

F/A

OFFICE OF CHIEF TECHNICAL OFFICER

No. Tech/DGMT-II/MT-IV/Kathai-II/7086-87

Date: 22-02-2018

WITHOUT PREJUDICEThe Registrar,
NEPRA.NEPRA Tower, Ataturk Avenue (East)
G-5/1, Islamabad.

D.R. / DR-2

C.P.P.A. L

- SA (T-2)

- SA (T-2)

- LA (KIP)

- Consulting (Hydro)

CC: - Chairman
- Mr. M. (M. S. S.)
- Mr. (S. S. S.)
- Mr. (L. S. S.)Sub: Submission of Tariff Proposal in respect of M/s Kathai-II Hydro Power Project in AJ&K.

- Ref: (i) CPPA letter No. CTO/CPPA (G)/DGM-V/35261-62 dated 06.10.2017.
 (ii) CPPA letter No. CPPAGL/2017/CEO/Kathai-II SHPP/8632-38 dated 26.05.2017
 (iii) NEPRA's letter No. NEPRA /TRF-100/Kathai-II/4208-09 dated 15.03.2018
 (iv) CPPA Letter No. CTO(CPPA-G)/DGM-V/35430-32 dated 10.10.2017
 (v) CPPA Letter No. CTO(CPPA-G)/DGM-V/32150-51 dated 28.08.2017
 (vi) NEPRA's letter No. NEPRA /LA(Leg)/NRG-19/14396 dated 22.08.2017
 (vii) CPPA Letter No. CEO/CPPA-G/30665-68 dated 09.08.2017
 (viii) CPPA Letter No. CEO/CPPA-G/28783-86 dated 21.07.2017
 (ix) NEPRA's letter No. NEPRA /LA(KIP)/NRG-19/10609 dated 23.06.2017

The Tariff Proposal submitted by M/s Kathai-II Hydro Power Project is being forwarded by CPPA to the Authority stipulating the status of compliance by the seller with respect to the documents required under Regulation 3(1) of the National Electric Power Regulatory Authority (Import of Power) Regulations, 2017 (the "Import Regulations").

Accordingly, please find attached herewith the requisite table, specifying the shortcomings in the Tariff Proposal submitted by M/s Kathai-II Hydro Power Project for onwards submission to the Authority for review, consideration and further necessary action as per the applicable regulatory framework. It is specified that the details required in Regulation 3 of the Import Regulations has been formulated in tabulated form which is hereby attached with as Annexure A.

It is pertinent to mention here that as per the Import Regulations and the clarification rendered by the Authority vide letter dated 22-08-2017, it is the responsibility of the seller to arrange the requisite documents and verify the correctness, fairness and validity of any information contained and request made in the same.

In view of above, the Tariff Proposal is being forwarded to the Authority subject to reservations specified in the Annexure A and qualifications specified above as well as submissions made in letter mentioned above. Further, CPPA-G reserves its rights to raise any comments /objections, merits/demerits in any proposal subsequently during the course of application of this Tariff Proposal. CPPA also reserves right of hearing for subject tariff proposal.


 (SYED IQBAL MEHDI)

Chief Technical Officer, CPPA-G

Copy to:

- Chief Executive Officer, CPPA-G Islamabad
- Master File.

G/NEECA Building G-5/2 Islamabad

☎ +92-51-9216962 ☎ +92-51-921149 ✉ dgmtech-ii@cppa.gov.pk

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Received	2996
By No.	2608-18
Dated	26-08-18

[illegible]

Detailed description of Figure 1: The graph plots the percentage of total catch against the percentage of total effort for five different fishing scenarios. The x-axis represents 'Percentage of total effort' from 0 to 100. The y-axis represents 'Percentage of total catch' from 0 to 100. The legend identifies five series: Yellow perch (solid line with circles), Rock bass (dashed line with squares), Rock bass + yellow perch (dotted line with triangles), Rock bass + yellow perch + white perch (dash-dot line with diamonds), and White perch (solid line with crosses). The 'Yellow perch' and 'Rock bass' series show a steep initial rise, indicating high catch efficiency at low effort levels. The 'Rock bass + yellow perch' series follows a similar but slightly lower path. The 'Rock bass + yellow perch + white perch' series shows a more gradual increase in catch percentage as effort increases. The 'White perch' series shows the lowest catch percentage for any given effort level compared to the other species.

Percentage of total effort	Yellow perch (%)	Rock bass (%)	Rock bass + yellow perch (%)	Rock bass + yellow perch + white perch (%)	White perch (%)
0	0	0	0	0	0
10	45	40	35	25	10
20	65	55	50	35	15
30	75	60	55	40	18
40	80	62	58	42	20
50	82	63	60	44	22
60	83	64	61	45	23
70	84	65	62	46	24
80	85	66	63	47	25
90	86	67	64	48	26
100	87	68	65	49	27

Kathai-II Small Hydro Power Project

(Annex-A)

F/A-1

Details information's/documents submitted by Kathai-II Hydro Private Limited along with its Tariff Proposal under Regulation 3 of Import Regulation is as follows:

Sr.No.	Details required for Tariff Proposal	Available	Not Available	Remarks
a	Name and address of the applicant;			CPPA is forwarding the Tariff Proposal as per the Import Regulations, subject to reservations and qualifications set forth herein and the attached letter.
b	Authorization from the competent authority to file application along with affidavit as to the correctness of the information.			CPPA-G cannot and does not confirm the correctness of information as provided by the project company. Further the Board Resolution and Affidavit, as provided by the project company, are attached herewith at (Annex-B).
c	Demand that is going to met through the proposed Import of power.			It is the responsibility of NTDCL and the concerned Disco to provide the detail regarding the demand that is going to met through the proposed Import of Power. Moreover it is highlighted that : 1. CPPA-G has secured approval/consent of PESCO (Annex-C). 2. Based on the said consent, CPPA-G had given conditional consent (Annex-D), which company has now accepted through their letter dated 01.03.2018. (Annex-D1).
d	Detail of Seller including but not limited to name, address, description of generation facilities etc.			Details of Seller is attached as (Annex-E)
e	Comprehensive Tariff Proposal including proposed rates of import of Power.			Tariff Proposal is attached (Annex-F), along with Sellers letters dated 01.03.2018 (Annex-D1). Authority to consider applicability and availability of same to the Seller in light of legal, regulatory and policy framework. To the extent of extension of upfront tariff the matter is <i>sub judice</i> in WP No. 655/2018 wherein the Honourable Islamabad High Court

				has passed order dated 21.02.2018 (Annex-F1).
f	Source of Power Generation, where applicable.	✓		This information is in the context of nature of fuel, which in the instant case is Hydel.
g	Capacity and/ or the estimated annual energy to be imported.	✓		Installed Capacity 8.00 MW (gross), 7.92 MW (net) and Annual Energy will be subject to actual hydrology. However, the company estimates the annual Energy as 43,180,000 Kwh. (Annex-E)
h	Feasibility study of the project, if applicable.	✓		Project company has submitted the approval of Feasibility study by AJ &K (PPC). (Annex-G).
i	Proposed interconnection arrangement with approximate distance.	✓		Interconnection Approval Letter from GM Planning NTDCL has been attached but the comment on the same study has not been received from PESCO. Report of Interconnection is attached along with NTDCL letter(Annex-H)
j	Augmentation required in existing transmission network and/ or the grid, if any;		✓	Not Provided
k	Estimated costs of the interconnection arrangement and the augmentation required in the transmission network—		✓	Not Provided
l	The technology, indicating primary fuel, alternate primary fuel and back up fuel. Where applicable;	✓		Hydel
m	Undertaking from Seller to comply with grid code, distribution code and other applicable documents;	✓		Undertaking Provided by the Company attached (Annex-I)
n	The expected commercial operations date;	✓		Dec-2021
o	The expected duration of import of Power;	✓		30 Year
p	The adequacy of the transmission system of the national grid company or Distribution Company, as the case may be, to import the electric power;		✓	Not Provided
q	The summary of evidence giving brief particulars of the data, facts and evidence in support of the application; and	✓		Authority to consider documents attached with the Tariff Proposal. Company would bear Hydrological Risk (Annex-J).

Any other information in such format as may be required by the Authority from time to time.		Authority to consider and direct additional information as may be required.
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1. The project is a small hydro power project with a capacity of 10 MW.

2. The project is located in the Kathai-II area.

3. The project is a small hydro power project with a capacity of 10 MW.

4. The project is a small hydro power project with a capacity of 10 MW.

5. The project is a small hydro power project with a capacity of 10 MW.

6. The project is a small hydro power project with a capacity of 10 MW.

7. The project is a small hydro power project with a capacity of 10 MW.

8. The project is a small hydro power project with a capacity of 10 MW.

9. The project is a small hydro power project with a capacity of 10 MW.

10. The project is a small hydro power project with a capacity of 10 MW.

11. The project is a small hydro power project with a capacity of 10 MW.

12. The project is a small hydro power project with a capacity of 10 MW.

13. The project is a small hydro power project with a capacity of 10 MW.

14. The project is a small hydro power project with a capacity of 10 MW.

15. The project is a small hydro power project with a capacity of 10 MW.

16. The project is a small hydro power project with a capacity of 10 MW.

17. The project is a small hydro power project with a capacity of 10 MW.

CERTIFIED TRUE COPY OF THE RESOLUTION PASSED

BY THE BOARD OF DIRECTORS OF

F/A-4

KATHAI-II HYDRO (PRIVATE) LIMITED

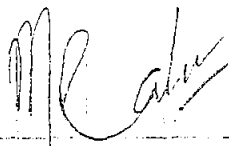
IN MEETING HELD ON MARCH 16, 2018

"RESOLVED that Kathai-II Hydro (Private) Limited (the "Company") shall apply to the Central Power Purchasing Agency (Guarantee) Limited ("CPPA-G") / National Electric Power Regulatory Authority ("NEPRA") for approval to charge tariff as per the rates and terms & conditions of the Upfront Tariff for Small Hydro Power Generation Projects up to 25 MW under the NEPRA (Import of Electric Power) Regulations, 2017.

FURTHER RESOLVED that Mr. Rana Uzair Nasim, Chief Executive Officer and Mr. Musaddiq Rahim, the Company Secretary, are hereby singly empowered and authorized to sign and submit on behalf of the Company the request for issuance of Tariff to CPPA-G / NEPRA, including all schedules, annexures, supporting documents, affidavits, undertakings, and any other oral or written representations or statements in relation thereto."

CERTIFIED TRUE COPY

For KATHAI-II HYDRO (PRIVATE) LIMITED



Musaddiq Rahim

Company Secretary

Kathai-II Hydro (Private) Limited



PESHAWAR ELECTRIC SUPPLY COMPANY

F/G-2

PH.No.091-9211990
Fax.No.091-9212335

Office of the Chief Executive Officer, PESCO
WAPDA House, Peshawar

Dated 14/03/2017

No.1758/Hydel/Kathai-II-HPP/

Chief Executive Officer
CPPA (G) Ltd,
6th Floor, Shaheed-e-Millat Secretariat,
Jinnah Avenue, Blue Area,
Islamabad.

SUBJECT:- Consent for Power Evacuation from 8.0 MW Kathai-II Hydropower Project being set up near Hattian Grid Station in District Hattian Bala, Azad Jammu & Kashmir (the "Project")

Reference your letter No. CPPAG/DGMT-II/MT-IV/Kathai-II SHPP/ 17573-75 dated 10-03-2017 & telephonic talk dated 13-03-2017.

PESCO conveys its no objection to evacuate power from the above cited project and to purchase the power from the said power plant on behalf of PESCO through CPPA (G) subject to the fulfillment of the following conditions:

- i. M/S Kathai-II shall be responsible for the construction alongwith operation and maintenance of the interconnection facility and no cost and responsibility in this regard shall be borne by PESCO as per attached undertaking by the Company Secretary.
- ii. Settlement of the obligation of PESCO arising under the back-to-back agreement which shall be signed between CPPA (G) and PESCO.

Chief Executive Officer
PESCO



Central Power Purchasing Agency (Guarantee) Limited

A Company of Government of Pakistan



OFFICE OF CHIEF EXECUTIVE OFFICER

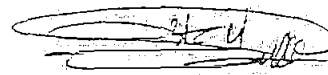
No. CPPAGL/2017/CEO/ Kathai-II SHPP / 8638-38

Date: 26-05-2017

The Registrar
NEPRA, NEPRA Office Building
G-5/1, Attaturk Avenue (East), Islamabad

Subject: Consent of Purchase of Power in Respect of
8 MW Kathai-II Small Hydropower Project, District Hattian Bala AJK

1. Pursuant to NEPRA's Upfront Tariff (Approval and Procedure) Regulations, 2011 'Consent of Purchase Power' is hereby issued in respect of 8 MW Kathai-II Hydro Power Project, District Hattian Bala AJK.
2. Issuance of Consent to Purchase Power is subsequent to fulfilment of all requirements under 'Guidelines/SOP for Power Procurement by CPPA-G under NEPRA Renewable Energy Companies Guidelines, 2015' issued by CPPA-G vide No. CPPA-G/CS/2016/1963 dated 31-05-2016; and subject to the following conditions:
 - i) Back-to-back agreement between CPPA-G and relevant DISCOs for the evacuation of Power;
 - ii) Approval of Grid Interconnection Study by the relevant DISCOs and NTDC;
 - iii) Completion of other legal formalities as per applicable Policies, laws, Rules and Regulations;
 - iv) CPPA-G will procure Power, on behalf of relevant DISCOs, from the project companies on Take and Pay basis;
 - v) Based on the above necessary changes will be made in the EPA
3. This is issued with approval of Board of Directors, Central Power Purchasing Agency (Guarantee) Limited given under Board Resolution No. VII/27 presented on 25th May 2017 and notified by Company Secretary vide No. CPPA-G/2017/CS/1021-24 dated 25th May 2017.


Chief Executive Officer

Copy to:

1. Chief Executive Officer, PESCO, Sakhi Chasma, Shami Road Peshawer.
2. Managing Director, PPIB, Emigration Tower, G-8/1 Islamabad.
3. Chief Technical Officer, CPPA-G, Islamabad.
4. Director General, Private Power Cell, Upper Chatter, Muzaffarabad AJK.
5. Company Secretary, CPPA-G, Islamabad.
6. M/s Kathai-II Hydro (Pvt) Limited, 1485/C-2A, Asad Jan Road, Lahore Cantt. abad.
7. Master File.

G^{no} Floor EMERCON Building, G-5/2 Islamabad

+92-51-9216962 +92-51-9216963 +92-51-9216964 +92-51-9216965 +92-51-9216966 +92-51-9216967 +92-51-9216968 +92-51-9216969 +92-51-9216970 +92-51-9216971 +92-51-9216972 +92-51-9216973 +92-51-9216974 +92-51-9216975 +92-51-9216976 +92-51-9216977 +92-51-9216978 +92-51-9216979 +92-51-9216980 +92-51-9216981 +92-51-9216982 +92-51-9216983 +92-51-9216984 +92-51-9216985 +92-51-9216986 +92-51-9216987 +92-51-9216988 +92-51-9216989 +92-51-9216990 +92-51-9216991 +92-51-9216992 +92-51-9216993 +92-51-9216994 +92-51-9216995 +92-51-9216996 +92-51-9216997 +92-51-9216998 +92-51-9216999 +92-51-9217000

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KATHAI-II HYDRO (PVT.) LIMITED

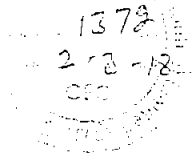
1485/C-2A, Asad Jan Road, Lahore Cantt.

Ph: 042 36687823-24; Fax: 042 36687825

Ref: KATHAI-II/CPPA/PA R/01-18

March 01, 2018

Chief Executive Officer
Central Power Purchasing Agency (Guarantee) Limited (CPPA-G)
Ground Floor, Enercon Building,
G-5/2, Islamabad.



Subject: Submission of Power Acquisition Request ('PAR') to NEPRA on behalf of Kathai-II Hydro (Pvt) Limited (the 'Company') to opt for the Upfront Tariff for Small Hydropower Projects

Ref: (1) Our Power Acquisition Request submitted vide letter No. KATHAI-II/CPPA/01/2017 dated 07.03.2017
(2) Consent for Power Purchase issued by CPPA-G dated 26.05.2017

Dear Sir,

Reference is made to our application at Sr. No (1) above, wherein we had requested to file PAR with NEPRA so that the Company may receive the Upfront Tariff for Small Hydro Projects dated October 14, 2015, as extended through decision dated April 10, 2017. Action on the same is still pending.

Subsequent to our application, we received consent from CPPA-G referred to in Sr. No (2) above, which is on 'Take and Pay' basis. We understand that this means: (i) the Company shall bear the hydrological risk, (ii) all energy generated shall be procured i.e. must-run despatch, (iii) any downside/upside associated with lower/higher plant factor shall be to the account of the Company.

On the above basis, the consent is acceptable to us and we kindly request you to move PAR with NEPRA expeditiously as the tariff is expiring on March 27, 2018. We are enclosing the modified certification as per Annexure III of the Upfront Tariff on the basis that the Company shall bear the hydrological risk. All other documents previously submitted with the application remain the same.

We remain at your disposal in case of any questions or queries.

Yours sincerely,

Rana Uzair Nasim
Chief Executive Officer
Kathai-II Hydro (Private) Limited

CEO	
CFO	
CLO	
Company Secretary	
DD HR/Admin	
Chief Information Officer	
SC Technical	
Advisor Treasury	
Manager EMO	
Manager EPC	

CC:

- 1) Chief Technical Officer, CPPA-G, Ground Floor, Enercon Building, G-5/2, Islamabad.
- 2) Director General, AJK Private Power Cell, PDO Complex, Upper Chatter Housing Colony, Muzaffarabad, AJK.

KATHAI-II HYDRO (PVT.) LIMITED

1435/C-2A, Asad Jan Road, Lahore Cantt.

Ph: 042-36687823-24, Fax: 042-36687825

F/A-10

Registrar

March 01, 2018

National Electric Power Regulatory Authority

NEPRA Tower, Ataturk Avenue (East)

Sector G-5/1, Islamabad

Subject: Certifications in respect of application opting for upfront tariff for small hydropower generation

I, Rana Uzair Nasim, Chief Executive Officer, being the duly authorized representative of Kathai-II Hydro (Pvt.) Limited by virtue of board resolution dated March 4, 2017, hereby confirm that for our project of 8.0 MW gross installed capacity to be located at Kathai Nullah in District Hattian Bala, Azad Jammu & Kashmir:

1. All the plant and machinery to be installed will be new.
2. Kathai-II Hydro (Pvt) Limited will bear the hydrological risk.
3. The above mentioned is a green field hydro power project. Kathai-II Hydro (Pvt) Limited has not availed any soft loan for the aforesaid project. In case any soft loan becomes available to Kathai-II Hydro (Pvt) Limited, we will intimate the Authority within 10 days of such event and will not claim the upfront tariff granted to us.
4. The annual plant factor of the aforementioned project, as certified by the panel of experts, is not based on the detailed design report.
5. We have not already executed a power purchase agreement with the power purchaser for the aforementioned project or have achieved financial close for the aforementioned project.
6. Kathai-II Hydro (Pvt) Limited may be granted upfront tariff based on the following loan structure

Foreign loan 70%

Local loan 30%

Total 100%

Date: March 01, 2018



Signature: _____

Name: Rana Uzair Nasim

Designation: Chief Executive Officer

KATHAI-II HYDRO (PVT.) LIMITED

1485/C-2A, Asad Jan Road, Lahore Cantt.

Ph: 042 36687823-24, Fax: 042 36687825

Ref: KATHAI-II/CPPA/01/2017

March 7, 2017

Chief Executive Officer
Central Power Purchasing Agency (Guarantee) Limited
6th Floor, Shahred-e-Millat Secretariat,
Binna Avenue, Blue Area, Islamabad

Subject: Submission of Power Acquisition Request to NEPRA on behalf of Kathai-II Hydro (Pvt) Limited to opt for the Upfront Tariff for Small Hydropower Projects determined by NEPRA vide decision No. NEPRA/UTB-01/15031-15032 dated October 14, 2015

Dear Sir,

We refer to the determination of the Upfront Tariff for Small Hydropower Projects by NEPRA (the "Authority") dated October 14, 2015 and notified in the Official Gazette on March 28, 2016 (the "Upfront Tariff"). Kathai-II Hydro (Private) Limited (the "Project Company") hereby submits relevant information and documents in relation to the 8.0 MW Kathai-II Hydropower Project on Kathai Nullah, District Hattian Bala, Azad Jammu & Kashmir (the "Project") to the Central Power Purchasing Agency (Guarantee) Limited ("CPPA-G") for onward submission to the Authority in the form of a Power Acquisition Request ("PAR") on behalf of the Project Company to opt for the Upfront Tariff.

You are kindly requested to process the PAR under the National Electric Power Regulatory Authority Interim Power Procurement (Procedures and Standards) Regulations, 2005 (the "Interim Regulations 2005") as per the Authority's instructions set out in paragraph 12 ("Order") sub-paragraph (xvi) of the Upfront Tariff in relation to hydropower projects located in Azad Jammu & Kashmir ("AJK"). As the Upfront Tariff is set to expire on 28 March 2017, we request you to kindly complete the PAR processing expedited basis.

1. Project Information

1.1 The following information about the Project is provided to assist CPPA-G in its submission of the PAR to the Authority:

- (a) Project Description: 8.0 MW high-head hydel project located on Kathai Nullah in District Hattian Bala, AJK. Weir site located just downstream of confluence of Kathai Nullah and Ranja Nal. Powerhouse site is about 5 km upstream of confluence of Kathai Nullah with Jhelum River at Ghinarti.
- (b) Plant Factor: 62.2% as certified by the relevant agency in the form of Annex-II of the Upfront Tariff.
- (c) Project Debt: The proposed loan structure for the Project is 70% foreign debt and 30% local debt.

- (d) Tariff: The indicative tariff for the Project, with a plant factor of 62.2% and a loan structure of 70% foreign debt and 30% local debt when applied to the summary table at paragraph 11.1 of the Upfront Tariff, is approximately ~8.5 cents/kWh. The actual tariff shall be determined by the Authority at the time of approval of the PAR.
- (e) Power Purchaser: Central Power Purchasing Agency (Guarantee) Limited
- (f) Interconnection (Financing and Nominal Tariff): PESCO is the relevant DISCO for the Project and would have been responsible for the interconnection from the Project to the national grid. However, due to the financial and technical constraints of PESCO, the Project Company has taken the initiative of financing, constructing, operating and maintaining the interconnection line from the Project to the Hattian Grid Station (the "Project Interconnection Line"). As per NEPRA's clarification issued vide letter no. NEPRA/SAT-1/TRF-100/1873-76 dated February 6, 2017, the Project Company may separately apply to NEPRA through CPPA-G for a nominal tariff for the Project Interconnection Line. Accordingly, the PAR may kindly stipulate that such application for the nominal tariff shall be submitted to NEPRA at a later date based on verifiable and cost-effective information provided by the Project Company at the detailed design stage.
- (g) Standardized Power Purchase Agreement: The PAR may also kindly stipulate that the Power Purchase Agreement based on the terms and conditions of the Upfront Tariff has almost been finalized through CPPA-G's efforts and copy of the same shall be submitted subsequently to NEPRA for approval of the same.
- (h) Generation Licence: Not relevant in the instant case due to the Project's location in AJK.

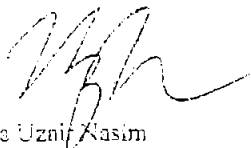
2 Submission of Relevant Documents

2.1 The following documents are enclosed for your review and consideration:

- (a) The Letter of Interest (LOI) issued by the AJK Private Power Cell for the Project dated June 6, 2012;
- (b) The Approval of Feasibility Study issued by the AJK Private Power Cell for the Project dated January 28, 2014;
- (c) Environmental Approval issued by the AJK Environmental Protection Agency dated July 16, 2014;
- (d) Approval of Grid Interconnection Study Report by NTDC dated August 21, 2014;
- (e) Clarification by NEPRA on the interconnection scheme for the Project dated February 6, 2017;
- (f) Certification by relevant agency dated June 22, 2016 certifying the plant factor as per Annexure-II of the Upfront Tariff;
- (g) Certification by Project Company dated March 7, 2017 as per Annexure-III of the Upfront Tariff; and
- (h) Letter of consent for power evacuation by PESCO dated March 7, 2017.

We hope the above is of assistance to you. Given the time-sensitive nature of the PAR, it is requested that the same may be processed at the earliest. We remain at your disposal in case of any questions or queries.

Yours sincerely,



Rana Uzair Asim
Chief Executive Officer
Kathai-II Hydro (Pvt) Limited

- CC: 1) Chief Technical Officer, CPPA-G, Ground Floor, Evercon Building, G-5/2, Islamabad
2) Director General, AJK Private Power Cell, PDO Complex, Upper Chatter Housing Colony, Muzaffarabad, AJK (for information)
3) The Registrar, National Electric Power Regulatory Authority, NEPRA Tower, Ataturk Avenue (East), G-5/1, Islamabad (for information)



Central Power Purchasing Agency (Guarantee) Limited

A Company of Government of Pakistan



OFFICE OF CHIEF EXECUTIVE

No. CPPAGL/2017/CEO/ Kathai-II SHPP / 8638-38

Date: 26-05

The Registrar
NEPRA, NEPRA Office Building
G-5/1, Attaturk Avenue (East), Islamabad

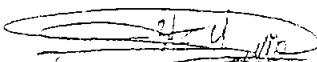
Subject: Consent of Purchase of Power in Respect of
8 MW Kathai-II Small Hydropower Project, District Hattian Bala AJK

1. Pursuant to NEPRA's Upfront Tariff (Approval and Procedure) Regulations, 2011 'Consent of Purchase Power' is hereby issued in respect of 8 MW Kathai-II Hydro Power Project, District Hattian Bala AJK.

2. Issuance of Consent to Purchase Power is subsequent to fulfilment of all requirements under 'Guidelines/SOP for Power Procurement by CPPA-G under NEPRA Renewable Energy Companies Guidelines, 2015' issued by CPPA-G vide No. CPPA-G/CS/2016/1963 dated 31-05-2016; and subject to the following conditions:

- Back to back agreement between CPPA-G and relevant DISCOs for the evacuation of Power
- Approval of Grid Interconnection Study by the relevant DISCOs and NTDC;
- Completion of other codal formalities as per applicable Policies, laws, Rules & Regulations;
- CPPA-G will procure Power, on behalf of relevant DISCOs, from the project companies Take and Pay basis;
- Based on the above necessary changes will be made in the EPA

3. This is issued with approval of Board of Directors, Central Power Purchasing Agency (Guarantee) Limited given under Board Resolution No. VII/27 presented on 25th May 2017 and notified by Company Secretary vide No. CPPA-G/2017/CS/1021 dated 25th May 2017.


Chief Executive Officer

Copy to:

- Chief Executive Officer, PESCO, Sakhi Chasma, Shami Road Peshawar.
- Managing Director, PPB, Emigration Tower, G-8/1 Islamabad.
- Chief Technical Officer, CPPA-G, Islamabad.
- Director General, Private Power Cell, Upper Chatter, Muraffarahad AJK.
- Company Secretary, CPPA-G, Islamabad.
- M/s Kathai-II Hydro (Pvt) Limited, 1485/C-2A, Asad Jan Road, Lahore Cantt. abad.
- Master File.

Gnd Floor ENERCON Building, G-5/2 Islamabad

+92-51-9216962 +92-51-9216949 dgmtech-ii@cpa.gov.pk

E:\Bod CPPAGL PAR\A/cor Kathai-II SHPP\Consent Letter To NE - Docx

Tariff Proposal

F/A-2

1. Details of the Applicant

No.	Parameter	Description
1	Name	Central Power Purchasing Agency (Guarantee) Limited
2	Address	ENERCON Building, Sector G/5-2, Islamabad, Pakistan

2. Authorization by the competent authority

Authorization given to procure power from the project on upfront tariff, based on consent given to the Project dated May 26, 2017 (attached).

3. Demand to be met through the proposed Import of Power

The Project shall be supplying power to the load centre of Peshawar Electric Supply Company (PESCO), extracts from PESCO consumer end tariff petition for FY 2015-16 to 2019-20 shows actual / forecast demand and calculated demand (attached). The quantum of proposed import of power can be comfortably absorbed given the increasing demand pattern.

4. Seller Details

No.	Parameter	Description
1	Project	Kathai-II Small Hydropower Project
2	Sponsor	Kathai-II Hydro (Pvt) Limited
3	Project Location	Kathai Nullah in District Hattian Bala, Azad Jammu & Kashmir. Weir site located just downstream of confluence of Kathai Nullah and Ranja Nar. Powerhouse site is about 5 km upstream of confluence of Kathai Nullah with Jhelum River at Chinari.
4	Source of Power Generation	Run-of-River, High-Head Small Hydro Power Plant
4	Installed Capacity (MW)	8.00 MW (gross); 7.92 MW (net)
5	Net Plant Factor	82.2%
5	Annual Benchmark Energy (kWh)	43,180,000 kWh
6	Expected COD	December 2021
7	Expected duration of Import of Power	30 years
8	Project Cost	Approx. US\$ 22.8 million as per Upfront Tariff

5. Tariff Proposal

The Project Company has opted for the Upfront Tariff for Small Hydro Power Projects determined by NEPRA dated October 14, 2015, extended through decision dated April 10, 2017.

The Indicative tariff for the Project based on plant factor of 62.2% and debt mix of 70% foreign and 30% local, is estimated ~8.5 cents / kWh as per Para 11.1 of Small Hydro Upfront Tariff. Actual to be determined by NEPRA as per its upfront tariff at time of approval.

a. Key Assumptions of Tariff Estimation

No.	Particulars	Description
1.	Project Size	8 MW (Gross) 7.92 MW (Net)
2.	Project Cost	US\$ 22.8 million.
3.	Debt to Equity Ratio	75:25
4.	Foreign Debt	70%
5.	Local Debt	30%
6.	Debt Tenor	10 years + 3 years (grace)
7.	Plant Factor	62.2%
8.	Hydrology Risk	Borne by the Project Company
9.	Despatch	Must-Run
10.	Annual Generation	43,130,000 kWh

6. Feasibility Study of the Project (if applicable)

As the Project Company opted for the Upfront Tariff by NEPRA, this requirement is not applicable. Approval of the project's feasibility study dated January 28, 2014 by the relevant agency is attached.

7. Interconnection Arrangement

a. Interconnection with NTDC/DISCO Transmission System

33 kV D/C transmission line of ~15 km length to Hattian Grid Station. The Project Company shall be responsible for financing, constructing, operating the interconnection facilities. Interconnection scheme has been approved by NTDC vide its letter No. GMPP/CEMP/TRP-322/3526-30 dated August 21, 2014 (attached). NEPRA has confirmed no objection to the interconnection scheme vide its letter dated February 6, 2017. Line losses above 1% (as may be modified by NEPRA subsequently) are to be borne by the Project Company.

b. Adequacy / Augmentation Required in the Existing Transmission Network

PESCO is the relevant DISCO for the Project and would have been responsible for the interconnection from the Project to the national grid. However, due to the financial and technical constraints of PESCO, the Seller has taken the initiative of financing, constructing, operating and maintaining the interconnection line from the Project to the Hattian Grid Station.

c. Cost of Interconnection Facilities

As per NEPRA clarification vide letter No. NEPRA/SAT-I/TRF-100/1873-76 dated February 6, 2017 (attached), a separate nominal tariff for the interconnection line would be included in the tariff, which would have otherwise been built by DISCO.

As the Seller shall be responsible for the 33 kV interconnection facilities up to the Grid station, any un-evacuated energy due to outages of the 33 kV interconnection line shall also be responsibility of the Seller.

As the Project Company has opted for the Upfront Tariff, which in any case provides for a one-time adjustment at COD for true-up of other costs, the nominal tariff for additional interconnection scope may be finalized as part of the one-time adjustment of tariff at COD, upon submission of verifiable/audited, cost-effective documentary evidence by Project Company and subject to reasonable limits.

8. Technology of the Project

Technological details of the Project are summarized below:

Sr	Particulars	Description
(a)	Location	About 50 km east of Muzaffarabad, on the Katha Nullian in District Hattian Bala, Azad Jammu and Kashmir.
(c)	Project Type	Run of River, High-Head Small Hydropower
(d)	Primary Fuel	Not applicable
(e)	Alternate Primary Fuel / Back-up fuel	Not applicable
(d)	Gross Head	170.55 meters
(e)	Net Head	155.39 meters
(f)	Gross plant installed capacity	8.0 MW
(g)	Auxiliary Consumption @ 1%	0.08 MW
(h)	Net plant installed capacity	7.92 MW
(i)	Net deliverable energy	43.18 GWh
(j)	Plant factor	62.2%

9. Undertaking by the Seller

Undertaking by the Seller for compliance with grid code, distribution code etc. attached in supporting documents

10. List of Supporting Documents

- a. Undertaking by the Seller regarding compliance with grid code, distribution code etc.
- b. Recommendation to opt for Upfront Tariff by the relevant agency dated March 14, 2016, as per Annex-I of the Upfront Tariff;
- c. Certification by relevant agency dated June 22, 2016 certifying the plant factor of Project, as per Annex-II of the Upfront Tariff;
- d. Certification by Project Company dated March 1, 2018, as per Annex-III of the Upfront Tariff;
- e. Letter of consent for power evacuation by CPPA-G dated May 26, 2017;
- f. Letter of consent for power evacuation by PESCO dated March 14, 2017;
- g. Clarification by NEPRA on the interconnection scheme for the Project dated February 6, 2017;
- h. Approval of Grid Interconnection Study Report by NTDC dated August 21, 2014;
- i. The Approval of Feasibility Study issued by the AJK Private Power Cell for the Project dated January 28, 2014;
- j. The Letter of Interest (LOI) issued by the AJK Private Power Cell for the Project dated June 6, 2012 as maintained through subsequent re-validation of bank guarantees;
- k. Extracts from PESCO consumer end tariff petition for FY 2015-16 to 2019-20.



Registrar

National Electric Power Regulatory Authority Islamic Republic of Pakistan



23020366109

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad
Ph: +92-51-9206500, Fax: +92-51-2600026
Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/SAT-I/TRF-103 / 1673-76

February 6, 2017

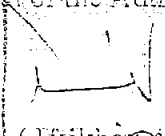
Mr. Musaddiq Rahim
Company Secretary
Kathai-II Hydro (Pvt) Limited
1485/C-2A, Asad Jan Road
Lahore Cantt.

**Subject: Clarification Regarding Grid Interconnection of 8.6 kV Kathai-II
Hydropower Project near Hattian Bala, AJK**

Reference: Your letter No. Kathai-II/NEPRA/IC/01/2016 dated December 13, 2016

The required clarifications are as under:

- 1) As already clarified in NEPRA (Interconnection for Renewable Generation Facilities) Regulations, 2015, the said Regulation does not apply to projects whose Simulation Studies [for Interconnection] have already been approved by a distribution company or a company holding a transmission license; hence, since the Interconnection Study of Kathai-II HPP has been vetted by NTDC vide its letter No. GMPP/CEMP/TRF-322/3526-30 dated August 21, 2014 before the Regulation was issued, the restriction on voltage level does not apply to the project.
- 2) It is recommended that maximum energy loss of 1% may be considered for 33 kV voltage level and the financial burden of loss above 1.0% up to the Hattian Grid may be borne by the project Company.
- 3) Please note that since the instant project is located in AJK, the tariff of the project will be agreed between the power purchaser and the sponsors and that can be the upfront tariff for small hydro power projects. You are advised to agree with the power purchaser for addition of the cost of transmission line in the tariff proposal of the project and send the same at the time of submission of Power Acquisition Request. The mechanism for recovery of cost of transmission line to be borne by the power producer separately from the generation tariff of the project, can be dealt with in the PPA/ Power Acquisition Contract which will be submitted for approval of the Authority.


(Iftikhar Ali Khan)
Director
Registrar Office

CC:

1. CEO PESCO, 166 WAPDA House, Shami Road, Peshawar.
2. General Manager Planning (Power) NTDC, PIA Tower, Egerton Road, Lahore.
3. Chief Executive Officer CPRA, 6th Floor, Shaheed-e-Millat Secretariat, Jinnah Avenue, Blue Area, Islamabad.



GOVT. OF AZAD JAMMU & KASHMIR
PRIVATE POWER CELL, HEB, AJ&K

Postal Add: H#B-10 Upper Chatter
Housing Scheme, Muzaffarabad A.K
D.G. (05822) 921605
Exch: (05822) 921966
Fax: (05822) 921306
E-mail: ajk_ppc@hotmail.com

Ref: PPC/ 494-01/2010- Dated: 6/1/2012

Rana Nasim Ahmed
Chief Operating Officer
M/s JDW Sugar Mills Limited
17, Abid Mujeeb Road
Lahore Cantt, Lahore

Subject: LETTER OF INTEREST (LOI) FOR A HYDROPOWER
GENERATION FACILITY OF APPROXIMATELY 4.6 MW
KATHAI-II HYDROPOWER PROJECT DISTRICT HATTIAN, AJK

Reference: Your proposal received dated 31.01.2012 including the Statement of Qualification (SOQ) for the Project.

Dear Sir,

Under provisions of the Policy for Power Generation Projects, 2002 (the "Policy") and AJK Simplified Framework for Fast Track Development of Hydropower Projects, the Azad Govt. of the State of Jammu and Kashmir (GoAJK) hereby confirms its interest in your above referred proposal for issuance of LOI subject to the approval of AJK Hydro Electric Board "the Board" for conducting detailed feasibility study (the "Feasibility Study") of 4.6 MW Kathai-II hydropower project at Upstream of Existing Kathai-I Hydropower Station on Kathai Nullah District Hattian AJ&K for its subsequent establishment in private sector. You are required to complete the Feasibility Study at no risk and cost to, and without any obligation on the part of the GoAJK and its agencies, within twenty four (24) months from the date of issuance of this LOI.

2. The Feasibility Study shall be detailed, well elaborated and shall conform to internationally acceptable standards in accordance with the provisions stipulated in the Policy. As a general guideline, the Feasibility Study must essentially include an environmental impact assessment (EIA), topographic and geological survey, hydrological investigations, optimization of available potential, economic project sizing and layout, designs of power house and its allied project structures, design of interconnection/transmission lines, details pertaining to infrastructure, project cost, financing plan, financing terms, tariff calculations and assumptions of financial calculations including economic/financial analysis. You are advised to liaise with the designated power purchaser (PESCO) while firming technical parameters i.e. plant size, project layout, point of interconnection with the Grid, plant factor and possible date of availability of capacity.

3. You will install gauge within one month of issuance of this LOI and you will carryout the Feasibility Study according to the specific milestones, and submit monthly progress reports showing progress against these milestones. In case three consecutive monthly reports are not received to this office the LOI will be terminated.

4. AIK Private Power Cell (AIK PPC) will appoint an independent Panel of Experts ("POE") to monitor the conduct of the Feasibility Study and evaluate it on completion. The progress of the Feasibility Study shall be monitored according to mutually agreed and prescribed milestones. Further processing of the Feasibility Study is subject to its acceptance by POE and approved by AIKPPC in accordance with the Policy.

5. In case, you intend to associate co-sponsors at any stage of the project undertaking, you, as lead Sponsor, shall be liable for all obligations and liabilities of and on behalf of other co-sponsors. AIK PPC shall ensure project implementation in accordance with the provisions of the Policy.

6. The validity of this LOI is twenty four (24) calendar months and the date of its effectiveness shall be determined in terms of clause 9 of this LOI. Issuance of this LOI or the lapsing of its validity, or your conducting a Feasibility Study there under, cannot form the basis of any claim for compensation or damages by the Sponsors or the project company or any party claiming through them against the GoAIK/AIK PPC or any of its agencies, employees or consultants on any grounds whatsoever, during or after the expiration of its validity.

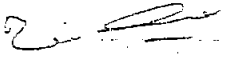
7. You are required to complete the Feasibility Study within the validity of this LOI whereafter this LOI shall automatically lapse immediately. In case there is delay in completion of the Feasibility Study within the validity of this LOI, a one-time extension may be granted on justifiable grounds to a maximum period of 180 days, provided the AIKPPC / Panel of Experts is satisfied that the Feasibility Study is being conducted in a satisfactory manner and is likely to be completed shortly. Furthermore, extension in validity of the LOI will only be provided upon submission of a performance guarantee in double the original amount and valid beyond six months of the extended LOI period.

8. In case, you fail to meet the relevant milestones and standards, AIK PPC will terminate this LOI and encash the Performance Guarantee.

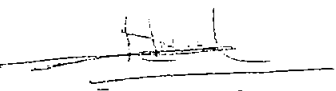
9. This LOI has been issued in duplicate on the date hereof, and it shall come into effect when one copy hereof is received by AJK PFC after having been duly countersigned by you. Nevertheless, this LOI shall lapse if the countersigned copy is not received at AJK PFC within *[thirty (30) days]* of its issuance.

With kind regards,

Yours sincerely,


Rana Nasim Ahmed

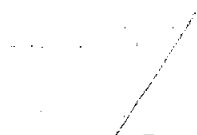
For and on behalf of
JDW Sugar Mills Limited
Lahore


Director General

AJK Private Power Cell


Copy to:

1. Chief Secretary, GoAJK, Muzaffarabad.
2. Managing Director, Private Power & Infrastructure Board, GOR.
3. Additional Chief Secretary (Development), GoAJK, Muzaffarabad.
4. Secretary Finance, GoAJK, Muzaffarabad.
5. Secretary Electricity/HEB, GoAJK, Muzaffarabad.
6. Managing Director, AJK Hydro Electric Board.
7. Chief Executive Officer, Peshawar Electric Supply Company.
8. Chief Operating Officer (CPPA), WAPDA House, Lahore.


Director General

AJK Private Power Cell

KATHAI-II HYDRO (PVT.) LIMITED

1485/C-2A, Asad Jan Road, Lahore Cantt.

Ph: 042 36687823-24, Fax: 042 36687825

Ref: KATHAI-II/PPC/BG/17-01

November 15, 2017

Director General
AJK Private Power Cell
PDO Complex,
Upper Chatter Housing Colony,
Muzaffarabad.

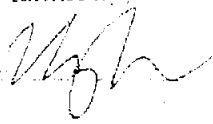
Subject: Kathai-II Hydropower Project-Revalidation of Bank Guarantee

Ref: Your Letter No. PPC/1689-90/2017 dated 02.11.2017

Dear Sir,

With reference to the above letter, please find enclosed the revalidated bank guarantee as required with expiry extended to 01.12.2018.

Yours faithfully,

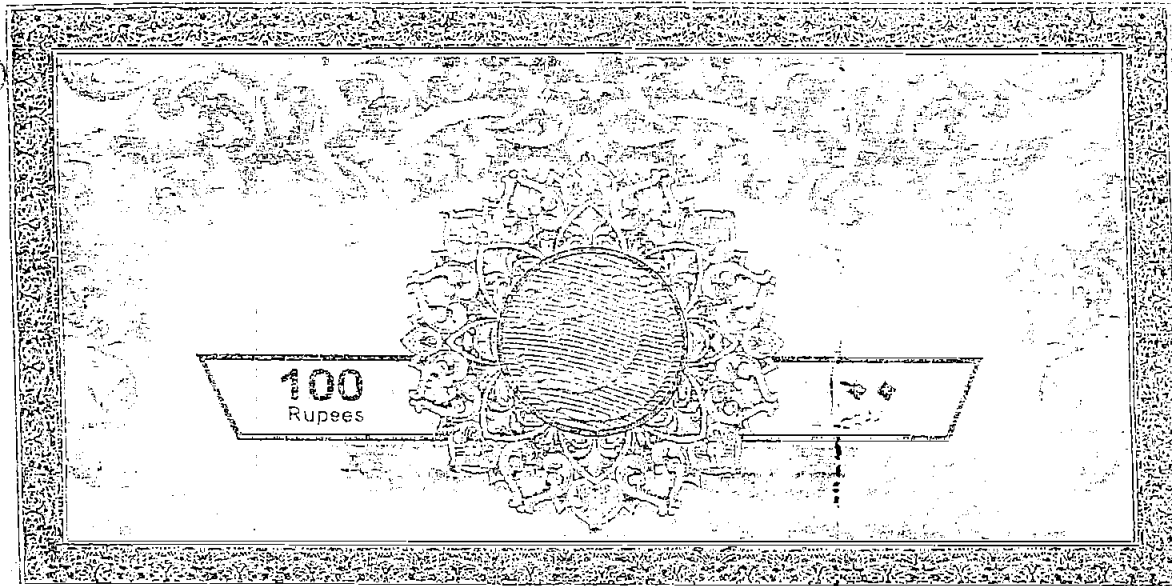

Rana Uzair Nasim

Chief Executive Officer

Kathai-II Hydro (Private) Limited

CC:

1. Secretary Electricity/PDO GoAJK, Muzaffarabad



November 13, 2017

Director General,
AJK Private Power Cell,
H # B-18, Upper Chatter Housing Scheme,
Muzaffarabad, A.J.K.

EXPIRY DATE: 01-12-2018

CLAIM LODGEMENT DATE: 01-12-2018

Re: OUR LG No: 01110PBG220812 DATED 23-05-2012 Rs.425,000/=
A/C M/S AGRO INDUSTRIAL SOLUTIONS.

We hereby amend our captioned letter of Guarantee as follows:-

1- We hereby extend the validity of the captioned letter of Guarantee up to 01-12-2018 instead of existing

Notwithstanding anything contained herein, above our bank's liability is restricted to Rs.425,000/- (Rupees Four Hundred Twenty Five Thousand Only) & This Guarantee is valid up to 01-12-2018.

All claims (if any) under this Guarantee must be received at our counters before the close of our normal business hours on or before 01-12-2018 failing which we shall stand absolved and released of all obligations under the Guarantee.

All other terms and conditions remain unchanged. This amendment forms an integral part of our above referred Guarantee.

For FAYSAL BANK LIMITED
100, UPPER MAH, LAHORE

Authorized Signature

Authorized Signature

AMEL KHALIL
Branch Manager

شیخ ذوالفقار احمد اعظمی فرزند نوشی و شریعت نویس

16 جنوری 1967ء لاہور فون نمبر: 37225262 فون نمبر: 37355888

اسٹیشن ہولڈر 1967 نمبر 92

پتہ: 36372 چارنگ چوک، ایف ایف ایف

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پتہ: 36372 چارنگ چوک، ایف ایف ایف

D. G. AJK Private

پتہ: 36372 چارنگ چوک، ایف ایف ایف

Patent Cell, Mujafriabad

AJK



KATHAI-II HYDRO (PVT.) LIMITED

1485/C-2A, Asad Jan Road, Lahore Cantt.

Ph: 042 36687823-24, Fax: 042 36687825

Registrar

March 01, 2018

National Electric Power Regulatory Authority

NEPRA Tower, Ataturk Avenue (East)

Sector G-5/1, Islamabad

Subject: Certifications in respect of application ontine for upfront tariff for small hydropower generation

I, Rana Uzair Nasim, Chief Executive Officer, being the duly authorized representative of Kathai-II Hydro (Pvt.) Limited by virtue of board resolution dated March 4, 2017, hereby confirm that for our project of 8.0 MW gross installed capacity to be located at Kathai Nullah in District Hattian Bala, Azad Jammu & Kashmir:

1. All the plant and machinery to be installed will be new.
2. Kathai-II Hydro (Pvt) Limited will bear the hydrological risk.
3. The above mentioned is a green field hydro power project. Kathai-II Hydro (Pvt) Limited has not availed any soft loan for the aforesaid project. In case any soft loan becomes available to Kathai-II Hydro (Pvt) Limited, we will intimate the Authority within 10 days of such event and will not claim the upfront tariff granted to us.
4. The annual plant factor of the aforementioned project, as certified by the panel of experts, is not based on the detailed design report.
5. We have not already executed a power purchase agreement with the power purchaser for the aforementioned project or have achieved financial close for the aforementioned project.
6. Kathai-II Hydro (Pvt) Limited may be granted upfront tariff based on the following loan structure

Foreign loan	70%
Local loan	30%
Total	100%

Date: March 01, 2018



Signature: _____

Name: Rana Uzair Nasim

Designation: Chief Executive Officer



PRIVATE POWER CELL

Tel: (05822) 921986
(05822) 921685
Fax: (05822) 921305
mail: ajk_ppc@hotmail.com

Ref: PPC/ 695-97 /2016 Dated: 22/6 /2016

Ghulam Murtaza
Chief Engineer-II
CPPA(G) Ltd

Subject: 08 MW KATHAI-II HYDROPOWER PROJECT - ACCEPTANCE OF UPFRONT TARIFF DETERMINED BY NEPRA

This is with reference to Kathai-II Hydro (Pvt.) Ltd 's letter # KHATHAI-II/PPC/03/2016 dated 25.05.2016 vide which it is requested for issuance of certificate regarding confirmation of Annual Plant Factor issued by NEPRA to accept Upfront Tariff.

Please find enclosed herewith the filled up Annexure II, for further necessary action.

Naveed-ul-Zaffar Gillani
Director General

Copy to:

1. Secretary Electricity/PDO, GoAJK, Muzaffarabad.
- 2. Musaddiq Rahim, M/s Kathai-II Hydro (Pvt.) Ltd, 1485/C-2A, Asad Jan Road, Lahore Cantt.

Date: _____

The Registrar,
National Electric Power Regulatory Authority,
Islamabad

F/A-9

Subject: Certificate Regarding Annual Plant Factor for the 8.0 MW Kathai-II Hydropower Project

1. A Panel of Experts (POE) was appointed by AJK Private Power Cell in respect of small hydropower project of Kathai-II Hydro (Private) Limited
2. Based on the proposed installed capacity and long term historical hydrological site data, the findings of the POE are as follows:

Name of the company	:	Kathai-II Hydro (Private) Limited
Address of Project Site	:	Kathai Nullah in District Hattian Bala, Azad Jammu & Kashmir. Weir site located just downstream of confluence of Kathai Nullah and Ranja Nar. Powerhouse site is about 5 km upstream from confluence of Kathai Nullah with Jhelum River at Chinari.
Gross Head [meters]	:	170.55
Net Head [meters]	:	155.39
Gross plant installed capacity [MW]	:	8.00
Auxiliary Consumption @ 1%	:	0.08 MW
Net plant installed capacity [MW] (to be used for computation of plant factor)	:	7.92
Net deliverable energy [GWh.]	:	43.18
Plant factor based on net deliverable energy	:	62.2%

Monthly benchmark hydrology [m^3/s]:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1.18	2.13	5.21	6.00	6.00	6.00	6.00	5.37	3.25	1.43	1.00	0.99	44.57

Monthly benchmark net deliverable energy [GWh.]:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Gross Energy Produced	1.20	2.00	5.17	5.72	5.91	5.72	5.91	5.34	3.16	1.48	0.98	1.01	43.61
Auxiliary Consumption @ 1%	0.01	0.02	0.05	0.06	0.06	0.06	0.06	0.03	0.03	0.01	0.01	0.01	0.44
Net Deliverable Energy	1.19	1.98	5.12	5.66	5.85	5.66	5.85	5.29	3.12	1.47	0.97	1.00	43.18

Note: Sum of the monthly values above differ slightly from the total figure due to rounding error

[Signature]

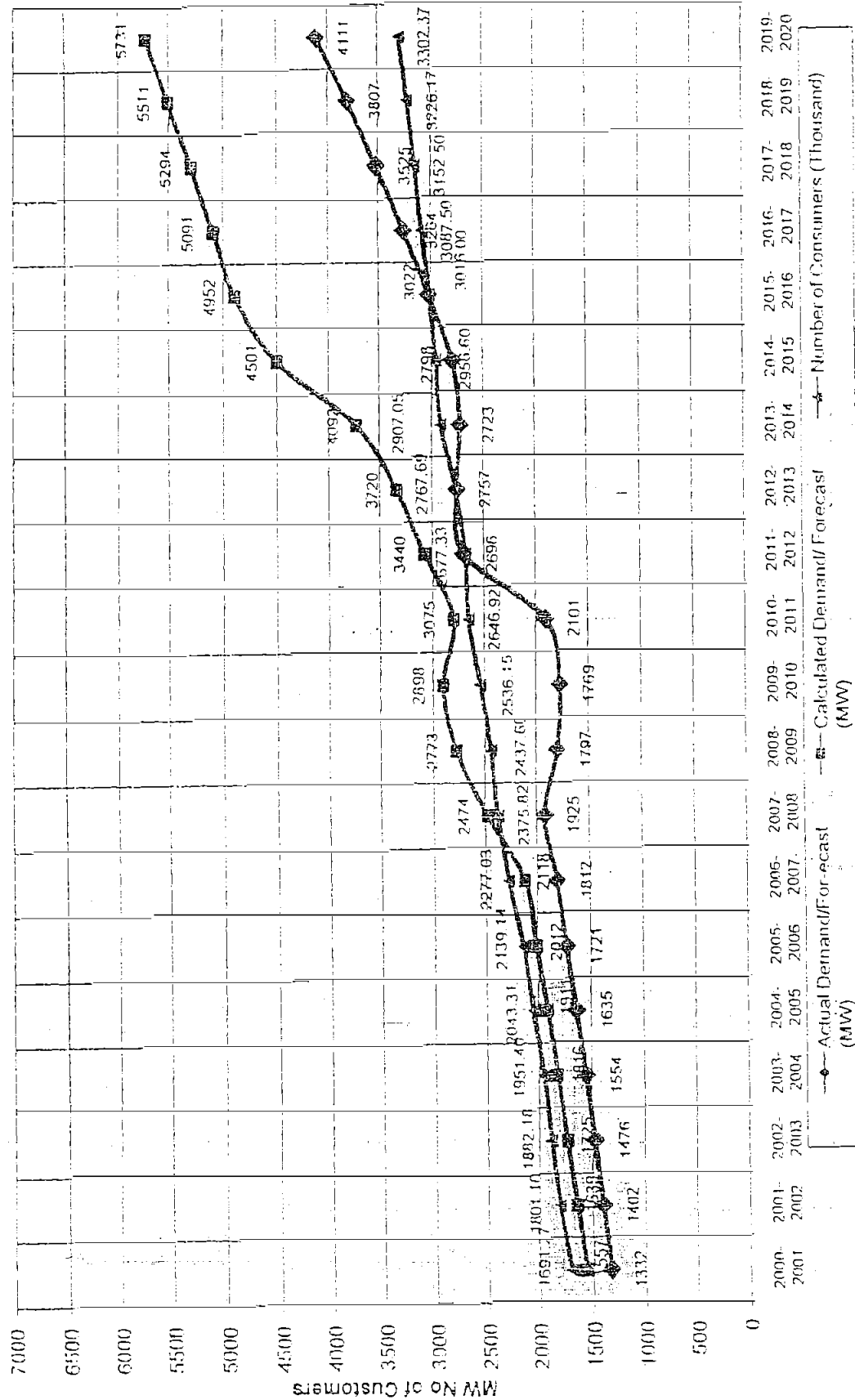
3. It is hereby confirmed that plant factor as detailed above may be used for allowing upfront tariff to the aforesaid company for the project site detailed above and the above findings of the POEs may be made a basis for making hydrological risk payments, if any, by the power purchaser.

Naveed-ul-Zafar Gillani
Director General

DEMAND (Actual and Calculated)

Fiscal Year	Actual Demand/Forecast (MW)	Change (MW)	Calculated Demand/Forecast (MW)	Change (MW)	Number of Consumers (Thousand)	Change (Thousand)
2000-2001	1332 / 1465	133.20	1557 / 1713	155.69	1691.27	96.00
2001-2002	1402 / 1542	140.20	1639 / 1803	163.89	1801.10	109.83
2002-2003	1476 / 1624	147.60	1725 / 1898	172.51	1882.18	81.08
2003-2004	1554 / 1709	155.40	1816 / 1998	181.59	1951.40	69.22
2004-2005	1635 / 1799	163.50	1911 / 2102	191.15	2043.31	91.91
2005-2006	1721 / 1893	172.10	2012 / 2213	201.21	2139.14	95.83
2006-2007	1812 / 1993	181.20	2118 / 2330	211.80	2277.03	137.89
2007-2008	1925 / 2118	192.50	2474 / 2721	247.40	2375.82	98.79
2008-2009	1797 / 1977	179.70	2773 / 3050	277.30	2437.60	61.78
2009-2010	1769 / 1946	176.90	2898 / 3188	289.80	2536.15	98.55
2010-2011	2101 / 2372	271.00	3075 / 3382	308.00	2646.92	110.77
2011-2012	2696 / 2858	188.72	3440 / 3677	236.74	2677.33	30.41
2012-2013	2757 / 2949	192.99	3720 / 4001	297.00	2817.83	140.50
2013-2014	2723 / 2859	136.15	4092 / 4419	327.00	2907.05	90.00
2014-2015	2798 / 2965	167.88	4501 / 4703	202.54	2956.60	49.55
2015-2016	3022	223.84	4891	188.12	3016.00	60.00
2016-2017	3264	241.76	5091	200.53	3087.50	71.5
2017-2018	3525	261.00	5294	203.64	3152.50	65.5
2018-2019	3807	282.00	5511	217.05	3226.17	73.67
2019-2020	4111	304.56	5731	220.44	3302.37	76.2

Demand Actual/Forecasted and # of Customers



9

FORM - 5

Peshawar Electric Supply Company

Cash Flow Statement (in million Rupees)

Description		Provisional 2014-15	Projected 2015-16	Projected 2016-17	Projected 2017-18	Projected 2018-19	Projected 2019-20
Average Monthly Demand Index (MDI)	(MW)	1,963	2,061	2,065	2,070	2,074	2,078
Units Purchased	(GVh)	11,857	11,801	11,919	12,157	12,279	12,340
Transmission Losses (132 kV)	(GWh)	4%	4%	3%	3%	3%	3%
Distribution Losses	(GWh)	31%	28%	27%	25%	23%	21%
Units Sold to Customers	(GWh)	7,597	8,025	8,343	8,753	9,056	9,379
Average Tariff Required	(Rs/unit)	17.25	17.25	16.90	16.79	16.62	16.90
Average Tariff Existing	(Rs/unit)	14.73					
Tariff Difference	(Rs/unit)	2.52	17.25	16.90	16.79	16.62	16.90
Revenue from Sales		113,115	138,426	141,018	146,943	152,679	156,522
Collection from Required	(%)	68%	90%	91%	92%	93%	94%
Inflows from Operations							
Collection from Current Sales		99,413	124,375	128,115	134,967	141,948	146,779
Prior Year Recovery		170	209	212	220	229	235
Total Inflows from Operations		99,582	124,583	128,327	135,186	142,177	148,014
Outflow from Operations							
Payment for electricity (to CPPA)		103,081	112,568	100,310	104,323	108,495	111,751
Distribution Service Cost (=DMC)		13,233	16,093	17,707	19,480	21,430	23,551
Total Outflow from Operations		121,314	128,661	118,017	123,803	129,927	135,301
Surplus/Deficit from Operations							
Inflows from Other Sources							
Capital Contributions		2,940	2,069	2,109	2,511	3,785	4,238
Consumer Security Deposits		327	500	500	500	500	500
Other Incomes		2,494	2,185	2,352	1,995	2,115	2,254
GDP Subsidy (Actual and Estimated)		28,551	793	753	718	630	645
Government Grant							
Long Term Loan / Redeemable Capital		1,250	2,600	1,542	700		
Total Inflows from Other Sources		35,562	8,047	7,266	6,524	7,030	7,637
Outflow Others							
Financial Charges		8,238	5,530	3,251	1,721	901	205
Repayment of Long Term Loans			250	270	310	325	350
Investment Program		7,862	8,969	8,251	9,311	9,783	10,614
Working Capital/Other Changes		(1,845)	(10,821)	5,436	6,305	9,162	9,615
Total Outflow Others		14,354	3,928	17,218	17,646	19,171	20,924
Surplus/Deficit Others							
Total Inflows (Operations + Others)		134,944	132,630	135,593	141,709	149,207	155,651
Total Outflows (Operations + Others)		135,668	132,589	135,235	141,450	149,098	156,225
Opening Balance		3,393	1,579	1,918	2,276	2,535	2,700
Surplus/Deficit for Fiscal Year		(724)	339	358	259	165	326
Deficit from Financing/Loans							
Closing Balance		1,579	1,918	2,276	2,535	2,700	3,026

KATHAI-II HYDRO (PVT.) LIMITED

1485/C-2A, Asad Jan Road, Lahore Cantt.

Ph: 042 36687823-24, Fax: 042 36687825

Ref: KATHAI-II/CPPA/TRF/01-18

March 17, 2018

Chief Executive Officer
Central Power Purchasing Agency (Guarantee) Limited (CPPA-G)
Ground Floor, Enercon Building,
G-5/2, Islamabad.

Subject: Application for Approval of Upfront Tariff for Small Hydro Power Generation Projects up to 25 MW for the 8 MW Kathai-II Hydro Project located at Kathai Nullah, District Hattian Bala, AJ&K under the NEPRA (Import of Electric Power) Regulations, 2017

Ref: (1) Our request letter dated 07.03.2017 revised through letter dated 01.03.2018
(2) NEPRA letter No. NEPRA/TRF-100/Kathai-II/4208-09 dated 15.03.2018

Dear Sir,

With reference to our pending letter at (1) and NEPRA directions under (2) above, we hereby request you to kindly forward our case to NEPRA under the NEPRA (Import of Electric Power) Regulations 2017.

In this regard, please find enclosed the draft tariff proposal, as per the required information under Rule 3 of the NEPRA (Import of Electric Power) Regulations 2017. We are also enclosing a checklist of relevant documents for onward submission.

We remain at your disposal in case of any questions or queries.

Yours sincerely,

Rana Uzair Nasim

Chief Executive Officer

Kathai-II Hydro (Private) Limited



Encl. As Above

Account Payee Only



HABIB BANK
CORPORATE CENTRE
102-105 UPPER HALL LANE

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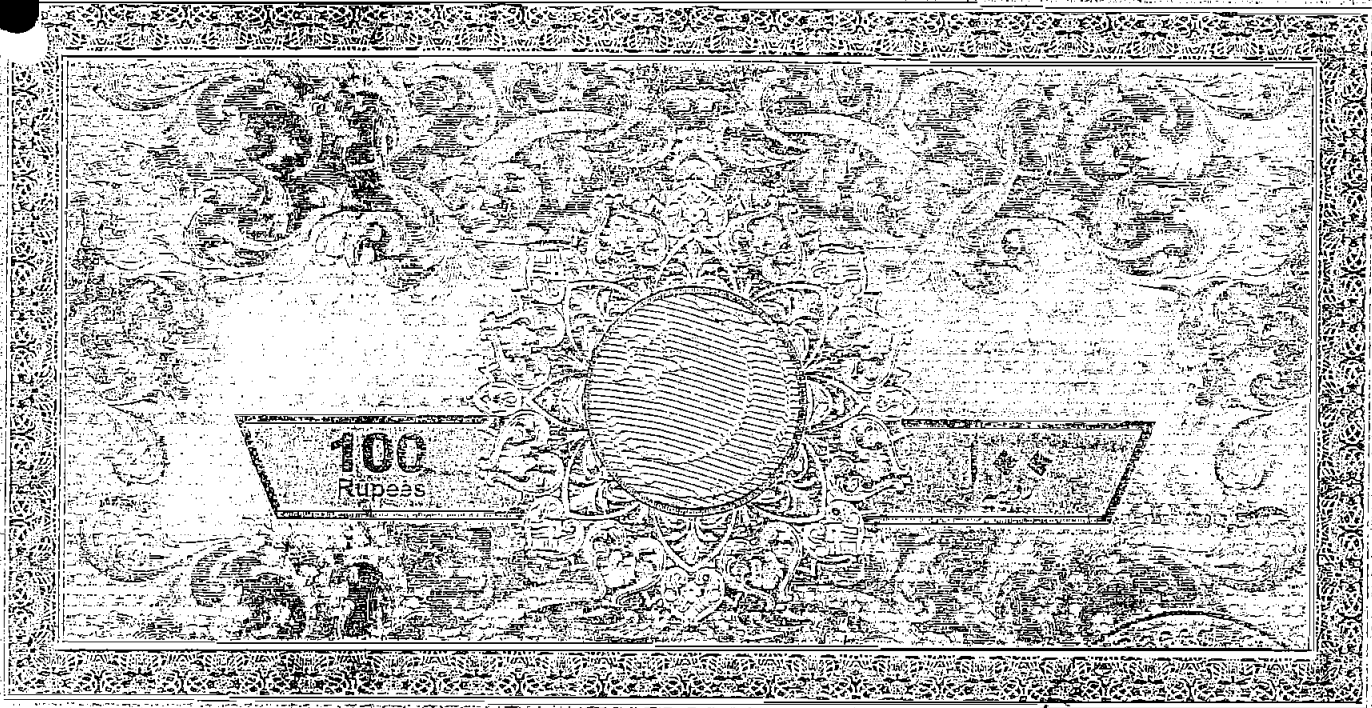
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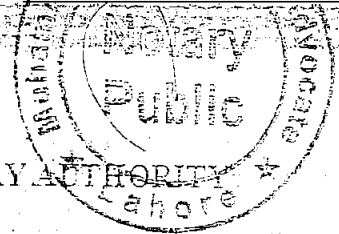
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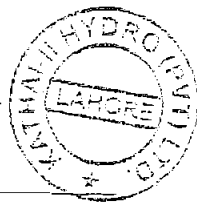


BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

AFFIDAVIT

I, Rana Uzair Nasim S/o Rana Nasim Ahmed, CNIC No. 35201-8925121-7, Chief Executive Officer, Kathai-II Hydro (Private) Limited, hereby solemnly affirm and declare on oath that the contents of the accompanying application for unconditional acceptance of upfront tariff, including all attached documents-in-support are true and correct to the best of my knowledge and belief and that nothing has been concealed.

DEPONENT



Rana Uzair Nasim
Chief Executive Officer
Kathai-II Hydro (Private) Limited

Date: March 17, 2018



Registrar

National Electric Power Regulatory Authority

Islamic Republic of Pakistan

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad
Ph: +92-51-9206500, Fax: +92-51-2600026
Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/UTH-01/15031-15033
October 14, 2015

Subject: Decision of the National Electric Power Regulatory Authority in the matter of Motions for Leave for Review filed against Determination of the Authority dated April 2, 2015 regarding Upfront Tariff for Small Hydro Power Generation Projects Upto 25 MW Installed Capacity

Dear Sir,

This is in continuation of this office letter No. NEPRA/UTH-01/4744-4746 dated April 2, 2015 whereby Determination of the Authority in the matter of Upfront Tariff for Small Hydro Power Generation Projects upto 25 MW installed capacity was sent to the Federal Government for notification in the official Gazette.

2. Please find enclosed herewith the decision of the Authority along with Annex-I, II, III, IVA, IVB, VA, VB, VIA, VIB, VIIA and VIIB (44 pages) in the matter of Motions for Leave for Review filed against Determination of the Authority dated April 2, 2015 regarding Upfront Tariff for Small Hydro Power Generation Projects Upto 25 MW installed Capacity

3. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

4. The Order at Paragraph 12 of the Authority's Decision needs to be notified in the official Gazette.

Enclosure: As above

(Iftikhar Ali Khan)

Secretary
Ministry of Water & Power
'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 MOTION FOR LEAVE FOR REVIEW FILED
AGAINST DETERMINATION OF THE AUTHORITY DATED APRIL 02, 2015
REGARDING UPFRONT TARIFF FOR SMALL HYDRO POWER GENERATION
PROJECTS UP TO 25 MW INSTALLED CAPACITY

1. National Electric Power Regulatory Authority (hereinafter referred to as the "Authority") issued its determination in the matter of upfront tariff for small hydro power generation project up to 25 MW installed capacity on April 2, 2015 (hereinafter referred to as the "Upfront Tariff Determination").

1.1 The following two companies filed motion for leave for review (hereinafter referred to as the "review motions") against the Upfront Tariff Determination dated April 2, 2015:

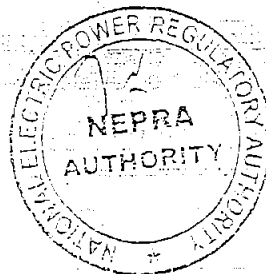
- i) Riali Hydro Power Company (Pvt.) Limited (RHPCI)
- ii) Kathal-II Hydro (Pvt.) Limited (KHL)

The review motions were filed under rule 16(6) of the NEPRA (Tariff Standards and Procedure) Rules, 1998 read with Regulation 3 of the NEPRA (Review Procedure) Regulations, 2009.

1.2 The Authority admitted the review motions on April 29, 2015 and decided to club both review motions for a consolidated decision.

1.3 Further, the Authority decided to hold a public hearing on the matter, in order to arrive at a just and informed decision and to hear the points of view/suggestions of all the stakeholders regarding the review motions. Accordingly, notices of hearing were issued to the Petitioners and all main stakeholders on May 13, 2015 for participation in the hearing.

1.4 In response to the aforesaid notice of hearing, comments were received from Blue Star Energy (Pvt.) Limited (BSEPL). The Alternative Energy Development Board (AEDB) and Frontier Mega Structure & Power (Pvt.) Limited (FMSP) also made comments with regard to the Upfront Tariff Determination and the same have been considered by the Authority in the



instant decision. The aforementioned comments have been discussed in subsequent paragraphs under the relevant heads.

- 1.5 Hearing of review motions was held on May 21, 2015 at NEPRA Tower, Islamabad, wherein participation was made by various stakeholders.
- 1.6 The Energy & Power Department, Government of Khyber Pakhtunkhwa (GoKPK) vide letter no. E&P/CPO/AMH-II/NEPRA/2014-15 dated April 20, 2015 submitted that the Upfront Tariff Determination does not include proposals submitted by GoKPK. In this regard a request was made by the GoKPK for a meeting with the Authority.
- 1.7 Considering the nature of issues highlighted by the GoKPK and the applicability of the upfront tariff to all stakeholders, the Authority decided to allow GoKPK to provide/submit comments and also held a meeting on the subject matter with senior management of Energy Department of GoKPK on June 25, 2015 at NEPRA Tower, Islamabad.
- 1.8 During the meeting, the GoKPK built their case regarding the need to revise the financial parameters forming the basis of the Upfront Tariff Determination in order to make the same viable and acceptable to private investors and to bring it in line with the ground realities. The Authority asked the GoKPK to provide certain key information, including copies of executed EPC contracts for hydropower projects being developed by the GoKPK as well as written recommendations regarding change in the bases of the Upfront Tariff Determination.
- 1.9 The Pakhtunkhwa Energy Development Organization (PEDO) vide letter no. 2064-67/PEDO/P&F/NEPRA dated July 16, 2015 submitted cost breakup of Machai, Ranolia, Jabori and Karora hydropower projects. Further, PEDO vide letter no. 20/PEDO/P&F/NEPRA dated July 24, 2015 submitted copies of executed EPC contracts of Jabori Hydropower Project and Karora Hydropower Project, both of which are being developed by the GoKPK. The Authority has considered all fresh information and recommendations provided by the GoKPK while deciding the instant review motions. The submissions/ recommendations of GoKPK, where appropriate, have been discussed in subsequent paras under the relevant heads.





2. Grounds of review motions

2.1 Briefly, the Petitioners have sought review of the Upfront Tariff Determination on the following grounds:

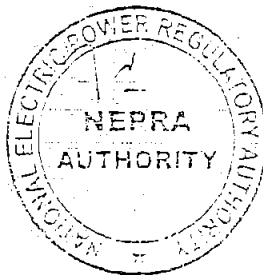
- i) The EPC cost assumed in the Upfront Tariff Determination is too low;
- ii) A mechanism for indexation of civil works cost (one-time adjustment at COD) on account of variation in prices of major inputs (i.e. Fuel, Steel, Labor and Cement) during the construction period has not been allowed;
- iii) The assumed Debt financing cost (premium over KIBOR) is low;
- iv) The assumed Debt-Equity ratio is low;
- v) The percentage assumed for Financing fee and charges is low;
- vi) The timelines regarding validity of the upfront tariff and maximum time for financial close may be altered;
- vii) Other minor grounds

3. EPC Cost

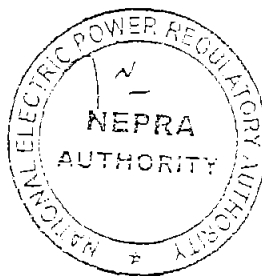
3.1 The Petitioners stated that the Upfront Tariff Determination does not offer a commercially viable solution from the perspective of potential reputable contractors which are acceptable to international lenders. The Petitioners submitted that it is extremely difficult to seek interest of any international contractor at the base EPC cost that has been assumed for high-head small hydropower projects. RHPCI proposed that a standard base EPC cost of US\$ 2.6 million per MW may be assumed for the purpose of calculation of the upfront tariff.

3.2 The Petitioners further claimed that the EPC prices that form the basis of the Upfront Tariff Determination are almost four years old now; whereas the most recent EPC contracts executed by a Government agency, PEDO, represent much higher EPC costs which fell within the range of US\$ 2.77 - US\$ 3.27 million per MW.

3.3 Based on the aforementioned grounds the Petitioners requested the Authority to revise the project costs forming the basis of the Upfront Tariff Determination.



- 3.4 On this matter, BSEPL vide letter no. BSEPL/NEPRA/2015/2 dated May 19, 2015 supported the Petitioners' stance and stated that the EPC cost approved by the Authority recently in other similar cost plus determinations is much higher than the one granted in the Upfront Tariff Determination. BSEPL neither made any specific mention of the determined EPC costs nor suggested a standard EPC cost to form the basis of the upfront tariff.
- 3.5 FMSP vide its letter dated April 22, 2015 in its comments also highlighted the issue of lower per MW EPC cost assumed for upfront tariff. FMSP suggested that the EPC cost of a 25 MW project should be approx. US\$ 2.3 million per MW. Further, FMSP suggested that for a 5 MW project the EPC Cost should be US\$ 2.6 million per MW and for 1 MW project it should be US\$ 3.0 million per MW. FMSP requested that the EPC cost for high head projects under 10 MW should be US\$ 2.6 - 3.0 million per MW.
- 3.6 The Authority, after considering the opinions and comments of all stakeholders decided that the underlying costs forming the basis of the Upfront Tariff Determination need to be reassessed based on more recent and fresh information provided by the GoKPK. The Authority is cognizant of the fact that the EPC contracts of low head and high head small hydropower projects previously available with the Authority were executed in the year 2011. Therefore the Authority has established that the EPC cost forming the basis of the upfront tariff for high head projects needs to be adjusted to account for the inflation factor. Further, the Authority has analyzed the fresh information presented by the GoKPK in the form of executed EPC contracts for two high head small hydropower projects being executed by PEDO, namely Karora HPP and Jabori HPP, and has found that the EPC prices of these projects, arrived at through competitive bidding, are much higher than the EPC cost assumed for the Upfront Tariff Determination. In view of the aforementioned, the Authority has decided to revise the underlying EPC cost for high head projects based on the indexed EPC cost of Ranolia HPP and the EPC cost of Karora and Jabori HPP.
- 3.7 During the meeting with the Authority on June 23, 2015, the representatives of GoKPK suggested that the difference in upfront tariff between low head and high head small hydropower projects may be maintained and therefore the underlying costs for upfront tariff for low head small hydropower projects may be revised by the same proportion as that for high head small





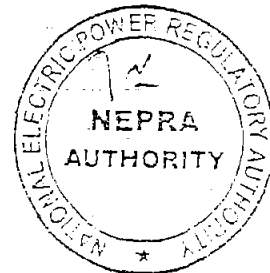
hydropower projects. The Authority considers that the suggestion of GoNPK is logical and therefore has decided to revise the underlying EPC cost of low head hydropower projects based on the same rationale.

4. Mechanism for indexation of civil work costs, one-time indexation adjustment at COD

4.1 The Petitioners have stated that the Upfront Tariff Determination does not provide any mechanism for indexation of civil work costs, which is allowed as a standard practice in cost-plus hydropower tariff determinations. The lack of an indexation mechanism poses a very significant risk to sponsors, particularly as small hydro projects opting for the upfront tariff shall not be eligible for other cost openers available under the cost-plus regime. The Petitioners requested that the Upfront Tariff Determination should include a one-time adjustment mechanism at COD as mostly allowed under the cost plus regime for variation in officially published price indices for Steel, Cement, Diesel and Labor. The Petitioner suggested that 60% of the EPC cost should be adjusted for variations in civil work costs and the non-EPC components of the project cost shall be adjusted based on the revised EPC cost. Further, it was suggested that 40% of the assumed EPC cost should be adjusted, in case of projects funded through local debt only, for exchange rate variation over 36 months starting from the date of financial close.

4.2 FMSP in its comments has stated that the EPC cost indexation mechanism provided in the case of cost plus tariff is one of the key elements that attract international EPC contractors for participating in the hydro power industry, therefore the same should also be made a part of the upfront tariff.

4.3 The Authority is of the view that the One-Time adjustment mechanism in the Upfront Tariff Determination which comprised of adjustment on account of exchange rate variation on 40% of the project cost for local debt only, was devised to be simple in application in order to remove any uncertainties regarding COD adjustment of tariff and to cater for the limitations of the upfront tariff regime; however, as submitted by the Petitioners, the said One-Time adjustment mechanism may not provide enough risk coverage for the average investor to comfortably arrange financing for hydropower projects.





4.4 In view of the above the Authority has decided to revise the previous onetime adjustment mechanism as under:

- a) 40% of the assumed EPC cost will be adjusted over 36 months (maximum) starting from the date of financial close of the project for USD/PKR exchange rate variation.
- b) 60% of the assumed EPC cost converted at reference USD/PKR exchange rate of 101.95 will be adjusted over 36 months (maximum) starting from the date of financial close of the project according to the formula below:

$$P_n = 0.51 + 0.10 \cdot (C_n/C_o) + 0.09 \cdot (S_n/S_o) + 0.15 \cdot (F_n/F_o) + 0.15 \cdot (L_n/L_o)$$

Where;

P_n is the adjustment factor to be applied for civil works;

C_n is the index value for the relevant month for Cement as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

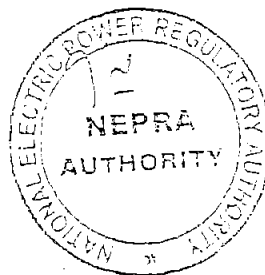
S_n is the index value for the relevant month for Steel Bar & Sheets as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

F_n is the index value for the relevant month for Diesel Oil as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

L_n is the index value for the relevant month for Mason (Raj) for Rawalpindi as per the Wage Rates published in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

C_o , S_o , F_o and L_o are the reference values of the price indices for Cement, Steel Bar & Sheets, Diesel Oil and Mason (Raj) respectively as available at the time of financial close of the project.

4.5 Further, the Authority is of the view that the above one-time adjustment mechanism will provide more clarity as to how the tariff is to be worked out at the COD. The revised one-time adjustment mechanism necessitates that





the adjustment of project cost be applied to all projects regardless of their debt financing being foreign or local, in order to maintain a balance between all sources of debt financing and to ensure that one type of debt financing is not inherently at an advantage or disadvantage under the upfront tariff regime. Therefore, the Authority has decided that the one-time adjustment will be applied on projects based on local as well as foreign debt.

5. Debt financing cost

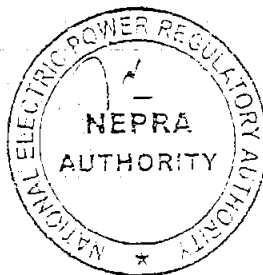
- 5.1 The Petitioners have stated that the Authority has assumed local debt financing cost as KIBOR + 3% in the Upfront Tariff Determination. The Petitioners have requested the Authority to allow 3 months KIBOR plus a premium of 350 basis points for local financing.

The Authority considers that the request of the Petitioners is justified. The Authority in the case of other medium sized hydropower projects has allowed spread over KIBOR of 3.25%. The Authority considers that arrangement of debt for small hydropower projects is comparatively difficult and therefore it is required that a reasonable margin/ spread over KIBOR be allowed for small hydropower projects. The Authority has therefore decided to allow a maximum interest rate of 3 months KIBOR plus 350 basis points for the upfront tariff.

6. Debt Equity ratio

- 6.1 The Petitioners stated that the Upfront Tariff Determination is based on a Debt-Equity ratio of 80:20. The Petitioners submitted that a debt equity ratio of 75:25 is a more realistic ratio for hydropower projects and that it has previously been allowed in other upfront tariffs.

- 6.2 FMSP in its comments stated that financial institutions are wary of investing in hydro power due to existence of risks including gestation period, physical security of the projects area etc. FMSP has requested that a flexibility of debt equity ratio be allowed to projects that are not able to achieve financial close at 80:20 debt equity ratio. The Authority considers that the concept of a



flexible debt equity ratio does not go hand in hand with the concept of an upfront tariff where minimum reopeners should be allowed.

- 6.3 The Authority has therefore decided that a Debt Equity ratio of 75 : 25 is suitable for the upfront tariff for small hydropower projects and is hereby allowed. This Debt-Equity ratio will not be flexible in any way, and will remain constant for the purpose of all adjustments in tariff, regardless of the actual Debt-Equity ratio of the individual project.

7. Financing fee and charges

- 7.1 The Petitioners stated that, in line with some of the other upfront tariff determinations, financing fees & charges should be based on 3.5% of the assumed debt.

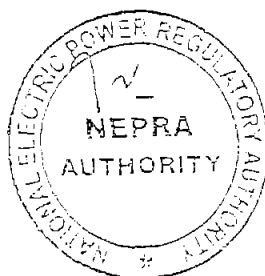
- 7.2 The Authority considers the request of the Petitioner to be justified and hereby allows financing fees and charges based on 3.5% of the assumed debt (excluding IDC and financial charges).

- 7.3 Based on the discussions outlined in the previous paras, the per MW total project costs forming the bases of the upfront tariff are hereby revised as under:

	100% Foreign Financing	100% Local Financing
Low Head	US\$ 3.945 Million / MW	US\$ 4.206 Million / MW
High Head	US\$ 2.794 Million / MW	US\$ 2.988 Million / MW

8. Annual plant factor

- 8.1 RHPCL submitted that the figure of 50% should be retained as the minimum threshold for plant factor; however the determination should stipulate the tariff for a range of plant factors in order to bring more clarity about the upfront tariff to the investor as well as the general public.



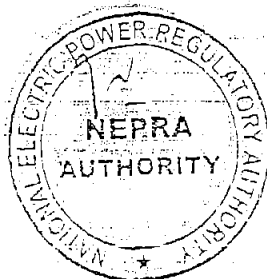


8.2 BSEPL in its comments stated that plant factor is linked with installed capacity. For the same site installing a smaller capacity will get higher plant factor, while bigger installed capacity will get a lower plant factor. BSEPL claimed that the sponsor will adjust the installed capacity so that low head plants can achieve plant factor of just 65% and high head just 50%. BSFPL suggested that in order to extract maximum energy from any site, it is suggested that the sponsors be given incentive for the additional energy produced as follows:

Energy Generated (Plant Factor)	Tariff
65% to 70% for low head and 50% to 55% for high head	75% of tariff
70% to 75% for low head and 55% to 60% for high head	50% of tariff
Beyond 75% for low head and beyond 60% for high head	10% of tariff

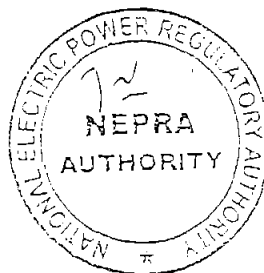
8.3 FMSP in its comments stated that the Upfront Tariff Determination is based on the lowest plant factor. According to FMSP, if the output assumed is at its lowest only then the projects with the lowest possible project cost will be feasible at this tariff. FMSP stated that it is best if the Authority can come up with a different mechanism to incorporate the plant factor. However, if the same mechanism is applied, the minimum plant factor threshold should be increased to 60% for high head projects.

8.4 The Authority considers that in view of the complexities associated with hydropower it has already determined a very detailed and practical mechanism for adjustment of plant factor, which allows projects to transfer the risk of hydrology to the power purchaser under the upfront tariff regime, despite the general opinion previously held that the concept of transferring hydrology risk to the power purchaser may not work well under an upfront tariff regime. The mechanism for adjustment of plant factor has been commended by the Petitioners as well as other stakeholders. The proposal of BESPL is unjustified as it would put unfair burden on the power purchaser. Additionally, the proposal of FMSP to increase the minimum plant factor threshold to 60% for high head projects can also not be considered, as it would possibly phase out many of the potential high head small hydropower projects from the ambit of the upfront tariff regime.



9. Other Minor Grounds

- i) The Petitioner has stated that water use charges is a pass through item and payment on this behalf be made on monthly or quarterly basis instead of spread over a twelve months. The Petitioner seems to have misunderstood the wording of the Upfront Tariff Determination. The Authority hereby clarifies that the payment of water use charges shall be reimbursed as per standard clauses of the Water Use Agreement and PPA.
- ii) The Petitioner has suggested that the validity of the upfront tariff and time period for achieving financial close be amended to 18 months and 12 months respectively. The Authority has considered the request of the Petitioner and has decided to maintain its original decision on the matter, i.e. the validity period of the upfront tariff will remain 12 months, and the projects will be required to achieve financial close within 18 months.
- iii) The Petitioner has suggested that the wording related to carbon credits be modified so that the company is not obligated to process and apply for carbon credits if there is no commercial basis for doing so. The Authority hereby clarifies that projects opting for the upfront tariff have no obligation to apply for carbon credits, however, they are encouraged to do so.
- iv) The Petitioner submitted that due to existence of ECC approved standardized hydropower security documents redrafting should be avoided. The Petitioner suggested that AEDEB and PPIB may jointly be tasked with expeditiously finalizing any minor changes required in the standardized hydropower documents in consultation with project sponsors. The Authority has clarified on concerns raised by the AEDEB regarding standardized security documents in subsequent paragraphs.
- v) The Petitioners also made the following suggestions:
 - a) The tariff granted to projects located in AJK through NTDC under the Interim Power Procurement (Procedures and Standards) Regulations, 2015 shall be notified in the official gazette and that all indexations and adjustments in the tariff shall be directly determined by NEPRA from then onwards.



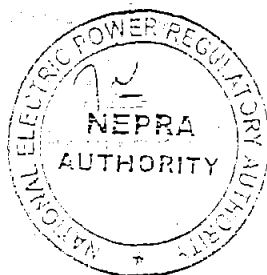


- b) The net annual plant factor is based on energy generated at the plant's bus bar as per the Grid Code, Distribution Code and established precedent.
- c) Standard allowance for scheduled and forced outages shall be incorporated in the power purchase agreement as per established benchmarks for other hydropower IPPs.
- d) The insurance adjustment mechanism for exchange rate variation at xix (b) on pages 60-61 of the Upfront Tariff Determination shall only apply in case the power producer petitions for it, otherwise no project-specific adjustment on this account shall be made.

10. Comments of AEDB

10.1 The AEDB in its comments has raised certain observations regarding the Upfront Tariff Determination. The Authority has given due consideration to the concerns of AEDB regarding practical issues related to the standardized PPA based on the upfront tariff for small hydropower projects. However, the Authority feels that certain misconceptions related to the upfront tariff and hydropower projects in particular need to be removed to enable the AEDB to expedite the finalization of the standardized security documents. The AEDB has submitted, *inter alia*, that:

- a) "NEPRA has asked to follow the 'standard security package' with appropriate modifications. The standard package for hydro power projects is premised on two-part tariff with capacity payments not linked to net annual plant factor or actual water flow; there being no 'Monthly Benchmark Hydrology' or 'Monthly Benchmark Energy' concepts there - Capacity Payments are payable in case of large hydro without - measurement of monthly hydrology. These are fundamental variations which necessitate AEDB to follow the Cost-Plus, Wind model, but that would further complicate matters as that would only work for a project where the hydro risk is transferred to the purchaser, and will not work where the project opts to keep the hydro risk - in the latter case, the appropriate model will be of the upfront-wind. Summarising, the document will end-up being a mix of all three, and this will entail considerable work. As NEPRA is processing review petitions by the developers and may alter the fundamental assumptions in its determination against those review petitions, the documents may have





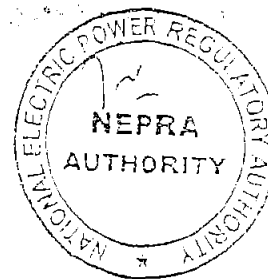
to be revised substantially and this would entail a lot of wasted effort. Since NEPRA has given 12 months for acceptance of tariff and has asked AEDB to prepare the documents, AEDB requests NEPRA to count 12 months after its decision on review petitions is given."

In this regard, the Authority considers that the request of AEDB to count 12 months for acceptance of upfront tariff from the date of the instant review decision is justified. The Authority has therefore decided that the validity period of the upfront tariff will be considered from the date of notification of this decision. Since a considerable time period has passed after the original Upfront Tariff Determination was issued, the Authority expects that at the time of issuance of the instant review decision, the AEDB has made considerable headway with regard to the development of a standardized security package. The Authority considers that, for this purpose, the standardized PPA already available with the Private Power & Infrastructure Board (PPIB) can be used with necessary modifications. In view of the aforementioned, the Authority expects that the standardized security package regarding upfront tariff for small hydropower projects will be finalized shortly.

- b) *"There is no mechanism in the standard documents for revision of the annual capacity factor after COD. Its implications in terms of the drafting will have to be considered afresh."*

The Authority considers that this is a misconception regarding the upfront tariff on AEDB's part. The plant factor is only adjustable up till the COD

- c) *"NEPRA has not considered the interconnection costs in the upfront tariff. The perennial issue remains - the NTDC - DISCO agreement where CPPA is the purchaser but the line is to be constructed by DISCO (or by the project and then transferred to DISCO) will continue to be an obstacle to the bankability of these documents. It may be noted that no PPA has so far been signed with this mode. Merely making the Guidelines does not work (and is not working) unless NEPRA steps forward and resolves this issue."*

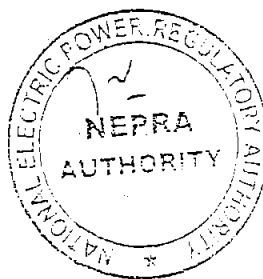




- d) "In order to comply with the Upfront Tariff Determination, unlike upfront wind projects, AEDEB will have to ask for Term Sheets and Financing Documents in the IA due to several reasons, including the tariff true-up or COD. There is no reason why these documents should be provided to NEPRA and not to AEDEB, given that the project cannot claim Sinesure, IDC, insurance costs, actual interest on debt (with sharing of 60:40 of lower interest costs), uplift of 40% of local debt for foreign exchange variation, and the like without "authentic documentary evidence" being demonstrated to NEPRA."
- e) "NEPRA requires in the Upfront Tariff determination that the hydrology for streams/nullahs hydrology must be monitored and if there is a 'material' change in hydrology, then for the power purchaser to 'place it before NEPRA'. If this results in a downward change in tariff, it will be impossible to bank such a PPA. NEPRA may clarify this and perhaps replace it with a shift of hydrology risk to purchaser if the hydrology is more than, say 20%, lower over 3 years, and for the purchaser and seller to share the 'upside' if the hydrology is 20% higher than assumed hydrology over 3 years. This can eliminate the uncertainty."

The Authority feels that there is a need to clarify the clause of the Upfront Tariff Determination which states that, if over long term, material variation between actual hydrology of the site and hydrology assessed by the panel of experts as detailed above is observed by the power purchaser, it shall be placed before the Authority by the power purchaser, for its consideration. It is hereby clarified that the sole purpose of the aforementioned clause was to monitor the practicability and effectiveness of the upfront tariff scheme. There is no intention to adjust the tariff of any project on the basis of changes in hydrology observed subsequent to the COD. Therefore, this clause has no adverse implications on the bankability of the EPA/PPA.

f) "The water use charges are made as 'pass-through' items (PTI) - the PTI are payable over a period of 12 months after they are incurred. Under the standardised Water Use Agreements, the WUC are payable each month within 30 days of invoice by the Provincial Government."



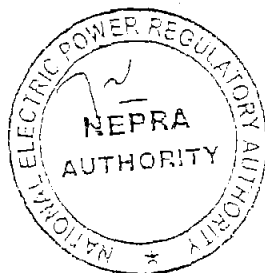


This means the IPP will have to pay WUCs from its own pocket each month and then bill the purchaser for reimbursement over the next 12 months, and this process will repeat every month. Under the standardised security documents, WUCs are part of the Energy Charges and are billed on per kWh generated basis. NEPRA may clarify this or address this in its final determination after reviewing the review petitions by the project companies."

The Authority has already expressed its stance on this issue in previous paragraphs. In short, the practice in vogue for payment of Water Use Charges on monthly basis will continue in case of upfront tariff as well.

"NEPRA has required that revised net annual plant capacity factor (NAPCF) for projects opting upfront tariff without detailed engineering design will get a revised POE certificate regarding the NAPCF 15 days after COD. AEDB feels that this is not going to work for small hydropower projects, and would be detrimental for success of upfront tariff scheme for small hydropower. For instance, if the revised NAPCF falls substantially below 65%/50%, then should the power purchaser be still obliged to purchase at the given tariff and make capacity payments? More precisely, if the EPA/PPA has been signed (long before COD) with hydrology risk transferred to the purchaser, will the EPA/PPA be amended (extensively) to transfer the risk back to the IPP (as projects with below 65%/ 55% plant factor cannot transfer the hydrology risk to the purchaser). This would make the whole transaction highly bankable [sic]."

The Authority considers that this is yet another misconception regarding the upfront tariff on AEDB's part. The very purpose of the Authority to include the clause regarding adjustment of the tariff due to change in plant factor based on detailed design was to provide comfort to the investor as well as the power purchaser. Due to the way in which hydropower projects are implemented in practice, such drastic change in design parameters at the detailed design stage which could result in the need to amend the EPA/PPA at COD is not at all expected. The mechanism for adjustment of plant factor





based on detailed design will in fact make the EPA/PPA more bankable as it is fair and transparent.

- h) "The projects are required to transfer the complex to the Provincial Governments for Rs. 1 at the end of the Term. However, as evident from the Upfront Tariff Determination for small hydropower projects, no redemption of equity is provided for, unlike the "standardised package" whereby redemption of equity is allowed after payment of debt."

The Authority would like to stress that the AEDE's understanding on this aspect of upfront tariff is incorrect. The assumed Equity has been redeemed in the tariff calculations and this is clearly visible in the tariff tables attached along with the determination of the Authority.

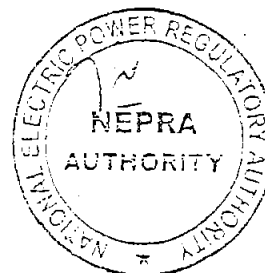
11. SUMMARY OF THE UPFRONT TARIFF

- 11.1 For the purpose of clarity for the investors and the general public, a summary of the levelized upfront tariff based on the assumed reference parameters (US cents/ kWh) with various presumed plant factors is given hereunder:

Presumed Plant Factor	Low Head		High Head	
	With 100% foreign debt	With 100% local debt	With 100% foreign debt	With 100% local debt
50%	c 10.8892	c 12.7804	c 10.0597	c 11.8299
55%	c 10.8892	c 12.7804	c 9.1452	c 10.7545
60%	c 10.8892	c 12.7804	c 8.3831	c 9.8583
65%	c 10.8892	c 12.7804	c 7.7383	c 9.1001
70%	c 10.0903	c 11.8676	c 7.1855	c 8.4501
75%	c 9.4374	c 11.0764	c 6.7065	c 7.8867
80%	c 8.8475	c 10.3841	c 6.2874	c 7.3938

12. ORDER

In exercise of powers under section 2 (3) (a) read with section 31 (4) of the Act, the Authority hereby determines and approves the following upfront tariffs, for generation of electricity from small hydro power generation, for delivery of electricity to the power purchaser:



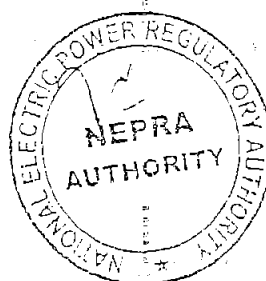


A) Applicable to low-head hydropower projects with head of 20 meters and below:

REFERENCE TARIFF ON BOOT BASIS

	With 100% foreign debt		With 100% local debt	
	Years 1 to 10 (Rs. /kWh)	Years 11 to 30 (Rs. /kWh)	Years 1 to 10 (Rs. /kWh)	Years 11 to 30 (Rs. /kWh)
Energy Charge				
Variable O & M				
- Local	0.1299	0.1299	0.1299	0.1299
- Foreign	0.1299	0.1299	0.1299	0.1299
Capacity Charge				
Fixed O & M				
- Local	0.6233	0.6233	0.6233	0.6233
- Foreign	0.1558	0.1558	0.1558	0.1558
Insurance	0.7841	0.7841	0.7841	0.7841
Return on equity	4.8511	4.9464	5.1886	5.2904
Debt servicing	6.7417	-	9.1786	-
Total tariff	13.4158	6.7694	16.1901	7.1134

Levelised tariff		
- Rs. /kWh	11.1016	13.0297
- US cents/kwh.	10.8892	12.7804



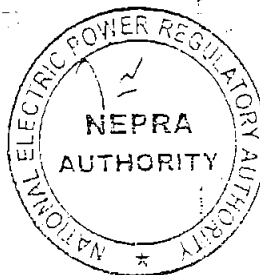


B) Applicable to high-head hydropower projects with head of more than 20 meters:

REFERENCE TARIFF ON BOOT BASIS

	With 100% foreign debt		With 100% local debt	
	Years 1 to 10 (Rs. /kWh)	Years 11 to 30 (Rs. /kWh)	Years 1 to 10 (Rs. /kWh)	Years 11 to 30 (Rs. /kWh)
Energy Charge				
Variable O & M				
- Local	0.1183	0.1183	0.1183	0.1183
- Foreign	0.1183	0.1183	0.1183	0.1183
Capacity Charge				
Fixed O & M				
- Local	0.5678	0.5678	0.5678	0.5678
- Foreign	0.1419	0.1419	0.1419	0.1419
Insurance	0.7646	0.7646	0.7646	0.7646
Return on equity	4.4676	4.5553	4.7918	4.8859
Debt servicing	6.2087	-	8.4767	-
Total tariff	12.3872	6.2662	14.9794	6.5968

Levelised tariff		
- Rs. /kWh	10.2559	12.0606
- US cents/kwh.	10.0597	11.8299





C) Summary of indexations applicable on various tariff components is as follows:

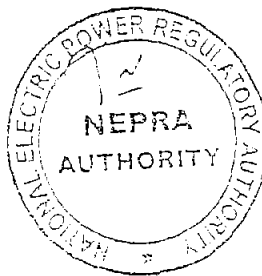
	Indexation	
Variable O & M		
- Local	CPI (General)	
- Foreign	US CPI and PKR/US\$	
Fixed O & M		
- Local	CPI (General)	
- Foreign	US CPI and PKR/US\$	
Insurance	PKR/US \$	
Return on equity	PKR/US \$	
Debt servicing		
	<u>Foreign debt</u>	<u>Local debt</u>
- Principal	PKR/US \$	
- Interest	3 months US \$ LIBOR & PKR/US \$	3 months KIBOR

i) Hydrological risk

Projects having certified net annual plant factor below 65% for low head projects and below 50% for high head projects, after allowing auxiliary consumption @ 1% on gross installed capacity, will not be eligible for transfer of hydrological risk to the power purchaser.

The eligible projects will have one-time irrevocable option, at the time of opting for upfront tariff, to bear hydrological risk or to transfer this risk to the power purchaser.

In cases where hydrological risk is borne by the power purchaser, the company shall receive an assured minimum amount every month from the power purchaser to cover its fixed costs (fixed O&M, insurance, return on equity and debt servicing) in case the plant is available but sufficient water i.e. at least equal to the average historic hydrology for that particular month.





is not available to generate electricity. Payment on account of hydrological risk shall be made by the power purchaser, on the basis of benchmark monthly energy generation, based on the average historic hydrology for that particular month. Further, the tariff will be limited to the extent of benchmark net annual energy generation of the project, while net annual energy generation supplied to the power purchaser in a year, in excess of the benchmark net annual energy generation will be charged at 10% of the prevailing upfront tariff. The power purchaser before signing the Power Purchase Agreement should verify the month wise benchmark hydrology.

Power producers opting to bear hydrology risk will be allowed to sell all power at the prevailing upfront tariff.

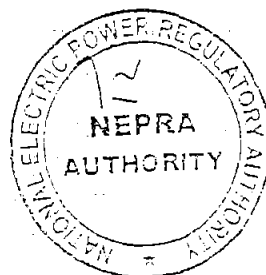
ii) Adjustment on account of savings in cost of debt

This upfront tariff has been worked out on the basis of 3 months LIBOR of 0.28250% plus a premium of 450 basis points for foreign financing and 3 months KIBOR of 6.73% plus a premium of 350 basis points for local financing. In case the spread negotiated is less than the said limits, the savings in the premium over KIBOR/LIBOR shall be shared by the power purchaser and the power producer in the ratio of 60 : 40 respectively. The power producer shall submit relevant authentic documentary evidence to the Authority, for the aforesaid adjustment within 15 days of commercial operations date of the relevant company/project. In case the premium on KIBOR/LIBOR is higher than that mentioned above, no adjustment on the basis of actual higher premium will be allowed.

The interest during construction assumed for the purpose of tariff calculations is as follows:

	Low head hydropower projects		High head hydropower projects	
	With 100% foreign debt	With 100% local debt	With 100% foreign debt	With 100% local debt
	US \$ in millions per MW		US \$ in millions per MW	
Interest during construction	0.241	0.502	0.171	0.365

The interest during construction will be reassessed at commercial operations date with actual LIBOR/KIBOR and spread as detailed above.





iii) Adjustment on account of Sinasure fees

For projects having foreign financing, an appropriate adjustment in benchmark project cost will be allowed on account of Sinasure or other export credit insurance fees, where applicable, at actual not exceeding 7% of the total benchmark foreign debt. In case the sponsors manage better alternative Sinasure or other credit insurance arrangement, the same will be considered at the time of allowing adjustment of such fees. The power producer, if it intends to claim Sinasure or other such fees, shall submit relevant authentic documentary evidence to the Authority, within 15 days of commercial operations date of the relevant company/project.

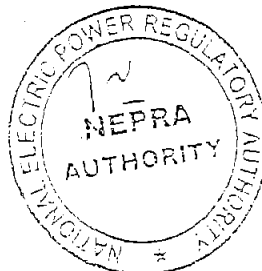
iv) Adjustment on account of actual plant factor

The above tariff has been worked out, after allowing auxiliary consumption @ 1% on gross installed capacity, on the following plant factors.

	Annual plant factor
Low-head hydropower projects with head of 20 meters and below	65%
High-head hydropower projects with head of more than 20 meters.	50%

This tariff will be adjusted based on actual certified net annual plant factor, if actual certified net annual plant factor of the site is above 65% for low head hydropower projects and above 50% for high head hydropower projects.

For companies opting for upfront tariff without finalization of their detailed project design, the power producer shall submit request for onetime adjustment, within 15 days of the commercial operations date of the relevant company/project, accompanied by the revised panel of experts certificate regarding net annual plant factor, on the basis of detailed project design. Other terms and conditions of the upfront tariff, including for installed capacity and net annual plant factor will remain applicable. For projects which have already opted for upfront tariff on the basis of detailed project design, this onetime adjustment will not be applicable.





v) Adjustment for loan structure

The company will have to provide its proposed loan structure to the Authority, along with its application opting for upfront tariff. The Authority will allow tariff to the company on the basis of its proposed loan structure. The tariff once allowed (i.e. on the basis of 100% foreign loan, 100% local loan or mixture of foreign and local loan) will not be subject to any further change, regardless of any subsequent change(s) in the financing structure, etc., except for the adjustment in accordance with the onetime adjustment mechanism detailed herein, where applicable, and the application of relevant indexations/adjustment as detailed in this order.

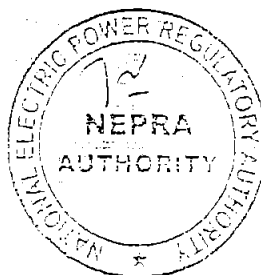
Tariffs detailed in this order have been calculated on the basis of project financing structure of equity plus 100% foreign loan and equity plus 100% local loan. For proposed loan composition other than the one mentioned above i.e. 100% foreign/local, the Authority after consideration will allow a two part tariff on the basis of request as follows:

Part 1	=	Tariff calculated on the basis of project financing structure of equity plus 100% foreign loan x Foreign debt of the relevant company as a percentage of its total debt
Part 2	=	Tariff calculated on the basis of project financing structure of equity plus 100% local loan x Local debt of the relevant company as a percentage of its total debt

All the terms and conditions detailed in this order will, with due alteration of details, also apply to two part tariff, as detailed above, allowed to any company.

vi) Pass-Through Items

If the company is obligated to pay any tax on its income from generation of electricity from small hydro, or water use charges/IRSA charges/other such levies or charges, not being of refundable nature, are payable by the company for generation of electricity from small hydro or any duties and/or taxes, not being of refundable nature, are imposed on the company upto the commencement of its commercial operations for import of its plant.





machinery and equipment, the exact amount paid by the company on these accounts shall be reimbursed by the power purchaser on production of original receipts. This payment should be considered as a pass-through payment spread over a twelve months period. The payment on account of water use charges shall be spread equally over 12 months for each year. Furthermore, in such a scenario, the company shall also submit to the power purchaser details of any tax/levies/charges savings and the power purchaser shall deduct the amount of these savings from its payment to the company on account of taxation.

The adjustment for duties and/or taxes will be restricted only to the extent of duties and/or taxes directly imposed on the company. No adjustment for duties and/or taxes imposed on third parties such as contractors, suppliers, consultants, etc., will be allowed. Further, withholding tax on dividend will also not be allowed as a pass through item.

vii) Onetime adjustment of Tariff after COD

The following Total EPC costs will be assumed for the purpose of Onetime adjustment of Tariff:

High Head	US\$ 2.409 Million / MW
Low Head	US\$ 3.211 Million / MW

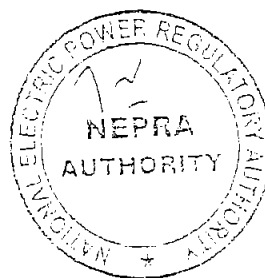
40% of the assumed EPC cost will be adjusted over 36 months (maximum) starting from the date of financial close of the project for USD/PKR exchange rate variation.

60% of the assumed EPC cost converted at reference USD/PKR exchange rate of 101.95 will be adjusted over 36 months (maximum) starting from the date of financial close of the project according to the formula below:

$$P_n = 0.51 + 0.10 \cdot (C_n/C_o) + 0.09 \cdot (S_n/S_o) + 0.15 \cdot (F_n/F_o) + 0.15 \cdot (L_n/L_o)$$

Where;

P_n is the adjustment factor to be applied for civil works.





Cn is the index value for the relevant month for Cement as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

Sn is the index value for the relevant month for Steel Bar & Sheets as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

Fn is the index value for the relevant month for Diesel Oil as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

Ln is the index value for the relevant month for Mason (Raj) for Rawalpindi as per the Wage Rates published in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

Co, So, Fo and Lo are the reference values of the price indices for Cement, Steel Bar & Sheets, Diesel Oil and Mason (Raj) respectively as available at the time of financial close of the project.

The adjustments will be made on quarterly basis and where applicable, the amounts will be spread equally into quarters after considering the annual phasing already allowed by the Authority in its determination.

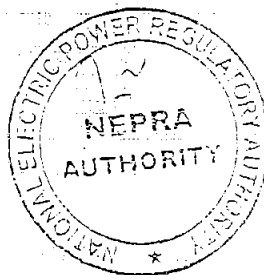
All other project costs, excluding IDC will be considered as local costs and shall not be adjusted in any way.

IDC will be adjusted based on the combined impact of the allowed financing mix and One-Time adjustment of EPC cost.

viii) Indexations/adjustment

The tariff allowed to any company, after onetime adjustment where applicable, will remain unchanged throughout the tariff control period, except for the adjustments due to indexations/adjustment detailed in this order. The indexations of O & M, return on equity, principal repayment of debt and interest will be allowed on quarterly basis on 1st July, 1st October, 1st January and 1st April. Insurance component will be adjusted annually.

The mode of indexations/adjustment will be as under:



a) Indexations applicable to O & M:

$$VOM_{(LREV)} = VOM_{(LREF)} * CPI-G_{(REV)} / CPI-G_{(REF)}$$

$$VOM_{(FREV)} = VOM_{(FREF)} * US\ CPI_{(REV)} / US\ CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$$

$$FOM_{(LREV)} = FOM_{(LREF)} * CPI-G_{(REV)} / CPI-G_{(REF)}$$

$$FOM_{(FREV)} = FOM_{(FREF)} * US\ CPI_{(REV)} / US\ CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$$

Where:

$VOM_{(LREV)}$ = The revised applicable variable O & M local component of tariff

$VOM_{(FREV)}$ = The revised applicable variable O & M foreign component of tariff

$FOM_{(LREV)}$ = The revised applicable fixed O & M local component of tariff

$FOM_{(FREV)}$ = The revised applicable fixed O & M foreign component of tariff

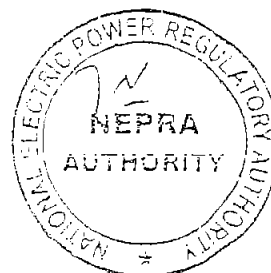
$VOM_{(LREF)}$ = The reference variable O & M local component of tariff for the relevant period

$VOM_{(FREF)}$ = The reference variable O & M foreign component of tariff for the relevant period

$FOM_{(LREF)}$ = The reference fixed O & M local component of tariff for the relevant period

$FOM_{(FREF)}$ = The reference fixed O & M foreign component of tariff for the relevant period

$CPI-G_{(REV)}$ = The revised Consumer Price Index (General) based on latest available information with respect to Consumer Price Index (General) as notified by the Pakistan Bureau of Statistics.





US CPI (REV) = The revised US CPI (all urban consumers) based on latest available information with respect to US CPI (notified by US Bureau of Labor Statistics)

ER (REV) = 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

CPI-G (REF) = Reference Consumer Price Index (General) - Current reference 199.66 Consumer Price Index (General) for the month of May 2015 as notified by the Pakistan Bureau of Statistics

US CPI (REF) = Reference US CPI (all urban consumers) - Current reference 237.805 US CPI (all urban consumers) for the month of May 2015 as notified by the US Bureau of Labor Statistics

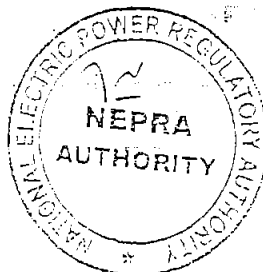
ER (REF) = Reference TT & OD selling rate of US dollar - current reference 101.95

b) Adjustment of insurance component

In case of insurance denominated in US \$, insurance cost component of tariff will be adjusted only on account of US \$/PKR exchange rate variation annually, not exceeding the insurance cost actually incurred. For availing this adjustment, relevant company will have to substantiate through authentic documentary evidence that the insurance cost allowed to it (from COD to date) does not exceed the insurance cost actually incurred.

c) Indexations applicable to return on equity

$$ROE (REV) = ROE (REF) * ER (REV) / ER (REF)$$



Where:

$ROE_{(REV)}$ = The revised applicable return on equity tariff component indexed with exchange rate parity

$ROE_{(REF)}$ = The reference return on equity tariff component for the relevant period

$ER_{(REV)}$ = 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

$ER_{(REF)}$ = Reference TT & OD selling rate of US dollar - current reference 101.95

d) Indexations applicable to foreign debt

Foreign debt and its interest 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.

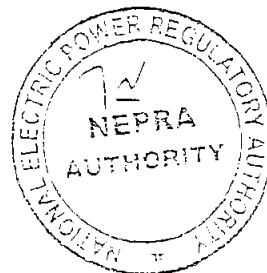
e) Indexation applicable to foreign interest

$$\Delta I = P_{(REV)} * (LIBOR_{(REV)} - 0.28250\%) / 4$$

Where:

ΔI = The variation in interest charges applicable corresponding to variation in 3 months LIBOR. ΔI can be positive or negative depending upon whether 3 months LIBOR $_{(REV)}$ per annum > or < 0.28250%. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each quarter under adjustment.

$P_{(REV)}$ = The outstanding principal (as indicated in the attached



debt service schedule to this order at Annex-IV B/VI B).
on a quarterly basis at the relevant quarterly calculations
date. Quarter 1 shall commence on the commercial
operations date (i.e. the first figure will be used for
calculation purposes of interest for the first quarter after
COD).

LIBOR = Revised 3 months US \$ LIBOR as at the last day of the
(REV) preceding quarter

f) Indexation applicable to local interest

$$\Delta I = P_{REV} * (KIBOR_{REV} - 6.73\%) / 4$$

- Where:

ΔI = The variation in interest charges applicable
corresponding to variation in 3 months KIBOR. ΔI
can be positive or negative depending upon whether
3 months KIBOR_{REV} per annum > or < 6.73%. The
interest payment obligation will be enhanced or
reduced to the extent of ΔI for each quarter under
adjustment.

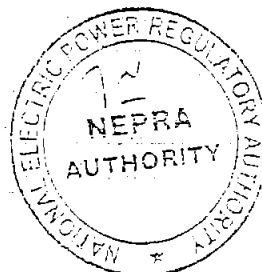
P_{REV} = is the revised outstanding principal (as indicated in
the attached debt service schedule to this order at
Annex-V B/VII B), after allowing onetime adjustment
for exchange rate parity on a quarterly basis at the
relevant quarterly calculations date. Quarter 1 shall
commence on the commercial operations date (i.e.
the first figure will be used for calculation purposes of
interest for the first quarter after COD).

Revised 3 months KIBOR

KIBOR_{REV} = Revised 3 months KIBOR as at the last day of the
preceding quarter

Note:

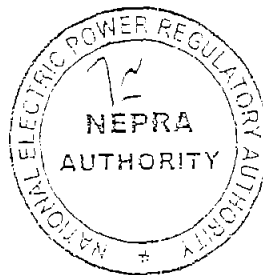
Above described indexations/adjustment will be approved and announced
by the Authority within fifteen days of the company's request for



indexations/adjustment in tariff in accordance with the requisite mechanisms stipulated herein.

Terms and Conditions of Upfront Tariff

- ix) These tariffs are only applicable for small hydro power generation companies (hereinafter referred to as the "companies") meeting the following conditions:
 - a) Companies with installed capacity of the project, for which upfront tariff is being opted, in the range of 1 MW to 25 MW.
 - b) Companies recommended by the relevant agency for the grant of upfront tariff on the format attached as Annex-I and having a certificate from the relevant agency, on the format attached as Annex-II, about the net annual plant factor of their site, based on their proposed installed capacity and long term historical hydrological data of the site.
 - c) Companies whose proposed plant and machinery is new. The relevant company will provide a certification in this regard and about other requirements of this upfront tariff on the format attached as Annex-III, along with their application to the Authority for acceptance of upfront tariff.
 - d) Companies who have not already executed a power purchase agreement with the power purchaser for the relevant project or have achieved financial close for the relevant project.
- x) The plant and machinery of the project, will be certified as new and of international standard by an independent engineer, appointed in accordance with the terms of power purchase agreement before any payment under this tariff is made. The said certificate shall be obtained and retained by the power purchaser.
- xi) The choice to opt for this tariff will only be available up to 12 months, from the date of notification of this order.
- xii) The upfront tariff granted to any particular company for any particular project will no longer remain applicable/valid if, financial close is not achieved for the relevant project within 18 months from the date of





decision of the Authority granting upfront tariff for that particular project, or a generation license is declined to the relevant company/project.

- xiii) The targeted maximum construction period after financial close is 36 months. No adjustment will be allowed in this tariff to account for financial impact of any delay in project construction. However, the failure of a project to complete construction within 36 months of financial close will not invalidate the tariff granted to it.
- xiv) The decision to opt for upfront tariff once exercised will be irrevocable.
- xv) In the above tariff no adjustment for certified emission reductions has been accounted for. However, if the company chooses to register for carbon credits, the subsequent proceeds from trading of carbon credits, shall be distributed between the power purchaser and the power producer in accordance with the Policy for Development of Renewable Energy for Power Generation 2006, as amended from time to time.
- xvi) This upfront tariff would also be available, for hydro power generation companies located outside legal jurisdiction of the Authority, under the provisions of National Electric Power Regulatory Authority Interim Power Procurement (Procedures and Standards) Regulations, 2005. All indexations and adjustments in the tariff in such cases may be directly determined by NEPRA, however this will be subject to the terms and conditions of the Power Acquisition Contract between NTDC and the foreign company along with necessary government approvals/ understanding.
- xvii) This upfront tariff will only be available for green field hydropower projects.
- xviii) This tariff will be applicable for a period of thirty years (30) from the commencement of commercial operations.
- xix) The terms and conditions specified herein form an integral part of this tariff.
- xx) Design & Manufacturing Standards:

Small hydro power generation system shall be designed, manufactured and tested in accordance with the latest ASME, ANSI, IEC standards or other equivalent standards. All plant and equipment shall be new.



xxd) Power curve of the hydro power complex:

The power curve of the hydro power plant shall be verified by the power purchaser, as part of the commissioning tests, according to the latest IEC standards and shall be used to measure the performance of the hydro generating units.

xxdi) Emissions Trading/ Carbon Credits:

The company granted this tariff shall process and obtain emissions/carbon credits expeditiously and credit the proceeds to the power purchaser in accordance with the Policy for Development of Renewable Energy for Power Generation 2006, as amended from time to time.

xxdii) General:

- The power purchaser, before signing the Power Purchase Agreement, shall satisfy itself that the plant and machinery proposed to be installed is new and is of an acceptable quality.
- The projects allowed upfront tariff will be transferred, at the end of tariff control period of 30 years, to the power purchaser/relevant Government at a notional price of Rs. 1.

• The Power Purchase Agreement should stipulate terms and conditions, regarding periodic physical inspection of plant and machinery, ensuring that the power plant of the company allowed this tariff is properly maintained and continues to supply energy for the entire tariff control period of 30 years.

• Pre-COD sale of electricity is allowed to the power producer, subject to the terms and conditions of Power Purchase Agreement, at the applicable tariff excluding principal repayment of debt component and interest component. However, pre COD sale will not alter the required commercial operations date stipulated by the Power Purchase Agreement in any manner.

- General assumptions, which are not covered in this determination and National Electric Power Regulatory Authority Upfront Tariff (Approval & Procedure) Regulations, 2011, may be dealt with as per the standard terms of the Power Purchase Agreement.

The order at paragraph 12 is recommended for notification by the Federal Government in the official gazette in accordance with Section 31(4) of the



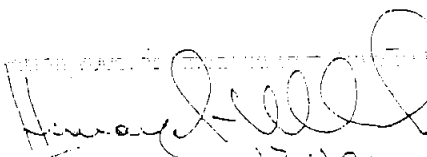


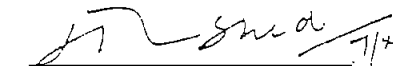
Regulation of Generation, Transmission and Distribution of Electric Power Act,
1997.

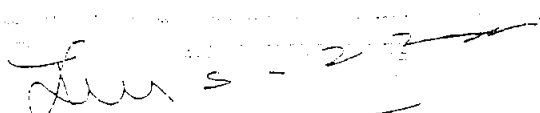
AUTHORITY

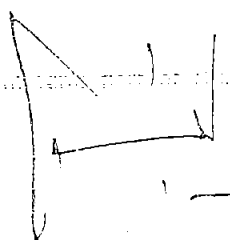

(Khawaja Muhammad Naeem)
Member

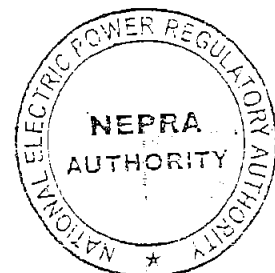

(Syed Masood ul Hassan) 14/10/15
Member


(Himayat Ullah Khan) 13/10/15
Member


(Major (Rtd.) Haroon Rasheed) 7/10/15
Vice Chairman


(Tariq Saddozai) 15/10/15
Chairman


14-10-2015



[On letter head of relevant agency]

Annexure - I

Date: -----

The Registrar,
National Electric Power Regulatory Authority,
Islamabad

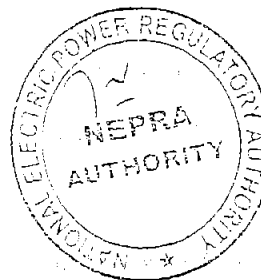
SUBJECT:— Recommendation for grant of upfront tariff

1. We hereby recommend [NAME OF THE COMPANY], for the grant of upfront tariff, as approved by the National Electric Power Regulatory Authority *vide* its determination dated [DATE OF THE UPFRONT TARIFF DETERMINATION], for its project of [GROSS INSTALLED CAPACITY OF THE PROJECT] MW installed capacity to be located at [ADDRESS OF THE PROJECT SITE].
2. We further confirm that our panel of experts has provided certificate regarding annual plant factor of [NAME OF THE COMPANY] for its project of [GROSS INSTALLED CAPACITY OF THE PROJECT] MW installed capacity to be located at [ADDRESS OF THE PROJECT SITE] on the prescribed format *vide* letter no. _____ dated: _____ which is enclosed for consideration of the Authority.

Signature: _____

Name: _____

Dated: _____



Date: _____

The Registrar,
National Electric Power Regulatory Authority,
Islamabad

SUBJECT:— Certificate Regarding Annual Plant Factor

1. A Panel of Experts (POE) was appointed by [NAME OF RELEVANT AGENCY] in respect of small hydropower project of [NAME OF THE COMPANY].
2. Based on the proposed installed capacity/installed capacity as per the detailed design [DELETE WHICHEVER IS INAPPLICABLE] and long term historical hydrological site data, the findings of the POE are as follows:

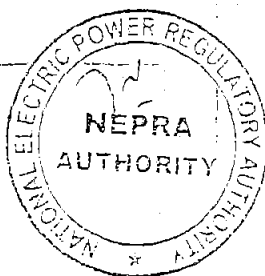
Name of the company	
Address of project site	
Gross head [meters]	
Net head [meters]	
Gross plant installed capacity [MW]	
Auxiliary consumption @ 1%	
Net plant installed capacity [MW] (to be used for computation of plant factor)	
Net deliverable energy [Gwh]	
Plant factor based on net deliverable energy	

Monthly benchmark hydrology [m^3/s]:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total

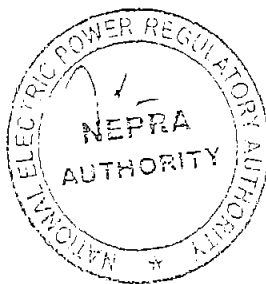
Monthly benchmark net deliverable energy [GWh]:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total



3. It is hereby confirmed that the plant factor as detailed above, may be used for allowing upfront tariff to the aforesaid company for the project site detailed above, and above findings of the POE may be made a basis for making hydrological risk payments, if any, by the power purchaser.

[TO BE SIGNED BY REPRESENTATIVE OF THE RELEVANT AGENCY]



Date: _____

The Registrar,
National Electric Power Regulatory Authority,
Islamabad

SUBJECT:— Certifications in respect of application opting for upfront tariff
for small hydropower generation

I, [NAME, DESIGNATION], being the duly Authorized representative of [NAME OF APPLICANT COMPANY] by virtue of [BOARD RESOLUTION/POWER OF ATTORNEY DATED], hereby confirm that for our project of [GROSS INSTALLED CAPACITY OF THE PROJECT] MW [gross installed capacity to be located at [ADDRESS OF THE PROJECT SITE]: _____]

1. All the plant and machinery to be installed will be brand new.

2. [NAME OF APPLICANT COMPANY] will/will not [DELETE WHICHEVER IS INAPPLICABLE] bear the hydrological risk.

3. The above mentioned is a green field hydro power project. [NAME OF APPLICANT COMPANY] has not availed any soft loan for the aforesaid project. In case any soft loan becomes available to [NAME OF APPLICANT COMPANY] we will intimate the Authority, within 10 days of such event and will not claim the upfront tariff granted to us.

4. The annual plant factor of the aforementioned project as certified by the panel of experts, is based / not based [DELETE WHICHEVER IS INAPPLICABLE] on the detailed design report.

5. We have not already executed a power purchase agreement with the power purchaser for the aforementioned project or have achieved financial close for the aforementioned project.



6. [NAME OF APPLICANT COMPANY] may be granted upfront tariff based on the following loan structure:

Foreign loan	_____ %
Local loan	_____

TOTAL	_____ 100
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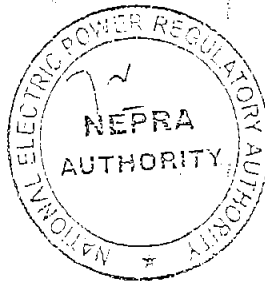
Date: _____

Signature: _____

Name: _____

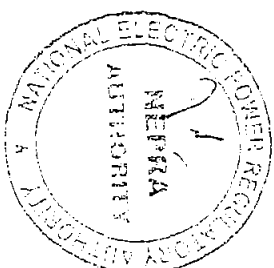
Designation: _____

Company Seal



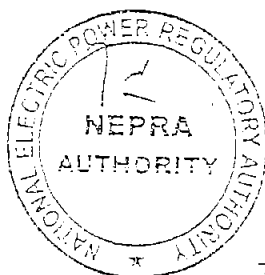
UPFRONT TARIFF FOR LOW HEAD HYDROPOWER PROJECTS (1 TO 25 MW) BASED ON 100% FOREIGN FINANCING
REFERENCE TARIFF

Year	Energy Purchase Price		Capacity Purchase Price						Total Tariff
	Variable O&M Local	Variable O&M Foreign	Fixed O&M Local	Fixed O&M Foreign	Insurance	Return on Equity (ROE)	Principal Repayment	Interest	
1	Rs./kWh 0.1299	Rs./kWh 0.1299	Rs./kWh 0.6233	Rs./kWh 0.1558	Rs./kWh 0.7841	Rs./kWh 4.8511	Rs./kWh 4.2666	Rs./kWh 2.4751	Rs./kWh 13.4158
2	0.1299	0.1299	0.6233	0.1558	0.7841	4.8511	4.4743	2.2674	13.4158
3	0.1299	0.1299	0.6233	0.1558	0.7841	4.8511	4.6922	2.0495	13.4158
4	0.1299	0.1299	0.6233	0.1558	0.7841	4.8511	4.9207	1.8211	13.4158
5	0.1299	0.1299	0.6233	0.1558	0.7841	4.8511	5.1602	1.5815	13.4158
6	0.1299	0.1299	0.6233	0.1558	0.7841	4.8511	5.4115	1.3302	13.4158
7	0.1299	0.1299	0.6233	0.1558	0.7841	4.8511	5.6750	1.0667	13.4158
8	0.1299	0.1299	0.6233	0.1558	0.7841	4.8511	5.9513	0.7904	13.4158
9	0.1299	0.1299	0.6233	0.1558	0.7841	4.8511	6.2410	0.5007	13.4158
10	0.1299	0.1299	0.6233	0.1558	0.7841	4.8511	6.5449	0.1968	13.4158
11	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
12	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
13	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
14	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
15	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
16	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
17	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
18	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
19	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
20	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
21	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
22	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
23	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
24	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
25	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
26	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
27	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
28	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
29	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
30	0.1299	0.1299	0.6233	0.1558	0.7841	4.9464	-	-	6.7694
Levelized Tariff	0.1299	0.1299	0.6233	0.1558	0.7841	4.8843	3.3500	1.0443	11.1016



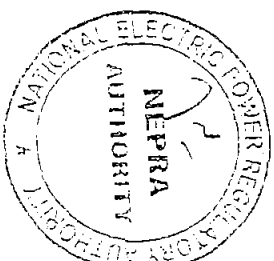
UPFRONT TARIFF FOR LOW HEAD HYDROPOWER PROJECTS (1 TO 25 MW) BASED ON 100% FOREIGN FINANCING
Debt Servicing Schedule for the Purpose of Indexation of Debt Component Only

Foreign						Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh	Annual Debt Servicing Rs./kWh
Period	Principal Million US\$	Repayment Million US\$	Mark-Up Million US\$	Balance Million US\$	Debt Service Million US\$			
	7.67	0.15	0.09	7.52	0.2423			
	7.52	0.15	0.09	7.36	0.2423			
	7.36	0.15	0.09	7.21	0.2423			
	7.21	0.16	0.09	7.05	0.2423			
1	7.67	0.61	0.36	7.05	0.9692	4.2665	2.4751	6.7417
	7.05	0.16	0.08	6.90	0.2423			
	6.90	0.16	0.08	6.74	0.2423			
	6.74	0.16	0.08	6.57	0.2423			
	6.57	0.16	0.08	6.41	0.2423			
2	7.05	0.64	0.33	6.41	0.9692	4.4743	2.2674	6.7417
	6.41	0.17	0.08	6.25	0.2423			
	6.25	0.17	0.07	6.08	0.2423			
	6.08	0.17	0.07	5.91	0.2423			
	5.91	0.17	0.07	5.74	0.2423			
3	6.41	0.67	0.29	5.74	0.9692	4.6922	2.0495	6.7417
	5.74	0.17	0.07	5.56	0.2423			
	5.56	0.18	0.07	5.39	0.2423			
	5.39	0.18	0.06	5.21	0.2423			
	5.21	0.18	0.06	5.03	0.2423			
4	5.74	0.71	0.26	5.03	0.9692	4.9207	1.8211	6.7417
	5.03	0.18	0.06	4.85	0.2423			
	4.85	0.18	0.06	4.66	0.2423			
	4.66	0.19	0.06	4.48	0.2423			
	4.48	0.19	0.05	4.29	0.2423			
5	5.03	0.74	0.23	4.29	0.9692	5.1602	1.5815	6.7417
	4.29	0.19	0.05	4.10	0.2423			
	4.10	0.19	0.05	3.90	0.2423			
	3.90	0.20	0.05	3.71	0.2423			
	3.71	0.20	0.04	3.51	0.2423			
6	4.29	0.78	0.19	3.51	0.9692	5.4115	1.3302	6.7417
	3.51	0.20	0.04	3.31	0.2423			
	3.31	0.20	0.04	3.11	0.2423			
	3.11	0.21	0.04	2.90	0.2423			
	2.90	0.21	0.03	2.69	0.2423			
7	3.51	0.82	0.15	2.69	0.9692	5.6750	1.0667	6.7417
	2.69	0.21	0.03	2.48	0.2423			
	2.48	0.21	0.03	2.27	0.2423			
	2.27	0.22	0.03	2.06	0.2423			
	2.06	0.22	0.02	1.84	0.2423			
8	2.69	0.86	0.11	1.84	0.9692	5.9513	0.7904	6.7417
	1.84	0.22	0.02	1.62	0.2423			
	1.62	0.22	0.02	1.39	0.2423			
	1.39	0.23	0.02	1.17	0.2423			
	1.17	0.23	0.01	0.94	0.2423			
9	1.84	0.90	0.07	0.94	0.9692	6.2410	0.5007	6.7417
	0.94	0.23	0.01	0.71	0.2423			
	0.71	0.23	0.01	0.48	0.2423			
	0.48	0.24	0.01	0.24	0.2423			
	0.24	0.24	0.00	(0.00)	0.2423			
10	0.94	0.94	0.03	(0.00)	0.9692	6.5449	0.1958	6.7417



**UPFRONT TARIFF FOR LOW HEAD HYDROPOWER PROJECTS (1 TO 25 MW) BASED ON 100% LOCAL FINANCING
REFERENCE TARIFF**

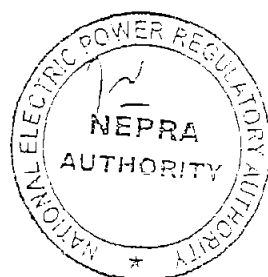
Year	Energy Purchase Price				Capacity Purchase Price				Total Tariff
	Variable O&M Local	Variable O&M Foreign	Fixed O&M Local	Fixed O&M Foreign	Insurance	Return on Equity (ROE)	Principal Repayment	Interest	
1	0.1299	0.1299	0.6233	0.1558	0.7841	5.1886	3.4730	5.7056	16.1901
2	0.1299	0.1299	0.6233	0.1558	0.7841	5.1886	3.8421	5.3364	16.1901
3	0.1299	0.1299	0.6233	0.1558	0.7841	5.1886	4.2505	4.9280	16.1901
4	0.1299	0.1299	0.6233	0.1558	0.7841	5.1886	4.7023	4.4762	16.1901
5	0.1299	0.1299	0.6233	0.1558	0.7841	5.1866	5.2021	3.9764	16.1901
6	0.1299	0.1299	0.6233	0.1558	0.7841	5.1886	5.7551	3.4735	16.1901
7	0.1299	0.1299	0.6233	0.1558	0.7841	5.1886	6.3668	2.8118	16.1901
8	0.1299	0.1299	0.6233	0.1558	0.7841	5.1886	7.0435	2.1350	16.1901
9	0.1299	0.1299	0.6233	0.1558	0.7841	5.1886	7.7922	1.3864	16.1901
10	0.1299	0.1299	0.6233	0.1558	0.7841	5.1886	8.6204	0.5581	16.1901
11	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
12	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
13	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
14	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
15	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
16	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
17	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
18	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
19	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
20	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
21	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
22	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
23	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
24	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
25	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
26	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
27	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
28	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
29	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
30	0.1299	0.1299	0.6233	0.1558	0.7841	5.2904			7.1134
Levelized Tariff	0.1299	0.1299	0.6233	0.1558	0.7841	5.2240	3.4367	2.5460	13.0297



UPFRONT TARIFF FOR LOW HEAD HYDROPOWER PROJECTS (1 TO 25 MW) BASED ON 100% LOCAL FINANCING

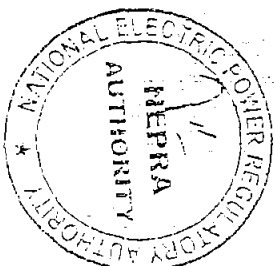
Debt Servicing Schedule for the Purpose of Indexation of Debt Component Only

Period	Local Debt					Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh	Annual Debt Servicing Rs./kWh
	Principal Million Rs.	Repayment Million Rs.	Mark-Up Million Rs.	Balance Million Rs.	Debt Service Million Rs.			
1	321.58	4.71	8.22	316.87	12.93	3.4730	5.7056	9.1785
	316.87	4.83	8.10	312.04	12.93			
	312.04	4.95	7.98	307.09	12.93			
	307.09	5.08	7.85	302.01	12.93			
2	302.01	19.58	32.16	296.79	12.93	3.6421	5.3364	9.1785
	296.79	5.21	7.72	291.45	12.93			
	291.45	5.34	7.59	285.97	12.93			
	285.97	5.48	7.45	280.35	12.93			
3	280.35	21.66	30.08	274.58	12.93	4.2505	4.9280	9.1785
	274.58	5.77	7.17	268.67	12.93			
	268.67	5.91	7.02	262.61	12.93			
	262.61	6.06	6.87	256.39	12.93			
4	256.39	23.96	27.78	250.01	12.93	4.7023	4.4762	9.1785
	250.01	6.22	6.72	243.47	12.93			
	243.47	6.38	6.56	236.76	12.93			
	236.76	6.54	6.39	229.88	12.93			
5	229.88	26.51	25.23	222.82	12.93	5.2021	3.9764	9.1785
	222.82	6.68	6.06	215.59	12.93			
	215.59	6.88	5.88	208.17	12.93			
	208.17	7.08	5.70	200.55	12.93			
6	200.55	29.32	22.42	192.75	12.93	5.7551	3.4235	9.1785
	192.75	7.81	5.13	184.74	12.93			
	184.74	8.01	4.93	176.53	12.93			
	176.53	8.21	4.72	168.11	12.93			
7	168.11	32.44	19.30	159.48	12.93	6.3668	2.9118	9.1785
	159.48	6.42	4.51	150.62	12.93			
	150.62	6.64	4.30	141.54	12.93			
	141.54	6.86	4.05	132.22	12.93			
8	132.22	35.89	15.85	122.67	12.93	7.0435	2.1350	9.1785
	122.67	9.32	3.62	112.87	12.93			
	112.87	9.55	3.38	102.82	12.93			
	102.82	9.80	3.14	92.52	12.93			
9	92.52	39.70	12.04	81.95	12.93	7.7922	1.3664	9.1785
	81.95	10.31	2.63	71.11	12.93			
	71.11	10.57	2.37	59.99	12.93			
	59.99	10.84	2.10	48.59	12.93			
10	48.59	43.62	7.82	36.90	12.93	8.6204	0.5581	9.1785
	36.90	11.40	1.53	24.91	12.93			
	24.91	11.69	1.24	12.61	12.93			
	12.61	11.99	0.94	0.00	12.93			



**UPFRONT TARIFF FOR HIGH HEAD HYDROPOWER PROJECTS (1 TO 25 MW) BASED ON 100% FOREIGN FINANCING
REFERENCE TARIFF**

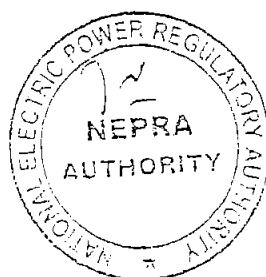
Year	Energy Purchase Price			Capacity Purchase Price					Total Tariff
	Variable O&M Local	Variable O&M Foreign	Fixed O&M Local	Fixed O&M Foreign	Insurance	Return on Equity (ROE)	Principal Repayment	Interest	
1	0.1183	0.1183	0.5678	0.1419	0.7646	4.4676	3.9293	2.2794	12.3872
2	0.1183	0.1183	0.5678	0.1419	0.7646	4.4676	4.1206	2.0881	12.3872
3	0.1183	0.1183	0.5678	0.1419	0.7646	4.4676	4.3212	1.8875	12.3872
4	0.1183	0.1183	0.5678	0.1419	0.7646	4.4676	4.5316	1.6771	12.3872
5	0.1183	0.1183	0.5678	0.1419	0.7646	4.4676	4.7522	1.4664	12.3872
6	0.1183	0.1183	0.5678	0.1419	0.7646	4.4676	4.9836	1.2251	12.3872
7	0.1183	0.1183	0.5678	0.1419	0.7646	4.4676	5.2263	0.9824	12.3872
8	0.1183	0.1183	0.5678	0.1419	0.7646	4.4676	5.4807	0.7279	12.3872
9	0.1183	0.1183	0.5678	0.1419	0.7646	4.4676	5.7476	0.4611	12.3872
10	0.1183	0.1183	0.5678	0.1419	0.7646	4.4676	6.0274	0.1812	12.3872
11	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
12	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
13	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
14	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
15	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
16	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
17	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
18	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
19	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
20	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
21	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
22	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
23	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
24	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
25	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
26	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
27	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
28	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
29	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
30	0.1183	0.1183	0.5678	0.1419	0.7646	4.5553	-	-	6.2662
Levelized Tariff	0.1183	0.1183	0.5678	0.1419	0.7646	4.4981	3.0851	0.9618	10.2559



UPFRONT TARIFF FOR HIGH HEAD HYDROPOWER PROJECTS (1 TO 25 MW) BASED ON 100% FOREIGN FINANCING

Debt Servicing Schedule for the Purpose of Indexation of Debt Component Only

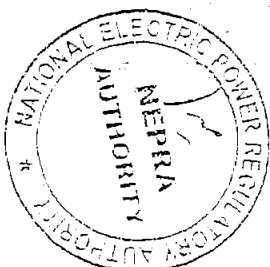
Foreign Debt						Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh	Annual Debt Servicing Rs./kWh
Period	Principal Million US\$	Repayment Million US\$	Mark-Up Million US\$	Balance Million US\$	Debt Service Million US\$			
	35.52	0.70	0.42	34.82	1.1223			
	34.82	0.71	0.42	34.11	1.1223			
	34.11	0.71	0.41	33.40	1.1223			
	33.40	0.72	0.40	32.68	1.1223			
1	35.52	2.84	1.65	32.68	4.4892	3.9293	2.2794	6.2087
	32.68	0.73	0.39	31.94	1.1223			
	31.94	0.74	0.38	31.20	1.1223			
	31.20	0.75	0.37	30.45	1.1223			
	30.45	0.76	0.36	29.70	1.1223			
2	32.68	2.98	1.51	29.70	4.4892	4.1206	2.0881	6.2087
	29.70	0.77	0.36	28.93	1.1223			
	28.93	0.78	0.35	28.15	1.1223			
	28.15	0.79	0.34	27.37	1.1223			
	27.37	0.80	0.33	26.57	1.1223			
3	29.70	3.12	1.36	26.57	4.4892	4.3212	1.8975	6.2087
	26.57	0.80	0.32	25.77	1.1223			
	25.77	0.81	0.31	24.95	1.1223			
	24.95	0.82	0.30	24.13	1.1223			
	24.13	0.83	0.29	23.30	1.1223			
4	26.57	3.28	1.21	23.30	4.4892	4.5316	1.6771	6.2087
	23.30	0.84	0.28	22.45	1.1223			
	22.45	0.85	0.27	21.60	1.1223			
	21.60	0.86	0.26	20.73	1.1223			
	20.73	0.87	0.25	19.86	1.1223			
5	23.30	3.44	1.05	19.86	4.4892	4.7522	1.4564	6.2087
	19.86	0.88	0.24	18.97	1.1223			
	18.97	0.90	0.23	18.06	1.1223			
	18.06	0.91	0.22	17.17	1.1223			
	17.17	0.92	0.21	16.26	1.1223			
6	19.86	3.60	0.89	16.26	4.4892	4.9636	1.2251	6.2087
	16.26	0.93	0.19	15.33	1.1223			
	15.33	0.94	0.18	14.39	1.1223			
	14.39	0.95	0.17	13.44	1.1223			
	13.44	0.96	0.16	12.48	1.1223			
7	16.26	3.78	0.71	12.48	4.4892	5.2263	0.9824	6.2087
	12.48	0.97	0.16	11.50	1.1223			
	11.50	0.98	0.14	10.52	1.1223			
	10.52	1.00	0.13	9.52	1.1223			
	9.52	1.01	0.11	8.51	1.1223			
8	12.48	3.95	0.53	8.51	4.4892	5.4807	0.7279	6.2087
	8.51	1.02	0.10	7.49	1.1223			
	7.49	1.03	0.09	6.46	1.1223			
	6.46	1.05	0.08	5.42	1.1223			
	5.42	1.06	0.06	4.36	1.1223			
9	8.51	4.16	0.33	4.36	4.4892	5.7476	0.4611	6.2087
	4.36	1.07	0.05	3.29	1.1223			
	3.29	1.08	0.04	2.26	1.1223			
	2.26	1.10	0.03	1.11	1.1223			
	1.11	1.11	0.01	(0.00)	1.1223			
10	4.36	4.36	0.13	-	4.4892	6.0274	0.1812	6.2087



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Annex-VII A
UPFRONT TARIFF FOR HIGH HEAD HYDROPOWER PROJECTS (1 TO 25 MW) BASED ON 100% LOCAL FINANCING
REFERENCE TARIFF

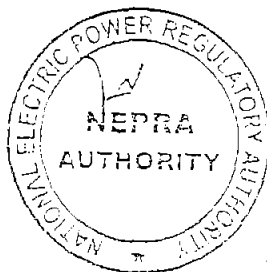
Year	Energy Purchase Price		Capacity Purchase Price				Total Tariff
	Variable O&M Local	Variable O&M Foreign	Fixed O&M Local	Fixed O&M Foreign	Insurance	Return on Equity (ROE)	
1	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	11.9794
2	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
3	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
4	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
5	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
6	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
7	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
8	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
9	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
10	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
11	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
12	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
13	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
14	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
15	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
16	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
17	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
18	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
19	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
20	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
21	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
22	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
23	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
24	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
25	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
26	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
27	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
28	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
29	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
30	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	14.9794
Levelized Tariff	0.1183	0.1183	0.5678	0.1419	0.7646	4.7918	12.0606



UPFRONT TARIFF FOR HIGH HEAD HYDROPOWER PROJECTS (1 TO 25 MW) BASED ON 100% LOCAL FINANCING

Debt Servicing Schedule for the Purpose of Indexation of Debt Component Only

Period	Local Debt					Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh	Annual Debt Servicing Rs./kWh
	Principal Million Rs.	Repayment Million Rs.	Mark-Up Million Rs.	Balance Million Rs.	Debt Service Million Rs.			
	228.45	3.35	5.84	225.11	9.19			
	225.11	3.43	5.76	221.68	9.19			
	221.68	3.52	5.67	218.16	9.19			
	218.16	3.61	5.58	214.55	9.19			
1	228.45	13.91	22.85	214.55	36.76	3.2074	5.2693	8.4766
	214.55	3.70	5.49	210.84	9.19			
	210.84	3.80	5.39	207.05	9.19			
	207.05	3.89	5.30	203.15	9.19			
	203.15	3.99	5.20	199.16	9.19			
2	214.55	15.39	21.37	199.16	36.76	3.5483	4.9283	8.4766
	199.16	4.10	5.09	195.06	9.19			
	195.06	4.20	4.99	190.86	9.19			
	190.86	4.31	4.88	186.56	9.19			
	186.56	4.42	4.77	182.14	9.19			
3	199.16	17.02	19.73	182.14	36.76	3.9255	4.5512	8.4766
	182.14	4.53	4.66	177.61	9.19			
	177.61	4.65	4.54	172.96	9.19			
	172.96	4.77	4.42	168.20	9.19			
	168.20	4.89	4.30	163.31	9.19			
4	182.14	18.83	17.93	163.31	36.76	4.3427	4.1339	8.4766
	163.31	5.01	4.18	158.30	9.19			
	158.30	5.14	4.05	153.15	9.19			
	153.15	5.27	3.92	147.88	9.19			
	147.88	5.41	3.78	142.48	9.19			
5	163.31	20.83	15.92	142.48	36.76	4.8043	3.6723	8.4766
	142.48	5.55	3.64	136.93	9.19			
	136.93	5.69	3.50	131.24	9.19			
	131.24	5.83	3.36	125.41	9.19			
	125.41	5.98	3.21	119.43	9.19			
6	142.48	23.05	13.71	119.43	36.76	5.3149	3.1617	8.4766
	119.43	6.13	3.05	113.29	9.19			
	113.29	6.29	2.90	107.00	9.19			
	107.00	6.45	2.74	100.55	9.19			
	100.55	6.62	2.57	93.93	9.19			
7	119.43	25.50	11.26	93.93	36.76	5.8799	2.5967	8.4766
	93.93	6.79	2.40	87.15	9.19			
	87.15	6.96	2.23	80.19	9.19			
	80.19	7.14	2.05	73.05	9.19			
	73.05	7.32	1.87	65.73	9.19			
8	93.93	28.21	8.55	65.73	36.76	6.5049	1.9718	8.4766
	65.73	7.51	1.68	58.22	9.19			
	58.22	7.70	1.49	50.52	9.19			
	50.52	7.90	1.29	42.62	9.19			
	42.62	8.10	1.09	34.52	9.19			
9	65.73	31.20	5.55	34.52	36.76	7.1953	1.2804	8.4766
	34.52	8.31	0.88	26.22	9.19			
	26.22	8.52	0.67	17.70	9.19			
	17.70	8.74	0.45	8.96	9.19			
	8.96	8.96	0.23	0.00	9.19			
10	34.52	34.52	2.24	0.00	36.76	7.9512	0.5154	8.4766



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Registrar

National Electric Power Regulatory Authority Islamic Republic of Pakistan

NEPRA Tower: Attaturk Avenue (East), G-5/1, Islamabad
Ph: +92-51-9206500, Fax: +92-51-2600026
Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/UTH-01/4945-4945

April 10, 2017

Subject: Decision of the Authority in the matter of Upfront Tariff for Small Hydro Power Generation Projects up to 25 MW Installed Capacity – Extension of Date of Acceptance of Upfront Tariff

Dear Sir,

This is in continuation of this office letter No. NEPRA/UTH-01/15031-15033 dated April 10, 2017 whereby Decision of the National Electric Power Regulatory Authority in the matter of Motions for Leave for Review filed against Determination of the Authority dated April 2, 2015 regarding Upfront Tariff for Small Hydro Power Generation Projects Up to 25 MW Installed Capacity was sent to the Federal Government for notification in the official Gazette.

2. Please find enclosed herewith the subject decision of the Authority (02 pages) in the matter of Upfront Tariff for Small Hydro Power Generation Projects up to 25 MW installed capacity – extension of date of acceptance of Upfront Tariff.

3. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 3(14) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

4. The Order at Paragraph 5 of the Authority's Decision needs to be notified in the official Gazette.

Enclosure: As above

Secretary
Ministry of Water & Power
'A' Block, Pak Secretariat
Islamabad

(Syed Safeer Hussain)

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



DECISION OF THE AUTHORITY IN THE MATTER OF UPFRONT TARIFF FOR SMALL HYDRO
POWER GENERATION PROJECTS UP TO 25 MW INSTALLED CAPACITY-
EXTENSION OF DATE OF ACCEPTANCE OF UPFRONT TARIFF

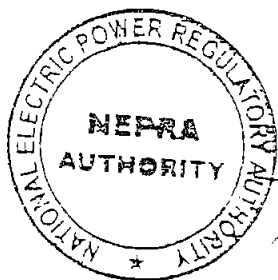
The National Electric Power Regulatory Authority (hereinafter referred to as the "Authority") has approved upfront tariff for small hydro power generation projects up to 25 MW installed capacity on April 2, 2015 (hereinafter referred to as the "Upfront Tariff Determination"). Subsequently, the Authority issued Decision in the matter of Motion for Leave for Review filed against the Upfront Tariff Determination dated April 02, 2015, on October 14, 2015 (hereinafter referred to as the "Review Motion Decision") containing the reference upfront tariff approved for 25 years along with the applicable terms and conditions for the small hydro power generation projects and notified by GoP vide S.R.O.260/(1)/2016 dated March 28, 2016. The Authority at clause xi of para 12(C) of the approved terms and conditions of Review Motion Decision dated October 14, 2015 and notified on March 28, 2016 has mentioned the validity period for acceptance of Upfront tariff by the hydro power generators as under:

"The choice to opt for this tariff will only be available up to 12 months, from the date of notification of this order."

2. The validity period for acceptance of the upfront tariff is expiring on March 27, 2017. Various stakeholders including Trident Power GR (Pvt.) Ltd. vide letter dated February 22, 2017, Riali Hydro Power Company (Pvt.) Ltd. vide letter dated February 24, 2017 and Blue Star Energy (Pvt.) Ltd. vide letter dated February 25, 2017 requested the Authority for extension of last date for opting the Upfront tariff.

3. The Authority considered the aforementioned requests in its meeting held on March 8, 2017, wherein it was observed by the Authority that the main objective to approve Upfront Tariff for small hydro power generation projects is to facilitate and galvanize the development of small hydro power generation projects. The Authority also noticed that up till now only two hydro power projects have been granted the Upfront Tariff, while there are several others who have either filed their applications or are in the process of fulfilling all the requirements applicable for acceptance of the approved Upfront Tariff. The Authority also observed that the requested extension of date of acceptance of Upfront Tariff by the hydropower companies would not have any effect on either the approved Upfront Tariff or other applicable terms and conditions.

4. The Authority after considering requests of the stakeholders and for development of hydro power generation has decided to extend the period for acceptance of Upfront Tariff by the small hydro power generation projects up to 25 MW installed capacity by 12 months while all other terms and conditions of Upfront Review Motion Decision will remain the same.





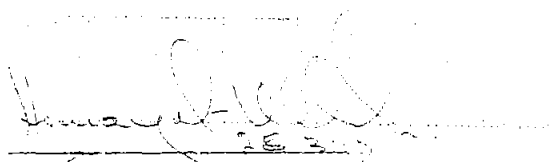
5. ORDER

Pursuant to Section 7(2)(g) and Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 read with Regulation 3 (1) of the National Electric Power Regulatory Authority (Review Procedure) Regulations, 2009, the Authority has decided to review clause 12(C)(xi) of the Decision of the National Electric Power Regulatory Authority in the matter of Motions for Leave for Review filed against Determination of the Authority dated April 2, 2015 regarding Upfront Tariff for Small Hydro Power Generation Projects up to 25 MW Installed Capacity approved on October 14, 2015 and notified on March 28, 2016 and accordingly decided to substitute with the following:

"The option for accepting Upfront Tariff by small hydro power projects will be applicable up to March 27, 2018"

6. The order at paragraph 5 is recommended for notification by the Federal Government in the official gazette in accordance with Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

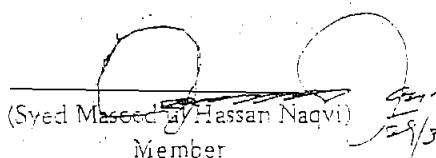
AUTHORITY



(Himayat Ullah Khan)
Vice Chairman/Member



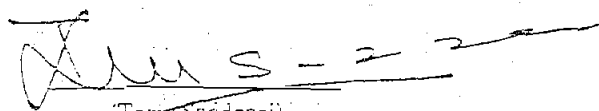
(Saif Ullah Chatha) 28.3.2017
Member



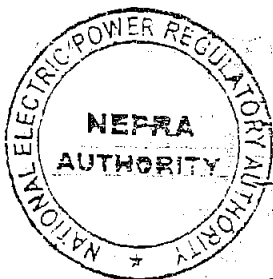
(Syed Masood Hassan Naqvi)
Member

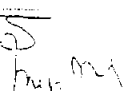


(Maj. (R) Haroon Rashid)
Member



(Tariq Saddozai)
Chairman




12-04-17

F/A-3



**AZAD GOVT. OF STATE OF JAMMU & KASHMIR
PRIVATE POWER CELL**

H # E-18, St. #9, Upper Chatter Housing
Colony, Muzaffarabad.
Tel: (05822) 921966
(05822) 921685
Fax: (05822) 921305
mail: ajk_ppc@hotmail.com

Ref: PPC/ 166-71 /2014 Dated: 28.07/2014

→ Mr. Rana Nasim Ahmed
Chief Operating Officer
M/s JDW Sugar Mills Limited
17, Abid Mujeeb Road
Lahore Cantt, Lahore

**SUBJECT: APPROVAL OF FEASIBILITY STUDY FOR 8.0 MW KATHAI-II
HYDROPOWER PROJECT (THE 'PROJECT') CONDUCTED
UNDER YOUR SPONSORSHIP**

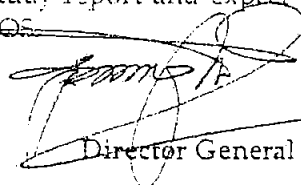
- Reference
- i) Letter of Interest (LOI) No. PPC/494-01/2012 dated 06.06.2012.
 - ii) Letter No. JDWS/AJK-PPC/04/2013 dated 09.07.2013 vide which the draft Feasibility study for 8.0 MW Kathai-II Hydropower Project was submitted.
 - iii) Subsequent meetings of Panel of Experts (POEs) dated 23.10.2013 and 21.01.2014 during which the feasibility study report was discussed and finally approved.

The AJK Private Power Cell (AJK PPC) is pleased to convey the approval of feasibility study received vide letter #SE/1674-75/2014 dated 28.01.2014 subject to the following:

- (i) The Panel of Experts (POEs) does not take any responsibility for reliability of hydro-climatological, topographical and geological data upon which the contents and conclusions of feasibility study are based.
- (ii) All queries / explanations raised either by designated Power Purchaser or any regulating agency including NEPRA on the contents of feasibility study shall be addressed by you.
- (iii) Until a letter of Support (LOS) is finally issued, the bank guarantee submitted under requirements of LOI shall remain in place and revalidated.
- (iv) An interconnection/load flow study shall be undertaken as part of obligations of Power Purchase Agreement.

2. You are directed to submit and get approval of feasibility level tariff for the designated Power Purchaser (CPPA/FESCO) within a period of three months of issuance of this letter.

3. We appreciate your efforts in the development of hydropower projects in private sector and completion of the feasibility study report and expect that you will complete all formalities prior to issuance of LOS.



Director General

CC:

1. Secretary Electricity/HEB, GoAJK, Muzaffarabad.
2. Chairman NEPRA, OPF Building, G-5/1, Islamabad.
3. Managing Director, PPB, GOP, Islamabad.
4. Chief Operating Officer, CPPA, 107-WAPDA House, Lahore.
5. Chief Executive Officer, Peshawar Electric Supply Company (PESCO).