

Appendices

- 1. Member List of the Study Team**
- 2. Study Schedule**
- 3. List of Parties Concerned in the Recipient Country**
- 4. Minutes of Discussions**
- 5. Soft Component (Technical Assistance) Plan**
- 6. Drawings**
- 7. References**

Appendix-1
Member List of the Study Team

Member of the Study Team(First Survey)

The Preparatory Survey on The Project for Introduction of
Clean Energy by Solar Electricity Generation System in Belize

1. Mr. Motoyuki UEGAKI
Leader
Director, Planning Division, Financing Facilitation and Procurement Supervision Department,
JICA
2. Mr. Ken IMAI
Assistant Director, Project Management Division I, Financing Facilitation Procurement
Supervision Department, JICA
3. Mr. Shoji HASEGAWA
Deputy Director General, First Management Department, JICS
4. Mr. Toshiaki KOBAYASHI
Team Leader / Grid-connected PV System
NIPPON KOEI Co., Ltd.
5. Mr. Kazuo FUJITA
Equipment and Facility Planner
NIPPON KOEI Co., Ltd.
6. Mr. Hitoshi EGAWA
Deputy Team Leader/Procurement Planner/Cost Estimator1
NIPPON KOEI Co., Ltd.
7. Mr. Munenori KUMASU
Institution & Standards/ Grid Operation
NIPPON KOEI Co., Ltd.

Member of the Study Team(Second Survey)

The Preparatory Survey on the Project for Introduction of
Clean Energy By Solar Electricity Generation System

1. Mr. Toshiaki KOBAYASHI
Team Leader / Grid-connected PV System
NIPPON KOEI Co., Ltd.
2. Mr. Tsutomu DEI
Total PV System
NIPPON KOEI Co., Ltd.
3. Mr. Kazuo FUJITA
Equipment and Facility Planner
NIPPON KOEI Co., Ltd.
4. Mr. Hitoshi EGAWA
Deputy Team Leader/Procurement Planner/Cost Estimator1
NIPPON KOEI Co., Ltd.
5. Mr. Munenori KUMASU
Institution & Standards/ Grid Operation
NIPPON KOEI Co., Ltd.
6. Ms. Junko MASAKI
Environmental& Social Specialist/CO2 Emission Evaluator
NIPPON KOEI Co., Ltd.

Member of the Study Team (Third Survey)

The Preparatory Survey on The Project for Introduction of
Clean Energy by Solar Electricity Generation System in Belize

1. Mr. Yoshinobu TAKISHITA
Leader
Representative of JICA Belize Office

2. Mr. Hiroyuki TOMURA
Planning Management
Deputy Assistant Director, Natural Resources and Energy Conservation Division, Natural Resources and Energy Group, Industrial Development Department, JICA

3. Mr. Toshiaki KOBAYASHI
Team Leader / Grid-connected PV System
NIPPON KOEI Co., Ltd.

4. Mr. Tsutomu DEI
Total PV System
NIPPON KOEI Co., Ltd.

5. Mr. Hitoshi EGAWA)
Deputy Team Leader/Procurement Planner/Cost Estimator1
NIPPON KOEI Co., Ltd.

Member of the Study Team(Fourth Survey)

**The Preparatory Survey on the Project for Introduction of
Clean Energy by Solar Electricity Generation System**

1. Mr. Toshiaki KOBAYASHI
Team Leader / Grid-connected PV System
NIPPON KOEI Co., Ltd
2. Mr. Tsutomu DEI
Total PV System
NIPPON KOEI Co., Ltd.
3. Mr. Hitoshi EGAWA
Deputy Team Leader/Procurement Planner/Cost Estimator1
NIPPON KOEI Co., Ltd.
4. Mr. Kazumasa YAZAWA
Procurement Planner/ Cost Estimator 2
NIPPON KOEI Co., Ltd.

Member of the Study Team(Belize, Fifth Survey)

The Preparatory Survey on the Project for Introduction of
Clean Energy by Solar Electricity Generation System

1. Mr. Tadayuki OGAWA
Leader
Senior Advisor, Energy and Power Sector
JICA

2. Mr. Tetsuya Takimoto
Planning Management
Deputy Director Electric Power Division, Natural Resources and Energy Group, Industrial
Development Department
JICA

3. Mr. Toshiaki KOBAYASHI
Team Leader / Grid-connected PV System
NIPPON KOEI Co., Ltd.

4. Mr. Hitoshi EGAWA
Deputy Team Leader/Procurement Planner/Cost Estimator1
NIPPON KOEI Co., Ltd.

Appendix-2

Study Schedule

Study Schedule in Belize(First Survey)

No.	Date	Day	Stay	Officials			Consultants			
				Uegaki	Imai	Hasegawa	Kobayashi	Kumasu	Fujita	Egawa
1	2009/8/9	Sun.	Belize/ Miami	JL5012 NRT-DLS 1130 0915 AA2193 DLS-BZE 1255 1445			AA922 LPB-MIA 0655 1605			
2	2009/8/10	Mon.	Belize	Workshop in MOW, Discussion with MOW, Site Inspection			Workshop in MOW, Discussion with MOW, Site Inspection			
3	2009/8/11	Tue.	Belize	Discussion with City Council, Ministry of Works			Discussion with City Council, Ministry of Works			
4	2009/8/12	Wed.	Belize	Discussion with BEL, PUC			Discussion with BEL,PUC, Discussion with Meteorological			
5	2009/8/13	Thu.	Belize	Preparation of MD			Discussion with MD,MOE			
6	2009/8/14	Fri.	Belize	Preparation of MD			Discussion with BE/Site Inspection			
7	2009/8/15	Sat.	Belize	AA2172 BZE MIA 1120 1520 AA2037 MIA KIN 1645 1725			Preparation of Report			
8	2009/8/16	Sun.	Belize	Preparation of Report			Site Inspection			
9	2009/8/17	Mon.	Belize	Report to Embassy in Jamaica			Preparation of Report	Visit to Transportation and Construction Company		Visit to Transportation Company
10	2009/8/18	Tue.	Transfer /Belize	JM019 KIN NYC 0015 0500 JL047 NYC NRT 0955 1255 +1			Preparation of Report	Visit to Transportation and Construction Company		Transportation Company and insurance
11	2009/8/19	Wed.	Belize	Arrival in Japan			Report to MOW, MOF			
12	2009/8/20	Thu.	Belize				Preparation of Report			
13	2009/8/21	Fri.	Belize				Report to JICA Office			
14	2009/8/22	Sat.	Belize				Preparation of Report			
15	2009/8/23	Sun.	Jamaica/ Transfer				AA2172 BZE MIA 1120 1520 AA2172 MIA KIN 1900 1939 Report to	DL938 BZE MIA 1201 1713		AA2172 BZE MIA 1120 1520 AA2172 MIA KIN 1900 1939 Report to
16	2009/8/24	Mon.	Jamaica				Embassy of Japan in Jamaica	DL801 ATL NRT 1420 1700+1		Embassy of Japan in Jamaica
17	2009/8/25	Tue.	Transfer				AA628 KIN MIA 1530 1825 AA972 MIA DLS 2040 2240	Arrival in Japan		AA628 KIN MIA 1530 1825 AA972 MIA DLS 2040 2240
18	2009/8/26	Wed.	Transfer				AA061 DLS NRT 1205 1505+1			AA061 DLS NRT 1205 1505+1
19	2009/8/27	Thu.	Japan				Arrival in Japan			Arrival in Japan

MOE Minister of Hydrocarbons and Energy
PUC Public Utilities Commission
MOW Ministry of Works
DOE Department of the Environment
MOF Ministry of Finance

Study Schedule in Belize(Second Survey)

No.	Date	Day	Stay	Consultants					
				Kobayashi	Dei	Fujita	Egawa	Kumasu	Masaki
1	2009/11/23	Mon.	Belize	Miami-Belize city Courtesy Call to JICA Office					
2	2009/11/24	Tue.	Belize	Courtesy Call to MOW Courtesy Call to BEL					
3	2009/11/25	Wed.	Belize	Discussion with MOW					
4	2009/11/26	Thr.	Belize	Discussion with DOE		Preparation of Documents			Discussion with DOE
5	2009/11/27	Fri.	Belize	Discussion with CCCCC		Preparation of Documents			Discussion with CCCCC
6	2009/11/28	Sat.	Belize	Preparation of Documents					
7	2009/11/29	Sun.	Belize	Preparation of Documents					
8	2009/11/30	Mon.	Belize	Discussion with PUC Discussion with MOF					
9	2009/12/1	Tue.	Belize	Discussion with DOM Discussion with BEL					
10	2009/12/2	Wed.	Belize	Discussion with MOW	To Japan	Discussion with MOW			
11	2009/12/3	Thr.	Belize	Discussion with Forest Department, Natural Resources Preparation of		Preparation of Tender Documents and Report			Discussion with Forest Department, Natural Resources
12	2009/12/4	Fri.	Belize	Tender Documents and Report		Preparation of Tender Documents and Report			
13	2009/12/5	Sat.	Belize	Arrangements of Documents		Arrangements of Documents			To Japan
14	2009/12/6	Sun.	Belize	Arrangements of Documents		Arrangements of Documents			
15	2009/12/7	Mon.	Belize	Preparation of Tender Documents and Report		Preparation of Tender Documents and Report			
16	2009/12/8	Tue.	Belize	Preparation of Tender Documents and Report		Preparation of Tender Documents and Report			
17	2009/12/9	Wed.	Belize	Preparation of Tender Documents and Report		Preparation of Tender Documents and Report			
18	2009/12/10	Thr.	Belize	Report to MOF Report to MOW		Report to MOF Report to MOW			
19	2009/12/11	Fri.	Belize	Report to JICA Office		Report to JICA Office			
20	2009/12/12	Sat.	Belize	Arrangements of Documents		Arrangements of Documents			
21	2009/12/13	Sun.	Transfer	Belize city - Dallas(AA2194)		Belize city -Dallas(AA2194)			
22	2009/12/14	Mon.	Dallas	Dallas- Narita(AA061)		Dallas-Narita(AA061)			
23	2009/12/15	Tue.	Japan	Arrival in Japan		Arrival in Japan			

DOE:Department of the Environment

CCCCC:Caribbean Community Climate Change Centre

MOW:Ministry of Works, BEL:BELIZE ELECTRICITY LIMITED

PUC:Public Utilities Commission

DOM:Department of Meteorology

MOF:Ministry of Foreign Affairs

Study Schedule in Belize(Third Survey)

No.	Date	Day	Stay	Officials		Consultants		
				Takishita	Tomura	Kobayashi	Dei	Egawa
1	2010/3/22	Mon.	Belize	Meeting with JICA Belize Office Courtesy Call to MOW Courtesy Call to MOF Courtesy Call to UB Courtesy Call to BEL Courtesy Call to PUC				
2	2010/3/23	Tue.	Belize	Joint Meeting with MOF and MOW Meeting with UB Internal Meeting				
3	2010/3/24	Wed.	Belize	Internal Meeting Discussion with MOF and MOW Discussion with UB				
4	2010/3/25	Thr.	Jamaica		Belize(11:50)- Miami(15:55) AA2172 Miami(19:30)-Kingston(20:15) AA1049			
5	2010/3/26	Fri.	Jamaica		Meeting with JICA Jamaica Office Courtesy Call to Japanese Embassy Kingston(19:20) - London(9:10+1)			
6	2010/3/27	Sat.	Transfer			London(19:00)- Tokyo(16:00+1) JL 402		
7	2010/3/28	Sun.	Transfer /Japan			Arrival in Japan		
8	2010/3/28	Mon.	Japan		Arrival in Japan			

MOW:Ministry of Works, BEL:BELIZE ELECTRICITY LIMITED

DOE:Department of the Environment

CCCCC:Caribbean Community Climate Change Centre

UB:University of Belize

Study Schedule in Belize(Fourth Survey)

No.	Date	Day	Stay	Consultants			
				Kobayashi	Dei	Egawa	Yazawa
1	2010/6/14	Mon.	Transfer	Narita-Dallas(AA176), Dallas-Belize City (AA2193)			Narita-Dallas(AA176), Dallas-Belize City (AA2193)
2	2010/6/15	Tue.	Belize	JICA(9:00), MOW(11:00), UB(13:30), MOF(15:00), BEL Belmopan Office(16:00)			JICA(9:00), MOW(11:00), UB(13:30), MOF(15:00),BEL Belmopan Office(16:00)
3	2010/6/16	Wed.	Belize	BEL Belmopan Office(11:00), Site Survey UB(13:00)			BEL Belmopan Office(11:00), Site Survey UB(13:00)
4	2010/6/17	Thr.	Belize	Preparation of Documents and Drawing			Preparation of Project Cost Estimate
5	2010/6/18	Fri.	Belize	Discussion with MOF Discussion with UB			Discussion with MOF Discussion with UB
6	2010/6/19	Sat.	Belize	Preparation of Drawing and operation setup plan			Preparation of Project schedule
7	2010/6/20	Sun.	Belize	Preparation of Report and Tender document			Preparation of Report and Tender document
8	2010/6/21	Mon.	Belize	Site Survey in UB Visit to UB in Belize City			Site Survey in UB Visit to UB in Belize City
9	2010/6/22	Tue.	Belize	Discussion with MOW Discuion with UB			Discussion with MOW Discuion with UB
10	2010/6/23	Wed.	Belize	Discussion with BEL			Discussion with BEL
11	2010/6/24	Thr.	Belize	Preparation of Report and Tender Documents			Preparation of Project Cost Estimate
12	2010/6/25	Fri.	Belize	Preparation of Report and Tender Documents		Preparation od Report	Preparation of Project Cost Estimate
13	2010/6/26	Sat.	Belzie	Preparation of Report and Tender Documents		Preparation of Project Cost Estimate	
14	2010/6/27	Sun.	Belize	Preparation of Report and Tender document			
15	2010/6/28	Mon.	Belize	Discussion with UB Engineering			Preparation of Project Cost Estimate
16	2010/6/29	Tue.	Belize	Discussion with MOF			
17	2010/6/30	Wed.	Belize	Discussion with UB			
18	2010/7/1	Thr.	Belize	Report to UB Report to JICA Office			
19	2010/7/2	Fri.	Transfer	Belize City-Dallas (AA2194)			
20	2010/7/3	Sat.	Transfer	Dallas-Narita(AA176)			
21	2010/7/4	Sun.	Japan	Dallas-Narita(AA176)			

Study Schedule in Belize(Fifth Survey)

No.	Date	Day	Stay	Officials		Consultants	
				Ogawa	Takimoto	Kobayashi	Egawa
1	2010/8/28	Sat.	Transfer	Tokyo(17:20)-LA(11:20) by JL 062 LA(15:00)-Miami(22:50) by JL5824		Tokyo(11:30)-Dallas(08:55) by AA 176	
2	2010/8/29	Sun.	Belize	Miami(10:05)-Belize(10:15) by AA2103		Dallas(12:45)-Belize(14:35) by AA 2193	
3	2010/8/30	Mon.	Belize	Meeting with JICA Office Courtesy Call to MOF and Discussion on M/D Courtesy Call to BEL			
4	2010/8/31	Tue.	Belize	Joint Mwwtng on Draft Final Report and M/D			
				Doscussion with DOE(Department of Environment)		Site Survey in UB	
				Internal Meeting			
5	2010/9/1	Wed.	Belize	Discussion with PUC Joint Meeting on Fraft Final Report and M/D			
6	2010/9/2	Thr.	Belize	Doscussion on M/D Inspection to Belmopan Substation			
7	2010/9/3	Fri.	Belize	Signing on M/D Internal Meeting			
8	2010/9/4	Sat.	Kingston/ Transfer	Belize(11:25)-Miami(15:25) by AA 2180 Miami(18:10) - Kingstone(18:50) by AA1049		Belize(11:25)-Miami(15:25) by AA 2180 Miami(20:45) - Lindon(10:00+1) by BA208	
9	2010/9/5	Sun.	Kingston/ Transfer	Preparation of Report		London(13:40) - Tokyo(09:05+1) by BA005	
10	2010/9/6	Mon.	Kingston/J apan	Report to Japanese Embassy in Jamaica		Tokyo(09:05) by BA005	
11	2010/9/7	Tue.	Transfer	Kingstone(06:10)-NY(10:55) by JM015 NY(13:05) - Tokyo(16:15+1) by JL005			
12	2010/9/8	Wed.	Japan	Tokyo(16:15) by JL005			

UB:University of Belize

MOW:Ministry of Works

MOF:Ministry of Finance

BEL:BELIZE EIECTRICITY LIMITED

Appendix-3
List of Parties Concerned
in the Recipient Country

Person in Charge of the Project (Belize, First Survey)

1. Ministry of Finance
 - 1) Mr. Joseph Waight Financial Secretary
 - 2) Ms. Betts-Ann Jones Deputy Financial Secretary
2. Ministry of Economic Development, Commerce, Industry & Consumer Protection
 - 1) Ms. Yvonne Hyde Chief Executive Officer
 - 2) Ms. Betts-Ann Jones Deputy Financial Secretary
3. Ministry of Works
 - 1) Mr. Cadet Henderson Chief Executive Officer
 - 2) Mr. Lennox Bradley Chief Engineer
 - 3) Mr. David Novelo Zone Engineer
4. Ministry of Public Utilities, Transport, Communication & National Emergency Management
 - 1) Mr. George Lovell Chief Executive Officer
 - 2) Mr. John Briggs Fire Chief
5. PUC (Public Utilities Commission)
 - 1) Mr. Leroy Almendarez Acting Chairman
 - 2) Ms. Anne Wade Communication Manager
 - 3) Mr. C. Victor Lewis Director of Electricity
 - 4) Mr. Ambrose Tillett Renewable Energy Consultant
6. Ministry of Foreign Affairs
 - 1) Mr. Alfonso Gahona Director of International Affairs
7. Department of Environment
 - 1) Mr. Jeavon Hulse Senior Environmental
 - 2) Ms. Marleni DeLafuente Environmental Technician
 - 3) Ms. Maxine Monsanto Environmental Officer
8. Belize Metrology Department
 - 1) Mr. Dennis Gonguez Acting Chief Metrological Officer
9. Belmopan City Council
 - 1) Hon. Simeon Lopez Mayor
 - 2) Mr. Amilcar Umana Deputy Mayor
 - 3) Mr. Pedro Carrillo Councilor
 - 4) Mr. Cuthbert Burrell Valuation & Lands Officer
 - 5) Mr. James Robinson Technical Director
10. Belize Electricity Limited
 - 1) Mr. Lyn Young President & CEO
 - 2) Mr. Rodney Baird Operation Superintendent Wes

Appendix-3 List of Parties Concerned in the Recipient Country

- | | |
|---------------------|-------------------------|
| 3) Mr. Brian Smith | Distribution Technician |
| 4) Mr. Leroy Matura | Line Supervisor |

Person in Charge of the Project (Belize, Second Survey)

1. Ministry of Finance
 - 1) Mr. Joseph Waight Financial Secretary
2. Ministry of Works
 - 1) Mr. Cadet Henderson Chief Executive Officer
 - 2) Mr. Lennox Bradley Chief Engineer
 - 3) Mr. Derick Calles
 - 4) Ms. Natsuko Miki
3. PUC (Public Utilities Commission)
 - 1) Mr. C. Victor Lewis Director Electricity
 - 2) Ms. Anne Wade Communication Manager
 - 3) Mr. Robert Tillett Electricity Engineer Electrical Sector
4. Ministry of Natural Resources & the Environment
 - 4-1 Department of the Environment
 - 1) Mr. Martin Alegria Chief Environmental Officer
 - 4-2 National Meteorological Service
 - 1) Mr. Dennis Gonguez Chief Meteorologist
 - 4-3 Forest Department
 - 1) Mr. Wilber Sabido Chief Forest Officer
5. Belize Electricity Limited
 - 1) Mr. Curtis Eck VP Customer Care & Operations
 - 2) Mr. Jose Moreno Director Distribution Planning, Metering & Special Projects
6. Caribbean Community Climate Change Centre
 - 1) Mr. Carlos Fuller Deputy Director

Person in Charge of the Project (Belize, Third Survey)

1. Ministry of Finance

- | | |
|-------------------|----------------------------|
| 1) Joseph Waight | Financial Secretary |
| 2) Marion Paracio | Deputy Financial Secretary |
| 3) Raquel Guerra | |

2. Ministry of Economic Development, Commerce, Industry & Consumer Protection

- | | |
|----------------------|--------------------------|
| 1) Karkene McSweeney | Policy and Planning Unit |
| 2) Duane Belisle | |

3. Ministry of Public Utilities, Transport, Communication & National Emergency Management

- | | |
|-----------------|-------------------------------------|
| 1) Paul Flowers | Strategic Planning & Policy Advisor |
|-----------------|-------------------------------------|

4. PUC (Public Utilities Commission)

- | | |
|--------------------|------------------------------|
| 1) C. Victor Lewis | Director of Electricity |
| 2) Robert Tillett | Engineer, Electricity Sector |

5. Belize Electricity Limited

- | | |
|-------------------|-----------------|
| 1) Mr. Lynn Young | President & CEO |
|-------------------|-----------------|

6. University of Belize

- | | |
|-------------------------|----------------------------|
| 1) Santos Mahung, Ph.D. | President |
| 2) Ewart Robateau | External Relations Officer |

Person in Charge of the Project (Belize, Fourth Survey)

1. Ministry of Finance
 - 1) Mr. Joseph Waight Financial Secretary

2. Ministry of Works
 - 1) Mr. Cadet Henderson Chief Executive Officer
 - 2) Mr. Lennox Bradley Chief Engineer

3. PUC (Public Utilities Commission)
 - 1) Mr. C. Victor Lewis Director Electricity
 - 2) Ms. Anne Wade Communication Manager
 - 3) Mr. Robert Tillett Electricity Engineer Electrical Sector

4. Belize Electricity Limited
 - 1) Mr. Jose Moreno Director Distribution Planning, Metering & Special Projects

6. University of Belize
 - 1) Dr. Santos Mahung President
 - 2) Mr. Ulric Usher Deputy Director Plants
 - 3) Mr. Ewart Robateau External Relations Officer
 - 4) Mr. Francis Burns Physical Planning Director

Person in Charge of the Project (Belize, Fifth Survey)

1. Ministry of Finance
 - 1) Mr. Joseph Waight Financial Secretary
 - 2) Mr. Marion Palacio, Economist
2. Ministry of Economic Development
 - 1) Ms. Carleen McSweeney Economist
3. Ministry of Foreign Affairs
 - 1) Mr. Percy Lewis Foreign Service Officer
4. Ministry of Works
 - 1) Mr. Cadet Henderson Chief Executive Officer
 - 2) Mr. David Novelo Senior Executive Engineer
5. PUC (Public Utilities Commission)
 - 1) Mr. Robert Tillett Electricity Engineer Electrical Sector
6. Department of the Environment
 - 1) Mr. Martin Alegria Chief Environmental Officer
7. Belize Electricity Limited)
 - 1) Mr. Lynn Young President & CEO
 - 2) Mr. Jose Moreno Director, Planning & Distribution Department
8. University of Belize)
 - 1) Dr. Santos Mahung President
 - 2) Mr. Marco Valle Director, Information & Communication Network