

APPENDICES

APPENDICES

1. Member List of the Survey Team
2. Survey Schedule
3. List of party Concerned in the Recipient Country
4. List of Reference Materials
5. Minutes of Discussions

1. Member List of the Survey Team

1-1 Survey Schedule of Basic Survey

1) 団長／松本 賢二

Leader, Kenji MATSUMOTO
国際協力事業団 モンゴル事務所長
Resident Representative JICA Mongolia Office
June 14, 2000 ~ June 20, 2000

2) 業務主任／運営・維持管理／久賀 伸生

Project Manager / Operation and Maintenance Planner, Nobuo KUGA
(株)パシフィックコンサルタンツインターナショナル
Pacific Consultants International
April 13, 2000 ~ June 21, 2000

3) 電力供給計画（1）／佐藤 義雄

Power Supply Planner I, Yoshio SATO
(株)パシフィックコンサルタンツインターナショナル
Pacific Consultants International
April 13, 2000 ~ June 21, 2000

4) 電力供給計画（2）／河辺 達雄

Power Supply Planner II, Tatsuo KAWABE
(株)パシフィックコンサルタンツインターナショナル
Pacific Consultants International
May 1, 2000 ~ June 21, 2000

5) 機材計画（1）／林田 賢一

Equipment Planner I, Kenich HAYASHIDA
(株)パシフィックコンサルタンツインターナショナル
Pacific Consultants International
June 14, 2000 ~ June 20, 2000

6) 機材計画（2）／岩元 伸一

Equipment Planner II, Shinichi IWAMOTO
(株)パシフィックコンサルタンツインターナショナル
Pacific Consultants International
May 1 2000 ~ June 21, 2000

7) 機材計画（3）／豊島 幸雄

Equipment Planner III, Yukio TOYOSHIMA

(株)パシフィックコンサルタンツインターナショナル
Pacific Consultants International
May 1, 2000 ~ June 21, 2000

- 8) 荷宮 仁樹 積算／調達計画
Cost and Procurement Planner, Masaki NIMIYA
(株)パシフィックコンサルタンツインターナショナル
Pacific Consultants International
May 1, 2000 ~ June 7, 2000
- 9) 通訳 (モンゴル語) / 吾孫子 さなえ
Interpreter, Sanae ABIKO
April 13, 2000 ~ June 21, 2000

1-2 Explanation on Draft Report

- 1) 団長／松本 賢二
Leader, Kenji MATSUMOTO
国際協力事業団 モンゴル事務所長
Resident Representative JICA Mongolia Office
August 16, 2000 ~ August 29, 2000
- 2) 業務主任／運営・維持管理／久賀 伸生
Project Manager / Operation and Maintenance Planner, Nobuo KUGA
(株)パシフィックコンサルタンツインターナショナル
Pacific Consultants International
August 16, 2000 ~ August 30, 2000
- 3) 機材計画 (1) / 林田 賢一
Equipment Planner I, Kenich HAYASHIDA
(株)パシフィックコンサルタンツインターナショナル
Pacific Consultants International
August 16, 2000 ~ August 30, 2000
- 4) 荷宮 仁樹 積算／調達計画
Cost and Procurement Planner, Masaki NIMIYA
(株)パシフィックコンサルタンツインターナショナル
Pacific Consultants International
August 16, 2000 ~ August 30, 2000
- 5) 通訳 (モンゴル語) / 吾孫子 さなえ

Interpreter, Sanae ABIKO
August 16, 2000 ~ August 30, 2000

2. Survey Schedule

2-2 Survey Schedule of Basic Design Survey

No.	Date	Member from the government (and member in charge of procurement and cost estimates)	Place of Stay	Group of Consultants: A	Place of Stay	Group of Consultants: B	Place of Stay	Group of Consultants: C	Place of Stay
1	Apr-13			Narita - Beijing	Beijing				
2	14			Beijing – Ulaanbaatar (UB). Courtesy calls to the embassy of Japan and MOID	UB				
3	15			Data collection and internal meeting	UB				
4	16			Procurement of food	UB				
5	17			Discussion of survey schedule with JICA and MOID	UB				
6	18			Preparatory works	UB				
7	19			UB - Undurhaan	Undurhaan				
8	20			Undurhaan - Choybalsan	Choybalsan				
9	21			Choybalsan - (2-1) Tsagaan Ovoo - (46) Bayanulal	Bayan Ulal				
10	22			Bayan Ulal - (50) Bayandun - Dashbalbar	Dashbalbar				
11	23			(B1) Dashbalbar - (45) Chuluunhoroot	Chuluunhoroot				
12	24			Chuluunhoroot - (47) Sergelen - Choybalsan	Choybalsan				
13	25			Choybalsan	Choybalsan				
14	26			Choybalsan - (B2) Khalkhgol - Sumber	Sumber				
15	27			(48) Sumber - Matad	Matad				
16	28			(43) Matad - Holonbuy	Holonbuy				
17	29			Holonbuy - UB	UB				
18	30			Holiday	UB				
19	May-1	(Narita - Beijing)		Preparation of survey documents	UB	Narita - Beijing	Beijing	Narita - Beijing	Beijing
20	2	Beijing - Ulaanbaatar (UB), meeting with JICA and Embassy of Japan		(Narita - Beijing, meeting with JICA and Embassy of Japan)	UB	Beijing - Ulaanbaatar (UB), meeting with JICA and Embassy of Japan	UB	Beijing - Ulaanbaatar (UB), meeting with JICA and Embassy of Japan	UB

No.	Date	Member from the government (and member in charge of procurement and cost estimates)	Place of Stay	Group of Consultants; A	Place of Stay	Group of Consultants; B	Place of Stay	Group of Consultants; C	Place of Stay
21	3	(Meeting with MOID)	UB	Meeting with MOID	UB	Meeting with MOID	UB	Meeting with MOID	UB
22	4	(Internal meeting)	UB	Internal meeting	UB	Internal meeting	UB	Internal meeting	UB
23	5	(Examination of the list of local contractors)	UB	Collection of data/information and classification of them	UB	Procurement of food	UB	Procurement of food	UB
24	6	(Collection of general information)	UB	Classification and analysis of data/information	UB	UB - Erdenet	Erdenet	UB - Arvaikheer - Bayanhongor	Bayanhongor or Altay
25	7	(Classification and analysis of data/information)	UB	Holiday	UB	Erdenet - Murun	Murun	Bayanhongor - Altay	Altay
26	8	(Interview with import traders)	Bayanhongor or Altay	UB - Bayanhongor	Bayanhongor or Altay	Murun - (79); Tosontsengel - Murun	Murun	Altay - Darvi	Darvi
27	9	(Study on availability of materials and manpowers)	Altay	Bayanhongor - Altay	Altay	Murun - (74); Tumarbulag - (78); Tunnel - Murun	Murun	Darvi - Hovd - Tolbo - Deluun	Deluun
28	10	(Interview with import traders and classification of data/information collected)	Darvi	Altay - (14); Sharga - (2-14); Darvi	Darvi	Murun - (81); Alag Erdone	Alag Erdone	(2-9); Deluun - (108); Tolbo - Ulgi	Ulgi
29	11	(Interview with installation companies)	Mankhan	Darvi - (1-2); Zereg - (105); Mankhan	Mankhan	Alag Erdone - Murun	Murun	Ulgi - Buyaan - (110); Altai	Altai
30	12	(Interview with installation companies)	Dargun	Mankhan - (106); Dargun	Dargun	Murun - (75); Burenogtokh	Burenogtokh	Altai - (111); Buyaan - Ulgi	Ulgi
31	13	(Interview with local consultants)	Hovd	Dargun - Hovd	Hovd	Burenogtokh - (77); Tsagaan Uul - Tselserlag	Tselserlag	Ulgi - Altansugs - (112); Bayannur - Altansugs	Altansugs
32	14	(Classification and analysis of data/information)	Hovd	Hovd - (107); Dant - Hovd	Hovd	(76); Tselserlag - (A8); Bayantes	Bayantes	(13); Altansugs - Ulgi - (109); Tsagaanuur	Tsagaanuur
33	15	(Interview with MOID officials)	Uyench	Hovd - (104); Uyench	Uyench	Bayantes - (B4); Bayankhairhan - (B5); Tudevtei	Tudevtei	Tsagaanuur - (115); Nogoonnur - (96); Bukhomonun - Khovt	Khovt
34	16	(Dispatch of questionnaires to import traders)	Bugat	Uyench - (103); Altai - (12); Bugat	Bugat	Tudevtei - Tosontsengel	Tosontsengel	(99); Khovt - (A10); Hoigor - Ulaangom	Ulaangom
35	17	(Dispatch of questionnaires to import traders)	Khailun	Bugat - (13); Tugrag - (15); Khailun	Khailun	Tosontsengel - (87); Ikh Uul - Tosontsengel	Tosontsengel	Ulaangom - (97); Davst - Ulaangom	Ulaangom
36	18	(Investigation of facilities of transportation companies)	Bayantooroy	Khailun - (A2); Bayantooroy	Bayantooroy	(92); Tosontsengel	Tosontsengel	Holiday	Ulaangom
37	19	(Investigation of facilities of local transport companies)	Altai	Bayantooroy - Altai	Altai	Tosontsengel - (90); Teinets - Uliastay	Uliastay	Ulaangom - (A9); Hartubugatai - (98); Naranbulag	Naranbata
38	20	(Interview with local consultants)	Altai	Holiday	Altai	Uliastay - (93); Aldarkhan - Uliastay	Uliastay	Naranbulag - (2-5); Matchin - Baruunuruun	Baruunuruun
39	21	(Classification and analysis of data/information collected)	Jargalan	Altai - (16); Bayan Uul - (18); Jargalan	Jargalan	Uliastay - (86); Yaran - Tsagaankhairhan	Tragaankhairhan	(95); Baruunuruun - Undurkhangai	Undurkhangai
40	22	(Investigation of meteorology.)	Shirstei	Jargalan - (11); Taishit -	Shirstei	(89); Tsagaankhairhan -	Culvanbu	(94); Undurkhangai	Undurkhangai

No.	Date	Member from the government (and member in charge of procurement and cost estimates)	Place of Stay	Group of Consultants; A	Place of Stay	Group of Consultants; B	Place of Stay	Group of Consultants; C	Place of Stay
		laws, standards, etc.)		(88) Tsagaanbuhai - Shirstai		(91) Ogon - Curvarbulag	Ulaanbaatar		
41	23	(Analysis of reply from transportation companies)		(A7) Shilaistei - (17) Guulin - (A1) Delgar	Delgar	(B6) Curvarbulag - Zag	Zag	Undurkhangai - Zavkhan	Zavkhan
42	24	(Ditto)		Delgar - (73) Bayantog - Arvaikheer	Arvaikheer	(B7) Zag	Zag	(101) Zavkhan - Hovd	Hovd
43	25	(Analysis of reply from installation companies)		Arvaikheer - UB	UB	Zag - Arvaikheer	Arvaikheer	Hovd - Darvi	Darvi
44	26	(Ditto)		Classification and analysis of data/information collected	UB	Arvaikheer - UB	UB	Darvi - Alay	Alay
45	27	Internal meeting		Internal meeting	UB	Internal meeting	UB	Alay - Bayanhongor	Bayanhongor
46	28	Holiday		Holiday	UB	Holiday	UB	Bayanhongor - Arvaikheer	Arvaikheer
47	29	(Dispatch of the second questionnaires to transportation and installation companies)		Meeting with MOID and JICA	UB	Meeting with MOID and JICA	UB	Arvaikheer - UB	UB
48	30	(Analysis of reply from installation companies)		Analysis of reply from installation companies	UB	Analysis of reply from installation companies	UB	Analysis of reply from installation companies	UB
49	31	(Analysis of replies from transportation and installation companies)		Analysis of reply from installation companies	UB	Procurement of food	UB	Analysis of reply from installation companies	UB
50	Jun-1	(Analysis of reply from installation companies)		UB - (A3) Bayanjir - (A4) Adasag - Mandalgovi	Mandalgovi	UB - Undurhaan	Undurhaan	Analysis of reply from installation companies	UB
51	2	(Analysis of reply from installation companies)		Mandalgovi - (A5) Delgerhangai - Tugrug	Tugrug	Undurhaan - (38) Munkkhuaan - Baruum Urt	Baruum Urt	Analysis of reply from installation companies	UB
52	3	(Study on general matters)		(A6) Tugrug - Arvaikheer - UB	UB	Baruum Urt - (34) Sukhbaatar - (39) Asgat - Baruum Urt	Baruum Urt	Analysis of reply from installation companies	UB
53	4	(Holiday)		Holiday	UB	Baruum Urt - (37) Uulbayan - (36) Tuvshinshree - Dalgerekh	Dalgerekh	Analysis of reply from installation companies	UB
54	5	(Analysis of reply from installation companies)		Analysis of reply from installation companies	UB	(25) Dalgerekh - Sainshand	Sainshand	(10) Tsogt Tssetsigi - Kharbogd	Kharbogd
55	6	(Analysis of reply from installation companies)		Meeting with MOID	UB	Sainshand - (30) Ulaanbadakh - Sainshand	Sainshand	(7) Kharbogd - (2) Bayan-Ovoo	Bayan-Ovoo
56	7	(Ulaanbaatar - Beijing - Narita)		Meeting with MOID	UB	Sainshand - (B3) Zamin Uud - Sainshand	Sainshand	Bayan-Ovoo - (6) Nonpon - Dalanzadgat	Dalanzadgat
57	8			Analysis of reply from installation	UB	Sainshand - UB	UB	Dalanzadgat - (9) Khurmen - Bayandagai	Bayandagai

No.	Date	Member from the government (and member in charge of procurement and cost estimates)	Place of Stay	Group of Consultants; A	Place of Stay	Group of Consultants; B	Place of Stay	Group of Consultants; C	Place of Stay
				companies				(1) Bayandala	
58	9			Analysis of reply from installation companies	UB	Analysis of reply from installation companies	UB	Bayandala - (3) Buigar - (1) Arvaikheer	Arvaikheer
59	10			Analysis of reply from installation companies	UB	Analysis of reply from installation companies	UB	Mandal-Ovoo - Arvaikheer	UB
60	11			Holiday	UB	Holiday	UB	Holiday	UB
61	12	Internal Meeting		Internal meeting	UB	Analysis of reply from installation companies	UB	Analysis of reply from installation companies	UB
62	13	Meeting with JICA and MOID		Meeting with JICA and MOID	UB	Analysis of reply from installation companies	UB	Analysis of reply from installation companies	UB
63	14	Discussion with MOID about the content of M/D	UB	Discussion with MOID about the content of M/D	UB	Analysis of reply from installation companies	UB	Analysis of reply from installation companies	UB
64	15	Discussion with MOID and MOF about the content of M/D	UB	Discussion with MOID and MOF about the content of M/D	UB	Analysis of reply from installation companies	UB	Analysis of reply from installation companies	UB
65	16	Signing M/D	UB	Signing M/D	UB	Signing M/D	UB	Signing M/D	UB
66	17		UB	Internal meeting	UB	Internal meeting	UB	Internal meeting	UB
67	18		UB	Holiday	UB	Holiday	UB	Holiday	UB
68	19		UB	Classification and analysis of data/information collected	UB	Classification and analysis of data/information collected	UB	Classification and analysis of data/information collected	UB
69	20	Report to Embassy of Japan	UB	Report to JICA and Embassy of Japan	UB	Report to JICA and Embassy of Japan	UB	Report to JICA and Embassy of Japan	UB
70	21			UB - Beijing - Narita		UB - Beijing - Narita		UB - Beijing - Narita	

2-3 Explanation on Draft Report

No.	Date	Member from the government	Place of stay	Consultants group; A	Place of stay
1	Aug-16			Haneda – Ulaabaatar (UB)	UB
2	17	Courtesy call to MOI and explanation of Draft Final Report	UB	Courtesy calls to MOI, MOF & JICA and explanation of Draft Report	UB
3	18			Discussion with MOI about the content of Draft Report	UB
4	19			Internal meeting	UB
5	20			Internal meeting	UB
6	21			Discussion with MOI about the content of Draft Report	UB
7	22			Discussion with MOI about the content of Draft Report	UB
8	23			Discussion with MOI about the content of Draft Report	UB
9	24	Internal meeting		Discussion with MOI about the content of Draft Report	UB
10	25			Discussion with MOI about the content of Draft Report	UB
11	26			Internal meeting	UB
12	27			Internal meeting	UB
13	28	Signing M.O.M		Signing M.O.M	UB
14	29	Report to Embassy of Japan		Report to JICA and Embassy of Japan	UB
11	30			Ulaanbaatar - Haneda	

3. List of party Concerned in the Recipient Country

3-1 Japanese Side

Organization	Title	Name
Embassy of Japan	Third Secretary, Embassy of Japan	Mr. Hiroshi Fujimoto
JICA Mongolia Office	Counsellor	Mr. Keizo Egawa

3-2 Mongolian Side

Aimag	Title	Name
Ulaanbaatar	Director General, Dept. of Strategic Planning and Integrated Policy, MOID	Mr. R. Bud
	Director General, Dept. of Policy Implementation and Coordination, MOID	Mr. B. Batjav
	Deputy Director, Dept. of Strategic Planning and Integrated Policy, MOID	Mr. G. Damdinsuren
	Officer, Dept. of Policy Implementation and Coordination, MOID	Mr. Sambalkundev
	Director, Dept. of Policy Implementation and Coordination, MOID	Mr. Sukhbaatar
	Officer, Dept. of Energy Control, MOID	Mr. Ariunbold
	Officer, Dept. of Energy Control, MOID	Mr. Nyamsuren
	Officer, Dept. of Energy Control, MOID	Mr. Unen
	Director, Dept. of Foreign Trade and Economic Cooperation, MOFA	Mr. A. Munkhbat
	Deputy Director, Dept. of Foreign Trade and Economic Cooperation, MOFA	Mr. D. Davaasambuu
	Officer, Dept. of Foreign Trade and Economic Cooperation, MOFA	Mr. L. Davaajargal
	Officer, Dept. of Foreign Trade and Economic Cooperation, MOER	Ms. L. Nasanbuyan
	Department of Financial Policy, MOF	Ms. Gerelmaa
Bayankhongor	Officer, Mobile Maintenance Unit	Mr. Mandah
Bayan-Ulgii	Officer in charge of infrastructure development	Mr. Sh. Serkbol
Dornod	Vice Governor	Mr. D. Baaturkhuyag
	Head of Dept. of Planning, Finance and Economic Policy	Mr. M. Baljinnyam
	Officer in charge of infrastructure development	Mr. J. Dulamjav

Aimag	Title	Name
Dornogovi	Governor Officer in charge of infrastructure, Dept. of Economic Policy Headquarter of Emergency Measure	Mr. L. Ishdorj Mr. O. Uhnaa Mr. J. Auyush
Dundgovi	Head of Governor's Staff Office	Mr. S. Purevsuren
Govi-Altai	Head of power generating facilities	Mr. Khishighkhoo
Khovd	Officer of Mobile Maintenance Unit	Mr. Lhagva
Umunogovi	Officer, Dept. of Infrastructure Development	Mr. B. Otgonbayar
Uvs	Officer, Dept. of Investment, MOID	Mr. Gankhuyag
Uvurkhangai	Officer, Dept. of Infrastructure Development	Mr. Badrakh

Note : All titles used in the above list are those as of June 21, 2000.

4. List of reference materials

No.	Name of document	Issuer	Date of issue	Form
1.	Summary of Final Report of the “Master Plan for Energy Sector, Vol.1”,	Technical Assistance by ADB	January 1996	Copy
2.	Energy Law of Mongolia		December 1995	Copy
3.	Statistical Yearbook of Mongolia - 1998			Original
4.	Documents related to the targeted Sum Centers			Original
5.	Demographics of Mongolia - 2000	Statistics Office		Copy
6.	Mongolia	Dambyn Galsandorj	1995	Original
7.	Mongolia’s Wild Heritage	Ministry for Nature and the Environment	1996	Original
8.	Information of Mongolia	The Academy of Science MPR	1990	Original
9.	Topographic map with a scale of 1/500,000 : (18 Nos.)	Defence Mapping Agency Aerospace Center, USA	1989	Original

MUNITES OF DISCUSSIONS
ON BASIC DESIGN STUDY
ON THE PROJECT FOR REHABILITATION OF POWER PLANTS IN SUM CENTERS,
PHASE IV
IN MONGOLIA

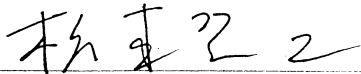
In response to a request from the Government of Mongolia, the Government of Japan decided to conduct a Basic Design Study on the Project for Rehabilitation of Power Plants in Sum Centers Phase IV. (hereinafter referred to be as "the Project") and entrusted to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Mongolia the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Matsumoto, Resident Representative, JICA Mongolia Office, and is scheduled to stay in the country from April 14 to June 21, 2000.

The Team held discussion with the officials concerned of the Government of Mongolia and conducted a field survey at the study area.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

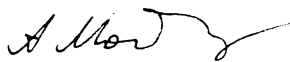
Ulaanbaatar, June 16, 2000



Kenji Matsumoto
Leader
Basic Design Study Team
Japan International Cooperation Agency



Rentsen Bud
Director General
Integrated Policy and Strategic Planning
Department
Ministry of Infrastructure Development



Ania Munkhbat
Director General
Foreign Trade & Economic Cooperation
Department
Ministry of External Relations



L. Dashdorj
Director General
Fiscal Policy Department
Ministry of Finance

ATTACHMENT

1. Objective of the Project
The objective of the Project is to improve the living standard of people who lives in rural areas by means of rural electrification.
2. Project sites
The sites of the Project are 76 Sum Centers shown in Annex-1.
However the sites marked (*) are subject to the approval of the Government of Japan based on the Study in Japan.
3. Responsible and Implementing Agency
 - 1) The Responsible Agency is Ministry of Infrastructure Development (Annex-2).
 - 2) The Implementing Agency is Department for Coordination of Policy Implementation, Ministry of Infrastructure Development and Sum Centers.
4. Items requested by the Government of Mongolia
After discussions with the Team, the following items were finally requested by the Mongolian side. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.
 - 1) Diesel generating facilities described in Annex-3 including operation and maintenance tools and spare parts
 - 2) Installation work including preparation of concrete foundation and connection to nearest existing power distribution system
 - 3) Execution of the soft component program
5. Japan's Grant Aid Scheme
 - 1) The Mongolian side understands the Japan's Grant Aid Scheme explained by the Team, as described in Annex-4.
 - 2) The Mongolian side will take the necessary measures, as described in Annex-5, for smooth implementation of the Project, as a condition for Japanese Grant Aid to be implemented. Mongolian side requested to include internal transportation as a part of the Grant Aid.
6. Schedule of the Study
 - 1) The consultants will proceed to further studies in Mongolia until June 20, 2000.
 - 2) JICA will prepare the draft report in English and dispatch a mission in order to explain.

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its contents in August, 2000.

- 3) JICA will complete the final report and send it to the Government of Mongolia by December 2000.

7. Other relevant issues

- 1) The Government of Mongolia will allocate the necessary budget and personnel for the execution of the Project.
- 2) The Government of Mongolia will maintain and operate properly and effectively the facilities purchased under the Project.
- 3) The ownership of equipment to be procured by the Japan's Grant Aid belongs to Ministry of Infrastructure Development.
- 4) The Government of Mongolia assured that all the necessary refurbishment works of the power houses and dismantling work of the existing power plants in the sum centers would be completed before set up of the equipment procured under the Grant Aid.
- 5) The Government of Mongolia mentioned that service teams for maintenance and repair of the generators is planned to be stationed in 5 Aimags (Dornod, Uvs, Bayan-Ulgii, Dornogovi, Umnugovi). The Mongolian side also requested for a procurement of maintenance vehicle with repairing tools for the Aimag mobile repairing teams.
- 6) The Mongolian side requested the consultant services for (a) operation and maintenance of generating facilities, (b) operation and management of power supply utilities as one of the components of the Grant Aid.
- 7) The Government of Mongolia takes responsible for the following matters related to the consultant services written above;
 - Provision of appropriate sites and facilities for seminar and training
 - Supporting works related to the seminar and training
 - Collection of monitoring sheets
 - All the transportation cost and hotel expenses of trainees
- 8) Mongolian side promised to exempt Japanese juridical and physical nationals engaged in the Project from custom duties, internal taxes including VAT, and other fiscal levies which may be imposed in Mongolia regarding the supply of products and services under the verified contracts.
- 9) As for the request of diesel engine generating facilities for Tosgons and Bags, JICA will assess the appropriateness of the request during the study in Japan. Mongolian side explained that only 2 Tosgons as listed are remained to be improved for Power Plants. Mongolian side also mentioned that Tosgon is as same as Sum which is categorized as industrialized.

Handwritten signatures and initials, including "All" and "B".

- 10) The Team pointed out Mongolian side that Sums where supply of electricity is already privatized and will be kept privatized are not appropriate for the project sites. Mongolian side promised to clarify this matter until July 10, 2000.
- 11) Mongolian side mentioned that the diesel engine generating facilities for Tosontsengel (Bulnai) would be maintained by the Power Station of Aimag Center. Mongolian side requested to consider for installation of larger generators than 100KW class. JICA will assess the appropriateness of the request for Tosontsengel(Bulnai), during the study in Japan based on the field survey.
- 12) Mongolian side mentioned that the power supply to Zamiin-Uud Sum is owned and operated by Mongolian Railway which has original power supply from China. JICA will assess the appropriateness of the request for Zamiin-Uud, during the study in Japan based on the field survey.
- 13) Mongolian side requested to the Team to consider the environment impact in the study for the following subjects.
 - Possibility of extending the life of battery
 - Disposal of used battery
 - Reduce emission of exhaust gas.
 - Treatment of waste lubricant oil

ANNEX-1: PROJECT SITES

AIMAG	SUM CENTER
BAYANKHONGOR	Zag
	Gurvanbulag
BAYAN-ULGII	Tolbo
	Tsagaannuur
	Altai
	Bayannuur
	Altantsugts
	Nogoonnuur
DORNOD	Bayandun
	Bayan-Uul
	Chuluunkhoroot
	Matad
	Sumber
	Sergelen
DORNOGOVI	Zamiin-Uud*
	Ulaanbadrakh
	Delgerekh*
DUNDGOVI	Adaatsag
	Delgerkhangai
GOVI-ALTAI	Guulin*
	Sharga
	Tugrug
	Bayantooroy*
	Delger
	Khaliun
	Jargalan
	Taishir*
	Bayan-Uul
	Bugat
KHOVD	Mankhan
	Uench
	Durgun
	Duut
	Altai
KHUBSGUL	Burentogtokh
	Tosontengel
	Tumurbulag
	Tsagaan-Uul
	Tunel
	Tsetserleg
	Alag-Erdene
SUKHBAATAR	Sukhbaatar
	Tuvshinshree
	Uulbayan
	Munkhkhaan

AIMAG	SUM CENTER
SUKHBAATAR	Asgat
UMUNOGOVI	Tsogttsetsii
	Khurmen
	Tsogt Ovoo
	Khanbogd
	Nomgon
	Bulgan
	Bayan Ovoo
	Bayandalai
UVS	Undurkhangai
	Khovd
	Khartarbagatai*
	Zavkhan
	Davst
	Baruunturuun
UVURKHANGAI	Bukhmurun
	Tugrug
ZABKHAN	Bayanteeg*
	Tudevtei
	Yaruu
	Ikh-Uul
	Tsagaanchuluut*
	Tsagaankhairkhan
	Otgon
	Bayankhairkhan
	Bayantes
	Shiluustei*
	Tosontengel(Bulnai)*
Aldarkhaan	
Telmen	

*: Subject to the approval of the Government of Japan based on the Study in Japan

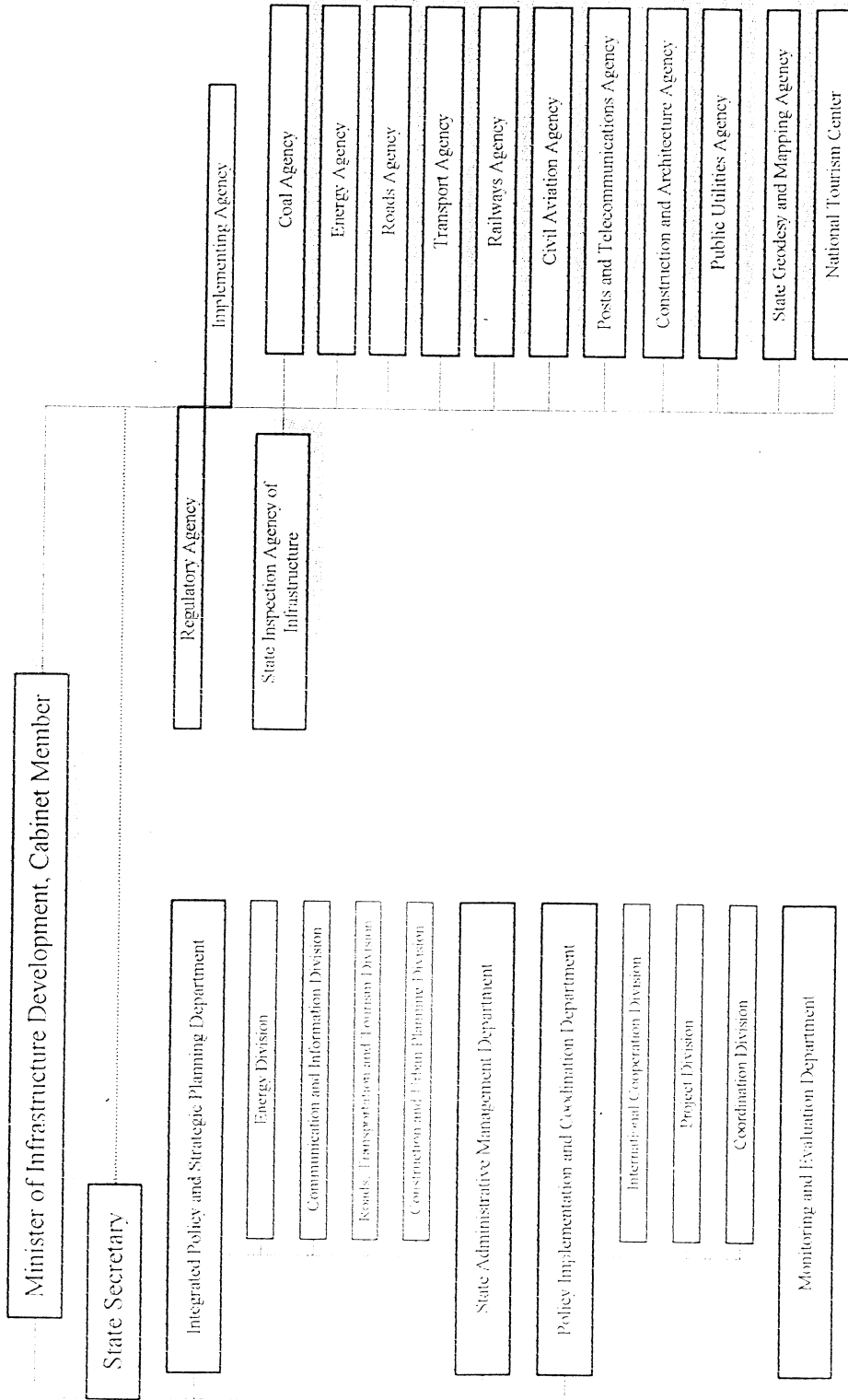
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ANNEX-2 RESPONSIBLE AND IMPLEMENTATION AGENCY

Refer to attached Organizational Chart of Ministry of Infrastructure Development.

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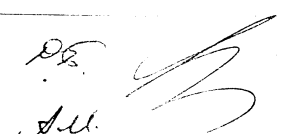
Organizational Chart of the Ministry of Infrastructure Development, Mongolia



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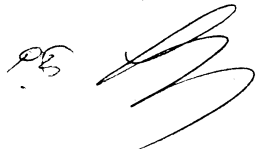

ANNEX-3 ITEMS REQUESTED BY THE GOVERNMENT OF MONGOLIA

AIMAG	SUM	60KW	100KW	REMARKS
BAYANKHONGOR	Gurvanbulag	2		
	Zag	2		
BAYAN-ULGII	Altai		2	
	Altantsugts	2		
	Bayannuur		2	
	Nogoonnuur		2	
	Tolbo		2	
	Tsagaannuur		2	
DORNOD	Bayandun		2	
	Bayan-Uul		2	
	Chuluunkhoroot		3	
	Dashbalbar	2		
	Matad	2		
	Sergelen	2		
	Sumber		3	
DORNOGOVI	Delgerekh*			Privatized
	Ulaanbadrakh	2		
	Zamiin-Uud*			Refer to 12) item 7 of Attachment
DUNDGOVI	Adaatsag	2		
	Delgerkhangai	2		
GOVI-ALTAI	Bayan-Uul		2	
	Bugat	2		
	Delger	2		
	Jargalan	2		
	Khaliun	2		
	Sharga	2		
	Taishir*			Privatized
	Tugrug	2		
	Guulin*			Tosgon not Sum Center
	Bayantooroy*			Tosgon not Sum Center, Privatized
KHOVD	Altai	2		
	Durgun	2		
	Duut	2		
	Mankhan		2	
	Uench	2		
KHUBSGUL	Alag-Erdene		2	
	Burentogtokh		2	
	Tosontsengel		2	
	Tsagaan-Uul		2	
	Tsetserleg		2	
	Tumurbulag	2		
	Tunel	2		
SUKHBAATAR	Asgat	2		
	Munkhkhaan		2	
	Sukhbaatar		2	
	Tuvshinshree	2		



 P.S.

AIMAG	SUM	60KW	100KW	REMARKS
SUKHBAATAR	Uulbayan	2		
UMUNOGVI	Bayan Ovoo	2		
	Bayandalai	2		
	Bulgan	2		
	Khanbogd	2		
	Khurmen	2		
	Nomgon	2		
	Tsogt Ovoo	2		
	Tsogttsetsii	2		
UVS	Baruunturuun		3	
	Bukhmunun	2		
	Davst	2		
	Khovd	2		
	Undurkhangai		2	
	Zavkhan	2		
	Khartarbagatai*			Bag not Sum Center
UVURKHANGAI	Tugrug	2		
	Bayanteeg*			Bag not Sum Center, Privatized
ZABKHAN	Aldarkhaan		2	
	Bayankhairkhan	2		
	Bayantes	2		
	Ikh-Uul	2		
	Otgon	2		
	Telmen	2		
	Tsagaankhairkhan	2		
	Tudevtei	2		
	Yaruu	2		
	Tosontsengel(Bulnai)*			Refer to II) item 7 of Attachment
	Shiluustei*			Privatized
	Tsagaanchuluut*			Privatized

ANNEX-4 Japan's Grant Aid

1 Japan's Grant Aid System

1.1 Grant Aid Procedures

(1) Japan's Grant Aid Program is executed through the following procedures.

Application	(Request made by a recipient country)
Study	(Basic Design Study conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan and Approval by Cabinet)
Determination of Implementation	(The Exchange of Notes between the Governments of Japan and the recipient country)

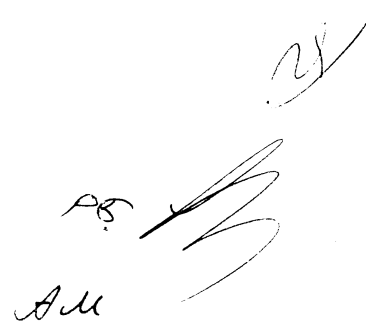
(2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Government of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.



1.2 Basic Design Study

(1) Contents of the Study

The aim of the Basic Design Study (hereinafter referred to as "the Study"), conducted by JICA on a requested project (hereinafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

- 1) Confirmation of the background, objectives, and benefits of the requested project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
- 2) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view.
- 3) Confirmation of items agreed on by both parties concerning the basic concept of the Project.
- 4) Preparation of a basic design of the Project.
- 5) Estimation of costs of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

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All

The consulting firm(s) used for the Study is (are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

1.3 Japan's Grant Aid Scheme

(1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

(2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

(3) "The period of the Grant Aid" means the one fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed.

However in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended by a maximum of one fiscal year at most by mutual agreement between the two Governments.

(4) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However, the prime contractors, namely consulting, construction and procurement firms, are limited to "Japanese nationals." (The term "Japanese nationals" means

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persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(5) Necessity of "Verification"

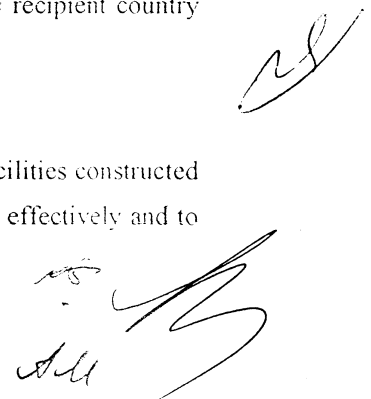
The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

(6) Undertakings required of the Government of the Recipient country

In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the following:

- 1) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.
- 2) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
- 3) To secure buildings prior to the procurement in the case of the installation of equipment.
- 4) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.
- 5) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.
- 6) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.
- 7) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to

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assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

- 8) "Re-Export"
The products purchased under the Grant Aid should not be re-exported from the recipient country.
- 9) Banking Arrangements (B/A)
 - a. The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
 - b. The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated

ANNEX-5 MAJOR UNDERTAKINGS TO BE TAKEN BY EACH GOVERNMENT

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
2	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site		●*
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
4	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		●
5	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
6	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the transportation and installation of the equipment		●

*: Refer to 2) item 5 of Attachment

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**MINUTES OF DISCUSSIONS
ON BASIC DESIGN STUDY
ON THE PROJECT FOR REHABILITATION OF POWER PLANTS OF SUM CENTERS
(PHASE IV)
IN MONGOLIA
(Explanation on Draft Report)**

In April 2000 the Japan International Cooperation Agency (JICA) dispatched a Study Team on the Project Rehabilitation of Power Plants of Sum Centers (Phase IV) (hereinafter referred to as "the Project") to Mongolia, and through discussions, field survey, and technical examination of the results in Japan, JICA prepared a Draft Report of the study.

In order to explain and to consult Mongolia on the components of the Draft Report, JICA sent to Mongolia the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Kenji Matsumoto, Resident Representative, JICA Mongolia Office, and is scheduled to stay in the country from August 16th to 30th, 2000.

In the course of discussions, both parties confirmed the main items described on the attached sheets.

Ulaanbaatar, August 29, 2000

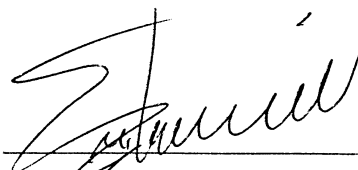


Kenji Matsumoto

Leader

Basic Design Study Team

Japan International Cooperation Agency



Tsugmed Tsengel
State Secretary

Ministry of Infrastructure

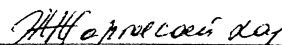


Ania Munkhbat

Director General

Foreign Trade & Economy Cooperation

Ministry of Foreign Affairs



J. Jyngalsaitkhan
Deputy Director

Department of Economic Policy
and Planning

Ministry of Finance and Economy

ATTACHMENT

1. Components of the Draft Report

The Government of Mongolia agreed and accepted in principle the components of the Draft Report explained by the Team.

2. Japan's Grant Aid Scheme

The Mongolian side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Mongolia as explained by the Team and described in Annex-4 and Annex-5 of the Minutes of Discussions signed by both parties on June 16th 2000. Also the Mongolian side agreed the detailed description of the necessary measures to be taken by the Government of Mongolia as explained by the Team and described in Annex-A attached hereinafter. The Team explained that the internal transportation will be covered by Japan's Grant Aid according to the request from Mongolian side.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed item and send it to the Government of Mongolia by December 2000.

4. Other Relevant Issues

- (1) Based on the request from the Mongolian side, the Team proposed to install incinerators of waste lubricant oil to Sum Centers. The Mongolian side confirmed that MOI would secure the space and carry out necessary refurbishment works for the facilities
- (2) The ownership of incinerators belongs to Ministry of Infrastructure.
- (3) The Mongolian side confirmed to store used batteries properly not to pollute environment. Mongolian side requested to include in the soft component to give an instruction of deleterious of used battery to the operators from Sums.
- (4) The Mongolian side confirmed to allocate necessary budget to each Aimag for the periodic maintenance done by the Mobile Maintenance Unit for maintenance and repair of the generators.
- (5) The Mongolian side confirmed to take all responsibility for transition of the operation of the power plant from the private to municipal for Shiluustei Sum. The Team agreed to include Shiluustei in the objective sums and provide 2 x 60KW new diesel generators based on the request from the Mongolian side.
- (6) The Mongolian side requested to allocate the new 3 x 500KW diesel generator sets in the old powerhouse which is presently not used. The team confirmed the existing layout of the old powerhouse for the installation of the new 3 x 500KW generators.



ANNEX-A

Undertaking of Government of Mongolia

Necessary measures to be taken by the Government of Mongolia for the implementation of the project under the Japan's Grant Aid Scheme are as follows.

1. General

- (a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.
- (b) To secure buildings and make necessary repairs prior to the installation of facilities and equipment provided through the Japanese Grant Aid.
- (c) Removal and relocation of existing facilities and equipment, which will not be necessary after the installation of the new facilities and equipment provided through the Japanese Grant Aid.
- (d) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
- (e) Implementation of necessary repair to the existing transmission and distribution lines.
- (f) Acquisitions of transport access to and in the site.
- (g) To obtain all licenses and permits necessary to implement the Project.
- (h) Public announcement and execution of power interruption necessary for work execution.
- (i) Conclusion of interbank agreement (Banking Arrangement) with bank located within Japan.
- (j) To ensure all the expenses and prompt execution for unloading, custom clearance at the port of disembarkation and internal transportation of the products purchased under the Grand Aid.
- (k) To exemption Japanese nationals from custom duties internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.
- (l) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

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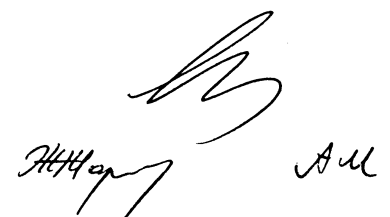
- (m) The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for the operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

2. For Sums where 60KW/100KW will be installed

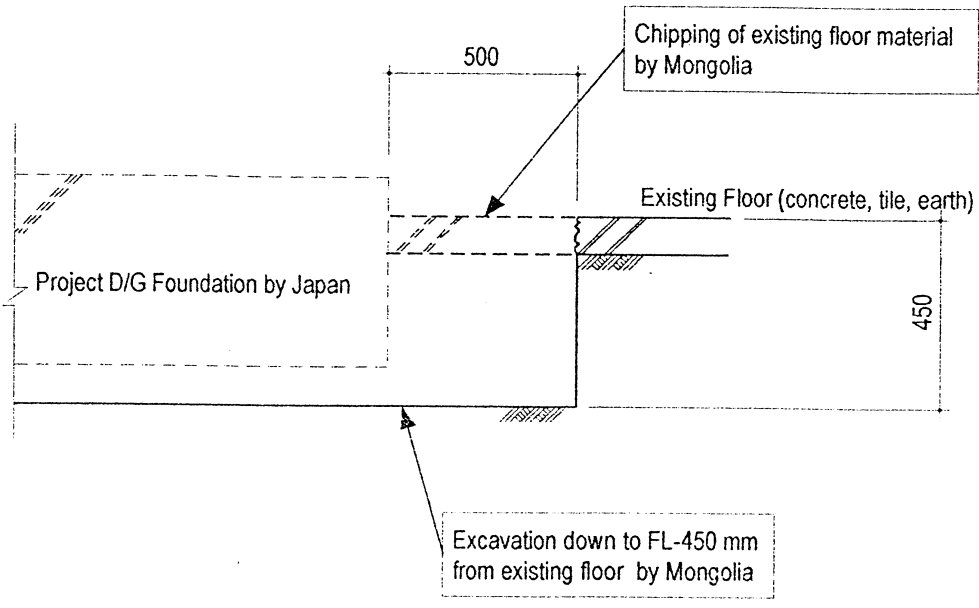
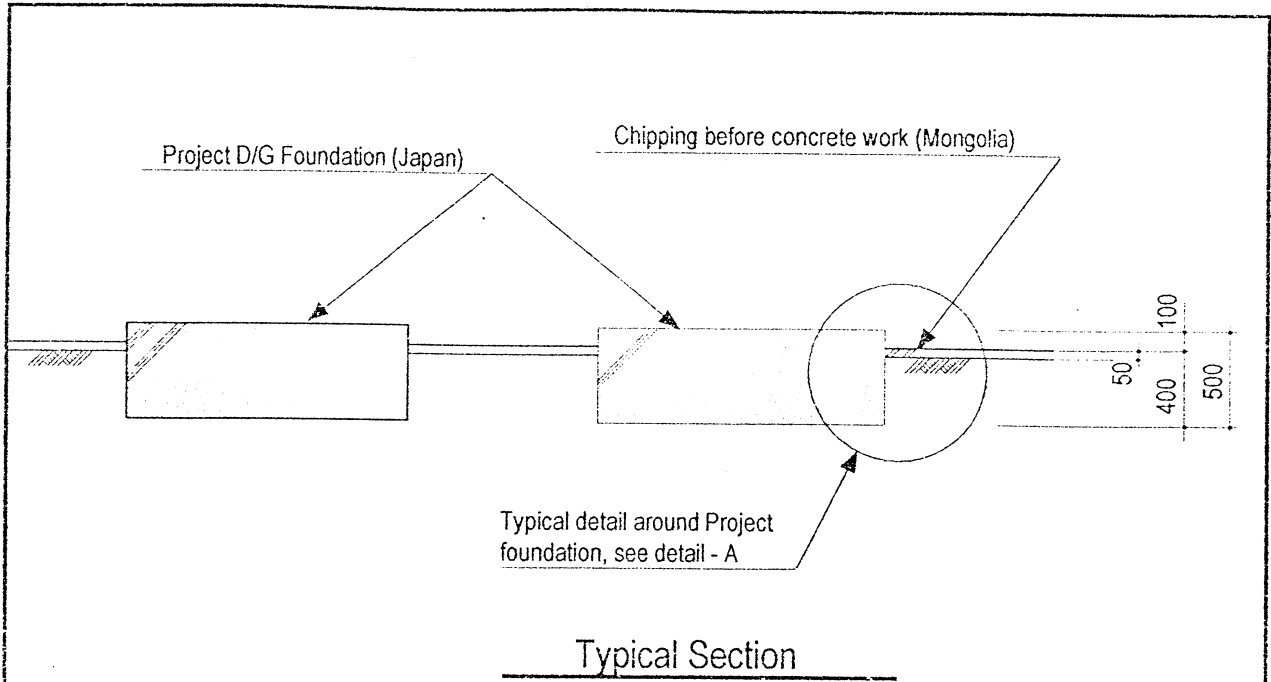
Scope of work by the Government of Mongolia for the installation of 60kW/100kW portion of the Project is shown in the table and sketch below.

Undertakings by the Government of Mongolia

No.	Scope of Work
1.	Provision of construction sites and assurance of access rights
2.	New construction or refurbishment of power plant housing facilities for equipment
3.	Removal and relocation of existing facilities and equipment including the existing concrete foundations, which will be not necessary after the installation of new equipment by the Project
4.	Provision and improvement of equipment access roads
5.	Provision and improvement of power distribution network



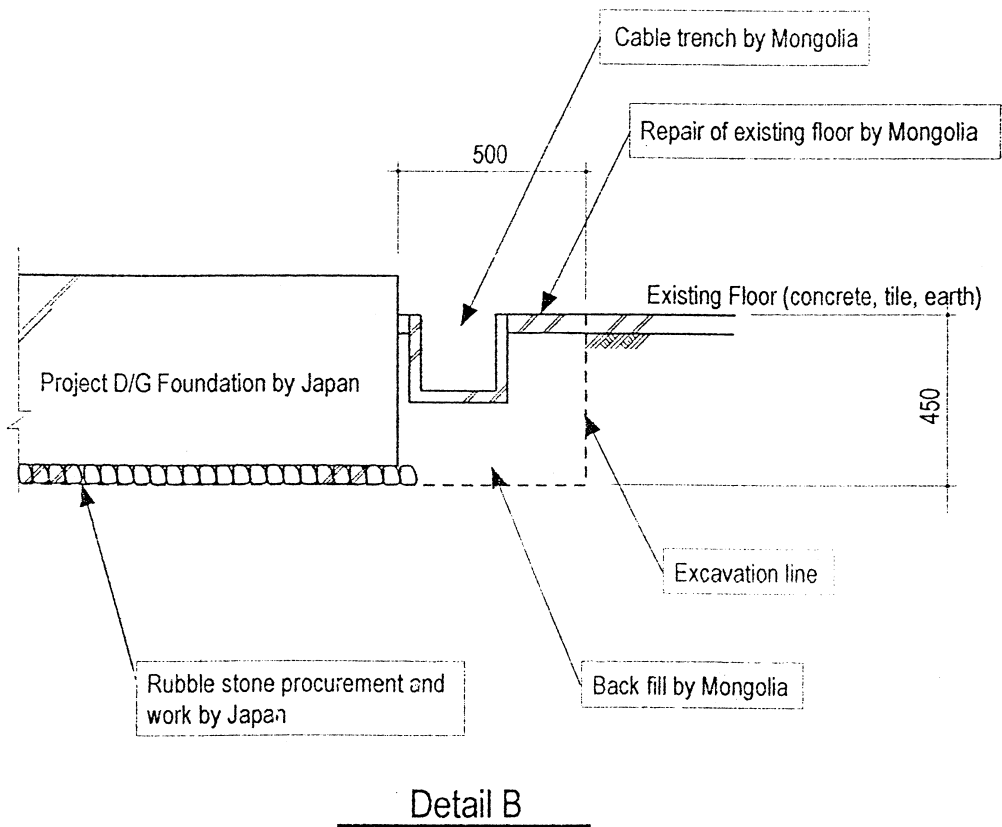
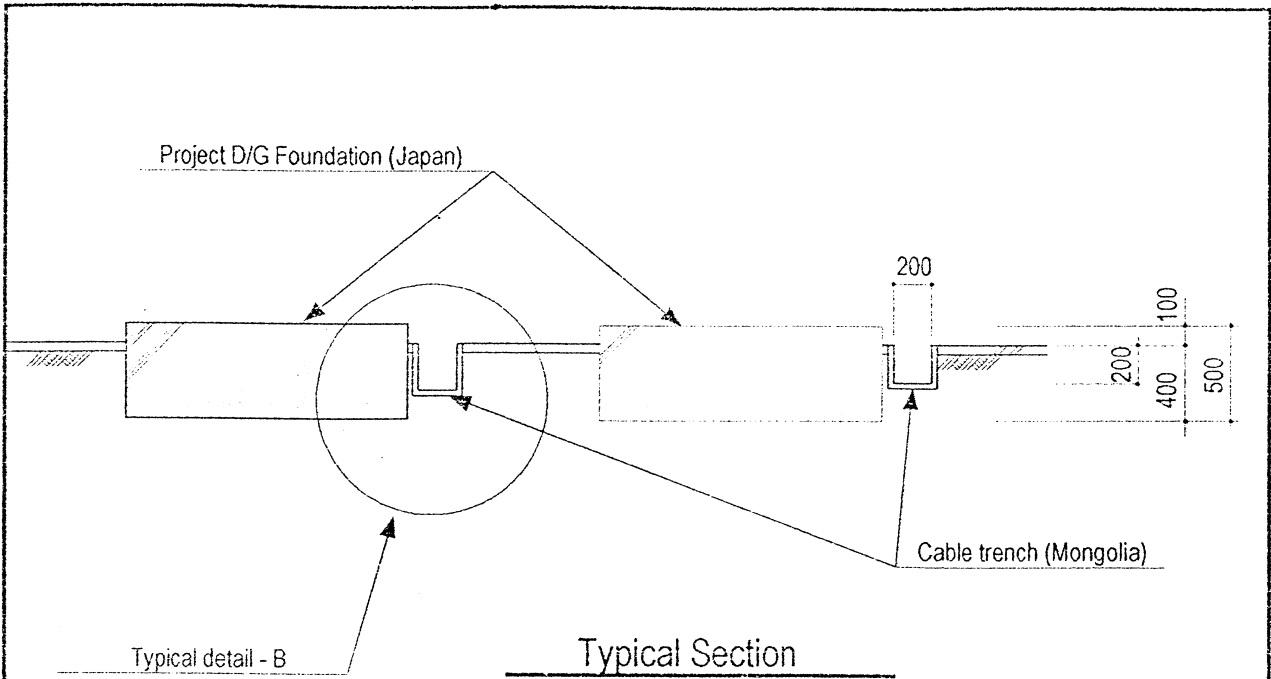
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Note : When clear distance of each foundation is less than 1500 mm, chipping and excavation shall be continuous between the foundations.

Scope of Work for 60kW & 100kW Foundations (1/2)	
Unit : mm	Pacific Consultants International Tokyo, Japan

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		Scope of Work for 60kW & 100kW Foundations (2/2)	
		Unit : mm	Pacific Consultants International Tokyo, Japan

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3. For Tosontsengel Sum where 500KW diesel generators will be installed

Scope of work by the Government of Mongolia for the installation of 500kW portion of the Project is shown in the table below.

No.	Undertakings by the Government of Mongolia for Tosontsengel
1.	Building
1.1	Clarification of the building structure safety and repair of walls.
1.2	Chipping of existing D/G and auxiliary equipment foundations.
1.3	Repair and modification of floor slab (including finishing) and pits (including covers).
1.4	Preparation and repair of equipment access, window, door, ventilation, radiator openings.
1.5	Installation of partition inside the building.
1.6	Lighting and electric serviced outlet works.
1.7	Fire fighting works.
1.8	Improvement of fencing around existing transformer.
2.	Mechanical Equipment
2.1	Removal of existing D/G and auxiliary equipment.
2.2	Fuel oil piping from main F.O. tank outside the building up to new engine room.
2.3	Service water piping from water source outside the building up to the new engine room.
2.4	Removal of existing fuel oil, air, cooling water piping inside building.
3.	Electrical Equipment
3.1	Removal of existing panels.
3.2	Removal of existing electrical wires and conduits inside building.
3.3	Adjustment of existing 1000kVA 0.4/10kV transformer for connecting new cables (low voltage terminal).
3.4	Relocation of existing 1000kVA 0.4/10kV transformer if necessary.
4.	Others
4.1	Procurement of heating apparatus for the building.

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