Table I.10.7-1 The Ratio of Meteorological Department and Precise Observation Equipment Data

(Pilot Plant Data / Data of Meteorological Agency)

	Tariat	Bayan-Undul	Adaatsag
June	—	0.96*	1.14
July	1.51	1.07	1.16
August	1.38	0.89	1.08
September	1.18	0.73	0.90
Average	1.36	0.91	1.07

(Data Source: JICA Study Team/Pilot Plants, Meteorological Department of Mongolia)

* Collecting data was begun on the 6th of July (Average for 24 days)

(Other Institute Data / Data of Meteorological Agency)

Month	Sum-A	Sum-B	Sum-C	Sum-D	Sum-E
January	1.05	1.09	1.36	0.91	1.00
February	1.00	1.06	1.16	0.94	1.26
March	1.05	1.10	1.12	1.00	1.07
April	0.97	1.02	1.02	0.98	1.00
May	0.89	0.90	0.92	0.87	0.94
June	0.97	1.00	0.93	1.07	1.04
July	1.05	1.07	0.98	0.97	1.13
August	0.94	—	—	0.90	0.98
September	0.96	1.00	1.00	0.96	0.96
October	0.84	0.89	0.89	0.84	0.84
November	0.96	1.04	1.04	0.92	0.92
December	1.40	1.40	—	1.13	1.27
Average Ratio of a Year	1.01	1.05	1.04	0.96	1.03

（Data Source: Ashikaga Institute of Technology, Meteorological Department of Mongolia）

* The above shown Table is placed in monthly order, but actually has been observed since August.

** "—" are omitted out of the data because of the fault of the data.

Table I.10.7-2 The Ratios of Precision Wind Monitoring Equipment/Russian-style Wind Monitoring Equipment of Each Month

(Precision Wind Monitoring Equipment / Data of Meteorological Agency)

Sum	Sep-98	Oct-98	Nov-98	Dec-98	Jan-99	Feb-99	Mar-99
A	1.60	1.44	1.16	-	1.24	1.31	-
B	1.13	0.93	-	0.82	0.65	0.69	0.88
C	-	2.02	3.05	-	-	-	-
D	1.64	1.68	1.63	-	1.57	-	1.29
E	1.01	1.04	1.06	-	-	-	1.07
F	-	-	-	-	-	-	-
G	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-

Sum	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99
A	-	-	-	-	-	-	-
B	0.96	-	-	-	-	-	-
C	2.20	1.81	-	-	-	-	-
D	1.54	-	-	-	-	-	-
E	0.90	0.94	-	-	-	-	-
F	-	-	-	1.40	1.18	1.37	1.39
G	-	-	-	-	-	0.59	0.68
H	-	-	-	-	-	-	1.22

（Data Source : Ashikaga Institute of Technology, JICA Study Team / Pilot Plants）

Table I.10.7-5 Applicable Sum Centers of PV Power Generation System

Serial No.	ID No.	Aimag Name	Sum	Group
1	1	Ⅰ.UMNUGOVI	Bayandalai	B
2	2		Bayan-Ovoo	A
3	3		Bulgan	A
4	4		Gurvantes	A
5	5		Mandal-Ovoo	A
6	6		Manlai	A
7	7		Noyon	A
8	8		Nomgon	A
9	9		Severi	A
10	10		Khanbogd	A
11	11		Tsogt-Ovoo	A
12	12		Khurmen	B
13	13		Tosgttsetsii	A
14	14	II.GOVI-ALTAI	Erdene	C
15	15		Tsogt	C
16	16		Chandamani	C
17	17		Altai	B
18	19		Taisher	B
19	20		Bugat	C
20	21		Tseel	C
21	22		Tugrug	C
22	23		Sharga	C
23	25		Darvi	C
24	26		Khaliun	C
25	27		Biger	C
26	28		Khukhmorit	B
27	29		Bayan-Uul	B
28	30		Jargalan	B
29	32	III.BAYANKHONGOR	Shinejinst	B
30	33		Bayan-Undur	B
31	34		Bayanlig	B
32	35		Bayangovi	B
33	36		Bogd	B
34	37		Jinst	B
35	38		Baatsagaan	B
36	39		Bayantsagaan	B
37	40		Khureemaral	B
38	41		Gurvanbulag	C
39	42		Jargalant	C
40	43		Galuut	C
41	44		Erdenetsogt	C
42	46		Bayanbulag	B
43	47		Buutsagaan	B
44	48		Bumbugur	B
45	50		Zag	B

Serial No.	ID No.	Aimag Name	Sum	Group
46	51	IV.DORNOGOVI	Erdene	A
47	52		Delgerekh	B
48	53		Zamiin-Uud	A
49	54		Mandakh	A
50	55		Saikhandulaan	A
51	56		Khatanbulag	A
52	57		Khuvsgul	A
53	9041		Ulaanbadrakh	A
54	58	V.SUKHBAATAR	Ongon	B
55	59		Dariganga	B
56	60		Naran	B
57	61		Bayandelger	B
59	62		Erdenetsagaan	C
59	64		Tumentsogt	C
60	65		Tuvshinshiree	B
61	66		Uulbayan	B
62	67		Munkhkhaan	C
63	69	VI.DORNOD	Matad	C
64	71		Khalkh-gol	C
65	72		Khulunbuir	C
66	73		Tsagaan-Ovoo	C
67	74		Chuluunkhoroot	C
68	75		Bayan-Uul	C
69	76		Bayandun	C
70	78	VII.KHENTII	Bayan-Adraga	C
71	79		Binder	C
72	80		Batshireet	C
73	81		Norovlin	C
74	83		Dadal	C
75	9071		Galshar	B
76	9072		Bayan-Ovoo	C
77	84	VIII.DUNDGOVI	Ulziit	B
78	85		Undurshil	B
79	86		Bayanjargalan	B
80	87		Adaatsag	B
81	9082		Khuld	B
82	9083		Delgerkhangai	B
83	89	IX.UVURKHANGAI	Bogd	B
84	90		Baruunbayan-Ulaan	B
85	91		Guchin-Us	B
86	93		Khairkhandulaan	B
87	94		Nariinteel	B
88	95		Bayanteeg	B
89	99	X.KHUVSGUL	Tumurbulag	C
90	100		Burentogtokh	C
91	118	XII.ZAVKHAN	Shiluustei	B
92	119		Durvuljin	B
93	120		Yaruu	C

Serial No.	ID No.	Aimag Name	Sum	Group
94	121		Erdenekhairkhan	C
95	122		Zavkhanmandal	B
96	123		Urgamal	B
97	124		Santmargats	C
98	125		Tsetsen-Uul	C
99	126		Ider	C
100	127		Ikh-Uul	C
102	128		Tes	C
102	129		Tsagaanchuluut	B
103	130		Tsagaankhairkhan	B
104	131		Telmen	C
105	132		Tudevtei	C
106	133		Songino	C
107	134		Otgon	C
108	135		Numrug	C
109	136		Asgat	C
110	137		Bayankhairkhan	C
111	138		Tsontsengel	C
112	9121		Bayantes	C
113	9122		Aldarkhaan	B
114	146	XIV.UVS	Zuungovi	C
115	148		Zavkhan	C
116	151	XV.KHOVD	Zereg	C
117	152		Darvi	C
118	153		Altai	C
119	154		Uyench	C
120	155		Bulgan	C
121	159		Mankhan	C
122	160		Chandmani	C
123	163		Durgun	C

Table I.10.7-6 Applicable Sum Centers of Wind Generators

Serial No.	ID.No.		Sum	Group
1	1	**Ⅰ. UMNUGOVI**	Bayandalai	C
2	2		Bayan-Ovoo	C
3	3		Bulgan	C
4	4		Gurvantes	B
5	6		Manlai	B
6	7		Noyon	B
7	8		Nomgon	C
8	9		Sevrei	B
9	10		Khanbogd	C
10	11		Tsogt-Ovoo	B
11	13		Tsogttsetsii	A
12	16	**Ⅱ. GOVI-ALTAI**	Chandmani	C
13	19		Taishir	C
14	21		Tseel	B
15	25		Darvi	C
16	26		Khaliun	B
17	32	**Ⅲ. BAYANKHONGOR**	Shinejinst	B
18	33		Bayan-Undur	B
19	36		Bogd	A
20	48		Bumbugur	C
21	52	**Ⅳ. DORNOGOVI**	Delgerekh	C
22	54		Mandakh	C
23	55		Saikhandulaan	A
24	56		Khatanbulag	C
25	58	**Ⅴ. SUKHUBAATAR**	Ongon	A
26	59		Dariganga	C
27	60		Naran	B
28	61		Bayandelger	B
29	62		Erdenetsagaan	B
30	64		Tumentsogt	C
31	65		Tuvshinshiree	A
32	67		Munkhkhaan	C
33	69	**Ⅵ. DORNOD**	Matad	C
34	72		Khulunbuir	C
35	74		Chuluunkhoroot	B
36	81	**Ⅶ. KHENTII**	Norovlin	C
37	9071		Galshar	B
38	84	**Ⅷ. DUNDGOVI**	Ulziit	C
39	85		Undurshil	C
40	86		Bayanjargalan	B
41	87		Adaatsag	A
42	9082		Khuld	C
43	9083		Delgerkhangai	B
44	91	**Ⅸ. UVRUKHANGAI**	Guchin-Us	B
45	152	**XV. KHOVD**	Darvi	C

Table I.10.7-7 Applicable Sum Centers as a Present Candidate for the PV･Wind Hybrid System for the Year 2015

Serial No.	ID No.	Aimag	Sum Center	Solor	Wind
1	5	**I. UMNUGOVI**	Mandal-Ovoo		○
2	12		Khurmen		○
3	20	**II. GOVI-ALTAI**	Bugat		○
4	24		Tonkhil	○	
5	78	**VII. KHENTII**	Bayan-Adraga		○
6	96	**X. KHUVSGUL**	Jargalant	○	
7	97		Galt	○	
8	98		Shine-Ider	○	
9	99		Tumurbulag		○
10	101		Tsetserleg	○	
11	106		Tsagaan-Uul	○	
12	109		Tunel	○	
13	111		Alag-Erdene	○	
14	114		Erdenebulgan	○	
15	117	**XI. ARKHANGAI**	Tsakhir	○	
16	9111		Chuluut	○	
17	126	**XII. ZAVKHAN**	Ider		○
18	140	**XIV. UVS**	Undurkhangai	○	
19	141		Tsahaankhairkhan	○	
20	142		Zuunkhangai	○	
21	143		Khyargas	○	
22	144		Baruuntruun	○	
23	145		Malchin	○	
24	146		Zuungovi		○
25	147		Bukhmurun	○	
26	149		Tes	○	
27	156	**XV. KHOVD**	Tsetseg	○	
28	157		Must	○	
29	164	**XVI. BAYAN-ULGII**	Tolbo	○	
30	165		Tsagaannuur	○	○
31	169		Buyant	○	
32	9161		Nogoonuur	○	

Table I.10.7-8 Power Supply Systems for Each Sum Centers for Year 2005

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources						
				Diesel Generator (kW)		Photovoltiac Cell (kWp)	Wind Generator (kW)	Inverter (kVA)	Converter (kVA)	Battery (kAh)
				New	Ex.	New	New	New	New	New
		UMNU-GOVI								
1	1	BAYANDALAI	NewDG + PV + WG	120		2	5	4	10	12
2	2	BAYAN-OVOO	NewDG + PV + WG	120		2	5	4	10	12
3	3	BULGAN	NewDG + PV + WG	120		2	10	4	10	6
4	4	GURVANTES	ExDG + PV + WG		180	2	5	4	20	6
5	5	MANDAL-OVOO	ExDG + PV		120	4		4	10	18
6	6	MANLAI	ExDG + PV + WG		180	2	2.5	4	20	6
7	7	NOYON	ExDG + PV + WG		180	2	2.5	4	20	6
8	8	NOMGON	NewDG + PV + WG	120		2	5	4	10	6
9	9	SEVREI	ExDG + PV + WG		120	2	2.5	4	10	12
10	10	KHANBOGD	NewDG + PV + WG	120		2	5	4	10	12
11	11	TSOGT-OVOO	NewDG + PV + WG	120		2	2.5	4	10	12
12	12	KHURMEN	NewDG + PV	120		4		4	10	18
13	13	TSOGT-TSETSII	NewDG + PV + WG	120		2	5	4	10	6
		GOVI-ALTAI								
14	14	ERDENE	ExDG + PV		300	6		4	40	18
15	15	TSOGT	ExDG + PV		300	6		4	40	24
16	16	CHANDMANI	ExDG + PV + WG		300	4	5	4	40	12
17	17	ALTAI	ExDG + PV		180	4		4	20	18
18	19	TAISHIR	NewDG + PV + WG	120		2	5	2	10	6
19	20	BUGAT	NewDG + PV	200		6		4	20	24
20	21	TSEEL	ExDG + PV + WG		180	2	5	4	20	6
21	22	TUGRUG	NewDG + PV	120		10		6	10	36
22	23	SHARGA	NewDG + PV	120		6		4	10	18
23	24	TONKHIL	ExDG		180				20	
24	25	DARVI	ExDG + PV + WG		180	2	5	4	20	6
25	26	KHALIUN	NewDG + PV + WG	120		2	2.5	4	10	6
26	27	BIGER	ExDG + PV		120	10		6	10	36
27	28	KHUKHMORIT	ExDG + PV		180	6		4	20	24
28	29	BAYAN-UUL	NewDG + PV	200		6		4	20	24
29	30	JARGALAN	NewDG + PV	120		4		4	10	18
		BAYANKHONGOR								
30	32	SHINEJINST	ExDG + PV + WG		120	2	5	4	10	6
31	33	BAYAN-UNDUR	ExDG + PV + WG		300	2	10	4	40	12
32	34	BAYANLIG	ExDG + PV		120	6		4	10	24
33	35	BAYANGOBI	ExDG + PV		180	6		4	20	24
34	36	BOGD	ExDG + PV + WG		180	2	5	4	20	6
35	37	JINST	ExDG + PV		120	6		4	10	24
36	38	BAATSAGAAN	ExDG + PV		180	8		4	20	30
37	39	BAYAN-TSAGAAN	ExDG + PV		300	8		4	40	30
38	40	KHUREEMARAL	ExDG + PV		180	6		4	20	24
39	41	GURVANBULAG	NewDG + PV	200		6		4	20	24
40	42	JARGALANT	ExDG + PV		300	10		6	40	42

Table I.10.7-8 Power Supply Systems for Each Sum Centers for Year 2005

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources						
				Diesel Generator (kW)		Photovoltiac Cell (kWp)	Wind Generator (kW)	Inverter (kVA)	Converter (kVA)	Battery (kAh)
				New	Ex.	New	New	New	New	New
41	43	GALUUT	ExDG + PV		180	8		4	20	30
42	44	ERDENETSOGT	ExDG + PV		220	8		4	10	24
43	46	BAYANBULAG	ExDG + PV		120	8		4	10	30
44	47	BUUTSAGAAN	ExDG + PV		200	8		4	20	30
45	48	BUMBUGUR	ExDG + PV + WG		180	4	7.5	4	20	12
46	50	ZAG	NewDG + PV	200		6		4	20	24
		DORNOGOVI								
47	51	ERDENE	NewDG + PV	200		6		4	20	24
48	52	DELGEREKH	NewDG + PV + WG	120		4	7.5	4	10	12
49	53	ZAMIIN-UUD	NewDG + PV	600		8		6	90	36
50	54	MANDAKH	ExDG + PV + WG		180	2	7.5	4	20	6
51	55	SAIKHANDULAAN	ExDG + PV + WG		300	2	2.5	2	40	6
52	56	KHATANBULAG	ExDG + PV + WG		300	2	10	4	40	12
53	57	KHUVSGUL	ExDG + PV		180	4		4	20	18
54	9041	ULAANBADRAKH	NewDG + PV	120		6		4	10	24
		SUKHBAATAR								
55	58	ONGON	ExDG + PV + WG		200	2	5	6	20	6
56	59	DARIGANGA	ExDG + PV + WG		180	2	2.5	4	20	12
57	60	NARAN	ExDG + PV + WG		200	2	2.5	4	20	6
58	61	BAYANDELGER	ExDG + PV + WG		300	2	7.5	4	40	6
59	62	ERDENETSAGAAN	ExDG + PV + WG		300	4	5	6	40	12
60	63	SUKHBAATAR	Grid							
61	64	TUMENTSOGT	ExDG + PV + WG		300	4	7.5	4	40	12
62	65	TUVSHINSHIREE	NewDG + PV + WG	120		2	2.5	4	10	6
63	66	UUL-BAYAN	NewDG + PV	200		6		4	20	24
64	67	MUNKHKHAAN	NewDG + PV + WG	200		6	5	6	20	18
		DORNOD								
65	69	MATAD	NewDG + PV + WG	120		2	5	4	10	12
66	71	KHALKHGOL	NewDG + PV	200		8		6	20	30
67	72	KHULUN-BUIR	ExDG + PV + WG		120	2	5	4	10	12
68	73	TSAGAAN-OVOO	ExDG + PV		300	8		4	40	30
69	74	CHULUUNKHOROOT	NewDG + PV + WG	120		2	2.5	2	10	6
70	75	BAYAN-UUL	NewDG + PV	300		12		8	40	48
71	76	BAYANDUN	NewDG + PV	200		6		4	20	24
		KHENTII								
72	78	BAYAN-ADRAGA	ExDG + PV		120	6		4	10	18
73	79	BINDER	ExDG + PV		180	6		4	20	24
74	80	BATSHIREET	ExDG + PV		200	6		4	20	18
75	81	NOROVLIN	ExDG + PV + WG		120	2	7.5	4	10	6
76	83	DADAL	ExDG + PV		300	6		4	40	18
77	9071	GALSHAR	ExDG + PV + WG		200	2	2.5	4	20	6
78	9072	BAYAN-OVOO	ExDG + PV		180	4		2	20	18
		DUNDGOVI								

Table I.10.7-8 Power Supply Systems for Each Sum Centers for Year 2005

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources						
				Diesel Generator (kW)		Photovoltiac Cell (kWp)	Wind Generator (kW)	Inverter (kVA)	Converter (kVA)	Battery (kAh)
				New	Ex.	New	New	New	New	New
79	84	ULZIIT	ExDG + PV + WG		200	2	5	4	20	6
80	85	UNDURSHIL	ExDG + PV + WG		180	2	2.5	2	20	6
81	86	BAYANJARGALAN	ExDG + PV + WG		180	2	2.5	2	20	6
82	87	ADAATSAG	NewDG + PV + WG	120		2	2.5	4	10	6
83	9082	KHULD	NewDG + PV + WG	120		2	5	4	10	12
84	9083	DELGERKHANGAI	NewDG + PV + WG	120		2	2.5	4	10	12
		UVURKHANGAI								
85	89	BOGD	ExDG + PV		300	6		4	40	24
86	90	BARUUN BAYAN-ULAAN	ExDG + PV		180	4		4	20	18
87	91	GUCHIN-US	ExDG + PV + WG		180	2	5	4	20	12
88	93	KHAIRHANDULAAN	ExDG + PV		180	6		4	20	24
89	94	NARIINTEEL	ExDG + PV		240	6		4	30	24
90	95	BAYANTEEG	NewDG + PV	120		4		2	10	12
		KHUVSGUL								
91	96	JARGALANT	ExDG		180				20	
92	97	GALT	ExDG		120				10	
93	98	SHINE-LDER	ExDG		180				20	
94	99	TUMURBULAG	NewDG + PV	120		8		6	10	30
95	100	BURENTOGTOKH	NewDG + PV	120		8		4	10	30
96	101	TSETSERLEG	NewDG	200					20	
97	102	ARBULAG	ExDG		120				10	
98	103	BAYANZURKH	ExDG		120				10	
99	104	CHANDMANI-UNDUR	ExDG		120				10	
100	105	TSAGAAN-UUR	ExDG		180				20	
101	106	TSAGAAN-UUL	NewDG	200					20	
102	107	ULAAN-UUL	ExDG		120				10	
103	108	RENCHINLKHUNBE	ExDG		200				20	
104	109	TUNNEL	NewDG	200					20	
105	110	TOSONTSENGEL	Grid							
106	111	ALAG-ERDENE	NewDG	120					10	
107	112	KHATGAL	ExDG		220				20	
108	113	TSAGAANNUUR	ExDG		200				20	
109	114	ERDENEBULGAN	ExDG		200				20	
		ARKHANGAI								
110	115	KHANGAI	ExDG		120				10	
111	117	TSAKHIR	ExDG		120				10	
112	9111	CHULUUT	ExDG		180				20	
		ZAVKHAN								
113	118	SHILUUSTEI	NewDG + PV	120		6		4	10	24
114	119	DURVULJIN	ExDG + PV		300	6		4	40	24
115	120	YARUU	NewDG + PV	120		6		4	10	24
116	121	ERDENEKHAIRKHAN	ExDG + PV		300	6		4	40	18
117	122	ZAVKHANMANDAL	ExDG + PV		300	6		4	40	24

Table I.10.7-8 Power Supply Systems for Each Sum Centers for Year 2005

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources						
				Diesel Generator (kW)		Photovoltiac Cell (kWp)	Wind Generator (kW)	Inverter (kVA)	Converter (kVA)	Battery (kAh)
				New	Ex.	New	New	New	New	New
118	123	URGAMAL	ExDG + PV		200	4		4	20	18
119	124	SANTMARGATS	ExDG + PV		180	6		4	20	24
120	125	TSETSEN-UUL	ExDG + PV		300	6		4	40	24
121	126	IDER	ExDG + PV		180	8		4	20	30
122	127	IKH-UUL	NewDG + PV	200		10		6	20	36
123	128	TES	ExDG + PV		300	10		6	40	42
124	129	TSAGAANCHULUUT	NewDG + PV	120		4		4	10	18
125	130	TSAGAANKHAIRKHAN	NewDG + PV	120		6		4	10	24
126	131	TELMEN	NewDG + PV	120		6		4	10	24
127	132	TUDEVTEI	NewDG + PV	120		12		6	10	42
128	133	SONGINO	ExDG + PV		300	6		4	40	24
129	134	OTGON	NewDG + PV	200		6		4	20	24
130	135	NUMRUG	ExDG + PV		200	6		4	20	24
131	136	ASGAT	ExDG + PV		180	6		4	20	18
132	137	BAYANKHAIRKHAN	NewDG + PV	120		6		4	10	18
133	138	TOSONTSENGEL	NewDG + PV	500		24		14	70	96
134	9121	BAYANTES	NewDG + PV	120		8		4	10	30
135	9122	ALDARKHAAN	NewDG + PV	120		6		4	10	24
		BULGAN								
136	139	TESHIG	ExDG		300				40	
		UVS								
137	140	UNDURKHANGAI	NewDG	300					40	
138	141	TSAGAANKHAIRKHAN	ExDG		180				20	
139	142	ZUUNKHANGAI	ExDG		300				40	
140	143	KHYARGAS	ExDG		180				20	
141	144	BARUUNTRUUN	NewDG+ Hyd	300					40	
142	145	MALCHIN	ExDG		180				20	
143	146	ZUUNGOBI	ExDG + PV		200	6		4	20	24
144	147	BUKHMURUN	NewDG	200					20	
145	148	ZAVKHAN	NewDG + PV	120		4		2	10	12
146	149	TES	ExDG		200				20	
		KHOVD								
147	151	ZEREG	ExDG + PV		120	8		4	10	30
148	152	DARVI	ExDG + PV + WG		200	4	5	4	20	18
149	153	ALTAI	NewDG + PV	200		6		4	20	24
150	154	UYENCH	NewDG + PV	300		10		6	40	36
151	155	BULGAN	ExDG + PV		300	20		12	40	78
152	156	TSETSEG	ExDG		180				20	
153	157	MUST	ExDG		200				20	
154	158	MUNKHKHAIRKHAN	ExDG + Hyd		120				10	
155	159	MANKHAN	NewDG+ PV +Hyd	200		8		4	20	30
156	160	CHANDMANI	ExDG + PV		120	6		4	10	24
157	163	DURGUN	NewDG + PV	120		6		4	10	24

Table I.10.7-8 Power Supply Systems for Each Sum Centers for Year 2005

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources						
				Diesel Generator (kW)		Photovoltiac Cell (kWp)	Wind Generator (kW)	Inverter (kVA)	Converter (kVA)	Battery (kAh)
				New	Ex.	New	New	New	New	New
158	9151	DUUT	NewDG	120					10	
		BAYAN-ULGII								
159	164	TOLBO	NewDG	120					10	
160	165	TSAGAANNUUR	NewDG	300					40	
161	166	BULGAN	ExDG		220				20	
162	167	DELUUN	ExDG		200				20	
163	168	ALTAI	NewDG	200					20	
164	169	BUYANT	NewDG	120					10	
165	170	BAYANNUUR	Grid							
166	171	ALTANTSUGTS	Grid							
167	9161	NOGOONUUR	NewDG	200					20	

NewDG : New Diesel Generator
ExDG : Existing Diesel Generator
PV : Photovoltiac Cell
WG : Wind Generator
FC : Fuel Cell
Hyd : Hydro-Generator
Grid : Grid Connection

Table I.10.7-9 Power Supply Systems for Each Sum Centers for Year 2010

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources									
				Diesel Generator (kW)	Photovoltiac Cell (kWp)		Wind Generator (kW)		Inverter (kVA)		Converter (kVA)	Battery (kAh)	
				Total	New	Total	New	Total	New	Total	Total	New	Total
		UMNU-GOVI											
1	1	BAYANDALAI	NewDG + PV + WG	120	10	12	20	25	10	14	10	24	36
2	2	BAYAN-OVOO	NewDG + PV + WG	120	10	12	40	45	20	24	10	24	36
3	3	BULGAN	NewDG + PV + WG	120	20	22	70	80	40	44	10	54	60
4	4	GURVANTES	ExDG + PV + WG	180	15	17	40	45	30	34	20	36	42
5	5	MANDAL-OVOO	ExDG + PV	120	40	44			30	34	10	120	138
6	6	MANLAI	ExDG + PV + WG	180	15	17	30	32.5	30	34	20	30	36
7	7	NOYON	ExDG + PV + WG	180	5	7	30	32.5	20	24	20	12	18
8	8	NOMGON	NewDG + PV + WG	120	15	17	40	45	20	24	10	36	42
9	9	SEVREI	ExDG + PV + WG	120	10	12	60	62.5	40	44	10	18	30
10	10	KHANBOGD	NewDG + PV + WG	120	5	7	50	55	20	24	10	12	24
11	11	TSOGT-OVOO	NewDG + PV + WG	120	10	12	30	32.5	20	24	10	18	30
12	12	KHURMEN	NewDG + PV	120	40	44			30	34	10	90	108
13	13	TSOGT-TSETSII	NewDG + PV + WG	120	10	12	40	45	40	44	10	24	30
		GOVI-ALTAI											
14	14	ERDENE	ExDG + PV	300	40	46			20	24	40	90	108
15	15	TSOGT	ExDG + PV	300	50	56			30	34	40	120	144
16	16	CHANDMANI	ExDG + PV + WG	300	25	29	40	45	30	34	40	48	60
17	17	ALTAI	ExDG + PV	180	60	64			40	44	20	150	168
18	19	TAISHIR	NewDG + PV + WG	120	15	17	20	25	20	22	10	30	36
19	20	BUGAT	NewDG + PV	200	65	71			40	44	20	150	174
20	21	TSEEL	ExDG + PV + WG	180	10	12	40	45	30	34	20	12	18
21	22	TUGRUG	NewDG + PV	120	55	65			30	36	10	150	186
22	23	SHARGA	NewDG + PV	120	60	66			40	44	10	150	168
23	24	TONKHIL	ExDG	180							20		
24	25	Darvi	ExDG + PV + WG	180	15	17	30	35	20	24	20	24	30
25	26	KHALIUN	NewDG + PV + WG	120	10	12	30	32.5	30	34	10	18	24
26	27	BIGER	ExDG + PV	120	20	30			10	16	10	60	96
27	28	KHUKHMORIT	ExDG + PV	180	25	31			20	24	20	90	114
28	29	BAYAN-UUL	NewDG + PV	200	45	51			30	34	20	120	144
29	30	JARGALAN	NewDG + PV	120	40	44			30	34	10	90	108
		BAYANKHONGOR											
30	32	SHINEJINST	ExDG + PV + WG	120	10	12	30	35	20	24	10	18	24
31	33	BAYAN-UNDUR	ExDG + PV + WG	300	25	27	30	40	30	34	40	54	66
32	34	BAYANLIG	ExDG + PV	120	45	51			30	34	10	120	144
33	35	BAYANGOBI	ExDG + PV	180	40	46			30	34	20	120	144
34	36	BOGD	ExDG + PV + WG	180	10	12	30	35	20	24	20	18	24
35	37	JINST	ExDG + PV	120	20	26			20	24	10	60	84
36	38	BAATSAGAAN	ExDG + PV	180	25	33			20	24	20	90	120
37	39	BAYAN-TSAGAAN	ExDG + PV	300	45	53			30	34	40	120	150
38	40	KHUREEMARAL	ExDG + PV	180	30	36			20	24	20	90	114
39	41	GURVANBULAG	NewDG + PV	200	55	61			30	34	20	120	144
40	42	JARGALANT	ExDG + PV	300	40	50			20	26	40	90	132
41	43	GALUUT	ExDG + PV	180	30	38			20	24	20	90	120
42	44	ERDENETSOGT	ExDG + PV	220	25	33			20	24	10	60	84
43	46	BAYANBULAG	ExDG + PV	120	45	53			30	34	10	120	150
44	47	BUUTSAGAAN	ExDG + PV	200	35	43			30	34	20	120	150
45	48	BUMBUGUR	ExDG + PV + WG	180	10	14	40	47.5	20	24	20	30	42
46	50	ZAG	NewDG + PV	200	55	61			40	44	20	150	174
		DORNOGOVI											
47	51	ERDENE	NewDG + PV	200	80	86			60	64	20	210	234
48	52	DELGEREKH	NewDG + PV + WG	120	25	29	40	47.5	30	34	10	60	72
49	53	ZAMIIN-UUD	NewDG + PV	600	100	108			140	146	90	240	276

Table I.10.7-9 Power Supply Systems for Each Sum Centers for Year 2010

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources									
				Diesel Generator (kW)	Photovoltiac Cell (kWp)		Wind Generator (kW)		Inverter (kVA)		Converter (kVA)	Battery (kAh)	
				Total	New	Total	New	Total	New	Total	Total	New	Total
50	54	MANDAKH	ExDG + PV + WG	180	15	17	50	57.5	30	34	20	30	36
51	55	SAIKHANDULAAN	ExDG + PV + WG	300	5	7	20	22.5	20	22	40	12	18
52	56	KHATANBULAG	ExDG + PV + WG	300	15	17	70	80	30	34	40	36	48
53	57	KHUVSGUL	ExDG + PV	180	25	29			20	24	20	90	108
54	9041	ULAANBADRAKH	NewDG + PV	120	35	41			30	34	10	120	144
		SUKHBAATAR											
55	58	ONGON	ExDG + PV + WG	200	15	17	70	75	70	76	20	18	24
56	59	DARIGANGA	ExDG + PV + WG	180	30	32	40	42.5	40	44	20	60	72
57	60	NARAN	ExDG + PV + WG	200	10	12	40	42.5	30	34	20	24	30
58	61	BAYANDELGER	ExDG + PV + WG	300	20	22	40	47.5	30	34	40	42	48
59	62	ERDENETSAGAAN	ExDG + PV + WG	300	30	34	80	85	70	76	40	54	66
60	63	SUKHBAATAR	Grid										
61	64	TUMENTSOGT	ExDG + PV + WG	300	60	64	130	137.5	80	84	40	114	126
62	65	TUVSHINSHIREE	NewDG + PV + WG	120	15	17	20	22.5	20	24	10	24	30
63	66	UUL-BAYAN	NewDG + PV	200	80	86			50	54	20	210	234
64	67	MUNKHKHAAN	NewDG + PV + WG	200	30	36	40	45	30	36	20	60	78
		DORNOD											
65	69	MATAD	NewDG + PV + WG	120	35	37	70	75	30	34	10	66	78
66	71	KHALKHGOL	NewDG + PV	200	90	98			50	56	20	210	240
67	72	KHULUN-BUIR	ExDG + PV + WG	120	25	27	60	65	40	44	10	54	66
68	73	TSAGAAN-OVOO	ExDG + PV	300	80	88			50	54	40	180	210
69	74	CHULUUNKHOROOT	NewDG + PV + WG	120	20	22	60	62.5	60	62	10	36	42
70	75	BAYAN-UUL	NewDG + PV	300	100	112			100	108	40	240	288
71	76	BAYANDUN	NewDG + PV	200	90	96			50	54	20	210	234
		KHENTII											
72	78	BAYAN-ADRAGA	ExDG + PV	120	100	106			80	84	10	240	258
73	79	BINDER	ExDG + PV	180	100	106			140	144	20	240	264
74	80	BATSHIREET	ExDG + PV	200	100	106			60	64	20	210	228
75	81	NOROVLIN	ExDG + PV + WG	120	60	62	130	137.5	80	84	10	108	114
76	83	DADAL	ExDG + PV	300	90	96			50	54	40	210	228
77	9071	GALSHAR	ExDG + PV + WG	200	10	12	40	42.5	30	34	20	18	24
78	9072	BAYAN-OVOO	ExDG + PV	180	100	104			60	62	20	240	258
		DUNDGOVI											
79	84	ULZIIT	ExDG + PV + WG	200	15	17	40	45	20	24	20	30	36
80	85	UNDURSHIL	ExDG + PV + WG	180	15	17	40	42.5	30	32	20	30	36
81	86	BAYANJARGALAN	ExDG + PV + WG	180	5	7	30	32.5	20	22	20	6	12
82	87	ADAATSAG	NewDG + PV + WG	120	5	7	10	12.5	10	14	10	12	18
83	9082	KHULD	NewDG + PV + WG	120	15	17	50	55	20	24	10	30	42
84	9083	DELGERKHANGAI	NewDG + PV + WG	120	15	17	20	22.5	20	24	10	30	42
		UVURKHANGAI											
85	89	BOGD	ExDG + PV	300	60	66			40	44	40	150	174
86	90	BARUUN BAYAN-ULAAN	ExDG + PV	180	70	74			40	44	20	180	198
87	91	GUCHIN-US	ExDG + PV + WG	180	30	32	60	65	40	44	20	60	72
88	93	KHAIRHANDULAAN	ExDG + PV	180	50	56			40	44	20	150	174
89	94	NARIINTEEL	ExDG + PV	240	70	76			50	54	30	180	204
90	95	BAYANTEEG	NewDG + PV	120	40	44			30	32	10	90	102
		KHUVSGUL											
91	96	JARGALANT	ExDG	180							20		
92	97	GALT	ExDG	120							10		
93	98	SHINE-LDER	ExDG	180							20		
94	99	TUMURBULAG	NewDG + PV	120	35	43			20	26	10	90	120
95	100	BURENTOGTOKH	NewDG + PV	120	40	48			30	34	10	90	120
96	101	TSETSERLEG	NewDG	200							20		

Table I.10.7-9 Power Supply Systems for Each Sum Centers for Year 2010

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources									
				Diesel Generator (kW)	Photovoltiac Cell (kWp)		Wind Generator (kW)		Inverter (kVA)		Converter (kVA)	Battery (kAh)	
				Total	New	Total	New	Total	New	Total	Total	New	Total
97	102	ARBULAG	ExDG	120							10		
98	103	BAYANZURKH	ExDG	120							10		
99	104	CHANDMANI-UNDUR	ExDG	120							10		
100	105	TSAGAAN-UUR	ExDG	180							20		
101	106	TSAGAAN-UUL	NewDG	200							20		
102	107	ULAAN-UUL	ExDG	120							10		
103	108	RENCHINLKHUNBE	ExDG	200							20		
104	109	TUNNEL	NewDG	200							20		
105	110	TOSONTSENGEL	Grid										
106	111	ALAG-ERDENE	NewDG	120							10		
107	112	KHATGAL	ExDG	220							20		
108	113	TSAGAANNUUR	ExDG	200							20		
109	114	ERDENEBULGAN	ExDG	200							20		
		ARKHANGAI											
110	115	KHANGAI	ExDG	120							10		
111	117	TSAKHIR	ExDG	120							10		
112	9111	CHULUUT	ExDG	180							20		
		ZAVKHAN											
113	118	SHILUUSTEI	NewDG + PV	120	30	36			20	24	10	90	114
114	119	DURVULJIN	ExDG + PV	300	35	41			20	24	40	90	114
115	120	YARUU	NewDG + PV	120	10	16			10	14	10	30	54
116	121	ERDENEKHAIRKHAN	ExDG + PV	300	35	41			20	24	40	90	108
117	122	ZAVKHANMANDAL	ExDG + PV	300	35	41			30	34	40	90	114
118	123	URGAMAL	ExDG + PV	200	15	19			10	14	20	60	78
119	124	SANTMARGATS	ExDG + PV	180	40	46			30	34	20	90	114
120	125	TSETSEN-UUL	ExDG + PV	300	95	101			50	54	40	210	234
121	126	IDER	ExDG + PV	180	40	48			30	34	20	120	150
122	127	IKH-UUL	NewDG + PV	200	50	60			30	36	20	120	156
123	128	TES	ExDG + PV	300	45	55			30	36	40	120	162
124	129	TSAGAANCHULUUT	NewDG + PV	120	35	39			20	24	10	90	108
125	130	TSAGAANKHAIRKHAN	NewDG + PV	120	25	31			20	24	10	90	114
126	131	TELMEN	NewDG + PV	120	55	61			30	34	10	120	144
127	132	TUDEVTEI	NewDG + PV	120	30	42			20	26	10	90	132
128	133	SONGINO	ExDG + PV	300	50	56			30	34	40	120	144
129	134	OTGON	NewDG + PV	200	50	56			30	34	20	120	144
130	135	NUMRUG	ExDG + PV	200	30	36			20	24	20	90	114
131	136	ASGAT	ExDG + PV	180	20	26			20	24	20	60	78
132	137	BAYANKHAIRKHAN	NewDG + PV	120	35	41			20	24	10	90	108
133	138	TOSONTSENGEL	NewDG + PV	500	100	124			140	154	70	240	336
134	9121	BAYANTES	NewDG + PV	120	25	33			20	24	10	90	120
135	9122	ALDARKHAAN	NewDG + PV	120	30	36			20	24	10	90	114
		BULGAN											
136	139	TESHIG	ExDG	300							40		
		UVS											
137	140	UNDURKHANGAI	NewDG	300							40		
138	141	TSAGAANKHAIRKHAN	ExDG	180							20		
139	142	ZUUNKHANGAI	ExDG	300							40		
140	143	KHYARGAS	ExDG	180							20		
141	144	BARUUNTRUUN	NewDG+ Hyd	300							40		
142	145	MALCHIN	ExDG	180							20		
143	146	ZUUNGOBI	ExDG + PV	200	60	66			40	44	20	150	174
144	147	BUKHMURUN	NewDG	200							20		
145	148	ZAVKHAN	NewDG + PV	120	35	39			20	22	10	90	102

Table I.10.7-9 Power Supply Systems for Each Sum Centers for Year 2010

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources									
				Diesel Generator (kW)	Photovoltiac Cell (kWp)		Wind Generator (kW)		Inverter (kVA)		Converter (kVA)	Battery (kAh)	
				Total	New	Total	New	Total	New	Total	Total	New	Total
146	149	TES	ExDG	200							20		
		KHOVD											
147	151	ZEREG	ExDG + PV	120	45	53			30	34	10	120	150
148	152	DARVI	ExDG + PV + WG	200	30	34	60	65	40	44	20	54	72
149	153	ALTAI	NewDG + PV	200	80	86			50	54	20	180	204
150	154	UYENCH	NewDG + PV	300	100	110			80	86	40	240	276
151	155	BULGAN	ExDG + PV	300	100	120			140	152	40	240	318
152	156	TSETSEG	ExDG	180							20		
153	157	MUST	ExDG	200							20		
154	158	MUNKHKHAIRKHAN	ExDG+Hyd	120							10		
155	159	MANKHAN	NewDG + PV + Hyd	200		8				4	20		30
156	160	CHANDMANI	ExDG + PV	120	65	71			40	44	10	150	174
157	163	DURGUN	NewDG + PV	120	45	51			30	34	10	120	144
158	9151	DUUT	NewDG	120							10		
		BAYAN-ULGII											
159	164	TOLBO	NewDG	120							10		
160	165	TSAGAANNUUR	NewDG	300							40		
161	166	BULGAN	ExDG	220							20		
162	167	DELUUN	ExDG	200							20		
163	168	ALTAI	NewDG	200							20		
164	169	BUYANT	NewDG	120							10		
165	170	BAYANNUUR	Grid										
166	171	ALTANTSUGTS	Grid										
167	9161	NOGOONUUR	NewDG	200							20		

NewDG : New Diesel Generator
ExDG : Existing Diesel Generator
PV : Photovoltiac Cell
WG : Wind Generator
FC : Fuel Cell
Hyd : Hydro-Generator
Grid : Grid Connection

Table I.10.7-10 Power Supply Systems for Each Sum Centers for Year 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources									
				Photovoltiac Cell (kWp)		Wind Generator (kW)		Inverter (kVA)		Battery (kAh)	Fuel Cell (Kw)	Hydrogen Production System (kWh)	Hydrogen Storage Capacity (MWh)
				New	Total	New	Total	New	Total	Total	New	New	New
		UMNU-GOVI											
1	1	BAYANDALAI	PV + WG + FC	30	42	50	75	50	64	36	50	100	40,000
2	2	BAYAN-OVOO	PV + WG + FC	10	22	30	75	50	74	36	50	100	30,000
3	3	BULGAN	PV + WG + FC		22	30	110	50	94	60	100	100	10,000
4	4	GURVANTES	PV + WG + FC	10	27	80	125	50	84	42	100	150	60,000
5	5	MANDAL-OVOO	PV + WG + FC		44	200	200	50	84	138	100	200	50,000
6	6	MANLAI	PV + WG + FC	10	27	30	62.5	50	84	36	50	100	20,000
7	7	NOYON	PV + WG + FC		7	30	62.5	50	74	18	50	100	30,000
8	8	NOMGON	PV + WG + FC	30	47	50	95	50	74	42	100	150	40,000
9	9	SEVREI	PV + WG + FC	40	52	50	113	50	94	30	100	150	40,000
10	10	KHANBOGD	PV + WG + FC	40	47	30	85	50	74	24	50	150	30,000
11	11	TSOGT-OVOO	PV + WG + FC	20	32	30	62.5	50	74	30	50	100	30,000
12	12	KHURMEN	PV + WG + FC		44	90	90	50	84	108	50	100	20,000
13	13	TSOGT-TSETSII	PV + WG + FC		12	60	105	50	94	30	100	100	60,000
		GOVI-ALTAI											
14	14	ERDENE	PV + FC	50	96			50	74	108	50	150	40,000
15	15	TSOGT	PV + FC	110	166			100	134	144	100	200	70,000
16	16	CHANDMANI	PV + WG + FC	20	49	60	105	50	84	60	100	150	50,000
17	17	ALTAI	PV + FC	160	224			100	144	168	150	300	70,000
18	19	TAISHIR	PV + WG + FC	20	37	50	75	50	72	36	50	100	30,000
19	20	BUGAT	PV + WG + FC		71	200	200	50	94	174	100	250	90,000
20	21	TSEEL	PV + WG + FC	10	22	130	175	100	134	18	150	150	100,000
21	22	TUGRUG	PV + FC	70	135			50	86	186	100	200	50,000
22	23	SHARGA	PV + FC	60	126			50	94	168	100	150	30,000
23	24	TONKHIL	PV + FC	200	200			250	250		300	400	70,000
24	25	Darvi	PV + WG + FC	20	37	60	95	50	74	30	100	150	50,000
25	26	KHALIUN	PV + WG + FC	30	42	30	62.5	50	84	24	100	100	30,000
26	27	BIGER	PV + FC	40	70			50	66	96	50	100	30,000
27	28	KHUKHMORIT	PV + FC	40	71			50	74	114	50	100	30,000
28	29	BAYAN-UUL	PV + FC	120	171			100	134	144	100	250	70,000
29	30	JARGALAN	PV + FC	50	94			50	84	108	50	150	30,000
		BAYANKHONGOR											
30	32	SHINEJINST	PV + WG + FC	30	42	60	95	50	74	24	100	150	50,000
31	33	BAYAN-UNDUR	PV + WG + FC	20	47	50	90	50	84	66	100	150	30,000
32	34	BAYANLIG	PV + FC	80	131			50	84	144	100	200	40,000
33	35	BAYANGOBI	PV + FC	70	116			50	84	144	100	150	50,000
34	36	BOGD	PV + WG + FC	20	32	180	215	50	74	24	50	200	40,000
35	37	JINST	PV + FC	50	76			50	74	84	50	100	30,000
36	38	BAATSAGAAN	PV + FC	50	83			50	74	120	50	100	30,000
37	39	BAYAN-TSAGAAN	PV + FC	80	133			50	84	150	100	200	50,000
38	40	KHUREEMARAL	PV + FC	70	106			50	74	114	50	150	30,000
39	41	GURVANBULAG	PV + FC	150	211			100	134	144	150	300	100,000
40	42	JARGALANT	PV + FC	120	170			100	126	132	100	250	80,000
41	43	GALUUT	PV + FC	110	148			100	124	120	100	200	70,000
42	44	ERDENETSOGT	PV + FC	90	123			50	74	84	100	200	70,000
43	46	BAYANBULAG	PV + FC	80	133			50	84	150	100	200	50,000
44	47	BUUTSAGAAN	PV + FC	60	103			50	84	150	50	150	30,000
45	48	BUMBUGUR	PV + WG + FC	30	44	50	97.5	50	74	42	50	150	40,000
46	50	ZAG	PV + FC	100	161			50	94	174	100	200	60,000
		DORNOGOVI											
47	51	ERDENE	PV + FC	120	206			50	114	234	100	300	60,000
48	52	DELGEREKH	PV + WG + FC	20	49	50	97.5	50	84	72	50	150	30,000
49	53	ZAMIIN-UUD	PV + FC	200	308			250	396	276	300	450	100,000
50	54	MANDAKH	PV + WG + FC	20	37	50	108	50	84	36	100	150	30,000
51	55	SAIKHANDULAAN	PV + WG + FC	40	47	30	52.5	50	72	18	50	100	20,000
52	56	KHATANBULAG	PV + WG + FC	40	57	30	110	50	84	48	100	150	40,000
53	57	KHUVSGUL	PV + FC	50	79			50	74	108	50	100	30,000

Table I.10.7-10 Power Supply Systems for Each Sum Centers for Year 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources									
				Photovoltiac Cell (kWp)		Wind Generator (kW)		Inverter (kVA)		Battery (kAh)	Fuel Cell (Kw)	Hydrogen Production System (kWh)	Hydrogen Storage Capacity (MWh)
				New	Total	New	Total	New	Total	Total	New	New	New
54	9041	ULAANBADRAKH	PV + FC	80	121			50	84	144	100	150	40,000
		SUKHBAATAR											
55	58	ONGON	PV + WG + FC	60	77	30	105	50	126	24	150	200	70,000
56	59	DARIGANGA	PV + WG + FC	40	72	50	92.5	50	94	72	100	150	50,000
57	60	NARAN	PV + WG + FC	30	42	30	72.5	50	84	30	50	100	30,000
58	61	BAYANDELGER	PV + WG + FC	20	42	50	97.5	50	84	48	100	150	50,000
59	62	ERDENETSAGAAN	PV + WG + FC	70	104	30	115	100	176	66	150	200	60,000
60	63	SUKHBAATAR	Grid										
61	64	TUMENTSOGT	PV + WG + FC	10	74	80	218	50	134	126	150	250	50,000
62	65	TUVSHINSHIREE	PV + WG + FC	20	37	30	52.5	50	74	30	50	100	30,000
63	66	UUL-BAYAN	PV + FC	140	226			50	104	234	150	300	60,000
64	67	MUNKHKHAAN	PV + WG + FC	30	66	50	95	100	136	78	100	150	50,000
		DORNOD											
65	69	MATAD	PV + WG + FC	30	67	30	105	50	84	78	100	150	40,000
66	71	KHALKHGOL	PV + FC	80	178			50	106	240	100	250	50,000
67	72	KHULUN-BUIR	PV + WG + FC	60	87	30	95	50	94	66	100	200	40,000
68	73	TSAGAAN-OVOO	PV + FC	100	188			50	104	210	100	250	60,000
69	74	CHULUUNKHOROOT	PV + WG + FC	80	102	50	113	50	112	42	150	200	70,000
70	75	BAYAN-UUL	PV + FC	200	312			100	208	288	200	400	40,000
71	76	BAYANDUN	PV + FC	90	186			50	104	234	100	250	50,000
		KHENTII											
72	78	BAYAN-ADRAGA	PV + WG + FC	80	186	300	300	100	184	258	200	450	120,000
73	79	BINDER	PV + FC	200	306			150	294	264	300	400	60,000
74	80	BATSHIREET	PV + FC	100	206			50	114	228	100	300	60,000
75	81	NOROVLIN	PV + WG + FC	100	162	80	218	100	184	114	200	350	70,000
76	83	DADAL	PV + FC	200	296			150	204	228	200	400	40,000
77	9071	GALSHAR	PV + WG + FC	20	32	80	123	50	84	24	100	150	70,000
78	9072	BAYAN-OVOO	PV + FC	160	264			100	162	258	150	350	70,000
		DUNDGOVI											
79	84	ULZIIT	PV + WG + FC	30	47	30	75	50	74	36	50	100	30,000
80	85	UNDURSHIL	PV + WG + FC	20	37	80	123	50	82	36	100	150	60,000
81	86	BAYANJARGALAN	PV + WG + FC	10	17	30	62.5	50	72	12	50	100	30,000
82	87	ADAATSAG	PV + WG + FC	10	17	30	42.5	50	64	18	50	50	30,000
83	9082	KHULD	PV + WG + FC	20	37	30	85	50	74	42	50	100	20,000
84	9083	DELGERKHANGAI	PV + WG + FC	10	27	50	72.5	50	74	42	50	100	40,000
		UVURKHANGAI											
85	89	BOGD	PV + FC	100	166			50	94	174	100	250	60,000
86	90	BARUUN BAYAN-ULAAN	PV + FC	170	244			100	144	198	150	300	80,000
87	91	GUCHIN-US	PV + WG + FC	60	92	150	215	100	144	72	150	250	60,000
88	93	KHAIRHANDULAAN	PV + FC	90	146			50	94	174	100	200	50,000
89	94	NARIINTEEL	PV + FC	180	256			100	154	204	150	300	90,000
90	95	BAYANTEEG	PV + FC	50	94			50	82	102	50	150	30,000
		KHUVSGUL											
91	96	JARGALANT	PV + FC	200	200			150	150		150	350	80,000
92	97	GALT	PV + FC	100	100			100	100		100	150	40,000
93	98	SHINE-LDER	PV + FC	140	140			100	100		100	200	60,000
94	99	TUMURBULAG	PV + WG + FC		43	100	100	50	76	120	100	150	30,000
95	100	BURENTOGTOKH	PV + FC	50	98			50	84	120	50	150	30,000
96	101	TSETSERLEG	PV + FC	190	190			100	100		100	250	60,000
97	102	ARBULAG	FC								100		40,000
98	103	BAYANZURKH	FC								100		40,000
99	104	CHANDMANI-UNDUR	FC								100		40,000
100	105	TSAGAAN-UUR	FC								100		50,000
101	106	TSAGAAN-UUL	PV + FC	170	170			100	100		100	250	80,000
102	107	ULAAN-UUL	FC								150		60,000
103	108	RENCHINLKHUNBE	FC								100		50,000
104	109	TUNNEL	PV + FC	170	170			100	100		100	250	50,000

Table I.10.7-10 Power Supply Systems for Each Sum Centers for Year 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources									
				Photovoltiac Cell (kWp)		Wind Generator (kW)		Inverter (kVA)		Battery (kAh)	Fuel Cell (Kw)	Hydrogen Production System (kWh)	Hydrogen Storage Capacity (MWh)
				New	Total	New	Total	New	Total	Total	New	New	New
105	110	TOSONTSENGEL	Grid										
106	111	ALAG-ERDENE	PV + FC	160	160			100	100		100	200	50,000
107	112	KHATGAL	FC								150		70,000
108	113	TSAGAANNUUR	FC								100		50,000
109	114	ERDENEBULGAN	PV + FC	150	150			100	100		100	200	50,000
		ARKHANGAI											
110	115	KHANGAI	FC								150		70,000
111	117	TSAKHIR	PV + FC	90	90			50	50		50	150	40,000
112	9111	CHULUUT	PV + FC	200	200			150	150		150	300	70,000
		ZAVKHAN											
113	118	SHILUUSTEI	PV + FC	60	96			50	74	114	50	150	40,000
114	119	DURVULJIN	PV + FC	70	111			50	74	114	100	150	50,000
115	120	YARUU	PV + FC	70	86			50	64	54	100	150	50,000
116	121	ERDENEKHAIRKHAN	PV + FC	100	141			100	124	108	100	200	70,000
117	122	ZAVKHANMANDAL	PV + FC	60	101			50	84	114	100	150	40,000
118	123	URGAMAL	PV + FC	70	89			50	64	78	100	150	50,000
119	124	SANTMARGATS	PV + FC	100	146			50	84	114	100	200	70,000
120	125	TSETSEN-UUL	PV + FC	200	301			100	154	234	200	400	110,000
121	126	IDER	PV + WG + FC	30	78	100	100	50	84	150	100	200	60,000
122	127	IKH-UUL	PV + FC	110	170			100	136	156	100	250	70,000
123	128	TES	PV + FC	130	185			100	136	162	150	250	90,000
124	129	TSAGAANCHULUUT	PV + FC	70	109			50	74	108	100	150	50,000
125	130	TSAGAANKHAIRKHAN	PV + FC	70	101			50	74	114	100	150	40,000
126	131	TELMEN	PV + FC	70	131			50	84	144	100	200	40,000
127	132	TUDEVTEI	PV + FC	90	132			50	76	132	100	200	60,000
128	133	SONGINO	PV + FC	80	136			50	84	144	100	200	50,000
129	134	OTGON	PV + FC	200	256			150	184	144	150	300	110,000
130	135	NUMRUG	PV + FC	90	126			50	74	114	100	150	60,000
131	136	ASGAT	PV + FC	70	96			50	74	78	100	150	50,000
132	137	BAYANKHAIRKHAN	PV + FC	60	101			50	74	108	100	150	40,000
133	138	TOSONTSENGEL	PV + FC	410	534			250	404	336	450	650	350,000
134	9121	BAYANTES	PV + FC	80	113			50	74	120	100	150	50,000
135	9122	ALDARKHAAN	PV + FC	60	96			50	74	114	50	150	30,000
		BULGAN											
136	139	TESHIG	FC								100		40,000
		UVS											
137	140	UNDURKHANGAI	PV + FC	200	200			250	250		250	400	60,000
138	141	TSAGAANKHAIRKHAN	PV + FC	200	200			250	250		250	400	60,000
139	142	ZUUNKHANGAI	PV + FC	160	160			100	100		100	200	60,000
140	143	KHYARGAS	PV + FC	200	200			150	150		150	300	70,000
141	144	BARUUNTRUUN	PV + FC + Hyd	200	200			250	250		250	350	190,000
142	145	MALCHIN	PV + FC	200	200			200	200		200	400	40,000
143	146	ZUUNGOBI	PV + WG + FC	10	76	100	100	50	94	174	100	200	50,000
144	147	BUKHMURUN	PV + FC	200	200			150	150		150	300	100,000
145	148	ZAVKHAN	PV + FC	60	99			50	72	102	50	150	40,000
146	149	TES	PV + FC	140	140			100	100		100	200	40,000
		KHOVD											
147	151	ZEREG	PV + FC	80	133			50	84	150	100	200	50,000
148	152	DARVI	PV + WG + FC	40	74	100	165	50	94	72	100	200	50,000
149	153	ALTAI	PV + FC	200	286			150	204	204	200	400	50,000
150	154	UYENCH	PV + FC	200	310			100	186	276	200	400	40,000
151	155	BULGAN	PV + FC	490	610			150	302	318	300	750	160,000
152	156	TSETSEG	PV + FC	90	90			50	50		50	150	40,000
153	157	MUST	PV + FC	200	200			150	150		150	300	90,000
154	158	MUNKHKHAIRKHAN	Hyd										
155	159	MANKHAN	ReHyd + PV		8				4	30			
156	160	CHANDMANI	PV + FC	90	161			50	94	174	100	200	60,000

Table I.10.7-10 Power Supply Systems for Each Sum Centers for Year 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Capacity of Power Sources									
				Photovoltiac Cell (kWp)		Wind Generator (kW)		Inverter (kVA)		Battery (kAh)	Fuel Cell (Kw)	Hydrogen Production System (kWh)	Hydrogen Storage Capacity (MWh)
				New	Total	New	Total	New	Total	Total	New	New	New
157	163	DURGUN	PV + FC	140	191			100	134	144	150	250	80,000
158	9151	DUUT	FC								100		30,000
		BAYAN-ULGII											
159	164	TOLBO	PV + FC	150	150			100	100		100	200	50,000
160	165	TSAGAANNUUR	PV + WG + FC	80	80	200	200	150	150		150	250	140,000
161	166	BULGAN	FC								100		50,000
162	167	DELUUN	FC								100		50,000
163	168	ALTAI	FC								150		60,000
164	169	BUYANT	PV + FC	140	140			100	100		100	200	50,000
165	170	BAYANNUUR	Grid										
166	171	ALTANTSUGTS	Grid										
167	9161	NOGOONUUR	PV + FC	200	200			150	150		150	300	70,000

NewDG : New Diesel Generator
ExDG : Existing Diesel Generator
PV : Photovoltiac Cell
WG : Wind Generator
FC : Fuel Cell
Hyd : Hydro-Generator
Grid : Grid Connection

Table I.10.7-11 Facilities Except for Power Sources for the Year 2005 - 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Facilities except Power Sources						
				Control House	Distribution System	Refurbishment of Indoor Wiring	Inteligent Management System	Hydro Generating System	Meteorogical Observation Unit	Transmission Line
				New	New	New	New	New	New	New
		UMNU-GOVI								
1	1	BAYANDALAI	NewDG + PV + WG	○	○	○	○		○	
2	2	BAYAN-OVOO	NewDG + PV + WG	○	○	○	○		○	
3	3	BULGAN	NewDG + PV + WG	○	○	○	○		○	
4	4	GURVANTES	ExDG + PV + WG	○	○	○	○		○	
5	5	MANDAL-OVOO	ExDG + PV	○	○	○	○		○	
6	6	MANLAI	ExDG + PV + WG	○	○	○	○		○	
7	7	NOYON	ExDG + PV + WG	○	○	○	○			
8	8	NOMGON	NewDG + PV + WG	○	○	○	○			
9	9	SEVREI	ExDG + PV + WG	○	○	○	○			
10	10	KHANBOGD	NewDG + PV + WG	○	○	○	○		○	
11	11	TSOGT-OVOO	NewDG + PV + WG	○	○	○	○			
12	12	KHURMEN	NewDG + PV	○	○	○	○			
13	13	TSOGT-TSETSII	NewDG + PV + WG	○	○	○	○			
		GOVI-ALTAI								
14	14	ERDENE	ExDG + PV	○	○	○	○			
15	15	TSOGT	ExDG + PV	○	○	○	○		○	
16	16	CHANDMANI	ExDG + PV + WG	○	○	○	○		○	
17	17	ALTAI	ExDG + PV	○	○	○	○		○	
18	19	TAISHIR	NewDG + PV + WG	○	○	○	○		○	
19	20	BUGAT	NewDG + PV	○	○	○	○		○	
20	21	TSEEL	ExDG + PV + WG	○	○	○	○		○	
21	22	TUGRUG	NewDG + PV	○	○	○	○			
22	23	SHARGA	NewDG + PV	○	○	○	○		○	
23	24	TONKHIL	ExDG				○		○	
24	25	DARVI	ExDG + PV + WG	○	○	○	○		○	
25	26	KHALIUN	NewDG + PV + WG	○	○	○	○			
26	27	BIGER	ExDG + PV	○	○	○	○		○	
27	28	KHUKHMORIT	ExDG + PV	○	○	○	○		○	
28	29	BAYAN-UUL	NewDG + PV	○	○	○	○			
29	30	JARGALAN	NewDG + PV	○	○	○	○		○	
		BAYANKHONGOR								
30	32	SHINEJINST	ExDG + PV + WG	○	○	○	○		○	
31	33	BAYAN-UNDUR	ExDG + PV + WG	○	○	○	○			
32	34	BAYANLIG	ExDG + PV	○	○	○	○			
33	35	BAYANGOBI	ExDG + PV	○	○	○	○		○	
34	36	BOGD	ExDG + PV + WG	○	○	○	○			
35	37	JINST	ExDG + PV	○	○	○	○		○	
36	38	BAATSAGAAN	ExDG + PV	○	○	○	○		○	
37	39	BAYAN-TSAGAAN	ExDG + PV	○	○	○	○		○	
38	40	KHUREEMARAL	ExDG + PV	○	○	○	○		○	
39	41	GURVANBULAG	NewDG + PV	○	○	○	○		○	
40	42	JARGALANT	ExDG + PV	○	○	○	○		○	
41	43	GALUUT	ExDG + PV	○	○	○	○		○	
42	44	ERDENETSOGT	ExDG + PV	○	○	○	○		○	
43	46	BAYANBULAG	ExDG + PV	○	○	○	○			
44	47	BUUTSAGAAN	ExDG + PV	○	○	○	○		○	
45	48	BUMBUGUR	ExDG + PV + WG	○	○	○	○		○	
46	50	ZAG	NewDG + PV	○	○	○	○			
		DORNOGOVI								
47	51	ERDENE	NewDG + PV	○	○	○	○		○	
48	52	DELGEREKH	NewDG + PV + WG	○	○	○	○		○	
49	53	ZAMIIN-UUD	NewDG + PV	○	○	○	○			
50	54	MANDAKH	ExDG + PV + WG	○	○	○	○		○	
51	55	SAIKHANDULAAN	ExDG + PV + WG	○	○	○	○			
52	56	KHATANBULAG	ExDG + PV + WG	○	○	○	○		○	
53	57	KHUVSGUL	ExDG + PV	○	○	○	○		○	
54	9041	ULAANBADRAKH	NewDG + PV	○	○	○	○			
		SUKHBAATAR								
55	58	ONGON	ExDG + PV + WG	○	○	○	○		○	

Table I.10.7-11 Facilities Except for Power Sources for the Year 2005 - 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Facilities except Power Sources						
				Control House	Distribution System	Refurbishment of Indoor Wiring	Inteligent Management System	Hydro Generating System	Meteorogical Observation Unit	Transmission Line
				New	New	New	New	New	New	New
56	59	DARIGANGA	ExDG + PV + WG	○	○	○	○			
57	60	NARAN	ExDG + PV + WG	○	○	○	○		○	
58	61	BAYANDELGER	ExDG + PV + WG	○	○	○	○		○	
59	62	ERDENETSAGAAN	ExDG + PV + WG	○	○	○	○		○	
60	63	SUKHBAATAR	Grid				○		○	○
61	64	TUMENTSOGT	ExDG + PV + WG	○	○	○	○		○	
62	65	TUVSHINSHIREE	NewDG + PV + WG	○	○	○	○		○	
63	66	UUL-BAYAN	NewDG + PV	○	○	○	○		○	
64	67	MUNKHKHAAN	NewDG + PV + WG	○	○	○	○		○	
		DORNOD								
65	69	MATAD	NewDG + PV + WG	○	○	○	○		○	
66	71	KHALKHGOL	NewDG + PV	○	○	○	○		○	
67	72	KHULUN-BUIR	ExDG + PV + WG	○	○	○	○		○	
68	73	TSAGAAN-OVOO	ExDG + PV	○	○	○	○		○	
69	74	CHULUUNKHOROOT	NewDG + PV + WG	○	○	○	○		○	
70	75	BAYAN-UUL	NewDG + PV	○	○	○	○		○	
71	76	BAYANDUN	NewDG + PV	○	○	○	○			
		KHENTII								
72	78	BAYAN-ADRAGA	ExDG + PV	○	○	○	○		○	
73	79	BINDER	ExDG + PV	○	○	○	○		○	
74	80	BATSHIREET	ExDG + PV	○	○	○	○		○	
75	81	NOROVLIN	ExDG + PV + WG	○	○	○	○			
76	83	DADAL	ExDG + PV	○	○	○	○		○	
77	9071	GALSHAR	ExDG + PV + WG	○	○	○	○		○	
78	9072	BAYAN-OVOO	ExDG + PV	○	○	○	○		○	
		DUNDGOVI								
79	84	ULZIIT	ExDG + PV + WG	○	○	○	○		○	
80	85	UNDURSHIL	ExDG + PV + WG	○	○	○	○		○	
81	86	BAYANJARGALAN	ExDG + PV + WG	○	○	○	○		○	
82	87	ADAATSAG	NewDG + PV + WG	○	○	○	○			
83	9082	KHULD	NewDG + PV + WG	○	○	○	○			
84	9083	DELGERKHANGAI	NewDG + PV + WG	○	○	○	○		○	
		UVURKHANGAI								
85	89	BOGD	ExDG + PV	○	○	○	○			
86	90	BARUUN BAYAN-ULAAN	ExDG + PV	○	○	○	○		○	
87	91	GUCHIN-US	ExDG + PV + WG	○	○	○	○			
88	93	KHAIRHANDULAAN	ExDG + PV	○	○	○	○			
89	94	NARIINTEEL	ExDG + PV	○	○	○	○			
90	95	BAYANTEEG	NewDG + PV	○	○	○	○			
		KHUVSGUL								
91	96	JARGALANT	ExDG				○		○	
92	97	GALT	ExDG				○			
93	98	SHINE-LDER	ExDG				○		○	
94	99	TUMURBULAG	NewDG + PV	○	○	○	○		○	
95	100	BURENTOGTOKH	NewDG + PV	○	○	○	○			
96	101	TSETSERLEG	NewDG				○		○	
97	102	ARBULAG	ExDG				○			
98	103	BAYANZURKH	ExDG				○			
99	104	CHANDMANI-UNDUR	ExDG				○			
100	105	TSAGAAN-UUR	ExDG				○			
101	106	TSAGAAN-UUL	NewDG				○		○	
102	107	ULAAN-UUL	ExDG				○			
103	108	RENCHINLKHUNBE	ExDG				○			
104	109	TUNNEL	NewDG				○		○	
105	110	TOSONTSENGEL	Grid				○		○	○
106	111	ALAG-ERDENE	NewDG				○		○	
107	112	KHATGAL	ExDG				○			
108	113	TSAGAANNUUR	ExDG				○			
109	114	ERDENEBULGAN	ExDG				○		○	
		ARKHANGAI								

Table I.10.7-11 Facilities Except for Power Sources for the Year 2005 - 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Facilities except Power Sources						
				Control House	Distribution System	Refurbishment of Indoor Wiring	Inteligent Management System	Hydro Generating System	Meteorogical Observation Unit	Transmission Line
				New	New	New	New	New	New	New
110	115	KHANGAI	ExDG				○			
111	117	TSAKHIR	ExDG				○		○	
112	9111	CHULUUT	ExDG				○		○	
		ZAVKHAN								
113	118	SHILUUSTEI	NewDG + PV	○	○	○	○			
114	119	DURVULJIN	ExDG + PV	○	○	○	○		○	
115	120	YARUU	NewDG + PV	○	○	○	○			
116	121	ERDENEKHAIRKHAN	ExDG + PV	○	○	○	○			
117	122	ZAVKHANMANDAL	ExDG + PV	○	○	○	○			
118	123	URGAMAL	ExDG + PV	○	○	○	○		○	
119	124	SANTMARGATS	ExDG + PV	○	○	○	○		○	
120	125	TSETSEN-UUL	ExDG + PV	○	○	○	○		○	
121	126	IDER	ExDG + PV	○	○	○	○		○	
122	127	IKH-UUL	NewDG + PV	○	○	○	○		○	
123	128	TES	ExDG + PV	○	○	○	○		○	
124	129	TSAGAANCHULUUT	NewDG + PV	○	○	○	○		○	
125	130	TSAGAANKHAIRKHAN	NewDG + PV	○	○	○	○			
126	131	TELMEN	NewDG + PV	○	○	○	○		○	
127	132	TUDEVTEI	NewDG + PV	○	○	○	○			
128	133	SONGINO	ExDG + PV	○	○	○	○			
129	134	OTGON	NewDG + PV	○	○	○	○			
130	135	NUMRUG	ExDG + PV	○	○	○	○		○	
131	136	ASGAT	ExDG + PV	○	○	○	○			
132	137	BAYANKHAIRKHAN	NewDG + PV	○	○	○	○		○	
133	138	TOSONTSENGEL	NewDG + PV	○	○	○	○			
134	9121	BAYANTES	NewDG + PV	○	○	○	○		○	
135	9122	ALDARKHAAN	NewDG + PV	○	○	○	○			
		BULGAN								
136	139	TESHIG	ExDG				○			
		UVS								
137	140	UNDURKHANGAI	NewDG				○		○	
138	141	TSAGAANKHAIRKHAN	ExDG				○		○	
139	142	ZUUNKHANGAI	ExDG				○		○	
140	143	KHYARGAS	ExDG				○		○	
141	144	BARUUNTRUUN	NewDG+ Hyd				○	○	○	
142	145	MALCHIN	ExDG				○		○	
143	146	ZUUNGOBI	ExDG + PV	○	○	○	○		○	
144	147	BUKHMURUN	NewDG				○		○	
145	148	ZAVKHAN	NewDG + PV	○	○	○	○		○	
146	149	TES	ExDG				○		○	
		KHOVD								
147	151	ZEREG	ExDG + PV	○	○	○	○			
148	152	DARVI	ExDG + PV + WG	○	○	○	○		○	
149	153	ALTAI	NewDG + PV	○	○	○	○		○	
150	154	UYENCH	NewDG + PV	○	○	○	○			
151	155	BULGAN	ExDG + PV	○	○	○	○			
152	156	TSETSEG	ExDG				○			
153	157	MUST	ExDG				○		○	
154	158	MUNKHKHAIRKHAN	ExDG + Hyd				○	○		
155	159	MANKHAN	NewDG+ PV +Hyd	○	○	○	○		○	
156	160	CHANDMANI	ExDG + PV	○	○	○	○		○	
157	163	DURGUN	NewDG + PV	○	○	○	○		○	
158	9151	DUUT	NewDG				○			
		BAYAN-ULGII								
159	164	TOLBO	NewDG				○		○	
160	165	TSAGAANNUUR	NewDG				○		○	
161	166	BULGAN	ExDG				○			
162	167	DELUUN	ExDG				○			
163	168	ALTAI	NewDG				○			
164	169	BUYANT	NewDG				○		○	

Table I.10.7-11 Facilities Except for Power Sources for the Year 2005 - 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Facilities except Power Sources						
				Control House	Distribution System	Refurbishment of Indoor Wiring	Inteligent Management System	Hydro Generating System	Meteorogical Observation Unit	Transmission Line
				New	New	New	New	New	New	New
165	170	BAYANNUUR	Grid				○			○
166	171	ALTANTSUGTS	Grid				○			○
167	9161	NOGOONUUR	NewDG				○		○	

Table I.10.7-11 Facilities Except for Power Sources for the Year 2005 - 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Facilities except Power Sources		
				Distribution System	Inteligent Management System	Hydro Generating System
				New	New	New
UMNU-GOVI						
1	1	BAYANDALAI	NewDG + PV + WG	○	○	
2	2	BAYAN-OVOO	NewDG + PV + WG	○	○	
3	3	BULGAN	NewDG + PV + WG	○	○	
4	4	GURVANTES	ExDG + PV + WG	○	○	
5	5	MANDAL-OVOO	ExDG + PV	○	○	
6	6	MANLAI	ExDG + PV + WG	○	○	
7	7	NOYON	ExDG + PV + WG	○	○	
8	8	NOMGON	NewDG + PV + WG	○	○	
9	9	SEVREI	ExDG + PV + WG	○	○	
10	10	KHANBOGD	NewDG + PV + WG	○	○	
11	11	TSOGT-OVOO	NewDG + PV + WG	○	○	
12	12	KHURMEN	NewDG + PV	○	○	
13	13	TSOGT-TSETSII	NewDG + PV + WG	○	○	
GOVI-ALTAI						
14	14	ERDENE	ExDG + PV	○	○	
15	15	TSOGT	ExDG + PV	○	○	
16	16	CHANDMANI	ExDG + PV + WG	○	○	
17	17	ALTAI	ExDG + PV	○	○	
18	19	TAISHIR	NewDG + PV + WG	○	○	
19	20	BUGAT	NewDG + PV	○	○	
20	21	TSEEL	ExDG + PV + WG	○	○	
21	22	TUGRUG	NewDG + PV	○	○	
22	23	SHARGA	NewDG + PV	○	○	
23	24	TONKHIL	ExDG	○	○	
24	25	DARVI	ExDG + PV + WG	○	○	
25	26	KHALIUN	NewDG + PV + WG	○	○	
26	27	BIGER	ExDG + PV	○	○	
27	28	KHUKHMORIT	ExDG + PV	○	○	
28	29	BAYAN-UUL	NewDG + PV	○	○	
29	30	JARGALAN	NewDG + PV	○	○	
BAYANKHONGOR						
30	32	SHINEJINST	ExDG + PV + WG	○	○	
31	33	BAYAN-UNDUR	ExDG + PV + WG	○	○	
32	34	BAYANLIG	ExDG + PV	○	○	
33	35	BAYANGOBI	ExDG + PV	○	○	
34	36	BOGD	ExDG + PV + WG	○	○	
35	37	JINST	ExDG + PV	○	○	
36	38	BAATSAGAAN	ExDG + PV	○	○	
37	39	BAYAN-TSAGAAN	ExDG + PV	○	○	
38	40	KHUREEMARAL	ExDG + PV	○	○	
39	41	GURVANBULAG	NewDG + PV	○	○	
40	42	JARGALANT	ExDG + PV	○	○	
41	43	GALUUT	ExDG + PV	○	○	
42	44	ERDENETSOGT	ExDG + PV	○	○	
43	46	BAYANBULAG	ExDG + PV	○	○	
44	47	BUUTSAGAAN	ExDG + PV	○	○	
45	48	BUMBUGUR	ExDG + PV + WG	○	○	
46	50	ZAG	NewDG + PV	○	○	
DORNOGOVI						
47	51	ERDENE	NewDG + PV	○	○	
48	52	DELGEREKH	NewDG + PV + WG	○	○	
49	53	ZAMIIN-UUD	NewDG + PV	○	○	
50	54	MANDAKH	ExDG + PV + WG	○	○	
51	55	SAIKHANDULAAN	ExDG + PV + WG	○	○	
52	56	KHATANBULAG	ExDG + PV + WG	○	○	
53	57	KHUVSGUL	ExDG + PV	○	○	
54	9041	ULAANBADRAKH	NewDG + PV	○	○	
SUKHBAATAR						
55	58	ONGON	ExDG + PV + WG	○	○	
56	59	DARIGANGA	ExDG + PV + WG	○	○	

Table I.10.7-11 Facilities Except for Power Sources for the Year 2005 - 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Facilities except Power Sources		
				Distribution System	Inteligent Management System	Hydro Generating System
				New	New	New
57	60	NARAN	ExDG + PV + WG	○	○	
58	61	BAYANDELGER	ExDG + PV + WG	○	○	
59	62	ERDENETSAGAAN	ExDG + PV + WG	○	○	
60	63	SUKHBAATAR	Grid	○	○	
61	64	TUMENTSOGT	ExDG + PV + WG	○	○	
62	65	TUVSHINSHIREE	NewDG + PV + WG	○	○	
63	66	UUL-BAYAN	NewDG + PV	○	○	
64	67	MUNKHKHAAN	NewDG + PV + WG	○	○	
		DORNOD				
65	69	MATAD	NewDG + PV + WG	○	○	
66	71	KHALKHGOL	NewDG + PV	○	○	
67	72	KHULUN-BUIR	ExDG + PV + WG	○	○	
68	73	TSAGAAN-OVOO	ExDG + PV	○	○	
69	74	CHULUUNKHOROOT	NewDG + PV + WG	○	○	
70	75	BAYAN-UUL	NewDG + PV	○	○	
71	76	BAYANDUN	NewDG + PV	○	○	
		KHENTII				
72	78	BAYAN-ADRAGA	ExDG + PV	○	○	
73	79	BINDER	ExDG + PV	○	○	
74	80	BATSHIREET	ExDG + PV	○	○	
75	81	NOROVLIN	ExDG + PV + WG	○	○	
76	83	DADAL	ExDG + PV	○	○	
77	9071	GALSHAR	ExDG + PV + WG	○	○	
78	9072	BAYAN-OVOO	ExDG + PV	○	○	
		DUNDGOVI				
79	84	ULZIIT	ExDG + PV + WG	○	○	
80	85	UNDURSHIL	ExDG + PV + WG	○	○	
81	86	BAYANJARGALAN	ExDG + PV + WG	○	○	
82	87	ADAATSAG	NewDG + PV + WG	○	○	
83	9082	KHULD	NewDG + PV + WG	○	○	
84	9083	DELGERKHANGAI	NewDG + PV + WG	○	○	
		UVURKHANGAI				
85	89	BOGD	ExDG + PV	○	○	
86	90	BARUUN BAYAN-ULAAN	ExDG + PV	○	○	
87	91	GUCHIN-US	ExDG + PV + WG	○	○	
88	93	KHAIRHANDULAAN	ExDG + PV	○	○	
89	94	NARIINTEEL	ExDG + PV	○	○	
90	95	BAYANTEEG	NewDG + PV	○	○	
		KHUVSGUL				
91	96	JARGALANT	ExDG	○	○	
92	97	GALT	ExDG	○	○	
93	98	SHINE-LDER	ExDG	○	○	
94	99	TUMURBULAG	NewDG + PV	○	○	
95	100	BURENTOGTOKH	NewDG + PV	○	○	
96	101	TSETSERLEG	NewDG	○	○	
97	102	ARBULAG	ExDG	○	○	
98	103	BAYANZURKH	ExDG	○	○	
99	104	CHANDMANI-UNDUR	ExDG	○	○	
100	105	TSAGAAN-UUR	ExDG	○	○	
101	106	TSAGAAN-UUL	NewDG	○	○	
102	107	ULAAN-UUL	ExDG	○	○	
103	108	RENCHINLKHUNBE	ExDG	○	○	
104	109	TUNNEL	NewDG	○	○	
105	110	TOSONTSENGEL	Grid	○	○	
106	111	ALAG-ERDENE	NewDG	○	○	
107	112	KHATGAL	ExDG	○	○	
108	113	TSAGAANNUUR	ExDG	○	○	
109	114	ERDENEBULGAN	ExDG	○	○	
		ARKHANGAI				
110	115	KHANGAI	ExDG	○	○	
111	117	TSAKHIR	ExDG	○	○	

Table I.10.7-11 Facilities Except for Power Sources for the Year 2005 - 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Facilities except Power Sources		
				Distribution System	Inteligent Management System	Hydro Generating System
				New	New	New
112	9111	CHULUUT	ExDG	○	○	
		ZAVKHAN				
113	118	SHILUUSTEI	NewDG + PV	○	○	
114	119	DURVULJIN	ExDG + PV	○	○	
115	120	YARUU	NewDG + PV	○	○	
116	121	ERDENEKHAIRKHAN	ExDG + PV	○	○	
117	122	ZAVKHANMANDAL	ExDG + PV	○	○	
118	123	URGAMAL	ExDG + PV	○	○	
119	124	SANTMARGATS	ExDG + PV	○	○	
120	125	TSETSEN-UUL	ExDG + PV	○	○	
121	126	IDER	ExDG + PV	○	○	
122	127	IKH-UUL	NewDG + PV	○	○	
123	128	TES	ExDG + PV	○	○	
124	129	TSAGAANCHULUUT	NewDG + PV	○	○	
125	130	TSAGAANKHAIRKHAN	NewDG + PV	○	○	
126	131	TELMEN	NewDG + PV	○	○	
127	132	TUDEVTEI	NewDG + PV	○	○	
128	133	SONGINO	ExDG + PV	○	○	
129	134	OTGON	NewDG + PV	○	○	
130	135	NUMRUG	ExDG + PV	○	○	
131	136	ASGAT	ExDG + PV	○	○	
132	137	BAYANKHAIRKHAN	NewDG + PV	○	○	
133	138	TOSONTSENGEL	NewDG + PV	○	○	
134	9121	BAYANTES	NewDG + PV	○	○	
135	9122	ALDARKHAAN	NewDG + PV	○	○	
		BULGAN				
136	139	TESHIG	ExDG	○	○	
		UVS				
137	140	UNDURKHANGAI	NewDG	○	○	
138	141	TSAGAANKHAIRKHAN	ExDG	○	○	
139	142	ZUUNKHANGAI	ExDG	○	○	
140	143	KHYARGAS	ExDG	○	○	
141	144	BARUUNTRUUN	NewDG+ Hyd	○	○	
142	145	MALCHIN	ExDG	○	○	
143	146	ZUUNGOBI	ExDG + PV	○	○	
144	147	BUKHMURUN	NewDG	○	○	
145	148	ZAVKHAN	NewDG + PV	○	○	
146	149	TES	ExDG	○	○	
		KHOVD				
147	151	ZEREG	ExDG + PV	○	○	
148	152	DARVI	ExDG + PV + WG	○	○	
149	153	ALTAI	NewDG + PV	○	○	
150	154	UYENCH	NewDG + PV	○	○	
151	155	BULGAN	ExDG + PV	○	○	
152	156	TSETSEG	ExDG	○	○	
153	157	MUST	ExDG	○	○	
154	158	MUNKHKHAIRKHAN	ExDG+Hyd	○	○	
155	159	MANKHAN	NewDG + PV + Hyd	○	○	○
156	160	CHANDMANI	ExDG + PV	○	○	
157	163	DURGUN	NewDG + PV	○	○	
158	9151	DUUT	NewDG	○	○	
		BAYAN-ULGII				
159	164	TOLBO	NewDG	○	○	
160	165	TSAGAANNUUR	NewDG	○	○	
161	166	BULGAN	ExDG	○	○	
162	167	DELUUN	ExDG	○	○	
163	168	ALTAI	NewDG	○	○	
164	169	BUYANT	NewDG	○	○	
165	170	BAYANNUUR	Grid	○	○	
166	171	ALTANTSUGTS	Grid	○	○	
167	9161	NOGOONUUR	NewDG	○	○	

Table I.10.7-11 Facilities Except for Power Sources for the Year 2005 - 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Facilities except Power Sources			
				Control House	Distribution System	Intelligent Management System	Hydrogen Fuel Transportation
				New	New	New	New
UMNU-GOVI							
1	1	BAYANDALAI	PV + WG + FC		○	○	
2	2	BAYAN-OVOO	PV + WG + FC		○	○	
3	3	BULGAN	PV + WG + FC		○	○	
4	4	GURVANTES	PV + WG + FC		○	○	
5	5	MANDAL-OVOO	PV + WG + FC		○	○	
6	6	MANLAI	PV + WG + FC		○	○	
7	7	NOYON	PV + WG + FC		○	○	
8	8	NOMGON	PV + WG + FC		○	○	
9	9	SEVREI	PV + WG + FC		○	○	
10	10	KHANBOGD	PV + WG + FC		○	○	
11	11	TSOGT-OVOO	PV + WG + FC		○	○	
12	12	KHURMEN	PV + WG + FC		○	○	
13	13	TSOGT-TSETSII	PV + WG + FC		○	○	
GOVI-ALTAI							
14	14	ERDENE	PV + FC		○	○	
15	15	TSOGT	PV + FC		○	○	
16	16	CHANDMANI	PV + WG + FC		○	○	
17	17	ALTAI	PV + FC		○	○	
18	19	TAISHIR	PV + WG + FC		○	○	
19	20	BUGAT	PV + WG + FC		○	○	
20	21	TSEEL	PV + WG + FC		○	○	
21	22	TUGRUG	PV + FC		○	○	
22	23	SHARGA	PV + FC		○	○	
23	24	TONKHIL	PV + FC	○	○	○	
24	25	DARVI	PV + WG + FC		○	○	
25	26	KHALIUN	PV + WG + FC		○	○	
26	27	BIGER	PV + FC		○	○	
27	28	KHUKHMORIT	PV + FC		○	○	
28	29	BAYAN-UUL	PV + FC		○	○	
29	30	JARGALAN	PV + FC		○	○	
BAYANKHONGOR							
30	32	SHINEJINST	PV + WG + FC		○	○	
31	33	BAYAN-UNDUR	PV + WG + FC		○	○	
32	34	BAYANLIG	PV + FC		○	○	
33	35	BAYANGOBI	PV + FC		○	○	
34	36	BOGD	PV + WG + FC		○	○	
35	37	JINST	PV + FC		○	○	
36	38	BAATSAGAAN	PV + FC		○	○	
37	39	BAYAN-TSAGAAN	PV + FC		○	○	
38	40	KHUREEMARAL	PV + FC		○	○	
39	41	GURVANBULAG	PV + FC		○	○	
40	42	JARGALANT	PV + FC		○	○	
41	43	GALUUT	PV + FC		○	○	
42	44	ERDENETSOGT	PV + FC		○	○	
43	46	BAYANBULAG	PV + FC		○	○	
44	47	BUUTSAGAAN	PV + FC		○	○	
45	48	BUMBUGUR	PV + WG + FC		○	○	
46	50	ZAG	PV + FC		○	○	
DORNOGOVI							
47	51	ERDENE	PV + FC		○	○	
48	52	DELGEREKH	PV + WG + FC		○	○	
49	53	ZAMIIN-UUD	PV + FC		○	○	
50	54	MANDAKH	PV + WG + FC		○	○	
51	55	SAIKHANDULAAN	PV + WG + FC		○	○	
52	56	KHATANBULAG	PV + WG + FC		○	○	
53	57	KHUVSGUL	PV + FC		○	○	
54	9041	ULAANBADRAKH	PV + FC		○	○	
SUKHBAATAR							
55	58	ONGON	PV + WG + FC		○	○	
56	59	DARIGANGA	PV + WG + FC		○	○	

Table I.10.7-11 Facilities Except for Power Sources for the Year 2005 - 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Facilities except Power Sources			
				Control House	Distribution System	Intelligent Management System	Hydrogen Fuel Transportation
				New	New	New	New
57	60	NARAN	PV + WG + FC		○	○	
58	61	BAYANDELGER	PV + WG + FC		○	○	
59	62	ERDENETSAGAAN	PV + WG + FC		○	○	
60	63	SUKHBAATAR	Grid		○	○	
61	64	TUMENTSOGT	PV + WG + FC		○	○	
62	65	TUVSHINSHIREE	PV + WG + FC		○	○	
63	66	UUL-BAYAN	PV + FC		○	○	
64	67	MUNKHKHAAN	PV + WG + FC		○	○	
		DORNOD					
65	69	MATAD	PV + WG + FC		○	○	
66	71	KHALKHGOL	PV + FC		○	○	
67	72	KHULUN-BUIR	PV + WG + FC		○	○	
68	73	TSAGAAN-OVOO	PV + FC		○	○	
69	74	CHULUUNKHOROOT	PV + WG + FC		○	○	○
70	75	BAYAN-UUL	PV + FC		○	○	
71	76	BAYANDUN	PV + FC		○	○	
		KHENTII					
72	78	BAYAN-ADRAGA	PV + WG + FC		○	○	
73	79	BINDER	PV + FC		○	○	○
74	80	BATSHIREET	PV + FC		○	○	
75	81	NOROVLIN	PV + WG + FC		○	○	
76	83	DADAL	PV + FC		○	○	○
77	9071	GALSHAR	PV + WG + FC		○	○	
78	9072	BAYAN-OVOO	PV + FC		○	○	
		DUNDGOVI					
79	84	ULZIIT	PV + WG + FC		○	○	
80	85	UNDURSHIL	PV + WG + FC		○	○	
81	86	BAYANJARGALAN	PV + WG + FC		○	○	
82	87	ADAATSAG	PV + WG + FC		○	○	
83	9082	KHULD	PV + WG + FC		○	○	
84	9083	DELGERKHANGAI	PV + WG + FC		○	○	
		UVURKHANGAI					
85	89	BOGD	PV + FC		○	○	
86	90	BARUUN BAYAN-ULA	PV + FC		○	○	
87	91	GUCHIN-US	PV + WG + FC		○	○	
88	93	KHAIRHANDULAAN	PV + FC		○	○	
89	94	NARIINTEEL	PV + FC		○	○	
90	95	BAYANTEEG	PV + FC		○	○	
		KHUVSGUL					
91	96	JARGALANT	PV + FC	○	○	○	
92	97	GALT	PV + FC	○	○	○	
93	98	SHINE-LDER	PV + FC	○	○	○	
94	99	TUMURBULAG	PV + WG + FC		○	○	
95	100	BURENTOGTOKH	PV + FC		○	○	
96	101	TSETSERLEG	PV + FC	○	○	○	
97	102	ARBULAG	FC	○	○	○	○
98	103	BAYANZURKH	FC	○	○	○	○
99	104	CHANDMANI-UNDUR	FC	○	○	○	○
100	105	TSAGAAN-UUR	FC	○	○	○	○
101	106	TSAGAAN-UUL	PV + FC	○	○	○	
102	107	ULAAN-UUL	FC	○	○	○	○
103	108	RENCHINLKHUNBE	FC	○	○	○	○
104	109	TUNNEL	PV + FC	○	○	○	
105	110	TOSONTSENGEL	Grid		○	○	
106	111	ALAG-ERDENE	PV + FC	○	○	○	
107	112	KHATGAL	FC	○	○	○	○
108	113	TSAGAANNUUR	FC	○	○	○	○
109	114	ERDENEBULGAN	PV + FC	○	○	○	
		ARKHANGAI					
110	115	KHANGAI	FC	○	○	○	○
111	117	TSAKHIR	PV + FC	○	○	○	

Table I.10.7-11 Facilities Except for Power Sources for the Year 2005 - 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Facilities except Power Sources			
				Control House	Distribution System	Intelligent Management System	Hydrogen Fuel Transportation
				New	New	New	New
112	9111	CHULUUT	PV + FC	○	○	○	
		ZAVKHAN					
113	118	SHILUUSTEI	PV + FC		○	○	
114	119	DURVULJIN	PV + FC		○	○	
115	120	YARUU	PV + FC		○	○	
116	121	ERDENEKHAIRKHAN	PV + FC		○	○	
117	122	ZAVKHANMANDAL	PV + FC		○	○	
118	123	URGAMAL	PV + FC		○	○	
119	124	SANTMARGATS	PV + FC		○	○	
120	125	TSETSEN-UUL	PV + FC		○	○	
121	126	IDER	PV + WG + FC		○	○	
122	127	IKH-UUL	PV + FC		○	○	
123	128	TES	PV + FC		○	○	
124	129	TSAGAANCHULUUT	PV + FC		○	○	
125	130	TSAGAANKHAIRKHAN	PV + FC		○	○	
126	131	TELMEN	PV + FC		○	○	
127	132	TUDEVTEI	PV + FC		○	○	
128	133	SONGINO	PV + FC		○	○	
129	134	OTGON	PV + FC		○	○	
130	135	NUMRUG	PV + FC		○	○	
131	136	ASGAT	PV + FC		○	○	
132	137	BAYANKHAIRKHAN	PV + FC		○	○	
133	138	TOSONTSENGEL	PV + FC		○	○	
134	9121	BAYANTES	PV + FC		○	○	
135	9122	ALDARKHAAN	PV + FC		○	○	
		BULGAN					
136	139	TESHIG	FC	○	○	○	○
		UVS					
137	140	UNDURKHANGAI	PV + FC	○	○	○	○
138	141	TSAGAANKHAIRKHAN	PV + FC	○	○	○	○
139	142	ZUUNKHANGAI	PV + FC	○	○	○	
140	143	KHYARGAS	PV + FC	○	○	○	
141	144	BARUUNTRUUN	PV + FC + Hyd	○	○	○	
142	145	MALCHIN	PV + FC	○	○	○	○
143	146	ZUUNGOBI	PV + WG + FC		○	○	
144	147	BUKHMURUN	PV + FC	○	○	○	
145	148	ZAVKHAN	PV + FC		○	○	
146	149	TES	PV + FC	○	○	○	
		KHOVD					
147	151	ZEREG	PV + FC		○	○	
148	152	DARVI	PV + WG + FC		○	○	
149	153	ALTAI	PV + FC		○	○	○
150	154	UYENCH	PV + FC		○	○	○
151	155	BULGAN	PV + FC		○	○	
152	156	TSETSEG	PV + FC	○	○	○	
153	157	MUST	PV + FC	○	○	○	
154	158	MUNKHKHAIRKHAN	Hyd		○	○	
155	159	MANKHAN	ReHyd + PV		○	○	
156	160	CHANDMANI	PV + FC		○	○	
157	163	DURGUN	PV + FC		○	○	
158	9151	DUUT	FC	○	○	○	
		BAYAN-ULGII					
159	164	TOLBO	PV + FC	○	○	○	
160	165	TSAGAANNUUR	PV + WG + FC	○	○	○	
161	166	BULGAN	FC	○	○	○	○
162	167	DELUUN	FC	○	○	○	○
163	168	ALTAI	FC	○	○	○	○
164	169	BUYANT	PV + FC	○	○	○	
165	170	BAYANNUUR	Grid		○	○	
166	171	ALTANTSUGTS	Grid		○	○	
167	9161	NOGOONUUR	PV + FC	○	○	○	○

Table I.10.7-11 Facilities Except for Power Sources for the Year 2005 - 2015

Serial No.	Original No. (ID No.)	Sum Name	Power Sources	Facilities except Power Sources			
				Control House	Distribution System	Intelligent Management System	Hydrogen Fuel Transportation
				New	New	New	New

NewDG : New Diesel Generator
ExDG : Existing Diesel Generator
PV : Photovoltiac Cell
WG : Wind Generator
FC : Fuel Cell
Hyd : Hydro Generator
Grid : Transmission Line

Table I.10.8-2 List of Necessary Facilities for Optimum Distribution System in 2005

No.	Item	Unit	Quantity
1	10kV outdoor overhead power cable line, power plant - substation with 30m span concrete poles, ABC 3 x 50 sq.mm copper cable	km	2
2	10kV/400-230V 31.5 kVA oil immersed transformer with accessories	set	2
3	10kV cubicle for the above item (3) with accessories	set	2
4	10kV cubicle for 10kV switchgear including circuit breaker, disconnecting switch, surge absorber, current transformers, voltage transformers, etc.	set	2
5	Low voltage outdoor overhead distribution lines, substation - public consumers, with 30m span concrete poles, OW 1 x 4 x 35 sq..mm	m	1000
6	Low voltage cubicle including molded case circuit breakers, surge absobver, current transformers, voltage transformers, meters, etc.	set	2
7	Low voltage indoor wiring materials for public consumers including cables, pipes, pull boxes, joint boxes, earthing materials, etc., 2c x 3.5 sq.mm	m	400
8	Low voltage outdoor wiring materials for general consumers(service wire) including messenger wire, earthing materials, etc., 2c x 3.5 sq.mm	m	40
9	Low voltage power cable, XLPE 4c x 50 sq.mm	m	100
10	Lighting fixtures(60sets) and covenience outlet(20sets), fluorescent light 20W Outlet 2P x 10A	lot	1
11	Safety breaker and watthour meter with mounting box	set	4
12	Miscellaneous materials, power and control cables, earthing grid materials, etc.	lot	1
13	Maintenance special tools and spare parts	lot	1
14	Civil foundation and building works	lot	1
15	Inland transportation work	lot	1
16	Installation and erection works	lot	1

Table I.10.8-3 List of Necessary Facilities for Optimum Distribution System in 2010

No.	Item	Unit	Quantity
1	10kV outdoor overhead power cable line, power plant - substation with 30m span concrete poles, ABC 3 x 50 sq.mm copper cable	km	2
2	10kV/400-230V 31.5 kVA oil immersed transformer with accessories	set	4
3	10kV cubicle for the above item (3) with accessories	set	4
4	10kV cubicle for 10kV switchgear including circuit breaker, disconnecting switch, surge absorber, current transformers, voltage transformers, etc.	set	4
5	Low voltage outdoor overhead distribution lines, substation - general and public consumers, with 30m span concrete poles, OW 1 x 4 x 35 sq.mm	km	40
6	Low voltage cubicle including molded case circuit breakers, surge absorber, current transformers, voltage transformers, meters, etc.	set	4
7	Low voltage outdoor wiring materials for general consumers(service wire) including messenger wire, earthing materials, etc., 2c x 3.5 sq.mm	m	2000
8	Low voltage power cable, XLPE 4c x 50 sq.mm	m	400
9	Safety breaker and watthour meter with mounting box for general consumers, one breaker and one watthour meter in one box	set	200
10	Miscellaneous materials, power and control cables, earthing grid materials, etc.	lot	1
11	Maintenance special tools and spare parts	lot	1
12	Civil foundation and building works	lot	1
13	Inland transportation work	lot	1
14	Installation and erection works	lot	1

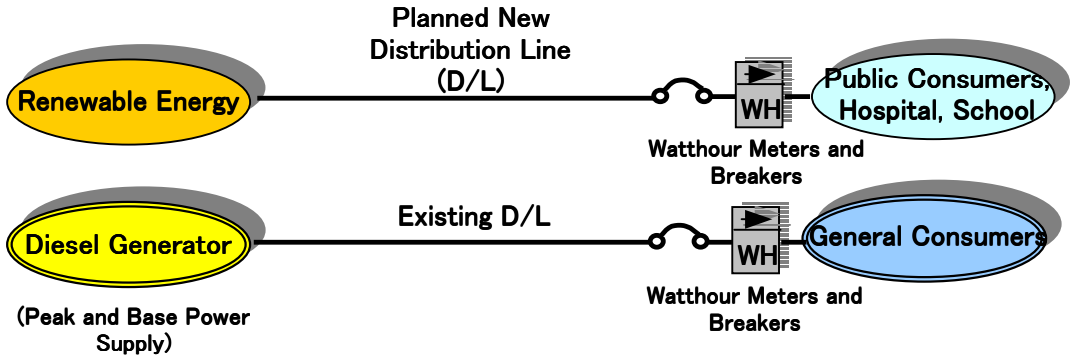

Figure Ⅰ.10.8-3 Distribution Plan in 2005

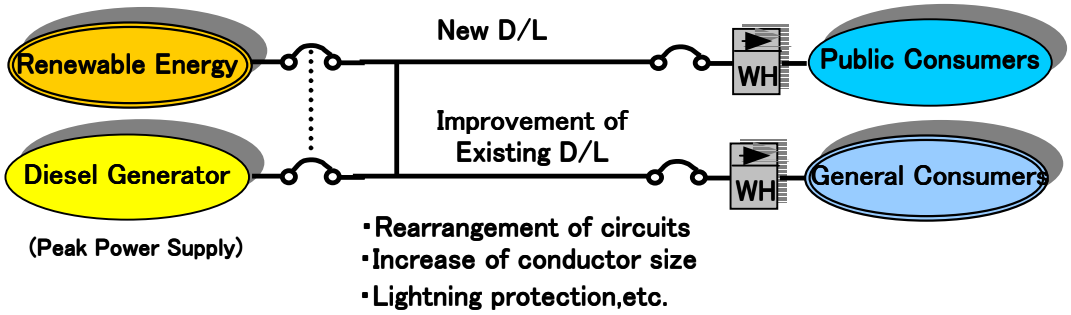

Figure Ⅰ.10.8-2 Distribution Plan in 2010

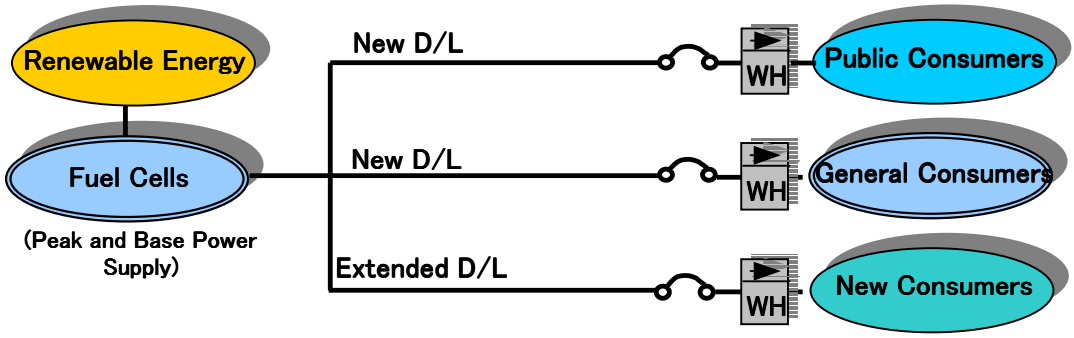

Figure Ⅰ.10.8-3 Distribution Plan in 2015

Table I.10.8-4 List of Necessary Facilities for Optimum Distribution System in 2015

No.	Item	Unit	Quantity
1	Low voltage outdoor overhead distribution lines, substation - general consumers, with 30m span concrete poles, OW 1 x 4 x 35 sq..mm	m	1000
2	Low voltage power cable, XLPE 4c x 50 sq.mm	m	20
3	Low voltage outdoor wiring materials for general consumers(service wire) including messenger wire, earthing materials, etc., 2c x 3.5 sq.mm	m	40
4	Safety breaker and watthour meter with mounting box	set	40
5	Miscellaneous materials, power and control cables, earthing grid materials, etc.	lot	1
6	Maintenance special tools and spare parts	lot	1
7	Civil foundation and building works	lot	1
8	Inland transportation work	lot	1
9	Installation and erection works	lot	1

Table I.10.9-3 List of Communication Facilities in 2005

Each Sum center

No.	Item	Unit	Quantity
1	Desk top type computer with accessories	set	2
2	Uninterruptible Power Supply unit, 220V 1hour	set	1
3	Digital Video Disk unit with disk and accessories	set	1
4	Communication Interface Unit with cable	set	2
5	One chip micro computer unit for operational data aquisition	set	10
6	Maintenance Tools and Spare Parts	lot	1
7	Miscellaneous materials	lot	1

Each Aimag center

No.	Item	Unit	Quantity
1	Desk top type computer with accessories	set	2
2	Uninterruptible Power Supply unit, 220V 1hour	set	1
3	Digital Video Disk unit with disk and accessories	set	1
4	Communication Interface Unit with cable	set	2
5	Maintenance Tools and Spare Parts	lot	1
6	Miscellaneous materials	lot	1

Table I.10.9-4 List of Communication Facilities in 2010

Each Sum center

No.	Item	Unit	Quantity
1	Upgrading of desk top type computer with accessories	set	2
2	Upgrading UPS unit, 220V 1hour	set	1
3	Upgrading of Digital Video Disk unit with disk and accessories	set	1
4	Upgrading of Communication Interface Unit with cable	set	2
5	One chip micro computer unit for operational data aquisition	set	5
6	Maintenance Tools and Spare Parts	lot	1
7	Miscellaneous materials	lot	1

Each MOID and Energy Authority

No.	Item	Unit	Quantity
1	Desk top type computer with accessories	set	2
2	Uninterruptible Power Supply unit, 220V 1hour	set	1
3	Digital Video Disk unit with disk and accessories	set	1
4	Communication Interface Unit with cable	set	2
5	Maintenance Tools and Spare Parts	lot	1
6	Miscellaneous materials	lot	1

Table I.10.9-5 List of Communication Facilities in 2015

Each Sum center

No.	Item	Unit	Quantity
1	Upgrading of operational software	lot	1
2	One chip micro computer unit for operational data aquisition	set	5
3	Miscellaneous materials	lot	1

Energy Authority

No.	Item	Unit	Quantity
1	Upgrading of operational software	lot	1
2	Upgrading of UPS unit, 220V 1hour	set	1
3	Upgrading of Digital Video Disk unit with disk and accessories	set	1
4	Communication Interface Unit with cable	set	2

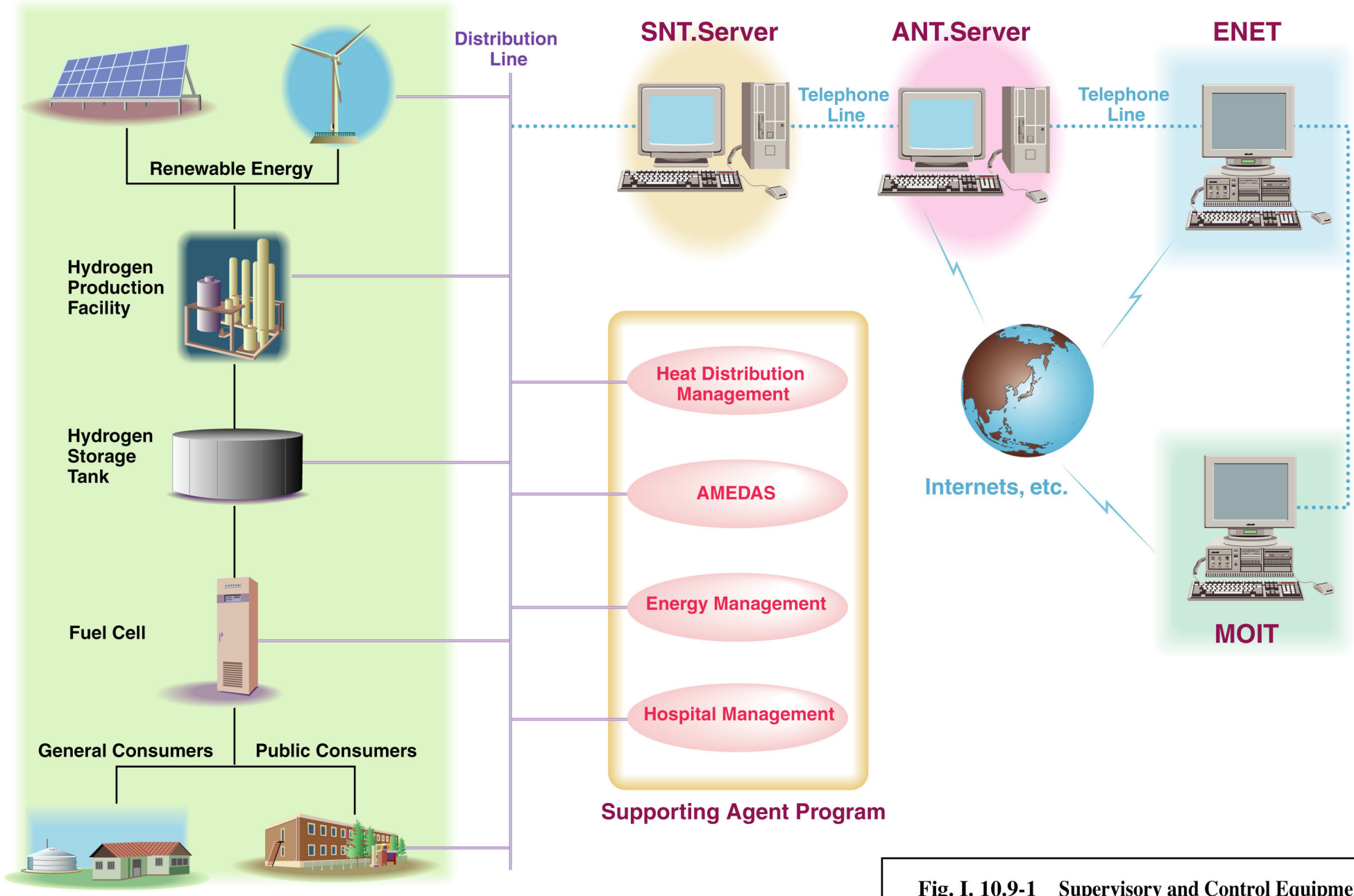

Fig. I. 10.9-1 Supervisory and Control Equipment