100.0	
								KbW-1-B-2	-25.000	0.000	1295.9	100.0	
B-3-Cyi-Cyi/Nko-1	30.000	98.228	2.9	0	0	0	0	3-Cyi/Nko-B	0.297	0.064	6.0	97.7	
								Cyi-3-B-1	-0.297	-0.064	6.0	97.7	
B-3-Cyi-Ghi-2	30.000	98.059	2.8	0	0	0	0	3-Cyi-Ghi-B	0.000	0.000	0.0	0.0	
B-3-Kbu-Kro/Nko-2	30.000	96.673	2.6	0	0	0	0	3-Kro/Kbu-B	2.917	-0.796	60.2	-96.5	
								Kbu-3-B-1	-2.917	0.796	60.2	-96.5	
B-3-Kbu-Kro-2	30.000	95.074	0.4	0	0	0	0	3-Kro/Kbu-B	-3.712	0.553	76.0	-98.9	
								Kro-3-B-1	3.712	-0.553	76.0	-98.9	
B-3-Nko-Cyi/Nko-1	30.000	98.349	3.0	0	0	0	0	3-Cyi/Nko-B	0.595	0.095	11.8	98.8	
								Nko-3-B-1	-0.595	-0.095	11.8	98.8	
B-10-Air-Rbo-1	110.000	96.296	-5.9	0	0	0	0	B-10-Air-Rbo-2	26.520	-9.976	154.4	-93.6	
								Air-10-B-1	-26.520	9.976	154.4	-93.6	
B-10-Air-Rbo-2	110.000	95.955	-8.3	0	0	0	0	B-10-Air-Rbo-1	-26.016	10.189	152.8	-93.1	
								Rbo-20-B-1	26.016	-10.189	152.8	-93.1	
B-10-Air-Rlm-1_S	110.000	96.296	-5.9	0	0	0	0	B-10-Air-Rlm-2_S	-70.061	-14.023	389.4	98.1	
								Air-10-B-1	70.061	14.023	389.4	98.1	
B-10-Air-Rlm-2_S	110.000	99.360	-3.6	0	0	0	0	B-10-Air-Rlm-1_S	71.667	16.898	389.0	97.3	
								Rlm-10-B-1	-71.667	-16.898	389.0	97.3	
B-10-Bga-Gsh-1	110.000	95.777	0.7	0	0	0	0	B-10-Bga-Gsh-2	-14.881	-8.412	93.7	87.1	
								Bga-10-B-1	14.881	8.412	93.7	87.1	
B-10-Bga-Gsh-2	110.000	96.481	1.0	0	0	0	0	B-10-Bga-Gsh-1	14.948	8.253	92.9	87.5	
								Gsh-10-B	-14.948	-8.253	92.9	87.5	
B-10-Bga-Nte-1	110.000	95.777	0.7	0	0	0	0	B-10-Bga-Nte-2	-4.843	-3.126	31.6	84.0	
								Bga-10-B-1	4.843	3.126	31.6	84.0	
B-10-Bga-Nte-2	110.000	96.268	0.9	0	0	0	0	B-10-Bga-Nte-1	4.858	2.541	29.9	88.6	
								Nte-10-B-1	-4.858	-2.541	29.9	88.6	
B-10-Bre-Gso-1	110.000	97.969	-5.5	0	0	0	0	10-Bre/Gso/Msb-B	51.701	0.873	277.0	100.0	
								Bre-10-B-1	-51.701	-0.873	277.0	100.0	
B-10-Bre-Jb1-D1F	110.000	97.969	-5.5	0	0	0	0	B-10-Bre-Jb1-D2F	93.860	18.076	512.1	98.2	
								Bre-10-B-1	-93.860	-18.076	512.1	98.2	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Bre-Jb1-D2F	110.000	97.040	-6.2	0	0	0	0	B-10-Bre-Jb1-D1F	-93.173	-17.298	512.6	98.3	
								Jb1-10-B-1	93.173	17.298	512.6	98.3	
B-10-Bre-Sha-1DT-F	110.000	97.969	-5.5	0	0	0	0	B-10-Bre-Sha-2DT-F	-172.220	-34.121	940.6	98.1	
								Bre-10-B-1	172.220	34.121	940.6	98.1	
B-10-Bre-Sha-2DT-F	110.000	99.060	-4.6	0	0	0	0	B-10-Bre-Sha-1DT-F	173.546	36.586	939.7	97.8	
								Sha-10-B-1	-173.546	-36.586	939.7	97.8	
B-10-Bta-Hye-1	110.000	98.952	-0.4	0	0	0	0	B-10-Bta-Hye-2	7.023	7.068	52.8	70.5	
								Bta-10-B-1	-7.023	-7.068	52.8	70.5	
B-10-Bta-Hye-2	110.000	98.107	-0.6	0	0	0	0	B-10-Bta-Hye-1	-6.983	-7.542	55.0	67.9	
								Hye-10-B-1	6.983	7.542	55.0	67.9	
B-10-Bta-Kgo-1	110.000	98.952	-0.4	0	0	0	0	B-10-Bta-Kgo-2	8.387	-3.971	49.2	-90.4	
								Bta-10-B-1	-8.387	3.971	49.2	-90.4	
B-10-Bta-Kgo-2	110.000	98.851	-1.4	0	0	0	0	B-10-Bta-Kgo-1	-8.321	2.935	46.8	-94.3	
								Kgo-10-B-1	8.321	-2.935	46.8	-94.3	
B-10-Gfu-Mku-2	110.000	96.925	-7.7	0	0	0	0	B-10-Gfu/Mku/Rln-B	6.138	-1.071	33.7	-98.5	
								Mku-10-B-1	-6.138	1.071	33.7	-98.5	
B-10-Gha-MKi-1	110.000	96.015	-7.2	0	0	0	0	B-10-Gha-MKi-2	-31.472	-0.641	172.1	100.0	
								Gha-10-B-1	31.472	0.641	172.1	100.0	
B-10-Gha-MKi-2	110.000	96.535	-6.6	0	0	0	0	B-10-Gha-MKi-1	31.635	0.763	172.0	100.0	
								MKi-10-B-1	-31.635	-0.763	172.0	100.0	
B-10-Gha-Nde-1	110.000	96.015	-7.2	0	0	0	0	B-10-Gha-Nde-2	10.680	-10.761	82.9	-70.4	
								Gha-10-B-1	-10.680	10.761	82.9	-70.4	
B-10-Gha-Nde-2	110.000	96.352	-7.8	0	0	0	0	B-10-Gha-Nde-1	-10.609	10.501	81.3	-71.1	
								Nde-10-B-1	10.609	-10.501	81.3	-71.1	
B-10-Gko-Jb1-1	110.000	96.424	-6.6	0	0	0	0	B-10-Gko-Jb1-2	-24.355	-10.183	143.7	92.3	
								Gko-10-B-1	24.355	10.183	143.7	92.3	
B-10-Gko-Jb1-2	110.000	97.040	-6.2	0	0	0	0	B-10-Gko-Jb1-1	24.437	10.151	143.1	92.3	
								Jb1-10-B-1	-24.437	-10.151	143.1	92.3	
B-10-Gko-MKi-1	110.000	96.424	-6.6	0	0	0	0	B-10-Gko/Kgo/MKi-B	-2.710	-4.731	29.7	49.7	
								Gko-10-B-1	2.710	4.731	29.7	49.7	
B-10-Gso-Msh-2	110.000	95.919	-8.4	0	0	0	0	B-10-Bre/Gso/Msh-B	-19.289	3.988	107.8	-97.9	
								Msh-10-B-1	19.289	-3.988	107.8	-97.9	
B-10-Gso-Nde-1	110.000	96.282	-7.6	0	0	0	0	B-10-Gso-Nde-2	10.498	-7.792	71.3	-80.3	
								Gso-10-B-1	-10.498	7.792	71.3	-80.3	
B-10-Gso-Nde-2	110.000	96.352	-7.8	0	0	0	0	B-10-Gso-Nde-1	-10.475	7.663	70.7	-80.7	
								Nde-10-B-1	10.475	-7.663	70.7	-80.7	
B-10-Hye-Rka-1	110.000	98.107	-0.6	0	0	0	0	B-10-Hye-Rka-2	-5.047	1.016	27.5	-98.0	
								Hye-10-B-1	5.047	-1.016	27.5	-98.0	
B-10-Hye-Rka-2	110.000	98.208	-0.3	0	0	0	0	B-10-Hye-Rka-1	5.059	-1.608	28.4	-95.3	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rka-10-B-1	-5.059	1.608	28.4	-95.3	
B-10-Jb1-Jb2-1	110.000	97.040	-6.2	0	0	0	0	B-10-Jb1-Jb2-2	0.000	-0.036	0.2	0.0	
								Jb1-10-B-1	0.000	0.036	0.2	0.0	
B-10-Jb1-Jb2-2	110.000	97.040	-6.2	0	0	0	0	B-10-Jb1-Jb2-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-1	0.000	0.000	0.0	0.0	
B-10-Jb1-Nbg-1	110.000	97.040	-6.2	0	0	0	0	B-10-Jb1-Nbg-2	22.415	-1.556	121.5	-99.8	
								Jb1-10-B-1	-22.415	1.556	121.5	-99.8	
B-10-Jb1-Nbg-2	110.000	96.742	-6.6	0	0	0	0	B-10-Jb1-Nbg-1	-22.335	1.508	121.4	-99.8	
								Nbg-10-B-1	22.335	-1.508	121.4	-99.8	
B-10-Jb1-Rln-2	110.000	97.040	-6.2	0	0	0	0	10-Gfu/Jb1/Rln-B	19.534	-6.433	111.2	-95.0	
								Jb1-10-B-1	-19.534	6.433	111.2	-95.0	
B-10-Kba-Kre-1	110.000	95.899	-8.1	0	0	0	0	B-10-Kba-Kre-2	-27.325	0.536	149.6	-100.0	
								Kba-10-B-1	27.325	-0.536	149.6	-100.0	
B-10-Kba-Kre-2	110.000	97.593	-5.9	0	0	0	0	B-10-Kba-Kre-1	27.825	-0.380	149.7	100.0	
								Kre-10-B-1	-27.825	0.380	149.7	100.0	
B-10-Kba-Msh-2	110.000	95.919	-8.4	0	0	0	0	10-Kba/Msh/Rwi-B	-4.636	2.140	27.9	-90.8	
								Msh-10-B-1	4.636	-2.140	27.9	-90.8	
B-10-Kba-Rwi-2	110.000	95.837	-8.3	0	0	0	0	10-Kba/Msh/Rwi-B	-11.348	3.691	65.4	-95.1	
								Rwi-10-B-1	11.348	-3.691	65.4	-95.1	
B-10-Kbo/Nte-2	110.000	96.268	0.9	0	0	0	0	10-Kbo/Nte-B	-0.534	-5.801	31.8	9.2	
								Nte-10-B-1	0.534	5.801	31.8	9.2	
B-10-Kbo-Kro-1	110.000	98.100	1.1	0	0	0	0	10-Kbo/Kro/Mr2-B	5.372	6.579	45.4	63.2	
								Kro-10-B-1	-5.372	-6.579	45.4	63.2	
B-10-Kbu-Kro-1	110.000	98.308	1.6	0	0	0	0	B-10-Kbu-Kro-2	21.140	-2.565	113.7	-99.3	
								Kbu-10-B-1	-21.140	2.565	113.7	-99.3	
B-10-Kbu-Kro-2	110.000	98.100	1.1	0	0	0	0	B-10-Kbu-Kro-1	-21.070	2.387	113.5	-99.4	
								Kro-10-B-1	21.070	-2.387	113.5	-99.4	
B-10-Kgo-Kli-1	110.000	98.851	-1.4	0	0	0	0	B-10-Kgo-Kli-2	-19.678	7.239	111.3	-93.9	
								Kgo-10-B-1	19.678	-7.239	111.3	-93.9	
B-10-Kgo-Kli-2	110.000	98.762	0.0	0	0	0	0	B-10-Kgo-Kli-1	19.841	-7.688	113.1	-93.2	
								Kli-10-B-1	-19.841	7.688	113.1	-93.2	
B-10-Kgo-MKi-2	110.000	98.851	-1.4	0	0	0	0	10-Gko/Kgo/MKi-B	55.288	-2.024	293.8	-99.9	
								Kgo-10-B-1	-55.288	2.024	293.8	-99.9	
B-10-Kli-Kro-1	110.000	98.100	1.1	0	0	0	0	B-10-Kli-Kro-2	14.738	-11.936	101.5	-77.7	
								Kro-10-B-1	-14.738	11.936	101.5	-77.7	
B-10-Kli-Kro-2	110.000	98.762	0.0	0	0	0	0	B-10-Kli-Kro-1	-14.620	11.443	98.7	-78.7	
								Kli-10-B-1	14.620	-11.443	98.7	-78.7	
B-10-Kli-Ny1-1	110.000	98.762	0.0	0	0	0	0	B-10-Kli-Ny1-2	16.610	-6.524	94.8	-93.1	
								Kli-10-B-1	-16.610	6.524	94.8	-93.1	

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Bus		Voltage		Generation		Load		Load Flow					XFMR
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-10-Kli-Ny1-2	110.000	98.593	-1.1	0	0	0	0	B-10-Kli-Ny1-1	-16.458	6.140	93.5	-93.7	
								Ny1-10-B-1	16.458	-6.140	93.5	-93.7	
B-10-Kli-Rka-1	110.000	98.762	0.0	0	0	0	0	B-10-Kli-Rka-2	5.280	1.755	29.6	94.9	
								Kli-10-B-1	-5.280	-1.755	29.6	94.9	
B-10-Kli-Rka-2	110.000	98.208	-0.3	0	0	0	0	B-10-Kli-Rka-1	-5.261	-2.543	31.2	90.0	
								Rka-10-B-1	5.261	2.543	31.2	90.0	
B-10-Kma-Rz3-1	110.000	99.352	16.4	0	0	0	0	B-10-Kma-Rz3-2	-47.577	3.739	252.1	-99.7	
								Kma-10-B-1	47.577	-3.739	252.1	-99.7	
B-10-Kma-Rz3-2	110.000	99.847	17.6	0	0	0	0	B-10-Kma-Rz3-1	47.883	-3.015	252.2	-99.8	
								Rz3-10-B-1	-47.883	3.015	252.2	-99.8	
B-10-Kma-Rz4-1	110.000	99.352	16.4	0	0	0	0	B-10-Kma-Rz4-2	-92.604	16.613	497.0	-98.4	
								Kma-10-B-1	92.604	-16.613	497.0	-98.4	
B-10-Kma-Rz4-2	110.000	100.592	20.7	0	0	0	0	B-10-Kma-Rz4-1	94.773	-10.201	497.4	-99.4	
								Rz4-10-B-1	-94.773	10.201	497.4	-99.4	
B-10-Kre-Nbu-1	110.000	97.593	-5.9	0	0	0	0	B-10-Kre-Nbu-2	-39.172	-5.892	213.0	98.9	
								Kre-10-B-1	39.172	5.892	213.0	98.9	
B-10-Kre-Nbu-2	110.000	99.324	-4.5	0	0	0	0	B-10-Kre-Nbu-1	39.710	6.516	212.6	98.7	
								Nbu-10-B-1	-39.710	-6.516	212.6	98.7	
B-10-MKi-Nbg-1	110.000	96.742	-6.6	0	0	0	0	B-10-MKi-Nbg-2	1.520	7.122	39.5	20.9	
								Nbg-10-B-1	-1.520	-7.122	39.5	20.9	
B-10-MKi-Nbg-2	110.000	96.535	-6.6	0	0	0	0	B-10-MKi-Nbg-1	-1.513	-7.281	40.4	20.3	
								MKi-10-B-1	1.513	7.281	40.4	20.3	
B-10-Mku-Nbi-1	110.000	96.925	-7.7	0	0	0	0	B-10-Mku-Nbi-1-2	-32.278	14.321	191.2	-91.4	
								Mku-10-B-1	32.278	-14.321	191.2	-91.4	
B-10-Mku-Nta-1	110.000	96.925	-7.7	0	0	0	0	B-10-Mku-Nta-2	-0.111	-1.648	8.9	6.7	
								Mku-10-B-1	0.111	1.648	8.9	6.7	
B-10-Mku-Nta-2	110.000	97.057	-7.7	0	0	0	0	B-10-Mku-Nta-1	0.112	0.773	4.2	14.3	
								Nta-10-B-1	-0.112	-0.773	4.2	14.3	
B-10-Mr1-Mr2-1	110.000	96.440	1.3	0	0	0	0	B-10-Mr1-Mr2-2	-3.267	-4.374	29.7	59.8	
								Mr1-10-B-1	3.267	4.374	29.7	59.8	
B-10-Mr1-Mr2-2	110.000	96.450	1.3	0	0	0	0	B-10-Mr1-Mr2-1	3.267	4.364	29.7	59.9	
								Mr2-10-B-2	-3.267	-4.364	29.7	59.9	
B-10-Mr2/Nte-1	110.000	96.450	1.3	0	0	0	0	10-Mr2/Nte-B	9.367	-1.135	51.3	-99.3	
								Mr2-10-B-2	-9.367	1.135	51.3	-99.3	
B-10-Mr2/Nte-2	110.000	96.268	0.9	0	0	0	0	10-Mr2/Nte-B	-9.343	0.576	51.0	-99.8	
								Nte-10-B-1	9.343	-0.576	51.0	-99.8	
B-10-Mr2-Rz2-1	110.000	96.450	1.3	0	0	0	0	B-10-Mr2-Rz2-2	-12.634	-3.229	71.0	96.9	
								Mr2-10-B-1	12.634	3.229	71.0	96.9	
B-10-Mr2-Rz2-2	110.000	96.989	1.7	0	0	0	0	B-10-Mr2-Rz2-1	12.684	2.943	70.5	97.4	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rz2-10-B-1	-12.684	-2.943	70.5	97.4	
B-10-Msh-Nga-1	110.000	95.919	-8.4	0	0	0	0	B-10-Msh-Nga-2	2.023	-3.295	21.2	-52.3	
								Msh-10-B-1	-2.023	3.295	21.2	-52.3	
B-10-Msh-Nga-2	110.000	96.249	-8.8	0	0	0	0	B-10-Msh-Nga-1	-2.012	2.040	15.6	-70.2	
								Nga-10-B-1	2.012	-2.040	15.6	-70.2	
B-10-Msh-Rbo-1	110.000	95.919	-8.4	0	0	0	0	B-10-Msh-Rbo-2	-5.320	1.616	30.4	-95.7	
								Msh-10-B-1	5.320	-1.616	30.4	-95.7	
B-10-Msh-Rbo-2	110.000	95.955	-8.3	0	0	0	0	B-10-Msh-Rbo-1	5.327	-1.877	30.9	-94.3	
								Rbo-20-B-1	-5.327	1.877	30.9	-94.3	
B-10-Nbi-Nyl-1	110.000	97.099	-5.5	0	0	0	0	B-10-Nbi-Nyl-2	-37.974	11.005	213.7	-96.0	
								Nbi-10-B-1	37.974	-11.005	213.7	-96.0	
B-10-Nbi-Nyl-2	110.000	98.593	-1.1	0	0	0	0	B-10-Nbi-Nyl-1	39.350	-9.373	215.3	-97.3	
								Nyl-10-B-1	-39.350	9.373	215.3	-97.3	
B-10-Nga-Rln-1	110.000	96.249	-8.8	0	0	0	0	B-10-Nga-Rln-2	-9.216	1.600	51.0	-98.5	
								Nga-10-B-1	9.216	-1.600	51.0	-98.5	
B-10-Nga-Rln-2	110.000	96.681	-7.7	0	0	0	0	B-10-Nga-Rln-1	9.297	-2.623	52.4	-96.2	
								Rln-10-B-1	-9.297	2.623	52.4	-96.2	
B-10-Ny2-Rln-1	110.000	96.624	-7.5	0	0	0	0	B-10-Ny2-Rln-2	5.868	-4.092	38.9	-82.0	
								Ny2-10-B-1	-5.868	4.092	38.9	-82.0	
B-10-Ny2-Rln-2	110.000	96.681	-7.7	0	0	0	0	B-10-Ny2-Rln-1	-5.855	3.771	37.8	-84.1	
								Rln-10-B-1	5.855	-3.771	37.8	-84.1	
B-20-Bta-Gte-D	220.000	99.301	1.5	0	0	0	0	20-Gte-B	0.000	-7.032	18.6	0.0	
								Bta-20-B-1	0.000	7.032	18.6	0.0	
B-20-Bta-Mmb-1D	220.000	99.301	1.5	0	0	0	0	B-20-Bta-Mmb-2D	-27.410	-3.678	73.1	99.1	
								Bta-20-B-1	27.410	3.678	73.1	99.1	
B-20-Bta-Mmb-2D	220.000	99.347	1.6	0	0	0	0	B-20-Bta-Mmb-1D	27.421	-2.449	72.7	-99.6	
								Mmb-20-B-1	-27.421	2.449	72.7	-99.6	
B-20-Bwi-KB2-1	220.000	100.015	6.1	0	0	0	0	B-20-Bwi-KB2-2	0.000	-0.404	1.1	0.0	
								Bwi-20-B-1	0.000	0.404	1.1	0.0	
B-20-Bwi-KB2-2	220.000	100.015	6.1	0	0	0	0	B-20-Bwi-KB2-1	0.000	0.000	0.0	0.0	
								Kb2-20-B-1	0.000	0.000	0.0	0.0	
B-20-Bwi-KbW-1	220.000	100.015	6.1	0	0	0	0	B-20-Bwi-KbW-2	-74.794	7.500	197.2	-99.5	
								Bwi-20-B-1	74.794	-7.500	197.2	-99.5	
B-20-Bwi-KbW-2	220.000	100.037	6.2	0	0	0	0	B-20-Bwi-KbW-1	74.825	-7.854	197.4	-99.5	
								G-KbW-1-B-3	-74.825	7.854	197.4	-99.5	
B-20-Bwi-Kma-1	220.000	100.015	6.1	0	0	0	0	B-20-Bwi-Kma-2	-137.064	33.638	370.3	-97.1	
								Bwi-20-B-1	137.064	-33.638	370.3	-97.1	
B-20-Bwi-Kma-2	220.000	99.817	11.4	0	0	0	0	B-20-Bwi-Kma-1	139.899	-33.053	377.9	-97.3	
								Kma-20-B-1	-139.899	33.053	377.9	-97.3	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
B-20-Bwi-Rba-1D	220.000	100.015	6.1	0	0	0	0	B-20-Bwi-Rba-2D	36.945	-31.809	127.9	-75.8	
								Bwi-20-B-1	-36.945	31.809	127.9	-75.8	
B-20-Bwi-Rba-2D	220.000	100.230	5.7	0	0	0	0	B-20-Bwi-Rba-1D	-36.867	15.271	104.5	-92.4	
								Rba-20-B-1	36.867	-15.271	104.5	-92.4	
B-20-Gma-Rba-2	220.000	100.230	5.7	0	0	0	0	20-Gma-B	0.000	-2.842	7.4	0.0	
								Rba-20-B-1	0.000	2.842	7.4	0.0	
B-20-Kgo-Kli-1	220.000	99.137	2.0	0	0	0	0	B-20-Kgo-Kli-2	-135.157	17.845	360.9	-99.1	
								Kgo-20-B-1	135.157	-17.845	360.9	-99.1	
B-20-Kgo-Kli-2	220.000	99.306	3.1	0	0	0	0	B-20-Kgo-Kli-1	135.750	-17.876	361.8	-99.1	
								Kli-20-B-1	-135.750	17.876	361.8	-99.1	
B-20-Kgo-Rwa-1	220.000	99.137	2.0	0	0	0	0	B-20-Kgo-Rwa-2	99.790	-32.102	277.5	-95.2	
								Kgo-20-B-1	-99.790	32.102	277.5	-95.2	
B-20-Kgo-Rwa-2	220.000	99.233	1.4	0	0	0	0	B-20-Kgo-Rwa-1	-99.557	31.329	276.0	-95.4	
								Rwa-20-B-1	99.557	-31.329	276.0	-95.4	
B-20-Kli-Bwi-1	220.000	100.015	6.1	0	0	0	0	B-20-Kli-Bwi-2	169.830	-11.643	446.7	-99.8	
								Bwi-20-B-1	-169.830	11.643	446.7	-99.8	
B-20-Kli-Bwi-2	220.000	99.306	3.1	0	0	0	0	B-20-Kli-Bwi-1	-167.960	14.472	445.5	-99.6	
								Kli-20-B-1	167.960	-14.472	445.5	-99.6	
B-20-Kri-Rba-1	220.000	100.251	5.7	0	0	0	0	B-20-Kri-Rba-2	0.000	0.000	0.0	0.0	
								Kri-20-B-1	0.000	0.000	0.0	0.0	
B-20-Kri-Rba-2	220.000	100.230	5.7	0	0	0	0	B-20-Kri-Rba-1	0.000	-2.842	7.4	0.0	
								Rba-20-B-1	0.000	2.842	7.4	0.0	
B-20-Mmb-Rwa-1D	220.000	99.347	1.6	0	0	0	0	B-20-Mmb-Rwa-2D	40.414	-5.935	107.9	-98.9	
								Mmb-20-B-1	-40.414	5.935	107.9	-98.9	
B-20-Mmb-Rwa-2D	220.000	99.233	1.4	0	0	0	0	B-20-Mmb-Rwa-1D	-40.367	-5.508	107.7	99.1	
								Rwa-20-B-1	40.367	5.508	107.7	99.1	
B-20-Mra-Sha-2D	220.000	99.554	0.0	0	0	0	0	20-Mra-B	-3.065	-30.166	79.9	10.1	
								Sha-20-B-1	3.065	30.166	79.9	10.1	
B-20-Nbu-Rsu-1	220.000	98.971	0.3	0	0	0	0	B-20-Nbu-Rsu-2	-51.309	-17.576	143.8	94.6	
								Nbu-20-B-1	51.309	17.576	143.8	94.6	
B-20-Nbu-Rsu-2	220.000	98.981	0.4	0	0	0	0	B-20-Nbu-Rsu-1	51.311	17.520	143.8	94.6	
								Rsu-20-B-1	-51.311	-17.520	143.8	94.6	
B-20-Rba-Sha-1	220.000	100.230	5.7	0	0	0	0	B-20-Rba-Sha-2	131.550	-20.033	348.4	-98.9	
								Rba-20-B-1	-131.550	20.033	348.4	-98.9	
B-20-Rba-Sha-2	220.000	99.554	0.0	0	0	0	0	B-20-Rba-Sha-1	-128.760	18.528	342.9	-99.0	
								Sha-20-B-1	128.760	-18.528	342.9	-99.0	
B-20-Rlm-Rsu-1D	220.000	99.135	0.7	0	0	0	0	B-20-Rlm-Rsu-2D	21.419	-14.107	67.9	-83.5	
								Rlm-20-B-1	-21.419	14.107	67.9	-83.5	
B-20-Rlm-Rsu-2D	220.000	98.981	0.4	0	0	0	0	B-20-Rlm-Rsu-1D	-21.396	-17.655	73.5	77.1	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Rsu-20-B-1	21.396	17.655	73.5	77.1	
B-20-Rlm-Rwa-1D	220.000	99.135	0.7	0	0	0	0	B-20-Rlm-Rwa-2D	-177.281	29.130	475.6	-98.7	
								Rlm-20-B-1	177.281	-29.130	475.6	-98.7	
B-20-Rlm-Rwa-2D	220.000	99.233	1.4	0	0	0	0	B-20-Rlm-Rwa-1D	177.843	-33.902	478.8	-98.2	
								Rwa-20-B-1	-177.843	33.902	478.8	-98.2	
B-20-Sha-Rlm-1D	220.000	99.554	0.0	0	0	0	0	B-20-Sha-Rlm-2D	-62.884	35.843	190.8	-86.9	
								Sha-20-B-1	62.884	-35.843	190.8	-86.9	
B-20-Sha-Rlm-2D	220.000	99.135	0.7	0	0	0	0	B-20-Sha-Rlm-1D	63.122	-51.290	215.3	-77.6	
								Rlm-20-B-1	-63.122	51.290	215.3	-77.6	
B-20-Smb-Rba-1	220.000	100.307	6.0	0	0	0	0	B-20-Smb-Rba-2	99.815	-8.307	262.0	-99.7	
								Smb-20-B-1	-99.815	8.307	262.0	-99.7	
B-20-Smb-Rba-2	220.000	100.230	5.7	0	0	0	0	B-20-Smb-Rba-1	-99.693	7.768	261.8	-99.7	
								Rba-20-B-1	99.693	-7.768	261.8	-99.7	
B-6-Mr1-Rz1-1	6.600	99.118	-0.4	0	0	0	0	B-6-Mr1-Rz1-2	-3.447	0.223	304.9	-99.8	
								Mr1-6-B-1	3.447	-0.223	304.9	-99.8	
B-6-Mr1-Rz1-2	6.600	99.961	0.4	0	0	0	0	B-6-Mr1-Rz1-1	3.480	-0.173	304.9	-99.9	
								Rz1-6-B-1	-3.480	0.173	304.9	-99.9	
B-B-10-Mku-Nbi-1-2	110.000	97.099	-5.5	0	0	0	0	B-10-Mku-Nbi-1	32.877	-13.730	192.6	-92.3	
								Nbi-10-B-1	-32.877	13.730	192.6	-92.3	
Bga-3-B-1	30.000	99.618	-3.8	0	0	19.679	9.531	Bga-10-B-1	-19.679	-9.531	422.4	90.0	
Bga-10-B-1	110.000	95.777	0.7	0	0	0	0	Bga-6-B-1	0.000	0.000	0.0	0.0	
								Bga-3-B-1	19.724	11.538	125.2	86.3	-8.000
								B-10-Bga-Nte-1	-4.843	-3.126	31.6	84.0	
								B-10-Bga-Gsb-1	-14.881	-8.412	93.7	87.1	
Bga-6-B-1	6.600	95.777	0.7	0	0	0	0	Bga-10-B-1	0.000	0.000	0.0	0.0	
Bre-1-B-1	15.000	99.193	-9.3	0	0	26.554	12.861	Bre-10-B-1	-13.277	-6.430	572.4	90.0	
								Bre-10-B-1	-13.277	-6.430	572.4	90.0	
Bre-10-B-1	110.000	97.969	-5.5	0	0	0	0	Bre-1-B-1	13.330	7.586	82.2	86.9	-5.000
								Bre-1-B-1	13.330	7.586	82.2	86.9	-5.000
								B-10-Bre-Gso-1	51.701	0.873	277.0	100.0	
								B-10-Bre-Sha-1DT-F	-172.220	-34.121	940.6	98.1	
								B-10-Bre-Jb1-D1F	93.860	18.076	512.1	98.2	
Bta-3-B-1	30.000	99.352	-3.2	0	0	11.959	5.792	Bta-10-B-1	-11.959	-5.792	257.4	90.0	
Bta-10-B-1	110.000	98.952	-0.4	0	0	0	0	Bta-3-B-1	11.976	6.537	72.4	87.8	-3.000
								Bta-20-B-1	-27.386	-9.634	154.0	94.3	
								B-10-Bta-Kgo-1	8.387	-3.971	49.2	-90.4	
								B-10-Bta-Hye-1	7.023	7.068	52.8	70.5	
Bta-20-B-1	220.000	99.301	1.5	0	0	0	0	Bta-10-B-1	27.410	10.710	77.8	93.1	-1.000
								B-20-Bta-Mmb-1D	-27.410	-3.678	73.1	99.1	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-20-Bta-Gte-D	0.000	-7.032	18.6	0.0	
Bwi-3-B-1	30.000	99.599	3.8	0	0	5.063	2.452	Bwi-20-B-1	-5.063	-2.452	108.7	90.0	
Bwi-10-B-1	110.000	100.015	6.1	0	0	0	0	Bwi-20-B-1	0.000	0.000	0.0	0.0	
Bwi-20-B-1	220.000	100.015	6.1	0	0	0	0	Bwi-10-B-1	0.000	0.000	0.0	0.0	
								Bwi-3-B-1	5.084	2.718	15.1	88.2	-2.000
								B-20-Bwi-Rba-1D	36.945	-31.809	127.9	-75.8	
								B-20-Kli-Bwi-1	169.830	-11.643	446.7	-99.8	
								B-20-Bwi-Kma-1	-137.064	33.638	370.3	-97.1	
								B-20-Bwi-KB2-1	0.000	-0.404	1.1	0.0	
								B-20-Bwi-KbW-1	-74.794	7.500	197.2	-99.5	
C-Gfu-B-3	30.000	97.881	-10.7	0	0	0.000	-9.581	Gfu-3-B-1	0.000	9.581	188.4	0.0	
C-MKi-3-B	30.000	99.446	-9.6	0	0	0.000	-14.834	MKi-3-B-1	0.000	14.834	287.1	0.0	
C-Mku-B-6	6.600	100.000	-11.6	0	0	0.000	-30.000	Mku-6-B-6	0.000	30.000	2624.3	0.0	
C-Msh-1-B	15.000	98.912	-12.5	0	0	0.000	-19.567	Msh-1-B-1	0.000	19.567	761.4	0.0	
C-Nbg-3-B	30.000	99.366	-9.1	0	0	0.000	-19.747	Nbg-3-B-1	0.000	19.747	382.5	0.0	
C-Nde-B	30.000	100.003	-10.4	0	0	0.000	-30.002	Nde-3-B-1	0.000	30.002	577.4	0.0	
C-Nga-B-3	30.000	98.976	-12.2	0	0	0.000	-9.796	Nga-3-B-1	0.000	9.796	190.5	0.0	
C-Rbo-B-3	30.000	99.095	-11.4	0	0	0.000	-19.640	Rbo-3-B-1	0.000	19.640	381.4	0.0	
C-Rln-3-B	30.000	98.452	-11.1	0	0	0.000	-9.693	Rln-3-B-1	0.000	9.693	189.5	0.0	
C-Rwi-B-1	15.000	99.563	-11.7	0	0	0.000	-9.913	Rwi-1-B-1	0.000	9.913	383.2	0.0	
C-Sha-20-B	220.000	99.554	0.0	0	0	0.000	-89.198	Sha-20-B-1	0.000	89.198	235.1	0.0	
Cyi-3-B-1	30.000	98.228	2.9	0	0	0	0	B-3-Cyi-Cyi/Nko-1	0.297	0.064	6.0	97.7	
								G-Cyi-3-B	-0.297	-0.064	6.0	97.7	
Cyi-3-B-2	30.000	98.228	2.9	0	0	0	0	N-Cyi-04-1	-0.297	-0.064	6.0	97.7	
								G-Cyi-3-B	0.297	0.064	6.0	97.7	
G-Cyi-3-B	30.000	98.228	2.9	0	0	0	0	Cyi-3-B-1	0.297	0.064	6.0	97.7	
								Cyi-3-B-2	-0.297	-0.064	6.0	97.7	
Gfu-3-B-1	30.000	97.881	-10.7	0	0	10.874	5.266	Gfu-10-B-1	-3.625	1.438	76.7	-93.0	
								Gfu-10-B-1	-3.625	1.438	76.7	-93.0	
								Gfu-10-B-1	-3.625	1.438	76.7	-93.0	
								C-Gfu-B-3	0.000	-9.581	188.4	0.0	
Gfu-10-B-1	110.000	96.766	-8.0	0	0	0	0	Gfu-3-B-1	3.647	-1.250	20.9	-94.6	
								Gfu-3-B-1	3.647	-1.250	20.9	-94.6	
								Gfu-3-B-1	3.647	-1.250	20.9	-94.6	
								10-Gfu/Mku/Rln-B	-10.940	3.751	62.7	-94.6	
G-Gko-1-B	15.000	99.465	-9.6	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-1-B-2	0.000	0.000	0.0	0.0	
G-Gko-3-B	15.000	99.465	-9.6	0	0	0	0	Gko-1-B-1	0.000	0.000	0.0	0.0	
								Gko-3-B	0.000	0.000	0.0	0.0	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
G-Gko-10-B	110.000	96.424	-6.6	0	0	0	0	Gko-10-B-1	0.000	0.000	0.0	0.0	
								Gko-10-B-2	0.000	0.000	0.0	0.0	
G-Gsh-1-B	11.000	99.713	3.8	0	0	0	0	Gsh-1-B-1	15.000	9.296	928.9	85.0	
								Gsh-1-B-2	-15.000	-9.296	928.9	85.0	
Gha-3-B-1	30.000	99.367	-10.1	0	0	20.762	10.055	Gha-10-B-1	-20.762	-10.055	446.8	90.0	
Gha-10-B-1	110.000	96.015	-7.2	0	0	0	0	Gha-3-B-1	20.792	11.402	129.6	87.7	-6.000
								B-10-Gha-MKi-1	-31.472	-0.641	172.1	100.0	
								B-10-Gha-Nde-1	10.680	-10.761	82.9	-70.4	
G-Jb2-10-B	110.000	97.040	-6.2	0	0	0	0	Jb2-10-B-1	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
G-Jb3-1-B	15.000	99.623	-9.9	0	0	0	0	Jb3-1-B-1	0.000	0.000	0.0	0.0	
								Jb3-1-B-2	0.000	0.000	0.0	0.0	
G-KbW-1-B-1	11.000	101.253	9.7	0	0	0	0	KbW-1-B-3	-17.000	0.000	881.2	100.0	
								KbW-1-B-2	17.000	0.000	881.2	100.0	
G-KbW-1-B-2	11.000	101.253	9.7	0	0	0	0	KbW-1-B-1	8.000	0.000	414.7	100.0	
								KbW-1-B-4	-8.000	0.000	414.7	100.0	
G-KbW-1-B-3	220.000	100.037	6.2	0	0	0	0	B-20-Bwi-KbW-2	74.825	-7.854	197.4	-99.5	
								KbW-20-B-2	-74.825	7.854	197.4	-99.5	
Gko-1-B-1	15.000	99.465	-9.6	0	0	26.968	13.061	Gko-10-B-1	-8.989	-4.354	386.5	90.0	
								Gko-10-B-1	-8.989	-4.354	386.5	90.0	
								Gko-10-B-1	-8.989	-4.354	386.5	90.0	
								G-Gko-1-B	0.000	0.000	0.0	0.0	
								G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-1-B-2	15.000	99.465	-9.6	0	0	0	0	G-Gko-1-B	0.000	0.000	0.0	0.0	
Gko-3-B	15.000	99.465	-9.6	0	0	0	0	G-Gko-3-B	0.000	0.000	0.0	0.0	
Gko-10-B-1	110.000	96.424	-6.6	0	0	0	0	Gko-1-B-1	9.022	4.971	56.1	87.6	-6.000
								Gko-1-B-1	9.022	4.971	56.1	87.6	-6.000
								Gko-1-B-1	9.022	4.971	56.1	87.6	-6.000
								B-10-Gko-Jb1-1	-24.355	-10.183	143.7	92.3	
								B-10-Gko-MKi-1	-2.710	-4.731	29.7	49.7	
								G-Gko-10-B	0.000	0.000	0.0	0.0	
Gko-10-B-2	110.000	96.424	-6.6	0	0	0	0	G-Gko-10-B	0.000	0.000	0.0	0.0	
G-Kse-1-B	110.000	96.282	-7.6	0	0	0	0	Gso-10-B-1	0.000	0.000	0.0	0.0	
								Kse-10-B1	0.000	0.000	0.0	0.0	
G-Mku-10-B	110.000	96.925	-7.7	0	0	0	0	Mku-10-B-1	0.000	0.000	0.0	0.0	
								Mku-10-B-2	0.000	0.000	0.0	0.0	
G-Mku-6-B	6.600	100.000	-11.6	0	0	0	0	Mku-6-B-4	12.000	6.352	1187.7	88.4	
								Mku-6-B-2	-12.000	-6.352	1187.7	88.4	
G-Mmb-3-B	30.000	98.853	6.6	0	0	0	0	Mmb-3-B-1	79.819	3.272	1555.2	99.9	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mmb-3-B-2	-79.819	-3.272	1555.2	99.9	
G-Mus-3-B	30.000	98.830	-0.3	0	0	0	0	Mus-3-B	-1.993	-0.553	40.3	96.4	
								Rka-3-B-1	1.993	0.553	40.3	96.4	
G-Nko-3-B	30.000	98.349	3.0	0	0	0	0	Nko-3-B-1	0.595	0.095	11.8	98.8	
								Nko-3-B-2	-0.595	-0.095	11.8	98.8	
G-NtB-3-B	30.000	97.118	-3.3	0	0	0	0	Kgo-3-B-1	4.978	2.882	114.0	86.5	
								NtB-3-B1	-4.978	-2.882	114.0	86.5	
G-Ny1-3-B	30.000	99.073	2.2	0	0	0	0	Ny1-3-B-1	27.937	0.543	542.8	100.0	
								Ny1-3-B-2	-27.937	-0.543	542.8	100.0	
G-Ny2-3-B	30.000	98.812	-5.7	0	0	0	0	Ny2-3-B-1	16.941	1.517	331.3	99.6	
								Ny2-3-B-2	-16.941	-1.517	331.3	99.6	
G-Rka5-3-B	30.000	98.830	-0.3	0	0	0	0	Rka5-3-B	-2.984	-0.401	58.6	99.1	
								Rka-3-B-1	2.984	0.401	58.6	99.1	
G-Rka-3-B	30.000	98.830	-0.3	0	0	0	0	Rka-3-B-1	6.671	0.691	130.6	99.5	
								Rka-3-B-2	-6.671	-0.691	130.6	99.5	
G-Rsu-10-B	110.000	99.198	3.3	0	0	0	0	Rsu-10-B-1	29.949	1.387	158.6	99.9	
								Rsu-10-B-2	-29.949	-1.387	158.6	99.9	
G-Rwa-3-B	30.000	99.048	6.0	0	0	0	0	Rwa-3-B-1	49.883	0.796	969.3	100.0	
								Rwa-3-B-2	-49.883	-0.796	969.3	100.0	
G-Rz1-.06-B	0.600	100.420	3.3	0	0	0	0	N-Rz1-.06-B-1-1	3.500	0.000	3353.8	100.0	
								N-Rz1-.06-B-1-2	-3.500	0.000	3353.8	100.0	
G-Rz2-.6-B	6.600	100.000	6.9	0	0	0	0	Rz2-.6-B-1-1	12.750	4.203	1174.4	95.0	
								Rz2-.6-B-1-2	-12.750	-4.203	1174.4	95.0	
G-Rz3-.6-B	6.600	100.000	23.9	0	0	0	0	Rz3-.6-B-1-1	48.000	2.232	4203.4	99.9	
								N-Rz4-.6-1	-48.000	-2.232	4203.4	99.9	
G-Rz4-.6-B	6.600	100.253	26.9	0	0	0	0	Rz4-.6-B-1-1	95.000	0.000	8289.3	100.0	
								Rz4-.6-B-1-2	-95.000	0.000	8289.3	100.0	
Gsh-1-B-1	11.000	99.713	3.8	0	0	0	0	Gsh-10-B	7.500	4.648	464.4	85.0	
								Gsh-10-B	7.500	4.648	464.4	85.0	
								G-Gsh-1-B	-15.000	-9.296	928.9	85.0	
Gsh-1-B-2	11.000	99.713	3.8	15.000	9.296	0	0	G-Gsh-1-B	15.000	9.296	928.9	85.0	
Gsh-10-B	110.000	96.481	1.0	0	0	0	0	Gsh-1-B-1	-7.474	-4.127	46.4	87.5	
								Gsh-1-B-1	-7.474	-4.127	46.4	87.5	
								B-10-Bga-Gsh-2	14.948	8.253	92.9	87.5	
G-Smb-1-B	11.000	100.146	10.8	0	0	0	0	N-Smb-1	100.000	0.000	5241.0	100.0	
								Smb-1-B-2N	-100.000	0.000	5241.0	100.0	
Gso-1-B-1	15.000	99.646	-10.4	0	0	20.866	10.106	Gso-10-B-1	-20.866	-10.106	895.6	90.0	
Gso-10-B-1	110.000	96.282	-7.6	0	0	0	0	Gso-1-B-1	20.896	11.459	129.9	87.7	-6.000
								B-10-Gso-Nde-1	10.498	-7.792	71.3	-80.3	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								10-Bre/Gso/Msh-B	-31.395	-3.667	172.3	99.3	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
Hye-3-B-1	30.000	99.513	-3.2	0	0	11.994	5.809	Hye-10-B-1	-11.994	-5.809	257.7	90.0	
Hye-10-B-1	110.000	98.107	-0.6	0	0	0	0	Hye-3-B-1	12.030	6.526	73.2	87.9	-4.000
								B-10-Bta-Hye-2	-6.983	-7.542	55.0	67.9	
								B-10-Hye-Rka-1	-5.047	1.016	27.5	-98.0	
Jb1-10-B-1	110.000	97.040	-6.2	0	0	0	0	Jb1-1-B-1	26.787	15.172	166.5	87.0	-6.000
								B-10-Jb1-Jb2-1	0.000	-0.036	0.2	0.0	
								B-10-Jb1-Rln-2	19.534	-6.433	111.2	-95.0	
								B-10-Gko-Jb1-2	24.437	10.151	143.1	92.3	
								B-10-Jb1-Nbg-1	22.415	-1.556	121.5	-99.8	
								B-10-Bre-Jb1-D2F	-93.173	-17.298	512.6	98.3	
Jb1-1-B-1	15.000	99.623	-9.9	0	0	26.738	12.950	Jb1-10-B-1	-26.738	-12.950	1147.8	90.0	
								B-1-Jb1-Jb3-1	0.000	0.000	0.0	0.0	
Jb2-6-B-1	6.600	99.020	-6.2	0	0	0	0	Jb2-10-B-2	0.000	0.000	0.0	0.0	
								Jb2-10-B-2	0.000	0.000	0.0	0.0	
Jb2-10-B-1	110.000	97.040	-6.2	0	0	0	0	B-10-Jb1-Jb2-2	0.000	0.000	0.0	0.0	
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb2-10-B-2	110.000	97.040	-6.2	0	0	0	0	Jb2-6-B-1	0.000	0.000	0.0	0.0	-2.000
								Jb2-6-B-1	0.000	0.000	0.0	0.0	-2.000
								G-Jb2-10-B	0.000	0.000	0.0	0.0	
Jb3-1-B-1	15.000	99.623	-9.9	0	0	0	0	B-1-Jb1-Jb3-2	0.000	0.000	0.0	0.0	
								G-Jb3-1-B	0.000	0.000	0.0	0.0	
Jb3-1-B-2	15.000	99.623	-9.9	0	0	0	0	G-Jb3-1-B	0.000	0.000	0.0	0.0	
								Jb3-1-B-2d	0.000	0.000	0.0	0.0	
Jb3-1-B-2d	15.000	99.623	-9.9	0	0	0	0	Jb3-1-B-2	0.000	0.000	0.0	0.0	
Kb2-20-B-1	220.000	100.015	6.1	0	0	0	0	B-20-Bwi-KB2-2	0.000	0.000	0.0	0.0	
Kba-3-B-1	30.000	99.271	-10.6	0	0	11.251	5.449	Kba-10-B-1	-5.625	-2.725	121.2	90.0	
								Kba-10-B-1	-5.625	-2.725	121.2	90.0	
Kba-10-B-1	110.000	95.899	-8.1	0	0	0	0	Kba-3-B-1	5.651	3.055	35.2	88.0	-6.000
								Kba-3-B-1	5.651	3.055	35.2	88.0	-6.000
								10-Kba/Msh/Rwi-B	16.023	-6.645	94.9	-92.4	
								B-10-Kba-Kre-1	-27.325	0.536	149.6	-100.0	
Kbo-3-B-1	30.000	96.296	-1.5	0	0	4.766	2.308	Kbo-10-B-1	-2.383	-1.154	52.9	90.0	
								Kbo-10-B-1	-2.383	-1.154	52.9	90.0	
Kbo-10-B-1	110.000	96.722	0.8	0	0	0	0	Kbo-3-B-1	2.394	1.279	14.7	88.2	-2.000
								Kbo-3-B-1	2.394	1.279	14.7	88.2	-2.000
								10-Kbo/Kro/Mr2-B	-4.787	-2.558	29.5	88.2	
Kbu-1-B-1	11.000	98.087	4.6	0	0	0	0	Kbu-3-B-1	1.463	-0.347	80.4	-97.3	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Kbu-3-B-1	1.463	-0.347	80.4	-97.3	
								Kbu-10-B-1	10.338	-0.733	554.6	-99.7	
								Kbu-10-B-1	10.857	-0.741	582.3	-99.8	
								B-1-Kbu-KbW-1F_T	-24.121	2.168	1295.9	-99.6	
Kbu-3-B-1	30.000	96.673	2.6	0	0	0	0	Kbu-1-B-1	-1.458	0.398	30.1	-96.5	-2.000
								Kbu-1-B-1	-1.458	0.398	30.1	-96.5	-2.000
								B-3-Kbu-Kro/Nko-2	2.917	-0.796	60.2	-96.5	
Kbu-10-B-1	110.000	98.308	1.6	0	0	0	0	Kbu-1-B-1	-10.310	1.265	55.5	-99.3	
								Kbu-1-B-1	-10.829	1.300	58.2	-99.3	
								B-10-Kbu-Kro-1	21.140	-2.565	113.7	-99.3	
KbW-1-B-1	11.000	101.253	9.7	0	0	0	0	KbW-1-B-2	8.000	0.000	414.7	100.0	
								G-KbW-1-B-2	-8.000	0.000	414.7	100.0	
KbW-1-B-2	11.000	101.253	9.7	0	0	0	0	KbW-1-B-1	-8.000	0.000	414.7	100.0	
								B-1-Kbu-KbW-2F_T	25.000	0.000	1295.9	100.0	
								G-KbW-1-B-1	-17.000	0.000	881.2	100.0	
KbW-1-B-3	11.000	101.253	9.7	17.000	0.000	0	0	G-KbW-1-B-1	17.000	0.000	881.2	100.0	
KbW-1-B-4	11.000	101.253	9.7	8.000	0.000	0	0	G-KbW-1-B-2	8.000	0.000	414.7	100.0	
KbW-1-B-5	20.000	99.722	12.2	75.000	0.000	0	0	KbW-20-B-2	75.000	0.000	2171.1	100.0	
KbW-20-B-2	220.000	100.037	6.2	0	0	0	0	KbW-1-B-5	-74.825	7.854	197.4	-99.5	
								G-KbW-1-B-3	74.825	-7.854	197.4	-99.5	
Kgo-3-B-1	30.000	97.118	-3.3	0	0	12.982	6.287	Kgo-10-B-1	-4.002	-1.703	86.2	92.0	
								Kgo-10-B-1	-4.002	-1.703	86.2	92.0	
								G-NtB-3-B	-4.978	-2.882	114.0	86.5	
Kgo-10-B-1	110.000	98.851	-1.4	0	0	0	0	Kgo-3-B-1	4.013	1.870	23.5	90.6	
								Kgo-3-B-1	4.013	1.870	23.5	90.6	
								Kgo-20-B-1	-35.314	-11.890	197.8	94.8	
								B-10-Kgo-MKi-2	55.288	-2.024	293.8	-99.9	
								B-10-Kgo-Kli-1	-19.678	7.239	111.3	-93.9	
								B-10-Bta-Kgo-2	-8.321	2.935	46.8	-94.3	
Kgo-20-B-1	220.000	99.137	2.0	0	0	0	0	Kgo-10-B-1	35.367	14.258	100.9	92.7	-2.000
								B-20-Kgo-Kli-1	-135.157	17.845	360.9	-99.1	
								B-20-Kgo-Rwa-1	99.790	-32.102	277.5	-95.2	
Kli-3-B-1	30.000	99.161	-2.2	0	0	5.023	2.385	Kli-10-B-1	-2.512	-1.193	54.0	90.3	
								Kli-10-B-1	-2.512	-1.193	54.0	90.3	
Kli-10-B-1	110.000	98.762	0.0	0	0	0	0	Kli-3-B-1	2.530	1.322	15.2	88.6	-3.000
								Kli-3-B-1	2.530	1.322	15.2	88.6	-3.000
								Kli-20-B-1	-32.171	-1.631	171.2	99.9	
								B-10-Kgo-Kli-2	19.841	-7.688	113.1	-93.2	
								B-10-Kli-Kro-2	-14.620	11.443	98.7	-78.7	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Kli-20-B-1	220.000	99.306	3.1	0	0	0	0	B-10-Kli-Rka-1	5.280	1.755	29.6	94.9	
								B-10-Kli-Ny1-1	16.610	-6.524	94.8	-93.1	
								Kli-10-B-1	32.210	3.403	85.6	99.4	
Kma-10-B-1	110.000	99.352	16.4	0	0	0	0	B-20-Kgo-Kli-2	135.750	-17.876	361.8	-99.1	
								B-20-Kli-Bwi-2	-167.960	14.472	445.5	-99.6	
								Kma-20-B-1	70.090	-10.176	374.2	-99.0	
Kma-20-B-1	220.000	99.817	11.4	0	0	0	0	Kma-20-B-1	70.090	-10.176	374.2	-99.0	
								B-10-Kma-Rz3-1	-47.577	3.739	252.1	-99.7	
								B-10-Kma-Rz4-1	-92.604	16.613	497.0	-98.4	
Kre-3-B-1	30.000	99.549	-9.0	0	0	11.308	5.477	Kma-10-B-1	-69.949	16.527	189.0	-97.3	-1.000
								Kma-10-B-1	-69.949	16.527	189.0	-97.3	-1.000
								B-20-Bwi-Kma-2	139.899	-33.053	377.9	-97.3	
Kri-20-B-1	220.000	100.251	5.7	0	0	0	0	Kre-10-B-1	-11.308	-5.477	242.9	90.0	
								Kre-3-B-1	11.347	6.272	69.7	87.5	-5.000
								B-10-Kba-Kre-2	27.825	-0.380	149.7	100.0	
Kro-3-B-1	30.000	95.074	0.4	0	0	4.659	2.256	B-10-Kre-Nbu-1	-39.172	-5.892	213.0	98.9	
								B-20-Kri-Rba-1	0.000	0.000	0.0	0.0	
								Kro-10-B-1	-0.947	-2.810	60.0	31.9	
Kro-10-B-1	110.000	98.100	1.1	0	0	0	0	B-3-Kbu-Kro-2	-3.712	0.553	76.0	-98.9	
								Kro-3-B-1	0.960	2.970	16.7	30.8	-2.000
								B-10-Kbu-Kro-2	-21.070	2.387	113.5	-99.4	
Kse-10-B1	110.000	96.282	-7.6	0	0	0	0	B-10-Kbo-Kro-1	5.372	6.579	45.4	63.2	
								B-10-Kli-Kro-1	14.738	-11.936	101.5	-77.7	
								G-Kse-1-B	0.000	0.000	0.0	0.0	
MKi-3-B-1	30.000	99.446	-9.6	0	0	20.791	10.070	MKi-10-B-1	-20.791	4.765	412.8	-97.5	
								C-MKi-3-B	0.000	-14.834	287.1	0.0	
								MKi-3-B-1	20.817	-3.615	114.9	-98.5	-2.000
MKi-10-B-1	110.000	96.535	-6.6	0	0	0	0	10-Gko/Kgo/MKi-B	-50.938	10.133	282.4	-98.1	
								B-10-MKi-Nbg-2	-1.513	-7.281	40.4	20.3	
								B-10-Gha-MKi-2	31.635	0.763	172.0	100.0	
Mku-3-B-1	30.000	96.403	-16.4	0	0	38.112	18.459	Mku-6-B-1	-19.056	-9.229	422.7	90.0	1.000
								Mku-6-B-3	-19.056	-9.229	422.7	90.0	1.000
								Mku-6-B-5	26.252	-11.602	155.4	-91.5	
Mku-10-B-1	110.000	96.925	-7.7	0	0	0	0	B-10-Gfu-Mku-2	6.138	-1.071	33.7	-98.5	
								B-10-Mku-Nta-1	-0.111	-1.648	8.9	6.7	
								B-10-Mku-Nbi-1	-32.278	14.321	191.2	-91.4	
Mku-10-B-2	110.000	96.925	-7.7	0	0	0	0	G-Mku-10-B	0.000	0.000	0.0	0.0	
								G-Mku-10-B	0.000	0.000	0.0	0.0	
Mku-6-B-1	6.600	100.000	-11.6	0	0	0	0	Mku-3-B-1	19.102	11.279	1940.5	86.1	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Mku-6-B-4	-6.000	-3.176	593.9	88.4	
								Mku-6-B-3	0.000	-7.500	656.1	0.0	
								Mku-6-B-5	-13.102	6.897	1295.2	-88.5	
								Mku-6-B-6	0.000	-7.500	656.1	0.0	
* Mku-6-B-2	6.600	100.000	-11.6	12.000	6.352	0	0	G-Mku-6-B	12.000	6.352	1187.7	88.4	
Mku-6-B-3	6.600	100.000	-11.6	0	0	0	0	Mku-3-B-1	19.102	11.279	1940.5	86.1	
								Mku-6-B-4	-6.000	-3.176	593.9	88.4	
								Mku-6-B-1	0.000	7.500	656.1	0.0	
								Mku-6-B-5	-13.102	6.897	1295.2	-88.5	
								Mku-6-B-6	0.000	-22.500	1968.2	0.0	
Mku-6-B-4	6.600	100.000	-11.6	0	0	0	0	Mku-6-B-1	6.000	3.176	593.9	88.4	
								Mku-6-B-3	6.000	3.176	593.9	88.4	
								G-Mku-6-B	-12.000	-6.352	1187.7	88.4	
Mku-6-B-5	6.600	100.000	-11.6	0	0	0	0	Mku-10-B-1	-26.203	13.794	2590.4	-88.5	
								Mku-6-B-1	13.102	-6.897	1295.2	-88.5	
								Mku-6-B-3	13.102	-6.897	1295.2	-88.5	
Mku-6-B-6	6.600	100.000	-11.6	0	0	0	0	C-Mku-B-6	0.000	-30.000	2624.3	0.0	
								Mku-6-B-3	0.000	22.500	1968.2	0.0	
								Mku-6-B-1	0.000	7.500	656.1	0.0	
Mmb-3-B-1	30.000	98.853	6.6	0	0	11.852	5.740	Mmb-20-B-1	67.967	-2.468	1324.1	-99.9	
								G-Mmb-3-B	-79.819	-3.272	1555.2	99.9	
Mmb-3-B-2	30.000	98.853	6.6	0	0	0	0	N-Mmb-6-1	-39.909	-1.636	777.6	99.9	
								N-Mmb-6-2	-39.909	-1.636	777.6	99.9	
								G-Mmb-3-B	79.819	3.272	1555.2	99.9	
Mmb-20-B-1	220.000	99.347	1.6	0	0	0	0	Mmb-3-B-1	-67.836	8.384	180.6	-99.2	
								B-20-Mmb-Rwa-1D	40.414	-5.935	107.9	-98.9	
								B-20-Bta-Mmb-2D	27.421	-2.449	72.7	-99.6	
Mr1-6-B-1	6.600	99.118	-0.4	0	0	0	0	Mr1-10-B-1	-3.249	-4.084	460.6	62.3	
								Mr1-3-B-1	6.696	3.861	682.2	86.6	
								B-6-Mr1-Rz1-1	-3.447	0.223	304.9	-99.8	
Mr1-10-B-1	110.000	96.440	1.3	0	0	0	0	Mr1-6-B-1	3.267	4.374	29.7	59.8	-7.000
								B-10-Mr1-Mr2-1	-3.267	-4.374	29.7	59.8	
Mr1-3-B-1	30.000	100.530	-4.6	0	0	6.656	3.224	Mr1-6-B-1	-6.656	-3.224	141.6	90.0	6.000
Mr2-10-B-1	110.000	96.450	1.3	0	0	0	0	B-10-Mr2-Rz2-1	-12.634	-3.229	71.0	96.9	
								Mr2-10-B-2	12.634	3.229	71.0	96.9	
Mr2-10-B-2	110.000	96.450	1.3	0	0	0	0	B-10-Mr2/Nte-1	9.367	-1.135	51.3	-99.3	
								B-10-Mr1-Mr2-2	3.267	4.364	29.7	59.9	
								Mr2-10-B-1	-12.634	-3.229	71.0	96.9	
Msh-1-B-1	15.000	98.912	-12.5	0	0	27.122	13.136	Msh-10-B-1	-13.561	3.216	542.3	-97.3	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								Msh-10-B-1	-13.561	3.216	542.3	-97.3	
								C-Msh-1-B	0.000	-19.567	761.4	0.0	
Msh-10-B-1	110.000	95.919	-8.4	0	0	0	0	Msh-1-B-1	13.611	-2.224	75.5	-98.7	-2.000
								Msh-1-B-1	13.611	-2.224	75.5	-98.7	-2.000
								B-10-Gso-Msh-2	-19.289	3.988	107.8	-97.9	
								B-10-Kba-Msh-2	-4.636	2.140	27.9	-90.8	
								B-10-Msh-Nga-1	2.023	-3.295	21.2	-52.3	
								B-10-Msh-Rbo-1	-5.320	1.616	30.4	-95.7	
Mus-3-B	30.000	98.830	-0.3	0	0	0	0	Mus-6-B	-1.993	-0.553	40.3	96.4	
								G-Mus-3-B	1.993	0.553	40.3	96.4	
* Mus-6-B	6.600	100.000	1.3	2.000	0.615	0	0	Mus-3-B	2.000	0.615	183.0	95.6	
Nbg-3-B-1	30.000	99.366	-9.1	0	0	20.761	10.055	Nbg-10-B-1	-10.381	4.846	221.9	-90.6	
								Nbg-10-B-1	-10.381	4.846	221.9	-90.6	
								C-Nbg-3-B	0.000	-19.747	382.5	0.0	
Nbg-10-B-1	110.000	96.742	-6.6	0	0	0	0	Nbg-3-B-1	10.407	-4.315	61.1	-92.4	-1.000
								Nbg-3-B-1	10.407	-4.315	61.1	-92.4	-1.000
								B-10-Jb1-Nbg-2	-22.335	1.508	121.4	-99.8	
								B-10-MKi-Nbg-1	1.520	7.122	39.5	20.9	
Nbi-3-B-1	30.000	99.750	-7.8	0	0	5.077	2.459	Nbi-10-B-1	-5.077	-2.459	108.8	90.0	
Nbi-10-B-1	110.000	97.099	-5.5	0	0	0	0	Nbi-3-B-1	5.098	2.725	31.2	88.2	-5.000
								B-B-10-Mku-Nbi-1-2	32.877	-13.730	192.6	-92.3	
								B-10-Nbi-Nyl-1	-37.974	11.005	213.7	-96.0	
Nbu-3-B-1	30.000	100.265	-7.5	0	0	11.454	5.548	Nbu-10-B-1	-11.454	-5.548	244.3	90.0	
Nbu-10-B-1	110.000	99.324	-4.5	0	0	0	0	Nbu-3-B-1	11.495	6.352	69.4	87.5	-4.000
								Nbu-20-B-1	-51.204	-12.868	279.0	97.0	
								B-10-Kre-Nbu-2	39.710	6.516	212.6	98.7	
Nbu-20-B-1	220.000	98.971	0.3	0	0	0	0	Nbu-10-B-1	51.309	17.576	143.8	94.6	-3.000
								B-20-Nbu-Rsu-1	-51.309	-17.576	143.8	94.6	
* N-Cyi-04-1	0.400	100.000	4.9	0.300	0.076	0	0	Cyi-3-B-2	0.300	0.076	446.7	96.9	
Nde-3-B-1	30.000	100.003	-10.4	0	0	21.001	10.171	Nde-10-B-1	-10.501	9.915	277.9	-72.7	
								Nde-10-B-1	-10.501	9.915	277.9	-72.7	
								C-Nde-B	0.000	-30.002	577.4	0.0	
Nde-10-B-1	110.000	96.352	-7.8	0	0	0	0	Nde-3-B-1	10.542	-9.082	75.8	-75.8	
								Nde-3-B-1	10.542	-9.082	75.8	-75.8	
								B-10-Gso-Nde-2	-10.475	7.663	70.7	-80.7	
								B-10-Gha-Nde-2	-10.609	10.501	81.3	-71.1	
Nga-3-B-1	30.000	98.976	-12.2	0	0	11.191	5.420	Nga-10-B-1	-11.191	4.376	233.6	-93.1	
								C-Nga-B-3	0.000	-9.796	190.5	0.0	
Nga-10-B-1	110.000	96.249	-8.8	0	0	0	0	Nga-3-B-1	11.228	-3.640	64.4	-95.1	-1.000

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Nga-Rln-1	-9.216	1.600	51.0	-98.5	
								B-10-Msh-Nga-2	-2.012	2.040	15.6	-70.2	
Nko-3-B-1	30.000	98.349	3.0	0	0	0	0	B-3-Nko-Cyi/Nko-1	0.595	0.095	11.8	98.8	
								G-Nko-3-B	-0.595	-0.095	11.8	98.8	
Nko-3-B-2	30.000	98.349	3.0	0	0	0	0	N-Nko-04-B-2	-0.595	-0.095	11.8	98.8	
								G-Nko-3-B	0.595	0.095	11.8	98.8	
* N-Mmb-.6-1	6.600	100.000	12.4	40.000	5.717	0	0	Mmb-3-B-2	40.000	5.717	3534.6	99.0	
* N-Mmb-.6-2	6.600	100.000	12.4	40.000	5.717	0	0	Mmb-3-B-2	40.000	5.717	3534.6	99.0	
* N-Nko-04-B-2	0.400	100.000	5.6	0.600	0.124	0	0	Nko-3-B-2	0.600	0.124	884.4	97.9	
* N-Ny1-.6-2	6.600	100.000	8.0	28.000	3.384	0	0	Ny1-3-B-2	28.000	3.384	2467.2	99.3	
* N-Ny2-.6-1	6.600	100.000	-1.8	17.000	2.700	0	0	Ny2-3-B-2	17.000	2.700	1505.8	98.8	
* N-Rka-.6-2	6.600	100.000	2.9	6.700	1.074	0	0	Rka-3-B-2	6.700	1.074	593.6	98.7	
* N-Rsu-1-1	12.000	100.000	7.6	30.000	3.670	0	0	Rsu-10-B-2	30.000	3.670	1454.1	99.3	
* N-Rwa-.6-2	6.600	100.000	12.0	50.000	6.080	0	0	Rwa-3-B-2	50.000	6.080	4406.1	99.3	
N-Rz1-.06-B-1-1	0.600	100.420	3.3	0	0	0	0	Rz1-.6-B-1	3.500	0.000	3353.8	100.0	
								G-Rz1-.06-B	-3.500	0.000	3353.8	100.0	
N-Rz1-.06-B-1-2	0.600	100.420	3.3	3.500	0.000	0	0	G-Rz1-.06-B	3.500	0.000	3353.8	100.0	
* N-Rz4-.6-1	6.600	100.000	23.9	48.000	2.232	0	0	G-Rz3-.6-B	48.000	2.232	4203.4	99.9	
N-Smb-1	11.000	100.146	10.8	0	0	0	0	Smb-1-B-1	50.000	0.000	2620.5	100.0	
								Smb-1-B-2	50.000	0.000	2620.5	100.0	
								G-Smb-1-B	-100.000	0.000	5241.0	100.0	
Nta-3-B-1	30.000	98.996	-11.0	0	0	11.097	5.374	Nta-.6-B-1	-11.097	-5.374	239.7	90.0	3.000
Nta-10-B-1	110.000	97.057	-7.7	0	0	0	0	Nta-.6-B-1	-0.056	-0.387	2.1	14.3	-2.000
								Nta-.6-B-1	-0.056	-0.387	2.1	14.3	-2.000
								B-10-Mku-Nta-2	0.112	0.773	4.2	14.3	
Nta-.6-B-1	6.600	99.353	-7.7	0	0	0	0	Nta-3-B-1	11.138	6.196	1122.2	87.4	
								Nta-10-B-1	0.056	0.388	34.5	14.3	
								Nta-10-B-1	0.056	0.388	34.5	14.3	
								Nta-.6-B-3	-11.250	-6.972	1165.3	85.0	
Nta-.6-B-2	6.600	99.353	-7.7	11.250	6.972	0	0	Nta-.6-B-3	11.250	6.972	1165.3	85.0	
Nta-.6-B-3	6.600	99.353	-7.7	0	0	0	0	Nta-.6-B-1	11.250	6.972	1165.3	85.0	
								Nta-.6-B-2	-11.250	-6.972	1165.3	85.0	
NtB-3-B1	30.000	97.118	-3.3	0	0	0	0	NtB-.6-B	-4.978	-2.882	114.0	86.5	
								G-NtB-3-B	4.978	2.882	114.0	86.5	
* NtB-.6-B	6.600	100.000	-1.0	5.000	3.174	0	0	NtB-3-B1	5.000	3.174	518.1	84.4	
Nte-3-B-1	30.000	98.891	-1.4	0	0	4.999	2.421	Nte-10-B-1	-4.999	-2.421	108.1	90.0	
Nte-10-B-1	110.000	96.268	0.9	0	0	0	0	Nte-3-B-1	5.019	2.684	31.0	88.2	-5.000
								B-10-Kbo/Nte-2	-0.534	-5.801	31.8	9.2	
								B-10-Mr2/Nte-2	-9.343	0.576	51.0	-99.8	

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap	
								B-10-Bga-Nte-2	4.858	2.541	29.9	88.6		
Ny1-10-B-1	110.000	98.593	-1.1	0	0	0	0	Ny1-3-B-1	-22.892	3.233	123.1	-99.0	-1.000	
								B-10-Kli-Ny1-2	-16.458	6.140	93.5	-93.7		
								B-10-Nbi-Ny1-2	39.350	-9.373	215.3	-97.3		
Ny1-3-B-1	30.000	99.073	2.2	0	0	5.015	2.429	Ny1-10-B-1	22.922	-1.886	446.8	-99.7		
								G-Ny1-3-B	-27.937	-0.543	542.8	100.0		
Ny1-3-B-2	30.000	99.073	2.2	0	0	0	0	N-Ny1-.6-2	-27.937	-0.543	542.8	100.0		
								G-Ny1-3-B	27.937	0.543	542.8	100.0		
Ny2-10-B-1	110.000	96.624	-7.5	0	0	0	0	Ny2-3-B-1	-5.868	4.092	38.9	-82.0	-4.000	
								B-10-Ny2-Rln-1	5.868	-4.092	38.9	-82.0		
Ny2-3-B-1	30.000	98.812	-5.7	0	0	11.060	5.356	Ny2-10-B-1	5.881	-3.840	136.8	-83.7		
								G-Ny2-3-B	-16.941	-1.517	331.3	99.6		
Ny2-3-B-2	30.000	98.812	-5.7	0	0	0	0	N-Ny2-.6-1	-16.941	-1.517	331.3	99.6		
								G-Ny2-3-B	16.941	1.517	331.3	99.6		
Rba-3-B-1	30.000	98.802	3.4	0	0	4.991	2.417	Rba-20-B-1	-4.991	-2.417	108.0	90.0		
Rba-20-B-1	220.000	100.230	5.7	0	0	0	0	Rba-3-B-1	5.011	2.679	14.9	88.2	-1.000	
								B-20-Bwi-Rba-2D	-36.867	15.271	104.5	-92.4		
								B-20-Rba-Sha-1	131.550	-20.033	348.4	-98.9		
								B-20-Kri-Rba-2	0.000	-2.842	7.4	0.0		
								B-20-Smb-Rba-2	-99.693	7.768	261.8	-99.7		
								B-20-Gma-Rba-2	0.000	-2.842	7.4	0.0		
Rbo-3-B-1	30.000	99.095	-11.4	0	0	20.660	10.006	Rbo-20-B-1	-20.660	9.634	442.7	-90.6		
								C-Rbo-B-3	0.000	-19.640	381.4	0.0		
Rbo-20-B-1	110.000	95.955	-8.3	0	0	0	0	Rbo-3-B-1	20.689	-8.311	122.0	-92.8	-1.000	
								B-10-Msh-Rbo-2	5.327	-1.877	30.9	-94.3		
								B-10-Air-Rbo-2	-26.016	10.189	152.8	-93.1		
* Rka5-.6-B	6.600	100.000	2.1	3.000	0.533	0	0	Rka5-3-B	3.000	0.533	266.5	98.5		
Rka5-3-B	30.000	98.830	-0.3	0	0	0	0	Rka5-.6-B	-2.984	-0.401	58.6	99.1		
								G-Rka5-3-B	2.984	0.401	58.6	99.1		
Rka-3-B-1	30.000	98.830	-0.3	0	0	11.847	5.738	Rka-10-B-1	-0.100	-2.047	39.9	4.9		
								Rka-10-B-1	-0.100	-2.047	39.9	4.9		
								G-Rka-3-B	-6.671	-0.691	130.6	99.5		
								G-Rka5-3-B	-2.984	-0.401	58.6	99.1		
								G-Mus-3-B	-1.993	-0.553	40.3	96.4		
Rka-3-B-2	30.000	98.830	-0.3	0	0	0	0	N-Rka-.6-2	-6.671	-0.691	130.6	99.5		
								G-Rka-3-B	6.671	0.691	130.6	99.5		
Rka-10-B-1	110.000	98.208	-0.3	0	0	0	0	Rka-3-B-1	0.101	2.075	11.1	4.9	-2.000	
								Rka-3-B-1	0.101	2.075	11.1	4.9	-2.000	
								B-10-Kli-Rka-2	-5.261	-2.543	31.2	90.0		

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ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
								B-10-Hye-Rka-2	5.059	-1.608	28.4	-95.3	
Rlm-3-B-1	30.000	99.651	-6.5	0	0	20.868	10.107	Rlm-10-B-1	-20.868	-10.107	447.8	90.0	
Rlm-10-B-1	110.000	99.360	-3.6	0	0	0	0	Rlm-3-B-1	20.898	11.460	125.9	87.7	-3.000
								Rlm-20-B-1	-92.565	-28.358	511.4	95.6	
								B-10-Air-Rlm-2_S	71.667	16.898	389.0	97.3	
Rlm-20-B-1	220.000	99.135	0.7	0	0	0	0	Rlm-10-B-1	92.741	36.267	263.6	93.1	-3.000
								B-20-Sha-Rlm-2D	63.122	-51.290	215.3	-77.6	
								B-20-Rlm-Rwa-1D	-177.281	29.130	475.6	-98.7	
								B-20-Rlm-Rsu-1D	21.419	-14.107	67.9	-83.5	
Rln-3-B-1	30.000	98.452	-11.1	0	0	10.988	5.322	Rln-10-B-1	-10.988	4.371	231.2	-92.9	
								C-Rln-3-B	0.000	-9.693	189.5	0.0	
Rln-10-B-1	110.000	96.681	-7.7	0	0	0	0	Rln-3-B-1	11.024	-3.651	63.0	-94.9	
								10-Gfu/Jb1/Rln-B	-14.466	2.502	79.7	-98.5	
								B-10-Nga-Rln-2	9.297	-2.623	52.4	-96.2	
								B-10-Ny2-Rln-2	-5.855	3.771	37.8	-84.1	
Rsu-10-B-1	110.000	99.198	3.3	0	0	0	0	Rsu-20-B-1	29.949	1.387	158.6	99.9	
								G-Rsu-10-B	-29.949	-1.387	158.6	99.9	
Rsu-10-B-2	110.000	99.198	3.3	0	0	0	0	N-Rsu-1-1	-29.949	-1.387	158.6	99.9	
								G-Rsu-10-B	29.949	1.387	158.6	99.9	
Rsu-20-B-1	220.000	98.981	0.4	0	0	0	0	Rsu-10-B-1	-29.915	0.135	79.3	100.0	
								B-20-Rlm-Rsu-2D	-21.396	-17.655	73.5	77.1	
								B-20-Nbu-Rsu-2	51.311	17.520	143.8	94.6	
Rwa-3-B-1	30.000	99.048	6.0	0	0	11.894	5.760	Rwa-20-B-1	37.989	-4.964	744.4	-99.2	
								G-Rwa-3-B	-49.883	-0.796	969.3	100.0	
Rwa-3-B-2	30.000	99.048	6.0	0	0	0	0	N-Rwa-6-2	-49.883	-0.796	969.3	100.0	
								G-Rwa-3-B	49.883	0.796	969.3	100.0	
Rwa-20-B-1	220.000	99.233	1.4	0	0	0	0	Rwa-3-B-1	-37.920	8.081	102.5	-97.8	-1.000
								B-20-Rlm-Rwa-2D	177.843	-33.902	478.8	-98.2	
								B-20-Kgo-Rwa-2	-99.557	31.329	276.0	-95.4	
								B-20-Mmb-Rwa-2D	-40.367	-5.508	107.7	99.1	
Rwi-1-B-1	15.000	99.563	-11.7	0	0	11.310	5.478	Rwi-10-B-1	-11.310	4.435	469.7	-93.1	
								C-Rwi-B-1	0.000	-9.913	383.2	0.0	
Rwi-10-B-1	110.000	95.837	-8.3	0	0	0	0	Rwi-1-B-1	11.348	-3.691	65.4	-95.1	-2.000
								B-10-Kba-Rwi-2	-11.348	3.691	65.4	-95.1	
Rz1-6-B-1	6.600	99.961	0.4	0	0	0	0	N-Rz1-.06-B-1-1	-3.480	0.173	304.9	-99.9	
								B-.6-Mr1-Rz1-2	3.480	-0.173	304.9	-99.9	
Rz2-6-B-1-1	6.600	100.000	6.9	0	0	0	0	Rz2-10-B-1	12.750	4.203	1174.4	95.0	
								G-Rz2-.6-B	-12.750	-4.203	1174.4	95.0	
* Rz2-6-B-1-2	6.600	100.000	6.9	12.750	4.203	0	0	G-Rz2-.6-B	12.750	4.203	1174.4	95.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	MW	Mvar	MW	Mvar	ID	MW	Mvar	Amp	%PF	%Tap
Rz2-10-B-1	110.000	96.989	1.7	0	0	0	0	Rz2-6-B-1-1	-12.684	-2.943	70.5	97.4	
								B-10-Mr2-Rz2-2	12.684	2.943	70.5	97.4	
Rz3-6-B-1-1	6.600	100.000	23.9	0	0	0	0	Rz3-10-B-1	48.000	2.232	4203.4	99.9	
								G-Rz3-6-B	-48.000	-2.232	4203.4	99.9	
Rz3-10-B-1	110.000	99.847	17.6	0	0	0	0	Rz3-6-B-1-1	-47.883	3.015	252.2	-99.8	
								B-10-Kma-Rz3-2	47.883	-3.015	252.2	-99.8	
Rz4-6-B-1-1	6.600	100.253	26.9	0	0	0	0	Rz4-10-B-1	95.000	0.000	8289.3	100.0	
								G-Rz4-6-B	-95.000	0.000	8289.3	100.0	
Rz4-6-B-1-2	6.600	100.253	26.9	95.000	0.000	0	0	G-Rz4-6-B	95.000	0.000	8289.3	100.0	
Rz4-10-B-1	110.000	100.592	20.7	0	0	0	0	Rz4-6-B-1-1	-94.773	10.201	497.4	-99.4	
								B-10-Kma-Rz4-2	94.773	-10.201	497.4	-99.4	
Sha-3-B-1	30.000	99.348	-7.5	0	0	20.755	10.052	Sha-10-B-1	-20.755	-10.052	446.7	90.0	
Sha-10-B-1	110.000	99.060	-4.6	0	0	0	0	Sha-3-B-1	20.784	11.399	125.6	87.7	-3.000
								Sha-20-B-1	-194.331	-47.984	1060.6	97.1	
								B-10-Bre-Sha-2DT-F	173.546	36.586	939.7	97.8	
Sha-20-B-1	220.000	99.554	0.0	0	0	0	0	Sha-10-B-1	194.709	64.993	541.1	94.9	-2.000
								C-Sha-20-B	0.000	-89.198	235.1	0.0	
								B-20-Sha-Rlm-1D	-62.884	35.843	190.8	-86.9	
								B-20-Rba-Sha-2	-128.760	18.528	342.9	-99.0	
								B-20-Mra-Sha-2D	-3.065	-30.166	79.9	10.1	
Smb-1-B-1	11.000	100.146	10.8	0	0	0	0	Smb-20-B-1	50.000	0.000	2620.5	100.0	
								N-Smb-1	-50.000	0.000	2620.5	100.0	
Smb-1-B-2	11.000	100.146	10.8	0	0	0	0	Smb-20-B-1	50.000	0.000	2620.5	100.0	
								N-Smb-1	-50.000	0.000	2620.5	100.0	
Smb-1-B-2N	11.000	100.146	10.8	0	0	0	0	G-Smb-1-B	100.000	0.000	5241.0	100.0	
								Smb-1-B-4	-50.000	0.000	2620.5	100.0	
								Smb-1-B-6	-50.000	0.000	2620.5	100.0	
Smb-1-B-4	11.000	100.146	10.8	50.000	0.000	0	0	Smb-1-B-2N	50.000	0.000	2620.5	100.0	
Smb-1-B-6	11.000	100.146	10.8	50.000	0.000	0	0	Smb-1-B-2N	50.000	0.000	2620.5	100.0	
Smb-20-B-1	220.000	100.307	6.0	0	0	0	0	Smb-1-B-1	-49.908	4.153	131.0	-99.7	
								Smb-1-B-2	-49.908	4.153	131.0	-99.7	
								B-20-Smb-Rba-1	99.815	-8.307	262.0	-99.7	

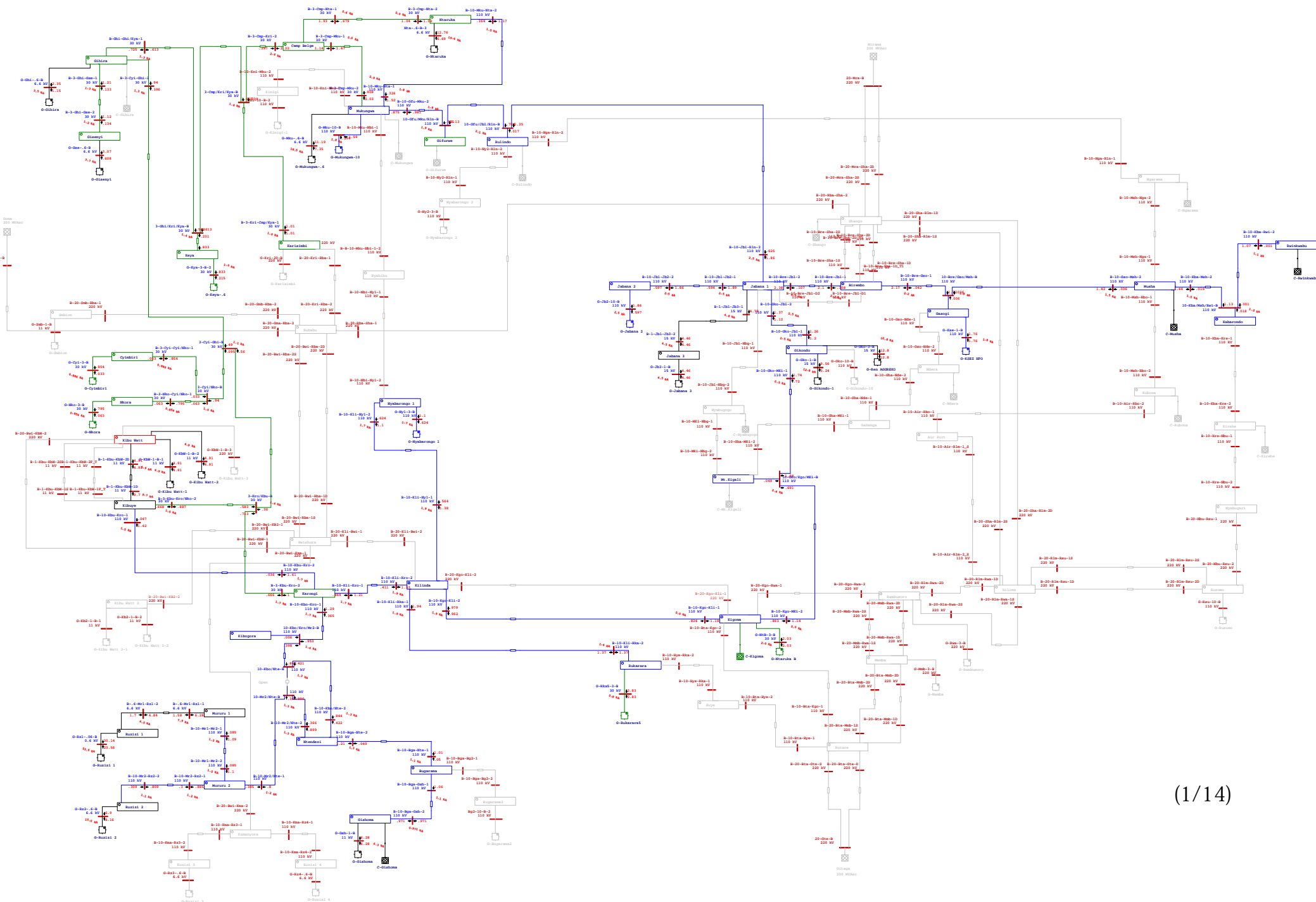
* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

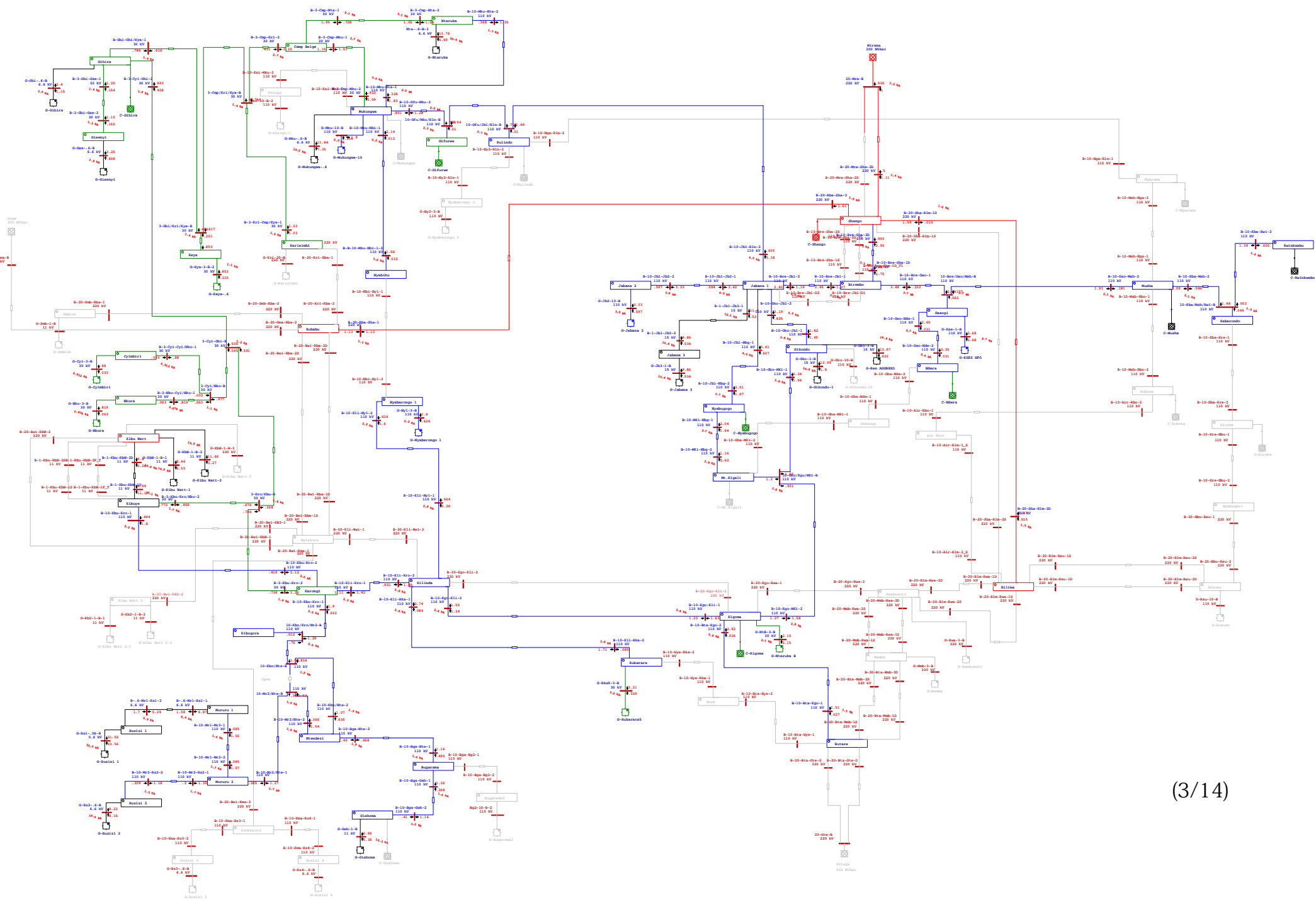
Indicates a bus with a load mismatch of more than 0.1 MVA

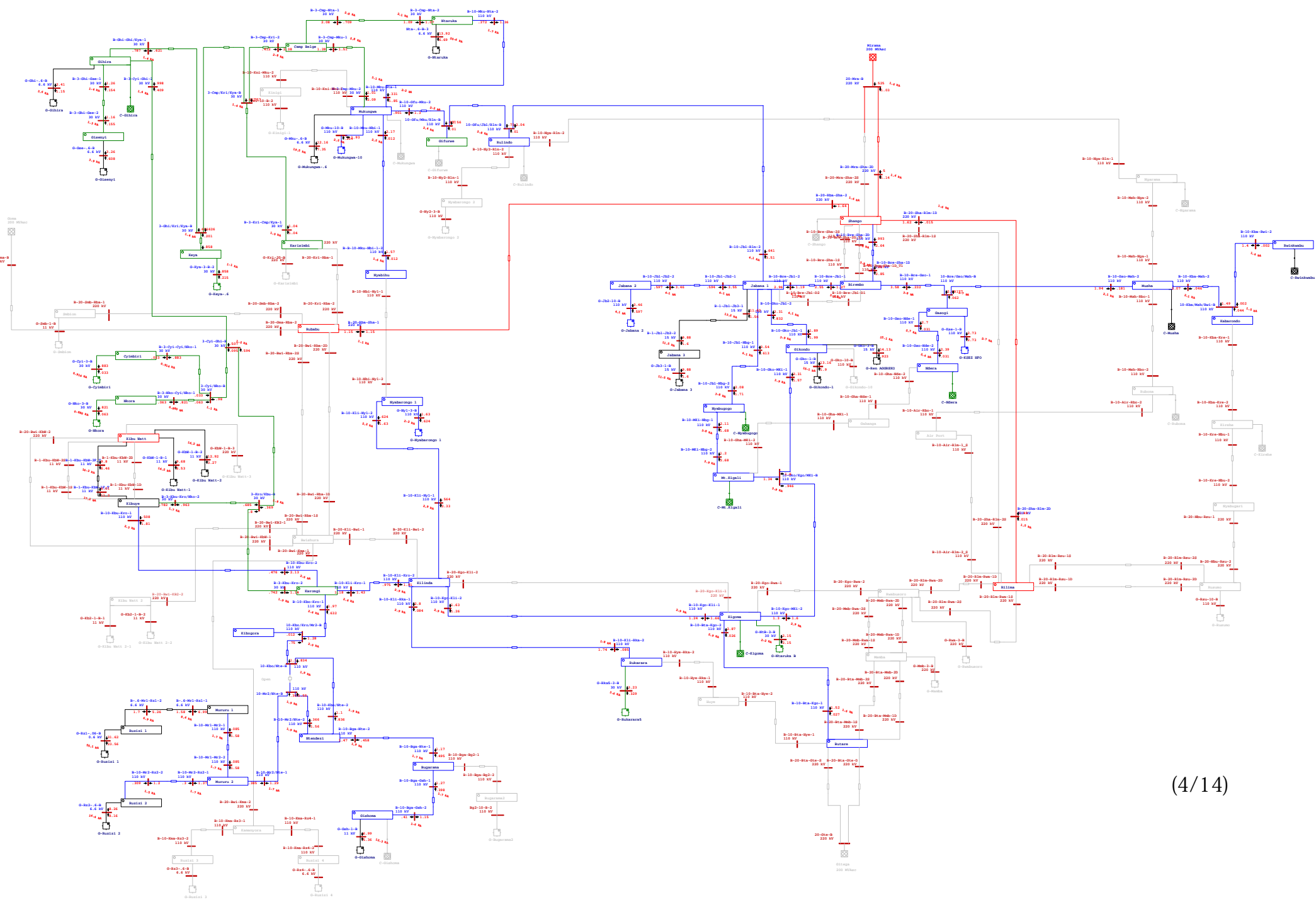
Short Circuit Calculation Results (Indicated on Single Line diagrams)

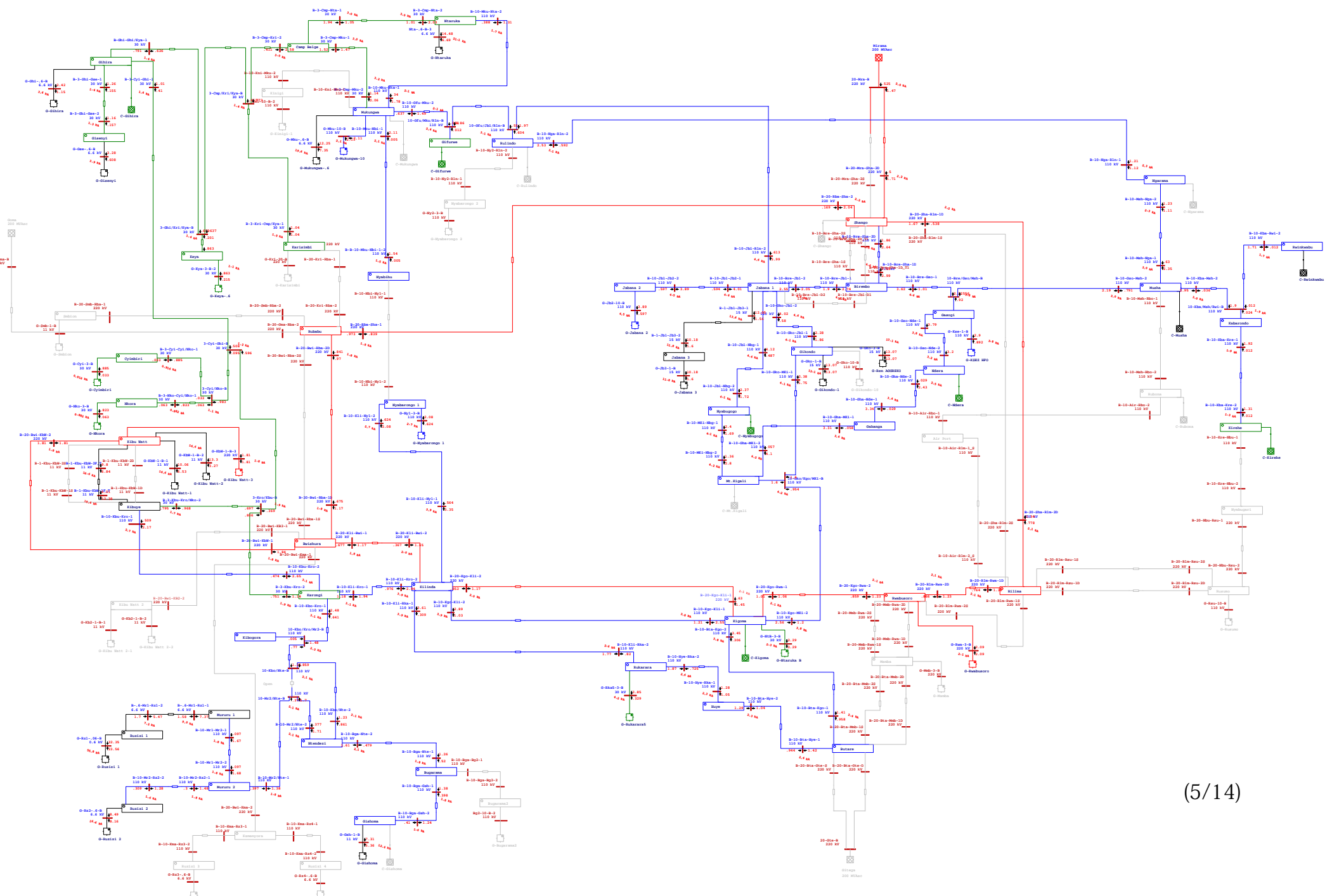
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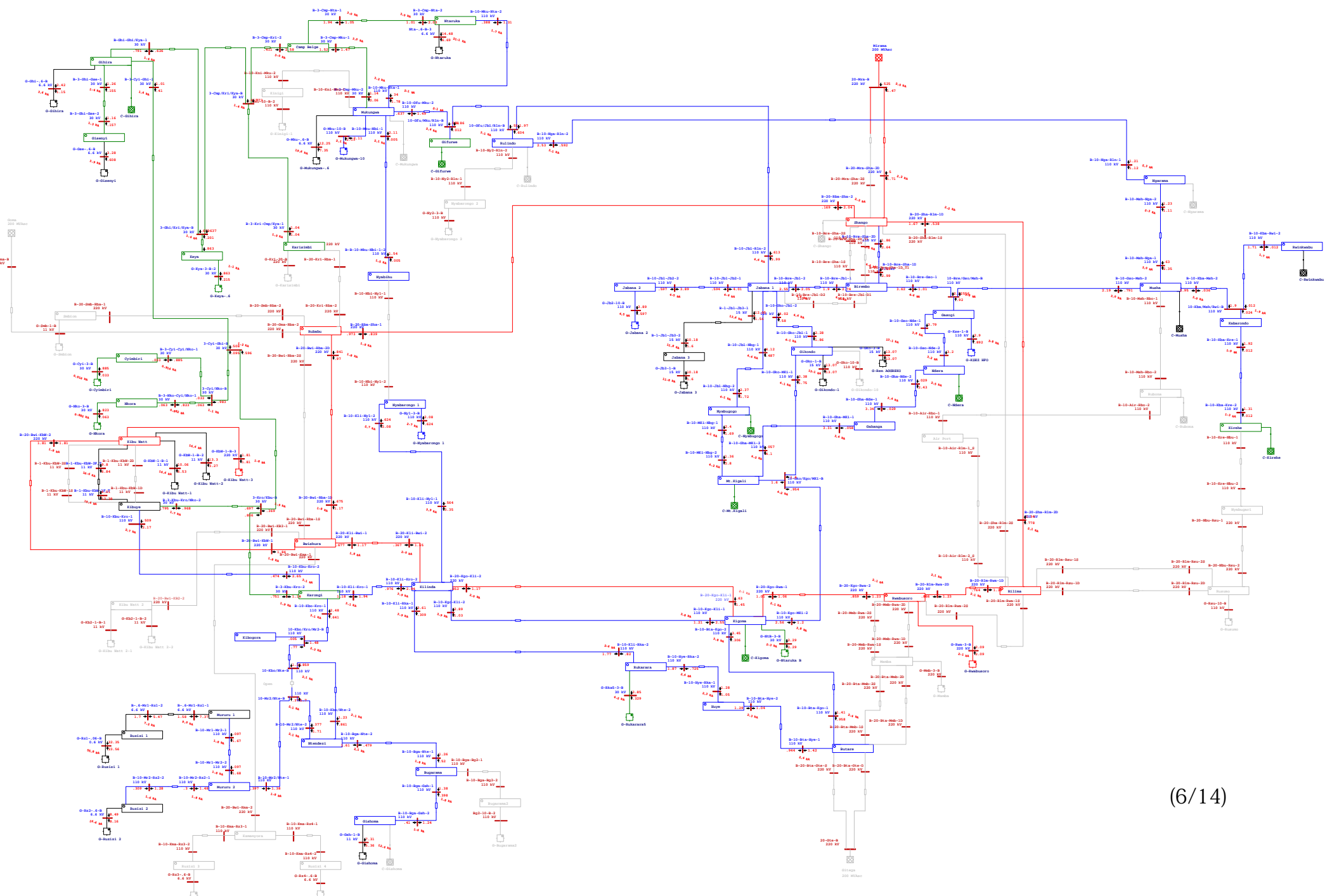
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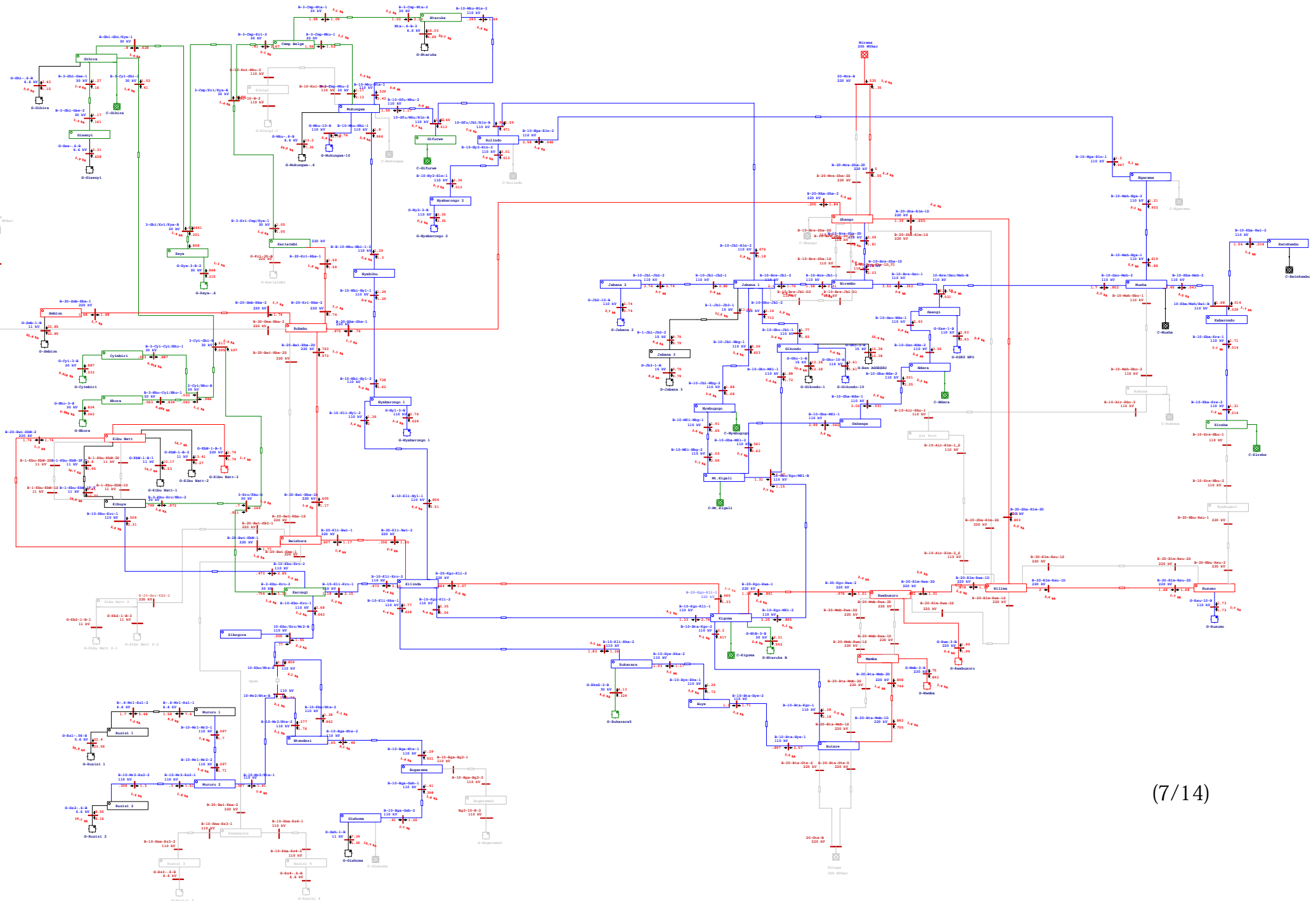


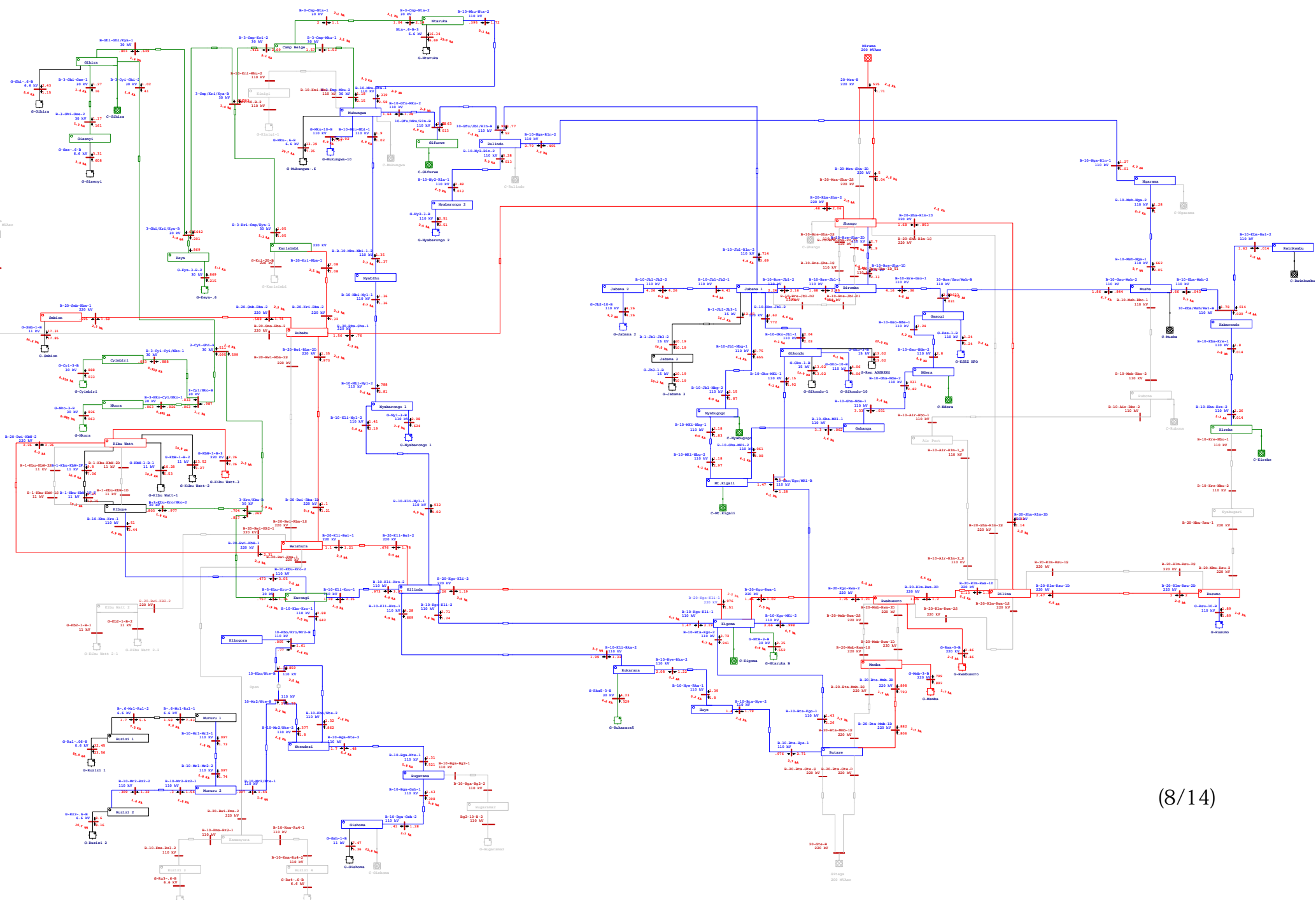


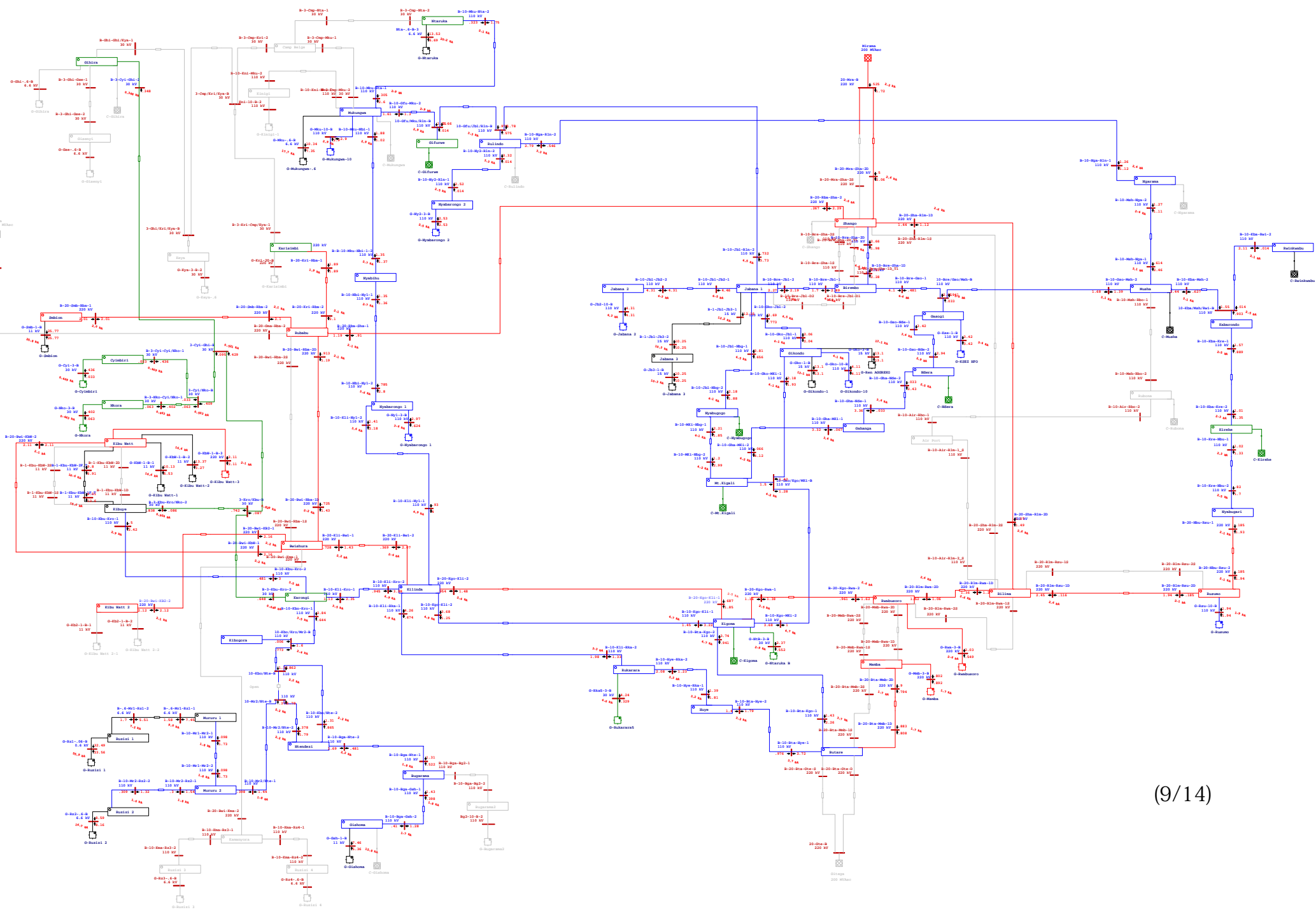


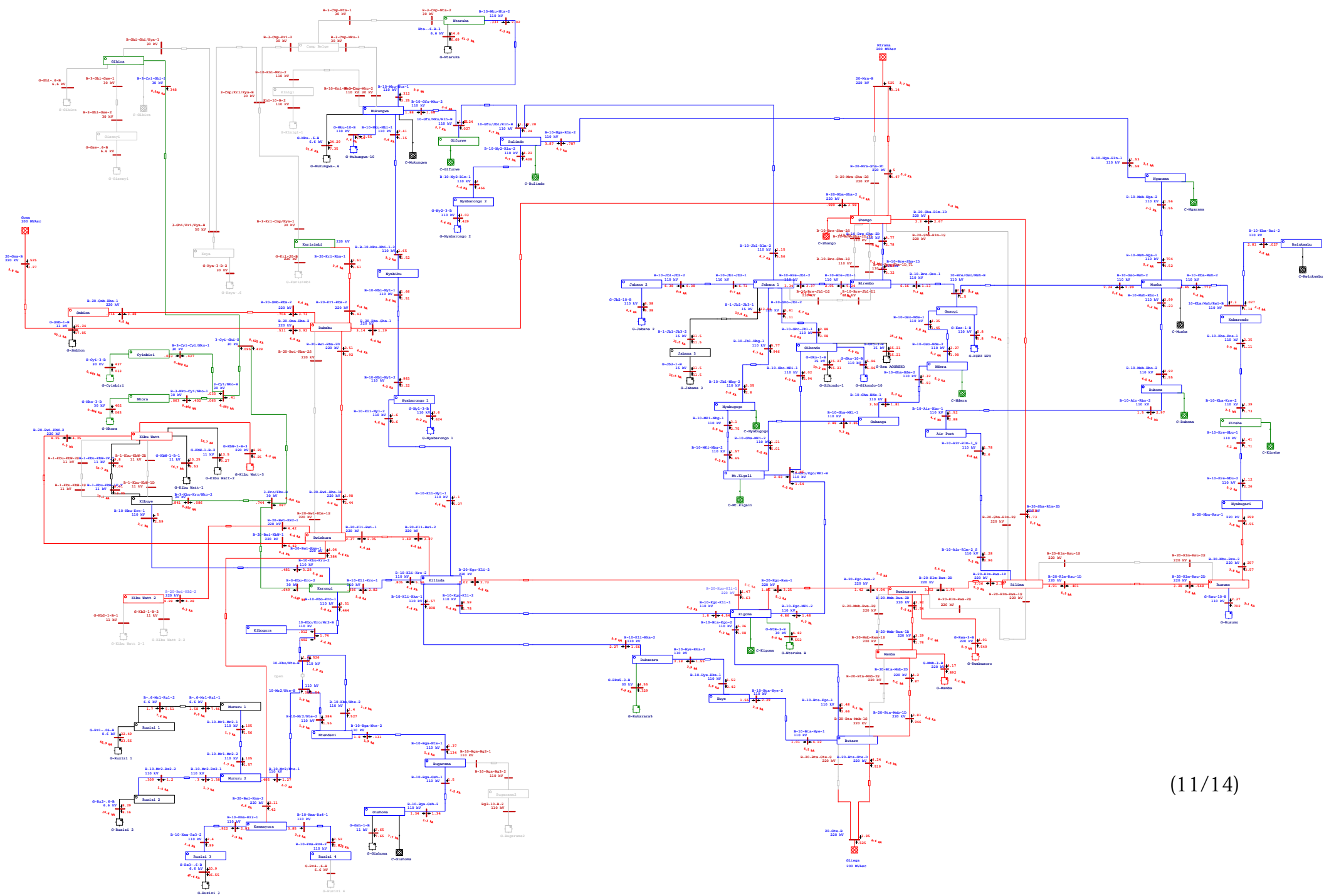


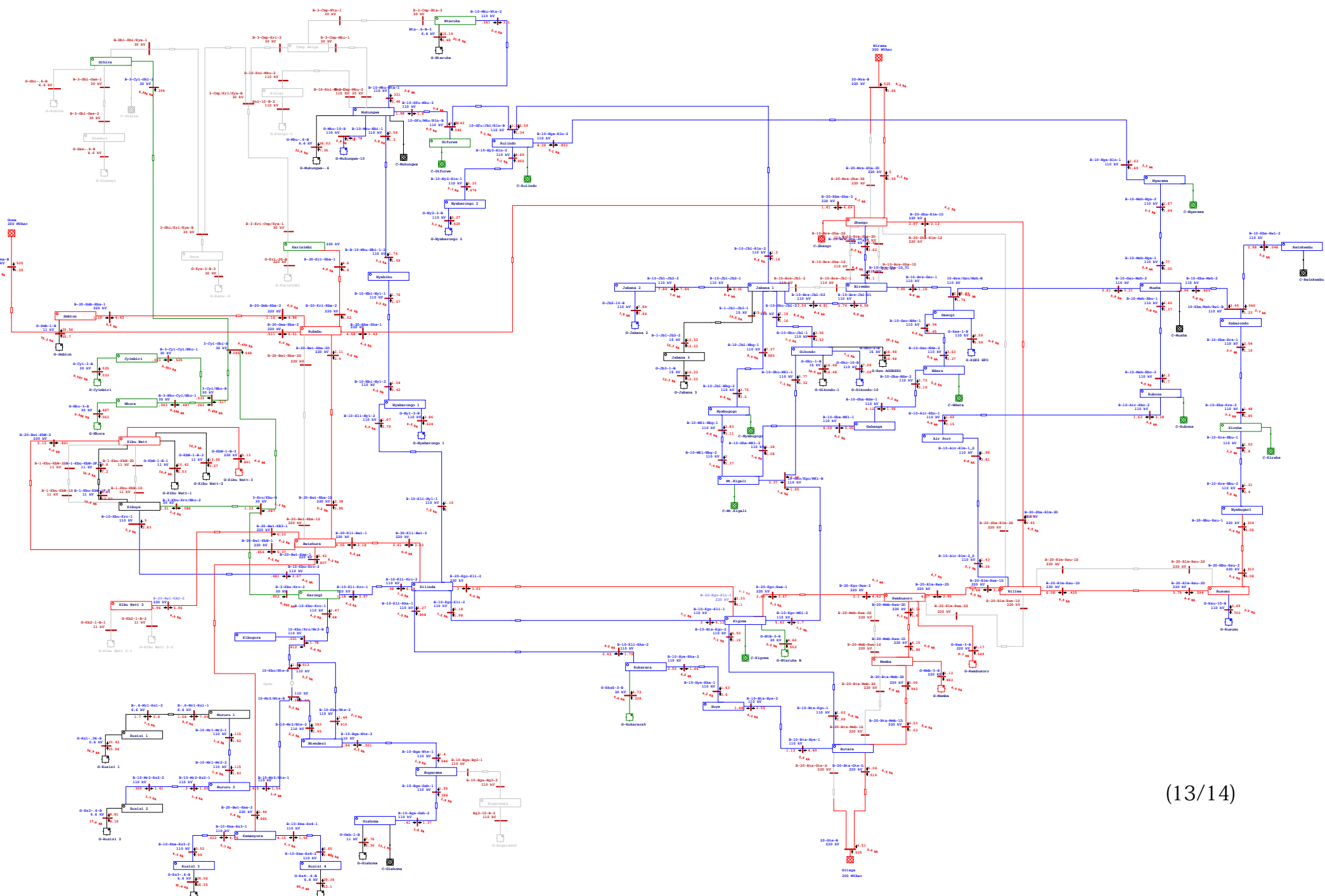


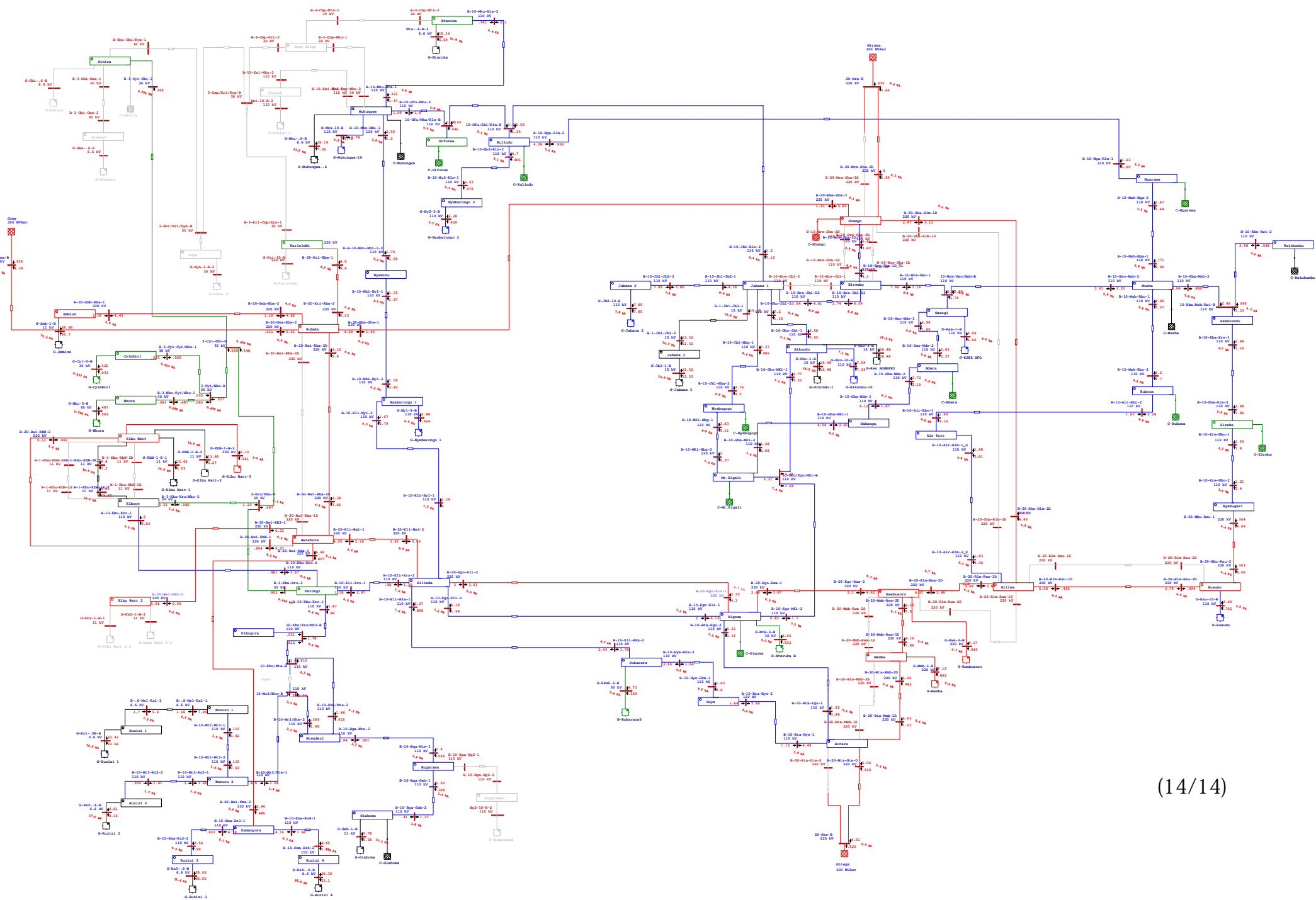












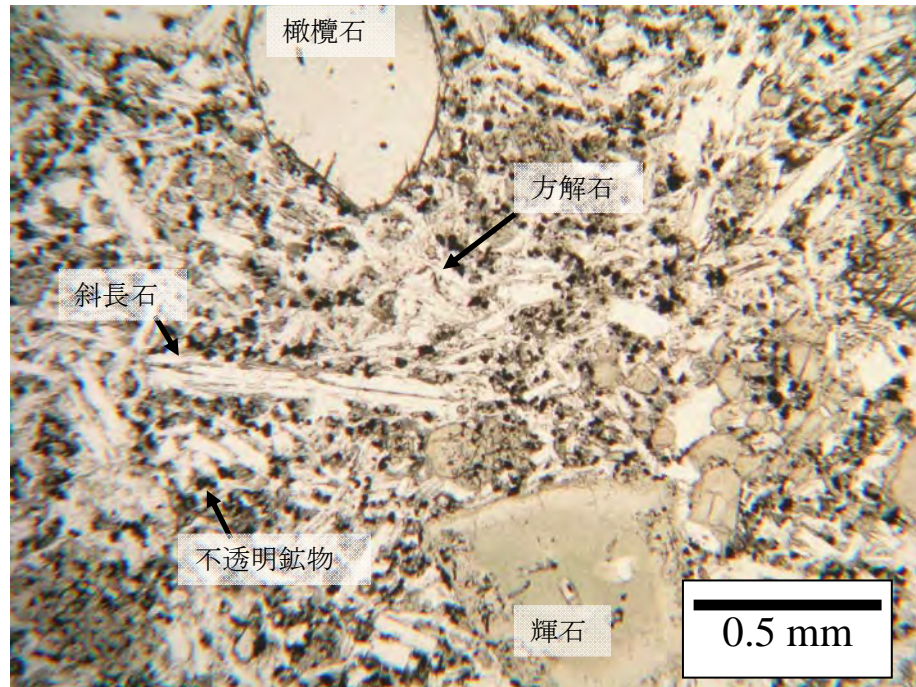
別 添 資 料

- 2-1 地質調査（偏光顕微鏡観察シート）
- 2-2 地質調査（赤外反射スペクトル解析結果）
- 2-3 重力異常データ（**Bugarama** 地域）
- 2-4 地熱多目的利用（**IRR** 試算結果）
- 2-5 補足地質調査（偏光顕微鏡観察シート）
- 2-6 重力異常データ（**Kinigi** 地域）

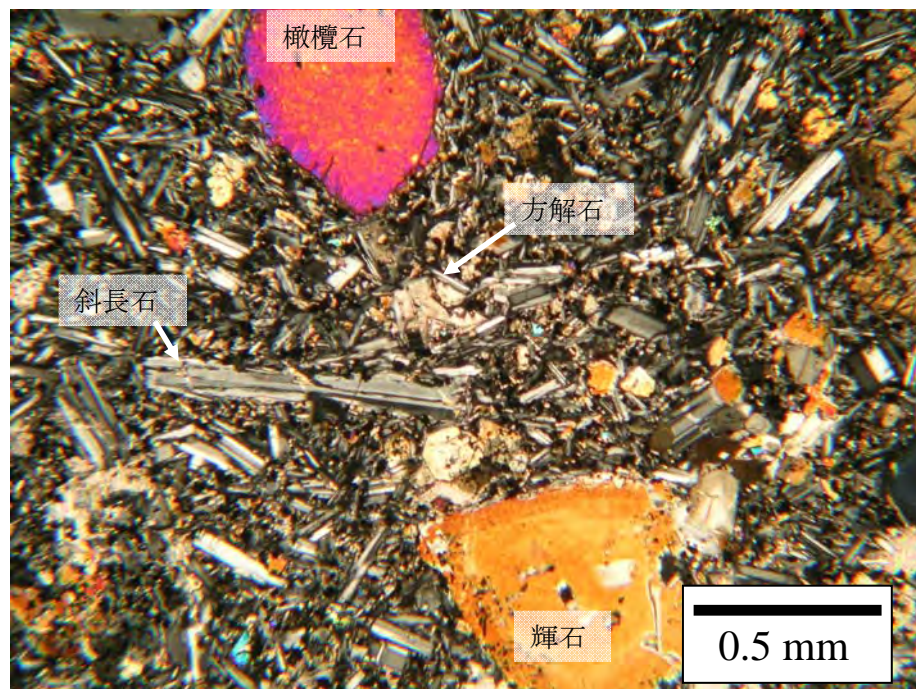
偏光顕微鏡観察シート No.1

062004 (ID:0620-13-02)

開放ポーラー



直交ポーラー



記載

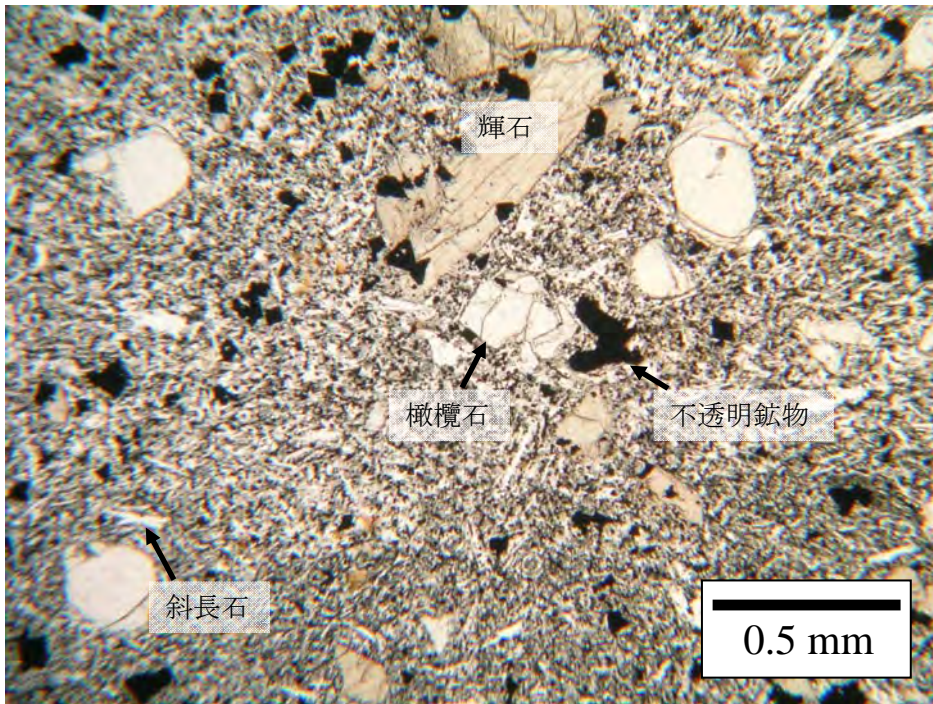
岩石名：玄武岩

- ・ 橄欖石，輝石，斜長石の斑晶をもち，石基は斜長石，輝石，橄欖石および 0.1mm 以下の細粒な不透明鉱物よりなる。
- ・ 石基の斜長石には流理が見られる。
- ・ 石基の一部は方解石に変質していた。

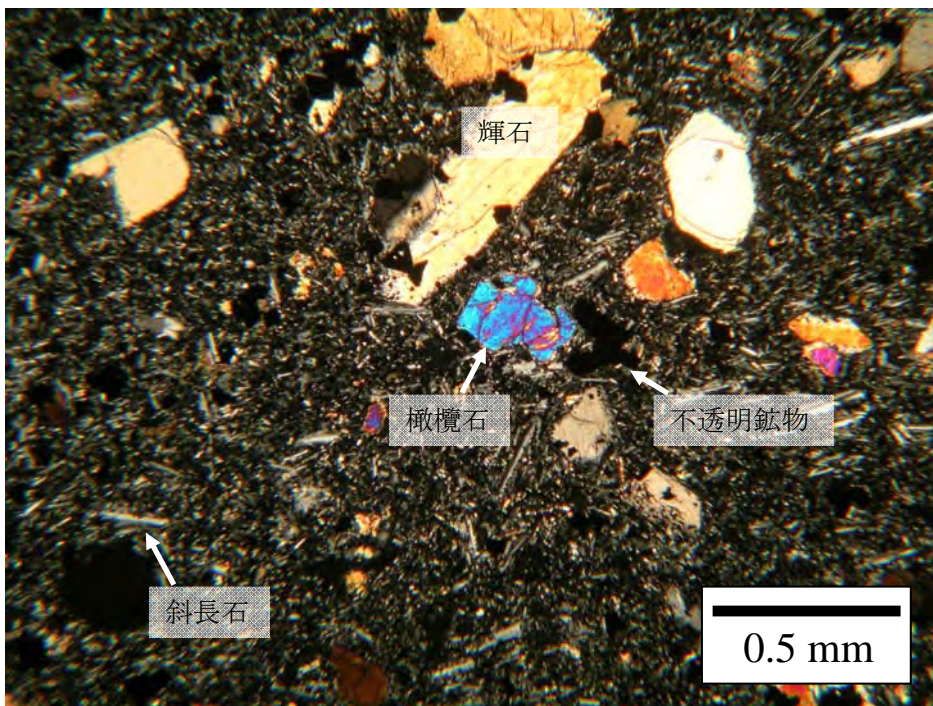
偏光顕微鏡観察シート No.2

062902 (ID:0625-59-01)

開放ポーラー



直交ポーラー



岩石名：玄武岩

記載

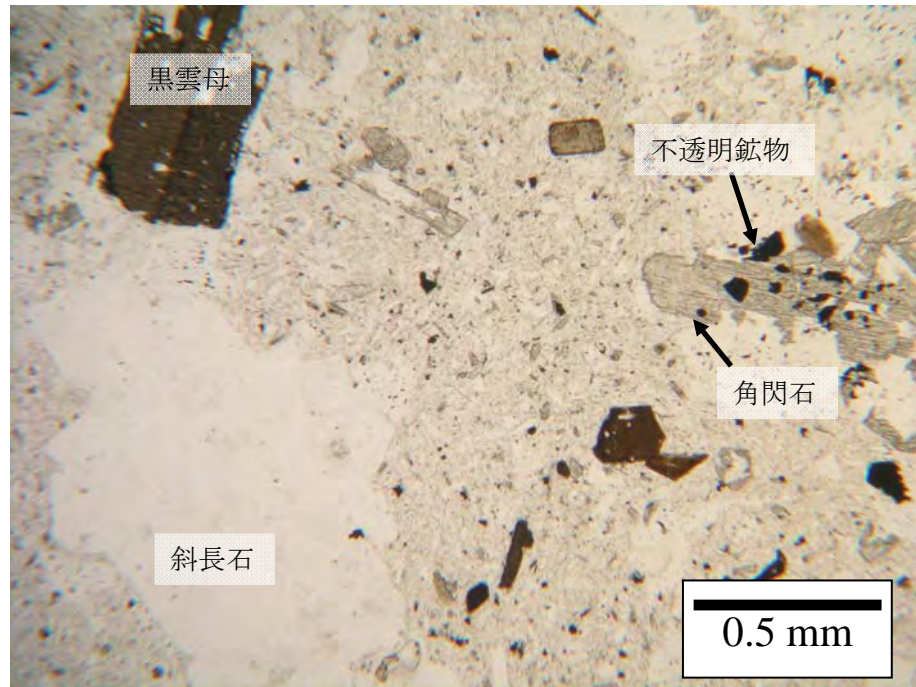
・輝石の斑晶が多く見られ、橄欖石および斜長石の斑晶も認められる。石基は斜長石、輝石、橄欖石および0.1mm以下の細粒な不透明鉱物よりなる。

・石基の斜長石は細粒で、粒間にガラス質が見られる。

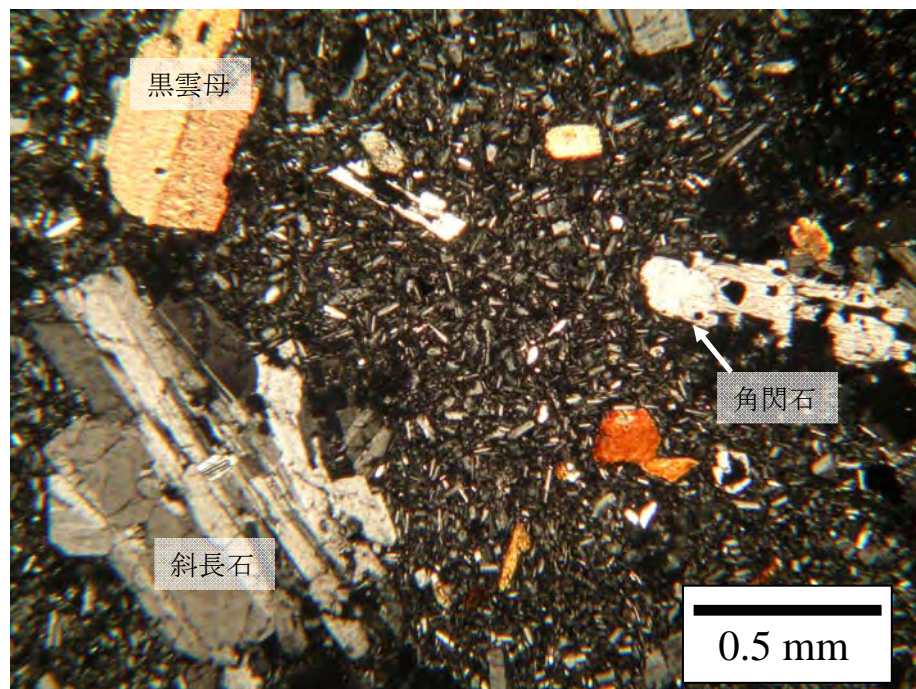
偏光顕微鏡観察シート No.3

062702 (ID:0627-85-01)

開放ポーラー



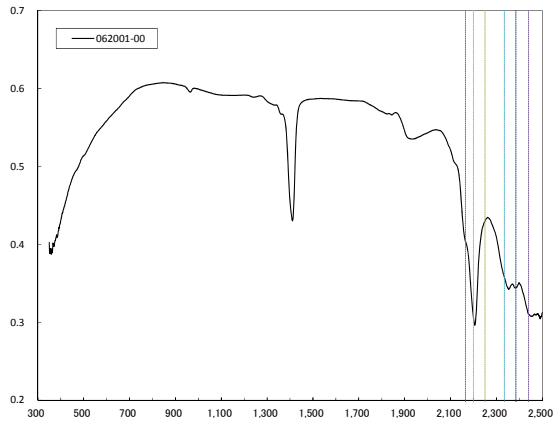
直交ポーラー



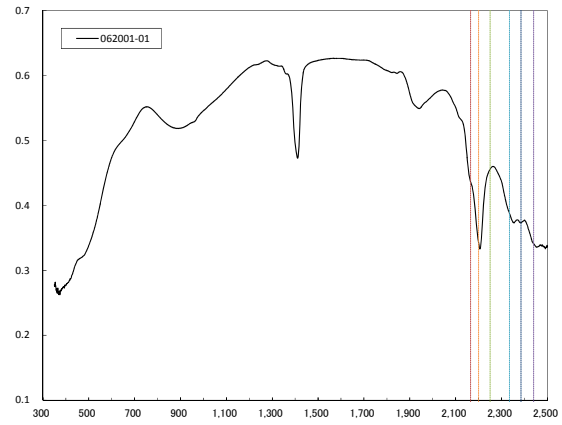
記載

岩石名：安山岩

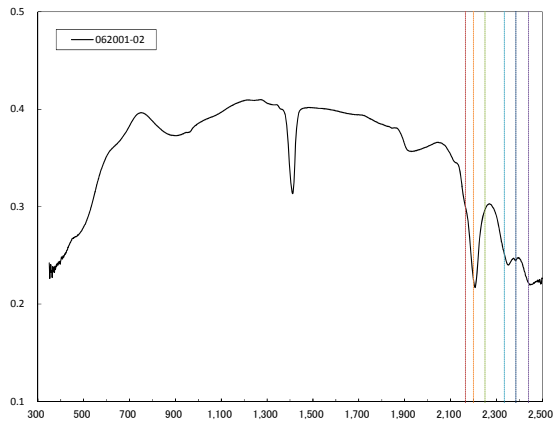
- ・斜長石および黒雲母の斑晶が多く見られ、角閃石の斑晶も見られる。石基は主に細粒な斜長石よりなり、黒雲母、角閃石および不透明鉱物も認められる。
- ・集斑状の斜長石の斑晶が多く見られる。



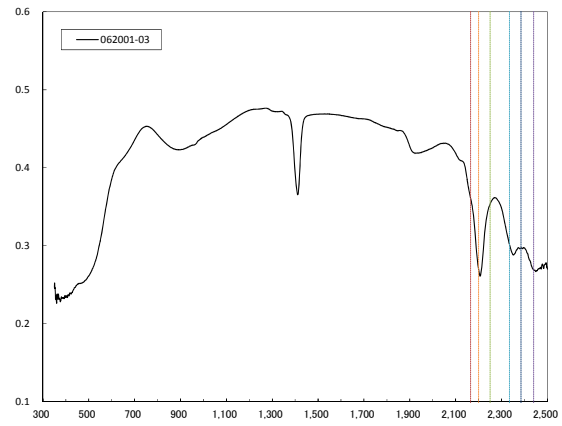
062001-01



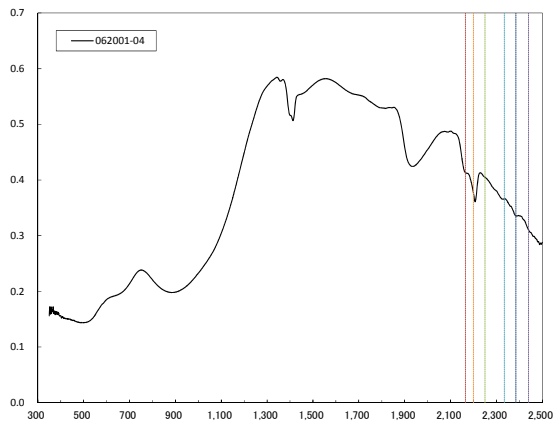
062001-02



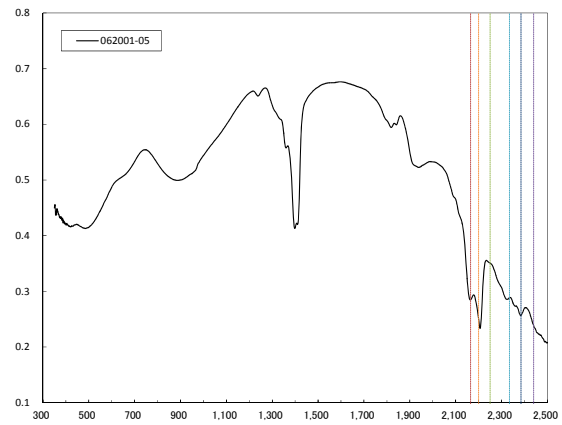
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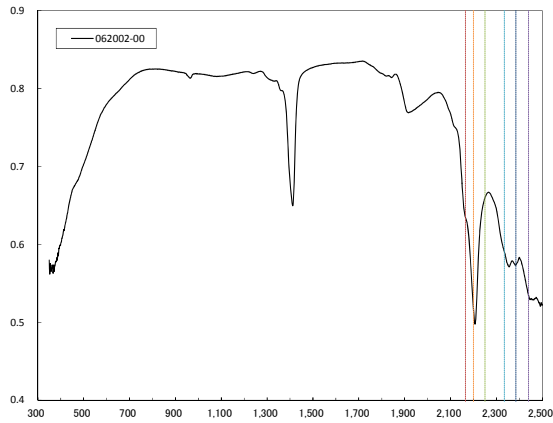
062001-04



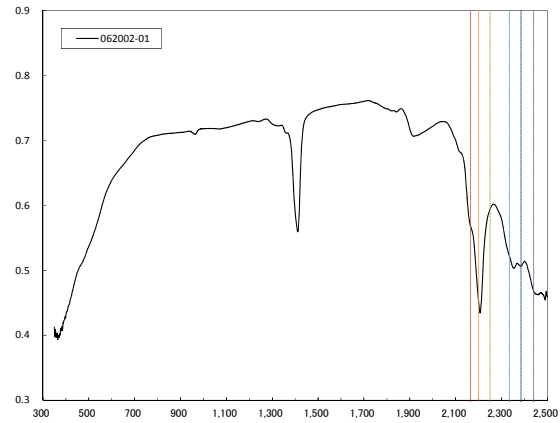
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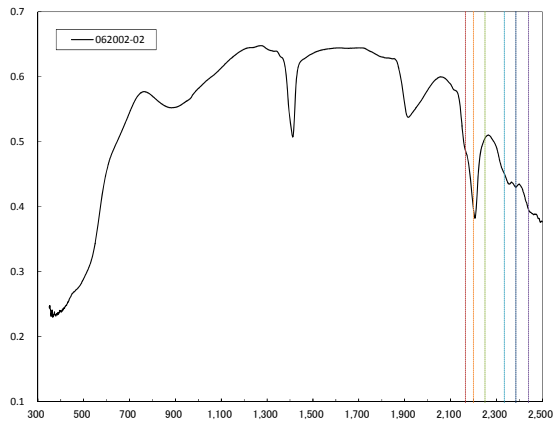
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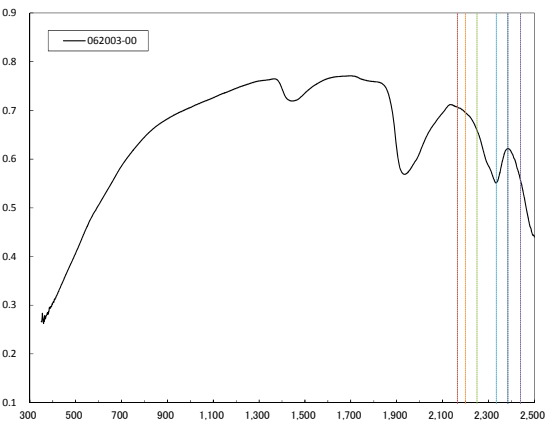
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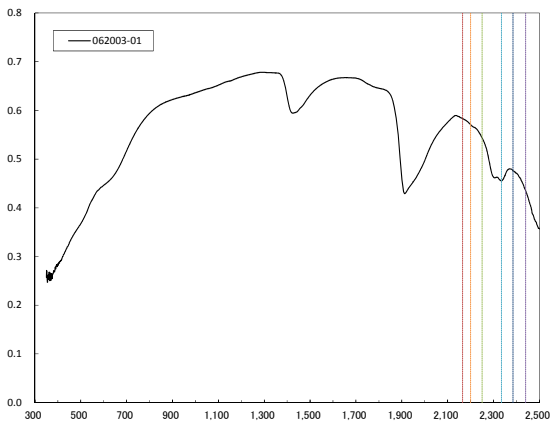
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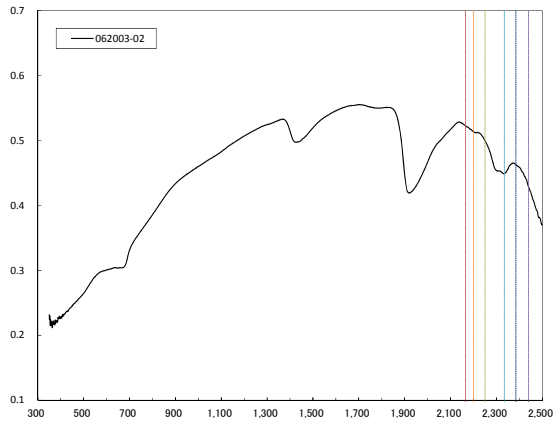
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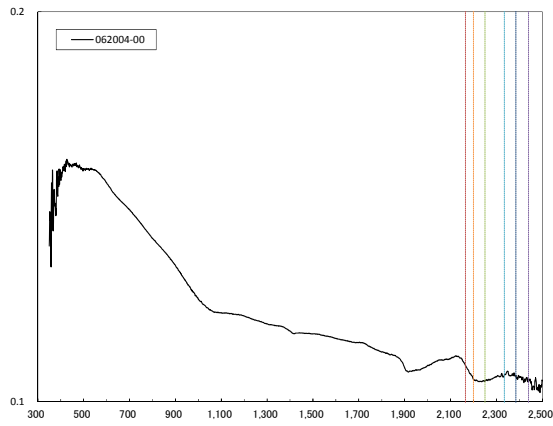
062003-00



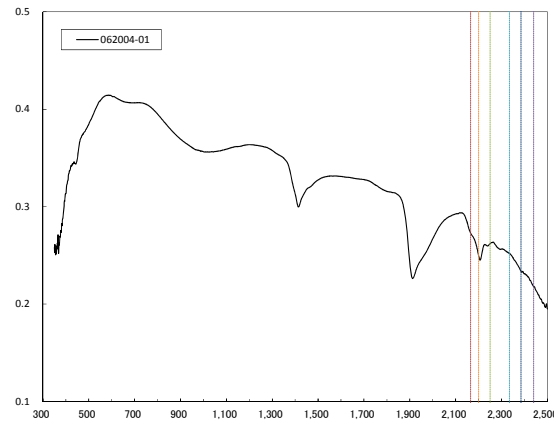
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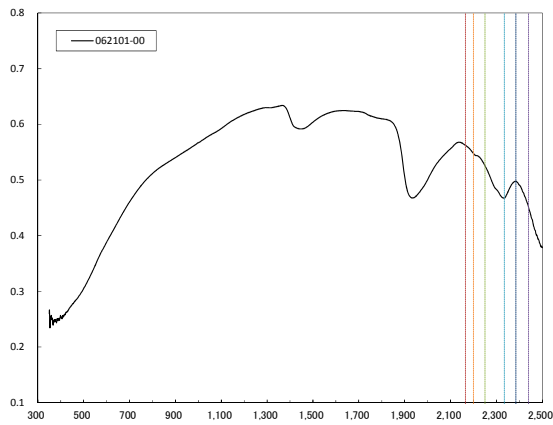
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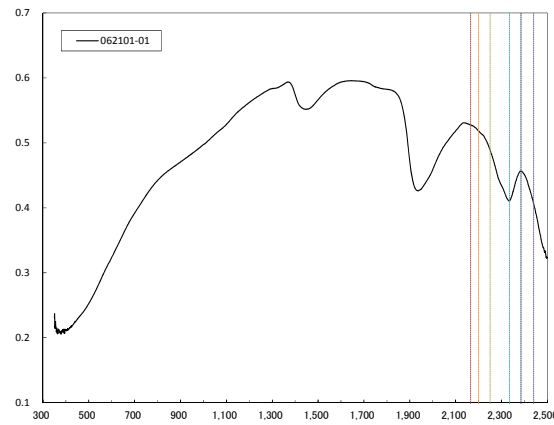
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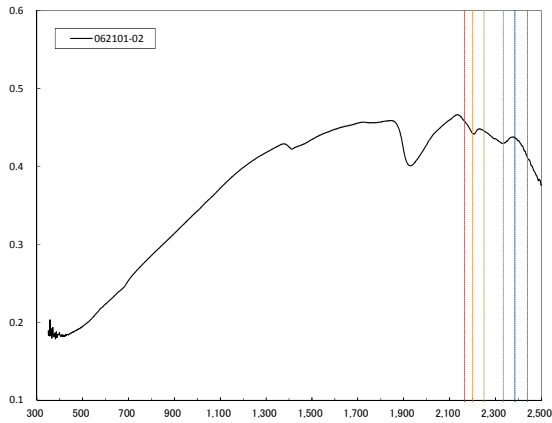
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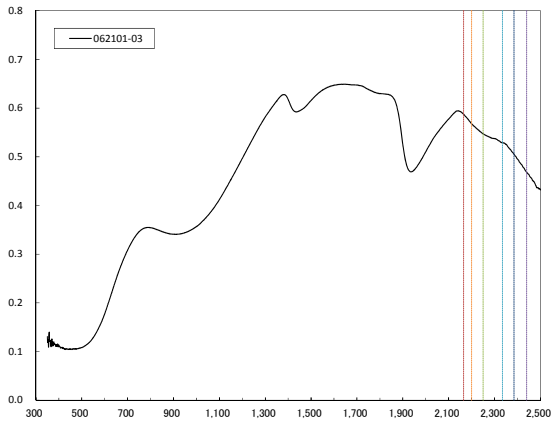
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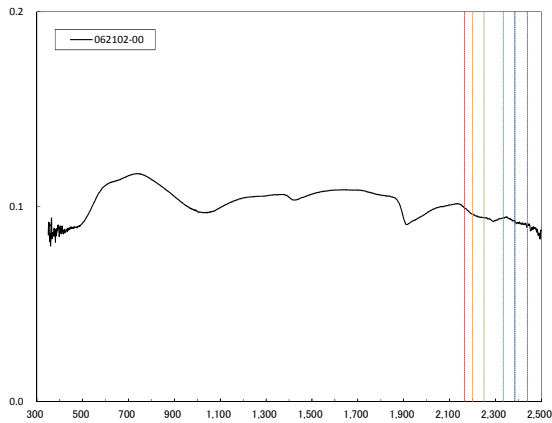
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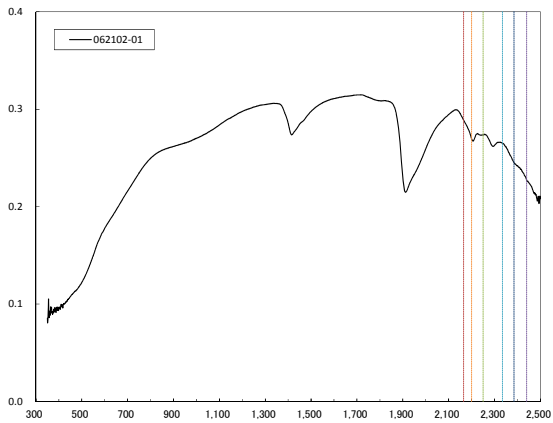
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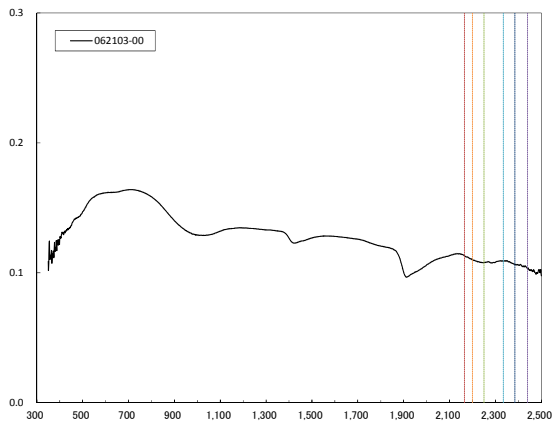
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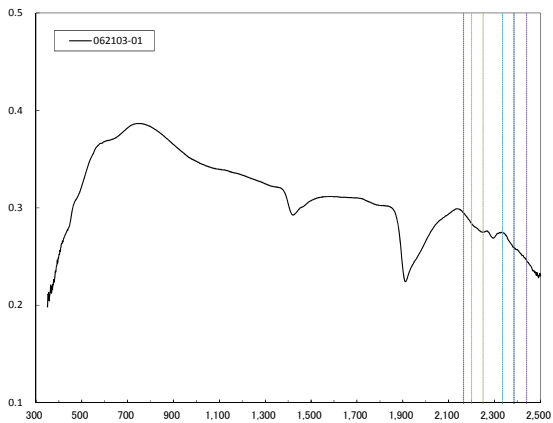
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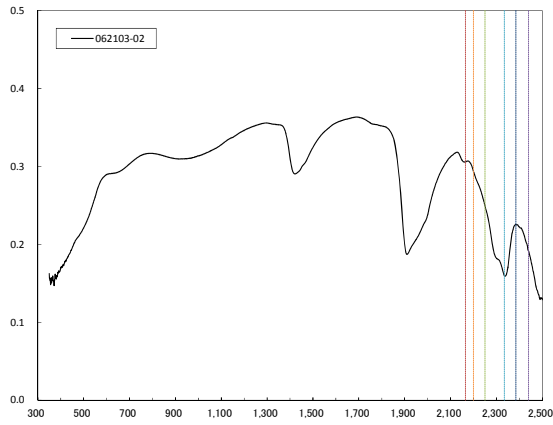
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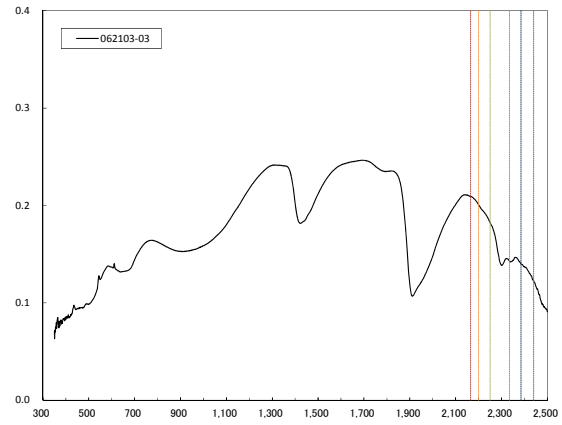
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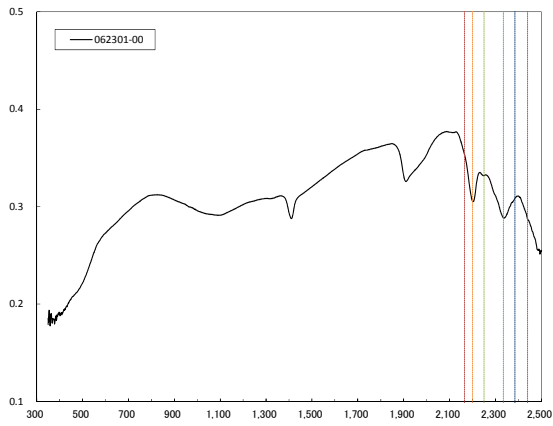
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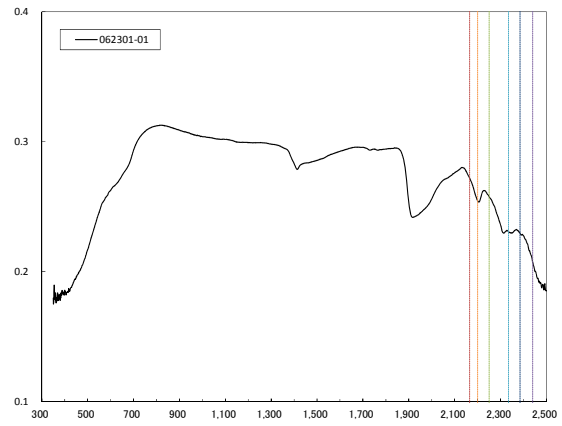
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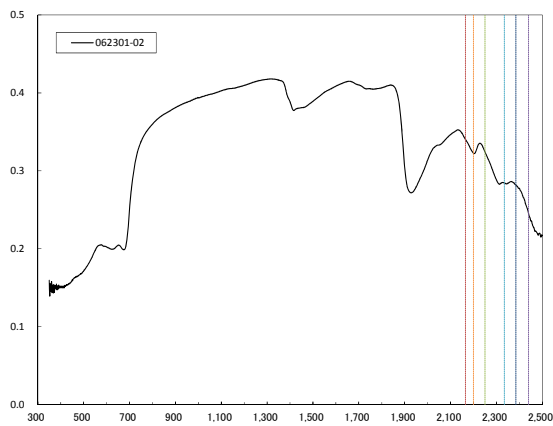
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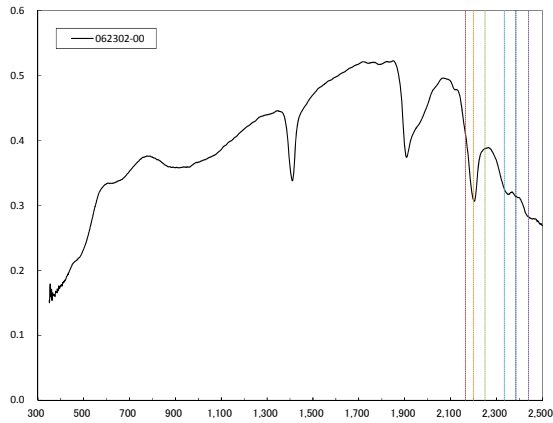
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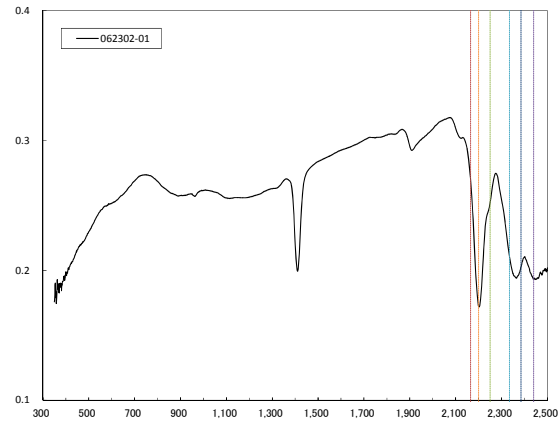
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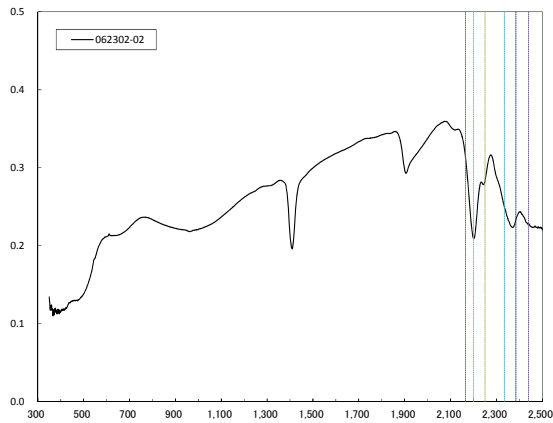
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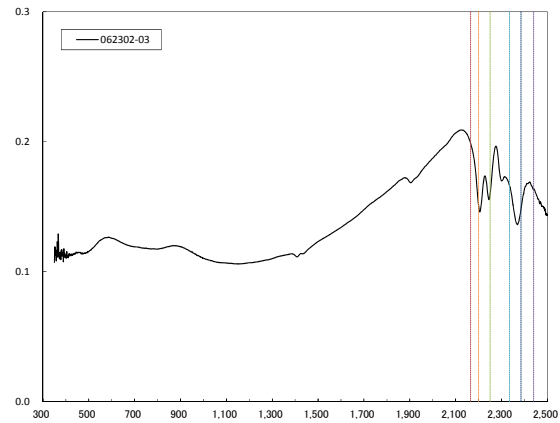
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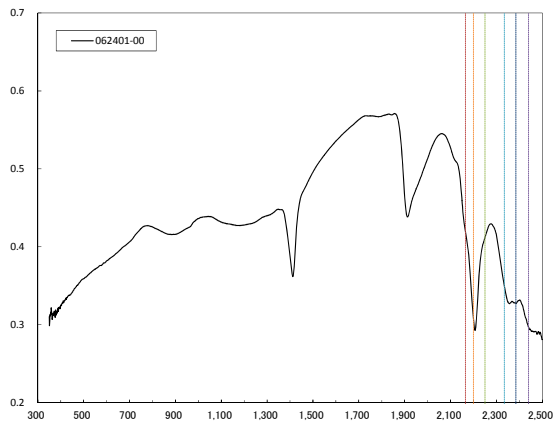
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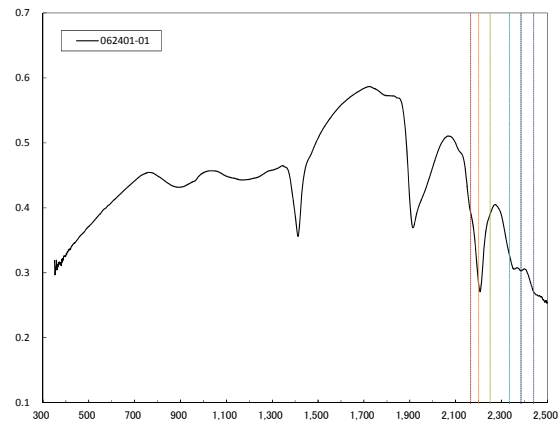
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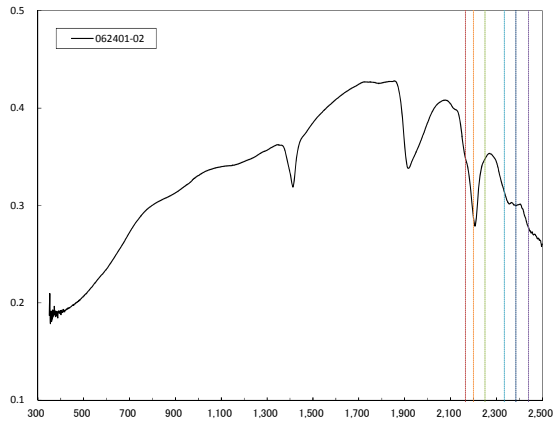
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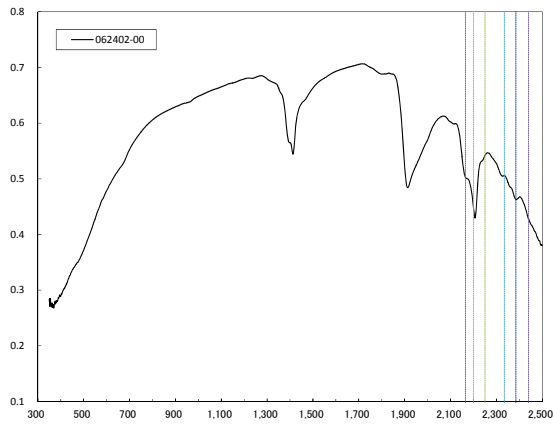
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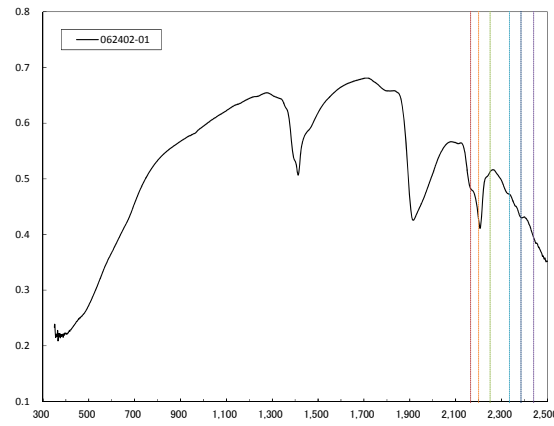
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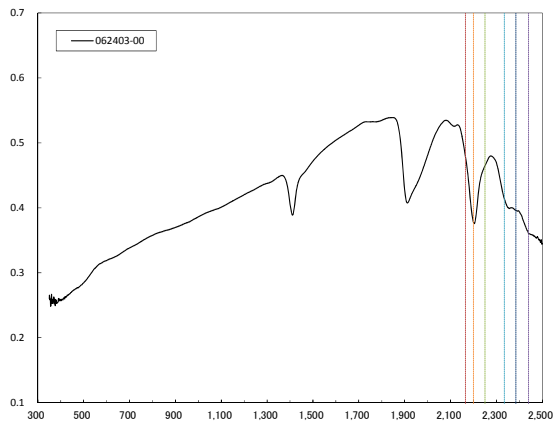
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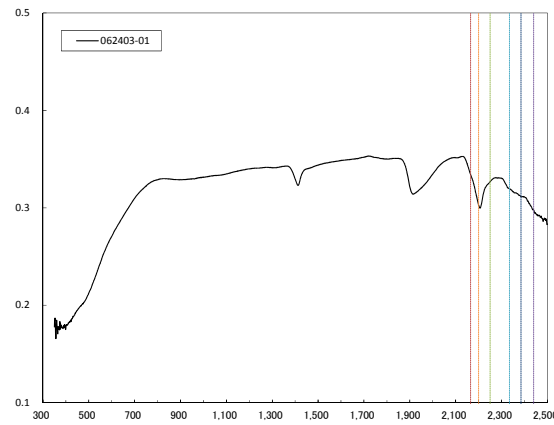
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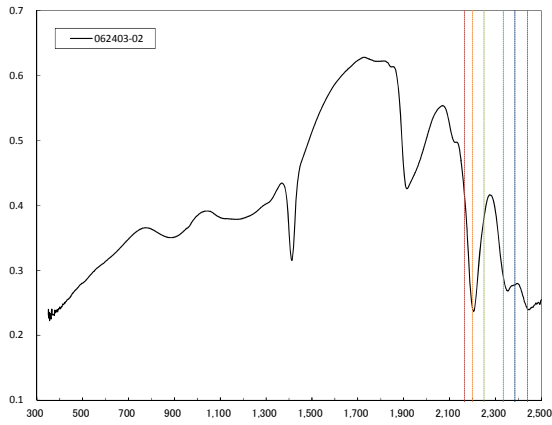
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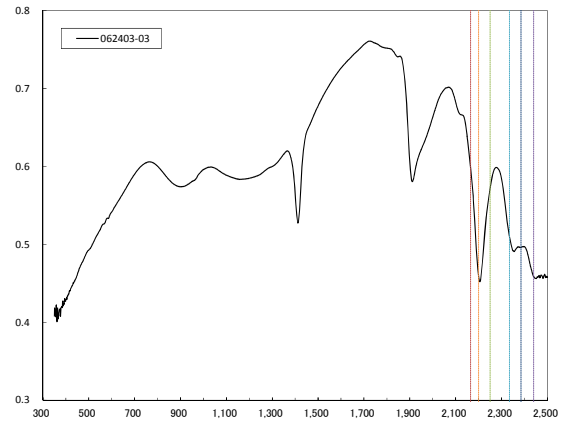
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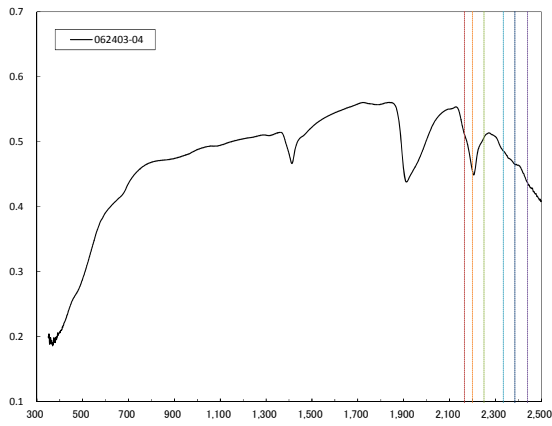
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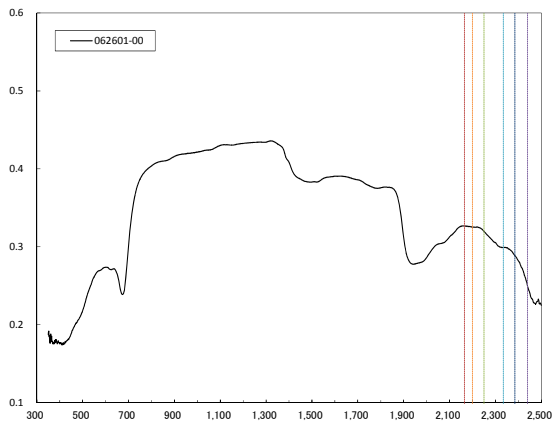
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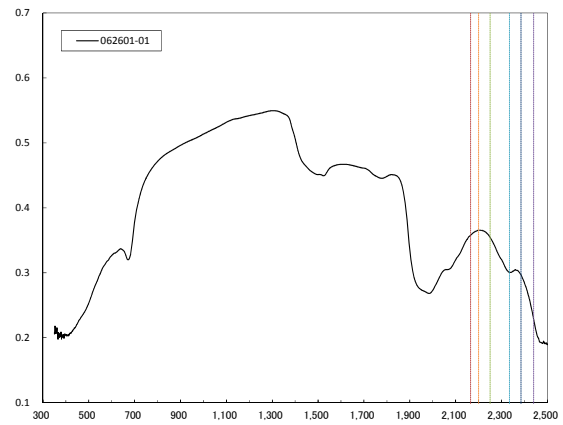
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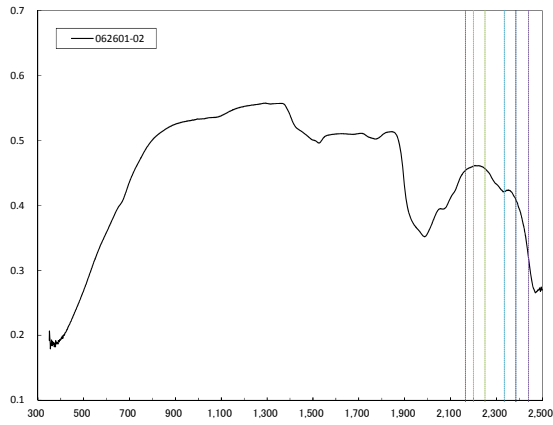
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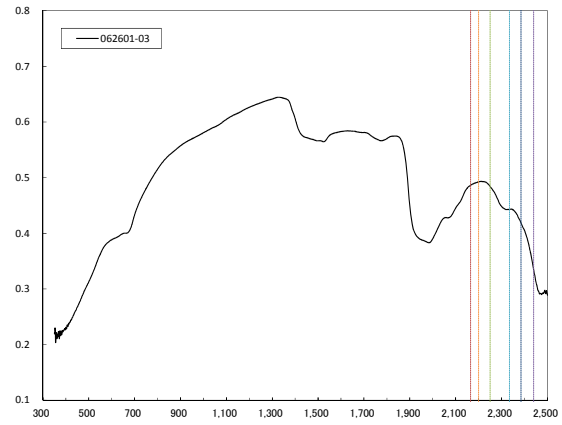
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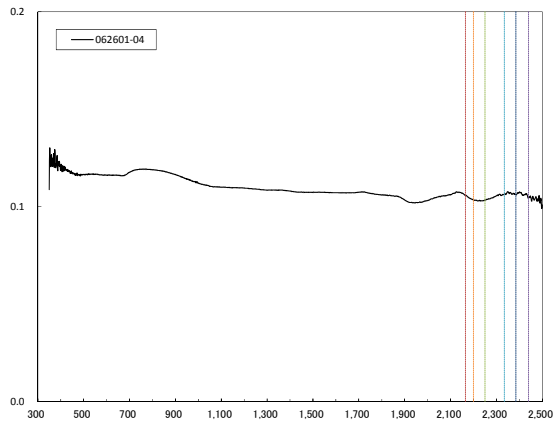
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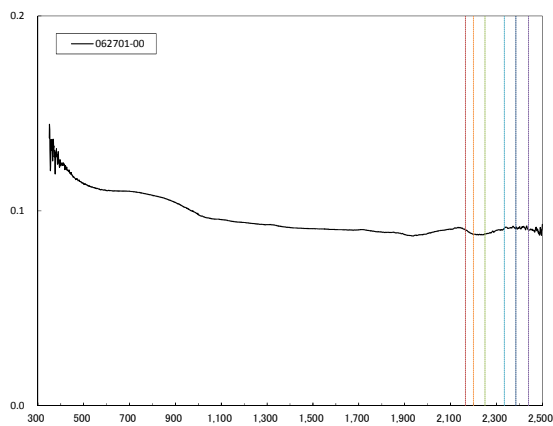
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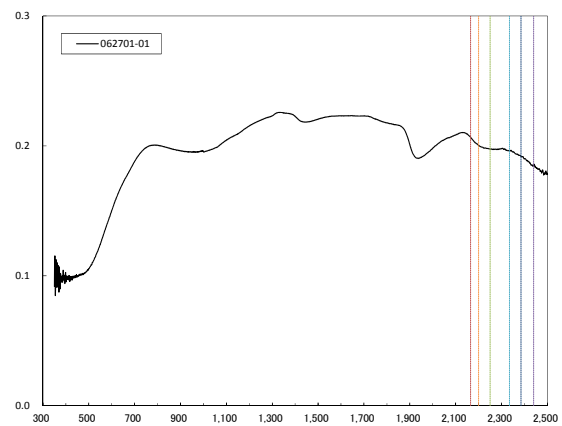
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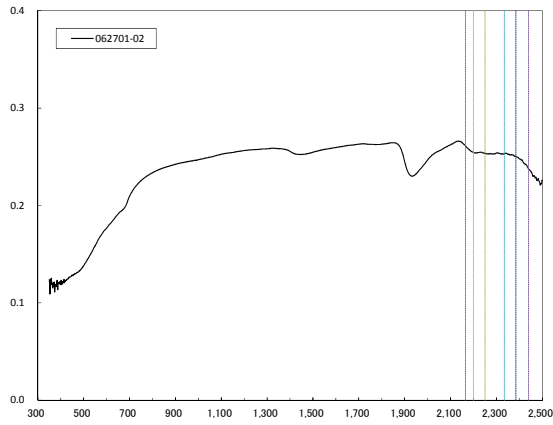
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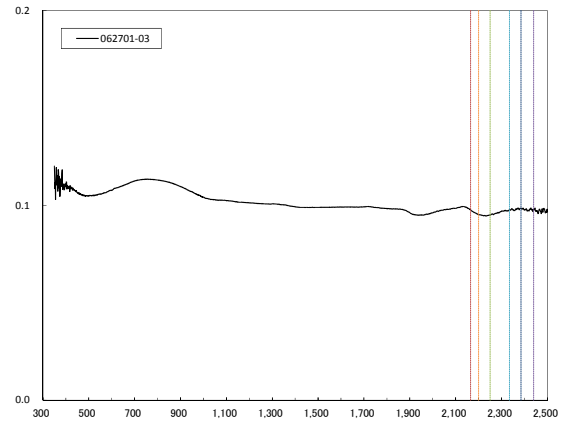
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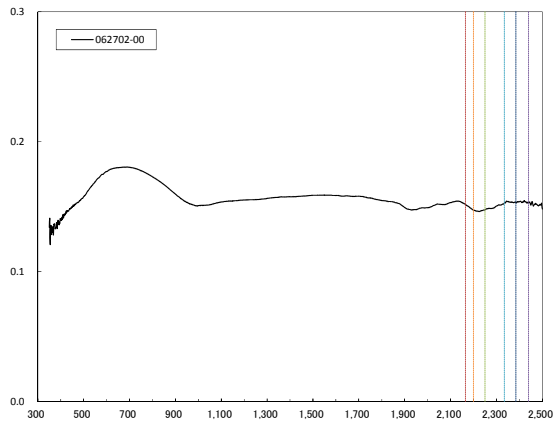
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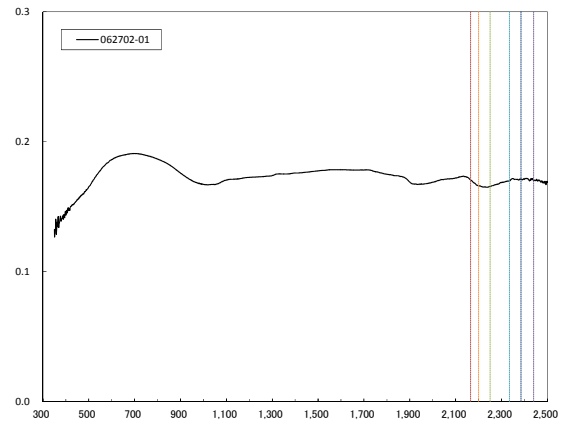
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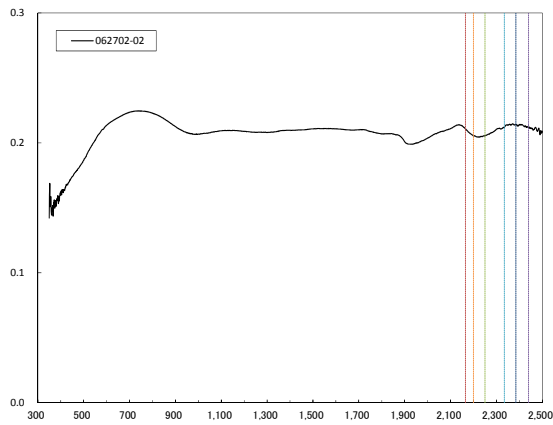
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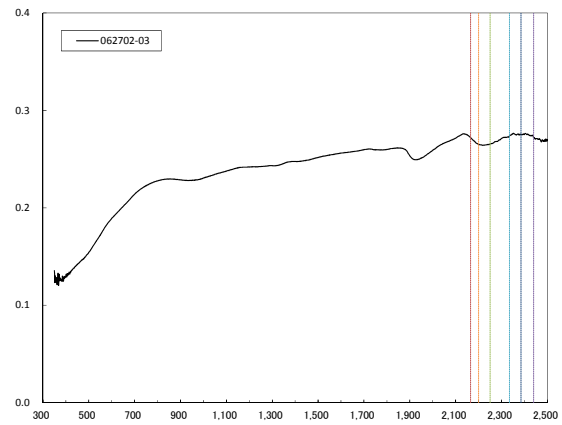
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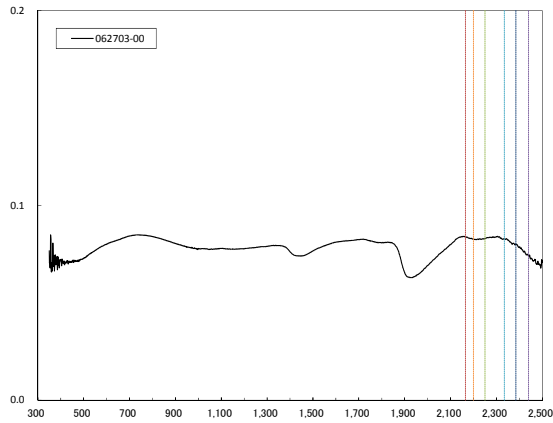
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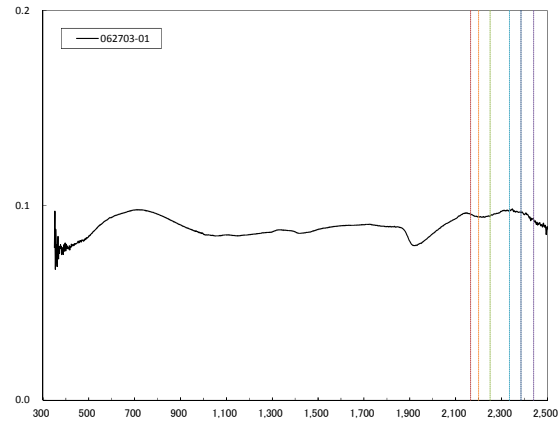
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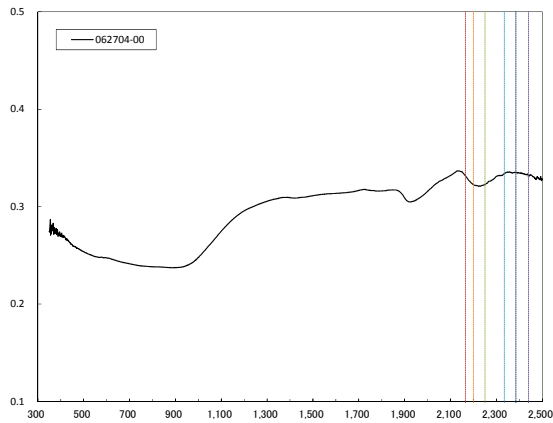
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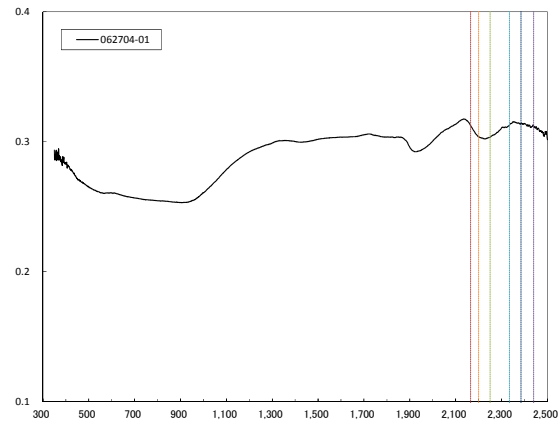
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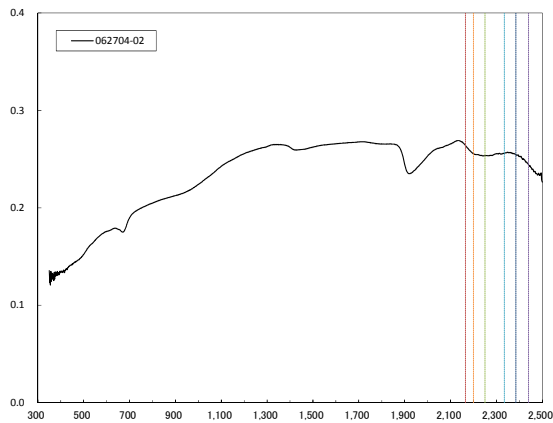
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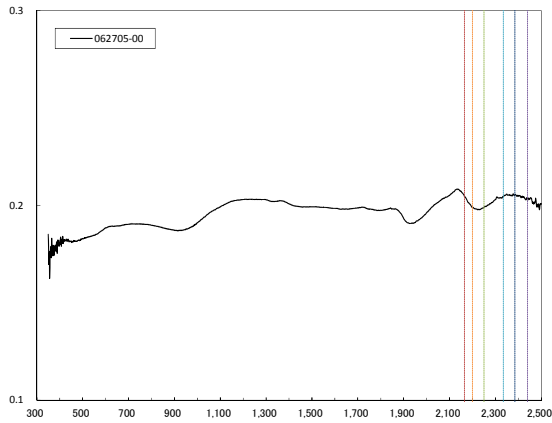
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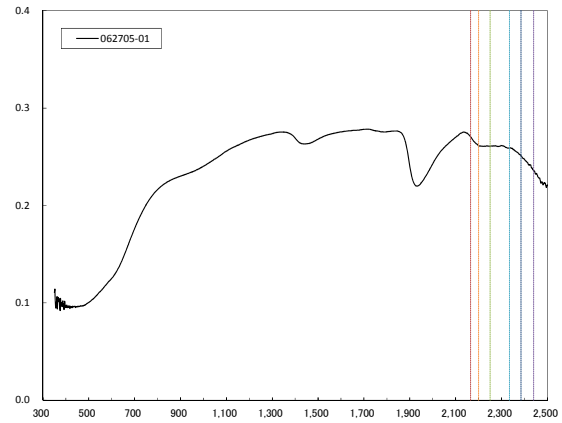
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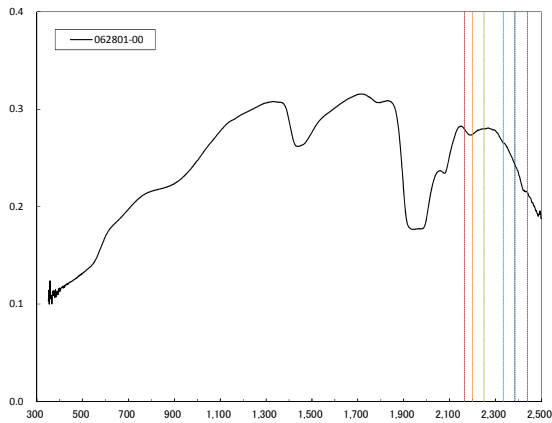
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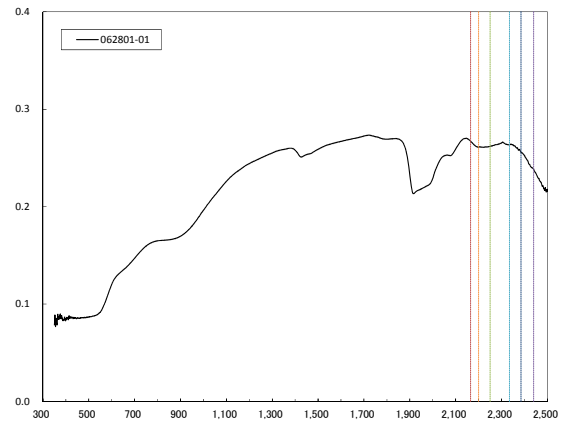
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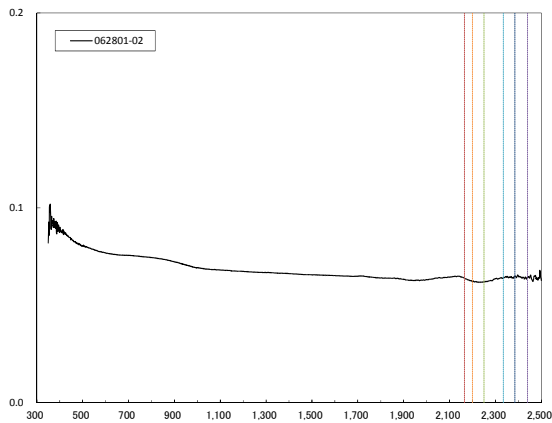
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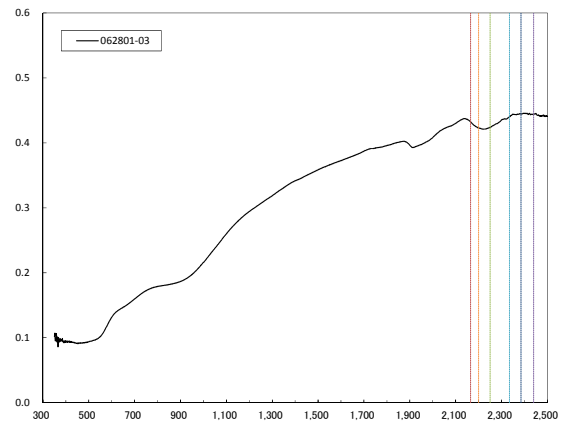
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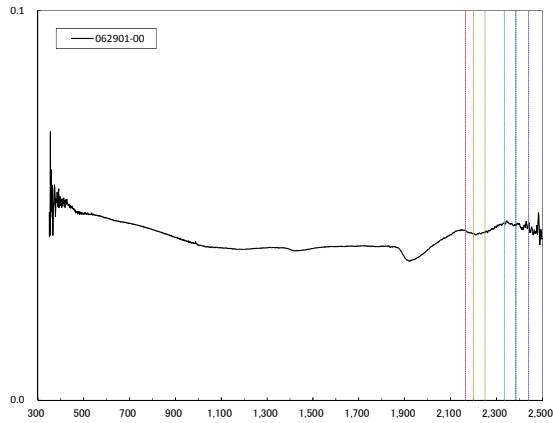
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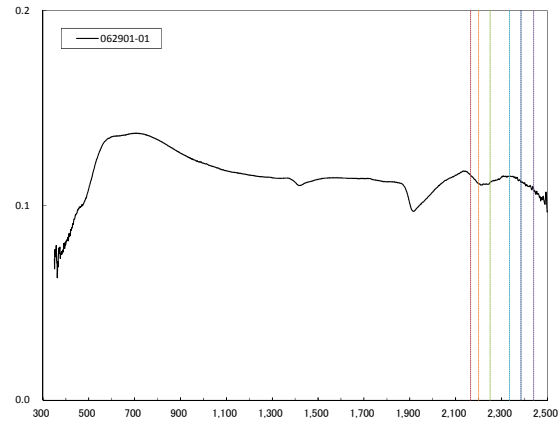
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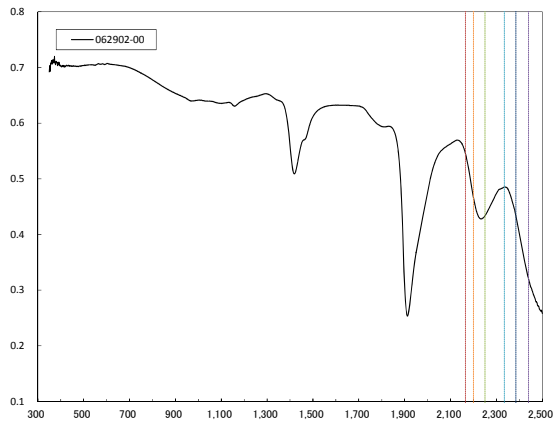
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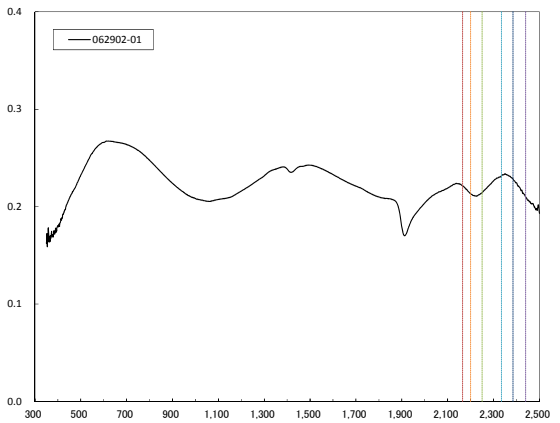
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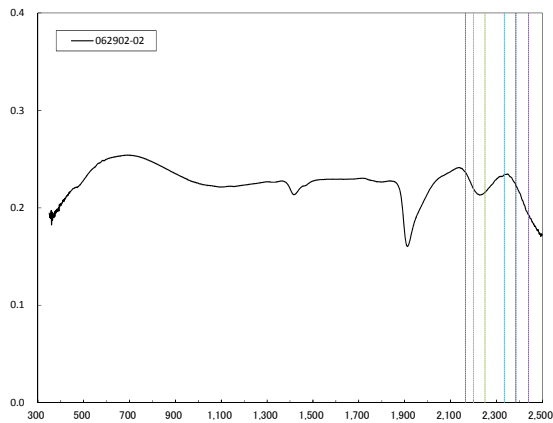
062901-01



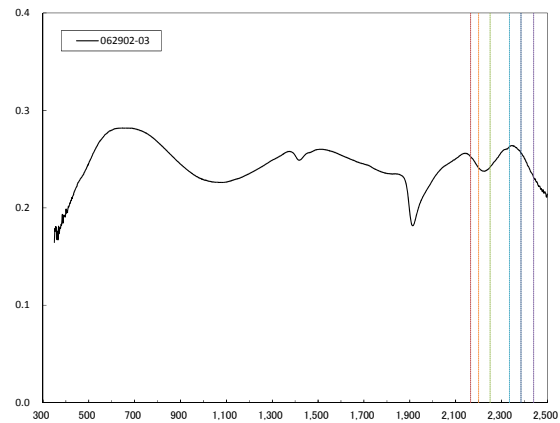
062902-00



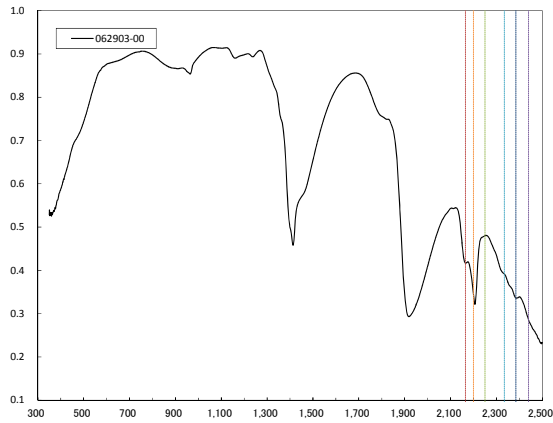
062902-01



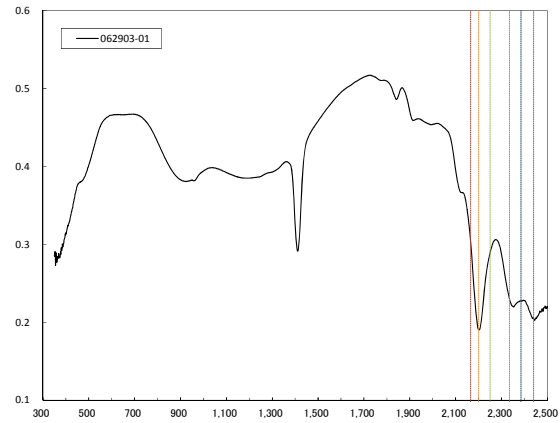
062902-02



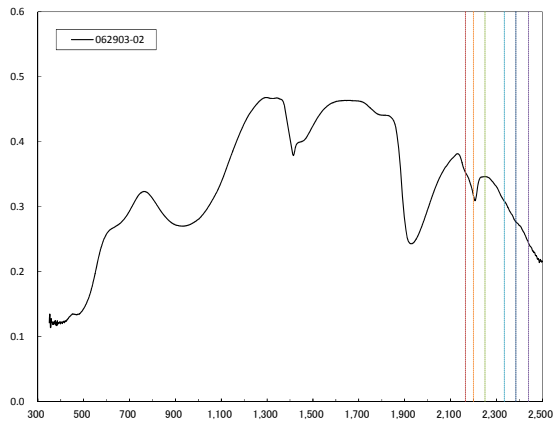
062902-03



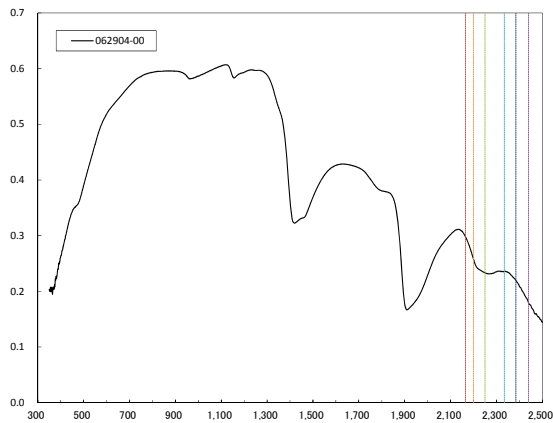
062903-00



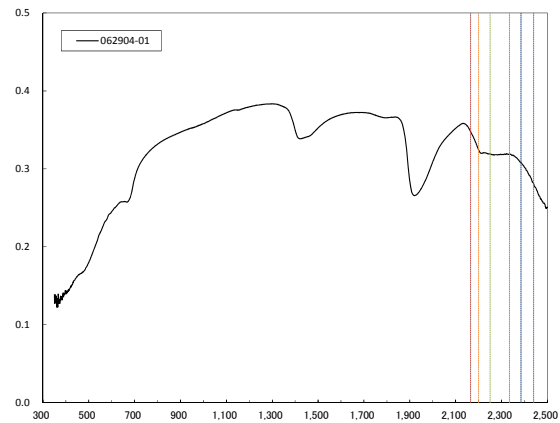
062903-01



062903-03



062904-00



062904-01

ブーゲー異常値(Bugarama地域)1

別添資料2-3

測点番号	UTM座標系		緯度			経度			標高(m)	ブーゲー異常値(mgal)									
	NS(m)	EW(m)	度	分	秒	度	分	秒		ρ(2.00)	ρ(2.10)	ρ(2.20)	ρ(2.30)	ρ(2.40)	ρ(2.50)	ρ(2.60)	ρ(2.70)	ρ(2.80)	ρ(2.64)
G1	9717096.277	725627.013	-2	33	28.396	29	1	45.250	1228.585	3.318	-1.621	-6.56	-11.5	-16.439	-21.378	-26.317	-31.256	-36.195	-29.674
G2	9716544.167	722404.707	-2	33	46.532	29	0	0.991	1731.421	17.862	10.867	3.872	-3.124	-10.119	-17.114	-24.109	-31.105	-38.1	-28.002
G3	9716060.152	722614.659	-2	34	2.276	29	0	7.811	1752.293	17.791	10.801	3.812	-3.178	-10.168	-17.157	-24.147	-31.137	-38.126	-28.966
G4	9716604.399	723144.500	-2	33	44.534	29	0	24.931	1621.019	15.227	8.658	2.089	-4.481	-11.05	-17.619	-24.188	-30.758	-37.327	-28.671
G5	9716058.090	723178.728	-2	34	2.314	29	0	26.067	1615.092	14.343	7.809	1.276	-5.258	-11.792	-18.326	-24.859	-31.393	-37.927	-28.567
G6	9716640.594	723628.674	-2	33	43.331	29	0	40.599	1469.421	11.371	5.471	-0.429	-6.329	-12.229	-18.129	-24.029	-29.929	-35.829	-27.988
G7	9716000.143	723766.029	-2	34	4.170	29	0	45.077	1475.633	11.008	5.074	-0.859	-6.792	-12.725	-18.659	-24.592	-30.525	-36.458	-28.218
G8	9716484.788	724143.300	-2	33	48.376	29	0	57.263	1470.638	10.697	4.75	-1.198	-7.146	-13.094	-19.041	-24.989	-30.937	-36.885	-29.205
G9	9715895.013	724245.551	-2	34	7.568	29	1	0.602	1409.839	8.248	2.556	-3.136	-8.829	-14.521	-20.213	-25.906	-31.598	-37.29	-29.742
G10	9716310.091	724559.539	-2	33	54.041	29	1	10.743	1384.907	8.186	2.584	-3.017	-8.619	-14.221	-19.823	-25.424	-31.026	-36.628	-29.028
G11	9716800.275	724861.746	-2	33	38.070	29	1	20.498	1314.913	7.135	1.819	-3.496	-8.812	-14.127	-19.443	-24.758	-30.074	-35.389	-28.307
G12	9715990.944	724984.096	-2	34	4.407	29	1	24.500	1263.087	4.359	-0.72	-5.8	-10.879	-15.959	-21.038	-26.118	-31.197	-36.277	-29.577
G13	9716442.437	725635.929	-2	33	49.678	29	1	45.573	1217.596	1.304	-3.606	-8.515	-13.424	-18.334	-23.243	-28.152	-33.062	-37.971	-31.449
G14	9716216.747	726088.611	-2	33	57.000	29	2	0.235	1145.407	1.132	-3.435	-8.001	-12.568	-17.134	-21.701	-26.267	-30.834	-35.4	-29.302
G15	9716871.397	726341.854	-2	33	35.679	29	2	8.397	1176.268	2.38	-2.325	-7.029	-11.734	-16.438	-21.143	-25.847	-30.552	-35.256	-29.083
G16	9716724.388	726816.647	-2	33	40.440	29	2	23.771	1278.450	5.651	0.478	-4.695	-9.868	-15.041	-20.214	-25.387	-30.56	-35.733	-28.801
G17	9715911.167	726958.333	-2	34	6.902	29	2	28.398	1188.802	4.255	-0.505	-5.266	-10.026	-14.786	-19.546	-24.306	-29.067	-33.827	-27.318
G18	9716268.025	727480.948	-2	33	55.259	29	2	45.293	1370.198	9.834	4.396	-1.041	-6.479	-11.916	-17.354	-22.791	-28.229	-33.666	-26.085
G19	9715684.373	721613.831	-2	34	14.558	28	59	35.438	1786.533	19.2	12.032	4.863	-2.305	-9.474	-16.642	-23.811	-30.979	-38.148	-27.964
G20	9715653.593	722199.195	-2	34	15.530	28	59	54.385	1628.665	15.545	8.967	2.388	-4.191	-10.77	-17.349	-23.928	-30.507	-37.085	-28.423
G21	9715198.305	722330.911	-2	34	30.343	28	59	58.671	1608.006	13.205	6.777	0.35	-6.077	-12.504	-18.931	-25.359	-31.786	-38.213	-29.127
G22	9714819.066	722715.385	-2	34	42.668	29	0	11.134	1485.878	10.561	4.575	-1.412	-7.398	-13.385	-19.371	-25.357	-31.344	-37.33	-29.417
G23	9715534.921	722968.777	-2	34	19.354	29	0	19.298	1589.321	13.224	6.82	0.415	-5.989	-12.394	-18.798	-25.202	-31.607	-38.011	-28.456
G24	9714965.870	723285.640	-2	34	37.860	29	0	29.582	1445.872	7.854	2.03	-3.793	-9.616	-15.439	-21.263	-27.086	-32.909	-38.732	-30.604
G25	9715502.572	723591.292	-2	34	20.375	29	0	39.447	1517.251	10.24	4.121	-1.997	-8.116	-14.234	-20.353	-26.471	-32.59	-38.708	-29.936
G26	9715046.495	723644.378	-2	34	35.217	29	0	41.189	1474.700	9.105	3.159	-2.787	-8.734	-14.68	-20.626	-26.572	-32.518	-38.464	-30.774
G27	9715424.061	724059.490	-2	34	22.906	29	0	54.604	1493.343	9.206	3.236	-2.734	-8.704	-14.673	-20.643	-26.613	-32.583	-38.552	-31.186
G28	9715139.851	724326.665	-2	34	32.144	29	1	3.266	1394.368	6.204	0.666	-4.872	-10.41	-15.948	-21.486	-27.024	-32.562	-38.1	-30.753
G29	9714825.042	724398.873	-2	34	42.387	29	1	5.619	1228.453	1.825	-3.015	-7.855	-12.695	-17.535	-22.376	-27.216	-32.056	-36.896	-29.98
G30	9715481.723	724507.953	-2	34	21.007	29	1	9.116	1337.598	5.396	0.029	-5.337	-10.704	-16.071	-21.438	-26.804	-32.171	-37.538	-30.418
G31	9715081.487	724839.537	-2	34	34.017	29	1	19.868	1158.389	-0.931	-5.488	-10.045	-14.603	-19.16	-23.717	-28.274	-32.832	-37.389	-30.945
G32	9715541.915	724922.614	-2	34	19.026	29	1	22.533	1223.654	2.508	-2.387	-7.281	-12.176	-17.071	-21.966	-26.86	-31.755	-36.65	-30.164
G33	9715339.623	725295.497	-2	34	25.591	29	1	34.611	1157.619	-2.444	-7.075	-11.707	-16.338	-20.969	-25.601	-30.232	-34.864	-39.495	-33.257
G34	9714949.653	725573.586	-2	34	38.270	29	1	43.632	1109.812	-2.556	-6.983	-11.411	-15.838	-20.265	-24.692	-29.119	-33.547	-37.974	-31.942
G35	9715755.482	725621.454	-2	34	12.038	29	1	45.139	1159.592	-1.401	-6.044	-10.688	-15.331	-19.974	-24.618	-29.261	-33.904	-38.548	-32.379
G36	9715344.269	725890.564	-2	34	25.409	29	1	53.870	1136.931	-1.42	-5.98	-10.541	-15.101	-19.661	-24.222	-28.782	-33.343	-37.903	-31.862
G37	9714906.711	726287.996	-2	34	39.630	29	2	6.755	1103.806	1.112	-3.281	-7.674	-12.067	-16.46	-20.854	-25.247	-29.64	-34.033	-28.383
G38	9715557.875	726541.712	-2	34	18.423	29	2	14.933	1128.579	2.077	-2.43	-6.937	-11.444	-15.951	-20.458	-24.965	-29.472	-33.979	-28.111
G39	9715005.112	726957.673	-2	34	36.393	29	2	28.424	1215.935	5.388	0.483	-4.423	-9.328	-14.233	-19.138	-24.044	-28.949	-33.854	-27.427
G40	9715478.684	727299.560	-2	34	20.961	29	2	39.464	1297.277	7.792	2.573	-2.646	-7.866	-13.085	-18.304	-23.523	-28.743	-33.962	-26.245
G41	9715104.939	727617.077	-2	34	33.109	29	2	49.759	1295.461	8.567	3.34	-1.887	-7.114	-12.341	-17.568	-22.795	-28.021	-33.248	-25.639
G42	9714544.417	721580.925	-2	34	51.665	28	59	34.431	1574.858	14.422	8.066	1.71	-4.645	-11.001	-17.357	-23.713	-30.068	-36.424	-28.159
G43	9713831.934	721646.293	-2	35	14.853	28	59	36.582	1585.410	14.733	8.357	1.982	-4.394	-10.77	-17.145	-23.521	-29.897	-36.272	-27.705
G44	9714132.878	722324.313	-2	35	5.023	28	59	58.511	1531.108	13.754	7.646	1.538	-4.57	-10.678	-16.786	-22.894	-29.002	-35.109	-26.626
G45	9714567.501	722429.494	-2	34	50.871	29	0	1.894	1538.519	12.981	6.82	0.658	-5.503	-11.664	-17.826	-23.987	-30.148	-36.31	-27.821
G46	9713781.233	722795.564	-2	35	16.445	29	0	13.781	1348.637	8.461	3.092	-2.276	-7.645	-13.014	-18.382	-23.751	-29.12	-34.488	-27.064
G47	9714314.316	722988.089	-2	34	59.083	29	0	19.985	1410.594	8.308	2.647	-3.014	-8.676	-14.337	-19.998	-25.66	-31.321	-36.982	-29.389

ブーゲー異常値(Bugarama地域)2

別添資料2-3

測点番号	UTM座標系		緯度			経度			標高(m)	ブーゲー異常値(mgal)									
	NS(m)	EW(m)	度	分	秒	度	分	秒		ρ(2.00)	ρ(2.10)	ρ(2.20)	ρ(2.30)	ρ(2.40)	ρ(2.50)	ρ(2.60)	ρ(2.70)	ρ(2.80)	ρ(2.64)
G48	9713937.564	723448.025	-2	35	11.323	29	0	34.890	1221.349	2.536	-2.311	-7.158	-12.005	-16.853	-21.7	-26.547	-31.394	-36.241	-29.578
G49	9714550.781	723583.323	-2	34	51.356	29	0	39.238	1298.285	4.284	-0.866	-6.016	-11.165	-16.315	-21.465	-26.615	-31.765	-36.914	-29.057
G50	9714205.064	723909.721	-2	35	2.592	29	0	49.820	1186.285	0.829	-3.865	-8.559	-13.254	-17.948	-22.643	-27.337	-32.032	-36.726	-30.151
G51	9713584.085	724030.946	-2	35	22.798	29	0	53.775	1139.319	-1.435	-5.989	-10.543	-15.097	-19.651	-24.204	-28.758	-33.312	-37.866	-31.898
G52	9714520.568	724155.208	-2	34	52.310	29	0	57.748	1213.968	0.87	-3.912	-8.694	-13.477	-18.259	-23.041	-27.824	-32.606	-37.388	-30.501
G53	9713942.864	724168.281	-2	35	11.113	29	0	58.201	1155.004	-1.917	-6.539	-11.161	-15.782	-20.404	-25.026	-29.648	-34.269	-38.891	-32.642
G54	9713608.789	724545.325	-2	35	21.967	29	1	10.421	1115.162	-2.971	-7.443	-11.914	-16.386	-20.857	-25.328	-29.8	-34.271	-38.743	-32.814
G55	9714101.404	724583.960	-2	35	5.931	29	1	11.646	1134.405	-2.382	-6.92	-11.457	-15.995	-20.532	-25.07	-29.607	-34.145	-38.683	-32.409
G56	9714507.410	724691.447	-2	34	52.710	29	1	15.104	1142.143	-2.184	-6.73	-11.275	-15.821	-20.367	-24.912	-29.458	-34.004	-38.55	-32.513
G57	9713795.821	724849.213	-2	35	15.864	29	1	20.247	1128.705	-2.989	-7.532	-12.074	-16.617	-21.16	-25.702	-30.245	-34.788	-39.33	-33.434
G58	9714052.981	725107.523	-2	35	7.480	29	1	28.594	1091.411	-3.055	-7.418	-11.78	-16.142	-20.504	-24.867	-29.229	-33.591	-37.954	-32.271
G59	9714565.166	725142.302	-2	34	50.807	29	1	29.693	1086.473	-3.3	-7.598	-11.896	-16.194	-20.492	-24.79	-29.088	-33.386	-37.684	-31.867
G60	9714280.805	725514.944	-2	35	0.043	29	1	41.768	1078.010	-2.821	-7.119	-11.417	-15.715	-20.012	-24.31	-28.608	-32.906	-37.203	-31.639
G61	9713901.567	725647.565	-2	35	12.380	29	1	46.080	1082.157	-2.598	-6.931	-11.263	-15.595	-19.928	-24.26	-28.592	-32.925	-37.257	-31.629
G62	9714647.876	725869.107	-2	34	48.077	29	1	53.212	1091.819	-1.061	-5.415	-9.77	-14.125	-18.479	-22.834	-27.189	-31.543	-35.898	-30.269
G63	9714296.938	725988.467	-2	34	59.494	29	1	57.093	1188.054	0.859	-3.895	-8.648	-13.402	-18.155	-22.909	-27.662	-32.416	-37.169	-30.577
G64	9713874.723	726203.685	-2	35	13.225	29	2	4.080	1164.125	1.801	-2.896	-7.592	-12.289	-16.986	-21.682	-26.379	-31.076	-35.772	-29.346
G65	9714378.260	726456.349	-2	34	56.822	29	2	12.231	1181.963	3.224	-1.56	-6.343	-11.127	-15.91	-20.694	-25.477	-30.261	-35.044	-28.752
G66	9713924.661	726934.066	-2	35	11.561	29	2	27.716	1198.665	4.303	-0.536	-5.376	-10.216	-15.055	-19.895	-24.735	-29.574	-34.414	-27.969
G67	9714361.679	727174.954	-2	34	57.324	29	2	35.489	1288.720	7.474	2.257	-2.96	-8.177	-13.393	-18.61	-23.827	-29.044	-34.261	-27.471
G68	9713770.062	727433.603	-2	35	16.567	29	2	43.891	1325.242	8.584	3.231	-2.122	-7.475	-12.828	-18.18	-23.533	-28.886	-34.239	-27.223
G69	9713316.705	721841.369	-2	35	31.614	28	59	42.922	1542.602	13.966	7.772	1.579	-4.615	-10.808	-17.001	-23.195	-29.388	-35.582	-27.09
G70	9712729.554	721880.730	-2	35	50.724	28	59	44.226	1316.688	9.867	4.605	-0.657	-5.919	-11.181	-16.443	-21.705	-26.968	-32.23	-24.707
G71	9713537.991	722180.189	-2	35	24.394	28	59	53.877	1556.561	13.983	7.775	1.566	-4.643	-10.851	-17.06	-23.269	-29.477	-35.686	-26.427
G72	9712540.706	722363.046	-2	35	56.846	28	59	59.846	1279.781	6.763	1.619	-3.525	-8.669	-13.813	-18.957	-24.101	-29.245	-34.389	-26.663
G73	9713067.667	722472.569	-2	35	39.688	29	0	3.364	1391.422	10.426	4.828	-0.771	-6.369	-11.968	-17.566	-23.164	-28.763	-34.361	-26.972
G74	9713219.215	722923.727	-2	35	34.732	29	0	17.958	1278.907	6.584	1.454	-3.676	-8.806	-13.936	-19.066	-24.196	-29.326	-34.456	-27.451
G75	9712634.064	722957.048	-2	35	53.776	29	0	19.067	1220.033	5.362	0.46	-4.443	-9.345	-14.247	-19.149	-24.051	-28.953	-33.855	-27.309
G76	9712973.082	723362.487	-2	35	42.720	29	0	32.172	1189.494	2.195	-2.582	-7.358	-12.135	-16.912	-21.689	-26.466	-31.243	-36.02	-29.826
G77	9713557.879	723472.122	-2	35	23.680	29	0	35.690	1233.907	1.826	-3.135	-8.096	-13.056	-18.017	-22.978	-27.938	-32.899	-37.86	-31.315
G78	9712556.594	723654.819	-2	35	56.262	29	0	41.654	1107.406	-0.355	-4.766	-9.177	-13.588	-17.999	-22.41	-26.82	-31.231	-35.642	-29.827
G79	9713185.088	723802.958	-2	35	35.797	29	0	46.417	1132.942	-0.634	-5.149	-9.664	-14.179	-18.694	-23.209	-27.724	-32.24	-36.755	-30.752
G80	9713213.059	724204.270	-2	35	34.866	29	0	59.404	1168.579	-1.931	-6.648	-11.366	-16.084	-20.801	-25.519	-30.236	-34.954	-39.672	-33.605
G81	9712831.705	724234.522	-2	35	47.277	29	1	0.402	1107.660	-2.734	-7.187	-11.64	-16.092	-20.545	-24.998	-29.451	-33.904	-38.357	-32.396
G82	9713279.104	724634.601	-2	35	32.694	29	1	13.328	1116.552	-3.423	-7.921	-12.42	-16.918	-21.416	-25.915	-30.413	-34.911	-39.41	-33.521
G83	9712744.952	724738.090	-2	35	50.075	29	1	16.705	1081.109	-3.032	-7.379	-11.727	-16.074	-20.421	-24.768	-29.116	-33.463	-37.81	-31.886
G84	9713482.164	725034.638	-2	35	26.063	29	1	26.265	1082.055	-3.889	-8.222	-12.555	-16.889	-21.222	-25.555	-29.888	-34.221	-38.554	-32.743
G85	9713011.785	725158.294	-2	35	41.367	29	1	30.291	1062.490	-3.431	-7.691	-11.951	-16.211	-20.471	-24.731	-28.991	-33.25	-37.51	-31.918
G86	9712537.773	725395.521	-2	35	56.784	29	1	37.993	1052.085	-3.036	-7.253	-11.471	-15.688	-19.906	-24.124	-28.341	-32.559	-36.776	-31.293
G87	9713217.604	725437.873	-2	35	34.654	29	1	39.329	1058.160	-3.215	-7.451	-11.687	-15.923	-20.159	-24.396	-28.632	-32.868	-37.104	-31.597
G88	9713548.691	725601.766	-2	35	23.868	29	1	44.616	1077.573	-3.106	-7.428	-11.751	-16.073	-20.396	-24.719	-29.041	-33.364	-37.686	-32.05
G89	9712678.674	725991.988	-2	35	52.166	29	1	57.291	1175.605	-0.27	-4.986	-9.701	-14.417	-19.133	-23.849	-28.565	-33.281	-37.997	-31.451
G90	9713184.272	726020.759	-2	35	35.708	29	1	58.196	1072.862	-1.399	-5.684	-9.969	-14.254	-18.54	-22.825	-27.11	-31.395	-35.68	-29.937
G91	9712898.317	726454.125	-2	35	44.993	29	2	12.236	1190.772	1.455	-3.331	-8.117	-12.903	-17.689	-22.475	-27.26	-32.046	-36.832	-29.891
G92	9713482.984	726575.489	-2	35	25.956	29	2	16.134	1173.240	2.253	-2.48	-7.212	-11.945	-16.677	-21.409	-26.142	-30.874	-35.607	-29.073
G93	9712682.864	726861.390	-2	35	51.984	29	2	25.428	1279.619	3.089	-2.087	-7.263	-12.439	-17.615	-22.791	-27.967	-33.143	-38.319	-31.367
G94	9713362.040	727117.496	-2	35	29.865	29	2	33.682	1196.259	4.029	-0.796	-5.621	-10.446	-15.271	-20.096	-24.921	-29.746	-34.571	-27.949

ブーゲー異常値(Bugarama地域)3

別添資料2-3

測点番号	UTM座標系		緯度			経度			標高(m)	ブーゲー異常値(mgal)									
	NS(m)	EW(m)	度	分	秒	度	分	秒		ρ(2.00)	ρ(2.10)	ρ(2.20)	ρ(2.30)	ρ(2.40)	ρ(2.50)	ρ(2.60)	ρ(2.70)	ρ(2.80)	ρ(2.64)
G95	9712943.773	727393.851	-2	35	43.464	29	2	42.648	1261.956	6.04	0.906	-4.227	-9.36	-14.494	-19.627	-24.761	-29.894	-35.028	-28.159
G96	9712033.718	722244.743	-2	36	13.354	28	59	56.043	1391.289	11.359	5.8	0.24	-5.319	-10.879	-16.439	-21.998	-27.558	-33.117	-25.788
G97	9712163.491	722824.301	-2	36	9.100	29	0	14.795	1230.693	5.57	0.626	-4.319	-9.264	-14.208	-19.153	-24.098	-29.042	-33.987	-26.79
G98	9712149.407	723191.269	-2	36	9.539	29	0	26.672	1166.390	3.642	-1.038	-5.718	-10.398	-15.078	-19.758	-24.438	-29.118	-33.798	-27.533
G99	9711901.010	723758.294	-2	36	17.595	29	0	45.037	1118.127	0.556	-3.908	-8.371	-12.835	-17.298	-21.761	-26.225	-30.688	-35.152	-29.136
G100	9712299.979	724309.661	-2	36	4.580	29	1	2.862	1115.379	-2.388	-6.893	-11.398	-15.903	-20.409	-24.914	-29.419	-33.924	-38.429	-32.364
G101	9711972.237	724527.233	-2	36	15.237	29	1	9.920	1063.941	-2.706	-6.962	-11.219	-15.475	-19.732	-23.988	-28.245	-32.501	-36.758	-31.008
G102	9712253.558	724896.634	-2	36	6.061	29	1	21.862	1094.723	-2.768	-7.189	-11.61	-16.031	-20.452	-24.873	-29.294	-33.715	-38.136	-32.343
G103	9712049.664	725393.086	-2	36	12.671	29	1	37.940	1041.619	-3.343	-7.522	-11.7	-15.879	-20.058	-24.237	-28.415	-32.594	-36.773	-31.283
G104	9712130.166	726047.148	-2	36	10.017	29	1	59.104	1153.520	-1.074	-5.738	-10.403	-15.068	-19.732	-24.397	-29.061	-33.726	-38.391	-32.189
G105	9712368.450	726412.833	-2	36	2.242	29	2	10.927	1240.349	1.18	-3.855	-8.891	-13.926	-18.962	-23.997	-29.033	-34.068	-39.104	-32.493
G106	9712112.518	726912.401	-2	36	10.546	29	2	27.109	1149.878	2.577	-2.054	-6.685	-11.316	-15.947	-20.578	-25.209	-29.84	-34.472	-28.199
G107	9712436.873	727460.596	-2	35	59.960	29	2	44.834	1300.727	5.419	0.18	-5.06	-10.299	-15.539	-20.778	-26.018	-31.257	-36.497	-29.763
G108	9711235.404	728082.871	-2	36	39.033	29	3	5.037	1268.070	6.036	0.891	-4.253	-9.397	-14.541	-19.686	-24.83	-29.974	-35.118	-28.44
G109	9710654.172	724296.961	-2	36	58.151	29	1	2.536	1105.580	-1.176	-5.646	-10.115	-14.584	-19.054	-23.523	-27.993	-32.462	-36.931	-30.99
G110	9711296.303	720157.754	-2	36	37.464	28	58	48.534	1649.656	16.516	9.892	3.267	-3.357	-9.981	-16.605	-23.229	-29.853	-36.477	-27.959
G111	9717203.545	720012.246	-2	33	25.190	28	58	43.527	1986.776	27.436	19.394	11.352	3.31	-4.732	-12.774	-20.817	-28.859	-36.901	-26.019
G112	9717929.289	726629.554	-2	33	1.231	29	2	17.654	1241.532	6.823	1.834	-3.155	-8.144	-13.133	-18.122	-23.111	-28.1	-33.089	-26.603
G113	9714272.357	724342.431	-2	35	0.379	29	1	3.821	1171.290	-1.963	-6.647	-11.331	-16.015	-20.699	-25.383	-30.067	-34.75	-39.434	-33.324

Cost and Benefit Analysis : SPA in Mashyuza

●Currency	RWF	
●Number of Users / Foreign Citizen	20	persons/day
●Number of Users / Rwandan	250	persons/day
●Usage Fee / Foreign Citizen	7,000	RWF/Person
●Usage Fee / Rwandan	1,000	RWF/Person
●Doller-RWF exchange rate	678	RWF/USD
●Initial Investment Cost	1,000,000	USD
●Initial Investment Cost	678	Million RWF
●Operation & Maintenance Cost	5.0	% of Initial Investment Cost
●Depreciation	15	years
●Infration rate	0.0	% Annual Rate
●Financial Cost	15.0	% Loan Interest Rate/year
●Loan Term	10.0	Years for Repayment
●Corporation Tax	30.0	%/year
●Discount Rate	7.0	%/year
●Evaluation Duration	15.0	Years (Life Time of Facilities)

[Operation & Maintenance Cost] Unit: Million RWF

		<---Construction					Commissioning-->														
		Year in A.D.		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total	
		Business Year		-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Cost	Details			Amount RWF																	
Operation & Maintenance Cost	Labor & Maintenance			34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	509

[Financial Cost]

		<---Construction					Commissioning-->													
		Year in A.D.		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
		Business Year		-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Financial Cost	Principal	Repayment (10 years)	Balance																	
Bank Loan	678.0	67.8 (June/every year)	Loan Balance		610	542	475	407	339	271	203	136	68	0						
			Average Balance in a year		644	593	534	470	405	338	271	203	135	68						

[Income Statement]

		<---Construction					Commissioning-->													
		Year in A.D.		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
		Business Year		-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Income	SPA				140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	2,106
	Others				42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	632
▲Cost & Expense	Operation & Maintenance Cost				34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	509
	Depreciation				45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	678
	Financial Cost				97	89	80	71	61	51	41	30	20	10	0	0	0	0	0	549
Profit before Tax				7	14	23	33	43	53	63	73	83	93	103	103	103	103	103	103	1,002
▲Income Tax (Profit before Tax x Tax rate)				2	4	7	10	13	16	19	22	25	28	31	31	31	31	31	31	301
Profit After Tax				5	10	16	23	30	37	44	51	58	65	72	72	72	72	72	72	701

[Cash Flow]

		<---Construction					Commissioning-->													
		Year in A.D.		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
		Business Year		-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Profit After Tax				5	10	16	23	30	37	44	51	58	65	72	72	72	72	72	72	701
Depreciation				45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	678
Initial Investment Cost			678	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Free Cash Flow			-678	50	55	62	68	75	82	89	96	103	110	118	118	118	118	118	118	1,379

[Payback Time]
Initial Cost / Profit 7.4 Years

[Internal Rate of Return]
IRR (15 years) 8.84%

[Net Present Value]

		NPV (15 years)																	96.6			
		Discount Rate																	7.00%			
		Discount Factor																	Total			
	Discount Rate	a	b	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1		
	Years			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15				
	Discount Factor	c = a^b	1/a^b	1.070	1.145	1.225	1.311	1.403	1.501	1.606	1.718	1.838	1.967	2.105	2.252	2.410	2.579	2.759	2.950	3.145	3.354	
	(Reciprocal Factor)	d		0.935	0.873	0.816	0.763	0.713	0.666	0.623	0.582	0.544	0.508	0.475	0.444	0.415	0.388	0.362	0.338	0.316	0.295	
	Free Cash Flow (FCF)=J54	d/c		50.0	55.3	61.5	68.2	75.1	82.1	89.2	96.3	103.4	110.5	117.6	117.6	117.6	117.6	117.6	117.6	117.6	117.6	1,379.5
	NPV=FCF/Factor			46.7	48.3	50.2	52.0	53.5	54.7	55.5	56.0	56.2	56.2	55.9	52.2	48.8	45.6	42.6	39.6	36.6	33.6	774.6
	NPV Accumelation			46.7	95.0	145.2	197.3	250.8	305.5	361.1	417.1	473.3	529.5	585.3	637.6	686.3	732.0	774.6				
	NPV Accumelation	A	774.6																			
	Initial Investment Cost	B	678.0																			
	NPV (15years)	A-B	96.6																			

Cost and Benefit Analysis : Flower Cultivation in Kinigi

●Currency	RWF
●Rose Production area	20 ha
●Unit revenue	240,000 USD/ha
●Dollar-RWF exchange rate	678 RWF/USD
●Initial Investment Cost	8,000,000 USD
●Unit Initial Investment Cost	400,000 USD/ha
●Initial Investment Cost	5,424 Million RWF
●Operation & Maintenance Cost	30.0 % of Initial Investment Cost
●Depreciation	15 years
●Inflation rate	0.0 % Annual Rate
●Financial Cost	15.0 % Loan Interest Rate/year
●Loan Term	10.0 Years for Repayment
●Corporation Tax	30.0 %/year
●Discount Rate	7.0 %/year
●Evaluation Duration	15.0 Years (Life Time of Facilities)

[Operation & Maintenance Cost]

		<---Construction		Commissioning--->															Unit: Million RWF
		Year in A.D.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
		Business Year	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Cost	Details	Amount RWF																	
Operation & Maintenance Cost	Labor & Maintenance	1,627		1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	24,408

[Financial Cost]

		<---Construction		Commissioning--->															Total
		Year in A.D.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
		Business Year	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Financial Cost	Principal	Repayment (10 years)	Balance																
Bank Loan	5,424.0	542.4 (June/every year)	Loan Balance Average Balance in a year	4,882	4,339	3,797	3,254	2,712	2,170	1,627	1,085	542	0						
				5,153	4,746	4,271	3,763	3,237	2,704	2,165	1,625	1,084	542						

[Income Statement]

		<---Construction		Commissioning--->															Total
		Year in A.D.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
		Business Year	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Income	Rose Selling			3,254	3,254	3,254	3,254	3,254	3,254	3,254	3,254	3,254	3,254	3,254	3,254	3,254	3,254	3,254	48,816
	Others			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
▲ Cost & Expense	Operation & Maintenance Cost			1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	1,627	24,408
	Depreciation			362	362	362	362	362	362	362	362	362	362	362	362	362	362	362	5,424
	Financial Cost			773	712	641	564	486	406	325	244	163	81	0	0	0	0	0	4,394
Profit before Tax				493	554	625	701	780	860	941	1,022	1,103	1,184	1,266	1,266	1,266	1,266	1,266	14,590
▲ Income Tax (Profit before Tax x Tax rate)				148	166	187	210	234	258	282	307	331	355	380	380	380	380	380	4,377
Profit After Tax				345	388	437	491	546	602	659	715	772	829	886	886	886	886	886	10,213

[Cash Flow]

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Profit After Tax	345	388	437	491	546	602	659	715	772	829	886	886	886	886	886	10,213
Depreciation	362	362	362	362	362	362	362	362	362	362	362	362	362	362	362	5,424
Initial Investment Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Free Cash Flow	706	749	799	852	908	964	1,020	1,077	1,134	1,191	1,248	1,248	1,248	1,248	1,248	15,637

[Payback Time]

Initial Cost / Profit **5.2** Years

[Internal Rate of Return]

IRR (15 years) **15.08%**

[Net Present Value]

NPV (15 years)		3,566.6																	
Discount Rate		7.00 %																	
Discount Factor	Discount Rate	a	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	Total
	Years	b	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
	Discount Factor (Reciprocal Factor)	c = a^b 1/a^b	1.070	1.145	1.225	1.311	1.403	1.501	1.606	1.718	1.838	1.967	2.105	2.252	2.410	2.579	2.759		
NPV	Free Cash Flow (FCF)=J54	d	706.5	749.2	799.0	852.4	907.6	963.6	1,020.2	1,076.9	1,133.7	1,190.6	1,247.5	1,247.5	1,247.5	1,247.5	1,247.5	1,247.5	15,637.3
	NPV=FCF/Factor	d/c	660.3	654.4	652.2	650.3	647.1	642.1	635.3	626.8	616.7	605.3	592.7	553.9	517.7	483.8	452.2		8,990.6
	NPV Accumelation		660.3	1,314.6	1,966.9	2,617.2	3,264.3	3,906.4	4,541.7	5,168.5	5,785.1	6,390.4	6,983.1	7,537.0	8,054.7	8,538.5	8,990.6		
	NPV Accumelation	A	8,990.6																
	Initial Investment Cost	B	5,424.0																
	NPV(15years)	A-B	3,566.6																

Cost and Benefit Analysis : Tea Drying in Karago

●Currency	RWF	
●Made Tea Production Volume	1,100	ton/year
●Steam Selling Volume	6,765	ton/year
●Unit Steam Price	20,000	RWF/ton
●Doller-RWF exchange rate	678	RWF/USD
●Initial Investment Cost	103	Million RWF
Unit Pipeline Construction Cost	75,650	USD/km
Pipeline Length	2,000	m
●Operation & Maintenance Cost	3.0	% of Initial Investment Cost
●Depreciation	15	years
●Infration rate	0.0	% Annual Rate
●Financial Cost	15.0	% Loan Interest Rate/year
●Loan Term	10.0	Years for Repayment
●Corporation Tax	3.0	%/year
●Discount Rate	7.0	%/year
●Evaluation Duration	15.0	Years (Life Time of Facilities)

[Operation & Maintenance Cost] Unit: Million RWF

		<---Construction		Commissioning-->															Total
		Year in A.D.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
		Business Year	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Cost	Details	Amount RWF																	
Operation & Maintenance Cost	Labor & Maintenance	3		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

[Financial Cost]

		<---Construction		Commissioning-->															Total
		Year in A.D.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
		Business Year	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Financial Cost	Principal	Repayment (10 years)	Balance																
Bank Loan	102.6	10.3 (June/every year)	Loan Balance Average Balance in a year	92	82	72	62	51	41	31	21	10	0						
				97	90	81	71	61	51	41	31	20	10						

[Income Statement]

		<---Construction		Commissioning-->															Total
		Year in A.D.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
		Business Year	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Income	Steam Selling			22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	Others			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
▲Cost & Expense	Operation & Maintenance Cost			3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Depreciation			7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Financial Cost			15	13	12	11	9	8	6	5	3	2	0	0	0	0	0	0
Profit before Tax				-3	-1	-0	1	3	4	6	7	9	11	12	12	12	12	12	12
▲Income Tax (Profit before Tax x Tax rate)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit After Tax				-3	-1	-0	1	3	4	6	7	9	10	12	12	12	12	12	12

[Cash Flow]

		Year in A.D.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
		Business Year	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Profit After Tax				-3	-1	-0	1	3	4	6	7	9	10	12	12	12	12	12	95
Depreciation				7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	103
Initial Investment Cost			103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Free Cash Flow			-103	4	5	7	8	10	11	13	14	16	17	19	19	19	19	19	198

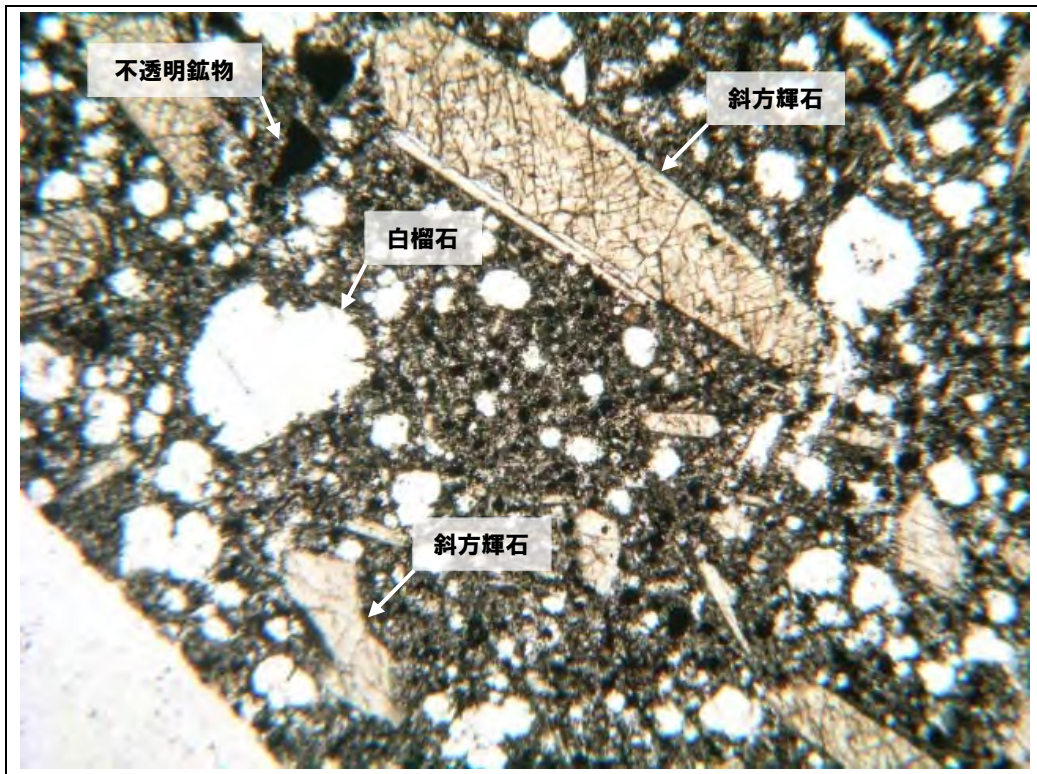
[Payback Time]
Initial Cost / Profit **7.8** Years

[Internal Rate of Return]
IRR (15 years) **7.50%**

[Net Present Value]

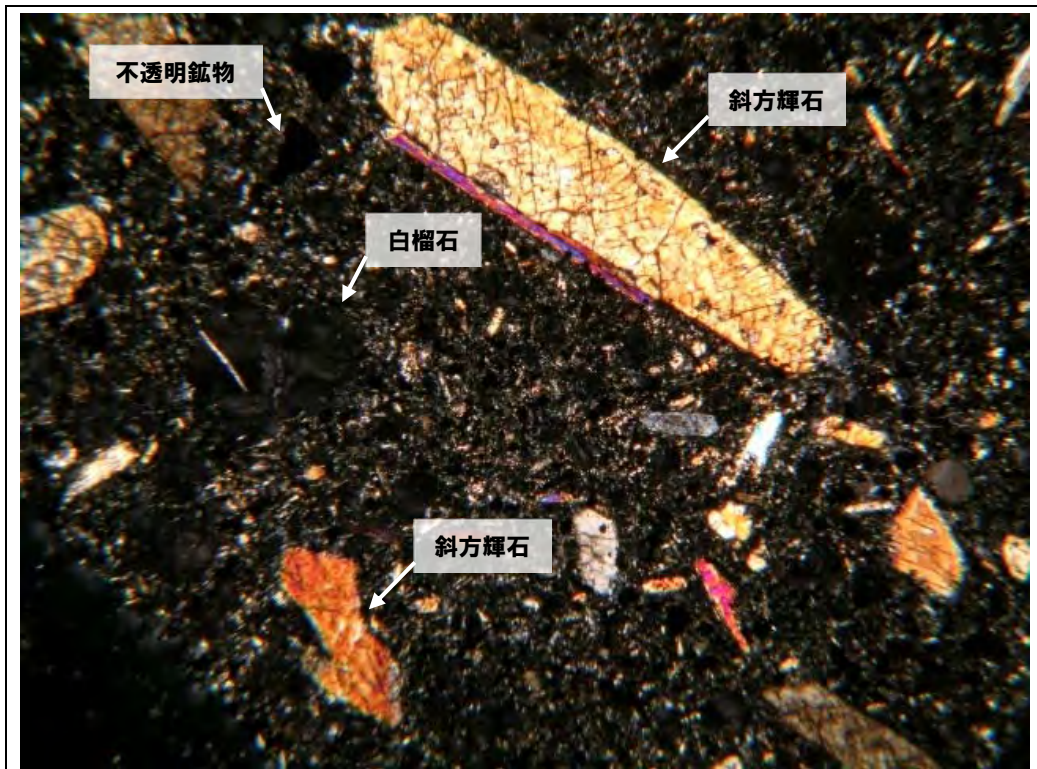
		NPV (15 years) 4.2																	Total
		Discount Rate	7.00%																
Discount Factor	Discount Rate	a		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	Years	b		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	Discount Factor (Reciprocal Factor)	c=a^b 1/a^b		0.935	0.873	0.816	0.763	0.713	0.666	0.623	0.582	0.544	0.508	0.475	0.444	0.415	0.388	0.362	
NPV	Free Cash Flow (FCF)=J54	d		4.3	5.5	6.8	8.2	9.7	11.1	12.6	14.1	15.6	17.1	18.6	18.6	18.6	18.6	18.6	197.7
	NPV=FCF/Factor	d/c		4.0	4.8	5.6	6.3	6.9	7.4	7.8	8.2	8.5	8.7	8.8	8.2	7.7	7.2	6.7	106.8
	NPV Accumelation			4.0	8.8	14.3	20.6	27.5	34.9	42.7	50.9	59.4	68.1	76.9	85.2	92.9	100.1	106.8	
	NPV Accumelation	A	106.8																
	Initial Investment Cost	B	102.6																
	NPV (15years)	A-B	4.2																

Thin Section ID: 082701-T (Visoke V., 白榴石-単斜輝石安山岩)



開放ポーラ

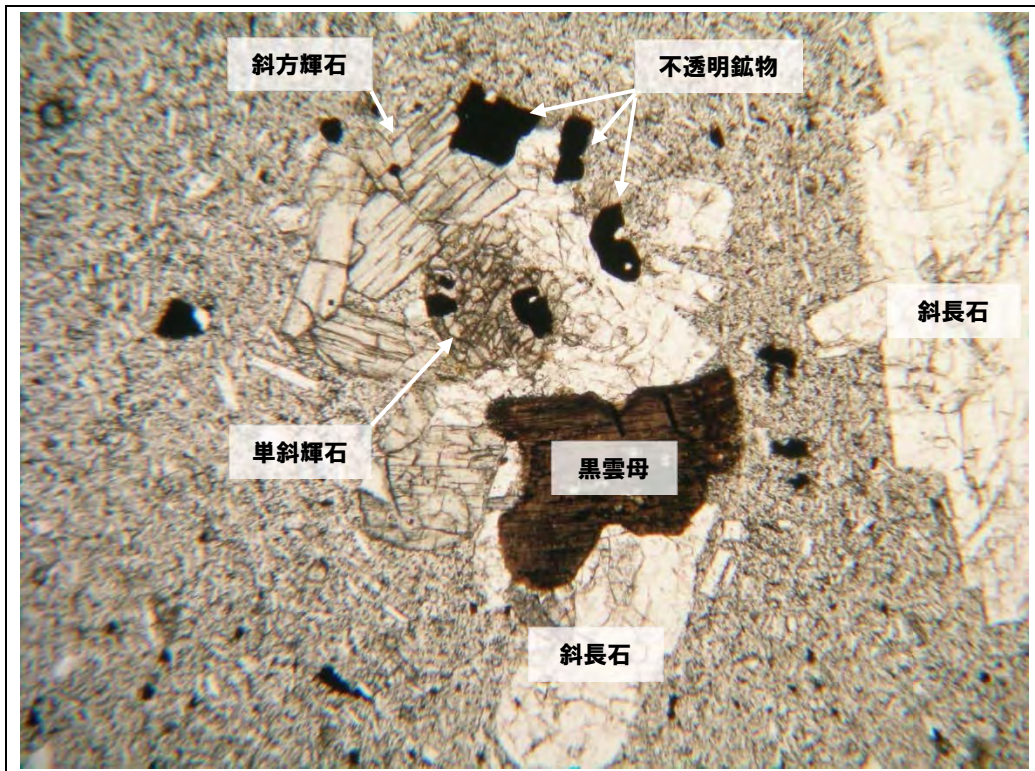
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直交ポーラ

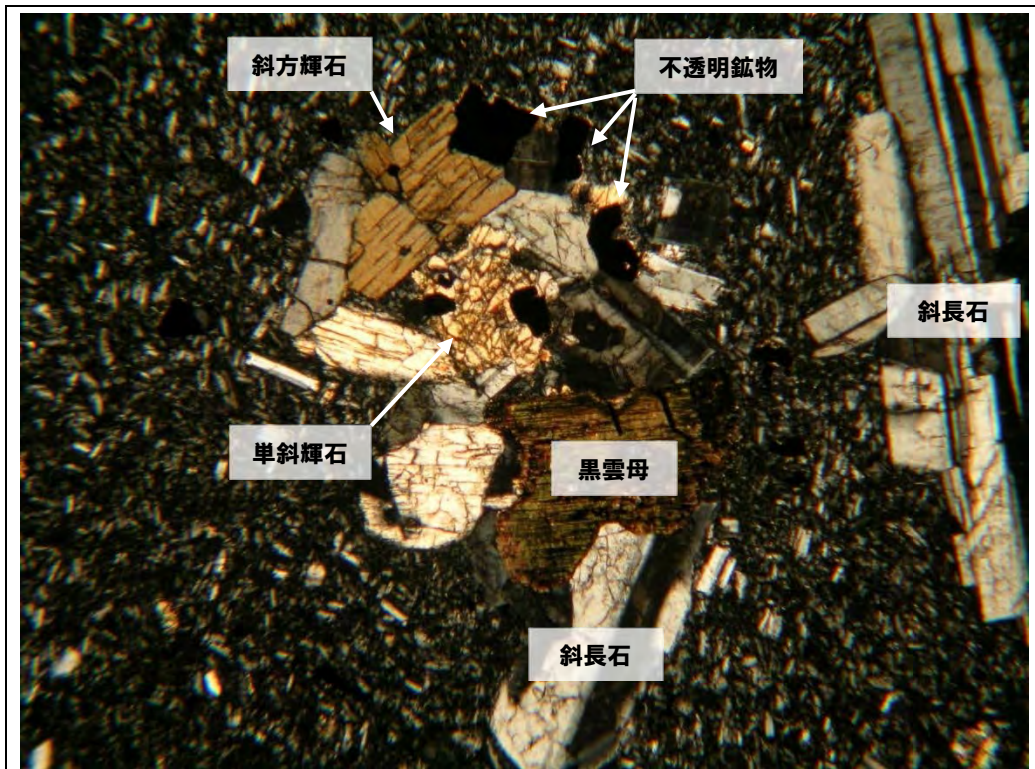
0.5mm

Thin Section ID: 082802-T (Sabyinyo V. 2, 黒雲母安山岩)



開放ポーラ

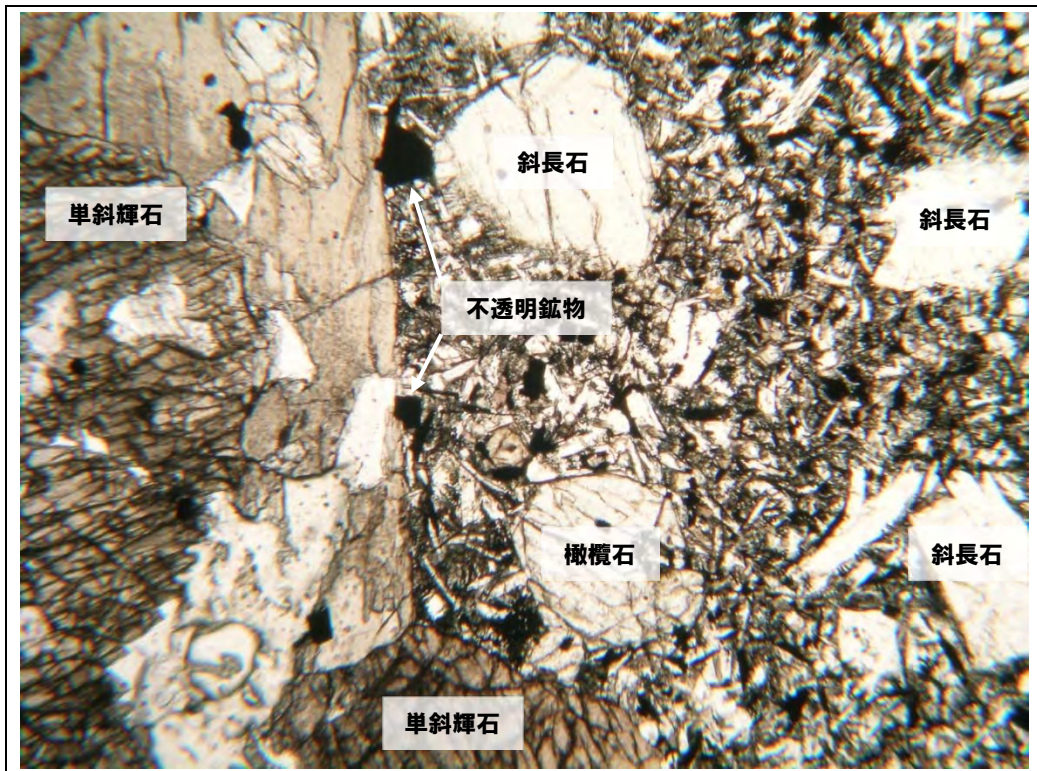
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直交ポーラ

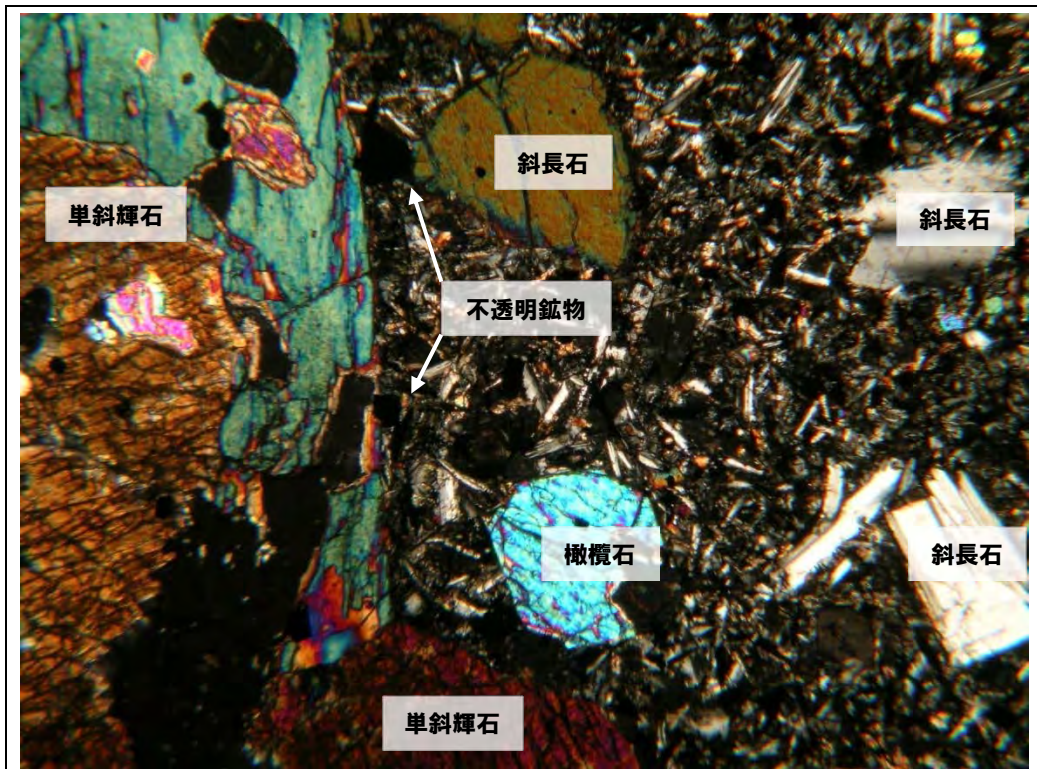
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開放ポーラ

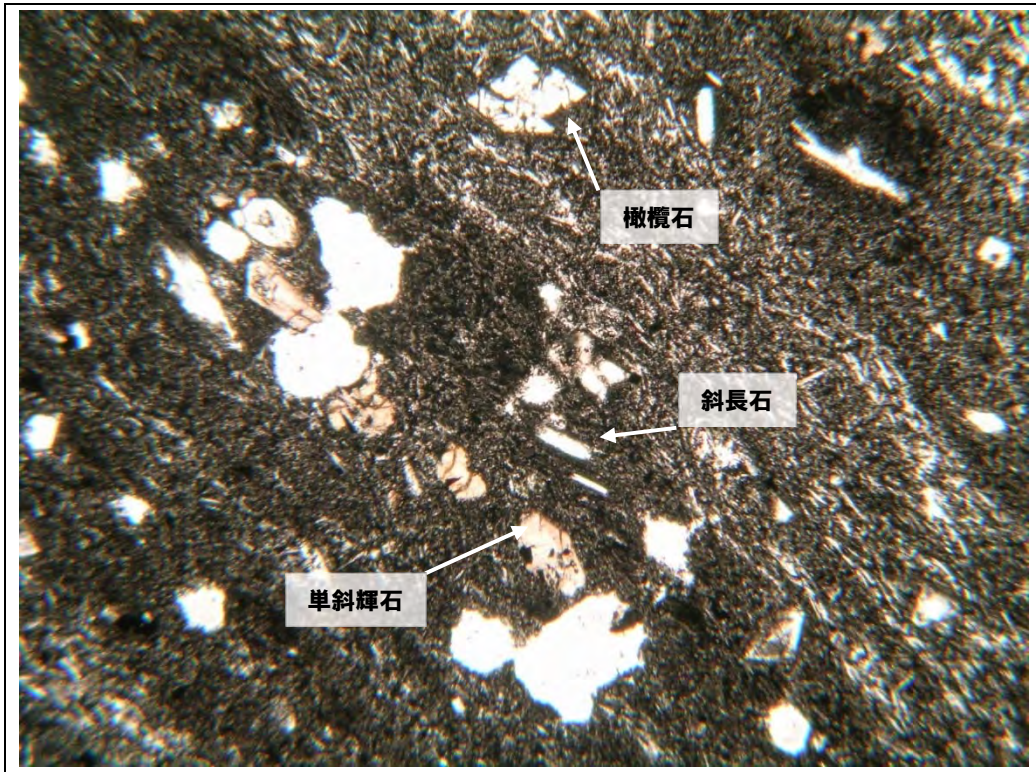
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直交ポーラ

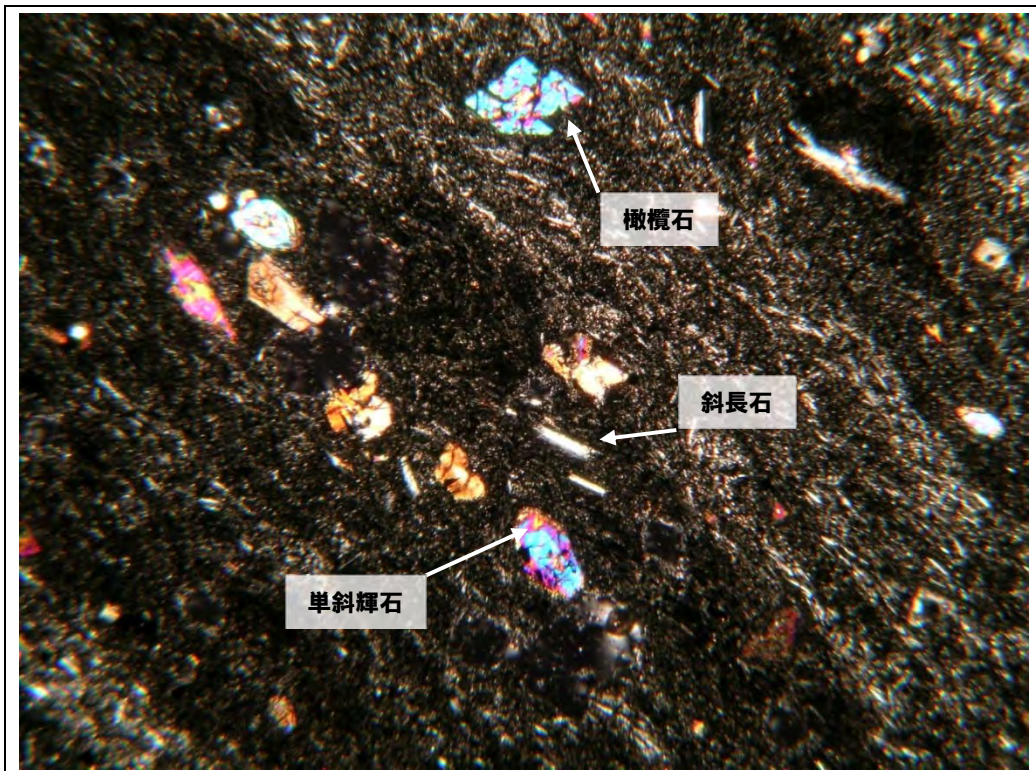
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Thin Section ID: 083101-T (Cone V. 1, 橄欖石-単斜輝石玄武岩)



開放ポーラ

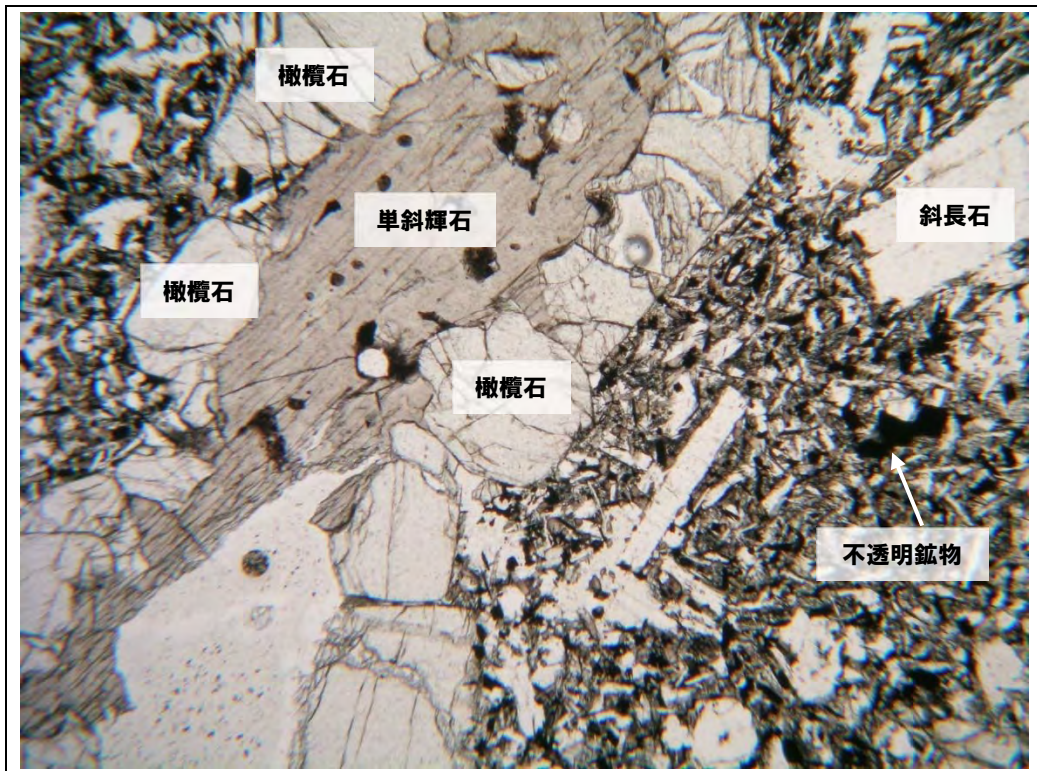
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直交ポーラ

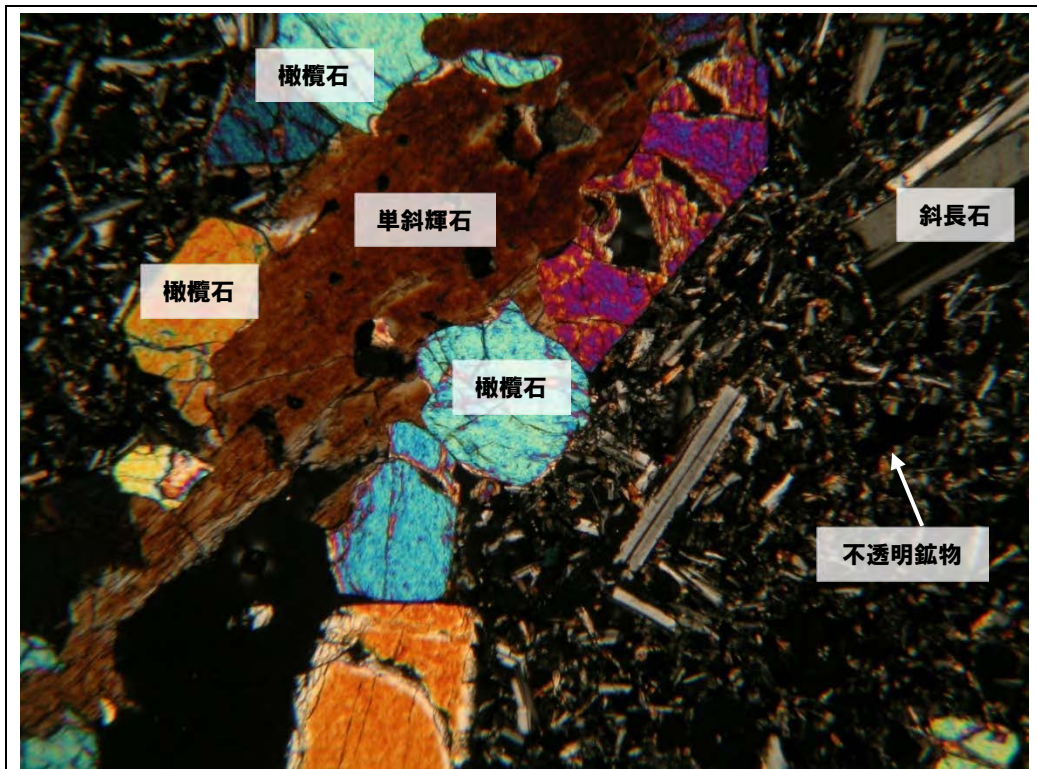
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Thin Section ID: 090201-T (Gahinga V., 単斜輝石－橄欖石玄武岩)



開放ポーラ

0.5mm



直交ポーラ

0.5mm

ブーゲー異常値(Kinigi地域)1

別添資料2-6

測点番号	UTM座標系		緯度			経度			標高(m)	ブーゲー異常値(mgal)							
	NS(m)	EW(m)	度	分	秒	度	分	秒		ρ(2.0)	ρ(2.1)	ρ(2.2)	ρ(2.3)	ρ(2.4)	ρ(2.5)	ρ(2.6)	ρ(2.7)
G000	9833848.232	793458.605	-1	30	5.838	29	38	13.926	1837.859	-3.921	-11.543	-19.165	-26.787	-34.409	-42.030	-57.274	-64.896
G001	9842325.131	781706.910	-1	25	30.468	29	31	53.682	2540.203	9.521	-0.950	-11.422	-21.893	-32.364	-42.835	-63.778	-74.249
G002	9842688.377	782564.152	-1	25	18.618	29	32	21.384	2501.821	9.984	-0.333	-10.649	-20.966	-31.282	-41.598	-62.231	-72.548
G003	9843176.798	783620.673	-1	25	2.688	29	32	55.524	2499.424	7.679	-2.627	-12.934	-23.241	-33.548	-43.854	-64.468	-74.775
G004	9843560.886	784477.768	-1	24	50.160	29	33	23.220	2501.207	6.888	-3.426	-13.740	-24.054	-34.368	-44.682	-65.309	-75.623
G005	9843359.571	784930.753	-1	24	56.694	29	33	37.872	2499.442	7.461	-2.846	-13.153	-23.460	-33.767	-44.073	-64.687	-74.994
G006	9843672.180	785557.647	-1	24	46.500	29	33	58.128	2515.067	7.571	-2.799	-13.168	-23.538	-33.908	-44.278	-65.018	-75.388
G007	9840714.792	780858.876	-1	26	22.896	29	31	26.322	2623.998	7.410	-3.398	-14.207	-25.016	-35.825	-46.634	-68.252	-79.060
G008	9841310.571	781369.700	-1	26	3.492	29	31	42.816	2579.337	8.910	-1.719	-12.348	-22.977	-33.606	-44.235	-65.493	-76.122
G009	9841484.157	781809.538	-1	25	57.828	29	31	57.030	2536.173	8.901	-1.554	-12.009	-22.464	-32.919	-43.374	-64.284	-74.739
G010	9841715.605	782285.630	-1	25	50.280	29	32	12.414	2503.654	9.748	-0.576	-10.899	-21.223	-31.547	-41.871	-62.519	-72.842
G011	9841963.395	782825.398	-1	25	42.198	29	32	29.856	2480.313	9.432	-0.798	-11.027	-21.257	-31.487	-41.716	-62.176	-72.405
G012	9842141.559	783295.497	-1	25	36.384	29	32	45.048	2462.390	9.153	-1.004	-11.161	-21.319	-31.476	-41.633	-61.948	-72.105
G013	9842340.088	783693.056	-1	25	29.910	29	32	57.894	2455.901	8.843	-1.288	-11.419	-21.550	-31.682	-41.813	-62.075	-72.206
G014	9842649.856	784384.339	-1	25	19.806	29	33	20.232	2445.186	7.220	-2.868	-12.956	-23.043	-33.131	-43.219	-63.395	-73.483
G015	9842574.397	784916.892	-1	25	22.242	29	33	37.452	2431.863	6.905	-3.129	-13.163	-23.197	-33.231	-43.265	-63.333	-73.367
G016	9843066.125	785816.986	-1	25	6.210	29	34	6.534	2451.777	6.919	-3.196	-13.310	-23.425	-33.539	-43.654	-63.883	-73.997
G017	9843193.988	786251.409	-1	25	2.034	29	34	20.574	2475.895	7.301	-2.911	-13.123	-23.334	-33.546	-43.758	-64.182	-74.394
G018	9843441.213	786639.753	-1	24	53.976	29	34	33.120	2521.585	7.390	-3.006	-13.403	-23.799	-34.195	-44.591	-65.383	-75.780
G019	9839933.430	780256.172	-1	26	48.342	29	31	6.864	2613.915	9.336	-1.433	-12.201	-22.969	-33.737	-44.506	-66.042	-76.811
G020	9840542.156	781724.424	-1	26	28.482	29	31	54.312	2497.112	7.464	-2.833	-13.130	-23.428	-33.725	-44.023	-64.618	-74.915
G021	9840764.453	782135.923	-1	26	21.234	29	32	7.608	2486.195	8.349	-1.905	-12.158	-22.411	-32.665	-42.918	-63.425	-73.678
G022	9840952.704	782652.054	-1	26	15.090	29	32	24.288	2463.529	8.593	-1.569	-11.731	-21.893	-32.055	-42.217	-62.540	-72.702
G023	9841179.530	783137.795	-1	26	7.692	29	32	39.984	2451.814	8.227	-1.887	-12.002	-22.116	-32.231	-42.346	-62.575	-72.689
G024	9841392.897	783621.482	-1	26	0.732	29	32	55.614	2435.000	7.981	-2.066	-12.112	-22.159	-32.206	-42.252	-62.346	-72.392
G025	9841555.050	784060.944	-1	25	55.440	29	33	9.816	2418.744	7.546	-2.435	-12.416	-22.397	-32.378	-42.359	-62.321	-72.302
G026	9841906.461	784610.857	-1	25	43.986	29	33	27.582	2418.110	7.590	-2.388	-12.367	-22.345	-32.324	-42.302	-62.259	-72.238
G027	9842136.588	785114.984	-1	25	36.480	29	33	43.872	2411.646	7.039	-2.913	-12.866	-22.818	-32.770	-42.723	-62.627	-72.580
G028	9842424.420	785631.055	-1	25	27.096	29	34	0.546	2411.249	6.958	-2.992	-12.943	-22.894	-32.845	-42.795	-62.697	-72.647
G029	9842912.664	786843.500	-1	25	11.166	29	34	39.726	2462.505	7.172	-2.986	-13.144	-23.302	-33.459	-43.617	-63.933	-74.090
G030	9842024.716	785886.536	-1	25	40.092	29	34	8.820	2383.529	6.810	-3.029	-12.867	-22.706	-32.545	-42.383	-62.061	-71.899
G031	9842353.106	786577.667	-1	25	29.382	29	34	31.152	2404.865	7.037	-2.888	-12.813	-22.738	-32.662	-42.587	-62.437	-72.362
G032	9842492.309	787257.641	-1	25	24.828	29	34	53.130	2433.004	6.552	-3.487	-13.525	-23.564	-33.602	-43.641	-63.718	-73.757
G033	9843139.195	788422.027	-1	25	3.738	29	35	30.750	2474.226	6.860	-3.345	-13.550	-23.755	-33.960	-44.165	-64.575	-74.780
G034	9839036.744	779891.809	-1	27	17.532	29	30	55.116	2585.644	7.228	-3.426	-14.081	-24.735	-35.390	-46.044	-67.353	-78.007
G035	9839826.501	780899.645	-1	26	51.798	29	31	27.672	2575.528	8.103	-2.511	-13.125	-23.738	-34.352	-44.965	-66.193	-76.806
G036	9839586.852	781498.990	-1	26	59.574	29	31	47.058	2481.300	7.502	-2.732	-12.965	-23.199	-33.433	-43.666	-64.133	-74.367
G037	9839795.537	782042.793	-1	26	52.764	29	32	4.632	2456.389	7.940	-2.193	-12.326	-22.459	-32.593	-42.726	-62.992	-73.125
G038	9840019.284	782475.080	-1	26	45.468	29	32	18.600	2433.745	7.552	-2.489	-12.531	-22.572	-32.614	-42.656	-62.739	-72.781
G039	9840214.025	782956.329	-1	26	39.114	29	32	34.152	2433.133	7.877	-2.162	-12.201	-22.240	-32.279	-42.318	-62.397	-72.436
G040	9840412.494	783402.881	-1	26	32.640	29	32	48.582	2411.564	7.379	-2.573	-12.525	-22.477	-32.429	-42.381	-62.285	-72.237

ブーゲー異常値(Kinigi地域)2

別添資料2-6

測点番号	UTM座標系		緯度			経度			標高(m)	ブーゲー異常値(mgal)							
	NS(m)	EW(m)	度	分	秒	度	分	秒		ρ(2.0)	ρ(2.1)	ρ(2.2)	ρ(2.3)	ρ(2.4)	ρ(2.5)	ρ(2.6)	ρ(2.7)
G041	9840611.524	783842.383	-1	26	26.148	29	33	2.784	2400.651	6.774	-3.134	-13.042	-22.949	-32.857	-42.765	-62.581	-72.489
G042	9840814.600	784292.285	-1	26	19.524	29	33	17.322	2379.652	6.372	-3.451	-13.274	-23.097	-32.920	-42.743	-62.389	-72.212
G043	9841063.659	785012.825	-1	26	11.394	29	33	40.608	2369.351	6.170	-3.611	-13.392	-23.174	-32.955	-42.736	-62.299	-72.080
G044	9841649.520	785497.308	-1	25	52.314	29	33	56.250	2370.936	6.772	-3.016	-12.804	-22.592	-32.379	-42.167	-61.743	-71.530
G045	9841375.764	785914.760	-1	26	1.206	29	34	9.756	2343.441	6.161	-3.516	-13.192	-22.869	-32.545	-42.222	-61.575	-71.251
G046	9841859.277	786569.504	-1	25	45.450	29	34	30.906	2359.660	6.418	-3.324	-13.066	-22.808	-32.550	-42.292	-61.777	-71.519
G047	9842005.862	787406.124	-1	25	40.650	29	34	57.948	2383.661	6.050	-3.789	-13.628	-23.467	-33.307	-43.146	-62.824	-72.663
G048	9842376.688	788240.961	-1	25	28.554	29	35	24.924	2398.619	6.054	-3.845	-13.745	-23.645	-33.544	-43.444	-63.243	-73.143
G049	9838146.224	780117.033	-1	27	46.500	29	31	2.430	2575.941	5.935	-4.680	-15.295	-25.911	-36.526	-47.141	-68.372	-78.987
G050	9837974.945	780749.293	-1	27	52.050	29	31	22.878	2522.763	5.916	-4.485	-14.886	-25.287	-35.688	-46.089	-66.891	-77.292
G051	9838485.875	780946.397	-1	27	35.418	29	31	29.232	2519.487	7.174	-3.214	-13.602	-23.989	-34.377	-44.765	-65.540	-75.928
G052	9838989.874	781076.126	-1	27	19.014	29	31	33.408	2504.891	7.535	-2.794	-13.123	-23.452	-33.781	-44.109	-64.767	-75.096
G053	9839219.007	781636.280	-1	27	11.538	29	31	51.510	2465.059	7.991	-2.178	-12.346	-22.514	-32.682	-42.850	-63.186	-73.354
G054	9839129.881	782347.515	-1	27	14.412	29	32	14.508	2428.890	7.636	-2.386	-12.408	-22.430	-32.452	-42.474	-62.518	-72.540
G055	9839288.449	782853.962	-1	27	9.234	29	32	30.876	2404.341	6.828	-3.095	-13.018	-22.941	-32.864	-42.786	-62.632	-72.555
G056	9839508.780	783206.818	-1	27	2.052	29	32	42.276	2405.901	6.853	-3.076	-13.005	-22.934	-32.863	-42.792	-62.650	-72.579
G057	9839687.604	783737.790	-1	26	56.214	29	32	59.436	2384.602	6.361	-3.482	-13.325	-23.168	-33.011	-42.854	-62.540	-72.383
G058	9839913.102	784252.113	-1	26	48.858	29	33	16.056	2365.708	5.713	-4.053	-13.820	-23.587	-33.353	-43.120	-62.653	-72.420
G059	9840050.396	784655.545	-1	26	44.376	29	33	29.094	2348.357	5.540	-4.157	-13.853	-23.549	-33.246	-42.942	-62.335	-72.032
G060	9840199.615	785114.111	-1	26	39.504	29	33	43.914	2334.058	5.644	-3.995	-13.634	-23.272	-32.911	-42.549	-61.826	-71.465
G061	9840366.779	785521.106	-1	26	34.050	29	33	57.066	2327.951	5.687	-3.927	-13.541	-23.155	-32.769	-42.382	-61.610	-71.224
G062	9840571.188	786095.545	-1	26	27.378	29	34	15.630	2311.850	6.008	-3.541	-13.089	-22.638	-32.187	-41.736	-60.833	-70.382
G063	9840794.905	786555.686	-1	26	20.082	29	34	30.498	2309.391	5.748	-3.790	-13.329	-22.868	-32.407	-41.945	-61.023	-70.562
G064	9841359.551	787376.073	-1	26	1.680	29	34	57.000	2324.712	5.307	-4.293	-13.894	-23.495	-33.096	-42.696	-61.898	-71.499
G065	9837923.094	781597.705	-1	27	53.706	29	31	50.310	2474.036	6.193	-4.011	-14.215	-24.420	-34.624	-44.828	-65.237	-75.441
G066	9838186.185	782291.889	-1	27	45.120	29	32	12.744	2420.959	6.588	-3.402	-13.392	-23.382	-33.372	-43.362	-63.342	-73.332
G067	9838828.187	782689.017	-1	27	24.216	29	32	25.560	2409.518	6.897	-3.047	-12.991	-22.935	-32.878	-42.822	-62.710	-72.653
G068	9838851.552	783226.491	-1	27	23.436	29	32	42.936	2376.648	6.045	-3.766	-13.577	-23.388	-33.199	-43.009	-62.631	-72.442
G069	9838825.836	783626.951	-1	27	24.258	29	32	55.884	2358.791	5.552	-4.186	-13.925	-23.663	-33.402	-43.141	-62.618	-72.357
G070	9838889.951	784165.403	-1	27	22.152	29	33	13.290	2326.333	4.807	-4.800	-14.407	-24.015	-33.622	-43.229	-62.444	-72.051
G071	9839042.495	784778.562	-1	27	17.166	29	33	33.108	2297.599	4.184	-5.307	-14.798	-24.289	-33.780	-43.271	-62.253	-71.744
G072	9838918.839	785358.005	-1	27	21.168	29	33	51.846	2265.109	2.829	-6.530	-15.889	-25.249	-34.608	-43.967	-62.686	-72.046
G073	9839349.794	785355.155	-1	27	7.146	29	33	51.738	2286.838	3.799	-5.648	-15.096	-24.543	-33.990	-43.438	-62.333	-71.780
G074	9839528.687	785824.149	-1	27	1.308	29	34	6.894	2276.861	3.283	-6.124	-15.531	-24.938	-34.345	-43.752	-62.566	-71.973
G075	9839714.794	786273.853	-1	26	55.236	29	34	21.426	2267.180	3.637	-5.731	-15.099	-24.466	-33.834	-43.202	-61.938	-71.305
G076	9839897.357	786759.188	-1	26	49.278	29	34	37.110	2256.266	4.392	-4.931	-14.255	-23.578	-32.902	-42.225	-60.873	-70.196
G077	9840445.163	787303.029	-1	26	31.434	29	34	54.672	2267.374	4.791	-4.578	-13.946	-23.315	-32.683	-42.052	-60.789	-70.158
G078	9840932.544	788121.479	-1	26	15.546	29	35	21.114	2284.350	4.122	-5.315	-14.752	-24.190	-33.627	-43.064	-61.939	-71.376
G079	9841601.021	788609.971	-1	25	53.778	29	35	36.882	2322.452	2.594	-6.998	-16.589	-26.181	-35.772	-45.364	-64.547	-74.139
G079R	9841506.684	788865.425	-1	25	56.838	29	35	45.144	2311.932	2.945	-6.604	-16.153	-25.702	-35.251	-44.800	-63.898	-73.447
G080	9842438.776	789600.872	-1	25	26.484	29	36	8.886	2389.419	5.015	-4.848	-14.710	-24.573	-34.435	-44.298	-64.023	-73.885

ブーゲー異常値(Kinigi地域)3

別添資料2-6

測点番号	UTM座標系		緯度			経度			標高(m)	ブーゲー異常値(mgal)							
	NS(m)	EW(m)	度	分	秒	度	分	秒		ρ(2.0)	ρ(2.1)	ρ(2.2)	ρ(2.3)	ρ(2.4)	ρ(2.5)	ρ(2.6)	ρ(2.7)
G081	9836290.361	780358.601	-1	28	46.878	29	31	10.308	2643.231	1.758	-9.129	-20.015	-30.901	-41.788	-52.674	-74.446	-85.333
G082	9836814.387	780874.546	-1	28	29.808	29	31	26.970	2554.797	4.078	-6.452	-16.982	-27.512	-38.043	-48.573	-69.633	-80.163
G083	9836617.825	781679.364	-1	28	36.174	29	31	52.998	2463.601	3.328	-6.835	-16.997	-27.159	-37.321	-47.483	-67.808	-77.970
G084	9837423.330	782123.260	-1	28	9.948	29	32	7.320	2428.968	5.270	-4.753	-14.775	-24.797	-34.820	-44.842	-64.886	-74.909
G085	9837162.787	782758.764	-1	28	18.402	29	32	27.876	2368.904	3.922	-5.858	-15.637	-25.417	-35.197	-44.976	-64.535	-74.315
G086	9837811.325	782920.030	-1	27	57.294	29	32	33.066	2405.560	5.438	-4.490	-14.418	-24.346	-34.273	-44.201	-64.057	-73.984
G087	9838022.467	783404.268	-1	27	50.406	29	32	48.714	2355.994	4.573	-5.154	-14.881	-24.609	-34.336	-44.063	-63.518	-73.245
G088	9838393.030	784127.351	-1	27	38.322	29	33	12.078	2318.068	4.514	-5.060	-14.634	-24.208	-33.782	-43.356	-62.503	-72.077
G089	9838552.299	784500.370	-1	27	33.126	29	33	24.132	2300.722	3.933	-5.570	-15.074	-24.578	-34.081	-43.585	-62.592	-72.096
G090	9838500.282	784999.906	-1	27	34.800	29	33	40.284	2267.144	3.062	-6.305	-15.673	-25.040	-34.408	-43.776	-62.511	-71.879
G091	9838521.021	785571.533	-1	27	34.104	29	33	58.764	2246.003	1.831	-7.451	-16.733	-26.015	-35.297	-44.579	-63.143	-72.425
G092	9838493.112	786111.557	-1	27	34.992	29	34	16.224	2216.281	-1.691	-10.853	-20.014	-29.176	-38.337	-47.499	-65.822	-74.983
G092R	9838611.737	786387.845	-1	27	31.122	29	34	25.152	2209.575	0.803	-8.332	-17.466	-26.600	-35.735	-44.869	-63.137	-72.272
G093	9838907.364	786526.632	-1	27	21.498	29	34	29.628	2219.767	1.978	-7.197	-16.373	-25.549	-34.724	-43.900	-62.251	-71.427
G094	9839052.271	787042.360	-1	27	16.764	29	34	46.296	2207.171	2.543	-6.582	-15.706	-24.831	-33.955	-43.080	-61.329	-70.453
G095	9839673.751	787499.804	-1	26	56.526	29	35	1.062	2214.398	3.125	-6.029	-15.183	-24.337	-33.491	-42.644	-60.952	-70.106
G096	9839715.992	788135.126	-1	26	55.128	29	35	21.600	2201.124	2.448	-6.652	-15.752	-24.852	-33.952	-43.052	-61.252	-70.352
G097	9840415.927	788687.130	-1	26	32.334	29	35	39.420	2237.285	3.040	-6.207	-15.454	-24.700	-33.947	-43.193	-61.687	-70.933
G098	9840761.308	789832.814	-1	26	21.054	29	36	16.446	2257.746	4.185	-5.144	-14.474	-23.804	-33.133	-42.463	-61.122	-70.451
G099	9841563.835	790501.868	-1	25	54.918	29	36	38.046	2283.100	5.175	-4.257	-13.689	-23.122	-32.554	-41.986	-60.851	-70.283
G100	9835597.172	781200.148	-1	29	9.402	29	31	37.542	2566.194	-0.290	-10.866	-21.442	-32.018	-42.594	-53.170	-74.322	-84.899
G101	9836549.521	782715.008	-1	28	38.358	29	32	26.484	2361.367	2.967	-6.782	-16.531	-26.280	-36.029	-45.778	-65.276	-75.025
G102	9836981.458	783620.769	-1	28	24.270	29	32	55.752	2302.620	3.091	-6.420	-15.932	-25.443	-34.954	-44.465	-63.488	-72.999
G103	9837440.539	784174.702	-1	28	9.312	29	33	13.644	2286.067	2.974	-6.471	-15.915	-25.359	-34.803	-44.248	-63.136	-72.581
G104	9837809.534	784653.187	-1	27	57.288	29	33	29.100	2278.374	3.103	-6.311	-15.724	-25.137	-34.550	-43.963	-62.789	-72.202
G105	9837563.764	785263.293	-1	28	5.262	29	33	48.834	2235.455	1.627	-7.612	-16.851	-26.091	-35.330	-44.569	-63.047	-72.287
G106	9838062.683	785653.409	-1	27	49.014	29	34	1.428	2225.346	0.922	-8.276	-17.474	-26.673	-35.871	-45.069	-63.466	-72.664
G107	9838083.168	786121.665	-1	27	48.330	29	34	16.566	2199.120	-0.828	-9.920	-19.012	-28.104	-37.196	-46.288	-64.471	-73.563
G107R	9837732.672	786232.058	-1	27	59.730	29	34	20.148	2187.785	0.310	-8.735	-17.781	-26.827	-35.873	-44.919	-63.011	-72.057
G108	9838324.178	786771.867	-1	27	40.464	29	34	37.578	2190.117	0.183	-8.873	-17.928	-26.984	-36.039	-45.094	-63.205	-72.260
G109	9838523.373	787542.286	-1	27	33.954	29	35	2.478	2169.911	-0.106	-9.079	-18.052	-27.026	-35.999	-44.973	-62.919	-71.893
G110	9839059.857	787825.553	-1	27	16.488	29	35	11.616	2181.629	1.824	-7.197	-16.218	-25.239	-34.260	-43.281	-61.323	-70.343
G111	9839289.849	788276.614	-1	27	8.988	29	35	26.190	2179.917	1.762	-7.252	-16.266	-25.280	-34.294	-43.308	-61.336	-70.350
G112	9834336.972	781217.815	-1	29	50.406	29	31	38.160	2675.011	-1.824	-12.839	-23.853	-34.867	-45.881	-56.895	-78.924	-89.938
G113	9834384.68	781900.609	-1	29	48.828	29	32	0.234	2510.715	-2.156	-12.508	-22.860	-33.213	-43.565	-53.917	-74.622	-84.974
G114	9835215.957	781896.557	-1	29	21.780	29	32	0.072	2494.837	-0.468	-10.756	-21.044	-31.333	-41.621	-51.909	-72.486	-82.774
G115	9835213.326	782740.383	-1	29	21.834	29	32	27.354	2390.609	-0.210	-10.077	-19.945	-29.812	-39.679	-49.547	-69.281	-79.149
G116	9835933.633	782707.065	-1	28	58.398	29	32	26.250	2354.354	1.460	-8.260	-17.981	-27.702	-37.422	-47.143	-66.585	-76.305
G117	9835900.479	783314.989	-1	28	59.454	29	32	45.906	2284.945	1.364	-8.075	-17.515	-26.955	-36.395	-45.834	-64.714	-74.154
G118	9836552.272	784015.196	-1	28	38.220	29	33	8.520	2278.939	2.144	-7.271	-16.686	-26.102	-35.517	-44.933	-63.764	-73.179
G119	9836931.867	784253.549	-1	28	25.860	29	33	16.212	2267.397	2.266	-7.102	-16.471	-25.839	-35.208	-44.577	-63.314	-72.683

ブーゲー異常値(Kinigi地域)4

別添資料2-6

測点番号	UTM座標系		緯度			経度			標高(m)	ブーゲー異常値(mgal)							
	NS(m)	EW(m)	度	分	秒	度	分	秒		ρ(2.0)	ρ(2.1)	ρ(2.2)	ρ(2.3)	ρ(2.4)	ρ(2.5)	ρ(2.6)	ρ(2.7)
G120	9836479.235	784507.834	-1	28	40.578	29	33	24.450	2250.446	1.638	-7.662	-16.962	-26.262	-35.562	-44.862	-63.461	-72.761
G121	9837086.889	784948.366	-1	28	20.790	29	33	38.670	2239.684	1.669	-7.588	-16.844	-26.100	-35.357	-44.613	-63.126	-72.382
G122	9837230.248	785522.915	-1	28	16.104	29	33	57.240	2211.447	0.704	-8.438	-17.580	-26.721	-35.863	-45.005	-63.289	-72.431
G123	9836778.991	785700.185	-1	28	30.780	29	34	2.988	2194.505	0.530	-8.543	-17.616	-26.689	-35.762	-44.835	-62.982	-72.055
G124	9837269.317	786184.942	-1	28	14.808	29	34	18.642	2185.293	0.252	-8.783	-17.819	-26.855	-35.891	-44.927	-62.998	-72.034
G125	9837684.244	786651.242	-1	28	1.290	29	34	33.702	2173.909	-0.520	-9.509	-18.499	-27.489	-36.478	-45.468	-63.447	-72.437
G126	9833545.47	781907.431	-1	30	16.134	29	32	0.486	2473.899	-4.588	-14.791	-24.995	-35.199	-45.403	-55.606	-76.014	-86.218
G127	9834297.188	783247.81	-1	29	51.624	29	32	43.794	2309.756	-2.261	-11.801	-21.341	-30.882	-40.422	-49.962	-69.042	-78.583
G128	9835021.519	783722.809	-1	29	28.038	29	32	59.124	2322.658	-0.039	-9.631	-19.224	-28.816	-38.409	-48.001	-67.186	-76.778
G129	9835710.987	784051.528	-1	29	5.592	29	33	9.726	2240.174	0.572	-8.686	-17.945	-27.203	-36.461	-45.720	-64.236	-73.495
G130	9835394.616	784474.475	-1	29	15.870	29	33	23.412	2261.106	0.093	-9.250	-18.594	-27.937	-37.280	-46.623	-65.309	-74.653
G131	9835777.321	784733.62	-1	29	3.408	29	33	31.776	2202.907	0.382	-8.725	-17.833	-26.940	-36.047	-45.154	-63.369	-72.476
G132	9836307.331	785182.045	-1	28	46.146	29	33	46.254	2182.952	0.660	-8.366	-17.392	-26.418	-35.445	-44.471	-62.524	-71.550
G133	9834575.124	784796.249	-1	29	42.522	29	33	33.846	2178.080	-2.538	-11.544	-20.551	-29.557	-38.564	-47.570	-65.584	-74.590
G134	9835253.299	785323.722	-1	29	20.436	29	33	50.874	2152.584	-1.525	-10.428	-19.331	-28.234	-37.137	-46.040	-63.846	-72.749
G135	9835576.092	786042.307	-1	29	9.906	29	34	14.094	2098.397	-1.046	-9.729	-18.412	-27.095	-35.778	-44.461	-61.827	-70.510
G136	9836197.673	785923.884	-1	28	49.686	29	34	10.242	2164.306	0.203	-8.748	-17.699	-26.649	-35.600	-44.550	-62.452	-71.402
G137	9836510.384	786594.766	-1	28	39.486	29	34	31.920	2146.377	-1.293	-10.171	-19.049	-27.927	-36.804	-45.682	-63.438	-72.316
G138	9836552.035	787092.742	-1	28	38.112	29	34	48.018	2096.220	-2.622	-11.296	-19.970	-28.644	-37.318	-45.993	-63.341	-72.015
G139	9837194.177	787057.854	-1	28	17.220	29	34	46.866	2129.709	-1.647	-10.457	-19.267	-28.077	-36.887	-45.697	-63.318	-72.128
G140	9837976.827	787352.171	-1	27	51.744	29	34	56.352	2140.526	-1.107	-9.961	-18.815	-27.669	-36.523	-45.377	-63.085	-71.940
G141	9837952.54	787943.984	-1	27	52.512	29	35	15.486	2124.053	-0.397	-9.184	-17.971	-26.758	-35.546	-44.333	-61.907	-70.694
G142	9838603.482	788757.988	-1	27	31.302	29	35	41.778	2135.274	0.401	-8.432	-17.264	-26.097	-34.930	-43.763	-61.428	-70.261
G143	9838837.465	789743.375	-1	27	23.652	29	36	13.626	2082.784	-0.590	-9.210	-17.829	-26.449	-35.068	-43.688	-60.927	-69.547
G143R	9838842.421	789763.053	-1	27	23.490	29	36	14.262	2082.079	-0.533	-9.150	-17.766	-26.383	-35.000	-43.616	-60.850	-69.466
G144	9839858.589	790823.219	-1	26	50.388	29	36	48.498	2139.396	1.862	-6.988	-15.837	-24.687	-33.536	-42.386	-60.085	-68.934
G145	9840500.478	791344.179	-1	26	29.484	29	37	5.316	2177.861	3.027	-5.979	-14.984	-23.990	-32.996	-42.001	-60.012	-69.018
G146	9832387.01	782118.752	-1	30	53.820	29	32	7.362	2440.280	-6.559	-16.627	-26.695	-36.763	-46.831	-56.899	-77.035	-87.103
G147	9833106.142	783246.793	-1	30	30.378	29	32	43.806	2261.513	-5.880	-15.225	-24.570	-33.915	-43.260	-52.604	-71.294	-80.639
G148	9833826.455	784474.504	-1	30	6.894	29	33	23.472	2177.462	-4.826	-13.830	-22.834	-31.838	-40.842	-49.846	-67.854	-76.858
G149	9834201.141	786223.685	-1	29	54.636	29	34	20.010	2069.584	-4.260	-12.826	-21.392	-29.958	-38.524	-47.090	-64.221	-72.787
G150	9834913.802	786278.896	-1	29	31.446	29	34	21.768	2066.342	-2.971	-11.523	-20.076	-28.629	-37.181	-45.734	-62.839	-71.392
G151	9835515.999	786655.223	-1	29	11.838	29	34	33.912	2079.871	-3.071	-11.679	-20.287	-28.894	-37.502	-46.110	-63.325	-71.933
G152	9836057.478	787549.637	-1	28	54.186	29	35	2.808	2055.245	-3.753	-12.261	-20.768	-29.276	-37.783	-46.291	-63.306	-71.813
G153	9836636.042	787956.005	-1	28	35.346	29	35	15.924	2056.198	-3.239	-11.751	-20.262	-28.774	-37.285	-45.797	-62.819	-71.331
G154	9837759.479	789205.026	-1	27	58.746	29	35	56.262	2077.166	-1.445	-10.042	-18.638	-27.235	-35.832	-44.428	-61.622	-70.218
G155	9838075.021	790933.991	-1	27	48.414	29	36	52.146	2022.877	-0.379	-8.755	-17.131	-25.507	-33.883	-42.259	-59.011	-67.386
G156	9838985.106	790920.202	-1	27	18.804	29	36	51.666	2078.955	1.080	-7.524	-16.128	-24.732	-33.336	-41.940	-59.148	-67.752
G157	9838936.997	792170.308	-1	27	20.322	29	37	32.082	2056.875	1.084	-7.430	-15.944	-24.458	-32.973	-41.487	-58.515	-67.029
G158	9832133.516	783013.122	-1	31	2.034	29	32	36.288	2281.103	-7.065	-16.489	-25.913	-35.338	-44.762	-54.186	-73.034	-82.459
G159	9831416.945	784094.753	-1	31	25.308	29	33	11.286	2189.748	-7.453	-16.507	-25.561	-34.615	-43.669	-52.723	-70.830	-79.884

ブーゲー異常値(Kinigi地域)5

別添資料2-6

測点番号	UTM座標系		緯度			経度			標高(m)	ブーゲー異常値(mgal)							
	NS(m)	EW(m)	度	分	秒	度	分	秒		$\rho(2.0)$	$\rho(2.1)$	$\rho(2.2)$	$\rho(2.3)$	$\rho(2.4)$	$\rho(2.5)$	$\rho(2.6)$	$\rho(2.7)$
G160	9832690.205	784596.581	-1	30	43.860	29	33	27.462	2186.249	-5.521	-14.560	-23.600	-32.640	-41.679	-50.719	-68.798	-77.838
G161	9833274.768	785375.596	-1	30	24.810	29	33	52.626	2121.128	-5.179	-13.955	-22.730	-31.505	-40.281	-49.056	-66.606	-75.382
G162	9832994.779	786366.274	-1	30	33.882	29	34	24.666	2078.385	-6.048	-14.650	-23.251	-31.853	-40.455	-49.056	-66.259	-74.861
G163	9833458.818	788170.703	-1	30	18.714	29	35	22.986	1999.233	-8.083	-16.363	-24.642	-32.922	-41.202	-49.481	-66.041	-74.320
G164	9835093.656	787644.828	-1	29	25.542	29	35	5.922	2017.577	-5.145	-13.499	-21.853	-30.208	-38.562	-46.916	-63.625	-71.979
G165	9834760.197	788783.752	-1	29	36.348	29	35	42.756	1950.178	-7.345	-15.425	-23.505	-31.585	-39.665	-47.745	-63.904	-71.984
G166	9835927.054	789008.203	-1	28	58.374	29	35	49.968	1998.189	-4.227	-12.502	-20.778	-29.053	-37.329	-45.604	-62.155	-70.430
G167	9836712.484	790082.388	-1	28	32.778	29	36	24.666	1984.112	-2.827	-11.046	-19.264	-27.482	-35.700	-43.918	-60.354	-68.573
G168	9835918.373	790898.981	-1	28	58.584	29	36	51.096	1938.866	-2.972	-11.006	-19.039	-27.073	-35.107	-43.141	-59.209	-67.242
G169	9837106.986	791613.241	-1	28	19.884	29	37	14.142	1967.792	-0.986	-9.138	-17.289	-25.441	-33.593	-41.744	-58.048	-66.199
G170	9837827.107	792092.361	-1	27	56.436	29	37	29.604	1997.335	0.183	-8.089	-16.361	-24.633	-32.905	-41.177	-57.721	-65.993
G171	9837009.677	793124.973	-1	28	22.992	29	38	3.018	1933.580	-1.191	-9.203	-17.216	-25.228	-33.240	-41.253	-57.277	-65.290
G172	9840323.622	779249.464	-1	26	35.682	29	30	34.302	2671.896	10.660	-0.341	-11.343	-22.344	-33.346	-44.348	-66.351	-77.353
G173	9841448.19	780816.075	-1	25	59.034	29	31	24.912	2621.691	10.712	-0.087	-10.887	-21.686	-32.486	-43.286	-64.885	-75.684
G174	9840053.756	789486.988	-1	26	44.088	29	36	5.292	2187.367	2.685	-6.359	-15.404	-24.448	-33.492	-42.536	-60.625	-69.669
G175	9830439.881	785720.933	-1	31	57.036	29	34	3.900	2107.059	-7.414	-16.132	-24.850	-33.568	-42.286	-51.004	-68.441	-77.159
G176	9831790.642	786959.264	-1	31	13.038	29	34	43.884	2070.980	-5.448	-14.019	-22.591	-31.163	-39.734	-48.306	-65.449	-74.020
G177	9831107.825	790441.309	-1	31	35.118	29	36	36.486	1795.298	-9.743	-17.191	-24.639	-32.087	-39.536	-46.984	-61.880	-69.328
G178	9833449.096	790600.398	-1	30	18.936	29	36	41.538	1875.517	-8.302	-16.078	-23.853	-31.629	-39.404	-47.180	-62.731	-70.507
G179	9843767.253	784961.082	-1	24	43.428	29	33	38.838	2527.132	6.321	-4.098	-14.516	-24.935	-35.354	-45.772	-66.609	-77.028
G180	9844086.756	786527.258	-1	24	32.976	29	34	29.460	2591.547	7.658	-3.020	-13.698	-24.376	-35.055	-45.733	-67.089	-77.767
G181	9843605.001	787437.236	-1	24	48.618	29	34	58.896	2568.162	7.383	-3.201	-13.785	-24.369	-34.953	-45.537	-66.705	-77.289
G182	9832711.444	794564.475	-1	30	42.780	29	38	49.722	1833.919	-3.010	-10.616	-18.222	-25.828	-33.434	-41.039	-56.251	-63.857
G183	9835186.438	795376.299	-1	29	22.224	29	39	15.870	1870.427	-4.121	-11.876	-19.631	-27.386	-35.141	-42.895	-58.405	-66.160

収集資料リスト

- 1 電力開発計画
- 2 地熱開発計画
- 3 環境社会配慮

収集資料リスト

1 電力開発計画

Africa

Title : REGIONAL POWER SYSTEM MASTER PLAN AND GRID CODE STUDY(Appendix A_EAC PMP)

Data ID No. : 60

Country / Area : Africa

Sector : Master plan

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : AppendixA_EAC_PMP.pdf

Title : REGIONAL POWER SYSTEM MASTER PLAN AND GRID CODE STUDY(Appendix B Part I_EAC PMP)

Data ID No. : 61

Country / Area : Africa

Sector : Master plan

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : AppendixB_Part_I_EACP_MP.pdf

Title : REGIONAL POWER SYSTEM MASTER PLAN(Appendix B Part II_EAC PMP)

Data ID No. : 62

Country / Area : Africa

Sector : Master plan

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : AppendixB_PartII_EAC_PMP.pdf

Title : REGIONAL POWER SYSTEM MASTER PLAN AND GRID CODE STUDY(Appendix B Part III_EAC PMP)

Data ID No. : 63

Country / Area : Africa

Sector : Master plan

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : AppendixB_Part_III_EAC_PMP.pdf

Title : REGIONAL POWER SYSTEM MASTER PLAN AND GRID CODE STUDY(Appendix B Part IV_EAC PMP)

Data ID No. : 64

Country / Area : Africa

Sector : Master plan

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix_B_PartIV_EAC_PMP.pdf

Title : REGIONAL POWER SYSTEM MASTER PLAN AND GRID CODE STUDY(Executive Summary_EAC PMP)

Data ID No. : 65

Country / Area : Africa

Sector : Master plan

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Executive_Summary_EAC_PMP.pdf

Title : REGIONAL POWER SYSTEM MASTER PLAN AND GRID CODE STUDY(Final Interconnection Code Report)

Data ID No. : 66

Country / Area : Africa

Sector : Master plan

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Final_Interconnection_Code_Report.pdf

Title : REGIONAL POWER SYSTEM MASTER PLAN AND GRID CODE STUDY(Main Report Vo I_EAC PMP)

Data ID No. : 67

Country / Area : Africa

Sector : Master plan

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Main_ReportVol_EAC_PMP.pdf

Title : REGIONAL POWER SYSTEM MASTER PLAN AND GRID CODE STUDY(Main Report Vo II_EAC PMP)

Data ID No. : 68

Country / Area : Africa

Sector : Master plan

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Main_ReportVoII_EAC_PMP.pdf

Title : REGIONAL POWER SYSTEM MASTER PLAN AND GRID CODE STUDY(Main Report Vo III_EAC PMP)

Data ID No. : 69

Country / Area : Africa

Sector : Master plan

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Main_ReportVoIII_EAC_PMP.pdf

Title : REGIONAL POWER SYSTEM MASTER PLAN AND GRID CODE STUDY(Main Report Vo IV_EAC PMP)

Data ID No. : 70

Country / Area : Africa

Sector : Master plan

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Main_ReportVoIV_EAC_PMP.pdf

Title : Community Pico Hydro in Sub-Saharan Africa: Case Study 1(06_Phase2_Section5_B_-_Annex_3_-_Kenya1_1)

Data ID No. : 133

Country / Area : Africa Kenya

Sector : Hydro

Author / Organization : Nottingham Trent University

Date of publication : 01/2002

Type of materials : electronic file

Data Storage location : database shared server

File Name : 06_Phase2_Section5_B_-_Annex_3_-_Ke

Title : Community Pico Hydro in Sub-Saharan Africa/ Case Study One/ Kathamba, Kirinyaga District, Kenya (07_Phase2_Section5_B_-_Annex_3_-_Kenya1_2)

Data ID No. : 134

Country / Area : Africa Kenya

Sector : Hydro

Author / Organization : Nottingham Trent University

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : 07_Phase2_Section5_B_-_Annex_3_-_Ke

Title : Community Pico Hydro in Sub-Saharan Africa/Case Study 2(10_Phase2_Section5_B_-_Annex_3_-_Thima(a).)

Data ID No. : 138

Country / Area : Africa Kenya

Sector : Hydro

Author / Organization : Nottingham Trent University

Date of publication : 02/2002

Type of materials : electronic file

Data Storage location : database shared server

File Name : 10_Phase2_Section5_B_-_Annex_3_-_Thi

Title : Community Pico Hydro in Sub-Saharan Africa/ Case Study Two/Thima, Kirinyaga District, Kenya(11_Phase2_Section5_B_-_Annex_3_-_Thima(b))

Data ID No. : 139

Country / Area : Africa Kenya

Sector : Hydro

Author / Organization : Nottingham Trent University

Date of publication : 02/2002

Type of materials : electronic file

Data Storage location : database shared server

File Name : 11_Phase2_Section5_B_-_Annex_3_-_Thi

Title : RURAL ENERGY SERVICE COMPANIES/EXPERIENCES FROM ZAMBIA(12_Phase2_Section5_B_-_Annex_4_SHS_Zambia.)

Data ID No. : 140

Country / Area : Africa Zambia

Sector : Hydro

Author / Organization : SEI (Stockholm environme Swedish International Devel

Date of publication : 04/2001

Type of materials : electronic file

Data Storage location : database shared server

File Name : 12_Phase2_Section5_B_-_Annex_4_SHS

Title : Issues and Options for Rural/ Electrification in Zambia (13_Phase2_Section5_B_-_Annex_5_RE_options_Zambia.)

Data ID No. : 141

Country / Area : Africa Zambia

Sector : Hydro

Author / Organization : Energy and Environment Tr

Date of publication : 03/2002

Type of materials : electronic file

Data Storage location : database shared server

File Name : 13_Phase2_Section5_B_-_Annex_5_RE_o

Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_4_3_Load_forecast)

Data ID No. : 190

Country / Area : Africa D.R. CONGO

Sector : Feasibility study Load Demand Forecast Master plan

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : VII_4_3_Load_forecast.pdf

Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(VIII_5_5_c.)

Data ID No. : 205

Country / Area : Africa Saudi Arabia

Sector : Feasibility study Load Demand Forecast Master plan

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : VIII_5_5_c.pdf

Title : Master Plan_EAPP_2013-14/Sudan Data/Long and Medium Term Power System Plans/260690_WP-II_demand_forecast_report_FINAL-Revision

Data ID No. : 280

Country / Area : Africa Sudan

Sector : Others Master plan Transmission

Author / Organization : Ministry of Water Resource Lahmeyer International Gm

Date of publication : 10/2012

Type of materials : electronic file

Data Storage location : database shared server

File Name : 260690_WP-II_demand_forecast_report_F

Title : Master Plan_EAPP_2013-14/EASTERN AFRICA POWER POOL/Sudan
Data/EAPP_Questionnaire_for_Market_Development_NOV13-Sudan

Data ID No. : 281

Country / Area : Africa Sudan

Sector : Transmission Master plan Interconnector

Author / Organization :

Date of publication : 10/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : EAPP_Questionnaire_for_Market_Develop

Title : Master Plan_EAPP_2013-14/Sudan Data/NLDCSudan_NARI_System

Data ID No. : 282

Country / Area : Africa Sudan

Sector : Master plan Others

Author / Organization :

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : NLDCSudan_NARI_System.ppt

Title : TRANSMISSION SYSTEM PERFORMANCE REPORT

Data ID No. : 285

Country / Area : Africa Sudan

Sector : Master plan Transmission

Author / Organization : Ministry of Water Resource

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Performance_Annual_Report_2012.pdf

Title : Annexure B Interface diagram of connections
SCADA/WAN/RTU/FaultRecorder(Substation_connection_to_Central_System)

Data ID No. : 286

Country / Area : Africa Sudan

Sector : Master plan Transmission

Author / Organization : SIEMENS

Date of publication : 02/2005

Type of materials : electronic file

Data Storage location : database shared server

File Name : Substation_connection_to_Central_Syste

Title : Supervisory Control and Data Acquisition (SCADA)/ Data Requirement Sheet Sudan

Data ID No. : 287

Country / Area : Africa Sudan

Sector : Master plan Transmission

Author / Organization :

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Supervisory_Control_and_Data_Acquisitio

Title : Supervisory Control and Data Acquisition (SCADA)/Data Requirement Sheet Sudan

Data ID No. : 288

Country / Area : Africa Sudan

Sector : Master plan Transmission

Author / Organization :

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Supervisory_Control_and_Data_Acquisitio

Title : EAPP_Letter_15Aug13_Master_plan_update

Data ID No. : 289

Country / Area : Africa

Sector : Others Interconnector Transmission

Author / Organization : Eastern Africa Power Pool

Date of publication : 08/2015

Type of materials : electronic file

Data Storage location : database shared server

File Name : EAPP_Letter_15Aug13_Master_plan_upda

Title : EAPP Master Plan Update/Data collection

Data ID No. : 290

Country / Area : Africa

Sector : Master plan Interconnector Transmission

Author / Organization : Ea Energy Analyses

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : EAPP_Master_Plan_Update_data_collecti

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-11_605084-EGTO-4GDD-1101-03)

Data ID No. : 300

Country / Area : Africa

Sector : Feasibility study Hydro

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-11_605084-EGTO-4GDD-1101-03.

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(605084-EGTO-40ER-0401-PA_En_-Vol2_COVER)

Data ID No. : 302

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 605084-EGTO-40ER-0401-PA_En_-Vol2_

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(605084-EGTO-40ER-0401-PA_En_-Vol2_Page_i)

Data ID No. : 303

Country / Area : Africa

Sector : Feasibility study Interconnector Hydro

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 605084-EGTO-40ER-0401-PA_En_-Vol2_

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-00_605084-EGTO_LISTE_DES_DESSINS_90MW-01)

Data ID No. : 304

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-00_605084-EGTO_LISTE_DES_DE

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-01_605084-EGTO-4GDD-3001)

Data ID No. : 305

Country / Area : Africa

Sector : Feasibility study Interconnector Hydro

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-01_605084-EGTO-4GDD-3001.PDF

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-02A_BassinVersant_VictoriaLake)

Data ID No. : 306

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-02A_BassinVersant_VictoriaLake.p

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-02B_BassinVersant_Stations)

Data ID No. : 307

Country / Area : Africa

Sector : Feasibility study Interconnector Hydro

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-02B_BassinVersant_Stations.pdf

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-03_605084-EGTO-40DD-0000-00)

Data ID No. : 308

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-03_605084-EGTO-40DD-0000-00.P

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings

Data ID No. : 309

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-04_605084-EGTO-4GDD-0001.PDF

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-05_605084-EGTO-4GDD-0002)

Data ID No. : 310

Country / Area : Africa

Sector : Feasibility study Interconnector Hydro

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-05_605084-EGTO-4GDD-0002.PDF

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-06_605084-EGTO-4GDD-0003)

Data ID No. : 311

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-06_605084-EGTO-4GDD-0003.PDF

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-07_605084-EGTO-4GDD-0004)

Data ID No. : 312

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-07_605084-EGTO-4GDD-0004.PDF

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-08_Atlas5k_DamSite_mod2)

Data ID No. : 313

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-08_Atlas5k_DamSite_mod2.pdf

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-09_605084-EGTO-4GDD-1100-00)

Data ID No. : 314

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-09_605084-EGTO-4GDD-1100-00.

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-10_605084-EGTO-4GDD-1102-02)

Data ID No. : 315

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-10_605084-EGTO-4GDD-1102-02.

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-12_605084-EGTO-4GDD-1103-03)

Data ID No. : 316

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-12_605084-EGTO-4GDD-1103-03.

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-13_605084-EGTO-4GDD-1107-01)

Data ID No. : 317

Country / Area : Africa

Sector : Feasibility study Interconnector Hydro

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-13_605084-EGTO-4GDD-1107-01.

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-14_605084-EGTO-40DD-9001-00)

Data ID No. : 318

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-14_605084-EGTO-40DD-9001-00.p

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings

Data ID No. : 319

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-15_605084-EGTO-40DD-9003-00.p

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-16_605084-EGTO-40DD-9004-00)

Data ID No. : 320

Country / Area : Africa

Sector : Feasibility study

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-16_605084-EGTO-40DD-9004-00.p

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-17_605084-EGTO-40DD-9005-00)

Data ID No. : 321

Country / Area : Africa

Sector : Feasibility study Interconnector Hydro

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-17_605084-EGTO-40DD-9005-00.p

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-18_605084-EGTO-40DD-9002-00)

RRFP-18_605084-EGTO-40DD-9002-00)

Data ID No. : 322

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-18_605084-EGTO-40DD-9002-00.P

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-19_605084-EGTO-40DD-9006-00)

Data ID No. : 323

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-19_605084-EGTO-40DD-9006-00.p

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-20_605084-EGTO-40DD-9010)

Data ID No. : 324

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

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File Name : RRFP-20_605084-EGTO-40DD-9010.PDF

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-21_605084-EGTO-40DD-9007-00)

Data ID No. : 325

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

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Data Storage location : database shared server

File Name : RRFP-21_605084-EGTO-40DD-9007-00.p

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-22_605084-EGTO-40DD-9008-00)

Data ID No. : 326

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

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Data Storage location : database shared server

File Name : RRFP-22_605084-EGTO-40DD-9008-00.p

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-23_605084-EGTO-40DD-9009-00)

Data ID No. : 327

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

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Data Storage location : database shared server

File Name : RRFP-23_605084-EGTO-40DD-9009-00.p

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-24_605084-EGTO-40DD-9011-00)

Data ID No. : 328

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

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Data Storage location : database shared server

File Name : RRFP-24_605084-EGTO-40DD-9011-00.P

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-25_605084-EGTO-40DD-9012-00)

Data ID No. : 329

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

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File Name : RRFP-25_605084-EGTO-40DD-9012-00.P

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-26_605084-EGTO-40DD-9019)

Data ID No. : 330

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

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Data Storage location : database shared server

File Name : RRFP-26_605084-EGTO-40DD-9019.PDF

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Data ID No. : 331

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-27_605084-EGTO-40DD-9013-00.P

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-28_605084-EGTO-40DD-9014-00)

Data ID No. : 332

Country / Area : Africa

Sector : Feasibility study Interconnector Hydro

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-28_605084-EGTO-40DD-9014-00.P

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-29_605084-EGTO-40DD-9018.)

Data ID No. : 333

Country / Area : Africa

Sector : Feasibility study Interconnector Hydro

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-29_605084-EGTO-40DD-9018.PDF

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-30_605084-EGTO-40DD-9015)

Data ID No. : 334

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

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Data Storage location : database shared server

File Name : RRFP-30_605084-EGTO-40DD-9015.PDF

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-31_605084-EGTO-40DD-9016)

Data ID No. : 335

Country / Area : Africa

Sector : Feasibility study Interconnector Hydro

Author / Organization : SNC LAVALIN INTERNATI

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Data Storage location : database shared server

File Name : RRFP-31_605084-EGTO-40DD-9016.PDF

Title : Rusumo Feasibility Study Report /Volume 2 Maps and Drawings(RRFP-32_605084-EGTO-40DD-9017)

Data ID No. : 336

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RRFP-32_605084-EGTO-40DD-9017.PDF

Title : Rusumo Feasibility Study Report / Volume 3 Annex I(605084-EGTO-4GER-0401-00(En)_June2011)

Data ID No. : 337

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 605084-EGTO-4GER-0401-00(En)_June2

Title : Rusumo Feasibility Study Report / Volume 3 Annex I(605084-EGTO-4GER-0401-00(En)-Attachment2)

Data ID No. : 338

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 605084-EGTO-4GER-0401-00(En)-Attach

Title : Rusumo Feasibility Study Report / Volume 3 Annex I/Laboratory Test Results(605084-EGTO-4GER-0401-00(En)-Attachment3)

Data ID No. : 339

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 06/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 605084-EGTO-4GER-0401-00(En)-Attach

Title : Rusumo Feasibility Study Report / Volume 3 Annex I/Borehole Core Photos(605084-EGTO-4GER-0401-00(En)-Attachment4)

Data ID No. : 340

Country / Area : Africa

Sector : Feasibility study Hydro Interconnector

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 06/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 605084-EGTO-4GER-0401-00(En)-Attach

Title : Rusumo Feasibility Study Report / Volume 3 Annex I/Borehole and Discontinuity Logs(605084-EGTO-4GER-0401-00_(En)-Attachment1)

Data ID No. : 341

Country / Area : Africa

Sector : Feasibility study Hydro

Author / Organization : SNC LAVALIN INTERNATI

Date of publication : 06/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 605084-EGTO-4GER-0401-00_(En)-Attach

Title : Rusumo Transmission Lines Reports Vol II(Vol-II_02_Chapter02_Intro_FS-Final)

Data ID No. : 342

Country / Area : Africa

Sector : Feasibility study Hydro Transmission

Author / Organization : FICHTNER

Date of publication : 03/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : Vol-II_02_Chapter02_Intro_FS-Final.pdf

Title :	Rusumo Transmission Lines Reports Vol II(Vol-II_03_Chapter03_Findings_FS-Final)		
Data ID No. :	343		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-II_03_Chapter03_Findings_FS-Final.p		
Title :	Rusumo Transmission Lines Reports Vol II(Vol-II_04_Chapter04_Load_forecast_FS-Final)		
Data ID No. :	344		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-II_04_Chapter04_Load_forecast_FS-Fi		
Title :	Rusumo Transmission Lines Reports Vol II(Vol-II_04_Chapter04A_Annex4-1_Burundi_FS-Final)		
Data ID No. :	345		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-II_04_Chapter04A_Annex4-1_Burundi		
Title :	Rusumo Transmission Lines Reports Vol II(Vol-II_04_Chapter04A_Annex4-2_Rwanda_FS-Final)		
Data ID No. :	346		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-II_04_Chapter04A_Annex4-2_Rwanda		
Title :	Rusumo Transmission Lines Reports Vol II(Vol-II_05_Chapter05_PowerSystem_Summary)		
Data ID No. :	347		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-II_05_Chapter05_PowerSystem_Sum		

Title :	Rusumo Transmission Lines Reports Vol II(Vol-II_06_Chapter06_Substation_Summary)		
Data ID No. :	348		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-II_06_Chapter06_Substation_Summar		
Title :	Rusumo Transmission Lines Reports Vol II(Vol-II_07_Chapter07_Overhead_Transmission_Line_Summary)		
Data ID No. :	349		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-II_07_Chapter07_Overhead_Transmis		
Title :	Rusumo Transmission Lines Reports Vol II(Vol-II_08_Chapter08_Environmental_Report_Summary)		
Data ID No. :	350		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-II_08_Chapter08_Environmental_Repo		
Title :	Rusumo Transmission Lines Reports Vol II(Vol-II_09_Chapter09_Analysis_of_Social_Impacts_Summary)		
Data ID No. :	351		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-II_09_Chapter09_Analysis_of_Social_I		
Title :	Rusumo Transmission Lines Reports Vol II(Vol-II_10_Chapter10_Resettlement_Action_Plan_Summary)		
Data ID No. :	352		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-II_10_Chapter10_Resettlement_Action		

Title : Rusumo Transmission Lines Reports Vol II(Vol-II_11_Chapter11_Social_Management_Plan_Summary)
Data ID No. : 353
Country / Area : Africa
Sector : Feasibility study Hydro Transmission
Author / Organization : FICHTNER
Date of publication : 03/2010
Type of materials : electronic file
Data Storage location : database shared server
File Name : Vol-II_11_Chapter11_Social_Management

Title : Rusumo Transmission Lines Reports Vol II(Vol-II_12_Chapter12_FinEco_FS-Final)
Data ID No. : 354
Country / Area : Africa
Sector : Feasibility study Hydro Transmission
Author / Organization : FICHTNER
Date of publication : 03/2010
Type of materials : electronic file
Data Storage location : database shared server
File Name : Vol-II_12_Chapter12_FinEco_FS-Final.pdf

Title : Rusumo Transmission Lines Reports Vol II(Vol-II_13_Chapter13_RSWI_Institutional_FS-Fina)
Data ID No. : 355
Country / Area : Africa
Sector : Feasibility study Hydro Transmission
Author / Organization : FICHTNER
Date of publication : 03/2010
Type of materials : electronic file
Data Storage location : database shared server
File Name : Vol-II_13_Chapter13_RSWI_Institutional_F

Title : Rusumo Transmission Lines Reports Vol II(Vol-II_14_Chapter14_Risks_FS-Final)
Data ID No. : 359
Country / Area : Africa
Sector : Feasibility study Hydro Transmission
Author / Organization : FICHTNER
Date of publication : 03/2010
Type of materials : electronic file
Data Storage location : database shared server
File Name : Vol-II_14_Chapter14_Risks_FS-Final.pdf

Title : Rusumo Transmission Lines Reports Vol II(Vol-II_15_Chapter15_Impl_Schedule_FS-Final)
Data ID No. : 360
Country / Area : Africa
Sector : Feasibility study Hydro Transmission
Author / Organization : FICHTNER
Date of publication : 03/2010
Type of materials : electronic file
Data Storage location : database shared server
File Name : Vol-II_15_Chapter15_Impl_Schedule_FS-F

Title :	Rusumo Transmission Lines Reports Vol V(Vol-IV_Chapter08A-Annex_8-10(Line_routing))		
Data ID No. :	361		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-IV_Chapter08A-Annex_8-10(Line_routi		
Title :	Rusumo Transmission Lines Reports Vol V(Vol-V_Chapter09_Social-Impacts_FS.)		
Data ID No. :	362		
Country / Area :	Africa		
Sector :	Feasibility study	Environment and Social Imp	
Author / Organization :	FICHTNER		
Date of publication :	03/2009		
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Data Storage location :	database shared server		
File Name :	Vol-V_Chapter09_Social-Impacts_FS.pdf		
Title :	Rusumo Transmission Lines Reports Vol V(Vol-V_Chapter09A_Annex9-1FS-Final)		
Data ID No. :	363		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Interconnector
Author / Organization :	FICHTNER		
Date of publication :	10/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-V_Chapter09A_Annex9-1FS-Final.pdf		
Title :	Rusumo Transmission Lines Reports Vol V(Vol-V_Chapter09A_Annex9-2FS-Final.)		
Data ID No. :	364		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Interconnector
Author / Organization :	FICHTNER		
Date of publication :	12/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-V_Chapter09A_Annex9-2FS-Final.pdf		
Title :	Rusumo Transmission Lines Reports Vol V(Vol-V_Chapter09A_Annex9-3FS-Final)		
Data ID No. :	365		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Interconnector
Author / Organization :	FICHTNER		
Date of publication :	10/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-V_Chapter09A_Annex9-3FS-Final.pdf		

Title : Rusumo Transmission Lines Reports Vol V(Vol-V_Chapter10A_RAP_Annex10-1FS-Final)
Data ID No. : 366
Country / Area : Africa
Sector : Feasibility study Hydro Transmission
Author / Organization : FICHTNER
Date of publication : 10/2009
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Data Storage location : database shared server
File Name : Vol-V_Chapter10A_RAP_Annex10-1FS-Fi

Title : Rusumo Transmission Lines Reports Vol V(Vol-V_Chapter10A_RAP_Annex10-3FS-Final)
Data ID No. : 368
Country / Area : Africa
Sector : Feasibility study Hydro Transmission
Author / Organization : FICHTNER
Date of publication : 10/2009
Type of materials : electronic file
Data Storage location : database shared server
File Name : Vol-V_Chapter10A_RAP_Annex10-3FS-Fi

Title : Rusumo Transmission Lines Reports Vol V(Vol-V_Chapter10A_RAP_Annex10-4FS-Final)
Data ID No. : 369
Country / Area : Africa
Sector : Feasibility study Hydro Transmission
Author / Organization : FICHTNER
Date of publication : 10/2009
Type of materials : electronic file
Data Storage location : database shared server
File Name : Vol-V_Chapter10A_RAP_Annex10-4FS-Fi

Title : Rusumo Transmission Lines Reports Vol V(Vol-V_Chapter10A_RAP_Annex10-5FS-Final)
Data ID No. : 370
Country / Area : Africa
Sector : Feasibility study Hydro Transmission
Author / Organization : FICHTNER
Date of publication : 10/2009
Type of materials : electronic file
Data Storage location : database shared server
File Name : Vol-V_Chapter10A_RAP_Annex10-5FS-Fi

Title : Rusumo Transmission Lines Reports Vol V(Vol-V_Chapter10A_RAP_Annex10-6FS-Final)
Data ID No. : 371
Country / Area : Africa
Sector : Feasibility study Interconnector Hydro
Author / Organization : FICHTNER
Date of publication : 10/2009
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Data Storage location : database shared server
File Name : Vol-V_Chapter10A_RAP_Annex10-6FS-Fi

Title :	Rusumo Transmission Lines Reports Vol V(Vol-V_Chapter11A_Annex11-1FS-Final)		
Data ID No. :	372		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	10/2009		
Type of materials :			
Data Storage location :			
File Name :	Vol-V_Chapter11A_Annex11-1FS-Final.pdf		
Title :	Transmission lines/(Final_PBA_Feasibility_Studies_Report_MASTER_Rev_00)		
Data ID No. :	406		
Country / Area :	Africa		
Sector :	Feasibility study	Transmission	
Author / Organization :	EWSA		
Date of publication :	12/2013		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Final_PBA_Feasibility_Studies_Report_MA		
Title :	JICA(ESIA_Annexes_signed)/Environmental and Social Impact Assessment (ESIA)Final Report		
Data ID No. :	456		
Country / Area :	Africa		
Sector :	Environment and Social Imp	Transmission	Hydro
Author / Organization :	FICHTNER		
Date of publication :	04/2012		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	ESIA_Annexes_signed.pdf		
Title :	JICA ESIA & RAP Reports/ESIA (ESIA_IV&V_signed) Environmental and Social Impact Assessment Final Report		
Data ID No. :	457		
Country / Area :	Africa		
Sector :	Environment and Social Imp	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	04/2012		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	ESIA_IV&V_signed.pdf		
Title :	ESIA & RAP Reports/ESIA/T_lines_Kiswahilli /KISWAHILLI NON TECHNICAL SUMMARY		
Data ID No. :	458		
Country / Area :	Africa		
Sector :	Hydro	Transmission	
Author / Organization :	FICHTNER		
Date of publication :	04/2012		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	T_lines_Kiswahilli.pdf		

Title : ESIA & RAP Reports/ESIA/RAP_Report/RESETTLEMENT ACTION PLAN

Data ID No. : 459

Country / Area : Africa

Sector : Hydro Transmission

Author / Organization : FICHTNER

Date of publication : 04/2012

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File Name : RAP_Report.PDF

Title : JICA/T.lines docs/T-lines Final FSVolume II (FICHT-5896274-v1-Vol-II_Chapter04A_Annex4-3_Tanzania_FS-Final)

Data ID No. : 466

Country / Area : Africa Tanzania

Sector : Others

Author / Organization : FICHTNER

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-5896274-v1-Vol-II_Chapter04A_An

Title : JICA/T.lines docs/T-lines Final FSVolume II (FICHT-5896394-v1-Vol-II_Chapter03_Findings__FS-Final)

Data ID No. : 467

Country / Area : Africa

Sector : Environment and Social Imp Economic and Financial An

Author / Organization : FICHTNER

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-5896394-v1-Vol-II_Chapter03_Findi

Title : JICA/T.lines docs/T-lines Final FSVolume II (FICHT-5982584-v1-Vol-II_Chapter13_RSWI_Institutional_FS-Final)

Data ID No. : 468

Country / Area : Africa

Sector : Electrification

Author / Organization : FICHTNER

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-5982584-v1-Vol-II_Chapter13_RS

Title : JICA/T-lines Final FS/Volume II.(FICHT-5991317-v1-Vol-II_Chapter09_Summary)

Data ID No. : 469

Country / Area : Africa

Sector : Others Master plan Electrification

Author / Organization : FICHTNER

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-5991317-v1-Vol-II_Chapter09_Sum

Title :	JICA/T-lines Final FS/Volume II(FICHT-5995425-v1-Vol-II_Chapter05_Summary)		
Data ID No. :	470		
Country / Area :	Africa		
Sector :	Others	Electrification	Load Demand Forecast
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5995425-v1-Vol-II_Chapter05_Sum		
Title :	FICHT-5982584-v1-Vol-II_Chapter13_RSWI_Institutional_FS-Final.(FICHT-5998095-v1-Vol-II_Chapter02_Intro_FS-Final)		
Data ID No. :	471		
Country / Area :	Africa		
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5998095-v1-Vol-II_Chapter02_Intro		
Title :	JICA/T-lines Final FS/Volume II(FICHT-5998992-v1-Vol-II_Chapter07_Summary)		
Data ID No. :	473		
Country / Area :	Africa		
Sector :	Transmission		
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5998992-v1-Vol-II_Chapter07_Sum		
Title :	JICA/T-lines Final FS/Volume II(FICHT-5999040-v1-Vol-II_Chapter10_Summary)		
Data ID No. :	475		
Country / Area :	Africa		
Sector :	Others	Transmission	
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5999040-v1-Vol-II_Chapter10_Sum		
Title :	JICA/T-lines Final FS/Volume II(FICHT-5999049-v1-Vol-II_Chapter11_Summary)		
Data ID No. :	476		
Country / Area :	Africa		
Sector :	Environment and Social Imp Transmission		
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5999049-v1-Vol-II_Chapter11_Sum		

Title :	JICA/T-lines Final FS/Volume II(FICHT-5999065-v1-Vol-II_Chapter12_FinEco_FS-Final.)		
Data ID No. :	477		
Country / Area :	Africa		
Sector :	Economic and Financial An	Transmission	Master plan
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5999065-v1-Vol-II_Chapter12_FinE		
Title :	T-lines Final FS/Volume II(FICHT-5999087-v1-Vol-II_Chapter14_Risks__FS-Final		
Data ID No. :	478		
Country / Area :	Africa		
Sector :	Others	Transmission	Master plan
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5999087-v1-Vol-II_Chapter14_Risk		
Title :	JICA/T-lines Final FS/Volume II(FICHT-5999095-v1-Vol-II_Chapter15_Impl__Schedule_FS-Final)		
Data ID No. :	479		
Country / Area :	Africa		
Sector :	Others	Load Demand Forecast	Master plan
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5999095-v1-Vol-II_Chapter15_Impl		
Title :	JICA/T-lines Final FS/Volume III(JICA/T-lines Final FS/Volume III)/FICHT-5286349-v1-Vol-III_Chapter07A-Annex_I_(Tower_Design)		
Data ID No. :	480		
Country / Area :	Africa		
Sector :	Feasibility study	Master plan	Master plan
Author / Organization :	FICHTNER		
Date of publication :	02/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5286349-v1-Vol-III_Chapter07A-An		
Title :	JICA/T-lines Final FS/Volume III(FICHT-5535112-v1-Vol-III_Chapter07A-Annex_II_(Tower_Hardware)		
Data ID No. :	481		
Country / Area :	Africa		
Sector :	Feasibility study	Master plan	Transmission
Author / Organization :	FICHTNER		
Date of publication :	02/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5535112-v1-Vol-III_Chapter07A-An		

Title : JICA/T-lines Final FS/Volume III(FICHT-5535115-v1-Vol-III_Chapter07A-Annex_III_(Tower_Grounding))

Data ID No. : 482

Country / Area : Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 02/2009

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-5535115-v1-Vol-III_Chapter07A-An

Title : JICA/T-lines Final FS/Volume III(FICHT-5535123-v1-Vol-III_Chapter07A-Annex_IV_(Electric_Clearance))

Data ID No. : 483

Country / Area : Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 02/2009

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-5535123-v1-Vol-III_Chapter07A-An

Title : JICA/T-lines Final FS/Volume III(FICHT-5535154-v1-Vol-III_Chapter07A-Annex_VII_(Costs))

Data ID No. : 484

Country / Area : Africa

Sector : Hydro Transmission

Author / Organization : FICHTNER

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-5535154-v1-Vol-III_Chapter07A-An

Title : KIGALI MASTER PLAN 2013
REPORTS/INCEPTION(RWF1101_01_Kigali_city_Inception_Report_03062013-s)

Data ID No. : 511

Country / Area : Africa

Sector : Master plan Inception report

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_01_Kigali_city_Inception_Repor

Baltic Sea area

Title : Master Plan_EAPP_2013-14/Balmorel/Balmorel_A_Model_for_Analyses_of_the_Electricity_and_CHP_Markets_in_the_Baltic_Sea_Region

Data ID No. : 273

Country / Area : Baltic Sea area

Sector : Master plan

Author / Organization :

Date of publication : 03/2001

Type of materials : electronic file

Data Storage location : database shared server

File Name : Balmorel_A_Model_for_Analyses_of_the_

Title : Master Plan_EAPP_2013-14/Balmorel/Balmorel_Data_and_Calibration_Version_2.05

Data ID No. : 274

Country / Area : Baltic Sea area

Sector : Master plan

Author / Organization :

Date of publication : 03/2001

Type of materials : electronic file

Data Storage location : database shared server

File Name : Balmorel_Data_and_Calibration_Version_

Title : Master Plan_EAPP_2013-14/Balmorel/Balmorel_training_-_day_1

Data ID No. : 275

Country / Area : Baltic Sea area

Sector : Master plan

Author / Organization : Ea Energy Analyses

Date of publication : 12/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : Balmorel_training_-_day_1.pptx

Title : Master Plan_EAPP_2013-14/Balmorel/Balmorel_training_-_day_2.

Data ID No. : 276

Country / Area : Baltic Sea area

Sector : Master plan

Author / Organization : Ea Energy Analyses

Date of publication : 12/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : Balmorel_training_-_day_2.pptx

Title : Master Plan_EAPP_2013-14/Balmorel/BalmorelGettingStarted-BGS301

Data ID No. : 277

Country / Area : Baltic Sea area

Sector : Master plan

Author / Organization :

Date of publication : 06/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : BalmorelGettingStarted-BGS301.pdf

Burundi

Title : JICA/T.lines docs/T-lines Final FSVolume II (FICHT-5896264-v1-Vol-II_Chapter04A_Annex4-1_Burundi_FS-Final)

Data ID No. : 464

Country / Area : Burundi

Sector : Others

Author / Organization : FICHTNER

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-5896264-v1-Vol-II_Chapter04A_An

Central Asia

Title : Nepal Case Study/Installation and performance of the Pico Power Pack(08_Phase2_Section5_B_-_Annex_3_-_Nepal_1.)

Data ID No. : 136

Country / Area : Central Asia Nepal

Sector : Hydro

Author / Organization :

Date of publication : 03/2000

Type of materials : electronic file

Data Storage location : database shared server

File Name : 08_Phase2_Section5_B_-_Annex_3_-_Ne

Title : Nepal Case Study Pa r t Two (09_Phase2_Section5_B_-_Annex_3_-_Nepal_2.)

Data ID No. : 137

Country / Area : Central Asia Nepal

Sector : Hydro

Author / Organization :

Date of publication : 03/2000

Type of materials : electronic file

Data Storage location : database shared server

File Name : 09_Phase2_Section5_B_-_Annex_3_-_Ne

Rwanda

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda (Table of contents)

Data ID No. : 10

Country / Area : Rwanda Africa

Sector : Hydro Feasibility study

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : E_2_List_of_Contents.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda Final Report (Title)

Data ID No. : 20

Country / Area : Rwanda Africa

Sector : Hydro Feasibility study

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : E_1_Title.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda Final Report (Abbreviation)

Data ID No. : 22

Country / Area : Rwanda Africa

Sector : Hydro Feasibility study

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : E_3_Abbreviation.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (Summary)

Data ID No. : 23

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_00_Summary.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_01_ProjectOverview)

Data ID No. : 24

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_01_ProjectOverview.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_02_ProjectNeeds)

Data ID No. : 25

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_02_ProjectNeeds.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_03_BasinSurvey)

Data ID No. : 26

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_03_BasinSurvey.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_04_FieldSurvey)

Data ID No. : 27

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_04_FieldSurvey.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_05_Hydrological_Analysis)

Data ID No. : 28

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_05_Hydrological_Analysis.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_06_WaterSupplyPlan)

Data ID No. : 29

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_06_WaterSupplyPlan.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_07_BugeseraWaterSupplyPlan)

Data ID No. : 31

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_07_BugeseraWaterSupplyPlan.

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_08_DamLocation_Dam_Type)

Data ID No. : 32

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_08_DamLocation_Dam_Type.pd

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_09_Study_OptimumSize_of_Dam)

Data ID No. : 33

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 08/2009

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_09_Study_OptimumSize_of_Da

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_10_Structure_Facilities)

Data ID No. : 34

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_10_Structure_Facilities.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_11_Road_Resettlement_Plan)

Data ID No. : 35

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_11_Road_Resettlement_Plan.p

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_12_Environmental_Assessment)

Data ID No. : 36

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_12_Environmental_Assessment.

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_13_Cost_Estimation)

Data ID No. : 37

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_13_Cost_Estimation.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_14_Economic_Analysis)

Data ID No. : 38

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_14_Economic_Analysis.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (EChapter_15_Conclusion_Recommendation)

Data ID No. : 39

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : EChapter_15_Conclusion_Recommendati

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (ED_Drawing)

Data ID No. : 40

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 08/2009

Type of materials : electronic file

Data Storage location : database shared server

File Name : ED_Drawing.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (E-References)

Data ID No. : 41

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : E-References.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (Appendix-00_List)

Data ID No. : 42

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix-00_List.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda
Final Report (Appendix-A-Rainfall analysis)

Data ID No. : 43

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : AppendixA_Rainfall_analysis.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda Final Report (Appendix-B-Flow analysis and Water Supply Plan)

Data ID No. : 44

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : AppendixB_Flow_analysis-and-Water-Sup

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda Final Report (Appendix-C-Flood analysis)

Data ID No. : 45

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : AppendixC_Flood_analysis.pdf

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda Final Report (Appendix-D-ReservoirSimulation_output)

Data ID No. : 46

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix-D-ReservoirSimulation_output.p

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda Final Report (Appendix-E-River diversion and spillway)

Data ID No. : 47

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 09/2008

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix_E_River_diversion_and_spillway

Title : Feasibility Study of Water Resources Development in Nyabarongo River in Rwanda Final Report (Appendix-F-Economic analysis)

Data ID No. : 48

Country / Area : Rwanda Africa

Sector : Hydro

Author / Organization : EWSA Korea International Cooper

Date of publication : 08/2009

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix-F-Economic-analysis.pdf

Title :	Final Design Report(GICIYE 2 MHPP) Giciye Hydro Power Plant		
Data ID No. :	49		
Country / Area :	Rwanda	Africa	
Sector :	Hydro		
Author / Organization :			
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	GICIYE_2_MHPP.pdf		
Title :	FIRST DRAFT REPORT(RUKARA_FS_Complete Booklet.) ON FEASIBILITY ANALYSIS(
Data ID No. :	50		
Country / Area :	Rwanda	Africa	
Sector :	Hydro		
Author / Organization :	Hydro Power International S		
Date of publication :	06/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	RUKARA_FS_Complete_Booklet.pdf		
Title :	EAST AFRICAN TEA TRADE ASSOCIATION (EATTA)(Rwanada - Giciye feasibility study FR)		
Data ID No. :	51		
Country / Area :	Rwanda	Africa	
Sector :	Hydro		
Author / Organization :	CENTRAL ENGINEERING		
Date of publication :	07/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Rwanada_Giciye_feasibility_study_FR.doc		
Title :	RWANDA ENERGY SECTOR REVIEW AND ACTION PLAN(FINAL REPORT)		
Data ID No. :	52		
Country / Area :	Rwanda	Africa	
Sector :	Power Sector Review	Master plan	Institutuinal and organizatio
Author / Organization :	AFRICAN DEVELOPMENT		
Date of publication :	07/2012		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	AfDB_Rwanda_Energy_Sector_Review_a		
Title :	RWANDA ENERGY SECTOR REVIEW AND ACTION PLAN(DRAFT REPORT)		
Data ID No. :	54		
Country / Area :	Rwanda	Africa	
Sector :	Power Sector Review	Master plan	Institutuinal and organizatio
Author / Organization :	AFRICAN DEVELOPMENT		
Date of publication :	06/2012		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Rwanda_Energy_Sector_Review_and_Acti		

Title : ANNUAL REPORT 2009

Data ID No. : 55

Country / Area : Rwanda Africa

Sector : Institutional and organizatio

Author / Organization : RECO&RWASCO ELECTROGAZ EWSA

Date of publication : 03/2009

Type of materials : electronic file

Data Storage location : database shared server

File Name : ANNUAL_FINAL_REPORT_2009_RECO_

Title : ANNUAL REPORT 2010

Data ID No. : 56

Country / Area : Rwanda Africa

Sector : Institutional and organizatio

Author / Organization : RECO&RWASCO ELECTROGAZ EWSA

Date of publication : 02/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : ANNUAL_REPORT_2010.doc

Title : ANNUAL REPORT 2008

Data ID No. : 57

Country / Area : Rwanda Africa

Sector : Institutional and organizatio

Author / Organization : MINISTRY OF INFRASTRU ELECTROGAZ EWSA

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : ANNUAL_REPORT_2008.doc

Title : Annual execution Report 2008/ELGZ ANNUAL REPORT 2008 (Electricity Depaerment)

Data ID No. : 58

Country / Area : Rwanda Africa

Sector : Institutional and organizatio

Author / Organization : ELECTROGAZ EWSA

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : ELGZ_ANNUAL_REPORT_2008.doc

Title : NATIONAL ADAPTATION PROGRAMMES OF ACTION TO CLIMATE CHANGE(NAPA-RWANDA)

Data ID No. : 59

Country / Area : Rwanda Africa

Sector : Climate Change Environment and Social Imp

Author / Organization : MINISTRY OF LANDS,ENV

Date of publication : 12/2006

Type of materials : electronic file

Data Storage location : database shared server

File Name : Climate_Change_Study_NAPAreport_Rwa

Title : Combined Design Report(Design_Report_EARP_Rwanda_V3 (2))

Data ID No. : 71

Country / Area : Rwanda Africa

Sector : Master plan Electrification

Author / Organization : EWSA SOFRECO

Date of publication : 03/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : Design_Report_EARP_Rwanda_V3(2).doc

Title : Combined Design Report(Design_Report_EARP_Rwanda_V3)

Data ID No. : 72

Country / Area : Rwanda Africa

Sector : Master plan Electrification

Author / Organization : SOFRECO EWSA

Date of publication : 03/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : Design_Report_EARP_Rwanda_V3.doc

Title : EARP Planning: Brief Summary/PLANNING RESULTS(COMBINED RESULTS SUMMARY_V4)
(COMBINED RESULTS SUMMARY_V4)

Data ID No. : 73

Country / Area : Rwanda Africa

Sector : Electrification Master plan

Author / Organization : EWSA SOFRECO

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : COMBINED_RESULTS_SUMMARY_V4.p

Title : EARP Planning: Brief Summary/PLANNING RESULTS(COMBINED RESULTS SUMMARY_V5)

Data ID No. : 74

Country / Area : Rwanda Africa

Sector : Electrification Master plan

Author / Organization : EWSA SOFRECO

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : COMBINED_RESULTS_SUMMARY_V5.p

Title : 30kV Structure Drawings

Data ID No. : 75

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA SOFRECO

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : 30kV_Structure_Drawings.pptx

Title : Design Standards and Guidelines for EARP rural Electrification Projects(EARP Reticulation Standards V3 (2))

Data ID No. : 76

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA SOFRECO

Date of publication : 02/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : EARP_Reticulation_StandardsV3(2).doc

Title : Design Standards and Guidelines for EARP Rural Electrification

Data ID No. : 77

Country / Area : Rwanda Africa

Sector : Electrification Master plan

Author / Organization : EWSA SOFRECO

Date of publication : 02/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : EARP_Reticulation_StandardsV3.doc

Title : ECONOMIC DEVELOPMENT AND POVERTY REDUCTION STRATEGY 2008-2012(EDPRS_1_Final English)

Data ID No. : 78

Country / Area : Rwanda Africa

Sector : Generation

Author / Organization : Minister of Finance and Eco

Date of publication : 09/2007

Type of materials : electronic file

Data Storage location : database shared server

File Name : EDPRS_1_Final_English.pdf

Title : ECONOMIC DEVELOPMENT AND POVERTY REDUCTION STRATEGY 2013-2018 (Shaping our development)

Data ID No. : 79

Country / Area : Rwanda Africa

Sector : Master plan National Development

Author / Organization : Minister of Finance and Eco

Date of publication : 05/2012

Type of materials : electronic file

Data Storage location : database shared server

File Name : EDPRS_2_FINAL1.pdf

Title : Final Draft Energy Sector Strategic Plan (ESSP) 2013-2018

Data ID No. : 80

Country / Area : Rwanda Africa

Sector : Master plan Generation Electrification

Author / Organization : MINISTRY OF INFRASTRU

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Final_Draft_Energy_Sector_Strategic_Plan

Title : Feasibility report Volume3B Uganda-Rwanda Interconnections enviromental and social impact assesment report
Data ID No. : 81
Country / Area : Rwanda Africa Uganda
Sector : Interconnector Transmission
Author / Organization : SOGREAH RSW International Hydro Quebec International
Date of publication : 10/2007
Type of materials : electronic file
Data Storage location : database shared server
File Name : Rwanda-Uganda_ESAI_Vol3B_English_20

Title : Training in Management of capacity shortages NBI workshop(Module 9 - Remedial Measures)
Data ID No. : 82
Country / Area : Rwanda Africa
Sector : Human resources manage Distribution Retail service
Author / Organization : PPA Energy UK
Date of publication : 07/2011
Type of materials : electronic file
Data Storage location : database shared server
File Name : Module9-Remedial_Measures.pdf

Title : The Third integrated household living conditions survey(EICV3) Main indicators report
Data ID No. : 83
Country / Area : Rwanda Africa
Sector : Reserch for politics and eco National Development
Author / Organization : Minister of Finance and Eco NATIONAL INSTITUTE OF
Date of publication :
Type of materials : electronic file
Data Storage location : database shared server
File Name : EICV3_report_main.pdf

Title : Phase2_Section1_Annex_1-1_HV_Grid_Rwanda
Data ID No. : 84
Country / Area : Rwanda Africa
Sector : Master plan Hydro
Author / Organization : FICHTNER
Date of publication :
Type of materials : electronic file
Data Storage location : database shared server
File Name : Phase2_Section1_Annex_1-1_HV_Grid_R

Title : Phase2_Section1_Annex_1-2_Grid_and_SS_Kigali
Data ID No. : 85
Country / Area : Rwanda Africa
Sector : Master plan Transmission
Author / Organization : FICHTNER
Date of publication :
Type of materials : electronic file
Data Storage location : database shared server
File Name : Phase2_Section1_Annex_1-2_Grid_and_S

Title :	AEPE program/ Actualisation Study of the Electricity Masterplan(Phase2_Section2_Executive_Summary)		
Data ID No. :	86		
Country / Area :	Rwanda	Africa	
Sector :	Master plan		
Author / Organization :	EWSA	FICHTNER	
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	01_Phase2_Section2_Executive_Summar		
Title :	AEPE PROGRAM /Actualisation Study of the Electricity Masterplan(Phase2_Section2_Annex_A_Energy_Production)		
Data ID No. :	87		
Country / Area :	Rwanda	Africa	
Sector :	Master plan		
Author / Organization :	FICHTNER	EWSA	
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Phase2_Section2_Annex_A_Energy_Prod		
Title :	AEPE Program/Actualisation Study of the Electricity Masterplan (Phase2_Section2_Annex_B_Hydrology)		
Data ID No. :	88		
Country / Area :	Rwanda	Africa	
Sector :	Master plan		
Author / Organization :	FICHTNER	EWSA	
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Phase2_Section2_Annex_B_Hydrology.pdf		
Title :	Section3(Generation report)/Annex C Thermal Power Plants(Phase2_Section2_Annex_C_3-1-1 Private diesel generators - Performance data and costs)		
Data ID No. :	89		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	04_Phase2_Section2_Annex_C_3-1-1.pdf		
Title :	Section2 Generation report /Annex C - Thermal Power Plants(Annex 3.2-1 Estimated investment costs for diesel plants) in isolated rural areas		
Data ID No. :	90		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	05_Phase2_Section2_Annex_C_3-2-1.pdf		

Title :	Section2 Generation report Annex C - Thermal Power Plants(Annex 3.2-3 Estimated investment costs for diesel plants in isolated rural areas)		
Data ID No. :	91		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	07_Phase2_Section2_Annex_C_3-2-3.pdf		
Title :	Section 2 - Generation Report Annex C - Thermal Power Plants(Annex 3.2-4 Performance of diesel plants considered isolated rural areas)		
Data ID No. :	94		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	08_Phase2_Section2_Annex_C_3-2-4.pdf		
Title :	Section 2 - Generation Report Annex C - Thermal Power Plants(Annex 3.2-5 Annual costs of diesel diesel plants considered in isolated rural areas)		
Data ID No. :	95		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	09_Phase2_Section2_Annex_C_3-2-5.pdf		
Title :	Section 2 - Generation Report Annex C - Thermal Power Plants(Annex 3.2-6 Annual costs of diesel plants considered in isolated rural areas)		
Data ID No. :	96		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	10_Phase2_Section2_Annex_C_3-2-6.pdf		
Title :	Section 2 - Generation Report Annex C - Thermal Power Plants(Annex 3.2-7 Annual costs of diesel plants considered in isolated rural networks)		
Data ID No. :	97		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	11_Phase2_Section2_Annex_C_3-2-7.pdf		

Title :	Section 2 - Generation Report/ Annex C - Thermal Power Plants (Annex 3.3-1 Estimated investment costs of diesel plants in the national grid)		
Data ID No. :	98		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	12_Phase2_Section2_Annex_C_3-3-1.pdf		
Title :	Section 2 - Generation Report/Annex C - Thermal Power Plants(Annex 3.3-2 Estimated investment costs of diesel plants in the national grid)		
Data ID No. :	99		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	13_Phase2_Section2_Annex_C_3-3-2.pdf		
Title :	Section 2 - Generation Report/Annex C - Thermal Power Plants(Annex 3.3-3 Estimated investment costs of diesel plants in the national grid)		
Data ID No. :	100		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	14_Phase2_Section2_Annex_C_3-3-3.pdf		
Title :	Section 2 - Generation Report/Annex C - Thermal Power Plants(Annex 3.3-4 Performance of diesel plants considered in the national grid)		
Data ID No. :	101		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	15_Phase2_Section2_Annex_C_3-3-4.pdf		
Title :	Section 2 - Generation Report/Annex C - Thermal Power Plants(Annex 3.3-5 Annual costs of diesel plants considered in the national grid)		
Data ID No. :	102		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	16_Phase2_Section2_Annex_C_3-3-5.pdf		

Title :	Section 2 - Generation Report/Annex C - Thermal Power Plants(Annex 3.3-6 Annual costs of diesel plants considered in the national grid)		
Data ID No. :	104		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	17_Phase2_Section2_Annex_C_3-3-6.pdf		
Title :	Section 2 - Generation Report/Annex C - Thermal Power Plants(Annex 3.3-7 Annual costs of diesel plants considered in the national grid)		
Data ID No. :	105		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Diesel	Generation
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	18_Phase2_Section2_Annex_C_3-3-7.pdf		
Title :	Section 2 - Generation Report/Annex C - Thermal Power Plants(Annex 3.4-1 Use of natural gas from Lake Kivu)		
Data ID No. :	106		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Generation	Methane
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	19_Phase2_Section2_Annex_C_3-4-1.pdf		
Title :	AEPE PROGRAM/Actualisation Study of the Electricity Masterplan(Phase 2 Section 2 Generation report Annex C- Thermal Power Plants)		
Data ID No. :	107		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Methane	Diesel
Author / Organization :	FICHTNER		
Date of publication :	05/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	20_Phase2_Section2_Annex_C_Thermal_		
Title :	AEPE Program/Actualisation Study of the Electricity Masterplan (Section2 Generation report) Annex D- Priority program for mini and micro hydropower Development)		
Data ID No. :	108		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Generation	
Author / Organization :	EWSA	FICHTNER	
Date of publication :	11/2010		
Type of materials :	electronic file		
Data Storage location :	document library		
File Name :	21_Phase2_Section2_Annex_D_MHP_Pro		

Title : Section 2 - Generation Report/Annex C - Thermal Power Plants(Annex 3.2-2
Estimated investment costs for diesel plants in isolated rural areas)

Data ID No. : 109

Country / Area : Rwanda Africa

Sector : Diesel Master plan

Author / Organization : FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 06_Phase2_Section2_Annex_C_3-2-2.pdf

Title : AEPE PROGRAM/ Actualisation Study of the Electricity Masterplan
(01_Phase2_Section3_Summry Network Calculation)

Data ID No. : 115

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 01_Phase2_Section3_Summry_Network_

Title : AEPE PROGRAM/Actualisation Study of the Electricity
Masterplan(02_Phase2_Section3_1Annex_3_2_3)

Data ID No. : 116

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 02_Phase2_Section3_1Annex_3_2_3.PDF

Title : AEPE PROGRAM/Actualisation Study of the Electricity
Masterplan(03_Phase2_Section3_3Annex_3_3.)

Data ID No. : 117

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 03_Phase2_Section3_3Annex_3_3.PDF

Title : AEPE PROGRAM/Actualisation Study of the Electricity
Masterplan(04_Phase2_Section3_2Annex_3_4_5)

Data ID No. : 119

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 04_Phase2_Section3_2Annex_3_4_5.PDF

Title : AEPE PROGRAM/Actualisation Study of the Electricity
Masterplan(05_Phase2_Section3_Annex_3_5_5_a)

Data ID No. : 120

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 05_Phase2_Section3_Annex_3_5_5_a.PD

Title : AEPE PROGRAM/Actualisation Study of the Electricity
Masterplan(06_Phase2_Section3_Annex_3_5_5_b)

Data ID No. : 121

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 06_Phase2_Section3_Annex_3_5_5_b.PD

Title : AEPE PROGRAM/Actualisation Study of the Electricity
Masterplan(07_Phase2_Section3_Annex_3_5_6_a)

Data ID No. : 122

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 07_Phase2_Section3_Annex_3_5_6_a.PD

Title : AEPE PROGRAM/Actualisation Study of the Electricity
Masterplan(08_Phase2_Section3_Annex_3_5_6_b)

Data ID No. : 123

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 08_Phase2_Section3_Annex_3_5_6_b.PD

Title : AEPE PROGRAM/Actualisation Study of the Electricity
Masterplan(09_Phase2_Section3_Annex_4)

Data ID No. : 124

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 09_Phase2_Section3_Annex_4.PDF

Title : AEPE PROGRAM/Actualisation Study of the Electricity Masterplan(10_Phase2_Section3_Annex_5)

Data ID No. : 125

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 10_Phase2_Section3_Annex_5.PDF

Title : AEPE PROGRAM/Actualisation Study of the Electricity Masterplan(01_Phase2_Section4_Urban_Electrical_Distribution)

Data ID No. : 126

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 01_Phase2_Section4_Urban_Electrical_Di

Title : AEPE PROGRAM/Actualisation Study of the Electricity Masterplan(02_Phase2_Section4_Annex_Urban_Electricity_Distribution)

Data ID No. : 127

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 02_Phase2_Section4_Annex_Urban_Elect

Title : AEPE PROGRAM/Actualisation Study of the Electricity Masterplan/Rural Electrification Part A Grid Connection (01_Phase2_Section5_Part_A_Grid_connection)

Data ID No. : 128

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 01_Phase2_Section5_Part_A_Grid_conne

Title : AEPE PROGRAM/Actualisation Study of the Electricity Masterplan/Development of a Rural Electrification Programme(02_Phase2_Section5_Part_A_Annex)

Data ID No. : 129

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA FICHTNER

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 02_Phase2_Section5_Part_A_Annexe.PD

Title :	AEPE PROGRAM/Actualisation Study of the Electricity Masterplan/Development of a Rural Electrification Program(03_Phase2_Section5_Part_B_Off_grid_electrification)	
Data ID No. :	130	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	EWSA	FICHTNER
Date of publication :	05/2011	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	03_Phase2_Section5_Part_B_Off_grid_ele	

Title :	AEPE PROGRAM/Economic and Financial Assessment (01_Phase2_Section6_EcoFin_Analysis)	
Data ID No. :	142	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	EWSA	FICHTNER
Date of publication :	05/2011	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	01_Phase2_Section6_EcoFin_Analysis.pdf	

Title :	AEPE PROGRAM/Actualisation Study of the Electricity Masterplan/Energy Mix Strategic Plan 2017(01_Phase2_Section7_Supply_Oriented_Scenario)	
Data ID No. :	143	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	EWSA	FICHTNER
Date of publication :	05/2011	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	01_Phase2_Section7_Supply_Oriented_S	

Title :	AEPE PROGRAM/Actualisation Study of the Electricity Masterplan(01_Phase2_Section8_Classification+Planning_of_Investments)	
Data ID No. :	144	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	EWSA	FICHTNER
Date of publication :	05/2011	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	01_Phase2_Section8_Classification+Plann	

Title :	AEPE PROGRAM/Actualisation Study of the Electricity Masterplan(01_Phase2_Section9_Environmental_Impact_Assessment)	
Data ID No. :	145	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	EWSA	FICHTNER
Date of publication :	05/2011	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	01_Phase2_Section9_Environmental_Imp	

Title : AEPE Program/Actualisation Study of the Electricity Masterplan(Vol.1-Coversheet_2-1)
Data ID No. : 146
Country / Area : Rwanda Africa
Sector : Master plan
Author / Organization : EWSA FICHTNER
Date of publication : 05/2011
Type of materials : electronic file
Data Storage location : database shared server
File Name : Coversheet_2-1.PDF

Title : AEPE Program/Actualisation Study of the Electricity Masterplan(Vol.2-Coversheet_2-2)
Data ID No. : 147
Country / Area : Rwanda Africa
Sector : Master plan
Author / Organization : EWSA FICHTNER
Date of publication : 05/2011
Type of materials : electronic file
Data Storage location : database shared server
File Name : Coversheet_2-2.PDF

Title : AEPE Program/Actualisation Study of the Electricity Masterplan(Vol.3-Coversheet_2-3)
Data ID No. : 148
Country / Area : Rwanda Africa
Sector : Master plan
Author / Organization : EWSA FICHTNER
Date of publication : 05/2011
Type of materials : electronic file
Data Storage location : database shared server
File Name : Coversheet_2-3.PDF

Title : AEPE PROGRAM/Actualisation Study of the Electricity Masterplan(01_Phase3_Electricity_Tariff_Analysis)
Data ID No. : 149
Country / Area : Rwanda Africa
Sector : Master plan
Author / Organization : EWSA FICHTNER
Date of publication : 05/2011
Type of materials : electronic file
Data Storage location : database shared server
File Name : 01_Phase3_Electricity_Tariff_Analysis.pdf

Title : Programme AEPE/Actualisation Study of the Electricity Masterplan(FICHT-5529985-v1-Section_2_-_Electrification_urbaine_annexe)
Data ID No. : 150
Country / Area : Rwanda Africa
Sector : Master plan
Author / Organization : FICHTNER
Date of publication : 12/2009
Type of materials : electronic file
Data Storage location : database shared server
File Name : FICHT-5529985-v1-Section_2_-_Electrifica

Title :	Programme AEPE/Actualisation Study of the Electricity Masterplan(FICHT-5530550-v1-Section_5__Part_B_Off_grid_electrification)	
Data ID No. :	151	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	FICHTNER	
Date of publication :	12/2009	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	FICHT-5530550-v1-Section_5__Part_B_Of	
Title :	Programme AEPE/Actualisation Study of the Electricity Masterplan(FICHT-5560110-v1-Section_7_Classification_and_Planning_of_the_Master_Plan_Investments)	
Data ID No. :	152	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	FICHTNER	
Date of publication :	12/2009	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	FICHT-5560110-v1-Section_7_Classificati	
Title :	Programme AEPE/Actualisation Study of the Electricity Masterplan(FICHT-5590162-v1-Section_8_-_Environmental_Impact_Assessment)	
Data ID No. :	153	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	FICHTNER	
Date of publication :	12/2009	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	FICHT-5590162-v1-Section_8_-_Environm	
Title :	AEPE Programme/ACTUALISATION STUDY OF ELECTRICITY MASTER PLAN(FICHT-5612509-v1-Section_4_Urban_electrical_distribution)	
Data ID No. :	154	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	FICHTNER	
Date of publication :	12/2009	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	FICHT-5612509-v1-Section_4_Urban_elec	
Title :	Programme AEPE/Actualisation Study of the Electricity Masterplan(FICHT-5614807-v1-Section_5_Part_A_Grid_connection.)	
Data ID No. :	155	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	FICHTNER	
Date of publication :	12/2009	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	FICHT-5614807-v1-Section_5_Part_A_Gri	

Title :	Programme AEPE/Actualisation Study of the Electricity Masterplan(FICHT-5641837-v1-Section_6_-_EcoFin_Analysis)	
Data ID No. :	156	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	FICHTNER	
Date of publication :	12/2009	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	FICHT-5641837-v1-Section_6_-_EcoFin_A	

Title :	Programme AEPE/Actualisation Study of the Electricity Masterplan(FICHT-5653637-v1-Section_2_Generation_Report+anlagen)	
Data ID No. :	157	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	FICHTNER	
Date of publication :	12/2009	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	FICHT-5653637-v1-Section_2_Generation	

Title :	Programme for the Supply of Drinking Water and Electricity/Study for Updating the Electricity Master Plan(Final_report_of_phase_1)	
Data ID No. :	158	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	FICHTNER	
Date of publication :	12/2009	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	FICHT-5663526-v1-FICHT-5599601-v3-Fin	

Title :	Programme AEPE(Phase_3__Electricity_Tariff_Analysis_final)	
Data ID No. :	159	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	FICHTNER	
Date of publication :	12/2009	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	FICHT-5743899-v1-Phase_3__Electricity_	

Title :	Programme AEPE/Actualisation Study of the Electricity Masterplan(Section_3_NetworkCalculation)	
Data ID No. :	160	
Country / Area :	Rwanda	Africa
Sector :	Master plan	
Author / Organization :	FICHTNER	
Date of publication :	12/2009	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	Section_3_NetworkCalculation.pdf	

Title : 2011_EWSA_POWER_SYSTEM_LOAD_FLOW_DIAGRAM

Data ID No. : 161

Country / Area : Rwanda Africa

Sector : Master plan Transmission

Author / Organization : EWSA

Date of publication : 11/2012

Type of materials : electronic file

Data Storage location : database shared server

File Name : 2011_EWSA_POWER_SYSTEM_LOAD_F

Title : 2015_EWSA_BASE_CASE_POWERSYSTEM_LOAD_FLOW_DIAGRAM

Data ID No. : 162

Country / Area : Rwanda Africa

Sector : Master plan Transmission

Author / Organization : EWSA

Date of publication : 11/2012

Type of materials : electronic file

Data Storage location : database shared server

File Name : 2015_EWSA_BASE_CASE_POWERSYST

Title : 2015_EWSA_IMPROVED_TRANSMISSION_SYSTEM_LOAD_FLOW_DIAGRAM

Data ID No. : 163

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : EWSA

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : 2015_EWSA_IMPROVED_TRANSMISSIO

Title : Feasibility Study Kigoma-Gitega(2011-08_zconFin_Rwegura-Kigoma)

Data ID No. : 164

Country / Area : Rwanda Africa

Sector : Feasibility study Economic and Financial An

Author / Organization : FICHTNER

Date of publication : 08/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 2011-08_zconFin_Rwegura-Kigoma.pdf

Title : Environmental and Social Impact Assessment (ESIA Report_Final_signed)

Data ID No. : 165

Country / Area : Rwanda Africa

Sector : Transmission Environment and Social Imp Feasibility study

Author / Organization : FICHTNER

Date of publication : 03/2012

Type of materials : electronic file

Data Storage location : database shared server

File Name : ESIA_Report_Final_signed.PDF

Title :	Feasibility Study/ HV System Overview (Final_Annex1)		
Data ID No. :	166		
Country / Area :	Rwanda	Africa	
Sector :	Interconnector	Transmission	Master plan
Author / Organization :	FICHTNER		
Date of publication :	10/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Feasibility_Study_Final_Annex1.PDF		

Title :	Feasibility Study / Topographical Surveying Report(Final_Annex2)		
Data ID No. :	167		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	
Author / Organization :	FICHTNER		
Date of publication :	06/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Feasibility_Study_Final_Annex2.PDF		

Title :	Feasibility Study /Technical Studies(Final_Annex3)		
Data ID No. :	168		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	
Author / Organization :	FICHTNER		
Date of publication :	10/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Feasibility_Study_Final_Annex3.PDF		

Title :	Feasibility Study/Transmission Line Design(Final_Annex4)		
Data ID No. :	169		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Feasibility study
Author / Organization :	FICHTNER		
Date of publication :	10/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Feasibility_Study_Final_Annex4.PDF		

Title :	Feasibility Study /Substation Design(Final_Annex5)		
Data ID No. :	170		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Feasibility study
Author / Organization :	FICHTNER		
Date of publication :	10/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Feasibility_Study_Final_Annex5.PDF		

Title : Feasibility Study /Implementation Schedule(Final_Annex6)			
Data ID No. :	171		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Feasibility study
Author / Organization :	FICHTNER		
Date of publication :	10/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Feasibility_Study_Final_Annex6.PDF		
Title : Feasibility Study (Final_signed_withoutAnnexes)			
Data ID No. :	172		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Feasibility study
Author / Organization :	FICHTNER		
Date of publication :	03/2012		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Feasibility_Study_Final_signed_withoutAn		
Title : Feasibility Study Kigoma-Gitega (LoadFlowReportAugust2011)			
Data ID No. :	174		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Feasibility study
Author / Organization :	FICHTNER		
Date of publication :	03/2012		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	LoadFlowReportAugust2011.pdf		
Title : Feasibility Study_220kV/Energizing Report/ZLER_Anexes_Line_Energizing			
Data ID No. :	175		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Interconnector
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	ZLER_Anexes_Line_Energizing.pdf		
Title : Feasibility Study_220kV/Energizing Report/ZLER_Annex_Kibuye_Power_Stattion_SLD			
Data ID No. :	176		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Feasibility study
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	ZLER_Annex_Kibuye_Power_Stattion_SL		

Title :	Standard Specification(ZLER-Annex_Generator_Data_Sheets) Generator for Wärtsilä engine(
Data ID No. :	177		
Country / Area :	Rwanda	Africa	
Sector :	Generation	Gas engine	
Author / Organization :	AVK		
Date of publication :	03/2006		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	ZLER-Annex_Generator_Data_Sheets.PD		
Title :	Line Energizing Study for the 220 kV Transmission Line Kibuye/Line_Energizing_Report - Gisenyi - Goma - Birembo (Line_Energizing_Report)		
Data ID No. :	178		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Feasibility study
Author / Organization :	FICHTNER		
Date of publication :	10/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Line_Energizing_Report.pdf		
Title :	Feasibility Study_220kV /Exective summary (VI_1_zAnnex_1_1)		
Data ID No. :	179		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Feasibility study
Author / Organization :	FICHTNER		
Date of publication :	10/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VI_1_zAnnex_1_1.pdf		
Title :	Feasibility Study_220kV /Exective summary (VI_1_zAnnex_1_2)		
Data ID No. :	180		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Interconnector	Master plan
Author / Organization :	FICHTNER		
Date of publication :	08/2008		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VI_1_zAnnex_1_2.pdf		
Title :	Feasibility Study_220kV /Exective summary (VI_1_zAnnex_1_3)		
Data ID No. :	181		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	
Author / Organization :	FICHTNER		
Date of publication :	09/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VI_1_zAnnex_1_3.PDF		

Title : Feasibility Study_220kV /Exective summary (VI_1_zAnnex_1_4)			
Data ID No. :	182		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Feasibility study
Author / Organization :	FICHTNER		
Date of publication :	09/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VI_1_zAnnex_1_4.pdf		
Title : Final FEASIBILITY STUDY(VI_1_Executive_Summary)			
Data ID No. :	183		
Country / Area :	Rwanda	Africa	D.R. CONGO
Sector :	Transmission	Interconnector	Master plan
Author / Organization :	FICHTNER		
Date of publication :	02/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VI_1_Executive_Summary.pdf		
Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_2_Introduction)			
Data ID No. :	184		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Interconnector	Master plan
Author / Organization :	FICHTNER		
Date of publication :	02/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_2_Introduction.pdf		
Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango/Topographic surveying report(VII_3_zAnnex3-1)			
Data ID No. :	185		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Feasibility study
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_3_zAnnex3-1.pdf		
Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango/Topographic surveying report(VII_3_Topographic_surveying_Report)			
Data ID No. :	187		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Feasibility study
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_3_Topographic_surveying_Report.pdf		

Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_4_1_Load_forecast)			
Data ID No. :	188		
Country / Area :	Rwanda	Africa	D.R. CONGO
Sector :	Load Demand Forecast	Master plan	
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_4_1_Load_forecast.pdf		
<hr/>			
Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_4_2_Load_forecast)			
Data ID No. :	189		
Country / Area :	Rwanda	Africa	
Sector :	Load Demand Forecast	Master plan	
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_4_2_Load_forecast.pdf		
<hr/>			
Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_5_Power_system_design)			
Data ID No. :	191		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Master plan	Load Demand Forecast
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_5_Power_system_design.pdf		
<hr/>			
Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_6_Substation_design)			
Data ID No. :	192		
Country / Area :	Rwanda	Africa	D.R. CONGO
Sector :	Feasibility study	Load Demand Forecast	Master plan
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_6_Substation_design.pdf		
<hr/>			
Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_7_Overhead_transmission_line_design)			
Data ID No. :	193		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Load Demand Forecast	Master plan
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_7_Overhead_transmission_line_design		

Title :	Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_8_Environmental_and_social_impact_assesment)		
Data ID No. :	195		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Master plan	Master plan
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_8_Environmental_and_social_impact_		
Title :	Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_9_Financial_and_evonomic_analysis)		
Data ID No. :	197		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Master plan	Load Demand Forecast
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_9_Financial_and_evonomic_analysis.p		
Title :	Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_10_Institutional_and_commercial_considerations)		
Data ID No. :	198		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Load Demand Forecast	Master plan
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_10_Institutional_and_commercial_cons		
Title :	Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_11_Risk_Assumptions)		
Data ID No. :	199		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Load Demand Forecast	Master plan
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_11_Risk_Assumptions.pdf		
Title :	Feasibility Study_220kV Kibuye-Gisenyi-Shango(VII_12_Implementation_Schedule)		
Data ID No. :	200		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Load Demand Forecast	Master plan
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VII_12_Implementation_Schedule.pdf		

Title :	Feasibility Study_220kV Kibuye-Gisenyi-Shango/Power system design(Annexes_Feasibility_Study_Rwanda)		
Data ID No. :	201		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Load Demand Forecast	Master plan
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Annexes_Feasibility_Study_Rwanda.pdf		

Title :	Feasibility Study_220kV Kibuye-Gisenyi-Shango/Power system design(VIII_5_2_3_Documentation_of_Device_Data		
Data ID No. :	202		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Load Demand Forecast	Master plan
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VIII_5_2_3_Documentation_of_Device_D		

Title :	Feasibility Study_220kV Kibuye-Gisenyi-Shango/Power system design(VIII_5_5_a)		
Data ID No. :	203		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Master plan	Load Demand Forecast
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VIII_5_5_a.pdf		

Title :	Feasibility Study_220kV Kibuye-Gisenyi-Shango(VIII_5_5_b)		
Data ID No. :	204		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Master plan	Load Demand Forecast
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VIII_5_5_b.pdf		

Title :	Feasibility Study_220kV Kibuye-Gisenyi-Shango(VIII_5_6_5_a)		
Data ID No. :	206		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Load Demand Forecast	Master plan
Author / Organization :	FICHTNER		
Date of publication :	01/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	VIII_5_6_5_a.pdf		

Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(VIII_5_6_5_b)			
Data ID No. : 207			
Country / Area : Rwanda	Africa		
Sector : Feasibility study	Master plan	Load Demand Forecast	
Author / Organization : FICHTNER			
Date of publication : 01/2011			
Type of materials : electronic file			
Data Storage location : database shared server			
File Name : VIII_5_6_5_b.pdf			
<hr/>			
Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango			
Data ID No. : 208			
Country / Area : Rwanda	Africa		
Sector : Feasibility study	Load Demand Forecast	Master plan	
Author / Organization : FICHTNER			
Date of publication : 01/2011			
Type of materials : electronic file			
Data Storage location : database shared server			
File Name : VIII_5_Power_system_design.pdf			
<hr/>			
Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango/Substation design(VIII_6_zAnnexe1)			
Data ID No. : 209			
Country / Area : Rwanda	Africa		
Sector : Feasibility study	Master plan	Load Demand Forecast	
Author / Organization : FICHTNER			
Date of publication : 01/2011			
Type of materials : electronic file			
Data Storage location : database shared server			
File Name : VIII_6_zAnnexe1.pdf			
<hr/>			
Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango/Substation design(VIII_6_zAnnexe2_6-11(Costs))			
Data ID No. : 210			
Country / Area : Rwanda	Africa		
Sector : Feasibility study	Load Demand Forecast	Master plan	
Author / Organization : FICHTNER			
Date of publication : 01/2011			
Type of materials : electronic file			
Data Storage location : database shared server			
File Name : VIII_6_zAnnexe2_6-11(Costs).pdf			
<hr/>			
Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango/Substation design(VIII_6_Substation_design)			
Data ID No. : 211			
Country / Area : Rwanda	Africa	D.R. CONGO	
Sector : Feasibility study	Master plan	Load Demand Forecast	
Author / Organization : FICHTNER			
Date of publication : 01/2011			
Type of materials : electronic file			
Data Storage location : database shared server			
File Name : VIII_6_Substation_design.pdf			

Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(Overhead transmission line design)(Appendix_I)

Data ID No. : 212

Country / Area : Rwanda Africa

Sector : Feasibility study Load Demand Forecast Master plan

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix_I.pdf

Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(Overhead transmission line design)(Appendix_Ib)

Data ID No. : 213

Country / Area : Rwanda Africa

Sector : Feasibility study Master plan Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix_Ib.pdf

Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(Overhead transmission line design)(Appendix_II.)

Data ID No. : 214

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission Master plan

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix_II.pdf

Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(Overhead transmission line design)

Data ID No. : 215

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix_III.pdf

Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(Overhead transmission line design)(Appendix_IV)

Data ID No. : 216

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix_IV.pdf

Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(Overhead transmission line design)(Appendix_V.)

Data ID No. : 217

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix_V.pdf

Title : Feasibility Study_220kV Kibuye-Gisenyi-Shango(Overhead transmission line design)(Appendix_VI)

Data ID No. : 218

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Appendix_VI.pdf

Title : Feasibility Study_220kV/Environmental and social impact assessment/Annexe(FICH#1-F)

Data ID No. : 219

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICH#1-F.PDF

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICH#9IO)

Data ID No. : 221

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICH#9IO.PDF

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICH#K~A)

Data ID No. : 223

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICH#K~A.PDF

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICH#NQG)

Data ID No. : 224

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICH#NQG.PDF

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICH#TLR)

Data ID No. : 226

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICH#TLR.PDF

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICHT-6971140-v1-01_Rubavu_Rubavu1)

Data ID No. : 227

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-6971140-v1-01_Rubavu_Rubavu1.

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICHT-6971142-v1-02_Rubavu_Rubavu2)

Data ID No. : 228

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-6971142-v1-02_Rubavu_Rubavu2.

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICHT-6971144-v1-03_Rubavu_Cyanzarwe)

Data ID No. : 231

Country / Area : Rwanda Africa

Sector : Feasibility study

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-6971144-v1-03_Rubavu_Cyanzarw

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICHT-6971145-v1-04_Rubavu_Kanzene)

Data ID No. : 232

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-6971145-v1-04_Rubavu_Kanzene.

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICHT-6971146-v1-05_Rubavu_Mudene_Nyabihu_Bigowe)

Data ID No. : 233

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-6971146-v1-05_Rubavu_Mudene_

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICHT-6971147-v1-06_Nyabihu_Jenda)

Data ID No. : 234

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-6971147-v1-06_Nyabihu_Jenda.PD

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe

Data ID No. : 235

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-6971149-v1-07_Nyabihu_Karongo.

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICHT-6971150-v1-08_Nyabihu_Rambura1)

Data ID No. : 236

Country / Area : Rwanda Africa

Sector : Feasibility study Transmission

Author / Organization : FICHTNER

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-6971150-v1-08_Nyabihu_Rambura

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/Annexe(FICHT-6971152-v1-10_Nyabihu_-_Shyira__Gakenke_-_Gatonde)
Data ID No. : 237
Country / Area : Rwanda Africa
Sector : Feasibility study Transmission
Author / Organization : FICHTNER
Date of publication : 01/2011
Type of materials : electronic file
Data Storage location : database shared server
File Name : FICHT-6971152-v1-10_Nyabihu_-_Shyira_

Title : Feasibility Study_220kV/8 Environmental and social impact assessment/final draft(VIV_8_ESIA)
Data ID No. : 238
Country / Area : Rwanda Africa D.R. CONGO
Sector : Feasibility study Environment and Social Imp Transmission
Author / Organization : FICHTNER
Date of publication : 01/2011
Type of materials : electronic file
Data Storage location : database shared server
File Name : VIV_8_ESIA.pdf

Title : Feasibility Study_220kV/8 Environmental and social impact assessment(Table of Content)
Data ID No. : 239
Country / Area : Rwanda Africa
Sector : Feasibility study Transmission Environment and Social Imp
Author / Organization : FICHTNER
Date of publication : 02/2011
Type of materials : electronic file
Data Storage location : database shared server
File Name : Table_of_Content.pdf

Title : EWSA_Financial_Sustainability_Roadmap_11May2012
Data ID No. : 240
Country / Area : Rwanda Africa
Sector : Others Finance
Author / Organization :
Date of publication : 05/2012
Type of materials : electronic file
Data Storage location : database shared server
File Name : EWSA_Financial_Sustainability_Roadmap

Title : TechnicalStudy Supply of 15MW to AKS steel factory vh2 mf3(Final_Draft)
Data ID No. : 241
Country / Area : Rwanda Africa
Sector : Others Peat
Author / Organization :
Date of publication : 07/2013
Type of materials :
Data Storage location :
File Name : TechnicalStudy_Supply_of_15MW_to_AKS

Title : Grid Audit_Loss Assessment_MHI(Presentation_GridAudit)

Data ID No. : 242

Country / Area : Rwanda

Africa

Sector : Others

Transmission

Distribution

Author / Organization : EWSA

Date of publication : 06/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : Presentation_GridAudit_26062013.pptx

Title : Grid Audit_Loss Assessment_MHI(Report_6A-Final_Report_Rev2)

Data ID No. : 243

Country / Area : Rwanda

Africa

Sector : Others

Transmission

Author / Organization : Manitoba International.,Ltd

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Report_6A-Final_Report_Rev2.docx

Title : Grid Audit_Loss Assessment_MHI(Report_7A-Executive_summary)

Data ID No. : 244

Country / Area : Rwanda

Africa

Sector : Others

Transmission

Author / Organization : Manitoba International.,Ltd The Kenya Power and Light

Date of publication : 07/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : Report_7A-Executive_summary.docx

Title : Grid Code_Rwanda (Rwanda Governance Code v1.0 (draft) rev8)

Data ID No. : 245

Country / Area : Rwanda

Africa

Sector : Institutional and organization

Transmission

Author / Organization : RURA

Date of publication : 10/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda_Governance_Code_v1.0(draft)rev

Title : Grid Code_Rwanda(Rwanda_Gri_dode Preamble V1.0 (draft) rev 8.)

Data ID No. : 246

Country / Area : Rwanda

Africa

Sector : Institutional and organization

Transmission

Author / Organization : RURA

Date of publication : 10/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda_Gri_dode_PreambleV1.0(draft)re

Title : THE RWANDA GRID CODE/Information Exchange
Code(RURA)/Rwanda_Grid_Code_Final_Draft

Data ID No. : 247

Country / Area : Rwanda Africa

Sector : Grid Code Institutuinal and organizatio Electrification

Author / Organization : RURA

Date of publication : 01/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda_Grid_Code_Final_Draft_Jan2012.

Title : RWANDA UTILITIES REGULATORY
AGENCY(RURA)/Rwanda_Grid_Code_Informations_Exchange_CodeV1.0(draft)_Appen
dices_rev8

Data ID No. : 248

Country / Area : Rwanda Africa

Sector : Institutuinal and organizatio Transmission

Author / Organization : RURA

Date of publication : 10/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda_Grid_Code_Informations_Exchan

Title : THE RWANDA GRID CODE(Information Exchange
Code)(RU/RA)/(Rwanda_Grid_Code_Informations_ExchangeCodeV1.0(draft)rev8)

Data ID No. : 250

Country / Area : Rwanda Africa

Sector : Institutuinal and organizatio Transmission

Author / Organization : RURA

Date of publication : 10/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda_Grid_Code_Informations_Exchan

Title : THE RWANDA GRID CODE/Metering
Code(RURA)/Rwanda_Grid_Code_Metering_CodeV1.0(draft)rev8

Data ID No. : 251

Country / Area : Rwanda Africa

Sector : Institutuinal and organizatio Transmission

Author / Organization : RURA

Date of publication : 10/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda_Grid_Code_Metering_CodeV1.0(

Title : THE RWANDA GRID CODE/Network
Code(RURA)/Rwanda_Grid_Code_Network_CodeV1.0(draft)rev8.

Data ID No. : 252

Country / Area : Rwanda Africa

Sector : Institutuinal and organizatio

Author / Organization : RURA

Date of publication : 10/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda_Grid_Code_Network_CodeV1.0(d

Title : THE RWANDA GRID CODE/Network Tariff
Code(RURA)/Rwanda_Grid_Code_NetworkTariff_CodeV1.0(draft)rev8.

Data ID No. : 253

Country / Area : Rwanda Africa

Sector : Institutuinal and organizatio

Author / Organization : RURA

Date of publication : 10/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda_Grid_Code_NetworkTariff_CodeV

Title : THE RWANDA GRID CODE/System Operations
Code(RURA)/Rwanda_Grid_Code_System_Ops_v1.0(draft)rev8

Data ID No. : 254

Country / Area : Rwanda Africa

Sector : Institutuinal and organizatio

Author / Organization : RURA

Date of publication : 10/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda_Grid_Code_System_Ops_v1.0(dr

Title : Industrial Parks/BUGESERA BUSINESS PLAN

Data ID No. : 255

Country / Area : Rwanda Africa

Sector : Others

Author / Organization : Miinistry ofTrade and Indust

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : BUGESERA_Business_Plan_updatedFinal

Title : Industrial Parks/ ENVIRONMENTAL IMPACT ASSESSMENT REPORT/EIA_M-
BUGESERAs

Data ID No. : 256

Country / Area : Rwanda Africa

Sector : Others Environment and Social Imp

Author / Organization : Miinistry ofTrade and Indust Rwanda Development Boar GASABO 3D and ALN CON

Date of publication : 08/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : EIA_M-BUGESERAs.pdf

Title : Industrial Parks/ ENVIRONMENTAL IMPACT ASSESSMENT/EIA_M-HUYEs

Data ID No. : 257

Country / Area : Rwanda Africa

Sector : Others Environment and Social Imp

Author / Organization : Miinistry ofTrade and Indust

Date of publication : 08/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : EIA_M-HUYEs.pdf

Title : Industrial Parks/ENVIRONMENTAL IMPACT ASSESSMENT REPORT/EIA_M-NYABIHUs

Data ID No. : 259

Country / Area : Rwanda Africa

Sector : Others Environment and Social Imp

Author / Organization : Miinistry ofTrade and Indust Rwanda Development Boar GASABO 3D and ALN CON

Date of publication : 08/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : EIA_M-NYABIHUs.pdf

Title : Industrial Parks/ENVIRONMENTAL IMPACT ASSESSMENT REPORT/EIA_M-RUSIZIs

Data ID No. : 260

Country / Area : Rwanda Africa

Sector : Others Environment and Social Imp

Author / Organization : Miinistry ofTrade and Indust Rwanda Development Boar GASABO 3D and ALN CON

Date of publication : 08/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : EIA_M-RUSIZIs.pdf

Title : Industrial Parks/HUYE BUSINESS PLAN/Final_Colour_Revised

Data ID No. : 261

Country / Area : Rwanda Africa

Sector : Others

Author / Organization : Miinistry ofTrade and Indust GASABO 3D and ALN CON

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Huye_Business_Plan_Final_Colour_Revis

Title : Industrial Parks/INFRASTRUCTURE FINAL REPORT//INTEGRATED STUDY FOR THE ESTABLISHMENT OF PROVINCIAL INDUSTRIAL PARKS (NYABIHU, HUYE, RUSIZI & BUGESERA)

Data ID No. : 262

Country / Area : Rwanda Africa

Sector : Others Environment and Social Imp

Author / Organization : Miinistry ofTrade and Indust GASABO 3D and ALN CON

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Infrastructure_Final_Report.pdf

Title : Industrial Parks/Main Report for the Integrated Study for the Establishment of Four Provincial Industrial Parks

Data ID No. : 263

Country / Area : Rwanda Africa

Sector : Master plan Load Demand Forecast

Author / Organization : Miinistry ofTrade and Indust

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Main_Report_for_the_Integrated_Studyfor

Title : Industrial Parks/KIGARI SPECIAL ECONOMIC ZONE/MAP_SHOWING3_PHASES_OF_KSEZ

Data ID No. : 265

Country / Area : Rwanda Africa

Sector : Load Demand Forecast Master plan

Author / Organization : Ministry of Trade and Industry

Date of publication : 07/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : MAP_SHOWING3_PHASES_OF_KSEZ.p

Title : Industrial Parks/NYABIHU BUSINESS PLAN

Data ID No. : 266

Country / Area : Rwanda Africa

Sector : Master plan Load Demand Forecast

Author / Organization : Ministry of Trade and Industry GASABO 3D and ALN CON

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Nyabihu_Business_Plan_Final_Colour.pdf

Title : Industrial Parks/Presentation_Kigali_SEZ_19_03_2012_02.

Data ID No. : 267

Country / Area : Rwanda Africa

Sector : Master plan Load Demand Forecast

Author / Organization : Ministry of Trade and Industry

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Presentation_Kigali_SEZ_19_03_2012_02.

Title : Industrial Parks/HUYE BUSINESS PLAN

Data ID No. : 268

Country / Area : Rwanda Africa

Sector : Others Master plan Load Demand Forecast

Author / Organization : Ministry of Trade and Industry

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rusizi_Business_Plan_Final_Colour.pdf

Title : Industrial Parks/RWANDAN ELECTRICAL NETWORK MAP 2013 WITH LOCATION OF INDUSTRIAL PARK

Data ID No. : 269

Country / Area : Rwanda Africa

Sector : Others Electrification Load Demand Forecast

Author / Organization : Ministry of Trade and Industry

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda_map_showing_Provincial_Industrial

Title : data for master plan update/The EAPP power system model - description of required country specific input
Data ID No. : 270
Country / Area : Rwanda Africa
Sector : Master plan Electrification Load Demand Forecast
Author / Organization : Ea Energy Analyses
Date of publication : 10/2013
Type of materials : electronic file
Data Storage location : database shared server
File Name : EAPP_description_of_data_input.docx

Title : Data for Master plan update/Supervisory_Control_and_Data_Acquisition_questions_Rwanda.
Data ID No. : 271
Country / Area : Rwanda Africa
Sector : Master plan Hydro
Author / Organization :
Date of publication :
Type of materials : electronic file
Data Storage location : database shared server
File Name : Supervisory_Control_and_Data_Acquisitio

Title : Master plan EAPP 2011 model/2011_EWSA_POWER_SYSTEM_LOAD_FLOW_DIAGRAM
Data ID No. : 272
Country / Area : Rwanda Africa
Sector : Master plan Load Demand Forecast
Author / Organization : EWSA
Date of publication :
Type of materials : electronic file
Data Storage location : database shared server
File Name : 2011_EWSA_POWER_SYSTEM_LOAD_F

Title : Master Plan_EAPP_2013-14/EAPP-description_of_data_input
Data ID No. : 278
Country / Area : Rwanda Africa
Sector : Master plan Electrification
Author / Organization : Ea Energy Analyses
Date of publication : 10/2013
Type of materials : electronic file
Data Storage location : database shared server
File Name : EAPP_description_of_data_input.docx

Title : Rwanda Electricity Sector Access Programme
Data ID No. : 293
Country / Area : Rwanda Africa
Sector : Electrification
Author / Organization : Castalia Strategic Advisors
Date of publication : 03/2009
Type of materials : electronic file
Data Storage location : database shared server
File Name : Castalia_Technical_Annex_Volumell.pdf

Title :	Rwanda Electricity Sector Access Programme/		
Data ID No. :	294		
Country / Area :	Rwanda	Africa	
Sector :	Electrification		
Author / Organization :	Castalia Strategic Advisors		
Date of publication :	03/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Prospectus_for_Rwanda_Electricty_Acces		
Title :	Rwanda Electricity Sector Access Programme(Technical_Annex_Volumell)		
Data ID No. :	297		
Country / Area :	Rwanda	Africa	
Sector :	Others		
Author / Organization :			
Date of publication :	03/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Technical_Annex_Volumell.pdf		
Title :	Program Hydroelectric regional (605084-EGTO-40ER-0401-PA_En_-Vol1-Appendix_A- Seismicity_Report)		
Data ID No. :	298		
Country / Area :	Rwanda	Africa	
Sector :	Electrification	Hydro	
Author / Organization :	SNC LAVALIN INTERNATI		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	605084-EGTO-40ER-0401-PA_En_-Vol1-		
Title :	Regional Rusumo Falls Hydroelectric and Multipurpose Project – Power Generation Plant Final Feasibility Study Phase(605084-EGTO-40ER-0401-PA_En_-Vol1- MainReport_18_July_2011)		
Data ID No. :	299		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Hydro	
Author / Organization :	SNC LAVALIN INTERNATI		
Date of publication :	07/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	605084-EGTO-40ER-0401-PA_En_-Vol1-		
Title :	Rusumo Transmission Lines Reports Vol V(Vol-V_Chapter10A_RAP_Annex10-2FS- Final)		
Data ID No. :	367		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :	10/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol-V_Chapter10A_RAP_Annex10-2FS-Fi		

Title :	National Land Use and Development Master Plan/II. Specific Studies(LandTenure)		
Data ID No. :	373		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Transmission	Land use
Author / Organization :	Swedesurvey		
Date of publication :	10/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	LandTenure.pdf		
Title :	National Land Use and Development Master Plan/II. Specific Studies(Phase_4_SocioEcon_Study_Report_First_Draft_NV_S)		
Data ID No. :	374		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Transmission	Land use
Author / Organization :	Swedesurvey		
Date of publication :	11/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Phase_4_SocioEcon_Study_Report_First_		
Title :	National Land Use and Development Master Plan/II. Specific Studies(Rwanda-08-Geo-01_draft)		
Data ID No. :	375		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Transmission	Land use
Author / Organization :	Swedesurvey		
Date of publication :	10/2008		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Rwanda-08-Geo-01_draft.pdf		
Title :	National Land Use and Development Master Plan/ II. Part 2 - Risk and suitability analysis(00_ReadMeFirst_SteeringCommitteDraft)		
Data ID No. :	376		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Transmission	Land use
Author / Organization :			
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	00_ReadMeFirst_SteeringCommitteDraft.p		
Title :	National Land Use and Development Master Plan/ II. Part 2 - Risk and suitability analysis(02_Demography_SteeringCommitteeDraft)		
Data ID No. :	377		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Transmission	Land use
Author / Organization :			
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	02_Demography_SteeringCommitteeDraft.		

Title : National Land Use and Development Master Plan/ II. Part 2 - Risk and suitability analysis(04_Education_SteeringCommitteeDraft)
Data ID No. : 378
Country / Area : Rwanda Africa
Sector : Master plan Transmission Land use
Author / Organization :
Date of publication : 03/2010
Type of materials : electronic file
Data Storage location : database shared server
File Name : 04_Education_SteeringCommitteeDraft.pdf

Title : National Land Use and Development Master Plan/ II. Part 2 - Risk and suitability analysis(05_Health_SteeringCommitteeDraft)
Data ID No. : 379
Country / Area : Rwanda Africa
Sector : Master plan Transmission Land use
Author / Organization :
Date of publication : 03/2010
Type of materials : electronic file
Data Storage location : database shared server
File Name : 05_Health_SteeringCommitteeDraft.pdf

Title : National Land Use and Development Master Plan/ II. Part 2 - Risk and suitability analysis(09_Energy_SteeringCommitteeDraft)
Data ID No. : 380
Country / Area : Rwanda Africa
Sector : Master plan Transmission Land use
Author / Organization :
Date of publication : 03/2010
Type of materials : electronic file
Data Storage location : database shared server
File Name : 09_Energy_SteeringCommitteeDraft.pdf

Title : National Land Use and Development Master Plan/ II. Part 2 - Risk and suitability analysis(10_Environment_SteeringCommitteeDraft)
Data ID No. : 381
Country / Area : Rwanda Africa
Sector : Master plan Land use
Author / Organization :
Date of publication : 03/2010
Type of materials : electronic file
Data Storage location : database shared server
File Name : 10_Environment_SteeringCommitteeDraft.p

Title : National Land Use and Development Master Plan/ II. Part 2 - Risk and suitability analysis(11_Scenario_SteeringCommitteeDraft)
Data ID No. : 382
Country / Area : Rwanda Africa
Sector : Master plan Land use
Author / Organization :
Date of publication : 03/2010
Type of materials : electronic file
Data Storage location : database shared server
File Name : 11_Scenario_SteeringCommitteeDraft.pdf

Title :	National Land Use and Development Master Plan/ II. Part 2 - Risk and suitability analysis(12_Appendix_SteeringCommitteeDraft)		
Data ID No. :	383		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Land use	
Author / Organization :			
Date of publication :	03/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	12_Appendix_SteeringCommitteeDraft.pdf		
Title :	National Land Use and Development Master Plan\IV. Consultation Report (District_Profiling)		
Data ID No. :	384		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Transmission	Land use
Author / Organization :			
Date of publication :	05/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	District_Profiling.pdf		
Title :	National Land Use and Development Master Plan/IV. Consultation Report (NewspaperArticleExample)		
Data ID No. :	386		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Transmission	Land use
Author / Organization :			
Date of publication :	05/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	NewspaperArticleExample.pdf		
Title :	National Land Use and Development Master Plan/IV. Consultation Report (ConsultationReport_Final.)		
Data ID No. :	387		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Transmission	Land use
Author / Organization :			
Date of publication :	06/2010		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	ConsultationReport_Final.pdf		
Title :	National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010 Version(4.0_FinalPartTextbook_v5)		
Data ID No. :	388		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Land use	
Author / Organization :	Swedesurvey		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	4.0_FinalPartTextbook_v5.pdf		

Title : National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010
Version(4.2_AssessmentIndicatorsForPlanRevision_v2)

Data ID No. : 389

Country / Area : Rwanda Africa
Sector : Master plan Land use

Author / Organization : Swedesurvey

Date of publication : 08/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : 4.2_AssessmentIndicatorsForPlanRevision

Title : National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010
Version/Appendix3 (4.3_IDDP_v18)

Data ID No. : 390

Country / Area : Rwanda Africa
Sector : Master plan Land use

Author / Organization : Swedesurvey

Date of publication : 12/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : 4.3_IDDP_v18.pdf

Title : National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010
Version(4.4_ImiduguduGuidelines_v4)

Data ID No. : 391

Country / Area : Rwanda Africa
Sector : Master plan Transmission Land use

Author / Organization : Swedesurvey

Date of publication : 10/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : 4.4_ImiduguduGuidelines_v4.pdf

Title : National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010
Version(4.5_DistrictDelineation_v2)

Data ID No. : 392

Country / Area : Rwanda Africa
Sector : Master plan Transmission Land use

Author / Organization : Swedesurvey

Date of publication : 08/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : 4.5_DistrictDelineation_v2.pdf

Title : National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010
Version(4.6_UrbanDevelopemntPlanGuidelines_v6)

Data ID No. : 393

Country / Area : Rwanda Africa
Sector : Master plan Transmission Land use

Author / Organization : Swedesurvey

Date of publication : 10/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : 4.6_UrbanDevelopemntPlanGuidelines_v6.

Title : National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010
Version(4.7_InformalSettlementMethod_v3)

Data ID No. : 394

Country / Area : Rwanda Africa

Sector : Master plan Transmission Land use

Author / Organization : Swedesurvey

Date of publication : 09/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : 4.7_InformalSettlementMethod_v3.pdf

Title : National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010
Version(4.9_MapPortfolio)

Data ID No. : 395

Country / Area : Rwanda Africa

Sector : Master plan Transmission Land use

Author / Organization : Swedesurvey

Date of publication : 09/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : 4.9_MapPortfolio_v3.pdf

Title : National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010
Version(4.10_Metadata_v2.)

Data ID No. : 396

Country / Area : Rwanda Africa

Sector : Master plan Transmission Land use

Author / Organization : Swedesurvey

Date of publication : 08/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : 4.10_Metadata_v2.pdf

Title : National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010
Version(Map)

Data ID No. : 397

Country / Area : Rwanda Africa

Sector : Master plan Transmission Land use

Author / Organization : Swedesurvey

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Map.pdf

Title : National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010
Version(TextbookFinalPartfrontpage_v4)

Data ID No. : 398

Country / Area : Rwanda Africa

Sector : Master plan Transmission Land use

Author / Organization : Swedesurvey

Date of publication : 10/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : TextbookFinalPartfrontpage_v4.pdf

Title :	National Land Use and Development Master Plan/V. NLUMP Draft Dec 2010 Version(4.0_FinalPartTextbook_v5)		
Data ID No. :	399		
Country / Area :	Rwanda	Africa	
Sector :	Master plan	Transmission	Land use
Author / Organization :	Swedesurvey		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	4.0_FinalPartTextbook_v5.pdf		
Title :	Urban Planning & Housing Development/LUDPs secondary cities(HUYE_LLUDP_FINAL_REPORT_2011-2020.)		
Data ID No. :	401		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Load Demand Forecast	Master plan
Author / Organization :	Two Ems Associates Ltd &		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	HUYE_LLUDP_FINAL_REPORT_2011-20		
Title :	Urban Planning & Housing Development/LUDPs secondary cities(MUSANZE-RAPPORT_DEFINITIF)		
Data ID No. :	402		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Electrification
Author / Organization :			
Date of publication :	11/2008		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	MUSANZE-RAPPORT_DEFINITIF.pdf		
Title :	Urban Planning & Housing Development/LUDPs secondary cities(Rapport_final_Nyagatare)		
Data ID No. :	403		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Others	Electrification
Author / Organization :	Tecsult International Limitée		
Date of publication :	08/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Rapport_final_Nyagatare.pdf		
Title :	Urban Planning & Housing Development/LUDPs secondary cities(Rubavu)		
Data ID No. :	404		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Others	Electrification
Author / Organization :	URGENT CAD INTERNATI MININFRA(MINISTRY OF I		
Date of publication :	03/2011		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Rubavu.pdf		

Title :	Urban Planning & Housing Development/LUDPs secondary cities(RUSIZI_MP)		
Data ID No. :	405		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Master plan	Electrification
Author / Organization :	MININFRA(MINISTRY OF I		
Date of publication :	05/2005		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	RUSIZI_MP.pdf		
Title :	Transmission lines (RFP_for_Transmission_lines_feasibility_study-May_2012)		
Data ID No. :	407		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Feasibility study	
Author / Organization :	EWSA		
Date of publication :	05/2012		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	RFP_for_Transmission_lines_feasibility_st		
Title :	Transmission lines/STEG_Feasibility_Study_Report		
Data ID No. :	408		
Country / Area :	Rwanda	Africa	
Sector :	Transmission	Feasibility study	
Author / Organization :	EWSA		
Date of publication :	08/2013		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	STEG_Feasibility_Study_Report.pdf		
Title :	20130507Rwanda_Electrical_Network_with_cell_without_power		
Data ID No. :	409		
Country / Area :	Rwanda	Africa	
Sector :	Electrification		
Author / Organization :	EWSA	MININFRA(MINISTRY OF I	
Date of publication :	05/2013		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	20130507Rwanda_Electrical_Network_wit		
Title :	Rwanda_country_profile_USAID_2012		
Data ID No. :	410		
Country / Area :	Rwanda	Africa	
Sector :	Others		
Author / Organization :	USAID		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Rwanda_country_profile_USAID_2012.pdf		

Title : Rwandan_Grid_SLD_15-03-2012

Data ID No. : 412

Country / Area : Rwanda Africa

Sector : Electrification Transmission

Author / Organization :

Date of publication : 03/2012

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwandan_Grid_SLD_15-03-2012.pdf

Title : new_doc_in_etu

Data ID No. : 413

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 10/2013

Type of materials :

Data Storage location :

File Name : new_doc_in_etu.docx

Title : Technical_data_sheets_for_110kV_towers_for_William_EWSA

Data ID No. : 414

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Technical_data_sheets_for_110kV_towers

Title : website_update_of_ETU-draft-REV1(2)

Data ID No. : 415

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 11/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : website_update_of_ETU-draft-REV1(2).do

Title : Volume_I_Kinigi_NTS_revA_FINAL

Data ID No. : 416

Country / Area : Rwanda Africa

Sector : Others Environment and Social Imp

Author / Organization : EWSA

Date of publication : 09/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : Volume_I_Kinigi_NTS_revA_FINAL.PDF

Title : Volume_II_Karisimbi_ESIA_revB_FINAL-p34

Data ID No. : 417

Country / Area : Rwanda Africa

Sector : Others Environment and Social Imp

Author / Organization : EWSA

Date of publication : 09/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : Volume_II_Karisimbi_ESIA_revB_FINAL-p

Title : From MINECOFIN/Population_projection2022

Data ID No. : 418

Country / Area : Rwanda Africa

Sector : Others Economic and Financial An Load Demand Forecast

Author / Organization : NISR(National Institute of st

Date of publication : 07/2009

Type of materials : electronic file

Data Storage location : database shared server

File Name : Population_projection2022.pdf

Title : Financial_statements_Final_draft

Data ID No. : 419

Country / Area : Rwanda Africa

Sector : Economic and Financial An

Author / Organization : EWSA

Date of publication : 06/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Financial_statements_Final_draft.pdf

Title : NETWORK DIAGRAMS/MUSANZE ELECTRIC NETWORK(2-Stations_31)

Data ID No. : 422

Country / Area : Rwanda Africa

Sector : Electrification Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 2-Stations_31.pdf

Title : NETWORK DIAGRAMS/MUSANZE ELECTRIC NETWORK(2-Stations_18)

Data ID No. : 427

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 2-Stations_18.pdf

Title : NETWORK DIAGRAMS/NYAGATARE NETWORK(2-Stations_31)

Data ID No. : 428

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : 2-Stations_31.pdf

Title : NETWORK DIAGRAMS/STATION GICUMBI - ELECTRICAL NETWORK

Data ID No. : 429

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : GICUMBI_electrical_Network.pdf

Title : NETWORK DIAGRAMS/HUYE ELECTRIC NETWORK

Data ID No. : 430

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : HUYE_electrical_Network.pdf

Title : NETWORK DIAGRAMS/STATION KABAYA - ELECTRIC NETWORK

Data ID No. : 431

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : KABAYA_electrical_Network.pdf

Title : NETWORK DIAGRAMS/KARONGI ELECTRIC NETWORK

Data ID No. : 432

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : KARONGI_electrical_Network.pdf

Title : NETWORK DIAGRAMS/MUHANGA ELECTRIC NETWORK

Data ID No. : 433

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : MUHANGA_electrical_Network.pdf

Title : NETWORK DIAGRAMS/MUSANZE ELECTRIC NETWORK

Data ID No. : 434

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : MUSANZE_electrical_Network.pdf

Title : NETWORK DIAGRAMS/KIBUNGO ELECTRIC NETWORK

Data ID No. : 435

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : NGOMA_electrical_Network.pdf

Title : NETWORK DIAGRAMS/Single line Diagram of NYAGATARE electrical network

Data ID No. : 436

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : NYAGATARE_electrical_Network.pdf

Title : NETWORK DIAGRAMS/NYAMAGABE ELECTRICAL NETWORK

Data ID No. : 437

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : NYAMAGABE_electrical_Network.pdf

Title : NETWORK DIAGRAMS/NYAMATA ELECTRIC NETWORK

Data ID No. : 438

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : NYAMATA_electrical_Network.pdf

Title : NETWORK DIAGRAMS/NYANZA ELECTRIC NETWORK

Data ID No. : 439

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : NYANZA_electrical_Network.pdf

Title : RUBAVU ELECTRIC NETWORK/RUBAVU_electrical_Network

Data ID No. : 440

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RUBAVU_electrical_Network.pdf

Title : RUHANGO ELECTRIC NETWORK/RUHANGO_electrical_Network

Data ID No. : 441

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RUHANGO_electrical_Network.pdf

Title : NETWORK DIAGRAMS/RULINDO NETWORK

Data ID No. : 442

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization :

Date of publication : 08/2005

Type of materials : electronic file

Data Storage location : database shared server

File Name : RULINDO_electrical_Network.pdf

Title : CYANGUGU ELECTRIC NETWORK

Data ID No. : 443

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RUSIZI_electrical_Network.pdf

Title : NETWORK DIAGRAMS/RWAMAGANA_electrical_Network

Data ID No. : 444

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWAMAGANA_electrical_Network.pdf

Title : NETWORK DIAGRAMS/RWANDAN ELECTRICAL NETWORK MAP 2012

Data ID No. : 445

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 12/2012

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwandan_map_Electrical_Grid_28-12-201

Title : NETWORK DIAGRAMS/RWANDAN ELECTRICAL NETWORK -SINGLE LINE
DIAGRAM

Data ID No. : 446

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 01/2012

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda-Single_line_Diagram-National_Gri

Title : NETWORK DIAGRAMS/SUBSTATION JABANA 110kV/15kV

Data ID No. : 447

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Single_Line_Diagram-DSK_electrical_Net

Title : NETWORK DIAGRAMS/SUBSTATION JABANA 110kV/15kV

Data ID No. : 448

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : Single_Line_Diagram-DSK-April_2011.pdf

Title : A0_EWSA_NETWORK_OVERVIEW_GN(3).(ELECTRICAL NETWORK OVERVIEW
110 / 70 / 30 / 15 / 11 / 6,6kV)

Data ID No. : 449

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : A0_EWSA_NETWORK_OVERVIEW_GN(

Title : MAP OF 20 BIG CONSUMERES OF ELECTRICITY EWSA

Data ID No. : 450

Country / Area : Rwanda Africa

Sector : Transmission Electrification

Author / Organization : EWSA

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : MAP_OF_20_BIG_CONSUMERS.pdf

Title : RWANDA ELECTRICAL NETWORK MAP 2013(Rwanda_Electrical_Network)

Data ID No. : 451

Country / Area : Rwanda Africa

Sector : Transmission Electrification

Author / Organization : EWSA

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Rwanda_Electrical_Network.pdf

Title : RWANDAN ELECTRICAL NETWORK -SINGLE LINE DIAGRAM

Data ID No. : 452

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : EWSA

Date of publication : 01/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : singleline_January2013.pdf

Title : JICA/EU Regional Project for G Exploration/Inception_Report.1.

Data ID No. : 454

Country / Area : Rwanda Africa D.R. CONGO

Sector : Inception report Geothermal

Author / Organization : NGALI Institute

Date of publication : 03/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : Inception_Report.1.pdf

Title : JICA/EU Regional Project for G Exploration/Inception_Report.2

Data ID No. : 455

Country / Area : Rwanda Africa D.R. CONGO

Sector : Inception report Geothermal

Author / Organization : NGALI Institute

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Inception_Report.2.pdf

Title : JICA/T.lines docs/T-lines Final FSVolume I(FICHT-5469510-v1-Vol-I_Chapter01A-Annex1-2)

Data ID No. : 460

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : FICHTNER

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-5469510-v1-Vol-I_Chapter01A-Ann

Title : JICA/T.lines docs/T-lines Final FSVolume I(FICHT-5469512-v1-Vol-I_Chapter01A-Annex1-1.)

Data ID No. : 461

Country / Area : Rwanda Africa

Sector : Transmission

Author / Organization : FICHTNER

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-5469512-v1-Vol-I_Chapter01A-Ann

Title : JICA/T.lines docs/T-lines Final FSVolume I(FICHT-5896164-v1-Vol-I_Chapter01_Summary_FS-Final)

Data ID No. : 462

Country / Area : Rwanda Africa

Sector : Feasibility study Hydro Transmission

Author / Organization : FICHTNER

Date of publication : 03/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : FICHT-5896164-v1-Vol-I_Chapter01_Sum

Title :	JICA/T.lines docs/T-lines Final FSVolume II (FICHT-5896256-v1-Vol-II_Chapter04_Load_forecast_FS-Final)		
Data ID No. :	463		
Country / Area :	Rwanda	Burundi	Tanzania
Sector :	Others		
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5896256-v1-Vol-II_Chapter04_Loa		
Title :	JICA/T.lines docs/T-lines Final FSVolume II (FICHT-5896273-v1-Vol-II_Chapter04A_Annex4-2_Rwanda_FS-Final)		
Data ID No. :	465		
Country / Area :	Rwanda	Africa	
Sector :	Others		
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5896273-v1-Vol-II_Chapter04A_An		
Title :	FICHT-5982584-v1-Vol-II_Chapter13_RSWI_Institutional_FS-Final.(FICHT-5998986-v1-Vol-II_Chapter06_Summary)		
Data ID No. :	472		
Country / Area :	Rwanda	Burundi	Tanzania
Sector :	Transmission		
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5998986-v1-Vol-II_Chapter06_Sum		
Title :	FICHT-5982584-v1-Vol-II_Chapter13_RSWI_Institutional_FS-Final.(FICHT-5998997-v2-Vol-II_Chapter08_Summary)		
Data ID No. :	474		
Country / Area :	Rwanda	Burundi	Tanzania
Sector :	Others		
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5998997-v2-Vol-II_Chapter08_Sum		
Title :	JICA/T-lines Final FS/Volume III (Estimation of Transmission Line Costs)/FICHT-5535154-v1-Vol-III_Chapter07A-Annex_VII_(Costs)		
Data ID No. :	487		
Country / Area :	Rwanda	Africa	
Sector :	Feasibility study	Hydro	Transmission
Author / Organization :	FICHTNER		
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	FICHT-5535154-v1-Vol-III_Chapter07A-An		

Title : ENERGY SECTOR STRATEGIC PLAN(Revised_Energy_Sector_Strategic_Plan-31Oct2013.)

Data ID No. : 488

Country / Area : Rwanda Africa

Sector : Electrification Transmission Master plan

Author / Organization : MININFRA(MINISTRY OF I

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : Revised_Energy_Sector_Strategic_Plan-3

Title : KIGALI MASTER PLAN 2013 REPORTS/RWF1101_01_Kigali City_Inception Report

Data ID No. : 489

Country / Area : Rwanda Africa

Sector : Master plan Electrification

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_01_Kigali_city_Inception_Repor

Title : KIGALI MASTER PLAN 2013 REPORTS(WF1101_02_Kigali City_Analysis_Benchmarking_and_Vision_Report)

Data ID No. : 490

Country / Area : Rwanda Africa

Sector : Master plan Electrification

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_02_Kigali_City_Analysis_Bench

Title : KIGALI MASTER PLAN 2013 REPORTS/city level / (RWF1101_03_Kigali_City_Master_Plan_Report)

Data ID No. : 491

Country / Area : Rwanda Africa

Sector : Master plan Electrification

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_03_Kigali_City_Master_Plan_R

Title : KIGALI MASTER PLAN 2013 REPORTS/ city level / (RWF1101_04_Kigali_Transportation_Master_Plan) KIGALI MASTER PLAN 2013 REPORTS/city level /

Data ID No. : 492

Country / Area : Rwanda Africa

Sector : Master plan Electrification

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_04_Kigali_Transportation_Mast

Title : KIGALI MASTER PLAN 2013 REPORTS/district level/KIGALI CITY SUB-AREAS
PLANNING I DETAILED MASTER PLAN REPORT FOR NYARUGENGE
DISTRICT/WF0801-Vol_1_NY_MP_Final_Report

Data ID No. : 493

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization :

Date of publication : 02/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF0801-Vol_1_NY_MP_Final_Report-Fe

Title : KIGALI MASTER PLAN 2013 REPORTS/district
level/RWF1101_05_Gasabo_Detailed_Master_Plan_Report

Data ID No. : 494

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_05_Gasabo_Detailed_Master_

Title : KIGALI MASTER PLAN 2013 REPORTS/district level
/RWF1101_06_Kicukiro_Detailed_Master_Plan_Report

Data ID No. : 495

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_06_Kicukiro_Detailed_Master_

Title : KIGALI MASTER PLAN 2013
REPORTS/Zoning/RWF1101_11_Gasabo_Zoning_Report

Data ID No. : 496

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_11_Gasabo_Zoning_Report_04

Title : KIGALI MASTER PLAN 2013
REPORTS/Zoning/RWF1101_12_Naryugenge_Zoning_Report

Data ID No. : 497

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_12_Naryugenge_Zoning_Repor

Title : KIGALI MASTER PLAN 2013 REPORTS/zoning
/RWF1101_13_Kicukiro_Zoning_Report

Data ID No. : 498

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_13_Kicukiro_Zoning_Report_04

Title : KIGALI MASTER PLAN 2013 REPORTS/urban design/RWF0801-Vol_4-CBD-
Final_Report

Data ID No. : 499

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization :

Date of publication : 02/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF0801-Vol_4-CBD-Final_Report-Feb20

Title : KIGALI MASTER PLAN 2013 REPORTS/urban
design/RWF1101_07_Kimironko_Urban_Design_Report

Data ID No. : 500

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_07_Kimironko_Urban_Design_

Title : KIGALI MASTER PLAN 2013 REPORTS/urban
design/RWF1101_08_Gahanga_Urban_Design_Report

Data ID No. : 501

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_08_Gahanga_Urban_Design_R

Title : KIGALI MASTER PLAN 2013
REPORTS/implementation/(RWF1101_09_Kigali_City_Implementation_Report)

Data ID No. : 502

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_09_Kigali_City_Implementation

Title : KIGALI MASTER PLAN 2013
REPORTS/GIS/RWF1101_10_Kigali_City_GIS_Database_Design_Report

Data ID No. : 503

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_10_Kigali_City_GIS_Database_

Title : Daniel Private

Data ID No. : 505

Country / Area : Rwanda Africa

Sector : ICT Electrification Master plan

Author / Organization : EWSA REG

Date of publication : 11/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : MUO.docx

Title : 3rd study

Data ID No. : 509

Country / Area : Rwanda Africa

Sector : Others

Author / Organization : MININFRA(MINISTRY OF I

Date of publication : 11/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : MOU.docx

Title : KIGALI MASTER PLAN 2013 REPORTS/ ANALYSIS AND
VISION(RWF1101_02_Kigali_City_Analysis_Benchmarking_and_Vision_Report_0306
2013-s)

Data ID No. : 512

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_02_Kigali_City_Analysis_Bench

Title : KIGALI MASTER PLAN 2013 REPORTS/DETAILED MASTER PLANS/CITY
LEVEL(RWF1101_03_Kigali_City_Master_Plan_Report_03062013-s)

Data ID No. : 513

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_03_Kigali_City_Master_Plan_R

Title : KIGALI MASTER PLAN 2013 REPORTS/DETAILED MASTER PLANS/CITY LEVEL(RWF1101_04_Kigali_Transportation_Master_Plan_04062013-s)

Data ID No. : 514

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_04_Kigali_Transportation_Mast

Title : KIGALI MASTER PLAN 2013 REPORTS/DETAILED MASTER PLANS/DISTRICT LEVEL(RWF0801-Vol_1_NY_MP_Final_Report-Feb2010)

Data ID No. : 515

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization :

Date of publication : 02/2010

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF0801-Vol_1_NY_MP_Final_Report-Fe

Title : KIGALI MASTER PLAN 2013 REPORTS/DETAILED MASTER PLANS/DISTRICT LEVEL(RWF1101_05_Gasabo_Detailed_Master_Plan_Report_03062013-s)
KIGALI MASTER PLAN 2013 REPORTS/DETAILED MASTER PLANS/DISTRICT LEVEL(RWF1101_05_Gasabo_Detailed_Master_Plan_Report_03062013-s)

Data ID No. : 516

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization :

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_05_Gasabo_Detailed_Master_

Title : KIGALI MASTER PLAN 2013 REPORTS/DETAILED MASTER PLANS/DISTRICT LEVEL(RWF1101_06_Kicukiro_Detailed_Master_Plan_Report_03062013-s)

Data ID No. : 517

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_06_Kicukiro_Detailed_Master_

Title : KIGALI MASTER PLAN 2013 REPORTS/ZONING(RWF1101_11_Gasabo_Zoning_Report_04062013-s)

Data ID No. : 518

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_11_Gasabo_Zoning_Report_04

Title : KIGALI MASTER PLAN 2013
REPORTS/ZONING(RWF1101_12_Naryugenge_Zoning_Report_04062013-s)

Data ID No. : 519

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization :

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_12_Naryugenge_Zoning_Repor

Title :
KIGALI MASTER PLAN 2013 REPORTS/DETAILED MASTER
PLANS/ZONING(RWF1101_13_Kicukiro_Zoning_Report_04062013-s)

Data ID No. : 520

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization :

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_13_Kicukiro_Zoning_Report_04

Title : KIGALI MASTER PLAN 2013 REPORTS/URBAN DESIGN(RWF0801-Vol_4-CBD-
Final_Report-Feb2010)

Data ID No. : 521

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization :

Date of publication : 02/2010

Type of materials :

Data Storage location :

File Name : RWF0801-Vol_4-CBD-Final_Report-Feb20

Title : KIGALI MASTER PLAN 2013 REPORTS/URBAN
DESIGN/(RWF1101_07_Kimironko_Urban_Design_Report_03062013-s)

Data ID No. : 522

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization :

Date of publication : 05/2013

Type of materials :

Data Storage location :

File Name : RWF1101_07_Kimironko_Urban_Design_

Title : KIGALI MASTER PLAN 2013 REPORTS/URBAN
DESIGN(RWF1101_08_Gahanga_Urban_Design_Report_03062013-s)

Data ID No. : 523

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization :

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_08_Gahanga_Urban_Design_R

Title : KIGALI MASTER PLAN 2013
REPORTS/IMPLEMENTATION(RWF1101_09_Kigali_City_Implementation_Report_03
062013-s)

Data ID No. : 525

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization :

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_09_Kigali_City_Implementation

Title : KIGALI MASTER PLAN 2013 REPORTS/GIS
DES/IGN(RWF1101_10_Kigali_City_GIS_Database_Design_Report_03062013-s)

Data ID No. : 526

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization :

Date of publication : 05/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : RWF1101_10_Kigali_City_GIS_Database_

Title : KIGALI MASTER PLAN 2013 REPORTS/SUMMARY
REPORT(KIC_GAS_Summary_Report_20130909)

Data ID No. : 531

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 08/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : KIC_GAS_Summary_Report_20130909.pd

Title : KIGALI MASTER PLAN 2013 REPORTS/SUMMARY
REPORT(KIC_GAS_Summary_Report_20130909_S)

Data ID No. : 532

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 08/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : KIC_GAS_Summary_Report_20130909_S

Title :
KIGALI MASTER PLAN 2013 REPORTS/SUMMARY
REPORT(KIC_GAS_Summary_Report_20130909_S_2)

Data ID No. : 533

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : Surbana

Date of publication : 08/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : KIC_GAS_Summary_Report_20130909_S

Title : Peat Masterplan 1993(RW_masterplan_bog_survey(1-48))

Data ID No. : 534

Country / Area : Rwanda Africa

Sector : Master plan Feasibility study

Author / Organization : BRGM Ekono Energy Ltd

Date of publication : 01/1993

Type of materials :

Data Storage location :

File Name : RW_masterplan_bog_survey(1-48).pdf

Title : Peat Masterplan 1993(RW_masterplan_EIA(1-35))

Data ID No. : 535

Country / Area : Rwanda Africa

Sector : Master plan Feasibility study

Author / Organization : BRGM Ekono Energy Ltd

Date of publication : 01/1993

Type of materials : electronic file

Data Storage location : database shared server

File Name : RW_masterplan_EIA(1-35).pdf

Title : Peat Masterplan 1993(RW_masterplan_EIA(36-57))

Data ID No. : 536

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : BRGM Ekono Energy Ltd

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : RW_masterplan_EIA(36-57).pdf

Title : Peat Masterplan 1993(RW_masterplan_feasibility(1-45))

Data ID No. : 537

Country / Area : Rwanda Africa

Sector : Master plan Feasibility study

Author / Organization : BRGM Ekono Energy Ltd

Date of publication : 01/1993

Type of materials : electronic file

Data Storage location : database shared server

File Name : RW_masterplan_feasibility(1-45).pdf

Title : Peat Masterplan 1993(RW_masterplan_feasibility(46-91))

Data ID No. : 538

Country / Area : Rwanda Africa

Sector : Master plan

Author / Organization : BRGM Ekono Energy Ltd

Date of publication : 01/1993

Type of materials : electronic file

Data Storage location : database shared server

File Name : RW_masterplan_feasibility(46-91).pdf

Title : Peat Masterplan 1993(RW_masterplan_hydrology)

Data ID No. : 539

Country / Area : Rwanda Africa
Sector : Master plan Feasibility study Hydro

Author / Organization : BRGM Ekono Energy Ltd

Date of publication : 01/1993

Type of materials : electronic file

Data Storage location : database shared server

File Name : RW_masterplan_hydrology.pdf

Title : Peat Masterplan 1993(RW_masterplan_summary)

Data ID No. : 540

Country / Area : Rwanda Africa
Sector : Master plan Feasibility study

Author / Organization : BRGM Ekono Energy Ltd

Date of publication : 01/1993

Type of materials : electronic file

Data Storage location : database shared server

File Name : RW_masterplan_summary.pdf

Title : Peat Masterplan 1993(RW-masterplan_bog_survey(49-))

Data ID No. : 541

Country / Area : Rwanda Africa
Sector : Master plan

Author / Organization : BRGM Ekono Energy Ltd

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : RW-masterplan_bog_survey(49-).pdf

Title : Peat Masterplan 1993(RW-masterplan_market_study)

Data ID No. : 542

Country / Area : Rwanda Africa
Sector : Master plan Feasibility study

Author / Organization : BRGM Ekono Energy Ltd

Date of publication : 01/1993

Type of materials : electronic file

Data Storage location : database shared server

File Name : RW-masterplan_market_study.pdf

Title : Peat Masterplan 1993(RW-masterplan_supplementary)

Data ID No. : 543

Country / Area : Rwanda Africa
Sector : Master plan Feasibility study

Author / Organization : BRGM Ekono Energy Ltd

Date of publication : 01/1993

Type of materials : electronic file

Data Storage location : database shared server

File Name : RW-masterplan_supplementary.pdf

Title :	Peat Methane from 28Jan2014/Methane data(Feasibilityreport)	
Data ID No. :	544	
Country / Area :	Rwanda	Africa
Sector :	Feasibility study	Methane
Author / Organization :		
Date of publication :	08/2000	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	Feasibilityreport.pdf	
Title :	Peat Methane from 28Jan2014/Methane data(Kivu_Management_Prescriptions-Final_Version_7_jan_2010)	
Data ID No. :	545	
Country / Area :	Rwanda	Africa
Sector :	Others	Methane
Author / Organization :	MININFRA(MINISTRY OF I	
Date of publication :	06/2009	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	Kivu_Management_Prescriptions-Final_Ve	
Title :	Peat Methane from 28Jan2014/Methane data(report_halbwachs_jointed_and_changes_acc_2003_11_21)	
Data ID No. :	546	
Country / Area :	Rwanda	Africa
Sector :	Methane	
Author / Organization :		
Date of publication :	06/2003	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	report_halbwachs_jointed_and_changes_a	
Title :	Peat Methane from 28Jan2014/Peat Data/52X101620_Peat_FinalReport Peat Methane from Cherles 28Jan2014/Peat Data/	
Data ID No. :	547	
Country / Area :	Rwanda	Africa
Sector :	Master plan	Peat
Author / Organization :	EWSA	POYRY
Date of publication :	02/2013	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	52X101620_Peat_FinalReport.pdf	
Title :	Peat Methane from 28Jan2014/Peat Data/Akanyaru_concessions_June_2013	
Data ID No. :	548	
Country / Area :	Rwanda	Africa
Sector :	Peat	
Author / Organization :		
Date of publication :	06/2013	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	Akanyaru_concessions_June_2013.pdf	

Title : Peat Methane from 28Jan2014/Peat Data/Feasibility_Study_50MW_Peat_to_Power
Data ID No. : 549
Country / Area : Rwanda Africa
Sector : Feasibility study Peat
Author / Organization : EWSA WAPCOS
Date of publication : 08/2012
Type of materials : electronic file
Data Storage location : database shared server
File Name : Feasibility_Study_50MW_Peat_to_Power.p

Title : Peat Methane from 28Jan2014/Peat Data/Peat_Master_Plan_Update
Peat Methane from Cherles 28Jan2014/Peat Data/
Data ID No. : 550
Country / Area : Rwanda Africa
Sector : Master plan Peat
Author / Organization : EWSA POYRY
Date of publication : 02/2013
Type of materials : electronic file
Data Storage location : database shared server
File Name : Peat_Master_Plan_Update.pdf

Title : Peat Methane 28Jan2014/Peat Data/RW_Rainfall_Geological Data(BUGESERA)
Data ID No. : 551
Country / Area : Rwanda Africa
Sector : Peat
Author / Organization :
Date of publication :
Type of materials : electronic file
Data Storage location : database shared server
File Name : BUGESERA[1].JPG

Title : Peat Methane from 28Jan2014/Peat Data/RW_Rainfall_Geological Data(BUTARE)
Data ID No. : 552
Country / Area : Rwanda Africa
Sector : Peat Methane
Author / Organization :
Date of publication :
Type of materials : electronic file
Data Storage location : database shared server
File Name : BUTARE[1].JPG

Title : Peat Methane28Jan2014/Peat Data/RW_Rainfall_Geological
Data/RW_masterplan_hydrology
Data ID No. : 553
Country / Area : Rwanda Africa
Sector : Peat Master plan Hydro
Author / Organization : BRGM Ekono Energy Ltd
Date of publication : 01/1993
Type of materials : electronic file
Data Storage location : database shared server
File Name : RW_masterplan_hydrology[1].pdf

Title : Peat Methane28Jan2014/Peat Data/RW_Rainfall_Geological
Data(RW_masterplan_summary)

Data ID No. : 554

Country / Area : Rwanda Africa

Sector : Master plan Feasibility study Peat

Author / Organization : BRGM Ekono Energy Ltd

Date of publication : 01/1993

Type of materials : electronic file

Data Storage location : database shared server

File Name : RW_masterplan_summary[1].pdf

Title : Peat Methane28Jan2014/Peat Master Plan(Feasibilityreport_1)

Data ID No. : 555

Country / Area : Rwanda Africa

Sector : Peat Methane

Author / Organization : MINISTRY OF ENERGY, W

Date of publication : 08/2000

Type of materials : electronic file

Data Storage location : database shared server

File Name : Feasibilityreport_1.pdf

Title : Geotherml Data/Data Validation Workshop Jan
2013/Final_Draft_validation_workshop_singed_by_Mariita_Anastasia_and_Omenda

Data ID No. : 557

Country / Area : Rwanda Africa

Sector :

Author / Organization : EWSA

Date of publication : 01/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : Final_Draft_validation_workshop_singed_b

Title : Geotherml Data/Data Validation Workshop Jan 2013/signatures

Data ID No. : 558

Country / Area : Rwanda Africa

Sector : Geothermal

Author / Organization :

Date of publication :

Type of materials : electronic file

Data Storage location : database shared server

File Name : signatures.pdf

Title : Geotherml Data/EU_2013.06/25.EU Energy Initiative

Data ID No. : 561

Country / Area : Rwanda Africa

Sector :

Author / Organization :

Date of publication : 06/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : 20130611_EUEI-PDF_TimeFrame_MININ

Title :	Geotherml Data/EU_2013.06/28.Rwanda Gisenyi Geoth(1.Instructions_to_tenderers)	
Data ID No. :	562	
Country / Area :	Rwanda	Africa
Sector :	Geothermal	
Author / Organization :		
Date of publication :	01/2013	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	1.Instructions_to_tenderers.pdf	
Title :	Geotherml Data/EU_2013.06/28.Rwanda Gisenyi Geoth(2.Geothermal_Gisenyi-EWSA_TOR)	
Data ID No. :	563	
Country / Area :	Rwanda	Africa
Sector :	Geothermal	
Author / Organization :		
Date of publication :		
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	2.Geothermal_Gisenyi-EWSA_TOR.pdf	
Title :	Geotherml Data/EU_2013.06(26.(KfW-ITF&AU)_GRMF(June2012))	
Data ID No. :	564	
Country / Area :	Rwanda	Africa
Sector :	Geothermal	
Author / Organization :	KfW Entwicklungsbank	
Date of publication :		
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	26.(KfW-ITF&AU)_GRMF(June2012).pdf	
Title :	Geotherml Data/EU_2013.06(27.CEPGL_Regional_Geothermal_Exploration-Tender_document)	
Data ID No. :	565	
Country / Area :	Rwanda	Africa
Sector :	Geothermal	
Author / Organization :		
Date of publication :	01/2013	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	27.CEPGL_Regional_Geothermal_Explora	
Title :	Geotherml Data/UWERA&JEAN(2013.07.02)/Karengera(10.Bugarama)	
Data ID No. :	566	
Country / Area :	Rwanda	Africa
Sector :	Geothermal	
Author / Organization :		
Date of publication :		
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	10.Bugarama.jpg	

Title :	Geotherml Data/UWERA&JEAN(2013.07.02)(6.UNU-GTP-2009-25)/ASSESSING GENERATING CAPACITY OF RWANDA	
Data ID No. :	567	
Country / Area :	Rwanda	Africa
Sector :	Geothermal	
Author / Organization :		
Date of publication :		
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	6.UNU-GTP-2009-25.pdf	
Title :	Geotherml Data/UWERA&JEAN(2013.07.02)(7.UNU-GTP-2011-28)/PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT	
Data ID No. :	568	
Country / Area :	Rwanda	Africa
Sector :	Geothermal	
Author / Organization :	EWSA	
Date of publication :		
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	7.UNU-GTP-2011-28.pdf	
Title :	Cobus report/Review of Grid Strengthening Projects For 2014 - 2018(EWSA_Review_o_TX_Projects_V3_Final)	
Data ID No. :	570	
Country / Area :	Rwanda	Africa
Sector :	Grid Strengthening	
Author / Organization :	EWSA	World Bank
Date of publication :	02/2014	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	EWSA_Review_o_TX_Projects_V3_Final.p	
Title :	Cobus report/RWANDA ELECTRICAL NETWORK 2014	
Data ID No. :	571	
Country / Area :	Rwanda	Africa
Sector :	Electrification	
Author / Organization :	EWSA	
Date of publication :	06/2014	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	Rwanda_Electrical_network_2014.pdf	
Title :	JICA EAPP/REGIONAL POWER SYSTEM MASTER PLAN AND GRID CODE STUDY(EAPP_MP_2011)	
Data ID No. :	572	
Country / Area :	Rwanda	Africa
Sector :	Grid Code	
Author / Organization :	SNC LAVALIN INTERNATI	
Date of publication :	05/2011	
Type of materials :	electronic file	
Data Storage location :	database shared server	
File Name :	EAPP_MP_2011.pdf	

Title :	NELSAP Subsidiary Action Program(Interconnectin_Project_Presentation_to_JICA_on_25_June_2014)		
Data ID No. :	573		
Country / Area :	Rwanda	Africa	Kenya
Sector :	Others	Interconnector	
Author / Organization :			
Date of publication :	06/2014		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Interconnectin_Project_Presentation_to_JI		

Title :	NELSAP(Rusumo_FAIL_Initiative_NELSAP)		
Data ID No. :	574		
Country / Area :	Rwanda	Africa	Tanzania
Sector :	Hydro		
Author / Organization :	Nile Basin Initiative		
Date of publication :	06/2014		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Rusumo_FAIL_Initiative_NELSAP.pdf		

Title :	Peat / Methane_Peat_Waste_Breakout_session		
Data ID No. :	575		
Country / Area :	Rwanda	Africa	
Sector :	Peat	Methane	Hydro
Author / Organization :			
Date of publication :	02/2012		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Methane_Peat_Waste_Breakout_session.		

Title :	Rura/Electricity_Licensing_Regulations		
Data ID No. :	576		
Country / Area :	Rwanda	Africa	
Sector :	Others	Retail service	
Author / Organization :	RURA		
Date of publication :	07/2013		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Electricity_Licensing_Regulations.pdf		

Title :	Japanese paper (0905_out_g_rw_methane_kivulake(1))		
Data ID No. :	577		
Country / Area :	Rwanda	Africa	
Sector :	Methane		
Author / Organization :			
Date of publication :	05/2009		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	0905_out_g_rw_methane_kivulake(1).pdf		

Title : Symbion power article(allAfrica.com_Rwanda_Awards_50MW_Methane_Gas-to-Electricity_Project_on_Lake_Kivu_to_U.S)

Data ID No. : 578

Country / Area : Rwanda Africa

Sector : Methane

Author / Organization : Symbion Power

Date of publication : 08/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : allAfrica.com_Rwanda_Awards_50MW_M

Title : Energy_Access_and_Security_in_Eastern_Africa_by_UN

Data ID No. : 579

Country / Area : Rwanda Africa

Sector : Hydro Others

Author / Organization : United Nations

Date of publication : 01/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : Energy_Access_and_Security_in_Eastern

Title : Geothermal_Breakout_Session(EWSA_HP_2012)

Data ID No. : 580

Country / Area : Rwanda Africa

Sector : Geothermal

Author / Organization : EWSA

Date of publication : 02/2012

Type of materials : electronic file

Data Storage location : database shared server

File Name : Geothermal_Breakout_Session(EWSA_HP)

Title : Africa Infrastructure Program Renewable Energy Feed-in Tariff

Data ID No. : 581

Country / Area : Rwanda Africa

Sector : Renewable Energy Infrastructure

Author / Organization : USAID

Date of publication : 06/2011

Type of materials : electronic file

Data Storage location : database shared server

File Name : REFITsReport110630.pdf

Title : Summary report of the 2013/2014 Backward Looking Energy JSR /Energy_backward_looking_JSR-signed_report

Data ID No. : 582

Country / Area : Rwanda Africa

Sector : Others

Author / Organization : MININFRA(MINISTRY OF I

Date of publication : 11/2014

Type of materials : electronic file

Data Storage location : database shared server

File Name : Energy_backward_looking_JSR-signed_r

Title :	Current Status Independent Power Produces/(ENERGY_PROJECTS_WITH_PRIVATE_INVESTORS)		
Data ID No. :	583		
Country / Area :	Rwanda	Africa	
Sector :	Others	Generation	
Author / Organization :			
Date of publication :			
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	ENERGY_PROJECTS_WITH_PRIVATE_I		
Title :	ENERGY SECTOR STRATEGIC PLAN(final draft)		
Data ID No. :	584		
Country / Area :	Rwanda	Africa	
Sector :	Others	Master plan	
Author / Organization :	MININFRA(MINISTRY OF I		
Date of publication :	10/2014		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	ESSP_FinalDraft_2013_2018.pdf		
Title :	STUDY ON THE INTERCONNECTION OF THE ELECTRICITY NETWORKS OF THE NILE EQUATORIAL LAKES COUNTRIES FEASIBILITY REPORT VOLUME 4A – BURUNDI -RWANDA INTERCONNECTIONS MAIN REPORT		
Data ID No. :	588		
Country / Area :	Rwanda	Burundi	Africa
Sector :	Transmission	Interconnector	Feasibility study
Author / Organization :	NELSAP	SOGREAH	Hydro Quebec International
Date of publication :	10/2007		
Type of materials :	electronic file		
Data Storage location :	database shared server		
File Name :	Vol4A_english_20071109_ocd_with_annex		
Title :	ETUDE D'INTERCONNEXION DES RESEAUX ELECTRIQUES DES PAYS DES LACS EQUATORIAUX DU NIL RAPPORT DE FAISAB LITE VOLUME 4 A – INTERCONNEXION BURUNDI-RWANDA RAPPORT PRINCIPAL		
Data ID No. :	589		
Country / Area :	Rwanda	Africa	Burundi
Sector :	Feasibility study	Interconnector	Transmission
Author / Organization :	Hydro Quebec International	SOGREAH	paa
Date of publication :			
Type of materials :			
Data Storage location :			
File Name :	Vol4A_français_20071106_ocd_avec_ann		
Title :	STUDY ON THE INTERCONNECTION OF THE ELECTRICITY NETWORKS OF THE NILE EQUATORIAL LAKES COUNTRIES FEASIBILITY REPORT VOLUME 5A – BURUNDI –DRC – RWANDA INTERCONNECTIONS AND UPGRADE MAIN REPORT		
Data ID No. :	590		
Country / Area :	Rwanda	Africa	D.R. CONGO
Sector :	Transmission	Interconnector	Feasibility study
Author / Organization :	Hydro Quebec International	SOGREAH	NELSAP
Date of publication :	11/2007		
Type of materials :			
Data Storage location :			
File Name :	Vol5A_english_20071122_phk_avec_anne		

Title : ETUDE D'INTERCONNEXION DES RESEAUX ELECTRIQUES DES PAYS DES LACS EQUATORIAUX DU NIL RAPPORT DE FAISABILITE VOLUME 5 A- INTERCONNEXIONS BURUNDI-RDCRWANDA ET AUGMENTATION DE TENSION RAPPORT PRINCIPAL

Data ID No. : 591

Country / Area : Rwanda Africa Burundi
Sector : Interconnector Feasibility study Transmission

Author / Organization : NELSAP SOGREAH PAALEN

Date of publication : 10/2007

Type of materials : electronic file

Data Storage location : database shared server

File Name : Vol5A_francais_20071106_ocd_avec_ann

South America

Title : ESMAP TECHNICAL PAPER(ESMAP TECHNICAL PAPER 090)

Data ID No. : 131

Country / Area : South America Ecuador

Sector : Others

Author / Organization : The World Bank Group

Date of publication : 12/2005

Type of materials : electronic file

Data Storage location : database shared server

File Name : 04_Phase2_Section5_B_-_Annex_1_Picoh

Sri Lanka

Title : BEST PRACTICES FOR SUSTAINABLE DEVELOPMENT OF MICRO HYDRO POWER IN DEVELOPING COUNTRIES /FINAL SYNTHESIS REPORT(Contract R7215) (05_Phase2_Section5_B_-_Annex_2_Village_hydro_best_practice)

Data ID No. : 132

Country / Area : Sri Lanka Nepal Peru

Sector : Hydro

Author / Organization : The World Bank Group Department for International

Date of publication : 03/2000

Type of materials : electronic file

Data Storage location : database shared server

File Name : 05_Phase2_Section5_B_-_Annex_2_Villag

Sudan

Title : Master Plan_EAPP_2013-14/Sudan Data/Performance_Annual_Report_2012

Data ID No. : 284

Country / Area : Sudan

Sector : Master plan Transmission Others

Author / Organization :

Date of publication : 01/2013

Type of materials : electronic file

Data Storage location : database shared server

File Name : Performance_Annual_Report_2012.pdf

収集資料リスト

2 地熱開発計画

収集資料リスト

2. 地熱開発計画

- 2-1.Chevron (2006) : Preliminary Assessment of Rwanda's Geothermal Energy Development Potential
- 2-2.BGR (2009) : Geothermal Potential Assessment in the Virunga Geothermal Prospect, Northern Rwanda
- 2-3.UWERA RUTAGARAMA (2009) : Assessing Generating Capacity of Rwanda Geothermal Fields roam Green Field Data Only
- 2-4.Photograph (2009): Water Intake at Lake Karago, Booster Pump at Sashwara
- 2-5.KenGen (2010) : Geothermal Potential Appraisal of Karisimbi Prospect, Rwanda (Combined Report)
- 2-6.MININFRA (2010) : Rwanda Geothermal Resources Exploration and Development for 2011-2017
- 2-7.MININFRA (2011) : Rwanda Geothermal Resources Potential
- 2-8.ISOR (2011) : Review of geothermal development schedule, Plans for drilling of three geothermal exploration wells at Karisimbi, Rwanda (Confidential)
- 2-9.MININFRA (2011) : Rwanda Geothermal Exploration Program, Request for Quotations for Geoscientific Surveys
- 2-10.JICA (2011) : 「地熱エネルギー開発計画策定能力向上/TICAD IVフォローアップ」 F/U 協力報告書
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