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1. 配電線運用（停止）データの解析結果
2. 配電網改善マニュアル
3. Basic Manual for ArcMap

1. 配電線運用（停止）データの解析結果

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A. Ranga Reddy District

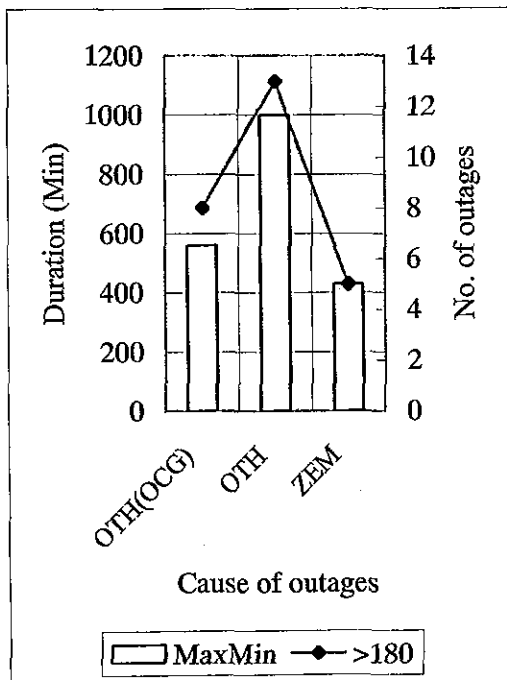
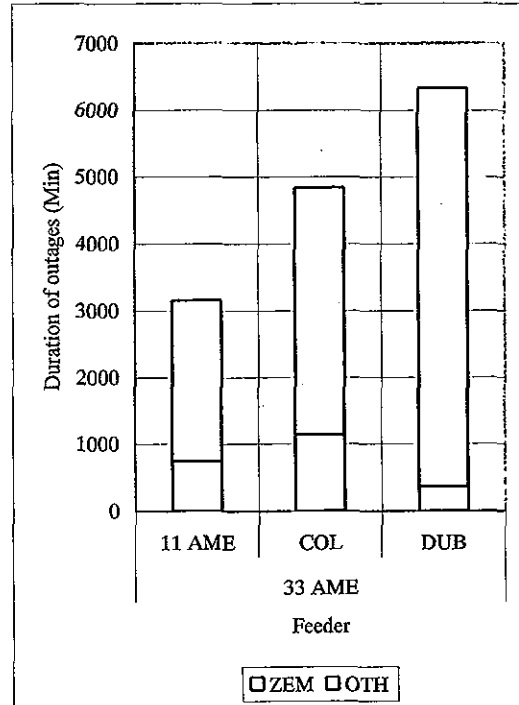
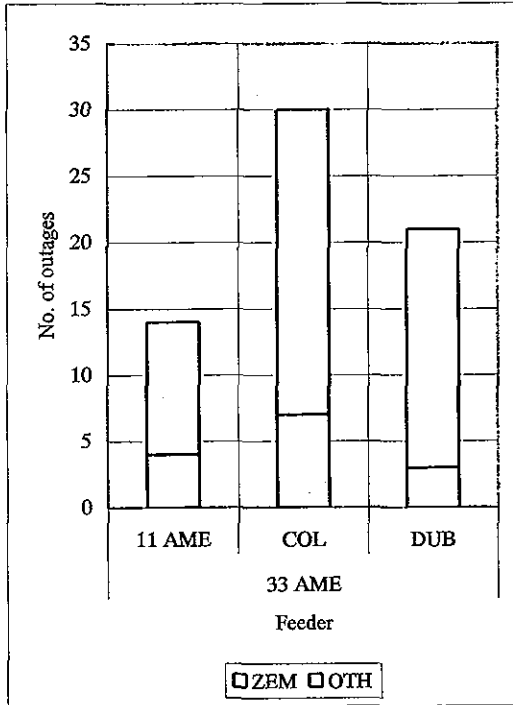
Code of Substation : HKOT

Total number of outages

33 kV SS	11 kV feeder	ZEM	OTH
AME	AME	4	10
	COL	7	23
	DUB	3	18

Total duration of outages (Min)

33 kV SS	11 kV feeder	ZEM	OTH
AME	AME	745	2413
	COL	1140	3705
	DUB	365	5965



Maximum duration/event (MaxMin) and Number of outages more than 180 minutes (>180) in HKOT system

	OTH(OCG)	OTH	ZEM
MaxMin	560	1000	430
>180	8	13	5

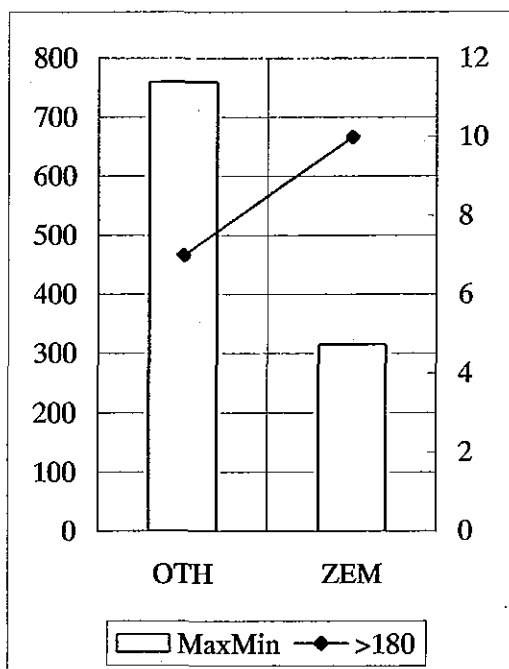
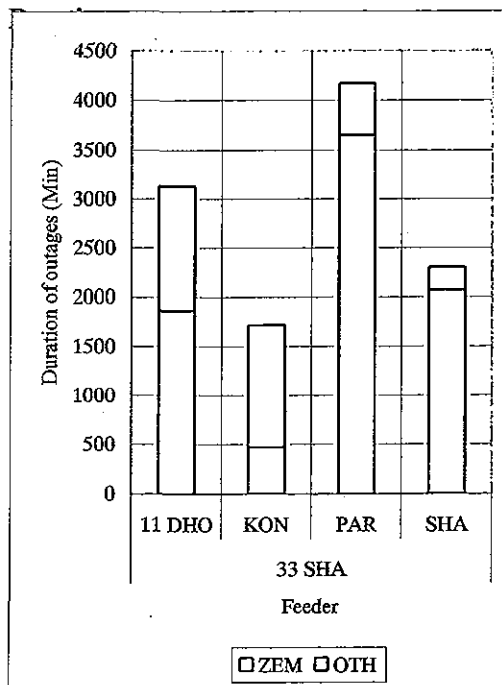
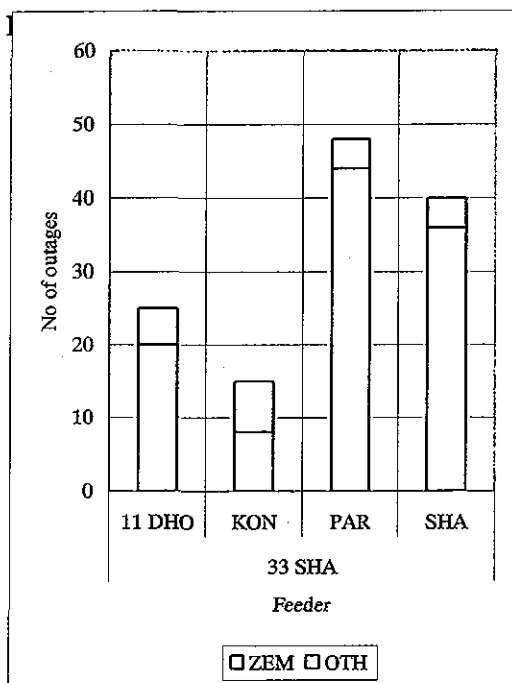
Code of Substation : HRAM

Total number of outages

33 kV SS	11 kV feeder	ZEM	OTH
SHA	DHO	20	5
	KON	8	7
	PAR	44	4
	SHA	36	4

Total duration of outages (Min)

33 kV SS	11 kV feeder	ZEM	OTH
SHA	DHO	1865	1270
	KON	470	1250
	PAR	3651	525
	SHA	2065	240



Maximum duration/event (MaxMin) and Number of outages more than 180 minutes (>180) in HRAM system

	OTH	ZEM
MaxMin	760	315
>180	7	10

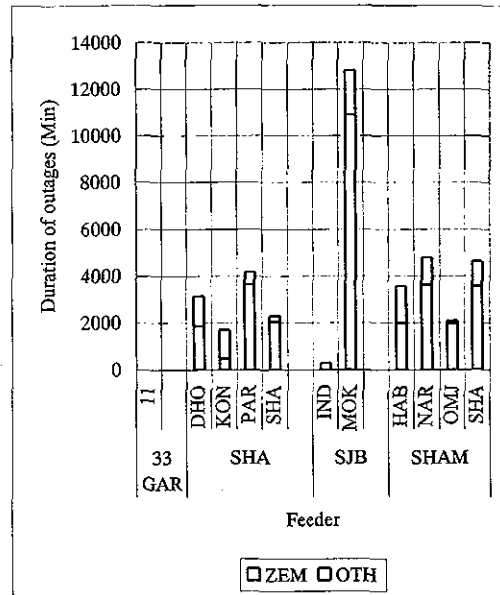
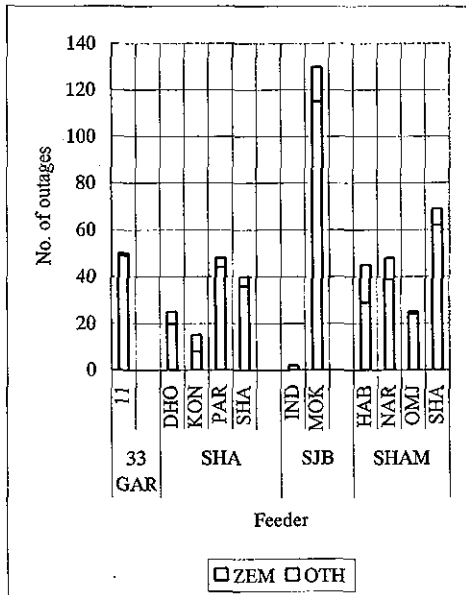
Code of Substation : MRAM

Total number of outages

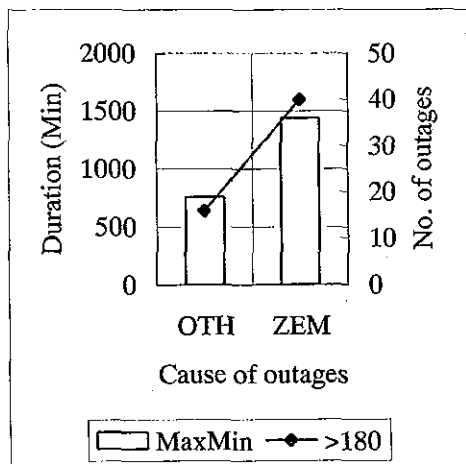
33 kV SS	11 kV feeder	ZEM	OTH
GAR	VAN	49	1
SHA	DHO	20	5
	KON	8	7
	PAR	44	4
	SHA	36	4
SJB	IND	2	
	MOK	115	15
SHAM	HAB	29	16
	NAR	39	9
	OMJ	24	1
	SHA	62	7

Total duration of outages (Min)

33 kV SS	11 kV feeder	ZEM	OTH
GAR	VAN	-	-
SHA	DHO	1865	1270
	KON	470	1250
	PAR	3651	525
	SHA	2065	240
SJB	IND	295	
	MOK	10907	1909
SHAM	HAB	1999	1583
	NAR	3644	1148
	OMJ	1962	120
	SHA	3591	1046



Note: Except 11 kV VAN



Maximum duration/event (MaxMin) and Number of outages more than 180 minutes (>180) in MRAM system

	OTH	ZEM
MaxMin	760	1440
>180	16	40

Note: Except 11 kV VAN

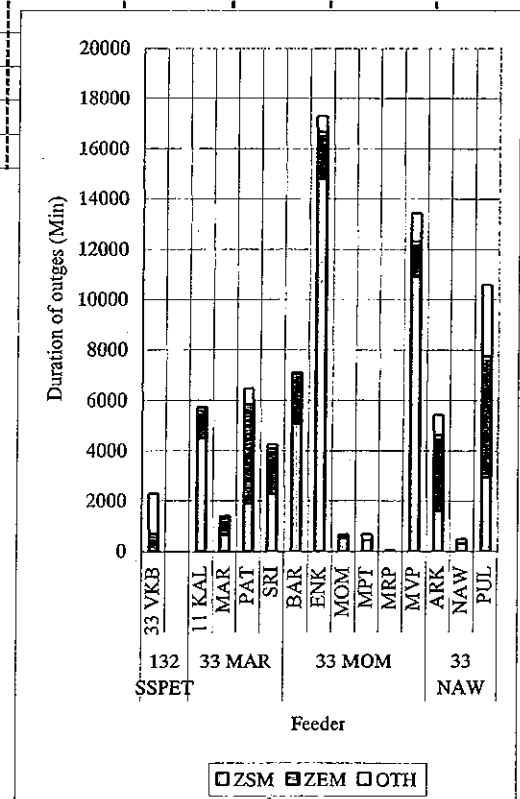
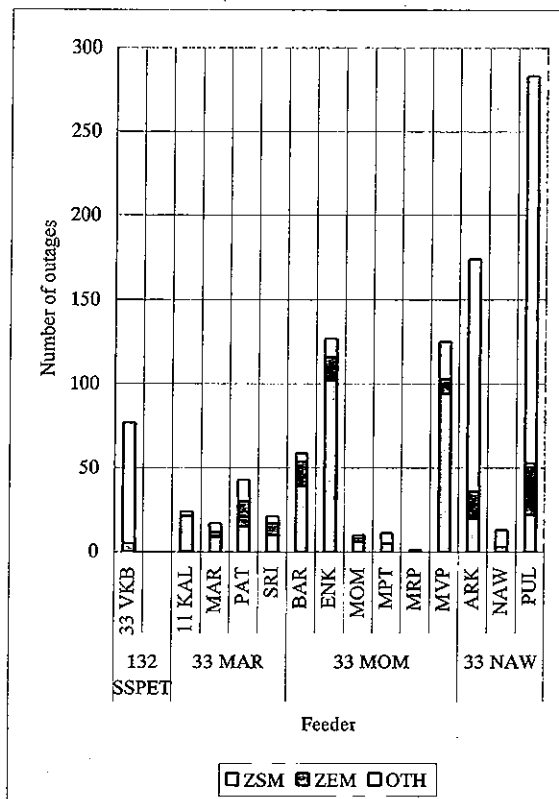
Code of Substation : MSAD

Total number of outages

Substation	Feeder	ZSM	ZEM	OTH
132 SSPET	33 VKB		5	72
33 MAR	11 KAL	21	3	
	MAR	9	3	5
	PAT	15	15	13
	SRI	10	7	4
33 MOM	BAR	39	15	5
	ENK	102	14	11
	MOM	6	2	2
	MPT	5		6
	MRP	1		
33 NAW	MVP	94	9	22
	ARK	20	16	138
	NAW	3		10
	PUL	22	31	230

Total duration of outages (Min)

Substation	Feeder	ZSM	ZEM	OTH
132 SSPET	33 VKB		699.6	1599
33 MAR	11 KAL	4,495	1,260	
	MAR	665	660	78
	PAT	1,895	3,965	608
	SRI	2,285	1,840	129
33 MOM	BAR	5,090	1,968	65
	ENK	14,818	1,868	610
	MOM	516	115	45
	MPT	435		240
	MRP	45		
33 NAW	MVP	10,925	1,405	1,105
	ARK	1,610	3,008	835
	NAW	325		165
	PUL	2,925	4,832	2,831



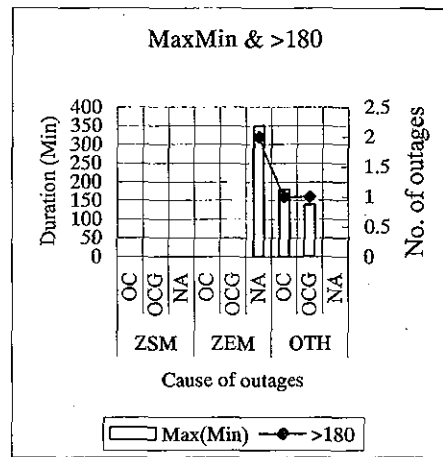
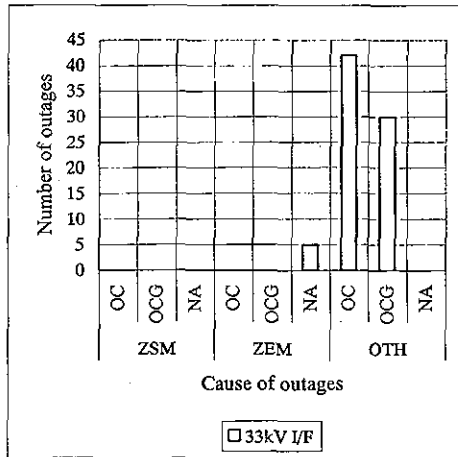
33 kV

Total number of outages

33 kV	ZSM			ZEM			OTH			
	OC	OCG	NA	OC	OCG	NA	OC	OCG	NA	
Incoming feeder							5	42	30	

MaxMin & >180

33 kV	ZSM			ZEM			OTH		
	OC	OCG	NA	OC	OCG	NA	OC	OCG	NA
Max(Min)						350	180	140	
>180					2		1		1



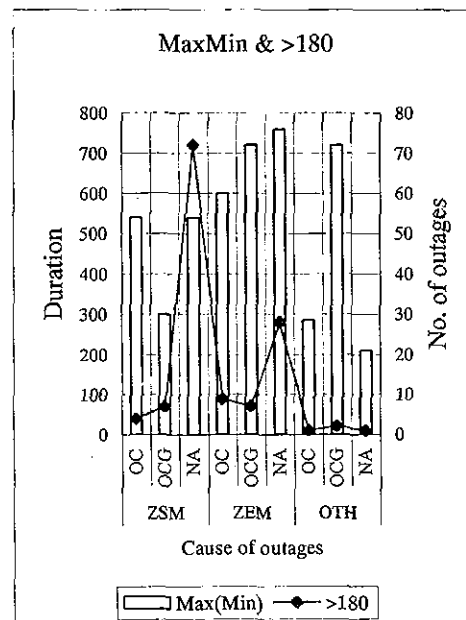
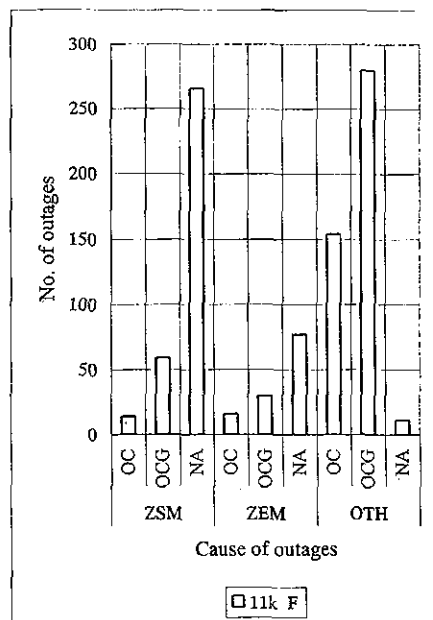
11 kV

Total number of outages

11 kV	ZSM			ZEM			OTH		
	OC	OCG	NA	OC	OCG	NA	OC	OCG	NA
Feeders	14	59	266	16	30	77	154	280	11

MaxMin & >180

11 kV	ZSM			ZEM			OTH		
	OC	OCG	NA	OC	OCG	NA	OC	OCG	NA
Max(Min)	540	300	540	600	720	760	285	720	210
>180	4	7	72	9	7	28	1	2	1



Code of Substation : RBAN

Summary of Outages (RBAN) (1/5)

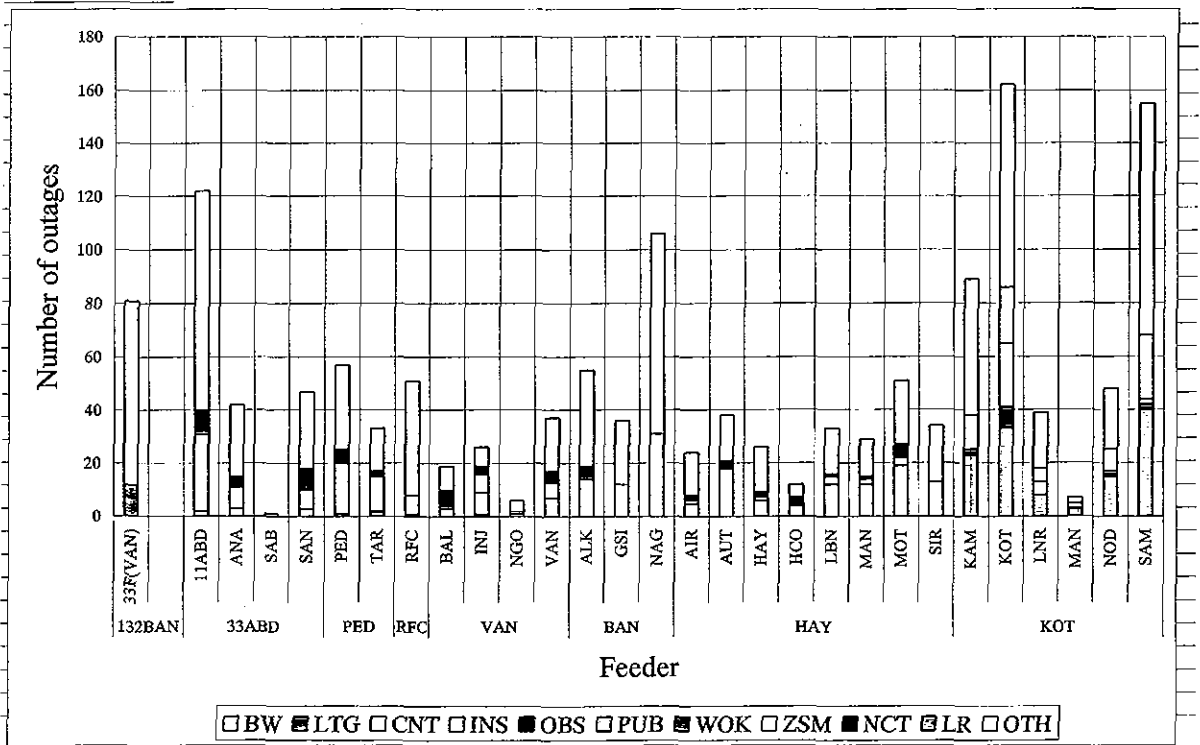
Substation Voltage	Feeder/Equipment Name	Equipment	Number of Interruption										Duration of Interruption (Min)										Remarks										
			TTL	BW	LTG	CNT	INS	ERE	OBS	PUB	WOK	ZSM	ZEM	NCT	LR	OTH	TTL	BW	LTG	CNT	INS	ERE		OBS	PUB	WOK	ZSM	ZEM	NCT	LR	OTH		
33	ABD	TR	12	1	1	3	1									12	960														960		
			38	1	1	3	1									33	1,485	120		330	70										965		
			1	1	1	1											120			120													
			47	20	20	20	2										25	1,450		1,140		40										270	
			8	2	2	2	3										3	670		180		275										215	
			16	1	1	3	3										9	1,045	30	290		195										530	
			122														5,730																
			4	4	4												3	375				100										275	
			5	1	1	6	3										1	340	50	320		200										90	
			11	11	11	17	2	2									5	505	210	150													185
11	SAB	COND	1	1	1	1									13	1,340	210	150													980		
			1	1	1	1									5	360															360		
			42													2,920																	
			1	1	1	1											950		950														
			1	1	1	1											950																
			6	6	6	6											3	505		240		225										280	
			5	5	5	2	2										2	410		240		20										150	
			14	14	14	2	2										11	475	120	120		120											235
			1	1	1	1												120	120	120		165										890	
			15	3	3	1	1										9	1,425	250	120		60											
33	PED	COND	6	1	1	1									4	405		60		60											345		
			47													3,400																	
			6	6	6	1	1										3	225	15	60		60									90		
			8	8	8	5	5										1	603		453		120										30	
			17	17	17	10	10										7	658		365												293	
			19	19	19												18	373														353	
			2	2	2												2	100														100	
			5	5	5	3	3										1	125		50		60										15	
			57														2,084																
			3	3	3	1	1										2	180		15													165
11	TAR	COND	11	2	2	6									2	408	50	314		22											22		
			10	10	10	5	5									5	365		310												55		
			7	7	7											7	15															15	
			1	1	1	1											20				20												
			1	1	1	1											120		120														
			33	33	33												1,108																

Summary of Outages (RBAN) (3/5)

Substation Voltage Name	Feeder/equipment Name	Equipment Name	Number of Interruption												Duration of Interruption (Min)												Remarks				
			TTL	BW	LTG	CNT	INS	ERE	OBS	PUB	WOK	ZSM	ZEM	NCT	LR	OTH	TTL	BW	LTG	CNT	INS	ERE	OBS	PUB	WOK	ZSM		ZEM	NCT	LR	OTH
11	NAG	COND	29			12									17	596			39											557	
		INS	6		1										5	40			3											37	
		JNT	19		17										2	391			42											349	
		OTH	52		1										51	771			4											767	
		TTL	106											1,798																	
33	HAY	AIR	3		2	1									11	11			6	5									3		
		INS	2		3									1	10			26													
		JNT	3		3										15	156			3											153	
		OTH	16												203																
		TTL	24																												
11	AUT	COND	3		1	1									1	17			5	7									5		
		INS	4		3										25	20			20												
		JNT	14		13										227	152			152											108	
		OTH	17		1										16	113			5												
		TTL	38												382																
11	HAY	COND	2		1	1									1	9			5	2									4		
		INS	2		1										7	7			46										5		
		JNT	7		5										62	46			16												
		OTH	15												15	70														70	
		TTL	26												148																
11	HCO	COND	5		1	1									2	85			5	35								45			
		INS	2												1	50					10								40		
11	LBN	JNT	3		3											49			49												
		OTH	2												2	44														44	
		TTL	12													228															
		BUS	1													10															
11	MAN	COND	6		4										2	249			49	10									200		
		INS	6		1	3									2	80			60	12									8		
		JNT	8		7										1	39			29										10		
		OTH	12												12	75													75		
		TTL	33												453																
11	MAN	COND	1													45			45												
		INS	2		1	1									8	8			5	3											
		JNT	11		9										1	88			43	40									5		
		OTH	13		1										12	228													228		
		TR	2		1									1	90			30										60			
		TTL	29												459																

SUMMARY OF OUTAGES

No. of outages		BW	LTG	CNT	INS	OBS	PUB	WOK	ZSM	NCT	LR	OTH	TTL
132BAN	33F(VAN)	0	0	0	0	0	0	0	0	0	12	69	81
33ABD	11ABD	2	0	29	1	8	0	0	0	0	0	82	122
	ANA	3	0	8	0	4	0	0	0	0	0	27	42
	SAB	0	0	1	0	0	0	0	0	0	0	0	1
PED	SAN	3	0	7	0	8	0	0	0	0	0	29	47
	PED	1	0	19	0	4	0	0	0	1	0	32	57
	TAR	2	0	13	0	2	0	0	0	0	0	16	33
RFC	RFC	1	0	7	0	0	0	0	0	0	0	43	51
VAN	BAL	0	0	3	1	6	0	0	0	0	0	9	19
	INJ	1	0	8	7	3	0	0	0	0	0	7	31
	NGO	0	0	1	1	0	0	0	0	0	0	4	7
BAN	VAN	0	0	7	6	4	0	0	0	0	0	20	42
	ALK	0	0	14	1	3	0	1	0	0	0	36	55
	GSI	0	0	12	0	0	0	0	0	0	0	24	36
HAY	NAG	0	0	31	0	0	0	0	0	0	0	75	106
	AIR	0	0	5	1	2	0	0	0	0	0	16	24
	AUT	0	0	18	0	3	0	0	0	0	0	17	38
KOT	HAY	0	0	6	1	2	0	0	0	0	0	17	26
	HCO	0	0	4	0	3	0	0	0	0	0	5	12
	LBN	0	0	12	3	1	0	0	0	0	0	17	33
KOT	MAN	0	0	12	2	1	0	0	0	0	0	14	29
	MOT	0	0	19	3	5	0	0	0	0	0	24	51
	SIR	0	0	13	0	0	0	0	0	0	0	21	34
KOT	KAM	23	1	0	0	0	1	0	13	0	0	51	91
	KOT	33	8	0	24	0	0	0	21	0	0	76	162
	LNR	8	0	0	5	0	0	0	5	0	0	21	39
KOT	MAN	3	0	0	2	0	0	0	0	0	0	2	7
	NOD	15	1	0	0	0	1	0	8	0	0	23	48
	SAM	40	2	0	0	0	2	0	24	0	0	87	155
TTL		135	12	249	58	59	4	1	71	1	12	864	1,479

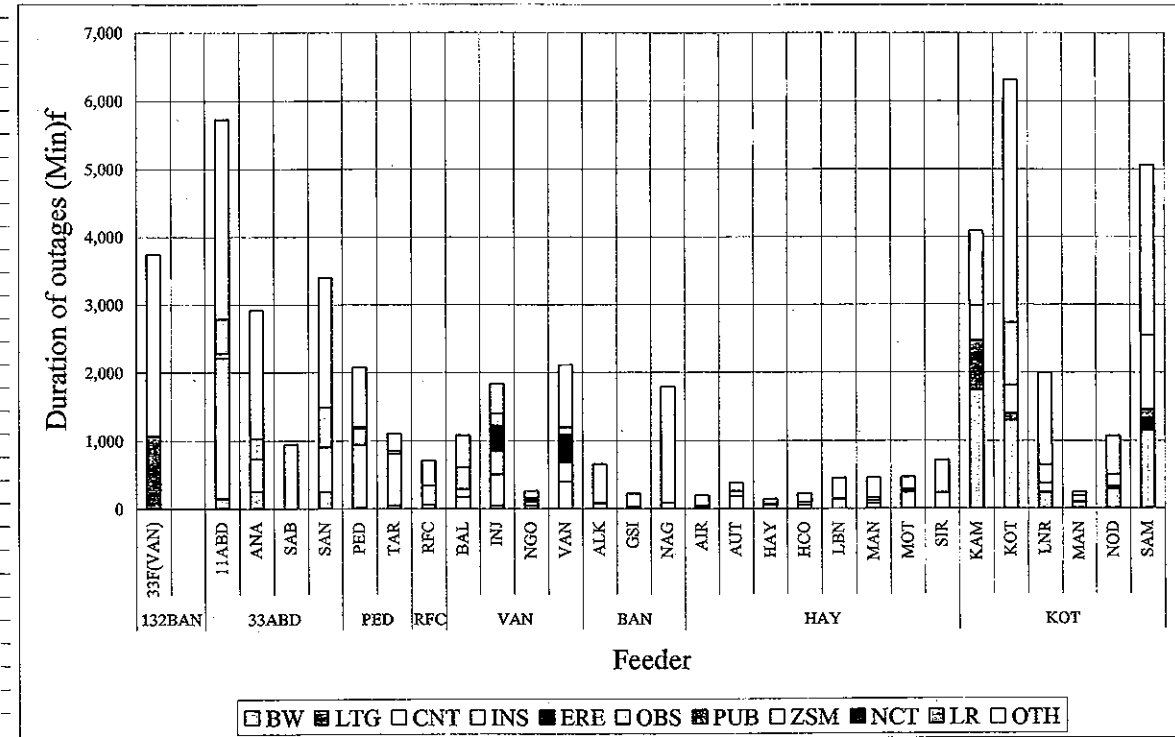


参考資料 1. 配電線運用 (停止) データの解析結果

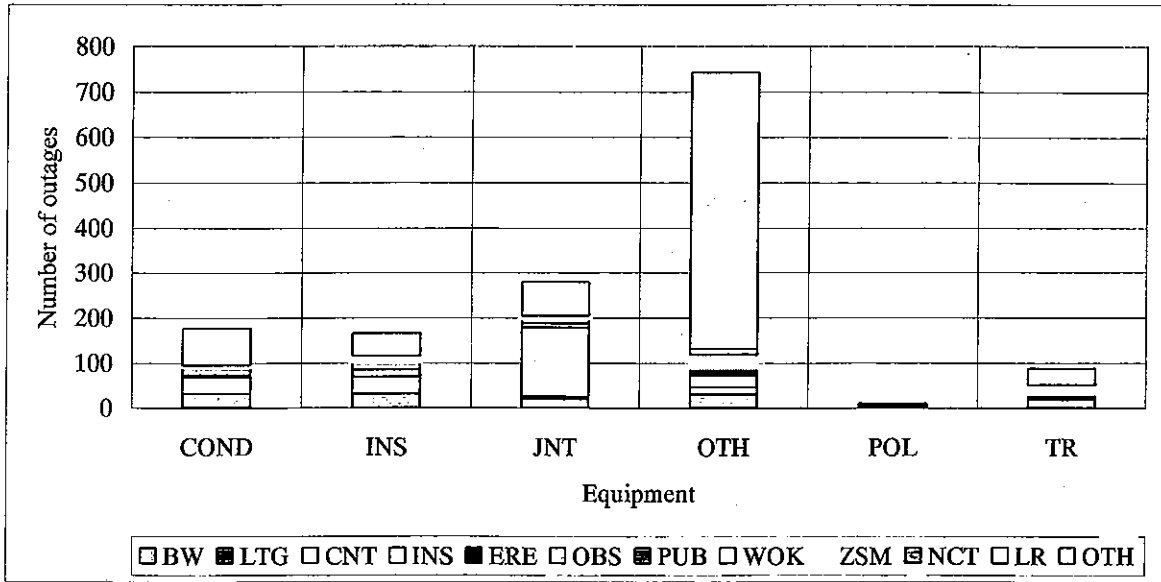
SUMMARY OF OUTAGES

Duration of outages (Min)

		BW	LTG	CNT	INS	ERE	OBS	PUB	ZSM	NCT	LR	OTH	TTL
132BAN	33F(VAN)	0	0	0	0	0	0	0	0	0	1,068	2,678	3,746
33ABD	11ABD	150	0	2,060	70	0	510	0	0	0	0	2,940	5,730
	ANA	260	0	470	0	0	300	0	0	0	0	1,890	2,920
	SAB	0	0	950	0	0	0	0	0	0	0	0	950
	SAN	250	0	660	0	0	590	0	0	0	0	1,900	3,400
PED	PED	15	0	928	0	0	240	0	0	20	0	881	2,084
	TAR	50	0	759	0	0	42	0	0	0	0	257	1,108
RFC	RFC	60	0	285	0	0	0	0	0	0	0	365	710
VAN	BAL	0	0	175	120	0	315	0	0	0	0	470	1,080
	INJ	50	0	460	340	370	175	0	0	0	0	440	1,835
BAN	NGO	0	0	45	60	60	0	0	0	0	0	100	265
	VAN	0	0	400	280	400	115	0	0	0	0	915	2,110
	ALK	0	0	72	2	0	9	0	0	0	0	576	661
HAY	GSI	0	0	37	0	0	0	0	0	0	0	189	226
	NAG	0	0	88	0	0	0	0	0	0	0	1,710	1,798
	AIR	0	0	32	5	0	10	0	0	0	0	156	203
	AUT	0	0	182	0	0	87	0	0	0	0	113	382
KOT	HAY	0	0	51	2	0	16	0	0	0	0	79	148
	HCO	0	0	54	0	0	45	0	0	0	0	129	228
	LBN	0	0	138	12	0	10	0	0	0	0	293	453
	MAN	0	0	78	48	0	40	0	0	0	0	293	459
	MOT	0	0	240	20	0	33	0	0	0	0	175	468
	SIR	0	0	238	0	0	0	0	0	0	0	481	719
	KAM	1,750	435	0	0	95	0	190	515	0	0	1,105	4,090
	KOT	1,300	105	0	415	0	0	0	920	0	0	3,570	6,310
	LNR	240	0	0	140	0	0	0	270	0	0	1,345	1,995
	MAN	95	0	0	90	0	0	0	0	0	0	60	245
NOD	290	15	0	0	0	0	0	20	180	0	565	1,070	
SAM	1,148	25	0	0	155	0	135	1,080	0	0	2,518	5,061	
	TTL	5,658	580	8,402	1,604	1,080	2,537	345	2,965	20	1,068	26,193	50,454

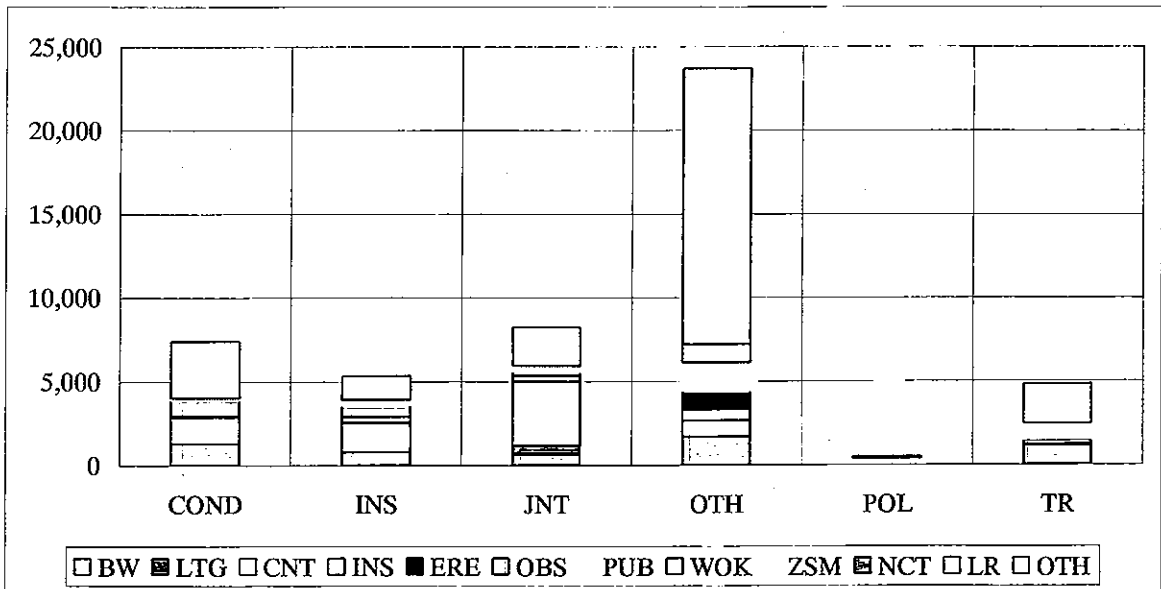


Number of outages



	BW	LTG	CNT	INS	ERE	OBS	PUB	WOK	ZSM	NCT	LR	OTH	TTL
COND	32	0	36	4	0	20	0	0	3	0	0	82	177
INS	32	0	38	15	0	18	0	0	13	0	0	50	166
JNT	21	5	153	9	0	9	0	1	7	0	0	75	280
OTH	31	2	14	26	11	6	0	0	29	1	12	611	743
POL	0	0	1	2	0	2	4	0	0	0	0	2	11
TR	19	5	5	0	0	4	0	0	19	0	0	36	88

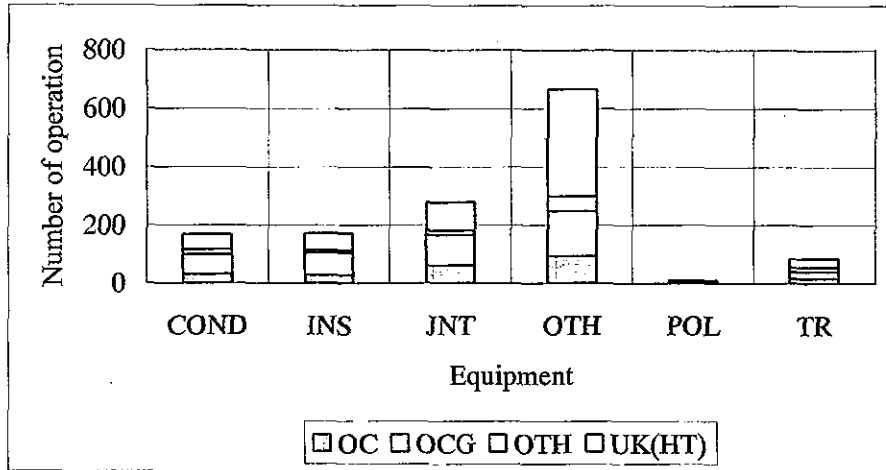
Duration of outages (Min)



	BW	LTG	CNT	INS	ERE	OBS	PUB	WOK	ZSM	NCT	LR	OTH	TTL
COND	1,325	0	1,566	55	0	1,062	0	0	30	0	0	3,355	7,393
INS	830	0	1,725	339	0	748	0	0	300	0	0	1,376	5,318
JNT	700	490	3,795	335	0	309	0	2	325	0	0	2,292	8,248
OTH	1,700	10	966	650	950	208	0	0	1,630	20	1,068	16,528	23,730
POL	0	0	60	105	0	25	200	0	0	0	0	100	490
TR	1,163	80	200	0	0	185	145	0	680	0	0	2,342	4,795

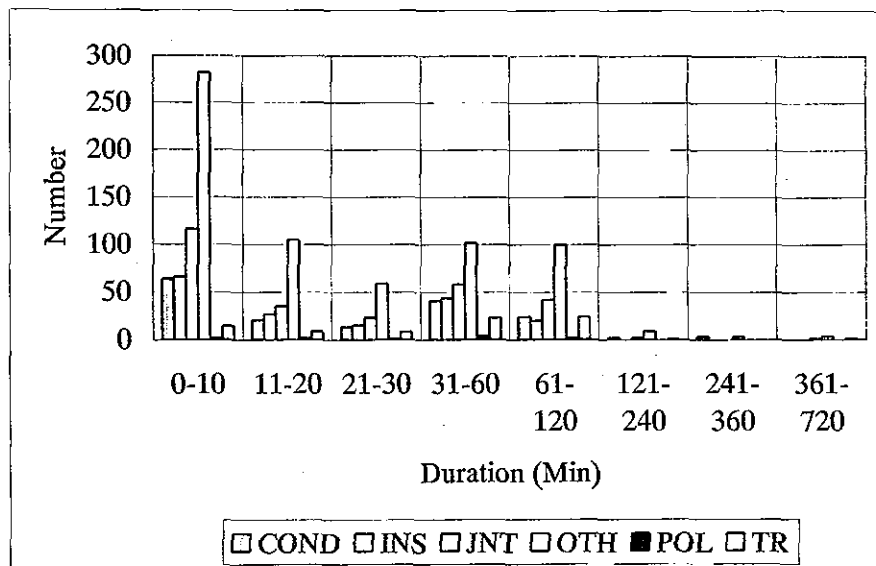
Record of 11 kV protective Relay operation

	COND	INS	JNT	OTH	POL	TR
OC	32	29	62	94	2	18
OCG	69	77	106	155	5	23
OTH	17	8	14	51	0	15
UK(HT)	52	59	98	367	4	30



Distribution of outage time as per equipment

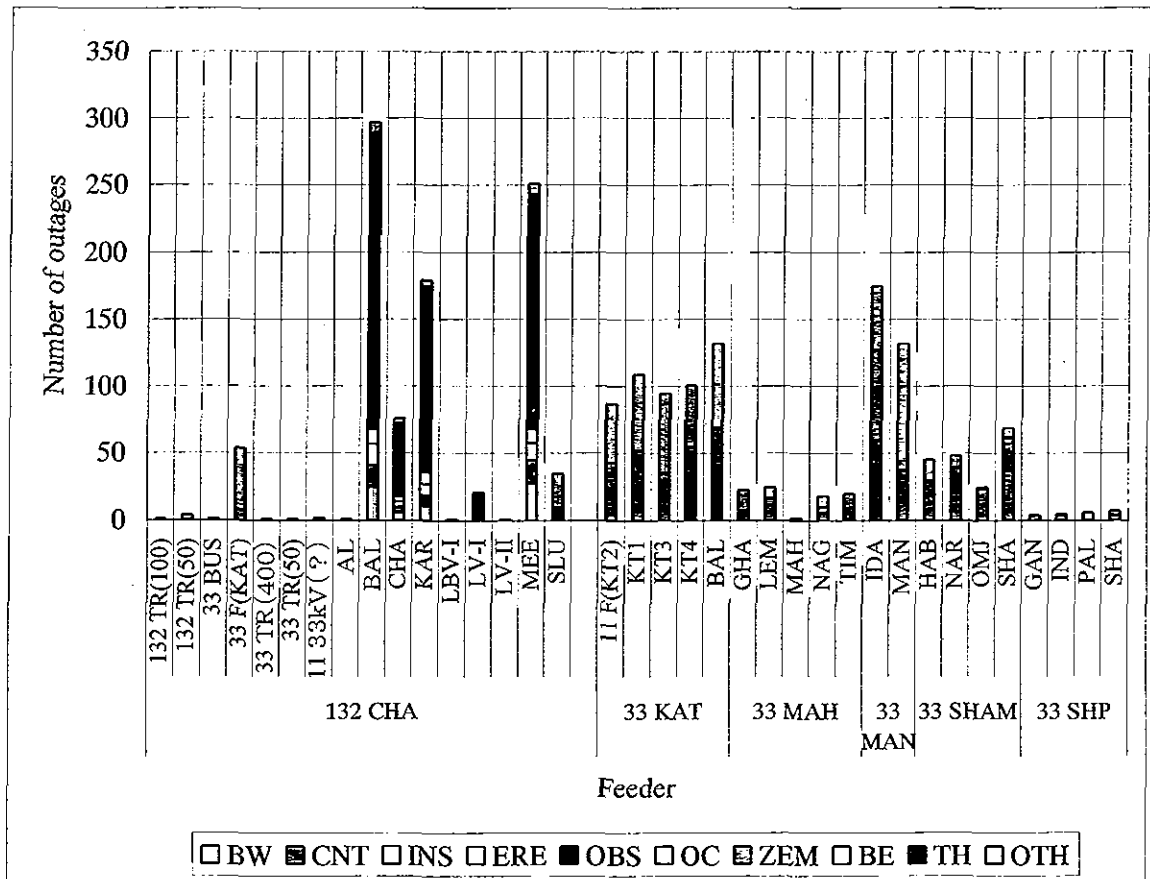
Duration(Min)	COND	INS	JNT	OTH	POL	TR
0-10	64	66	116	282	2	14
11-20	21	27	35	105	2	9
21-30	13	15	23	59	1	8
31-60	41	44	58	102	4	23
61-120	24	20	42	100	2	24
121-240	2	0	2	9	0	1
241-360	3	0	0	3	0	0
361-720	0	0	1	3	0	1
721-1440	0	0	0	0	0	0
>1440	0	0	0	0	0	0



Code of Substation : RCHA

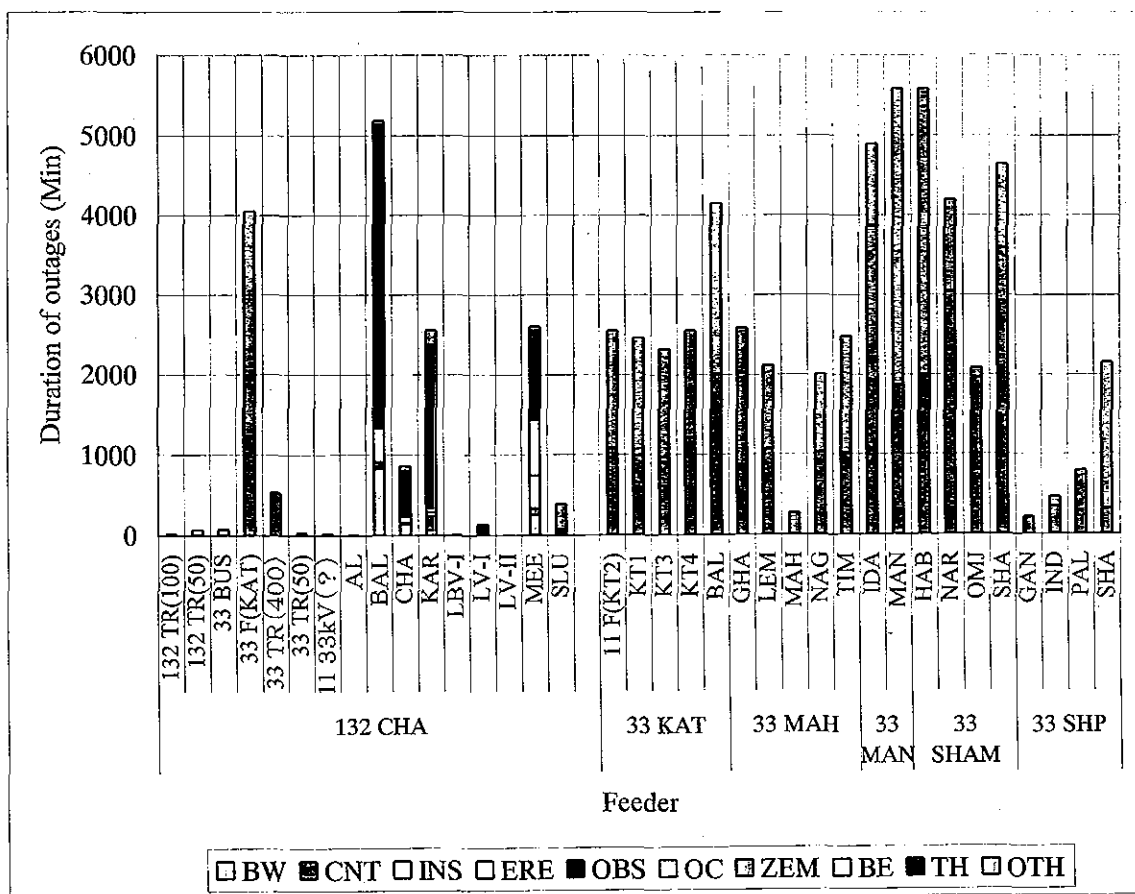
Number of Outages (RCHA)

Substation	Feeder/equip.	BW	CNT	INS	ERE	OBS	OC	ZEM	BE	TH	OTH
132 CHA	132 TR(100)										1
	132 TR(50)										4
	33 BUS										1
	33 F(KAT)							8			46
	33 TR(400)							1			1
	33 TR(50)										1
	11 33KV(?)						2				
	AL						1				
	BAL	25	16	16	11	220			1		8
	CHA	6	4	4	4	54					4
	KAR	11	8	8	9	138					4
	LBV-I					1					
	LV-I			2			17				2
	LV-II				1						
MEE	28	17	13	10	173		1			8	
SLU	1	5	2	1						26	
33 KAT	11 F(KT2)							43			44
	KT1							52			57
	KT3							35			60
	KT4							55			46
	BAL							69			63
33 MAH	GHA							7			16
	LEM							16			9
	MAH										2
	NAG							10			8
	TIM							9			11
33 MAN	IDA							60			115
	MAN							37			95
33 SHAM	HAB							29			16
	NAR							39			9
	OMJ							24			1
	SHA							62			7
33 SHP	GAN							4			1
	IND							4			1
	PAL							6			
	SHA							4			3



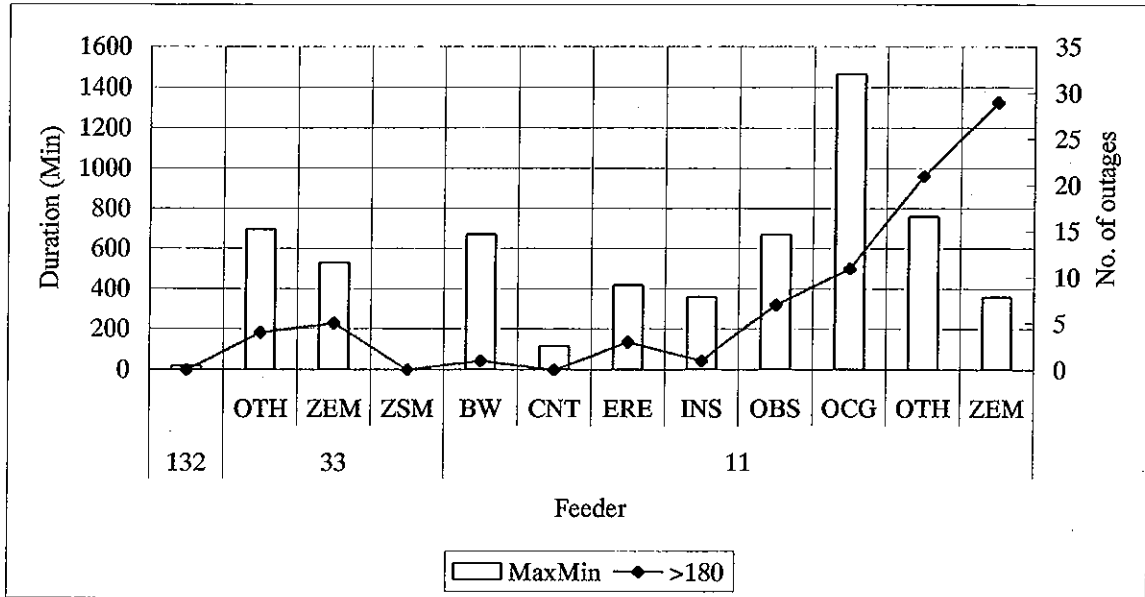
Duration of Outages (RCHA)

Substation	Feeder/equip.	BW	CNT	INS	ERE	OBS	OC	ZEM	BE	TH	OTH	
132 CHA	132 TR(100)										18	
	132 TR(50)										71	
	33 BUS										75	
	33 F(KAT)							1236			2818	
	33 TR(400)							531				
	33 TR(50)										24	
	11 33kV(?)						13					
	AL						5					
	BAL		832	83		426	3798			3		43
	CHA		135	18	73	16	546					75
	KAR		66	174	47	52	2027				5	183
	LBV-I						2					
	LV-I			7			117					10
	LV-II				5							
MEE		254	77	409	701	1101		5			57	
SLU		2	40	17	10						317	
33 KAT	11 F(KT2)							1085			1462	
	KT1							992			1464	
	KT3							975			1344	
	KT4							1216			1337	
	BAL							2004			2147	
33 MAH	GHA							870			1713	
	LEM							1065			1050	
	MAH										270	
	NAG							1027			980	
33 MAN	TIM							1020			1460	
	IDA							3875			1020	
	MAN							1865			3714	
33 SHAM	HAB							1999			3583	
	NAR							3044			1148	
	OMJ							1962			120	
33 SHP	SHA							3591			1046	
	GAN							215				
	IND							348			120	
	PAL							800				
	SHA							310			1845	



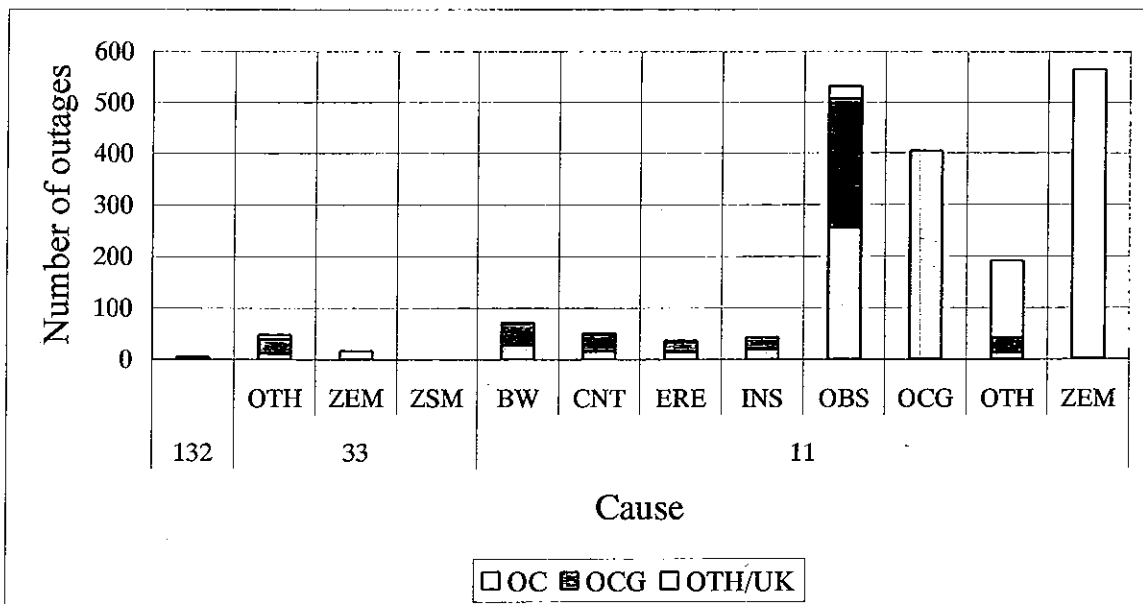
Maximum duration/event (MaxMin) and Number of outages more than 180 minutes (>180)

	132kV	33kV			11kV							
		OTH	ZEM	ZSM	BW	CNT	ERE	INS	OBS	OCG	OTH	ZEM
MaxMin	20	696	531	0	670	116	420	360	670	1465	760	360
>180	0	4	5	0	1	0	3	1	7	11	21	29



Number of protective device operations as per cause of interruption

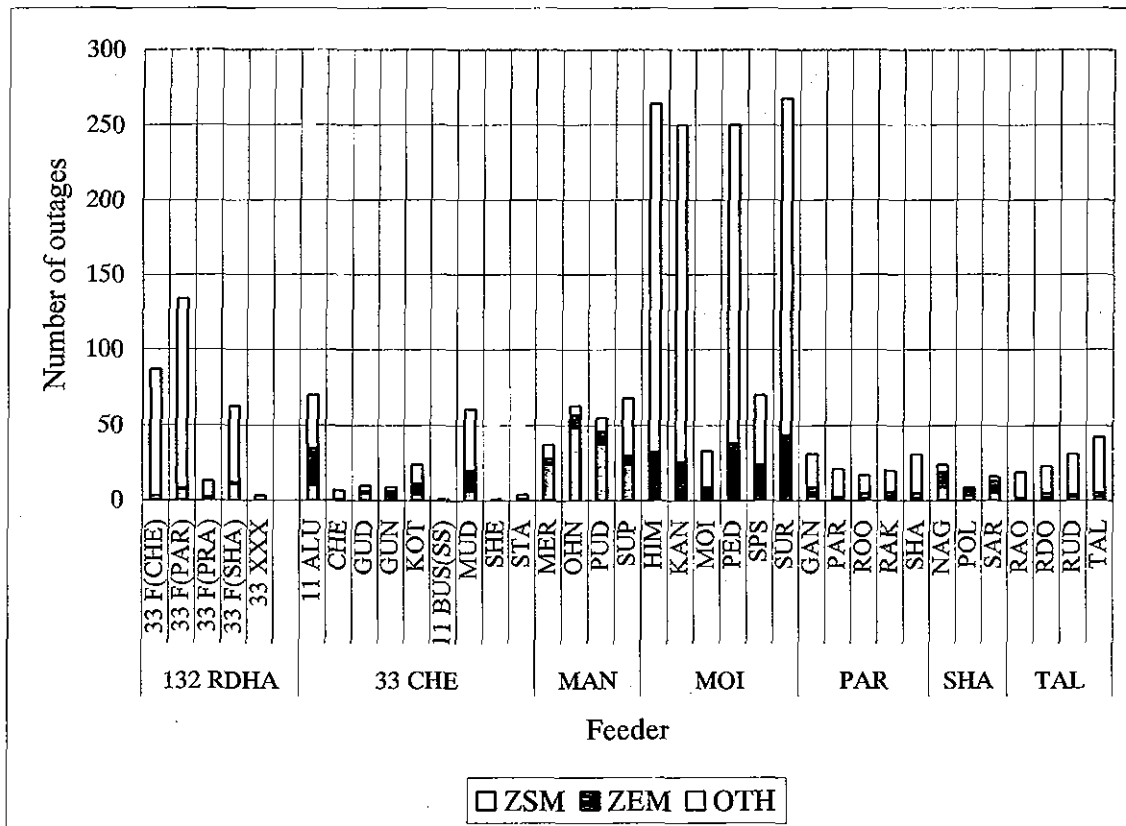
	132kV	33kV			11kV							
		OTH	ZEM	ZSM	BW	CNT	ERE	INS	OBS	OCG	OTH	ZEM
OC	0	12	0	0	28	16	15	21	254	404	13	0
OCG	0	28	0	0	42	34	20	23	253	0	30	2
OTH/UK	5	8	17	0	2	2	2	0	25	0	148	563



Code of Substation : RDHA

Number of Outages (RDHA)

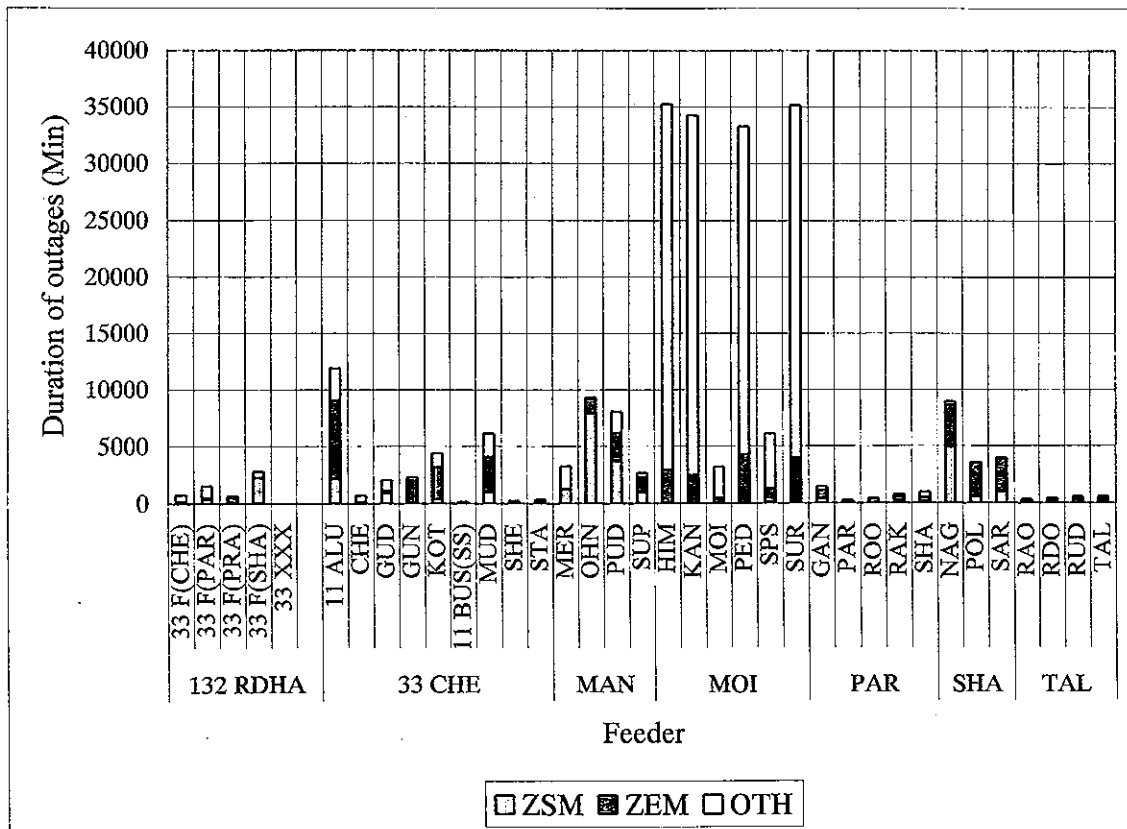
Substation	Feeder/equip.	ZSM	ZEM	OTH
132 RDHA	33 F(CHE)	3		84
	33 F(PAR)	7	1	126
	33 F(PRA)		2	11
	33 F(SHA)	11	1	51
	33 XXX			3
33 CHE	11 ALU	10	25	35
	CHE		1	6
	GUD	5	1	4
	GUN		6	3
	KOT	4	7	13
	11 BUS(SS)			1
	MUD	6	14	41
	SHE	1		
MAN	STA		1	3
	MER	24	4	9
	OHN	49	8	6
	PUD	38	8	9
MOI	SUP	24	6	38
	HIM		32	232
	KAN		26	224
	MOI		9	24
	PED		38	212
	SPS		24	46
PAR	SUR		44	224
	GAN	3	6	22
	PAR		2	19
	ROO		5	12
	RAK	1	5	14
SHA	SHA	1	4	26
	NAG	9	10	5
	POL	3	5	1
TAL	SAR	5	8	3
	RAO	1	1	17
	RDO	2	3	18
	RUD	2	2	27
	TAL	2	3	37



Duration of Outages (RDHA)

Unit : Minutes

Substation	Feeder/equip.	ZSM	ZEM	OTH
132 RDHA	33 F(CHE)	90	40	634
	33 F(PAR)	345	190	989
	33 F(PRA)		585	97
	33 F(SHA)	2263		541
	33 XXX			10
33 CHE	11 ALU	2165	6900	2848
	CHE		120	595
	GUD	945	175	905
	GUN		1995	295
	KOT	390	2805	1205
	11 BUS(SS)			120
	MUD	1005	3105	2020
	SHE	210		
MAN	STA		60	240
	MER	1265		1974
	OHN	7935	1295	112
	PUD	3735	2454	1860
MOI	SUP	1057	1260	335
	HIM		2974	32269
	KAN		2458	31775
	MOI		449	2742
	PED		4310	28990
PAR	SPS		1265	4845
	SUR		3988	31180
	GAN	440	720	274
	PAR		120	141
	ROO		364	67
	RAK	180	425	159
	SHA	120	420	402
	NAG	4910	3740	295
SHA	POL	580	2965	30
	SAR	1040	2795	120
	RAO	160	60	64
TAL	RDO	180	120	99
	RUD	240	180	154
	TAL	180	210	178

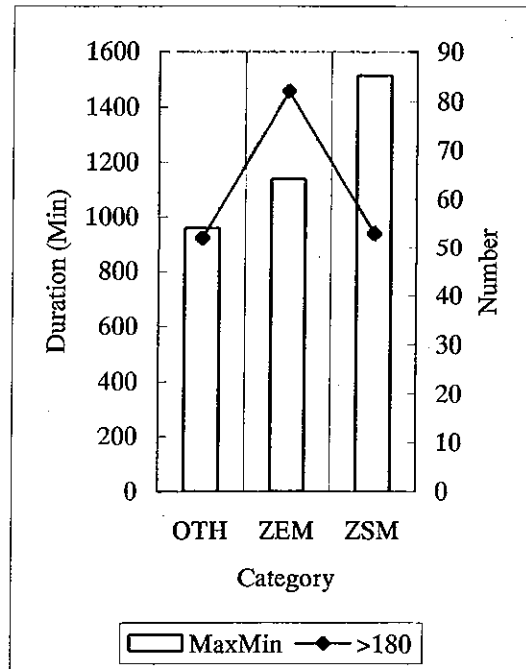
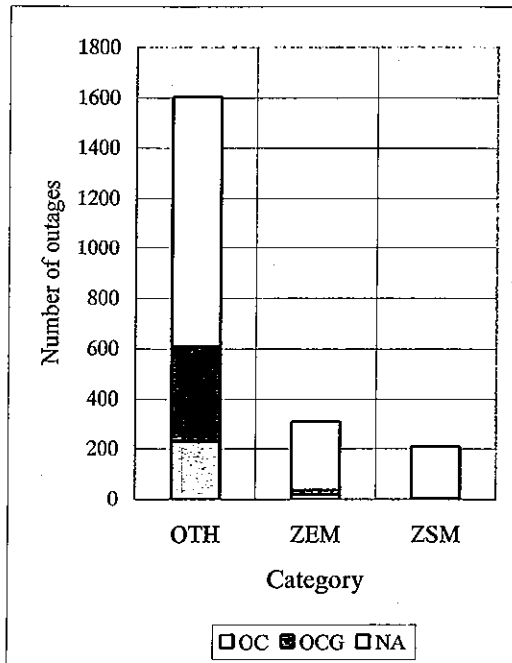


Number of protective device operations as per categories

	OTH	ZEM	ZSM
OC	230	18	4
OCG	380	19	0
NA	995	274	206

Maximum duration/event (MaxMin) and Number of outages more than 180 minutes (>180) in RDHA system

	OTH	ZEM	ZSM
MaxMin	960	1140	1515
>180	52	82	53



Code of Substation : RIBR

Summary of Outages (RIBR) (3/5)

Substation Voltage	Name	Feeder/Equipment troubled		Number of Interruption										Duration of Interruption (Min)										Remarks			
		Name	Equipment	TTL	BW	LTG	CNT	INS	ERE	OBS	PUB	WOK	ZSM	ZEM	TTL	BW	LTG	CNT	INS	ERE	OBS	PUB	WOK		ZSM	ZEM	OTH
33	MAL	11	KOT	TR	8																						32
				OTH	58																						1,056
				JNT	30																						399
				INS	44			36																			
				COND	16	4				12																	520
				TTL	156																						
		11	MAL	OTH	34																						347
				JNT	49	4		41																			144
				COND	12	4			8																		72
				TTL	95																						
				OTH	51				4																		725
				JNT	17																						145
				INS	33			4	29																		
				COND	22	5				17																	
				TTL	123																						
33	MAN	11	ARU	TR	4																						60
				OTH	31				8																		347
				JNT	9																						144
				INS	25			25																			
				TTL	69																						
		11	JAP	OTH	28				4																		512
				JNT	9																						45
				INS	49			4	45																		
				TTL	86																						
		11	MAN	TR	3																						15
				OTH	16																						200
				JNT	8																						88
				INS	38			4	25																		
				TTL	65																						855
		11	MOM	TR	3																						24
				OTH	31				3																		388
				JNT	33																						309
				INS	32			4	24																		
				COND	12					12																	
				TTL	111																						
		11	TAL	TR	12																						180
				OTH	40																						524
				JNT	10																						57
				INS	80			4	76																		
				TTL	142																						

Summary of Outages (RIBR) (4/5)

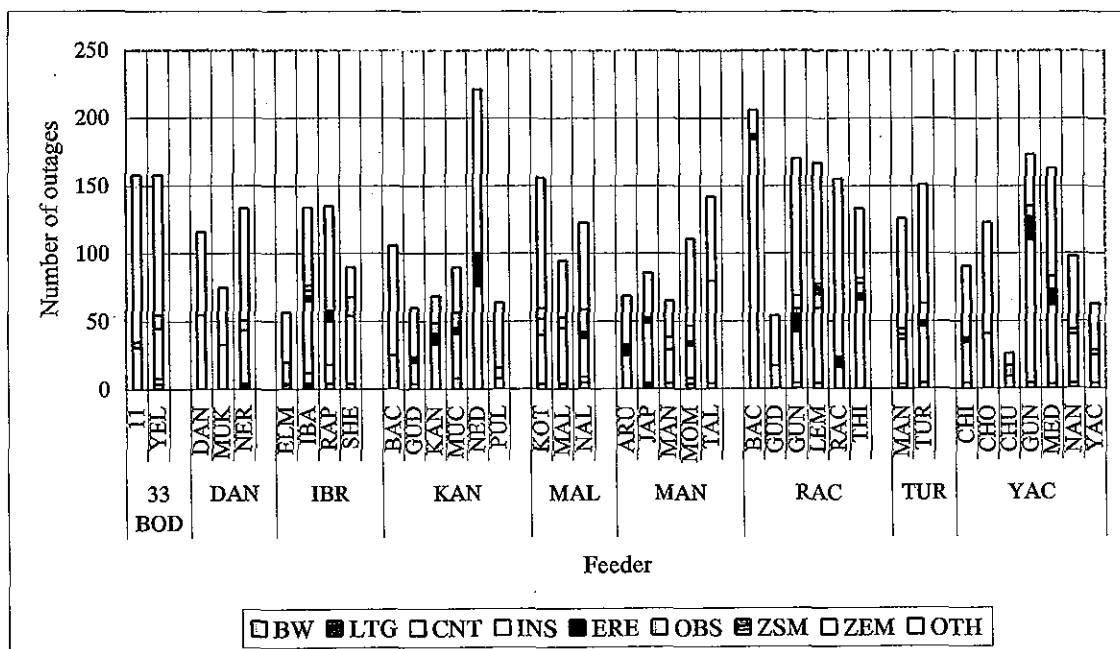
Substation Voltage	Name	Feeder/equipment troubled		Number of Interruption										Duration of Interruption (Min)										Remarks				
		Volage	Name	TTL	BW	L7G	CNT	INS	ERE	OBS	PUB	WOK	ZSM	ZEM	OTH	TTL	BW	L7G	CNT	INS	ERE	OBS	PUB		WOK	ZSM	ZEM	OTH
33	RAC	11	BAC	OTH	12										8	180												124
				JNT	10										10	110												110
				INS	184																							
				TTL	206																							
		11	GUID	OTH	29										29	478												478
				JNT	8										8	100												100
				INS	17																							
				TTL	54																							
		11	GUN	TR	16										16	280												280
				OTH	74									13	61	851												630
				JNT	24										24	464												464
				INS	52																							
				COND	4										4	40												
				TTL	170																							
		11	LEM	OTH	48										40	1,010												490
				JNT	49										49	333												333
				INS	56																							
				COND	14																							
				TTL	167																							
		11	RAC	TR	17										17	85												85
				OTH	79										71	1,094												958
				JNT	43										43	457												457
				INS	16																							
				TTL	155																							
		11	THI	TR	3										3	60												60
				OTH	30										26	508												440
				JNT	22										22	234												234
				INS	70																							
				COND	8										8	1,220												
				TTL	133																							
		33	TUR	11	MAN	OTH	22								22	376												376
						JNT	60								60	698												698
						INS	40																					
						COND	4								4	40												
						TTL	126																					
		11	TUR	OTH	45										41	548												468
				JNT	47										47	432												432
				INS	55																							
				COND	4										4	144												
				TTL	151																							

Summary of Outages (RIBR) (5/5)

Substation Voltage	Name	Feeder/equipment troubled		Number of Interruption										Duration of Interruption (Min)					Remarks									
		Vol	Equip	TTL	BW	LTG	CNT	INS	ERE	OBS	PUB	WOK	ZSM	ZEM	OTH	TTL	BW	LTG		CNT	INS	ERE	OBS	PUB	WOK	ZSM	ZEM	OTH
33	YAC	11	CHI TR	91											9	288												288
			OTH	44											40	496					68							428
			INS	38			4	30							4	668			44	564								60
			TTL	91												1,452												
11	CHO	TR	8												8	72												72
			OTH	40											40	744												744
			JNT	34											34	424												424
			INS	41				41								621												
			TTL	123												1,861												
11	CHU	OTH	9												9	45												45
			INS	9				9								270				270								
			COND	8					8							80												
			TTL	26												395												
11	GUN	TR	9												9	180												180
			OTH	46						17					29	579					206							373
			INS	114				106								1,684												
			COND	4												140	140											520
			TTL	173												2,583												
11	MED	OTH	60												49	765					187							578
			JNT	31						11					31	249												249
			INS	62												826			45	781								
			COND	10				3	59							129					129							
			TTL	163						10						1,969												
11	NAN	OTH	39												39	410												410
			JNT	15											15	265												265
			INS	36												508												
			COND	8				36								268	220				48							
			TTL	98						4						1,451												
11	YAC	TR	4												4	80												80
			FOL	4												300	300											
			OTH	30											30	381												381
			INS	21												299												
			COND	4												84												84
			TTL	63						4						1,144												

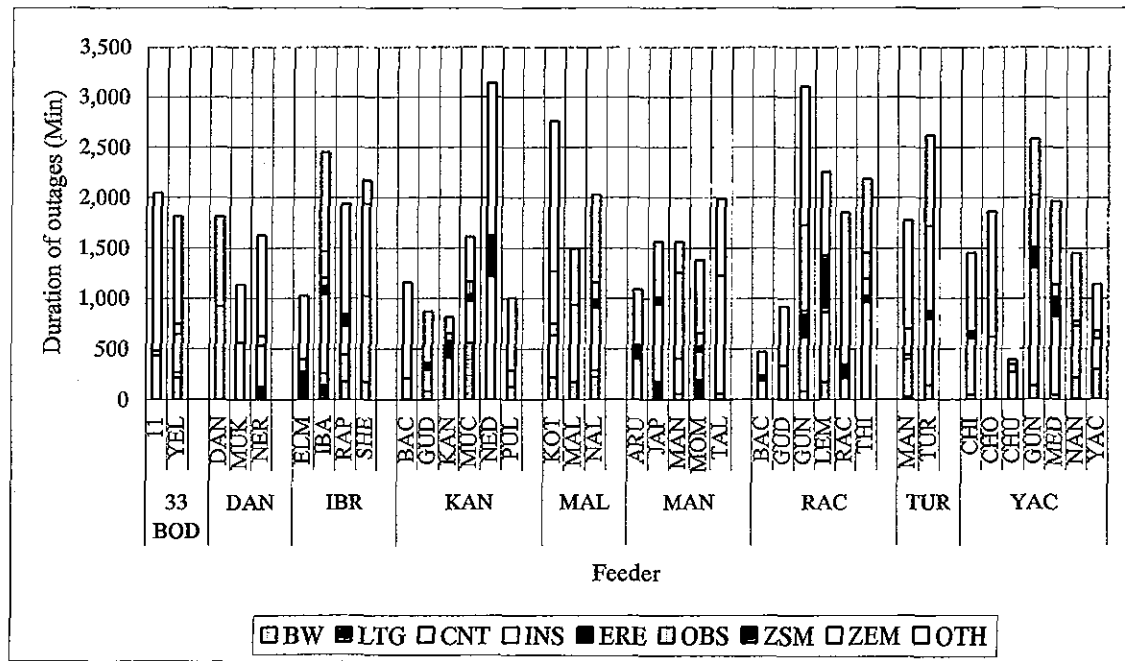
Number of Outages (RIBR)

		BW	LTG	CNT	INS	ERE	OBS	ZSM	ZEM	OTH	TTL
33 BOD	11 BOD	0	0	0	31	0	4	0	0	123	158
	YEL	4	0	4	37	0	10	0	0	103	158
DAN	DAN	0	0	0	55	0	0	0	0	61	116
	MUK	0	0	0	33	0	0	0	0	42	75
	NER	0	4	0	39	0	8	0	0	82	133
IBR	ELM	0	4	0	0	0	16	0	0	37	57
	IBA	0	4	8	53	4	4	0	4	57	134
	RAP	4	0	14	32	8	0	0	0	77	135
	SHE	4	0	0	50	0	0	0	14	22	90
KAN	BAC	0	0	0	25	0	0	0	0	81	106
	GUD	0	0	4	16	4	0	0	0	36	60
	KAN	0	0	0	33	8	8	0	0	20	69
	MUC	8	0	0	33	4	12	0	0	33	90
	NED	0	0	0	76	24	0	0	0	121	221
	PUL	0	0	0	8	0	8	0	0	48	64
MAL	KOT	4	0	0	36	0	12	0	8	96	156
	MAL	4	0	0	41	0	8	0	0	42	95
	NAL	5	0	4	29	4	17	0	0	64	123
MAN	ARU	0	0	0	25	8	0	0	0	36	69
	JAP	0	4	0	45	4	0	0	0	33	86
	MAN	0	0	4	25	0	0	0	9	27	65
	MOM	0	4	4	24	3	12	0	0	64	111
	TAL	0	0	4	76	0	0	0	0	62	142
RAC	BAC	0	0	0	184	4	0	0	0	18	206
	GUD	0	0	0	17	0	0	0	0	37	54
	GUN	0	0	4	38	13	4	0	10	101	170
	LEM	4	0	0	56	0	10	8	0	89	167
	RAC	0	0	0	16	8	0	0	0	131	155
	THI	0	0	0	66	4	8	0	4	51	133
TUR	MAN	0	0	3	33	0	4	0	4	82	126
	TUR	4	0	0	42	4	0	0	13	88	151
YAC	CHI	0	0	4	30	4	0	0	0	53	91
	CHO	0	0	0	41	0	0	0	0	82	123
	CHU	0	0	0	9	0	8	0	0	9	26
	GUN	4	0	0	106	17	0	0	8	38	173
	MED	0	0	3	59	11	10	0	0	80	163
	NAN	4	0	0	36	0	4	0	0	54	98
	YAC	4	0	0	21	0	4	0	0	34	63
		53	20	60	1,576	136	171	8	74	2,314	4,412



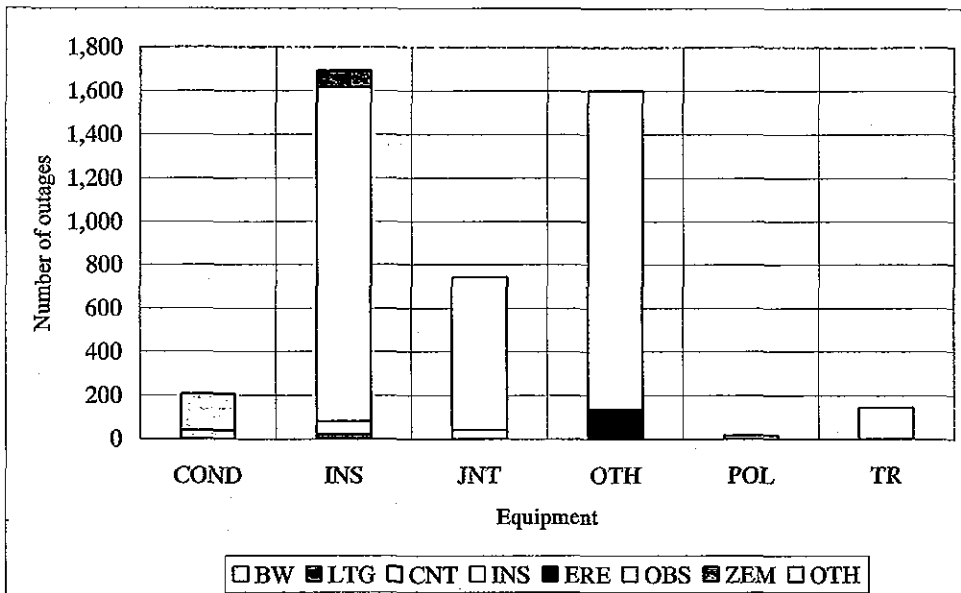
Duration of Outages (RIBR)

		BW	LTG	CNT	INS	ERE	OBS	ZSM	ZEM	OTH	TTL
33 BOD	IT BOD	0	0	0	436	0	48	0	0	1,564	2,048
	YEL	220	0	48	378	0	100	0	0	1,072	1,818
DAN	DAN	0	0	0	919	0	0	0	0	890	1,809
	MUK	0	0	0	564	0	0	0	0	573	1,137
	NER	0	128	0	404	0	96	0	0	996	1,624
IBR	ELM	0	280	0	0	0	128	0	0	620	1,028
	IBA	0	140	120	784	80	84	0	260	980	2,448
	RAP	180	0	263	287	112	0	0	0	1,093	1,935
	SHE	180	0	0	851	0	0	0	910	231	2,172
KAN	BAC	0	0	0	214	0	0	0	0	945	1,159
	GUD	0	0	84	216	68	0	0	0	500	868
	KAN	0	0	0	414	160	80	0	0	160	814
	MUC	560	0	0	412	68	132	0	0	439	1,611
	NED	0	0	0	1,219	408	0	0	0	1,512	3,139
	PUL	0	0	0	128	0	168	0	0	709	1,005
MAL	KOT	220	0	0	415	0	120	0	520	1,487	2,762
	MAL	180	0	0	754	0	0	0	0	563	1,497
	NAL	225	0	68	616	80	170	0	0	870	2,029
MAN	ARU	0	0	0	404	136	0	0	0	551	1,091
	JAP	0	180	0	764	68	0	0	0	557	1,569
	MAN	0	0	60	348	0	0	0	855	303	1,566
	MOM	0	180	20	276	51	132	0	0	721	1,380
	TAL	0	0	60	1,169	0	0	0	0	761	1,990
RAC	BAC	0	0	0	184	56	0	0	0	234	474
	GUD	0	0	0	343	0	0	0	0	578	921
	GUN	0	0	84	537	221	40	0	850	1,374	3,106
	LEM	180	0	0	685	0	50	520	0	823	2,258
	RAC	0	0	0	214	136	0	0	0	1,500	1,850
	THI	0	0	0	960	68	168	0	260	734	2,190
TUR	MAN	0	0	30	370	0	40	0	260	1,074	1,774
	TUR	144	0	0	652	80	0	0	845	900	2,621
YAC	CHI	0	0	44	564	68	0	0	0	776	1,452
	CHO	0	0	0	621	0	0	0	1,240	1,861	
	CHU	0	0	0	270	0	80	0	0	45	395
	GUN	140	0	0	1,164	206	0	0	520	553	2,583
	MED	0	0	45	781	187	129	0	0	827	1,969
	NAN	220	0	0	508	0	48	0	0	675	1,451
	YAC	300	0	0	299	0	84	0	0	461	1,444
		2,749	908	926	20,124	2,253	1,897	520	5,280	29,891	64,548



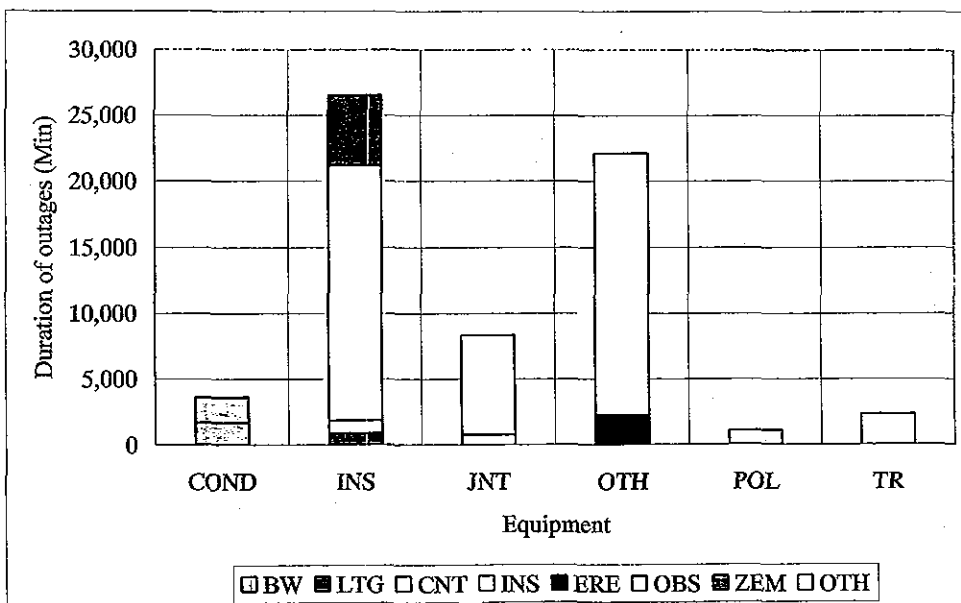
Number of Outages (RIBR)

	BW	LTG	CNT	INS	ERE	OBS	ZEM	OTH	TTL
COND	37	0	0	0	0	171	0	0	208
INS	0	20	60	1,535	0	0	74	4	1,693
JNT	0	0	0	41	0	0	0	702	743
OTH	0	0	0	0	136	0	0	1,464	1,608
POL	16	0	0	0	0	0	0	0	16
TR	0	0	0	0	0	0	0	144	144



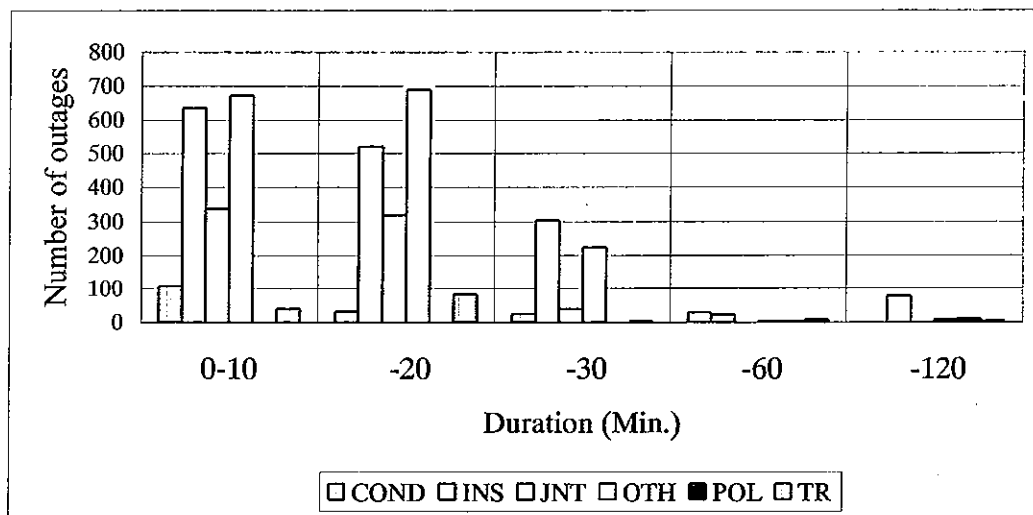
Duration of outages

	BW	LTG	CNT	INS	ERE	OBS	ZEM	OTH	TTL
COND	1,669	0	0	0	0	1,897	0	72	3,638
INS	0	908	926	19,370	0	0	5,280	60	26,544
JNT	0	0	0	754	0	0	0	7,555	8,309
OTH	0	0	0	0	2,253	0	0	19,861	22,634
POL	1,080	0	0	0	0	0	0	0	1,080
TR	0	0	0	0	0	0	0	2,343	2,343



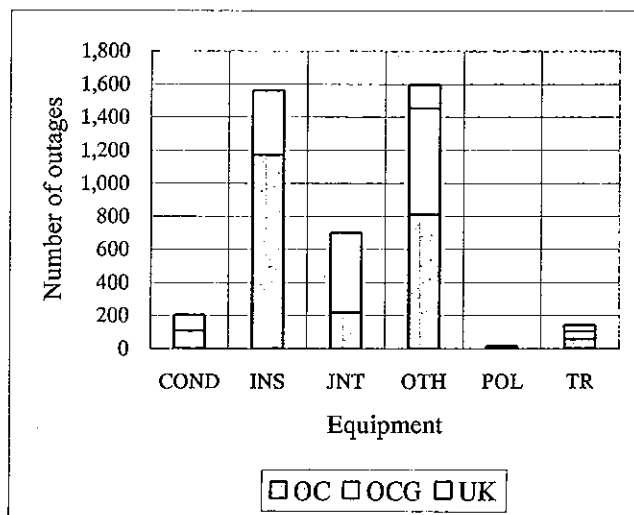
Distribution of Outage time as per Equipment

Duration (COND	INS	JNT	OTH	POL	TR	TTL
0-10	108	635	340	672	0	43	1,798
-20	36	521	319	690	0	83	1,649
-30	27	304	42	224	0	4	601
-60	32	24	0	4	4	9	73
-120	0	78	0	8	12	4	102
TTL	203	1,562	701	1,598	16	143	4,223



Record of 11 kV protective relay operation

	OC	OCG	UK	TTL
COND	111	92	0	203
INS	1,174	388	0	1,562
JNT	220	481	0	701
OTH	812	645	141	1,598
POL	0	16	0	16
TR	61	46	36	143
TTL	2,378	1,668	177	4,223



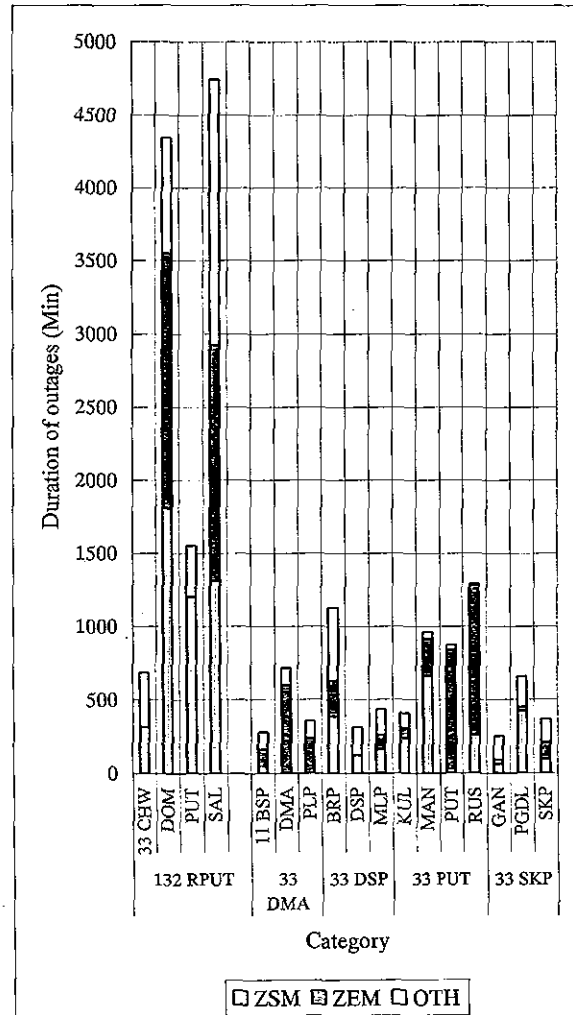
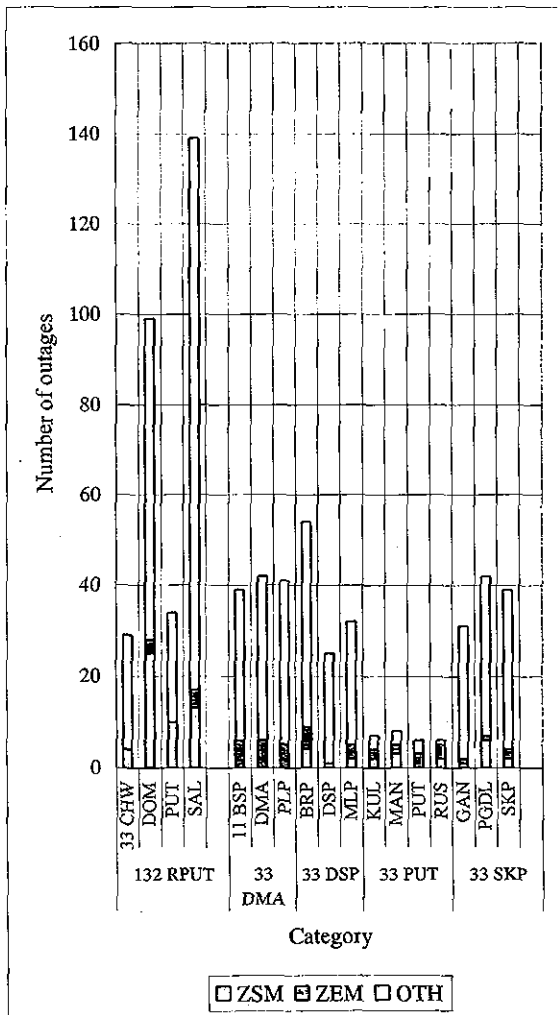
Code of Substation : RPUT

Number of Outages

		ZSM	ZEM	OTH
132 RPUT	33 CHW	4		25
	DOM	25	3	71
	PUT	10		24
	SAL	13	4	122
33 DMA	11 BSP		6	33
	DMA		6	36
	PLP		5	36
33 DSP	BRP	4	5	45
	DSP	1		24
	MLP	2	3	27
33 PUT	KUL	2	2	3
	MAN	3	2	3
	PUT		3	3
	RUS	2	3	1
33 SKP	GAN	1	1	29
	PGDL	6	1	35
	SKP	2	2	35

Duration of Outages

		ZSM	ZEM	OTH
132 RPUT	33 CHW	315		369
	DOM	1810	1740	794
	PUT	1205		345
	SAL	1310	1615	1818
33 DMA	11 BSP		162	117
	DMA		600	116
	PLP		237	116
33 DSP	BRP	384	250	494
	DSP	120		190
	MLP	160	101	172
33 PUT	KUL	240	68	100
	MAN	660	255	45
	PUT		840	35
	RUS	260	1020	10
33 SKP	GAN	60	30	162
	PGDL	421	30	208
	SKP	90	120	156



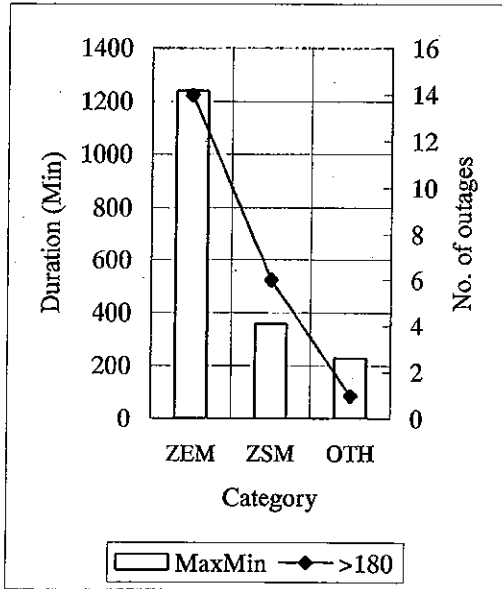
Maximum duration/event (MaxMin) and Number of outages more than 180 minutes (>180) in RPUT system

	ZEM	ZSM	OTH
MaxMin	1240	360	230
>180	14	6	1

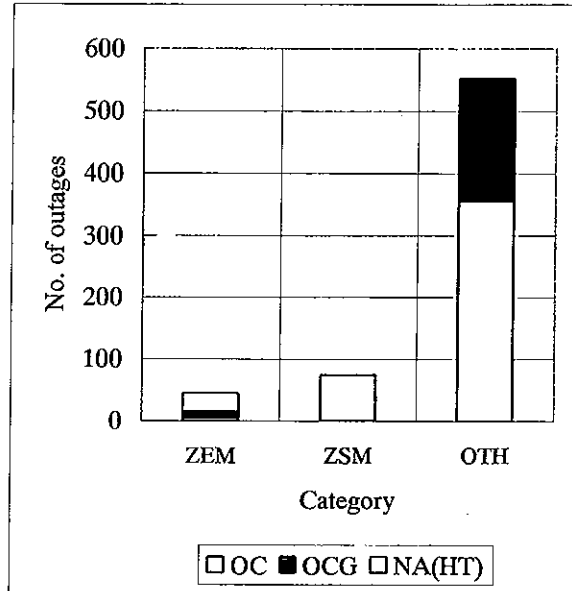
Number of protective device operations as per categories

	ZEM	ZSM	OTH
OC	5	1	356
OCG	10	0	196
NA(HT)	30	73	0

33+11 kV



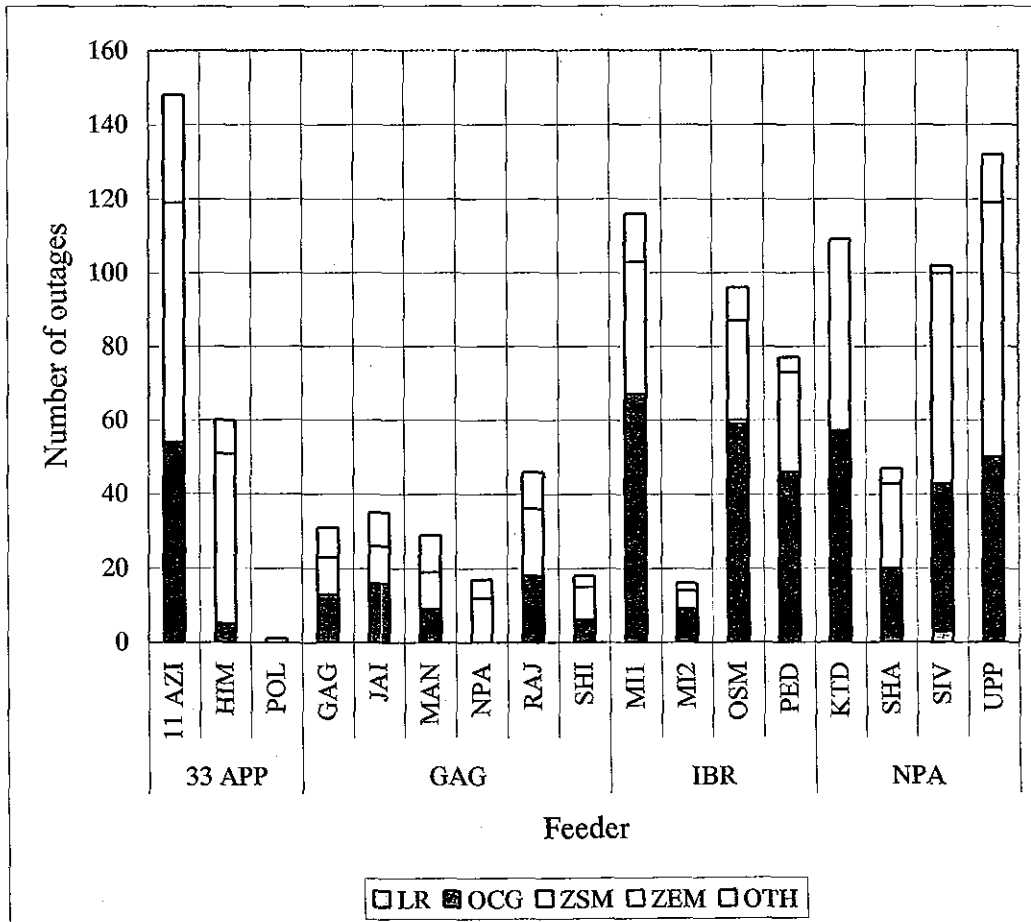
33+11 kV



Code of Substation : RSHI

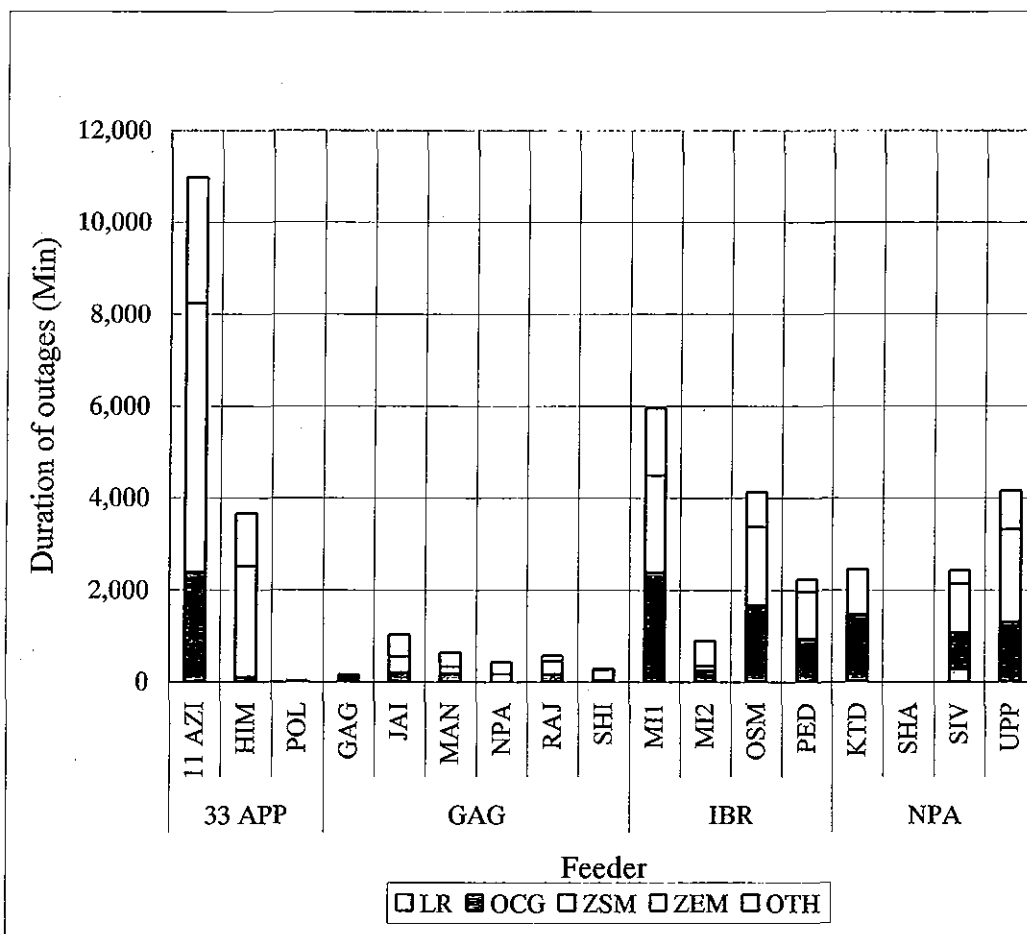
Number of Outages (RSHI)

Substation	Feeder	LR	OCG	ZSM	ZEM	OTH
33 APP	11 AZI		54		65	29
	HIM		5		46	9
	POL				1	
GAG	GAG		13	10		8
	JAI		16	10		9
	MAN		9	10		10
	NPA				12	5
	RAJ		18		18	10
IBR	SHI		6		9	3
	MI1		67		36	13
	MI2		9		5	2
	OSM		59	1	27	9
	PED		46		27	4
NPA	KTD		57		52	
	SHA		20		23	4
	SIV	3	40		57	2
	UPP		50		69	13



Duration of Outages (RSHI)

Duration of outages (Min)		Unit : Min				
Substation	Feeder	LR	OCG	ZSM	ZEM	OTH
33 APP	11 AZI		2,385		5,849	2,743
	HIM		95		2,425	1,145
	POL				30	
GAG	GAG		72		43	35
	JAI		192		362	479
	MAN		176		155	305
	NPA				169	250
	RAJ		163		282	120
	SHI		43		220	13
IBR	MI1		2,391		2,089	1,475
	MI2		239		105	557
	OSM		1,634	35	1,705	750
	PED		932		1,039	265
NPA	KTD		1,464		992	
	SHA		0		0	0
	SIV	270	802		1,076	281
	UPP		1,312		2,004	835

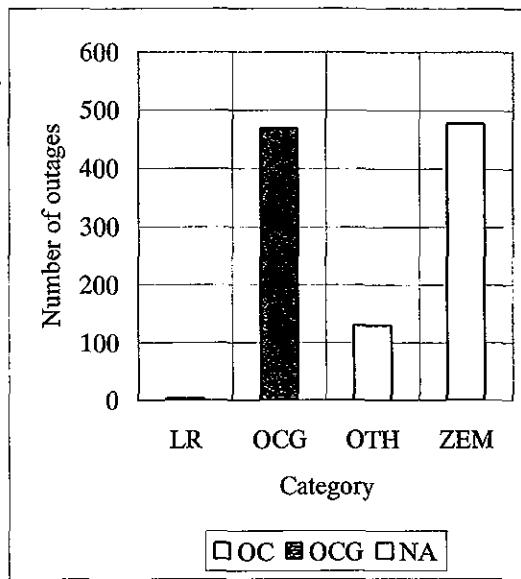
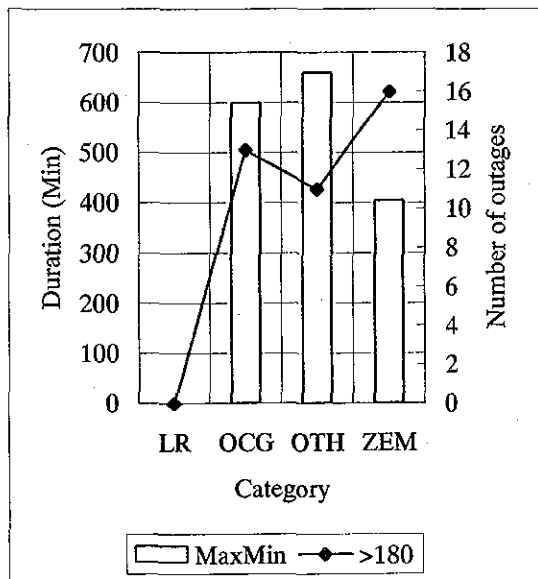


Maximum duration/event (MaxMin) and
Number of outages more than
180 minutes (>180) in RSHI system

	LR	OCG	OTH	ZEM
MaxMin	-	600	660	405
>180	-	13	11	16

Number of protective device operations
as per categories

	LR	OCG	OTH	ZEM
OC	0	0	0	0
OCG	0	469	0	0
NA	3	0	130	478



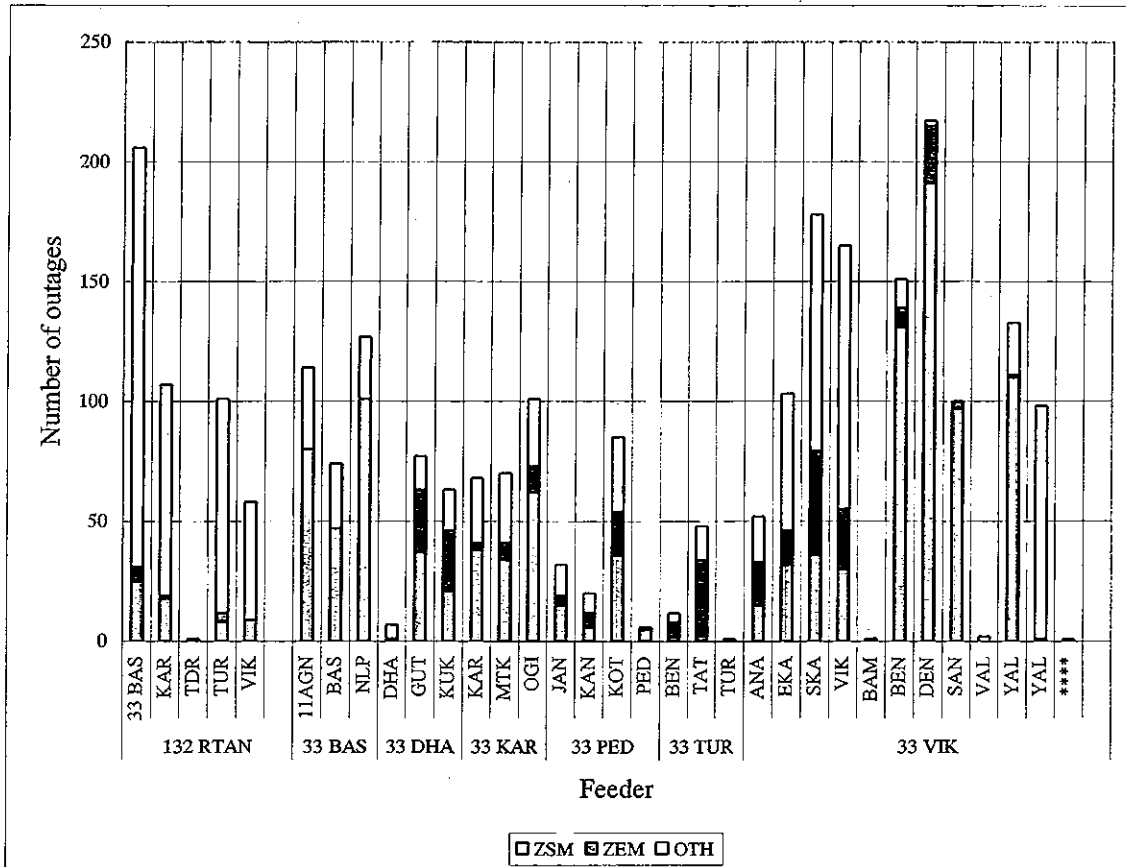
Code of Substation : RTAN

Summary of Outages (RTAN)

Substation	Feeder/equipment troubled			Number of Interruption										Duration of Interruption (Min)										Remarks							
	Voltage	Name	Equipment	TTL	RW	LTG	CNT	INS	ERE	OBS	OC	WOK	ZSM	ZEM	BE	TH	OTH	TTL	BW	LTG	CNT	INS	ERE		OBS	OC	WOK	ZSM	ZEM	BE	TH
132	RTAN	BAS		206								25	6				175	8,822								4,055	440				4,327
		KAR		107							18	1					88	6,137								3,220	230			2,687	
		TDR		1													1	10												10	
		TUR		101							8	4					89	3,084								1,070	405			1,609	
		VIK		58							9						49	3,850								3,175				675	
				473														21,903													
33	BAS	AGN		114							80						34	8,005								5,420				2,485	
		BAS		74							47						27	2,758								2,588				170	
		NLP		127							101						26	14,051								13,134				917	
				315														24,814													
33	DHA	DHA		7							1						6	58								30				28	
		GUT		77							37	26					14	15,863								4,965	10,452			446	
		KUK		63							21	25					17	14,531								3,885	10,360			266	
				147														30,452													
33	KAR	KAR		68							38	3					27	4,111								2,923	943			245	
		MIK		70							34	7					29	7,381								4,555	2,391			435	
		OGI		101							62	11					28	7,840								5,750	1,830			260	
				239														19,332													
33	PED	JAN		32							15	4					13	2,894								1,483	1,285			124	
		KAN		20							6	6					8	3,357								583	2,685			87	
		KOT		85							36	18					31	8,828								4,015	4,514			299	
		PED		6							5						1	430								300				130	
				143														15,509													
33	TUR	BEN		12							8						4	1,865								1,820				45	
		TAT		48							34						14	6,709								6,531				169	
		TUR		1							1							60								60					
				61														8,625													
33	VIK	ANA		52							15	18					19	4,451								1,875	2,175			401	
		EKA		103							32	14					57	7,761								4,083	3,150			526	
		SKA		178							36	43					99	11,859								2,775	7,880			1,244	
		VIK		165							30	25					110	6,034								3,069	2,090			875	
		BAM		1														110								110					
		BEN		151							131	8					12	9,797								7,312	2,355			130+DBN	
		DEN		217							191	24					21	30,970								18,340	12,605			25	
		SAN		100							97	3						11,155								9,210	1,945				
		VAL		2													2	15													
		YAL		133							110	1					22	8,709									8,433	180			15+BEN,DEG,SAG
		YAL+		98													97	1,155												96	
		****		1													1	5												395	
				1,201														92,061													5

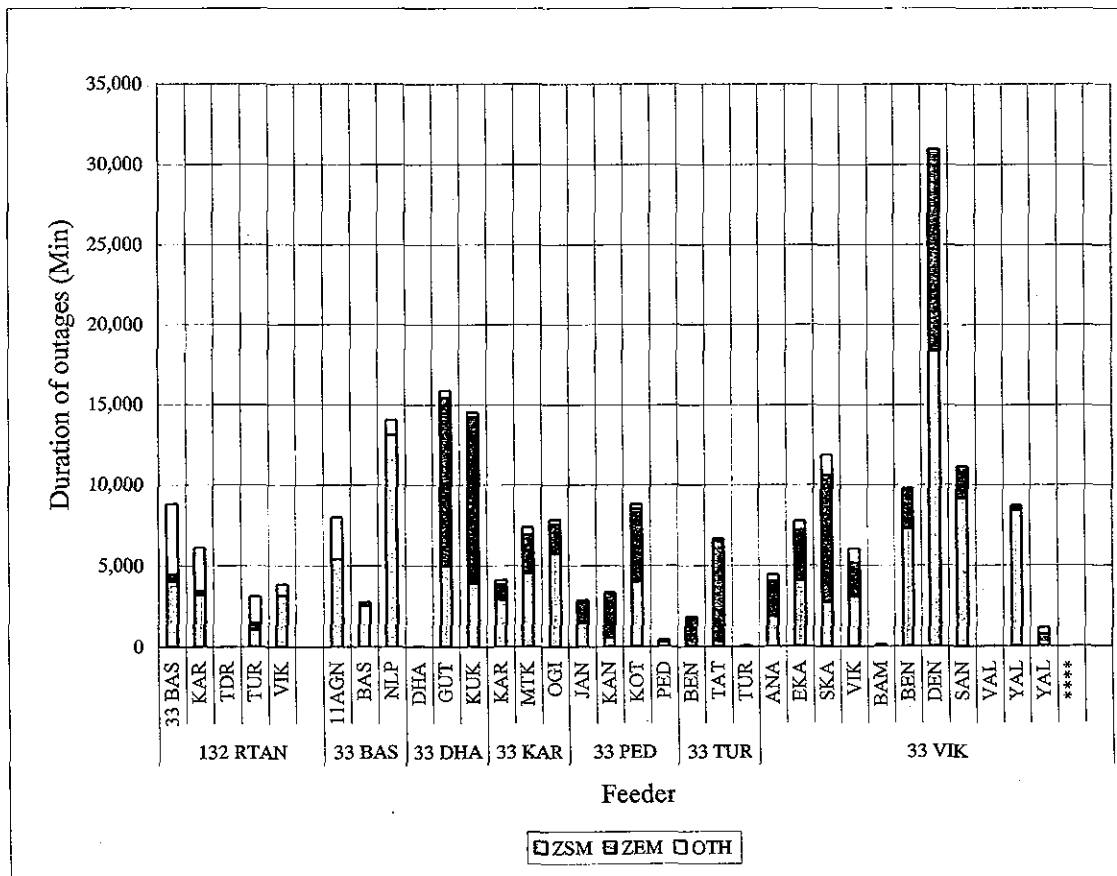
Number of Outages (RTAN)

Substation	Feeder	ZSM	ZEM	OTH
132 RTAN	33 BAS	25	6	175
	KAR	18	1	88
	TDR			1
	TUR	8	4	89
	VIK	9		49
33 BAS	11AGN	80		34
	BAS	47		27
	NLP	101		26
33 DHA	DHA	1		6
	GUT	37	26	14
	KUK	21	25	17
33 KAR	KAR	38	3	27
	MTK	34	7	29
	OGI	62	11	28
33 PED	JAN	15	4	13
	KAN	6	6	8
	KOT	36	18	31
	PED	5		1
33 TUR	BEN		8	4
	TAT		34	14
	TUR	1		
33 VIK	ANA	15	18	19
	EKA	32	14	57
	SKA	36	43	99
	VIK	30	25	110
	BAM	1		
	BEN	131	8	12
	DEN	191	24	2
	SAN	97	3	
	VAL			2
	YAL	110	1	22
****			1	



Duration of Outages (RTAN)

Substation	Feeder	ZSM	ZEM	OTH
132 RTAN	33 BAS	4,055	440	4,327
	KAR	3,220	230	2,687
	TDR			10
	TUR	1,070	405	1,609
	VIK	3,175		675
33 BAS	11AGN	5,420		2,585
	BAS	2,588		170
	NLP	13,134		917
33 DHA	DHA	30		28
	GUT	4,965	10,452	446
	KUK	3,885	10,360	286
33 KAR	KAR	2,923	943	245
	MTK	4,555	2,391	435
	OGI	5,750	1,830	260
33 PED	JAN	1,485	1,285	124
	KAN	585	2,685	87
	KOT	4,015	4,514	299
33 TUR	PED	300		130
	BEN		1,820	45
	TAT		6,531	169
33 VIK	TUR	60		
	ANA	1,875	2,175	401
	EKA	4,085	3,150	526
	SKA	2,775	7,880	1,244
	VIK	3,069	2,090	875
	BAM	110		
	BEN	7,312	2,355	130
	DEN	18,340	12,605	25
	SAN	9,210	1,945	
	VAL			15
YAL	8,433	180	96	
YAL		760	395	
****			5	



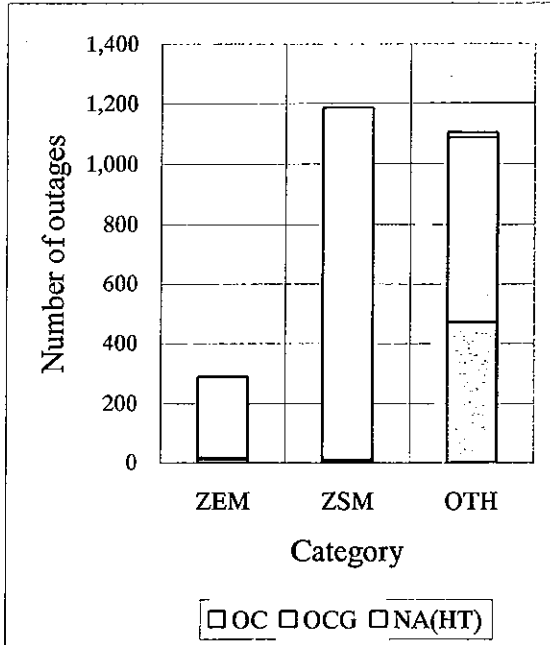
Number of protective device operations as per categories

	ZEM	ZSM	OTH
OC	11	9	473
OCG	7	2	612
NA(HT)	272	1,176	17

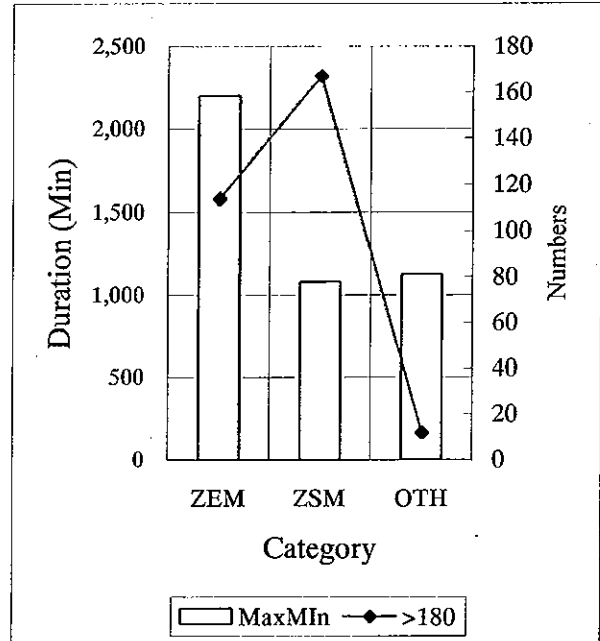
Maximum duration/event (MaxMin) and Number of outages more than 180 minutes (>180) in RTAN system

	ZEM	ZSM	OTH
MaxMin	2,200	1,080	1,125
>180	114	167	12

(33+11 kV)



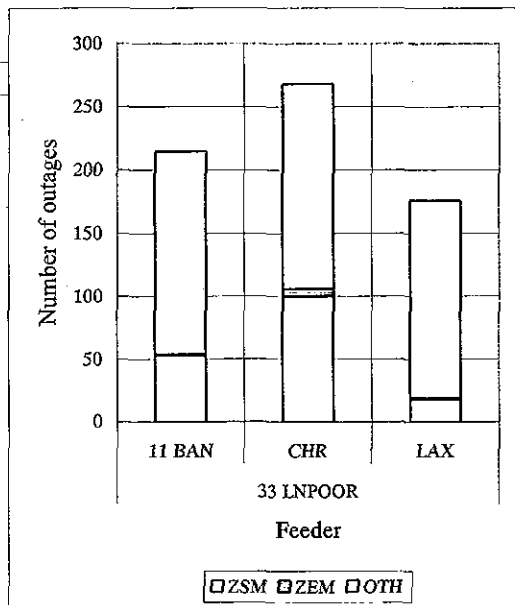
(33+11 kV)



Code of Substation : ROTH

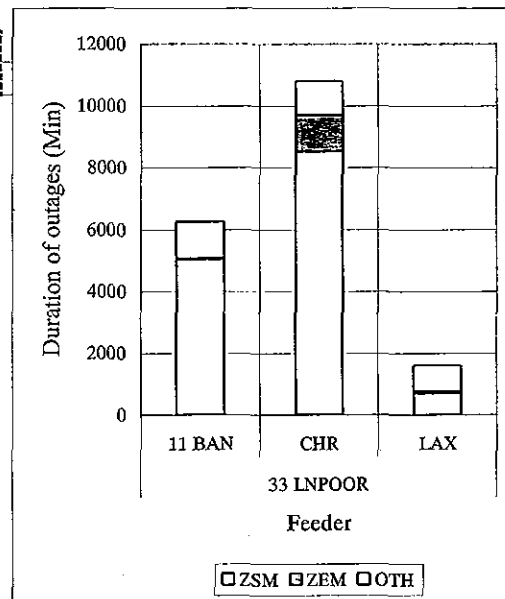
Number of Outages (ROTH)

Substation	Feeder	ZSM	ZEM	OTH
33 LNPOOR	11 BAN	53	1	161
	CHR	100	6	162
	LAX	18	1	157



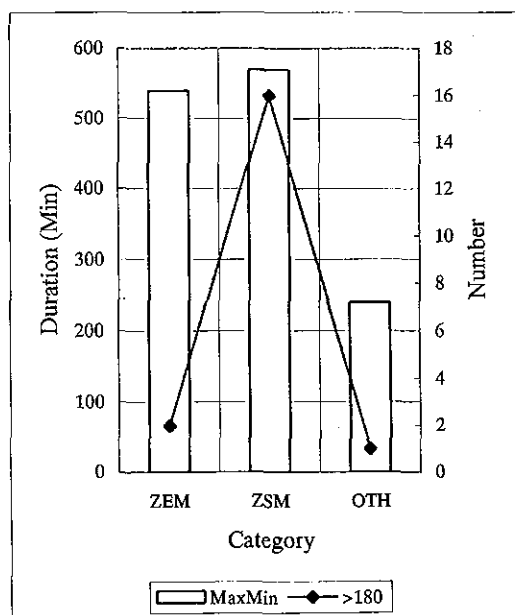
Duration of Outages (ROTH)

Substation	Feeder	ZSM	ZEM	OTH
33 LNPOOR	11 BAN	5060	15	1192
	CHR	8536	1165	1100
	LAX	708	60	841



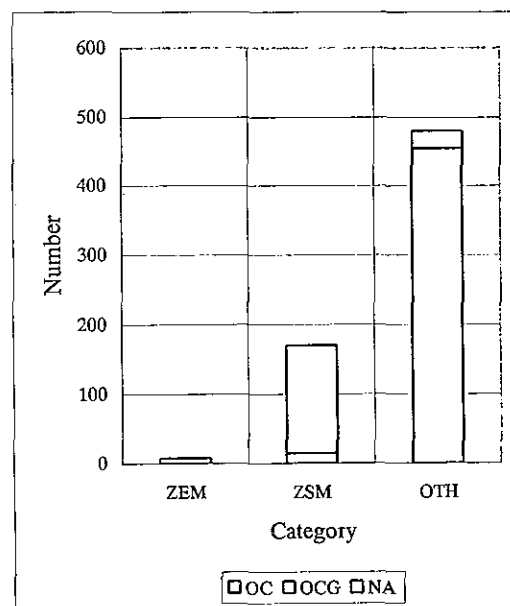
Maximum duration/event (MaxMin) and Number of outages more than 180 minutes (>180) in ROTH system

	ZEM	ZSM	OTH
MaxMin	540	570	240
>180	2	16	1



Number of protective device operations as per categories

	ZEM	ZSM	OTH
OC	0	0	0
OCG	0	15	455
NA	8	156	25



B. Medak District

Code of Substation : MAL (MKAN)

Summary of Outages (33/ 11 kV Malkapur)

Y	M	33 kV Incoming												Remarks					
		E/L			O/L			L/R			L/C				Interruption		Total		
		Nos.	Duration		Nos.	Duration		Nos.	Duration		Nos.	Duration			Nos.	Duration		Nos.	Duration (Total)
			Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event			Total	Max./event		
2	4													15	508	315	15	508	
	5													2	15	8	2	15	
	6													2	8	5	2	8	
	7													32	3,384	120	32	3,384	
	8													36	3,946	120	36	3,946	
	9													33	4,093	180	33	4,093	
	10													60	8,260	210	60	8,260	
	11													58	7,320	150	58	7,320	
	12													61	7,225	125	61	7,225	
3	1													57	6,850	125	57	6,850	
	2													55	6,565	125	55	6,565	
	3													33	3,680	180	33	3,680	
TTL		0	0		0	0		0	0		0	0		444	51,854		444	51,854	

Y	M	11 kV MAL												Remarks					
		E/L			O/L			L/R			L/C				B/D			Total	
		Nos.	Duration		Nos.	Duration		Nos.	Duration		Nos.	Duration			Nos.	Duration		Nos.	Duration (Total)
			Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event			Total	Max./event		
2	4	8	44	7	0	0	0	30	10,500	360	1	240	240	0	0	0	39	10,784	
	5	17	85	5	3	15	5	31	11,160	360	0	0	0	0	0	0	51	11,260	
	6	12	60	5	8	40	5	30	10,320	360	4	770	300	2	180	120	56	11,370	
	7	12	60	5	4	20	5	31	10,980	540	0	0	0	0	0	0	47	11,060	
	8	10	50	5	6	30	5	15	4,740	360	3	9	300	1	360	360	35	5,189	
	9	14	65	8	5	25	5	13	3,780	360	1	180	180	0	0	0	33	4,050	
	10	10	50	5	7	35	5	30	8,580	420	0	0	0	0	0	0	47	8,665	
	11	8	40	5	3	15	5	30	7,080	420	2	350	240	0	0	0	43	7,485	
	12	4	20	5	2	10	5	30	7,200	300	0	0	0	1	60	60	37	7,290	
3	1	15	75	5	4	20	5	30	7,560	360	1	60	60	0	0	0	50	7,715	
	2	7	35	6	5	25	5	27	7,080	300	1	180	180	0	0	0	40	7,320	
	3	10	50	5	4	20	5	31	9,300	420	0	0	0	1	60	60	46	9,430	
TTL		127	634		51	255		328	98,280		13	1,789		5	660		524	101,618	

Y	M	11 kV MUN												Remarks					
		E/L			O/L			L/R			L/C				B/D			Total	
		Nos.	Duration		Nos.	Duration		Nos.	Duration		Nos.	Duration			Nos.	Duration		Nos.	Duration (Total)
			Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event			Total	Max./event		
2	4	22	125	8	0	0	0	29	9,960	360	6	1,380	540	2	245	180	59	11,710	
	5	30	150	5	1	5	5	29	10,440	360	1	300	300	2	240	180	63	11,135	
	6	31	155	5	9	45	5	30	10,260	360	4	340	180	4	1,260	600	78	12,060	
	7	31	70	10	9	50	8	31	9,240	540	1	360	360	0	0	0	72	9,720	
	8	22	110	5	6	30	5	14	4,140	360	10	1,140	300	1	540	540	53	5,960	
	9	13	65	5	11	55	5	14	1,620	300	13	2,580	360	1	60	60	52	4,380	
	10	11	55	5	7	35	5	30	7,680	540	0	0	0	1	60	60	49	7,830	
	11	11	55	5	8	40	5	30	7,740	420	4	300	120	1	60	60	54	8,195	
	12	13	75	5	7	40	10	30	7,020	300	1	180	180	0	0	0	51	7,315	
3	1	16	80	5	4	20	5	30	7,620	360	0	0	0	0	0	0	50	7,720	
	2	10	50	5	5	25	5	27	6,780	300	3	420	240	3	180	120	48	7,455	
	3	10	50	5	5	25	5	31	9,780	420	0	0	0	0	0	0	46	9,855	
TTL		220	1,040		72	370		325	92,280		43	7,000		15	2,645		675	0	

Y	M	11 kV TWN												Remarks					
		E/L			O/L			L/R			L/C				B/D			Total	
		Nos.	Duration		Nos.	Duration		Nos.	Duration		Nos.	Duration			Nos.	Duration		Nos.	Duration (Total)
			Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event			Total	Max./event		
2	4																0	0	
	5																0	0	
	6																0	0	
	7																0	0	
	8																0	0	
	9																0	0	
	10																0	0	
	11																0	0	
	12	0	0		1	5	5	0	0	0	0	1	60	60	0	0	0	2	65
3	1	3	15		5	2	10	5	1	120	120	0	0	0	0	0	6	145	
	2	2	10		5	0	0	0	0	0	0	1	60	60	1	120	120	4	190
	3	19	90		8	7	35	5	0	0	0	0	0	0	1	120	120	27	245
TTL		24	115		10	50		1	120		2	120		2	240		39	645	

Note) Unit of duration = Minute

Summary of Outages (33/ 11 kV Malkapur)

Y	M	11 kV KOT														Remarks
		E/L		O/L		L/R		L/C		B/D		Total				
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration			
	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Duration (Total)		
2	4	-		-		30	5,400	180	0	0	0	0	0	0	30	5,400
	5	-		-		31	6,180	360	1	120	120	1	360	360	32	6,660
	6	-		-		6	1,800	300	2	120	60	4	1,020	480	12	2,940
	7	-		-		17	2,940	300	1	300	300	2	420	240	20	3,660
	8	-		-		15	1,800	120	0	0	0	3	660	360	18	2,460
	9	1	5	5	0	0	0	0	0	0	0	0	0	0	1	5
	10	0	0	0	0	0	0	0	2	120	60	0	0	0	2	120
	11	-		-		0	0	0	2	300	180	0	0	0	2	300
	12	0	0	0	1	5	3,660	300	1	60	60	0	0	0	18	3,725
3	1	4	20	5	5	25	7,740	420	1	60	60	0	0	0	41	7,845
	2	7	35	5	3	15	7,080	300	1	120	120	1	300	300	39	7,550
	3	16	80	5	2	10	9,900	420	2	540	300	1	60	60	52	10,590
TTL		28	140		11	55	204	46,500		13	1,740		12	2,820	268	51,255

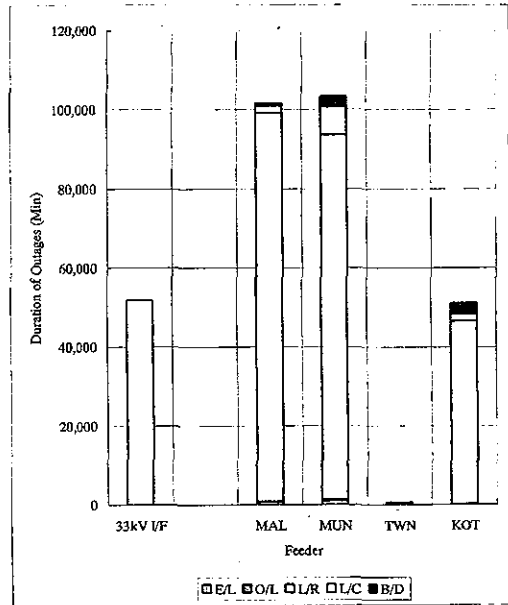
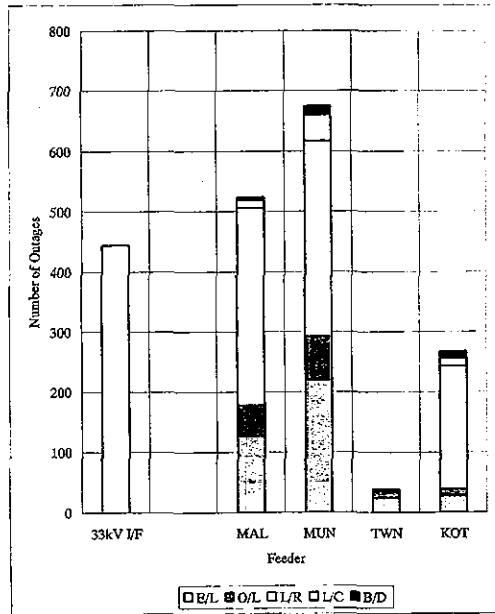
Note) Unit of duration = Minute

Number of Outages

	E/L	O/L	L/R	L/C	B/D
33kV I/F	0	0	444	0	0
MAL	127	51	328	13	5
MUN	220	72	325	43	15
TWN	24	10	1	2	2
KOT	28	11	204	13	12

Duration of Outages (Min)

	E/L	O/L	L/R	L/C	B/D
33kV I/F	0	0	51,854	0	0
MAL	634	255	98,280	1,789	660
MUN	1,040	370	92,280	7,000	2,645
TWN	115	50	120	120	240
KOT	140	55	46,500	1,740	2,820



Code of Substation : KON (MKAN)

参考資料 1. 配電線運用 (停止) データの解析結果

Summary of Outages (33/ 11 kV Kondapur)

Y	M	33 kV Incoming										Remarks			
		E/L		O/L		L/R		L/C		Interruption			Total		
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration		Nos.	Duration	
	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event			
2	4									5	489	315	5	489	
	5									5	128	59	5	128	
	6									6	35	17	6	35	
	7									18	3,494	255	18	3,494	
	8									17	3,309	247	17	3,309	
	9									19	4,119	360	19	4,119	
	10									30	7,739	360	30	7,739	
	11									30	7,177	240	30	7,177	
	12									30	7,170	265	30	7,170	
3	1									58	7,062	263	58	7,062	
	2									54	6,256	267	54	6,256	
	3									7	262	120	7	262	
TTL		0	0	0	0	0	0	0	0	279	47,240		279	47,240	

Y	M	11 kV KON										Remarks							
		E/L		O/L		L/R		L/C		B/D			Total						
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration		Nos.	Duration					
	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event							
2	4	17	399	185	6	30	5	0	0	0	2	480	420	2	480	420	27	1,389	
	5	14	231	47	0	0	0	0	0	0	7	1,380	420	1	180	180	22	1,791	
	6	9	107	34	4	40	15	0	5,100	360	6	780	180	1	360	360	20	6,387	
	7	5	30	10	0	0	0	0	0	0	0	0	0	0	0	0	5	30	
	8	9	74	10	2	10	5	15	4,320	360	1	60	60	0	0	0	27	4,464	
	9	5	25	5	3	40	25	13	3,600	360	4	300	120	0	0	0	25	3,965	
	10	6	47	15	5	45	20	29	7,980	420	0	0	0	1	120	120	41	8,192	
	11	1	5	5	2	20	15	30	7,380	420	0	0	0	0	0	0	33	7,405	
	12	3	20	10	2	10	5	16	3,420	300	0	0	0	0	0	0	21	3,450	
3	1	20	100	5	2	10	5	0	0	0	3	83	36	0	0	0	25	193	
	2	10	46	5	3	15	5	0	0	0	4	340	145	1	300	300	18	701	
	3	22	110	5	9	45	5	57	7,560	120	4	405	225	0	0	0	92	8,120	
TTL		121	1,194	336	38	265	105	160	39,360	2,340	31	3,828	1,606	6	1,440	1,380	356	5,767	

Y	M	11 kV TER										Remarks								
		E/L		O/L		L/R		L/C		B/D			Total							
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration		Nos.	Duration						
	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event								
2	4																			
	5																			
	6																			
	7	2	10	5	1	40	40	29	10,020	420	0	0	0	0	0	0	32	10,070		
	8	10	83	15	1	5	5	14	4,380	360	2	180	120	2	300	180	29	4,948		
	9	4	35	22	2	35	25	13	3,600	360	3	540	240	1	60	60	23	4,270		
	10	5	38	15	6	62	20	30	8,100	660	0	0	0	0	0	0	41	8,200		
	11	1	5	5	3	25	15	30	420	420	1	180	180	0	0	0	35	630		
	12	4	25	10	2	10	5	0	6,900	300	0	0	0	0	0	0	6	6,935		
3	1							31	7,500	300	0	0	0	0	0	0	31	7,500		
	2							27	7,320	300	4	675	190	0	0	0	31	7,995		
	3							31	13,140	540	2	230	190	0	0	0	33	13,370		
TTL		26	196		15	177		205	61,380		12	1,805		3	360		261	63,918		

Y	M	11 kV MAR										Remarks							
		E/L		O/L		L/R		L/C		B/D			Total						
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration		Nos.	Duration					
	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event							
2	4	15	542	215	3	15	5	0	9,480	540	3	165	85	1	240	240	22	10,442	
	5	15	227	47	0	0	0	31	11,160	360	1	60	60	2	420	240	49	11,867	
	6	12	91	20	4	35	10	30	10,800	360	2	180	120	1	60	60	49	11,166	
	7	5	30	10	4	60	40	31	11,400	540	1	60	60	3	360	120	44	11,910	
	8	6	75	15	2	10	5	16	4,680	360	2	180	120	0	0	0	26	4,945	
	9	6	45	22	3	40	25	13	3,600	260	1	240	240	1	60	60	24	3,985	
	10	3	23	15	2	10	5	29	7,980	540	1	180	180	1	180	180	36	8,373	
	11	4	20	5	1	5	5	30	7,680	420	0	0	0	1	240	240	36	7,945	
	12	5	45	20	2	25	20	30	7,020	300	0	0	0	0	0	0	37	7,090	
3	1	15	75	8	2	10	5	30	7,620	300	6	175	50	0	0	0	53	7,880	
	2	8	40	5	3	15	5	27	7,320	300	2	345	265	0	0	0	40	7,720	
	3	21	105	5	7	35	5	31	13,740	540	1	65	65	1	120	120	61	14,065	
TTL		115	1,318		33	260		298	102,480		20	1,650		11	1,680		477	0	

Note) Unit of duration = Minute

Summary of Outages (33/ 11 kV Kondapur)

Y	M	11 kV GAN														Remarks			
		E/L		O/L		L/R		L/C		B/D		Total							
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration						
		Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	(Total)							
2	4	15	126	15	30	10	29	13,500	600	1	400	400	0	1,020	660	50	15,076		
	5	14	190	47	0	0	30	10,200	360	0	0	0	4	1,500	540	48	11,890		
	6	6	80	30	3	30	10	28	9,840	360	3	300	180	2	1,500	960	42	11,750	
	7	3	20	10	3	55	40	31	11,700	540	0	0	0	0	0	0	37	11,775	
	8	7	72	15	2	10	5	16	4,680	360	2	180	120	0	0	0	27	4,942	
	9	6	47	22	3	40	25	13	3,420	360	6	1,080	360	1	360	360	29	4,947	
	10	4	28	15	2	10	5	29	8,100	540	1	180	180	0	0	0	36	8,318	
	11	3	20	10	1	5	5	30	128	420	0	0	0	0	0	0	34	153	
	12	5	45	20	1	5	5	30	7,200	300	0	0	0	0	0	0	36	7,250	
3	1	-	-	-	-	-	-	30	7,620	300	2	450	330	0	0	0	32	8,070	
	2	-	-	-	-	-	-	27	7,080	300	1	360	360	0	0	0	28	7,440	
	3	-	-	-	-	-	-	31	13,740	540	0	0	0	0	0	0	31	13,740	
TTL		63	628	20	185		324	97,208		16	2,950		7	4,380		430	105,351		

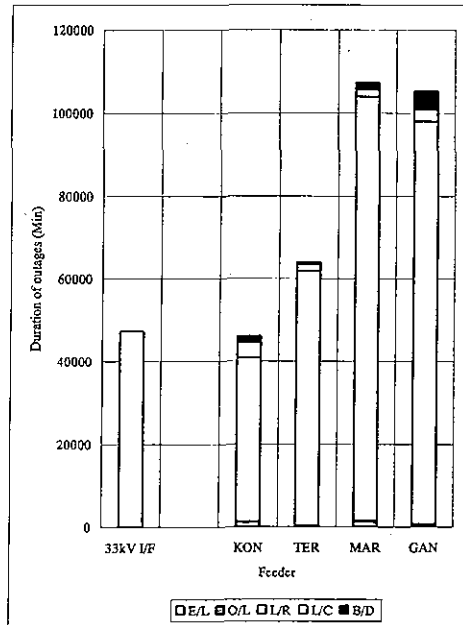
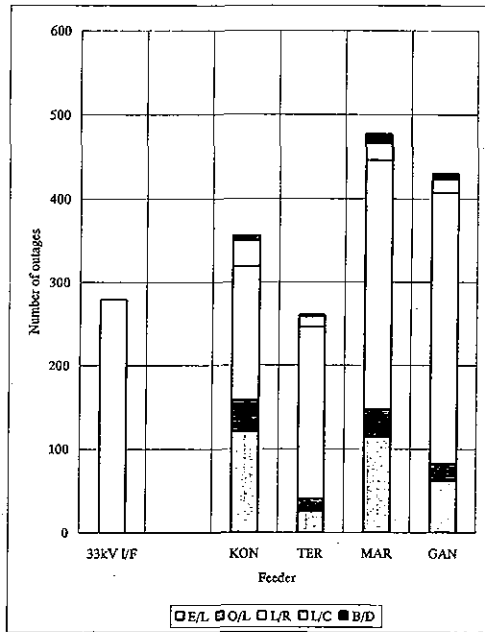
Note) Unit of duration = Minute

Number of outages

	E/L	O/L	L/R	L/C	B/D
33kV I/F	0	0	279	0	0
KON	121	38	160	31	6
TER	26	15	205	12	3
MAR	115	33	298	20	11
GAN	63	20	324	16	7

Duration of outages (Min)

	E/L	O/L	L/R	L/C	B/D
33kV I/F	0	0	47240	0	0
KON	1,194	265	39,360	3,828	1,440
TER	196	177	61,380	1,805	360
MAR	1,318	260	102,480	1,650	1,680
GAN	628	185	97,208	2,950	4,380



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Code of Substation : BOR (MNAR)

Summary of Outages (33/ 11 kV Borancha)

Y	M	33 kV Incoming												Remarks				
		E/L			O/L			L/R			L/C				Interruption		Total	
		Nos.	Duration		Nos.	Duration		Nos.	Duration		Nos.	Duration			Nos.	Duration		Nos.
	Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event		Total	Duration (Total)	
2	4												60	6,103		60	6,103	
	5												42	3,554		42	3,554	
	6												32	1,537		32	1,537	
	7												94	9,228		94	9,228	
	8												34	2,853		34	2,853	
	9												43	4,326		43	4,326	
	10												93	9,388		93	9,388	
	11												66	7,290		66	7,290	
	12												70	8,642		70	8,642	
3	1												58	8,430		58	8,430	
	2												60	6,506		60	6,506	
	3												27	2,605		27	2,605	
TTL		0	0		0	0		0	0		0	0	679	70,462		679	70,462	

Y	M	11 kV BOR												Remarks					
		E/L			O/L			L/R			L/C				B/D			Total	
		Nos.	Duration		Nos.	Duration		Nos.	Duration		Nos.	Duration			Nos.	Duration		Nos.	Duration
	Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event		Total	Duration (Total)		
2	4																0	0	
	5																0	0	
	6	17	85	5	2	10	5			4	625	240	3	2,160	1,140	26	2,880		
	7	11	55	5	0	0	0			2	480	265	0	0	0	13	535		
	8	19	95	5	1	5	5			1	30	30	0	0	0	21	130		
	9	8	45	10	2	15	10			0	0	0	0	0	0	10	60		
	10	11	75	20	4	30	10			0	0	0	0	0	0	15	105		
	11	8	45	10	2	20	10			1	30	30	0	0	0	11	95		
	12	10	50	5	1	5	5			0	0	0	0	0	0	11	55		
3	1	9	70	25	0	0	0			0	0	0	0	0	0	9	70		
	2	14	70	5	3	15	5			0	0	0	0	0	0	17	85		
	3	19	110	20	2	10	5			0	0	0	0	0	0	21	120		
TTL		126	700		17	110		0	0	8	1,165		3	2,160		154	4,135		

Y	M	11 kV DHA												Remarks					
		E/L			O/L			L/R			L/C				B/D			Total	
		Nos.	Duration		Nos.	Duration		Nos.	Duration		Nos.	Duration			Nos.	Duration		Nos.	Duration
	Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event		Total	Duration (Total)		
2	4	10	55	10	1	5	5			0	0	0	2	1,200	780	13	1,260		
	5	26	130	5	1	5	5			2	240	120	2	660	360	31	1,035		
	6	17	85	5	2	10	5			2	245	180	2	685	495	23	1,025		
	7	11	55	5	0	0	0			1	120	120	5	2,625	780	17	2,800		
	8	19	95	5	3	15	5			2	99	69	6	1,380	360	30	1,589		
	9	8	45	10	2	15	10			5	808	225	0	0	0	15	868		
	10	10	70	10	4	30	10			0	0	0	1	165	165	15	265		
	11	8	45	10	2	20	10			1	30	30	0	0	0	11	95		
	12	10	50	5	1	5	5			0	0	0	0	0	0	11	55		
3	1	9	65	25	0	0	0			0	0	0	0	0	0	9	65		
	2	14	70	5	3	15	5			0	0	0	0	0	0	17	85		
	3	18	110	20	2	10	5			0	0	0	1	20	20	21	140		
TTL		160	875		21	130		0	0	13	1,542		19	6,735		213	0		

Y	M	11 kV NAP												Remarks					
		E/L			O/L			L/R			L/C				B/D			Total	
		Nos.	Duration		Nos.	Duration		Nos.	Duration		Nos.	Duration			Nos.	Duration		Nos.	Duration
	Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event		Total	Max./event		Total	Duration (Total)		
2	4	10	55	10	1	5	5			0	0	0	0	0	0	11	60		
	5	27	135	5	1	5	5			2	960	480	1	240	240	31	1,340		
	6	17	85	5	2	10	5			2	245	180	1	264	264	22	604		
	7	11	55	5	0	0	0			0	0	0	0	0	0	11	55		
	8	19	95	5	3	15	5			1	30	30	0	0	0	23	140		
	9	8	45	10	2	15	10			0	0	0	0	0	0	10	60		
	10	10	80	20	4	30	10			0	0	0	0	0	0	14	110		
	11	8	45	10	2	20	10			1	30	30	0	0	0	11	95		
	12	10	50	5	1	5	5			0	0	0	0	0	0	11	55		
3	1	9	7	25	0	0	0			0	0	0	0	0	0	9	7		
	2	14	70	5	3	15	5			0	0	0	0	0	0	17	85		
	3	19	110	20	2	10	5			0	0	0	0	0	0	21	120		
TTL		162	832		21	130		0	0	6	1,265		2	504		191	2,731		

Note) Unit of duration = Minute

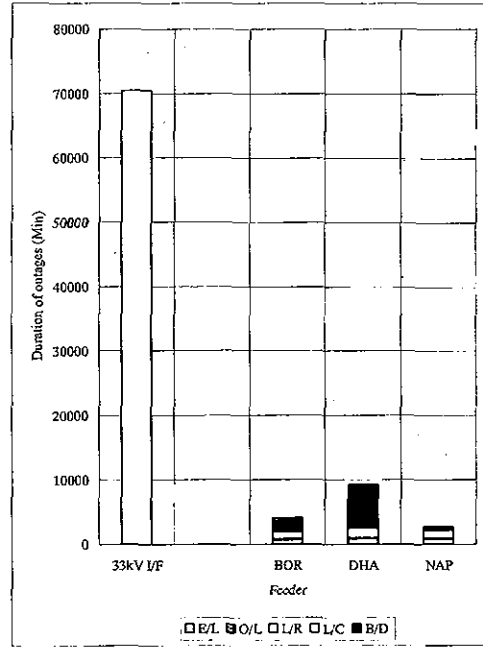
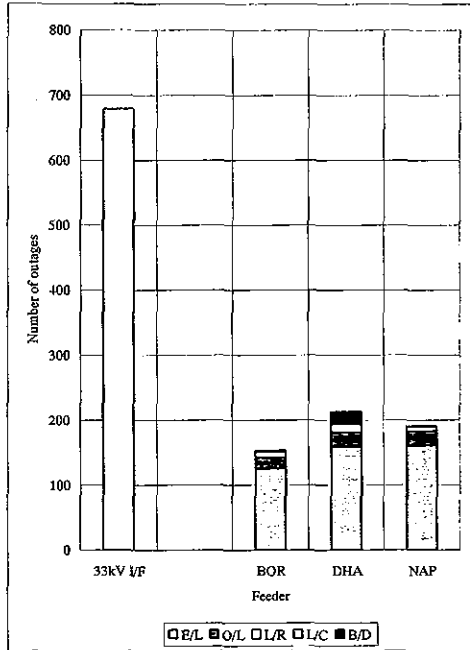
Summary of Outages (33/ 11 kV Borancha)

Number of outages

	E/L	O/L	L/R	L/C	B/D
33kV I/F	0	0	679	0	0
BOR	126	17	0	8	3
DHA	160	21	0	13	19
NAP	162	21	0	6	2

Duration of outages (Min)

	E/L	O/L	L/R	L/C	B/D
33kV I/F	0	0	70462	0	0
BOR	700	110	0	1,165	2,160
DHA	875	130	0	1,542	6,735
NAP	832	130	0	1,265	504



Code of Substation : POO (MNAR)

参考資料 1. 配電線運用 (停止) データの解析結果

Summary of Outages (33/ 11 kV Poosalpahad)

		33 kV Incoming												Remarks
Y	M	E/L		O/L		L/R		L/C		Interruption		Total		
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	
			Total		Max./event		Total		Max./event		Total		Max./event	
2	4									52	6,495		52	6,495
	5									36	2,387		36	2,387
	6									21	1,185		21	1,185
	7									92	9,543		92	9,543
	8									29	2,640		29	2,640
	9									45	5,080		45	5,080
	10									69	8,694		69	8,694
	11									65	7,418		65	7,418
	12									59	7,502		59	7,502
3	1									56	8,848		56	8,848
	2									51	6,198		51	6,198
	3									24	2,585		24	2,585
TTL		0	0	0	0	0	0	0	0	599	68,575		599	68,575

		11 kV MAN												Remarks			
Y	M	E/L		O/L		L/R		L/C		B/D		Total					
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration				
			Total		Max./event		Total		Max./event		Total		Max./event		Total	Max./event	
2	4	18	194	58	13	69	10		1	135	135	2	540	420	34	938	
	5	22	115	8	10	50	5		10	3,480	780	2	670	300	44	4,315	
	6	31	155	5	3	15	5		19	2,929	550	10	4,455	1,440	63	7,554	
	7	14	68	5	2	10	5		10	1,698	315	1	125	125	27	1,901	
	8	10	168	65	5	40	10		14	1,937	695	5	2,200	750	34	4,345	
	9	15	100	15	13	66	10		10	1,715	255	4	850	365	42	2,731	
	10	39	208	11	16	105	15		9	2,245	515	7	1,960	680	71	4,518	
	11	42	217	8	13	56	7		1	325	325	4	410	220	60	1,008	
	12	26	1,561	450	18	82	6		4	755	345	10	950	305	58	3,348	
3	1	21	93	5	6	28	5		7	1,230	235	0	0	0	34	1,351	
	2	13	64	5	5	20	5		0	0	0	0	0	0	18	84	
	3	17	85	8	4	18	5		8	1,109	187	4	524	205	33	1,736	
TTL		268	3,028		108	559		0	0	93	17,558		49	12,684		518	33,829

		11 kV SHA												Remarks			
Y	M	E/L		O/L		L/R		L/C		B/D		Total					
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration				
			Total		Max./event		Total		Max./event		Total		Max./event		Total	Max./event	
2	4	32	138	5	12	60	5		0	0	0	3	1,080	540	47	1,278	
	5	11	705	220	10	47	5		7	2,460	660	9	1,620	420	37	4,832	
	6	14	70	5	0	0	0		18	5,098	525	7	4,195	1,440	39	9,363	
	7	14	70	5	2	10	5		10	2,135	300	2	215	185	28	2,430	
	8	5	64	25	1	45	45		10	2,050	480	7	1,055	300	23	3,214	
	9	10	55	10	9	55	10		9	1,870	495	3	630	260	31	2,610	
	10	25	123	5	11	128	38		5	670	225	3	880	660	44	1,801	
	11	19	85	6	10	51	10		5	1,184	310	2	185	145	36	1,505	
	12	10	179	125	6	56	16		9	1,295	330	2	345	310	27	1,875	
3	1	13	62	5	2	10	5		6	1,920	735	1	5	5	22	1,997	
	2	8	40	5	4	19	5		3	400	175	0	0	0	15	459	
	3	12	55	5	4	14	14		7	1,135	300	1	600	600	24	1,804	
TTL		173	1,646		71	495		0	0	89	20,217		40	10,810		373	33,168

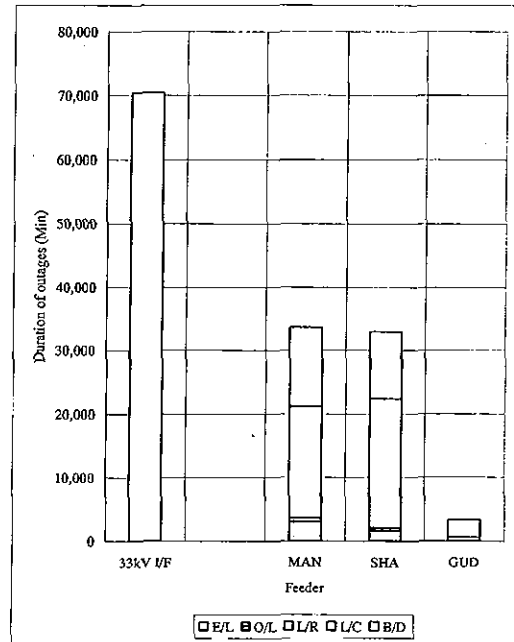
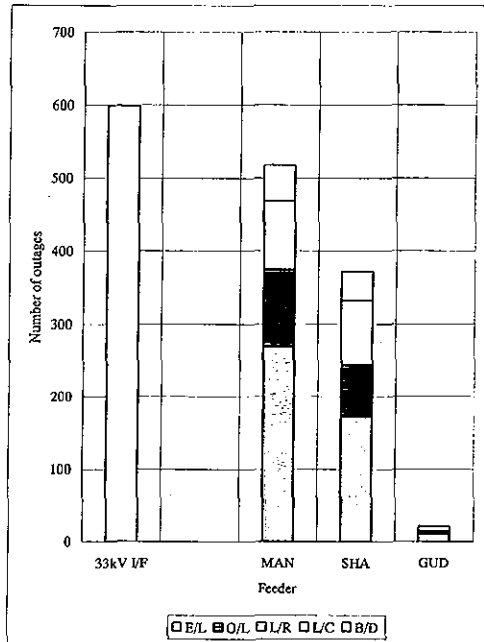
		11 kV GUD												Remarks			
Y	M	E/L		O/L		L/R		L/C		B/D		Total					
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration				
			Total		Max./event		Total		Max./event		Total		Max./event		Total	Max./event	
2	4														0	0	
	5														0	0	
	6														0	0	
	7														0	0	
	8														0	0	
	9														0	0	
	10														0	0	
	11														0	0	
	12														0	0	
3	1														0	0	
	2														0	0	
	3	11	58	5	1	5	5		3	530	255	6	2,700	990	21	3,293	
TTL		11	58		1	5		0	0	3	530		6	2,700		21	3,293

Note) Unit of duration = Minute

Summary of Outages (33/ 11 kV Poosalpahad)

Number of outages					
	E/L	O/L	L/R	L/C	B/D
33kV I/F	0	0	599	0	0
MAN	268	108	0	93	49
SHA	173	71	0	89	40
GUD	11	1	0	3	6

Duration of outages (Min)					
	E/L	O/L	L/R	L/C	B/D
33kV I/F	0	0	70,462	0	0
MAN	3,028	559	0	17,558	12,684
SHA	1,646	495	0	20,217	10,810
GUD	58	5	0	530	2,700



Code of Substation : KAL (MNAR)

Summary of Outages (33/11 kV Kather)

Y	M	11 kV F(MAR)														
		I/C Failure		E/L		O/L		L/R		L/C		B/D		Total		
		Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	
2	4	50	5,205	2	8	0	0	25	8,100	480	0	0	2	145	79	13,458
	5	32	4,740	0	0	0	0	28	9,120	420	0	0	6	1,180	66	15,040
	6	11	735	360	1	2	0	29	8,700	300	0	0	7	2,290	555	11,727
	7	63	8,135	300	0	0	0	30	6,900	300	0	0	2	425	300	15,460
	8	11	1,335	240	0	0	0	17	4,470	300	0	0	6	1,245	685	7,050
	9	49	5,770	545	0	0	0	12	3,060	300	0	0	1	540	540	9,370
	10	50	5,880	240	0	0	0	30	6,180	360	0	0	7	1,070	420	13,130
	11	30	3,945	180	1	5	0	30	6,660	240	0	0	3	300	180	10,910
	12	31	5,250	180	0	0	0	31	6,420	240	0	0	2	190	180	11,860
3	1	31	5,260	450	0	0	0	31	6,480	360	0	0	2	280	160	12,020
	2	30	4,030	215	0	0	0	26	6,420	360	0	0	4	450	180	10,900
	3	34	2,355	140	0	0	0	31	8,700	360	0	0	2	200	110	11,255
TTL	422	52,640	4	15	0	0	0	320	81,210	0	0	0	44	8,315	790	142,180

Y	M	11 kV F(KAU)														
		I/C Failure		E/L		O/L		L/R		L/C		B/D		Total		
		Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	
2	4	50	5,205	2	10	0	0	28	8,340	480	0	0	0	0	80	13,555
	5	32	4,740	960	0	0	0	29	8,760	360	0	0	4	445	270	13,945
	6	11	735	360	0	0	0	29	8,400	300	0	0	4	1,450	675	10,585
	7	63	8,135	300	0	0	0	29	8,160	300	0	0	4	605	420	16,900
	8	11	1,335	240	0	0	0	18	5,100	360	0	0	3	425	270	6,860
	9	49	5,770	545	0	0	0	10	2,580	360	0	0	2	170	120	8,520
	10	50	5,880	240	0	0	0	30	6,120	360	0	0	0	0	80	12,000
	11	30	3,945	180	0	0	0	29	6,060	240	0	0	2	300	240	10,305
	12	31	5,250	180	0	0	0	30	6,360	240	0	0	0	0	61	11,610
3	1	31	5,260	450	0	0	0	28	5,820	360	0	0	6	1,170	360	12,250
	2	30	4,030	215	0	0	0	27	7,860	360	0	0	1	720	720	12,610
	3	34	2,355	140	0	0	0	29	8,640	360	0	0	5	1,400	540	12,395
TTL	422	52,640	2	10	0	0	0	315	82,200	0	0	0	31	6,685	770	141,535

Y	M	11 kV F(KAN)																
		I/C Failure		E/L		O/L		L/R		L/C		B/D		Total				
		Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event			
2	4	50	5,205	200	4	16	5	0	0	0	0	28	7,440	480	84	12,966		
	5	32	4,740	960	0	0	0	0	0	0	0	29	8,760	360	4	445	270	13,945
	6	11	735	360	0	0	0	0	0	0	0	29	8,700	300	4	2,065	840	11,500
	7	63	8,135	300	0	0	0	0	0	0	0	30	8,280	300	7	1,390	360	17,805
	8	11	1,335	240	0	0	0	0	0	0	0	19	5,460	360	0	0	0	6,795
	9	49	5,770	545	0	0	0	10	2,580	360	0	0	1	65	65	8,415		
	10	50	5,880	240	0	0	0	29	5,820	360	0	0	3	1,605	1,140	13,305		
	11	30	3,945	180	1	5	0	27	5,580	240	0	0	9	1,530	380	11,060		
	12	31	5,250	180	0	0	0	31	6,600	240	0	0	1	120	120	11,970		
3	1	31	5,260	450	0	0	0	31	6,660	240	0	0	1	1,800	540	12,460		
	2	30	4,030	215	0	0	0	27	4,800	420	0	0	1	1,800	180	9,010		
	3	34	2,355	140	0	0	0	31	9,240	360	0	0	1	280	280	11,875		
TTL	422	52,640	5	21	0	0	0	321	79,920	0	0	0	34	8,525	782	141,106		

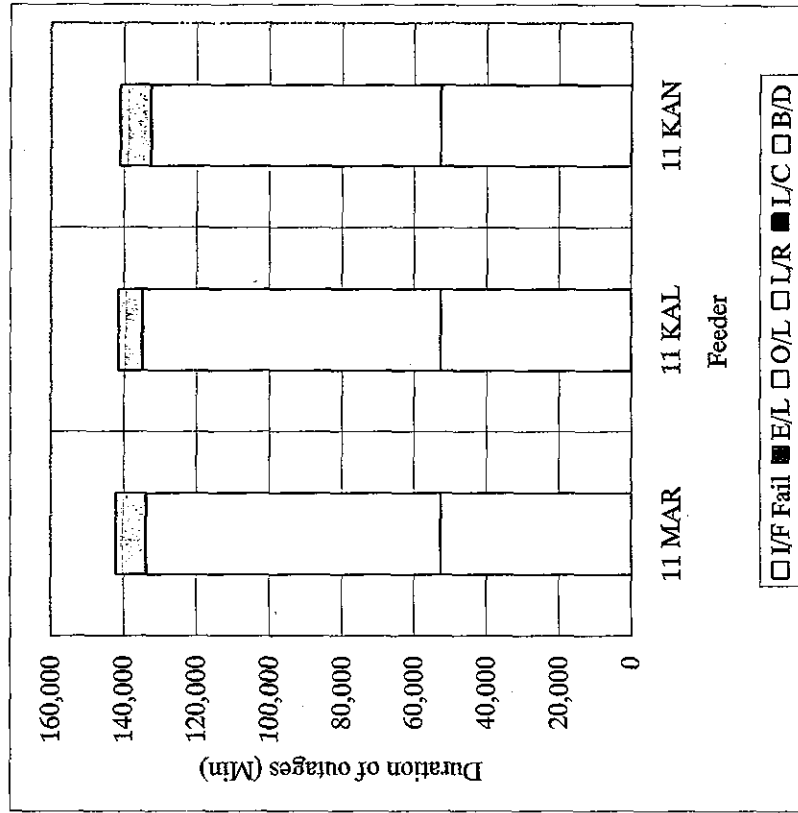
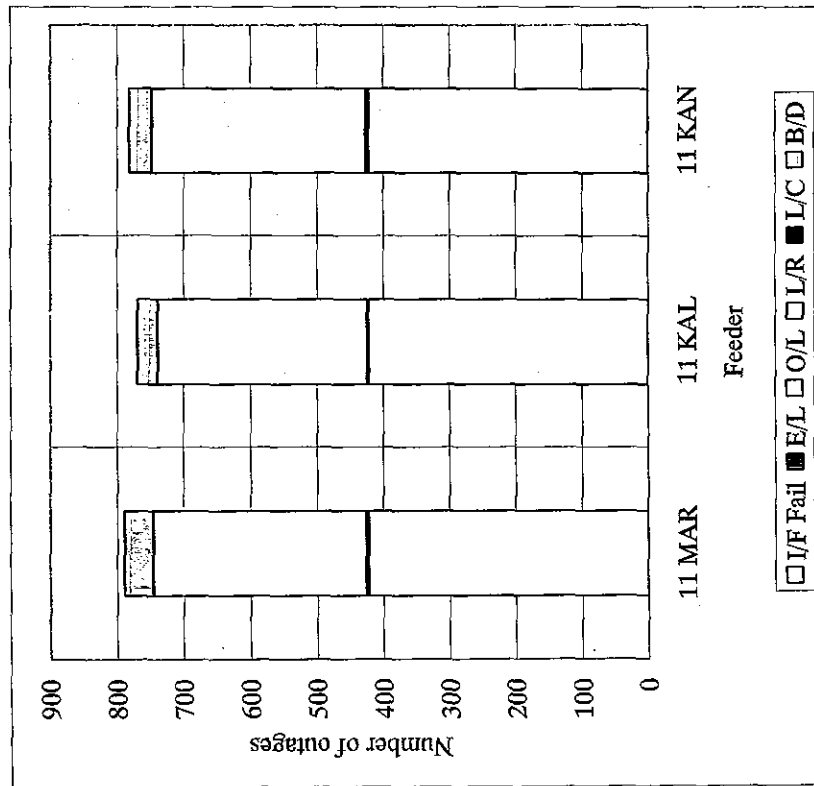
Summary of Outages (33/11 kV Kalher)

Number of outages

	I/F Fail	E/L	O/L	L/R	L/C	B/D
11 MAR	422	4	0	320	0	44
11 KAL	422	2	0	315	0	31
11 KAN	422	5	0	321	0	34

Duration of outages (Min)

	I/F Fail	E/L	O/L	L/R	L/C	B/D
11 MAR	52,640	15	0	81,210	0	8,315
11 KAL	52,640	10	0	82,200	0	6,685
11 KAN	52,640	21	0	79,920	0	8,525



Code of Substation : MSAD (MSAD)

参考資料 1. 配電線運用 (停止) データの解析結果

Summary of Outages (132/33/11 kV Sadasivpet)

Y	M	Incoming (132 kV)												Remarks				
		E/L		O/L		L/R		L/C		Interruption		Total						
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration					
		Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	(Total)					
2	4																	
5																		
6																		
7										1	10	10	1	10		P.S.M.L		
8										1	117	120	1	117		Jog, Koh, Mun		
9																		
10																		
11																		
12																		
3	1												1	65	65	1	65	Koh
2																		
3																		
TTL		0	0	0	0	0	0	0	0	3	192		3	192				

Y	M	33 KV F(JOG)												Remarks			
		E/L		O/L		L/R		L/C		B/D		Total					
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration				
		Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	(Total)				
2	4	0	0	0	0	3	310	135	0	0	0	0	0	0	3	310	
5	4	30	10	0	0	3	630	130	2	345	225	2	835	770	11	1,840	
6	3	85	55	4	251	1	45	45	3	456	381	0	0	0	11	837	
7	3	25	15	1	30	35	5,415	240	0	0	0	0	0	0	39	5,470	
8	5	60	15	9	100	15	1,930	120	0	0	0	0	0	0	29	2,090	
9	2	20	15	0	0	0	1,195	180	2	315	265	0	0	0	21	1,530	
10	4	30	10	0	0	0	1,900	120	1	240	240	0	0	0	23	2,170	
11	0	0	0	0	0	2	240	120	0	0	0	0	0	0	2	240	
12	2	20	15	0	0	0	600	120	0	0	0	0	0	0	7	620	
3	1	1	20	20	0	0	360	120	0	0	0	0	0	0	4	380	
2	1	15	15	1	15	15	780	120	0	0	0	0	0	0	10	810	
3	2	40	20	4	100	45	360	180	0	0	0	0	0	0	9	500	
TTL		27	345	19	496	113	13,765		8	####		2	835		169	16,797	

Y	M	33 kV F(KOH)												Remarks			
		E/L		O/L		L/R		L/C		B/D		Total					
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration				
		Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	(Total)				
2	4	0	0	0	0	1	55	55	0	0	0	0	0	0	1	55	
5	3	65	30	0	0	0	610	155	0	0	0	0	0	0	10	675	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	7	70	20	0	0	0	1,307	177	0	0	0	0	0	0	17	1,377	
8	12	140	25	0	0	0	0	0	1	####	1,290	1	745	745	14	2,175	
9	5	55	20	0	0	0	16	2,110	195	1	80	80	0	0	22	2,245	
10	2	25	10	1	10	10	33	3,700	155	1	360	360	0	0	37	4,095	
11	1	10	10	0	0	0	17	1,860	120	0	0	0	0	0	18	1,870	
12	1	10	10	0	0	0	5	600	120	1	40	40	0	0	7	650	
3	1	2	25	20	1	47	47	7	840	120	0	0	0	0	10	912	
2	2	20	10	1	180	180	10	1,020	120	0	0	0	0	0	13	1,220	
3	3	55	35				4	450	180	0	0	0	0	0	7	505	
TTL		38	475	3	237	110	12,552		4	####		1	745		156	15,779	

Y	M	33 kV F(MRT)												Remarks				
		E/L		O/L		L/R		L/C		B/D		Total						
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration					
		Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	(Total)					
2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5	2	80	60	0	0	0	0	0	0	0	0	0	1	545	545	3	625	
6	0	0	0	0	0	0	0	0	1	30	30	0	0	0	1	30		
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8	0	0	0	0	0	0	0	0	3	625	530	0	0	0	3	625		
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10	0	0	0	0	0	0	10	1,150	120	0	0	0	0	0	10	1,150		
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
12	1	5	5	0	0	0	0	0	0	0	0	0	0	0	1	5		
3	1	1	10	10	0	0	0	0	1	335	335	0	0	0	2	345		
2	1	10	10	0	0	0	0	0	0	0	0	0	0	0	1	10		
3	0	0	0	0	0	0	0	0	0	0	0	1	35	35	1	35		
TTL		5	105	0	0	10	1,150		5	990		2	580		22	2,825		

Summary of Outages (132/33/11 kV Sadasivpet)

Y	M	33 kV F(P.S.M.L)														Remarks	
		E/L		O/L		L/R		L/C		B/D		Total					
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration				
2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	1	50	50	0	0	0	0	0	0	0	0	0	1	50
6	1	20	20	0	0	0	0	0	0	0	0	0	0	0	0	1	20
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1	5	5	0	0	0	14	960	360	0	0	0	0	0	0	15	965
11	1	20	20	1	5	5	0	0	0	0	0	0	0	0	0	2	25
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	1	1	10	10	0	0	0	0	0	0	0	0	0	0	0	1	10
2	0	0	0	0	0	0	0	0	2	130	95	0	0	0	0	2	130
3	2	20	15	0	0	0	0	0	0	0	0	0	0	0	0	2	20
TTL	6	75		2	55		14	960		2	130		0	0	24	1,220	

Y	M	33 kV F(MAN)														Remarks
		E/L		O/L		L/R		L/C		B/D		Total				
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration			
2	4	1	10	10	0	0	0	0	0	0	0	0	0	0	1	10
5	4	65	30	0	0	0	0	0	0	0	0	2	750	510	6	815
6	2	20	15	0	0	0	0	0	1	15	240	1	240	240	4	275
7	12	175	40	2	80	50	0	0	0	0	0	0	0	0	14	255
8	8	93	40	4	50	20	0	0	1	117	117	0	0	0	13	260
9	5	40	10	0	0	0	0	0	1	265	265	0	0	0	6	305
10	7	95	25	1	70	70	12	1,395	120	1	360	360	0	0	21	1,920
11	6	45	15	0	0	0	0	0	1	10	10	0	0	0	7	55
12	4	30	10	1	5	5	0	0	1	255	255				6	290
3	1	6	75	20	1	10	10	0	0	0	0	0	0	0	7	85
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	2	45	60	0	0	0	0	0	0	0	0	2	45
TTL	55	648		11	260		12	1,395		6	1,022		3	990	87	4,315

Y	M	33 kV F(MUN)														Remarks
		E/L		O/L		L/R		L/C		B/D		Total				
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration			
2	4	0	0	0	0	4	440	140	0	0	0	0	0	0	4	440
5	2	25	15	2	90	45	5	430	120	0	0	0	0	0	9	545
6	2	35	25	5	95	55	0	0	1	150	150	0	0	0	8	280
7	4	30	10	3	35	15	6	865	185	0	0	0	0	0	13	930
8	7	56	15	2	25	15	2	225	120	0	0	0	1	120	12	426
9	1	15	15	2	20	15	12	1,165	120	0	0	0	0	0	15	1,200
10	2	30	25	0	0	0	15	1,765	120	1	360	360	0	0	18	2,155
11	0	0	0	0	0	0	2	240	120	0	0	0	0	0	2	240
12	1	10	10	1	10	10	4	480	120	0	0	0	0	0	6	500
3	1	0	0	1	10	10	5	610	130	0	0	0	0	0	6	620
2	1	10	10	2	25	15	4	300	120	6	272	95	1	140	14	747
3	3	20	10	3	25	15	2	780	660	3	165	85	1	100	12	1,090
TTL	23	231		21	335		61	7,300		11	947		3	360	119	9,173

Y	M	33 kV F(VIK)														Remarks	
		E/L		O/L		L/R		L/C		B/D		Total					
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration				
2	4	1	20	20	0	0	2	240	120	0	0	0	0	0	3	260	
5	5	85	40	15	300	55	3	305	125	0	0	0	0	0	23	690	
6	8	198	50	9	115	20	1	75	75	0	0	0	3	670	230	21	1,058
7	2	30	20	2	35	20	13	1,640	205	3	390	140	0	0	20	2,095	
8	3	75	40	6	85	20	10	1,080	120	0	0	0	0	0	19	1,240	
9	6	425	375	1	55	55	17	1,945	180	2	465	385	0	0	26	2,890	
10	1	25	25	3	100	65	9	985	155	0	0	0	0	0	13	1,110	
11	1	10	10	0	0	0	7	840	120	0	0	0	0	0	8	850	
12	0	0	0	0	0	0	2	240	120	0	0	0	0	0	2	240	
3	1	2	20	15	1	15	15	6	720	120	0	0	0	0	9	755	
2	1	15	15	1	180	180	8	840	120	3	390	290	0	0	13	1,425	
3	2	35	20	4	48	20	4	375	180	0	0	0	0	0	10	458	
TTL	32	938		42	933		82	9,285		8	###		3	670	167	13,071	

Note) Unit of duration = Minute

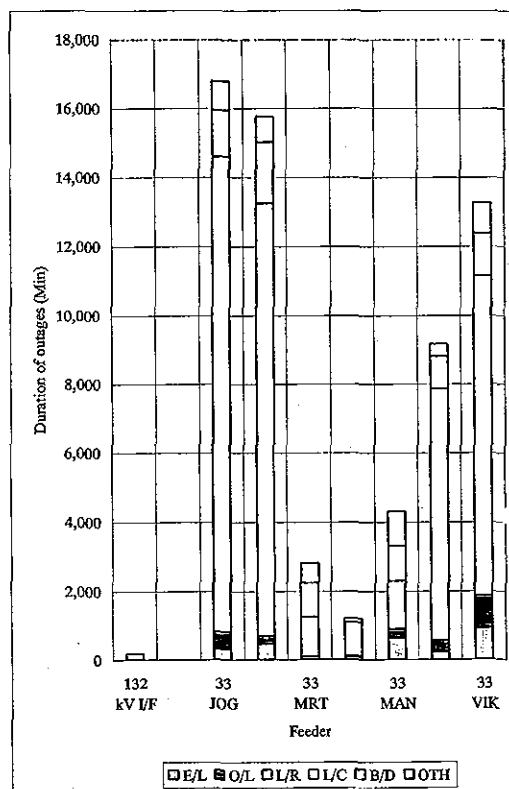
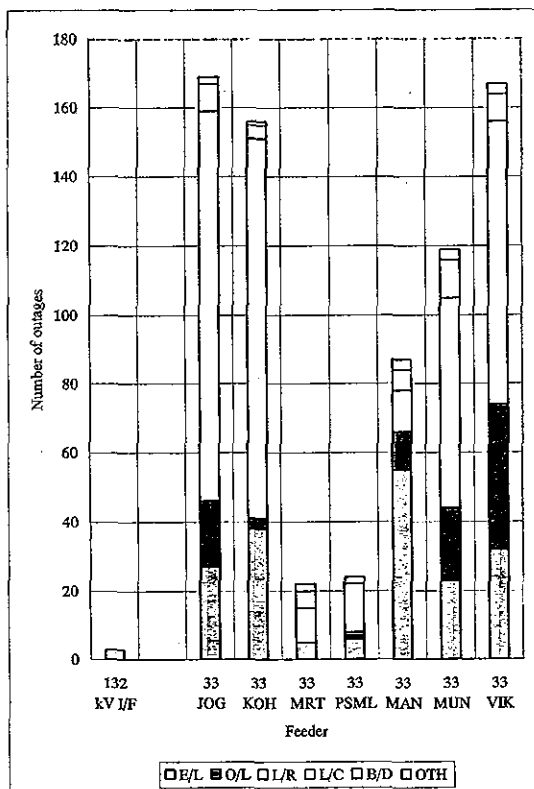
参考資料 1. 配電線運用（停止）データの解析結果

Number of outages

	E/L	O/L	L/R	L/C	B/D	OTH
132 kV I/F	0	0	0	0	0	3
33 JOG	27	19	113	8	2	
33 KOH	38	3	110	4	1	
33 MRT	5	0	10	5	2	
33 PSML	6	2	14	2	0	
33 MAN	55	11	12	6	3	
33 MUN	23	21	61	11	3	
33 VIK	32	42	82	8	3	

Duration of outages (Min)

	E/L	O/L	L/R	L/C	B/D	OTH
132 kV I/F	0	0	0	0	0	192
33 JOG	345	496	13,765	1,356	835	
33 KOH	475	237	12,552	1,770	745	
33 MRT	105	0	1,150	990	580	
33 PSML	75	55	960	130	0	
33 MAN	648	260	1,395	1,022	990	
33 MUN	231	335	7,300	947	360	
33 VIK	938	933	9,285	1,245	870	



Summary of Outages (132/33/11 KV Sadasivpet)

Y	M	11 KV F(SAD)												Remarks							
		I/C Failure		E/L		O/L		L/R		L/C		B/D			Total Duration (Total)						
		Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event								
2	4	8	120	80	1	5	24	516	135	45	4,070	120	3	145	95	1	109	109	82	4,965	O/L includes Others.
5	2	35	25	0	0	9	77	12	50	4,720	120	0	0	0	0	0	0	0	61	4,832	
6	6	90	25	2	15	10	14	113	15	0	0	0	4	177	105	0	0	0	26	395	
7	5	480	210	5	30	10	14	202	30	0	0	0	3	125	70	0	0	0	27	837	
8	8	552	140	2	20	15	2	15	10	0	0	0	2	120	100	0	0	0	14	707	
9	7	560	370	5	40	10	1	5	5	14	240	180	0	0	0	0	0	0	27	845	
10	18	1,975	195	4	30	10	1	15	15	13	1,565	130	3	105	50	0	0	0	39	3,690	
11	8	292	65	10	63	10	2	15	10	22	2,640	120	1	35	35	0	0	0	43	3,045	
12	6	410	95	5	65	30	7	97	30	20	2,400	120	2	110	60	0	0	0	40	3,082	
3	1	1	20	2	20	10	5	45	15	0	0	0	4	190	50	0	0	0	12	275	
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	2,173	
3	3	205	155	6	53	25	8	114	50	47	5,600	120	10	685	200	1	223	223	75	6,880	
TTL	72	4,739		43	349		87	1,214		228	23,275		35	1,817		2	332		467	31,726	

Y	M	11 KV F(BUD)												Remarks							
		I/C Failure		E/L		O/L		L/R		L/C		B/D			Total Duration (Total)						
		Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event								
2	4	7	205	90	1	5	4	90	40	0	0	0	1	180	180	0	0	0	13	480	
5	2	35	25	13	162	45	9	131	45	0	0	0	0	0	0	0	1	60	25	388	
6	6	93	25	21	318	60	1	25	25	0	0	0	0	0	0	5	720	285	33	1,156	
7	5	330	115	4	75	30	2	20	10	0	0	0	2	70	35	1	130	130	14	625	
8	7	584	140	5	45	15	2	40	30	0	0	0	0	0	0	0	0	0	14	669	
9	7	592	370	4	40	15	6	65	15	0	0	0	1	50	50	1	370	370	19	1,117	
10	10	2,150	360	22	210	25	5	62	20	0	0	0	1	60	60	1	240	240	39	2,722	
11	8	292	65	8	55	10	2	20	10	1	180	180	0	0	0	0	0	0	19	547	
12	6	350	190	5	40	10	7	42	10	0	0	0	3	185	75	1	675	675	22	1,292	
3	1	1	20	2	25	15	0	0	0	0	0	0	2	210	135	0	0	0	5	255	
2	0	0	0	0	0	0	0	0	0	0	0	0	15	15	15	2	115	60	12	412	
3	4	225	155	6	38	10	3	30	15	0	0	0	4	610	340	0	0	0	17	903	
TTL	63	4,876		98	##		42	535		2	195		16	1,480		11	2,385		232	10,566	

Y	M	11 KV F(TSM)												Remarks							
		I/C Failure		E/L		O/L		L/R		L/C		B/D			Total Duration (Total)						
		Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event								
2	4	7	205	90	0	0	29	509	100	0	0	0	1	40	40	1	45	45	38	799	
5	2	35	25	0	0	0	19	249	35	0	0	0	0	0	0	1	220	220	22	504	
6	6	93	25	5	36	15	30	276	35	0	0	0	3	170	70	1	55	55	45	630	
7	5	330	115	0	0	0	6	65	20	0	0	0	2	180	145	0	0	0	13	575	
8	7	584	140	0	0	0	0	8	57	12	0	0	2	240	175	0	0	0	17	881	
9	7	592	370	2	6	5	3	20	10	0	0	0	3	35	15	0	0	0	15	653	
10	10	2,150	360	1	5	5	7	65	15	6	720	120	1	40	40	0	0	0	25	2,980	
11	8	292	65	4	55	5	5	221	190	0	0	0	2	290	190	2	1,470	1,345	21	2,328	
12	6	350	190	5	27	13	1	10	10	0	0	0	1	140	140	0	0	0	13	527	
3	1	1	20	2	10	10	5	45	15	0	0	0	3	70	45	2	840	280	12	985	
2	0	0	0	0	0	0	5	40	10	0	0	0	0	0	0	0	0	0	10	260	
3	4	225	155	4	30	10	11	108	35	0	0	0	5	240	105	0	0	0	24	603	
TTL	63	4,876		27	209		126	1,640		6	720		26	1,650		7	2,630		255	11,725	

Summary of Outages (132/33/11 kV Sadasivpet)

Y	M	11 kV F(NAN) : Nandikandi											Remarks		
		I/C Failure		E/L		O/L		L/R		L/C		B/D		Total Duration (Total)	
		Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.			Duration Total Max./event
2	4	8	220 90	1	15 15	11	108 35	29	6,530 360	2	90 20	0	0 0	51	6,903 O/L includes Others.
5	2	35	25 3	17	10 3	23	375 45	29	5,220 180	0	0 0	0	0 0	57	5,647
6	6	90	25 3	63	40 12	358	215 11	11	1,920 180	2	120 90	3	752 655	37	3,303
7	4	300	115 19	87	31 7	315	40 26	4,680 360	5	150 35	6	1,163 278	91	6,695	
8	8	839	380 10	103	30 28	545	120 19	2,280 120	3	425 205	1	95 95	69	4,287	
9	7	562	370 25	385	65 23	775	130 22	5,760 360	2	170 130	1	370 370	80	8,022	
10	18	2,090	365 18	897	585 10	85	20 53	12,120 360	0	0 0	2	930 580	101	16,122	
11	7	277	65 7	180	125 3	40	25 52	22,620 360	0	0 0	0	0 0	69	23,117	
12	6	410	190 12	140	25 3	25	10 50	11,820 420	2	130 90	3	685 385	76	13,210	
3	1	20	20 4	65	25 6	60	15 59	13,560 420	2	425 335	3	580 320	75	14,710	
2	0	0	0 10	80	10 10	35	10 53	11,725 420	1	60 60	0	0 0	69	11,900	
3	4	225	155 4	45	15 16	175	35 56	9,645 210	5	495 200	0	0 0	85	10,585	
TTL	71	5,068	116:###	171	2,896	459	107,880	24	2,005	19	4,575	860	124,501		

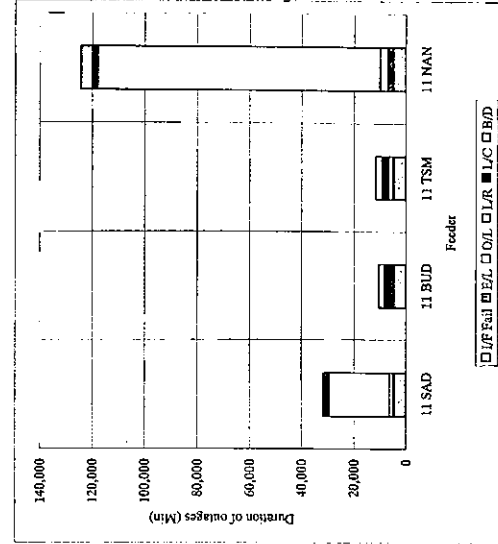
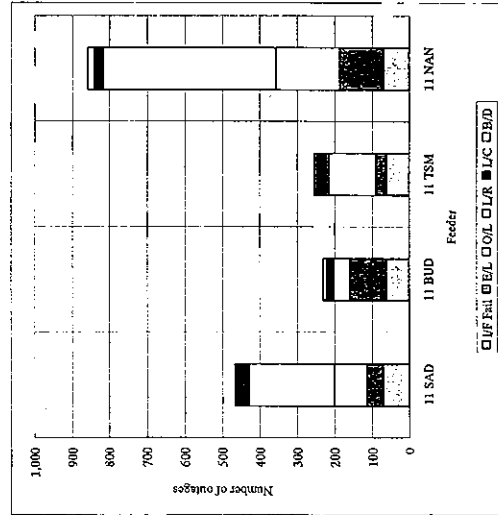
Note) Unit of duration = Minute

Number of outages

	I/F Fail	E/L	O/L	L/R	L/C	B/D
11 SAD	72	43	87	228	35	2
11 BUD	63	98	42	2	16	11
11 TSM	63	27	126	6	26	7
11 NAN	71	116	171	459	24	19

Duration of outages (Min)

	I/F Fail	E/L	O/L	L/R	L/C	B/D
11 SAD	4,739	349	1,214	23,275	1,817	332
11 BUD	4,876	1,095	535	195	1,480	2,385
11 TSM	4,876	209	1,640	720	1,650	2,630
11 NAN	5,068	2,077	2,896	107,880	2,005	4,575



Code of Substation : NIZ (MSAD)

Summary of Outages (33/11 kV Nizampur Substation)

Y	M	11 kV F(NIZ)												Remarks							
		I/C Failure			E/L + O/L			L/R			L/C				B/D			Total			
		Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event		Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	
2	4	9	700	165	11	80	30					2	85	55				22	865		
	5	6	580	145	15	90	10					5	770	240				26	1,440		
	6	1	20	20	10	90	15											11	110		
	7	9	920	140	8	165	125					2	190	120				19	1,275		
	8	1	125	125	11	100	35					1	300	300				13	525		
	9	17	2,320	525	19	135	25					2	235	140				39	3,335		
	10	20	1,895	130	11	70	10					6	725	230				37	2,690		
	11	24	2,525	125	5	30	10					5	465	190				34	3,020		
	12	11	1,320	120	4	25	10					5	400	110				20	1,745		
3	1	4	385	120	4	25	10					4	180	70				12	590		
	2	9	870	180	12	115	20					4	220	115				25	1,205		
	3	2	180	125	9	105	30					0	0	0				11	285		
TTL		113	11,840		119	1,030		0	0	0	0	36	3,570		1	645		269	17,085		

Y	M	11 kV F(VEN)												Remarks							
		I/C Failure			E/L + O/L			L/R			L/C				B/D			Total			
		Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event		Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	Nos.	Duration Total Max./event	
2	4	9	890	155	7	220	170					3	320	200				20	1,490		
	5	3	870	780	16	100	15					2	205	145				21	1,175		
	6	4	525	245	10	75	20					5	1,125	480				21	1,805		
	7	9	945	155	3	55	45					3	220	120				16	1,460		
	8	10	755	130	16	140	30					2	235	190				28	1,130		
	9	9	1,250	270	15	80	10											25	1,830		
	10	20	2,440	360	5	35	15					7	715	190				36	4,240		
	11	10	1,230	150	9	50	10					1	60	60				20	1,340		
	12	23	2,750	145	12	65	10					5	1,005	375				40	3,820		
3	1	27	3,335	380	13	100	15					7	2,035	395				47	5,470		
	2	17	1,590	135	10	90	15					15	1,555	320				43	3,555		
	3	2	160	100	13	125	30					7	1,485	520				23	1,920		
TTL		143	16,740		129	1,135		0	0	0	0	57	8,960		11	2,200		340	29,035		

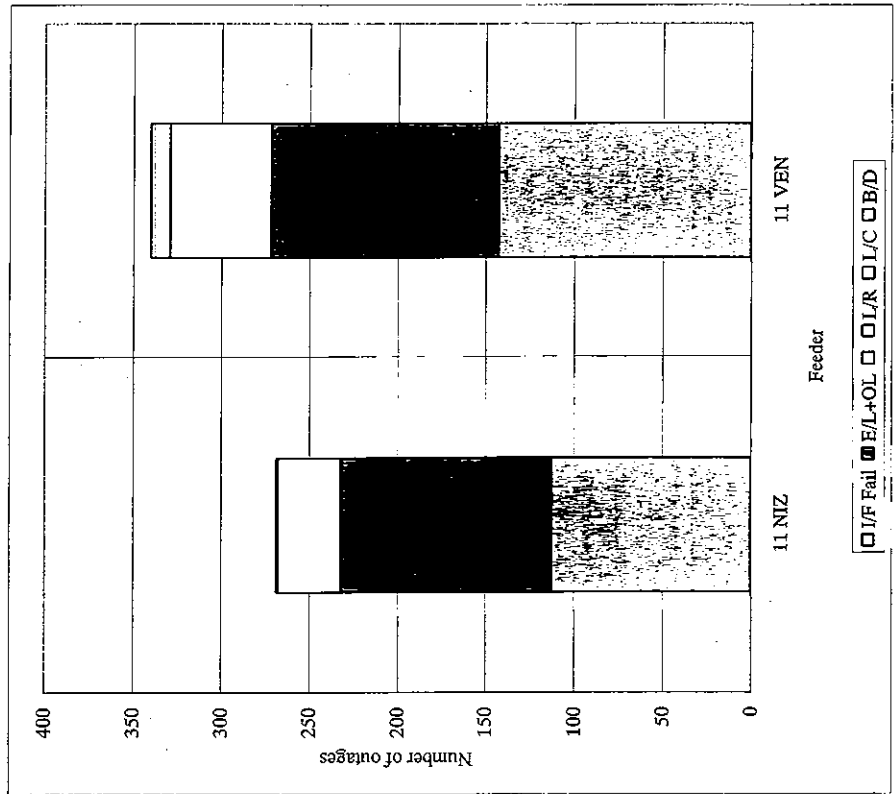
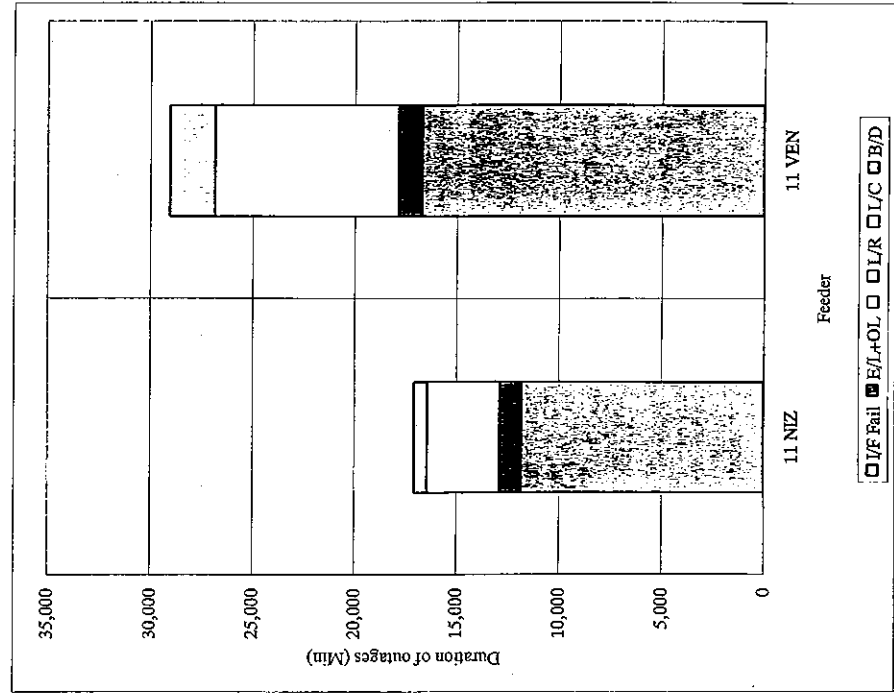
(Note) Unit of duration = Minute

(33/11 kV Nizampur Substation)

Summary of Outages

Duration of outages (Min)					
	I/F Fail	E/L+OL	L/R	L/C	B/D
11 NIZ	11,840	1,030		3,570	645
11 VEN	16,740	1,135		8,960	2,200

Number of outages					
	I/F Fail	E/L+OL	L/R	L/C	B/D
11 NIZ	113	119		36	1
11 VEN	143	129		57	11



Code of Substation : MUN (MSAD)

Code of Substation : CHA (MOTH)

Summary of Outages (33/11 kV Chandanpur)

Y	M	11 kV F(ATH) - Athmakur																						
		I/C Failure			E/L			O/L			L/R			L/C			B/D			Remarks				
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration					
		Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event		Total	Max./event		
2	4																					0	Some data missing	
6	5	2	265	170	4	30	10	1	5	5	5	555	285	0	0	0	0	0	0	0	0	0	0	0
7	6	6	640	130	3	40	20	0	0	0	0	887	305	1	80	80	16	1,647	1,800	39	1,800	0	0	
8	6	6	575	135	26	205	15	1	5	5	5	895	210	1	120	120	0	0	0	0	0	0	0	
10	30	30	3,718	360	25	255	45	0	0	0	0	165	60	1	270	270	61	4,408	4,408	61	4,408	0	0	
11	27	27	2,975	140	5	90	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	26	26	2,930	130	2	25	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	32	32	3,770	130	19	125	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	31	31	3,715	165	10	155	45	1	15	15	4	440	175	1	525	525	47	4,850	4,850	47	4,850	0	0	
3	30	30	3,845	150	20	231	20	2	25	25	0	0	0	1	105	105	53	4,206	4,206	53	4,206	0	0	
TTL	190	22,433	114	1,156	114	1,156	23	2,942	23	2,942	5	1,100	5	1,100	337	27,681	337	27,681	337	27,681	337	27,681	0	0

Y	M	11 kV F(YEL) - Yellarn																						
		I/C Failure			E/L			O/L			L/R			L/C			B/D			Remarks				
		Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration	Nos.	Duration					
		Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event	Total	Max./event		Total	Max./event	Total	Max./event
2	4	38	2,465	125	115	20	10	5	5	4	470	240	3	570	240	62	3,630	3,630	62	3,630	0	0	0	
5	12	1450	625	4	20	5	0	0	0	1	85	85	0	0	0	17	1,555	1,555	17	1,555	0	0	0	
6	3	155	60	4	20	5	4	35	15	2	155	135	0	0	0	13	365	365	13	365	0	0	0	
7	15	1,598	345	12	90	10	1	5	5	5	325	180	1	840	840	34	2,858	2,858	34	2,858	0	0	0	
8	5	90	60	14	155	45	0	0	0	0	0	0	0	0	0	19	245	245	19	245	0	0	0	
9	12	1,693	130	36	310	15	3	20	10	7	590	140	0	0	0	58	2,613	2,613	58	2,613	0	0	0	
10	18	2,123	360	29	201	80	0	0	0	3	150	90	2	675	420	52	3,149	3,149	52	3,149	0	0	0	
11	11	1,322	127	5	80	60	2	10	5	1	60	60	0	0	0	19	1,472	1,472	19	1,472	0	0	0	
12	10	1,505	390	6	50	25	0	0	0	0	0	0	0	0	0	16	1,555	1,555	16	1,555	0	0	0	
3	1	2	240	120	3	25	15	0	0	0	0	0	0	0	0	5	265	265	5	265	0	0	0	
2	3	465	195	14	165	20	0	0	0	2	35	30	1	100	100	20	765	765	20	765	0	0	0	
3	15	1,850	150	2	20	15	2	20	10	2	105	60	2	590	510	23	2,585	2,585	23	2,585	0	0	0	
TTL	144	14,956	144	1,251	144	1,251	14	100	14	27	1,975	1,975	9	2,775	2,775	338	21,057	21,057	338	21,057	338	21,057	0	0

Duration of outages (Min)

	I/F Fail	E/L	O/L	L/R	L/C	B/D
11 ATH	22,433	1,156	50	2,942	1,100	2,775
11 YEL	14,956	1,251	100	1,975	2,775	

Number of outages

	I/F Fail	E/L	O/L	L/R	L/C	B/D
11 ATH	190	114	5	23	5	5
11 YEL	144	144	14	27	9	9

