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BEFORE
THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (NEPRA)

TARIFF PETITION

ON BEHALF OF

PUNJAB THERMAL POWER (PRIVATE) LIMITED (PTPL)

FOR NEPRA'S APPROVAL OF REFERENCE GENERATION TARIFF FOR PTPL

FOR PUNJAB POWER PLANT, JHANG OF 1,242.7 MW
(NET AT RSC)

AT

DISTRICT JHANG

DATED: SEPTEMBER 13, 2017

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GLOSSARY

BALLOKI POWER PROJECT	Balloki Power Plant (1,198.555 MW) established by GOP through National Power Parks Management Company (Private) Limited
BHIKKI POWER PROJECT	Bhikki Power Plant (1,156.675 MW) established by GoPb through Quaid-e-Azam Thermal Power (Private) Limited
BHIKKI TARIFF DETERMINATION	NEPRA tariff determination No. NEPRA/TRF-347/QATPL-2016/5034-5037 dated April 14, 2016 for Bhikki Power Project.
BOO	Build, Own and Operate
BTU	British Thermal Unit
CC	Combined Cycle
CCPP	Combined Cycle Power Plant
CMEC	China Machinery Engineering Corporation
COD	Commercial Operations Date
CPI	Consumer Price Index
CPP	Capacity Purchase Price
CPPA-G	Central Power Purchasing Agency (Guarantee) Limited
ECC	Economic Coordination Committee
EPC	Engineering Procurement and Construction
EPP	Energy Purchase Price
GAS SUPPLIER	SNGPL / PLL or any other entity nominated as the gas supplier and with whom the GSA is executed.
GSA	Gas Supply Agreement
GOP	Government of Pakistan
GoPb	Government of the Punjab
GST	General Sales Tax
GT	Gas Turbine
HAVELI POWER PROJECT	Haveli Bahadur Shah Power Plant (1,207.90 MW) established by GOP through National Power Parks Management Company (Private) Limited
HSD	High Speed Diesel
IA	Implementation Agreement
ICB	International Competitive Bidding
IDC	Interest During Construction
IPP	Independent Power Producer
IRR	Internal Rate of Return
ISO	International Standards Organization
KIBOR	Karachi Inter Bank Offered Rate
kW	Kilowatt
kWh	Kilowatt hour
L/C	Letter of Credit
LHV	Lower Heating Value
LOWEST EVALUATED BIDDER	Means CMEC
LTSA	Long Term Service Agreement
MW	Megawatt, i.e., 1,000,000 Watts
MWh	Megawatt hour

NEPRA	National Electric Power Regulatory Authority
NEPRA ACT	Regulation for Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997)
NEPRA RULES	NEPRA (Tariff Standards and Procedure) Rules, 1998
NTDC	National Transmission & Dispatch Company
OEM	Original Equipment Manufacturer
O&M	Operation & Maintenance
PKR	Pakistani Rupees, the legal currency of Pakistan
POWER POLICY 2015	Policy For Power Generation Projects issued by the Federal Government of Pakistan in 2015
PPA	Power Purchase Agreement
PPIB	The Private Power & Infrastructure Board of the Government of Pakistan
PROJECT	Punjab Power Plant, Jhang located near Haveli Bahadur Shah /Trimmu Barrage, 1,242.7 MW capacity (Net at RSC) RLNG based CCPP.
PETITIONER	Punjab Thermal Power (Private) Limited or PTPL
PLL	Pakistan LNG Limited
PPRA RULES	Punjab Procurement Rules, 2014 notified under the Punjab Procurement Regulatory Authority Act 2009.
RLNG	Re-Gasified Liquefied Natural Gas
ROE	Return on Equity
RSC	Reference Site Condition
SC	Simple Cycle
SITE	Near Haveli Bahadur Shah /Trimmu Barrage Jhang
SNGPL	Sui Northern Gas Pipelines Limited
TON	Metric Tonne i.e. 1000 kg
US CPI	United States Consumer Price Index
USD	United States Dollar, the legal currency of the United States of America

1. DETAILS OF THE PETITIONER

NAME AND ADDRESS

Punjab Thermal Power (Private) Limited
(A wholly owned company of Government of the Punjab)
First Floor 7-C-1, Gulberg III, Lahore
Tel# (042) 35750936-8
Fax# (042) 35750939

REPRESENTATIVE OF Punjab Thermal Power (Private) Limited

Mr. Ahad Khan Cheema
Chief Executive Officer
Punjab Thermal Power (Private) Limited

2. BACKGROUND – REGULATORY FRAMEWORK & GOP APPROVAL

2.1 NATIONAL ELECTRIC POWER REGULATORY AUTHORITY – THE COMPETENT AUTHORITY FOR DETERMINATION OF TARIFF

2.1.1 Background

The Petitioner submitted tariff petition dated July 27, 2017 for the Project. The tariff petition was submitted in the wake of stringent timelines of the Project, whereby among other things, the financial close of the Project, was envisioned to be achieved by mid of October 2017 in public interest. Therefore, the submitted tariff petition was based on schedule of reference charges and costs which had been approved earlier by the Authority in other RLNG-based public sector projects (**Schedule – A**). It was specifically stated that the assumption / reference figures would be actualized once the figures were finalized as a consequence of procurement under the PPRA Rules. However, vide letter dated August 16, 2017 the tariff petition was returned.

In the meantime, the Petitioner undertook the procurement process for finalization of EPC contractor in a fair and transparent manner, with the objective of achieving value for money, in accordance with the PPRA Rules. The ICB process attracted bids from renowned EPC contractors and manufacturers of gas turbines at very competitive costs / prices. As a result, the Petitioner has received un-precedent lowest EPC and LTSA prices.

Accordingly, the existing tariff petition, including the data and facts submitted therein, for the purposes of seeking reference tariff, is supported by the requisite evidence in the form of bid submitted by the CMEC, as already determined and notified as lowest / successful bidder. It is pertinent to mention that the tariff petitions based on evidence as a consequence of ICB process have earlier also been admitted for hearing by the Authority. However, copy of executed EPC contract will be provided within September, 2017.

2.1.2 NEPRA Act & NEPRA Rules

Under the NEPRA Act, NEPRA is responsible, inter alia, for determining tariffs and other terms and conditions for the supply of electricity by generation, transmission and distribution companies and recommend to the Federal Government for notification. NEPRA is also responsible for determining the process and procedures for reviewing / recommending tariffs and tariff adjustments. Further, pursuant to the enabling provisions of the NEPRA Act, the procedure for tariff determination has been prescribed in the NEPRA Rules.

2.1.3 Power Policy 2015

In accordance with the NEPRA Act, the NEPRA Rules, read with the enabling provisions of the Power Policy, 2015, PTPL submits its petition for tariff approval before NEPRA.

2.1.4 Salient Features of the Project

Salient features of the project are as under:

Project	1,263.2 MW (Gross at RSC); and 1,242.7 MW (Net at RSC) RLNG based Combined Cycle Power Plant	
Site Location	Near Haveli Bahadur Shah /Trimmu Barrage Jhang	
Project Area	170 Acres approx.	
Sponsor	Government of the Punjab	
Project Company	Punjab Thermal Power (Pvt.) Limited	
Project Name	Punjab Power Plant, Jhang	
Plant Thermal Efficiency (Estimated)	61.16% (Net at RSC)	
Construction Period	Approximately 30 Months from notice to proceed.	
Project Cost (Expected)	PKR 84.594 billion	USD 801.836 million
Proposed Financing Plan	Debt 75%	Equity 25%
Proposed Financing Terms	For a period of 10 years after Grace Period / COD	
Proposed Appraisal	ROE Guaranteed	
Timelines	Notice of Award - September, 2017	
Financial Close Targeted	December, 2017	
Simple Cycle Operations	December, 2018	
Combined Cycle Operations	January-February, 2020	

2.1.5 Fast Track Projects on RLNG

In view of: (a) the continued shortage of electricity in the country; (b) sustainable LNG availability; and (c) higher thermal efficiency of the latest gas-fired power plants being set up in Bhikki Power Project, Haveli Power Project and Balloki Power Project, the Cabinet Committee on Energy (CCE) of Federal Government in its meeting held on June 06, 2017 has approved the Project for implementation by GoPb. The GoPb incorporated PTPL, a wholly owned company under the Companies Act, 2017, to act as an IPP to implement the said Project.

Similarly, in line with the recommendations / Power Acquisition Request of NTDC / CPPA-G, it has been decided to set up the new RLNG power project in District Jhang. The power project has been named as Punjab Power Plant, Jhang.

As per above, the implementation of the new RLNG project has to be on a fast track basis. It is targeted that in order to avail the benefits specified above, the Simple cycle operations be achieved by the Project within a period of 15 months. While combined cycle operations are to be achieved in 30 months' time. Accordingly, to comply with the above target, it is of crucial significance that the financial close is achieved latest by December 2017.

It is pointed out that PTPL submitted the previous tariff petition on July 27, 2017 and it was expected that the tariff determination for the Project would be issued by mid of September, 2017. Accordingly, the financial close of the Project was targeted to be achieved by end of October, 2017. However, the said petition was returned, consequently PTPL could not achieve the targeted timeline and the financial close is delayed up to December, 2017.

Accordingly, in order to mitigate the delay, as a result of returning of the said petition, and to remain within the overall project timelines, the LC opening / financial close has been rescheduled to December, 2017 in consultation with lowest bidder. It is submitted that in order to meet the new timeline for the financial close i.e. December, 2017, it is imperative that the Authority issues a viable tariff determination latest by end of October, 2017, enabling the Petitioner to execute the financing agreements and meet all conditions precedent thereto within the stipulated timeline.

2.1.6 Tariff Petition for Reference Tariff

In view of the compressed timelines for the Project and to ensure its timely financial close, the Petitioner initiated an ICB process for the selection of EPC and LTSA Contractors. The bidding process was structured after taking into consideration the benchmark efficiency levels and detailed assessment of proven technologies in commercial operations in Pakistan. The process for the selection of EPC Contractor attracted participation of world renowned manufacturers as the supplier / OEM of Gas Turbines for the Project. Based on the detailed evaluation of bids, CMEC (with Siemens as OEM) has emerged as the Lowest Evaluated Bidder.

Given the large size of the project and related financing requirements, tariff determination for the Project by Authority, by end October 2017, is critical. It shall facilitate the Project lenders to initiate their internal credit approval process and complete the underlying due diligence within the targeted timelines. Thus, enabling Petitioner to open letter of credit(s) under the EPC Contract. Accordingly, the instant petition is being submitted based upon the EPC and LTSA prices, determined as a result of the bidding process, and other Project specific estimates as detailed herein under and corroborated by the supporting evidence. Furthermore, the instant Petition is also based, where relevant, upon the framework established by Authority for the previous three RLNG projects (i.e. Bhikki Power Project, Balloki Power Plant and Haveli Power Project).

2.2 GOP APPROVAL

2.2.1 GOP Letter of Intent

GoPb vide its letter dated June 16, 2017 (**Schedule B-1**) intimated its approval and recommended the Project. Subsequently, Ministry of Water and Power Resources, GOP vide its letter June 20, 2017 (**Schedule B-2**) directed PPIB to process the Project as IPP in accordance with the relevant provisions of the Power Policy, 2015, as applicable.

PPIB issued the LOI to the Petitioner for the Project on 26th July, 2017, which is attached as **Schedule C**.

2.3 GENERATION LICENSE

Application for grant of generation license along with relevant documents and requisite fees has been filed by PTPL on July 26th, 2017, and is attached as **Schedule O**.

2.4 SUBMISSION

Pursuant to the relevant provisions of the NEPRA Rules, read with the provisions of the NEPRA Act and the Rules and Regulations made thereunder; AND in accordance with the Power Policy 2015; AND in light of the issuance of the LOI for the Project by PPIB: PTPL, submits to NEPRA, the instant tariff petition (the **Tariff Petition**) duly supported by the requisite evidence for EPC and LTSA prices as per requirements of the Authority conveyed vide letter dated August 16, 2017, for approval of the reference generation tariff for Simple Cycle and Combined Cycle Operations (the **Reference Generation Tariff**) for PTPL's 1,242.7 MW (Net at RSC) power generation facility to be located at Jhang.

It is important to highlight that this Project, in line with Bhikki Power Project, Haveli Power Project and Balloki Power Project, is to be operated in simple cycle mode, as soon as it has been commissioned. The simple cycle operation for the Project with the resultant tariff is being requested on account of the following:

1. Simple cycle operations of the Project shall add over 5 billion units and help address the growing electricity requirements on account of higher GDP growth.
2. Simple cycle operations of the Project are likely to be at around 39.2% efficiency which would still be better than many plants currently in operation and thus feasible for the power purchaser in merit order.
3. The anticipated power generation under simple cycle operations cannot be achieved under a conventional Pre-COD sale arrangement as:
 - 10 to 12 months power generation of the plant on simple cycle operations will produce electricity worth over PKR 45 billion.

This, huge quantum cannot be equated with the concept of pre COD electricity sale.

- The plant will have to put in place O&M regime, LTSA regime as well as all required insurances for enabling simple cycle operations.
 - The plant will face degradation of efficiency and power output during the simple cycle operation which will not be protected if only combined cycle COD is envisaged.
4. The tariff for the simple cycle operations is being requested on unit delivered basis without any guaranteed offtake requirements from the power purchaser.

3. Executive Summary

3.1 PUNJAB THERMAL POWER (PRIVATE) LIMITED

PTPL is a private limited company, wholly owned by the **GoPb**. A copy of its memorandum and articles of association is attached at **Schedule D** and its incorporation certificate is attached at **Schedule E**.

3.2 PROJECT SUMMARY

- 3.2.1 In light of the LOI and following approval of PTPL's Reference Generation Tariff by NEPRA through this Tariff Petition, PTPL will finance, design, engineer, procure, construct, install, test, complete, commission, insure, own, operate and maintain a 1,242.7 MW (Net at RSC) power generation facility (the **Facility**) at the Site (the **Project**).

A summary of the Project for Authority's perusal is as follows:

PROJECT SIZE	1,263.2 MW (Gross at RSC); and 1,242.7 MW (Net at RSC)
PROJECT SITE	Near Haveli Bahadur Shah /Trimmu Barrage Jhang
TECHNOLOGY	Combined Cycle Gas Turbine
EQUIPMENT	H- Class Gas Turbines
POWER OFF-TAKER	CPPA-G
GAS SUPPLIER	SNGPL / PLL, or any other entity nominated as the gas supplier and with whom the GSA is executed.
PROJECT COST	USD 801.836 million
CAPITAL STRUCTURE	75% debt and 25% equity
FINANCIERS	A consortium of local financial institutions. Option of ECA Financing may also be explored in due course.
SPONSOR	Government of the Punjab
LEVELIZED REFERENCE GENERATION TARIFF (LNG) – CC	PKR 7.0947 per kWh (subject to NEPRA's final determination)
LEVELIZED REFERENCE GENERATION TARIFF (HSD) – CC	PKR 12.7851 per kWh (subject to NEPRA's final determination)
LEVELIZED REFERENCE GENERATION TARIFF (LNG) – SC	PKR 8.9377 per kWh (subject to NEPRA's final determination)

3.3 KEY FEATURES

(a) Engineering, Procurement and Construction Cost

As explained in 2.1.5 above, the procurement of the EPC and LTSA contractors, was carried out by PTPL through ICB process in line with all applicable public procurement rules. The Petitioner is successful in achieving the lowest EPC cost for the Project, contributing towards the Government's objective to rationalize energy tariffs for the benefit of the consumers.

The requisite evidence so as to support the EPC cost in the form of bid evaluation report (**Schedule – Q**), the draft EPC contract included in the bidding process (**Schedule – R**) and a copy of the financial bid of CMEC (**Schedule – S**) is attached.

It is pertinent to mention that the Authority has previously admitted tariff petition(s), whereby the petitioner submitted lowest bid of proposed EPC contractor as an evidence of the EPC cost. Accordingly, PTPL hereby submits the bid of lowest evaluated bidder in support of the instant Petition and the EPC contract is expected to be executed by the end of September, 2017.

(b) Long-Term Service Cost:

As part of the ICB Process for the appointment of EPC Contractor, bidders were also required to arrange and submit for price of LTSA services by GT OEM for the *inter alia* maintenance and supply of initial service spares on a long-term basis for scheduled and unscheduled maintenance of Gas Turbines, Gas Turbine Generators and associated auxiliaries. The LTSA cost quoted by CMEC is lowest as compared to other three RLNG projects, which was further reduced by voluntary discount offered by the GT OEM (**Schedule – T**).

(c) Operation & Maintenance (O&M) Contract

The O&M cost for the Project will be available after a separate O&M bidding process, which is expected to be undertaken and concluded a few months prior to the COD. Hence, the O&M cost for the Project can only be assumed in line with the previous three RLNG projects. As the financial dynamics of the Project primarily resembles that of the Bhikki Power Project, the O&M cost allowed by the Authority for the Bhikki Power Project, is assumed for the Project.

(d) **Financing arrangements with Local Banks;**

Project financing is to be obtained from various local financial institutions. The mandated lead arrangers and the Petitioner are currently negotiating the terms and conditions for the finance facilities, and in the meantime, the costs of the Project on a debt to equity ratio of 75:25 have been assumed. Finalisation of financing terms is subject to determination of a viable tariff from NEPRA.

4. Project Introduction

4.1 KEY CONSIDERATIONS

4.1.1 Technology & Equipment

The Project entails setting up of the Facility on BOO basis. The Facility will be a thermal IPP using RLNG as the primary fuel and HSD as back-up fuel. The proposed Project is based on the combined cycle technology with a net capacity of 1,242.7 MW at RSC. The Facility configuration shall consist of two Gas Turbines, two HRSGs and one Steam Turbine.

Taking into account the thermal efficiencies of Gas turbines of H-class technology from well renowned OEMs, it is anticipated that the thermal efficiency of plant shall be 61.16%.

4.1.2 Site

NTDC after due consideration of load flow, availability of grid station, transmission lines and in view of the requirements and electricity demand of the area, has allocated to PTPL the Site. The Site will be developed by PTPL to serve the Project's land, logistical, water, and drainage requirements.

The site location is favorable in term of accessibility and water availability, Power evacuation and spurs gas pipeline's connectivity.

From a power evacuation standpoint, the site posts an advantage because CPPA-G/NTDC will not have to add significant transmission infrastructure to the area. As per the current power evacuation plan the project will feed net generation to the nearest Toba Tek Singh (TTS) 220 KV grid station and the proposed dispersal is 220KV in the existing lines. The power will be evacuated from the Project through 220 KV transmission lines that will connect it to national grid through Grid Station.

For the provision of gas supply to the site, a spur pipeline and allied facilities will be constructed at the Petitioner's cost, the same is requested to be entertained in tariff as allowed by the Authority in case of the previous three RLNG projects.

4.1.3 Power off-take

The electricity generated is envisioned to be sold to CPPA-G (the **Power Purchaser**), pursuant to the Power Purchase Agreement (the **PPA**). The PPA will be executed following NEPRA's approval of PTPL's 30 years Reference Generation Tariff. In view of the agreed executed template of the three RLNG projects, it is expected that PPA shall be executed promptly without much modification.

4.1.4 Gas supply arrangement

GOP has committed firm allocation of the required RLNG (200 MMSCFD) for the project vide its letter dated June 21, 2017. PTPL shall enter into a Gas Supply Agreement (the **Gas Supply Agreement**) with SNGPL / PLL / Gas Supplier for the continuous supply of RLNG to the site of the power plant to ensure its base load operations. In view of the agreed executed template of the previous three RLNG projects, it is expected that GSA shall be executed promptly without any major modifications as such.

4.1.5 Project cost and capital structure

As per the discussion in Section 6 (Project Cost & Investment), the proposed Project cost is USD 801.836 million (the **Project Cost**).

The planned financing of the Project Cost is 75% long-term local debt (the **Debt**) and 25% equity (the **Equity**).

4.2 RELIEF SOUGHT

4.2.1 Reference Generation Tariff

In the view of foregoing, NEPRA is requested to determine the generation tariff for the Petitioner, in terms of this Tariff Petition.

The financing documents, PPA and IA etc. shall be executed subject to NEPRA's approval of the tariff acceptable to the Petitioner. The Reference Generation Tariff has a typical two-part structure with an energy charge (the **Energy Purchase Price**) for the energy dispatched and a capacity charge (the **Capacity Purchase Price**) based on the dependable capacity.

The Reference Generation Tariff, for Simple cycle and Combined cycle, as approved by NEPRA will be integrated into the PPA, which shall be based on the terms approved by the competent authority.

Any benefit, concession, incentives etc. given, previously or in future, to any other IPP/power projects will also be given to the Petitioner.

4.3 ADDITIONAL INFORMATION [SUMMARY OF EVIDENCES]

4.3.1 In view of the foregoing, the following pertinent information is hereto attached for NEPRA:

- (a) **SCHEDULE A** – REFERENCE GENERATION TARIFF TABLE;
- (b) **SCHEDULE B/1** – GOP APPROVAL LETTER DATED JUNE 16, 2017;
- (c) **SCHEDULE B/2** – GOP LETTER DATED JUNE 20, 2017;
- (d) **SCHEDULE C** – COPY OF LETTER OF INTENT DATED 26 JULY 2017;
- (e) **SCHEDULE D** – MEMORANDUM AND ARTICLES OF ASSOCIATION PTPL;
- (f) **SCHEDULE E** – CERTIFICATE OF INCORPORATION;
- (g) **SCHEDULE F** - LETTER FROM NTDC – POWER EVACUATION
- (h) **SCHEDULE G** – LETTER FROM CPPA-G – POWER ACQUISITION REQUEST
- (i) **SCHEDULE H** – RLNG FIRM ALLOCATION
- (j) **SCHEDULE I** – ADDITIONAL EPC COSTS
- (k) **SCHEDULE J** - PIPELINE COST ESTIMATE FROM SNGPL
- (l) **SCHEDULE K** – ENGINEERING AND RELATED CONSULTANCY CONTRACT
- (m) **SCHEDULE L** – ADMINISTRATIVE EXPENSES
- (n) **SCHEDULE M** – SECURITY AND SURVEILLANCE
- (o) **SCHEDULE N** – TESTING AND COMMISSIONING COST
- (p) **SCHEDULE O** – APPLICATION FOR GENERATION LICENSE
- (q) **SCHEDULE P** – CHECKLIST CONFIRMING THE COMPLIANCE OF INFORMATION / DOCUMENTS WITH TARIFF (STANDARDS AND PROCEDURES) RULES, 1998.
- (r) **SCHEDULE Q** – BID EVALUATION REPORT AS NOTIFIED
- (s) **SCHEDULE R** - DRAFT EPC CONTRACT
- (t) **SCHEDULE S** – COPY OF FINANCIAL BID
- (u) **SCHEDULE T** – COPY OF VOLUNTARY DISCOUNT LETTER BY THE GT OEM

4.3.2 Additionally, the following have been attached as part of the Tariff Petition:

- (a) Board Resolution of PTPL;
- (b) Affidavit of Mr. Ahad Khan Cheema, Chief Executive Officer, PTPL; and
- (c) Bank Draft No. 03767550 amounting to PKR 1,495,760/- (Rupees One Million Four Hundred Ninety-Five Thousand and Seven Hundred Sixty only) and Bank Draft No. 04023598 amounting to PKR 8,080/- (Rupees Eight thousand and eighty only) as requisite fee for the Tariff Petition, as notified by NEPRA.

4.3.3 PTPL reserves the right to submit additional information(s)/ document(s)/ evidence(s) as and when so required and/or are available to PTPL. Furthermore, any additional information, to the extent available, will be submitted by PTPL, if required by NEPRA.

4.3.4 This Tariff Petition is submitted in triplicate, together with the requisite fee.

4.3.5 PTPL's application for the Generation License is presently under process with NEPRA.

BASED ON THOROUGH ANALYSIS of the national electricity generation structure, the existing available power generation technologies, the existing infrastructure and in light of PTPL's efforts towards the engagement of EPC contractor for the engineering, procurement and construction of the Project, it is highly anticipated that PTPL's Project shall be among the most efficient and competitive independent power producers in Pakistan.

5. Project Financing – Debt & Equity

5.1 DEBT FINANCING STRUCTURE

- 5.1.1 The Project lenders / Mandated Lead Arrangers (MLAs) are in the process of finalizing the terms and conditions with PTPL for providing a finance facility to finance the costs of the Project, and in the meantime, the cost has been assumed on a debt to equity ratio of 75:25. The MLAs are confident that the debt required for the Financial Close of the Project will be arranged from the local banking market provided a bankable generation tariff is determined by NEPRA.

Nevertheless, it is imperative to highlight that the banks (lenders) are keenly expecting that the PTPL be allowed a commercially viable tariff for the Project guaranteeing loan repayments and duly providing cushion for cost over-runs and unforeseen scope variation risks associated with the most advanced and high-tech plant (with high efficiency) being implemented in the Project.

5.2 EQUITY FINANCING

The sponsor financing the equity for the Project is GoPb. GoPb has committed upfront equity injection of PKR 10 Billion in the first year, which is accordingly being released. The balance equity will be injected in proportion to the loan drawdown as per the agreed debt:equity ratio. The upfront amount of equity injection shall be used to primarily backstop the EPC advance payment obligations which will be paid to the EPC Contractor immediately. Hence, PTPL is entitled to return on equity during the construction accordingly.

6. PROJECT COST & INVESTMENT

6.1 PROJECT COST SUMMARY

- 6.1.1 The total Project Cost, expressed in United States Dollars, has been calculated after thorough consideration of the Lowest Evaluated Bidder's technical and financial bids and based on the benchmarks set in the determinations of the previous RLNG Power Projects.
- 6.1.2 In view of submissions made in this tariff application, please find below, for NEPRA's approval, a summary of PTPL's estimated Project Cost under this application for Reference Generation Tariff:

Sr. No.	Project Cost	USD million
1	EPC	520.000
2	Additional EPC Cost	10.00
3	Customs Duties & Cess	29.326
4	LTSA Initial Service Fee	10.500
5	Gas Pipeline Cost	37.735
6	Non-EPC & Project Development	59.356
	CAPEX	666.916
7	Financing Fees and Charges	21.048
8	Interest During Construction	65.038
9	One-month LNG escrow account	48.83
	Total Project Cost	801.836

For purpose of the instant Petition, exchange rate of PKR/USD 105.5 has been assumed. Since the exact timing of payment to EPC contractor is not known at this point of time, therefore, it is proposed that an adjustment for relevant foreign currency fluctuation for off-shore EPC portion of payment in the foreign currency be made against the reference exchange rate of Rs.105.5/USD on the basis of actual payment. The adjustment shall be made only for the currency fluctuation against the reference parity values.

- 6.1.3 Based on the above, the Project Cost shall be financed through a Debt: Equity ratio of 75:25 and capital structure of the Project is proposed as follows:

	'MILLION USD
DEBT	601.377
EQUITY	200.459
TOTAL PROJECT COST	801.836

Keeping in view the stringent timelines for financial close and project completion, as set out for the Project, financial close is required to be achieved on a very fast track for which the timely tariff determination by the Authority is imperative.

The Petitioner / GoPb is also exploring the possibility of availing supplier credit through export credit agencies (ECA). In case, the Petitioner / GoPb is successful in availing ECA-financing for the Project, any additional financing cost including ECA insurance fee, arrangement fee, commitment fee, confirmation charges, LC discounting, etc. shall be a pass-through item as per actual. In such an eventuality, KIBOR-pegged lending rate for the Debt shall be substituted with a LIBOR-based rate or any other international benchmark (US Treasury rate, etc.) as per final term sheet, in accordance with NEPRA practice. The Authority is requested, therefore, to allow for this flexibility in the financing structure and costs while determining the tariff for the Project.

PROJECT COST EXPLANATION

6.1.4 EPC Cost:

The procurement process was carried out by PTPL through ICB process in line with all applicable public procurement rules. The Petitioner has been successful in achieving the lowest ever EPC cost for the Project, contributing towards the Government's objective to rationalize energy tariffs for the benefit of the consumers.

The requisite evidence so as to support the EPC cost in the form of bid evaluation report (**Schedule – Q**), the draft EPC contract included in the bidding process (**Schedule – R**) and a copy of the financial bid of CMEC (**Schedule – S**) is attached.

The EPC cost includes power generation sets together with all the necessary auxiliary machinery, equipment and systems.

Additional EPC Costs

Although, the scope of work envisaged for the EPC contractor being selected for the Project includes majority of such items, however, as recommended by the technical advisors of PTPL, due to the nature and size of the Project, there may be certain additional items required during the course of completion of the Project. These costs are estimated to be USD 10.00 million, and are reflected in **Schedule – I**. Accordingly; such costs need to be allowed as additional EPC cost so as to safeguard the interests of the Project in the event the same are incurred. Hence, the additional EPC cost of USD 10.00 million has been assumed for the Project, which may be actualized at the time of COD. It is submitted that these items are estimated by the Technical Advisor and may be replaced with other items that may be required during construction. It is pertinent to point out that the Authority approved certain additional items costs, which were not covered in the EPC contract of Bhikki Power Project in its tariff determination dated April 14, 2016. Accordingly, the Additional EPC cost, as requested hereby, is also required to be approved.

6.1.5 **LTSA Initial Service Spares**

LTSA initial service spares price of USD 10.5 million (as quoted by the Lowest Evaluated Bidder) form part of CAPEX and is in foreign currency.

6.1.6 **Gas Pipeline Cost**

Project costs also include spur Gas Pipe Line Cost of 92 Kms from off-take point Kabirwala to Punjab Power Plant site. It is submitted that the Authority, in the case of the previous three RLNG Power Projects, allowed the Spur Gas Pipeline cost on estimated basis and is subject to actualization (up-ward or down-ward) at the time of its COD. Accordingly, the estimated cost of the spur gas pipeline and its actualization mechanism is requested for the Project.

The cost estimate has been provided by SNGPL and is attached as **Schedule-J**.

6.1.7 **Custom duties, taxes and cess:**

Based on the Authority's precedents, Taxes and Customs Duty etc. have been calculated in light of the applicable laws of Pakistan and will be treated as pass through item as per actual.

Furthermore, based on the reference exchange rates of PKR 105.5 for 1 USD, the Taxes and Custom Duty for the Project have been calculated as 7.05% (i.e. custom duties 5%, Sindh Infrastructure Cess 1.15% and Punjab Infrastructure Cess of 0.9%) of the Offshore EPC Cost.

6.1.8 **Non EPC and Project Development costs:**

The Petitioner has engaged a consortium of reputable advisors with strong power sector experience. Based on their recommendations, the company's estimates and industry trends, Non-EPC and project development costs have been budgeted at USD 59.356 million. The same are comparable with the previous RLNG power projects. These include engineering and related consultancy, administrative expenses, O&M mobilization cost, land cost, security and surveillance, insurance during construction, fixed O&M and LTSA during construction and testing and commissioning cost.

Certain project specific customizations/adjustments have been assumed and accordingly incorporated in the Non-EPC costs allowed by the Authority for the previous three RLNG Power Projects as explained below:

6.1.8.1 Engineering and related consultancy

The Engineering and related consultancy costs for the Project are USD 12.597 million which depicts the cost and scope of the consultancy work agreed with the consultant. The consultancy fee, in comparison with the three RLNG projects, is slightly enhanced, primarily due to the following factors:

1. Annual Price Escalation factor, Exchange Rate Escalation and additional services (USD 0.8 million)
2. Inclusion of Geo-tech study and investigation (increase by USD 0.7 million); and
3. The enhanced scope of foreign technical consultant (increase by USD 1.9 million)

The executed agreement with the consultant (NESPAK) is attached as **Schedule – K.**

6.1.8.2 Administrative expenses

An amount of USD 11.676 million, as administrative expenses, is estimated, hence, requested to be allowed under the instant tariff petition for a period of 30 months. It is submitted that the same is in line with benchmark costs determined in case of the previous three RLNG projects. For details, refer to **Schedule - L.**

6.1.8.3 O&M mobilization

The O&M mobilization fee, as an industry practice and requirement of O&M contractor, is envisioned and hence requested herein. In view of the mobilization fee benchmark allowed for all the three RLNG power plants by the Authority, O&M mobilization cost of USD 6 million, for the instant Petition is estimated.

6.1.8.4 Land cost

Land area measuring 170 acres approximately has been estimated to be required for the project and includes the land for the housing complex, plantation and the land required for performing allied engineering works for the project. The land has been purchased through land acquisition process at the rate of PKR. 2.5 million per acre. It is submitted that the said cost is based on the notification of the District Price Assessment Committee, which set the price at Rs 2 million per acre plus 25% compulsory acquisition charges as per the Government policy. This comes to a total of USD 4.05 million. In addition, an approximate amount of USD 0.57 million is estimated to be spent toward the cost of compensation for structures, crops and trees. The total cost of land hence works out to be USD 4.62 million.

6.1.8.5 Security and surveillance

GoPb has established a Special Protection Unit (SPU) for providing security to expatriates especially Chinese working on different development projects in Pakistan as part of its commitment for security of the foreign nationals. Although the Project is not part of China Pakistan Economic Corridor (CPEC), but the level of the security being provided to the Chinese and other expats working on the Project is up to the level of CPEC. SPU not only provides security to expats working at site but also at their residences, offices and during their movements. For details, refer to **Schedule - M**.

In view of the above, the security and surveillance costs are requested to be allowed, through this Petition, at USD 8.257 million in line with the previous RLNG power projects.

6.1.8.6 Insurance During Construction

Insurance during construction has been assumed as 1% of the EPC cost which is in line with the benchmarks established by the Authority in other projects.

6.1.8.7 Testing and Commissioning Cost

The testing and commissioning cost has been estimated to be in line with the cost allowed by the Authority in case of previous RLNG power projects, subject to customization relating to technical parameters of the Project, including but not limited to plant efficiency and output, as reflected in the Lowest Evaluated Bid. The details are provided at **Schedule - N**.

6.1.9 Financing Fees and Charges

In line with the established industry benchmarks and the Authority's precedents, the financing fees have been assumed at 3.50% of the debt amount. The same shall be re-established at COD in accordance with debt availed.

6.1.10 Interest During Construction (IDC)

IDC is to be considered as a reference cost and is to be actualized at the time of COD of the project on the basis of actual project financing and weighted average quarterly KIBOR and applicable premiums. As mentioned herein above, the timeline of completion of the Project is currently set at 30 months which is substantially lower than the time required for completing such large scale projects. Since, the Petitioner is following aggressive completion timelines with the EPC contractor, given the liquidity, project management and other incidental risks associated with such a large scale and highly advance technology and adequate flexibility would be required in the construction period to compensate any additional IDC in case of delay.

Moreover, in the case of this Project, the equity shall be partially injected upfront and thereafter the overall Debt to Equity ratio shall be maintained.

IDC has accordingly been calculated on the debt amount at a rate of KIBOR plus 3%.

6.1.11 **One Month LNG Escrow**

In line with the earlier determinations by the Authority and requirements of the Gas Supplier in case of the three RLNG projects, one-month LNG escrow account has to be created. The same has been assumed at USD 48.834 million based at per day cost of RLNG fuel. The RLNG price has been assumed at USD 9.6483 / MMBTU (HHV) (i.e. USD 8.2464 / MMBTU (HHV) being the OGRA notified provisional RLNG price for the month of August 2017 with addition of 17% GST). This price shall be indexed to prices as notified by the competent authority from time to time and allowed to the petitioner at the time of COD.

7. REFERENCE GENERATION TARIFF SUMMARY

- 7.1 Based on the RLNG price of USD 8.2464 per MMBTU (HHV) and an output of 1,242.7 MW (for combined cycle operations on LNG), output of 1,081.8 MW (for combined cycle operations on HSD) and detailed financial analyses, the proposed Reference Generation Tariff for Simple Cycle Operations and Combined Cycle Operations is hereunder:

The proposed Simple Cycle tariff figures during Simple cycle operations period are as follows:

Proposed levelized tariff – Simple Cycle	RLNG (PKR per kWh)
Fuel cost component	8.3871
Variable O&M (Foreign)	0.3041
Fixed O&M (Local)	0.0605
Fixed O&M (Foreign)	0.1036
Cost of working capital	0.0824
Total	8.9377

The proposed combined cycle tariff figures derived using the power generation capacity of 1,242.7 MW (on RLNG fuel) and 1,081.8 MW (HSD fuel) during combined cycle operations period are as follows:

Proposed levelized tariff – Combined Cycle	RLNG (PKR per kWh)	HSD (PKR per kWh)
Fuel cost component	5.3763	10.7216
Variable O&M	0.3041	0.4388
Total energy purchase price	5.6804	11.1604
Fixed O&M (Local)	0.0605	0.0695
Fixed O&M (Foreign)	0.1036	0.1190
Cost of working capital	0.0824	0.0947
Insurance	0.0514	0.0590
Return on Equity	0.4157	0.4775
Debt service cost – repayment	0.3543	0.4070
Debt service cost – interest	0.2333	0.2681
Capacity charge @ 92%	1.4144	1.6247
Total tariff Rs / kWh	7.0947	12.7851

Key underlying Project and operating assumptions for the Combined Cycle tariff are provided below:

Design, fuel and operating assumptions	Unit	RLNG	HSD
Gross capacity (reference site conditions)	MW	1,263.2	1,105.0
Net capacity	MW	1,242.7	1,081.8
Annual availability	%	92%	
		RLNG	HSD
Efficiency – CC	%	61.16%	55.76%
Efficiency – SC	%	39.20%	n.a
Base fuel price (excluding GST)	USD per MMBTU-HHV / PKR per litre (HHV)	8.2464	59.54
Project cost assumptions			
EPC cost	USD in M	530.000	
Project cost before IDC	USD in M	736.798	
Total project cost	USD in M	801.836	
O&M, insurance and cost of working capital assumptions			
Variable O&M (foreign)			
LTSA variable fee [USD 456.0per FFH]	USD per kWh	0.0008	0.0012
O&M operator fee	USD per kWh	0.0021	0.0030
Total	USD per kWh	0.0029	0.0042
Fixed O&M (Local) – Non LTSA	USD per kWh	0.0006	0.0007
Fixed O&M (Foreign) [USD 3.632M per annum]	USD per kWh	0.0010	0.0011
Total	USD per kWh	0.0016	0.0018
Cost of working capital	%	3mKIBOR + 2%	
Insurance	% of total EPC cost	1.00%	
Financing assumptions			
Equity	%	25%	
Debt	%	75%	
Equity IRR	%	16%	
Cost of debt	%	3mKIBOR + 3%	

Reference Tariff Tables based on RLNG and HSD are attached at **Schedule A**.

8. Energy Purchase Price

8.1 SUMMARY

As already mentioned above, to counter the energy shortage in the country, the Ministry of Water and Power/Power Purchaser requested that all the RLNG based projects should be operated in a phased manner i.e. Simple cycle operations for GT1 and GT2 followed by the Combined cycle operations thereafter. Accordingly, the petitioner requests individual tariffs for Simple cycle operations and Combined-cycle operations.

The tariff has a typical two-part structure with an Energy Purchase Price (EPP) for the energy despatched and a Capacity Purchase Price (CPP) based on the available capacity.

For Combined cycle operations, the CPP will cover Fixed O&M (Local), Fixed O&M (Local and Foreign), Insurance, cost of working capital, Return on Equity and Debt servicing.

For Combined cycle operations, the EPP will cover fuel cost (RLNG and HSD), and Variable O&M (Foreign) cost.

For Simple cycle operations, the Simple Cycle Payment will cover fuel cost (RLNG), Fixed O&M (Local and Foreign) cost, Variable O&M (Foreign) cost and Cost of Working Capital.

The price of fuel will be a pass through item as indexed using a robust indexation mechanism as proposed in the section on fuel below.

8.1.1 The Energy Purchase Price component of the Reference Generation Tariff is based on the actual kWh off-take, and consists of:

- (a) The fuel component (the **Fuel Component**);
- (b) The foreign variable O&M component (the **Foreign Variable O&M Component**).

Simple cycle Tariff Mechanism:

For Simple Cycle operations, the tariff is to be calculated on Units Delivered basis. The Simple Cycle tariff compensates for Fuel Cost, Variable O&M Cost, Fixed O&M Cost (Local), Fixed O&M Cost (Foreign) and cost of working capital only.

It is important to have a proper tariff for operations on Simple Cycle. The Petitioner shall not be able to generate electricity with proper commissioning and based on pre-COD sale due to following reasons:

- a) 10 to 12 months power generation of the plant on Simple cycle operations will produce electricity worth over PKR 45 billion. This, huge quantum cannot be equated with the concept of pre COD electricity sale.

- b) The plant will have to put in place O&M regime, LTSA regime as well as all required insurances for enabling simple cycle operations.
- c) The plant will face degradation of efficiency and power output during the simple cycle operation which will not be protected if only combined cycle COD is envisaged.
- d) Over 7,000 fire hours will be consumed which is more than 14% of the factored fire hours for major overhaul.
- e) A significant part of the warranty period will be consumed.
- f) The plant will not be obliged to produce power and arranging working capital if it is not commissioned under PPA. Thus availability of plant will not be guaranteed.
- g) Simple cycle operation may enhance cost of insurance due to side by side construction and operation of plant.
- h) Simple cycle operations of plant is likely to be at around 39.2% efficiency which would be still better than many plants currently in operation in Pakistan and thus feasible for the power purchaser in merit order.
- i) The Petitioner submits that phased commissioning be allowed for the reasons mentioned above keeping in view the power shortage in the country. Considering the operation of Gas Turbines during the transition period between simple cycle COD of individual units and the COD of combined cycle, degraded performance parameters i.e. efficiency and power output must be allowed.
- j) Gas Turbine performance degradation (output and heat rate) due to its operation in open cycle mode for approximately 7,000 hours, to be accounted for, at COD while determining the baseline net plant output and heat rate.

8.1.2 FUEL COST COMPONENT

ASSUMPTIONS

This component represents the fuel consumption at an efficiency level of 39.2% (for RLNG – Simple cycle operations), 61.16% (for RLNG – Combined cycle operations) and 55.76% (for HSD – combined cycle operations), all at 92% plant load factor, based on the lowest bid submitted by CMEC for PTPL. It is submitted that the fuel cost component shall be adjusted as per various established benchmarks including but not limited to the corrections / adjustments for ambient temperature, degradation etc.

EFFICIENCY

The net thermal efficiency for the RLNG combined cycle and simple cycle operations has been assumed at 61.16% and 39.20% respectively, as quoted by Siemens (as OEM) as part bid submitted by the Lowest Evaluated Bidder.

Furthermore, in line with the Authority's earlier determinations on RLNG power projects, it is proposed that any excess efficiency over and above the

contracted efficiency under the EPC Contract shall be shared between the Power Purchaser and PTPL in the ratio of 60:40 at COD. The actual efficiency shall be established at the time of COD after applying all applicable/permissible (IPP industry) corrections / degradations including but not limited to:

- recoverable and non-recoverable adjustments,
- grid frequency variation,
- blow-down adjustment,
- temperature adjustments,
- part – load / load correction factor adjustment,
- fuel calorific value variation, and
- miscellaneous adjustment

In case the actual efficiency is less than the contracted efficiency (on RLNG and HSD), the tariff at COD shall be adjusted to allow for such reduced efficiency as no power project can afford to operate on a financial loss on account of fuel consumption. It is submitted that the higher efficiency parameter in the Project was given weightage in the public interest, however, non-achievement of the same by any reason whatsoever shall not be allowed to put the Petitioner in disadvantageous position by establishing the quoted efficiency as a benchmark.

8.1.3 INDEXATION & ESCALATION

The Fuel Cost Component (FCC) is proposed to be adjusted on account of fuel price variation as and when notified by the relevant authority.

8.2 FOREIGN VARIABLE O&M COST COMPONENT

ASSUMPTIONS

The costs submitted by Lowest Evaluated Bidder for LTSA with OEM Siemens, in the case of PTPL for maintenance of equipment, at USD 456.0 per factored fired hour have been considered for the Project. The Petitioner intends to initiate ICB process for the selection of O&M contractor in due course. Accordingly, the O&M costs allowed for Bhikki Power Project by the Authority vide the Bhikki Tariff Determination, subject to customization with respect to LTSA costs reflected in the Lowest Bid for the Project has been assumed at PKR 0.3041 / kWh for operations on RLNG fuel and PKR 0.4388 / kWh for HSD operations.

INDEXATION AND ESCALATION

The Foreign Variable O&M Cost Component of the Energy Purchase Price shall be quarterly indexed to both:

- (a) the USD/PKR exchange rate, based on the revised TT & OD selling rate of United States Dollar notified by the National Bank of Pakistan; and
- (b) US CPI, notified by the US Bureau of Labor Statistics.

In case there is any local variable component, this will be subject to local CPI indexation.

Since the Variable O&M Operator Fee is being requested using a net output of 1,242.7 MW, annual output degradation and part load operation is expected to gradually reduce the aforesaid discrete denominator over the tariff control period, thereby, exposing the Petitioner to loss on account of actual absolute variable costs being higher than the respective Variable O&M amounts to be recovered under the tariff. In view of this, the Authority is requested to allow application of (a) heat rate degradation factor; and (b) Part load correction factor, to the Variable O&M Cost Components.

The indexations and escalations allowed for the respective components determined for the combined cycle tariff are requested to be allowed for the simple cycle tariff components.

9. Capacity Purchase Price

9.1 SUMMARY

The Capacity Purchase Price component of the reference generation tariff is payable on the basis of the contract capacity established at the COD and annually thereafter. Net dependable capacity used for Simple and Combined cycle operations for RLNG and HSD are assumed to be as follows:

	Combined cycle (2GTsx1 ST)		Simple cycle (1 GT)
	RLNG	HSD	RLNG
Gross Capacity	1,263,200 kW	1,105,000 kW	405,000 kW
Net Capacity	1,242,700 kW	1,081,800 kW	400,000 kW
Auxiliary load	20,500 kW	23,200 kW	5,000 kW

A detailed breakup and explanation of various components of the Capacity Purchase Price Component is provided below.

9.1.1 The Capacity Purchase Price is further broken down into the following two components:

- (a) the **Escalable Capacity Purchase Price**; and
- (b) the **Non- Escalable Capacity Purchase Price**.

9.2 THE ESCALABLE COMPONENT

The Escalable Capacity Purchase Price component of the Reference Generation Tariff comprises of the following components for the Project:

- (a) the fixed operations and maintenance cost (the **Fixed O&M Cost Component**);
- (b) the insurance cost (the **Insurance Cost Component**);
- (c) the cost of working capital facility (the **Cost of Working Capital Component**);
- (d) the return on equity during construction (the **ROEDC**) and post COD (the **ROE**).

9.2.1 FIXED O&M COST COMPONENT

9.2.1.1 ASSUMPTIONS

Fixed O&M (**Foreign**) cost to the extent of LTSA costs is based on the LTSA bid of the Lowest Evaluated Bidder, at USD 3.632 million. Whereas,

as explained above, the Fixed O&M contractor fee (foreign) has been adopted on the basis of Bhikki tariff determination at USD 7.058 M.

Similarly, the Fixed O&M (**Local**) cost has been based on budgeted company overhead/ O&M fee (local) during operations of USD 6.25M. The O&M costs are to be actualized at the time of COD of the project.

9.2.1.2 INDEXATION & ESCALATION

The following indexations shall be applicable to the Fixed O&M Cost Component:

- (a) The Local Fixed O&M Cost Component shall be quarterly indexed to the CPI of manufacturing in Pakistan, as notified by the Pakistan Bureau of Statistics; and
- (b) The Foreign Fixed O&M Cost Component shall be quarterly indexed to both:
 - (i) the USD/PKR exchange rate, based on the revised TT & OD selling rate of USD notified by the National Bank of Pakistan; and
 - (ii) the US CPI, notified by the US Bureau of Labor Statistics.

9.2.2 INSURANCE COST COMPONENT

9.2.2.1 ASSUMPTIONS

The Insurance cost component consists of all-risk insurance/reinsurance for the Project, as well as business- interruption insurance (which is a standard lender-stipulated requirement). The insurance cost component has been calculated at 1.00% of the EPC cost as allowed by the Authority in the earlier Determinations.. The Insurance costs are to be actualized at the time of COD of the project and thereafter shall be as per actual on yearly basis.

9.2.3 COST OF WORKING CAPITAL COMPONENT

9.2.3.1 ASSUMPTIONS

PTPL has estimated its working capital requirement equivalent to 40 days of cash cycle taking into account the normal payment cycle of the PPA applicable to energy payments receivable from the Power Purchaser. Cost of short term borrowing has been assumed at 3mKIBOR + 2%. Further, cost of 60 days SBLC at the rate of 1.5% per annum has been assumed as part of the working capital cost. Working capital requirement also includes 7 days HSD inventory requirement at 60% load.

As per the Authority's decision in case of previous RLNG projects, it is proposed that the cost of working capital shall be adjusted for actual payment terms agreed in the PPA and GSA and fuel prices at the time of COD and thereafter, the cost of working capital shall be adjusted quarterly for variation in KIBOR and fuel prices only.

9.2.3.2 INDEXATION & ESCALATION

The Cost of Working Capital Component of the Escalable Component of the Reference Generation Tariff shall be indexed to the following:

- (a) the Fuel Price variation;
- (b) the quarterly changes in the 3 month KIBOR; and
- (c) Quarterly foreign currency exchange rate variation.

9.2.4 THE RETURN ON EQUITY

9.2.4.1 ASSUMPTIONS

The Return on Equity component of the tariff (including Return on Equity During Construction) has been based on an internal rate of return of 16% which is in line with the Power Policy 2015 and previous rulings of the Authority on the matters related to RLNG generation. Calculations are based on expected equity utilization up to COD.

Corporate income tax and Withholding tax payable on income are assumed to be pass-through and are not included in the Tariff.

9.2.4.2 INDEXATION AND ESCALATION

The ROE (including Return on Equity During Construction) component of the Reference Generation Tariff shall be quarterly indexed to the USD/PKR exchange rate, based on the revised TT & OD selling rate of USD notified by the National Bank of Pakistan; and

9.3 NON-ESCALABLE CAPACITY PURCHASE PRICE

The Non-Escalable Capacity Purchase Price component of the Reference Generation Tariff comprises of the principal (the **Principal**) and interest (the **Interest**) component of the debt procured for the Project (the **Debt Service Component**);

9.3.1 DEBT SERVICE COMPONENT

9.3.1.1 ASSUMPTIONS

The Petitioner has assumed 100% of the debt amount from local banks and financial institutions in calculating the debt-servicing component of the tariff.

The following assumptions have been made in calculating this component:

Amount of debt: USD 601.377 million in local financing

- Term of debt: 10 years
- Interest rate: 3-month KIBOR plus 3.0%
- Base KIBOR: 6.14%
- Repayment: Semi-annual

The Project drawdown schedule and related Interest during Construction (IDC) is based on expected cost utilization up to COD. This will be adjusted at COD on account of actual variation in interest on the basis of actual drawdown for the period during construction.

Any savings in interest rate spread shall be shared between power purchaser and PTPL in the ratio of 60:40. The debt servicing components shall be adjusted at COD in accordance with the repayment period of instalments agreed with the project lenders.

9.3.1.2 INDEXATION & ESCALATION

Assuming the Project is financed through 100% local Debt financing, the Interest part of the Debt Service Component shall be quarterly indexed to the 3 month KIBOR.

10. ONE TIME ADJUSTMENTS

10.1 ADJUSTMENT AT COD

In line with the Authority's determination for the RLNG Power Projects, following adjustments shall be made at COD:

At COD, the tariff components will be adjusted by the inflation factors and reference exchange rates, as the case may be, as defined and described herein.

The relevant reference tariff components will also be adjusted on account of variation in FCY/PKR, and by the then prevailing KIBOR (if applicable). Furthermore, any debt related cost will be adjusted at COD.

Debt service and ROE components will be adjusted on account of actual variation in debt and equity drawdown, actual Interest during Construction, financing costs/fees, actual customs duties and taxes, repayment frequency. Once adjusted, the Debt service and ROE will be updated according to the relevant indexations.

Spur Gas pipeline cost shall be actualized at COD

Fuel price assumed to estimate HSD inventory, LNG Escrow Account and Fuel consumption cost during testing and commissioning phase shall be indexed to price variations announced by competent authority from time to time at COD.

The fuel cost component on either fuel (i.e. LNG or HSD) requested in the instant tariff petition is assumed to be grossed up and restated at COD to incorporate the fuel consumption cost pertaining to auxiliary consumption/ load based on IDC test.

10.1.1 In summary, at COD, the Reference Generation Tariff will be updated on the basis of:

- (a) Actual interest incurred during the construction period including any upward variation in IDC resulting from delay in COD;
- (b) Fuel Price variation;
- (c) Custom Duties, and Taxes;
- (d) Changes in KIBOR and exchange rate variations;
- (e) Actual loan repayment frequency; and
- (f) Changes in Gas pipeline costs, HSD inventory and LNG Escrow Account.

10.2 ADJUSTMENT DUE TO VARIATION IN NET CAPACITY

It is proposed that all the tariff components of capacity charge and variable O&M Components of the Energy Purchase Price shall be adjusted at the time of COD based upon the Initial Dependable Capacity tests to be carried out for determination of net contracted capacity on either fuel. In case net capacity is established lower than the guaranteed level, the same shall be allowed and appropriate adjustment in the tariff components shall be made.

10.3 HEAT RATE TEST

The energy purchase price shall be adjusted subsequent to the heat rate test carried out by the independent engineer in the presence of representatives of power purchaser in accordance with the established benchmarks. Subsequent to the submission of the test report to the satisfaction of the authority, onetime adjustment be made in the fuel cost components at COD.

In case the efficiencies on either fuel is established lower than the guaranteed levels, appropriate adjustment in the fuel cost components, working capital component, debt servicing and ROE components shall be made. In case the efficiencies on either fuel establish higher than the guaranteed levels, the gain be shared in the ratio of 60:40 between the power purchaser and power producer and fuel cost components be adjusted accordingly at COD.

10.4 ADJUSTMENT DUE TO VARIATION IN NET THERMAL EFFICIENCY

It is proposed that fuel component of energy purchase price and working capital component, debt servicing and ROE components of the capacity purchase price be adjusted at the time of COD based upon the net thermal efficiency established after applying all corrections/adjustments [as indicated earlier including those] based on tests to be carried out at COD.

In case the net thermal efficiency established at COD after applying all corrections/adjustments exceeds the contracted efficiency, excess efficiency gains will be shared in 60:40 [Power Purchaser: IPP] ratio.

10.5 PASS-THROUGH ITEMS

In addition to the pass-through items stipulated in the standardized PPA and in the Petition herein, early completion bonus, any taxes (including but not limited to corporate taxes, minimum turnover tax, alternate corporate tax etc.), duties and levies, Workers Welfare Fund, Workers Profit Participation Fund and/or governmental impositions of whatsoever nature; and financing cost of SBLC's or any other instruments required under the GSA not factored in the tariff calculations will be treated as part of the Project / operating cost as per actual basis and will be passed through to the Power Purchaser.

In case the ECA financing option for the project is availed, any additional financing cost including insurance fee shall be a pass through item as per actual.

11. GENERAL ASSUMPTIONS

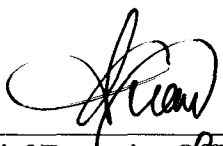
The following have been assumed while calculating the Reference Generation Tariff and changes in any of these assumptions will result in changes in the Reference Generation Tariff.

- All calculations have been performed in USD and unindexed.
- Where applicable, an exchange rate of PKR 105.5 per USD has been used to convert the figures into USD.
- For Simple cycle operations, gross capacity of each GT has been assumed at 405 MW on RLNG operations whereas for Combined cycle operations gross capacity of the plant has been assumed at 1,263.2 MW on RLNG operations and 1,105.0 MW on HSD.
- The configuration of proposed power plant has been assumed at 2 + 2 + 1 i.e. 2 GT's + 2 HRSG's + 1 ST.
- Plant / load factor i.e. average availability of the plant has been assumed at 92%.
- The tariff control period has been assumed to be 30 years from the date of COD. Construction period has been assumed to be 30 months.
- Auxiliary load for the plant has been assumed to be 20.5 MW on RLNG and 23.2 MW on HSD and shall be allowed up to a 3% of the contract capacity based on the IDC test to be carried out at COD. The fuel cost component on either fuel (i.e. LNG or HSD) requested in the instant tariff petition is assumed to be grossed up and restated at COD to incorporate the fuel consumption cost pertaining to auxiliary consumption/ load based on IDC test.
- For Simple cycle operations, thermal efficiency of 39.2% on RLNG has been assumed, whereas, thermal efficiency of 61.16% on RLNG and 55.76% on HSD has been assumed for Combined cycle operations.
- Any efficiency gains determined at COD against the contracted values may be shared with the power purchaser in ratio of 60:40.
- Degradation has been considered as a normal feature of plant and hence assumed to be a pass through under the tariff. The monthly degradation schedule would be agreed with the Power Purchaser under the Power Purchase Agreement.
- In line with the previous Tariff Determinations, a discount rate of 10.0% has been used to calculate NPV for the purpose of this tariff determination.

- All invoicing and payment terms are assumed to be in accordance with the finalized PPA terms.
- Any benefit/concession/incentives given to any other IPP/projects will also be given to the Company.
- Any additional costs incurred to cater for any modifications or additions required by the Power Purchaser will form part of the Project Cost at the COD.
- Impact of foreign currency fluctuations relating to project cost payments to be made post construction period such as retention money are also assumed to be compensated.
- Grid connection shall be the responsibility of NTDC.
- No corporate taxes (including but not limited to minimum turnover tax, alternate corporate tax, normal tax etc.) has been assumed. As these are assumed to be a pass through item.

In light of the submissions, the financial analysis and information contained in this Tariff Petition, along with the Schedules attached hereto, and in the national interest of expediting PTPL's power generation facility establishment process initiated by GOP on a fast track basis, this Tariff Petition is submitted for NEPRA's approval of the Reference Generation Tariff based on grounds stated herein, in terms of this Tariff Petition.

Respectfully submitted for and on behalf of PTPL:



Chief Executive Officer

SCHEDULE A
REFERENCE GENERATION TARIFF TABLE – RLNG COMBINED CYCLE

Energy Purchase Price (Rs. kWh)				Capacity Purchase Price (PKR kW/Hour)									Total Tariff	
Year	Fuel component	Var. O&M	Total EPP	Fixed O&M local	Fixed O&M foreign	Cost of W/C	Insurance	ROE	Debt Repayment	Interest Charges	Total CPP	Capacity charge @ 92%	Rs. / kWh	Cents / kWh
1	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.3773	0.5243	1.6151	1.7556	7.4360	7.0483
2	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.4125	0.4890	1.6151	1.7556	7.4360	7.0483
3	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.4511	0.4504	1.6151	1.7556	7.4360	7.0483
4	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.4933	0.4083	1.6151	1.7556	7.4360	7.0483
5	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.5394	0.3621	1.6151	1.7556	7.4360	7.0483
6	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.5898	0.3117	1.6151	1.7556	7.4360	7.0483
7	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.6450	0.2566	1.6151	1.7556	7.4360	7.0483
8	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.7053	0.1963	1.6151	1.7556	7.4360	7.0483
9	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.7712	0.1303	1.6151	1.7556	7.4360	7.0483
10	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.8433	0.0582	1.6151	1.7556	7.4360	7.0483
11	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
12	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
13	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
14	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
15	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
16	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
17	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
18	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
19	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
20	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
21	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
22	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
23	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
24	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
25	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
26	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
27	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
28	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
29	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
30	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	-	-	0.7136	0.7756	6.4560	6.1194
Average														
1-10	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.5828	0.3187	1.6151	1.7556	7.4360	7.0483
11-30	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.0000	0.0000	0.7136	0.7756	6.4560	6.1194
1-30	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.1943	0.1062	1.0141	1.1023	6.7827	6.4291
Levelized														
1-30	5.3763	0.3041	5.6804	0.0605	0.1036	0.0824	0.0514	0.4157	0.3543	0.2333	1.3012	1.4144	7.0947	6.7249
Levelized Tariff = 7.0947 Rs./kWh 6.7249 US Cents/kWh														

REFERENCE GENERATION TARIFF TABLE – HSD COMBINED CYCLE

Energy Purchase Price (Rs. kWh)							Capacity Purchase Price (PKR kW/ Hour)					Total Tariff		
Year	Fuel component	Var. O&M	Total EPP	Fixed O&M local	Fixed O&M foreign	Cost of W.C	Insurance	ROE	Debt Repayment	Interest Charges	Total CPP	Capacity charge@ 92%	Rs. / kWh	Cents / kWh
1	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.4334	0.6022	1.8554	2.0167	13.1771	12.4901
2	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.4739	0.5617	1.8554	2.0167	13.1771	12.4901
3	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.5182	0.5174	1.8554	2.0167	13.1771	12.4901
4	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.5667	0.4690	1.8554	2.0167	13.1771	12.4901
5	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.6196	0.4160	1.8554	2.0167	13.1771	12.4901
6	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.6776	0.3581	1.8554	2.0167	13.1771	12.4901
7	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.7409	0.2947	1.8554	2.0167	13.1771	12.4901
8	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.8102	0.2255	1.8554	2.0167	13.1771	12.4901
9	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.8859	0.1497	1.8554	2.0167	13.1771	12.4901
10	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.9687	0.0669	1.8554	2.0167	13.1771	12.4901
11	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
12	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
13	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
14	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
15	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
16	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
17	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
18	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
19	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
20	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
21	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
22	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
23	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
24	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
25	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
26	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
27	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
28	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
29	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
30	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	-	-	0.8197	0.8910	12.0514	11.4231
Average														
1-10	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.6695	0.3661	1.8554	2.0167	13.1771	12.4901
11-30	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.0000	0.0000	0.8197	0.8910	12.0514	11.4231
1-30	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.2232	0.1220	1.1649	1.2662	12.4266	11.7788
Levelized														
1-30	10.7216	0.4388	11.1604	0.0695	0.1190	0.0947	0.0590	0.4775	0.4070	0.2681	1.4948	1.6247	12.7851	12.1186
Levelized Tariff =														
				12.7851	Rs./kWh				12.1186	US Cents/kWh				

SCHEDULE B / 1
GOP APPROVAL LETTER DATED JUNE 16, 2017



F.No. 50(Power)ED 21-42/2017
GOVERNMENT OF THE PUNJAB
ENERGY DEPARTMENT
Dated: June 16, 2017

To,

The Secretary
Government of Pakistan
Ministry of Water & Power

Subject: **RECOMMENDATION FOR ISSUANCE OF LETTER OF INTENT FOR 1100-1400 MW LNG BASED POWER PLANT TO BE ESTABLISHED NEAR HAVELI BAHADUR SHAH/TRIMMU BARAGE, JHANG DISTRICT, PUNJAB**

Cabinet of Province of Punjab approved setting up of a new approximately 1200 MW LNG based power plant. The Cabinet Committee on Energy (CCoE) of the Federal Government in its meeting held on June 06, 2017 also approved the proposed power project. It may also be noted that CCoE has also relaxed, to the extent of the project, the ban it had placed on new imported fuel-based power projects (*decisions of the said meeting of CCoE are attached at Annex-A*). Subsequently, Government of the Punjab ("GoPb") incorporated a wholly owned company under the Companies Act, 2017 i.e. Punjab Thermal Power (Pvt.) Limited (the "Company").

2. The Company is established to setup a combined cycle thermal power plant of capacity ranging between 1100 MW to 1400 MW at Jhang District, Punjab (hereinafter referred to as the "Project"). The range of 1100-1400 MW to account for different range in capacities of gas turbines and steam turbines offered by different Original Equipment Manufacturers (OEMs). The equity for the Project shall be injected/funded by the GoPb.

3. With regard to the location of the Project, the Company requested National Transmission & Dispatch Company (NTDC) to identify a suitable site in Punjab for establishment of the plant vide its letter dated June 06, 2017 (**Annex-B**). NTDC vide its letter dated June 12, 2017 informed that Haveli Bahadur Shah, District Jhang, Punjab, is a suitable option for establishment of the plant (**Annex-C**). It may also be noted that GoPb mandated the Company to plan, develop, execute and implement the project on fast track basis and do all necessary and incidental acts in this regard ("**Annex-D**"). Hence, the project would be established near Haveli Bahadur Shah/Trimmu Barrage.

4. Salient features of the Project are as under:

Project	1100 -1400 MW CCPP Jhang District, Punjab
Site Location	District Jhang near Trimmu Barage, in Punjab
Project Area	150 Acres approx.
Sponsors	Government of the Punjab
Project Company	Punjab Thermal Power Pvt. Limited
Capacity	1100 – 1400 MW
Plant Efficiency	60% ISO
Construction Period	26 – 27 Months approx.

Project (Expected)	Cost	Description	USD m*
		EPC Cost	540
		Customs Duty and Taxes	26
		Non-EPC Cost and Project Development	135
		Interest During Construction	82
		Financial Fees and Charges	20
		One Month LNG Escrow Account	57
		Total	860

Proposed Plan	Financing	Description	%age
		Equity	20-25
		Debt	75-80
Proposed Terms	Financing	For a period of 10 years	
Timelines		Work Award Sept 2017	

(*Estimated costs based on Bhikki Power Project reference. These are subject to inter alia actual EPC costs, financing terms and fuels costs as approved by NEPRA)

5. Accordingly the Project is to be processed under IPP mode and in accordance with the para 7(A) of Power Generation Policy, 2015, as amended (“**Power Policy**”) therefore the Project is required to be registered with Private Power & Infrastructure Board (“**PPIB**”).

6. In pursuance of the above, GoPb being the sponsor of the Project, hereby intimates its approval and recommends the Project as private power project/IPP under the Power Policy and requests the Federal Government to sanction the Project to be processed as IPP under the Power Policy by PPIB for further processing thereunder such as issuance of Letter of Intent, Letter of Support and Implementation Agreement.



Asad Rehman Gilani

Secretary Energy

16.6.2017

C.C.

1. Managing Director, Private Power & Infrastructure Board
2. CEO, Punjab Thermal Power (Pvt.) Limited

SCHEDULE B / 2
GOP LETTER DATED JUNE 20, 2017

Islamabad June 20, 2017

Subject: **RECOMMENDATION FOR ISSUANCE OF LETTER OF INTENT FOR 1100-1400 MW
LNG BASED POWER PLANT TO BE ESTABLISHED NEAR HAVELI BAHADUR
SHAH/TRIMMU BARAGE, JHANG DISTRICT, PUNJAB.**

I am directed to refer to Government of Punjab, Energy Department letter No. Nil dated 16th June, 2017 on the subject captioned above (copy enclosed). The Cabinet Committee on Energy vide Case No. CCE-27-7-2017 dated 6th June, 2017 approved the proposed new 1200 MW LNG-Based Power Project in Punjab and directed this Ministry to initiate the required actions immediately. Furthermore CCE also relaxed, to the extent of this project, the ban it had placed on new imported fuel-based power projects.

2. Subsequent to the CCOE decision, the GoPb, Energy Department has requested, as Sponsor of the project for processing of project under IPP mode in accordance with Para 7(A) of Power Generation Policy 2015 as amended and requested registering with PPIB.

3. As per provisions of the GoP's Power Generation Policy 2015 (Section 7(A)), the incentives/concessions available to private power projects will be available to public sector projects which are owned and controlled by, or any entity or enterprise of, Federal Government, Provincial Government, or Local Authority, and specifically sanctioned by Federal Government.

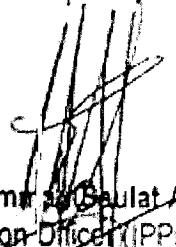
4. PPIB is hereby directed to process the project as IPP as per above mentioned provisions of the Policy.

Encl.a.a

cc: file
The Manager Director,
PPIB,
Islamabad.

C.c.

- i. PSO to Secretary, Water & Power, Islamabad.
- ii. PS to JS(PF), M/o Water & Power, Islamabad.


(Muhammad Saadul Anjum)
Section Officer (IPPs)
Tele: 9223090

SCHEDULE C
COPY OF LETTER OF INTENT



PRIVATE POWER & INFRASTRUCTURE BOARD
MINISTRY OF WATER & POWER
GOVERNMENT OF PAKISTAN

No. 1(102) PPIB-8005/17/PRJ/O-49231

26th July 2017

Mr. Ahad Khan Cheema
Chief Executive Officer
Punjab Thermal Power (Pvt.) Ltd.
First Floor, 7 C-1, Gulberg III
Lahore

SUBJECT: LETTER OF INTENT (LOI) FOR 1250 MW INDEPENDENT POWER GENERATION PROJECT BASED ON R-LNG TO BE ESTABLISHED NEAR TRIMMU BARRAGE, DISTRICT JHANG, PUNJAB (THE "PROJECT")

Whereas, Cabinet Committee on Energy (CCE) in Case No. CCE27/7/2017 dated 6th June 2017 titled "Proposal of a new 1200 MW LNG-Based Power Plant by Government of Punjab" has approved the proposed new 1200 MW LNG-based power project in Punjab and directed Ministry of Water & Power to initiate required actions immediately;

Whereas, Government of Punjab (GoPb), being the sponsor of the Project, through Energy Department Punjab (the "Sponsor") vide letter No. SO(Power)ED21-42/2017 dated 16th June 2016 to Ministry of Water & Power, Government of Pakistan (GOP), has communicated its approval and recommended the Project as private power project/IPP under the GOP Power Generation Policy 2015 as amended (hereinafter referred to as the Policy) for establishment of 1100-1400 MW R-LNG based Power Project near Trimmu Barrage, District Jhang, Punjab and further processing by PPIB for issuance of Letter of Intent, Letter of Support etc.;

Whereas, Ministry of Water & Power, GOP vide letter No. IPPs-10(03)/2016 dated 20th June 2017 has directed PPIB to process the project as IPP as per provisions of the Policy;

Whereas, GoPb through its letter No. SO(POWER)ED/21-42/2017 dated 5th July 2017 to PPIB has communicated its approval and recommendation for the Project;

Whereas, GoPb through Energy Department has setup a special purpose company with the name and title of Punjab Thermal Power (Pvt.) Ltd. (PTPL) under the laws of Pakistan, with its registered office at First Floor, C-1 Gulberg III, Lahore (the "Project Company");

Whereas, upon recommendation of the GoPb and upon approval and directions of the Ministry of Water & Power GOP, PPIB issued Notice to Proceed No. 1(102) PPIB-8005/17/PRJ/O-491/1 dated 14th July 2017 to the Sponsor/Project Company (Notice to Proceed);

Ground & 2nd Floors, Immigration Tower, Plot No. 10, Mauve Area, G-8/1, Islamabad - Pakistan.

Tel: (92-51) 9264034-45, Fax No. (92-51) 9264030-31

Email: ppib@ppib.gov.pk Internet: <http://www.ppib.gov.pk>

Whereas, the Sponsor/Project Company having delivered an irrevocable, unconditional, on demand bank guarantee No. 002LOG1171990007, on terms acceptable to PPIB, dated 18th July 2017 issued by The Bank of Punjab, Main Branch, 7-Egerton Road, Lahore, in the amount of US \$ 1,250,000/- (United States Dollars One Million Two Hundred Fifty Thousand only) (at the rate of United States Dollars US\$ 1,000 per MW) (hereinafter referred to as the 'Performance Guarantee') in favor of PPIB; and

Whereas, the Sponsor/Project Company has submitted a non-refundable processing fee of Pak Rupees 31,650,000/- (Pak Rupees Thirty One Million Six Hundred Fifty Thousand only) in favour of PPIB through Pay Order No. 03767458 dated 18th July 2017 issued by The Bank of Punjab, Main Branch, 7-Egerton Road, Lahore.

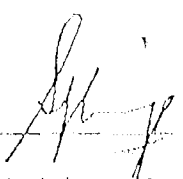
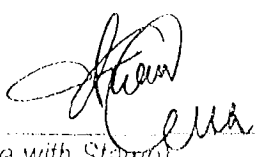
Now therefore, the GOP through PPIB; is pleased to issue this **Letter of Intent** (the 'LOI') subject to the following terms and conditions;

1. The Sponsor/Project Company is required to submit, within three (3) months from the Notice to Proceed, petitions before National Electric Power Regulatory Authority (NEPRA) to obtain, tariff determination and generation license under Regulation of Generation, Transmission and Distribution of Electric Power Act 1997;
2. The Sponsor/Project Company is required to obtain Letter of Support (LOS) from PPIB within one (01) month from the Tariff Determination by NEPRA (Tariff Determination) under and in accordance with the Policy;
3. In the event, the Sponsor/Project Company delays, defaults or fails to: (i) submit petition to NEPRA for Tariff Determination within three (3) months from the issuance of Notice to Proceed; or (ii) obtain Letter of Support (LOS) from PPIB within one (01) month of the Tariff Determination, PPIB shall be entitled to, encash the Performance Guarantee and the LOI shall stand terminated without any notice. Provided, Sponsor/Project Company shall not be in delay, default or failure if: (a) it has completed all the requirements prescribed under the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997 for the determination / approval of the Tariff; (b) if it has completed all the requirements prescribed under the Policy for obtaining the LOS; and (c) Sponsor/Project Company delay, default or failure is solely attributable to the GOP entities; or (d) Sponsor/Project Company's delay, default or failure is attributable to the reasons beyond the control of the Sponsor / Project Company.
4. In the event of delay, default or failure to obtain Tariff Determination or LOS by the Sponsor / Project Company is solely attributable to the GOP entities, then the PPIB shall, acting in its sole determination, upon on an application in writing made to it by the Sponsor / Project Company at least thirty (30) days before the expiry of this LOI stating the reasons of delay, default or failure in obtaining Tariff Determination or LOS attributable to the GOP entities, grant an extension in the term of this LOI commensurate with such period of delay, default or failure provided further that the Performance Guarantee (in the same amount of existing Performance Guarantee) shall be extended by the Sponsor/Project Company for a period not less than three (3) months beyond such extended term of the LOI;
5. In the event of any delay, default or failure in obtaining the Tariff Determination or LOS is due to events beyond the reasonable control of the Sponsor / Project Company, then PPIB shall, acting in its sole discretion, upon an application in

writing made to it by the Sponsor / Project Company at least thirty (30) days before the expiry of this LOI, grant in writing to the Sponsor / Project Company a one-time extension of up to a maximum period of three (3) months beyond the LOI expiry date, provided however, that such an extension in the term of the LOI would only be granted upon submission of the Performance Guarantee (in double the amount) with validity of three (3) months beyond the extended LOI;

6. This LOI shall, be effective from the date hereof and unless terminated or extended earlier, continue to be in full force and effect until the issuance of LOS or 17th January 2018, whichever is earlier,
7. The rights and obligations of the parties pursuant to and under this LOI shall be governed by the laws of Pakistan;
8. This LOI shall in no way be construed as an award of the Project as no such vested legal or contractual rights shall accrue, in favour of Sponsor or Project Company, till such time, valid Project Agreements (as defined in the LOS) are executed in accordance with the terms and conditions contained therein;
9. Issuance of this LOI or its termination by PPIB or expiry cannot form the basis of any claim for compensation or damages against the Government of Pakistan, PPIB or any of its agencies on any grounds whatsoever, during or after the expiration or termination as the case may be.

Kindly sign the attached copy of this LOI at the place indicated and return the same to us no later than seven (07) days.

For & on behalf of Private Power & Infrastructure Board	For & on behalf of Punjab Thermal Power (Pvt.) Ltd.
	
(Shah Jahan Mirza) Managing Director	(Signature with Stamp)
	Name: <u>AHSAN KHAN (AHEEMA)</u>
	Designation: <u>CEO</u>

Copy to:

1. Secretary, MoW&P, Islamabad
2. Secretary, MoP&NR, Islamabad
3. Chairman, NEPRA, Islamabad
4. Secretary (Energy), Govt. of Punjab, Lahore
5. Chief Executive Officer, CPPA-G, Islamabad
6. Managing Director, NIDC, Lahore
7. Managing Director, SNGPL, Lahore

SCHEDULE D
MEMORANDUM & ARTICLES OF ASSOCIATION OF PUNJAB THERMAL POWER
(PRIVATE) LIMITED

10/3/24
8/6/2017

(PRIVATE COMPANY LIMITED BY SHARES)

Memorandum of Association
of
PUNJAB THERMAL POWER (PRIVATE) LIMITED

1. The name of the Company is "PUNJAB THERMAL POWER (PRIVATE) LIMITED".
2. The Registered Office of the Company will be situated in the Province of Punjab.
3. (i) The principal line of business of the company shall be to establish, procure, construct, equip, operate, use, manage and maintain 1200 MW RLNG based power plant near load centers in Punjab.

(ii) Except for the businesses mentioned in sub-clause (iii) hereunder, the company shall engage in all the lawful businesses and shall be authorized to take all necessary steps and actions in connection therewith and ancillary thereto.

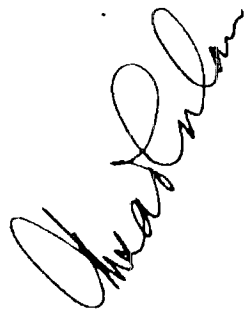
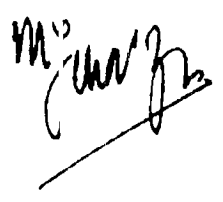
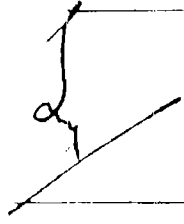
(iii) Notwithstanding anything contained in the foregoing sub-clauses of this clause nothing contained herein shall be construed as empowering the Company to undertake or indulge, directly or indirectly in the business of a Banking Company, Non-banking Finance Company (Mutual Fund, Leasing, Investment Company, Investment Advisor, Real Estate Investment Trust management company, Housing Finance Company, Venture Capital Company, Discounting Services, Microfinance or Microcredit business), Insurance Business, Modaraba management company, Stock Brokerage business, forex, real estate business, managing agency, business of providing the services of security guards or any other business restricted under any law for the time being in force or as may be specified by the Commission.

(iv) It is hereby undertaken that the company shall not:

- (a) engage in any of the business mentioned in sub-clause (iii) above or any unlawful operation;
- (b) launch multi-level marketing (MLM), Pyramid and Ponzi Schemes, or other related activities/businesses or any lottery business;
- (c) engage in any of the permissible business unless the requisite approval, permission, consent or licence is obtained from competent authority as may be required under any law for the time being in force.

4. The liability of the members is limited.
5. The Authorised Capital of the Company is Rs. 10,000,000/- (Rupees Ten Million Only) divided into 100,000 (Hundred Thousand) equity shares of Rs. 100/- (Rupees One Hundred only) each.

We, the several persons whose names and addresses are subscribed below, are desirous of being formed into a Company, in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the Capital of the Company as set opposite to our respective names.

S N o	Name and Surname (present & former) in full (in Block Letters)	CNIC No. (In case of foreigner Passport No)	Father's/ Husband' Name in full	Nationality (ies) with any former Nationality	Occupation	Residential address in full	Number of shares taken by each subscriber	Signatures
1	Governm ent of Punjab, Energy Departme nt through Mr. Asad Rehman Gilani	35201- 0254196 -5	Ghafoor- ur- Rehman Gilani	Pakistani	Secretary, Energy Department	125 E, 99, 998 Model Town, Lahore		
2	Mr. Mohamm ad Jehanzeb Khan	173018- 276764- 5	Mr. Muhammad Aurangzeb Khan	Pakistani	Chairman, P&D Department	8 - Danepur Lane, GOR-I, Lahore.	1	
3	Hamed Yaquob Sheikh	35202- 2994923 -9	Muhammad Yaquob	Pakistani	Secretary Finance Department	House No. 6, Danepur	1	

					Lane, GOR-1, Lahore	
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Dated this 8th day of June, 2017

Witness =

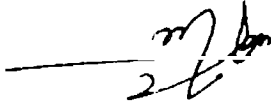
Name: ZOHAIL AHMAD

Father's name: MUHAMMAD RAFI

NIC: 35301-1921753-5

Address: 12-A, MUHAFFAZ TOWN, PHASE (II)
LAHORE

OCCUPATION: ASSISTANT MANAGER CORPORATE

Signature: 

The Companies Act, 2017
(Private Company Limited by Shares)

ARTICLES OF ASSOCIATION
OF
PUNJAB THERMAL POWER (PRIVATE) LIMITED

1. The Regulations contained in Table 'A' to the First Schedule to the Companies Act, 2017 shall be the regulations of **PUNJAB THERMAL POWER (Private) Limited** (the "Company") so far as these are applicable to a private company.

PRIVATE COMPANY

2. The Company is a "Private Company" within the meaning of Section Clause (49) of Section 2(1) of the Ordinance and accordingly:

- (1) No invitation shall be made to the public to subscribe for the shares or debentures of the Company.
- (2) The number of the members of the Company (exclusive of persons in the employment of the Company), shall be limited to fifty, provided that for the purpose of this provision, where two or more persons hold one or more shares in the company jointly, they shall be treated as single member; and
- (3) The right to transfer shares of the Company is restricted in the manner and to the extent herein appearing.

TRANSFER OF SHARES

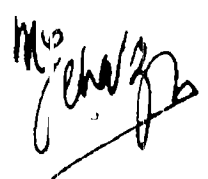
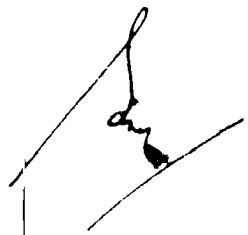
3. A member desirous to transfer any of his shares shall first offer such shares for sale or gift to the existing members and in case of their refusal to accept the offer, such shares may be transferred to any other person, as proposed by the transferor member, with the approval of the Board of Directors.

DIRECTORS

4. The number of directors shall not be less than two or a higher number as fixed under the provisions of Section 154 of the Ordinance. The following persons shall be the first directors of the Company and shall hold the office upto the date of First Annual General Meeting:

1. Mohammad Jehanzeb Khan – ACS (Energy)
2. Asad Rehman Gilani – Secretary Energy
3. Hamed Yaqoob Sheikh – Secretary Finance

We, the several persons whose names and addresses are subscribed, are desirous of being formed into a company, in pursuance of these articles of association, and we respectively agree to take the number of shares in the capital of the company set opposite our respective names.

S N o	Name and Surname (present & former) in full (In Block Letters)	CNIC No. (in case of foreigner Passport No)	Father's/ Husband' Name in full	Nationality (ies) with any former Nationality	Occupation	Residential address in full	Number of shares taken by each subscriber	Signatures
1	Government of Punjab, Energy Department through Asad Rehman Gilani	35201-0254196-5	Ghafoor-ur- Rehman Gilani	Pakistani	Secretary, Energy Department	125 E, 99, 998 Model Town, Lahore		
2	Mohammad Jehanzeb Khan	173018-276764-5	Mr. Muhammad Aurangzeb Khan	Pakistani	Chairman, P&D Department	8 - Danepur Lane, GOR-I, Lahore.	1	
3	Hamed Yaqoob Sheikh	35202-2994923-9	Muhammad Yaqoob	Pakistani	Secretary Finance Department	House No. 6, Danepur Lane, GOR-I, Lahore	1	

Total number of shares taken 100,000
(One Hundred Thousand)

Dated the 8th day of June, 2017

Witness :

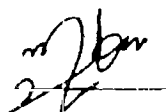
Name : ZOHAIB AHMAD

Fathers name : MUHAMMAD RAFI

NIC : 35301-1921753-5

Address : 12-A, MUTAFI2 TOWN, PHASE II
LAHORE

OCCUPATION : ASSISTANT MANAGER CORPORATE

Signature : 

SCHEDULE E
CERTIFICATE OF INCORPORATION



A030137

SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN
COMPANY REGISTRATION OFFICE,
LAHORE

CERTIFICATE OF INCORPORATION

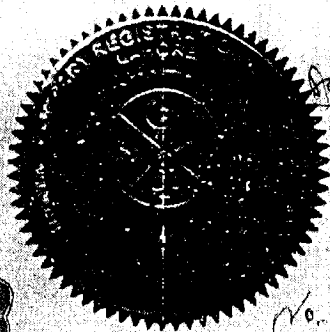
[Under section 16 of the Companies Act, 2017 (XIX of 2017)]

Corporate Universal Identification No. 0169152

I hereby certify that **PUNJAB THERMAL POWER (PRIVATE) LIMITED**
is this day incorporated under the Companies Act, 2017 (XIX of 2017) and that the
company is limited by shares,

Given under my hand at Lahore this Eighth day of June, Two Thousand and
Seventeen.

Incorporation fee Rs. 101000.0/= only



(Signature)
14/6/17
(SABOOHI ISRAR)
Deputy Registrar
Lahore

No. ARL/31459- dt 8/6/2017

SCHEDULE F
LETTER FROM NTDC – POWER EVACUATION



NATIONAL TRANSMISSION & DESPATCH COMPANY (NTDC)

General Manager Power System Planning, NTDC

No. GMPSP/CEMP/TRP-360/3 866-69

Dated: 03-07-2017

Mr. Ahad Khan Cheema
Chief Executive Officer
Punjab Thermal Power (Pvt) Limited,
First Floor, 7 C-1, Gulberg-III,
Lahore.
Fax #: 042-45750939

Sub: Consent of Power Dispersal from 1200 MW RLNG Based Combined Cycle Power Plant (CCPP), Trimmu, Jhang

Ref: M/s Punjab Thermal Power (Pvt) Ltd. letter No. PTPL/TECH/018/2017 dated 23-06-2017.

With reference to the above letter, NTDC gives its consent for dispersal of power from the subject power plant to the national grid. The interconnection scheme for the subject power plant is most likely to be at 220 kV voltage level for which the system studies are already under progress. It is however, intimated that the timelines for the construction of back feed power supply from the grid and power evacuation of simple cycle for the subject power plant as mentioned in the above referred letter are very much challenging in view of the activities/timelines related to the construction of new transmission lines and it is, therefore, suggested to have a meeting during next week in our office.

(Maqsood Ahmad Qureshi)

General Manager Power System Planning

CC:

- Managing Director NTDC, Wapda House, Lahore.
- Deputy Managing Director NTDC, Wapda House, Lahore.
- Mr. Zafar Abbas, Joint Secretary, Ministry of Water & Power, Islamabad.
- Master File

03/07

0/70

2. Wazim

3/7/2017

CEO/PTPL	
Diary No.	020
Date:	03/07/2017
CFO	
GM HR& Admin	
GM Tech. Serv.	
Company Secy	
CIA	
Manager Legal	
P.S.	

SCHEDULE G
LETTER FROM CPPA – G – POWER ACQUISITION REQUEST



Central Power Purchasing Agency Guarantee Limited
A Company of Government of Pakistan



Chief Technical Officer, CPPA(G)

Dated--2.2-/86-/2017

No. CTO/CPPA(G) /DGM-V/ 26359-63

Managing Director,
Private Power Infrastructure Board,
Ministry of Water And Power,
Islamabad.

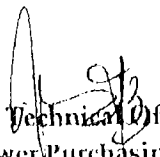
Subject: Power Procurement Consent from 1200 MW Trimmu Jhang

Reference: Letter no 1(102) PPIB/17/PRJ/O-49040 dated 19th June, 2017

Pursuant to CCOE decision dated 06th June, 2017 & PPIB letter referred above, BoD CPPA-G issued Procurement of Power consent for 1200 MW RING based power Project at Trimmue, District Jhang after getting codal formalities.

BOD issued Power Purchase Consent to the project company subject to the fulfillment of the following conditions:

- A. The Company shall take the LOI/LOS from PPIB.
- B. The Consent of NTDC shall be taken for the following:
 - i. Dispersal of Power from the subject power Plant to National grid.
 - ii. The construction of Interconnection Facility in accordance with timeline for the Subject Power Plant as per Grid Interconnection study.
- C. The firm Gas Allocation from Ministry of Petroleum and Natural Resources.
- D. The previously approved ECC document (PPA) for RING based power plants (3600 MW) will administer this project, according to which plant shall be capable of using alternate fuel (HSD).


Chief Technical Officer
Central Power Purchasing Agency

Copy to:-

- PS to Joint Secretary (PF), Ministry of Water & Power Islamabad
- Chief Executive Officer, CPPA-G, Islamabad
- Chief Executive Officer, Punjab Thermal Power (Pvt) Limited w.r.letters PTPL/TECH/010/2017 & PTPL/TECH/011/2017 dated 13th June, 2017
- Managing Director, NTDCI, Wapda House, Lahore.

SCHEDULE H
RLNG FIRM ALLOCATION

No. NG (H)-16(1)/17-RLNG-IPP- VOL-I
Government of Pakistan
Ministry of Petroleum & Natural Resources
(Policy Wing)
Directorate General of Gas
First Floor, Petroleum House, Ataturk Avenue G-5/2

Islamabad, the 21st June, 2017

The Chief Executive Officer,

M/s Punjab Thermal Power (Pvt.) Ltd.,
7 C-1, Gulberg III, Lahore

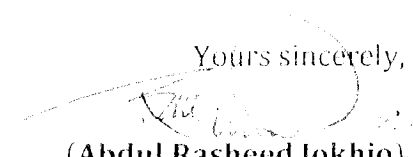
Subject: **FIRM ALLOCATION OF APPROX. 200 MMCFD RLNG FOR POWER PROJECT AT TRIMMU, DISTRICT JHANG**

Dear Sir,

I am directed to refer to M/s Punjab Thermal Power (Pvt.) Ltd. (PTPL)'s letter No. PTPL/TECH/002/2017 dated 09.06.2017 on the above subject and to say that in pursuance of ECC decision No. ECC-126/15/2015 dated 03.09.2015, this Ministry hereby allocates 200 MMCFD RLNG to M/s PTPL's 1100-1400 MW capacity Power Plant on take or pay basis subject to following conditions:

- i. The Power Company /IPP will be required to provide a firm guarantee in the form acceptable to the RLNG supplier.
 - ii. The Power Company/IPP will execute Gas Sales & Purchase Agreement (GSPA), at least a year before its commissioning /commercial operation, purely on "take or pay" basis. The terms & conditions of the GSPA will be negotiated between RLNG supplier and the buyer (Power Company / IPP).
 - iii. Any take or pay quantities and obligations related thereto in the LNG SPA will be reflected in the GSPA with Power Company/IPP.
 - iv. The price of RLNG will be as per approval of the ECC of the Cabinet for supply of RLNG to power sector and /or as notified by OGRA/PSO/other nominated entity.
 - v. The Power Company /IPP will obtain LOI/LOS/IA/PPA from PPIB / Ministry of Water & Power as per the Government Policies.
2. This issues with the approval of Competent Authority.

Yours sincerely,


(Abdul Rasheed Jokhio)
Director (Technical)

CC:

- i. Managing Director, PPIB, Islamabad
- ii. Managing Director, SNGPL, Lahore
- iii. Managing Director, PLI, Islamabad
- iv. Managing Director, PLTL, Islamabad
- v. Director to Minister for Petroleum & NR, Islamabad
- vi. SPS to Secretary Water & Power, Islamabad
- vii. SPS to Secretary Petroleum & NR, Islamabad
- viii. SPS to Addl. Secretary (A&D) Petroleum & NR, Islamabad
- ix. PA to DG (Gas) Petroleum & NR, Islamabad

SCHEDULE I
ADDITIONAL EPC COST

DETAIL OF ADDITIONAL COSTS NOT COVERED IN EPC AGREEMENT SCOPE

Contingency, Design Improvement

Sr. #	Listed Item	Description / Justification	Requested for the Project (Million USD)
1	Independent Asset Monitoring & Management System	Other than the O&M Contractor's scope, remotely Asset Monitoring & Management System for the GTs/GTGs and BoP equipment shall be installed.	500,000
2	Combustion Monitoring System of Gas Turbines [Exhaust Spread Monitor]	The combustion monitoring system monitors the condition and status of the combustion parts of the gas turbine. It may not be part of the OEM standard package and have to be ordered separately. It keeps record of the out of flame fuel injectors and calculate the exhaust spread (the temperature difference between the two combustors with maximum and minimum temperatures). It generates alarm and trips the GT if the spread is above the set points.	500,000
3	Flood protection	Left marginal bank flood protection	2,000,000
4	Auditorium	To hold conferences/seminars and trainings etc.	1,500,000
5	BOP Spares	In addition to the spares covered under the EPCC, additional spares could be procured to ensure that in case of a breakdown parts would be readily available. This will be based on the List of Recommended Spare Parts of the EPC Contractor. Employer will purchase these and hand them over to the O&M Contractor who will keep replenishing it regularly. These will be in the ownership of the Employer.	5,500,000
Additional EPC Cost Estimate			10,000,000

SCHEDULE J
PIPELINE COST ESTIMATE FROM SNGPL



GAS HOUSE, 21 KASHMIR ROAD, P.O. BOX 56, LAHORE

Ref: P&D/02-10170

Date: August 16, 2017

Syed Wasim Ur Rehman,
General Manager (Technical)
Punjab Thermal Power (Pvt) Limited.
First Floor, 7 C-1 Gulberg III,
Lahore, Pakistan

**GAS PIPELINE COST FOR
POWER PLANT AT DISTRICT JHANG**

Dear Sir,

This is further to our letter No. P&D/02-9971 dated 21.6.2017 on the subject cited above where by cost estimates were furnished for the infrastructure required to supply 200 MMCFD gas to subject proposed power plant.

As result of detailed route survey and in the light of plant location maps provided from your end, final length of pipeline comes out to be 93 KM. Accordingly, cost estimates have been revised which are given as under.

<u>Sr. No.</u>	<u>Description</u>	<u>Dia. & length</u>	<u>Budgeted Cost</u> (Rs. Million)
1-	Offtake point near Kabir wala to proposed power plant near Haveli Bahadar Shah	24"dia x 93 KM	3581.00
2-	Sales Metering Station at Power Plant Site	200 MMCFD Capacity	400.00
Total Cost			3981.00

Please note that above costs are valid for one year and any fluctuation in dollar price and escalation if any shall be reflected into the cost estimates accordingly. All the recovered costs of the project shall be charged on actual basis and adjustments from budgeted / estimated figures shall be made where required. Moreover, 370'x 250' piece of land shall also be required for constructing the metering station in the plant premises.

The above terms and conditions related to subject matter have already been communicated vide our above referred letter.

Regards,

Yours sincerely,
SUI NORTHERN GAS PIPELINES LTD


(Imran Yousaf Khan)
General Manager (P&D)
For Managing Director

Cc: MD

054

17/08/2017

elephones Exch: { (92-42)99082000
(92-42)99082006

Telephone: +(92-42)99201376
(Direct)

Fax: +(92-42)99201834

www.sngpl.com.pk



OHSAS 18001



ISO 14001 EN ISO 9001: 2008

TUV
AUSTRIA
HELLAS

SCHEDULE K
ENGINEERING AND RELATED CONSULTANCY

CONTRACT FOR ENGINEERING CONSULTANCY SERVICES

between

**PUNJAB THERMAL POWER (PVT.) LIMITED
(PTPL)**

and

**NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED
(NESPAK)**

for

**REGASIFIED LIQUEFIED NATURAL GAS (RLNG) BASED
1100-1400 MW COMBINED CYCLE POWER PLANT AT DISTRICT JHANG**

 AUGUST 2017 

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CONTRACT FOR ENGINEERING CONSULTANCY SERVICES
between
PUNJAB THERMAL POWER (PVT.) LIMITED
(PTPL)
and
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED
(NESPAK)
for
REGASIFIED LIQUEFIED NATURAL GAS (RLNG) BASED
1100-1400 MW COMBINED CYCLE POWER PLANT AT DISTRICT JHANG

This CONTRACT (hereinafter called the "Contract") is made on the _____ day of _____ (month) of _____ (year), between, on the one hand, Punjab Thermal Power (Pvt.) Limited, First Floor, 7 C-1, Gulberg III, Lahore, Pakistan (hereinafter called the "Employer" which expression shall include the successors, legal representatives and permitted assigns) and, on the other hand, National Engineering Services Pakistan (Pvt.) Limited, NESPAK House, I-C, Block-N, Model Town Extension, Lahore (hereinafter called the "Consultants" which expression shall include the successors, legal representatives and permitted assigns).

WHEREAS

- (a) the Employer has requested the Consultants to provide certain consulting services as defined in the General Conditions of Contract attached to this Contract (hereinafter called the "Services");
- (b) the Consultants are being engaged in accordance with the applicable Punjab Procurement Rules 2014 by the Employer; and
- (c) the Consultants, having represented to the Employer that they have the required professional skills, and personnel and technical resources, have agreed to provide the Services on the terms and conditions set forth in this Contract;

NOW THEREFORE the Parties hereby agree as follows:

- I. The following documents attached hereto shall be deemed to form an integral part of this Contract:
 - (a) the General Conditions of Contract;
 - (b) the Special Conditions of Contract;
 - (c) the following Appendices:

Appendix A: Description of the Services

Appendix B: Reporting Requirements

Appendix C: Key Personnel and Sub-Consultants

Appendix D: Breakdown of Contract Price in Foreign Currency

Appendix E: Breakdown of Contract Price in Local Currency

Appendix F: Services & Facilities to be Provided by the Employer

Appendix G: Integrity Pact (for Services above Rs.10 million)
Appendix H: Payment Schedule
Appendix I: Summary of Cost of Consultants and Associated Sub-Consultants

2. The mutual rights and obligations of the Employer and the Consultants shall be as set forth in the Contract, in particular:
- (a) the Consultants shall carry out the Services in accordance with the provisions of the Contract; and
 - (b) the Employer shall make payments to the Consultants in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names in two identical counterparts, each of which shall be deemed as the original, as of the day, month and year first above written.

Witness

Signatures

Name

Title

For and on behalf of

Punjab Thermal Power (Pvt.) Limited

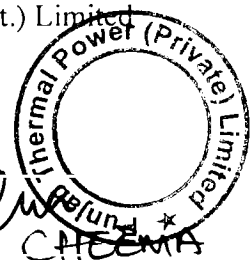
(EMPLOYER)

Signatures

Name

Title

(Seal)



Witness

Signatures

Name

Title

For and on behalf of

National Engineering Services Pakistan
(Pvt.) Limited

(CONSULTANTS)

Signatures

Name

Title

(Seal)

AAMIR ASHRAF
Vice President/Head
Power & Mechanical Division
National Engineering Services
Pakistan (Pvt.) Limited, Lahore

II. GENERAL CONDITIONS OF CONTRACT

1. GENERAL PROVISIONS

1.1 Definitions

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

- (a) "Applicable Law" means the laws and any other instruments having the force of law in the Islamic Republic of Pakistan, as those may be issued and in force from time to time;
- (b) "Contract" means the Contract signed by the Parties, to which these General Conditions of Contract (GC) are attached, together with all the documents listed in Clause 1 of such signed Contract;
- (c) "Contract Price" means the price to be paid for the performance of the Services, in accordance with Clause 6;
- (d) "Effective Date" means the date on which this Contract comes into force and effect pursuant to Sub-Clause 2.1;
- (e) "GC" mean these General Conditions of Contract;
- (f) "Government" mean the Government of the Islamic Republic of Pakistan and/or Provincial Government(s);
- (g) "Foreign Currency" means currency other than the currency of Islamic Republic of Pakistan;
- (h) "Local Currency" means the currency of the Islamic Republic of Pakistan;
- (i) "Member" in case the Consultants consist of a joint venture of more than one entity, means any of the entities, and "Members" means all of these entities;
- (j) "Party" means the Employer or the Consultants, as the case may be, and "Parties" means both of them;
- (k) "Personnel" means persons hired by the Consultants or by any Sub-consultant as employees and assigned to the performance of the Services or any part thereof;

- (l) "SC" means the Special Conditions of Contract by which the GC are amended or supplemented;
- (m) "Services" means the work to be performed by the Consultants pursuant to this Contract, as described in Appendix A;
- (n) "Sub-consultant" means any entity to which the Consultants subcontract any part of the Services in accordance with the provisions of Sub-Clause 3.6;
- (o) "Third Party" means any person or entity other than the Employer, the Consultants or a Sub-consultant; and
- (p) "Project" means the work specified in SC for which engineering consultancy services are desired.

1.2 Law Governing the Contract

This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

1.3 Language

This Contract has been executed in the English language which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract. All the reports and communications shall be in the English language.

1.4 Notices

Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an Authorized Representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, or facsimile to such Party at the address of the Authorized Representatives specified under Sub-Clause SC 1.6. A Party may change its address for notice hereunder by giving the other Party notice of such change.

1.5 Location

The Services shall be performed at such locations as are specified in Appendix A and, where the location of a particular task is not so specified, at such locations as mutually agreed by the Parties.

1.6 Authorized Representatives

Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Employer or the Consultants shall be taken or executed by the Authorized Representatives specified in the SC or so agreed between the Parties from time to time.

1.7 Taxes and Duties

Unless specified in the SC, the Consultants, Sub-consultants, and their Personnel shall pay such taxes, duties, fees, and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price.

2. COMMENCEMENT, COMPLETION, MODIFICATION, AND TERMINATION OF CONTRACT

2.1 Effectiveness of Contract

This Contract shall come into force and effect on the date (the "Effective Date") of the Employer's notice to the Consultants instructing the Consultants to begin carrying out the Services. This notice shall confirm that the effectiveness conditions, if any, listed in the SC have been met.

2.2 Termination of Contract for Failure to Become Effective

If this Contract has not become effective within such time period after the date of the Contract signed by the Parties as shall be specified in the SC, either Party may, by not less than twenty eight (28) days written notice to the other Party, declare this Contract to be null and void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party except for the work (if any) already done or costs already incurred by a Party at the request of the other Party.

2.3 Commencement of Services

The Consultants shall begin carrying out the Services at the end of such time period after the Effective Date as shall be specified in the SC.

2.4 Expiration of Contract

Unless terminated earlier pursuant to Sub-Clause 2.9, this Contract shall expire when, pursuant to the provisions hereof, the Services have been completed and the payments of remunerations including the direct costs if any, have been

made. The Services shall be completed within a period as is specified in the SC, or such extended time as may be allowed under Sub-Clause 2.6.

The term "Completion of Services" is as specified in the SC.

2.5 Modification

Modification of the terms and conditions of this Contract, including any modification of the scope of the Services or of the Contract Price, may only be made in writing, which shall be signed by both the Parties.

2.6 Extension of Time for Completion

If the scope or duration of the Services is increased:

- (a) the Consultants shall inform the Employer of the circumstances and probable effects;
- (b) the increase shall be regarded as Additional Services; and
- (c) the Employer shall extend the time for Completion of the Services accordingly.

2.7 Force Majeure

2.7.1 Definition

- (a) For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party and which makes a Party's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial actions (except where such strikes, lockouts or other industrial actions are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies.
- (b) Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party's Sub-Consultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected to both (A) take into account at the time of the conclusion of this Contract and (B) avoid or overcome in the carrying out of its obligations hereunder.

- (c) Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

2.7.2 No Breach of Contract

The failure of a Party to fulfill any of its obligations under the Contract shall not be considered to be a breach of, or default under this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event; (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract; and (b) has informed the other Party in writing not later than fifteen (15) days following the occurrence of such an event.

2.7.3 Extension of Time

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

2.7.4 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultants shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purpose of the Services and in reactivating the Services after the end of such period.

2.8 Suspension of Payments by the Employer

The Employer may, by written notice of suspension to the Consultants, suspend all payments to the Consultants hereunder if the Consultants fail to perform any of their obligations under this Contract, including the carrying out of the Services, provided that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultants to remedy such failure within a period not exceeding thirty (30) days after receipt by the Consultants of such notice of suspension.

2.9 Termination

2.9.1 By the Employer

The Employer may terminate this Contract, by not less than thirty (30) days written notice of termination to the Consultants, to be given after the

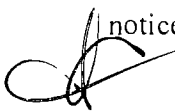
occurrence of any of the events specified in paragraphs (a) through (e) of this Sub-Clause 2.9.1 and sixty (60) days' in the case of the event referred to in paragraph (f):

- (a) if the Consultants do not remedy a failure in the performance of their obligations under the Contract, within thirty (30) days after being notified or within any further period as the Employer may have subsequently approved in writing;
- (b) if the Consultants become (or, if the Consultants consist of more than one entity, if any of their Members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;
- (c) if the Consultants fail to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 7 hereof;
- (d) if the Consultants submit to the Employer a statement which has a material effect on the rights, obligations or interests of the Employer and which the Consultants know to be false;
- (e) if, as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days;
- (f) if the Employer, in its sole discretion, decides to terminate this Contract.

2.9.2 By the Consultants

The Consultants may terminate this Contract, by not less than thirty (30) days written notice to the Employer, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this Sub-Clause 2.9.2:

- (a) if the Employer fails to pay any monies due to the Consultants pursuant to this Contract and not subject to dispute pursuant to Clause 7 within forty-five (45) days after receiving written notice from the Consultants that such payment is overdue;
- (b) if the Employer is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Consultants may have subsequently approved in writing) following the receipt by the Employer of the Consultants' notice specifying such breach;



- (c) if, as a result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days;
- (d) if the Employer fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 7 hereof.

2.9.3 Cessation of Services

Upon receipt of notice of termination under Sub-Clause 2.9.1, or giving of notice of termination under Sub-Clause 2.9.2, the Consultants shall take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultants, and equipment and materials furnished by the Employer, the Consultants shall proceed as provided, respectively, by Sub-Clauses 3.8 or 3.9.

2.9.4 Payment upon Termination

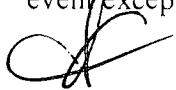
Upon termination of this Contract pursuant to Sub-Clauses 2.9.1 or 2.9.2, the Employer shall make the following payments to the Consultants:

- (a) Remuneration and reimbursable direct costs expenditure pursuant to Clause 6 for Services satisfactorily performed prior to the effective date of termination. Effective date of termination for purposes of this Sub-Clause means the date when the prescribed notice period would expire;
- (b) except in the case of termination pursuant to paragraphs (a) through (d) of Sub-Clause 2.9.1, reimbursement of any reasonable cost incidental to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel, according to Consultants Traveling Allowance Rules.

In order to compute the remuneration for the part of the Services satisfactorily performed prior to the effective date of termination; the respective remunerations shall be proportioned.

2.9.5 Disputes about Events of Termination

If either Party disputes whether an event specified in paragraphs (a) through (e) of Sub-Clause 2.9.1 or in paragraph (a) through (d) of Sub-Clause 2.9.2 hereof has occurred, such Party may, within forty-five (45) days after receipt of notice of termination from the other Party, refer the matter to arbitration pursuant to Clause 7 hereof, and this Contract shall not be terminated on account of such event except in accordance with the terms of any resulting arbitral award.



3. OBLIGATIONS OF THE CONSULTANTS

3.1 General

The Consultants shall perform the Services and carry out their obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods. The Consultants shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Employer, and shall at all times support and safeguard the Employer's legitimate interests in any dealings with Sub-consultants or third parties.

3.2 Consultants Not to Benefit from Commissions, Discounts, etc.

The remuneration of the Consultants pursuant to Clause 6 shall constitute the Consultants' sole remuneration in connection with this Contract or the Services, and the Consultants shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Consultants shall use their best efforts to ensure that the Personnel, any Sub-consultants, and agents of either of them similarly shall not receive any such additional remuneration.

3.3 Confidentiality

The Consultants, their Sub-consultants, and the Personnel of either of them shall not, either during the term or after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Employer's business or operations without the prior written consent of the Employer.

3.4 Liability of the Consultants

The Consultants are liable for the consequence of errors and omissions on their part or on the part of their employees in so far as the design of the Project is concerned to the extent and with the limitations as mentioned herein below.

If the Employer suffers any losses or damages as a result of proven faults, errors or omissions in the design of a project, the Consultants shall make good such losses or damages, subject to the conditions that the maximum liability as aforesaid shall not exceed twice the total remuneration of the Consultants for design phase in accordance with the terms of the Contract.



The liability of the Consultants expires after one (1) year from the stipulated date of completion of construction or after three (3) years from the date of final completion of the design whichever is earlier.

The Consultants may, to protect themselves, insure themselves against their liabilities but this is not obligatory. The extent of the insurance shall be up to the limit specified in second para above. The Consultants shall procure the necessary cover before commencing the Services and the cost of procuring such cover shall be borne by the Consultants up to a limit of one percent of the total remuneration of the Consultants for the design phase for every year of keeping such cover effective.

The Consultants shall, at the request of the Employer, indemnify the Employer against any or all risks arising out of the furnishing of professional services by the Consultants to the Employer, not covered by the provisions contained in the first para above and exceeding the limits set forth in second para above provided the actual cost of procuring such indemnity as well as costs exceeding the limits set forth in fourth para above shall be borne by the Employer.

3.5 Other Insurance to be Taken out by the Consultants

The Consultants (a) shall take out and maintain, and shall cause any Sub-consultants to take out and maintain, at their (or the Sub-consultants', as the case may be) own cost but on terms and conditions approved by the Employer, insurance against the risks, and for the coverage, as are specified in the SC; and (b) at the Employer's request, shall provide evidence to the Employer showing that such insurance has been taken out and maintained and that the current premiums have been paid.

3.6 Consultants' Actions Requiring Employer's Prior Approval

The Consultants shall obtain the Employer's prior approval in writing before taking any of the following actions:

- (a) appointing such Personnel as are listed in Appendix-C merely by title but not by name;
- (b) entering into a subcontract for the performance of any part of the Services, it being understood (i) that the selection of Sub-consultants and the terms and conditions of the subcontract shall have been approved in writing by the Employer prior to the execution of the subcontract, and (ii) that the Consultants shall remain fully liable for the performance of the Services by the Sub-consultants and its Personnel pursuant to this Contract;

 any other action that may be specified in the SC. 

3.7 Reporting Obligations

The Consultants shall submit to the Employer the reports and documents specified in Appendix B in the form, in the numbers, and within the periods set forth in the said Appendix.

3.8 Documents Prepared by the Consultants to be the Property of the Employer

All plans, drawings, specifications, reports, and other documents and software prepared by the Consultants in accordance with Sub-Clause 3.7 shall become and remain the property of the Employer, and the Consultants shall, not later than upon termination or expiration of this Contract, deliver (if not already delivered) all such documents and software to the Employer, together with a detailed inventory thereof. The Consultants may retain a copy of such documents and software.

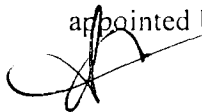
Restriction(s) about the future use of these documents is specified in the SC.

3.9 Equipment and Materials Furnished by the Employer

Equipment and materials made available to the Consultants by the Employer, or purchased by the Consultants with funds provided exclusively for this purpose by the Employer, shall be the property of the Employer and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultants shall make available to the Employer an inventory of such equipment and materials and shall dispose of such equipment and materials in accordance with the Employer's instructions or afford salvage value of the same. While in possession of such equipment and materials, the Consultants, unless otherwise instructed by the Employer in writing, shall insure them at the expense of the Employer in an amount equal to their full replacement value.

3.10 Accounting, Inspection and Auditing

The Consultants (i) shall keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify all relevant time charges, and cost, and the basis thereof, and (ii) shall permit the Employer or its designated representatives periodically, and up to one year from the expiration or termination of this Contract, to inspect the same and make copies thereof as well as to have them audited by auditors appointed by the Employer.



4. CONSULTANTS' PERSONNEL AND SUBCONSULTANTS

4.1 Description of Personnel

The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Consultants' Key Personnel are described in Appendix C. The Key Personnel and Sub-consultants listed by title and/or by name, as the case may be, in Appendix C are deemed to be approved by the Employer.

4.2 Removal and/or Replacement of Personnel

- (a) Except as the Employer may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Consultants, it becomes necessary to replace any of the Key Personnel, the Consultants shall provide as a replacement a person of equivalent or better qualifications;
- (b) If the Employer, (i) finds that any of the Personnel have committed serious misconduct or have been charged with having committed a criminal action; or (ii) has reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Consultants shall, at the Employer's written request specifying the grounds therefor, provide as a replacement a person with qualifications and experience acceptable to the Employer.
- (c) Except as the Employer may otherwise agree, the Consultants shall; (i) bear all the additional travel and other costs arising out of or incidental to any removal and/or replacement; and (ii) bear any additional remuneration, to be paid for any of the Personnel provided as a replacement to that of the Personnel being replaced.

5. OBLIGATIONS OF THE EMPLOYER

5.1 Assistance, Coordination and Approvals

5.1.1 Assistance

The Employer shall use its best efforts to ensure that the Employer shall:

- (a) provide at no cost to the Consultants, Sub-consultants and Personnel such documents prepared by the Employer or other consulting engineers appointed by the Employer as shall be necessary to enable the Consultants, Sub-consultants or Personnel to perform the Services. The

documents and the time within which such documents shall be made available, are as specified in the SC;

- (b) assist to obtain the existing data pertaining or relevant to the carrying out of the Services, with various Government and other organizations. Such items unless paid for by the Consultants without reimbursement by the Employer, shall be returned by the Consultants upon completion of the Services under this Contract;
- (c) issue to officials, agents and representatives of the concerned organizations, all such instructions as may be necessary or appropriate for prompt and effective implementation of the Services;
- (d) assist to obtain permits which may be required for right-of-way, entry upon the lands and properties for the purposes of this Contract;
- (e) provide to the Consultants, Sub-consultants, and Personnel any such other assistance and exemptions as may be specified in the SC.

5.1.2 Co-ordination

The Employer shall:

- (a) coordinate and get or expedite any necessary approval and clearances relating to the work from any Government or Semi-Government Agency, Department or Authority, and other concerned organization named in the SC.
- (b) coordinate with any other consultants employed by him.

5.1.3 Approvals

The Employer shall accord approval of the documents within such time as specified in the SC, whenever these are applied for by the Consultants.

5.2 Access to Land

The Employer warrants that the Consultants shall have, free of charge, unimpeded access to all land of which access is required for the performance of the Services.

5.3 Change in the Applicable Law

If, after the date of this Contract, there is any change in the Applicable Law which increases or decreases the cost of the Services rendered by the

Consultants, then the remunerations and direct costs otherwise payable to the Consultants under this Contract shall be increased or decreased accordingly, and corresponding adjustment shall be made to the amounts referred to in Sub-Clause 6.2 (a) or (b), as the case may be.

5.4 Services and Facilities

The Employer shall make available to the Consultants, Sub-consultants and the Personnel, for the purpose of the Services and free of any charge, the services, facilities and property described in Appendix F at the times and in the manner specified in said Appendix F, provided that if such services, facilities and property shall not be made available to the Consultants as and when so specified, the Parties shall agree on; (i) any time extension that it may be appropriate to grant to the Consultants for the performance of the Services; (ii) the manner in which the Consultants shall procure any such services, facilities and property from other sources; and (iii) the additional payments, if any, to be made to the Consultants as a result thereof pursuant to Clause 6 hereinafter.

5.5 Payments

In consideration of the Services performed by the Consultants under this Contract, the Employer shall make to the Consultants such payments and in such manner as is provided by Clause 6 of this Contract.

6. PAYMENTS TO THE CONSULTANTS

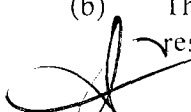
6.1 Lump Sum Remuneration

The Consultants' total remuneration shall not exceed the Contract Price and shall be a fixed lump sum including all staff costs, incurred by the Consultants in carrying out the Services described in Appendix A. Other reimbursable direct costs expenditure, if any, are specified in the SC. Except as provided in Sub-Clause 5.3, the Contract Price may only be increased above the amounts stated in Sub-Clause 6.2 if the Parties have agreed to additional payments in accordance with Sub-Clauses 2.5, 2.6, 5.4 or 6.6.

6.2 Contract Price

(a) Foreign currency payment shall be made in the currency or currencies specified as foreign currency or currencies in the SC, and local currency payment shall be made in Pakistani Rupees.

(b) The SC shall specify the breakup of remuneration to be paid, respectively, in foreign and in local currencies.



6.3 Terms and Conditions of Payment

Payment will be made to the account of the Consultants and according to the payment schedule stated in the SC. Payments shall be made after the conditions listed in the SC for such payments have been met, and the Consultants have submitted an invoice to the Employer specifying the amount due.

6.4 Period of Payment

- (a) Advance payment to the Consultants shall be affected within the period specified in the SC, after signing of the Contract Agreement between the Parties.
- (b) Any other amount due to the Consultants shall be paid by the Employer to the Consultants within twenty-eight (28) days in case of local currency and fifty six(56) days in case of foreign currency after the Consultants' invoice has been delivered to the Employer.

6.5 Delayed Payments

If the Employer has delayed payments beyond the period stated in paragraph (b) of Sub-Clause 6.4, financing charges shall be paid to the Consultants for each day of delay at the rate specified in the SC.

6.6 Additional Services

Additional Services means:

- (a) Services as approved by the Employer outside the Scope of Services described in Appendix A;
- (b) Services to be performed during the period extended pursuant to Sub-Clause 2.6, beyond the original schedule time for completion of the Services; and
- (c) any re-doing of any part of the Services as a result of Employer's instructions.

If, in the opinion of the Employer, it is necessary to perform Additional Services during the currency of the Contract for the purpose of the Project, such Additional Services shall be performed with the prior concurrence of both the Parties. The Consultants shall inform the Employer of the additional time (if any), and the additional remuneration and reimbursable direct costs expenditure for such Additional Services. If there is no disagreement by the Employer within two weeks of this intimation, such additional time, remuneration and reimbursable direct costs expenditure shall be deemed to become part of the Contract. Such remuneration and reimbursable direct costs

expenditure shall be determined on the basis of rates provided in Appendices D and E, in case the Additional Services are performed during the scheduled period of the Services, otherwise remuneration for Additional Services shall be determined on the basis of Consultants' billing rates prevailing at the time of performing the Additional Services.

6.7 Consultants' Entitlement to Suspend Services

If the Employer fails to make the payment of any of the Consultants' invoice (excluding the advance payment), within twenty-eight (28) days after the expiry of the time stated in paragraph (b) of Sub-Clause 6.4, within which payment is to be made, the Consultants may after giving not less than fourteen (14) days' prior notice to the Employer, suspend the Services or reduce the rate of carrying out the Services, unless and until the Consultants have received the payment.

This action will not prejudice the Consultants entitlement to financing charges under Sub-Clause 6.5.

7. SETTLEMENT OF DISPUTES

7.1 Amicable Settlement

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

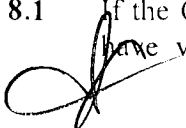
7.2 Dispute Settlement

Any dispute between the Parties as to matters arising pursuant to this Contract which cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be submitted by either Party for settlement in accordance with the provisions of the Arbitration Act, 1940 (Act No.X of 1940) and of the Rules made there under and any statutory modifications thereto.

Services under the Contract shall, if reasonably possible, continue during the arbitration proceedings and no payment due to or by the Employer shall be withheld on account of such proceedings.

8. INTEGRITY PACT

8.1 If the Consultant or any of his Sub-consultants, agents or servants is found to have violated or involved in violation of the Integrity Pact signed by the



Consultant as Appendix-G to this Form of Contract, then the Employer shall be entitled to:

- (a) recover from the Consultant an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by the Consultant or any of his Sub-consultant, agents or servants;
- (b) terminate the Contract; and
- (c) recover from the Consultant any loss or damage to the Employer as a result of such termination or of any other corrupt business practices of the Consultant or any of his Sub-consultant, agents or servants.

On termination of the Contract under Sub-Para (b) of this Sub-Clause, the Consultant shall proceed in accordance with Sub-Clause 2.9.3. Payment upon such termination shall be made under Sub-Clause 2.9.4 (a) after having deducted the amounts due to the Employer under sub-para (a) and (c) of this Sub-Clause.



III. SPECIAL CONDITIONS OF CONTRACT

1.1 Definitions

- (p) "Project" means "Regasified Liquefied Natural Gas (RLNG) based 1100-1400 MW Combined Cycle Power Plant at District Jhang" (Punjab Power Plant, Jhang).

1.6 Authorized Representatives

The Authorized Representatives are the following:

For the Employer:

Chief Executive Officer
Punjab Thermal Power (Pvt.) Limited
First Floor, 7C-1, Gulberg-III, Lahore, Pakistan
Telephone : +92-42-35750936-8
Facsimile : +92-42-35750939
Email : ahadkhancheema@gmail.com

For the Consultants:

Project Manager
Power & Mechanical Division
NESPAC House, I-C, Block N, Model Town Extension, Lahore
Telephone : +92-42-99090332
Facsimile : +92-42-9921936
Email : pm.nespac.jp@gmail.com

1.7 Taxes and Duties

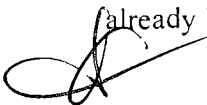
The payment of taxes, fees and other impositions as may be levied under the Applicable Law prevalent at the time of signing of the Contract. Any change in the Law shall be adjusted in the contract price accordingly by the Employer.

2.1 Effectiveness of Contract

The Contract became effective when the Consultants commenced the Services on June 10, 2017 after the instructions by the Employer vide Punjab Thermal Power (Pvt.) Limited Letter No. PTPL/Admin/007-1/2017 dated June 10, 2017.

2.2 Termination of Contract for Failure to Become Effective

This Sub-Clause of General Condition is not applicable since the Contract has already become effective prior to signing of the Contract.



2.3 Commencement of Services

The Consultants have commenced the Services from the Effective Date of the Contract.

2.4 Expiration of Contract

The estimated period of Completion of Services shall be 54 months (4 months Part-I Services + 26 months Construction Period + 24 months Defects Liability Period) from the Commencement Date (June 10, 2017) of the Services or such other period as the Parties may agree in writing.

"Completion of Services" means completion of all Services as described in Appendix-A.

3.4 Liability of the Consultants

Whereas the Consultants are liable for their Scope of Services described in Appendix A interalia design review of the detailed design prepared by the EPC Contractor.

3.5 Other Insurance to be Taken out by the Consultants

The risks and the coverage's shall be as follows:

- (a) Third Party motor vehicle liability insurance in respect of motor vehicles operated in Pakistan by the Consultants or their Personnel or any Sub-consultants or their Personnel.
- (b) Insurance against loss of or damage to equipment purchased in whole or in part with funds provided under the Contract.

3.6 Consultants' Actions Requiring Employer's Prior Approval

- (b) Delete the phrase, "entering into a subcontract for the performance of any part of the Services, it being understood" and replace it with the following:

"entering into a subcontract for the performance of any part of the Services for any works/services for which in-house expertise is not available, it being understood...."

- (b)(ii) Delete the complete phrase and replace with the following:

"that the sub-consultants shall remain fully liable for the performance of their respective obligations/scope of services under the Contract."

- (b)(iii) The following statement is added into the provision of Sub-Clause

3.6(b):

“any foreign Sub-Consultants hired to perform works or any part thereof shall be paid by the Employer in foreign currency as agreed between the Consultants and their Sub-Consultants.”

(c) The Consultants shall also clear with the Employer, before commitments on any action they propose to take while, interalia, performing the role of the Engineer under EPC Contract, as following:

- i) Issuing Variations Orders in respect of:
 - additional items of Works as determined by the Engineer to be necessary for the execution of Works.
 - any new item of the Works not envisaged in the Contract Documents and which is determined by the Engineer to be necessary for the execution of Works.
- ii) Claim from the Contractor for extra payment with full supporting details and Consultants recommendations, if any, for settlement.
- iii) Details of any nominated sub-contracts.
- iv) Any action under terms of Performance Guarantee or Insurance Policy.
- v) Any action by the Consultants affecting the costs under the following clauses of Conditions of Contract of the EPC Contract:
 - Unforeseeable Difficulties;
 - Suspension of Works;
 - Bonus and Liquidated Damages;
 - Taking Over Certificate
 - Performance Certificate;
- vi) Final Measurement Statement.
- vii) Release of Retention Money.
- viii) Any change in the ratios of various currencies of payment.

3.8 Documents Prepared by the Consultants to be the Property of the Employer

The Employer and the Consultants shall not use these documents for purposes unrelated to this Contract without the prior written approval of the other Party.

5.1.1 Assistance

The Employer shall make available within seven (07) days from the Commencement Date of the Services, all existing data, information and reports

related to the Project available with the Employer and other inputs to assist the Consultants to carry out the Services.

5.1.3 Approvals

The Employer shall accord approval of the documents immediately but not later than fourteen (14) days from the date of their submission by the Consultants.

6.2 Contract Price

- (a) The amount in foreign currency is Euro 3,362,069/- and USD 52,812/-
- (b) The amount in local currency is Pakistani Rupees 912,759,371/-

The breakup of foreign and local currencies shall be as provided in Appendix D and Appendix E, attached hereto.

- (c) The currency provision in (a) above are for the foreign technical and insurance services from specialized firms and any foreign Sub-Consultants hired to perform works or any part thereof shall be paid by the Employer in foreign currency as agreed between the Consultants and their Sub-Consultants.

6.3 Terms and Conditions of Payment

A lump sum amount in foreign and local currencies given in Sub-Clause 6.2 shall be paid to the Consultants/Sub-Consultants for their respective Services to be completed within the period specified in SC Sub-Clause 2.4.

The Payment shall be according to the "Payment Schedule" attached as Appendix H to this contract. The actual payments to the Sub-Consultants shall be made by the Employer according to the sub-milestones agreed between the Sub-Consultant and the Consultants, under the relevant Sub-Consultancy Contracts. However, the sum of sub-milestones shall not exceed the amount of the relevant milestone agreed under Appendix-H. Copies of all sub-consultancy contracts shall be provided by the Consultants to the Employer.

The following Services to be performed as described in Appendix-H shall be paid as actual (subject to maximum amounts specified against each of the following services in Appendix H) with the consent of the Employer;

- (i) Contingencies for Part-I Services Including But Not Limited to Extensive Travelling of Experts Inside/Outside Pakistan
- (ii) Design Review (Contingencies and Works on Weekend/Holidays/Critical Conditions)
- (iii) Construction Supervision (Contingencies and Works on Weekend/Holidays/Critical Conditions)

- (iv) Services during DLP (Deployments from Head Office on Critical Conditions)
- (v) Escalation
- (vi) Geotechnical Investigations, Pile Testing, Hydrological Studies, Flood Inundation/Modeling Studies for Breach of LMB of Trimmu& Canal Water Analysis

The "Summary of Cost of Consultants and Associated Sub-Consultants" is attached as Appendix I to this contract.

6.4 Period of Payment

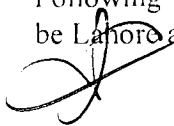
- (a) The time period for advance payment shall be twenty one (21) days after signing of Contract Agreement by both the Parties.
- (b) The period of payment fifty six (56) days in case of foreign currency is replaced with thirty (30) days.

6.5 Delayed Payments

The indemnification on delayed payments in case of local currency and foreign currency shall be paid 8% and 1% respectively, per annum. The same shall be paid to the Consultants/Sub-Consultants for each day of delay.

7.2 Dispute Settlement

Following is added at the end of this Sub-Clause: "Venue of Arbitration shall be Lahore and the courts located in Lahore shall have jurisdiction in the matter."



IV APPENDICES

Appendix A

DESCRIPTION OF SERVICES

The Consultants shall provide overview, coordination and design review services sufficient to realize turnkey implementation by the Contractor of "REGASIFIED LIQUEFIED NATURAL GAS (RLNG) based 1100-1400 MW Combined Cycle Power Plant at District Jhang". The intent of these Services is to assist the Employer in the Project execution to achieve the objectives of a functional, reliable and safe facility, which meets the EPC contract requirements, satisfies performance goals and is completed within budget and on schedule.

The Consultancy Services will consist of various activities, some in coordination with PTPL and others as representative of PTPL, to achieve the Project objectives. The Consultancy Services for the Project will be rendered by the Consultants in two phases:

Part I Services: Bankable Feasibility Study, Pre-Qualification Documents, Evaluation of Pre-qualification Applications, Bidding Documents, Bid Evaluation and Award of Contract for EPC, LTSA Simple Cycle O&M and Combined Cycle O&M Contracts

Part II Services: Design Review, Construction Supervision and Assistance to Employer during Defects Liability Period

The Consultants will provide end to end Services starting from the Project conception up to end of Defects Liability Period to cover all technical, legal, financial / taxation and insurance aspects related to the Project.

The Consultants will also ensure that all EPC and non-EPC items and other activities are properly identified and procurement and management plans are prepared for each item.

The scope listed below for Part I and Part II Services is illustrative but not exhaustive.

1.0 PART I SERVICES:

This part of the Services includes preparation of pre-feasibility and bankable feasibility study, pre-qualification documents and bidding documents, evaluation of pre-qualification applications and bid evaluation, and assistance to the Employer during award of Contract.

1.1 Preparation of Bankable Feasibility Study

1). Data collection and Site related studies

- a). Topographic survey of the Site
- b). Geotechnical / soil investigations
- c). Canal water availability (quality and quantity)
- d). Ground water availability (quality and quantity)
- e). Transportation Study
- f). Meteorological and seismic data collection
- g). Effluents disposal
- h). Applicable emission standards
- i). Site conditions and access
- j). Availability of space

2). Basic Project input data/parameters/conditions

- a). Discussion on power supply and demand situation in Pakistan
- b). Role of the proposed plant

- c). Analysis of power evacuation and grid interconnection to permit export and import of electric power. The analysis will be undertaken on the basis of grid interconnection studies viz. load flow, stability and short circuit studies to be provided by the Employer.
 - d). Analysis of availability of requisite quantity and quality of gas
 - e). Identification of land requirement and other relevant requirements
- 3). **Identification of alternatives and selection of optimized technical plant concept**
- a). Design conditions and fuel characteristics
 - b). Description of alternative plant concepts
 - c). Basic power plant design criteria with regard to site conditions and operational requirements.
 - d). Assessment of number and size of GT units
 - e). Configuration options
 - f). Performance data comparison and expected plant outputs and heat rates
 - g). Selection of preferred configuration and recommendation
 - h). List of gas turbine suppliers (OEMs) that can fulfill requirements
 - i). General Plant configuration and layout
- 4). **Preparation of plant conceptual design and functional specifications of:**
- a). Civil works
 - b). Gas turbine(s)
 - c). Heat recovery steam generator(s)
 - d). Steam turbine(s)
 - e). Water / steam cycle
 - f). Fuel system(s)
 - g). Gas booster compressor station
 - h). Main and auxiliary cooling systems
 - i). Waste water / effluents treatment and disposal system
 - j). Instrument and service air systems
 - k). Fire protection system
 - l). Generators and transformers
 - m). Switchyard
 - n). MV/LV systems.
 - o). Instrumentation and control systems
 - p). Emergency diesel generator system
 - q). Communication system / IT system
 - r). Security system
 - s). Any other equipment / system
- 5). **Environmental Impact Assessment (EIA)**
- a). Preparation of EIA
The EIA will be prepared to ascertain that Plant emissions and emission controls comply with Pakistan Environmental Regulations.
 - b). The Consultants will assist the Employer in submission and approval of EIA report and will attend the EIA public hearing.
- 6). **Project Implementation Concept**
- a). Preparation of Project implementation time schedule based on EPC mode of contracting and establishing milestones up to commercial operation date (COD).



7). **O&M Staff Requirements**

- a). Requirement of Staff (technical & non-technical) to be established for smooth operation and maintenance of plant.
- b). O&M cost estimates

8). **Project cost and financing plan**

- a). Basic project CAPEX without limitation to land, civil, mechanical, electrical and ancillary works
- b). Taxes and duties
- c). Interest during construction
- d). Disbursement schedule
- e). Estimation of OPEX
- f). Financing plan

9). **Financial analysis, tariff calculations and risk analysis.**

- a). Detailed financial model along with assumptions.
- b). Risk analysis for the project, quantification of risks and mitigation measures.
- c). Probably scenario based analysis (sensitivity analysis) as well.

10). **Identification of required permits and approvals from relevant agencies/departments**

Note: The Consultants will initially prepare a pre-feasibility study with a limited scope with the purpose of enabling the Consultants to prepare the Tender Documents. The pre-feasibility study will be subsequently upgraded to become a bankable feasibility study addressing the scope of services detailed above.

1.2 Preparation of Pre-qualification Documents

Preparation of pre-qualification documents for short listing of prospective EPC bidders.

1.3 Evaluation of Pre-qualification Applications

Evaluation of pre-qualifications applications of EPC bidders and preparation of evaluation report. Support Employer in grievance redressal process.

1.4 Preparation of Tender Documents

- Preparation of tender level design, selection of design parameters, functional technical specifications and tender drawings.
- The Tender Documents will be prepared on EPC mode of contracting. The Tender Documents shall include:
 - Invitation for Bidders;
 - Instructions to Bidders;
 - Evaluation criteria;
 - Detailed Employer's requirements;
 - Ancillary Items;
 - EPC Agreement;
 - Forms and Schedules to Bids;
 - Technical Specifications;
 - Drawings; and
 - Technical Data Sheets.

- Preparation of Long Term Service Agreement (LTSA) specifications.

1.5 Evaluation of Bids

The Consultants will attend pre-bid conference, prepare replies to queries of EPC bidders, undertake evaluation of EPC and LTSA bids and prepare bid evaluation reports.

1.6 Award of Contract

Assistance to the Employer in EPC and LTSA pre-award clarification meetings and contract award.

1.7 Preparation of Bidding Documents for O&M, Evaluation and Award of Contract

Preparation of Bidding Documents for hiring O&M Contractor, evaluation of bids of O&M contractors and provide assistance to the Employer during pre-award meetings.

1.8 Preparation of Project Documents

Preparing the Project documents viz. Power Purchase Agreement (PPA), gas supply agreement (GSA), implementation agreement (IA), etc., and provide other required support for all the permits like generation license, LoI, tariff etc.

2.0 PART II SERVICES:

The Consultants will act as Employer's Engineer (EE) / Employer's Representative (ER) during the implementation period of the Project. The Consultants will cover the review of the EPC Contractor's design documents; witnessing of factory tests and other quality assurance activities; supervision of construction, testing and commissioning of the plant; and services during defects liability period (DLP) of two (2) years.

2.1 Design Review

The scope of service in the engineering / design review stage comprises detailed examination, review and approval by the Consultants of the EPC Contractor's design drawings, technical documentation, manuals, procedures, etc. The work will be initiated with the establishment of appropriate quality assurance and Contract Administration procedures that will be presented in a kick-off meeting of the Project.

The review and approval of the EPC Contractor's drawings and documents prepared for the execution of the Project will be performed in the Consultants' head offices. The objective of the design review will be to determine the compatibility of equipment and plant systems as well as to ensure that systems and structures are capable of performing their specified functions and that adequate technical specification and drawings are provided by the EPC Contractor for all plant equipment and components. The Consultants will review the adequacy of design and provide an administrative check on the EPC Contractor's design functions.

The design review undertaken by the Consultants will include the following:

- Review of submittals of the EPC Contractor as specified in the Contract, viz., technical specifications, flow diagrams, data sheets, and equipment lists etc. These documents will be checked, commented, duly marked and returned to the EPC Contractor. Special attention will be paid to the compliance with the EPC Contract, meeting the specified requirements of the Project site and of the Employer, latest applicable codes and standards, good engineering practice, reliability and safety.

- Thermal, vibrational, hydraulic, stress and other calculations provided by the EPC Contractor will be reviewed whenever found necessary to investigate the design philosophy/criteria and to examine the characteristic figures and applied safety margins. The principle drawings, diagrams etc. requiring the Consultants' approval are essentially the including but not limited to the following:
 - Plot plan
 - General arrangement drawings (civil) of gas turbines, HRSGs, steam turbines, gas booster compressor station, HSD tanks, major buildings and structures
 - Layout and architectural drawings
 - Typical civil execution drawings
 - Heat and mass balance (HMB) diagrams
 - Main process flow diagrams (PFDs)
 - Equipment and instrument data sheets and characteristic curves
 - Major P&I diagrams (P&IDs)
 - Circulating water and drainage systems
 - Single line and schematic diagrams, as applicable for major equipment as well as MV/LV lighting and communication systems
 - Standard wiring diagrams of switchgear and major I&C equipment
 - Control system configuration & architecture drawings
 - Functional/interlocking diagrams
 - Analogue and digital loop diagrams and typical control logic diagrams of major systems
 - Inspection and test schedules for both shop manufacture and site installation
 - Testing & commissioning procedures / protocols
 - Start-up and operational procedures
- Identify to the EPC Contractor those items in their design, drawings and document submittals which require revision to comply with the EPC Contract Specifications.
- Coordinate between the EPC Contractor and NTDC for the approval of the design, drawings and layout of all equipment to be approved by NTDC.
- Monitor design, drawings and documents status including:
 - Those to be submitted by the EPC Contractor
 - Those being reviewed
 - Those to be resubmitted by the EPC Contractor
 - For information only
 - Approved drawings
 - As built drawings
- The Consultants will review the shop inspection and testing plan (ITP) of EPC Contractor and will attend the workshop inspections and tests (factory acceptance tests) on major equipment. The Consultants in general will undertake the following activities:
 - Review EPC Contractor's production baseline schedule and delivery programs
 - Review EPC Contractor's quality assurance program for compliance with the Contract
 - Review and comment on EPC Contractor's manufacturing progress reports
 - Review factory testing methods and procedures
 - Witness necessary factory tests as agreed with Employer along with Employer's representation and review test results
 - The number of workshop inspections will be in line with provisions of the EPC Contract between the Employer and EPC Contractor.

2.2 Construction Supervision

The Consultants will review EPC contractor's Project schedules and plans and ensure their adequacy and approve the schedule as per provisions of the EPC contract. The Consultants will identify any deficiency in Project planning, sequencing / scheduling, resource loading, if any, and ensure observance of the schedule.

The Consultants will monitor the progress and raise alerts if there are any possible delays. The Consultants will also certify the milestone payments and will advise in the case of any change or new requirements or disputes.

The Consultants will supervise the correct execution of the construction works, co-ordinate the various works of the EPC Contractor at Site, take care that the quality assurance program is applied, assist the Employer in establishing/enforcing site safety regulations and hold regular site progress review meetings with the Employer and the EPC Contractor.

Following the implementation activities, the Consultants will conduct, together with the EPC Contractor, a formal inspection of the construction and erection / installation to check and record the satisfactory completion of the work. Upon satisfactory completion of the work, the testing and commissioning activities will commence. The Consultants will supervise all testing and commissioning activities to ensure that all equipment/systems are ready for testing of all site tests; the commissioning, start-up tests, are properly executed, recorded, witnessed and approved; and a proper deficiency / punch list is prepared for each system or subsystem of the project. Also all tests will be supervised by the Consultant alongside NTDC which are listed as required tests in PPA.

In principle, the Consultants will ensure quality of all construction, erection and commissioning activities, including those related to power plant and associated switchyard, ensuring that:

- the construction/erection works are carried out in a professional manner and in time according to the schedule agreed upon in the EPC Contract,
- the construction manpower and equipment required are available according to construction schedule,
- site surveying by the EPC Contractor is done correctly,
- review and approval of 'concrete mix design' proposed by the Contractor,
- concrete tests are carried out properly and are certified,
- the construction/equipment/material are in accordance with the specifications, the approved drawings and comply with the latest applicable codes and standards,
- the construction materials' suitability is checked before being used,
- the corrosive nature of the soil and environment is considered and that appropriate materials and types of paint are applied by the EPC Contractor ,
- appropriate site instructions and work permits are issued,
- site inspection and deficiency reports are prepared,
- all site tests are properly carried out, witnessed and approved,
- progress reports, as specified, are prepared and distributed,
- monthly progress review and co-ordination meetings are held and minutes of such meetings are prepared and followed-up for proper implementation as needed,
- correct accounts and records of cost/financial activities of the works are maintained,
- the EPC Contractor's milestone payment applications are scrutinized,
- a proper deficiency list is prepared for each system or subsystem of the project,
- a proper claim management is organized,
- milestone completion certificates, certificate of completion of interconnection facilities, certificate of commissioning of plant, construction completion and provisional acceptance

test certificate are issued and all preconditions according to the Contract are completely fulfilled,

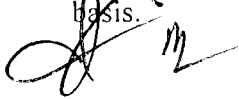
- all punch lists and pending items are followed up till finally rectified by the EPC Contractor,
- to ensure from EPC Contractor that all NTDC approved equipment is being constructed and built as per the requirements of NTDC,
- Factory witness tests are carried out for all NTDC related equipment along with NTDC representative, and
- Site tests of all NTDC related equipment as mentioned in PPA are carried out in the presence of NTDC representative.

2.3 Services during Defects Liability Period (DLP)

This phase would entail Defects Liability Period of (DLP) of two (2) year during which, under the supervision of the Consultants, outstanding minor works are attended & completed, performance of the equipment and systems and defects made good by the turnkey/EPC contractor are monitored, as-built drawings submitted by the Contractor are verified.

3.0 Distribution/ Preparation of Services

Distribution of services between NESPAK and any firm/entity hired for technical, financial and legal services have been addressed below. Services to be provided in terms of Insurance and Tax shall be hired during the process on as and when needed basis.



Distribution of Services

Sr. No.	Scope of Services	NESPAK	Foreign Technical Sub-consultant	Legal & Financial Sub-consultants
Legend: X = 100% Responsibility; L = Lead; S = Support				
A. PART I SERVICES				
1.0	Preparation of Bankable Feasibility Study			
1.1	Data collection and site related studies			
1.1.1	Topographic survey of the Site	X		
1.1.2	Geotechnical / soil investigations	X		
1.1.3	Canal water availability (quality and quantity)	L	S	
1.1.4	Ground water availability (quality and quantity)	L	S	
1.1.5	Transportation Study	L	S	
1.1.6	Meteorological and seismic data collection	X		
1.1.7	Effluents disposal	X		
1.1.8	Applicable emission standards	X		
1.1.9	Site conditions and access	X		
1.1.10	Availability of space	L	S	
1.2	Basic project input data/parameters / conditions			
1.2.1	Discussion on power supply and demand situation in Pakistan	X		
1.2.2	Role of the proposed plant	X		
1.2.3	Analysis of power evacuation and grid interconnection to permit export and import of electric power.	X		
1.2.4	Analysis of availability of requisite quantity and quality of gas	L	S	
1.2.5	Identification of land and other relevant requirements	S	L	
1.3	Identification of alternatives and selection of optimized technical plant concept			

1.3.1	Design conditions and fuel characteristics	S	L		
1.3.2	Description of alternative plant concepts		X		
1.3.3	Basic power plant design criteria with regard to site conditions and operational requirements.		X		
1.3.4	Assessment of number and size of GT units		X		
1.3.5	Configuration options		X		
1.3.6	Performance data comparison and expected plant outputs and heat rates		X		
1.3.7	Selection of preferred configuration and recommendation		X		
1.3.8	List of gas turbine suppliers (OEMs) that can fulfil requirements		X		
1.3.9	General Plant configuration and layout	S	L		
1.4	Preparation of plant conceptual design and functional specifications of:				
1.4.1	Civil works	L	S		
1.4.2	Gas turbine(s)		X		
1.4.3	Heat recovery steam generator(s)		X		
1.4.4	Steam turbine(s)		X		
1.4.5	Water / steam cycle		X		
1.4.6	Fuel system(s)		X		
1.4.7	Gas booster compressor station		X		
1.4.8	Main and auxiliary cooling systems	S	L		
1.4.9	Waste water / effluents treatment and disposal system	S	L		
1.4.10	Instrument and service air systems		X		
1.4.11	Fire protection system		X		
1.4.12	Generators and transformers		X		
1.4.13	Switchyard	X			

1.4.14	MV/LV systems.		X	
1.4.15	Instrumentation and control systems		X	
1.4.16	Emergency diesel generator system		X	
1.4.17	Any other equipment / system	S	L	
1.5	Environmental Impact Assessment (EIA)	L	S	
1.6	Project Implementation Concept	S	L	
1.7	O&M Staff Requirements	S	L	
1.8	Project cost (CAPEX&OPEX) and financing plan	S	S	L
1.9	Financial analysis, tariff calculations and risk analysis.	S	S	L
1.10	Identification of required permits and approvals from relevant agencies/departments	S		L
2.0	Preparation of Pre-qualification Documents			
2.1	Preparation of pre-qualification documents for short listing of prospective EPC bidders.	L		S
3.0	Evaluation of Pre-qualification Applications			
3.1	Evaluation of pre-qualification applications of EPC bidders and preparation of evaluation report.	L	S	S
4.0	Preparation of Tender Documents			
4.1	Preparation of tender level design, selection of design parameters, functional technical specifications and tender drawings.	S	L	
4.1.1	Define scope of works and services for the EPC contract	S	L	
4.1.2	Define scope of works and services for LTSA contract		X	
4.1.3	Design parameters and standards	S	L	
4.1.4	Civil part	L	S	
4.1.5	Mechanical part		X	

4.1.6	Electrical part excluding switchyard		X	
4.1.7	Switchyard part	X		
4.1.8	I&C part		X	
4.1.9	Testing (including commissioning) part		X	
4.1.10	Performance and reliability test part		X	
4.2	Preparation of contractual / legal and commercial parts of bidding documents			
4.2.1	Invitation for Bidders	X		
4.2.2	Instructions to Bidders	L	S	S
4.2.3	Evaluation Criteria	S	L	
4.2.4	Detailed Client's Requirements	L	S	
4.2.5	Conditions of the Contract	S	S	L
4.2.6	Forms and Schedules to Bids	L	S	S
4.3	Preparation of Long Term Service Agreement (LTSA) specifications.		X	
5.0	Evaluation of Bids			
5.1	Evaluation of EPC and LTSA bids and preparation of bid evaluation reports			
5.1.1	Pre-bid meeting with the bidders	L	S	S
5.1.2	Responding to the clarifications of the bidders	L	S	S
5.1.3	Preparation of EPC evaluation report	S	L	S
5.1.4	Preparation of LTSA evaluation report	S	L	S
6.0	Award of Contract			
6.1	Assistance to the Client in pre-award meetings for EPC contract	L	S	S
6.2	Assistance to the Client in pre-award meetings for LTSA contract	L	S	S
6.3	Preparation of EPC and LTSA contracts	L	S	S

7.0 Preparation of Bidding Documents for O&M				
7.1	Preparation of bidding documents for O&M hiring contractor	S	L	S
8.0 Evaluation of Bids for O&M				
8.1	Pre-bid meeting with the bidders	L	S	S
8.2	Responding to the clarifications of the bidders	L	S	S
8.3	Preparation of evaluation report	S	L	S
9.0 Assistance to the Client during Award of O&M Contract				
9.1	Provide assistance to the Client during award of O&M contract	S	L	S
10.0 Preparation of Project Documents				
10.1	Preparing the project documents viz. power purchase agreement (PPA), gas supply agreement (GSA), implementation agreement (IA) etc. and provide other required support for all the permits like generation license, Lol, tariff etc.	S	S	L
B. PART II SERVICES				
1.0 Design Review				
1.1	Review of EPC contractor's detailed design / drawings:			
1.1.1	Mechanical	S	L	
1.1.2	Electrical excluding Switchyard	S	L	
1.1.3	I&C	S	L	
1.1.4	Switchyard	X		
1.1.5	Civil	X		
1.1.6	Chemical	S	L	
1.1.7	Architecture	X		
1.1.8	HVAC	X		
1.2	Review of Shop Inspection & Testing Plan and attend the workshop tests	L	S	

2.0 Construction Supervision

2.1 Supervision of construction, erection,
testing & commissioning L S

3.0 Services during DLP

3.1 Services during DLP of Two (2) years L S



Appendix B

Reporting Requirements

Pursuant to Sub-Clause GC-3.7, the Consultants shall submit the following reports:

Reports	Copies	Date
Monthly Progress Report	One (01) copy	To be submitted within fifteen (15) days of the due month



Appendix C
Key Personnel and Sub-Consultants

Sr. No.	Name	Position
C1	NESPAK (The Consultants)	
1	Akhtar Hussain Mayo	Project Manager
2	TBN	Project Coordinator
3	Kaukab H. Bhatti/Qaiser Akram	Contracts Specialist
4	M. Haseeb Saqib	Chief Engineer (Thermal)
5	Abdul Salam	I&C Expert
6	Raees Akbar	Substation Expert
7	Muhammad Arif	Structures Expert
8	Sohail Kibria	Geotechnical Specialist
9	Munir-ud-Din	Chief Engineer (HVAC)
10	Jamshaid Iqbal	Chief Architect
C2	Sub-Consultants (associated to the Consultants)	
1	Lahmeyer International GmbH	Foreign Technical Services
2	EY Ford Rhodes	Financial Services
3	Cornelius, Lane & Mufti	Legal Services
4	EY Ford Rhodes	Tax Services
5	Marsh	Insurance Services




Appendix D

Breakdown of Contract Price in Foreign Currency

1. Payments to be made to **Foreign Technical Consultants** are to be in Euros for which cost breakup is as under:

A.	PART-I SERVICES (Sum 1.0 + ... + 7.0)	Duration	Cost (Euro)
1	Preparation of Bankable Feasibility Study	1 Month	268,222
2	Preparation of Tender Documents	1 Month	49,844
3	Evaluation of Pre-Qualification Applications and Evaluation of Bids	1 Month	141,011
4	Award of Contract	1 Month	48,389
5	Preparation of Bidding Documents for O&M	1 Month	46,422
6	Evaluation of Bids for O&M	1 Month	46,422
7	Assistance to the Employer during Award of O&M Contract	1 Month	19,889
	Sub-Total (A)		620,200
B.	Contingencies for Part-I Services including but not limited to extensive travelling of experts inside/outside Pakistan		24,808
	Sub-Total (B)		24,808
C.	PART-II SERVICES (Sum 1.0 + ... + 3.0)	Duration	Cost (Euro)
	Design Review	10-12 Months	621,844
1	Design Review (Contingencies and Works on Weekends/Holidays/Critical Conditions)		50,000
	Construction Supervision	26 Months from the Commencement of EPC Contract	1,777,778
2	Construction Supervision (Contingencies and Works on Weekends/Holidays/Critical Conditions)		100,000
3	Services during DLP	2 Years	75,856
	Sub-Total (C)		2,625,478
D.	Escalation		91,583
	Sub-Total (D)		91,583
	Total (A+B+C+D)		3,362,069

Note: Any Engineering Services required by the Employer which are not included in the scope of work as described in Appendix-A of this proposal will be charged in accordance with the following man-day rates:

Project Manager and Experts: EUR 1,250.00 per day (Exclusive of WHT)

The expenses for the inspection and witnessing the factory acceptance tests for the plant and equipment to be procured for the Project at manufacturer's premises outside Pakistan are not considered and shall be borne by the Employer or Turnkey Contractors pursuant to provisions of the Turnkey Contract.

*The above prices are valid till December 31, 2018. For each subsequent year, an escalation of 4% per annum will be applicable.

2. Payments to be made to **Insurance Consultant** are to be in US Dollars for which cost is USD 52,812

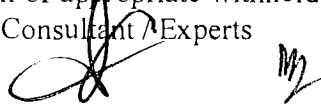
Appendix E

Breakdown of Contract Price in Local Currency

NESPAK's Consultancy Contract with Punjab Thermal Power (Pvt) Limited (PTPL) is structured in a tax efficient manner. NESPAK would have to charge or adjust for Punjab Sales Tax. Further, double deduction of withholding tax needs to be avoided.

The costs of Sub-Consultant / Expert are considered as out-of-pocket expenses and hence reimbursable costs. This is normal practice in privatization related contracts where the lead advisor includes the cost of technical, insurance, legal and accounting firms as part of out of pocket costs.

PTPL shall reimburse this cost by making cheques directly in the name of the sub-consultants / experts after deduction of appropriate withholding taxes and pass these on to NESPAK for passing onward to Sub-Consultant / Experts

A large, stylized handwritten signature is written over the text "Sub-Consultant / Experts". To its right, there are smaller handwritten initials, possibly "M2".

1100-1400 MW RLNG BASED COMBINED CYCLE POWER PLANT AT JHANG

APPENDIX-E

BREAKDOWN OF CONTRACT PRICE IN LOCAL CURRENCY

Lump Sum Prices							
Sr. No.	Description	NESPAK (PKR)	FINANCIAL SERVICES (PKR)	LEGAL SERVICES (PKR)	TAX SERVICES (PKR)	PST @16% levied by Government of Punjab on Services	Total
A.	PART-1 SERVICES (Sum 1.0 + ... + 7.0)	PKR 39,313,750	PKR 22,750,000	PKR 15,000,000	PKR 600,000	PKR 24,560,840	PKR 102,224,590
1.0	Upon submission of Final EPC Documents	PKR 11,794,125	PKR 6,825,000	PKR 4,500,000		PKR 6,156,228	PKR 29,275,353
2.0	Upon submission of Final EPC Evaluation Report	PKR 11,794,125	PKR 6,825,000	PKR 4,500,000		PKR 6,080,628	PKR 29,199,753
3.0	Upon Completion of Assistance During EPC Contract Clarifications	PKR 7,862,750	PKR 4,550,000	PKR 3,000,000		PKR 4,847,608	PKR 20,260,358
4.0	Upon submission of Final Bankable Feasibility Report	PKR 1,965,688	PKR 1,137,500	PKR 750,000		PKR 3,245,278	PKR 7,698,466
5.0	Upon submission of Final O&M Tender Documents	PKR 1,965,688	PKR 1,137,500	PKR 750,000		PKR 1,807,294	PKR 5,660,482
6.0	Upon submission of Final O&M Evaluation Report	PKR 1,965,688	PKR 1,137,500	PKR 750,000		PKR 1,211,902	PKR 5,065,090
7.0	Upon Final submission of PPA, GSA & IA, Tariff etc	PKR 1,965,688	PKR 1,137,500	PKR 750,000		PKR 1,211,902	PKR 5,065,090
B.	Contingencies for Part-I Services including But Not Limited to Extensive Travelling of Experts Inside/Outside Pakistan	PKR 22,998,544	PKR 4,550,000	PKR 3,000,000	PKR 120,000	PKR 5,401,425	PKR 36,069,968
C.	PART-2 SERVICES (Sum 1.0 + 2.0 + 3.0 + 4.0)	PKR 438,510,352	PKR 12,150,000	PKR 2,025,000	PKR 3,450,000	PKR 124,007,730	PKR 580,143,082
1.0	Project Management	PKR 61,427,552				PKR 10,318,841	PKR 74,156,143
	Design Review	PKR 67,416,500				PKR 23,723,269	PKR 96,408,519
2.0	Design Review (Contingencies and Works on Weekends/Holidays/Critical Conditions)	PKR 20,000,000				PKR 4,160,000	PKR 24,160,000
	Construction Supervision	PKR 240,653,000	An amount of PKR 450,000/- is payable per month.	An amount of PKR 75,000/- is payable per month.	An amount of PKR 150,000/- is payable per month.	PKR 74,391,359	PKR 323,844,859
3.0	Construction Supervision (Contingencies and Works on Weekends/Holidays/Critical Conditions)	PKR 30,000,000				PKR 6,720,000	PKR 36,720,000
	Services during DLP	PKR 6,013,300				PKR 2,614,261	PKR 9,773,561
4.0	Services during DLP (Deployments from Head Office on Critical Conditions)	PKR 13,000,000				PKR 2,080,000	PKR 15,080,000
D.	Direct Cost (for C)	PKR 63,315,000	PKR 0	PKR 0	PKR 0	PKR 10,130,400	PKR 73,445,400
E.	Gross Total (A + B + C + D)	PKR 564,137,646	PKR 39,450,000	PKR 20,025,000	PKR 4,170,000	PKR 164,100,395	PKR 791,883,040
F.	Escalation	PKR 35,683,979	PKR 1,265,000	PKR 435,000	PKR 282,000	PKR 7,810,352	PKR 45,476,331
G.	Geotechnical Investigations, Pile Testing, Hydrological Studies, Flood Inundation/Modeling Studies for Breach of LMB of Tammu & Canal Water Analysis	PKR 65,000,000	PKR 0	PKR 0	PKR 0	PKR 10,400,000	PKR 75,400,000
H.	Net Total (E + F + G)	PKR 664,821,625	PKR 40,715,000	PKR 20,460,000	PKR 4,452,000	PKR 182,310,746	PKR 912,759,371

Appendix F

Services and Facilities to be provided by the Employer

The Employer shall make available the following Services and Facilities:

1. Services and Facilities of the Employer

The Employer shall make available to the Consultants for the purpose of the Services and free of any charge, the services and facilities and property described in this Appendix at the times and in the manner as specified hereunder:

(a) Site Office

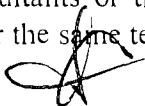
- i) The Employer shall establish and maintain suitably furnished office premises at site including safety, electricity, air-conditioning, heating, water supply, telephone connection, furniture and other utilities at no cost to the Consultants. Cleaning, janitorial and gardening services shall also be provided by the Employer.
- ii) The Consultants shall be entitled to use the Employer's telephone, and internet facility available at Site at no cost. This includes local and long distance calls provided these are in connection with the Services under this Project. Private calls shall be charged at actual by the Employer.
- iii) The Employer shall provide adequate number of telephone connections in the office of the Consultants at site.
- iv) The Consultants' personnel deployed at the Site may avail lunch facility on same terms and conditions as it would be available for the Employer's own personnel.

(b) First Aid

First aid facility shall be provided free of charge to the personnel of the Consultants deployed at Site. This facility shall be the same as it would be available to the Employer's own personnel.

2. Lodge Accommodation

If requested by the Consultants, the Employer shall provide lodge accommodation, to all Personnel of the Consultants or the Sub-consultants when on visit to various parts of the Project area or any other station where such facilities or the lodge accommodation of the Employer exists (and provided that the Personnel of the Consultants or the Sub-consultants visit that place in connection with the Project) under the same terms and conditions as the Employer's staff is entitled.



3. **Security for Personnel**

The Employer shall make necessary arrangements to provide security for personnel of the Consultants at the work site.

4. **Counterpart Personnel to be made available to the Consultants**

Not Applicable



Appendix G

(INTEGRITY PACT)

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS OF GOODS, SERVICES & WORKS IN CONTRACTS WORTH RS. 10.00 MILLION OR MORE

Contract No. _____ Dated _____
Contract Value: _____
Contract Title: _____

National Engineering Services Pakistan (Pvt.) Limited [the Consultants] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan (GoP), Government of Punjab (GoPb) or any administrative subdivision or agency thereof or any other entity owned or controlled by GoP through any corrupt business practice.

Without limiting the generality of the foregoing, [the Consultants] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP or GoPb, except that which has been expressly declared pursuant hereto.

[the Consultants] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP or GoPb and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[the Consultants] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP or GoPb.

Notwithstanding any rights and remedies exercised by GoP or GoPb in this regard, [the Consultants] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP or GoPb in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [the Consultants] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.

Name of Employer:
Punjab Thermal Power
(Pvt.) Limited (PTPL)

Signature: _____
[Seal]

Name of Consultants:
National Engineering Services
Pakistan (Pvt.) Limited (NESPAK)

Signature: _____
[Seal]
Vice President/Head
Power & Mechanical Division
National Engineering Services
Pakistan (Pvt.) Limited, Lahore

Appendix H
Payment Schedule

**APPENDIX-H
PAYMENT SCHEDULE**

Sr. No.	Milestone	NESPAK (PKR)		FOREIGN TECHNICAL SERVICES (EURO)		INSURANCE SERVICES (USD)		FINANCIAL SERVICES (PKR)		LEGAL SERVICES (PKR)		TAX SERVICES (PKR)		Total (EURO)	Total (USD)	Total (PKR)
		Percentage Payable	Amount Payable Including Tax	Percentage Payable	Amount Payable Excluding Tax	Payment Milestone	Amount Payable Excluding Tax	Payment Milestone	Amount Payable Excluding Tax	Payment Milestone	Amount Payable Excluding Tax	Payment Milestone	Amount Payable Excluding Tax			
A.	PART-1 SERVICES		45,603,950		620,200		13,500		22,750,000		15,000,000		600,000	620,200	13,500	83,953,950
(a)	Advance Payment upon signing of Contract Agreement	20%	9,120,790	30%	186,060	Upon Engagement	4,500	Selection of EPC Contractor Support	1,750,000	Selection of EPC Contractor Support	4,500,000			186,060	4,500	16,790,790
(b)	Upon submission of Final EPC Documents	25%	11,400,968	10%	62,020	Upon Finalization of Bidding Documents / RFP Package	9,000	Project Documentation Support	1,800,000	Project Documentation Support	3,500,000	An amount of Rs. 150,000/- is payable per month, for four (04) months of Part - I services.		62,020	9,000	20,988,488
(c)	Upon submission of Final EPC Evaluation Report	25%	11,400,968	10%	62,020			Feasibility and Tariff Related Support	4,100,000	Tariff and Generation License Application Support	3,000,000			62,020		20,988,488
(d)	Upon Completion of Assistance During EPC Contract Clarifications	10%	4,560,395	10%	62,020			Project Financing	13,000,000	Project Financing	1,500,000			62,020		6,395,395
(e)	Upon submission of Final Feasibility Report	5%	2,280,198	20%	124,040			O&M Contractor Selection support	1,100,000	O&M Contractor Selection support	1,500,000			124,040		4,197,698
(f)	Upon submission of Final O&M Tender Documents	5%	2,280,198	10%	62,020			Working Capital Financing Assistance	1,000,000	Working Capital Financing Assistance	1,000,000			62,020		4,197,698
(g)	Upon submission of Final Evaluation Report	5%	2,280,198	5%	31,010			Out of Pocket Expenses Claimed as per actual		Out of Pocket Expenses Claimed as per actual				31,010		4,197,698
(h)	Upon Final submission of PPA, GSA & IA, Tariff etc.	5%	2,280,198	5%	31,010									31,010		4,197,698
(i)	Total (a + ... + h)	100%	45,603,950	100%	620,200		13,500		22,750,000		15,000,000			620,200	13,500	83,953,950
B.	Contingencies for Part-I Services including But Not Limited to Extensive Travelling of Experts Inside/Outside Pakistan		26,678,311		24,808		1,080		4,550,000		3,000,000		120,000	24,808	1,080	34,348,311
C.	PART-2 SERVICES (Sum 1.0 +2.0 + 3.0 + 4.0)		508,672,008		2,625,478		36,720		12,150,000		2,025,000		3,450,000	2,625,478	36,720	526,297,008
1.0	Project Management*		71,255,960		-		-		-		-		-	-	-	71,255,960
(a)	First Payment against submission of Invoice	20%	14,251,192	-	-	USD 13,500/- Upon Finalization / Approval of Insurance Programme from Lenders	-	An amount of Rs. 450,000/- is payable per month during the construction phase	-	An amount of Rs. 75,000/- is payable per month during the construction phase	-	An amount of Rs. 150,000/- is payable per month	-	-	-	14,251,192
(b)		10%	7,125,596	-	-		-		-		-		-	-	-	7,125,596
(c)		10%	7,125,596	-	-	USD 9,000/- Upon Finalization of Insurance Policies for Construction Phase	-	The total amount has been capped at Rs.12 150 Million.	-	The total amount has been capped at Rs. 2 025 Million.	-	The total amount has been capped at Rs.3 450 Million.	-	-	-	7,125,596
(d)		10%	7,125,596	-	-		-		-		-		-	-	-	7,125,596
(e)		10%	7,125,596	-	-	USD 9,000/- Upon Finalization of Operational Phase Policies	-		-		-		-	-	-	7,125,596
(f)		10%	7,125,596	-	-		-		-		-		-	-	-	7,125,596
(g)		10%	7,125,596	-	-		-		-		-		-	-	-	7,125,596
(h)		10%	7,125,596	-	-	USD 5,220/- Out of Pocket Expenses	-		-		-		-	-	-	7,125,596
(i)		10%	7,125,596	-	-		-		-		-		-	-	-	7,125,596
(j)	Total (a + ... + i)	100%	71,255,960	-	-		-		-		-		-	-	-	71,255,960
2.0	Design Review*		78,203,140		621,844		-		-		-		-	621,844	-	78,203,140
(a)	First Payment against submission of Invoice	20%	15,640,628	20%	124,369		-		-		-		-	124,369	-	15,640,628
(b)		20%	15,640,628	20%	124,369		-		-		-		-	124,369	-	15,640,628
(c)		20%	15,640,628	20%	124,369		-		-		-		-	124,369	-	15,640,628
(d)	Four equal instalments each 20% every three months against submission of invoice	20%	15,640,628	20%	124,369		-		-		-		-	124,369	-	15,640,628
(e)		20%	15,640,628	20%	124,369		-		-		-		-	124,369	-	15,640,628
(f)	Total (a + ... + e)	100%	78,203,140	100%	621,844		-		-		-		-	621,844	-	78,203,140
2.0	Design Review (Contingencies and Works on Weekends/Holidays/Critical Conditions)		23,200,000		50,000		-		-		-		-	50,000	-	23,200,000
3.0	Construction Supervision*		279,157,480		1,777,778		-		-		-		-	1,777,778	-	279,157,480
(a)	First Payment against submission of Invoice	20%	55,831,496	20%	355,556		-		-		-		-	355,556	-	55,831,496
(b)		10%	27,915,748	10%	177,778		-		-		-		-	177,778	-	27,915,748
(c)		10%	27,915,748	10%	177,778		-		-		-		-	177,778	-	27,915,748

(d)	10%	27,915,748	10%	177,778	-	-	-	-	-	-	177,778	-	27,915,748
(e)	10%	27,915,748	10%	177,778	-	-	-	-	-	-	177,778	-	27,915,748
(f)	10%	27,915,748	10%	177,778	-	-	-	-	-	-	177,778	-	27,915,748
(g)	10%	27,915,748	10%	177,778	-	-	-	-	-	-	177,778	-	27,915,748
(h)	10%	27,915,748	10%	177,778	-	-	-	-	-	-	177,778	-	27,915,748
(i)	10%	27,915,748	10%	177,778	-	-	-	-	-	-	177,778	-	27,915,748
(j) Total (a + ... + i)	180%	279,157,488	108%	1,777,778	-	-	-	-	-	-	1,777,778	-	279,157,488
3.0 Construction Supervision (Contingencies and Works on Weekends/Holidays/Critical Conditions)		34,800,000		100,000	-	-	-	-	-	-	100,000	-	34,800,000
4.0 Services during DLP		6,975,428		75,856	-	-	-	-	-	-	75,856	-	6,975,428
(a) First Payment against submission of Invoice	20%	1,395,086	20%	15,171	-	-	-	-	-	-	15,171	-	1,395,086
(b)	20%	1,395,086	20%	15,171	-	-	-	-	-	-	15,171	-	1,395,086
(c) Four equal instalments each 20% every six months against submission of invoice	20%	1,395,086	20%	15,171	-	-	-	-	-	-	15,171	-	1,395,086
(d)	20%	1,395,086	20%	15,171	-	-	-	-	-	-	15,171	-	1,395,086
(e)	20%	1,395,086	20%	15,171	-	-	-	-	-	-	15,171	-	1,395,086
(f) Total (a + ... + e)	180%	6,975,428	108%	75,856	-	-	-	-	-	-	75,856	-	6,975,428
4.0 Services during DLP (Deployments from Head Office on Critical Conditions)		15,080,000		-	-	-	-	-	-	-	-	-	15,080,000
D. Direct Cost (for C)		73,445,400		-	-	-	-	-	-	-	-	-	73,445,400
(a) First Payment against submission of Invoice	20%	14,689,080	-	-	-	-	-	-	-	-	-	-	14,689,080
(b)	10%	7,344,540	-	-	-	-	-	-	-	-	-	-	7,344,540
(c)	10%	7,344,540	-	-	-	-	-	-	-	-	-	-	7,344,540
(d)	10%	7,344,540	-	-	-	-	-	-	-	-	-	-	7,344,540
(e)	10%	7,344,540	-	-	-	-	-	-	-	-	-	-	7,344,540
(f) Eight equal instalments each 10% every three months against submission of invoice	10%	7,344,540	-	-	-	-	-	-	-	-	-	-	7,344,540
(g)	10%	7,344,540	-	-	-	-	-	-	-	-	-	-	7,344,540
(h)	10%	7,344,540	-	-	-	-	-	-	-	-	-	-	7,344,540
(i)	10%	7,344,540	-	-	-	-	-	-	-	-	-	-	7,344,540
(j) Total (a + ... + i)	100%	73,445,400	-	-	-	-	-	-	-	-	-	-	73,445,400
E. Grand Total (A + B + C + D)		654,399,669		3,270,486	51,300	39,450,000	20,025,000	4,170,000	3,270,486	51,300	718,044,669		
F. Escalation		41,393,416		91,583	1,512	1,265,000	435,000	282,000	91,583	1,512	43,375,416		
G. Geotechnical Investigations, Pile Testing, Hydrological Studies, Flood Inundation/Modeling Studies for Breach of LMB of Trimmu & Canal Water Analysis		75,400,000		-	-	-	-	-	-	-	75,400,000		
H. Net Total (E + F + G)		771,193,085		3,362,069	52,812	40,715,000	20,460,000	4,452,000	3,362,069	52,812	836,820,085		

Note: 1. Foreign Consultants, Legal Consultant, Tax Consultants and Financial Consultant milestones have been framed without GST, with the assumption of direct disbursement to concerned subconsultants. However, the provision is available in the contract. If so required such milestone shall be adjusted @ 16% on account of GST.

2. NESPAK milestones have been framed with 16% GST

3. Vehicles (5 Nos.), Furnished Accommodation, Furnished Offices with Office Supplies has been assumed in EPC Contract.

4. Quoted Cost is valid till July 01, 2017. For each subsequent year an escalation of 10% per annum will be applicable in case of Local Currency (PKR) applicable from July 01, 2018 and 4% on Foreign Currency (Euro/USD) applicable after December 31, 2018

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Appendix I
Summary of Cost of Consultants and Associated Sub-
Consultants

APPENDIX-I

SUMMARY OF COST OF CONSULTANTS AND ASSOCIATED SUB-CONSULTANTS

Lump Sum Prices

Sr. No.	Description	NESPAK (PKR)	FOREIGN TECHNICAL SERVICES (EUR)	INSURANCE SERVICES (USD)	FINANCIAL SERVICES (PKR)	LEGAL SERVICES (PKR)	TAX SERVICES (PKR)	PST @ 16% levied by Government of Punjab on Services	Total
A.	PART-I SERVICES (Sum 1.0 + ... + 7.0)	PKR 39,313,750	EUR 620,200	USD 13,500	PKR 22,750,000	PKR 15,000,000	PKR 600,000	PKR 24,560,840	PKR 178,066,090
1.0	Upon submission of Final EPC Documents	PKR 11,794,125	EUR 124,040	USD 4,500	PKR 6,825,000	PKR 4,500,000		PKR 6,156,228	PKR 44,632,653
2.0	Upon submission of Final EPC Evaluation Report	PKR 11,794,125	EUR 124,040	USD 0	PKR 6,825,000	PKR 4,500,000		PKR 6,080,628	PKR 44,084,553
3.0	Upon Completion of Assistance During EPC Contract Clarifications	PKR 7,862,750	EUR 124,040	USD 0	PKR 4,550,000	PKR 3,000,000	An amount of PKR 150,000/- is payable per month, for Four (04) months of Part-I services.	PKR 4,847,608	PKR 35,145,158
4.0	Upon submission of Final Bankable Feasibility Report	PKR 1,965,688	EUR 124,040	USD 9,000	PKR 1,137,500	PKR 750,000		PKR 3,245,278	PKR 23,528,266
5.0	Upon submission of Final O&M Tender Documents	PKR 1,965,688	EUR 62,020	USD 0	PKR 1,137,500	PKR 750,000		PKR 1,807,294	PKR 13,102,882
6.0	Upon submission of Final O&M Evaluation Report	PKR 1,965,688	EUR 31,010	USD 0	PKR 1,137,500	PKR 750,000		PKR 1,211,902	PKR 8,786,290
7.0	Upon Final submission of PPA, GSA & IA, Tariff etc.	PKR 1,965,688	EUR 31,010	USD 0	PKR 1,137,500	PKR 750,000		PKR 1,211,902	PKR 8,786,290
B.	Contingencies for Part-I Services Including But Not Limited to Extensive Travelling of Experts Inside/Outside Pakistan	PKR 22,998,544	EUR 24,808	USD 1,080	PKR 4,550,000	PKR 3,000,000	PKR 120,000	PKR 5,401,425	PKR 39,160,328
C.	PART-2 SERVICES (Sum 1.0 + 2.0 + 3.0 + 4.0)	PKR 438,510,352	EUR 2,625,478	USD 36,720	PKR 12,150,000	PKR 2,025,000	PKR 3,450,000	PKR 124,007,730	PKR 899,056,042
1.0	Project Management	PKR 61,427,552	EUR 0					PKR 10,318,841	PKR 74,811,595
	Design Review	PKR 67,416,500	EUR 621,844					PKR 23,723,269	PKR 171,993,699
2.0	Design Review (Contingencies and Works on Weekends/Holidays/Critical Conditions)	PKR 20,000,000	EUR 50,000	As per milestone mentioned in Payment Schedule (Appendix - H)	An amount of PKR 450,000/- is payable per month.	An amount of PKR 75,000/- is payable per month. (5 hours of Legal Services @ 15,000/- per month)	An amount of PKR 150,000/- is payable per month.	PKR 4,160,000	PKR 30,160,000
3.0	Construction Supervision	PKR 240,653,000	EUR 1,777,778					PKR 74,391,359	PKR 539,337,355
	Construction Supervision (Contingencies and Works on Weekends/Holidays/Critical Conditions)	PKR 30,000,000	EUR 100,000					PKR 6,720,000	PKR 48,720,000
4.0	Services during DLP	PKR 6,013,300	EUR 75,856					PKR 2,614,261	PKR 18,953,393
	Services during DLP (Deployments from Head Office on Critical Conditions)	PKR 13,000,000	EUR 0					PKR 2,080,000	PKR 15,080,000
D.	Direct Cost (for C)	PKR 63,315,000	EUR 0	USD 0	PKR 0	PKR 0	PKR 0	PKR 10,130,400	PKR 73,445,400
E.	Gross Total (A + B + C + D)	PKR 564,137,646	EUR 3,270,486	USD 51,300	PKR 39,450,000	PKR 20,025,000	PKR 4,170,000	PKR 164,100,395	PKR 1,189,727,860
F.	Escalation	PKR 35,683,979	EUR 91,583	USD 1,512	PKR 1,265,000	PKR 435,000	PKR 282,000	PKR 7,810,352	PKR 56,625,051
G.	Geotechnical Investigations, Pile Testing, Hydrological Studies, Flood Inundation/Modeling Studies for Breach of LMB of Trimmu & Canal Water Analysis	PKR 65,000,000	EUR 0	USD 0	PKR 0	PKR 0	PKR 0	PKR 10,400,000	PKR 75,400,000
H.	Net Total (E + F + G)	PKR 664,821,625	EUR 3,362,069	USD 52,812	PKR 40,715,000	PKR 20,460,000	PKR 4,452,000	PKR 182,310,746	PKR 1,321,752,911

* Exchange Rate: 1 Euro = PKR 120

** Exchange Rate: 1 USD = PKR 105

NOTES: 1. NESPAK, Foreign Consultants, Legal Consultant, Tax Consultants and Financial Consultant milestones have been framed without GST, with the assumption of direct disbursement to concerned subconsultants. However, the provision is available in the contract. If so required such milestone shall be adjusted @ 16% on account of GST.

2. Vehicles (5 Nos.), Furnished Accommodation, Furnished Offices with Office Supplies has been assumed in EPC Contract.

3. Quoted Cost is valid till July 01, 2017. For each subsequent year an escalation of 10% per annum will be applicable in case of Local Currency (PKR) applicable from July 01, 2018 and 4% on Foreign Currency (Euro/USD) applicable after December 31, 2018

4. All costs other than retainer cost for the sub-consultants shall be reimbursed by the Employer as per actual which is beyond the present consultancy agreement cost.

SCHEDULE L
ADMINISTRATIVE EXPENSES

ADMINISTRATIVE EXPENSES

	USD
Administrative expenses during construction for (30 months)-rounded off	11,676,000
Administrative expenses during construction for (30 months)	11,676,013
Administrative expenses during construction for (30 months)	10,619,349
(30 months represents 27 months construction period and 3 months prior to Notice To Proceed)	
Purchase of vehicles, computers, ERP etc. (one time)	1,056,664
Administrative expenses per annum in USD (12 months)	4,247,740
Purchase of vehicles, computers, ERP etc. in USD (one time)	1,056,664
	Rs
Administrative expenses per annum in Rs (12 months)	448,136,542
Purchase of vehicles, computers, ERP etc. in Rs (one time)	111,478,000

Admin expenses per annum	Rs
Employee Costs	291,020,926
Rental Agreements	18,677,880
Entertainment	4,800,000
Printing and Stationery Costs	9,600,000
Communications Costs	6,000,000
Electricity & Generator Fuel	18,000,000
Vehicles Running & Maintenance	14,916,600
Travelling, Boarding and Lodging	11,582,076
Auditors remuneration	4,600,000
Training and Fees	18,075,060
Computer Software / Hardware	6,000,000
Repair & Maintenance / Services	3,000,000
Group life & health insurance	8,000,000
Security & surveillance	3,900,000
Advertisement etc	18,000,000
Miscellaneous Expenses	11,964,000
Total	448,136,542

Purchase of vehicles, computers, ERP etc.	NOTE	Rs
Automobiles & Motorcycles	1	45,468,000
Computerization - Software / Hardware / Networking	2	10,010,000
ERP	3	29,700,000
Communication equipment	4	5,500,000
Printers & faxes etc.	5	4,600,000
Office Furniture	6	9,000,000
Office & Safety Equipment	7	6,200,000
Kitchen Appliances	8	1,000,000
Total		111,478,000

NOTES:

- 1 Represents purchase of 4 Vigo, 6 Altis, 1 GLI, 2 Civic, 2 Swift, 3 Cultus, 10 bikes and registration cost of all vehicles
- 2 Represents purchase of 58 laptops, desktops, network drives, LED, LCDs etc.
- 3 Represents cost of SAP, Oracle etc.
- 4 Represents cost of telephone exchange, network hub etc.
- 5 Represents cost of printers, fax, photocopier etc.
- 6 Represents cost of chairs, tables, sofas, partitions, cabinets etc.
- 7 Represents cost of fire extinguishers, safety alarm system, heaters etc.
- 8 Represents crockery items etc.

Month wise break up of admin. expenditure

		(All amounts in Rs)													
Sr #	Description	NOTE	month 1	month 2	month 3	month 4	month 5	month 6	month 7	month 8	month 9	month 10	month 11	month 12	Total
1	Employee Costs	1	24,251,744	24,251,744	24,251,744	24,251,744	24,251,744	24,251,744	24,251,744	24,251,744	24,251,744	24,251,744	24,251,744	24,251,744	291,020,926
2	Rental Agreements	2	1,556,490	1,556,490	1,556,490	1,556,490	1,556,490	1,556,490	1,556,490	1,556,490	1,556,490	1,556,490	1,556,490	1,556,490	18,677,880
3	Entertainment	3	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	4,800,000
4	Printing and Stationery Costs	4	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	9,600,000
5	Communications Costs	5	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	6,000,000
6	Electricity & Generator Fuel	6	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	18,000,000
7	Vehicles Running & Maintenance	7	1,243,050	1,243,050	1,243,050	1,243,050	1,243,050	1,243,050	1,243,050	1,243,050	1,243,050	1,243,050	1,243,050	1,243,050	14,916,600
8	Travelling, Boarding and Lodging	8	965,173	965,173	965,173	965,173	965,173	965,173	965,173	965,173	965,173	965,173	965,173	965,173	11,582,076
9	Auditors remuneration	9	2,250,000				500,000				1,350,000		500,000		4,600,000
10	Training and Fees	10	1,506,255	1,506,255	1,506,255	1,506,255	1,506,255	1,506,255	1,506,255	1,506,255	1,506,255	1,506,255	1,506,255	1,506,255	18,075,060
11	Computer Software / Hardware	11	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	6,000,000
12	Repair & Maintenance / Services	12	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	3,000,000
13	Group life & health insurance	13			4,000,000					4,000,000					8,000,000
14	Security & surveillance	14	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	325,000	3,900,000
15	Advertisement etc	15	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	18,000,000
16	Miscellaneous Expenses	16	997,000	997,000	997,000	997,000	997,000	997,000	997,000	997,000	997,000	997,000	997,000	997,000	11,964,000
	Total		38,044,712	35,794,712	39,794,712	41,794,712	36,294,712	35,794,712	39,794,712	37,144,712	35,794,712	36,294,712	35,794,712	35,794,712	448,136,542

NOTES:

- 1 refer employee cost break up
- 2 30% increase in rent of office building of Rs 1,197,300 rented out by QATPL
- 3 estimated at Rs 400,000 per month for meetings with consultants, foreign consultants etc.
- 4 includes paper, inks, toners, cartridges, box files, stationary items etc.
- 5 includes internet connectivity costs, email hosting etc.
- 6 it represents electricity and generator cost for office
- 7 includes fuel of official cars, 5 pool cars and maintenance of vehicles
- 8 includes air fare, boarding & lodging costs, fuel for outstation travelling etc.
- 9 includes fee for annual audit, review assignments
- 10 includes local trainings in LUMS for top management and managers
- 11 includes purchase of ancillary items for computers such as UPS, network ports, adapters, networking cables, routers etc.
- 12 represents minor repair work for office including upkeep of furniture etc.
- 13 represents group insurance premium for life insurance
- 14 represents security charges of security staff deputed at entrance and other security related items such as barbed wire, concrete blocks, minor equipment etc.
- 15 represents event cost for foundation stone and other events to be held at achievement of different milestones such as simple cycle operations
- 16 it represents miscellaneous expenses

Monthly salaries

Sr#	Designation	Salaries Rs	2%	Medical OPD Rs	gratuity Rs	10%	2
			Health Care Insurance Premium Rs			Provident fund Rs	Bonus Rs
	NOTES		1	2	3	4	5
1	Chief Executive Officer	1,881,159	37,623	25,000	156,763	188,116	3,762,318
2	Chief Operating Officer	1,590,056	31,801	25,000	132,505	159,006	3,180,113
3	Chief Legal Officer	672,716	13,454	25,000	56,060	67,272	1,345,432
4	Chief Technical Officer	1,590,056	31,801	25,000	132,505	159,006	3,180,113
5	GM Technical	1,100,808	22,016	25,000	91,734	110,081	2,201,616
6	Chief Financial Officer	1,590,056	31,801	25,000	132,505	159,006	3,180,113
7	Chief Strategy Officer	1,100,808	22,016	25,000	91,734	110,081	2,201,616
8	Dy CFO / GM Finance (CIA)	1,161,964	23,239	20,000	96,830	116,196	2,323,928
9	Dy CFO / GM Accounts	978,496	19,570	20,000	81,541	97,850	1,956,992
10	General Manager Admin / HR	522,272	10,445	20,000	43,523	52,227	1,044,545
11	Company Secretary	275,202	5,504	20,000	22,934	27,520	55,040
12	Manager Contracts	244,624	4,892	20,000	20,385	24,462	48,924
13	Manager Legal	214,046	4,281	20,000	17,837	21,405	42,809
14	Manager Technical	244,624	4,892	20,000	20,385	24,462	48,924
15	Manager Operations	244,624	4,892	20,000	20,385	24,462	48,924
16	Manager Administration	269,086	5,382	20,000	22,424	26,909	53,817
17	Manager Human Resource	214,046	4,281	20,000	17,837	21,405	42,809
18	Manager Security	214,046	4,281	20,000	17,837	21,405	42,809
19	Assistant Manager Operations	122,312	2,446	18,000	10,193	12,231	24,462
20	Assistant Manager O&I	122,312	2,446	18,000	10,193	12,231	24,462
21	Assistant Manager Technical	122,312	2,446	18,000	10,193	12,231	24,462
22	Assistant Manager Contracts	122,312	2,446	18,000	10,193	12,231	24,462
23	Assistant Manager Accounts	122,312	2,446	18,000	10,193	12,231	24,462
24	Assistant Manager Finance	122,312	2,446	18,000	10,193	12,231	24,462
25	Assistant Manager Legal	122,312	2,446	18,000	10,193	12,231	24,462
26	Assistant Manager Corporate Affairs	122,312	2,446	18,000	10,193	12,231	24,462
27	Assistant Manager Administration	122,312	2,446	18,000	10,193	12,231	24,462
28	Assistant Manager Human Resource	122,312	2,446	18,000	10,193	12,231	24,462
29	Assistant Manager IT	122,312	2,446	18,000	10,193	12,231	24,462
30	Personal Secretary to CEO	110,081	2,202	18,000	9,173	11,008	22,016
31	Store Officer	42,809	856	18,000	3,567	4,281	8,561
32	Support Staff (30 Employees) incl. Ras	880,647	17,613	225,000	73,387	88,065	1,761,293
33	Driver-1	24,462	489	15,000	2,039	2,446	4,892
34	Driver-2	24,462	489	15,000	2,039	2,446	4,892
35	Driver-3	24,462	489	15,000	2,039	2,446	4,892
36	Driver-4	24,462	489	15,000	2,039	2,446	4,892
37	Driver-5	24,462	489	15,000	2,039	2,446	4,892
38	Driver-6	24,462	489	15,000	2,039	2,446	4,892
39	Driver-7	24,462	489	15,000	2,039	2,446	4,892
40	Naib Qasid-1	22,016	440	15,000	1,835	2,202	4,403
41	Naib Qasid-2	22,016	440	15,000	1,835	2,202	4,403
42	Naib Qasid-3	22,016	440	15,000	1,835	2,202	4,403
43	Naib Qasid-4	24,462	489	15,000	2,039	2,446	4,892
44	Naib Qasid-5	24,462	489	15,000	2,039	2,446	4,892
45	Naib Qasid-6	24,462	489	15,000	2,039	2,446	4,892
46	Naib Qasid-7	24,462	489	15,000	2,039	2,446	4,892
47	Janitor-1	23,239	465	15,000	1,937	2,324	4,647
48	Janitor-2	23,239	465	15,000	1,937	2,324	4,647
49	Janitor-3	23,239	465	15,000	1,937	2,324	4,647
	Monthly Total	16,892,514	337,850	1,109,000	1,407,709	1,689,251	33,785,028

NOTES:

- 1 Healthcare insurance premium is assumed to be 2% of monthly salary
- 2 Medical OPD is assumed to be reimbursed with maximum monthly limit
- 3 Gratuity is assumed to be 1 salary for each completed year of service
- 4 Provident fund contribution by the Company is 10% of salary per month
- 5 2 bonuses are assumed to be paid per annum during construction period

SCHEDULE M
SECURITY AND SURVEILLANCE

Security and Surveillance Cost

105.50

30

12

	USD
Security and surveillance cost during construction for (30 months)-rounded off	8,257,000
Security and surveillance cost during construction for (30 months) (30 months represents 27 months construction period and 3 months prior to Notice To Proceed)	8,257,881
Security and surveillance cost per annum in USD	2,914,755
Security and surveillance cost one time in USD	970,995
	Rs
Security and surveillance cost per annum in Rs	307,506,600
Security and surveillance cost one time in Rs	102,439,970

Security and surveillance cost per annum

Sr#	Description	NOTE	Rs
1	Security personnel costs	1	242,481,600
2	Vehicles Running & Maintenance	2	20,349,000
3	Security Staff Food	3	44,676,000
			307,506,600
4	Arms & ammunition	4	22,439,970
5	Costs of security barracks, bunkers, cameras etc.	5	50,000,000
6	Security equipment purchase & service	6	30,000,000
			102,439,970

NOTES:

- 1 It includes cost of 408 security & other personnel working in 3 shifts comprising mainly of Police personnel, Rangers and SSG commandos with 20% overheads
- 2 Represents annual fuel cost of 4 Hilux Vigo, 10 motorcycles for 12500 liters per month and repair cost at 75% of fuel cost.
- 3 Represents food cost of 408 security personnel @300 per head for 365 days
- 4 It represents one time arms & ammunition cost of 378 security personnel @ 59,365 per person.
- 5 It represents costs of security barracks, bunkers, cameras, search lights, watch towers, alarm systems, fencing etc.
- 6 It represents cost of walk through doors, detectors, control room, surveillance equipment, walk through gates etc.

[illegible]

SCHEDULE N
TESTING AND COMMISSIONING COST

BREAKDOWN OF TESTING AND COMMISSIONING COST

Full Load - Gas	MW	1,242,700											
Gas Rate (LHV)	USD/MMBTU	9.1337											
	USD/RTU	0.00009134											
Full Load of 1 Gr - Gas (Net)	MW	400,000											
Full Load of 1 Gr - Gas (Net)	KW	400,000											
Max Efficiency (Single Cycle)	%age	39.20%											
Max Efficiency (Combined Cycle)	%age	61.16%											
													Efficiency for Siemens
TESTS USING GAS FUEL													
Fuel Gas	12.000000	Days	Load	Load (KW)	Eff. Factor	Eff.	Heat Rate(Btu)	Per Unit Cost (USD)/KWh	Load Factor	Total Cost (USD)	Comments		
TESTS FOR SINGLE CYCLE													
First Fire Tests (Pre- & Post- Synchronization)	Days	9	25%	100,000.0	50.43%	19.77%	17,258.46	0.16	0.70	2,383,424	Includes start/stops, full speed no load operation and intermittent operation on lower loads. Also, the tests under schedule B.2 (Tests Prior to Synchronization) of PPA have been considered herein, attached as Annex.		
Performance Test	Days	3	50%	200,000.0	86%	31.36%	10,879.30	0.10		1,430,906	Assumed that the complete fuel cost is recoverable against units generated		
Trial Run- Reliability & Base Load Test	Days	8	100%	400,000.0	100%	39.20%	8,703.44	0.08		6,105,187	Assumed that the complete fuel cost is recoverable against units generated		
			20							9,919,526			
TESTS FOR COMBINED CYCLE													
Full Load (Net)	MW	1,242,700											
Full Load (Net)	KW	1,242,700											
Combined Cycle Performance / Trial Run & Reliability Test Run	Days	10	11.0%	1,242,700.00	100%	61.16%	5,579.09	0.05		15,198,074	Assumed that the complete fuel cost is recoverable against units generated		
Steam Blowing (including boiler chemical cleaning, safety valve adjustment, steam blowing, main steam pipe blowing, fuel changeover tests, interlock protection tests)	Days	12	25%	310,675.00	47%	28.74%	11,870.41	0.11	0.50	4,650,449	It is assumed that during steam blowing, the machine will be on FSNL most of the time and intermittently be on part load (of about 25% that has been assumed for the sake of calculation). The tests may take about 20-25 (4+15+5) days but a fuel cost of only 15 days is being claimed.		
										20,048,523			
TESTS USING HSD FUEL OIL													
Full Load of 1 GT - HSD (Net)	MW	357,114											
Full Load of 1 GT - HSD (Net)	KW	357,114											
Max Efficiency - HSD SC	%age	36.67%											
HSD Rate	Rs/Ltr	69.85											
Fuel Oil - HSD			Load	Load (KW)	Eff. Factor	Eff.	Heat Rate(Btu)	Per Unit Cost (USD)/KWh	Load Factor	Total Cost (USD)			
First Fire Tests (Pre- & Post- Synchronization)	Days	5.000000	25%	89,278.50	50%	18.44%	19,528.07	0.38	0.70		Includes start/stops, full speed no load operation and intermittent operation on lower loads. Also, the tests under schedule B.2 (Tests Prior to Synchronization) of PPA have been considered herein, attached as Annex.		
Performance Test	Days	3.000000	100%	357,114.0	100%	36.67%	9,620.00	0.09		2,259,237	Assumed that the complete fuel cost is recoverable against units generated		
		3.000000								2,259,237			
Full Load - Combined Cycle on HSD	MW	1,081,800											
Full Load - Combined Cycle on HSD	KW	1,081,800											
Combined Cycle Performance / Rel Test	Days	4.000000	100%	1,081,800	100%	55.76%	5,116.37	0.10		10,542,183	Assumed that the complete fuel cost is recoverable against units generated		
										10,542,183			
										54,948,233			

LTSA Annual Fix Cost (USD)	3,632,441
LTSA Monthly Fix Cost (USD)	302,703
LTSA Cost for 1 months if Tariff is available (1 month mobilization before COD)	-
LTSA Cost for 2 months waiting period (From SC to CC Conversion)	605,407
Assuming O&M Annual Fix Cost (USD)	6,960,000
O&M Cost for 4 months (mobilization has been assumed 4 months prior to COD)	-
O&M Cost for 2 months waiting period (From SC to CC Conversion)	683,000
Total O&M and LTSA Cost (USD)	1,288,407
Electricity Cost for Back feed from National Grid (USD)	-
Total Fuel Cost for Both GT's	9,617,297
Overall Total Cost (Total Fuel Cost For Both GT's + Total O&M & LTSA Cost)	10,905,704

SCHEDULE O
APPLICATION FOR GENERATION LICENSE

Punjab Thermal Power (Pvt.) Limited

Date: July 26, 2017

THE REGISTRAR

National Electric Power Regulatory Authority

NEPRA Tower

Ataturk Avenue (East), G-5/1

Islamabad

Subject: APPLICATION FOR A GENERATION LICENSE

I, Ahad Khan Cheema, Chief Executive Officer, being the duly authorized representative of **Punjab Thermal Power (Private) Limited** by virtue of board resolution dated June 9th, 2017 hereby apply to the National Electric Power Regulatory Authority for the grant of a **Generation Licence** to **Punjab Thermal Power (Private) Limited** pursuant to Section 15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

I certify that the documents-in-support attached with this application are prepared and submitted in conformity with the provisions of the National Electric Power Regulatory Authority Licensing (Application and Modification Procedure) Regulations, 1999, and undertake to abide by the terms and provisions of the above-said regulations. I further undertake and confirm that the information provided in the attached documents-in-support is true and correct to the best of my knowledge and belief.

A bank draft in the sum of Rupees 747,880/- (Rupees Seven Hundred Forty Seven Thousand Eight Hundred Eighty only) bearing no. **03767508** dated July 24, 2017 being the non-refundable licence application fee calculated in accordance with Schedule II to the National Electric Power Regulatory Authority Licensing (Application and Modification Procedure) Regulations, 1999, is also attached herewith.

for & on behalf of

PUNJAB THERMAL POWER (PVT.) LIMITED



AHAD KHAN CHEEMA)

Chief Executive Officer

SCHEDULE P
CHECKLIST CONFIRMING THE COMPLIANCE OF INFORMATION/DOCUMENTS
REQUIRED UNDER NEPRA TARIFF (STANDARDS & PROCEDURES) RULES, 1998

Rule No.	Information/Document Required	Compliance
3(2)(a)	Name and address	Section 1
	Grounds giving rise to petitioner's interest	Section 2
3(2)(b)	Grounds and Facts of the Petition	Section 3
3(2)(c)	Relief Sought	Section 4.2
3(2)(d)	Proposed Tariff	Section 7
3(2)(f)	Summary of Evidence	Section 4.3
3(8)	Affidavit	Pg. 3
	Board Resolution	Pg. 2

SCHEDULE Q
BID EVALUATION REPORT AS NOTIFIED

Punjab Thermal Power (Private) Limited

1st Floor, 7-C-1, Gulberg-III, Lahore

BID EVALUATION REPORT

(AS PER RULE 37 OF PUNJAB PROCUREMENT RULES, 2014)

**FOR HIRING OF EPC CONTRACTOR, LTSA CONTRACTOR AND SIMPLE
CYCLE O&M CONTRACTOR FOR DESIGN, SUPPLY, ERECTION, TESTING &
COMMISSIONING AND OPERATION & MAINTENANCE OF AROUND 1100 –
1400 MW RE-GASIFIED LIQUEFIED NATURAL GAS (RLNG) BASED
COMBINED CYCLE POWER PLANT IN DISTRICT JHANG, PUNJAB, PAKISTAN.**

1. Name of Procuring Agency: **Punjab Thermal Power (Pvt) Limited**
2. Method of Procurement: **International Competitive Bidding (Single Stage - Two Envelope)**
3. Title of Procurement: **Design, Supply, Erection, Testing & Commissioning of around 1100 – 1400 MW Re-gasified Liquefied Natural Gas (RLNG) based Combined Cycle Power Plant in District Jhang, Punjab, Pakistan.**
4. Tender Inquiry No.: **IFP NO. 01-PTPL-POWER PLANT (EPC)**
5. PPRA reference No.: **75111P110620171001**
6. Date & Time of Bid Closing: **August 29, 2017 at 03:00 p.m.**
7. Date & Time of Bids Opening: **August 29, 2017 at 03:30 p.m.**
8. No. of Bids Received: **Three (03)**
9. Criteria for Bid Evaluation: **Evaluation criteria was defined in the Bidding Document which involved calculation of Levelised Electricity Cost (LEC) once the bidder had qualified technically by complying with the requirements of the Bidding Document.**

10. Detail of Bid Evaluation:

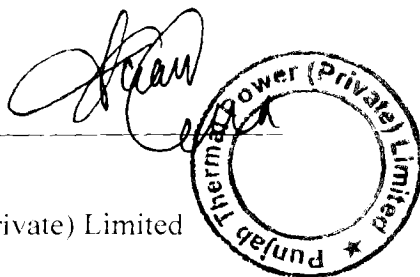
Name of Bidder	EPC Price (in USD)	LTSA Price (in USD)	Simple Cycle O&M Price (in USD)	Levelised Electricity Cost (LEC) (in US¢ / kWh)	Remarks
China Machinery Engineering Corporation (CMEC)	520,000,000	156,836,628.61	3,399,842	7.3410	Lowest Evaluated Bidder (Ranked 1 st)
Power Construction Corporation of China	528,000,000	156,836,628.61	3,229,587	7.4835	Ranked 2 nd
Harbin Electric International Co. Ltd. – TEPC – NEPDI Joint Venture	595,069,842	198,524,790	3,169,800	7.8809	Ranked 3 rd

Lowest
11. Evaluated
Bidder:

China Machinery Engineering Corporation (CMEC).

Signature / Stamp:

Chief Executive Officer,
Punjab Thermal Power (Private) Limited



SCHEDULE R
DRAFT EPC CONTRACT

**AGREEMENT FOR ENGINEERING, PROCUREMENT AND
CONSTRUCTION**

BETWEEN

PUNJAB THERMAL POWER (PVT.) LIMITED
(THE EMPLOYER)

AND

[.](THE CONTRACTOR)

For

PUNJAB POWER PLANT, JHANG

A [.] MW (Gross) gas based power generation facility¹ to be located near Haveli Bahadur Shah / Trimmu Barrage, at District Jhang, Province of Punjab, Pakistan

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AGREEMENT FOR ENGINEERING, PROCUREMENT AND CONSTRUCTION

This AGREEMENT FOR ENGINEERING, PROCUREMENT AND CONSTRUCTION (this “**Agreement**”) is made and entered into as of this [DATE] by and between:

1. **PUNJAB THERMAL POWER (PVT.) LIMITED**, a company wholly owned by the Government of Punjab; duly organized and existing under the laws of Pakistan with office located at [ADDRESS] and where the context so requires, its successors-in-interest and permitted assigns (the “**Employer**”); and
2. [Insert name of the successful Bidder], a company / firm / joint venture consisting of [insert name of JV parties, if applicable], existing under the laws of [.] having its registered office at [ADDRESS], including where the context so requires, its successors-in-interest and permitted assigns (the “**Contractor**”).

(The Contractor and the Employer are hereinafter jointly referred to as the “**Parties**” or singularly as “**Party**”).

RECITALS

- (a) **WHEREAS**, the Employer desires to build, own and operate a [.]MW (Gross)/[.] MW (net) gas based power generation facility (the “**Facility**”, as hereinafter defined) to be located near Haveli Bahadur Shah / Trimmu Barrage, at District Jhang, Province of Punjab, Pakistan.
- (b) **WHEREAS**, the Employer has carried out an international competitive bidding process to select an experienced, competent and internationally recognized contractor with the capability to undertake the Works in accordance with requirements of the Employer.
- (c) **WHEREAS**, on conclusion of the bidding process the Contractor was declared as the successful bidder.
- (d) **WHEREAS**, the Employer, accepting the Contractor’s bid, issued to the Contractor the Notification of Award dated [.] which has been duly countersigned by the Contractor on [.]
- (e) **WHEREAS**, in accordance with the requirements of the bidding process adopted, the Parties are entering into this Agreement being the form of Agreement referred to in the Bidding Document.

NOW, THEREFORE, in consideration of the mutual covenants herein contained, the receipt and sufficiency of which is hereby acknowledged, intending to be legally bound, the Parties hereto agree as follows:

1. GENERAL PROVISIONS

1.1 Definitions

In this Agreement, the following words and expressions shall have the meanings stated below. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

"Acceptable Bank" means (a) together the Foreign Bank and the Acceptable (Pakistani) Bank, which is counter-guaranteeing the obligations of the Foreign Bank, or (b) an Acceptable (Pakistani) Bank, as the case maybe.

"Acceptable (Pakistani) Bank" means a scheduled bank in Pakistan or a financial institution incorporated or organised in Pakistan having a credit rating of at least AA or higher by PACRA, or AA or higher by JCR-VIS, or A3 or higher by Moody's or equivalent rating by Fitch or Standard and Poor, in each case, acceptable to the Employer.

"Advance Payment" means the advance payment by the Employer in accordance with Sub-Clause 14.2 (*Advance Payment*) equalling fifteen percent (15%) of the Agreement Price, if opted by the Contractor in its Tender.

"Advance Payment Security" means the irrevocable and unconditional bank guarantee(s) equalling the Advance Payment, issued and maintained in USD by an Acceptable Bank acceptable to the Employer, on behalf of the Contractor and in favour of the Employer in accordance with Sub-Clause 14.2 (*Advance Payment*), in the form set out in Schedule 5 (*Form of Advance Payment Security*), if applicable.

"Agreement" means this Agreement together with the Schedules, including the Employer's Requirements, the Letter of Acceptance and the Tender.

"Agreement Price" means the sum of the Onshore EPC Price and the Offshore EPC Price payable for the design, execution and completion of the Works, the remedying of any defects and for complying with the warranty obligations and includes adjustments (if any) in accordance with this Agreement, equalling United States Dollars [*INSERT AMOUNT IN WORDS AND FIGURES*].

"Applicable Standards" means the standards, requirements and criterion applicable to the performance of the Works and the Facility as contained in:

- (a) the applicable Laws;
- (b) the Consents;
- (c) this Agreement;
- (d) the Environmental Standards;
- (e) the Prudent Practices; and

(f) the Relevant Provisions;

provided however, in the event of any discrepancy or inconsistency in the foregoing, the most stringent standards, requirements and criterion, as contained in (a) to (f), shall apply.

"Base Date" means the date twenty-eight (28) days prior to the last date for submission of the Tender.

"Bidder's Milestone Payment Schedule" means the duly filled in milestones payment schedule in the form specified in the Bidding Document, submitted by the Contractor as part of the Tender, attached hereto as part of Schedule 7.

"Bidding Document" means the bidding document issued by the Employer on [..], bearing IFP No.1-PTPL-POWER PLANT(EPC).

"Bid Security" means the bid security provided by the Contractor in favour of the Employer pursuant to the Bidding Document.

"Business Day" means a day on which scheduled banks are open for normal banking business in Lahore, Pakistan.

"Change in Law" means:

- (a) the adoption, promulgation, repeal, modification or reinterpretation after the date of signing of this Agreement by any Relevant Authority of any applicable Law of the Country (including a final, binding and non-appealable decision of any Relevant Authority); or
- (b) the imposition by a Relevant Authority of any material term or condition in connection with the issuance, renewal, extension, replacement or modification of any Consent after the date of signing of this Agreement; or
- (c) the imposition by a Relevant Authority of any additional Consent,

that each of clause (a), (b), or (c) above establishes a material increase in the cost of the design, supply and construction of the Facility that is more restrictive than the most restrictive requirements in effect as of the date of this Agreement.

"Commencement Date" means the date of issuance of the Notice to Proceed.

"Consent" means all approvals, consents, authorizations, notifications, concessions, acknowledgements, licenses (including the generation license), permits, decisions or similar items which is or are issued by a Relevant Authority and which the Employer or the Contractor or any of their respective contractors is required to obtain from any Relevant Authority.

"Contractor" has the meaning given to that term in the preamble to this Agreement.

"Contractor's Documents" means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature supplied by the Contractor under this Agreement, as described in Sub-Clause 5.2 (*Contractor's Documents*).

"Contractor's Equipment" means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. Except that Contractor's Equipment excludes Temporary Works, Plant, Materials and any other things intended to form or forming part of the Permanent Works.

"Contractor's Personnel" means the Contractor's Representative and all personnel whom the Contractor utilises on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.

"Contractor's Representative" means the person named by the Contractor in this Agreement or appointed from time to time by the Contractor under Sub-Clause 4.3 (*Contractor's Representative*), who acts on behalf of the Contractor.

"Cost" means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

"Country" means the Islamic Republic of Pakistan.

"DAB" means the dispute adjudication board appointed in terms of Sub-Clause 20.2 (*Appointment of the Dispute Adjudication Board*) or Sub-Clause 20.3 (*Failure to Agree Dispute Adjudication Board*).

"Day" means a calendar day and **"Year"** means three hundred sixty-five (365) days.

"Defects or Deficiencies" means any Works (or any part thereof) that fail to conform to the Applicable Standards in any manner (including services, performance, materials, design, execution, engineering and/or workmanship).

"Effective Date" means the date on which this Agreement is signed by both Parties, which in any event shall not be later than twenty (20) days following the issuance of the Letter of Acceptance.

"EIA Report & Approval" means the environmental impact assessment report and the relevant environmental protection agency's determination in respect thereof dated [.] no. [.] in each case, relating to the Project attached hereto at Schedule 12 (*EIA Report & Approval*).

"Employer" has the meaning given to that term in the preamble to this Agreement.

"Employer's Claim Notice" has the meaning given to that term in Sub-Clause 2.5 (*Employer's Claims*).

"Employer LDs Invoice" has the meaning given to that term in Sub-Clause 8.7 (*Damages*).

"Employer's Personnel" means the Employer's Representative, the assistants referred to in Sub-Clause 3.2 (*Other Employer's Personnel*) and all other staff, labour and other employees of the Employer and of the Employer's Representative; and any other personnel notified to the Contractor, by the Employer or the Employer's Representative, as Employer's Personnel.

"Employer's Representative" means the person named by the Employer in this Agreement or appointed from time to time by the Employer under Sub-Clause 3.1 (*The Employer's Representative*), who acts on behalf of the Employer.

"Employer's Requirements" means the document titled Employer's Requirements, as included in this Agreement as Schedule 1 (*Employer's Requirements*), and any additions and modifications to such document in accordance with this Agreement. Such document specifies, *inter alia*, the purpose, scope, and/or design and/or other technical criteria, for the Works.

"Employer's Engineer" or "Engineer" means the consulting engineer, or engineering company appointed by the Employer for *inter alia* supervision, verification and certification of the Works or tests carried out under this Agreement.

"Environment" means living organisms including the ecological systems of which they form part and the following media:

- (a) air (including air within natural or man-made structures, whether above or below ground);
- (b) water (including territorial, coastal and inland waters, water under or within land and water in drains and sewers);
- (c) land (including land under water, flora and fauna); and
- (d) cultural heritage and the built environment.

"Environmental and Social Management and Monitoring Plan" means the social and environmental management system of the Employer that enables the Employer to identify, assess and manage risks in respect of the Project on an ongoing basis.

"Environmental Standards" means collectively, the applicable environmental guidelines and occupational health and safety standards established by the "Pakistan Environmental Protection Agency" and the relevant "Provincial Environmental Protection Agency" (including the requirements and conditions stated in the EIA Report & Approval), the Equator Principles and the Environmental and Social Management and Monitoring Plan.

"EPC Performance Security" means the irrevocable and unconditional bank guarantee(s) in USD in favour of the Employer on behalf of the Contractor in the form attached as Schedule 3 (*Form EPC Performance Security*) and shall be issued and maintained by an Acceptable Bank, for an amount equalling 10% of the Agreement Price.

"Equator Principles" mean the set of principles and guidelines applicable to environmental and social risk management in project finance lending transactions known as the "Equator Principles", agreed and adopted by the World Bank, the International Finance Corporation

and various other financial institutions, and promulgated on 4 June 2003 as amended from time to time and amended and modified effective 6 July 2006.

"Extended Warranty Items for the Facility" has the meaning given to that term in Sub-Clause 11.3 (*Extension*).

"Extended Warranty Items GT1" has the meaning given to that term in Sub-Clause 11.3 (*Extension*).

"Extended Warranty Items GT2" has the meaning given to that term in Sub-Clause 11.3 (*Extension*).

"Extended Warranty Period for the Facility" has the meaning given to that term in Sub-Clause 11.3 (*Extension*).

"Extended Warranty Period GT1" has the meaning given to that term in Sub-Clause 11.3 (*Extension*).

"Extended Warranty Period GT2" has the meaning given to that term in Sub-Clause 11.3 (*Extension*).

"Facility" means the electrical power generating facility meeting the specifications set out in the Employer's Requirements and is in compliance with the Applicable Standards, to be established at the Site.

"Final Statement" means the statement defined in Sub-Clause 14.11 (*Application for Final Payment*).

"Financiers" mean the financial institutions and investment vehicles, agencies and/or funds extending financing to the Employer in relation to the financing (including any refinancing) of the Project (or any part thereof), together with their respective successors and assigns.

"Force Majeure Event" has the meaning given to that term in Clause 19 (*Force Majeure*).

"Foreign Bank" means any bank or financial institution incorporated or organized outside the Country.

"Foreign Currency" means United States Dollar (USD).

"Goods" means Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.

"Grid Code" means the grid code issued in June, 2005 (as amended from time to time) prepared by NTDC, or such other entity as may be authorized in this regard, and approved by the electricity regulator of the Country, namely, the National Electric Power Regulatory Authority.

"Grid System" means the transmission facilities owned or operated by the NTDC, through which electrical power (and, where applicable, ancillary services) will be received and

distributed by the NTDC to users of electricity or be utilized in the Grid System and the electrical power to be delivered to the Facility will be transported.

"GT OEM" means *[INSERT NAME]*.

"GT1" means the first gas turbine to form or forming part of the Permanent Works for the purposes of initially simple cycle operation of the Facility and thereafter combined cycle operation, the specifications of which are set out in the Employer's Requirements.

"GT2" means the second gas turbine to form or forming part of the Permanent Works for the purposes of initially simple cycle operation of the Facility and thereafter combined cycle operation, the specifications of which are set out in the Employer's Requirements.

"Guaranteed Net Power Output (GNPO)" means the net power output of [*· (in kilowatt)*, GNPO_B] on Gas and the net power output of [*· (in kilowatt)*, GNPO_C] for HSD at RSC, as the case may be, of the Facility guaranteed to be delivered by the Contractor upon completion.

"Guaranteed Net Power Output of GT1 (GNPOGT1)" means the net power output of [*· (in kilowatt)*, GNPO_A] of the GT1, at RSC, guaranteed to be delivered by the Contractor upon completion.

"Guaranteed Net Power Output of GT2 (GNPOGT2)" means the net power output of [*· (in kilowatt)*, GNPO_A] of the GT2, at RSC, guaranteed to be delivered by the Contractor upon completion.

"Guaranteed Net Heat Rate (GNHR)" means the net heat rate of [*· (in Kilo joules/Kilowatt hours)*, GNHR_B] on Gas and the net heat rate of [*· (in Kilo joules/Kilowatt hours)*, GNHR_C] for HSD, at RSC, as the case may be, of the Facility guaranteed to be delivered by the Contractor upon completion.

"Guaranteed Net Heat Rate of GT1 (GNHRGT1)" means the net heat rate of [*· (in Kilo joules/Kilowatt hours)*, GNHR_A] of the GT1, at RSC, guaranteed to be delivered by the Contractor upon completion.

"Guaranteed Net Heat Rate of GT2 (GNHRGT2)" means the net heat rate of [*· (in Kilo joules/Kilowatt hours)*, GNHR_A] of the GT2, at RSC, guaranteed to be delivered by the Contractor upon completion.

"Hazardous Materials" means any waste, pollutant, contaminant or other substance (including any liquid, solid, gas, ion, living organism or noise) that may be harmful to human health or other life or the Environment or a nuisance to any person or that may make the use or ownership of any affected land or property costlier.

"Implementation Agreement" means the implementation agreement to be entered into between the Government of Pakistan and the Employer, as may be amended from time to time.

"Intended Purpose" means:

- (a) in relation to Works or any part thereof, all Works to be performed by the Contractor hereunder shall be fit and appropriate for the purposes of the Facility;
- (b) in relation to the Facility, that the Facility shall meet the Performance Guarantees and shall be fit to operate and to generate and deliver the electric power to the Purchaser / NTDC, as the case may be, at the Interconnection Point, in each case, in full compliance with the Applicable Standards.

"Interconnection Point" means the physical point or points where the Facility and the Grid System are to be connected as specified in the Employer's Requirements at which point the NTDC / Purchaser, as the case may be, shall receive the electrical power generated by the Facility.

"International Health and Safety Standards & Work Practices" mean those practices, methods and procedures conforming to the safety, ethical and legal requirements which are attained by exercising that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced engineering, procurement, supply, operations, maintenance and services contractor engaged in the same or a similar type of undertaking or activity under the same or similar circumstances and conditions to those pertaining internationally and reasonably satisfying the ethical, health, safety and environmental standards (including Environmental Standards prevailing in the Country) of reputable engineering, procurement, supply, operations, maintenance and services contractors internationally. 'International Health and Safety Standards & Work Practices' are not limited to optimum practices, methods or acts to the exclusion of all others, but rather are a spectrum of possible practices, methods and acts which could have been expected to accomplish the desired result at reasonable cost consistent with reliability and safety in the power industry.

"Laws" means all federal, provincial or local legislation, statutes, ordinances and other laws (including Social and Environmental Law), and regulations and by laws of any legally constituted public authority of the Country.

"Latent Defect for the Facility" means any material Defects or Deficiency in the Works or a Section which:

- (a) subsisted at the end of the Warranty Period for the Facility but was not revealed through normal Facility operations;
- (b) subsisted at the end of the Extended Warranty Period for the Facility in respect of the Extended Warranty Items for the Facility but was not revealed through normal Facility operations; and/or
- (c) did not or could not have become apparent upon a diligent and careful examination by the Employer.

"Latent Defect GTI" means any material Defects or Deficiency in the Works or a Section which:

- (a) subsisted at the end of the Warranty Period GT1 but was not revealed through normal GT1 operations;
- (b) subsisted at the end of the Extended Warranty Period GT1 in respect of the Extended Warranty Items GT1 but was not revealed through normal GT1 operations; and/or
- (c) did not or could not have become apparent upon a diligent and careful examination by the Employer.

"Latent Defect GT2" means any material Defects or Deficiency in the Works or a Section which:

- (a) subsisted at the end of the Warranty Period GT2 but was not revealed through normal GT2 operations;
- (b) subsisted at the end of the Extended Warranty Period GT2 in respect of the Extended Warranty Items GT2 but was not revealed through normal GT2 operations and/or
- (c) did not or could not have become apparent upon a diligent and careful examination by the Employer.

"Latent Defects Notification Period for the Facility" means the two (2) years period commencing on the date of expiry of the Warranty Period for the Facility provided that for the Extended Warranty Items for the Facility, the period shall commence on the date of expiry of the Extended Warranty Period for the Facility.

"Latent Defects Notification Period GT1" means the two (2) years period commencing on the date of expiry of the Warranty Period GT1 provided that for the Extended Warranty Items GT1, the period shall commence on the date of expiry of the Extended Warranty Period GT1.

"Latent Defects Notification Period GT2" means the two (2) years period commencing on the date of expiry of the Warranty Period GT2 provided that for the Extended Warranty Items GT2, the period shall commence on the date of expiry of the Extended Warranty Period GT2.

"LDs Cap" means twenty percent (20%) of the Agreement Price.

"Letter of Commitment and Undertaking" means the letter of commitment and undertaking dated [.] issued by the GT OEM, forming part of the Tender.

"Local Currency" means Pakistani Rupees (PKR.).

"Long Stop Date" means date falling three (3) months following the Effective Date.

"LTSA" means the long term service agreement to be executed between the Employer and LTSA contractor.

"LTSA Performance Guarantee" means the performance guarantee to be issued by the LTSA contractor in favour of the Employer, pursuant to the LTSA.

"Materials" means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under this Agreement.

"Milestone Completion Certificate" has the meaning given to that term in Sub-Clause 14.3 (*Application for Interim Payments*).

"Net Power Output (NPO)" means corrected power output of the Facility to RSC measured on the HV (High Voltage) side of the step-up transformers in kilowatt.

"Net Power Output of GT1 (NPOGT1)" means corrected power output of the GT1 to RSC measured on the HV (High Voltage) side of the step-up transformers in kilowatt.

"Net Power Output of GT2 (NPOGT2)" means corrected power output of the GT2 to RSC measured on the HV (High Voltage) side of the step-up transformers in kilowatt.

"Net Heat Rate (NHR)" means the total fuel heat consumption of the Facility, based on lower heating value, divided by the total net power output in Kilo joules/Kilowatt hours, corrected to RSC.

"Net Heat Rate of GT1 (NHRGT1)" means the total fuel heat consumption of the GT1, based on lower heating value, divided by the total net power output of GT1 in Kilo joules/Kilowatt hours, corrected to RSC.

"Net Heat Rate of GT2 (NHRGT2)" means the total fuel heat consumption of the GT2, based on lower heating value, divided by the total net power output of GT2 in Kilo joules/Kilowatt hours, corrected to RSC.

"Notice to Proceed" means the written notice issued to the Contractor by the Employer in accordance with Sub-Clause 8.1 (*Commencement of Works*), substantially in the form set forth in Schedule 11 (*Form of Notice to Proceed*).

"Notification of Award" means the notification of award issued by the Employer dated [..], whereby the Employer accepts the Tender on the terms stated in such letter.

"OEM Performance Security" means the irrevocable and unconditional bank guarantee(s) in USD, for an amount of USD 20,000,000/- (United States Dollars Twenty Million Only), by an Acceptable Bank in favour of the Employer on behalf of the GT OEM in the form attached as Schedule 3A (*Form OEM Performance Security*).

"Offshore EPC Price" means the price for the offshore portion of the Works, being United States Dollars [*WORDS AND FIGURES*].

"Offshore LCs" means the irrevocable sight letters of credit, to be established by the Employer in favour of the Contractor in accordance with Sub-Clause 14.7 (*Timing and Mode of Payments*) for an amount equal to, in aggregate, the Offshore EPC Price less the Advance Payment (if the Contractor has opted for Advance Payment) apportioned to the Offshore EPC Price.

"Offshore LCs Documents" has the meaning given to that term in Sub-clause 14.7 (*Timing and Mode of Payments*).

"Onshore EPC Price" means the price for the onshore portion of the Works, being United States Dollars [*WORDS AND FIGURES*] payable in Local Currency and converted into equivalent PKR based on the National Bank of Pakistan's exchange rate for TT&OD prevailing on the date falling twenty-eight (28) days prior to the deadline for submission of the Bid.

"Onshore LCs" means the irrevocable sight letters of credit, to be established by the Employer in favour of the Contractor in accordance with Sub-Clause 14.7 (*Timing and Mode of Payments*) for an amount equal to, in aggregate, the Onshore EPC Price less the Advance Payment (if the Contractor has opted for Advance Payment) apportioned to the Onshore EPC Price.

"Onshore LCs Documents" has the meaning given to that term in Sub-clause 14.7 (*Timing and Mode of Payments*).

"Parent Company" means [*INSERT NAME, ADDRESS, ETC.*].

"Parent Company Guarantee" has the meaning given to that term in Sub-Clause 4.28 (*Parent Company Guarantee*).

"Party" means the Employer or the Contractor, as the context requires.

"Payment Milestone" has the meaning given to that term in Sub-Clause 14.3 (*Application for interim Payments*).

"Performance Certificate" means the certificate to be issued by the Employer under Sub-Clause 11.9 (*Performance Certificate*).

"Performance Guarantees" means each and all of the guarantees relating to the Facility (and each part thereof) set out in the Employer's Requirements and the Tender. Provided however, in the event of any discrepancy or inconsistency between the Employer's Requirements and the Tender, the most stringent standards and guarantees out of the two shall apply.

"Permanent Works" means the permanent works to be designed and executed by the Contractor under this Agreement.

"PIF Completion Date" means the date notified by the Employer to the Contractor by which the Purchaser Interconnection Facilities shall be energised.

"Plant" means the apparatus, machinery and vehicles intended to form or forming part of the Permanent Works.

"Power Purchase Agreement" means the agreement so entitled, to be entered into between the Employer and the Purchaser for the sale and purchase of electrical power produced at the Facility, a copy of which shall be attached hereto as Schedule 4 (*Power Purchase Agreement*),

replacing the Reference Power Purchase Agreement, when provided by the Employer to the Contractor and shall form an integral part of this Agreement.

"PPA Change Order" means a written order by the Employer to the Contractor pursuant to Sub-Clause 20.1A (*PPA Change Order*) authorizing an addition, deletion or revision in the Work and/or a change in the Agreement Price.

"Pre-Commissioning Certificate" means the certificate to be issued by the Employer's Engineer on completion of the Pre-Commissioning Tests.

"Pre-Commissioning Tests" mean the Tests on Completion that are to be performed by the Contractor without the completed, commissioned and energized Purchaser Interconnection Facilities.

"Project" means the execution of the Works and the development and/or operation of the Facility.

"Prudent Practices" means the International Health and Safety Standards and Work Practices, the prudent electrical practices, the prudent utility practices and the good industry practices that are applicable to gas fired power projects.

"Punch list Completion Period for the Facility" means the three (3) months period starting from the date on which the Taking-Over Certificate for the Facility is issued, during which the Contractor shall complete the minor and incidental items of the relevant Works (as set out in the Taking-Over Certificate for the Facility) which are not necessary for the safe and reliable operation of the Facility, will not affect the ability of the Facility to perform at the levels required by this Agreement and will not increase the operations and maintenance costs of the Facility following the issuance of the Taking-Over Certificate for the Facility.

"Punch list Completion Period GT1" means the three (3) months period starting from the date on which the Taking-Over Certificate GT1 is issued, during which the Contractor shall complete the minor and incidental items of the relevant Works (as set out in the Taking-Over Certificate GT1) which are not necessary for the safe and reliable operation of the Facility, will not affect the ability of the Facility to perform at the levels required by this Agreement and will not increase the operations and maintenance costs of the Facility following the issuance of the Taking-Over Certificate GT1.

"Punch list Completion Period GT2" means the three (3) months period starting from the date on which the Taking-Over Certificate GT2 is issued, during which the Contractor shall complete the minor and incidental items of the relevant Works (as set out in the Taking-Over Certificate GT2) which are not necessary for the safe and reliable operation of the Facility, will not affect the ability of the Facility to perform at the levels required by this Agreement and will not increase the operations and maintenance costs of the Facility following the issuance of the Taking-Over Certificate GT2.

"Purchaser" means Central Power Purchasing Agency (Guarantee) Limited on behalf of Ex-WAPDA Distribution Companies, a public limited company incorporated under the laws of Pakistan, with its principal office at 6th Floor, Shaheed-e-Millat Secretariat, Jinnah Avenue,

Blue Area, Islamabad, Pakistan or such other entity approved by the competent authority to purchase electrical power generation.

"NTDC" means National Transmission and Despatch Company Limited, a public limited company incorporated under the laws of Pakistan, with its principal office at WAPDA House, Shahrah e Quaid e Azam, Lahore.

"Purchaser Interconnection Facilities" mean the facilities and equipment to be designed, constructed or installed by or on behalf of the Purchaser on the Purchaser's / NTDC's side of the Interconnection Point.

"Reference Power Purchase Agreement" means the reference power purchase agreement attached hereto, for the time being, as Schedule 4 (*Power Purchase Agreement*).

"Relevant Authority" means the department, authority, instrumentality, agency or other relevant entity of the Country from which a Consent is to be obtained in the Country and any authority, body or other person having jurisdiction under the applicable Laws of the Country with respect to the Facility.

"Relevant Provisions" means the provisions of the Reference Power Purchase Agreement, the EIA Report & Approval, the Grid Code and the Equator Principles.

"Retention Money" means the accumulated retention moneys which the Employer retains under Sub-Clause 14.3 (*Application for Interim Payments*) and pays under Sub-Clause 14.9 (*Payment of Retention Money*).

"Section" means a part of the Works, specified herein as a Section (if any).

"Simple Cycle O&M Agreement" means the agreement to be entered into between the Contractor and the Employer, at the sole option of the Employer, in the form attached as Schedule 13.

"Simple Cycle O&M Services" means the services to be provided, as detailed in the Simple Cycle O&M Agreement.

"Site" means the area specified for the [.] MW (Gross) gas based power plant located near Haveli Bahadur Shah / Trimmu Barrage, at District Jhang, Punjab Province, Pakistan, the plant site has the following coordinates in the UTM coordinate system [.] the place where the Permanent Works are to be executed and to which Plant and Materials are to be delivered, and any other places as may be specified in this Agreement as forming part of the Site.

"Statement" means a statement submitted by the Contractor as part of an application for payment under Clause 14 (*Agreement Price and Payment*).

"Social and Environmental Law" means all statutes, laws, rules and regulations of the Country, including (but not limited to) all licenses, permits and other government authorizations, which:

- (a) have as a purpose or effect the protection of, and/or prevention of harm or damage to, the Environment;
- (b) provide remedies or compensation for harm or damage to the Environment; or
- (c) relate to (i) Hazardous Materials; (ii) health and safety matters; (iii) setting standards of conduct concerning any environmental, social, labour, health and safety or security risks of the type contemplated by the Equator Principles.

"Subcontractor" means the subcontractors listed in the Tender and/or other subcontractors appointed by the Contractor in accordance with Sub-Clause 4.4 (*Subcontractors*).

"Taking-Over Certificate for the Facility" means the certificate issued by the Employer pursuant to Clause 10 (*Employer's Taking Over*), upon completion of the Works relating to the Facility and completion of the other Works and requirements needed to be completed before the issuance of such certificate, in accordance with this Agreement.

"Taking-Over Certificate GT1" means the certificate issued by the Employer pursuant to Clause 10 (*Employer's Taking Over*), upon completion of the Works relating to GT1 and completion of the other Works and requirements needed to be completed before the issuance of such certificate, in accordance with this Agreement.

"Taking-Over Certificate GT2" means the certificate issued by the Employer pursuant to Clause 10 (*Employer's Taking Over*), upon completion of the Works relating to GT2 and completion of the other Works and requirements needed to be completed before the issuance of such certificate, in accordance with this Agreement.

"Temporary Works" means all temporary works of every kind (other than Contractor's Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

"Tender" or "Bid" or "Proposal" means the Contractor's signed offer for the Works and all other documents which the Contractor submitted therewith (other than the Employer's Requirements, if so submitted), included herein as Schedule 6 (*Tender*).

"Tests on Completion" means the tests which are to be specified in the Testing Protocol or agreed by both Parties or instructed as a Variation, and which are to be carried out pursuant to the Testing Protocol and Clause 9 (*Tests on Completion*) to ensure the Works are fit for the Intended Purpose.

"Testing Protocol" means the testing protocol for the Facility (and each part thereof) as set out in the Employer's Requirements.

"Time for Completion for the Facility" means Seven Hundred and Ninety-One (791) days from the Commencement Date in accordance with Sub-Clause 8.2 (*Time for Completion*), subject to any extension under Sub-Clause 8.4 (*Extension of Time for Completion*).

"Time for Completion GT1" means Four Hundred and Forty-Two (442) days from the Commencement Date in accordance with Sub-Clause 8.2 (*Time for Completion*), subject to any extension under Sub-Clause 8.4 (*Extension of Time for Completion*).

"Time for Completion GT2" means Four Hundred and Fifty-Six (456) days from the Commencement Date in accordance with Sub-Clause 8.2 (*Time for Completion*), subject to any extension under Sub-Clause 8.4 (*Extension of Time for Completion*).

"Variation" means any change to the Employer's Requirements or the Works, which is instructed or approved as a variation under Clause 13 (*Variations and Adjustments*).

"Warranty Period for the Facility" means the period starting from the issuance of the Taking-Over Certificate for the Facility and ending 24 months thereafter, as extended for any items listed in the Employer's Requirements as having a longer warranty / guarantee period until such time as stated in the Employer's Requirements or otherwise as provided by the manufacturer.

"Warranty Period GT1" means the period starting from the issuance of the Taking-Over Certificate GT1 and ending 24 months thereafter: provided that for the gas turbine, if at least three gas turbines of the same specifications and model as GT1 have not completed 7000 hours of commercial operation fifteen (15) days prior to the deadline for submission of the Bid, at another location, then for the gas turbine unit, the Warranty Period GT1 shall be for a period of 48 months from issuance of the Taking-Over Certificate GT1.

"Warranty Period GT2" means the period starting from the issuance of the Taking-Over Certificate GT2 and ending 24 months thereafter: provided that for the gas turbine, if at least three gas turbines of the same specifications and model as GT2 have not completed 7000 hours of commercial operation fifteen (15) days prior to the deadline for submission of the Bid, at another location, the Warranty Period GT2 shall be for a period of 48 months from issuance of the Taking-Over Certificate GT2.

"Works" means the Permanent Works, the Temporary Works and all other obligations of the Contractor to be performed in terms of this Agreement.

1.2 Interpretation

In this Agreement, except where the context requires otherwise:

- (a) words indicating one gender include all genders;
- (b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- (c) provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing;
- (d) "written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record;

- (e) All references in this Agreement to the Reference Power Purchase Agreement (other than in Sub-Clause 4.27 (*Power Purchase Agreement*)) shall mean, when executed, the Power Purchase Agreement.

References to Schedules shall be Schedules to this Agreement, unless the context requires otherwise.

The marginal words and other headings shall not be taken into consideration in the interpretation of this Agreement.

1.3 **Communications**

Wherever this Agreement provides for the giving or issuing of approvals, certificates, consents, determinations, notices and requests, these communications shall be:

- (a) in writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated herein; and
- (b) delivered, sent or transmitted to the address for the recipient's communications as stated below. Except that:
 - (i) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
 - (ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.

Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed.

With regard to the systems of electronic transmission (mentioned at paragraph 1.3 (a) above), communications may be delivered electronically to the Employer by email or facsimile if the product of these modes of communication, when printed out in hard copy is at the same scale, size and clarity of the originals. All communications sent by email or facsimile shall be subsequently delivered within three (3) days in hard copy.

EMPLOYER'S DETAILS:

Address:

Email:

CONTRACTOR'S DETAILS:

Address:

Email:

1.4 Law and Language

This Agreement shall be governed by the Laws in force in the Country.

If there are versions of any part of this Agreement which are written in more than one language, the version which is in English shall prevail.

The language for communications shall be English.

1.5 Priority of Documents

The documents forming this Agreement are to be taken as mutually explanatory of one another. For the purposes of interpretation and in case of any inconsistency between the documents set out below, the priority of the documents shall be in accordance with the following sequence and shall prevail accordingly:

- (a) this Agreement (other than the Schedules) including any variations / modifications thereof;
- (b) the Notification of Award;
- (c) the Employer's Requirements;
- (d) the Schedules (other than those mentioned above);
- (e) the Tender; and
- (f) any other documents forming part of this Agreement.

1.6 Effective Date of the Agreement

Subject to the execution of the Parent Company Guarantee, in the form and substance acceptable to the Employer, this Agreement shall come into full force and effect on the Effective Date.

1.7 Assignment

The Contractor shall not assign the whole or any part of its obligations under this Agreement or any benefit or interest in or under this Agreement, without the prior written consent of the Employer. Any attempt by the Contractor at such assignment shall be void. However, the Employer may without the consent of the Contractor, as security in favour of the Financiers, assign its right to any moneys due, or to become due, under this Agreement, including the right to encash the Advance Payment Security (if applicable), EPC Performance Security and the OEM Performance Security. Further, the Employer may without the consent of the Contractor, assign to an O&M contractor its rights under this Agreement, including the right to call the Advance Payment Security (if applicable), the EPC Performance Security and the OEM Performance Security, and to exercise the same on behalf of the Employer.

1.8 Care and Supply of Documents

Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Employer. Unless otherwise stated in this Agreement, the Contractor shall supply to the Employer six (6) copies of each of the Contractor's Documents.

The Contractor shall keep, on the Site, a copy of this Agreement, publications named in the Employer's Requirements, the Contractor's Documents, and Variations and other communications given under this Agreement. The Employer's Personnel shall have the right of access to all these documents at all reasonable times.

If a Party becomes aware of an error or defect of a technical nature in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.

1.9 Confidentiality

Both Parties shall treat the details of this Agreement as private and confidential, except to the extent necessary to carry out obligations under it or to comply with applicable Laws. The Contractor shall not publish, permit to be published, or disclose any particulars of the Works in any trade or technical paper or elsewhere without the previous agreement of the Employer.

1.10 Employer's Use of Contractor's Documents

As between the Parties, the Contractor shall retain the copyright and other intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.

The Contractor shall be deemed (by signing this Agreement) to give to the Employer a non-terminable transferable non-exclusive royalty-free licence to copy, use and communicate the Contractor's Documents, including making and using modifications of them for the purposes of completing, operating, maintaining, altering, adjusting, financing and repairing the Works. This licence shall:

- (a) apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works;
- (b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works;
- (c) in the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by this Agreement, including replacements of any computers supplied by the Contractor. The Contractor will supply computers and software updates as may be required so that the Contractor's programme, software and documents will function and be available for the Employer's use throughout the life of the Works; and

- (d) be capable of being sub-licensed or assigned by the Employer or any Financier (or designee or transferee of any Financier) on the same terms as set out in this Sub-Clause.

The Contractor's Documents and other design documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent which shall not be unreasonably withheld, be used, copied or communicated to a third party by (or on behalf of) the Employer for purposes other than those permitted under this Sub-Clause.

1.11 Contractor's Use of Employer's Documents

As between the Parties, the Employer shall retain the copyright and other intellectual property rights in the Employer's Requirements and other documents made by (or on behalf of) the Employer. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of this Agreement. They shall not, without the Employer's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of this Agreement.

1.12 Confidential Details

The Contractor shall not be required to disclose, to the Employer, any information which the Contractor described in the Tender as being confidential. The Contractor shall disclose any other information which the Employer may reasonably require in order to verify the Contractor's compliance with this Agreement.

1.13 Compliance with Laws

The Contractor shall, in performing its obligations under this Agreement, comply with applicable Laws. Unless otherwise stated herein:

- (a) the Employer shall have obtained (or shall obtain) the planning, zoning or similar permission for the Permanent Works, and any other permissions described in the Employer's Requirements as having been (or being) obtained by the Employer; and
- (b) the Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licences and approvals, and consents (including but not limited to the specific Consents detailed in Schedule 14) as required by the Laws in relation to the design, execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Employer harmless against and from the consequences of any failure to do so.

1.14 Joint and Several Liability

If the Contractor constitutes (under the Laws) a joint venture, consortium or other unincorporated grouping of two or more persons:

- (a) these persons shall be deemed to be jointly and severally liable to the Employer for the performance of this Agreement;

- (b) these persons shall notify the Employer of their leader who shall have authority to bind the Contractor and each of these persons; and

The Contractor shall not alter its composition or legal status without the prior consent of the Employer.

1.15 Consent

The Contractor hereby represents and warrants that it has obtained all relevant Consents required to be obtained prior to the date of this Agreement in relation to the implementation of the Project.

2. THE EMPLOYER

2.1 Right of Access to the Site

The Employer shall give the Contractor right of access to, and possession of, all parts of the Site on the Commencement Date. However, the Employer may withhold any such right or possession until the EPC Performance Security and OEM Performance Security have been received. The right and possession may not be exclusive to the Contractor in that other parties including the Employer, Employer's Representative, Employer's Engineer, the Purchaser, Financiers, and each of their relevant employees, representatives and third party consultants, shall be permitted unrestricted access to the Site (including any part thereof).

If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Employer to give any such right or possession within such time, the Contractor shall give notice to the Employer and shall be entitled, subject to Sub-Clause 20.1 (*Contractor's Claims*), to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 (*Extension of Time for Completion*); and
- (b) payment of any such Cost, which shall be added to the Agreement Price.

After receiving this notice, the Employer shall proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine these matters.

If and to the extent that the Employer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time or Cost.

2.2 Permits, Licences or Approvals

The Employer shall (where it is in a position to do so) provide reasonable assistance to the Contractor at the request of the Contractor:

- (a) by obtaining copies of the Laws of the Country which are relevant to this Agreement but are not readily available; and

- (b) for the Contractor's applications for any permits, licences or approvals required by the Laws of the Country:
 - (i) which the Contractor is required to obtain under Sub-Clause 1.13 (*Compliance with Laws*);
 - (ii) for the delivery of Goods, including clearance through customs; and
 - (iii) for the export of Contractor's Equipment when it is removed from the Site.

It shall be the sole responsibility of the Contractor to timely make a request for such assistance in terms of the above and provide all relevant documents, and any delay in the same shall not in any manner be attributable to the Employer.

2.3 **Employer's Personnel**

The Employer shall be responsible for ensuring that the Employer's Personnel and the Employer's other contractors on the Site:

- (a) co-operate with the Contractor's efforts under Sub-Clause 4.6 (*Co-operation*); and
- (b) take actions similar to those which the Contractor is required to take under subparagraphs (a), (b) and (c) of Sub-Clause 4.8 (*Safety Procedures*) and under Sub-Clause 4.18 (*Protection of the Environment*).

2.4 **Not Used**

2.5 **Employer's Claims**

If the Employer considers itself to be entitled to any payment under any Clause of this Agreement or otherwise in connection with this Agreement, and/or to any extension of the Warranty Period GT1, Warranty Period GT2 and/or Warranty Period for the Facility (as applicable), it shall give notice and particulars to the Contractor (the "**Employer's Claim Notice**"). The Employer's Claim Notice is not required for payments due under Sub-Clause 4.19 (*Electricity, Water and Gas*), liquidated damages payable for failure to meet the Performance Guarantees, liquidated damages, any other damages stated in this Agreement or other services requested by the Contractor.

The Employer's Claim Notice shall be given as soon as practicable after the Employer becomes aware of the event or circumstances giving rise to the claim. The Employer's Claim Notice relating to any extension of the Warranty Period GT1, Warranty Period GT2 and/or Warranty Period for the Facility shall be given before the expiry of such period.

The Employer's Claim Notice shall specify the Clause or other basis of the claim, and shall include substantiation of the amount and/or extension to which the Employer considers itself to be entitled in connection with this Agreement. The Employer shall then proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine (i) the amount (if any) which the Employer is entitled to be paid by the Contractor, and/or (ii) the extension (if any)

of the Warranty Period GT1, Warranty Period GT2 and/or Warranty Period for the Facility (as applicable) in accordance with Sub-Clause 11.3(*Extension*).

The Employer shall invoice for the claim at any time following the accrual of such amount and the Contractor shall pay such amounts within fourteen (14) days of receipt of the Employer's invoice. The Employer may alternatively (at its discretion) deduct this amount from any moneys due, or to become due, to the Contractor or otherwise encash the EPC Performance Security and/or encash the Advance Payment Security (if applicable) in accordance with Sub-Clause 14.2 (*Advance Payment*). The Employer shall only be entitled to set off against or make any deduction from an amount due to the Contractor, or to otherwise claim against the Contractor, in accordance with this Sub-Clause or with sub-paragraph (a) and/or (b) of Sub-Clause 14.6 (*Interim Payments*).

3. THE EMPLOYER'S ADMINISTRATION

3.1 The Employer's Representative

The Employer may appoint an Employer's Representative to act on its behalf under this Agreement. In this event, it shall give notice to the Contractor of the name, address, duties and authority of the Employer's Representative.

The Employer's Representative shall carry out the duties assigned to him, and shall exercise the authority delegated to him, by the Employer. Unless and until the Employer notifies the Contractor otherwise, the Employer's Representative shall be deemed to have the full authority of the Employer under this Agreement, except in respect of Clause 15 (*Termination by Employer*).

If the Employer wishes to replace any person appointed as Employer's Representative, the Employer shall give the Contractor not less than seven (7) days' notice of the replacement's name, address, duties and authority, and of the date of appointment.

Except as otherwise stated herein:

- a) whenever carrying out duties or exercising authority, specified or implied by this Agreement, the Employer's Representative shall be deemed to act for the Employer;
- b) the Employer's Representative has no authority to relieve either party of any duties, obligations or responsibilities under this Agreement; and

any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test or similar act by the Employer's Representative (including absence of disapproval) shall not relieve the Contractor from any responsibility it has under this Agreement including responsibility for errors, omissions, discrepancies and non-compliance.

3.2 Other Employer's Personnel

The Employer or the Employer's Representative may from time to time assign duties and delegate authority to assistants, and may also revoke such assignment or delegation. These

assistants may include a resident engineer and/or independent inspectors appointed to inspect and/or test items of Plant and/or Materials. The assignment, delegation or revocation shall not take effect until a copy of it has been received by the Contractor.

Assistants shall be suitably qualified persons, who are competent to carry out these duties and exercise this authority, and who are fluent in the language for communications defined in Sub-Clause 1.4 (*Law and Language*).

3.3 **Delegated Persons**

All these persons, including the Employer's Representative and assistants, to whom duties have been assigned or authority has been delegated, shall only be authorised to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by a delegated person, in accordance with the delegation, shall have the same effect as though the act had been an act of the Employer. However:

- (a) it shall not relieve the Contractor from any responsibility it has under this Agreement, including responsibility for errors, omissions, discrepancies and non-compliances;
- (b) any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Employer to reject the work, Plant or Materials; and
- (c) if the Contractor questions any determination or instruction of a delegated person, the Contractor may refer the matter to the Employer, who shall promptly confirm, reverse or vary the determination or instruction.

3.4 **Instructions**

The Employer may issue to the Contractor instructions which may be necessary for the Contractor to perform its obligations under this Agreement. Each instruction shall be given in writing and shall state the obligations to which it relates and Sub-Clause (or other term of this Agreement) in which the obligations are specified. If any such instruction constitutes a Variation, Clause 13 (*Variations and Adjustments*) shall apply.

The Contractor shall grant the Employer sufficient rights of audit and access in relation to any relevant documentation (including information which is electronically stored) and shall disclose all confidential and other information as the Employer may reasonably require in order to verify, agree or determine a claim submitted by the Contractor under the Agreement.

The Contractor shall take and comply with instructions from the Employer, or from the Employer's Representative or an assistant to whom the appropriate authority has been delegated under this Clause.

3.5 **Determinations**

Whenever this Agreement provides that the Employer shall proceed in accordance with this Sub-Clause 3.5 (*Determinations*) to agree or determine any matter, the Employer shall consult

with the Contractor in an endeavour to reach agreement. If agreement is not achieved, the Employer shall make a fair determination in accordance with this Agreement, taking due regard of all relevant circumstances.

The Employer shall give notice to the Contractor of each agreement or determination, with supporting particulars. Each Party shall give effect to each agreement or determination, unless such determination is subsequently reversed in terms of this Agreement or the Parties reach an amicable settlement. Either Party may then refer the dispute to the DAB in accordance with Sub-Clause 20.4 (*Obtaining Dispute Adjudication Board's Decision*).

4. THE CONTRACTOR

4.1 Contractor's General Obligations

The Contractor hereby represents and warrants that it has complied with and shall continue to comply, in all respects, with the Bidding Document, which form part of the Tender. Further, the Contractor further represents that it has satisfied itself of the Employer's Requirements and all other requirements under the Agreement, and accuracy of any and all information and documents pertaining to the Works and the Site.

The Contractor shall design, execute and complete the Works in accordance with this Agreement (including the Employer's Requirements) and shall remedy any defects in the Works. The Works shall be fit for the Intended Purpose.

The Contractor shall provide the Plant and Contractor's Documents specified in this Agreement, and all Contractor's Personnel, Goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for this design, execution, completion and remedying of defects.

The Works shall include any work which is necessary to satisfy the Employer's Requirements, or is implied by this Agreement, and all works which (although not mentioned in this Agreement) are necessary for stability or for the completion, or safe and proper operation, of the Works.

The Contractor shall be responsible for the adequacy, stability and safety of all Site operations, of all methods of construction and of all the Works.

The Contractor shall, whenever required by the Employer, submit details of the arrangement and methods which the Contractor proposes to adopt for the execution of the Works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Employer.

The overall responsibility of ensuring that the Facility is completed within the Time for Completion for the Facility is that of the Contractor. Following the issuance of each of the Taking Over Certificate GT1 and Taking Over Certificate GT2 the Contractor shall, in accordance with the Employer's Requirements (especially in the manner specified in the sub-clause 2.1 (*General Design and Operation Requirements*) of the Employer's Requirements), ensure coordination in the performance of their respective duties by both, the O&M

contractor and the LTSA contractor, so as to ensure that the Works are completed within the prescribed times for completion in accordance with Sub-Clause 8.2 (*Time for Completion*). Furthermore, the Contractor shall ensure that the issuance of the Taking Over Certificate GT1 and/or Taking Over Certificate GT2 (as may be applicable) and the coming into operation of GT 1 and/or GT 2 (as may be applicable) shall not in any way hinder or delay the performance by the O&M contractor or the LTSA contractor of their respective obligations nor the Contractor's obligations in relation to the completion of the Works.

4.2 EPC Performance Security

The Contractor shall ensure the issuance of the EPC Performance Security no later than one (1) day prior to the signing of this Agreement in accordance with the Bidding Document. The EPC Performance Security shall be for an amount equal to ten percent (10 %) of the Agreement Price.

The EPC Performance Security shall remain valid until the issuance of the Performance Certificate. If the terms of the EPC Performance Security specify an expiry date and the Performance Certificate has not been issued, the Contractor shall, forty-five (45) days prior to the expiry of the EPC Performance Security, extend the EPC Performance Security until such date as notified by the Employer.

In the event the credit rating of the Acceptable Bank issuing and/or counter guaranteeing the EPC Performance Security falls below the credit rating of an Acceptable Bank and a replacement EPC Performance Security issued and/or counter guaranteed by an Acceptable Bank is not provided to the Employer within fourteen (14) days of such occurrence, the Employer shall be entitled to (without notice to the Contractor) immediately encash the full amount of the EPC Performance Security.

The Employer may at any time and from time to time, make a claim under the EPC Performance Security in the event of:

- (a) failure by the Contractor to extend the validity of the EPC Performance Security as described in the preceding paragraphs, in which event the Employer may claim the full amount of the EPC Performance Security;
- (b) failure by the Contractor to pay the Employer:
 - (i) delay liquidated damages pursuant to Sub-Clause 8.7 (*Damages*) (including for the avoidance of doubt liquidated damages pursuant to Sub-Clause 8.7.3) and/or performance liquidated damages pursuant to Sub-Clause 4.26 (*Performance Guarantees*), or any other liquidated damages as may be provided for in this Agreement, within twenty (20) days after the date of the delivery of the Employer LDs Invoice to the Contractor; and/or
 - (ii) an amount due, which has either been agreed by the Contractor herein (other than the liquidated damages set out in (i) above) or determined under Sub-Clause 2.5 (*Employer's Claims*), within fourteen (14) days after such agreement or determination;

- (c) failure by the Contractor to comply with any warranty obligations under this Agreement;
- (d) failure by the Contractor to provide a replacement EPC Performance Security in the circumstances described in the preceding paragraphs, in which event the Employer may claim the full amount of the EPC Performance Security;
- (e) failure by the Contractor to remedy a default (subject to any grace period permitted by the Employer or otherwise specified in this Agreement) after receiving the Employer's notice requiring the default to be remedied (provided that such default is capable of remedy);
- (f) circumstances which entitle the Employer to terminate this Agreement under Sub-Clause 15.2 (*Termination by Employer*), irrespective of whether notice of termination has been given; or
- (g) the LTSA Performance Guarantee has not been provided to the Employer ninety (90) days prior to the issuance of the Taking-Over Certificate GT1.

Notwithstanding any other clause or provision of this Agreement, it is explicitly agreed, understood and acknowledged by the Contractor that the EPC Performance Security is independent of and in addition to the OEM Performance Security, and the provision of the OEM Performance Security does not bind the Employer in any manner to make a call on the OEM Performance Security prior to making a call on the EPC Performance Security. For all intents and purposes, the Employer shall have complete right to make a call on the EPC Performance Security, notwithstanding any entitlement it may have to make any call on the OEM Performance Security.

4.2A OEM Performance Security

The Contractor shall have procured from the GT OEM, and shall have provided to the Employer, the OEM Performance Security no later than one (1) day prior to signing of this Agreement in accordance with the Bidding Document, in terms of the Letter of Commitment and Undertaking. The OEM Performance Security shall be for an amount equal to USD 20,000,000/- (United States Dollars Twenty Million Only).

In the event the credit rating of the Acceptable Bank issuing and/or counter guaranteeing the OEM Performance Security falls below the credit rating of an Acceptable Bank and a replacement OEM Performance Security issued and/or counter guaranteed by an Acceptable Bank is not provided to the Employer within fourteen (14) days of such occurrence, the Employer shall be entitled to immediately encash the full amount of the OEM Performance Security or the EPC Performance Security.

4.3 Contractor's Representative

The Contractor shall appoint the Contractor's Representative and shall give him all authority necessary to act on the Contractor's behalf under this Agreement.

Unless the Contractor's Representative is named in this Agreement, the Contractor shall, prior to the Commencement Date, submit to the Employer for consent, the name and particulars of the person the Contractor proposes to appoint as Contractor's Representative. If consent is withheld or subsequently revoked, or if the appointed person fails to act as Contractor's Representative, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.

The Contractor shall not, without the prior consent of the Employer, revoke the appointment of the Contractor's Representative or appoint a replacement.

The Contractor's Representative shall, on behalf of the Contractor, receive instructions under Sub-Clause 3.4 (*Instructions*).

The Contractor's Representative may delegate any powers, functions and authority to any competent person, and may at any time revoke the delegation. Any delegation or revocation shall not take effect until the Employer has received prior notice signed by the Contractor's Representative, naming the person and specifying the powers, functions and authority being delegated or revoked.

The Contractor's Representative and all these persons shall be fluent in the language for communications defined in Sub-Clause 1.4 (*Law and Language*). If the Contractor's Representative, or these persons, are not fluent in the language for communications, the Contractor shall make a competent interpreter available during all working hours.

Notwithstanding any delegation of duties or authority by the Contractor to any other person(s) in accordance with this Agreement, the Contractor shall remain principally liable to the Employer for all its obligations and duties under this Agreement (including any duties and obligations etc. delegated to another in terms of this Agreement).

4.4 **Subcontractors**

The Contractor shall not subcontract the whole of the Works.

The Contractor shall be responsible for the acts or defaults of any Subcontractor, its agents or employees, as if they were the acts or defaults of the Contractor. Any subcontracting by the Contractor of any portion of the Works shall not release or discharge the Contractor of any of its responsibilities or obligations under the Agreement. Any Subcontractor warranties extending beyond the Defects Liability Period (or any longer applicable period agreed to by the Contractor) shall be deemed to be assigned to the Employer. The Contractor shall execute and procure execution of such further documents from the Subcontractors as may be requested by the Employer to effectuate the assignment of rights. The Contractor shall give the Employer not less than seven (7) days' notice of:

- (a) the intended appointment of a Subcontractor as listed in the Tender, with detailed particulars which shall include his relevant experience;
- (b) the intended commencement of the Subcontractor's work; and

- (c) the intended commencement of the Subcontractor's work on the Site.

The Contractor will notify the Employer of all works to be executed by the Subcontractor.

The Contractor shall not be required to obtain consent for performance of part of Works or for subcontracts for which, in each case, the Subcontractor is listed in the Tender.

Prior approval of the Employer shall be obtained for any other subcontractors not expressly set forth in the Tender.

4.5 Simple Cycle O&M Services

At its sole option and discretion, no later than twelve (12) months of the Commencement Date (unless otherwise mutually agreed between the Parties), the Employer may require the Contractor to undertake the Simple Cycle O&M Services, in which case the Contractor shall be obligated to enter into the Simple Cycle O&M Agreement with the Employer, in terms of the Bidding Document and the Tender.

The Employer may, however, contract any third party to undertake Simple Cycle O&M Services, in which case the Contractor shall extend all possible support and assistance to such O&M contractor. Neither the Contractor nor the GT OEM have any vested right or interest in being awarded / contracted the work pertaining to Simple Cycle O&M Services.

Notwithstanding anything to the contrary, any performance, non-performance, action or omission under the Simple Cycle O&M Agreement shall not in any manner whatsoever affect or relieve the Contractor from meeting any of its obligations (including but not limited to meeting the Performance Guarantees and the timelines) under this Agreement.

4.6 Co-operation

The Contractor shall, as specified in this Agreement or as instructed by the Employer, allow appropriate opportunities for carrying out work to:

- (a) the Employer's Personnel;
- (b) any other contractors employed by the Employer (including a contractor for Simple Cycle O&M Services, an O&M contractor and a LTSA contractor); and
- (c) the personnel of any legally constituted public authorities,

who may be employed in the execution on or near the Site of any work not included in this Agreement.

Any such instruction shall constitute a Variation if and to the extent that it causes the Contractor to incur Cost in an amount which was not reasonably foreseeable by an experienced contractor by the date for submission of the Tender. Services for these personnel and other contractors may include the use of Contractor's Equipment, Temporary Works or access arrangements which are the responsibility of the Contractor. It being clarified, any instruction under this Sub-Clause relating to co-operation on part of the Contractor for the purposes of single cycle operation of GT1 and/or GT2 shall not constitute a Variation.

The Contractor shall be responsible for its construction activities on the Site, and shall co-ordinate its own activities with those of other contractors to the extent (if any) specified in the Employer's Requirements.

4.7 **Setting Out**

The Contractor shall set out the Works in relation to original points, lines and levels of reference specified in this Agreement. The Contractor shall be responsible for the correct positioning of all parts of the Works and shall rectify any error in the positions, levels, dimensions or alignment of the Works.

4.8 **Safety Procedures**

The Contractor shall:

- (a) comply with all applicable safety regulations;
- (b) take care for the safety of all persons entitled to be on the Site;
- (c) use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons;
- (d) provide fencing, lighting, guarding and watching of the Works until completion and taking over under Clause 10 (*Employer's Taking Over*); and
- (e) provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land.

4.9 **Quality Assurance**

The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of this Agreement. The system shall be in accordance with the details stated in this Agreement. The Employer shall be entitled to audit any aspect of the system.

Details of all procedures and compliance documents shall be submitted to the Employer for information before each design and execution stage is commenced. When any document of a technical nature is issued to the Employer, evidence of the prior approval by the Contractor itself shall be apparent on the document itself.

Compliance with the quality assurance system shall not relieve the Contractor of any of its duties, obligations or responsibilities under this Agreement.

4.10 **Site Data**

The Employer has made available to the Contractor for his information, prior to the Base Date, as part of the Bidding Document, all relevant data in the Employer's possession relating to the Site (including soil, water, environmental aspects, the transportation study and the

geotechnical investigations report.) The Employer shall similarly make available to the Contractor all such data which come into the Employer's possession after the Base Date.

The Contractor shall be responsible for verifying and interpreting all such data. The Employer shall have no responsibility for the accuracy, sufficiency or completeness of such data, except as stated in Sub-Clause 5.1 (*General Design Obligations*).

The Employer shall not be liable for any claim or excuse of the Contractor regarding Site conditions or for the data made available by the Employer, whatsoever, for the completion and performance of the Works. The submission of the design by the Contractor to the Employer under Clause 5 (*Design*) shall mean that the Contractor has verified any information made available by the Employer and that the Contractor is familiar with the Site conditions in general and, in particular, for the purposes of the transport of plant, construction, installation, erection, execution, start-up, testing and commissioning of the Facility and the Works (including the construction of the interconnection facilities, detailed in the Employer's Requirements).

Furthermore, it is understood and agreed that the Employer has conducted and undertaken certain services in order to facilitate the design and construction by the Contractor immediately after the signing of the Agreement. These services include Geotechnical Investigations, Pile Load Testing and Hydrological Flood Studies etc. The provision of these services / data shall not dilute any obligation of the Contractor under this Clause 4.10 or elsewhere in the Agreement. The cost of such services is PKR 40,000,000/- (Pakistan Rupees Forty Million Only), and it is agreed that the same shall be deducted by the Employer from the first Statement of the EPC Contractor, notwithstanding anything contained in this Agreement.

4.11 Sufficiency of the Agreement Price

The Contractor shall be deemed to have satisfied itself as to the correctness and sufficiency of the Agreement Price.

Unless otherwise stated in this Agreement, the Agreement Price covers all the Contractor's obligations under this Agreement and all things necessary for the proper design, execution and completion of the Works and the remedying of any defects.

4.12 Unforeseeable Difficulties

Except as otherwise stated in this Agreement:

- (a) the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Works;
- (b) by signing this Agreement, the Contractor accepts responsibility for having foreseen all difficulties and costs of successfully completing the Works; and
- (c) neither the Agreement Price shall be adjusted to take account of any unforeseen difficulties or costs nor shall the Contractor be entitled to any extension of time under

Sub-Clause 8.4 (*Extension of Time for Completion*) due to any unforeseen difficulties or costs, if completion is or will be delayed.

4.13 Rights of Way and Facilities

The Contractor shall bear all costs and charges for special and/or temporary rights-of-way which it may require, including those for access to the Site. The Contractor shall also obtain, at its risk and cost, any additional facilities outside the Site which it may require for the purposes of the Works.

4.14 Avoidance of Interference

The Contractor shall not interfere unnecessarily or improperly with:

- (a) the convenience of the public; or
- (b) the access to and use and occupation of all roads and footpaths, irrespective of whether they are public or in the possession of the Employer or of others.

The Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from any such unnecessary or improper interference.

4.15 Access Route

The Contractor shall be deemed to have satisfied itself as to the suitability and availability of the access routes to the Site. The Contractor shall use reasonable efforts to prevent any road or bridge from being damaged by the Contractor's traffic or by the Contractor's Personnel. These efforts shall include the proper use of appropriate vehicles and routes. The Contractor shall indemnify the Employer against and from losses in respect of any breach of its obligations under this paragraph.

Except as otherwise stated herein:

- (a) the Contractor shall be responsible for any maintenance which may be required for its use of access routes;
- (b) the Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for its use of routes, signs and directions;
- (c) the Employer shall not be responsible for any claims which may arise from the use or otherwise of any access route;
- (d) the Employer does not guarantee the suitability or availability of particular access routes; and
- (e) Costs due to non-suitability or non-availability, for these required by the Contractor, of access routes shall be borne by the Contractor.

4.16 **Transport of Goods**

Unless otherwise stated herein:

- (a) the Contractor shall give the Employer not less than twenty-one (21) days' notice of the date on which any Plant or a major item of other Goods will be delivered to the Site;
- (b) the Contractor shall be responsible for packing, loading, transporting to Site, custom clearance, receiving, unloading, storing and protecting all Goods and other things required for the Works;
- (c) the Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from the transport of Goods and shall negotiate and pay all claims arising from their transport; and
- (d) and subject to Sub-Clause 14.17 (*Taxes, Levies and Duties*), the Employer shall be the importer of record in respect of all equipment. The Employer shall provide all relevant exemptions certificates; Contractor shall avail all available exemptions at the time of import.

4.17 **Contractor's Equipment**

The Contractor shall be responsible for all Contractor's Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works.

4.18 **Protection of the Environment**

The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of its operations and shall, at its own cost take all necessary and appropriate remedial measures in relation to any such resulting damage or nuisance.

The Contractor shall ensure that emissions, surface discharges and effluent from the Contractor's activities shall not exceed the values indicated in the Environmental and Social Management and Monitoring Plan and in the Employer's Requirements, and shall not exceed the values prescribed by applicable Laws.

The Contractor shall implement and comply with, and shall ensure its subcontractors comply with, the Environmental and Social Management and Monitoring Plan for the purposes of all Works to be undertaken in the Country.

The Contractor shall fully comply with, and shall ensure that its Subcontractors comply with, all applicable Laws and the Equator Principles for the purposes of all Works to be undertaken in the Country. The Contractor shall indemnify and hold the Employer harmless against the consequences of any failure to comply with such applicable laws, the Equator Principles and other requirements.

The Contractor shall, and shall ensure that its subcontractors, contain, remove and remedy any leaks, spills or other discharges of Hazardous Materials and shall promptly inform the Employer of such discharge.

The Contractor shall, and shall ensure that its subcontractors shall, at the request of the Employer, furnish all information to the Employer, within five (5) days or earlier if specified in the Relevant Provisions, about the Site, including Site conditions and Hazardous Materials, which may be necessary for the Employer to satisfy its obligations under the Relevant Provisions, including soil investigation reports.

The Contractor shall comply with all Consents and applicable Laws pertaining to protection of the environment in its access arrangements, execution of Works, procurement, construction and operations on Site. The Contractor shall take all necessary steps to protect the environment and shall not cause damage and nuisance to people and property resulting from pollution, noise and other results of its operations. The Contractor shall until the issuance of the Performance Certificate ensure that air emissions, surface discharges and effluent from the Site shall not exceed the values prescribed by Applicable Standards and the applicable Laws.

The Contractor shall provide properly designed storage areas for its Hazardous Materials which are impermeable to leakage into the surrounding soil for storage of hazardous wastes. Such storage will also be covered and protected from inundation and overflow by rainfall into the surrounding soil. Hazardous Materials generated during completion of the Works by the Contractor shall be properly disposed off by the Contractor on completion of the Works. The Contractor shall be responsible for keeping safe and disposing any Hazardous Materials and any dangerous substances on Site generated at or brought on to the Site by the Contractor.

Subject to Sub-Clause 17.6 (*Limitation of Liability*), the Contractor shall indemnify, defend and hold the Employer harmless from any and all liabilities, claims, damages, costs, penalties, fines, expenses, fees (including reasonable legal fees) and charges of any nature associated with any non-compliance by the Contractor of its obligations contained in this Sub-Clause 4.18 (*Protection of the Environment*).

4.19 Electricity, Water and Fuel

The Contractor shall, except as stated below, be responsible for the provision of all power including but not limited to backfeed electricity, water, fuel and other services it may require during construction and testing of the Facility at its own cost and expense. However, the cost of gas pipeline for fuel supply and power evacuation beyond interconnection points shall be borne by the Employer or relevant authorities.

The Employer shall pay for gas, and high speed diesel for each successful Tests on Completion (but only if such test is successfully passed by the Contractor, failing which, the Contractor shall be solely responsible for the gas and high speed diesel consumed during such Test on Completion, unless the Employer is reimbursed for the same by the Purchaser under the Power Purchase Agreement).

The Contractor shall procure (and on request of the Contractor, the Employer will facilitate the Contractor in this regard) connections for the water, power and other services from the relevant authorities for the whole Facility.

In the event that the Employer procures such utilities/connections on behalf of the Contractor, the Employer may deduct any amounts owed by the Contractor pursuant to this Sub-Clause from any moneys due, or to become due, to the Contractor.

4.20 **Not Used**

4.21 **Progress Reports**

Unless otherwise stated herein, weekly/monthly progress reports (as required by the Employer) shall be prepared by the Contractor and submitted to the Employer in six (6) copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within seven (7) days after the last day of the period to which it relates.

Reporting shall continue until issuance of the Taking-Over Certificate for the Facility.

Each report shall include:

- (a) charts and detailed descriptions of progress, including each stage of design, Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection, testing, commissioning and trial operation;
- (b) photographs showing the status of manufacture and of progress on the Site;
- (c) for the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:
 - (i) commencement of manufacture;
 - (ii) Contractor's inspections;
 - (iii) tests; and
 - (iv) shipment and arrival at the Site;
- (d) the details described in Sub-Clause 6.10(*Records of Contractor's Personnel and Equipment*);
- (e) copies of quality assurance documents, test results and certificates of Materials;
- (f) list of Variations, notices given under Sub-Clause 2.5 (*Employer's Claims*) and notices given under Sub-Clause 20.1 (*Contractor's Claims*);

- (g) safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and
- (h) comparisons of actual and planned progress, with details of any events or circumstances which may jeopardize the completion in accordance with this Agreement and the measures being (or to be) adopted to overcome delays.

4.22 Security of the Site

Unless otherwise stated in this Agreement:

- (a) the Contractor shall be responsible for keeping unauthorised persons off the Site;
- (b) authorised persons shall be limited to the Contractor's Personnel and the Employer's Personnel; and to any other personnel notified to the Contractor, by (or on behalf of) the Employer, as authorised personnel of the Employer's other contractors on the Site; and
- (c) the Employer, through Government of Punjab, shall provide and maintain adequate security outside the boundaries of the Site.

The Contractor shall be liable for any loss or damage as a result of any breach of security.

4.23 Contractor's Operations on Site

The Contractor shall confine its operations to the Site, and to any additional areas which may be obtained by the Contractor and agreed by the Employer as working areas. The Contractor shall take all necessary precautions to keep Contractor's Equipment and Contractor's Personnel within the Site and these additional areas, and to keep them off adjacent land.

During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction, and shall store or dispose of any Contractor's Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish and Temporary Works which are no longer required, which shall be disposed of at its own cost.

Upon the issue of the Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility (as applicable) for the Works, the Contractor shall clear away and remove all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works no longer required to be present at the Site. The Contractor shall leave the Site and the Works in a clean and safe condition. However, the Contractor may retain on Site, during each of the Punch List Completion Period GT1, Punch list Completion Period GT2 and Punch List Completion Period for the Facility, such Goods as are required for the Contractor to fulfil obligations under this Agreement. The Contractor shall at its own cost, risk and expense make reasonable arrangements for the storage, safety and safekeeping of such Goods during aforesaid periods, provided however, any Goods stored and/or kept at the Site shall be stored and safely kept at such area as approved by the Employer.

All other materials, including but not limited to packing material and recyclable waste, shall be properly stored and stacked by the Contractor for the Employer, in such manner that the Site remains free from any obstructions. The Employer may deal with the same in such manner as it may deem fit and appropriate. If the Contractor does not store and stack such materials to the satisfaction of the Employer, the Employer may do the same itself at the cost of the Contractor, which may be recovered by the Employer through reduction / set-off in the next Statement of the Contractor, through set-off against Retention Money lying with the Employer or by encashing the EPC Performance Security.

4.24 **Fossils**

All fossils, coins, articles of value or antiquity, and structures and other remains or items of geological or archaeological interest found on the Site shall be placed under the care and authority of the Employer. The Contractor shall take reasonable precautions to prevent Contractor's Personnel or other persons from removing or damaging any of these findings.

The Contractor shall, upon discovery of any such finding, promptly give notice to the Employer, who shall issue instructions for dealing with it. If the Contractor suffers delay and/or incurs Cost from complying with the instructions, the Contractor shall give a further notice to the Employer and shall be entitled, subject to Sub-Clause 20.1 (*Contractor's Claims*), to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 (*Extension of Time for Completion*); and
- (b) payment of any such Cost, which shall be added to the Agreement Price.

After receiving this further notice, the Employer shall proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine these matters.

4.25 **Financiers' Direct Agreement**

The Parties shall execute a direct agreement with the Financiers, substantially in the form attached as Schedule 15, which agreement shall include, *inter alia*, step-in rights for the Financiers to cure (at their option) any defaults of the Employer, confirmation of assignment of the Employer's right under this Agreement, including the EPC Performance Security, the OEM Performance Security and the Advance Payment Security (if applicable) in favour of Financiers.

4.26 **Performance Guarantees**

In the event the Contractor fails to meet any of the Performance Guarantees, the Employer may (at its sole and absolute discretion) exercise any or all of the remedies set out in this Agreement and / or otherwise available under Law.

Without prejudice to the generality of the preceding paragraph, in the event the Contractor fails to meet any of the Performance Guarantees, the Contractor shall be liable to pay

liquidated damages to the Employer, calculated in the manner set out in Schedule 10 (*Liquidated Damages*).

The Contractor's maximum liability towards the Employer in respect of liquidated damages payable for failure to meet any of the Performance Guarantees shall not exceed the LDs Cap.

Without prejudice to the above right of the Employer to impose liquidated damages, failure to meet the Performance Guarantees shall additionally entitle the Employer to reduce the Agreement Price in terms set out in Sub-Clause 14.1A.

4.27 **Power Purchase Agreement**

The Reference Power Purchase Agreement, is the power purchase agreement entered into by another project company and till date is the closest reference available for the Project.

Until the Power Purchase Agreement has been executed, the Contractor shall comply with the requirements of the Reference Power Purchase Agreement. Once the Power Purchase Agreement has been executed, it shall replace the Reference Power Purchase Agreement attached hereto and the former shall become an integral part of this Agreement and the Contractor shall comply with the requirements of the Power Purchase Agreement.

The Contractor covenants that it shall:

- (i) observe, perform and comply with all requirements of the Power Purchase Agreement so far as they relate or apply to the Works (or any part thereof);
- (ii) ensure that no act or omission by the Contractor, the Contractor's Personnel, Subcontractors or subcontractors of any tier shall cause any breach of Employer's obligation under or pursuant to the Power Purchase Agreement; and
- (iii) upon the Employer's request provide assistance as may be necessary for coordination with the Purchaser for matters that affect the Works and that relate to the Power Purchase Agreement.

In the event the requirements of the Power Purchase Agreement that are to be complied with by the Contractor are more onerous than the requirements of the Reference Power Purchase Agreement or its obligation under this Agreement and/or if compliance with the requirements of the Power Purchase Agreement would substantially increase the Costs to be incurred by the Contractor, the Contractor shall have the right to (i) apply for an extension of time, if completion is or will be delayed, under Sub-Clause 8.4 (*Extension of Time for Completion*); and/or (ii) apply for a PPA Change Order under Sub-Clause 20.1A (*PPA Change Order*).

If there is any default by the Employer under the Power Purchase Agreement which is in any manner on account of the Contractor, then the Contractor shall be liable to indemnify the Employer for any payment or compensation payable by the Employer under the Power Purchase Agreement.

4.28 Parent Company Guarantee

The Contractor hereby represents and warrants that:

- (a) it shall procure a guarantee (the “**Parent Company Guarantee**”) from its Parent Company, in favour of the Employer, in respect of its obligations towards the Employer under this Agreement;
- (b) the Parent Company has taken all necessary corporate actions and has all necessary authorizations to execute and deliver the Parent Company Guarantee to the Employer;
- (c) the Parent Company is empowered under applicable laws of [*INSERT NAME OF RELEVANT COUNTRY / JURISDICTION*], its constitutive documents (including the memorandum and articles of association or charter) to execute and deliver the Parent Company Guarantee and to perform its obligations hereunder; and
- (d) the Parent Company Guarantee has been / shall be, as applicable, executed by a duly authorized person on behalf of the Parent Company and is and shall continue to remain binding and enforceable against the Parent Company.

The Parent Company Guarantee shall remain valid until the issuance of the Performance Certificate. If the terms of the Parent Company Guarantee specifies an expiry date and the Performance Certificate has not been issued, the Contractor shall, thirty (30) days prior to the expiry of the Parent Company Guarantee, procure the extension of the Parent Company Guarantee from the Parent Company until such date as notified by the Employer. If the Contractor fails to procure such extension, the Employer shall be entitled to encash the EPC Performance Security.

The Employer may at any time and from time to time, make a claim under the Parent Company Guarantee in the event of failure by the Contractor in relation to the due performance and discharge by the Contractor of all its obligations and liabilities under this Agreement, including but not limited to:

- (a) performance and implementation of all terms and conditions of this Agreement by the Contractor; and
- (b) payment by the Contractor of all amounts due to the Employer under this Agreement.

4.29 Tampering with Metering System

The Contractor shall install the metering devices in accordance with, inter alia, the Employer’s Requirements and Schedule [●] and shall not, and shall ensure that its employees and Subcontractors do not, tamper with any meters and metering devices, metering system and back-up metering system installed at the Site. The Contractor shall indemnify the Employer against any liability incurred by the Employer under the Power Purchase Agreement as a consequence of the Contractor breaching such obligations, notwithstanding Clause 15.2(i) of this Agreement.

5. DESIGN

5.1 General Design Obligations

The Contractor shall be deemed to have scrutinised, prior to the Base Date, the Employer's Requirements (including design criteria and calculations, if any). The Contractor shall be responsible for the design of the Works and for the accuracy of such Employer's Requirements (including design criteria and calculations), except as stated below.

The Employer shall not be responsible for any error, inaccuracy or omission of any kind in the Employer's Requirements as originally included in this Agreement and shall not be deemed to have given any representation of accuracy or completeness of any data or information. Any data or information received by the Contractor, from the Employer or otherwise, shall not relieve the Contractor from its responsibility for the design and execution of the Works.

Any mistake, inaccuracy, discrepancy or divergence in information provided by the Employer or set out in the Employer's Requirements shall be notified to the Employer as soon as the same is discovered and, if the Employer so instructs, corrected by the Contractor, provided that no adjustment to the Agreement Price shall be made in respect of such correction and the Contractor shall not make any claim for an extension of the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility, in respect of such correction. Notwithstanding any contrary requirements mentioned above, the Employer shall only be responsible for compliance with the fuels specifications specified in the Employer's Requirements.

5.2 Contractor's Documents

The Contractor's Documents shall comprise the technical documents specified in the Employer's Requirements, documents required to satisfy all regulatory approvals, and the documents described in Sub-Clause 5.6 (*As-Built Documents*) and Sub-Clause 5.7 (*Operation and Maintenance Manuals*). Unless otherwise stated in the Employer's Requirements, the Contractor's Documents shall be written in the language for communications defined in Sub-Clause 1.4 (*Law and Language*).

The Contractor shall prepare all Contractor's Documents, and shall also prepare any other documents necessary to instruct the Contractor's Personnel.

If the Employer's Requirements describe the Contractor's Documents which are to be submitted to the Employer for review, they shall be submitted accordingly, together with a notice as described below. In the following provisions of this Sub-Clause, (i) "review period" means the period required by the Employer for review, and (ii) "Contractor's Documents" exclude any documents which are not specified as being required to be submitted for review.

Unless otherwise stated in the Employer's Requirements, each review period shall not exceed twenty-one (21) days, calculated from the date on which the Employer receives a Contractor's Document and the Contractor's notice. This notice shall state that the Contractor's Document is considered ready, both for review in accordance with this Sub-Clause and for use. The

notice shall also state that the Contractor's Document complies with this Agreement, or the extent to which it does not comply.

The Employer may, within the review period, give notice to the Contractor that a Contractor's Document fails (to the extent stated) to comply with this Agreement. If a Contractor's Document so fails to comply, it shall be rectified, resubmitted and reviewed in accordance with this Sub-Clause, at the Contractor's cost.

For each part of the Works, and except to the extent that the Parties otherwise agree:

- (a) execution of such part of the Works shall not commence prior to the expiry of the review periods for all the Contractor's Documents which are relevant to its design and execution;
- (b) execution of such part of the Works shall be in accordance with these Contractor's Documents, as submitted for review; and
- (c) if the Contractor wishes to modify any design or document which has previously been submitted for review, the Contractor shall immediately give notice to the Employer. Thereafter, the Contractor shall submit revised documents to the Employer in accordance with the above procedure.

Any such agreement (under the preceding paragraph) or any review (under this Sub-Clause or otherwise) shall not relieve the Contractor from any obligation or responsibility.

In case the Contractor proposes changes in the approved design, at any time during the period of this Agreement, then all such changes shall be made, subject to the approval of the Employer at no extra cost to the Employer.

5.3 Contractor's Undertaking

The Contractor undertakes that the design, the Contractor's Documents, the execution and the completed Works will be in accordance with the Applicable Standards.

5.4 Technical Standards and Regulations

The design, the Contractor's Documents, the execution and the completed Works shall comply with the Applicable Standards.

5.5 Training

The Contractor shall carry out the training of Employer's Personnel in the operation and maintenance of the Works to the extent specified in the Employer's Requirements. If this Agreement specifies training which is to be carried out before taking-over, the Works shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 (*Taking Over of the Works and Sections*) until this training has been completed.

5.6 As-Built Documents

The Contractor shall prepare, and keep up-to-date, a complete set of "as-built" records of the execution of the Works, showing the exact as-built locations, sizes and details of the work as executed. These records shall be kept on the Site and shall be used exclusively for the purposes of this Sub-Clause. Two (2) copies shall be supplied to the Employer prior to the commencement of the Tests on Completion.

In addition, the Contractor shall supply to the Employer as-built drawings of the Works, showing all Works as executed, and submit them to the Employer for review under Sub-Clause 5.2 (*Contractor's Documents*). The Contractor shall obtain the consent of the Employer as to their size, the referencing system, and other relevant details.

Prior to the issue of any Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility (as applicable), the Contractor shall supply to the Employer the specified numbers and types of copies of the relevant as-built drawings, in accordance with the Employer's Requirements. The relevant Works shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 (*Taking Over of the Works and Sections*) until the Employer has received these documents.

5.7 Operation and Maintenance Manuals

Within five (5) months of the issuance of the Notice to Proceed, the Contractor shall supply to the Employer provisional operation and maintenance manuals in sufficient detail for any person (acceptable to the Employer) to operate, maintain, dismantle, reassemble, adjust and repair the relevant part(s) of the Plant subject to the Tests on Completion being conducted at that time.

The relevant Works shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 (*Taking Over of the Works and Sections*) until the Employer has received the relevant final operation and maintenance manuals in such detail, and any other manual specified in the Employer's Requirements for these purposes.

5.8 Design Error

If errors, omission, ambiguities, inconsistencies, inadequacies or other defects are found in the Contractor's Documents, the Contractor's Documents and the Works shall be corrected at the Contractor's cost, notwithstanding any consent or approval under this Clause.

6. STAFF AND LABOUR

6.1 Engagement of Staff and Labour

Except as otherwise stated in the Employer's Requirements, the Contractor shall make arrangements for the engagement of all staff and labour, local or otherwise, and for their payment, housing, feeding and transport.

6.2 Rates of Wages and Conditions of Labour

The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out or as prescribed under the Laws of the Country. If no established rates or conditions are applicable, the Contractor shall pay the rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.

6.3 Persons in the Service of Others

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst the Employer's Personnel.

6.4 Labour Laws

The Contractor shall comply, and shall cause its Subcontractors to comply, with all the relevant labour Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights.

The Contractor shall require its employees to obey all applicable Laws, including those concerning safety at work.

The Contractor shall be liable to make payments and contributions, and shall keep the Employer indemnified of any claims, costs, etc., in respect of labour as provided under Law, and such payments and contributions shall be deemed to have been included in the Agreement Price, notwithstanding any amendment or modification in the minimum payments / contributions under Law.

6.5 Working Hours

No work shall be carried out on the Site on locally recognised days of rest, or outside normal working hours, unless:

- (a) otherwise stated in this Agreement;
- (b) the Employer gives consent; or
- (c) the work is unavoidable, or necessary for the protection of life or property, or for the safety of the Works, in which case the Contractor shall immediately advise the Employer.

6.6 Facilities for Staff and Labour

Except as otherwise stated in the Employer's Requirements, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel as per the applicable labour Laws of the Country. The Contractor shall also provide facilities for the Employer's Personnel as stated in the Employer's Requirements.

The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

6.7 Health and Safety

The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.

The Contractor shall send, to the Employer, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Employer may reasonably require.

6.8 Contractor's Superintendence

Throughout the design and execution of the Works, and as long thereafter as is necessary to fulfil the Contractor's obligations, the Contractor shall provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the work.

Superintendence shall be given by a sufficient number of persons having adequate knowledge of the language for communications (defined in Sub-Clause 1.4(*Law and Language*)) and of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works. A reasonable proportion of the Contractor's superintending staff shall have a working knowledge of the language of communication or the Contractor shall have a sufficient number of competent interpreters available on Site.

6.9 Contractor's Personnel

The Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Employer may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative if applicable, who:

- (a) persists in any misconduct or lack of care;
- (b) carries out duties incompetently or negligently;
- (c) fails to conform with any provisions of this Agreement; or

- (d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment.

If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

6.10 Records of Contractor's Personnel and Equipment

The Contractor shall submit, to the Employer, details showing the number of each class of Contractor's Personnel and of each type of Contractor's Equipment on the Site. Details shall be submitted each calendar month, in a form approved by the Employer, until the Contractor has completed all outstanding work which was to be completed before the end of the Punch List Completion Period for the Facility.

6.11 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst the Contractor's Personnel, and to preserve peace and protection of persons and property on and near the Site.

6.12 Foreign Staff and Labour

Subject to the Laws of the Country, the Contractor may import any personnel who are necessary for the execution of the Works. The Contractor must ensure that these personnel are provided with the required residence visas and work permits. The Contractor shall be responsible for the return to the place where they were recruited or to their domicile of imported Contractor's Personnel. In the event of the death in the Country of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial.

6.13 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal by Contractor's Personnel of the same.

6.14 Arms and Ammunition

The Contractor shall not give, barter or otherwise dispose of to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so, or possess the same, unless employed to possess and suitably qualified to provide security for the Site.

6.15 Festivals and Religious Customs

The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs.

7. PLANT, MATERIALS AND WORKMANSHIP

7.1 Manner of Execution

The Contractor shall carry out the manufacture of Plant, the production and manufacture of Materials, and all other execution of the Works:

- (a) in the manner (if any) specified in this Agreement;
- (b) in a proper workmanlike and careful manner, in accordance with sound engineering and construction practices and Prudent Practices; and
- (c) with properly equipped facilities and non-hazardous Materials, except as otherwise specified in this Agreement.

7.2 Samples

The Contractor shall submit samples to the Employer, for review and/or Purchaser's approval (as applicable) in accordance with the procedures for Contractor's Documents described in Sub-Clause 5.2 (*Contractor's Documents*), as specified in this Agreement or the Reference Power Purchase Agreement and at the Contractor's cost. Each sample shall be labelled as to origin and intended use in the Works.

7.3 Inspection

The Employer's Personnel shall at all reasonable times:

- (a) have full access to all parts of the Site and to all places from which natural Materials are being obtained; and
- (b) during production, manufacture and construction (at the Site and, to the extent specified in this Agreement, else-where), be entitled to examine, inspect, measure and test the materials and workmanship and to check the progress of manufacture of Plant and production and manufacture of Materials.

The Contractor shall give the Employer's Personnel full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility.

In respect of the work which the Employer's Personnel are entitled to examine, inspect, measure and/or test, the Contractor shall give notice to the Employer whenever any such work is ready and before it is covered up, put out of sight, or packaged for storage or transport. The Employer shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or promptly give notice to the Contractor that the Employer does not require to do so. If the Contractor fails to give the notice, it shall, if and when required by the Employer, uncover the work and thereafter reinstate and make good, all at the Contractor's cost.

The Employer may perform independent inspection and quality assurance in terms of the Employer's Requirements (and otherwise if the Employer deems it necessary) but the Contractor shall remain responsible for the Works irrespective of such independent inspection and quality assurance. The Contractor will assist and provide logistic support in the performance of the Employer's inspection and quality assurance activities and where stated in the Employer's Requirement bear the costs of such inspection and quality assurance activities.

7.4 **Testing**

This Sub-Clause shall apply to all tests in this Agreement.

The Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, consumables, instruments, labour, materials, and suitably qualified and experienced staff, as are necessary to carry out all the tests efficiently. The Contractor shall agree, with the Employer, the time and place for the testing of any Plant, Materials and other parts of the Works. The Employer shall provide and bear the cost of the fuel necessary to carry out the tests required to be carried out under this Agreement. However, any fuel required for carrying out repeat tests (due to the Contractor's negligence, omission or non-performance / failure to meet the Performance Guarantees), shall be the responsibility of the Contractor and the cost of the same shall also be borne by the Contractor, unless the Employer is reimbursed for the same by the Purchaser under the Power Purchase Agreement.

The Employer may, under Clause 13 (*Variations and Adjustments*), vary the location or details of specified tests, or instruct the Contractor to carry out additional tests. If these varied or additional tests show that the tested Plant, Materials or workmanship is not in accordance with this Agreement, the cost of carrying out this Variation shall be borne by the Contractor, notwithstanding other provisions of this Agreement.

The Employer shall give the Contractor not less than twenty-four (24) hours' notice of the Employer's intention to attend the tests. If the Employer does not attend at the time and place agreed, the Contractor may proceed with the tests (unless otherwise instructed by the Employer), which shall then be deemed to have been made in the Employer's presence.

If the Contractor suffers delay and/or incurs Cost from complying with these instructions, or as a result of a delay for which the Employer is responsible, the Contractor shall give notice to the Employer and shall be entitled, subject to Sub-Clause 20.1 (*Contractor's Claims*), to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 (*Extension of time for Completion*), and
- (b) payment of any such Cost, which shall be added to the Agreement Price.

After receiving this notice, the Employer shall proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine these matters.

The Contractor shall promptly forward to the Employer duly certified reports of the tests. When the specified tests have been passed, the Employer shall endorse the Contractor's test

certificate, or issue a certificate to it, to that effect. If the Employer has not attended the tests, it shall be deemed to have accepted the readings as accurate.

7.5 Rejection

If, as a result of an examination, inspection, measurement or testing (including for Tests on Completion), any Plant, Materials, design or workmanship is found to be defective or otherwise not in accordance with this Agreement, the Employer may reject the Plant, Materials, design or workmanship by giving notice to the Contractor, with reasons. The Employer may also reject the Facility in accordance with Schedule 10 (*Liquidated Damages*). The Contractor shall then promptly make good the defect and ensure that the rejected item complies with this Agreement. Any such defect shall be remedied by the Contractor, at its sole cost and risk, without any delay in achieving the taking over in accordance with Sub-Clause 10.1 (*Taking Over of the Works and Sections*).

If the Employer requires this Plant, Materials, design or workmanship to be re-tested, the tests shall be repeated under the same terms and conditions. If the rejection and re-testing cause the Employer to incur additional costs, the Contractor shall subject to Sub-Clause 2.5 (*Employer's Claims*) pay these costs to the Employer.

If the Contractor fails to remedy any defect or the retesting is unsuccessful then the Employer shall be entitled to reject the Works in terms of Sub-Clause 11.4 (*Failure to Remedy Defects*).

7.6 Remedial Work

Notwithstanding any previous test or certification, the Employer may instruct the Contractor to:

- (a) remove from the Site any Plant or Materials which is not in accordance with this Agreement;
- (b) remove and re-execute any other work which is not in accordance with this Agreement; and
- (c) execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseeable event or otherwise.

If the Contractor fails to comply with any such instruction, which complies with Sub-Clause 3.4 (*Instructions*), the Employer shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to Sub-Clause 2.5 (*Employer's Claims*) pay to the Employer all costs arising from this failure.

7.7 Ownership of Plant and Materials

Each item of Plant and Materials shall, to the extent consistent with the Laws of the Country, become the property of the Employer, free from liens and other encumbrances, at whichever is the earlier of the following times:

- (a) when the Contractor is entitled to payment of the value of the Plant and Materials under Sub-Clause 14.7 (*Timing and Mode of Payments*);
- (b) upon issuance of the "Bill of Lading" or "Airway Bill";
- (c) when it is delivered to the Site; and
- (d) when the Contractor is entitled to payment of the value of the Plant and Materials under Sub-Clause 8.10 (*Payment for Plant and Materials in Event of Suspension*).

Any purchase order issued in respect of the Plant and Materials shall be in the name of the Employer and shall specifically state that the Plant and Materials to be manufactured, procured etc. shall be in the name of and for the benefit of the Employer.

7.8 Royalties

Unless otherwise stated in the Employer's Requirements, the Contractor shall pay all royalties, rents and other payments for:

- (a) natural Materials obtained from outside the Site; and
- (b) the disposal of material from demolitions and excavations and of other surplus material (whether natural or man-made), except to the extent that disposal areas within the Site are specified in this Agreement.

7.9 Eligible Source Countries

All Goods and services (including banks and carriers) shall have the origin in eligible countries i.e. with whom the Country has commercial/trade relations and who are not subject to sanctions imposed by the United Nations Security Council.

8. COMMENCEMENT, DELAYS AND SUSPENSION

8.1 Commencement of Works

The Employer may issue the Notice to Proceed, in its sole and absolute discretion, at any time on or prior to the Long Stop Date, but in any event no earlier than the Effective Date.

If for reasons not attributable to the Contractor:

- (a) the Notice to Proceed is not issued within seven (7) days following the Long Stop Date; or
- (b) if applicable, the Advance Payment is not paid in accordance with Sub-Clause 14.2 (*Advance Payment*) provided the Contractor has provided the Advance Payment Security, the EPC Performance Security and the OEM Performance Security; or
- (c) the first Offshore LC and the first Onshore LC have not been issued in accordance with Sub-Clause 14.7 (*Timing and Mode of Payments*) provided the Contractor has

provided the EPC Performance Security and the OEM Performance Security to the Employer; or

- (d) the Employer has not fulfilled its obligations in accordance with Sub-Clause 2.1 (*Right of Access to the Site*);

then either party shall have the right to terminate this Agreement and neither Party shall be liable to the other in any respect, and the EPC Performance Security and OEM Performance Security shall be returned to the Contractor. Notwithstanding the above the Contractor may nevertheless opt to continue with the Agreement, in which event the Contractor may seek an extension of time in accordance with Sub-Clause 8.4 (*Extension of Time for Completion*).

On and from the Commencement Date, the Contractor shall commence the design and execution of the Works with due expedition and without delay.

8.2 Time for Completion

The Contractor shall complete whole of the Works, and each phase/Section of the Works within the Time for Completion GT1, Time for Completion GT2 and Time for Completion for the Facility (as applicable), including:

- (a) achieving the passing of the Tests on Completion, and
- (b) completing all work which is stated in this Agreement as being required for the Works or Section to be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 (*Taking Over of the Works and Sections*).

The Contractor shall remain liable for all its obligations under this Agreement, in accordance with this Agreement, until the issuance of the Performance Certificate.

8.3 Programme

The Contractor shall submit a detailed programme to the Employer within twenty-eight (28) days after the Commencement Date. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor's obligations. Unless otherwise stated/provided in this Agreement, each programme shall include:

- (a) the order in which the Contractor intends to carry out, the Works, including the anticipated timing of each major stage of the Works;
- (b) the periods for reviews under Sub-Clause 5.2 (*Contractor's Documents*);
- (c) the sequence and timing of inspections and tests specified in this Agreement; and
- (d) a supporting report which includes:
 - (i) a general description of the methods which the Contractor intends to adopt for the execution of each major stage of the Works; and

- (ii) the approximate number of each class of Contractor's Personnel and of each type of Contractor's Equipment for each major stage.

The Contractor must obtain the express approval of the Employer before proceeding in accordance with such programme. The Employer shall have a period of twenty-one (21) days after receiving such programme to approve or disapprove the same. In the event the Employer does not approve the programme, it must give notice to the Contractor stating the extent to which the programme does not comply with this Agreement. Once approved by the Employer, the Employer's Personnel shall be entitled to rely upon the programme when planning their activities.

The Contractor shall promptly give notice to the Employer of specific probable future events or circumstances which may adversely affect or delay the execution of the Works. In this event, or if the Employer gives notice to the Contractor that a programme fails (to the extent stated) to comply with this Agreement or to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Employer in accordance with this Sub-Clause.

8.4 Extension of Time for Completion

The Contractor shall be entitled subject to Sub-Clause 20.1 (*Contractor's Claims*) to an extension of the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility (as applicable), if and to the extent that completion for the purposes of Sub-Clause 10.1 (*Taking Over of the Works and Sections*) is or will be delayed by any of the following causes:

- (a) a Variation (unless an adjustment to the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility (as applicable) has been agreed under Sub-Clause 13.3 (*Variation Procedure*)); or
- (b) where a Sub-Clause of this Agreement expressly provides a cause of delay, which entitles the Contractor to extension of time.

If the Contractor considers itself to be entitled to an extension of the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility (as applicable) in terms of (a) or (b) above, the Contractor shall give notice to the Employer in accordance with Sub-Clause 20.1 (*Contractor's Claims*). When determining each extension of time under Sub-Clause 20.1 (*Contractor's Claims*), the Employer shall review previous determinations and may increase, but shall not decrease, the total extension of time.

It being clarified that the Contractor shall not be entitled to an extension of time under Sub-Clause 8.4 (*Extension of Time for Completion*), or to payment of any Cost incurred and the Employer shall have no obligation to extend the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility (as applicable) or make any payments if and to the extent that the delay / increased Cost would nevertheless have occurred regardless of the Employer's actions/omissions.

8.5 Delays Caused by Authorities

With respect to the delay or disruption faced by the Contractor due to the absence of receiving a timely Consent from the Relevant Authority, provided that:

- (a) the Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in the Country; and
- (b) the delay or disruption was not reasonably foreseeable by an experienced contractor by the date for submission of the Tender,

then this delay or disruption will be considered as a cause of delay under sub-paragraph (b) of Sub-Clause 8.4 (*Extension of Time for Completion*).

8.6 Rate of Progress

If, at any time:

- (a) actual progress, including but not limited to design and procurement, is too slow to complete within the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility (as applicable) ; and/or
- (b) progress has fallen (or will fall) behind the current programme under Sub- Clause 8.3 (*Programme*),

other than as a result of a cause listed in Sub-Clause 8.4 (*Extension of Time for Completion*), then the Employer may instruct the Contractor to submit, under Sub-Clause 8.3 (*Programme*), a revised programme and supporting report describing the revised methods which the Contractor proposes to adopt in order to expedite progress and complete within the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility (as applicable).

Unless the Employer notifies otherwise, the Contractor shall adopt these revised methods, which may require increases in the working hours and/or in the numbers of Contractor's Personnel and/or Goods, at the risk and cost of the Contractor. If these revised methods cause the Employer to incur additional costs, the Contractor shall subject to Sub-Clause 2.5 (*Employer's Claims*) pay these costs to the Employer, in addition to delay damages (if any) under Sub-Clause 8.7 (*Damages*) below.

8.7 Damages

8.7.1 Delay Damages

In the event the Contractor fails to procure:

- (a) the Taking-Over Certificate GT1 by the expiry of the Time for Completion GT1;
- (b) the Taking-Over Certificate GT2 by the expiry of the Time for Completion GT2; and/or
- (c) the Taking-Over Certificate for the Facility by the expiry of the Time for Completion for the Facility;

the Contractor shall pay the Employer, as compensation for damages and not as penalty an amount determined in accordance with Schedule 10 (*Liquidated Damages*).

The Contractor's maximum liability towards the Employer in respect of delay damages shall be ten percent (10%) of the Agreement Price.

8.7.2 Payment of Liquidated Damages

All sums payable as liquidated damages (including delay liquidated damages and liquidated damages for failure to meet the Performance Guarantees) by the Contractor to the Employer from time to time shall be calculated in the manner set out in Schedule 10 (*Liquidated Damages*). Such liquidated damages shall be stated in an invoice submitted by the Employer to the Contractor (the "**Employer LDs Invoice**") and shall be payable within fourteen (14) days from the date of receipt by the Contractor of the Employer LDs Invoice. Liquidated damages shall be paid into the bank account specified in the Employer LDs Invoice. In the event of failure by the Contractor to pay the Employer the liquidated damages pursuant to the Employer LDs Invoice, the Employer shall recover such liquidated damages upon first demand by making a claim under the EPC Performance Security and/or by applying the Retention Money against amounts due. Nothing in this Sub-Clause shall affect the right of the Employer to claim damages (pursuant to the provisions of this Agreement) on the ground of breach or failure on the part of the Contractor to perform any of its obligations under this Agreement or to avail itself of any remedy provided under this Agreement for any failure of the Contractor to perform any other obligation under this Agreement. Further, nothing in this Sub-Clause shall restrict the right of the Employer to make a claim under the EPC Performance Security and/or apply the Retention Money against amounts due for any breach by the Contractor of its respective obligations under this Agreement.

Subject to Clause 14.1A, the Contractor's maximum liability towards the Employer in respect of delay damages and liquidated damages payable for failure to meet any of the Performance Guarantees shall not exceed the LDs Cap.

The Employer shall have the right to set-off liquidated damages due from the Contractor against amounts owed by the Employer to the Contractor under this Agreement.

The liquidated damages under this Agreement shall be payable in all events without set-off or counterclaim by the Contractor.

Any payment for liquidated damages shall not release the Contractor of its obligations to complete or continue to perform the Works in accordance with this Agreement or from any other liability or obligation under this Agreement.

The Parties acknowledge and admit that:

- (a) the amount of liquidated damages payable by the Contractor, under this Agreement, are not by way of a fine or penalty and constitute the actual loss suffered by the Employer;
- (b) it is entirely possible to predetermine the actual loss that may be suffered by the Employer; and
- (c) the liquidated damages payable by the Contractor are reasonable compensation and are without prejudice to the other remedies that may be available to the Employer.

8.7A Payment of Miscellaneous Liquidated Damages on account of other delays and non-compliance of contractual obligations

The Contractor shall, in addition to liquidated damages specified in Sub-Clauses 4.26 and 8.7, also be liable to pay liquidated damages for failure to meet the stated periods of submission specified in section 4.23.11 of the Employer's Requirements or non-compliance or non-performance of any other obligations under or pursuant to this Agreement, as set out in Schedule 10 (*Liquidated Damages*). The payment mechanism in Clause 8.7.2 above shall apply mutatis mutandis to recovery of liquidated damages under this Clause.

8.8 Suspension of Work

The Employer may at any time instruct the Contractor to suspend progress of part or all of the Works. During such suspension, the Contractor shall protect, store and secure such part or the Works against any deterioration, loss or damage.

The Employer may also notify the cause for the suspension. If and to the extent that the cause is notified and is the responsibility of the Contractor, the following Sub-Clauses 8.9 (*Consequences of Suspension*), 8.10 (*Payment for Plant and Materials in Event of Suspension*) and 8.11 (*Prolonged Suspension*) shall not apply.

8.9 Consequences of Suspension

If the Contractor suffers delay and/or incurs Cost from complying with the Employer's instructions under Sub-Clause 8.8 (*Suspension of Work*) and/or from resuming the work, the Contractor shall give notice to the Employer and shall be entitled, subject to Sub-Clause 20.1 (*Contractor's Claims*), to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 (*Extension of Time for Completion*); and
- (b) payment of any such Cost, which shall be added to the Agreement Price. After receiving this notice, the Employer shall proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine these matters.

The Contractor shall not be entitled to an extension of time for, or to payment of the Cost incurred in, making good the consequences of the Contractor's faulty design, workmanship or

materials, or of the Contractor's failure to protect, store or secure in accordance with Sub-Clause 8.8 (*Suspension of Work*).

8.10 Payment for Plant and Materials in Event of Suspension

The Contractor shall, subject to Clause 20.1 (*Contractor's Claims*), be entitled to payment of the value (as at the date of suspension) of Plant and/or Materials which have not been delivered to Site, if:

- (a) the work on the Plant or delivery of Plant and/or Materials has been suspended for more than fifty-six (56) days;
- (b) the Plant and/or Materials have been certified for payment in accordance with this Agreement and evidence (satisfactory to the Employer) of actual non-refundable expenditure in relation to the same has been provided to the Employer; and
- (c) the Contractor has marked the Plant and/or Materials as the Employer's property in accordance with the Employer's instructions.

The Employer shall then proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine the value of the Plant and/or Materials due to the Contractor under this Sub-Clause 8.10 (*Payment for Plant and Materials in Event of Suspension*).

8.11 Prolonged Suspension

If the suspension under Sub-Clause 8.8 (*Suspension of Work*) has continued for more than eighty-four (84) days, the Contractor may request the Employer's permission to proceed. If the Employer does not give permission within twenty-eight (28) days after being requested to do so and if the suspension affects the whole of the Works, the Contractor may give notice of termination under Sub-Clause 16.2 (*Termination by Contractor*).

8.12 Resumption of Work

After the permission or instruction to proceed is given, the Parties shall jointly examine the Works and the Plant and Materials affected by the suspension. Subject to Clause 8.9 (*Consequences of Suspension*), the Contractor shall make good any deterioration or defect in or loss of the Works or Plant or Materials, which has occurred during the suspension.

9. TESTS ON COMPLETION

9.1 Contractor's Obligations

The Contractor shall carry out the Tests on Completion in accordance with the Testing Protocol, the Applicable Standards, this Clause and Sub-Clause 7.4 (*Testing*) after providing the documents in accordance with Sub-Clause 5.6 (*As-Built Documents*) and Sub-Clause 5.7 (*Operation and Maintenance Manuals*).

The Contractor shall give to the Employer and the Employer's Engineer not less than twenty-one (21) days' notice of the date after which the Contractor will be ready to carry out each of

the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within fourteen (14) days after this date, on such day or days as the Employer shall instruct.

Unless otherwise stated herein, the Tests on Completion shall be carried out in the following sequence:

- (a) Pre-Commissioning Tests, which shall include the appropriate inspections and ("dry" and "cold") functional tests to demonstrate that each item of Plant can safely undertake the next stage;
- (b) commissioning tests, which shall include the specified operational tests to demonstrate that the Works or Section can be operated safely and as specified, under all available operating conditions;
- (c) trial operation, which shall demonstrate that the Works or Section perform reliably and in accordance with this Agreement; and
- (d) any other tests specified in the Employer's Requirements and the Reference Power Purchase Agreement.

During trial operation, when the Works are operating under stable conditions, the Contractor shall give notice to the Employer and Employer's Engineer that the Works are ready for any other Tests on Completion, including performance tests to demonstrate whether the Works conform with criteria specified in the Employer's Requirements and with the Performance Guarantees.

Trial operation shall not constitute a taking-over under Clause 10 (*Employer's Taking Over*). Unless otherwise stated herein, any product produced by the Works during trial operation shall be the property of the Employer.

In considering the results of the Tests on Completion, appropriate allowances shall be made for the effect of any use of the Works by the Employer on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed each of the Tests on Completion described in sub-paragraph (a), (b) (c) or (d), the Contractor shall submit a certified report of the results of these tests to the Employer. Such report shall be further certified/approved by the Employer's Engineer in order for such tests to be considered as passed.

The Employer (including its agents, employees, consultants, representatives, contractors and subcontractors), the Employer's Engineer, the Financiers, the Contractor, the Purchaser and each of their respective agents, representatives and consultants shall have the right to be present during all Tests On Completion (or any part thereof).

9.2 **Delayed Tests**

Provided that the Contractor has applied for and received the Pre-Commissioning Certificate from the Employer's Engineer, the Employer shall procure that the Purchaser / NTDC, as the case may be, properly and timely completes the Purchaser's Interconnection Facilities by the

PIF Completion Date so that the Contractor may perform the Tests on Completion that require the completed, commissioned and energized Purchaser Interconnection Facilities.

In the event that:

- (a) the Employer fails to provide backfeed electricity to the Contractor before Tests on Completion including Pre-commissioning Tests; or
- (b) the Employer has unduly delayed the Pre-Commissioning Tests;

the Contractor shall give notice to the Employer and subject to Sub-Clause 20.1 (*Contractor's Claims*) shall be entitled to:

- (i) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 (*Extension of Time for Completion*), and
- (ii) payment of any such Cost, which shall be added to the Onshore EPC Price.

After receiving this notice, the Employer shall proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine these matters.

The Contractor shall be responsible for the storage and safe keeping of the Works at all times.

The Contractor undertakes that it shall without delay conduct the remaining Tests on Completion upon availability of the Purchaser Interconnection Facilities.

If the Tests on Completion are being unduly delayed by the Contractor, the Employer may by notice require the Contractor to carry out the tests within seven (7) days after receiving the notice. The Contractor shall carry out the tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Employer.

If the Contractor fails to carry out the Tests on Completion within the seven (7) days, the Employer's Engineer may proceed with the Tests at the risk and cost of the Contractor. These Tests on Completion shall then be deemed to have been carried out in the presence of the Contractor and the results of the tests shall be accepted as accurate.

9.3 **Retesting**

If the Works, or a Section, fail to pass the Tests on Completion, Sub-Clause 7.5 (*Rejection*) shall apply, and the Employer, the Employer's Engineer or the Contractor may require the failed tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions at the sole cost, risk and expense of the Contractor.

9.4 **Failure to Pass Tests on Completion**

If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 (*Retesting*), the Employer shall at its sole discretion be entitled to:

- (a) order further repetition of Tests on Completion under Sub-Clause 9.3 (*Retesting*);

- (b) if the failure deprives the Employer of substantially the whole benefit of the Works or Section, reject the Works or Section (as the case may be) in which event the Employer shall have the same remedies as are provided in Sub-Clause 11.4 (*Failure to Remedy Defects*); or
- (c) issue the Taking-Over Certificate GT1, Taking-Over Certificate GT2 or Taking-Over Certificate for the Facility as applicable in relation to the Works or a Section.

In the event of sub-paragraph (c), the Contractor shall proceed in accordance with all other obligations under this Agreement, and the Contractor shall at the option of the Employer either (i) accept a reduction in the Agreement Price by such amount as shall be appropriate to cover the reduced value to the Employer as a result of this failure or (ii) pay the Employer liquidated damages equal to the amount of loss suffered by the Employer due to reduction in the tariff applicable to the sale of electric power to the Purchaser.

9.5 Testing of Interconnection Facilities

Notwithstanding the provisions above regarding the testing of the Works, the Contractor acknowledges that it shall be responsible for preliminary testing of interconnection facilities, as is further set out in the Employer's Requirements. Following preliminary testing of such facilities to the satisfaction of the Employer and the Employer's Engineer, the Contractor will facilitate testing, energising and commissioning of the interconnection facilities by the Purchaser / NTDC, as the case may be, and the Contractor agrees to co-operate with the Employer, the Employer's Engineer and the Purchaser / NTDC in respect of such testing, energising and commissioning in accordance with any schedule thereof and as and when reasonably required to do so.

10. EMPLOYER'S TAKING OVER

10.1 Taking Over of the Works and Sections

Except as stated in Sub-Clause 9.4 (*Failure to Pass Tests on Completion*), the Employer shall issue the Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility (as applicable) when (i) the applicable criteria, for issuance of each of the aforementioned certificates, as set out in the Employer's Requirements and (ii) all other Works required to be completed before the issuance of such certificate are complete. Additionally, the Taking-Over Certificate GT1 shall not be issued unless the LTSA Performance Guarantee has been provided to the Employer no later than ninety (90) days prior to the issuance of the Taking-Over Certificate GT1.

The Contractor may apply by notice to the Employer for a Taking-Over Certificate GT1 not earlier than fourteen (14) days before the Works relating to GT1 (including all other Works needed to be completed before the issuance of such certificate) will, in the Contractor's opinion, be complete and ready for taking over. The Contractor may apply for the Taking-Over Certificate GT2 and Taking-Over Certificate for the Facility in a similar manner.

The Employer shall, within twenty-eight (28) days after receiving the Contractor's application:

- (a) issue the Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility (as applicable) to the Contractor, stating the date on which the relevant Works or Section were completed in accordance with this Agreement, except for any minor outstanding work and defects which, in the opinion of the Employer, will not substantially affect the use of the Works or Section for their Intended Purpose (either until or whilst this work is completed and these defects are remedied); or
- (b) reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility (as applicable) to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.

If the Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility (as applicable), or any notice attached or pertaining thereto, contains requirements or restrictions over and above those in this Agreement, the Contractor shall notify the Employer's Representative and shall be entitled to a Variation under Clause 13 (*Variations and Adjustments*) unless such requirements or restrictions are as a result of a fault or failure of the Contractor.

If the Employer fails either to issue the Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility (as applicable) or to reject the Contractor's application within the period of twenty eight (28) days, and if the Works or Section (as the case may be) are substantially in accordance with this Agreement, the Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility shall be deemed to have been issued on the last day of that period.

Nothing in this Agreement shall impose any restriction on the Employer from selling any electrical energy produced during the performance of any Tests on Completion or otherwise at any time prior to issuance of the Taking-Over Certificate for the Facility. The Contractor acknowledges that all electrical energy generated by the Facility at any time, including during performance of any Tests on Completion or the operation of the Facility (whether as a single unit, in simple cycle, or as a whole) shall be the property of the Employer and the sale of any electrical energy by the Employer shall not constitute or be deemed to constitute a taking-over of the Works of the Facility.

10.2 Taking Over of Parts of the Works

Parts of the Works (other than Sections) shall not be taken over or used by the Employer, except as stated in this Agreement or as may be agreed by both Parties.

10.3 Operation without Issuance of Taking Over Certificate

The Employer may, solely at its own discretion, use or continue to use the Facility, or part thereof without issuance of the Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility, if the time period specified in the Agreement for the issuance of the same has passed and taking-over has not been achieved due to any action or inaction of the

Contractor. The Contractor has no objection to such operations, and shall continue to perform its obligations under this Agreement. Any exercise of discretion by the Employer under this clause shall be in addition to any other rights or remedies available to it on account of delay in meeting the timelines for taking-over.

It is agreed and acknowledged declaration of 'Commercial Operations Date' or any other event under the Power Purchase Agreement, and the Employer's use in terms of this clause, shall not be deemed to imply taking-over of the Facility or part thereof, and shall not entitle the Contractor to receive any certification in this respect. The Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility, as the case may be, shall only be issued by the Employer once the pre-conditions for the same specified under this Agreement have been complied with in full by the Contractor.

11. DEFECTS LIABILITY

11.1 Completion of Outstanding Work and Remedying Defects

11.1.1 Punch list Completion Period

In order that the relevant Works and Contractor's Documents, and each relevant Section, shall be in the condition required by this Agreement by the expiry date of the Punch List Completion Period GT1, the Contractor shall at its own cost complete any work which is outstanding on the date stated in the Taking-Over Certificate GT1. Such exercise shall be repeated during each of the Punch List Completion Period GT2 and the Punch List Completion Period for the Facility, for the relevant Works and Contractor's Documents, and each relevant Section not in the condition required by this Agreement on the date stated in Taking-Over Certificate GT2 and Taking-Over Certificate for the Facility respectively.

Final payment for the Works, in accordance with Clause 14 (*Agreement Price and Payment*), will not be certified until the above requirements have, in the opinion of the Employer's Representative, been met.

11.1.2 Warranty Period

During each of the Warranty Period GT1, Warranty Period GT2, Warranty Period for the Facility, Extended Warranty Period GT1, Extended Warranty Period GT2 and Extended Warranty Period for the Facility (as maybe applicable), the Contractor warrants that:

- (a) the Works shall be performed with good workmanship in accordance with the Applicable Standards and shall be free from all defects or deficiencies; and
- (b) it shall execute all work of amendment, reconstruction, and remedying defects or damage at its cost, as may be notified by the Employer or observed by the Contractor itself on or before the expiry date of the Warranty Period GT1, Warranty Period GT2, Warranty Period for the Facility, Extended Warranty Period GT1, Extended Warranty Period GT2 and/or Extended Warranty Period for the Facility (as applicable) for the Works or Section (as the case may be).

In addition to (a) and (b) above, the Contractor warrants that:

- (i) the Facility design life shall be for thirty (30) years; and
- (ii) the completed Facility shall be fit for the Intended Purpose.

The Performance Certificate issued under Sub-Clause 11.9 (*Performance Certificate*) will not be issued until all defects and damage and all outstanding work have been remedied and completed (other than those identified during the Latent Defects Notification Period GT1, Latent Defects Notification Period GT2 and/or Latent Defects Notification Period for the Facility (as applicable)).

11.1.3 Latent Defects

The Contractor shall be responsible for making good any Latent Defect GT1, Latent Defect GT2 and/or Latent Defect for the Facility (as applicable) (and damage caused by or resulting from such defect, and including uncovering and recovering).

If, before the expiry of the Latent Defects Notification Period GT1, Latent Defects Notification Period GT2 and/ or Latent Defects Notification Period for the Facility (as applicable), a Latent Defect GT1, a Latent Defect GT2 and/or a Latent Defect for the Facility (as applicable) should be found in the Works, the Employer shall notify the Contractor who shall promptly and at its own cost, repair, replace or otherwise make good such Defects or Deficiencies.

In the event the Contractor within a reasonable period of time fails to carry out repair or replacement or otherwise make good such Latent Defect GT1, Latent Defect GT2 and/or Latent Defect for the Facility (as applicable), the Employer shall carry out the remedial work itself or by others and the Contractor shall pay the Employer all reasonably incurred costs.

The Contractor shall, in undertaking any remedial work in relation to a Latent Defect GT1, Latent Defect GT2 and/or Latent Defect for the Facility (as applicable) which could affect the safe and efficient use or the operation of the Works, observe all reasonable requirements of the Employer with regard to safe and efficient use or operation thereof and shall in any event comply with Site security, safety and operational requirements.

11.2 Cost of Remedying Defects

All Works required to repair defects or damage shall be executed at the risk and cost of the Contractor, except where it is attributable to any act by the Employer or the Employer's Personnel or agents.

Where the Contractor is required to remedy a defect or damage to the Works due to a reason attributable to the Employer or the Employer's Personnel, the Contractor shall notify the Employer's Representative and shall be entitled to a Variation under Clause 13 (*Variations and Adjustments*).

11.3 Extension

The Warranty Period GT1 for any replaced and/or repaired parts of the Works relating to GT1 during the Warranty Period GT1 (the "**Extended Warranty Items GT1**") shall be extended

for twenty-four (24) months from the date of replacement and/or repair of such Extended Warranty Items GT1 (the "**Extended Warranty Period GT1**").

The Warranty Period GT2 for any replaced and/or repaired parts of the Works relating to GT2 during the Warranty Period GT2 (the "**Extended Warranty Items GT2**") shall be extended for twenty-four (24) months from the date of replacement and/or repair of such Extended Warranty Items GT2 (the "**Extended Warranty Period GT2**").

The Warranty Period for the Facility for any replaced and/or repaired parts of the Works relating to the Facility during the Warranty Period for the Facility (the "**Extended Warranty Items for the Facility**") shall be extended for twenty-four (24) months from the date of replacement and/or repair of such Extended Warranty Items for the Facility (the "**Extended Warranty Period for the Facility**").

11.4 **Failure to Remedy Defects**

If the Contractor fails to remedy any defect or damage within the time, specified by the Employer's Representative, the Employer may cease all further payments to the Contractor and may (at its sole discretion):

- (a) require the Employer's Representative to determine and certify a reasonable reduction in the Agreement Price in accordance with Sub-Clause 3.5 (*Determinations*); or
- (b) if the defect or damage is such (i) that the Contractor has been unable to pass the Tests on Completion, (ii) that the Performance Guarantees cannot be met within a period of thirty (30) days from when such damage or defect has been notified by the Employer or observed by the Contractor, and/or (iii) that it deprives the Employer of substantially the whole benefit of the Works or parts of the Works, terminate this Agreement as a whole, or in respect of any parts of the Works which cannot be put to the intended use. Without prejudice to any other rights, under this Agreement or otherwise, the Employer shall then be entitled to recover all sums paid for the whole or these parts of the Works (as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor; or
- (c) if the Employer chooses to complete the Works by itself or by engaging others, the Employer shall be entitled to recover the extra costs, if any, of completing the Works after allowing for any sum due to the Contractor under Sub-Clause 15.3 (*Valuation at Date of Termination*).

11.5 **Removal of Defective Work**

If the defect or damage cannot be remedied expeditiously on the Site and the Employer gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged. This consent may require the Contractor to increase the amount of the EPC Performance Security by the full replacement cost of these items, or to provide other appropriate security acceptable to the Employer.

11.6 Further Tests

If the work of remedying of any defect or damage may affect the performance of the Works, the Employer's Representative may require the repetition of any of the tests described in this Agreement. The requirement shall be made by notice within twenty-eight (28) days after the defect or damage is remedied.

These tests shall be carried out in accordance with the terms applicable to the previous tests, except that they shall be carried out at the risk and cost of the Party liable, under Sub-Clause 11.2 (*Cost of Remedying Defects*), for the cost of the remedial work.

11.7 Right of Access

Until the Performance Certificate has been issued, the Contractor shall have the right of access to all parts of the Works and to records of the operation and performance of the Works, except as may be inconsistent with the Employer's reasonable security restrictions.

11.8 Contractor to Search

The Contractor shall, if required by the Employer's Representative, search for the cause of any defect, under the direction of the Employer's Representative. Unless the defect is to be remedied at the cost of the Contractor under Sub-Clause 11.2 (*Cost of Remedying Defects*), the Cost of the search shall be agreed or determined in accordance with Sub-Clause 3.5 (*Determinations*).

11.9 Performance Certificate

Performance of the Contractor's obligations in respect of this Agreement shall not be considered to have been completed until the Employer has issued the Performance Certificate to the Contractor, stating the date on which the Contractor completed its obligations in respect of all the Works under this Agreement.

The Employer shall issue the Performance Certificate within twenty-eight (28) days after the expiry of the Warranty Period for the Facility, the Extended Warranty Period GT1 (if any), the Extended Warranty Period GT2 (if any) and the Extended Warranty Period for the Facility (if any) (whichever is later).

Only the Performance Certificate shall constitute the Employer's acceptance of the Contractor's completion of its obligations under this Agreement.

11.10 Unfulfilled Obligations

After the Performance Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, this Agreement shall be deemed to remain in force.

11.11 Clearance of Site

Within thirty (30) days of the issuance of the Taking-Over Certificate for the Facility, the Contractor shall clear away and remove all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works no longer required to be present at the Site. The Contractor shall leave the Site and the Works in a clean and safe condition. However, the Contractor may retain on Site, with the prior permission of the Employer, during each of the Punch list Completion Period GT1, Punch list Completion Period GT2, Punch list Completion Period for the Facility, Warranty Period GT1, Warranty Period GT2, Warranty Period for the Facility, Extended Warranty Period GT1, Extended Warranty Period GT2 and/or Extended Warranty Period for the Facility (as maybe applicable) such Goods as are required for the Contractor to fulfil its remaining obligations under this Agreement. The Contractor shall at its own cost, risk and expense make reasonable arrangements for the storage, safety and safekeeping of such Goods during aforesaid periods, provided however, any Goods stored and/or kept at the Site shall be stored and safely kept at such area as approved by the Employer.

Such exercise shall be repeated at the expiry of each of the Punch List Completion Period for the Facility, Warranty Period for the Facility and the later of the expiry of the Extended Warranty Period GT1, Extended Warranty Period GT2 and Extended Warranty Period for the Facility and the Contractor shall only retain on the Site, with the prior permission of the Employer, such items as required by the Contractor to perform its obligations under this Agreement during the remaining periods.

If all these items have not been removed within the aforementioned time periods, the Employer may sell or otherwise dispose of any remaining items. The Employer shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Employer's costs, the Contractor shall pay the outstanding balance to the Employer.

12. NOT USED

13. VARIATIONS AND ADJUSTMENTS

13.1 Right to Vary

Variations may be initiated by the Employer at any time prior to issuing the Taking-Over Certificate GT1, Taking-Over Certificate GT2 or Taking-Over Certificate for the Facility for the relevant Works, either by an instruction or by, a request for the Contractor to submit a proposal. A Variation shall not comprise the omission of any work which is to be carried out by others, unless it is initiated by the Employer within fifteen (15) days of the Effective Date.

The Contractor shall execute and be bound by each Variation, unless the Contractor promptly gives notice to the Employer stating (with supporting particulars) that (i) the Contractor cannot readily obtain the Goods required for the Variation, (ii) it will reduce the safety or suitability of the Works, or (iii) it will have an adverse impact on the achievement of the Performance Guarantees. Upon receiving this notice, the Employer shall cancel, confirm or vary the instruction.

13.2 Value Engineering

The Contractor may, at any time, submit to the Employer a written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Employer of executing, maintaining or operating the Works, (iii) improve the efficiency or value to the Employer of the completed Works, or (iv) otherwise be of benefit to the Employer.

The proposal shall be prepared at the cost of the Contractor and shall include the items listed in Sub-Clause 13.3 (*Variation Procedure*).

13.3 Variation Procedure

If the Employer requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:

- (a) a description of the proposed design and/or work to be performed and a programme for its execution;
- (b) the Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 8.3 (*Programme*) and to the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility (as applicable); and
- (c) the Contractor's proposal for adjustment to the Agreement Price.

The Employer shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.2 (*Value Engineering*) or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.

Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Employer to the Contractor, who shall acknowledge receipt.

Upon instructing or approving a Variation, the Employer shall proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine adjustments to the Agreement Price and Payment Milestones. These adjustments shall take account of the Contractor's submissions under Sub-Clause 13.2 (*Value Engineering*) if applicable.

13.4 Payment in Applicable Currencies

Since this Agreement provides for payment of the Agreement Price in more than one currency, whenever an adjustment is agreed, approved or determined as stated above, the

amount payable in each of the applicable currencies shall be specified. For this purpose, reference shall be made to the actual or expected currency proportions of the Cost of the varied work, and to the proportions of various currencies specified for payment of the Agreement Price. If there is an adjustment to the Onshore EPC Price, the same shall be payable in PKR equivalent converted at National Bank of Pakistan's exchange rate for TT&OD prevailing on the date of issuance of the Variation.

13.5 Not Used

13.6 Daywork

For work of a minor or incidental nature, the Employer may instruct that a Variation shall be executed on a daywork basis. The work shall then be evaluated in accordance with the daywork schedule included in this Agreement, and the following procedure shall apply. If a daywork schedule is not included in this Agreement, this Sub-Clause shall not apply.

Before ordering Goods for the work, the Contractor shall submit quotations to the Employer. When applying for payment, the Contractor shall submit invoices, vouchers and accounts or receipts for any Goods.

Except for any items for which the daywork schedule specifies that payment is not due, the Contractor shall deliver each day to the Employer accurate statements in duplicate which shall include the following details of the resources used in executing the previous day's work:

- (a) the names, occupations and time of Contractor's Personnel;
- (b) the identification, type and time of Contractor's Equipment and Temporary Works; and
- (c) the quantities and types of Plant and Materials used.

One copy of each statement will, if correct, or when agreed, be signed by the Employer and returned to the Contractor. The Contractor shall then submit priced statements of these resources to the Employer, prior to their inclusion in the next Statement under Sub-Clause 14.3 (*Application for Interim Payments*).

14. AGREEMENT PRICE AND PAYMENT

14.1 The Agreement Price

Unless otherwise stated herein:

- (a) payment for the Works shall be made on the basis of the lump sum Agreement Price, subject to adjustments in accordance with this Agreement; and
- (b) the Contractor shall pay all taxes, duties and fees required to be paid by it under this Agreement and the Agreement Price shall not be adjusted for any of these costs.

14.1A Agreement Price Reduction

In the event the Contractor falls short of meeting the Performance Guarantees, the Contractor shall be liable to pay to the Employer such amounts as calculated below by way of reduction in the Agreement Price:

- (a) the Employer shall re-calculate the levelized electricity cost (LEC) of the Contractor by using the actual performance figures established, such as the Net Power Output and Net Heat Rate achieved, in the same LEC formula / evaluation matrix as provided in section 3 of the Bidding Document, whilst keeping all other figures the same as submitted and determined during the original bid evaluation.
- (b) If the Contractor's revised LEC is higher than the LEC that was calculated for the second lowest evaluated bidder at the time of evaluation of bids, then the price of the EPC Agreement shall be reduced (the "**Revised EPC Price**") up to the point that the revised LEC of the Contractor is the lowest.
- (c) Accordingly, the Agreement Price shall be reduced by the difference between the Revised EPC Price and the Agreement Price, if any, after adjustment of liquidated damages paid / to be paid by the Contractor pursuant to Clause 4.26.

If required, the Employer shall have the right to recover any payment due from the Contractor on account of the above by setting-off the same from any pending / future invoices of the Contractor or from the Retention Money, or by encashing the EPC Performance Security, at its sole discretion.

14.2 Advance Payment

If the Contractor had opted for Advance Payment in the Tender, then the Contractor shall furnish the Advance Payment Security to the Employer no earlier than the Effective Date and no later than seven (7) Business Days prior to the date on which the Advance Payment is to be made.

Upon receipt by the Employer of the Advance Payment Security, the EPC Performance Security and the OEM Performance Security and issuance of the Notice to Proceed by the Employer, the Contractor shall raise two separate invoices for: (i) fifteen percent (15%) of the Onshore EPC Price and (ii) fifteen percent (15%) of the Offshore EPC Price. The Employer shall within seven (7) Business Days of receipt of such invoices remit the Advance Payment to the Contractor.

If the Employer fails to remit the Advance Payment within the time stipulated in this Sub-Clause 14.2 (*Advance Payment*) and the Contractor suffers delay as result of such failure, the Contractor shall give notice to the Employer and shall be entitled subject to Sub-Clause 20.1 (*Contractor's Claims*) to an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 (*Extension of Time for Completion*).

The Advance Payment Security shall be valid until the Advance Payment has been fully repaid, and its amount shall be progressively reduced by the amount repaid by the Contractor. Such reduction shall only be applied once the GT2 has been shipped and the 'Bill of Lading'

relating to the same has been issued. If the terms of the Advance Payment Security specifies an expiry date (the "expiry date"), and the Advance Payment has not been repaid by the date fifty (50) days prior to such expiry date, the Contractor shall extend the Advance Payment Security accordingly, until the Advance Payment has been repaid. If the Contractor has failed to extend the Advance Payment Security as stated thirty (30) days prior to the expiry date, the Employer shall be entitled on such date to encash the full amount of the Advance Payment Security.

The Advance Payment shall be repaid through percentage deductions of the Agreement Price. Deductions shall commence on the next payment of the Agreement Price once fifteen percent (15%) of the Agreement Price (which shall include the Advance Payment) has been paid to the Contractor. Following this, a deduction of fifteen percent (15%) shall be made from each invoice submitted by the Contractor and such deductions shall continue until the Advance Payment has been fully repaid; provided however, the Advance Payment shall be completely repaid on or prior to the time when ninety percent (90%) of the Agreement Price has been certified for payment.

If the Advance Payment has not been repaid on or prior to the time when ninety percent (90%) of the Agreement Price has been certified for payment or prior to termination under Clause 15 (*Termination by Employer*), Clause 16 (*Suspension and Termination by Contractor*) or Clause 19 (*Force Majeure*) (as the case may be), the whole of the balance then outstanding shall immediately become due and payable by the Contractor to the Employer and the Employer shall be entitled, if such amounts are not repaid within five (5) days, to encash the full amount of the Advance Payment Security.

In the event the credit rating of the financial institution(s) issuing and/or counter guaranteeing the Advance Payment Security falls below the credit rating of an Acceptable Bank and a replacement Advance Payment Security issued and/or counter guaranteed by an Acceptable Bank is not provided to the Employer within fourteen (14) days of such occurrence, the Employer shall be entitled to (without notice to the Contractor) immediately encash the full amount of the Advance Payment Security.

Other than as set out in this Sub-Clause 14.2 (*Advance Payment*), the Advance Payment Security may also be encashed for non-delivery of Plant and/or Materials against which pre-shipment milestone payments have been made. In such event, the Employer shall be entitled to encash the full amount of the Advance Payment Security.

In the event the Contractor did not opt for Advance Payment in its Bid, this Sub-Clause 14.2 shall not apply.

14.3 **Application for Interim Payments**

The Agreement Price shall be paid following completion of each milestone (or part thereof) specified in Schedule 7 (*Payment Milestones*) (the "**Payment Milestone**"), in accordance with this Agreement.

For the avoidance of doubt, it is clarified that prior to signing of this Agreement, the Parties have incorporated all the deliverables (but not all the obligations) under the Employer's

Requirements into the relevant heads in the Bidder's Milestone Payment Schedule, reflected in Appendix-A of the attached Schedule 7 (*Payment Milestones*). It is agreed and understood that if the Contractor makes a claim for payment for achieving a particular Payment Milestone, the Employer's Engineer or the Employer's Representative, as the case may be, shall be entitled to refuse issuance of the Milestone Completion Certificate, till such time that the Contractor has completed all the requirement(s) set out in Appendix-A of Schedule 7 against a particular Payment Milestone.

However, the Employer may, at its sole discretion, require the Employer's Representative to issue the Milestone Completion Certificate even if any requirement(s) in respect of a particular Payment Milestone have not been met, subject to an undertaking by the Contractor to complete the relevant requirement as part of some other Payment Milestone as notified by the Employer.

In this regard, the Parties acknowledge that the work entailed in completing a Payment Milestone may include various smaller items that are not explicitly set out in the Employer's Requirements and / or in Schedule 7. If the Employer is of the view, in its sole discretion, that any such work should have been completed as part of a Payment Milestone, then: (i) the Employer's Representative shall reject the relevant Statement(s) and require the Contractor to complete the work before a Milestone Completion Certificate can be issued; or (ii) if the Milestone Completion Certificate has already been issued, the Employer shall have the right to withhold payment against the Payment Milestone or the following Payment Milestone till the identified work is completed by the Contractor.

Notwithstanding the above, the Employer may at its complete and sole discretion, upon the request of the Contractor, agree to make payment against partial completion of a Payment Milestone, subject to such terms and conditions as the Employer may deem appropriate; provided however that the Contractor will continue to remain obligated to complete the remaining work for achieving the Payment Milestone in terms hereof, including Schedule 7, and the remaining payment shall only be made by the Employer once the Milestone Completion Certificate for the respective Payment Milestone has been issued to and submitted by the Contractor in terms of this Agreement.

The Employer shall deduct and retain an amount of seven percent (7%) from every approved Statement as "Retention Money" until the aggregate Retention Money reaches five percent (5%) of the Agreement Price.

The Contractor shall submit a maximum of two (2) Statements in one original each and five copies each to the Employer's Representative during each month, in a form approved by the Employer's Representative, setting out the Payment Milestone(s) (or part thereof) that has been completed and the details of the amounts to which the Contractor considers itself to be entitled together with supporting documents including:

- (a) the Agreement Price to be paid against the Payment Milestone(s) (or part thereof) completed up to the end of the month (including Variations but excluding items described in sub-paragraph (b) to (f) below);

- (b) where payment relates to amount due under the Offshore LCs and/or the Onshore LCs, the Contractor shall also provide the Offshore LCs Documents and/or the Onshore LCs Documents respectively;
- (c) the amount to be retained from every approved Statement as Retention Money;
- (d) any amounts to be added and deducted for the Advance Payment and repayments in accordance with Sub-Clause 14.2 (*Advance Payment*), if applicable;
- (e) any other additions or deductions which may have become due in accordance with this Agreement or otherwise, including those under Clause 20 (*Claims, Disputes and Arbitration*); and
- (f) the deduction of amounts included in previous Statements.

Within seven (7) Business Days following completion and inspection of the part of the Works relating to the completed Payment Milestone (or part thereof) by the Employer's Representative and the Employer's Engineer, the Employer's Representative shall either:

- (i) certify and approve the completion of the Works relating to the completed Payment Milestone (or part thereof), in which case the Employer's Representative shall issue its certificate of approval to the Contractor stating that the Payment Milestone (or part thereof) has been completed and setting out each part of the Works completed (the "**Milestone Completion Certificate**"); and/or
- (ii) reject the completion of the Works relating to the relevant Payment Milestone (or part thereof), in which case it shall issue its certificate of rejection to the Contractor stating that the Payment Milestone (or part thereof) has been rejected and setting out each part of the Works rejected along with the reasons for rejection.

In the event of issuance of a rejection certificate, the Contractor shall complete / rework / modify the relevant part of Works relating to subject Payment Milestone (or part thereof) and following such completion, the procedure set out above shall be repeated.

14.4 Not Used

14.5 Not Used

14.6 Interim Payments

No amount will be paid until the Employer has received and approved the EPC Performance Security and OEM Performance Security. After the Milestone Completion Certificate has been issued by the Employer's Representative, the Contractor shall submit (i) the Statement, (ii) the supporting information submitted to the Employer's Representative pursuant to Sub-Clause 14.3 (*Application for Interim Payments*); and (iii) the Milestone Completion Certificate, all in six (6) copies to the Employer.

Payments due shall not be withheld, except that:

- (a) if anything supplied or work done by the Contractor is not in accordance with this Agreement, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and/or
- (b) if the Contractor was or is failing to perform any work or obligation in accordance with this Agreement, including but not limited to meeting the Payment Milestones in terms of Schedule 7, the Employer may withhold payment as specified in Clause 14.3 above.

The Employer may, by any payment, make any correction or modification that should properly be made to any amount previously considered due or payment made. Payment shall not be deemed to indicate the Employer's acceptance, approval, consent or satisfaction.

14.7 Timing and Mode of Payments

14.7.1 Payment Timing

The Employer shall pay to the Contractor:

- (a) The Advance Payment (if applicable) within seven (7) Business Days after the Employer receives the EPC Performance Security and OEM Performance Security in accordance with Sub-Clause 4.2 and 4.2A (EPC Performance Security and OEM Performance Security respectively), and the Advance Payment Security in accordance with Sub-Clause 14.2 (*Advance Payment*) and issuance of the Notice to Proceed by the Employer in accordance with Sub-Clause 8.1 (*Commencement of Works*).
- (b) The amount which is due in respect of each Statement, other than the Final Statement, within thirty (30) days after receiving from the Contractor, the Statement, the supporting information submitted to the Employer's Representative pursuant to Sub-Clause 14.3 (Application for Interim Payments) and the Milestone Completion Certificate.
- (c) The amount due in respect of the Final Statement, within thirty (30) days after receiving the Statement, the supporting information submitted to the Employer's Representative pursuant to Sub-Clause 14.3 (Application for Interim Payments) and the Milestone Completion Certificate from the Contractor and the written discharge from the Contractor in connection with Sub-Clause 14.11 (Application for Final Payment) and Sub-Clause 14.12 (Discharge).

14.7.2 Mode of payments for the Offshore EPC Price

All payments of the Offshore EPC Price (other than the offshore Advance Payment, if applicable) shall be made under the Offshore LCs. The first Offshore LC shall be established by the Employer within forty-five (45) days of the Commencement Date. The second Offshore LC shall be established by the Employer within six (6) months of establishing the first Offshore LC.

In the event the Contractor has opted for the Advance Payment, the first Offshore LC shall be

for an amount equal to forty percent (40%) of the Offshore EPC Price. However, in the event the Contractor has not opted for the Advance Payment, the first Offshore LC shall be for an amount equal to fifty-five percent (55%) of the Offshore EPC Price. In any event, the second Offshore LC shall be for an amount equal to forty-five percent (45%) of the Offshore EPC Price.

All claims under the Offshore LCs and payments in respect of the same through the Offshore LCs shall be in accordance with this Agreement.

The Contractor shall not be entitled to payment under the Offshore LCs, unless the following documents have been submitted to the Offshore LCs issuing bank:

(A) For all Payment Milestones:

- (i) Statement;
- (ii) Milestone Completion Certificate;
- (iii) the supporting information submitted to the Employer's Representative pursuant to Sub-Clause 14.3 (*Application for Interim Payments*);
- (iv) all other documents reasonably required for payment, including but not limited to a cumulative maximum monthly payment certificate (confirming that the Bidder's Milestone Payment Curve has not been exceeded) issued by the Employer, as stated in the Offshore LCs as mutually agreed by the Parties;

(B) For Payment Milestones relating to the delivery of Goods:

- (i) commercial invoice (including the Harmonized System Code (HS Code) for each item mentioned thereunder);
- (ii) "Bill of Lading" or "Airway Bill";
- (iii) packing list;
- (iv) certificate of origin.

((A) and (B) above are together referred to as the "**Offshore LCs Documents**").

Partial shipments shall be allowed under the Offshore LCs. Trans-shipment shall not be allowed.

All opening charges relating to the opening of the Offshore LCs shall be on the account of the Employer. However, if the Contractor requires the Offshore LCs to be confirmed, confirmation charges shall be borne by the Contractor.

All costs resulting from any extensions in the Offshore LCs due to reasons attributable to the Contractor shall be at the Contractor's account and risk.

14.7.3 Mode of payments for the Onshore EPC Price

All payments of the Onshore EPC Price (other than the onshore Advance Payment, if applicable) shall be made under the Onshore LCs. The first Onshore LC shall be established by the Employer within forty-five (45) days of the Commencement Date. The second Onshore LC shall be established by the Employer within six (6) months of establishing the first Onshore LC.

In the event the Contractor has opted for the Advance Payment, the first Onshore LC shall be for an amount equal to forty percent (40%) of the Onshore EPC Price. However, in the event the Contractor has not opted for the Advance Payment, the first Onshore LC shall be for an amount equal to fifty-five percent (55%) of the Onshore EPC Price. In any event, the second Onshore LC shall be for an amount equal to forty-five percent (45%) of the Onshore EPC Price.

All claims under the Onshore LCs and payments in respect of the same through the Onshore LCs shall be in accordance with this Agreement.

The Contractor shall not be entitled to payment under the Onshore LCs, unless the following documents have been submitted to the Onshore LCs issuing bank:

For all Payment Milestones:

- (i) Statement;
- (ii) Milestone Completion Certificate;
- (iii) the supporting information submitted to the Employer's Representative pursuant to Sub-Clause 14.3 (*Application for Interim Payments*); and
- (iv) all other documents reasonably required for payment, including but not limited to a cumulative maximum monthly payment certificate (confirming that the Bidder's Milestone Payment Curve has not been exceeded) issued by the Employer, as stated in the Onshore LC as mutually agreed by the Parties.

((i) to (iv) above are together referred to as the "**Onshore LCs Documents**").

All opening charges relating to the opening of the Onshore LCs shall be on the account of the Employer. However, if the Contractor requires the Onshore LCs to be confirmed, confirmation charges shall be borne by the Contractor.

All costs resulting from any extensions in the Onshore LCs due to reasons attributable to the Contractor shall be at the Contractor's account and risk.

14.7.4 Non establishment of LCs

In the event the Employer, for reasons not attributable to the Contractor, does not establish the second Offshore LC and/or the second Onshore LC (as applicable) within the time stipulated herein, the Contractor may choose to (i) terminate this Agreement and any monies paid under

the first Offshore LC and/or first Onshore LC (as applicable) shall stand forfeited in favour of the Contractor; or (ii) continue to perform its obligations under this Agreement and if the Contractor suffers delay as result of the Employer not establishing the second Offshore LC and/or second Onshore LC (as applicable) within the time stipulated herein, the Contractor may give notice to the Employer and shall be entitled subject to Sub-Clause 20.1 (*Contractor's Claims*) to an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 (*Extension of Time for Completion*).

14.8 **Delayed Payment**

Late payments by either Party of amounts due and payable under this Agreement shall bear interest at a rate per annum calculated at the simple annual rates given as under:

For Local Currency Payments = KIBOR (Karachi Inter Bank Offered Rate).

For Foreign Currency Payments = LIBOR (London Inter Bank Offered Rate).

14.9 **Payment of Retention Money**

Within thirty (30) days from issuance of the Taking-Over Certificate for the Facility, half of the Retention Money shall be paid to the Contractor.

The outstanding balance of the Retention Money shall be paid to the Contractor within fourteen (14) Business Days of expiry of the Punch List Completion Period for the Facility.

However, if any work remains to be executed under Clause 11 (*Defects Liability*), the Employer shall be entitled to withhold the estimated cost of this work until it has been executed.

14.10 **Statement at Completion**

Within eighty-four (84) days after receiving the Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility (as applicable) for the relevant Works, the Contractor shall submit to the Employer six copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 14.3(*Application for Interim Payments*), showing:

- (a) the value of all work done in accordance with this Agreement up to the date stated in the Taking-Over Certificate GT1, Taking-Over Certificate GT2 and/or Taking-Over Certificate for the Facility (as applicable) for the relevant Works;
- (b) any further sums which the Contractor considers to be due; and
- (c) an estimate of any other amounts which the Contractor considers will become due to it under this Agreement. Estimated amounts shall be shown separately in this Statement at completion.

The Employer shall then give notice to the Contractor in accordance with Sub-Clause 14.6(*Interim Payments*) and make payment in accordance with Sub-Clause 14.7(*Timing and Mode of Payments*).

14.11 **Application for Final Payment**

Within fifty-six (56) days after receiving the Performance Certificate, the Contractor shall submit to the Employer, six copies of a draft final statement with supporting documents showing in detail in a form approved by the Employer:

- (a) the value of all work done in accordance with this Agreement; and
- (b) any further sums which the Contractor considers to be due to it under this Agreement or otherwise.

If the Employer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Employer may reasonably require and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Employer the final statement as agreed. This agreed statement is referred to in this Agreement as the "**Final Statement**".

However, if, following discussions between the Parties and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Employer shall pay the agreed parts of the draft final statement in accordance with Sub-Clause 14.6 (*Interim Payments*) and Sub-Clause 14.7 (*Timing and Mode of Payments*).

Thereafter, if the dispute is finally resolved under Sub-Clause 20.4 (*Obtaining Dispute Adjudication Board's Decision*) or Sub-Clause 20.5(*Amicable Settlement*), the Contractor shall then prepare and submit to the Employer a Final Statement.

14.12 **Discharge**

When submitting the Final Statement, the Contractor shall submit a written discharge which confirms that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor under or in connection with this Agreement. This discharge may state that it becomes effective after payment due under the Final Statement has been made and the EPC Performance Security referred to in Sub-Clause 4.2 (*Performance Security*) has been returned to the Contractor.

14.13 **Final Payment**

In accordance with sub-paragraph (c) of Sub-Clause 14.7(*Timing and Mode of Payments*), the Employer shall pay to the Contractor the amount which is finally due, less all amounts previously paid by the Employer, all unpaid and due liquidated damages (if any) by the Contractor to the Employer and any deductions in accordance with Sub-Clause 2.5(*Employer's Claims*).

14.14 Cessation of Employer's Liability

The Employer shall not be liable to the Contractor for any matter or thing under or in connection with this Agreement or execution of the Works, except to the extent that the Contractor shall have included an amount expressly for it:

- (a) in the Final Statement; and also
- (b) (except for matters or things arising after the issuance of the Taking-Over Certificate for the Facility in relation the Works) in the Statement at completion described in Sub-Clause 14.10(*Statement at Completion*).

However, this Sub-Clause shall not limit the Employer's liability under its indemnification obligations, or the Employer's liability in any case of fraud, deliberate default or reckless misconduct by the Employer.

14.15 Currencies of Payment

The Offshore EPC Price shall be paid in Foreign Currency.

The Onshore EPC Price shall be paid in Local Currency (not adjustable for any variation in the foreign exchange rate).

14.16 NOT USED

14.17 Taxes, Levies and Duties

The Employer shall reimburse the Contractor in relation to the payment of Customs Duty, Sales Tax, Income Tax, Provincial Infrastructure Development Cess and Federal Excise Duty, if any, applicable on the import of equipment only that is to form part of the Permanent Works.

Other than the taxes stated in the immediately preceding paragraph to be payable by the Employer, all other federal, provincial or local taxes applicable in respect of execution of contractual work or chargeable in respect of contract billings, including but not limited to any tax, duty, cess, fee, fine, penalty, additional tax, surcharge and the withholding tax applicable on local or foreign Contractor, Subcontractors, suppliers, service provider, employees or labor hired by the Contractor for the Project or the federal or the provincial sales tax chargeable at the time of issuance of invoices against Agreement Price or payable in respect of any service used for the purposes of contractual work shall be borne by the Contractor and shall be deemed to be included in the Agreement Price.

Except where the Contractor produces a certificate from the relevant tax authorities for Nil/reduced withholding of taxes, the Employer shall be entitled to make deductions for taxes from its respective payments to the Contractor (i) as may be required under the applicable Laws of the Country; or (ii) where the Contractor has provided a certificate from the relevant tax authorities for Nil/reduced withholding, at such reduced rates of withholding, provided

that the Employer shall submit to the Contractor the relevant tax payment receipt and documentation that evidences the relevant deductions by the Employer on account of taxes.

The Contractor hereby confirms that (i) it has established a permanent establishment (PE) in Pakistan in order to perform the onshore portion of the Works for which a certificate from the 'Commissioner Inland Revenue' will be provided to the Employer; and (ii) all payments, in relation to the Onshore EPC Price, received by the Contractor from the Employer under this Agreement shall be taxed in the hands of the Contractor's PE. In the event the status of the Contractor differs from the aforesaid and it is claimed that the Employer has made deductions on account of withholding tax from its respective payments to the Contractor at the wrong rate, the Contractor shall be responsible for any tax liabilities. The Contractor hereby agrees to indemnify, defend and hold the Employer harmless from any and all taxes, liabilities, damages, costs, penalties, fines, expenses, fees (including attorney's fees) and charges of any nature associated with any non-compliance and violations by the Contractor of this Sub-Clause 14.17 (*Taxes, Levies and Duties*).

15. TERMINATION BY EMPLOYER

15.1 Notice to Correct

If the Contractor fails to carry out any obligation under this Agreement, the Employer may by notice require the Contractor to make good the failure and to remedy it within the time specified in such notice.

15.2 Termination by Employer

The Employer shall be entitled to terminate this Agreement, without prejudice to the right or exercise of any other right or remedy provided to the Employer under this Agreement or the Law:

- (a) if the Contractor fails to comply with the instructions under Sub-Clause 15.1 (*Notice to Correct*);
- (b) if the Contractor does not demonstrate the intention to continue performance of its obligations under this Agreement to the satisfaction of the Employer or cannot demonstrate, to the satisfaction of the Employer, that sufficient capability is employed in the performance of the Works to achieve completion of the Works or otherwise cannot achieve completion of the relevant Works within the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility being applicable to such Works;
- (c) if the Contractor fails:
 - (i) to commence the Works following the Commencement Date and proceed with the Works in accordance with Clause 8 (*Commencement, Delays and Suspension*);
 - (ii) to comply with a notice issued under Sub-Clause 7.5 (*Rejection*) or Sub-

Clause 7.6 (*Remedial Work*);

- (iii) complete the Works within the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility (as applicable) and the maximum amount of delay damages payable under the Sub-Clause 8.7 (*Damages*), have been recovered;
- (d) if the Contractor subcontracts the whole of the Works or assigns this Agreement without the prior written approval of the Employer;
- (e) if the Contractor becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against it, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events;
- (f) if the Contractor gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:
 - (i) for doing or forbearing to do any action in relation to this Agreement; or
 - (ii) for showing or forbearing to show favour or disfavour to any person in relation to this Agreement;or if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (f). Except that lawful inducements and rewards to Contractor's Personnel shall not entitle termination;
- (g) if the Contractor commits a material breach of this Agreement;
- (h) if the Contractor has made any statement, representation or warranty in this Agreement and the same proves to be incorrect, in any material respect, when made or when reaffirmed and such incorrect statement, representation or warranty having a material adverse effect on the Employer's ability to perform its obligations under this Agreement or having a material adverse effect on the rights or obligations of the Employer under this Agreement;
- (i) if the Contractor fails to furnish, keep valid and maintain in full effect the EPC Performance Security and/or the Advance Payment Security (if the Contractor has opted for Advance Payment), or fails to cause the OEM Performance Security to remain valid and maintained in full effect by the GT OEM, or fails to furnish, keep valid and maintain in full effect the Parent Company Guarantee, each in accordance with this Agreement;
- (j) if the Works performed by the Contractor hereunder and/or the Facility, in each case, fail to meet the Applicable Standards in any material respect;
- (k) pursuant to Sub-Clause 9.4(b);

- (l) if the Contractor's maximum liability towards the Employer in respect of delay damages has been reached;
- (m) termination of the Power Purchase Agreement or the Implementation Agreement entered into or to be entered into by the Employer and the Government of Pakistan, solely due to a breach of or non-performance by the Contractor of any of its obligations under this Agreement;
- (n) if the Contractor fails to achieve the Performance Guarantees and the Contractor's maximum liability towards the Employer in respect of liquidated damages under Sub-Clause 4.26 (*Performance Guarantees*) has been reached;
- (o) tampering by the Contractor or its employees with the Purchaser Interconnection Facilities, metering system or the back-up metering system; or
- (p) pursuant to Sub-Clause 8.1 (*Commencement of Works*).

In any of these events or circumstances, the Employer may, upon giving fourteen (14) days' notice to the Contractor, terminate the Agreement and expel the Contractor from the Site. Except that, in the case of sub-paragraphs (a), (c) (iii), (d), (e), (f), (i), (k), (l), and (m), the Employer may by notice terminate this Agreement immediately.

The Employer's election to terminate this Agreement shall not prejudice any other rights of the Employer, under this Agreement or otherwise.

The Contractor shall then leave the Site and deliver any required Goods, all Contractor's Documents, and other design documents made by or for it, to the Employer. However, the Contractor shall use its best efforts to comply immediately with any reasonable instructions included in the notice (i) for the assignment of any subcontract, and (ii) for the protection of life or property or for the safety of the Works.

After termination, the Employer may complete the Works and/or arrange for any other entities to do so. The Employer and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor.

The Employer shall then give notice that the Contractor's Equipment and Temporary Works will be released to the Contractor at or near the Site. The Contractor shall promptly arrange their removal, at the risk and cost of the Contractor. However, if by this time the Contractor has failed to make a payment due to the Employer, these items may be sold by the Employer in order to recover this payment. Any balance of the proceeds shall then be paid to the Contractor.

15.3 Valuation at Date of Termination

As soon as practicable after a notice of termination under Sub-Clause 15.2 (*Termination by Employer*) has taken effect, the Employer shall proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine the value of the Works, Goods and Contractor's

Documents, and any other sums due to the Contractor for work executed in accordance with this Agreement.

15.4 **Payment after Termination**

After a notice of termination under Sub-Clause 15.2 (*Termination by Employer*) has taken effect, the Employer may:

- (a) proceed in accordance with Sub-Clause 2.5 (*Employer's Claims*);
- (b) with-hold further payments to the Contractor until the costs of design, execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Employer, have been established; and/or
- (c) recover from the Contractor any losses and damages incurred by the Employer and any extra costs of completing the Works, after allowing for any sum due to the Contractor under Sub-Clause 15.3 (*Valuation at Date of Termination*). After recovering any such losses, damages and extra costs, the Employer shall pay any balance to the Contractor.

15.5 **Employer's Entitlement to Termination**

The Employer shall be entitled to terminate this Agreement, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect twenty-eight (28) days after the later of the dates on which the Contractor receives this notice or the Employer returns the EPC Performance Security and, if applicable, the OEM Performance Security. In the event of such termination, the Contractor shall proceed in accordance with section 16.3 (*Cessation of Work and Removal of Contractor's Equipment*).

Upon such termination, the Employer shall pay to the Contractor:

- (a) the amounts payable for any work carried out for which a price is stated in this Agreement;
- (b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery. The Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;
- (c) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and
- (d) the Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.

15.6 Vendor's Warranties

Notwithstanding which Party initiates termination of this Agreement, within fourteen (14) days following termination, the Contractor shall submit to the Employer information and details of all subcontracts and purchase orders relating to the Works and, upon the Employer's notification, within fourteen (14) days, assign to the Employer all such purchase orders and subcontracts relating to the Works. Further, the Contractor shall ensure that all performance warranties and guarantees provided by the Subcontractors / vendors / suppliers to the Contractor shall be on termination of this Agreement, immediately and automatically transferred to the Employer. The Employer shall be under no obligation to return the OEM Performance Security, EPC Performance Security and the Advance Payment Security (if applicable) until the Contractor has fulfilled its obligations under this Sub-Clause.

16. SUSPENSION AND TERMINATION BY CONTRACTOR

16.1 Contractor's Entitlement to Suspend Work

If the Employer fails to comply with Sub-Clause 14.7 (*Timing and Mode of Payments*), the Contractor may, after giving not less than twenty-eight (28) days' notice to the Employer, suspend work (or reduce the pace of work) unless and until the Contractor has received reasonable evidence or payment, as the case may be and as described in the notice.

The Contractor's action shall not prejudice his entitlements to financing charges under Sub-Clause 14.8 (*Delayed Payment*) and to termination under Sub-Clause 16.2 (*Termination by Contractor*).

If the Contractor subsequently receives such payment (as described in the relevant Sub-Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.

If the Contractor suffers delay and/or incurs Cost as a result of suspending work (or reducing the rate of work) in accordance with this Sub-Clause, the Contractor shall give notice to the Employer and shall be entitled subject to Sub-Clause 20.1 (*Contractor's Claims*) to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 (*Extension of Time for Completion*); and
- (b) payment of any such Cost, which shall be added to the Agreement Price.

After receiving this notice, the Employer shall proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine these matters.

16.2 Termination by Contractor

The Contractor shall be entitled to terminate this Agreement if:

- (a) Not Used;

- (b) the Contractor does not receive the amount due within fifty-six (56) days after the expiry of the time stated in Sub-Clause 14.7 (*Timing and Mode of Payments*) within which payment is to be made (except for deductions in accordance with Sub-Clause 2.5 (*Employer's Claims*));
- (c) the Employer substantially fails to perform his obligations under this Agreement;
- (d) the Employer fails to comply with Sub-Clause 1.7 (*Assignment*);
- (e) a prolonged suspension affects the whole of the Works as described in Sub-Clause 8.11 (*Prolonged Suspension*);
- (f) the Employer becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against it, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events; or
- (g) any of the events specified in Sub-Clause 8.1 (*Commencement of Works*) occurs.

In any of these events or circumstances, the Contractor may, upon giving fourteen (14) days' notice to the Employer, terminate this Agreement.

The Contractor's election to terminate this Agreement shall not prejudice any other rights of the Contractor, under this Agreement or otherwise.

16.3 Cessation of Work and Removal of Contractor's Equipment

After a notice of termination under Sub-Clause 15.5 (*Employer's Entitlement to Termination*), Sub-Clause 16.2 (*Termination by Contractor*) or Sub-Clause 19.8 (*Optional Termination, Payment and Release*) has taken effect, the Contractor shall promptly:

- (a) cease all further work, except for such work as may have been instructed by the Employer for the protection of life or property or for the safety of the Works;
- (b) hand over Contractor's Documents, Plant, Materials and other work, for which the Contractor has received payment; and
- (c) remove all other Goods from the Site, except as necessary for safety, and leave the Site.

16.4 Payment on Termination

After a notice of termination under Sub-Clause 16.2 (*Termination by Contractor*) has taken effect, the Employer shall promptly:

- (a) return the Advance Payment Security (if applicable and not already done so), EPC Performance Security and OEM Performance Security to the Contractor;

- (b) pay the Contractor in accordance with Sub-Clause 19.8 (*Optional Termination, Payment and Release*); and
- (c) pay to the Contractor the amount of any loss sustained by the Contractor as a result of this termination subject to Sub-Clause 20.1 (*Contractor's Claims*).

17. RISK AND RESPONSIBILITY

17.1 Indemnities

The Contractor shall indemnify and hold harmless the Employer, the Employer's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:

- (a) bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of the design, execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, wilful act or breach of this Agreement by the Employer, the Employer's Personnel, or any of their respective agents; and
- (b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss:
 - (i) arises out of or in the course of or by reason of the design, execution and completion of the Works and the remedying of any defects; and
 - (ii) is not attributable to any negligence, wilful act or breach of this Agreement by the Employer, the Employer's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

The Employer shall indemnify and hold harmless the Contractor, the Contractor's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of bodily injury, sickness, disease or death, which is attributable to any negligence, wilful act or breach of this Agreement by the Employer, the Employer's Personnel, or any of their respective agents.

17.2 Contractor's Care of the Works

The Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the issuance of the Taking-Over Certificate for the Facility.

If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with this Agreement.

17.3 **Not Used**

17.4 **Not Used**

17.5 **Intellectual and Industrial Property Rights**

In this Sub-Clause, "infringement" means an infringement (or alleged infringement) of any patent, registered design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works; and "claim" means a claim (or proceedings pursuing a claim) alleging an infringement.

Whenever a Party does not give notice to the other Party of any, claim within twenty-eight (28) days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.

Where the Contractor's compliance with the Employer's Requirements or instructions issued by the Employer would result in a claim, for infringement, against the Contractor, the Contractor shall immediately notify the Employer of the same. The Employer's Requirements or instructions issued by the Employer shall be modified appropriately to ensure that compliance with the same would not result in infringement.

The Employer shall indemnify and hold the Contractor harmless from and against any claim alleging an infringement which is or was a result of any Works being used by the Employer:

- (i) for a purpose other than that indicated by, or reasonably to be inferred from, this Agreement; or
- (ii) in conjunction with anything not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in this Agreement.

The Contractor shall indemnify and hold the Employer harmless from and against any other claim which arises out of or in relation to (i) the Contractor's design, manufacture, construction or execution of the Works, (ii) the use of Contractor's Equipment, or (iii) the proper use of the Works.

If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.

17.6 **Limitation of Liability**

Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contract or for any indirect or consequential loss or damage which may be suffered by the other Party in connection with this Agreement, other than under Sub-Clause 16.4 (*Payment on Termination*) and Sub-Clause 17.1 (*Indemnities*).

The total liability of the Contractor to the Employer, under or in connection with this Agreement other than under Sub-Clause 4.18 (*Protection of the Environment*), Sub-Clause 4.19 (*Electricity, Water and Gas*), Sub-Clause 17.1 (*Indemnities*) and Sub-Clause 17.5 (*Intellectual and Industrial Property Rights*), shall not exceed the Agreement Price, as at the Effective Date.

This Sub-Clause shall not limit liability in any case of fraud, wilful misconduct or gross negligence by the defaulting Party.

18. INSURANCE

18.1 Employer Insurance

- (a) Without limitation to the Contractor's liabilities, duties, obligations or responsibilities under this Agreement, the Employer shall, at its own cost and expense, obtain and maintain in full force and effect, the policies of insurance which shall be subject to the deductibles, exclusions, extensions, conditions and other limitations as prescribed in Part B of Schedule 9 (*Insurance*) or as agreed between the Parties. Such policies shall name, among others, the Contractor, the Subcontractor and the Financier as co-insureds and shall include an insurers' waiver of subrogation in favour of all such co-insureds for losses or claims arising out of the performance of this Agreement other than where any of the foregoing has committed a vitiating act in relation to the relevant policy.
- (b) The insurance coverages listed under Part B of Schedule 9 (*Insurance*) are minimum coverages required to be purchased by the Employer under this Agreement. Should any loss occur for which the Contractor is responsible, the Contractor shall be liable for the full amount of the loss, including the amount in excess of the Employer's insurance limits and including the amount of any deductible specified in the Owners insurance policy except in respect of bodily injury, sickness, disease or death, which is attributable to any negligence, wilful act or breach of this Agreement by the Employer, the Employer's Personnel, or any of their respective agents.

18.2 Contractor Insurance

- (a) Subject to the requirements of applicable Laws, insurance coverage required under section 18.2 shall be placed with reputable insurance company or companies authorized to conduct business in Pakistan and/or with permitted international reinsurance company or companies having A.M Best rating of atleast "A: VIII" or a Standard & Poor rating of "A-" as a minimum (subject to Employer's approval, not to be unreasonably withheld).
- (b) Except where Subcontractor is covered by the policies taken out by either the Employer or the Contractor, the Contractor shall ensure that the Contractor's Subcontractor (of any tier) shall take out and maintain in effect adequate insurance policies for their own employees, vehicles, machinery and equipment, marine and aviation liabilities (if applicable) and all off the Site work executed by them under the relevant subcontract and for employer's liability and workmen's compensation

insurance that the Subcontractors (at any tier) shall name the Employer and the Contractor as co-insured. The Contractor shall procure that the Contractor's Subcontractors (at any tier) shall comply with the obligations consistent with the requirements of this Sub-Clause 18.2, including giving the Employer in each Subcontract the rights specified in Sub-Clauses 18.2(d) and (e).

- (c) The insurance coverages listed under Part A of Schedule 9 (*Insurance*) are minimum coverages required to be purchased by the Contractor under this Agreement. Should any loss occur for which the Contractor is responsible, the Contractor shall be liable for the full amount of the loss, including the amount in excess of the Contractor's insurance limits and including the amount of any deductible specified in the Contractor's insurance policy.
- (d) If requested by the Employer, the Contractor shall have its insurance carrier(s) furnish to the Employer, insurance certificates specifying the types and amounts of coverage in effect and the expiration dates of each policy, and a statement that no insurance will be cancelled or materially changed without thirty (30) days prior written notice to the Employer. If requested by the Employer, the Contractor shall permit the Employer to examine the original insurance policies or, at the Employer's option, the Contractor shall furnish the Employer with copies of insurance policies certified by the carrier(s) as being true and complete copies of the original policies. The Employer's approval of, or non-objection to, the Contractor's insurance certificates or policies shall not relieve the Contractor of any obligation or liability under this Agreement.
- (e) In all insurance coverage purchased by the Contractor pursuant to Sub-Clause 18.2(a), the Contractor shall have the insurance carriers waive all rights of subrogation against the Employer, their affiliates and any of their officers, directors, employees, agents and appointed representatives. Comprehensive General and Automobile Liability and Marine Liability Insurance (if required) policies shall designate the Employer as an additional insured as regards their liabilities for Work performed by the Contractor pursuant to this Agreement. Such policies shall contain a cross-liability clause so that the Employer and the Contractor are both regarded as third parties to each other.
- (f) Without prejudice to Sub-Clause 18.2(d), not later than twenty-five (25) Business Days after the date any of the insurance policies required to be obtained and maintained in accordance with this Sub-Clause 18.2 are obtained and thereafter renewed in accordance with the terms of the relevant insurance policies, the Contractor shall cause its insurers or agents to provide the Employer with certificates of insurance evidencing such policies and coverage.
- (g) If the Contractor fails to procure or maintain any insurance policy or policy endorsement required pursuant to this Sub-Clause 18.2 or an insurance policy otherwise fails to comply with the requirements of this Sub-Clause 18.2 at any time, the Employer shall have the right to procure such insurance policy or policy endorsement at the Contractor's expense; so long as the Employer has given thirty (30) days prior written notice to the Contractor of its intention to exercise such right,

unless such intention arises from the Contractor's non-payment of premiums for existing insurance, in which case the Employer shall have given the Contractor at least five (5) days prior written notice of such intention.

- (h) If the Contractor fails to reimburse the Employer for any premiums of policies the Employer obtains on the Contractor's behalf within twenty-five (25) Business Days of being notified of the Employer's payment thereof, the Employer shall be entitled to deduct such amount or amounts from any invoice(s) of the Contractor.

18.3 Contractor Obligations

- (a) The Contractor shall provide the Employer with written details of any occurrences likely to give rise to a claim. In respect of the insurances provided by the Employer under Part B of Schedule 9 (*Insurance*), the Contractor shall not give any release or make any compromise with any insurers without prior written consent of the Employer. All costs and incidental expenses incurred in relation to the preparation of claims under the policies of insurance, listed under Part A and Part B of Schedule 9 (*Insurance*), arising out of matters for which the Contractor is responsible under this Agreement, shall be borne by the Contractor.
- (b) The Contractor shall, and ensure that its Subcontractor and vendors where applicable shall, notify the marine warranty surveyor regarding critical item shipment prior to any loading, stowage, lighterage or unloading operations of the critical Items as identified by marine insurers. Preliminary notice shall be given at least fifteen (15) days before the ex-works date and as much advance warning as possible before all other movements including detailed data of the shipment. Late notification may compromise availability of the surveyor, which will in turn compromise insurance coverage.
- (c) The Contractor shall, and ensure that its Subcontractor and vendors where applicable shall, cooperate with any loss adjusters, surveyors or others in connection with the insurances; observe and fulfil the terms and conditions of the insurance policies including marine warranty and survey requirements and risk management recommendations of marine cargo insurance surveyor appointed by the Employer's marine insurers in relation to shipment of critical items, and in the event that the Contractor or its Subcontractors and/or vendors fail to do so, the Contractor shall indemnify the Employer against all damage, expenses, loss of liability claims resulting from any such failure.
- (d) The Contractor shall, and ensure that its Subcontractors and vendors where applicable shall, cooperate with and follow the reasonable risk improvement measures required by the Employer's construction and erection all risks insurers in relation to the Works.
- (e) Prior to cover inception and throughout the term of this Agreement, the Contractor shall ensure that full disclosure is made by providing, in a timely manner, to the Employer and to its insurers providing insurance cover in respect of any risks relating to the performance of the Works, of:

- (i) all information which the insurers especially request to be disclosed;
 - (ii) all information which is of a type which insurance brokers / advisors in relation to the relevant policy advise should be disclosed to the insurers;
 - (iii) all technical information which may be material in any way to any insurance policy;
 - (iv) details of any significant problems encountered in relation to the Works and details of any design manufacturing or operational problems encountered anywhere in the world with materials, plant, equipment or spare parts; which may be material in any way to any insurance policy; and
 - (v) all other information which the Contractor, acting in accordance with 'good industry practice' could reasonably consider to be material to any insurance policy.
- (f) The Contractor shall put in place appropriate internal reporting procedures to ensure that full disclosure as described in Sub-Clause 18.3(e) is made by the management and managers of the Contractor in a timely manner throughout the term of this Agreement.
 - (g) The Contractor shall give the Employer prompt written notice, and in any event within five (5) days of the occurrence of the relevant incident, of any incident which results or may result in any claim, accompanied by full details of the relevant incident.
 - (h) The Contractor shall indemnify, defend and hold the Employer harmless against the amount of any loss incurred or suffered by the Employer as a result of not being able to recover under any insurance policy or policy endorsement required to be obtained or maintained pursuant to this Clause 18 (*Insurance*) as a result of a misrepresentation, non-disclosure, want of due diligence or breach of declaration, condition or warranty contained in the relevant insurance policy by management or managers of the Contractor or any Subcontractor.
 - (i) In respect of any claim arising under the insurance policies provided by the Contractor's insurers, unless such claims arise from the wilful misconduct or gross negligence of any Employer's Personnel, the Contractor shall cause all of its insurers under the insurance policies placed in accordance with Schedule 9 (*Insurance*) to waive all rights of subrogation against each Employer Personnel.
 - (j) The Contractor shall not take or agree to take any action or omit to do anything which may prejudice its or any other insured party's right under any of the insurance policies obtained and maintained (or required to be obtained and maintained) under Schedule 9 (*Insurance*).
 - (k) The Contractor shall comply with all warranties, declarations, terms, conditions and other requirements or provisions of all the insurance policies maintained by the

Employer and the Contractor shall not do or omit to do anything which may render voidable, void, unenforceable or otherwise ineffective any such policy or entitle insurers to avoid any liability there under including as relating to marine warranty surveys.

- (l) The Contractor shall notify its respective insurers and the Employer of any changes in the nature, extent or programme for the execution of the Works and comply with any other requirements imposed by insurers.

19. FORCE MAJEURE

19.1 Definition of Force Majeure

A “**Force Majeure Event**” means any event or circumstance or combination of events or circumstances (including the effects thereof) that is beyond the reasonable control of a Party and that on or after the signing date of this Agreement, materially and adversely affects the performance by such affected Party of its obligations under or pursuant to this Agreement; provided, however, that such material and adverse effect could not have been prevented, overcome or remedied in whole or in part by the affected Party through the exercise of diligence and reasonable care, it being understood and agreed that reasonable care includes acts and activities to protect the Facility from a casualty or other event that are reasonable in light of the probability of the occurrence of such event, the probable effect of such event if it should occur, and the likely efficacy of the protection measures. “Force Majeure Events” hereunder shall include the following events and circumstances (including the effects thereof), but only to the extent that each satisfies the above requirements:

- (a) the following political events that occur in the Country, which are also a Force Majeure Event:
 - (i) any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, civil commotion, or act of taking over campaign of terrorism or political sabotage; or
 - (ii) any strike, work-to-rule, go-slow, or analogous labor action that is politically motivated and is widespread or nationwide;
- (b) any Change in Law;
- (c) other events beyond the reasonable control of the affected Party, including, but not limited to:
 - (i) lightning, fire, earthquake, tsunami, flood, cyclone, typhoon, or tornado; or
 - (ii) any strike, work-to-rule, go-slow, or analogous labor action that is not politically motivated and is not widespread or nationwide, provided it is not caused by disputes between employees or the Contractor or the Subcontractor; or

- (iii) explosion, chemical contamination, radioactive contamination, or ionizing radiation; or
- (iv) epidemic or plague;
- (d) Force Majeure Events shall not include the following events or circumstances except and to the extent that such events or circumstances occur directly as a consequence of a Force Majeure Event:
 - (i) late delivery or interruption in the delivery of machinery, equipment materials, spare parts or consumables;
 - (ii) a delay in the performance of the Contractor or any Subcontractor (including each of their representatives, agents, executives, employees, subcontractors, vendors, suppliers and other personnel); or
 - (iii) normal wear and tear or random flaws in materials, machinery and equipment; or
 - (iv) breakdown in machinery or equipment; or
 - (v) lack of funds.

19.2 Notification Obligations

- (a) If by reason of a Force Majeure Event or events a Party is wholly or partially unable to carry out its obligations under this Agreement, the affected Party shall:
 - (i) give the other Party notice of the Force Majeure Event(s) as soon as practicable, but in any event, not later than the later of forty-eight (48) hours after the affected Party becomes aware of the occurrence of the Force Majeure Event(s) or six (6) hours after the resumption of any means of providing notice between the Employer and the Contractor, and
 - (ii) give the other Party a second notice, describing the Force Majeure Event(s) in reasonable detail and, to the extent which can be reasonably determined at the time of such notice, providing a preliminary evaluation of the obligations affected, a preliminary estimate of the period of time that the affected Party shall be unable to perform such obligations and other relevant matters as soon as practicable, but in any event, not later than seven (7) days after the initial notice of the occurrence of the Force Majeure Event(s) is given by the affected Party. When appropriate, or when reasonably requested so to do by the other Party, the affected Party shall provide further notices to the other Party more fully describing the Force Majeure Event(s) and its cause(s) and providing or updating information relating to the efforts of the affected Party to avoid and/or to mitigate the effect(s) thereof and estimates, to the extent practicable, of the time that the affected Party reasonably expects it shall be

unable to carry out any of its affected obligations due to the Force Majeure Event(s).

- (b) The affected Party shall provide notice to the other Party:
- (i) of the cessation of the Force Majeure Event notified under Sub-Clause 19.2(a) along with an estimate of the date it would be able to recommence performance of its obligations under the Agreement; and
 - (ii) the date it was able to recommence performance of its obligations under this Agreement;

as soon as possible but, in any event, no later than seven (7) days after the occurrence of each of the events mentioned in clauses (i) and (ii) hereof.

- (c) Failure by the affected Party to give written notice of a Force Majeure Event to the other Party within the forty-eight (48) hour period or six (6) hour period required by Sub-Clause 19.2(a) shall not prevent the affected Party from giving such notice at a later time; provided, however, that in such case the affected Party shall not be excused pursuant to Sub-Clause 19.7 (*Payment to Contractor & Extension of Time For Completion Due to Force Majeure Event*) for any failure or delay in complying with its obligations under or pursuant to this Agreement until such notice has been given. If the said notice is given within the forty-eight (48) hour period or six (6) hour period required by Sub-Clause 19.2(a), hereinabove, the affected Party shall be excused for such failure or delay pursuant to Sub-Clause 19.7 (*Payment to Contractor & Extension of Time for Completion Due to Force Majeure Event*) from the date of commencement of the relevant Force Majeure Event.

19.3 Not Used

19.4 Duty to Mitigate

The affected Party shall use all reasonable efforts and shall ensure that it and its contractors use all reasonable efforts to mitigate the effects of a Force Majeure Event.

19.5 Contractor's Responsibility

Upon occurrence of a Force Majeure Event which affects performance by the Contractor of its obligations, the Contractor shall promptly notify the Employer's Representative in accordance with the provisions of Sub-Clause 19.2 (*Notification Obligations*) and shall continue to perform its obligations as far as reasonably practicable. The Contractor shall also notify the Employer's Representative of any proposals, including any reasonable alternative means for performance, but shall not effect such proposals without the consent of the Employer's Representative.

19.6 Employer's Responsibility

Upon occurrence of a Force Majeure Event which affects performance by the Employer of its obligations, the Employer shall promptly notify the Contractor in accordance with the

provisions of Sub-Clause 19.2 (*Notification Obligations*) and shall continue to perform its obligations as far as reasonably practicable. The Employer shall also notify the Contractor of any proposals with the objectives of completing the Works and mitigating any increased costs to the Employer and the Contractor.

19.7 Payment to Contractor & Extension of Time for Completion Due to Force Majeure Event

If as consequence of a Force Majeure Event:

- (a) the Contractor is to incur additional Cost and/or additional time in complying with proposals under Sub-Clause 19.5 (*Contractor's Responsibility*) or Sub-Clause 19.6 (*Employer's Responsibility*); and/or
- (b) any performance deadline (including any extensions to Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility (as applicable) resulting due to a Force Majeure Event) that the Contractor is obligated to meet under the Agreement is to be extended pursuant to the provisions of this Sub-Clause 19.7 (*Payment to Contractor & Extension of Time for Completion Due to Force Majeure Event*),

then, the Contractor shall be entitled, subject to Sub-Clause 20.1 (*Contractor's Claims*), to:

- (i) an extension of time for any such delay, if completion is or will be delayed under Sub-Clause 8.4 (*Extension of Time for Completion*); and
- (ii) payment of any such Cost, which shall be added to the Agreement Price.

After receiving this notice, the Employer shall proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine these matters, provided, however, that no relief, including the extension of performance deadlines and Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility (as applicable), shall be granted to the affected Party pursuant to this Sub-Clause to the extent that such failure or delay would have nevertheless been experienced by the Contractor had the Force Majeure Event not occurred.

Other than payments and extensions for performance of deadlines specifically approved by the Employer, the Contractor shall be entitled to no other payments, compensations or extensions in consequence of a Force Majeure Event.

19.8 Optional Termination, Payment and Release

If a political event occurs pursuant to Sub-Clause 19.1(a) which has a material adverse effect and such Force Majeure Event continues for a period exceeding one hundred eighty (180) consecutive days or a series of such related political events pursuant to Sub-Clause 19.1(a) that continue in the aggregate for a period that exceeds one hundred eighty (180) Days (not including the effects thereof) during any year, either the Employer or the Contractor may give to the other a notice of termination which shall take effect thirty (30) days after the giving of

the notice. If, at the end of the thirty (30) day period, the effect of the Force Majeure Event continues, this Agreement shall be terminable by either Party. In the event of termination under this section, the total monies that the Contractor shall be entitled to for its performance under this Agreement shall be (i) all actual Costs reasonably incurred by the Contractor in the proper performance of completed Works; (ii) the Costs of plant and materials ordered for the Works which have been delivered to the Contractor, or which the Contractor is liable to accept delivery provided on payment of such Costs the plant and materials shall be delivered by the Contractor to the Employer; and (iii) the Cost of removal of the Temporary Works and the Contractor's Equipment from the Site to the destination port. The Costs referred to in this Sub-Clause shall be subject to audit review at the option and cost of the Employer.

20. CLAIMS, DISPUTES AND ARBITRATION

20.1 Contractor's Claims

The Contractor shall only be entitled to claim for an extension of the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility and/or additional payments, under the following Sub-Clauses:

- (a) 2.1 (*Right of Access to the Site*);
- (b) 4.24 (*Fossils*);
- (c) 4.27 (*Power Purchase Agreement*);
- (d) 7.4 (*Testing*);
- (e) 8.4 (*Extension of Time for Completion*);
- (f) 8.9 (*Consequences of Suspension*);
- (g) 9.2 (*Delayed Tests*);
- (h) 14.2 (*Advance Payment*);
- (i) 14.7 (*Timing and Mode of Payments*);
- (j) 16.1 (*Contractor's Entitlement to Suspend Work*);
- (k) 17.4 (*Consequences of Employer's Risk*); and
- (l) 19.7 (*Payment to Contractor & Extension of Time for Completion Due to Force Majeure Event*).

If the Contractor fails to give notice of a claim within twenty-eight (28) days of the occurrence of the event giving rise to the claim, the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility shall not be extended, the Contractor shall not be entitled to additional payment and the Employer shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of the Sub-Clause shall apply. It being clarified that for the purposes of Sub-Clause 4.27 (*Power Purchase Agreement*), the 'event giving rise to the claim' as mentioned in this paragraph shall be the receipt of a copy of the Power Purchase Agreement by the Contractor.

The Contractor shall also submit any other notices which are required by this Agreement and supporting particulars for the claim, all as relevant to such event or circumstance.

The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Employer. Without admitting liability, the Employer may, after receiving any notice under this Sub-Clause, monitor the

record-keeping and/or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Employer to inspect all these records, and shall (if instructed) submit copies to the Employer.

Within forty-two (42) days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Employer, the Contractor shall send to the Employer a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:

- (a) this fully detailed claim shall be considered as interim;
- (b) the Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Employer may reasonably require; and
- (c) the Contractor shall send a final claim within twenty-eight (28) days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Employer.

Within forty-two (42) days after receiving a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Employer and approved by the Contractor, or where the Employer requires the approval of the Financiers or the Purchaser, within Financiers or the Purchaser's additional response period set out in the relevant agreement plus a further five (5) days, the Employer shall respond with approval, or with disapproval and detailed comments. The Employer may also request any necessary further particulars, but shall nevertheless give its response on the principles of the claim within such time.

Each interim payment shall include such amounts for any claim as have been reasonably substantiated as due under the relevant provision of this Agreement. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as it has been able to substantiate.

The Employer shall proceed in accordance with Sub-Clause 3.5 (*Determinations*) to agree or determine (i) the extension (if any) of the Time for Completion GT1, Time for Completion GT2 and/or Time for Completion for the Facility (as applicable) (before or after its expiry) in accordance with Sub-Clause 8.4 (*Extension of Time for Completion*), and/or (ii) the additional payment (if any) to which the Contractor is entitled under this Agreement.

The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or additional payment shall take account of the extent (if any) to which the failure shall have prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause.

20.1A PPA Change Order

In the event the requirements of the Power Purchase Agreement that are to be complied with by the Contractor are more onerous than the requirements of the Reference Power Purchase Agreement and its obligation under this Agreement, and/or if compliance with the requirements of the Power Purchase Agreement would substantially increase the Costs to be incurred by the Contractor, then the Contractor may apply for a PPA Change Order.

The Contractor must apply for a PPA Change Order within twenty-eight (28) days of receiving a copy of the Power Purchase Agreement or such other period as may be mutually agreed between the Contractor and Employer (the "**PPA Change Order Request**"). If the PPA Change Order Request is not made within such period, the Contractor shall no longer be entitled to apply for a PPA Change Order. The Contractor shall provide full detailed particulars (and any clarifications/ further information required by the Employer) to the Employer to substantiate its PPA Change Order Request, on the basis of which the Employer shall proceed in accordance with Sub-Clause 3.5 (*Determinations*) to determine the PPA Change Order. The Employer will determine the PPA Change Order within forty-two (42) days of receiving the PPA Change Order Request. The Employer's determination shall be final.

The Contractor may only apply for PPA Change Order in the circumstances set out in Sub-Clause 4.27 (*Power Purchase Agreement*). It being clarified that the Contractor may only apply for the PPA Change Order once and the Employer may only issue PPA Change Order once, unless otherwise mutually agreed between the Parties.

20.2 Appointment of the Dispute Adjudication Board

Disputes shall be adjudicated by a DAB in accordance with Sub-Clause 20.4 (*Obtaining Dispute Adjudication Board's Decision*). The Parties shall jointly appoint a DAB by the date twenty-eight (28) days after a Party gives notice to the other Party of its intention to refer a dispute to a DAB in accordance with Sub-Clause 20.4(*Obtaining Dispute Adjudication Board's Decision*).

The DAB shall comprise of three suitably qualified persons ("the members").

Each Party shall nominate one member for the approval of the other Party. The Parties shall consult both these members and shall agree upon the third member, who shall be appointed to act as chairman.

The terms of the remuneration of each of the three members shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

If at any time the Parties so agree, they may appoint a suitably qualified person or persons to replace any one or more members of the DAB. Unless the Parties agree otherwise, the appointment will come into effect if a member declines to act or is unable to act as a result of death, disability, resignation or termination of appointment. The replacement shall be

appointed in the same manner as the replaced person was required to have been nominated or agreed upon, as described in this Sub-Clause.

The appointment of any member may be terminated by mutual agreement of both Parties, but not by the Employer or the Contractor acting alone. Unless otherwise agreed by both Parties, the appointment of the DAB (including each member) shall expire when the DAB has given its decision on the dispute referred to it under Sub-Clause 20.4 (*Obtaining Dispute Adjudication Board's Decision*), unless other disputes have been referred to the DAB by that time under Sub-Clause 20.4 (*Obtaining Dispute Adjudication Board's Decision*), in which event the relevant date shall be when the DAB has also given decisions on those disputes.

20.3 Failure to Agree Dispute Adjudication Board

If any of the following conditions apply, namely:

- (a) Not used;
- (b) either Party fails to nominate a member (for approval by the other Party) of a DAB of three persons by such date;
- (c) the Parties fail to agree upon the appointment of the third member (to act as the chairman) of the DAB by such date; or
- (d) the Parties fail to agree upon the appointment of a replacement person within forty-two (42) days after the date on which one of the three members declines to act or is unable to act as a result of death, disability, resignation or termination of appointment, then the Chief Secretary, Government of Punjab shall, upon the request of either or both of the Parties and after due consultation with both parties, appoint this member of the DAB. This appointment shall be final and conclusive. Each Party shall be responsible for paying one-half of the remuneration of the appointing entity or official.

20.4 Obtaining Dispute Adjudication Board's Decision

If a dispute (of any kind whatsoever) arises between the Parties in connection with, or arising out of, this Agreement or the execution of the Works, including any dispute as to any certificate, determination, instruction, opinion or valuation of the Employer, then after the DAB has been appointed pursuant to Sub-Clause 20.2 (*Appointment of the Dispute Adjudication Board*) and Sub-Clause 20.3 (*Failure to Agree Dispute Adjudication Board*), either party may refer the dispute in writing to the DAB for its decision, with a copy to the other Party. Such reference shall state that it is given under this Sub-Clause.

For a DAB of three persons, the DAB shall be deemed to have received such reference on the date when it is received by the chairman of the DAB.

Both Parties shall promptly make available to the DAB all information, access to the Site, and appropriate facilities, as the DAB, may require for the purposes of making a decision on such dispute. The DAB shall be deemed to be not acting as arbitrator(s).

Within eighty-four (84) days after receiving such reference, or within such other period as may be proposed by the DAB and approved by both Parties, the DAB shall give its decision, which shall be reasoned and shall state that it is given under this Sub-Clause.

However, if neither of the Parties has paid in full the amounts payable to the members of DAB, the DAB shall not be obliged to give its decision until such invoices have been paid in full. The decision shall be binding on both Parties, who shall promptly give effect to it unless and until it shall be revised in an amicable settlement or an arbitral award as described below. Unless this Agreement has already been abandoned, repudiated or terminated, the Contractor shall continue to proceed with the Works in accordance with this Agreement.

If either Party is dissatisfied with the DAB's decision, then either Party may, within twenty-eight (28) days after receiving the decision, give notice to the other Party of its dissatisfaction. If the DAB fails to give its decision within eighty-four (84) days (or as otherwise approved) after receiving such reference or such payment, then either Party may, within twenty-eight (28) days after the period of eighty-four (84) days after this period has expired, give notice to the other Party of its dissatisfaction.

In either event, this notice of dissatisfaction shall state that it is given under this Sub-Clause, and shall set out the matter in dispute and the reason(s) for dissatisfaction. Except as stated in Sub-Clause 20.7 (*Failure to Comply with Dispute Adjudication Board's Decision*) and Sub-Clause 20.8 (*Expiry of Dispute Adjudication Board's Appointment*), neither Party shall be entitled to commence arbitration of a dispute unless a notice of dissatisfaction has been given in accordance with this Sub-Clause.

If the DAB has given its decision as to a matter in dispute to both Parties, and no notice of dissatisfaction has been given by either Party within twenty-eight (28) days after it received the DAB's decision, then the decision shall become final and binding upon both Parties.

20.5 Amicable Settlement

Where notice of dissatisfaction has been given under Sub-Clause 20.4 (*Obtaining Dispute Adjudication Board's Decision*) above, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, arbitration may be commenced on or after the fifty-sixth (56th) day after the day on which notice of dissatisfaction was given, even if no attempt at amicable settlement has been made.

20.6 Arbitration

- (a) Any dispute arising out of or in connection with this Agreement that has not been resolved following the procedures set forth above or has been required by a Party to be referred to arbitration without reference to the above procedures shall be settled by arbitration in accordance with the Arbitration Act, 1940 (the "**Act**"), by three (3) arbitrators appointed in accordance with the Act. The arbitration proceedings shall be conducted, and the award shall be rendered in the English language.

- (b) The arbitration shall be conducted in Lahore, Pakistan. Except as awarded by the arbitral tribunal, each Party shall be responsible for its own costs incurred by it in connection with an arbitration hereunder.
- (c) No arbitrator shall be an employee or agent or former employee or agent of the Parties.
- (d) In relation to the Parties, or any parties claiming through the Parties, the provisions of this Sub-Clause shall override and have effect, notwithstanding any arbitration clause or provision to the contrary or otherwise in any bilateral investment treaty to which Pakistan is or may become a party.
- (e) The decision of the arbitrators shall be final and binding.

20.7 Failure to Comply with Dispute Adjudication Board's Decision

In the event that:

- (a) neither Party has given notice of dissatisfaction within the period stated in Sub-Clause 20.4 (*Obtaining Dispute Adjudication Board's Decision*),
- (b) the DAB's related decision (if any) has become final and binding, and
- (c) a Party fails to comply with this decision,

then the other Party may, without prejudice to any other rights it may have, refer the failure itself to arbitration under Sub-Clause 20.6 (*Arbitration*). Sub-Clause 20.4 (*Obtaining Dispute Adjudication Board's Decision*) and Sub-Clause 20.5 (*Amicable Settlement*) shall not apply to this reference.

20.8 Expiry of Dispute Adjudication Board's Appointment

If a dispute arises between the Parties in connection with, or arising out of, this Agreement or the execution of the Works and there is no DAB in place, whether by reason of the expiry of the DAB's appointment or otherwise:

- (a) Sub-Clause 20.4 (*Obtaining Dispute Adjudication Board's Decision*) and Sub-Clause 20.5 (*Amicable Settlement*) shall not apply, and
- (b) the dispute may be referred directly to arbitration under Sub-Clause 20.6 (*Arbitration*).

20.9 Performance to Continue During Dispute

Notwithstanding any reference of a dispute to the DAB, arbitration or amicable settlement herein, the Parties shall (to the extent practicable) continue to perform their respective obligations under this Agreement unless they otherwise agree.

20.10 **Joint and Several Liability**

The Contractor shall be jointly and severally bound to the Employer for the fulfillment of the terms of the Agreement.

SCHEDULE 1-EMPLOYER'S REQUIREMENTS

[To be added at the time of signing]

SCHEDULE 2- NOTIFICATION OF AWARD

[to be inserted at time of signing]

SCHEDULE 3- FORM OF EPC PERFORMANCE SECURITY

PERFORMANCE SECURITY

BANK GUARANTEE

GUARANTEE NO. ///

EXECUTED ON ///

TO: PUNJAB THERMAL POWER (PRIVATE) LIMITED,

7-C1, GULBERG-III, LAHORE, PAKISTAN

PERFORMANCE SECURITY NO. /// (THE BOND)

WE, /// (NAME AND ADDRESS OF THE BANK), BEING THE BOND ISSUING BANK (THE ISSUING BANK) UNDERSTAND THAT THE FOLLOWING PARTIES SHALL ENTER, ABOUT THE DATE HEREOF INTO AN AGREEMENT ENTITLED AGREEMENT FOR ENGINEERING, PROCUREMENT AND CONSTRUCTION (THE AGREEMENT) ENTERED INTO BETWEEN, INTER ALIA:

(A) PUNJAB THERMAL POWER (PRIVATE) LIMITED, A COMPANY INCORPORATED UNDER THE LAWS OF PAKISTAN HAVING ITS REGISTERED OFFICE LOCATED AT 7-C1, GULBERG-III, LAHORE, PAKISTAN (THE EMPLOYER), AND

(B) [(THE CONTRACTOR)].

FURTHER, WE UNDERSTAND THAT PURSUANT TO THE AGREEMENT, THE CONTRACTOR IS REQUIRED TO PROVIDE THE EMPLOYER WITH A PERFORMANCE BOND EQUAL TO USD [(U.S. DOLLARS [.]ONLY)].

THE ABOVE PREMISED, WE (THE ISSUING BANK) HEREBY UNDERTAKE IRREVOCABLY AND UNCONDITIONALLY ON DEMAND TO PAY TO THE EMPLOYER, WITHOUT ANY NOTICE, REFERENCE OR RECOURSE TO THE CONTRACTOR OR TO ANY OTHER ENTITY

OR WITHOUT ANY RECOURSE OR REFERENCE TO THE AGREEMENT OR ANY OTHER DOCUMENT, AGREEMENT, INSTRUMENT OR DEED, ANY SUM OR SUMS (OR ANY PART THEREOF) EQUIVALENT IN AGGREGATE UP TO BUT NOT EXCEEDING A MAXIMUM AMOUNT OF: USD[.] (U.S. DOLLARS [.] ONLY) (THE GUARANTEED AMOUNT) AT SIGHT AND IMMEDIATELY, HOWEVER NOT LATER THAN 5(FIVE) BUSINESS DAYS FROM THE DATE OF RECEIPT OF THE EMPLOYER'S FIRST WRITTEN DEMAND (THE DEMAND) AT THE ISSUING BANK'S OFFICES LOCATED AT /// (ADDRESS OF THE BANK) OR THROUGH SWIFT INSTRUCTIONS TRANSMITTED BY THE EMPLOYER'S BANK, ON BEHALF OF THE EMPLOYER, TO THE ISSUING BANK, SUCH DEMAND STATING:

(A) THAT THE CONTRACTOR IS IN BREACH OF ITS OBLIGATIONS TOWARDS THE EMPLOYER:

(I) SPECIFYING THE BREACH AND, IF APPLICABLE, REQUESTING THE CONTRACTOR TO CURE THE BREACH

(II) , IF APPLICABLE, CERTIFYING THAT THE CONTRACTOR HAS FAILED TO REMEDY THE BREACH WITHIN THE PERIOD ALLOWED FOR REMEDIAL ACTION, AND

(B) THE TOTAL AMOUNTS DEMANDED.

A DEMAND SHALL ONLY BE HONOURED BY US (I) IN THE CASE OF A WRITTEN DEMAND, IF IT IS MADE BY AND BEARS THE SIGNATURE OF AN AUTHORISED OFFICER OR OTHER REPRESENTATIVE OF THE EMPLOYER, AS DULY VERIFIED TO US BY THE EMPLOYER'S BANK, OR (II) IN THE CASE OF A DEMAND TRANSMITTED THROUGH SWIFT, IF IT IS TRANSMITTED THROUGH AUTHENTICATED SWIFT INSTRUCTIONS BY THE EMPLOYER'S BANK, ON BEHALF OF THE EMPLOYER.

WE, THE ISSUING BANK, SHALL UNCONDITIONALLY HONOUR A DEMAND HEREUNDER MADE IN COMPLIANCE WITH THIS BOND AT SIGHT AND IMMEDIATELY ON THE DATE OF RECEIPT OF YOUR DEMAND, AS STATED EARLIER,

AND SHALL TRANSFER THE AMOUNT SPECIFIED IN THE DEMAND TO THE BANK ACCOUNT, AS NOTIFIED IN THE DEMAND, IN IMMEDIATELY AVAILABLE AND FREELY TRANSFERABLE FUNDS IN THE CURRENCY OF THIS BOND, FREE AND CLEAR OF AND WITHOUT ANY SET-OFF OR DEDUCTION FOR OR ON ACCOUNT OF ANY PRESENT OR FUTURE TAXES, LEVIES, IMPOSTS, DUTIES, CHARGES, FEES, DEDUCTIONS OR WITHHOLDINGS OF ANY NATURE WHATSOEVER AND BY WHOMSOEVER IMPOSED.

THIS BOND SHALL COME INTO FORCE AND SHALL BECOME AUTOMATICALLY EFFECTIVE UPON ITS ISSUANCE.

AFTER HAVING COME INTO FORCE, THIS BOND AND OUR OBLIGATIONS HEREUNDER WILL EXPIRE ON THE EARLIER OF:

(I) [.] (THE PERFORMANCE SECURITY ORIGINAL EXPIRY DATE) PROVIDED THAT, IN THE EVENT THE ISSUING BANK HAS RECEIPT OF THE DEMAND ON OR PRIOR TO THE PERFORMANCE SECURITY ORIGINAL EXPIRY DATE, THE ISSUING BANK SHALL HONOUR THAT DEMAND, OR

(II) WHEN THE AGGREGATE OF ALL PAYMENTS MADE BY US UNDER THIS BOND EQUAL THE GUARANTEED AMOUNT.

UPON EXPIRY, THIS BOND SHALL BE RETURNED TO THE CONTRACTOR WITHOUT UNDUE DELAY. MULTIPLE DEMANDS MAY BE MADE BY THE EMPLOYER UNDER THIS BOND BUT OUR AGGREGATE LIABILITY WILL BE RESTRICTED UP TO THE GUARANTEED AMOUNT.

THE GUARANTEED AMOUNT SHALL BE REVISED UPON RECEIPT BY US OF A NOTICE DULY SIGNED BY THE EMPLOYER AND THE CONTRACTOR OF THE REVISED GUARANTEED AMOUNT.

WE HEREBY AGREE THAT ANY AMENDMENT, RENEWAL, EXTENSION, MODIFICATION, COMPROMISE, RELEASE OR DISCHARGE BY MUTUAL AGREEMENT BY THE EMPLOYER, THE CONTRACTOR OR ANY OTHER ENTITY OF ANY DOCUMENT, AGREEMENT, INSTRUMENT OR DEED SHALL NOT IN ANY WAY

IMPAIR OR AFFECT OUR LIABILITIES HEREUNDER AND MAYBE UNDERTAKEN WITHOUT NOTICE TO US AND WITHOUT THE NECESSITY FOR ANY ADDITIONAL ENDORSEMENT, CONSENT OR GUARANTEE BY US.

THIS BOND FOR ITS VALIDITY PERIOD SHALL NOT BE AFFECTED IN ANY MANNER BY ANY CHANGE IN OUR CONSTITUTION OR OF THE CONTRACTOR'S CONSTITUTION OR OF THEIR SUCCESSORS AND ASSIGNEES AND THIS BOND SHALL BE LEGALLY VALID, ENFORCEABLE AND BINDING ON EACH OF THEIR SUCCESSORS AND PERMITTED ASSIGNNESS.

ALL REFERENCES TO ANY CONTRACT, AGREEMENT, DEED OR OTHER INSTRUMENTS OR DOCUMENTS ARE BY WAY OF REFERENCE ONLY AND SHALL NOT AFFECT OUR OBLIGATIONS TO MAKE PAYMENT UNDER THE TERMS OF THIS BOND.

IF ONE OR MORE OF THE PROVISIONS OF THIS BOND ARE HELD OR FOUND TO BE INVALID, ILLEGAL, OR UNENFORCEABLE FOR ANY REASON WHATSOEVER, IN ANY RESPECT, ANY SUCH INVALIDITY, ILLEGALITY, OR UNENFORCEABILITY OF ANY PROVISION SHALL NOT AFFECT THE VALIDITY OF THE REMAINING PROVISIONS OF THIS BOND.

WE HEREBY DECLARE AND CONFIRM THAT UNDER OUR CONSTITUTION AND APPLICABLE LAWS AND REGULATIONS, WE HAVE THE NECESSARY POWER AND AUTHORITY, AND ALL NECESSARY AUTHORIZATIONS, APPROVALS AND CONSENTS THEREUNDER TO ENTER INTO, EXECUTE, DELIVER AND PERFORM THE OBLIGATIONS WE HAVE UNDERTAKEN UNDER THIS BOND, WHICH OBLIGATIONS ARE VALID AND LEGALLY BINDING ON AND ENFORCEABLE AGAINST US UNDER THE LAWS OF PAKISTAN AND UNDER THE LAWS OF THE JURISDICTION WHERE THIS BOND IS ISSUED. FURTHER, THAT THE SIGNATORY(IES) TO THIS BOND IS/ARE OUR DULY AUTHORIZED OFFICER(S) TO EXECUTE THIS BOND.

THIS BOND AND ALL RIGHTS AND OBLIGATIONS ARISING FROM THIS BOND SHALL BE GOVERNED AND CONSTRUED IN ALL RESPECTS IN ACCORDANCE WITH

THE LAWS OF PAKISTAN. THE COURTS IN PAKISTAN SHALL HAVE EXCLUSIVE JURISDICTION IN RESPECT OF ANY DISPUTE RELATING TO ANY MATTER CONTAINED HEREIN.

THE ISSUANCE OF THIS BOND IS PERMITTED ACCORDING TO THE LAWS OF PAKISTAN AND THE LAWS OF THE JURISDICTION WHERE THIS BOND IS ISSUED.

THIS BOND IS SUBJECT TO THE UNIFORM RULES FOR DEMAND GUARANTEE, ICC PUBLICATION NO.758.

NAME: ///

DESIGNATION: ///

SCHEDULE 3A - FORM OF OEM PERFORMANCE SECURITY

PERFORMANCE SECURITY

BANK GUARANTEE

GUARANTEE NO. ///

EXECUTED ON ///

TO: PUNJAB THERMAL POWER (PRIVATE) LIMITED,

7-C1, GULBERG-III, LAHORE, PAKISTAN

PERFORMANCE SECURITY NO. /// (THE **BOND**)

WE, /// (NAME AND ADDRESS OF THE BANK), BEING THE BOND ISSUING BANK (THE **ISSUING BANK**) UNDERSTAND THAT PUNJAB THERMAL POWER (PRIVATE) LIMITED (THE **EMPLOYER**) HAD INVITED BIDS FROM PRE-QUALIFIED PARTIES FOR ENGINEERING, PROCUREMENT AND CONSTRUCTION OF 1100 – 1400 MW (GROSS) [.] (THE **PROJECT**). IN RESPONSE TO THE SAME, WE UNDERSTAND THAT [NAME OF **BIDDER**] (THE **BIDDER / CONTRACTOR**) SUBMITTED A BID, WHICH ALSO RELIED ON AND CONTAINED CERTAIN ASSURANCES, CONFIRMATIONS, COMMITMENTS AND WARRANTIES ON BEHALF OF [NAME OF **GT OEM**] (THE **GT OEM**). THE BIDDER / CONTRACTOR HAS BEEN AWARDED A NOTIFICATION OF AWARD DATED [.] AND CONSEQUENTLY THE EMPLOYER AND THE BIDDER / CONTRACTOR ARE TO ENTER INTO AN AGREEMENT ENTITLED AGREEMENT FOR ENGINEERING, PROCUREMENT AND CONSTRUCTION (THE **AGREEMENT**) ON OR AROUND [.]

WE FURTHER UNDERSTAND THAT THE GT OEM HAD ISSUED A LETTER OF COMMITMENT AND UNDERTAKING DATED [.] (THE **COMMITMENT UNDERTAKING**), IN RELIANCE OF WHICH THE NOTIFICATION OF AWARD WAS ISSUED TO THE BIDDER / CONTRACTOR, WHEREIN THE GT OEM HAD UNDERTAKEN TO PROVIDE A PERFORMANCE SECURITY OF AN AMOUNT OF USD 20,000,000/- (UNITED STATES DOLLARS TWENTY MILLION ONLY), ON OR BEFORE THE SIGNING OF THE AGREEMENT.

THE ABOVE PREMISED, WE (THE ISSUING BANK) HEREBY ISSUE THIS BOND ON BEHALF OF THE GT OEM, AND HEREBY UNDERTAKE IRREVOCABLY AND UNCONDITIONALLY ON DEMAND TO PAY TO THE EMPLOYER, WITHOUT ANY NOTICE, REFERENCE OR RECOURSE TO THE GT OEM, THE BIDDER / CONTRACTOR OR TO ANY OTHER ENTITY OR WITHOUT ANY RECOURSE OR REFERENCE TO THE AGREEMENT OR ANY OTHER DOCUMENT, AGREEMENT, UNDERTAKING, INSTRUMENT OR DEED, AND WITHOUT BEING ENTITLED TO INQUIRE WHETHER OR NOT SUCH PAYMENT IS LAWFULLY DUE AND PAYABLE, ANY SUM OR SUMS (OR ANY PART THEREOF) EQUIVALENT IN AGGREGATE UP TO BUT NOT EXCEEDING A MAXIMUM AMOUNT OF: USD 20,000,000/- (U.S. DOLLARS TWENTY MILLION ONLY) (THE **GUARANTEED AMOUNT**) AT SIGHT AND IMMEDIATELY, HOWEVER NOT LATER THAN 5 (FIVE) BUSINESS DAYS FROM THE DATE OF RECEIPT OF THE EMPLOYER'S FIRST WRITTEN DEMAND (THE **DEMAND**), WHICH SHALL BE TREATED AS FINAL AND CONCLUSIVE, AT THE ISSUING BANK'S OFFICES LOCATED AT /// (ADDRESS OF THE BANK) OR THROUGH SWIFT INSTRUCTIONS TRANSMITTED BY THE EMPLOYER'S BANK, ON BEHALF OF THE EMPLOYER, TO THE ISSUING BANK, SUCH DEMAND STATING:

(A) THAT THE GT OEM IS IN BREACH OF ITS OBLIGATIONS TOWARDS THE BIDDER / CONTRACTOR OR THE EMPLOYER, OR AS PROVIDED IN THE COMMITMENT UNDERTAKING, WITHOUT ANY REQUIREMENT OF JUSTIFYING OR EXPLAINING SUCH BREACH; AND

(B) THE TOTAL AMOUNTS DEMANDED, NOT EXCEEDING THE GUARANTEED AMOUNT.

A DEMAND BY THE EMPLOYER SHALL BE TREATED AS FINAL, CONCLUSIVE AND BINDING ON US, WITHOUT ANY OBJECTION WHATSOEVER, AND SHALL BE HONoured BY US (I) IN THE CASE OF A WRITTEN DEMAND, IF IT IS MADE BY AND BEARS THE SIGNATURE OF AN AUTHORISED OFFICER OR OTHER REPRESENTATIVE OF THE EMPLOYER, OR (II) IN THE CASE OF A DEMAND TRANSMITTED THROUGH SWIFT, IF IT IS TRANSMITTED THROUGH AUTHENTICATED SWIFT INSTRUCTIONS BY THE EMPLOYER'S BANK, ON BEHALF OF THE EMPLOYER.

WE, THE ISSUING BANK, SHALL UNCONDITIONALLY HONOUR A DEMAND HEREUNDER MADE IN COMPLIANCE WITH THIS BOND AT SIGHT AND IMMEDIATELY ON THE DATE OF RECEIPT OF YOUR DEMAND, AS STATED EARLIER, AND SHALL TRANSFER THE AMOUNT SPECIFIED IN THE DEMAND TO THE BANK ACCOUNT, AS NOTIFIED IN THE DEMAND, IN IMMEDIATELY AVAILABLE AND FREELY TRANSFERABLE FUNDS IN THE CURRENCY OF THIS BOND, FREE AND CLEAR OF AND WITHOUT ANY SET-OFF OR DEDUCTION FOR OR ON ACCOUNT OF ANY PRESENT OR FUTURE TAXES, LEVIES, IMPOSTS, DUTIES, CHARGES, FEES, DEDUCTIONS OR WITHHOLDINGS OF ANY NATURE WHATSOEVER AND BY WHOMSOEVER IMPOSED. MULTIPLE DEMANDS MAY BE MADE BY THE EMPLOYER UNDER THIS BOND BUT OUR AGGREGATE LIABILITY WILL BE RESTRICTED UP TO THE GUARANTEED AMOUNT.

WE UNDERSTAND AND UNEQUIVOCALLY ACKNOWLEDGE THAT OUR OBLIGATION TO HONOUR ANY DEMAND OF THE EMPLOYER UNDER THIS BOND IS ABSOLUTE, AND INDEPENDENT OF ANY OTHER ACT OF THE EMPLOYER, INCLUDING ANY OTHER REMEDY AVAILABLE BY THE EMPLOYER IN RESPECT OF ANY BREACH. WE SHALL NOT REFUSE OR FAIL TO HONOR A DEMAND OF THE EMPLOYER ON THE BASIS THAT THE EMPLOYER HAS, OR HAS AVAILABLE, ANY OTHER REMEDIES AVAILABLE TO IT.

THIS BOND SHALL COME INTO FORCE AND SHALL BECOME AUTOMATICALLY EFFECTIVE UPON ITS ISSUANCE. AFTER HAVING COME INTO FORCE, THIS BOND AND OUR OBLIGATIONS HEREUNDER WILL EXPIRE (SUBJECT TO ANY DEMANDS OF THE EMPLOYER DURING THE TERM OF THIS BOND) UPON RECEIPT BY US OF A CERTIFICATE FROM THE EMPLOYER IN THE FORM ATTACHED AS APPENDIX – I OF THIS BOND. PROVIDED THAT, IN THE EVENT THE ISSUING BANK HAS RECEIPT OF A DEMAND ON OR PRIOR TO THE EXPIRY DATE, THE ISSUING BANK SHALL HONOUR THAT DEMAND.

THE GUARANTEED AMOUNT UNDER THIS BOND SHALL STAND REDUCED IN THE FOLLOWING MANNER²:

- A. BY AN AMOUNT OF USD 2,000,000/- UPON RECEIPT BY US OF A CERTIFICATE DULY SIGNED AND AUTHENTICATED BY THE EMPLOYER, IN THE FORM ATTACHED AS APPENDIX-I TO THIS BOND;
- B. BY AN AMOUNT OF USD 2,000,000/- UPON RECEIPT BY US OF A CERTIFICATE DULY SIGNED AND AUTHENTICATED BY THE EMPLOYER, IN THE FORM ATTACHED AS APPENDIX-II TO THIS BOND;
- C. BY AN AMOUNT OF USD 3,500,000/- UPON RECEIPT BY US OF A CERTIFICATE DULY SIGNED AND AUTHENTICATED BY THE EMPLOYER, IN THE FORM ATTACHED AS APPENDIX-III TO THIS BOND;
- D. BY AN AMOUNT OF USD 3,500,000/- UPON RECEIPT BY US OF A CERTIFICATE DULY SIGNED AND AUTHENTICATED BY THE EMPLOYER, IN THE FORM ATTACHED AS APPENDIX-IV TO THIS BOND;
- E. BY AN AMOUNT OF USD 3,500,000/- UPON RECEIPT BY US OF A CERTIFICATE DULY SIGNED AND AUTHENTICATED BY THE EMPLOYER, IN THE FORM ATTACHED AS APPENDIX-V TO THIS BOND;
- F. BY AN AMOUNT OF USD 3,500,000/- UPON RECEIPT BY US OF A CERTIFICATE DULY SIGNED AND AUTHENTICATED BY THE EMPLOYER, IN THE FORM ATTACHED AS APPENDIX-VI TO THIS BOND; AND
- G. BY AN AMOUNT OF USD 2,000,000/- UPON RECEIPT BY US OF A CERTIFICATE DULY SIGNED AND AUTHENTICATED BY THE EMPLOYER, IN THE FORM ATTACHED AS APPENDIX-VII TO THIS BOND.

² In case 3-3-1 CCPP configuration is proposed, appropriate changes shall be made to this reductions table, in light of the Letter of Commitment and Undertaking

WE HEREBY AGREE THAT ANY AMENDMENT, RENEWAL, EXTENSION, MODIFICATION, COMPROMISE, RELEASE OR DISCHARGE BY MUTUAL AGREEMENT BY THE EMPLOYER, THE GT OEM, OR ANY OTHER ENTITY OF ANY DOCUMENT, AGREEMENT, UNDERTAKING, INSTRUMENT OR DEED SHALL NOT IN ANY WAY IMPAIR OR AFFECT OUR LIABILITIES HEREUNDER AND MAYBE UNDERTAKEN WITHOUT NOTICE TO US AND WITHOUT THE NECESSITY FOR ANY ADDITIONAL ENDORSEMENT, CONSENT OR GUARANTEE BY US.

THIS BOND FOR ITS VALIDITY PERIOD SHALL NOT BE AFFECTED IN ANY MANNER BY ANY CHANGE IN OUR CONSTITUTION OR OF THE GT OEM'S CONSTITUTION OR OF THEIR SUCCESSORS AND ASSIGNEES AND THIS BOND SHALL BE LEGALLY VALID, ENFORCEABLE AND BINDING ON EACH OF THEIR SUCCESSORS AND PERMITTED ASSIGNNESS.

ALL REFERENCES TO ANY CONTRACT, AGREEMENT, DEED OR OTHER INSTRUMENTS OR DOCUMENTS ARE BY WAY OF REFERENCE ONLY AND SHALL NOT AFFECT OUR OBLIGATIONS TO MAKE PAYMENT UNDER THE TERMS OF THIS BOND. ALL TERMS AND REFERENCES TO DOCUMENTS USED HEREIN BUT NOT DEFINED SHALL HAVE THE MEANING ASCRIBED TO THEM IN THE AGREEMENT, BIDDING DOCUMENTS, OR THE LTSA, AS THE CASE MAY BE.

IF ONE OR MORE OF THE PROVISIONS OF THIS BOND ARE HELD OR FOUND TO BE INVALID, ILLEGAL, OR UNENFORCEABLE FOR ANY REASON WHATSOEVER, IN ANY RESPECT, ANY SUCH INVALIDITY, ILLEGALITY, OR UNENFORCEABILITY OF ANY PROVISION SHALL NOT AFFECT THE VALIDITY OF THE REMAINING PROVISIONS OF THIS BOND.

WE HEREBY DECLARE AND CONFIRM THAT UNDER OUR CONSTITUTION AND APPLICABLE LAWS AND REGULATIONS, WE HAVE THE NECESSARY POWER AND AUTHORITY, AND ALL NECESSARY AUTHORIZATIONS, APPROVALS AND CONSENTS THEREUNDER TO ENTER INTO, EXECUTE, DELIVER AND PERFORM THE OBLIGATIONS WE HAVE UNDERTAKEN UNDER THIS BOND, WHICH OBLIGATIONS ARE VALID AND LEGALLY BINDING ON AND ENFORCEABLE AGAINST US UNDER THE LAWS OF PAKISTAN AND UNDER THE LAWS OF THE JURISDICTION WHERE THIS BOND IS ISSUED. FURTHER, THAT THE SIGNATORY(IES) TO THIS BOND IS/ARE OUR DULY AUTHORIZED OFFICER(S) TO EXECUTE THIS BOND.

THIS BOND AND ALL RIGHTS AND OBLIGATIONS ARISING FROM THIS BOND SHALL BE GOVERNED AND CONSTRUED IN ALL RESPECTS IN ACCORDANCE WITH THE LAWS OF PAKISTAN. THE COURTS IN PAKISTAN SHALL HAVE EXCLUSIVE JURISDICTION IN RESPECT OF ANY DISPUTE RELATING TO ANY MATTER CONTAINED HEREIN.

THE ISSUANCE OF THIS BOND IS PERMITTED ACCORDING TO THE LAWS OF PAKISTAN AND THE LAWS OF THE JURISDICTION WHERE THIS BOND IS ISSUED.

THIS BOND IS SUBJECT TO THE UNIFORM RULES FOR DEMAND GUARANTEE, ICC PUBLICATION NO.758.

NAME: ///

DESIGNATION: ///

Appendix – I³

For GT Unit 1 Rotor Blade Balancing

It is hereby certified that [.] (GT OEM) has completed the tests for rotor blade balancing, for the Gas Turbine Unit No.1, comprising of the Gas Turbine 1.

This certificate is being issued solely for the purpose of reduction in the Performance Security dated [.] provided by the GT OEM by an amount of [.]. This certificate shall not, in any manner, mean our acceptance or satisfaction of completion of any obligations under the Agreement for Engineering, Procurement and Construction dated [.]

For GT Unit 2 Rotor Blade Balancing

It is hereby certified that [.] (GT OEM) has completed the tests for rotor blade balancing, for the Gas Turbine Unit No.2, comprising of the Gas Turbine 2.

This certificate is being issued solely for the purpose of reduction in the Performance Security dated [.] provided by the GT OEM by an amount of [.]. This certificate shall not, in any manner, mean our acceptance or satisfaction of completion of any obligations under the Agreement for Engineering, Procurement and Construction dated [.]

For GT Unit 1 Delivery at Site

It is hereby certified that [.] (GT OEM) has delivered the Gas Turbine Unit No.1, comprising of the Gas Turbine 1 and Gas Turbine Generator 1 at the Site.

This certificate is being issued solely for the purpose of reduction in the Performance Security dated [.] provided by the GT OEM by an amount of [.]. This certificate shall not, in any manner, mean our acceptance or satisfaction of completion of any obligations under the Agreement for Engineering, Procurement and Construction dated [.]

For GT Unit 2 Delivery at Site

It is hereby certified that [.] (GT OEM) has delivered the Gas Turbine Unit No.2, comprising of the Gas Turbine 2 and Gas Turbine Generator 2 at the Site.

This certificate is being issued solely for the purpose of reduction in the Performance Security dated [.] provided by the GT OEM by an amount of [.]. This certificate shall not, in any manner, mean our acceptance or satisfaction of completion of any obligations under the Agreement for Engineering, Procurement and Construction dated [.]

^{3 3} In case of 3-3-1 CCP configuration, similar certification will be required for GT3 where applicable and shall form part of the OEM Performance Security.

For GT Unit 1 Taking-Over

It is hereby certified that Taking-Over Certificate GT1 has been issued.

This certificate is being issued solely for the purpose of reduction in the Performance Security dated [.] provided by the GT OEM by an amount of [.] This certificate shall not, in any manner, mean our acceptance or satisfaction of completion of any obligations under the Agreement for Engineering, Procurement and Construction dated [.]

For GT Unit 2 Taking-Over

It is hereby certified that Taking-Over Certificate GT2 has been issued.

This certificate is being issued solely for the purpose of reduction in the Performance Security dated [.] provided by the GT OEM by an amount of [.] This certificate shall not, in any manner, mean our acceptance or satisfaction of completion of any obligations under the Agreement for Engineering, Procurement and Construction dated [.]

For Facility Taking-Over

It is hereby certified that Taking-Over Certificate of the Facility has been issued.

This certificate is being issued solely for the purpose of reduction in the Performance Security dated [.] provided by the GT OEM by an amount of [.] This certificate shall not, in any manner, mean our acceptance or satisfaction of completion of any obligations under the Agreement for Engineering, Procurement and Construction dated [.]

SCHEDULE 4- POWER PURCHASE AGREEMENT

[Reference Power Purchase Agreement is attached as Part – V of the Bidding Document]

SCHEDULE 5- FORM OF ADVANCE PAYMENT SECURITY

....., 20...

To:

[●]

[Insert Address]

ADVANCE PAYMENT SECURITY NO. (the **Guarantee**)

We, [●]2, being the Guarantee issuing bank (the **Issuing Bank**) understand that the following parties have entered into an agreement entitled "AGREEMENT FOR ENGINEERING, PROCUREMENT AND CONSTRUCTION" dated, 20..... (the **Agreement**):

(a) **PUNJAB THERMAL POWER (PRIVATE) LIMITED**, a company incorporated under the laws of Pakistan, having its registered office located at [●], Pakistan (the **Employer**); and

(b) [●], a company incorporated under the laws of the [●] having its registered office located at [●] (the **Contractor**).

2. Further, we understand that pursuant to the terms of the Agreement, and subject to the receipt of this Guarantee by the Employer, the Employer is required to pay the Contractor an amount equal to [●] [●]/- ([●] [●]) (the **Advance Payment**).

3. The above premised, we (the Issuing Bank) hereby undertake irrevocably and unconditionally on demand to pay to the Employer, without any notice, reference or recourse to the Contractor or to any other entity or without any recourse or reference to the Agreement or any other document, agreement, instrument or deed, any sum or sums (or any part thereof) equivalent in aggregate up to but not exceeding a maximum amount of:

[●] [●]/- ([●] [●])

(the **Guaranteed Amount**)

at sight and immediately, however not later than [●] business days from the date of receipt of the Employer' s first written demand (the **Demand**) at the Issuing Bank's offices located at [●] or through SWIFT instructions transmitted by the Employer's bank (i.e. [●]), on behalf of the Employer, to the Issuing Bank, such Demand stating:

(a) that the Contractor is in breach of its obligations to repay the Advance Payment (in whole or in part) to the Employer or extend the validity of the Guarantee; and

(b) the total amounts demanded; and

(c) the details of the account in which the total amounts demanded are to be credited.

4. A Demand shall only be honoured by us (i) in the case of a written Demand, if it is made by and bears the signature of an authorised officer or other representative of the Employer, as duly verified to us by the Employer's bank (i.e. [●]); or (ii) in the case of a Demand transmitted through SWIFT, if it

is transmitted through authenticated SWIFT instructions by the Employer's bank (i.e. [●]), on behalf of the Employer.

5. We, the Issuing Bank, shall unconditionally honour a Demand hereunder made in compliance with this Guarantee at sight and immediately upon receipt of your Demand, as stated earlier, and shall transfer the amount specified in the Demand to the bank account, as notified in the Demand, in immediately available and freely transferable funds in the currency of this Guarantee, free and clear of and without any set-off or deduction for or on account of any present or future taxes, levies, imposts, duties, charges, fees, deductions or withholdings of any nature whatsoever and by whomsoever imposed.

6. This Guarantee shall come into force and shall become automatically effective upon the payment of the Advance Payment to the Contractor, as evidenced through a copy of SWIFT instructions transmitted by the Employer's bank (i.e. [●]) to the Issuing Bank.

7. After having come into force, this Guarantee and our obligations hereunder will expire on the earlier of:

(i) [●] (the **Advance Payment Security Expiry Date**) provided that, in the event that the Issuing Bank has receipt of the Demand on or immediately prior to the Advance Payment

Security Expiry Date, the Issuing Bank shall honour that Demand; or

(ii) when the aggregate of all payments made by us under this Guarantee equal the Guaranteed Amount; or

(iii) the Guaranteed Amount is reduced to zero in terms of paragraph 9 below.

8. Upon expiry, this Guarantee shall be returned to the Contractor. However, this Guarantee shall automatically become null and void after the expiry date of the ADVANCE PAYMENT SECURITY whether it is returned to the Contractor or not. Multiple Demands may be made by the Employer under this Guarantee but our aggregate liability shall be restricted up to the Guaranteed Amount.

9. The Guaranteed Amount will be reduced in accordance with the Agreement upon the Contractor's presentation to us of the relevant commercial invoice, duly signed and approved by the Employer, clearly stating the amount by which the Guaranteed Amount is to be reduced.

10. We hereby agree that any amendment, renewal, extension, modification, compromise, release or discharge by mutual agreement by the Employer, the Contractor or any other entity of any document, agreement, instrument or deed shall not in any way impair or affect our liabilities hereunder and maybe undertaken without notice to us and without the necessity for any additional endorsement, consent or guarantee by us.

11. This Guarantee for its validity period shall not be affected in any manner by any change in our constitution or of the Contractor's constitution or of their successors and assignees and this Guarantee shall be legally valid, enforceable and binding on each of their successors and permitted assignees.

12. All references to any contract, agreement, deed or other instruments or documents are by way of reference only and shall not affect our obligations to make payment under the terms of this Guarantee.

13. If one or more of the provisions of this Guarantee are held or found to be invalid, illegal, or unenforceable for any reason whatsoever, in any respect, any such invalidity, illegality, or

unenforceability of any provision shall not affect the validity of the remaining provisions of this Guarantee.

14. We hereby declare and confirm that under our constitution and applicable laws and regulations, we have the necessary power and authority, and all necessary authorizations, approvals and consents thereunder to enter into, execute, deliver and perform the obligations we have undertaken under this Guarantee, which obligations are valid and legally binding on and enforceable against us under the laws of Pakistan and under the laws of the jurisdiction where this Guarantee is issued. Further, that the signatory(ies) to this Guarantee is/are our duly authorized officer(s) to execute this Guarantee.

15. This Guarantee and all rights and obligations arising from this Guarantee shall be governed and construed in all respects in accordance with the laws of Pakistan. The courts in Pakistan shall have exclusive jurisdiction in respect of any dispute relating to any matter contained herein.

16. The issuance of this Guarantee is permitted according to the laws of Pakistan and the laws of the jurisdiction where this Guarantee is issued.

17. This Guarantee is subject to the Uniform Rules for Demand Guarantee, ICC Publication No.758.

SCHEDULE 6- TENDER

[To be added at the time of signing]

SCHEDULE 7- PAYMENT MILESTONES -

[BIDDER'S MILESTONE PAYMENT SCHEDULE, ETC. TO BE ADDED]

SCHEDULE 8- NOT USED

SCHEDULE 9- INSURANCE

PART A: CONTRACTOR PROCURED INSURANCES

CONTRACTOR'S EQUIPMENT ALL RISKS INSURANCE

Coverage	Covering physical loss of or damage to the Contractor's and Subcontractor's permanent and temporary facilities, site huts, their contents, equipment, consumables, and tools including cranes and lifting equipment used in connection with the construction and completion of the Facility (other than motor vehicles, and marine vessels) and the like not forming a permanent part of the Facility owned or leased by the Contractor.
Amount	To the full replacement value at the time loss or damage occurs.

WORKERS COMPENSATION INSURANCE

Coverage	Workers Compensation for all employees of the Contractor and Subcontractors as required to comply with Applicable Standards.
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AUTOMOBILE LIABILITY:

Coverage	Liability for loss of or damage to property or injury to or death of third parties arising out of the ownership, leasing, operation or maintenance of motor vehicles by the Contractor and Subcontractor.
Amount	As required from time to time by Applicable Standards

MARINE OPERATIONS LIABILITY INSURANCE

Coverage	If the performance of this Agreement requires the Contractor or Subcontractor to use Marine Craft (as defined below) owned or leased by them, the Contractor shall carry or require the owners of such Marine Craft to carry marine insurance with policy limits adequate to cover and protect: (a) the full replacement value of the Contractor's or Subcontractor's vessels, barges, boats, tugs and all other marine equipment (hereinafter "Marine Craft"), if any, engaged in the Work; (b) injury to or death of the personnel engaged in work on such Marine Craft; and (c) any other liability, including contractual liability and
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pollution liability related to this Agreement, which may result from the operation of such Marine Craft.

Amount	Not less than USD 100,000,000 (one hundred million) per occurrence.
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AVIATION LIABILITY INSURANCE

Coverage	If the performance of this Agreement requires the use of aircraft owned or leased by the Contractor (including helicopters), the Contractor or its subcontractors shall carry, or require the owners of such aircraft to carry Aviation Liability Insurance, including passenger legal liability.
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Amount	Not less than USD 50,000,000 (fifty million) applicable to bodily injury, sickness or death and loss of or damage to property of third parties.
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OTHER

All other insurances as would be maintained by a prudent contractor acting in accordance with Applicable Standards and/or the Agreement.

PART B: EMPLOYER PROCURED INSURANCES

I. CONSTRUCTION AND ERECTION "ALL RISKS" INSURANCE

Policy Cover All risks of physical loss or damage to the Insured Property (as defined below) forming part of or intending to form part of the Project except as otherwise excluded in the contract of insurance.

Insureds

- (a) the Employer;
- (b) the Contractor and/or Subcontractor of every tier;
- (c) each of the Financiers;
- (d) the O&M Contractor (as required by the Contract);
- (e) vendors, manufacturers, suppliers, professional consultants, engineering consultants, architects and any other party engaged by any of the other Insured parties for their on-site activities (whilst excluding design work on site) only; and
- (f) project management consultants and/or engineering contractors and/or construction contractors and/or licensor and any other company, firm, person or party (including but not limited to contractors and subcontractors of any tier) with whom the Named Insured(s) above, or in this paragraph have, or in the past had, entered into written agreement(s) in connection with the Project, and/or any works activities, and preparations connected therewith; and
- (g) Purchaser
- (h) any Insured's subsidiary companies and their respective officers, directors, employees.

Each for their respective rights and interests.

Interest Physical loss and damage to permanent and temporary works and materials (including buildings, structures, boilers, machinery, equipment, and supplies) to be incorporated into the Facility including spare parts and any other related construction work at the Site contracted by Contractor, to the extent that the value

thereof is included in the estimated insurable value declared (the “**Insured Property**”).

For avoidance of doubt, such interest shall not include the Contractor’s Equipment.

Period From the Notice to Proceed and continuing with respect to each Plant until the issuance of the Taking-Over Certificate for the Facility (including any testing and commissioning) plus not more than 24 Months of extended maintenance cover during the Warranty Period for the Facility.

Territory Pakistan

Minimum Sum Insured The Agreement Price less non-recurring costs and certain extension sub-limits in accordance with market practice and as are available at commercially reasonable terms.

Deductible "All-risk" perils including but not limited to transit in Pakistan: not greater than USD 250,000 each and every event.

Natural events (including but not limited to earthquake, storm, tempest, flood, inundation, water damage, volcano, and tsunami): not greater than USD 500,000 each and every event.

Hot testing & Commissioning, DEFECTS, and during Maintenance period not greater than 1,250,000 (each and every event) for Gas Turbine Generators, and not greater than USD 750,000 (each and every event) for boilers / HRSGs, steam turbine generators, main transformers); but in case of a ‘prototype’ technology, the deductible will be not greater USD 2,000,000 each and every event.

Sub-limits **Inner Limits:**

USD 5,000,000 Offsite storage, per occurrence.

USD 5,000,000 Temporary removal, per occurrence.

USD 5,000,000 Temporary repairs, per occurrence.

USD 5,000,000 Inland transit per occurrence for locally procured

items

Extensions of Coverage:

10% of loss, maximum USD 10,000,000 debris removal, per occurrence.

20% of loss, maximum USD 10,000,000 expediting expenses, per occurrence except USD 1,000,000 air freight, per occurrence.

USD 1,000,000 Public authorities, per occurrence.

USD 1,000,000 Professional fees, per occurrence.

USD 2,500,000 Preventative measures, per occurrence.

USD 1,000,000 Plans & documents, per occurrence.

Lenders' clauses/endorsements and loss payable provisions.

Additional Clauses

72-Hour Occurrences Clause for earth movement, flood and windstorm

Firefighting expenses

Automatic increase (110%)

Maintenance coverage 24 months (extended maintenance basis)

Interim payments

Multiple insured clause

Marine cargo 50/50 clause

Repeat Tests

Piling conditions

Open Trench Clause

Serial Clause

Fuels and Consumables

Fuel Quality Clause

Safety Measures Clause in respect of Flood and Inundation

Multiple Insured's Clause.

**Principal
Exclusions**

Defects exclusion (LEG 2/96).

Radiation.

War, terrorism and any political violence.

Nationalisation.

Electronic data.

Cost of rectifying natural wear and tear and gradual deterioration.

Animals, conveyances designed for highway use, aircraft or waterborne vessels or craft.

Loss of cash, bank notes and monetary instruments.

Liquidated damages, criminal fines and penalties.

Contractor's equipment.

Inventory losses.

Reckless Act (done with the knowledge and consent of management)

Any other conditions as is customary for such insurances

THIRD PARTY LIABILITY INSURANCE

The Interest	All sums which the Insured shall be legally liable for compensation or damages arising out of death of or injury to third party people and damage to third party property happening during the Period (as defined in section 1 of this Part B) within the Territory (as defined in section 1 of this Part B) and arising out of the Project.
The Insured	(a) the Employer; (b) the Contractor and/or Subcontractor of every tier; (c) each of the Financiers; (d) the O&M Contractor (as required by the Contract); (e) vendors, manufacturers, suppliers, professional consultants, engineering consultants, architects and any other party engaged by any of the other Insured parties for their on-site activities (whilst excluding design work on site) only; (f) project management consultants and/or engineering contractors and/or construction contractors and/or licensor and any other company, firm, person or party (including but not limited to contractors and Subcontractors at any tier) with whom the Named Insured(s) above, or in this paragraph have, or in the past had, entered into written agreement(s) in connection with the Project, and/or any works activities, and preparations connected therewith; and (g) Purchaser (h) any Insured's subsidiary companies and their respective officers, directors, employees. Each for their respective rights and interests.
Period	As per the construction and erection "all risks" insurance.
Territory	Worldwide excluding claims brought in USA, Canada or Australia.
Limits of liability	USD 10,000,000 per occurrence and in aggregate where

applicable.

Deductible USD 25,000 per occurrence

Additional Clauses Cross liability.

Sudden and accidental pollution.

Worldwide jurisdiction (excluding USA, Canada and Australia).

Costs and expenses clause.

Lenders' clauses and loss payable provisions.

**Principal
Exclusions**

Asbestos exclusion.

Professional liability exclusion.

Liquidated Damages / punitive or exemplary damages exclusion.

Consequential financial losses.

Seepage, pollution and contamination (unless sudden, unintended and unexpected)

Commercial operations

Contractor's Equipment

Own employees

Ownership, position or use of aircraft, waterborne craft and/or motor vehicle under circumstances where road traffic legislation or equivalent applies.

Property in care, custody and control

Works covered under construction / erection all risks insurance

War, terrorism and any political violence

Claims subject to North American law or jurisdiction

Radioactive Contamination

Reckless Act (done with the knowledge and consent of

management)

Any other conditions as is customary for such insurances

MARINE TRANSIT INSURANCE

Scope of Coverage All materials, equipment, machinery, spares and other items for incorporation in the Facility, against all risks of physical loss or damage whilst in transit by land, sea or air from country of origin anywhere in the world (subject to geographical limits contained herein) to the Site from the time that the insured item leaves the warehouse or factory for shipment to the site, or vice versa. For avoidance of doubt, such insurance shall not cover the Contractor's Equipment.

Insureds

- (a) the Employer;
- (b) the parent, subsidiary and/or controlling companies of the Principal as they now exist or may hereafter be constituted for which any Principal Insured had, has, or may have the responsibility for purchasing insurance including joint venture companies and/or their officers, directors, employees, agents, successors and/or authorized representatives;
- (c) the Contractor and/or Subcontractor of any tier;
- (d) the Financiers; and
- (e) the Purchaser
- (f) others as required by the Agreement to provide goods and/or materials in connection with the Project,

each for their respective rights and interests.

Period Open cover commencing from the first shipment of property to be incorporated into the new build works comprising the Facility until such time as those goods reach their final designated lay down area(s) and any intermittent storage.

Voyages From supplier's premises anywhere in the world to completion of unloading at 'lay down' area at the Site.

Excluding shipments sourced from within the country of the

Project unless specifically agreed hereunder.

This insurance commences from the time of attachment of the Insured's interest in the subject matter insured, subject always to the provisions of the Institute of London Underwriters clauses, until the goods are delivered to site at final destination including return shipments of damaged cargo to manufacturers or suppliers premises and return back to site.

Including all loading and unloading risks.

Territorial Limits	At and from ports and/or places anywhere in the world to the Site, direct shipment or via ports and/or places in any order, including trans-shipment by land, air or water whether customary or otherwise and including return shipments if and as applicable.
---------------------------	--

Deductibles	Not greater than USD 50,000 each and every loss.
--------------------	--

Subject Matter Insured	Project Cargo being all materials, Equipment and Supplies which form part of The Facility.
-------------------------------	--

Maximum Limit of liability	The value of the largest single cargo shipment or the value in storage, whichever is the greater any one vessel, conveyance and/or location.
-----------------------------------	--

Additional Clauses	Lenders' clauses and loss payable provisions. 50/50 clause (consistent with construction and erection "all risks" clause wording).
---------------------------	---

Key suppliers' premises.

Worldwide territorial limit and any mode of transport extension.

Institute of London Underwriters (**Institute**) clauses and cover forms (or equivalent acceptable to the Lenders' insurance consultant) including:

- (a) Institute cargo clauses (A);
- (b) Institute war clauses (cargo);
- (c) Institute strikes clauses (cargo);
- (d) Institute classification clauses;
- (e) Institute war cancellation clause (cargo);

- (f) Institute radioactive contamination exclusion clause ;
- (g) Institute cargo clauses (Air);
- (h) Institute war clauses (Air cargo);
- (i) Institute strikes clauses (Air cargo);
- (j) Cargo ISM endorsement (JC 98/019 1 May 1998); and
- (k) Cargo ISM forwarding charges clause.
- (l) Multiple Insured's Clause (but with respect to Non Vitiating, the survey warranty clause will be paramount).
- (m) Excluding electrical and/or mechanical derangement unless caused by an insured peril.
- (n) Accumulation Clause (200%).

Concealed damages clause.

Packing exclusion deleted.

Notice of cancellation seven days for war, strikes, riots, and civil commotion, except 48 hours for sending to and from the United States of America. Otherwise, non-cancellable.

Value at amount of invoice, including all charges therein, and including prepaid and/or advanced and/or guaranteed freight not included in the invoice, plus 10 per cent.

Survey warranty in respect of key and critical items.

Principal Exclusions

As per Institute clauses.

Contractor's equipment.

Excluding known unseaworthiness or lack of fitness of conveyance.

Excluding known insolvency of conveyor.

Excluding barge shipment unless agreed with underwriter prior to voyage and at additional premium.

SCHEDULE 10- LIQUIDATED DAMAGES

1. REFERENCE SITE CONDITIONS

When tested on site during the Tests on Completion, the Facility shall meet the performance, adjusted to Reference Site Conditions (RSC), as mentioned in Employer's Requirements.

2. REJECTION CRITERIA FOR PERFORMANCE DEVIATIONS

Upon carrying out Tests on Completion, if the Facility is unable to meet the following conditions the Employer would have the right to reject the Facility, Materials, design or workmanship by giving notice to the Contractor, with reasons.

- a. If the Net Power Output (NPO) of the Facility on either fuel (i.e. natural gas or high speed diesel) is less than 95% of the Guaranteed Net Power Output (GNPO) of the Facility at RSC.
- b. If the Net Heat Rate (NHR) of the Facility on either fuel exceeds 103% of the Guaranteed Net Heat Rate (GNHR) of the Facility at RSC.

3. LIQUIDATED DAMAGES FOR PERFORMANCE DEVIATIONS

In the event that the Facility's Net Power Output and Net Heat Rate on either fuel do not conform to the Guaranteed Net Power Output and/or the Guaranteed Net Heat Rate respectively but do not reduce below or exceed the rejection criteria specified above, the Contractor shall pay the Employer liquidated damages, as described below.

3.1 Liquidated damages for Net Power Output of the Facility on either fuel

For each 1% deviation in Net Power Output, 3% of the Agreement Price ("AP") shall be charged as liquidated damages (LDs). For avoidance of doubt, deviations below 1% will also attract LDs based on the formula below. The aggregate cap of liquidated damages for not achieving the Guaranteed Net Power Output of the Facility on either fuel shall be limited to 15% of the AP and applicable liquidated damages would be calculated as under:

$$LD_p = 3\% \times AP \times \left[\frac{(GNPO - NPO)}{GNPO} \right] \times 100$$

Where:

LD_p = Value of liquidated damages for power [in USD]

3.2 Liquidated damages for Net Power Output of gas turbines on either fuel

In case of failure by the Contractor to achieve the Guaranteed Net Power Output of GT1 or Guaranteed Net Power Output of GT2 on either fuel the respective liquidated damages would be calculated as under:

$$LD_{PGT1} = 1\% \times AP \times \left[\frac{(GNPO_{GT1} - NPO_{GT1})}{GNPO_{GT1}} \right] \times 100$$

$$LD_{PGT2} = 1\% \times AP \times \left[\frac{(GNPO_{GT2} - NPO_{GT2})}{GNPO_{GT2}} \right] \times 100$$

Where:

LD_{PGT1} = Value of liquidated damages for power of GT1 [in USD]

LD_{PGT2} = Value of liquidated damages for power of GT2 [in USD]

Provided further in case of failure by the Contractor to achieve the GNPO of the Facility, which is on account of reduction in the Net Power Output of GT1 or Net Power Output of GT2 on either fuel, then liquidated damages payable for failure to achieve the GNPO of the Facility upon Tests on Completion would be arrived at after deducting the amount of liquidated damages levied as per calculations made under this paragraph 3.2.

3.3 Liquidated Damages for Net Heat Rate of the Facility on either fuel

For each 1% deviation in Guaranteed Net Heat Rate, 5% of the AP shall be charged as LDs. For avoidance of doubt, deviations below 1% will also attract LDs based on the formula below. The aggregate cap of liquidated damages for not achieving the Guaranteed Net Heat Rate of the Facility on either fuel shall be limited to 15% of the AP and applicable liquidated damages would be calculated as under:

$$LD_{HR} = 5\% \times AP \times \left[\frac{(NHR - GNHR)}{GNHR} \right] \times 100$$

Where:

LD_{HR} = Value of liquidated damages for power [in USD]

3.4 Liquidated damages for Net Heat Rate of gas turbines on either fuel

In case of failure by the Contractor to achieve the Guaranteed Net Heat Rate of GT1 or Guaranteed Net Heat Rate of GT2 on either fuel, the respective liquidated damages would be calculated as under:

$$LD_{HRGT1} = \left(\frac{5}{3}\right)\% \times AP \times \left[\frac{(NHR_{GT1} - GNHR_{GT1})}{GNHR_{GT1}} \right] \times 100$$

$$LD_{HRGT2} = \left(\frac{5}{3}\right)\% \times AP \times \left[\frac{(NHR_{GT2} - GNHR_{GT2})}{GNHR_{GT2}} \right] \times 100$$

Where:

LD_{HRGT1} = Value of liquidated damages for power of GT1 [in USD]

LD_{HRGT2} = Value of liquidated damages for power of GT2 [in USD]

Provided further in case of failure by the Contractor to achieve the GNHR of the Facility, which is on account of deviation in the Guaranteed Net Heat Rate of GT1 or Guaranteed Net Heat Rate of GT2 on either fuel, then liquidated damages payable for failure to achieve the GNHR of the Facility upon Tests on Completion would be arrived at after deducting the amount of liquidated damages levied as per calculations made under this paragraph 3.4.

3.5 Liquidated damages for delay in completion

The cap for all liquidated damages for delay shall be limited to 10% of the AP. Liquidated damages for delay in procuring the Taking-Over Certificate GT1 by the expiry of the Time for Completion GT1, procuring the Taking-Over Certificate GT2 by the expiry of the Time for Completion GT2 (simple cycle operation), and/or procuring the Taking-Over Certificate for the Facility by the expiry of the Time for Completion for the Facility (combined cycle operation) and would be calculated as under:

GT1 $LD_{D1} = 0.035\% \times AP \times (\text{No. of days delayed})$

GT2 $LD_{D2} = 0.025\% \times AP \times (\text{No. of days delayed})$

Facility $LD_{D3} = 0.1\% \times AP \times (\text{No. of days delayed})$

Where:

$LD_{D(1,2,3)}$ = Value of liquidated damages for delay [in USD]

Provided further that in case GT1 and GT2 are not delayed but there is a delay in procuring the Taking-Over Certificate for the Facility by the expiry of the Time for Completion for the Facility, then liquidated damages of 0.1%*AP/day would be payable. In case one of GT1 or GT2 are delayed then applicable liquidated damages for such unit would be charged. However, if there is a delay in procuring the Taking-Over Certificate for the Facility by the expiry of the Time for Completion for the Facility then the apart from the applicable liquidated damages for such unit, the total liquidated damages for such delay would be calculated as 0.1% of AP/day till such time the Taking-Over Certificate for the Facility is issued. For the purpose of clarity, it is reiterated that cumulative LDs for delay shall in no case exceed 10% of AP.

3.6 Aggregate cap of liquidated damages for the Agreement

The aggregate maximum amount for liquidated damages for deviation from performance standards such as GNPO and GNHR; and delay in completion shall be limited to an amount equal to 20% of the AP.

4. MISCELLANEOUS LIQUIDATED DAMAGES

If the Contractor fails to meet any stated period of submission specified in section 4.23.11 of the Employer's Requirements, the Contractor shall be liable to pay liquidated damages equivalent to US\$500 (US Dollars Five Hundred Only) per day, for each day of delay, for each particular occurrence of delay by the Contractor in complying with the corresponding timelines.

In addition, in case the Contractor fails to meet any other obligation under this Agreement or specified under the Employer's Requirements which have not been specifically provided for otherwise, the Contractor shall be liable to pay liquidated damages equivalent to US\$500 (US Dollars Five Hundred Only) per day for each failure by the Contractor.

SCHEDULE 11 –FORM OF NOTICE TO PROCEED

Date:

To,

[NAME OF THE CONTRACTOR]

[●]

REFERENCE: ISSUANCE OF NOTICE TO PROCEED

Dear Sir/Madam,

We, **PUNJAB THERMAL POWER (PRIVATE) LIMITED** (the “**Employer**”), hereby refer you, [name of the Contractor] (the “**Contractor**”) to the agreement entitled “AGREEMENT FOR ENGINEERING, PROCUREMENT AND CONSTRUCTION” relating to the [•] MW gas based power plant located near Haveli Bahadur Shah / Trimmu Barrage, at District Jhang, Punjab, Pakistan and entered into between the Employer and the Contractor on....., [●] (the “**Agreement**”).

Unless defined herein, all capitalized terms shall bear the meaning ascribed thereto in the Agreement.

The Employer hereby issues this Notice to Proceed to the Contractor and hereby instructs the Contractor to commence the performance of Works in accordance with the terms of the Agreement.

Yours sincerely,

For and on behalf of,

PUNJAB THERMAL POWER (PRIVATE) LIMITED

.....

Name:

Designation:

SCHEDULE 12- EIA REPORT & APPROVAL

[to be attached at the time of signing]

SCHEDULE 13- FORM OF SIMPLE CYCLE O&M AGREEMENT

SCHEDULE 14 – LIST OF CONSENTS (NON-EXHAUSTIVE)

SR. No.	PERMIT / LICENSES
1	Temporary Electricity Connection Application
2	Intake & Drainage NOC from Irrigation Department
3	Highway Connection (Construction of Main Access Road)
4	Electric pole shifting
5	Natural Gas Pipe area excavation
6	NOC during construction phase and later for the operation phase from Environmental Protection Agency, Punjab
7	HRSB / Boiler License from Chief Boiler Inspection, Punjab
8	Dumping Area from City District Government
9	NOC for Boreholes
10	NOC for removal of Spoil Bank
11	NOC for Intake & Out Fall Channel
12	Certificate of stability for the Complex under the Factories Act, 1934 read with Punjab Factories Rules, 1975.
13	Relevant approvals / sanctions, if any, under the Electricity Act, 1910
14	Approval regarding erection of the Facility under the provincial local government laws

15	License for firearms
16	NOCs/Licenses from Pakistan Nuclear Regulatory Authority (if applicable)
17	License for storage of petroleum products under the Petroleum Act, 1934
18	Certificate of registration and certificate of stability for the Facility under the Factories Act, 1934
19	NOC from Narcotics Division against usage of chemical storage and license of sulphuric acid holding
20	Allotment of frequency for wireless communication from PTA

SCHEDULE 15 – EPC DIRECT AGREEMENT

SIGNATURE PAGE

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed by their duly authorised representatives as of the day, month and year first above written.

AS EMPLOYER

For and on behalf of **PUNJAB THERMAL
POWER (PRIVATE) LIMITED** through its
authorised signatory

signature

Name: Ahad Khan Cheema

Designation: Chief Executive Officer

.....

in the presence of:

signature of witnesses

1- Name:

Address:

NIC or Passport No:

signature

.....

2- Name:

Address

NIC or Passport No:

.....

AS CONTRACTOR

For and on behalf of [.]

Name: [.]

Designation: [.]

in the presence of:

signature of witnesses

}

Signature

.....

1- Name:

Address:

NIC or Passport No:

signature

2- Name:

Address

NIC or Passport No:

.....

.....

SCHEDULE S
COPY OF FINANCIAL BID



RLNG CCPP PROJECT IN DISTRICT JHANG, PUNJAB, PAKISTAN

Letter of Financial Bid

Date: August 29th, 2017

IFP NO. 1-PTPL-POWER PLANT (EPC)

To: Punjab Thermal Power (Pvt.) Ltd.

We, the undersigned, declare that:

(a) We, China Machinery Engineering Corporation, ¹³ registered under incorporation / registration number 9111000100000710J under the laws of People's Republic of China, (the "Bidder"), do hereby solemnly declare that we have examined and have no reservations to the Bidding Documents, including Addenda Nos. issued in accordance with Instructions to Bidders ITB 8, or the Agreement;

(b) We offer to design, engineer, procure, supply, construct, install, test and commission, operate and maintain (during Simple Cycle), in conformity with the Bidding Document the following Plant and Services:

1263.2 (Gross, | 2+2+1 Configuration) MW Re-gasified Liquefied Natural Gas (RLNG) based Combined Cycle Power Plant at Jhang, Punjab, Pakistan

(c) The Bid Price of our Bid is USD 703,227,583.09 (SEVEN HUNDRED AND THREE MILLION TWO HUNDRED AND TWENTY-SEVEN THOUSAND FIVE HUNDRED AND EIGHTY-THREE US DOLLARS AND NINE CENTS), worked out in the following manner:

Sr. No.		Price (in USD) (Figures and Words)	Discount (in USD) (Figures and Words)	Final Price (in USD) (Figures and Words)
1.	Off shore EPC Price	415,967,942 FOUR HUNDRED AND FIFTEEN MILLION NINE HUNDRED AND SIXTY-SEVEN THOUSAND NINE HUNDRED AND FORTY-TWO US DOLLARS	0	415,967,942 FOUR HUNDRED AND FIFTEEN MILLION NINE HUNDRED AND SIXTY-SEVEN THOUSAND NINE HUNDRED AND FORTY-TWO US DOLLARS

¹³ In the event that the Prospective Bidder is a JV, this undertaking must be submitted by either the JV or by the Lead Partner for and on behalf of the JV partners.



RLNG CCPP PROJECT IN DISTRICT JHANG, PUNJAB, PAKISTAN

2.	On Shore EPC Price	104,032,059 ONE HUNDRED AND FOUR MILLION THIRTY-TWO THOUSAND AND FIFTY-NINE US DOLLARS	0	104,032,059 ONE HUNDRED AND FOUR MILLION THIRTY- TWO THOUSAND AND FIFTY-NINE US DOLLARS
3.	LTSA Price	179,827,740.11 ONE HUNDRED AND SEVENTY-NINE MILLION EIGHT HUNDRED AND TWENTY-SEVEN THOUSAND SEVEN HUNDRED AND FORTY US DOLLARS AND ELEVEN CENTS	0	179,827,740.11 ONE HUNDRED AND SEVENTY- NINE MILLION EIGHT HUNDRED AND TWENTY- SEVEN THOUSAND SEVEN HUNDRED AND FORTY US DOLLARS AND ELEVEN CENTS
4.	Simple Cycle O&M Price	3,399,841.98 THREE MILLION THREE HUNDRED AND NINETY-NINE THOUSAND EIGHT HUNDRED AND FORTY-ONE US DOLLARS AND NINETY- EIGHT CENTS	0	3,399,841.98 THREE MILLION THREE HUNDRED AND NINETY-NINE THOUSAND EIGHT HUNDRED AND FORTY-ONE US DOLLARS AND NINETY-EIGHT CENTS
5.	Total	703,227,583.09 SEVEN HUNDRED AND THREE MILLION TWO HUNDRED AND TWENTY-SEVEN THOUSAND FIVE HUNDRED AND EIGHTY-THREE US DOLLARS AND NINE CENTS		703,227,583.09 SEVEN HUNDRED AND THREE MILLION TWO HUNDRED AND TWENTY-SEVEN THOUSAND FIVE HUNDRED AND EIGHTY-THREE US DOLLARS AND NINE CENTS

- (d) The methodology for the discounts offered (if any) is:
- (e) Regarding Advance Payment, we hereby notify that we take Option A;
- (f) Our bid shall be valid for a period of 110 days from the date fixed for the Submission Deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;



RLNG CCPP PROJECT IN DISTRICT JHANG, PUNJAB, PAKISTAN

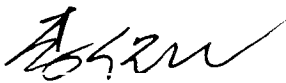
- (g) If our bid is accepted, we commit to provide the EPC Performance Security and arrange the OEM Performance Security in accordance with ITB 45 (*Performance Security*) ;
- (h) We have reviewed and accepted the form of the 'Agreement For Engineering, Procurement And Construction' as attached in Part III of the Bidding Documents, and undertake to execute the same within fourteen (14) days of issuance of the Notification of Award, if issued to us, along with fulfilling all other pre-conditions and obligations of the Contractor as detailed in the Agreement or the Bidding Documents;
- (i) We have reviewed and accepted the form of Simple Cycle O&M Agreement attached in Section 9 of the Bidding Documents, and agree and acknowledge that the Employer has an option, but not an obligation, to enter into the Simple Cycle O&M Agreement with us. Furthermore, this option may be exercised at any time up to twelve (12) months from the date of signing of the Agreement. Should the Employer seek to exercise such option, we accept and acknowledge that we shall be under an obligation to enter into the Simple Cycle O&M Agreement, in the form provided in Section 9 of the Bidding Documents.
- (j) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until the Agreement (attached as Part III to the Bidding Documents) is executed;
- (k) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
- (l) We agree to permit the Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the Employer; and
- (m) We have not been engaged in any corrupt or fraudulent practices nor have any commissions or gratuities been or are to be paid by us to agents relating to this bid and Agreement execution.



RLNG CCPP PROJECT IN DISTRICT JHANG, PUNJAB, PAKISTAN

Name: Li Kan

In the capacity of Deputy General Manager

Signed 

Duly authorized to sign the Bid for and on behalf of

China Machinery Engineering Corporation

Date: August 29th, 2017

[Seal]

in the presence of Mr. Zhang Chun

Signed 
President

SCHEDULE T
COPY OF VOLUNTARY DISCOUNT LETTER BY THE GT OEM

Punjab Thermal Power (Pvt.) Limited

1st Floor, 7-C-1, Gulberg-III
Lahore, Pakistan

Mr. Syed Salman Hassan
Company Secretary

Name Syed Muhammad Daniyal
Department RC-PK PS PG
Power Generation Services

Telephone +92 (213) 259 2907
Fax +92 (213) 256 6805
Mobile +92 (322) 222 4036
E-mail syed.daniyal@siemens.com

Your letter of IFP No.1-PTPL-Power Plant
Our reference PGS/546/LTP/SMD
Date August 31st, 2017

Subject: **IFP No.1-PTPL-Power Plant, LTSA**

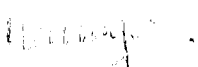
Dear Sirs,

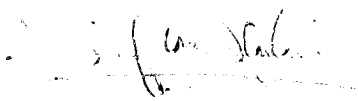
With reference to subject matter whereby Siemens being the OEM of the two bidders; CMEC and Power Construction Corporation of China, has submitted respective LTSA bid which has been accordingly forwarded to PTPL by these two aforementioned bidders.

Siemens is pleased to submit herewith a voluntary discounted offer as per attached schedule 6 of the ITB documents for PTPL positive consideration.

Yours sincerely

Siemens Pakistan Engineering Co. Ltd.


Naeem Ahmed
Divisional Controller


Safdar Ibrahim
Divisional Director

Cc:

1. Mr. Li Kan (CMEC)
2. Mr. Yu Chao (Power China)

073
08/09/2017

Siemens (Pakistan) Engg. Co. Ltd
Power Generation Services
Management: Safdar Ibrahim

Siemens (Pakistan) Engg. Co. Ltd. Tel: 021 111-077-088
B-72, Estate Avenue,
SITE, Karachi. www.siemens.com.pk

Siemens (Pakistan) Engg. Co. Ltd., MO Helmut von Struve,
CFO: Umer Jalil Anwer, Company Secretary: Abdul Mannan Majid
Co. Reg. CUIN 0000617, Reg. Address: B-72, Estate Avenue, SITE., Karachi

Schedule No. 6 - LTSA Price

Assumptions ¹		
Gas Fired Operational Hours (per Annum)	7200	
HSD ² Fired Operational Hours (per Annum)	800	
Number of Years	12	
Fees		
Initial Service Fee ³ (USD Lumpsum)	$A_1 = 10,500,000$	
Variable Fee (USD/FFH ⁴)	$B_1 = 456,000$	
Fixed Fee (USD/Month)	$C_1 = 270,833.330$	
Annual Escalation Factor ⁵	$D_1 = F_{Esc} \times (US-CPI)' = 100\% \times (2\%) = 2\%$	
Number of Gas Turbine Units	$X_{GT} = 2$	
Annual Variable Fee (USD)	$E_1 = [X_{GT} \times (B_1 \times 7200 \text{ hours} \times 1^6 \text{ FFH})] + [X_{GT} \times (B_1 \times 800 \text{ hours} \times 1.5^9 \text{ FFH})] = [2 \times (456.00 \times 7200 \text{ hours} \times 1^{10} \text{ FFH})] + [2 \times (456.00 \times 800 \text{ hours} \times 1.5^{11} \text{ FFH})] = 7,660,800,000$	
Annual Fixed Fee (USD)	$F_1 = C_1 \times 12 \text{ months} = 270,833.330 \times 12 = 3,249,999.960$	
Fixed Fee and Variable Fee Ratio ¹²	30:70	
	Variable Fee	Fixed Fee
Year 1	7,660,800,000	3,249,999.960
Year 2	7,814,016,000	3,314,999.959
Year 3	7,970,296,320	3,381,299.958
Year 4	8,129,702,246	3,448,925.958
Year 5	8,292,296,291	3,517,904.477
Year 6	8,458,142,217	3,588,262.566
Year 7	8,627,305,061	3,660,027.818
Year 8	8,799,851,163	3,733,228.374
Year 9	8,975,848,186	3,807,892.941
Year 10	9,155,365,150	3,884,050.800
Year 11	9,338,472,453	3,961,731.816
Year 12	9,525,241,902	4,040,966.453
Total	B = 102,747,336.989	C = 43,589,291.000
LTSA Price^{13,14}	$A_1 + B + C = 10,500,000 + 102,747,336.989 + 43,589,291.000 = 156,836,627.989$	

Naeem Ahmed
Divisional Controller
Power Generation Services

Sardar Ibrahim
Head
Power Generation Services

¹ The assumptions in this table are to allow comparable bids to be submitted for evaluation purpose, payments shall be made as per actual services rendered under the Long Term Service Agreement.

² High Speed Diesel

³ In consideration of the Initial Service Spares in the Long Term Service Agreement, the same shall not exceed 10% of the LTSA Price. If the 10% cap is burst, the bid shall be considered non-responsive and subsequently rejected.

⁴ Factored Fired Hours or Equivalent Base Hours.

⁵ The Annual Escalation Factor shall be capped at US-CPI, in terms of a fraction of US-CPI, the Bidder may quote their annual escalation factor within that limit, the same factor shall remain fixed for the duration of this Long Term Service Agreement. The Bidder shall assume this to be 2% per annum for the purposes of evaluation.

⁶ The fraction, i.e. F_{Esc} , selected by the Bidder against US-CPI which shall not exceed 100% of US-CPI.

⁷ Annual United States Consumer Price Index (All Urban Consumers) issued by US Bureau of Labor Statistics from time to time (or any successor or replacement agency thereto).

⁸ One (01) Operational Hour (OH) on Gas shall not exceed One (01) FFH/EBH/EOH

⁹ One (01) Operational Hour (OH) on HSD shall not exceed One Point Five (1.5) FFH/EBH/EOH

¹⁰ One (01) Operational Hour (OH) on Gas shall not exceed One (01) FFH/EBH/EOH

¹¹ One (01) Operational Hour (OH) on HSD shall not exceed One Point Five (1.5) FFH/EBH/EOH

¹² The ratio of Fixed Fee shall not be increased beyond this prescribed limit, but may be reduced if the Bidder elects.

¹³ The Prices quoted above should be inclusive of all federal, provincial or local taxes, duties, cess, fee, etc. including but not limited to federal or provincial sales tax chargeable on contract billing. The applicable withholding taxes shall be deducted out of contract payments to the LTSA contractor and deposited with the tax authorities on its behalf. The employer shall not make any payment or reimbursement of any tax, levy, cess, duty, fee or fine incurred in respect of import/export of any material or equipment or levied on account of execution of any contractual work or charged in respect of contract billings.

¹⁴ The fees / prices shall be quoted in USD but the payments shall be made in equivalent PKR.