

**GOVERNMENT OF THE DEMOCRATIC SOCIALIST  
REPUBLIC OF SRI LANKA**

**MINISTRY OF POWER**



**CEYLON ELECTRICITY BOARD**

**REQUEST FOR PROPOSAL  
FOR THE DEVELOPMENT OF SECOND 300MW LNG  
COMBINED CYCLE POWER PLANT AT KERAWALAPITIYA  
ON BOOT BASIS**

RFP NO.: CEB/AGM(TR)/DGM(PPD)/LNG2-2020  
International Competitive Bidding (ICB)

**VOLUME II  
PROPOSAL LETTERS AND FORMS  
JUNE 2021**



**REQUEST FOR PROPOSAL**  
**FOR THE DEVELOPMENT OF SECOND 300 MW LNG**  
**COMBINED CYCLE POWER PLANT AT KERAWALAPITIYA**  
**ON BOOT BASIS**

**VOLUME II**  
**PROPOSAL LETTERS AND FORMS**

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## **INTRODUCTORY NOTES**

### **1. General**

The Proposal to be prepared by the Project Proponent shall include the documents and Forms of Part I and Part II of this Volume II. The Project Proponent's attention is drawn to the requirements of Volume I, Instructions to Project Proponents, and in particular to the requirement that the Project Proponent shall complete the Forms and respond to the questions in the specified format and in compliance with the RFP.

Where the Project Proponent comprises two or more members to a bidding consortium, each being a properly constituted company, corporation, firm, joint venture or other entity, each member shall, where relevant and applicable, separately complete the Forms and otherwise respond to the RFP so that the Proposal contains the required information about each constituent member of the Project Proponent.

The Project Proponent's attention is drawn to the Proposal Requirements of Clause 4 of Volume I and to the general need to fully describe its Proposal. To the extent that information additional to that specifically requested in the Forms is required, the Project Proponent may include such information on other sheets and attach them to the Proposal.

### **2. Attachment to the Technical Proposal Letter**

The Project Proponent's Financial Proposal will not be opened until its Technical Proposal has been evaluated. So that the responsiveness of the Financial Proposal can be confirmed as part of the Responsiveness Test, the Technical Proposal shall contain an explicit and unequivocal affirmation regarding the contents of the Financial Proposal in the form expressly sought as an attachment to the Technical Proposal letter (refer Section A of Volume II).

### **3. Inclusions in the Proposal**

The Project Proponents' attention is drawn particularly to the provisions of "Mandatory Proposal Requirements" in Clause 3.13 of Volume I, and to the responsiveness requirements of the "Responsiveness Test", Annex VII of Volume I. Failure to satisfy the requirements of these provisions will be grounds for rejection of the Proposal as non-responsive.



# **PART I**

## **TECHNICAL PROPOSAL FORMS**

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AND QA PLAN
8. SECTION F : PROJECT PROPONENT'S TRANSFER PLAN

## ITEM 1 DOCUMENT REFERENCE CHECK LIST

S/N	RFP Reference	Form reference	Description	Response from the Project Proponent	
				Provided (Yes/ No)	Document reference number in the Proposal
Technical Proposal					
1	Clause 3.10 of Vol I	Item 1, Part 1 of Vol II	Completed document reference check list		
2	Clause 3.13 of Vol I	Item 2, Part 1 of Vol II	Certificate of purchase of RFP document.		
3	Clause 3.19 of Vol I		Notarially executed Power of Attorney to the authorized representatives who will sign for the Project Proponent.		
4	Clause 3.10 of Vol I	Section A of Vol II	Technical Proposal Letter		
5	Clause 3.10 of Vol I	Section A of Vol II (Attachment to technical proposal letter)	The Project Proponent unequivocally affirms that its Financial Proposal conforms to the requirements of the RFP		
6	Clause 6.1 of Vol I	Vol II Form B1 & B2 and attachments Vol II B2 Annex to B2	Legal Form and Organization of the Project Proponent (Form B1)		
7			legal Form and Organization of Members of the Project Proponent (Form B2)		
8			Certified true copy of the memorandum and Articles of Association		
9			Resolution of each member's Board authorizing to submit the Proposal		
10			Joint Venture Agreement		
11			Memorandum of commitment of members to provide the required equity.		
12			Organization chart of each member		
13		Form B3 of Vol II	Members 's of the Project Proponent Boards of Directors		
14	Clause 6.2 (i) of Vol I	Form B4 of Vol II	Project Proponent's Experience in Development of Power Generation Projects On BOO/BOOT Basis (Completed Projects) <b>Note: Separate forms for each member of the Project Proponent are required.</b>		
15	Clause 6.2 (i) of Vol I	Form B5 of Vol II	Project Proponent's Experience in Development of Power Generation Projects On BOO/BOOT Basis (On Going Projects) <b>Note: Separate forms for each member of the Project Proponent are required.</b>		
16	Clause 6.2 (ii) of Vol I	Form B6 of Vol II	General information about EPC contractors		
17	Clause 6.2 (ii) of Vol I	Form B6 & Attachment of Vol II	Expression of interest for supply of the EPC contractor's services.		



18	Clause 6.2 (ii) of Vol I	Form B7 of Vol II	Experience record of EPC contractors. <b>Note: A separate form for each power plant is required.</b>		
19	Clause 6.2 (ii) of Vol I	Form B7 (Attachment)	Authentic Certificate of Final Acceptance of each project		
20	Clause 6.2 (iii) of Vol I	Form B8 of Vol II	General information about O&M contractors		
21	Clause 6.2 (iii) of Vol I	Form B8 Attachment	Expression of interest for supply of the O&M contractor's services.		
22	Clause 6.2 (iii) of Vol I	Vol II Form B9	Experience record of proposed O&M contractor(s)		
23	Clause 6.2 (iv) of Vol I	Form B10 of Vol II	Gas Turbine Manufacturer's Experience		
24		Annexes to B10	Expression of interest in the supply of the gas turbine.		
25			Certificates of final acceptance duly issued by owners or clients of the works or any other supporting documents to verify the experience		
26		Form B11 of Vol II	Steam Turbine Manufacture's experience		
27		Annexes to Form B11	Expression of interest from manufacturer to supply of steam turbine		
28			Certificates of final acceptance duly issued by owners or clients of the works or any other supporting documents to verify the experience		
29		Form B12 of Vol II	HRSG Manufacture's experience		
30		Annexes to Form B12	Expression of interest from manufacturer to supply of HRSG		
31			Certificates of final acceptance duly issued by owners or clients of the works or any other supporting documents to verify the experience		
32		Form B13 of Vol II	Generator Manufacturers experience		
33		Annexes to Form B13	Expression of interest from manufacturer to supply of Generator		
34			Certificates of final acceptance duly issued by owners or clients of the works or any other supporting documents to verify the experience		
35		Form B14 of Vol II	Transformer Manufacturers experience		
36		Annexes to B14	Expression of interest from manufacturer to supply of Transformer		
37			Certificates of final acceptance duly issued by owners or clients of the works or any other supporting documents to verify the experience		
38		Form B15 of Vol II	Foreign Equipment or Material Suppliers		
39		Form B16 of Vol II	Local Contractors and Suppliers		
40	Clause 6.3 of Vol I	Form B17 of Vol II	Financial capability		
41		Annexes to B17	Copy of audited accounts –year 1		
42		Annexes to B17	Copy of audited accounts –year 2		
43		Annexes to B17	Copy of audited accounts –year 3		
44	Clause 4.2.9 of Vol I	Form C3 of Vol II	Project Milestone Schedule of Key activities of the project.		

45		Form C4 of Vol I	Other key dates including placement of major orders, execution of site establishment works, plant manufacture, shipping, erection and commissioning activities		
46	Section D of Vol II	D0	Preamble		
47		D1	Plant Availability		
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49		D3	Start-Up Times		
50		D4	Mechanical Equipment		
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52		D6	Control Equipment		
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54		D8	Power Output, Emissions, Heat Rate		
55		D9	Any Deviation from the Minimum Functional Specifications		
56	Clause 3.17 of Vol I	Annex II of Vol I	Proposal security (Note: Original to be submitted separately)		
57	Clause 4.2.3 of Vol I	Section E of Vol II	Project Proponent's organizational, staffing and QA plan		
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<b>Financial Proposal</b>					
60	Clause 4.3 of Vol I	Section G of Vol II	Financial proposal letter		
61			Financial proposal letter from Project Proponent's financial adviser		
62		Vol II I-(A)	Finance data - Proposed contract base rates and other financial data		
63		Vol II I-(B)	Finance data - Duly signed hard copies of furnished financial template in A3 sized papers		
64		Vol II I-(B)	Electronic format of completed Financial Template		
65		Section J of Vol II	Duly furnished financing plan as per the Section J of Vol II.		
66		Section K of Vol II	Lender's commitment letters		

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

## ITEM 2 CERTIFICATE OF PURCHASE OF RFP DOCUMENT

(TO BE SIGNED AND ATTACHED WITH THE PROPOSAL)

RFP NO.: CEB/AGM(TR)/DGM(PPD)/LNG2-2020

Date: .....

Issued to : .....

.....

On behalf of : .....

.....

.....

.....

Non-refundable Project Proponent Fee- PIV No. .... Date .....

Date: .....

Additional General Manager (Transmission)

CEYLON ELECTRICITY BOARD

I/We agree to abide by the conditions to Project Proponent in the RFP document of RFP No. CEB/AGM(TR)/DGM(PPD)/LNG2-2020 and therefore I wish to submit my/our offer as per the instructions given in the RFP document.

Position and Name of Signatory .....

.....

Signature

Address : .....

.....

.....

Contact Details: Tel. No : .....

Fax No : .....

## **SECTION A**

### **TECHNICAL PROPOSAL LETTER**

#### **FOR THE DEVELOPMENT OF 300 MW LNG COMBINED CYCLE POWER PLANT AT KERAWALAPITIYA ON BOOT BASIS**

To: Cabinet Appointed Negotiating Committee,

In response to the RFP No. CEB/AGM(TR)/DGM(PPD)/LNG2-2020 entitled "REQUEST FOR PROPOSAL FOR THE DEVELOPMENT OF SECOND 300 MW LNG COMBINED CYCLE POWER PLANT AT KERAWALAPITIYA ON BOOT BASIS" and in accordance with the Instructions to Project Proponents, the undersigned hereby proposes to Ceylon Electricity Board, an agency of the Ministry of Power of the Government of Sri Lanka, (the Government), to finance, design, procure, construct, test, commission, operate, maintain and transfer combined cycle power generation facility at Kerawalapitiya on build-own-operate-and-transfer basis, in accordance with the provisions of the Project Agreements (included as part this RFP).

The undersigned agrees that this Proposal shall remain open for acceptance and shall remain irrevocable for a period of two hundred and seventy (270) days from the Proposal Closing given in the RFP, and it shall remain binding upon the undersigned and may be accepted at any time before the expiration of that period. The undersigned certifies that it has examined and is fully familiar with all of the provisions of the RFP, the Project Agreements and any addenda thereto; has carefully reviewed the accuracy of all statements in the RFP and attachments thereto, has carefully examined the RFP (including the Project Agreements) and any addenda thereto, is satisfied as to the nature and location of all the works, the general and local conditions and all other matters which can in any way affect the Facility or the cost thereof, and has otherwise taken steps to inform itself as required under the RFP. The undersigned hereby agrees that the Government or its Representatives will not be responsible for any errors or omissions on the part of the undersigned in preparing this Proposal.

Within a period of not more than.....calendar days commencing on the day of issuance of a notice that the undersigned has been selected to undertake the Project, the undersigned will submit a Preliminary Obligation Bond in the form specified in Annex III of Volume I of this RFP, to an amount of Sri Lankan Rupees ..... and agrees to execute a Power Purchase Agreement, Lease, Implementation Agreement and Liquid Supply Agreement for the provision of the Facility to be financed, designed, constructed, tested, commissioned, operated, maintained and, at the option of the Government, transferred by a project company formed by the undersigned.

The undersigned agrees to complete the Facility and to fulfil all conditions for it to enter commercial service on combined cycle basis on or prior to the respective date so stipulated in the PPA.

Attached hereto and by this reference incorporated herein and made a part of this proposal are the data required under the heading "TECHNICAL PROPOSAL".

In addition to the proposal data required, the undersigned encloses the following additional information:

The undersigned also acknowledges receipt, understanding, and full consideration of the following addenda to the RFP Document into the proposal:

Addenda Nos:

Signature:

In the Capacity of: (Title)  
duly authorised to sign the proposal for and on behalf of:

Project Proponent: (Name)

Dated:

Home Office: (PO Box or Street No.)  
(State and Country)  
(Telephone No.)  
(Fax No.)

Attention: (Name & capacity of authorised representative for Project Proponent)

Address in Sri Lanka (if applicable):  
(PO Box or Street No.)  
(State and Country)  
(Telephone No.)  
(Fax No.)

**PROJECT PROPONENT'S AFFIRMATION  
IN RESPECT OF ITS FINANCIAL PROPOSAL**

The Project Proponent unequivocally affirms that its Financial Proposal conforms to the requirements of the RFP and specifically meets the following conditions:

- The Tariff offered by the Project Proponent complies with the structure and pricing mechanisms specified in the draft PPA;
- The Project Proponent's Financing Plan provided as Section J of its Proposal is comprehensive and has been endorsed by the Project Proponent's Financial Advisor as bankable without material change to either the Project Agreements or the Government's support package, such endorsement being in the form specified in Section G of Volume II.
- The Financial Proposal contains a memorandum from all intended subscribers of equity committing them to:
  - the full amount of the Required Equity, being no less than twenty (20%) of the Project's total capital requirements;
  - disbursement of equity in accordance with PPA requirements.
- The Financing Plan proposes a financing structure based on fixed interest rates, adequate interest rate protection (hedging) and a debt service coverage ratio in all years of the Combined Cycle Operational Period of no less than 1.3.
- The lead member of the Project Proponent shall retain at least fifteen (15%) of the equity capital in the Company for a minimum of five (5) years from CCOD.
- Technical and financial requirements

## **SECTION B**

### **QUALIFICATIONS OF THE PROJECT PROPONENT**

- B1 LEGAL FORM AND ORGANIZATION OF THE PROJECT PROPONENT
- B2 LEGAL FORM AND ORGANIZATION OF PROJECT PROPONENT'S MEMBERS
- B3 PROJECT PROPONENT MEMBER'S BOARDS OF DIRECTORS
- B4 PROJECT PROPONENT'S EXPERIENCE IN DEVELOPMENT OF POWER GENERATION PROJECTS ON BOO/BOOT BASIS (COMPLETED PROJECTS)
- B5 PROJECT PROPONENT'S EXPERIENCE IN DEVELOPMENT OF POWER GENERATION PROJECTS ON BOO/BOOT BASIS (ON GOING PROJECTS)
- B6 GENERAL INFORMATION ABOUT EPC CONTRACTORS
- B7 EXPERIENCE RECORD OF PROPOSED EPC CONTRACTOR(S)
- B8 GENERAL INFORMATION ABOUT O&M CONTRACTORS
- B9 EXPERIENCE OF PROPOSED O & M CONTRACTOR(S)
- B10 EXPERIENCE OF PROPOSED GAS TURBINE MANUFACTURER.
- B11 EXPERIENCE RECORD OF PROPOSED STEAM TURBINE MANUFACTURER
- B12 EXPERIENCE OF HRSG MANUFACTURER
- B13 EXPERIENCE RECORD OF PROPOSED GENERATOR MANUFACTURER
- B14 EXPERIENCE RECORD OF PROPOSED TRANSFORMER MANUFACTURER
- B15 FOREIGN EQUIPMENT OR MATERIAL SUPPLIERS
- B16 LOCAL CONTRACTORS AND SUPPLIERS
- B17 FINANCIAL CAPABILITY

**B1      LEGAL FORM AND ORGANIZATION OF THE PROJECT PROPONENT**

Legal Form and Organization of the Project Proponent:		
No.	Item	Information
1	Name of Project Proponent	[Lead Member] [Other members of the <b>Project</b> Proponent]
2	Home Office Address	
3	Telephone/Fax/Email	
4	Regional Office Address	
5	Telephone/Fax/Email	
6	Authorized Person for contract for the Project	
7	Contact Address of Authorized Person	
8	Telephone/Fax/Email of Authorized Person	
9	Legal Form	[e.g. company, corporation, partnership, consortium, joint venture, individual]
10	Organizational Charts	[ To be attached by <b>Project</b> Proponent]
11	Memorandum and Articles of Association	[ To be attached by <b>Project</b> Proponent]
12	Joint Venture Agreement	If applicable [ To be attached by <b>Project</b> Proponent]

**Signature of Authorized Person and Seal : .....**

**Name of signatory                    : .....**

**Date                                        : .....**



## B2 LEGAL FORM AND ORGANIZATION OF PROJECT PROPONENT'S MEMBERS

Legal Form and Organization of Project Proponent's Members:				
No	Item	Lead Member	[Other Member]	[Other Member]
1	Name			
2	Legal Form	[e.g. company, corporation, partnership, consortium, joint venture, individual]	[e.g. company, corporation, partnership, consortium, joint venture, individual]	[e.g. company, corporation, partnership, consortium, joint venture, individual]
3	Resolution of each member's Board authorizing to participate for the RFP.	[To be attached by each member of the <b>Project Proponent</b> ]	[To be attached by each member of the <b>Project Proponent</b> ]	[To be attached by each member of the <b>Project Proponent</b> ]
4	Role of member in this project			
5	Country of Registration/Incorporation			
6	Home Office Address			
7	Telephone/Fax/Email			
8	Name and Position of Contact Person			
9	Address of Contact Person			
10	Telephone/Fax/Email/of Contact Person			
11	Share in Total Equity of the Project (%)			
12	Memorandum of commitment of members to provide the required equity.	[To be attached by each member of the <b>Project Proponent</b> ] <b>Note 1</b>	[To be attached by each member of the <b>Project Proponent</b> ]	[To be attached by each member of the <b>Project Proponent</b> ]
13	Organizational Charts	[To be attached by Project Proponent]	[To be attached by Project Proponent]	[To be attached by Project Proponent]

**Note 1:** Lead member shall submit an undertaking that lead member should maintain not less than 15% of the required equity for a period not less than 5 years from the Combined Cycle Operation Date.

Signature of Authorized Person and Seal : .....

Name of signatory : .....

Date : .....

**B3 PROJECT PROPONENT MEMBER'S BOARDS OF DIRECTORS**

<b>Lead Member of Project Proponent:</b>	
<b>Name:</b>	<b>Function:</b>
<u>Members of the Board</u>	
<u>Chief Executive Officer</u>	

<b>Member No. 2:</b>	
<b>Name:</b>	<b>Function:</b>
<u>Members of the Board</u>	
<u>Chief Executive Officer</u>	

**MEMBER NO. 3: (etc.)**

**Signature of Authorized Person and Seal : .....**

**Name of signatory : .....**

**Date : .....**

**B4 PROJECT PROPONENT'S EXPERIENCE IN DEVELOPMENT OF POWER GENERATION PROJECTS ON BOO/BOOT BASIS (COMPLETED PROJECTS)**

Requirement: Development Experience as per 6.2 (i) of RFP document.  
(Note: Separate B 4 form shall be furnished for each project)

**Name of the Project Proponent or member of the Project Proponent: .....**  
***Use additional sheets for additional information.***

- 1. Name and contact Address, telephone number of the Client:**
- 2. Name of the Project:**
- 3. MW capacity of the Project**
- 4. Type of the thermal power plant (Gas/Combined cycle, etc):**
- 5. Short Description of the Project.**
- 6. Date of commencement of the project;**
- 7. Date of financial closure of the project**
- 8. Date in which Project Proponent or member of the Project Proponent commence its participation as a developer in the project.**
- 9. Duration in which Project Proponent or member of Project Proponent participated as a developer in the project**
- 10. Date of Completion of the Project**
- 11. Total Project Cost**
- 12. Percentage (%) value of the Project Proponent or member of the Project Proponents contribution**
- 13. Attach authentic Certificate of Final Acceptance of each project & any supporting documents to prove the above details.**

**Signature of Authorized Person and Seal :.....**

**Name of signatory : .....**

**Date : .....**

**B5 PROJECT PROPONENT'S EXPERIENCE IN DEVELOPMENT OF POWER GENERATION PROJECTS ON BOO/BOOT BASIS (ON GOING PROJECTS)**

Requirement: Development Experience as per Clause 6.2 (i) of Volume I.

(Note: Separate B 5 form shall be furnished for each project)

**Name of the Project Proponent or member of the Project Proponent:**

.....

*Use additional sheets for additional information.*

1. **Name and contact Address, telephone number of the Client:**
2. **Name of the Project:**
3. **MW capacity of the Project**
4. **Type of the thermal power plant (Gas/Combined cycle, etc):**
5. **Short Description of the Project.**
6. **Date of commencement of the project;**
7. **Date of financial closure of the project**
8. **Date in which Project Proponent or member of the Project Proponent commence its participation as a developer in the project.**
9. **Duration in which Project Proponent or member of Project Proponent participated as a developer in the project**
10. **Total Project Cost**
11. **Percentage (%) value of the Project Proponent or member of the Project Proponents contribution**
12. **Attach authentic Certificate of Final Acceptance of each project & any supporting documents to prove the above details.**

**Signature of Authorized Person and Seal : .....**

**Name of signatory : .....**

**Date : .....**

**B6 GENERAL INFORMATION ABOUT EPC CONTRACTORS**

No.	Item	Information
1	Name of EPC Contractor	
2	Legal Form	[e.g. company, corporation, partnership, consortium, joint venture, individual]
3	Country of Registration/Incorporation	
4	Home Office Address	
5	Telephone/Fax/Email	
6	Name and Position of Contract Person for the Project.	
7	Address of Contact Person	
8	Telephone/Fax/Email of Contact Person	
9	Area of Main Business	Literature/Brochures/technical magazines describing the business/facilities/organization shall be attached.
10	No of years of experience as EPC contractor	
11	Number of staff in Main Business	Engineers: Others
12	Number of 250MW or higher Combined cycle power plants successfully constructed during last fifteen (15) years.	
13	Expression of interest for supply of the EPC contractor's services.	(To be attached)

**Signature of Authorized Person and Seal :.....**

**Name of signatory : .....**

**Date : .....**

## **B7 EXPERIENCE RECORD OF PROPOSED EPC CONTRACTOR(S)**

Requirement: EPC contractors Experience including civil works as per Clause 6.2 (ii) of Volume I.

**Name of the EPC Contractor:** .....

**(Note: Separate B 7 form shall be furnished for each project)**

- 1. Name and Address of the Proposed EPC Contractor(s):**
- 2. Name & address of the client:**
- 3. Name of the Project:**
- 4. MW capacity of the Project**
- 5. Is it combined Cycle power plant or not:**
- 6. Short Description of the Project.**
- 7. Date of commencement of the project**
- 8. Date of Completion of the Project**
- 9. Operation period after completion of the project.**
- 10. Total Project Cost**
- 11. Percentage (%) value of EPC contractor's contribution**
- 12. Nature of financing\***
- 13. Attach authentic Certificate of Final Acceptance of each project & any supporting documents to prove the above details**

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

**B8 GENERAL INFORMATION ABOUT O&M CONTRACTORS**

No.	Item	Information
1	Name of O&M Contractor	
2	Legal Form	[e.g. company, corporation, partnership, consortium, joint venture, individual]
3	Country of Registration/Incorporation	
4	Home Office Address	
5	Telephone/Fax/Email	
6	Name and Position Of Contract Person for the Project.	
7	Address of Contact Person	
8	Telephone/Fax/Email of Contact Person	
9	Area of Main Business	Literature/Brochures/technical magazines describing the business/facilities/organization shall be attached.
10	No of years of experience as O&M contractor	
11	Number of staff in Main Business	Engineers: Others
12	Number of 150MW or higher Combined cycle power plants successfully operated & maintained during last fifteen (15) years.	
13	Expression of interest for supply of the O&M contractor's services.	(To be attached)

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

**B9 EXPERIENCE OF PROPOSED O & M CONTRACTOR(S)**

Requirement: O&M Experience as per Clause 6.2 (iii) of Volume I.

**Name of the O&M Contractor:** .....

**(Note: Separate B 9 form shall be furnished for each O&M Contract)**

- 1. Name and Address of the Proposed O&M Contractor(s):**
- 2. Name & address of the client:**
- 3. Name of the Plant:**
- 4. MW capacity of the Plant**
- 5. Is it combined Cycle power plant or not:**
- 6. Short Description of the Power Plant.**
- 7. Date of commencement of the O&M Contract**
- 8. Date of Completion of the O&M Contract**
- 9. Duration of the O&M period.**
- 10. Attach authentic Certificate of Final Acceptance of each project & any supporting documents to prove the above details**

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....



## **B10 EXPERIENCE OF PROPOSED GAS TURBINE MANUFACTURER**

Requirement: Gas turbine manufacturing & operation Experience as per Clause 6.2 (iv) of Volume I.

**For the gas turbine manufacturer (or, if more than one manufacturer is proposed, then for each manufacturer), provide the following:**

- 1. Name and Address of proposed Gas Turbine Manufacturer:**
- 2. Number of years of experience as a Gas Turbine manufacturer:**
- 3. Model/Type of the proposed of the gas turbine:**
- 4. Provide the following details of the Gas Turbine manufacturer's experience:**

NAME AND ADDRESS OF CLIENT	NAME OF Power Plant ** ***	GAS TURBINE (GT)				
		TOTAL GT CAPACITY	NO. OF GT'S	MODEL	FUEL TYPE	Aggregate running hours of each Fuel type

\* Literature/brochures/technical magazines describing the business/facilities/organisation of manufacturer shall be attached as well as an Expression of Interest in the supply of the gas turbine.

\*\* Authentic certificates of final acceptance duly issued by owners or clients of the works described above shall be attached.

\*\*\* Identify which projects used the same gas turbine technology with the same (low NO<sub>x</sub>) burner technology and similar rating and Fuel as the model proposed for this Project.

**Signature of Authorized Person and Seal : .....**

**Name of signatory : .....**

**Date : .....**

**B11 EXPERIENCE RECORD OF PROPOSED STEAM TURBINE MANUFACTURER**

Requirement: Steam turbine manufacturing & operation Experience as per Clause 6.2 (iv) of Volume I.

**For the steam turbine manufacturer (or, if more than one manufacturer is proposed, then for each manufacturer), provide the following:**

- 1. Name and Address of proposed Steam Turbine Manufacturer**
- 2. Number of years of experience as a Steam Turbine manufacturer:**
- 3. Model/Type of the proposed steam turbine:**
- 4. Provide the following details of the Steam Turbine manufacturer's experience:**

NAME AND ADDRESS OF CLIENT	NAME OF THE Power Plant ** ***	STEAM TURBINE (ST)			
		STEAM TURBINE CAPACITY	NO. OF ST'S	MODEL	NO. OF OPERATING HOURS

\* Literature/brochures/technical magazines describing the business/facilities/organisation of manufacturer shall be attached as well as an Expression of Interest in the supply of the steam turbines.

\*\* Authentic certificates of final acceptance duly issued by owners or clients of the works described above shall be attached.

\*\*\* Identify which projects used the same steam turbine technology with similar rating to the model proposed for the Project.

**Signature of Authorized Person and Seal : .....**

**Name of signatory : .....**

**Date : .....**

## B12 EXPERIENCE OF HRSG MANUFACTURER

Requirement: HRSG manufacturing & operation Experience as per Clause 6.2 (iv) of Volume I.

**For the proposed Heat Recovery Steam Generator manufacturer (or, if more than one manufacturer is proposed, then for each manufacturer), the Project Proponent shall provide details and experience record as follows:**

- 1. Name and Address HRSG Manufacturer:**
- 2. Number of years of experience as Heat Recovery Steam Generator manufacturer:**
- 3. Model/Type of proposed HRSG:**
- 4. Provide the following details of the Heat Recovery Steam Generator manufacturer's experience:**

NAME AND ADDRESS OF CLIENT	NAME OF THE PROJECT ** ***	HEAT RECOVERY STEAM GENERATOR (HRSG)				
		HRSG CAPACITY (in hrs)	NO. OF HRSG'S	MODEL	NO. OF OPERATING HOURS	SUPPLEMENTARY FIRED?

\* Literature/brochures/technical magazines describing the business/facilities/organisation of manufacturer shall be attached as well as an Expression of Interest for the supply of the heat recovery steam generators.

\*\* Authentic certificates of final acceptance duly issued by owners or clients of the works described above shall be attached.

\*\*\* Identify which projects used the same HRSG technology with similar rating and Fuel to the model proposed for this Project.

**Signature of Authorized Person and Seal : .....**

**Name of signatory : .....**

**Date : .....**

## **B13 EXPERIENCE RECORD OF PROPOSED GENERATOR MANUFACTURER**

Requirement: Generator manufacturing & operation Experience as per Clause 6.2 (iv) of Volume I.

**For the Generator manufacturer (or, if more than one manufacturer is proposed, then for each manufacturer), provide the following:**

- 1. Name and Address of proposed Generator Manufacturer**
- 2. Number of years of experience as a Generator manufacturer:**
- 3. Model/Type of proposed Generator**
- 4. Provide the following details of the Generator manufacturer's experience:**

NAME AND ADDRESS OF CLIENT	NAME OF THE Power Plant ** ***	Generator			
		Generator CAPACITY	NO. OF Generators	MODEL	NO. OF OPERATING HOURS

\* Literature/brochures/technical magazines describing the business/facilities/organisation of manufacturer shall be attached as well as an Expression of Interest in the supply of Generator

\*\* Authentic certificates of final acceptance duly issued by owners or clients of the works described above shall be attached.

\*\*\* Identify which projects used the same Generator technology with similar rating to the model proposed for the Project.

**Signature of Authorized Person and Seal : .....**

**Name of signatory : .....**

**Date : .....**

**B14 EXPERIENCE RECORD OF PROPOSED TRANSFORMER MANUFACTURER**

Requirement: Transformer manufacturing & operation Experience as per Clause 6.2 (iv) of Volume I.

**For the Transformer manufacturer (or, if more than one manufacturer is proposed, then for each manufacturer), provide the following:**

- 1. Name and Address of proposed Transformer Manufacturer**
- 2. Number of years of experience as a Transformer manufacturer:**
- 3. Model/Type of proposed transformer:**
- 4. Provide the following details of the Transformer manufacturer's experience:**

NAME AND ADDRESS OF CLIENT	NAME OF THE Power Plant ** ***	Transformer			
		Transformer CAPACITY	NO. OF Transformer S	MODEL	NO. OF years in operation

\* Literature/brochures/technical magazines describing the business/facilities/organisation of manufacturer shall be attached as well as an Expression of Interest in the supply of the Transformer

\*\* Authentic certificates of final acceptance duly issued by owners or clients of the works described above shall be attached.

\*\*\* Identify which projects used the same Transformer technology with similar rating to the model proposed for the Project.

**Signature of Authorized Person and Seal : .....**

**Name of signatory : .....**

**Date : .....**

**B15 FOREIGN EQUIPMENT OR MATERIAL SUPPLIERS**

**List the non-Sri Lankan equipment or material suppliers from whom firm commitments to supply equipment and materials will be made:**

NAME OF THE FIRM	EXPECTED PROCUREMENTS

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

**B16      LOCAL CONTRACTORS AND SUPPLIERS**

**List the Sri Lankan contractors or local suppliers of equipment or materials from whom firm commitments to supply services, equipment and materials will be made:**

<b>NAME OF THE FIRM</b>	<b>EXPECTED PROCUREMENTS</b>

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

**B17 FINANCIAL CAPABILITY**

This Section shall be filled in accordance with the provisions given in the Clause 6.3 of the Volume I of Volume I.

**(I). NET WORTH OF THE COMPANY**

Members of the Consortium/ Project Proponent	Net Worth in US\$ million		
	Year 1 (2017)	Year 2 (2018)	Year 3 (2019)

Copies of Audited accounts should be provided.

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....



## **SECTION C**

### **PROJECT MILESTONES SCHEDULE**

- C1 PROJECT PROPONENT'S PROJECT MILESTONE SCHEDULE
- C2 MILESTONE DATES
- C3 MILESTONE SCHEDULE OF KEY ACTIVITIES OF THE PROJECT.
- C4 OTHER KEY DATES INCLUDING PLACEMENT OF MAJOR ORDERS, EXECUTION OF SITE ESTABLISHMENT WORKS, PLANT MANUFACTURE, SHIPPING, ERECTION AND COMMISSIONING ACTIVITIES

## **C1 PROJECT PROPONENT'S PROJECT MILESTONE SCHEDULE**

The Project Proponent shall provide a detailed Project Milestones Schedule which supports and confirms the Project Milestone Schedule contained in Clause 4.2.9 of Volume I, starting from execution of the Project Agreements.

The Project Proponent's detailed Project Milestones Schedule shall be a time-scaled critical path network programme that has been analysed in terms of time and resources. The Project Milestones Schedule shall clearly demonstrate the timing and sequence in which the Project Proponent intends carrying out the Project activities including financing, design, permits and approvals, procurement, construction, commissioning and operation. The Project Milestones Schedule shall provide sufficient detail to demonstrate competence in the development of projects similar to the Facility, as well as a sound knowledge of procedures and prevailing conditions in Sri Lanka.

A breakdown of activities in the Project Milestones Schedule will be provided with a description of each activity that permits clear identification of the portion of the work included under the activity. The breakdown will provide the following, as appropriate:

- Breakdown of the Preliminary Obligations Period, Construction, the Open Cycle Operational Period and the Combined Cycle Operational Period into constituent activities to the extent necessary to establish a clear sequence and timing of activities from the execution of the Project Agreements through to full commercial operation;
- Activities breakdown that will clearly demarcate financing, design, procurement, erection, commissioning and operations phases;
- Scheduled start, scheduled finish and duration of each activity with critical path clearly indicating critical activities;
- The identity and duration of all external interface events, i.e. an activity which must be done before or after, as the case may be, some activity by another person.
- Dates by which the following must be ready to occur:
  - access by the Company to the GIS substation;
  - energising of CEB transmission line;
  - delivery of Fuel to the Facility by CPC, as applicable;
  - other milestones to be achieved by Government Agencies.
- Any float and/or dependencies between activities,

The Project Proponent shall outline its project controls strategies and shall explain how timely remedial actions will be initiated to correct programme delays.

The Project Milestones Schedule shall be prepared in Microsoft Project format. The Project Proponent shall state other project management tools and software it proposes to use.

## **C2 MILESTONE DATES**

The Project Milestones Schedule shall indicate the dates by which the following will be achieved:

1. the milestone dates listed in Table C3;
2. other key dates including placement of major orders, execution of site establishment works, plant manufacture, shipping, erection and commissioning activities. Table C4

The Project Proponent shall provide milestone dates for all milestones specified in Table C4. Any item not applicable to the Facility must be so marked with a brief explanation as to why it is not applicable. This list is intended not to be exhaustive but rather to include appropriate milestones to allow the Government to evaluate proposals. Project Proponent's shall identify and all appropriate activities and milestones necessary for the completion of its Facility whether or not they are included in Table C4. This includes the identification and acquisition of all necessary permits.

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### C3 MILESTONE SCHEDULE OF KEY ACTIVITIES OF THE PROJECT

**Table C3**

Activity	Date Specified by CEB	Date Specified by the Project Proponent
Signing of Project Agreements		
Financial Closure		
Completion of all Preliminary Period obligations under the Project Agreements	Maximum 270 days from the signing of the PPA	
Issue of Construction notice	End of the preliminary obligations period	
Scheduled Open Cycle Operation Date	Maximum 365 days from the construction notice	
Scheduled Combined Cycle (L) Operation Date	Maximum 730 days from the construction notice	

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

**C4 OTHER KEY DATES INCLUDING PLACEMENT OF MAJOR ORDERS, EXECUTION OF SITE ESTABLISHMENT WORKS, PLANT MANUFACTURE, SHIPPING, ERECTION AND COMMISSIONING ACTIVITIES**

Table C4

<b><u>Milestone</u></b>	<b><u>Start Date</u></b>	<b><u>Completion Date</u></b>
<b>EIA</b>		
<b>Financing</b>		
Issue Project Information Memorandum		
Financial closure		
<b>Permits</b>		
Generation license		
Environmental Protection License		
BOI Agreement		
Permit from Civil Aviation Department		
Coastal Conservation & CRM Dept. Consent		
Archaeological Permit		
Local authority permits and licenses		
Urban Development Authority license		
Consent under the Fire Regulations		
Central Bank approval		
Approvals related to Fuel supply		
<b>Engineering and Procurement</b>		
Preliminary		
Detailed Design		
Award turnkey contract		
Solicit and award major plant subcontracts		
Solicit and award major civil subcontract		
Solicit and award O&M subcontract		
<b>Major Plant Delivery / Erection</b>		
Gas Turbines		
Steam turbines		
HRSG		
Transformers		
<b>Construction</b>		
Mobilisation / Site establishment		
Foundations		
Cooling water conduits		
Crossing Hamilton Canal (CW conduits)		
Cooling system		
Desalination plant		
Fuel receiving facilities		
Electrical interconnection		

**Milestone**

**Start Date**

**Completion Date**

**Commissioning**

Pre-synchronisation tests

Demonstration tests

Reliability tests

Performance tests

Pre-synchronisation tests

Demonstration tests

Reliability tests

Performance tests

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**Operation**

Open Cycle Operation date

Combined Cycle Operation Date

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**Signature of Authorized Person and Seal : .....**

**Name of signatory : .....**

**Date : .....**

## **SECTION D**

### **TECHNICAL DATA**

D0	PREAMBLE
D1	PLANT AVAILABILITY
D2	PLANT OUTPUT
D3	START-UP TIMES AND SHUT DOWN TIMES
D4	MECHANICAL EQUIPMENT
D5	ELECTRICAL EQUIPMENT
D6	CONTROL EQUIPMENT
D7	CIVIL, STRUCTURAL AND ARCHITECTURAL
D8	POWER OUTPUT, EMISSIONS, HEAT RATE
D9	ANY DEVIATION FROM THE MINIMUM FUNCTIONAL SPECIFICATIONS

## D0 PREAMBLE

The Company shall provide the following basic technical information for the proposed Facility:

1. **Concept design description of the Facility including supporting facilities and Site infrastructure. The description shall explain the basis on which the design conforms to Minimum Functional Specification Requirement that the design life of the Facility measured from CCOD is not less than twenty five (25) years.**
2. **Country of manufacture for the following major components:**
  - Gas turbine generators
  - Steam turbine
  - Generators
  - HRSGs
  - Condensers
  - Major pumps
  - Cooling Towers
  - Sea water desalination plant
  - Control System
  - MV and LV Switchgear
  - Step up transformers
  - Auxiliary transformers
3. **Auxiliary loads consumption by Facility.**

• All GT's in open cycle operation	_____ MW
• Facility operation under combined cycle mode	_____ MW
4. **Description of equipment for filtering at the air inlet for the gas turbines (for salt, etc).**
5. **Listing of the Codes and Standards to be used in design, manufacturing, construction, performance testing, and quality control for civil, electrical, mechanical, and controls and instrumentation works of the Facility.**
6. **Description of provisions made for SCADA systems.**
7. **Temperature in GT combustion chamber at one hundred percent (100%) load and for exhaust gas of gas turbines in simple cycle and in combined cycle at the stack outlet.**
8. **Heat and mass balances diagrams for the Facility giving principal flows pressures and temperatures at the Reference Conditions / NDC<sub>CC</sub>. The diagrams shall also indicate all the measurement points to be adopted in the performance tests.**
9. **Drawings such as:**
  - Outline drawings of the GT, HRSG, and STG.
  - Conceptual station layout drawings including cooling system.
  - P&IDs of major systems.
  - DCS flowchart and architecture.
  - Single line electrical diagram.



10. For Facility of similar size, with similar design of systems and the same equipment manufacturer, that has been operating for at least one year provide: the name of the Facility, year commissioned, name of owner and representative (phone and fax number), with data on reliability, availability, gigawatt hours produced for each year, and the number of forced outages or reduced output due to technical difficulties. Information on more than one Facility is desirable but not mandatory.
11. For the following equipment to be used in the Facility, provide similar information, as above (and as applicable), from manufacturers.
  - Gas turbines
  - Steam turbines
  - HRSG
  - Generator
  - Step-up transformer
12. Terms of Reference for Studies, technical in nature, to be conducted. The Project Proponent shall list the studies he intends to conduct in accordance with the present RFP requirements and shall add to such list all other studies he intends to conduct for the proper functioning of the Facility.
13. Description of the operation and maintenance plan and details of the Computerised Maintenance / Asset Management System (CMMS) up to and including the first major overhaul.
14. Evidence that the proposed design of the Facility and the plant and components to be incorporated in it employ only proven technology in accordance with the requirements of the Minimum Functional Specification. The Project Proponent shall identify in its Proposal any features of the design or proposed plant or components that have not seen satisfactory commercial service over a period of sufficient duration to prove the technology.
15. A description of the redundancies included in the design of the Facility to minimize the number and effect of Forced Outages and ensure Target Availability is achieved. The Project Proponent shall identify in its Proposal any features of the design that do not meet the redundancy requirements of the Minimum Functional Specification.
16. Reference codes for verifying maximum capacities and Heat Rates.

**D1 PLANT AVAILABILITY**

1. **Target Availability is to be expressed as a percentage of NDC \* PH<sub>y</sub>, taking into account Scheduled and Forced outages and output reductions.**
2. **Target Availability for the Open Cycle Period - .....**  
[shall not be less than ninety percent (90%)]
3. **Availability averaged over the period from CCOD to the last day of the Operational Period shall be no less than ninety percent (90%)**

PERIOD	TARGET AVAILABILITY (%)
Contract Year 1	
Contract Year 2	
Contract Year 3	
Contract Year 4	
Contract Year 5	
Contract Year 6	
Contract Year 7	
Contract Year 8	
Contract Year 9	
Contract Year 10	
Contract Year 11	
Contract Year 12	
Contract Year 13	
Contract Year 14	
Contract Year 15	
Contract Year 16	
Contract Year 17	
Contract Year 18	
Contract Year 19	
Contract Year 20	
Contract Year 21	
Contract Year 22	
Contract Year 23	
Contract Year 24	
Contract Year 25	

## D2 PLANT OUTPUT

### 1. For the Open Cycle Operational Period and the Open Cycle operation with Liquid Fuel,

The minimum stable net output is: [ ] kW.

The Net Dependable Capacity during this period,  $NDC_{OL}$  is: [ ] kW.

(Note: Net Dependable Capacity is as defined in the PPA.)

### 2. For the Combined Cycle (L) Operational Period,

The minimum stable net output is: [ ] kW.

The Net Dependable Capacity during this Period,  $NDC_{CL}$  is: [ ] kW.

(Note: Net Dependable Capacity is as defined in the PPA.)

### 3. For the Combined Cycle(N) Operational Period,

The minimum stable net output is: [ ] kW.

The Net Dependable Capacity during this Period  $NDC_{CN}$  is: [ ] kW.

(Note: Net Dependable Capacity is as defined in the PPA.)

### 4. Open Cycle operation with Gas Fuel,

The minimum stable net output is: [ ] kW.

The Net Dependable Capacity during this period,  $NDC_{ON}$  is: [ ] kW

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

### D3 START-UP TIMES & SHUT-DOWN TIMES

The following values will remain constant throughout the Term:

#### (I) Operation with Liquid Fuel – Start up Times

Length of Shut Down	Time required to synchronisation from the time of Dispatch Instruction (minutes)				Time required from 1 <sup>st</sup> synchronisation to full output (minutes)		
	Open Cycle Operation Mode		Combined Cycle Operation Mode		Open Cycle Operation Mode		Combined Cycle Operation Mode
	1 <sup>st</sup> gas Turbine	2 <sup>nd</sup> gas turbine	1 <sup>st</sup> gas Turbine	2 <sup>nd</sup> gas turbine	1 <sup>st</sup> gas Turbine	2 <sup>nd</sup> gas turbine	
Hot Start							
Warm Start							
Cold Start							
After a major overhaul							

#### (ii) Operation with Gas Fuel – Start Up Times

Length of Shut Down	Time required to synchronisation from the time of Dispatch Instruction (minutes)				Time required from 1 <sup>st</sup> synchronisation to full output (minutes)		
	Open Cycle Operation Mode		Combined Cycle Operation Mode		Open Cycle Operation Mode		Combined Cycle Operation Mode
	1 <sup>st</sup> gas Turbine	2 <sup>nd</sup> gas turbine	1 <sup>st</sup> gas Turbine	2 <sup>nd</sup> gas turbine	1 <sup>st</sup> gas Turbine	2 <sup>nd</sup> gas turbine	
Hot Start							
Warm Start							
Cold Start							
After a major overhaul							

(iii) Shut Down Times

Load of Shut Down	Time required to de-synchronisation(minutes)			
	Open Cycle Operation Mode		Combined Cycle Operation Mode	
	1 <sup>st</sup> gas Turbine	2 <sup>nd</sup> gas turbine	1 <sup>st</sup> gas Turbine	2 <sup>nd</sup> gas turbine
100%				
80%				
60%				
40%				

Signature of Authorized Person and Seal : .....

Name of signatory : .....

Date : .....

## D4 MECHANICAL EQUIPMENT

Item	Description	Units	
<b>1.0</b>	<b>Gas Turbine</b>		
1.1	Manufacturer	-	
1.2	Model and Series No.	-	
1.3	Year of introduction of identical model and series		
1.4	Firing temperature at base load	°C	
1.5	Pressure ratio		
1.6	Gearbox included [yes (Y) or no (N)]		
1.7	Base load power output of each gas turbine at Reference Conditions	kW	
1.8	Number of gas turbines	-	
1.9	Gas turbine black start capability [yes (Y) or no (N)]	-	
1.10	If No (N) black start, state starting power required	kW	
1.11	NO <sub>x</sub> control details:	-	
	NO <sub>x</sub> control method [Water (W), Steam (S) or Other (O)]		
	NO <sub>x</sub> level (15% O <sub>2</sub> , dry)	ppmv	
	Steam (S) or Water (W) flow required to meet above figure	kg/s	
1.12	Bypass exhaust stack and damper supplied [yes (Y), or no (N)], and height of stack (m)	m	
1.13	Number of gas turbines of same model in commercial operation	-	
1.14	Total number of gas turbines of same model operating on the proposed Fuel		
1.15	Total number of actual operating hours of gas turbines of the same model on any Fuel	h	
1.16	Total number of actual operating hours of gas turbines of the same model on the proposed Fuel	h	
1.17	Gas turbine/steam turbine combination on single shaft (S) or Multi-shaft (M) arrangement		
1.18	Governor droop range and step size		
1.19	Air inlet filter type		
1.20	Inlet air cooling system supplied [yes (Y), or no (N)]		
1.21	On-line wash system supplied [yes (Y), or no (N)]		

# **D4 MECHANICAL EQUIPMENT (CONTINUED)**

Item	Description	Units	
<b>2.0</b>	<b>Heat Recovery Steam Generator (HRSG)</b>	-	
2.1	Manufacturer	-	
2.2	Number of HRSG's	-	
2.4	Maximum continuous rating with and without supplementary firing	kg/s	
2.5	If supplementary firing state Fuel rate at 100% MCR	kg/s	
2.6	Horizontal (H) or Vertical (V) gas path	-	
2.7	If (V)ertical, confirm if HRSG is Natural (S) or Forced (F) circulation type	-	
2.8	Number of pressure levels	-	
	Steam pressure (1)	bar (a)	
	Steam temperature (1)	°C	
	Steam pressure (2)	bar (a)	
	Steam temperature (2)	°C	
	Steam pressure (3)	bar (a)	
	Steam temperature (3)	°C	
2.9	If forced circulation HRSG number of circulation pumps (2 x 100%, 3 x 50% etc)	-	
2.10	Power of each HRSG circulation pump	kW	
2.11	Number of HRSG feed pumps (2 x 100%, 3 x 50% etc.)	-	
2.12	Power of each HRSG feed pump	kW	
2.13	Height of stack	M	
2.14	Gas temperature entering stack	°C	
2.15	Water temperature entering the water heater	°C	

# **D4 MECHANICAL EQUIPMENT (CONTINUED)**

Item	Description	Units	
<b>3.0</b>	<b>Steam Turbine</b>		
3.1	Manufacturer	-	
3.2	Model	-	
3.3	Number of steam turbines	-	
3.4	Number of casings	-	
3.5	Power output at reference conditions	MW	
3.6	Turbine rotor speed	RPM	
3.7	Type of HP and LP blading		
3.8	Turbine stop valve design pressure temperature	bar (g)	
3.9	Turbine stop valve design temperature	°C	
3.10	HP turbine exhaust pressure	bar (g)	
3.11	HP turbine exhaust temperature	°C	
3.12	Gearbox included [yes (Y), or no (N)]		
3.13	Number of exhaust flows in each turbine		
3.14	Downward / axial LP exhaust		
3.15	LP last blade row height	mm	
3.16	LP last blade row mean diameter	mm	
3.17	Sliding pressure control [yes (Y), or no (N)]		
3.18	Governor droop range and steep sizes		
3.19	Steam Turbine by-pass provided and % of MCR	-	



**D4 MECHANICAL EQUIPMENT (CONTINUED)**

Item	Description	Units	
<b>4.0</b>	Steam Condenser		
4.1	Type of steam condenser		
4.2	Manufacturer	-	
4.3	Circulating water quantity at 100% MCR	m <sup>3</sup> /h	
4.4	Condenser working pressure at 100% MCR	bar (a)	
4.4	Condenser water inlet temperature at 100% MCR		
4.5	Condenser cooling water temp. rise at 100% MCR	°C	
4.6	On load cleaning facility [yes (Y) or no (N)]	-	
4.7	Tube material		
4.8	Number of passes		
4.9	Number of waterboxes		
4.10	Operation with 50% flow [yes (Y) or no (N)]		
4.11	Maximum condenser working pressure	bar (a)	
4.12	Hot well temperature	°C	
4.13	Steam by-pass to condenser	%	
4.14	De-aeration arrangement [separate (S) or integral (I)]		
4.15	Waterbox materials and corrosion protection		

#### D4 MECHANICAL EQUIPMENT (CONTINUED)

Item	Description	Units	
<b>5.0</b>	<b>Cooling Water System</b> (Hybrid Cooling tower System)		
5.1	General Arrangement Sketch		
5.2	Location and type of intake structure		
5.3	Location and type of discharge structure		
5.4	Water intake and discharge capacity	m <sup>3</sup> /s	
5.5	Total cooling water flow	kg/s	
5.6	Cooling water make-up flow (evaporation losses and blow down)	kg/s	
5.7	Type of cooling tower [Forced (F) draft or Induced (I) draft mechanical fans]	-	
5.8	Plume abatement [yes (Y), or no (N)]		
5.9	No of cells		
5.10	Total fan power at 100% MCR, Reference Conditions	kW	
5.11	Total heat rejection from cooling water system	kW	
5.12	Heat rejection to sea (blow down, etc)	kW	
5.13	Number of circulating pumps (2x100%, 3x50% etc)	-	
5.14	Rating of each circulating pump	kW	
5.15	Cooling Tower Materials Structure Fill Basin Piping		
5.16	Pump manufacturer		
5.17	Tower manufacturer		

# **D4 MECHANICAL EQUIPMENT (CONTINUED)**

Item	Description	Units	
<b>6.0</b>	<b>Water Desalination Plant</b>		
6.1	Manufacturer		
6.2	Type		
6.3	Capacity	m <sup>3</sup> /h	
6.4	Continuous power demand	kW	
6.5	Storage volume of fresh water	m <sup>3</sup>	
<b>7.0</b>	<b>Water Treatment Plant</b>		
7.1	Manufacturer	-	
7.2	Number of water treatment plant streams (2 x 100%, 3 x 50% etc.)	-	
7.3	Capacity of each stream	m <sup>3</sup> /h	
7.4	Regeneration chemical consumption per cycle:		
	Acids	kg	
	Caustic soda	kg	
	Other	kg	
	Number of regenerations per week when operating on full load		
7.5	Type of chlorination plant		
7.6	Manufacturer		
7.7	Output	kg Cl / hr	
7.8	No. of streams (2x100%, 3x100%, etc.)		
7.9	Output per stream	kg Cl / hr	

**D4 MECHANICAL EQUIPMENT (CONTINUED)**

Item	Description	Units	
<b>8.0</b>	Fuel Storage and Handling		
8.1	Capacity for Fuel delivery pipeline	m <sup>3</sup> /h	
8.2	Type of Fuel treatment plant - (E)electrostatic or (C)centrifugal		
8.3	Manufacturer of the Fuel Treatment Plant		
8.4	Number of treatment streams (2 x 100% or 3 x 50% etc.)		
8.5	Capacity of each stream	m <sup>3</sup> /h	
8.6	Number of storage tanks (treated and un-treated)		
8.7	Capacity of each tank	m <sup>3</sup>	
8.8	Area allocated for future gas receiving station	m <sup>2</sup>	
8.9	Capacity of truck unloading facility	m <sup>3</sup> /h	
8.10	Main Fuel meters		
8.11	Individual Fuel meters (each unit)		

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

## D5 ELECTRICAL EQUIPMENT

Item	Description	Units	
<b>9.0</b>	<b>Gas Turbine Generator(s)</b>		
9.1	Manufacturer	-	
9.2	Type of Construction	-	
9.3	Standard voltage	-	
9.4	Rated voltage	kV	
9.5	Rated frequency	Hz	
9.6	Rated output	MVA	
9.7	Rated current	A	
9.8	Rated power factor	-	
9.9	Rated losses at 75 °C	kW	
9.10	Overload capacity	%	
9.11	Type of excitation	-	
9.12	Rated speed	rpm	
9.13	Winding connection	-	
9.14	Reactances <ul style="list-style-type: none"> <li>- synchronous reactance <math>x_d</math></li> <li>- transient reactance <math>x'_d</math></li> <li>- sub-transient reactance <math>x''_d</math>(saturated)</li> <li>- zero sequence reactance <math>x_0</math></li> </ul>	-	
9.15	Automatic voltage regulator range	-	
9.16	Insulation class <ul style="list-style-type: none"> <li>- rotor</li> <li>- stator</li> </ul>	-	
9.17	Method of generator cooling (open or closed)	-	
9.18	Cooling air maximum inlet temperature	°C	
9.19	Connection to gas turbine	-	

**D5 ELECTRICAL EQUIPMENT (CONTINUED)**

Item	Description	Units	
<b>10.0</b>	Steam Turbine Generator		
10.1	Manufacturer	-	
10.2	Type of Construction	-	
10.3	Standard voltage	-	
10.4	Rated voltage	kV	
10.5	Rated frequency	Hz	
10.6	Rated output	MVA	
10.7	Rated current	A	
10.8	Rated power factor	-	
10.9	Rated losses at 75 °C	kW	
10.10	Overload capacity	%	
10.11	Type of excitation	-	
10.12	Rated speed	rpm	
10.13	Winding connection	-	
10.14	Reactances: - synchronous reactance $x_d$ - transient reactance $x'_d$ - sub-transient reactance $x''_d$ (saturated) - zero sequence reactance $x_0$	-	
10.15	Automatic voltage regulator range	-	
10.16	Insulation class - rotor - stator	-	
10.17	Method of generator cooling (open or closed)	-	
10.18	Cooling air maximum inlet temperature	°C	
10.19	Connection to steam turbine	-	

**D5 ELECTRICAL EQUIPMENT (CONTINUED)**

Item	Description	Units	
<b>11.0</b>	<b>Gas Turbine Generator Step-up Transformer(s)</b>		
11.1	Manufacturer and country	-	
11.2	Type of construction	-	
11.3	Maximum continuous rating of each transformer	MVA	
11.4	Vector group	-	
11.5	Rated transformation ratio	kV/kV	
11.6	Type of cooling	-	
11.7	Load losses (excluding cooling fans) at nominal rating	kW	
11.8	No load losses	kW	
11.9	Cooling fan power at nominal rating	kW	
11.10	Tap change range/step size, on or off load	-	
11.11	Impedance voltage	%	
11.12	Basic Insulation levels	-	
<b>12.0</b>	<b>Steam Turbine Generator Step-up Transformer</b>		
12.1	Manufacturer and country	-	
12.2	Type of construction	-	
12.3	Maximum continuous rating of each transformer	MVA	
12.4	Vector group	-	
12.5	Rated transformation ratio	kV/kV	
12.6	Type of cooling	-	
12.7	Load losses (excluding cooling fans) at nominal rating	kW	
12.8	No load losses	kW	
12.9	Cooling fan power at nominal rating	kW	
12.10	Tap change range/step size, on or off load	-	
12.11	Impedance voltage	%	
12.12	Basic Insulation levels	-	

**D5 ELECTRICAL EQUIPMENT (CONTINUED)**

Item	Description	Units	
<b>13.0</b>	<b>Gas Turbine Unit Auxiliary Transformer(s)</b>		
13.1	Manufacturer and country	-	
13.2	Type of construction	-	
13.3	Maximum continuous rating of each transformer	MVA	
13.4	Vector group	-	
13.5	Rated transformation ratio	kV/kV	
13.6	Type of cooling	-	
13.7	Load losses (excluding cooling fans) at nominal rating	kW	
13.8	No load losses	kW	
13.9	Cooling fan power at nominal rating	kW	
13.10	Tap change range/step size, on or off load	-	
13.11	Impedance voltage	%	
<b>14.0</b>	<b>Steam Turbine Unit Auxiliary Transformer</b>		
14.1	Manufacturer and country	-	
14.2	Type of construction	-	
14.3	Maximum continuous rating of each transformer	MVA	
14.4	Vector group	-	
14.5	Rated transformation ratio	kV/kV	
14.6	Type of cooling	-	
14.7	Load losses (excluding cooling fans) at nominal rating	kW	
14.8	No load losses	kW	
14.9	Cooling fan power at nominal rating	kW	
14.10	Tap change range/step size, on or off load	-	
14.11	Impedance voltage	%	



**D5 ELECTRICAL EQUIPMENT (CONTINUED)**

Item	Description	Units	
<b>15.0</b>	<b>Station Transformer</b>		
15.1	Manufacturer and country	-	
15.2	Type of construction	-	
15.3	Maximum continuous rating of each transformer	MVA	
15.4	Vector group	-	
15.5	Rated transformation ratio	kV/kV	
15.6	Type of cooling	-	
15.7	Load losses (excluding cooling fans) at nominal rating	kW	
15.8	No load losses	kW	
15.9	Cooling fan power at nominal rating	kW	
15.10	Tap change range/step size, on or off load	-	
15.11	Impedance voltage	%	
<b>16.0</b>	<b>Medium Voltage Switchgear</b>		
16.1	Manufacturer / type	-	
16.2	Country	-	
16.3	Nominal voltage	kV	
16.4	Nominal current	A	
16.4	Circuit breaker medium [vacuum (V) or SF <sub>6</sub> (S)]	-	
16.5	Circuit breaker operating mechanism	-	
16.6	Short circuit rating/time	KA/sec	
16.7	Busbar nominal fault rating	A	

**D5 ELECTRICAL EQUIPMENT (CONTINUED)**

Item	Description	Units	
<b>17.0</b>	<b>Gas Turbine Generator Circuit Breaker(s)</b>		
17.1	Number of circuit breakers	-	
17.2	Manufacturer and country	-	
17.3	Model	-	
17.4	Rated voltage	kV	
17.5	Current rating	kA	
17.6	Circuit breaker medium [vacuum (V) or SF <sub>6</sub> (S)]		
17.7	Short circuit rating/time	KA/sec	
17.8	Making and breaking ratings (rms symmetrical)	kA	
17.9	Is this a synchronising breaker?		
<b>18.0</b>	<b>Steam Turbine Generator Circuit Breaker</b>		
18.1	Number of circuit breakers	-	
18.2	Manufacturer and country	-	
18.3	Model	-	
18.4	Rated voltage	kV	
18.5	Current rating	kA	
18.6	Circuit breaker medium [vacuum (V) or SF <sub>6</sub> (S)]		
18.7	Short circuit rating/time	KA/sec	
18.8	Making and breaking ratings (rms symmetrical)	kA	
18.9	Is this a synchronising breaker?		
<b>19.0</b>	<b>Gas Turbine Generator Transformer HV Circuit Breaker(s)</b>		
19.1	Number of circuit breakers	-	
19.2	Manufacturer and country	-	
19.3	Model	-	
19.4	Rated voltage	kV	
19.5	Current rating	kA	
19.6	Circuit breaker medium [vacuum (V) or SF <sub>6</sub> (S)]		
19.7	Short circuit rating/time	KA/sec	
19.8	Making and breaking ratings (rms symmetrical)	kA	
19.9	Is this a synchronising breaker?		

**D5 ELECTRICAL EQUIPMENT (CONTINUED)**

Item	Description	Units	
<b>20.0</b>	<b>Steam Turbine Generator Transformer HV Circuit Breaker</b>		
20.1	Number of circuit breakers	-	
20.2	Manufacturer and country	-	
20.3	Model	-	
20.4	Rated voltage	kV	
20.5	Current rating	kA	
20.6	Circuit breaker medium [vacuum (V) or SF <sub>6</sub> (S)]		
20.7	Short circuit rating/time	KA/sec	
20.8	Making and breaking ratings (rms symmetrical)	kA	
20.9	Is this a synchronising breaker?		

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

**D6 CONTROL EQUIPMENT**

Item	Description	Units	
<b>21.0</b>	<b>DCS Control System</b>		
21.1	Manufacturer	-	
21.2	Year that the system was introduced	years	
21.3	Type of communication link	-	
21.4	Total number of operator consoles	-	
21.5	Total number of keyboards	-	
21.6	Number of VDU's per console	-	
21.7	Total number of printers		
21.8	Provision of workstation [yes (Y), or no (N)]		
21.9	Manufacturers pledge for spare parts availability	years	

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

**D7 CIVIL, STRUCTURAL AND ARCHITECTURAL**

Item	Description	Units	
<b>22.0</b>	<b>Civil, Structural and Architectural</b>		
22.1	Piling to major equipment foundations and buildings [Yes(Y) or No(N)]	-	
22.2	Gas Turbine Enclosure type [Packaged outdoor (PO), Packaged inside turbine hall (PH) or unpackaged in turbine hall (UK)]	-	
22.3	Steam Turbine Enclosure type [Packaged outdoor (PO), Packaged inside turbine hall (PH) or unpackaged in turbine hall (UH)]	-	
22.4	HRSG Enclosure type [Packaged outdoor (PO), Packaged inside building (PI) or unpackaged inside building (UOI)]	-	
22.5	Administration building/main control room (air conditioned) provided [Yes (Y) or No (N)]	-	
22.6	Local control rooms (air conditioned) provided [Yes (Y) or No (No)]	-	
22.7	Fully equipped workshop (air conditioned where necessary) provided [Yes (Y) or No (N)]	-	
22.8	Fully equipped (air conditioned where necessary) stores/spare parts building provided [Yes (Y) or No (N)]	-	
22.9	Internal access and perimeter roads provided [Yes (Y) or No (N)]	-	
22.10	Complete separate secure fencing and access points provided around perimeter of project site (Yes (Y) or No (N))	-	
22.11	Surface finish to outdoor areas between roads and buildings [Compacted soil only (S). Compacted hard standing with chippings/ gravel finish (G), concrete finish (C), or vegetation (V)]	-	
22.12	External lighting to access roads and perimeter roads provided [Yes (Y) or No (N)].	-	
22.13	Fully equipped (air conditioned where necessary) water supply and water treatment building provided [Yes (Y) or No (N)]		

**Signature of Authorized Person and Seal : .....**

**Name of signatory : .....**

**Date : .....**

## D8 POWER OUTPUT, EMISSIONS, HEAT RATE

Item	Description	Units	Open Cycle		Combined Cycle	
			For Liquid Fuel	For Gas Fuel	For Liquid Fuel	For Gas Fuel
<b>23.0</b>	<b>Power Output, Emissions, Heat Rate</b>					
23.1	Gas turbine power output at generator terminals	kW				
23.2	Steam turbine power output at generator terminals	kW				
23.3	Total Facility gross output at Interconnection Point and at Reference Conditions	kW				
23.4	Auxiliary power demand and losses	kW				
23.5	Other auxiliary load including auxiliary transformer losses	kW				
23.6	Main transformer losses	kW				
23.7	Total Losses	kW				
23.8	Total net power output at high voltage side of generator set-up transformer	kW				
23.9	Gross Heat Rate (at generator terminals and Fuel HHV)	kJ/kWh				
23.10	Net Heat Rate (at Interconnection Point and Fuel HHV)	kJ/kWh				
23.11	NO <sub>x</sub> emissions (15% O <sub>2</sub> dry) when operating without emission control	mg/MJ				
23.12	NO <sub>x</sub> emissions (15% O <sub>2</sub> dry) when operating with emission control	mg/MJ				
23.13	SO <sub>x</sub> emissions (15% O <sub>2</sub> dry)	mg/MJ				
23.14	Total suspended Particulates	mg/MJ				
23.15	Noise levels: At Site boundary – day At Site boundary – night At 1 m from equipment At Start-Up	dBa dBa dBa dBa				

### Notes:

- Performance data given in this table for power output, emissions and Heat Rate shall be at Reference Conditions and 100% MCR.
- All correction curves, as identified in Schedule 5 of the draft PPA shall be attached. (If final curves are unavailable, the most recent and reliable curves shall be submitted).

**D8 POWER OUTPUT, EMISSIONS, HEAT RATE (CONT.)**

Load  % of applicable NDC	Net Heat Rate at the interconnection point kJ/kWh			
	For Liquid Fuel		For Gas Fuel	
	Open Cycle mode (each Gas Turbine)	Combined Cycle mode (Facility net output)	Open Cycle mode (each Gas Turbine)	Combined Cycle mode (Facility net output)
100				
95				
90				
85				
80				
75				
70				
65				
60				
55				
50				
45				
40				

**D8 POWER OUTPUT, EMISSIONS, HEAT RATE (CONT.)**

1.	<b>NO LOAD ENERGY</b>		
1.1	<b>For Operation with Liquid Fuel</b>		
	a) No Load Energy guaranteed for the Term and the Site Conditions for Open Cycle operation mode		kJ/hour
	b) No Load Energy guaranteed for the Term and the Site conditions for Combined Cycle operation mode		kJ/hour
1.2	<b>For Operation with Gas Fuel</b>		
	a) No Load Energy guaranteed for the Term and the Site Conditions for Open Cycle operation mode		kJ/hour
	b) No Load Energy guaranteed for the Term and the Site conditions for Combined Cycle operation mode		kJ/hour
2.	<b>INCREMENTAL HEAT RATE AT THE INTERCONNECTION POINT</b>		
2.1	<b>For Operation with Liquid Fuel</b>		
	a) Incremental Hear Rate guaranteed for the Term and the Site Conditions for Open Cycle operation mode		kJ/kWh
	b) Incremental Hear Rate guaranteed for the Term and the Site conditions for Combined Cycle operation mode		kJ/kWh
2.2	<b>For Operation with Gas Fuel</b>		
	a) Incremental Hear Rate guaranteed for the Term and the Site Conditions for Open Cycle operation mode		kJ/kWh
	b) Incremental Hear Rate guaranteed for the Term and the Site conditions for Combined Cycle operation mode		kJ/kWh

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....



**D9      DEVIATIONS TO MINIMUM FUNCTIONAL SPECIFICATIONS**

Clause / Schedule	Deviation
	<p><b>NOTE:</b> Each proposed deviation shall be described and explained.</p>

The Project Proponent confirms its acceptance of, and willingness to comply with, the minimum functional specifications without amendment save only the non-material deviations noted in the above form: The Project Proponent accepts that CANC reserves the right to accept or reject deviations given in this schedule.

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

## **SECTION E**

### **PROJECT PROPONENT'S ORGANISATIONAL, STAFFING AND QA PLAN**

#### **1. General**

The Project Proponent shall submit a plan setting out its proposed organisational arrangements. The Project Proponent's plan will describe the Company's Proposal with respect to, amongst others:

- The organisational structure of the Company;
- The staffing policies and personnel deployments to build, operate and administer the Facility, and
- Quality management systems that would be implemented to give confidence to the Government, CEB, investors, lenders and other parties that the Facility will be built, operated and managed to the standards required by them.

#### **2. Organisational Plan**

In respect of each of the Preliminary Obligations Period, Construction Period and the Operational Period, the Project Proponent shall submit separate & detailed organisation charts showing its home office management organisation (off-shore), its Sri Lankan and Site organisation (in-country) and the interfaces between them. The organisation chart shall designate for each period the following:

- authorised representative(s) of the Company and the limits of the authorisations;
- organisational units and their responsibilities;
- key personnel, their functional responsibilities and reporting paths;
- the Company's interface arrangements with relevant Government Agencies.

#### **3. Staffing Plan**

In respect of the Construction Period, the Project Proponent shall describe the staff that will be employed to carry out the following functions:

- project preparation and financing;
- formation and administration of procurement and construction contracts;
- project controls functions including overseeing procurement and construction activities to ensure time, quality and cost objectives are achieved.

In respect of the Operational Period, the Project Proponent shall submit an O&M staffing plan that describes the proposed management and staffing of the Facility. Maintenance staffing shall be provided based on a schedule of the Facility's routine maintenance and major overhauls over the Term.

#### **4. Total Quality Management Plan**

The Project Proponent shall describe the Company's Quality Assurance Plan. The Quality Assurance Plan shall meet the requirements of ISO 9001:2000 and cover all activities as required to comply with the Company's obligations under the Project Agreements.

## **SECTION F**

### **PROJECT PROPONENT'S TRANSFER PLAN**

#### **1. General**

The Project Proponent's Proposal shall include a Transfer Plan detailing the manner in which the Facility will be transferred to CEB at the end of the Term. The Transfer Plan shall form part of the PPA.

The standards and procedures offered in the Project Proponent's Transfer Plan shall be no less favourable to CEB and other Government Agencies than the minimum transfer requirements specified in Paragraph 5.6 of Schedule 5 of the Draft PPA.

The Project Proponent's Transfer Plan shall adhere to the requirements set out below.

#### **2. Minimum Performance Characteristics**

The Project Proponent shall specify the Facility minimum performance characteristics that it will guarantee to CEB at Transfer Date.

The Project Proponent shall explain in its Transfer Plan the steps it proposes to take to ensure that the Facility by the Transfer Date:

- achieves the guaranteed performance characteristics;
- is free of known defects likely to impair its long term economic performance;
- is otherwise in a physical condition consistent with it having been operated and maintained in accordance with Prudent Utility Practices for the duration of the Operational Period.

#### **3. Inspections and Tests**

The Project Proponent shall set out in its Transfer Plan the program of testing and inspection it proposes to perform to demonstrate the Facility's condition at Transfer Date.

#### **4. Cost of decommissioning**

In the event of CEB not agreed to take over the Facility at the end of the Term, the Company shall have to bear the cost of decommissioning as to handover the vacant position of the land to CEB in accordance with the Land Lease Agreement. Under the Transfer Plan, Project Proponent shall explore the estimated cost of decommissioning which is required at the end of the Term. If CEB agreed to take over the Facility at the end of the Term, for such event Company has to pay such amount accrued to CEB within three (3) Months, on completion of the Term. In the event of the Company not paid the amount within this period, CEB shall charge decommissioning from the Land Reinstatement Bond.

#### **5. Asset Transfers**

The Project Proponent's Transfer Plan shall provide for the transfer to CEB at the end of the Term of those assets used by the Company in its management, operation and maintenance of the Facility under normal and emergency conditions. It shall describe the assets to be transferred, the timing of the transfers and any conditions attaching thereto.

#### **6. Staffing and Documentation**

The Project Proponent will describe in its Transfer Plan the initiatives it proposes for transferring to CEB the knowledge, skills, documentation and intellectual property rights to ensure a smooth and efficient transition of the Facility.

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## **PART II**

### **FINANCIAL PROPOSAL FORMS**

#### **CONTENTS**

SECTION G :	Financial Proposal Letters
SECTION H :	[Not Applicable]
SECTION I :	Financial Data
SECTION J :	Financing Plan
SECTION K :	Lender's Commitment Letter

## SECTION G

### FINANCIAL PROPOSAL LETTER

#### FOR THE DEVELOPMENT OF 300MW LNG COMBINED CYCLE POWER PLANT AT KERAWALAPITIYA ON BOOT BASIS

**To:** Cabinet Appointed Negotiating Committee

**From:** [ *Project Proponent* ]

In response to the RFP CEB/AGM(TR)/DGM(PPD)/LNG2-2020 entitled "REQUEST FOR PROPOSAL FOR THE DEVELOPMENT OF 300MW LNG COMBINED CYCLE POWER PLANT AT KERAWALAPITIYA ON BOOT BASIS" and in accordance with the Instructions to Project Proponents, the undersigned hereby proposes to design, procure, finance, deliver, construct, test, commission, operate, maintain and transfer combined cycle power generation facility at Kerawalapitiya on build-own-operate-and-transfer basis, in accordance with the provisions of this RFP and Project Agreements set out in the RFP, at the prices stated opposite the respective items set forth in the Financial Proposal.

The undersigned agrees that this proposal shall remain open for acceptance and shall remain irrevocable for a period of two hundred and seventy (270) days from the Proposal Closing Date given in the RFP, and it shall remain binding upon the undersigned and may be accepted at any time before the expiration of that period. The undersigned certifies that it has examined and is fully familiar with all of the provisions of the RFP, the Project Agreements and any addenda thereto; has carefully reviewed the accuracy of all statements in the RFP and attachments thereto and, by careful examination of the RFP, the Project Agreements and any addenda thereto, is satisfied as to the nature and location of all the works, the general and local conditions under which the Project will be undertaken and all other matters which can in any way affect the Facility or the cost thereof. The undersigned hereby agrees that the Government or its representatives will not be responsible for any errors or omissions on the part of the undersigned in preparing this Proposal.

The Project Proponent has appointed a Financial Advisor that is experienced in advising on project financed power stations in Asia. We have made available to the financial advisor all information known to the Project Proponent that could reasonably be considered to be relevant to the Project's financing. We have furnished the financial advisor with all information that it has sought from the Project Proponent in connection with its financial advisory assignment. The Project Proponent hereby represents and warrants that all information provided to the Financial Advisor was true, complete and accurate at the time it was given.

The Financial Advisor has assisted in the development of the financing plan set out in Section J and we have not deviated from that plan. The Financial Advisor has also advised us of the changes to the Project Agreements that would be required for those agreements to be acceptable to prudent but experienced project finance lenders (with particular reference to those banks set out in Section J). Those variations have been addressed by amendments made to the draft Project Agreements through issue of addenda to the RFP document.

Prior to the signing of the Project Agreements, the undersigned shall provide CEB with a Preliminary Obligation Bond in the form specified in Annex III of Volume 1 of the RFP to the value of Rupees thousand one hundred (1,100) Million.

Attached hereto and by this reference incorporated herein and made a part of this proposal are the data required for "FINANCIAL PROPOSAL".

In addition to the required data, the undersigned encloses the following additional information.

.....  
.....  
.....

The undersigned also acknowledges receipt, understanding, and full consideration of the following addenda to the RFP:

Addenda Nos: \_\_\_\_\_

Signature: \_\_\_\_\_

In the Capacity of: \_\_\_\_\_ (Title)  
duly authorised to sign proposal for and on behalf of

Project Proponent: \_\_\_\_\_ (Name)

Dated: \_\_\_\_\_ at \_\_\_\_\_

Home Office:

\_\_\_\_\_ (PO Box or Street No.)  
\_\_\_\_\_ (State and Country)  
\_\_\_\_\_ (Telephone No.) \_\_\_\_\_ (Telex No.)  
\_\_\_\_\_ (Fax No.)

Attention: \_\_\_\_\_ (Name and capacity of authorised representative  
for Project Proponent)

Address in Sri Lanka (if applicable):

\_\_\_\_\_ (PO Box or Street No.)  
\_\_\_\_\_ (State and Country)  
\_\_\_\_\_ (Telephone No.) \_\_\_\_\_ (Telex No.)  
\_\_\_\_\_ (Fax No)

[Letterhead of Financial Advisor]

## **SECTION G**

### **FINANCIAL PROPOSAL LETTER FROM PROJECT PROPONENT'S FINANCIAL ADVISOR**

#### **FOR THE DEVELOPMENT OF LNG COMBINED CYCLE POWER PLANT AT KERALAPITIYA ON BOOT BASIS**

**To:** Cabinet Appointed Negotiating Committee  
**From:** [ Project Proponent's Financial Advisor]

In response to the RFP Document no. [ ] entitled "REQUEST FOR PROPOSAL FOR THE DEVELOPMENT OF SECOND 300 MW LNG COMBINED CYCLE POWER PLANT AT KERALAPITIYA ON BOOT BASIS and in accordance with the Instructions to Project Proponents, the undersigned advises that we have been appointed by [ ] (the "Project Proponent") to provide financial advice in respect of the Project Proponent's Financial Proposal.

The undersigned certifies that we have examined and are fully familiar with all of the provisions of the RFP, the Project Agreements and any addenda thereto (insofar as they relate to the financing of the Project); and is satisfied as to all matters that relate to the financing of the Project (insofar as they can be reasonably known at this stage in the Project's development). The undersigned hereby acknowledges that it is aware that the Government and CEB will be relying, inter alia, on our advice in determining whether the Project Proponent will be successful.

We are satisfied that we have had sufficient information and made sufficient enquiries to be able to assist the Project Proponent's development of a financing plan for the Project that is achievable under current market conditions. We have been assured by our client that all information it has provided was true, complete and accurate at the time it was given

We have also reviewed the Project Agreements and discussed the variations to those agreements that we believe are necessary in order for the agreements to be acceptable to prudent but experienced project finance lenders (with particular reference to those banks set out in Section J). To the best of our understanding those variations have been addressed to our satisfaction by amendments made to the draft Project Agreements through issue of addenda to the RFP document.

Accordingly, we endorse the financing plan contained in the Project Proponent's Financial Proposal without further reservation.

Yours Sincerely,  
For and on Behalf of  
**[Name of Financial Advisor]**

---

Name of Authorised Signatory



## **SECTION H**

[NOT APPLICABLE]

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## **SECTION I**

### **FINANCIAL DATA**

- I-(A) PROPOSED CONTRACT BASE RATES AND OTHER FINANCIAL DATA
- I-(B) FINANCIAL TEMPLATE
- I-(C) NOTES TO FINANCIAL DATA

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## I-(A) PROPOSED CONTRACT BASE RATES AND OTHER FINANCIAL DATA

1. The Net Dependable Capacity of the Facility at Site Conditions and on the Fuel specified shall be as stated in the Commercial and Technical Proposal, viz.:
2. The Average Availability of the Plant operating in Combined Cycle mode shall be: \_\_\_\_\_ % (as stated in the Commercial and Technical Proposal).
3. The following values will remain constant throughout the Term of the PPA.

Note: If there is any discrepancy among input data and output values indicated in the financial proposal, electronic version of completed financial template and information in printed copy of financial template, the figures in printed copy of financial template will prevail.

### (i) For Open Cycle Operation Mode

Values for Open Cycle Operational Period and open cycle mode operation during Combined Cycle (L) Operational Period			Values for open cycle operation mode during Combined Cycle (N) Operational Period		
Parameter	Units	Value	Parameter	Units	Value
IHR <sub>OL</sub> (net, HHV)	kJ/kWh		IHR <sub>ON</sub> (net, HHV)	kJ/kWh	
NL <sub>1OL</sub> (net, HHV)	kJ/hour/1 <sup>st</sup> gas turbine		NL <sub>1ON</sub> (net, HHV)	kJ/hour/1 <sup>st</sup> gas turbine	
NL <sub>2OL</sub> (net, HHV)	kJ/hour/2 <sup>nd</sup> gas turbine		NL <sub>2ON</sub> (net, HHV)	kJ/hour/2 <sup>nd</sup> gas turbine	
DFOM <sub>bOL</sub>	US\$/kW/year		DFOM <sub>bON</sub>	US\$/kW/year	
RFOM <sub>bOL</sub>	Rs/kW/year		RFOM <sub>bON</sub>	Rs/kW/year	
DVOM <sub>bOL</sub>	US\$/kWh		DVOM <sub>bON</sub>	US\$/kWh	
RVOM <sub>bOL</sub>	Rs/kWh		RVOM <sub>bON</sub>	Rs/kWh	
NDC <sub>OL</sub>	kW		NDC <sub>ON</sub>	kW	
S <sub>hOL</sub>	Rs/Hot Start		S <sub>hON</sub>	Rs/Hot Start	
S <sub>wOL</sub>	Rs/Warm Start		S <sub>wON</sub>	Rs/Warm Start	
S <sub>cOL</sub>	Rs/Cold Start		S <sub>cON</sub>	Rs/Cold Start	

**I-(A) PROPOSED CONTRACT BASE RATES AND OTHER FINANCIAL DATA (CONT.)**

**(ii) For Combined Cycle Operation Mode**

Values for combined cycle operation mode during Combined Cycle (L) Operational Period			Values for combined cycle operation mode during Combined Cycle (N) Operational Period		
Parameter	Units	Value	Parameter	Units	Value
$IHR_{CL}$ (net, HHV)	kJ/kWh		$IHR_{CN}$ (net, HHV)	kJ/kWh	
$NL_{1CL}$ (net, HHV)	kJ/hour/1 <sup>st</sup> gas turbine		$NL_{1CN}$ (net, HHV)	kJ/hour/1 <sup>st</sup> gas turbine	
$NL_{2CL}$ (net, HHV)	kJ/hour/2 <sup>nd</sup> gas turbine		$NL_{2CN}$ (net, HHV)	kJ/hour/2 <sup>nd</sup> gas turbine	
$DFOM_{bCL}$	US\$/kW/year		$DFOM_{bCN}$	US\$/kW/year	
$RFOM_{bCL}$	Rs/kW/year		$RFOM_{bCN}$	Rs/kW/year	
$DVOM_{bCL}$	US\$/kWh		$DVOM_{bCN}$	US\$/kWh	
$RVOM_{bCL}$	Rs/kWh		$RVOM_{bCN}$	Rs/kWh	
$NDC_{CL}$	kW		$NDC_{bCN}$	kW	
$S_{hCL}$	Rs/Hot Start		$S_{hCN}$	Rs/Hot Start	
$S_{wCL}$	Rs/Warm Start		$S_{wCN}$	Rs/Warm Start	
$S_{cCL}$	Rs/Cold Start		$S_{cCN}$	Rs/Cold Start	

**Signature of Authorized Person and Seal : .....**

**Name of signatory : .....**

**Date : .....**

#### 4. Capital Cost Recovery

The following values for the Capital Cost Recovery Rate (CCR) will be used through the Term of the PPA:

- (i) For the period from Open Cycle Operation Date to the Combined Cycle Commissioning Date (If the Facility is operated with Liquid Fuel):

RCCR<sub>OL</sub>: \_\_\_\_\_Rs/kW/Year

DCCR<sub>OL</sub>: \_\_\_\_\_USD/kW/Year

For the period from Open Cycle Operation Date to the Combined Cycle Commissioning Date (If the Facility is operated with Gas Fuel):

RCCR<sub>ON</sub>: \_\_\_\_\_Rs/kW/Year

DCCR<sub>ON</sub>: \_\_\_\_\_USD/kW/Year

Signature of Authorized Person and Seal : .....

Name of signatory : .....

Date : .....

# **I-(A) PROPOSED CONTRACT BASE RATES AND OTHER FINANCIAL DATA (CONT.)**

## **(ii) For the Combined Cycle Operational Period:**

### **(a) Combined Cycle (L) Operational Period**

	US Dollar Debt Service Rate	US Dollar Return on Equity Rate	US Dollar Component of the Capital Cost Recovery Rate	Rupee Debt Service Rate	Rupee Return on Equity Rate	Rupee Component of the Capital Cost Recovery Rate
	<b>DCCR<sub>YDCL</sub></b>	<b>DCCR<sub>YECL</sub></b>	<b>DCCR<sub>YCL</sub></b>	<b>RCCR<sub>YDCL</sub></b>	<b>RCCR<sub>YECL</sub></b>	<b>RCCR<sub>YCL</sub></b>
	US\$/kW/Year	US\$/kW/Year	US\$/kW/year	Rs/kW/Year	Rs/kW/Year	Rs/kW/year
Contract Year 1						
Contract Year 2						
Contract Year 3						
Contract Year 4						
Contract Year 5						
Contract Year 6						
Contract Year 7						
Contract Year 8						
Contract Year 9						
Contract Year 10						
Contract Year 11						
Contract Year 12						
Contract Year 13						
Contract Year 14						
Contract Year 15						
Contract Year 16						
Contract Year 17						
Contract Year 18						
Contract Year 19						
Contract Year 20						
Contract Year 21						
Contract Year 22						
Contract Year 23						
Contract Year 24						
Contract Year 25						

# **I-(A) PROPOSED CONTRACT BASE RATES AND OTHER FINANCIAL DATA (CONT.)**

## **(b) Combined Cycle (N) Operational Period**

	US Dollar Debt Service Rate	US Dollar Return on Equity Rate	US Dollar Component of the Capital Cost Recovery Rate	Rupee Debt Service Rate	Rupee Return on Equity Rate	Rupee Component of the Capital Cost Recovery Rate
	<b>DCCR<sub>YDCN</sub></b>	<b>DCCR<sub>YECN</sub></b>	<b>DCCR<sub>YCN</sub></b>	<b>RCCR<sub>YDCN</sub></b>	<b>RCCR<sub>YECN</sub></b>	<b>RCCR<sub>YCN</sub></b>
	US\$/kW/Year	US\$/kW/Year	US\$/kW/year	Rs/kW/Year	Rs/kW/Year	Rs/kW/year
Contract Year 1						
Contract Year 2						
Contract Year 3						
Contract Year 4						
Contract Year 5						
Contract Year 6						
Contract Year 7						
Contract Year 8						
Contract Year 9						
Contract Year 10						
Contract Year 11						
Contract Year 12						
Contract Year 13						
Contract Year 14						
Contract Year 15						
Contract Year 16						
Contract Year 17						
Contract Year 18						
Contract Year 19						
Contract Year 20						
Contract Year 21						
Contract Year 22						
Contract Year 23						
Contract Year 24						
Contract Year 25						

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

## I-(A) PROPOSED CONTRACT BASE RATES AND OTHER FINANCIAL DATA (CONT.)

### 5. Break Down of Variable and Fixed O&M Costs:

The Project Proponent is required to indicate in below tables the breakdown of variable and fixed O&M costs that are referred in Section I-(A).

#### (i) Open Cycle Operational Period and Open Cycle Operation Mode with Liquid Fuel

		Value
1.	DFOM <sub>bOL</sub>	
a)		
b)		
c)		
d)		
	DFOM <sub>bOL</sub> in US\$/kW/year	
2.	RFOM <sub>bOL</sub>	
a)		
b)		
c)		
d)		
	RFOM <sub>bOL</sub> in Rs/kW/year	
3.	DVOM <sub>bOL</sub>	
a)		
b)		
c)		
d)		
	DVOM <sub>bOL</sub> in US\$ /kWh	
4.	RVOM <sub>bOL</sub>	
a)		
b)		
c)		
d)		
	RVOM <sub>bOL</sub> in Rs/kWh	



**I-(A) PROPOSED CONTRACT BASE RATES AND OTHER FINANCIAL DATA (CONT.)**

**(ii) Open Cycle Operation with Gas Fuel**

		Value
1.	DFOM <sub>bON</sub>	
a)		
b)		
c)		
d)		
	DFOM <sub>bON</sub> in US\$/kW/year	
2.	RFOM <sub>bON</sub>	
a)		
b)		
c)		
d)		
	RFOM <sub>bON</sub> in Rs/kW/year	
3.	DVOM <sub>bON</sub>	
a)		
b)		
c)		
d)		
	DVOM <sub>bON</sub> in US\$ /kWh	
4.	RVOM <sub>bON</sub>	
a)		
b)		
c)		
d)		
	RVOM <sub>bON</sub> in Rs/kWh	

**I-(A) PROPOSED CONTRACT BASE RATES AND OTHER FINANCIAL DATA (CONT.)**

**(iii) Combined Cycle (L) Operational Period**

		Value
1.	DFOM <sub>bCL</sub>	
a)		
b)		
c)		
d)		
	DFOM <sub>bCL</sub> in US\$/kW/year	
2.	RFOM <sub>bCL</sub>	
a)		
b)		
c)		
d)		
	RFOM <sub>bCL</sub> in Rs/kW/year	
3.	DVOM <sub>bCL</sub>	
a)		
b)		
c)		
d)		
	DVOM <sub>bCL</sub> in US\$ /kWh	
4.	RVOM <sub>bCL</sub>	
a)		
b)		
c)		
d)		
	RVOM <sub>bCL</sub> in Rs/kWh	

**I-(A) PROPOSED CONTRACT BASE RATES AND OTHER FINANCIAL DATA (CONT.)**

**(iv) Combined Cycle (N) Operational Period**

		Value
1.	DFOM <sub>bCN</sub>	
a)		
b)		
c)		
d)		
	DFOM <sub>bCN</sub> in US\$/kW/year	
2.	RFOM <sub>bCN</sub>	
a)		
b)		
c)		
d)		
	RFOM <sub>bCN</sub> in Rs/kW/year	
3.	DVOM <sub>bCN</sub>	
a)		
b)		
c)		
d)		
	DVOM <sub>bCN</sub> in US\$ /kWh	
4.	RVOM <sub>bCN</sub>	
a)		
b)		
c)		
d)		
	RVOM <sub>bCN</sub> in Rs/kWh	

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

**I-(A) PROPOSED CONTRACT BASE RATES AND OTHER FINANCIAL DATA (CONT.)**

**6. Start Up Cost**

Start up	Start UP Cost in Rs			
	Open Cycle Operation with Liquid Fuel	Combined Cycle with Operation with Liquid Fuel	Open Cycle Operation with Gas Fuel	Combined Cycle with Operation with Gas Fuel
Hot				
Warm				
Cold				

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

**I-(A) PROPOSED CONTRACT BASE RATES AND OTHER FINANCIAL DATA (CONT.)**

**7. Project Cost**

	<b>US\$ Component</b>	<b>Rs. Component</b>
Land		
Gas Turbine sets		
Steam Turbines sets		
HRSG		
Condensate and Feed Water System		
Instrumentation, Control & Protection System		
Mechanical BOP		
Electrical BOP		
Fuel Treatment and Storage		
Water Intake		
Circulating Water and cooling water system		
Water Treatment System		
Civil Works		
Erection Cost		
Transmission Cost		
Engineering, Management& project Development Cost		
Inland transport		
Initial Spares		
Permits and approvals		
Proposal preparation and Negotiation		
Interest during Construction		
Financing Cost		
Interest for Initial Working Capital		
Any other Cost		
Contingency		

**Signature of Authorized Person and Seal :** .....

**Name of signatory :** .....

**Date :** .....

## **I-(B) FINANCIAL TEMPLATE**

In Place of this page insert the following duly completed Spread Sheet

NOTE: Project Proponent is required to attach

1. Hard copy of duly completed Financial Template in A3 size papers
2. Electronic Format of completed Financial Template

**File name – Financial\_Template\_LNG2\_2021.xls**

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## **I-(C) NOTES TO FINANCIAL DATA**

The Financial Template set out in Section I-(B) is also provided in software form as a Microsoft Excel spreadsheet.

Where possible and practical, formulae have been included in the Financial Template in a form consistent with the PPA and these formulae are not repeated in these notes. The Project Proponent is not to amend formulae other than in respect of adding further loans as mentioned in Section 2.0 below.

If the Project Proponent believes the Financial Template contains an error or errors, The Project Proponent shall seek clarification under the Clause 3.3 of Volume I. Such written notice shall set out the nature of the perceived error(s) and, if appropriate, propose amendments for rectifying them. Error(s) notified earlier than 30 days prior to Proposal Closing, may be clarified or corrected by issue of an Addendum.

All figures to be entered in the Financial Template shall be provided in nominal terms. Although escalable items have been identified in the tariff given in the PPA, for the purpose of Financial Template the rate of escalation and the change of the exchange parities are considered zero

**General Note:** The Financial Template denotes the first Operational Year as "0". It is assumed for the purpose of financial evaluation only that the Facility will operate in Open Cycle Mode for the first year. Further it is considered for the purpose of the Financial Template that the first contract year the Facility is operated with Liquid Fuel and the rest of the contract years with Gas Fuel.

An explanation of items in the Financial Template is provided in the following paragraphs:

### **1.0 BASE DATA**

#### **1.1 Project Cost**

The project cost (as given in the item no 5 in the Section I-(A) of this Volume) shall be entered into Financial Template under item 2.0 (the page named "PC") as to be incurred in different currencies as stated in the item no 2.0. The breakdown of the total project cost as to be incurred during the years of construction shall be entered in the appropriate cells under the item no 2.0 of the Template. The total project cost to be incurred in each year in each currencies and the total project cost in currencies as given under the item no 2.0 will be calculated as per the formulas entered in the Template.

#### **1.2 Construction Period**

The Construction Period is as defined in the Volume III, (Draft PPA), to be expressed in months. This has been already entered under the item no 1.5 in the Financial Template.

#### **1.3 Net Dependable Capacity (MWe)**

The Net Dependable Capacity of the Facility for the Open Cycle Operational Period and Open Cycle Operation Mode in Combined Cycle (L) Operational Period,  $NDC_{OL}$ ,

the combined Cycle Operation Mode in Combined Cycle (L) Operational Period,  $NDC_{CL}$ , the combined Cycle Operation Mode In Combined Cycle (N) Operational Period,  $NDC_{CN}$  and Open Cycle Operation Mode in Combined Cycle (N) Operational Period,  $NDC_{ON}$  shall be entered into the Financial Template under Item 1.1 expressed in MWe.

#### 1.4 Debt

The Debt % (Item 1.3 Financial Template worksheet "PC") is the sum of all debt finance to be made available to the Company by the Company's proposed Lenders, divided by the Total Project Cost and expressed as a percentage to two decimal places. The debt portions drawn by years during the Construction Period in each currency shall be entered in under the Item No 3.0.

#### 1.5 Equity

The Equity % shall be (Item 1.4 Financial Template worksheet "PC") the sum of all finance to be made available to the Company by the Company's proposed shareholders, divided by the Total Project Cost and expressed as a percentage to two decimal places. The Equity portions subscribed by years during the Construction Period in each currency shall be entered in under the Item No 3.0.

#### 1.6 Term of Agreement

The Term of the PPA is defined in Volume III The term shall be a period of twenty years from the Combined Cycle Operation Date and has been entered under the item no 1.6.

#### 1.7 Discount Factor

The discount factor is the rate at which the Tariff is discounted to arrive at the levelized price. A discount rate of ten percent (10%) has been entered under the item no 1.7 and will be applied in the levelising of Tariffs for the purposes of evaluation.

#### 1.8 Reference Exchange Rate

For the purpose of evaluation, the relevant buying Exchange Rates, published on [14 days prior to the date of publishing RFP document] by the Central Bank of Sri Lanka. These rates shall be used in the conversions of currencies as required by the Template.

#### 1.9 Escalation

Escalation is considered as 0% for the purpose of the Financial Template.

### 2.0 FINANCING

Debts and equity parts of financing shall be entered into Financial Template under item 3.0 (the page named "Fin"). Financial Template provides for three packages of foreign currency (USD) debts and one package of Rupee debts. If the Project Proponent has more loans than are provided for, the Project Proponent may amend the Financial Template to reflect those additional loans, provided the same format for those loans is used.



- 2.1 The repayments of the debts are in equal annual instalments during the repayment period. The interests are paid from the Year 1 (from the Combined Cycle Operation Date) calculated for the average of opening and closing balance of the outstanding debt.
- 2.2 Equity return is calculated for the Year "0" (Open Cycle Period) for the equity amount to be incurred for the Open Cycle Part only. The equal equity return for the twenty five (25) contract years is calculated based on the total net equity employed as per Year "0" after transferring the equity employed in the Year "1" to the Year "0".

### **3.0 OPERATIONAL CHARACTERISTICS**

The required operational characteristics for the Financial Template are given under item 4.0 (the page named "OC").

#### **3.1 Plant Data**

The plant data given in the item 4.1 of the Financial Template shall be entered as provided in the Proposal Forms

#### **3.2 Base O&M Costs and Start-up Costs.**

These costs shall be entered in the item 4.2 of the Financial Template shall be entered as provided in the Proposal Forms

### **4.0 TARIFF CALCULATION**

The proposed tariff for evaluation is the sum of Capacity Charges, Energy Charges and Start-Up Allowances. The tariff is calculated for the evaluation purposes as per the Item No. 5 (Pages named T1, T2 and T3) in the Financial Template. The Page T1 under the Item no 5.1 provides tariff calculations considering that Liquid Fuel is used throughout Operational Period. The Page T2 under the Item no 5.2 provides the tariff calculation considering that Liquid Fuel is used for the Open Cycle Operational Period and Gas Fuel is used throughout Combined Cycle Operational Period. The Page T3 under the Item no 5.3 Provides the tariff calculation considering that Liquid Fuel is used for the Open Cycle Operational Period and for the 1<sup>st</sup> and 2<sup>nd</sup> Contract Years and Gas Fuel is used from the 3<sup>rd</sup> Contract Year to the end of the Combined Cycle Operational Period.

The equity returns for the Year "0" (Open Cycle Period is calculated) considering the equity spend on for the open cycle plant during the year "-1" only. The equity return for the Contract Years are equally distributed to achieve the required equity rate of return.

The expected energy generation per year is calculated under item No. 5.1.2.1 in the page T1 and No. 5.2.2.1 in the page T2 Considering (i) the load patterns given in the items nos. 4.1.14, 4.1.15 and 4.1.16 in the page OC (ii) time taken to the load from the 1<sup>st</sup> synchronization as per the items nos. 4.1.8, 4.1.9 and 4.1.10 in the page OC (iii) Time taken to the de-synchronization to the form the load as per the items nos. 4.1.11 in the page OC (this is considered for all the loads.), The arithmetic average of the

load during the loading and de-loading considered for the energy generation calculation.

The tables for the Capital Coast recovery given under the item no 4 of the Section I of this Volume shall be completed from the relevant calculated values found under the items nos. 5.1.1.1 and 5.2.1.1 in the page “T1” and “T2” respectively.

The levelized tariff is calculated in the Page “T3” dividing present value of the of the total payment by present amount of the total electricity generation.

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## **SECTION J**

### **FINANCING PLAN**

#### **1.0 FINANCING PLAN STRUCTURE**

Each Project Proponent's Financing Plan shall comprise: Financing Plan, being that amount required to finance the Project's costs to completion.

The Financing Plan shall address the total Project costs and how the Project Proponent proposes to finance those costs with equity and debt. The Financing Plan shall be consistent with the information given under Financial Data, Section I.

#### **2.0 TIED FINANCE**

Particular reference shall be made to whether finance is tied to the supply of certain goods and services, investment or other resources required by the Project.

#### **3.0 FOREIGN EXCHANGE AND INTEREST RATE RISK**

The Company shall not be permitted to pass interest or exchange rate risk through the PPA to CEB other than to the extent allowed under the Project Agreements. Project Proponents shall therefore detail how they plan to mitigate interest and exchange rate risk in their financing plans. It is preferred that the debt finance for the Project is committed in US\$ terms and at fixed interest rates;

##### *a.* Foreign Exchange Risk

The extent to which currencies of finance and expenditure are matched during the construction period is also to be discussed in the Financing Plan. The Project Proponent is to outline in reasonable detail how it proposes to mitigate the foreign currency risks associated with any mismatch between funding and construction related expenditures.

##### *b.* Interest Rate Risk

The proportion of debt finance that is fixed is to be given in the Financing Plan, together with the period during which that fixing applies. Further, the proportions of interest rate risk that are fixed (i) natively under the facilities concerned and (ii) through separate hedging arrangements is to be provided.

#### **4.0 FINANCIAL COVENANTS**

Financial Plans shall consider which financial covenants prudent and experienced project lenders might expect in respect of the Project. These shall include, for example:

gearing covenants, debt service cover ratios, the extent to which a debt service and other reserve account(s) may be required, whether offshore accounts are necessary. A commentary shall be provided on how the Project Proponent's proposed Project's cash flows perform against these requirements.

## **5.0 IMPLEMENTATION TIMETABLE AND PROCESS**

Each Project Proponent shall set out (in narrative and GANTT chart form) the timetable. It would plan to work in respect of finance, with particular regard to key milestones such as finalisation of Project agreements, issuance of information memoranda, selection of underwriters (if any), documentation, loan signing, satisfaction of conditions precedent and financial close.

## **6.0 SUPPORT LETTERS**

Expressions of interest from financial institutions for an amount not less than debt proposed shall be provided. Each letter shall explore the level of project finance experience the bank concerned has, with particular reference to power station financings in the Asian region.

Project Proponents shall also provide a tabulation of:

- Names of financial institutions for which support letters have been obtained;
- The potential role(s) of each financial institution (e.g. underwriter, arranger, lender, guarantor, hedging);
- Facility under which it is proposed financial institution might participate;
- Amounts up to which each financial institution is expected to lend;
- Short commentary on recent and relevant financings.

Regarding the provision of numeric information, if a range is given, then the most conservative number will be applied in the evaluation of the Proposal.

## **7.0 PROJECT FINANCE**

The Financing Plan shall not only show the division between shareholder equity and debt at the date of execution of the Project Agreements, but should also indicate the evolution of this division during the Project's Construction Period and Operational Period.

### **a. Shareholders' Equity**

The Financing Plan shall clearly indicate the extent to which the Project will be financed by the Company's shareholders. Of that financing, proposed shareholder funding shall be tabulated to show for each proposed shareholder:

- the amount that each shareholder proposes to contribute;
- the manner in which those funds are to be injected (e.g. equity or loans)
- the proposed currencies of their commitments;

- the timing of their respective equity contributions during the Project's construction.
- the degree to which stand-by finance will be made available to the Company by the shareholders.

b. Debt Finance

Project Proponents shall also furnish details of the expected debt finance for the Project, giving full details of:

- Amount of the debt facility
- Type of debt facility (e.g. commercial loan, export credit, bond, guarantee)
- Currency of debt facility
- Interest rate basis (e.g. LIBOR, CIRR) and current interest rate
- Whether interest is fixed or floating rate
- Likely margin / guarantee fee
- Likely front-end fee
- Likely commitment fee
- Likely credit insurance premium (if any)
- Any other fees or charges associated with the debt facility
- Period in months during which IDC is funded under debt facility
- Grace period for loan principal (in months)
- Month in which the first repayment is to be made
- Repayment period (in months)
- Final maturity
- Average life of the debt facility
- Repayment type (e.g. equal payments of principal, annuity style, profiled to cash flow)
- Other relevant details shall also be specified.

In specifying the above, if a range is given, the most conservative number will be applied by CANC in the evaluation of the Proposal.

## SECTION K

### LENDER'S COMMITMENT LETTER

LETTER OF COMMITMENT FROM PROPOSED LENDER(S)

[Letter Head of the Proposed Lender]

Date:

Letter of Commitment from Proposed Lender

In connection with the participation of [name of the Project Proponent(s)] in the Request for Proposal (RFP) Process for the [name of the project] (the "Project"), we have carefully reviewed and considered the provisions of the aforesaid RFP including the draft Power Purchase Agreement, draft Liquid Fuel Supply Agreement, draft Land Lease Agreement, draft Implementation Agreement and subsequent addendums issued for the Project, the Project Proponent(s) business plan and financial projections, and confirm our commitment to providing financing to the Project Company that the [name of the Project Proponent(s)] will incorporate for the purpose of implementation of the Project, if and when it is declared by the procuring authority as the winning bidder on the basis of the attached Term Sheet(s) (Annex1) and subject to the Lending Conditions (Annex 2) set out herewith.

We also confirm that none of the provisions in the Term Sheet and Lending Conditions are in conflict with the provisions of the RFP including the draft Power Purchase Agreement, draft Liquid Fuel Supply Agreement, draft Land Lease Agreement, draft Implementation Agreement and subsequent addendums issued.

We are also enclosing Statements (Annex 3) on:

- the approval status of our financing as at the date of issuing this letter and Term Sheet(s)
- the required pending approvals prior to signing-off the financing agreements;
- the due diligence we have carried out to date; and
- the pending due diligence to be carried out prior to final approval, as applicable.

Sincerely yours,

[Name of Proposed Lender]

By:

[Full Name of duly authorized officer]

[Official designation]

Annex 1 - Term Sheet (To be provided by the lender)

Annex 2 - Lending Conditions (To be provided by the lender)

Annex 3 - Statements (To be provided by the lender)