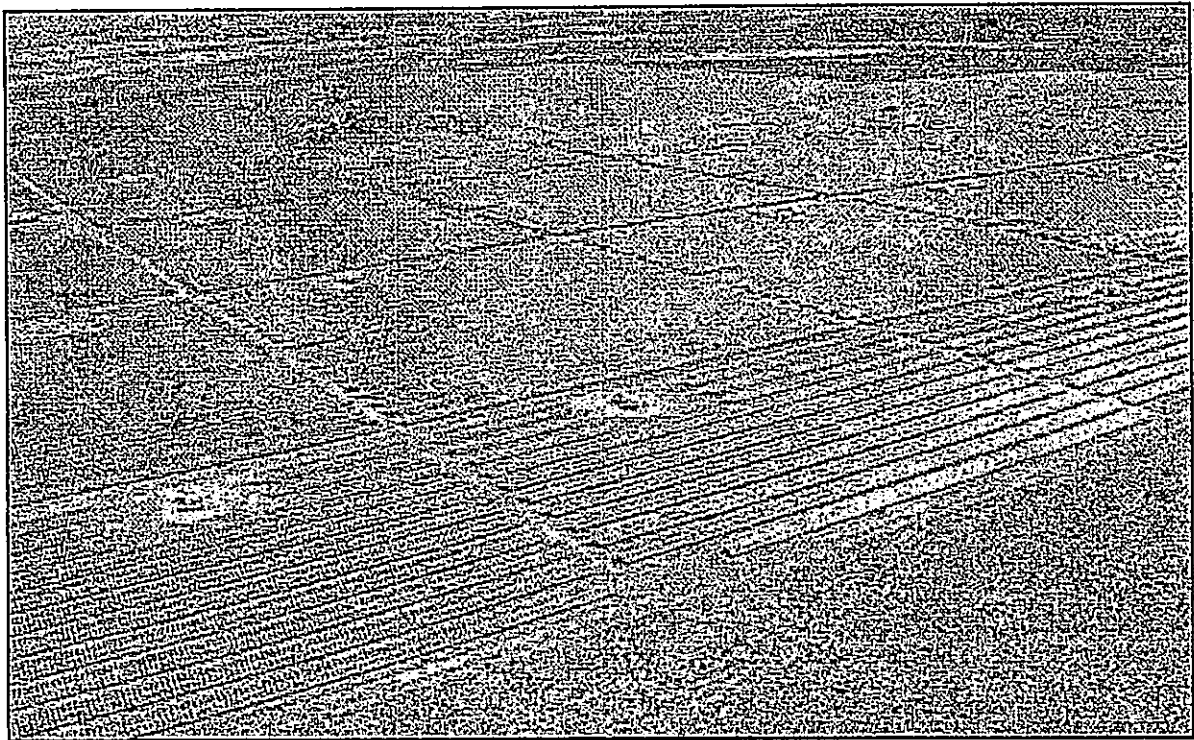




BID EVALUATION REPORT

**100 MWp SOLAR POWER PROJECT AT BELA –
BALOCHISTAN – PAKISTAN ("PROJECT")**

**IN ACCORDANCE WITH NEPRA COMPETITIVE
BIDDING TARIFF REGULATIONS, 2017 ("NCBTR")**



AUGUST 2024



Table of Contents

Executive Summary	3
1 Project Background	5
2 Evaluation of Bids	6
3 Evaluation of Bid Tariff	12
4 KE's Prudency Check.....	13
5 Conclusion	15
ANNEXURES.....	17



Executive Summary

Project Background

K-Electric Limited ("KE") initiated the process of bidding to Induct 100 MW Solar Project in Balochistan region under NEPRA Competitive Bidding Tariff (Approval Procedure) Regulations, 2017. The Project will not only reduce generation costs but will also help KE in achieving its goal to include 30% Renewable capacity by 2030.

The Project is planned to be connected through to KE grid through the 132kV HVUB transmission line.

Open Competitive Bidding

KE conducted the initial prequalification process for the Project in 2021. Subsequently, the Request for Proposal ("RFP") for the Projects were approved by NEPRA on February 29, 2024, under open competitive bidding without benchmark tariff. In compliance with the NCBTR and NEPRA determination, KE invited reputable local and international companies/consortiums with proven power project experience and sound financial standing to submit their Bid Proposal for the Project by 31st July 2024 ("**Bid Submission Deadline**").

Power Evacuation arrangement

It is pertinent to mention here that evacuation of power from the Project is dependent on timely completion of HVUB Grid and Transmission Line for which KE humbly requests the Honorable NEPRA Authority to approve the cost based on competitive bids received so that EPC Contract can be awarded for construction of the HVUB Grid and Transmission Line for timely evacuation of power from the Project.

Submission of Bids and Evaluation of Technical Proposals

In response to KE invitation, eight (08) Bidders participated in the open competitive bidding procedure and their technical bids for the Project were opened on August 1, 2024.

After a thorough technical evaluation, it was concluded that all the Bidders met the knock-off criteria and achieved more than the minimum technical score. The list of Technically qualified Bidders is as follows.

S.No.	Lead Sponsor
1	Atlas Power Limited
2	Hecate Global Renewables LLC
3	Hub Power Holdings Limited
4	JCM Power Corporation
5	Master Textile Mills Limited
6	Metro Group of Companies
7	Oursun Pakistan Limited
8	Sapphire Electric Company Limited

Table 1: List of Technically qualified Bidders



Evaluation of Commercial Proposals

Subsequent to technical evaluation, financial bids were opened for all the Technically qualified Bidders on August 19, 2024. The summary of tariff proposal submitted by all the Bidders are as follows:

Lead Sponsor Name	Bid Tariff (PKR/kWh)	Ranking
Master Textile Mills Limited	11.2071	1
Atlas Power Limited	12.1766	2
JCM Power Corporation	12.3057	3
Metro Group of Companies	12.3900	4
Hub Power Holdings Limited	12.8449	5
Oursun Pakistan Limited	13.5088	6
Hecate Global Renewables LLC	15.8757	7
Sapphire Electric Company Limited	16.6000	8

Table 2: Summary of Tariff Proposal

Prudency Check by KE

As directed by NEPRA in its determination of RFP of the Project, KE has conducted a comprehensive assessment of the successful bid, considering the prevailing macroeconomic and market conditions along with an assessment and analysis of displacement of expensive electricity in its system.

Based on the prudency check of Bid Tariff, KE has independently prepared an estimated Tariff number based on current market conditions and prices which works out to be in the range of Rs. 11.5186/kWh – Rs.12.7634/kWh (USc.3.9906/kWh – USc.4.4218/kWh) depending upon the mix of foreign and local debt. However, as evident from Table 2 above, the lowest Bidder - Master Textiles Mills Limited has offered a tariff of Rs. 11.2071/kWh which is less than the estimated tariff worked out by KE.

Additionally, KE has conducted analysis of displacement of expensive fuel due to offtake from the Project – further detailed in Section 4 of the Bid Evaluation Report ("BER"). Based on the analysis, the Project is expected to fetch annual savings in energy cost of PKR 1,569 million (total savings of PKR 39.23 billion through the life of the Project) on account of displacement of expensive imported fuel-based generation. Moreover, the Project is also expected to realize annual forex savings of USD 11.25 million (total savings of USD 281 million through the life of the Project).

Results of Tariff Proposal

In accordance with the Technical and Financial evaluation criteria approved by NEPRA and as per the prudency check performed by KE, **Master Textile Mills Limited is declared as the Successful Bidder** for the Project by the Bid Evaluation Committee ("BEC").

Submission to NEPRA

KE hereby requests the Honorable NEPRA Authority to grant its approval of the Competitive Bidding process and the BER so that the same can be communicated to Successful Bidder and subsequent steps can be taken accordingly.



1 Project Background

- 1.1 K-Electric Limited ("KE") is a publicly listed utility company and the only vertically integrated power utility, engaged in the Generation, Transmission Distribution and Supply of electricity in Pakistan. K-Electric has Distribution and Electric Power Supplier license for Karachi and its adjoining areas including Dhabeji and Ghara in Sindh and Hub, Uthal, Winder and Bela in Balochistan. The Company has around 3.7 million industrial, commercial, agriculture and residential consumers and is supplying electricity to over 20 million people.
- 1.2 The Winder, and Bela towns are located in the Lasbela district of Balochistan which falls under KE distribution territory. The existing transmission network from Winder to Bela is 66 kV which is planned to be replaced with new transmission lines and grids of 132 kV. The investment required for this upgradation is currently under review with NEPRA for approval. The 132 kV transmission system is planned to be energise before each Project's COD, subject to regulatory approvals.
- 1.3 KE conducted the initial prequalification process for the Projects in 2021.
- 1.4 In accordance with NEPRA's determination dated February 29, 2024, the prequalification process was conducted again. Moreover, NEPRA had clarified that the existing prequalified parties were considered as prequalified.
- 1.5 The RFP of the Project was structured in line with the laws of Pakistan, international standards and bankability. The approval of RFP document for the Projects was accorded by NEPRA vide its decision no. NEPRA/Advisor (CTBCM)/RFP-04/3115-21 on February 29, 2024.
- 1.6 The invitation to bid advertisement for the Project(s) was published on 2nd April 2024, under major publications as follows:
 1. International newspapers: China Daily, Khaleej Times, New York Times and Financial Times
 2. Local newspapers: Daily Dawn, Business Recorder, Express Tribune and others
 3. Tendering websites: globaltenders.com and tendersinfo.com
- 1.7 The RFP document was also made available on the KE website. All Bidders/Applicants were required to register on SAP ARIBA software, for submission of soft copy of the bids. All correspondence, clarifications and amendments were uploaded on the Ariba Software and/or KE website.
- 1.8 In line with the RFP, KE formed the Bid Evaluation Committee (as detailed in Section 2 below) to oversee the Competitive Bidding process, evaluation of Bids and preparation of Bid Evaluation Report.
- 1.9 As required under NCBTR, KE appointed M/s OMS (Private) Limited ("OMS") as Independent Consultant ("IC") in the Bid Evaluation Committee of the Project.



2 Evaluation of Bids

2.1 Bid Evaluation Committee

In compliance with NEPRA Competitive Bidding Tariff Regulations, 2017 ("NCBTR"), KE formed the Bid Evaluation Committee comprising of following five (5) members:

S. No.	Members
1	KE Business Development
2	KE Business Finance
3	KE Corporate Legal
4	KE Supply Chain
5	OMS (Private) Limited - Independent Consultant

Table 2.1-1: Bid Evaluation Committee Members

The Bid Evaluation Committee has assessed both the Technical and Financial/Tariff Proposal received, and subsequently conducted bid evaluations in accordance with Exhibit 7 (Bid Evaluation Criteria) of the RFP. Moreover, OMS (Private) Limited, in its capacity as the Independent member of the Bid Evaluation Committee as required under the NCBTR, has been integral part of the bid evaluation process and has endorsed the technical and financial evaluation.

2.2 Power evacuation arrangements and Grid Interconnection Study

It is pertinent to mention here that evacuation of power from the Project is dependent on timely completion of HVUB Grid and Transmission Line for which KE humbly requests the Honorable NEPRA Authority to approve the cost based on competitive bids received so that EPC Contract can be awarded for construction of the HVUB Grid and Transmission Line for timely evacuation of power from the Project.

Grid Interconnection study had already been conducted for the project and the same has already been shared with the bidders.

2.3 Bidding Process

2.3.1 Prequalification

A prequalification process was initially carried out by KE in 2021, however in the recent approval of the RFP, NEPRA directed KE to allow new parties to participate in the prequalification process who had not previously participated in the prequalification process, while the parties who have already been prequalified by KE shall not be required to go through the process again. The following parties were pre-qualified in the initial round of 2021.

S. No.	Lead Sponsor	Status
1	China Machinery Engineering Corporation (CMEC)	Single Entity
2	Trina Solar Company Limited	Single Entity
3	Master Textile Mills Limited (MTML)	Consortium
4	Oursun Pakistan Limited	Consortium
5	Rana Nasim - Gharo Solar (Private) Limited	Consortium



6	Marubeni Corporation	Consortium
7	Sapphire Electric Company Limited	Consortium
8	Atlas Power Limited	Single Entity
9	Ib vogt GmbH	Single Entity
10	Metro Group of Companies	Consortium
11	Zorlu Energy	Single Entity
12	Universal Energy Company Limited	Consortium
13	JCM Power	Consortium
14	Engro Energy Limited	Single Entity
15	Zonergy Company Limited	Single Entity
16	Artistic Milliners (Private) Limited	Single Entity
17	Scatec Solar	Consortium
18	Malaysian Solar MSR	Consortium
19	Hecate Energy	Consortium
20	JA Solar Holdings	Single Entity

Table 2.3-1: List of prequalified bidders

Subsequently, new bidders and the parties who have changed the consortium submitted prequalification documents along with their bidding documents.

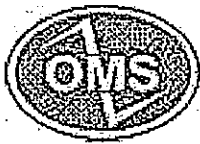
2.3.2 Pre-bid clarifications

During the tendering process, several potential bidders submitted pre-bid clarifications to KE. In response, KE, in consultation with the Independent Consultant (OMS), addressed these clarifications. A consolidated document of pre-bid clarifications was subsequently prepared and circulated to all bidders by KE on July 23, 2024, and July 26, 2024. Moreover, KE issued General Clarifications (Refer Annexure A2), Corrigendum to RFP (Refer Annexure A3) and shared Energy Purchase Agreement revision with Bidders (Refer Annexure A4).

2.3.3 Bid submission

At the time of Bid Submission Deadline on July 31, 2024, a total number of 08 (eight) Bids were received from the following Bidders:

S. No.	Bidder Name	Address	Single Entity/Consortium	Country
1	Atlas Power Limited	26/27 Km, Lahore, Sheikhupura Road, Sheikhupura	Single Entity	Pakistan
2	Hecate Global Renewables LLC (Lead Member) – Asia Petroleum Limited	621 W. Randolph St., Chicago, IL 60661, United States of America D-52, Block 4, Scheme 5, Clifton, Karachi	Consortium	USA Pakistan
3	Hub Power Holdings Limited	9 th Floor, Ocean Tower Block-9, Main Clifton Road, Karachi	Single Entity	Pakistan
4	JCM Power Corporation (Lead Member) – Rana	15 Baycrest Drive, Barrie, CA, ON L4M 7C7	Consortium	Canada Pakistan



	Nasim Ahmed (Support Member)	76-B, Street 4, Phase 5, DHA, Lahore, Pakistan		
5	Master Textile Mills Limited (Lead Member) - Mr. Nadeem Malik (Sponsor) - Mr. Shahzad Malik (Sponsor)	82-C1, Gulberg III, Lahore	Consortium	Pakistan
6	Metro Group of Companies - Mr. Danish Iqbal (Sponsor) - Mr. Saad Iqbal (Sponsor) - Ms. Natasha Iqbal (Sponsor)	7 th Floor, Al-Tijarah Centre, P.E.C.H.S., Main Shahrah-e-Faisal, Karachi.	Consortium	Pakistan
7	Oursun Pakistan Limited - Orient Power Company Private Limited	10 Ali Block, New Garden Town, Lahore - Pakistan	Consortium	Pakistan
8	Sapphire Electric Company Limited - Sapphire Fibres Limited - Ningbo Green Light Energy Pvt. Ltd.	7-A/K, Main Boulevard, Gulberg-II, Lahore - Pakistan 2nd Floor, Pace Mall, 96-B1, MM Alam Road, Gulberg III, Lahore	Consortium	Pakistan

Table 2.3-2: List of bids received

2.3.4 Evaluation of Prequalification Application upon bid submission

In accordance with the KE RFP, three (3) Prequalified Applicants in the initial round namely, JCM Power Corporation, Metro Group of Companies and Hecate Energy, submitted the request for change in their consortium.

Furthermore, Hub Power Holdings Limited submitted a new pre-qualification application for the Project.

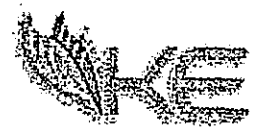
After evaluation of the Legal, Technical and Commercial requirements submitted in compliance of the RFP, the following new parties were prequalified for the Project.

S. No.	Lead Member	Status
1	JCM Power Corporation	Consortium
2	Hub Power Holdings Limited	Single Entity
3	Hecate Global Renewables LLC	Consortium
4	Metro Group of Companies - Mr. Danish Iqbal	Consortium

Table 2.3-3: List of fresh prequalified bidders



2023-24



2.3.5 Technical Evaluation Criteria:

Given below are the technical specifications relevant to technology and energy yield of the solar power plant, non-compliance to which shall result in disqualification of the bidder.

Knock-off Criteria:

Solar Panel:	Tier 1
Yield:	Greater than 21.5%
Grid Code:	Compatibility of the Complex and equipment with technical standards of Grid Code 2023 (power factor, voltage variation, operating frequency range etc.), Distribution Code and other applicable documents etc.

Detailed Technical Scorecard is given in annexure A5, according to which, minimum criteria for qualification of bidder are 75 out of 100 marks after passing the knock-off criteria.

2.3.6 Technical Evaluation Summary

In view of the above, all parties submitting the technical bids have passed the technical evaluation and were declared as technically qualified.



Technical Evaluation Criteria	Atlas Power Limited	Hecate Global Renewable LLC	Hub Power Holding Co. Limited	JCM Power Corporation	Master Textile Mills Limited	Metro Group of Companies	Oursun Pakistan Limited	Sapphire Electric Company Limited
Compliant with Knock off Criteria	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Solar Panel	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power Inverter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GIS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power Transformer & Other Switchgear equipment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SCADA, Telecommunication and Protection Schemes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Metering System & Back-up Metering System	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weather Station	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Civil / Mounting Structure	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BOP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Safety & Security	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Plant Monitoring System	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interconnection Requirement	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Design Experience and Capability	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yield	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
O&M	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
HSE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 2.3-4: Technical Submission Summary Results (detailed technical scoring card in annexure A5)

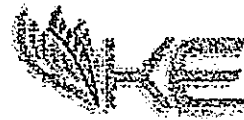
Key: Yes = Compliant; No = Not Compliant

As per the RFP and general clarifications any change in equipment proposed will be subject to KE's approval and with the fulfillment of criteria set out in the RFP.

2.3.7 Legal Submission:

The prequalified bidders were required to submit the following information in their legal submission:

- Bid Submission Letter
- Confidentiality Agreement
- Form of Covenant



- d) Power of Attorney
- e) Affidavit
- f) Letter of Acceptance
- g) Form of Bid Bond

All the bidders are considered to have submitted a compliant legal submission.

Lead Sponsor	Bid Submission Letter	Confidentiality Agreement	Form of Contract	Power of Attorney	Affidavit	Letter of Acceptance	Form of Bid Bond
Atlas Power Limited	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hecate Global Renewables LLC	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hub Power Holdings Limited	Yes	Yes	Yes	Yes	Yes	Yes	Yes
JCM Power Corporation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Master Textile Mills Limited	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Metro Group of Companies - Mr. Danish Iqbal	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Oursun Pakistan Limited	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sapphire Electric Company Limited	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 2.3-5: Summary of Legal Documentation
Key: Yes = Compliant; No = Not Compliant

2.3.8 Grievance and Redressal Committee

From and after the announcement of the technically qualified Bidders, any Bidder feeling aggrieved by the evaluation outcome may lodge a written complaint before the Grievance Redressal Committee concerning its grievance not later than seven (7) days after the announcement with adequate particulars of the complaint and attaching copies of any documents relevant to the complaint, via electronic mail to the following address: email address: project.grievance@ke.com.pk.

No grievance was received for the Project as all Bidders were declared technically qualified.



3 Evaluation of Bid Tariff

The financial bid opening took place on August 19, 2024. The Tariff Proposals of the technically qualified Bidders were opened in the presence of the representatives from KE, OMS and all technically qualified Bidders. The details of the Bid Tariffs submitted by each Bidder are summarized in the table below:

Lead Sponsor	Bid Tariff (PKR/kWh)	Ranking
Master Textile Mills Limited	11.2071	1
Atlas Power Limited	12.1766	2
JCM Power Corporation	12.3057	3
Metro Group of Companies – Mr. Danish Iqbal	12.3900	4
Hub Power Holdings Limited	12.8449	5
Oursun Pakistan Limited	13.5088	6
Hecate Global Renewables LLC	15.8757	7
Sapphire Electric Company Limited	16.6000	8

Table 3-1: Bid Tariff of technically qualified bidders

Furthermore, it is pertinent to mention that all Bidders have submitted their proposal based on commercial financing and have asserted that SBP concessionary financing is not available. Additionally, they have also submitted relevant correspondence from Local Banks confirming the non-availability of SBP's concessionary financing arrangement.

In conclusion, based on the evaluation criteria as mentioned in Exhibit -7 of the RFP, the Bidder offering the lowest Bid Tariff is **Master Textile Mills Limited**, with a Bid Tariff of **11.2071 PKR/kWh (USc. 3.8826/kWh)¹**.

¹ USD to PKR rate of Rs.288.65/USD have been used



4 KE's Prudency Check

As required by NEPRA in the RFP approval, KE has performed a prudency check on the successful bid based on the prevailing equipment cost, market conditions and funding costs. Moreover, analysis for displacement of expensive fuel have also been performed.

4.1 Prudency of Bid Tariff

KE has performed an analysis of submitted tariffs based on the prevailing equipment costs (based on quotes received from equipment manufacturers) and prevailing market conditions. The key assumptions and results of the above analysis are as follows:

Parameter	Assumptions
Exchange Rate	288.65/USD
SOFR + Spread	5.37% + 4.5%
Foreign Debt Tenor	15 years
KIBOR + Spread	21.28% + 2.5%
Local Debt Tenor	15 years
Capacity Factor	23%
Debt: Equity Ratio	70:30
Return on Equity	15% (USD Based)
IRR	13%
EPC Cost	USD 0.48 Mn/MW ²

Table 4.1-1: Assumptions

Range of Bid Tariff upon KE independent assessment	
PKR 11.5186/kWh	PKR 12.7634/kWh
Foreign Debt Mix – 100%	Foreign Debt Mix – 80%
Local Debt Mix – Nil	Local Debt Mix – 20%

Table 4.1-2: Estimated bid tariff

4.2 Displacement Cost Analysis³

The induction of the Project in KE fleet is expected to bring savings in both national system and KE grid due to replacement of expensive generation in National Grid and KE fleet with renewable power from the Project. Based on KE estimate, the Project will bring following cost and forex savings:

Parameters	Annual savings	Project life savings
Energy Cost Savings – PKR	1,569 Mn	39,232 Mn
Forex Savings – USD	11.25 Mn	281.2 Mn

Table 4.2-1: Project Savings

The above savings are indicative only and have been computed based on certain assumptions including but not limited to the hourly demand profile, availability of

² KE had gathered quotations from different equipment manufacturers and service providers to evaluate the prudency of successful bid.³ Savings due to displacement of imported fuel has been worked out using prevalent fuel cost considering horizon of 3 years, which have then been prorated over entire Project Life.

³ Savings due to displacement of imported fuel has been worked out using prevalent fuel cost considering horizon of 3 years, which have then been prorated over entire Project Life.



supply from National Grid (assumed at 1,700 MW for the analysis), fuel prices, marginal cost of National Grid, technical constraints etc.

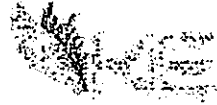


Page No. _____



5 Conclusion

Based on the Technical and Financial evaluation conducted by the Bid Evaluation Committee, along with the prudency checks performed by KE as detailed in the report presented above, It is requested to the Honorable NEPRA Authority to approve the Bid Evaluation Report and declare M/s Master Textile Mills Limited (Refer Annexure A1 for Bid Details) as the Successful Bidder. This declaration is requested in accordance with the criteria set forth in the NCBTR and NEPRA approved RFP.



The Bid Evaluation Committee hereby approves the Bid Evaluation Report and declares **M/s Master Textile Mills Limited** as the Successful Bidder, subject to approval of NEPRA.

A handwritten signature in dark ink, appearing to be 'Raj', written over a horizontal line.

Head of Business Development - KE

A handwritten signature in dark ink, appearing to be 'Gaur', written over a horizontal line.

Head of Business Finance - KE

A handwritten signature in dark ink, appearing to be 'Raj', written over a horizontal line.

Head of Legal - KE

A handwritten signature in dark ink, appearing to be 'Raj', written over a horizontal line.

Head of Procurement - KE

A handwritten signature in dark ink, appearing to be 'Raj', written over a horizontal line.

Independent Consultant - OMS (Private) Limited



ANNEXURES

A1 – Bid Details for Master Textile Mills Ltd.

S. No.	Description	Specifications
1	Solar Panel	Longi Himo 9 (LR7-72HYD), Longi Himo 7 (LR7-72HGD), Trina Vertex N (N-type I-TOPCon)
2	Power Inverters	Sungrow SG8800UD-MV-20, Huawei
3	Gas Insulated Switchgear (GIS)	TBEA ZF53-145 SF6-GIS, Chint
4	Power Transformers	TBEA SFZ11 SFZ-100000/132, Chint
5	SCADA System	EBOP SCADA
6	Overall System Design and Documentation	Detailed design provided
7	Experience of Key Design Staff	Master team and RE2
8	Tracking System	Trina Vanguard 1P, HD Solar, ANTAI
9	Warranty duration and coverage for solar panels	12 year material and processing, 30 year linear power output
10	Warranty duration and coverage for inverters	5 years
11	Warranty duration and coverage for GIS	2 years
12	Warranty duration and coverage for power and inverter transformers	Inverter Transformer: 5 years, Power Transformer: 2 years
13	CSR	Compliance