



Registrar

# National Electric Power Regulatory Authority Islamic Republic of Pakistan

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No. NEPRA/R/ADG(Trf)/TRF-412/MGEL-2017/23391-23393

December 8, 2022

Subject: **Decision of the National Electric Power Regulatory Authority in the matter of Tariff Adjustment at Commercial Operations Date of Master Green Energy Limited [Case # NEPRA/TRF-412/MGEL-2017]**

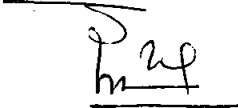
Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annexure-I, II, III & IV (31 Pages) in the matter of Tariff Adjustment at Commercial Operations Date of Master Green Energy Limited in Case No. NEPRA/TRF-412/MGEL-2017.

2. The Decision is being intimated to the Federal Government for the purpose of notification in the official Gazette pursuant to Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 within 30 days from the intimation of this Decision. In the event the Federal Government fails to notify the subject tariff Decision or refer the matter to the Authority for reconsideration, within the time period specified in Section 31(7), then the Authority shall notify the same in the official Gazette pursuant to Section 31(7) of NEPRA Act.

3. The Order part along with Annexure-I (Tariff Table), Annex-II (SBP Loan), Annex-III (Commercial Foreign Loan) and Annex-IV (Commercial Local Loan) of the Authority's Decision are to be notified in the official Gazette.

Enclosure: As above

  
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( Syed Safeer Hussain )

Secretary  
Ministry of Energy (Power Division)  
'A' Block, Pak Secretariat  
Islamabad

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.



**DECISION OF THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY IN THE MATTER OF TARIFF ADJUSTMENT  
AT COMMERCIAL OPERATIONS DATE OF MASTER GREEN ENERGY LIMITED**

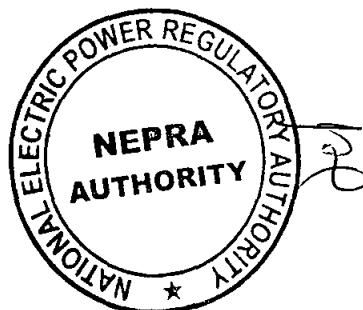
**Introduction**

1. M/s. Master Green Energy Limited ("MGEL" or "the petitioner" or "the company") is a company formed to develop 50 MW wind power project ("the Project"). The Generation License to the company was issued by the National Electric Power Regulatory Authority ("NEPRA" or "the Authority") on November 27, 2017. Subsequently, the decision on Licensee Proposed Modification ("LPM") was issued on October 14, 2019.
2. The tariff of MGEL was determined by the Authority on August 20, 2018. The Authority then issued its decision in the matter of review motion filed by the company on February 12, 2019 wherein the Authority approved levelized tariff of PKR 5.6673/kWh (US Cents 4.7227/kWh). Next, the Authority issued its decision on July 23, 2020 in the matter of tariff modification petition filed by MGEL. Afterwards, the decision in the matter of motion for leave for review filed by MGEL against the tariff modification decision was issued on May 17, 2021 (all the mentioned decisions shall be collectively or separately be referred to as "Tariff Determination").

**Adjustment of Tariff at Commercial Operations Date**

3. Following mechanism was approved in the Tariff Determination for the adjustment of tariff at the Commercial Operations Date ("COD") of the company:
  - The EPC cost shall be adjusted at actual considering the approved amount as the maximum limit. Applicable foreign portion of the EPC cost will be adjusted at COD on account of variation in PKR/USD parity, on production of authentic documentary evidence to the satisfaction of the Authority. The adjustment in approved EPC cost shall be made only for the currency fluctuation against the reference parity values.
  - The petitioner has submitted M/s DNV-GL certification No. TC-236603-A-2 dated May 29, 2010 about the design, specification and country of origin of various component of the wind turbine to be installed for this project. At the time of COD stage tariff adjustments, the petitioner will have to provide a confirmation from the EPC contractor as to the fullest compliance of the equipment having same design and origin of manufacture as given in the type certificate. Where needed, the bill of lading and other support documents will also have to be submitted.
  - PDC, Insurance during construction and Financing Fee and Charges shall be adjusted at actual at the time of COD considering the approved amount as the maximum limit. The amounts allowed on these accounts in USD will be converted in PKR using the reference PKR/USD rate of 120 to calculate the maximum limit of the amount to be allowed at COD.
  - Duties and/or taxes, not being of refundable nature, relating to the construction period directly imposed on the company up to COD will be allowed at actual upon production of verifiable documentary evidence to the satisfaction of the Authority.

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- IDC will be recomputed at COD on the basis of actual timing of debt draw downs (for the overall debt allowed by the Authority at COD) for the project construction period of fifteen months allowed by the Authority.
  - For full/part of conventional local or foreign loans or a mix of both, if availed by the company, the IDC shall also be allowed adjustment for change in applicable KIBOR/LIBOR.
  - The tariff has been determined on debt : equity ratio of 80 :20. The tariff shall be adjusted on actual debt : equity mix at the time of COD, subject to equity share of not more than 20%. For equity share of more than 20%, allowed IRR shall be neutralized for the additional cost of debt : equity ratio.
  - The reference tariff has been worked out on the basis of cost of 6% offered under SBP financing scheme. In case cost negotiated by the company under SBP scheme is less than the said limit of 6%, the savings in that cost shall be shared between the power purchaser and the power producer in the ratio of 60:40 respectively.
  - For full or part of local or foreign loan, if any, the savings in the approved spreads shall be shared between the power purchaser and power producer in the ratio of 60:40.
  - ROEDC will be adjusted at COD on the basis of actual equity injections (within the overall equity allowed by the Authority at COD) for the project construction period of fifteen months allowed by the Authority.
  - O&M components shall be adjusted on the basis of bidding results at the time of COD to be carried out by the petitioner considering the approved amount as the maximum limit.
4. Vide the Tariff Determination issued on May 17, 2021, the Authority changed the adjustment clause with respect to O&M component of tariff which is produced below:
- The O&M cost, its mix, and the corresponding mechanism thereof as approved in the Tariff Determination of Master Green Energy Limited shall be applicable for the period during which the Petitioner has already finalized the WP and LT O&M Agreements, i.e. 13 years. During this time, however, the Petitioner shall be required to submit, on an annual basis, the documentary evidence/report pertaining to actual expenditures on account of O&M. The savings, if any, in the actual O&M cost compared to the approved O&M cost shall completely be passed on to the consumers.

Subsequent to the lapse of the LT O&M Contract, in order to claim O&M costs, the Petitioner shall be required to carry out competitive bidding for the selection of the O&M contractor in accordance with NEPRA's applicable law. Based on this competitive bidding process, the Authority shall make revisions in the O&M cost, while capping the prevailing level of the approved O&M cost. Those revisions may also entail changing the mix of the approved O&M cost (local and foreign) as well as the indexation mechanism (indices, frequency etc.).

**Filing of Tariff Adjustment Request at COD**

5. The company through letter No. MGEL/NEPRA/TARIFF/001-22 dated February 09, 2022 submitted its application for adjustment of tariff at COD. Subsequently, MGEL vide letter dated August 17, 2022 submitted addendum to the above

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tariff adjustment application. In the said addendum, MGEL primarily submitted the details of the payment the company made to the EPC contractor at a later stage, i.e. post filing of adjustment application in February, 2022 and accordingly revised the claimed tariff.

6. Below is the summary of project cost allowed by the Authority in the Tariff Determination and claimed by MGEL in its tariff adjustment application dated February 09, 2022, as revised on August 17, 2022:

Project Cost Heads	Determined		Claimed at COD	
	USD Million	PKR Million	USD Million	PKR Million
EPC Cost	57.94	6,952.80	57.94	9,721.69
Duties and Taxes	-	-	0.58	97.40
Project Development Cost	2.50	300.00	2.50	373.20
Insurance during Construction	0.29	34.76	0.27	42.67
Financing Fee and Charges	1.22	145.75	1.21	184.37
Interest during Construction	1.96	235.35	2.80	452.44
Interest Earned	-	-	(0.29)	(46.98)
<b>Total Project Cost</b>	<b>63.91</b>	<b>7,668.66</b>	<b>65.01</b>	<b>10,824.79</b>

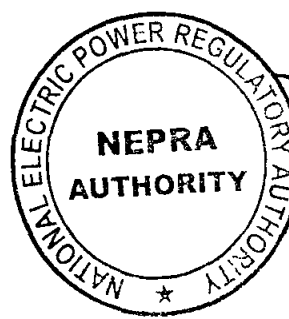
#### Audit of Project Cost

7. MGEL submitted Audit Report of EY Ford Rhodes dated February 07, 2022. In the said Audit Report, the project cost as verified by the Auditors is given below:

Project Cost Heads	Claimed at COD		
	PKR Million		
	Paid	Payable	Total
EPC Cost	8,155.86	1,400.45	9,556.31
Duties and Taxes	97.40	-	97.40
Project Development Cost	371.95	1.25	373.20
Insurance during Construction	42.67	-	42.67
Financing Fee and Charges	184.37	2.33	186.70
Interest during Construction	438.89	-	438.89
Interest Income	(46.98)	-	(46.98)
<b>Total</b>	<b>9,244.16</b>	<b>1,404.03</b>	<b>10,648.20</b>

8. One of the main reason of the difference in the amount as claimed by the company and as verified by the Auditors is the application of different exchange rates on the amounts that were payable till the time Audit was completed. The company has used the exchange rates prevailing on the respective dates at which the remaining payments were made. Whereas the Auditors had used the exchange rate of January 11, 2022 on those amounts. The second main reason of the above difference is that the company in the addendum has stated that it has convinced the financiers to discount the payable amount in respect of financing fee and charges. Thirdly, the company has claimed the interest during construction amount while keeping its share of savings in the interest cost whereas the Auditors have verified the

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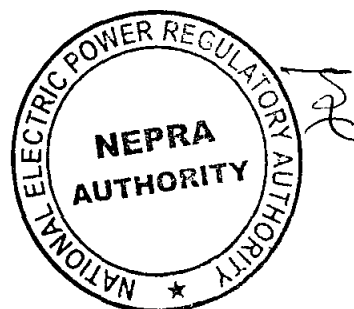


interest amount as actually paid by the company. The details with respect to the differences under each head is discussed in the ensuing relevant sections of this decision.

**Force Majeure and Construction Period**

9. In its tariff adjustment application and during the processing thereof, MGEL informed that post issuance of the Tariff Determination, the company obtained Letter of Support ("LOS") from Alternative Energy Development Board ("AEDB") on August 08, 2019, signed the Energy Purchase Agreement ("EPA") with Central Power Purchasing Agency Guarantee Limited ("CPPAGL" or "the power purchaser") on August 08, 2019 and signed Implementation Agreement ("IA") with AEDB on August 09, 2019. Accordingly, MGEL achieved Financial Closing ("FC") on August 19, 2019. In the EPA, the Required Commercial Operations Date ("RCOD") is defined as 15 months following the date on which FC occurs, i.e. in the instant matter the RCOD comes out as November 19, 2020. However, MGEL achieved Commercial Operations Date ("COD") with effect from August 21, 2021.
10. In the tariff adjustment application, MGEL has requested construction period of about 24 months from the date of FC, i.e. from August 19, 2019 till actual COD on August 21, 2021. The construction period of 15 months was allowed in the Tariff Determination. The reason for the delay in achieving COD as cited by MGEL is COVID-19 Pandemic.
11. MGEL submitted that due to the situation prevailing during Pandemic, the contractors issued Force Majeure Event ("FME") notices to it, pursuant to relevant provisions under the construction (onshore) and supply (offshore) contracts. According to the company, the above declaration from the contractors forced MGEL to also issue notice to the CPPAGL on January 28, 2020 under the EPA for declaring FME. MGEL submitted that CPPAGL recognized the impact of FME and issued a confirmation of an extension in RCOD to July 22, 2021 (i.e. 23 months from FC) vide letter dated August 16, 2021. MGEL further submitted that it was not only its obligations that got impacted by COVID-19: CPPAGL also notified the company of occurrence of a FME vide letter dated March 26, 2020 due to the Pandemic as intimated to the power purchaser by the transmission operator, i.e. National Transmission and Despatch Company Limited ("NTDCL").
12. MGEL referred the Authority's decision dated September 02, 2021 in the matter of tariff modification petition filed by Pak Matiari Lahore Transmission Company (Pvt.) Ltd ("PMLTCPL") and submitted that the Authority in its decision issued on September 02, 2021 has acknowledged that it has never allowed the allied costs associated with extension in RCOD to any licensee except in the cases of FME declared by the contracting parties. MGEL also referred another decision of the Authority dated November 23, 2012 in the matter of motion for leave for review filed by Sapphire Electric Company Ltd ("SECL") and submitted that the Authority allowed costs associated with RCOD extension to SECL.
13. As the IA and EPA were signed by MGEL with AEDB and CPPAGL respectively, so a letter was issued to CPPAGL on June 15, 2022 asking it to confirm the claim of MGEL that the power purchaser accepted to extend the date of RCOD, while also explaining the process followed for recognizing the FME to grant the said extension in RCOD. Further, CPPAGL was also directed to submit its position about adjusting the additional cost, as a result of the above extension in the RCOD, in the tariff of MGEL. Likewise, a letter was also sent to AEDB on June 15, 2022 asking it to confirm whether any approvals are required to be obtained from the GOP, under the concession agreements or otherwise, for the recognition of FME/OFME. AEDB was also directed to submit its position about adjusting the additional cost, as a result of the above extension in the RCOD, in the tariff of MGEL.

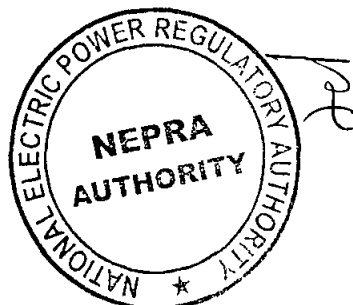
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14. CPPAGL vide letter dated July 5, 2022 submitted its response wherein it explained the provisions of EPA under which the FME claim was acknowledged and the process followed for such matter by the power purchaser. CPPAGL also referred the FME notice issued by NTDCL and explained that why RCOD of MGEL was extended to July 22, 2021. For additional cost, CPPAGL responded that the GOP approved EPAs contain Chapter-15 devoted to the treatment of FMEs namely (i) "Other Force Majeure Events ("OFMEs")" (ii) "Pakistan Political Force Majeure Events ("PPFMEs")" and (iii) "Change in Law Force Majeure Events ("CLFMEs")" and enables the Generation Licensees to claim FME in the event such a set of circumstances arises. In the event an Independent Power Producer ("IPP") claims an instance of a CLFME or PPFME, the power purchaser will be required to make payments corresponding to the IPP's capacity invoices for the duration of the FME. In the event an IPP claims and the power purchaser accepts an instance of an OFME, no financial implication arises and instead the agreement year in which the OFME occurred is extended for a period corresponding to the duration of the OFME so claimed and consequently, the term of the agreement is also extended for a corresponding length of time. CPPAGL also referred the terms and condition of the Tariff Determination of MGEL which states that "....No adjustment will be allowed in this tariff to account for financial impact of any delay in project construction. ....". Stating above, CPPAGL submitted that no adjustment should be allowed in the tariff of MGEL to account for financial impact of any delay in project construction. Additionally, CPPAGL highlighted that as per PACRA report of Jun-21, MGEL has lodged a claim with the EPC contractor regarding payment of Liquidated Damages ("LD") @ USD 29,000 per day. Therefore, the Authority may seek the detailed information from MGEL whether the said LD claim has been realized and if so, the EPC cost of the project be adjusted accordingly.
15. AEDB vide letter dated August 02, 2022 submitted its response wherein it submitted that since CPPAGL vide its letter dated August 16, 2021 communicated acceptance of FME claim to Seller and granted extension in RCOD up to July 22, 2021: the GOP/AEDB has also confirmed the RCOD extension to Seller for the equal period under the applicable provision of IA dated August 9, 2019. For the additional cost, AEDB submitted that no liability for any additional cost or loss incurred as a result of OFME, and consequent RCOD extension, fall upon the GOP or the purchaser pursuant to the terms of the IA and EPA. AEDB submitted that NEPRA should not approve any additional cost claimed by the seller on account of extension in RCOD under the EPA or IA.
16. The Authority has noted that both AEDB and CPPAGL have acknowledged the claim of OFME declared by MGEL and the power purchaser granted extension in the RCOD to the company as per the relevant provisions of EPA. However, they have commented that no additional cost on account of this delay/extension should be allowed to MGEL since EPA does not state any compensation to the affecting party on occurrence of OFME. Only day for day extension is provided in the EPA which in the matter has been approved by the CPPAGL, i.e. RCOD has been extended by 247 days (from November 19, 2020 to July 22, 2021) corresponding to the period during which OFME was applicable (from January 28, 2020 till September 30, 2020).
17. The Authority is of the view that the parties while signing the contracts should take into account the potential risks and the mechanism for the compensation thereof. In absence of any such compensation on occurrence of OFME, it is not appropriate to allow any additional cost to the petitioner in this respect. The Authority had allowed the compensation to IPPs in the past due to the occurrence of OFME but in those cases relevant parties did not oppose allowing the additional cost during the extended period. However, in the instant case the parties to the contracts i.e. EPA and IA are explicitly opposing to allow the additional cost claim. Keeping in view the above, the Authority has decided not to allow the compensation or any additional cost for the construction period beyond 15 months.

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18. The Authority also considered CPPAGL's comments for adjusting the claim of LDs by the petitioner to its EPC contractor if the same has been realized. In this regard, MGEL was asked vide email dated September 01, 2022 to submit the details of LDs charged to EPC contractor as stated by CPPAGL in their comments. MGEL vide email dated September 02, 2022 responded that the LDs are chargeable in case the delay in achievement of COD is directly and solely attributable to the contractor. Whereas, in the case of MGEL, the Project was affected by a Pandemic which is a FME under the EPC contracts. Later, the petitioner vide email dated October 06, 2022 informed that it has not received any amounts from the contractors against delay in achievement of COD or for any other reason. Since, no LDs were charged and recovered by MGEL under the EPC contract therefore same needs no adjustment in EPC cost.

**Adjustment of Engineering Procurement and Construction Cost**

19. The Authority in the Tariff Determination allowed EPC Cost of USD 57.94 million to MGEL while stating the following mechanism for its adjustment at COD:

"The EPC cost shall be adjusted at actual considering the approved amount as the maximum limit. Applicable foreign portion of the EPC cost will be adjusted at COD on account of variation in PKR/USD parity, on production of authentic documentary evidence to the satisfaction of the Authority. The adjustment in approved EPC cost shall be made only for the currency fluctuation against the reference parity values."

".....the petitioner will have to provide a confirmation from the EPC contractor as to the fullest compliance of the equipment having same design and origin of manufacture as given in the type certificate. Where needed, the bill of lading and other support documents will also have to be submitted."

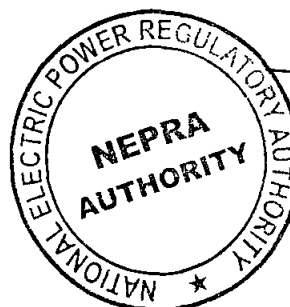
20. MGEL in its adjustment application followed by addendum application has claimed EPC cost of USD 57.94 million (PKR. 9,721.69 million). The breakup of the EPC cost as approved in the Tariff Determination, claimed by MGEL and as verified through the Audit Report is given hereunder:

Description	Tariff Determination		Claimed at COD		Audit Report
	USD Million	PKR Million	USD Million	PKR Million	PKR Million
Offshore EPC	57.940	6,952.80	45.94	7,809.30	7,643.93
Onshore EPC			12.00	1,912.39	1,912.39
<b>Total</b>	<b>57.94</b>	<b>6,952.80</b>	<b>57.94</b>	<b>9,721.69</b>	<b>9,556.31</b>

**Offshore EPC Cost**

21. For the claim of EPC offshore cost, the petitioner has submitted copy of offshore supply contract dated July 01, 2019 signed with Hangzhou Huachen Electric Power Control Company Limited ("HEPCCL") for the amount of USD 45.94 million. In addition to above said contract, MGEL has submitted copies of commercial invoices, SWIFT payment messages, relevant bank statements, exchange rate emails and National Bank of Pakistan ("NBP") exchange rate sheets. Further, the milestone completion certificates issued by Owner's Engineer namely Renewable Resources (Pvt.) Limited and import documents such as copy of Goods Declaration ("GD"), Bill of Lading ("BL"), Packing List were also submitted by MGEL.

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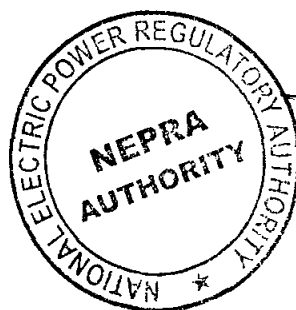


22. MGEL has also submitted the certificate of HEPCCCL which states that the wind turbines supplied by the contractors are fully complied with the Type Certificate issued by DNVGL bearing certificate No. TC-236603-A-2 having same design, specification, and origin of manufacture. The said certificate also provides that the wind turbines are in accordance with the offshore supply contract dated July 01, 2019, purchaser requirements and provisions of the EPA dated August 08, 2019.
23. The Audit Report provides that the schedule of costs, as prepared by management of the company, with respect to EPC offshore cost was obtained. Then the amounts paid and other details appearing therein were matched with the respective invoice dates, invoice amount in USD, exchange rate and payment date with copy of commercial invoice, milestone completion certificate, swift acknowledgement, exchange rate approval email (USD to PKR) (for payments made from Bank Alfalah Lahore), NBP / Brecorder.com exchange rate sheet (for payments made from Bank Alfalah Bahrain), and bank statement, where applicable.
24. In the supply contract, it is noted that the price of USD 45.940 million was agreed between the parties. They also agreed on the schedule stating the different milestones based on which the above price was to be paid to the supply contractor. It is noted that as per the milestone schedule the cost of the equipment under different milestones is USD 38.36 million while the rest of the payment pertains to the final delivery of the equipment which amounts to USD 7.58 million.
25. It is noted that MGEL has made payments of EPC offshore cost from three bank accounts i.e. USD Currency Bank Alfalah Bahrain Account, Bank Alfalah PKR proceed account and Bank Alfalah PKR escrow account. For the payments made from USD Account, MGEL has used the exchange rates applicable on the payment dates, as obtained from the NBP's website, to compute the corresponding PKR amount. For the payments made from PKR Accounts, the petitioner has used exchange rates as agreed with the said banks, for which email from the representative of the banks were provided.
26. The comparison of offshore EPC cost, as claimed by MGEL, verified by auditors and as being allowed in this decision, after review and verification of the above documents, is given below:

Claimed by MGEL		Verified by Auditors		Approved	
USD	PKR	USD	PKR	USD	PKR
Million					
45.94	7,809.30	45.94	7,643.93	45.94	7,529.14

27. The reason of the difference - ~PKR 165.37 million - between the cost as claimed by MGEL and as verified by the Auditors is that the Auditors in their Report used exchange rate of PKR 176.48/USD as of January 11, 2022 on the portion of EPC Cost, i.e. USD 6.193 million which was payable till the completion of the Audit. Whereas the petitioner revised the EPC claim based on exchange rates applicable on the dates of respective payments.
28. The difference - ~PKR 280.16 million - between the cost as claimed by MGEL and being allowed in this decision is due to two reasons. Firstly, the difference of PKR 10.03 million is because MGEL had used exchange rates for the payments made from PKR Accounts as per the exchange rates which was communicated by the said banks through email, however, for the payments made from USD account MGEL has used the exchange rates applicable on the payment

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dates, as obtained from the NBP's website. Accordingly, as a matter of consistency for all the payments of EPC offshore cost, the exchange rates prevailing on the payment dates, as per NBP website, have been used. Secondly, the difference of ~PKR. 270.13 million is due to the reason that MGEL has paid cumulative amount of USD 7.17 million after RCOD, i.e. November 19, 2020 and to convert those payments in PKR, MGEL has used the exchange rates as prevailing on the respective payment dates. However, for those three payments, the exchange rates of RCOD of November 19, 2020, i.e. PKR 160.25/USD has been used.

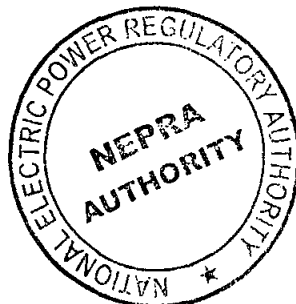
#### Onshore EPC Cost

29. For the claim of the EPC onshore cost, the petitioner has submitted copy of onshore EPC contract dated July 01, 2019 signed with Hydrochina International Engineering Company (Pvt) Limited ("HIECL") for USD 12 million. In addition to above said contract, MGEL also submitted copies of commercial invoices, sales tax invoices, pay orders, swift messages, relevant bank statements, State Bank of Pakistan ("SBP") weighted average customer exchange rates sheets, Withholding Tax ("WHT") Computerized Payment Receipts ("CPR"), milestone completion certificate by Renewable Resources (Pvt) Limited etc.
30. The Audit Report provides that the schedule of costs, as prepared by management of the company, with respect to EPC onshore cost was obtained. Then the amounts paid and other details appearing therein were matched with respect to the invoice date, invoice amount, payment date with copy of commercial invoice, sales tax invoice, swift acknowledgement, SBP's weighted average exchange rates sheets, milestone completion certificates, cheque, CPR for WHT paid to FBR, CPR number with copy of sales tax invoice, pay order and CPR to Sindh Revenue Board ("SRB") and bank statement, where applicable.
31. In the onshore contract, it is noted that the price of USD 12 million was agreed between the parties. The parties also agreed on the schedule based on milestones for the payment of the above agreed price. It is noted that MGEL has made payments of EPC onshore cost from two accounts, (i) Bank Alfalah PKR proceed account and (ii) Bank Alfalah Sponsor SST account.
32. The onshore contract provides that 50% of the USD amount shall be converted into equivalent PKR at the rate on the date of Notice to Proceed (PKR 158.5974/USD prevailing on August 20, 2019) while the remaining 50% being converted into equivalent PKR on the date of invoice. In each case, the SBP customer weighted average exchange rates (sell side) of USD/PKR shall be considered.
33. The comparison of onshore EPC cost, as claimed by MGEL, verified by auditors and as being allowed in this decision, after review and verification of the above documents, is given below:

Claimed by MGEL		Verified by Auditors		Approved	
USD	PKR	USD	PKR	USD	PKR
Million					
12.000	1,912.39	12.000	1,912.39	12.000	1,912.17

34. The difference -- ~PKR 0.22 million -- between the cost as claimed by MGEL and allowed is due to the reason that MGEL had invoiced for cumulative amount of USD 3.13 million after RCOD, i.e. November 19, 2021. To convert the

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said amount into PKR, MGEL has used the exchange rates as prevailing on the respective invoice dates (to the extent of 50%). However, for the payment of the said amount, the weighted average customer exchange rates of RCOD (November 19, 2020), i.e. **PKR 160.57/USD** (on 50% of the amount) has been used.

35. Below is the comparison of EPC cost as claimed by MGEL and as allowed by the Authority in this decision:

EPC	Claimed by MGEL		Approved	
	Million			
	USD	PKR	USD	PKR
Offshore	45.94	7,809.30	45.94	7,529.14
Onshore	12.00	1,912.39	12.00	1,912.17
Total	57.94	9,721.69	57.94	9,441.31

#### Adjustment of Duties and Taxes

36. The Tariff Determination did not account for the impact of duties and taxes and provides the following with respect to the adjustment of this cost head:

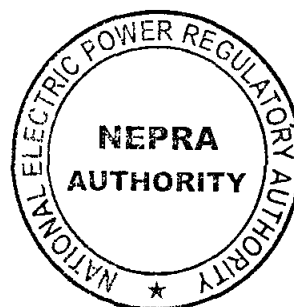
"the duties and/or taxes, not being of refundable nature, relating to the construction period directly imposed on the company up to COD will be allowed at actual upon production of verifiable documentary evidence to the satisfaction of the Authority."

37. MGEL in its COD tariff application has requested for the duties and taxes of USD 0.583 million (PKR. 97.40 million): breakup of which is given hereunder:

Description	Tariff Determination		Claimed at COD		Verified by Auditors
	USD Million	PKR Million	USD Million	PKR Million	PKR Million
SIDC	As per actual		0.580	96.97	96.97
Stamp Duty			0.003	0.43	0.43
<b>Total</b>			<b>0.583</b>	<b>97.40</b>	<b>97.40</b>

38. The claimed duties and taxes comprises of PKR 96.67 million on account of Sindh Infrastructure Development Cess ("SIDC") paid with respect to imports part of the EPC cost. Additionally, the stamp duty amount of PKR 0.43 million has been claimed in respect of duties related to the insurance amount. It is noted that insurance cost as allowed in the Tariff Determination was inclusive of all the taxes and fees, therefore, this claim is to be considered in the insurance cost head as discussed in the relevant section of this decision.
39. The Audit Report provides that schedule of SIDC prepared by management was obtained. Then the amounts paid were matched with the details appearing therein with respect to respective GD number, GD date, BL number, BL date,

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invoice date, invoice amount (USD), commercial invoice, packing list, SIDC challan, pay order/customer's advice to excise & taxation (if any), invoice from clearing agent (if any) and bank statement, where applicable.

40. In support of its claim with respect to the SIDC payment, MGEL has submitted copies of relevant commercial invoices, shipment invoices, GDs, BLs, Cess CPRs, cheques, bank statement etc. The comparison of duties and taxes, as claimed by MGEL, verified by auditors and as being allowed in this decision, after review and verification of the above documents, is given below:

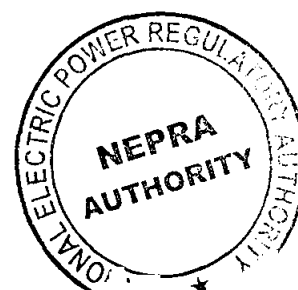
Description	Claimed at COD		Verified by Auditors	Approved	
	USD Million	PKR Million	PKR Million	USD Million	PKR Million
SIDC	0.58	96.97	96.97	0.58	96.97

#### **Adjustment of Project Development Cost**

41. The Authority in the Tariff Determination allowed the company USD 2.50 million in respect of the Project Development Cost ("PDC") while stating the following mechanism for its adjustment at COD:
- "PDC...shall be adjusted at actual at the time of COD considering the approved amount as the maximum limit. The amount allowed on this account in USD will be converted in PKR using the reference PKR/USD rate of 120 to calculate the maximum limit of the amount to be allowed at COD."
42. As per the above mechanism, the maximum amount allowed to MGEL under PDC head @PKR 120/USD works out to be PKR 300.00 million. The petitioner in its COD adjustment request has claimed PDC of PKR 373.20 million, equivalent to about USD 2.49 million.
43. The petitioner explained that PDC has remained the same in USD, however, in PKR has been impacted two-fold, (i) due to the devaluation of PKR by almost 41% against major currencies since the time of Tariff Determination and (ii) owing to COVID-19 i.e. a recognized FME under the EPA. MGEL also submitted that it incurred additional expenses for (a) procurement of additional services from legal and technical consultants in order to mitigate to the extent possible the impact of FME, and (b) additional cost over-heads such as administrative costs incurred during the delay of 09 months i.e. from the originally envisaged COD (November 19, 2020) to actual COD (August 21, 2021). MGEL submitted following detailed break-up of the claimed PDC:

PDC Heads	Claimed	
	PKR	USD
	Million	
Technical Consultant	109.14	0.74
Advisor's Fee	29.27	0.20
Land Lease	10.20	0.10
Regulatory Fee	40.00	0.27
Fixed Assets	27.55	0.17
HR Cost	85.35	0.53
Travelling and Conveyance	28.31	0.21
Other Admin Costs	43.38	0.27
<b>Total</b>	<b>373.20</b>	<b>2.49</b>

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44. The Audit Report provides that the company incurred PDC amounting to PKR 373.20 million. Out of that total amount, PKR 371.95 million have been paid whereas amount of PKR 1.25 million is yet to be paid. As per the Auditors, the schedule of costs prepared by the management was obtained and the details appearing therein such as nature of service, invoice date, invoice amount, vendor name, CPR number and payment date with the documentary evidences were checked. The information with respect to documents checked by the Auditors for different sub heads under the PDC are provided as under:
- Technical Consultants: Copy of sales tax invoice, pay order to consultants, pay order to FBR, CPRs and bank statements, where applicable.
  - Advisors Fee: Copy of commercial invoice, pay order to advisor, and bank statement and CPRs, where applicable.
  - Land Lease: Copy of lease agreement, treasury challan and pay order, where applicable.
  - Regulatory Fee: Copy of invoice/challan and cheque/pay order, where applicable.
  - Fixed Assets: Copy of sale tax invoice and cheque, where applicable.
  - Travelling Conveyance: Copy of invoice/claim expense voucher, pay order/petty cash voucher, where applicable.
  - Other Admin Costs: Copy of invoice/claim, expense voucher, and pay order/petty cash voucher, where applicable.
45. The claim submitted by MGEL has been analyzed considering the expenses incurred till different dates of COD. The company incurred the total cost of PKR 233.57 million till RCOD of November 19, 2020, total PKR 338.85 million till extended RCOD of July 22, 2021 and total PKR 373.20 million till actual COD of August 21, 2021. The relevant documents as submitted by the company in relation to the claim of the PDC have been checked. Considering the above details, the Authority has decided to allow the expenses under the captioned to the limit of Tariff Determination, i.e. PKR 300 million. To convert the approved PKR amount in USD, the average exchange rate of PKR 160.77/USD has been taken into account. The said average exchange rate has been computed using three rates of each month, i.e. rate at the start, middle and end of that month as published by NBP on its website for 15 months, i.e. from August 19, 2019 till November 19, 2020. Accordingly, the corresponding USD amounts works out to be about USD 1.88 million, which is being allowed in the decision.

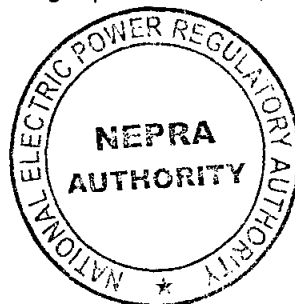
**Adjustment of Insurance Cost during Construction**

46. The Authority in the Tariff Determination allowed USD 0.29 million for insurance during construction while stating the following mechanism for its adjustment at COD:

"...Insurance during construction...shall be adjusted at actual at the time of COD considering the approved amount as the maximum limit. The amounts allowed on these accounts in USD will be converted in PKR using the reference PKR/USD rate of 120 to calculate the maximum limit of the amount to be allowed at COD."

47. As per the above mechanism, the maximum amount allowed to MGEL under captioned head @PKR 120/USD works out to be about PKR 34.80 million. The petitioner in its adjustment request has claimed insurance amount of PKR 42.67 million (equivalent to about USD 0.27 million). MGEL submitted that owing to a 09 months delay due to the FME, it had to extend its construction period insurance. The company informed that initially the insurance for the shorter extended period was procured free-of-cost, however, due to the continuing impact of the FME, the further extension

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was charged by the insurer. Keeping in view the above, the petitioner requested that the increase in insurance cost should be allowed.

48. The Auditors in their Report has also verified the amount of PKR 42.67 million in respect of the insurance cost. The Audit Report provides that the schedule of costs prepared by management was obtained and the amount paid and the details appearing therein with respect to insurance policy date, insurance policy amount and payment date with copy of insurance policies, premium bill, premium paid receipts and bank statement were matched.
49. As per the details submitted by MGEL, the breakup of the claimed insurance during construction for the period from August 20, 2019 till August 21, 2021 is given hereunder:

Description	Premium net of FED and Stamp Duty
	PKR Million
Marine Cargo & Marine Delay in start up	12.05
Erection All Risk, Delay in Startup and Third Party Liability, Operational All Risk, Business Interruption and Third Party Liability	26.98
Political Violence Insurance including delay in Startup and Business Interruption	3.64
<b>Total</b>	<b>42.67</b>
PKR/USD exchange rate	158.46
<b>Total Premium USD</b>	<b>0.27</b>

50. As stated above, the stamp duties of PKR 0.43 million pertaining to the insurance premium has been claimed by the petitioner under the head of duties and taxes. Since the allowed insurance cost is inclusive of duties and taxes therefore the claim of stamp duty has been considered here under the insurance cost head. Accordingly, the amount that has been claimed in respect of insurance during construction works out to be PKR 43.10 million.
51. MGEL in support of its claim has submitted copies of insurance policies, premium invoices, premium payment receipts, extension letters, withdrawal requests and bank statements which have been checked. Considering the above details, the Authority has decided to allow the expenses under the captioned head to the limit of Tariff Determination, i.e. PKR 34.80 million. The corresponding USD amount has been worked out on the basis of the average of the exchange rates prevailing on the respective payment dates prior to November 19, 2020. The resultant amount works out to be about USD 0.22 million which is being allowed in this decision.

#### Adjustment of Financing Fee and Charges

52. The Authority in the Tariff Determination had allowed financing fee and charges of USD 1.22 million. The captioned head was allowed at the rate of 2.50% of the debt amount as approved in the Tariff Determination. Following mechanism for the adjustment of financing fee and charges at the time of COD was prescribed:

"...Financial Fee and charges...shall be adjusted at actual at the time of COD considering the approved amount as the maximum limit. The amounts allowed on these accounts in USD will be converted in PKR

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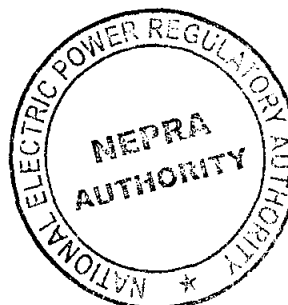
using the reference PKR/USD rate of 120 to calculate the maximum limit of the amount to be allowed at COD."

53. As per the above mechanism, the maximum amount allowed to MGEL under captioned head @PKR 120/USD works out to be about PKR 145.80 million. The petitioner in its COD adjustment request followed by subsequent addendum application has claimed financing fee and charges amounting to PKR 184.37 million. In terms of USD, the corresponding amount of USD 1.21 million has been claimed by the petitioner. Below is the detailed breakup of financing fee and charges as claimed by the petitioner and as verified by the Auditors:

Description	Claim		Audited
	USD	PKR	PKR
	Million		
Local Financing Fee	0.42	65.85	
Foreign Financing Fee	0.25	38.17	
Advisors Fee	0.55	80.35	
<b>Total</b>	<b>1.22</b>	<b>184.37</b>	<b>184.37</b>

54. MGEL has requested that for foreign financing, the amount of fee/charges paid in USD be converted at the exchange rate prevailing on the payment date to compute the corresponding amount in PKR. The petitioner grounded this request as about 50% of the debt has been obtained in foreign currency as against 100% local financing on which tariff was determined by the Authority. In addition, the petitioner submitted that the increase in the financial charges (as compared to those approved in the Tariff Determination) is also attributable to the significant devaluation of PKR from the date of Tariff Determination of up to 41% during the construction period against major currencies. Furthermore, MGEL highlighted that in order to minimize the impact of interest during construction due to delays in construction owing to the FME, the company opted to delay drawdown of debt which resulted in an increase in commitment fees. Had MGEL drawn its debt and incurred IDC (which would have been allowed under the tariff as IDC and is determined based on actual) the increase in project cost would have been much more than it is right now. MGEL stated that the prudence of the company in managing its costs is worth appreciating and the increase should therefore be allowed.
55. The Audit Report provides that for financing fee and charges, schedule of costs prepared by management were obtained and the amount paid and the details appearing therein with respect to invoice amount, invoice date, payment instrument such as cheque, swift message and payment date, FBR CPR, if any where WHT was paid, and bank statement were verified.
56. MGEL in support of its claim has submitted copies of agreements, fee/charges invoices, payment instruments, CPRs for WHT payment (if any) and bank statements, which have been checked. It was noted that although the Authority vide the modification decision issued on July 23, 2020 recognized that the foreign financing be also obtained by MGEL. However, the term of adjustment of financing fee and charges was not modified. Considering the decision for not allowing additional cost related to extended period, the Authority has decided to allow the expenses under the captioned head to the limit of Tariff Determination, i.e. PKR 145.80 million. The corresponding USD amount has been worked out on the basis of the average of the exchange rates prevailing on the respective payment dates prior to November 19, 2020. The resultant amount works out to be about USD 0.96 million which is being allowed in this decision.

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**Adjustment Debt Amount and Interest during Construction**

57. The Tariff Determination was issued on debt to equity ratio of 80 : 20, while stating that the tariff shall be adjusted on actual debt to equity mix at the time of COD, subject to equity share of not more than 20%. In the tariff adjustment application, MGEL has submitted that the total project cost has been financed by the company as per the following details:

Description	PKR	USD
	Million	
Equity	2,144.86	13.19
Debt Financing		
SBP-Local	4,241.57	26.09
Commercial-Local	146.50	0.89
Commercial-Foreign	4,086.38	25.00
Total Debt	8,474.45	51.98

58. The Tariff Determination of MGEL was approved on the basis of 100% SBP concessionary debt refinancing scheme for renewable energy projects issued on June 02, 2016 ("SBP Scheme 2016") with the following provisions:

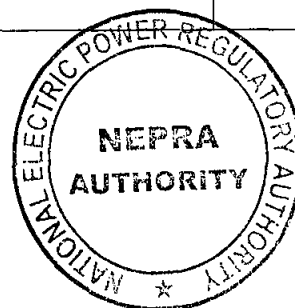
"In case the petitioner is not able to secure financing under SBP scheme then the tariff of MGEL shall be adjusted on conventional local/foreign financing, or a mix of both, at the time of its COD. However, the petitioner shall have to prove through documentary evidence that it exhausted the option of availing financing under SBP scheme before availing part/full of conventional local/foreign loan."

59. The aforesaid refinancing scheme was revised by SBP on July 26, 2019 ("SBP Scheme 2019") and allowed renewable energy projects, having capacity of more than 20 MW, to obtain up to 50% of financing (debt) under the said Scheme. Since the Project is of more than 20 MW capacity, therefore, the petitioner filed Tariff Modification Petition dated requesting the Authority to base tariff on a mix of foreign and local financing, on the pretext that not more than 50% financing can be obtained under SBP Scheme, 2019. The decision of the Authority on the Modification Petition was issued on July 23, 2020 whereby the Authority held that the adjustment of tariff on mix of local and foreign financing shall be made at the time of tariff adjustment at COD of the Project.

60. MGEL submitted that since compliance with the provisions of the RE Scheme (loan to not exceed 50%) was mandatory, therefore, it had to ensure that the debt mix (in PKR terms) at the time of COD satisfied this requirement. The company informed that the timings of drawdowns, variations in exchange rates, etc. had to be taken into account on a monthly basis to develop forecasts of the position MGEL (in terms of debt mix) would be at upon achievement of COD. For calculating the debt mix, the foreign currency loan was converted to PKR using the PKR / USD exchange rate prevailing on the date of disbursement. The final position and terms of different loans, as obtained by MGEL, is provided below:

Debt Sources	Amount PKR in Million	% of Debt	Interest Rate	Repayment Period
SBP RE Scheme Debt	4,241.57	50.05%	5.25%	10 years
Foreign Debt (LIBOR)	4,086.39	48.22%	3 month LIBOR + 4.25%	13 years
Commercial Local Debt (KIBOR)	146.50	1.73%	3 month KIBOR + 2.25%	13 years
Total	8,474.46	100.00%		

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61. It is noted that the SBP loan has been secured by the company for 10 years repayment period at the cost of 5.25% (5.55% inclusive of savings) to be paid on quarterly basis having equal principal installments. The foreign loan has been obtained by the company for 13 years repayment period at the cost of LIBOR + 4.25% to be paid on quarterly basis having certain fixed percentage of principal repayments. The local loan has been obtained by the company for 13 years repayment period at the cost of KIBOR + 2.25% to be paid on quarterly basis having equal annuity payments.
62. The Audit Report provides that schedule of debt drawdowns as prepared by management were obtained and the amount received and the details appearing therein with respect to receipt date and amount were matched with copy of bank statements, swift messages for loan receipt (for foreign loan), and NBP Rate Sheet, where applicable. The amount of debt as verified by the Auditors is provided as under:

Debt Amount	Foreign Loan Million (USD)	Local Loan Million (PKR)
SBP RE Scheme debt		4,241.57
Commercial Foreign debt	25.00	
Commercial Local debt		146.50

63. MGEL has submitted copies of financing agreements, copies of bank statements in which debt drawdown were credited, NBP rate sheets and audited accounts for the construction period. Based on the documentary evidence as submitted by the petitioner, there is no difference noted in the debt amount as claimed by the petitioner and as audited by the Auditors.
64. In the Tariff Determination, the IDC of USD 1.961 million (PKR 235.35 million) was approved. The said amount of IDC was computed on the basis of 100% SBP refinancing scheme at 6% interest rate using certain percentage of drawdowns for the construction period of 15 months. The Tariff Determination provides the following mechanism with respect to adjustment of IDC at the time of COD:

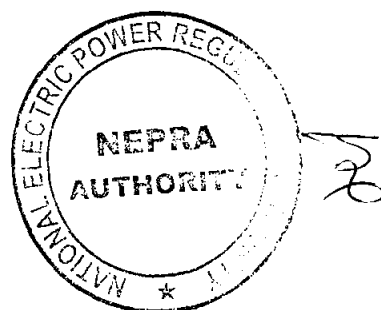
"IDC will be recomputed at the time of COD on the basis of actual timing of debt drawdowns (for the overall debt allowed by the Authority at COD) for the project construction period of fifteen months allowed by the Authority."

The reference tariff has been worked out on the basis of cost of 6% offered under SBP financing scheme. In case cost negotiated by the company under SBP scheme is less than the said limit of 6%, the savings in that cost shall be shared between the power purchaser and the power producer in the ratio of 60:40 respectively.

In case the company shall secure full or part of local conventional loan then the tariff of company shall be adjusted at the time of COD at applicable KIBOR + spread of 2.25%. The savings in the approved spreads during the loan tenor shall be shared between the power purchaser and power producer in the ratio of 60:40. The tenor of the debt servicing shall not be less than thirteen years for this loan.

In case the company shall secure full or part of foreign conventional loan then the tariff of company shall be adjusted at the time of COD at applicable LIBOR + spread of 4.25%. The savings in the approved spreads during the loan tenor shall be shared between the power purchaser and power producer in the ratio of 60:40. The tenor of the debt servicing shall not be less than thirteen years for this loan.

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In case the company shall secure foreign loan under any credit insurance (Sinosure etc.) then the cost of that insurance shall be allowed to the maximum limit of 0.6% of the yearly outstanding principal and interest amounts. For that purpose, the spread over that full/part of loan shall be considered as 3.5% as the maximum limit. The savings in the spread during the loan tenor shall be shared between the power purchaser and power producer in the ratio of 60:40."

65. MGEL in its COD tariff application has requested for IDC based on actual debt drawdown for the actual construction period of more than 24 months. Below are the details of IDC as claimed by MGEL and as verified by Auditors:

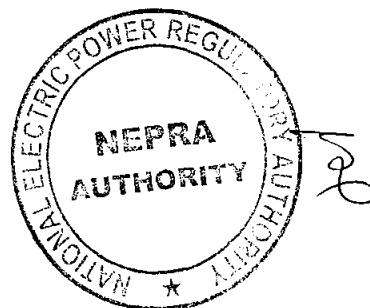
Interest Amount	Claimed by MGEL		Verified by Auditors
	USD in Million	PKR In Million	
	2.80	452.44	438.89

66. The Audit report provides that schedule of costs prepared by management were obtained and the amount paid and the details appearing therein were matched with respect to amount, payment date and interest rate with copy of invoice, bank statement and SBP's KIBOR rate sheet, swift acknowledgement, bank debit advice, LIBOR rates etc.
67. MGEL in support of the claim has submitted copies of financing agreement, interest payment invoices, bank statement, exchange rate sheets, KIBOR rate sheets, swift acknowledgement, bank debit advice, LIBOR rates, where applicable. Based on the documentary evidence submitted by the company, the interest payments made by the company as verified on account of local and foreign debt is given hereunder:

Local Loan	Total Drawdowns	Interest Rate	Interest Amount	
	PKR in Million		PKR in Million	USD in Million
SBP RE scheme	4,241.57	<ul style="list-style-type: none"> <li>Rate before refinancing is KIBOR+1%</li> <li>SBP Refinancing rate is 5.25%</li> </ul>	265.46	1.65
Commercial Local loan	146.50	<ul style="list-style-type: none"> <li>KIBOR+2.25%</li> </ul>	0.19	0.001
<b>Total Interest on Local Financing</b>			<b>265.65</b>	<b>1.65</b>
<b>Foreign Loan</b>	<b>USD in Million</b>			
Commercial Foreign loan	25.000	<ul style="list-style-type: none"> <li>LIBOR+4.25%</li> </ul>	<b>173.24</b>	<b>1.07</b>
<b>Total Interest payment</b>			<b>438.90</b>	<b>2.72</b>

68. The interest amount of PKR 265.46 million in respect of SBP loan includes interest amount of PKR 28.43 million paid at KIBOR +1% till the time that loan was refinanced by the SBP. After which the interest has been paid at the refinance rate of 5.25%.
69. As stated above, the tariff of MGEL was approved on 100% SBP financing using the interest rate of 6%, with the provision that the savings therein shall be shared between the power purchaser and producer in 60:40. The company has informed that it has secured financing under the SBP Scheme at the rate of 5.25%, i.e. the savings of 0.75% was negotiated by the petitioner. Accordingly, the rate, while including the impact of saving for the producer at the rate of 40%, works out to be 5.55%. This is the reason of the difference of PKR 13.54 million between the amount of IDC PKR 452.44 million as claimed by MGEL, and PKR 438.90 million as verified by the Auditor.

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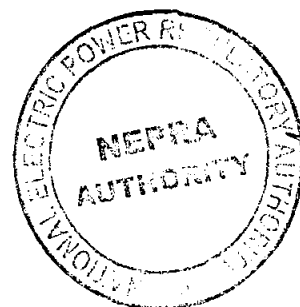
70. The details of interest amount, as computed and submitted by the company, against above mentioned three debts till different dates of CODs are given below:

Description	As at Nov 19, 2020		As at July 22, 2021		As at August 21, 2021	
	PKR	USD	PKR	USD	PKR	USD
	in Million					
SBP Financing	116.14	0.71	260.86	1.63	279.01	1.73
Commercial Foreign Loan	70.75	0.43	161.05	1.00	173.24	1.07
Commercial Local Loan	-	-	-	-	0.19	0.001
<b>Total</b>	<b>186.89</b>	<b>1.14</b>	<b>421.91</b>	<b>2.63</b>	<b>452.44</b>	<b>2.80</b>

71. The amount of PKR has been converted in USD using the rate prevailing on the date of the interest payment, as obtained from NBP's website. Likewise, the amount of interest amount paid in USD has been converted in PKR using the above said mechanism.
72. As stated above, the Authority has decided to allow the construction period of 15 months as specified in the Tariff Determination, therefore, the amount of IDC to be allowed to the petitioner has also been restricted to November 19, 2020, which has been computed using the following steps:
- The amount of IDC as actually paid and verified till RCOD has been added in the capital cost (EPC, Duties, PDC, Insurance during Construction, Financing Fee) as allowed in this decision to arrive at the verified project cost.
  - The amount of verified project cost was then segregated between debt and equity in the ratio of 80:20, as was approved in the Tariff Determination
  - That amount of debt was then sub-divided into their actual positions, i.e. SBP loan (50.05%), foreign loan (48.22%) and local commercial loan (1.73%).
  - The percentage of each loan as actually disbursed till RCOD (November 19, 2022) was applied on the respective debt amount.
  - The IDC was then recomputed on the portion of debt amounts which is disbursed till RCOD (November 19, 2022) using the actual schedule of drawdowns.
73. Accordingly, the amount of allowed IDC following all the above steps worked out as under which is being approved in this decision:

Loans	Approved IDC Amount	
	PKR	USD
	Million	
SBP Financing	111.49	0.68
Commercial Foreign Loan	68.42	0.43
Commercial Local Loan	-	-
<b>Total</b>	<b>179.91</b>	<b>1.10</b>

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### Adjustment of Interest Income

74. The petitioner has informed that it has earned interest income to the tune of PKR 46.98 million. The said amount of the interest income has also been verified by the Auditors. The Audit Report provide that the schedule of interest income prepared by management was obtained and the amount received and the details appearing therein with respect to receipt date and exchange rate with copy of bank statements and NBP exchange rate sheet were matched.
75. The details of interest amount as earned by the company against debt and equity injections till different dates of CODs are given below:

Description	As at Nov 19, 2020		As at July 22, 2021		As at August 21, 2021	
	PKR	USD	PKR	USD	PKR	USD
	Million					
Total	39.09	0.24	46.00	0.29	46.98	0.29

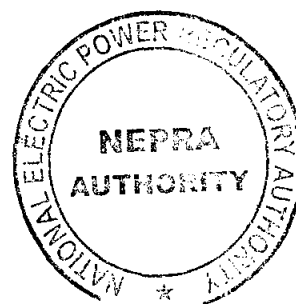
76. Given the fact that interest cost to the limit of RCOD (November 19, 2020) has been allowed, therefore, the impact of interest income has also been limit to RCOD (November 19, 2020), i.e. PKR 39.09 million.
77. Recapitulating above, the project cost determined in the Tariff Determination, claimed in the tariff adjustment application, verified in the Audit Report and being allowed by the Authority in this decision is provided as under:

Description	Determined		Claimed		Auditors	Approved	
	USD	PKR	USD	PKR	Total PKR	USD	PKR
	Millions		Million		Million	Million	
Total EPC Cost	57.94	6,952.80	57.94	9,721.69	9,556.31	57.94	9,441.30
Duties and Taxes	-	-	0.58	97.40	97.40	0.58	96.97
Project Development Cost	2.50	300.00	2.50	373.20	373.20	1.88	300.00
Insurance	0.29	34.80	0.27	42.67	42.67	0.22	34.80
Financing Fee and Charges	1.22	145.80	1.21	184.37	186.70	0.96	145.80
Interest during Construction	1.96	235.32	2.80	452.44	438.89	1.10	179.91
Interest Income	-	-	(0.29)	(46.99)	(46.99)	(0.24)	(39.09)
<b>Total Project Cost</b>	<b>63.91</b>	<b>7,668.72</b>	<b>65.03</b>	<b>10,825.21</b>	<b>10,648.18</b>	<b>62.43</b>	<b>10,159.69</b>

78. Based on the above project cost, following table shows the amount of different debts which have been used to compute the debt servicing component of the tariff being approved in this decision:

Loans	USD	PKR
	Million	
SBP Loan	25.08	4,081.47
Foreign Loan	24.01	3,907.73
Local Loan	0.85	138.56
<b>Total</b>	<b>49.94</b>	<b>8,127.76</b>

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**Adjustment of Equity Amount, Return on Equity and Return on Equity during Construction ("ROEDC")**

79. The total equity injected by the different shareholders, as submitted by MGEL, is provided as under:

Shareholders	Amount PKR in Million	Amount USD in Million
Mr. Najeeb Malik	0.30	0.003
Mr. Shahzad Malik	0.30	0.003
Mr. Nadeem Malik	0.30	0.003
Nadeem Malik Holdings (Pvt) limited	550.30	3.38
NM Holding (Pvt) limited	550.30	3.38
Najeeb Holdings (Pvt) limited	550.30	3.38
Master Textile Mills Limited	493.05	3.03
<b>Total</b>	<b>2,144.86</b>	<b>13.19</b>

80. The Audit Report provides that the schedule of equity contribution by company shareholders prepared by management were obtained and the amount received and the details appearing therein with respect to shares and their amounts were matched with copy of share certificate, return of allotments of shares (SECP-Form 3), bank statement, and NBP Rate Sheet. The amount of equity as verified by the auditors is provided as under:

Source of Funds	Amount USD in Million	Amount PKR in Million
Equity	13.19	2,144.86

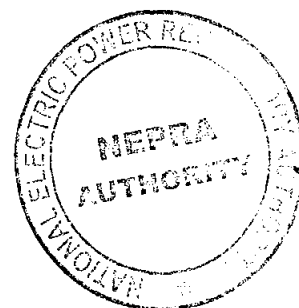
81. MGEL in support of the equity injections submitted copies of bank statements in which equity was injected, share certificates, SECP Form 3, NBP rate sheets and audited accounts. Based on the review and verification of the above documents, there is no difference noted in the equity amount as injected by the petitioner and as audited by the Auditors. The ratio of equity contribution comes out to be higher than what was prescribed in the Tariff Determination therefore, the Authority has decided to consider the equity contribution more than 20% as being financed by debt, in accordance with the Tariff Determination. Based on the project cost being approved in this decision, the amount of equity works being allowed in this decision comes out as following:

Equity Share (20%)	USD	PKR
	Million	
	12.49	2,031.94

82. The ROEDC component of PKR 0.1148/kWh was approved in the Tariff Determination, while stating the following mechanism for its adjustment:

"ROEDC will be adjusted at COD on the basis of actual equity injections (within the overall equity allowed by the Authority at COD) for the project construction period of fifteen months allowed by the Authority."

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83. It is noted that about 86% of the equity amount had been disbursed till November 19, 2020. Therefore, the amount of ROEDC to be allowed has been computed while (i) restricting the computation of return till the date of RCOD and (ii) proportionating the same on the approved equity amount over the actual equity amount. The detailed computations are explained in the following table:

Computation of ROEDC	November 19, 2020
A. Actual Equity Injections till November 19, 2020 (USD in million)	11.38
B. Percentage of Actual Injections over Total %	86.32%
C. Total Approved Equity Amount (USD in million)	12.49
D. Amount Drawn (C*B) (USD in million)	10.78
E. ROEDC Verified (USD in million)	1.14
F. ROEDC Approved (E/A*D) (USD in million)	1.08

84. Using the PMT formula, the ROEDC component works out to be PKR. 0.1386/kWh (using exchange rate of PKR 158.30/USD as on 30<sup>th</sup> June, 2021). The amount of annual ROE, using rate of 14%, at approved equity amount of USD 12.49 million comes out as USD 1.65 million. Accordingly, the ROE component works out to be PKR. 1.5450/kWh (using exchange rate of PKR 158.30/USD as on 30<sup>th</sup> June, 2021).
85. It is important to mention here that the equity IRR of 14% per annum was allowed to MGEL and the calculations in the Tariff Determination were made assuming the payment is to be made on annual basis, whereas the payment of ROE is to be paid on monthly basis as per EPA. Therefore, the Authority has decided to approve IRR while using the monthly payment of return components as has also been allowed in the recent cases of solar and wind power projects.

**Operation and Maintenance (O&M) Cost**

86. The Authority in the Tariff Determination allowed O&M cost of USD 23,000 per MW per annum for MGEL. The allowed O&M had approved in the ratio of 50:50 in local and foreign components: details thereof are given hereunder:

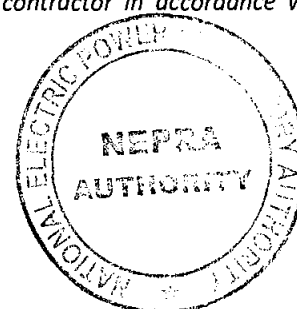
O&M	Tariff (PKR/kWh)	Indexation
Local	0.4094	CPI (General)
Foreign O&M	0.4094	US-CPI and PKR/USD Exchange rate
<b>Total</b>	<b>0.8188</b>	

87. Further, the Authority vide review motion decision dated May 17, 2021 decided as under:

*"The O&M cost, its mix, and the corresponding mechanism thereof as approved in the Tariff Determination of Master Green Energy Limited shall be applicable for the period during which the Petitioner has already finalized the WP and LT O&M Agreements, i.e. 13 years. During this time, however, the Petitioner shall be required to submit, on an annual basis, the documentary evidence/report pertaining to actual expenditures on account of O&M. The savings, if any, in the actual O&M cost compared to the approved O&M cost shall completely be passed on to the consumers.*

*Subsequent to the lapse of the LT O&M Contract, in order to claim O&M costs, the Petitioner shall be required to carry out competitive bidding for the selection of the O&M contractor in accordance with NEPRA's*

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*applicable law. Based on this competitive bidding process, the Authority shall make revisions in the O&M cost, while capping the prevailing level of the approved O&M cost. Those revisions may also entail changing the mix of the approved O&M cost (local and foreign) as well as the indexation mechanism (indices, frequency etc.)."*

88. The petitioner in its COD adjustment request has claimed local O&M of PKR 0.4094/kWh and foreign O&M of PKR 0.5617/kWh. The tariff being approved in this decision is to be applicable for the energy supplied by the company during the quarter July-September, 2021, therefore, the O&M cost being allowed in this decision has been adjusted/indexed, as per the prescribed mechanism, on the indices applicable for the said quarter: which is detailed as under:

O&M Cost	Determined	Claimed	Approved
	PKR/kWh		
Local O&M	0.4094	0.4094	0.5220
Foreign O&M	0.4094	0.5617	0.5766
<b>Indexation Values:</b>			
CPI / N-CPI	229.27	229.27	145.24
PKR/USD exchange rate	120	164.65	158.30
US-CPI	252.146	252.14	269.195

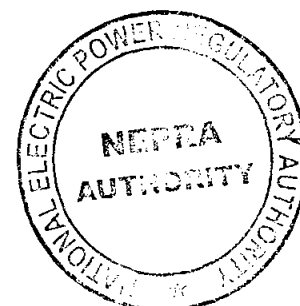
- For the purpose of calculation of approved numbers, US CPI for month of May, 2021 has been used. The exchange rate of June 30, 2021 has been used.
- Due to discontinuation of CPI, the equivalent value of reference N-CPI of August, 2019 (reference) and revised N-CPI for the month of May, 2021 has been used.

89. **ORDER**

In pursuance of section 7(3)(a) read with Rule 3 of the Tariff Standards & Procedure Rules, 1998, the Authority hereby approves the following generation tariff along with terms and conditions for Master Green Energy Limited for its 50 MW wind power project for delivery of electricity to the power purchaser:

Tariff Component	Year (1-25)
	PKR/kWh
Local O&M	0.5220
Foreign O&M	0.5766
Insurance during Operation	0.2177
Return on Equity	1.5450
Return on equity during construction	0.1386
Debt Servicing	4.0366
<b>Levelized Tariff</b>	<b>7.0364</b>

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- Levelized tariff works out to be US Cents 4.4450/kWh at exchange rate of PKR 158.30/USD.
- Net Annual Plant Capacity Factor of 38.48 % has been approved.
- The aforementioned tariff is applicable for twenty five (25) years from COD
- Debt to Equity of 80:20 has been used.
- Debt Repayment period of 10 years for SBP concessionary financing has been taken into account.
- Debt Repayment period of 13 years for commercial local and foreign loans has been taken into account
- The cost of financing of 5.55% (inclusive of saving) for SBP loan, KIBOR+ 2.25% for commercial local loan and LIBOR+4.25% for foreign loan, both for construction and operation period has been considered.
- Return on Equity during construction and operation of 14% on monthly payment basis has been allowed.
- Construction period of fifteen (15) months has been used for the workings of ROEDC and IDC.
- Insurance during Operation has been calculated as 0.4% of the allowed EPC Cost.
- Reference Exchange Rates of 158.30 PKR/USD has been used.
- Detailed component wise tariff is attached as **Annex-I** of this decision.
- Debt Servicing Schedule for SBP financing is attached as **Annex-II** of this decision.
- Debt Servicing Schedule for Foreign financing is attached as **Annex-III** of this decision.
- Debt Servicing Schedule for Commercial Local Financing is attached as **Annex-IV** of this decision.

**A. Indexations**

Adjustment of O&M, return on equity, return on equity during construction shall be made on quarterly basis for the quarters starting from 1<sup>st</sup> January, 1<sup>st</sup> April, 1<sup>st</sup> July and 1<sup>st</sup> October, based on latest available information. Adjustment of debt servicing components, where applicable, shall also be made on quarterly basis. Insurance component shall be adjusted on annual basis. The indexation for the 1<sup>st</sup> quarter i.e. July-September 2021 except for insurance component has already been made in this decision. The indexation mechanisms for the following quarters is given hereunder:

**i) Operation and Maintenance Costs**

O&M components of tariff shall be adjusted based on revised rates of local Inflation (N-CPI) as notified by Pakistan Bureau of Statistics, foreign inflation (US-CPI) as notified by US Bureau of Labour Statistics and TT&OD selling rate of US Dollar as notified by National Bank of Pakistan, according to the following formula:

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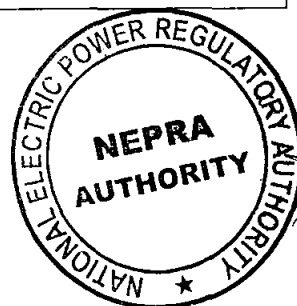
F. O&M <sub>(REV)</sub>	=	F. O&M <sub>(REF)</sub> * US CPI <sub>(REV)</sub> / US CPI <sub>(REF)</sub> * ER <sub>(REV)</sub> /ER <sub>(REF)</sub>
L. O&M <sub>(REV)</sub>	=	L. O&M <sub>(REF)</sub> * N-CPI <sub>(REV)</sub> / N-CPI <sub>(REF)</sub>
Where:		
F. O&M <sub>(REV)</sub>	=	The revised O&M Foreign Component of Tariff
L. O&M <sub>(REV)</sub>	=	The revised O&M Local Component of Tariff
F. O&M <sub>(REF)</sub>	=	The reference O&M Foreign Component of Tariff, i.e. PKR 0.5766/kWh
L. O&M <sub>(REF)</sub>	=	The reference O&M Local Component of Tariff, i.e. PKR 0.5220/kWh
US CPI <sub>(REV)</sub>	=	The revised US CPI (All Urban Consumers) of the middle month of preceding quarter
US CPI <sub>(REF)</sub>	=	The reference US CPI (All Urban Consumers) of 269.195 of May, 2021
N-CPI <sub>(REV)</sub>	=	The revised N- CPI (General) of the middle month of preceding quarter
N-CPI <sub>(REF)</sub>	=	The reference N-CPI (General) of 145.24 for the month of May, 2021
ER <sub>(REV)</sub>	=	The revised TT & OD selling rate of US dollar as at the last day of the preceding quarter
ER <sub>(REF)</sub>	=	The reference TT & OD selling rate of PKR 158.30/USD

ii) **Insurance during Operation**

The actual insurance cost for the minimum cover required under contractual obligations with the Power Purchaser, not exceeding 0.4% of the approved EPC cost, will be treated as pass through. Insurance component of reference tariff shall be adjusted annually as per actual upon production of authentic documentary evidence according to the following formula:

AIC	=	INS <sub>(REF)</sub> / P <sub>(REF)</sub> * P <sub>(ACT)</sub>
Where:		
AIC	=	Adjusted insurance component of tariff
INS <sub>(REF)</sub>	=	Reference insurance component of tariff
P <sub>(REF)</sub>	=	Reference premium @ 0.4% of EPC Cost at PKR 158.30/USD
P <sub>(ACT)</sub>	=	Actual premium or 0.4% of the EPC Cost converted into PKR on exchange rate prevailing at the time of insurance premium payment of the insurance coverage period, whichever is lower.

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iii) Return on Equity

The total ROE (ROE + ROEDC) component of the tariff will be adjusted on quarterly basis on account of change in USD/PKR parity. The variation relating to these components shall be worked out according to the following formula:

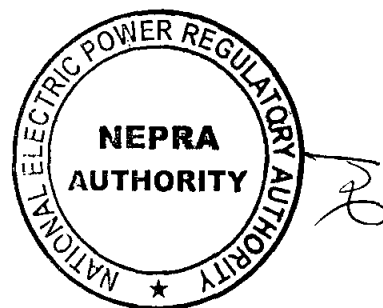
$ROE_{(REV)}$	=	$ROE_{(REF)} * ER_{(REV)} / ER_{(REF)}$
$ROEDC_{(REV)}$	=	$ROEDC_{(REF)} * ER_{(REV)} / ER_{(REF)}$
Where:		
$ROE_{(REV)}$	=	Revised ROE Component of Tariff
$ROEDC_{(REV)}$	=	Revised ROEDC Component of Tariff
$ROE_{(REF)}$	=	Reference ROE Component of Tariff
$ROEDC_{(REF)}$	=	Reference ROEDC Component of Tariff
$ER_{(REV)}$	=	The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan as at the last day of the preceding quarter.
$ER_{(REF)}$	=	The reference TT & OD selling rate of PKR 158.30/USD

iv) Indexations applicable to debt

The principal component of foreign loan will be adjusted on quarterly basis, on account of revised TT & OD selling rate of US Dollar, as notified by the National Bank of Pakistan as at the last day of the preceding quarter, over the applicable reference exchange rate. The interest part of the foreign and commercial local loan shall be adjusted with respect to change in the applicable LIBOR and KIBOR respectively as per the following formula:

$\Delta I$ (Foreign)	=	$P_{(REV)} \text{ (Foreign)} * (KIBOR_{(REV)} - 7.45\%) / 4$
$\Delta I$ (Local)	=	$P_{(REV)} \text{ (Local)} * (LIBOR_{(REV)} - 0.14575\%) / 4$
Where	:	
$\Delta I$ (Local)	=	the variation in interest charges applicable corresponding to variation in 3 months KIBOR. $\Delta I$ can be positive or negative depending upon whether 3 months KIBOR <sub>(REV)</sub> per

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		annum > or < 7.45%. The interest payment obligation will be enhanced or reduced to the extent of $\Delta I$ for each quarter under adjustment.
$\Delta I$ (Foreign)	=	the variation in interest charges applicable corresponding to variation in 3 months LIBOR. $\Delta I$ can be positive or negative depending upon whether 3 months LIBOR <sub>(REV)</sub> per annum > or < 0.14575%. The interest payment obligation will be enhanced or reduced to the extent of $\Delta I$ for each quarter under adjustment.
$P_{(REV)}$ (Foreign)	=	is the outstanding principal of foreign debt (as indicated in the attached debt service schedule to this order at <b>Annex-III</b> ) on a quarterly basis at the relevant calculations date.
$P_{(REV)}$ (Local)	=	is the outstanding principal of commercial local debt (as indicated in the attached debt service schedule to this order at <b>Annex-IV</b> ) on a quarterly basis at the relevant calculations date.

The foreign interest component will also be adjusted on quarterly basis, on account of revised TT & OD selling rate of US Dollar, as notified by the National Bank of Pakistan as at the last day of the preceding quarter, over the applicable reference exchange rate.

**B. Terms and Conditions**

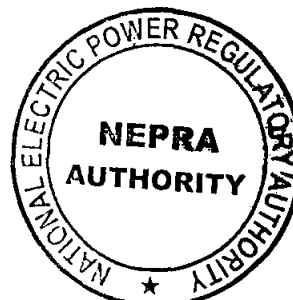
The following terms and conditions shall apply to the approved tariff:

- The O&M cost, its mix, and the corresponding mechanism thereof as approved shall be applicable for 13 years from COD. During this time, however, the Petitioner shall be required to submit, on an annual basis, the documentary evidence/report pertaining to actual expenditures on account of O&M. The savings, if any, in the actual O&M cost compared to the approved O&M cost shall completely be passed on to the consumers.

Subsequent to the lapse of the LT O&M Contract, in order to claim O&M costs, the Petitioner shall be required to carry out competitive bidding for the selection of the O&M contractor in accordance with NEPRA's applicable law. Based on this competitive bidding process, the Authority shall make revisions in the O&M cost, while capping the prevailing level of the approved O&M cost. Those revisions may also entail changing the mix of the approved O&M cost (local and foreign) as well as the indexation mechanism (indices, frequency etc.).

- This tariff will be limited to the extent of net annual energy generation supplied to the power purchaser up to 38.48% net annual plant capacity factor. Net annual energy generation supplied to the power purchaser in a year, in excess of 38.48% net annual plant capacity factor will be charged at the following tariffs:

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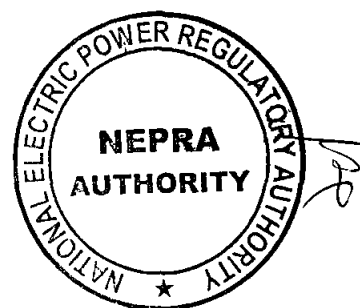




<u>Net annual plant capacity factor</u>	<u>% of prevalent tariff allowed to power producer</u>
Above 38.48% to 40.48%	5%
Above 40.48% to 42.48%	10%
Above 42.48% to 44.48%	20%
Above 44.48% to 46.48%	40%
Above 46.48% to 48.48%	80%
Above 48.48%	100%

- The risk of wind resource shall be borne by the power producer.
- The company is required to maintain the availability levels as declared in the Tariff Petition and the studies provided therein. Necessary clauses shall be included in the EPA so that the power producer cannot intentionally suppress the capacity factors. NPCC shall conduct detailed monitoring/audit of the operational record/log of all the wind turbines on quarterly basis to verify output/capacity of the power plant.
- In the tabulated above tariff no adjustment for certified emission reductions has been accounted for. However, upon actual realization of carbon credits, the same shall be distributed between the power purchaser and the power producer in accordance with the applicable GOP Policy, amended from time to time.
- The savings in the cost of any financing during any time of debt servicing period shall be shared between the company and the power purchaser in the ratio of 40 : 60.
- In case the company is obligated to pay any tax on its income from generation of electricity, or any duties and/or taxes, not being of refundable nature, are imposed on the company, the exact amount paid by the company on these accounts shall be reimbursed on production of original receipts. This payment shall be considered as a pass-through payment. However, withholding tax on dividend shall not be a pass through item.

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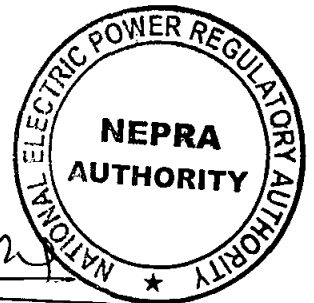
90. The Order part along with 04 Nos. Annexures is recommended for notification by the Federal Government in the official gazette in accordance with Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

**AUTHORITY**

Engr. Maqsood Anwar Khan  
Member

Rafique Ahmed Shaikh  
Member

Tauseef H. Farooqi  
Chairman



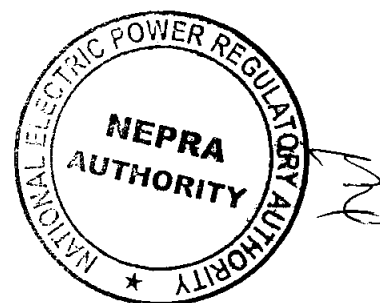
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**MASTER GREEN ENERGY LIMITED  
TARIFF TABLE**

Annex-I

Year	Fixed O&M		Insurance	ROE	ROEDC	Debt Servicing SBP Loan		Debt Servicing Commercial Local Loan		Debt Servicing Commercial Foreign Loan		Total
	Local	Foreign				Principal	Interest	Principal	Interest	Principal	Interest	
Rs. / kWh												
1	0.5220	0.5766	0.2177	1.5450	0.1386	2.4216	1.2936	0.0334	0.0786	1.1637	0.9724	8.9631
2	0.5220	0.5766	0.2177	1.5450	0.1386	2.4216	1.1592	0.0368	0.0752	1.2381	0.9201	8.8508
3	0.5220	0.5766	0.2177	1.5450	0.1386	2.4216	1.0248	0.0404	0.0715	1.3193	0.8643	8.7418
4	0.5220	0.5766	0.2177	1.5450	0.1386	2.4216	0.8904	0.0445	0.0674	1.4027	0.8049	8.6315
5	0.5220	0.5766	0.2177	1.5450	0.1386	2.4216	0.7560	0.0490	0.0630	1.4929	0.7418	8.5241
6	0.5220	0.5766	0.2177	1.5450	0.1386	2.4216	0.6216	0.0539	0.0580	1.5877	0.6746	8.4173
7	0.5220	0.5766	0.2177	1.5450	0.1386	2.4216	0.4872	0.0593	0.0526	1.6914	0.6032	8.3152
8	0.5220	0.5766	0.2177	1.5450	0.1386	2.4216	0.3528	0.0653	0.0466	1.7996	0.5270	8.2129
9	0.5220	0.5766	0.2177	1.5450	0.1386	2.4216	0.2184	0.0719	0.0401	1.9124	0.4461	8.1103
10	0.5220	0.5766	0.2177	1.5450	0.1386	2.4216	0.0840	0.0791	0.0328	2.0342	0.3601	8.0117
11	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	0.0871	0.0249	2.1650	0.2686	5.5453
12	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	0.0958	0.0161	2.3003	0.1712	5.5832
13	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	0.1055	0.0065	2.4446	0.0677	5.6241
14	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
15	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
16	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
17	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
18	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
19	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
20	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
21	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
22	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
23	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
24	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
25	0.5220	0.5766	0.2177	1.5450	0.1386	-	-	-	-	-	-	2.9998
Levelized	0.5220	0.5766	0.2177	1.5450	0.1386	1.6393	0.5367	0.0436	0.0440	1.2511	0.5218	7.0364

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**MASTER GREEN ENERGY LIMITED**  
**SBP LOAN**

**Annex-II**

Period	PKR			PKR/kWh	
	Outstanding	Principal	Interest	Principal	Interest
1	4,081,468,935	102,036,723	56,630,381	-	-
2	3,979,432,212	102,036,723	55,214,622	-	-
3	3,877,395,489	102,036,723	53,798,862	-	-
4	3,775,358,765	102,036,723	52,383,103	2.4216	1.2936
5	3,673,322,042	102,036,723	50,967,343	-	-
6	3,571,285,319	102,036,723	49,551,584	-	-
7	3,469,248,595	102,036,723	48,135,824	-	-
8	3,367,211,872	102,036,723	46,720,065	2.4216	1.1592
9	3,265,175,148	102,036,723	45,304,305	-	-
10	3,163,138,425	102,036,723	43,888,546	-	-
11	3,061,101,702	102,036,723	42,472,786	-	-
12	2,959,064,978	102,036,723	41,057,027	2.4216	1.0248
13	2,857,028,255	102,036,723	39,641,267	-	-
14	2,754,991,531	102,036,723	38,225,507	-	-
15	2,652,954,808	102,036,723	36,809,748	-	-
16	2,550,918,085	102,036,723	35,393,988	2.4216	0.8904
17	2,448,881,361	102,036,723	33,978,229	-	-
18	2,346,844,638	102,036,723	32,562,469	-	-
19	2,244,807,915	102,036,723	31,146,710	-	-
20	2,142,771,191	102,036,723	29,730,950	2.4216	0.7560
21	2,040,734,468	102,036,723	28,315,191	-	-
22	1,938,697,744	102,036,723	26,899,431	-	-
23	1,836,661,021	102,036,723	25,483,672	-	-
24	1,734,624,298	102,036,723	24,067,912	2.4216	0.6216
25	1,632,587,574	102,036,723	22,652,153	-	-
26	1,530,550,851	102,036,723	21,236,393	-	-
27	1,428,514,127	102,036,723	19,820,634	-	-
28	1,326,477,404	102,036,723	18,404,874	2.4216	0.4872
29	1,224,440,681	102,036,723	16,989,114	-	-
30	1,122,403,957	102,036,723	15,573,355	-	-
31	1,020,367,234	102,036,723	14,157,595	-	-
32	918,330,510	102,036,723	12,741,836	2.4216	0.3528
33	816,293,787	102,036,723	11,326,076	-	-
34	714,257,064	102,036,723	9,910,317	-	-
35	612,220,340	102,036,723	8,494,557	-	-
36	510,183,617	102,036,723	7,078,798	2.4216	0.2184
37	408,146,894	102,036,723	5,663,038	-	-
38	306,110,170	102,036,723	4,247,279	-	-
39	204,073,447	102,036,723	2,831,519	-	-
40	102,036,723	102,036,723	1,415,760	2.4216	0.0840

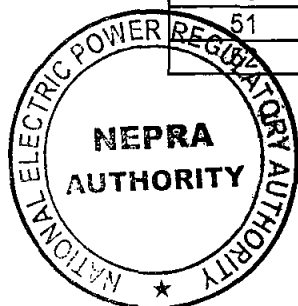
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**MASTER GREEN ENERGY LIMITED  
COMMERCIAL FOREIGN LOAN**

Annex-III

Period	USD				PKR/kWh	
	Outstanding	Repayment percentage	Principal	Interest	Principal	Interest
1	24,011,163	1.26%	302,541	263,868	-	-
2	23,708,622	1.28%	307,343	260,543	-	-
3	23,401,279	1.30%	312,145	257,165	-	-
4	23,089,134	1.32%	316,947	253,735	1.1637	0.9724
5	22,772,187	1.34%	321,750	250,252	-	-
6	22,450,437	1.36%	326,552	246,716	-	-
7	22,123,886	1.38%	331,354	243,128	-	-
8	21,792,531	1.41%	338,557	239,486	1.2381	0.9201
9	21,453,974	1.43%	343,360	235,766	-	-
10	21,110,614	1.45%	348,162	231,992	-	-
11	20,762,453	1.47%	352,964	228,166	-	-
12	20,409,488	1.50%	360,167	224,288	1.3193	0.8643
13	20,049,321	1.52%	364,970	220,330	-	-
14	19,684,351	1.54%	369,772	216,319	-	-
15	19,314,579	1.57%	376,975	212,255	-	-
16	18,937,604	1.59%	381,777	208,112	1.4027	0.8049
17	18,555,827	1.62%	388,981	203,917	-	-
18	18,166,846	1.64%	393,783	199,642	-	-
19	17,773,063	1.67%	400,986	195,315	-	-
20	17,372,076	1.69%	405,789	190,908	1.4929	0.7418
21	16,966,288	1.72%	412,992	186,449	-	-
22	16,553,296	1.75%	420,195	181,910	-	-
23	16,133,100	1.77%	424,998	177,293	-	-
24	15,708,103	1.80%	432,201	172,622	1.5877	0.6746
25	15,275,902	1.83%	439,404	167,873	-	-
26	14,836,498	1.86%	446,608	163,044	-	-
27	14,389,890	1.89%	453,811	158,136	-	-
28	13,936,079	1.92%	461,014	153,149	1.6914	0.6032
29	13,475,065	1.95%	468,218	148,083	-	-
30	13,006,847	1.98%	475,421	142,937	-	-
31	12,531,426	2.01%	482,624	137,713	-	-
32	12,048,802	2.04%	489,828	132,409	1.7996	0.5270
33	11,558,974	2.07%	497,031	127,026	-	-
34	11,061,943	2.10%	504,234	121,564	-	-
35	10,557,708	2.14%	513,839	116,023	-	-
36	10,043,869	2.17%	521,042	110,376	1.9124	0.4461
37	9,522,827	2.20%	528,246	104,650	-	-
38	8,994,582	2.24%	537,850	98,845	-	-
39	8,456,732	2.27%	545,053	92,934	-	-
40	7,911,678	2.31%	554,658	86,944	2.0342	0.3601
41	7,357,020	2.34%	561,861	80,849	-	-
42	6,795,159	2.38%	571,466	74,675	-	-
43	6,223,693	2.42%	581,070	68,395	-	-
44	5,642,623	2.46%	590,675	62,009	2.1650	0.2686
45	5,051,949	2.49%	597,878	55,518	-	-
46	4,454,071	2.53%	607,482	48,947	-	-
47	3,846,588	2.57%	617,087	42,272	-	-
48	3,229,501	2.61%	626,691	35,490	2.3003	0.1712
49	2,602,810	2.65%	636,296	28,603	-	-
50	1,966,514	2.69%	645,900	21,611	-	-
51	1,320,614	2.73%	655,505	14,513	-	-
	665,109	2.77%	665,109	7,309	2.4446	0.0677



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**MASTER GREEN ENERGY LIMITED  
COMMERCIAL LOCAL LOAN**

Annex-IV

Period	PKR			PKR/kWh	
	Outstanding	Principal	Interest	Principal	Interest
1	138,557,721	1,356,902	3,360,025	-	-
2	137,200,818	1,389,807	3,327,120	-	-
3	135,811,011	1,423,510	3,293,417	-	-
4	134,387,501	1,458,030	3,258,897	0.0334	0.0786
5	132,929,471	1,493,387	3,223,540	-	-
6	131,436,084	1,529,602	3,187,325	-	-
7	129,906,482	1,566,695	3,150,232	-	-
8	128,339,787	1,604,687	3,112,240	0.0368	0.0752
9	126,735,100	1,643,601	3,073,326	-	-
10	125,091,499	1,683,458	3,033,469	-	-
11	123,408,041	1,724,282	2,992,645	-	-
12	121,683,759	1,766,096	2,950,831	0.0404	0.0715
13	119,917,663	1,808,924	2,908,003	-	-
14	118,108,739	1,852,790	2,864,137	-	-
15	116,255,949	1,897,720	2,819,207	-	-
16	114,358,229	1,943,740	2,773,187	0.0445	0.0674
17	112,414,489	1,990,876	2,726,051	-	-
18	110,423,613	2,039,154	2,677,773	-	-
19	108,384,458	2,088,604	2,628,323	-	-
20	106,295,854	2,139,253	2,577,674	0.0490	0.0630
21	104,156,602	2,191,129	2,525,798	-	-
22	101,965,472	2,244,264	2,472,663	-	-
23	99,721,208	2,298,688	2,418,239	-	-
24	97,422,520	2,354,431	2,362,496	0.0539	0.0580
25	95,068,089	2,411,526	2,305,401	-	-
26	92,656,564	2,470,005	2,246,922	-	-
27	90,186,558	2,529,903	2,187,024	-	-
28	87,656,655	2,591,253	2,125,674	0.0593	0.0526
29	85,065,402	2,654,091	2,062,836	-	-
30	82,411,311	2,718,453	1,998,474	-	-
31	79,692,858	2,784,375	1,932,552	-	-
32	76,908,483	2,851,896	1,865,031	0.0653	0.0466
33	74,056,587	2,921,055	1,795,872	-	-
34	71,135,532	2,991,890	1,725,037	-	-
35	68,143,642	3,064,444	1,652,483	-	-
36	65,079,198	3,138,756	1,578,171	0.0719	0.0401
37	61,940,441	3,214,871	1,502,056	-	-
38	58,725,570	3,292,832	1,424,095	-	-
39	55,432,738	3,372,683	1,344,244	-	-
40	52,060,055	3,454,471	1,262,456	0.0791	0.0328
41	48,605,584	3,538,242	1,178,685	-	-
42	45,067,343	3,624,044	1,092,883	-	-
43	41,443,299	3,711,927	1,005,000	-	-
44	37,731,372	3,801,941	914,986	0.0871	0.0249
45	33,929,430	3,894,138	822,789	-	-
46	30,035,292	3,988,571	728,356	-	-
47	26,046,721	4,085,294	631,633	-	-
48	21,961,427	4,184,362	532,565	0.0958	0.0161
49	17,777,064	4,285,833	431,094	-	-
50	13,491,231	4,389,765	327,162	-	-
51	9,101,466	4,496,216	220,711	-	-
52	4,605,250	4,605,250	111,677	0.1055	0.0065

