KATHAI-II HYDRO (PVT.) LIMITED

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For information & n/a pl.
13/04/15

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The Registrar, NEPRA
NEPRA Tower, Ataturk Avenue (East)
G-5/1, Islamabad

April 10, 2015

Subject: <u>Motion for Leave for Review in relation to the determination of NEPRA in the matter of Upfront Tariff for Small Hydro Power Generation Projects – Case No. NEPRA/UTH-01/4744-4746 dated April 2, 2015 (the "Determination)</u>

Dear Sir,

Having participated as an intervener in the tariff proceedings and being aggrieved by the Determination, Kathai-II Hydro (Pvt.) Limited (the "**Company**") submits through this letter and enclosure thereto, its Motion for Leave for Review (the "**Motion for Review**") with the learned Authority under Rule 16(6) of the NEPRA (Tariff Standards & Procedure) Rules, 1998 read with Regulations 3(1), 3(2) and 3(3) of the NEPRA (Review Procedure) Regulations, 2009. The Motion for Review is being filed in light of the discovery of new and important evidence, particularly for high-head small hydro projects, and on account of other matters apparent on the face of the record. The Authority is requested to review and modify the Determination on the following grounds:

1. While the Determination is a very welcome initiative and addresses various institutional / non-tariff factors constraining the development of small hydro projects, the tariff itself is based on outdated cost information and departs materially from standard precedent established by NEPRA in all recent cost-plus hydro, upfront wind, upfront solar and upfront coal determinations.

2. For high-head projects, the assumed EPC cost of around $1.88 million per MW is taken exactly the same as for the 17 MW Ranolia HPP being undertaken in the public sector in KPK. The EPC contract for Ranolia was executed by PHYDO on June 28, 2011 and is now almost four years old. The Determination does not provide for any escalation in this benchmark cost, even though hydro projects primarily comprise civil work costs which can change dramatically in Pakistan over such a long period.

Determination provides for exchange rate variation for 40% of cost

3. The Authority seems to have inadvertently ignored two much more recent, relevant and directly comparable benchmarks in its Determination. Both benchmarks are from high-head small hydro projects that were tendered through a competitive process by PHYDO, as was the case with Ranolia four years ago. As shown in the table below, recent EPC costs for such projects are in the range of $2.77-3.26 million per MW. As such, the EPC cost assumed in the Determination is inadequate and unviable and should kindly be reconsidered by the Authority.

Project	Location	Contract Execution Date	EPC Cost (Rs. billion)	EPC Cost (US$ million)	EPC Cost (US$ / MW)
10.2 MW Jabori HPP	District Mansehra, KPK	November 13, 2014	2.786	28.28	2.77
11.8 MW Karora HPP	District Shangla, KPK	November 12, 2014	3.786	38.44	3.26

Note: Based on exchange rate of 1 US$: 98.5 PKR

4. Critically, the Determination does not provide any mechanism for indexation of civil work costs, which is allowed as standard practice in cost-plus hydropower tariff determinations. In effect, the Determination assumes that sponsors shall be able to set up and commission small hydro projects four to five years from now (i.e. around 2019-20) at the same cost as assumed today, which itself is based on an EPC cost from 2011. The Authority would appreciate that 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.

Accordingly, it is requested that the Determination may be modified to include a one-time indexation adjustment at COD as in precedent determinations (e.g. Patrind). This adjustment would not be project-specific and would be based on the generalized benchmarks assumed by the Authority and variation in exchange rate and officially published indices for steel, cement, diesel and labour. The suggested mechanism is as follows:

a) 40% of the assumed EPC cost shall be adjusted for exchange rate variation over 36 months starting from the date of financial close. This adjustment shall only apply for projects funded through local currency debt.

b) 60% of the EPC cost shall be adjusted for variations in civil costs as per the following formula:

$$P_n = 0.51 + 0.10*(C_n/C_0) + 0.09*(S_n/S_0) + 0.17*(F_n/F_0) + 0.13*(L_n/L_0)$$

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 per the Wholesale Price Indices published as part of the Monthly Review on Price Indices by the Pakistan Bureau of Statistics;

S_n is the index value for the relevant month for Steel Bar & Sheets as per the Wholesale Price Indices published as part of the Monthly Review on Price Indices by the Pakistan Bureau of Statistics;

F_n is the index value for the relevant month for Diesel Oil as per the Wholesale Price Indices published as part of the Monthly Review on Price Indices by the Pakistan Bureau of Statistics;

L_n is the index value for the relevant week for Mason (Raj) for Rawalpindi as per the Wage Rates published as part of the Weekly Sensitive Price Index by the Pakistan Bureau of Statistics; and

C_0, S_0, F_0 and L_0 are the reference values of the cost indices for Cement, Steel Bar & Sheets, Diesel Oil and Mason (Raj) as of the date of the tariff determination.

c) Other non-EPC components of the project cost shall be adjusted based on the revised EPC cost.

RLNG 3%
Same as in wind + bagasse
impact 0.1078 cents

5. The Determination assumes local financing at KIBOR + 3%, which is a major deviation from KIBOR + 3.5% allowed in other recent upfront tariff determinations (e.g. solar and coal). Commercial banks will not consider financing small hydro projects at a lower spread as the construction complexity for such projects is significantly higher. The Authority is requested to keep the spread over KIBOR at least the same as in the solar and coal upfront tariffs.

As per RE Policy 2006.
impact 0.2405

6. It appears that the Determination is based on a debt: equity ratio of 80:20, which again does not reflect current financing trends and is inconsistent with the more realistic 75:25 ratio assumed by the Authority in the upfront wind, solar and coal tariffs. It is requested that the debt: equity ratio in the Determination may be modified as per established precedent.

Coal, solar 3.5%
3% allowed in wind, etc
impact 0.0375

7. Similarly, in line with the arguments above, financing fees & charges should be based on 3.5% of the total debt worked out at 75% of the project cost as already allowed in other upfront tariffs.

8. The Authority's decision to enhance IRR for small hydro projects to 20% is highly appreciated as it acknowledges the various complexities in developing a small hydro project in comparison to other power generation projects. However, it is respectfully pointed out that if the IRR is increased to 20%, but other important assumptions related to project cost and financing parameters are unrealistic or adverse compared to other tariffs, then the effective IRR will be much lower than the notional 20% figure. In fact, if there were a choice between the current tariff and a revised tariff with standard IRR but more realistic tariff parameters, the Company would choose the latter. Sponsors cannot earn the IRR assumed by the Authority if the tariff itself is not viable for setting up a project.

9. The Authority has developed a fair, detailed and commendable mechanism for adjustment of plant factor as per actual for projects that opt to transfer the hydrological risk to the power purchaser. However, the Determination does not include a table illustrating the tariff for various plant factors. Instead, the Determination is based on the lowest possible plant factor of 50%, which has the effect of artificially inflating the tariff. Most high-head projects will likely have higher plant factors and hence significantly lower tariffs as estimated in the table below. Including such a table in the Determination would communicate complete information to investors as well as the general public and avoid any misconceptions on account of the low base plant factor.

Plant Factor	Estimated levelized tariff for high-head projects (Rs/kWh)	
	Foreign Financing	Local Financing
50%	7.62	9.99
55%	6.93	9.09
60%	6.35	8.33
65%	5.86	7.69
70%	5.44	7.14

To further illustrate this point, the plant factors for various high-head projects under development by PHYDO in KPK are provided below. Several projects have plant factors substantially higher than the assumed 50%. While the figure of 50% should be retained as the minimum threshold, the Determination should stipulate the tariff for a range of plant factors.

Project	Stage	District	MW	Plant Factor
Ranolia	Under construction	Kohistan	17	67.5%
Jabori	- do -	Mansehra	10.2	79.6%
Karora	- do -	Shangla	11.8	69.1%
Ghorband	Feasibility	Shangla	20.6	61.7%
Nandihar	- do -	Battagram	12.3	64.7%
Patrak Shringal	- do -	Dir	22	56.6%

10. The inclusion of Annexure-II in the Determination as a standard template for certification of plant capacity and hydrology is an excellent initiative to streamline processing of small hydro

projects. However, it is recommended that a small change be made to Annexure-II to ensure that the template achieves the desired results.

As per established practice for small hydro, the relevant provincial / AJK agency issues certifications for feasibility study approval on behalf of the Panel of Experts after the Experts have reviewed the study and given their approval. The wording of Annexure-II instead places the onus of certification directly on the Experts themselves in their individual and collective capacity. The Experts will likely shy away from this, as they perform their role in an advisory capacity and are otherwise full time employees of other public sector departments and agencies, e.g. irrigation, environment, public works, CPPA, etc.

Instead, the relevant agency should itself sign and issue the certificate after having completed its scrutiny including review by the Panel of Experts. The references in Annexure-II to signatures and dates of each member of the Panel of Experts should be deleted, so that the designated signatory is the agency as per its mandate and not voluntary individuals.

11. Para xvii) on page 57 of the Determination currently provides that all pass-through items including water use charges shall be reimbursed by the power purchaser over a twelve month period. It is submitted that water use charges shall be a regular monthly or quarterly payment by the company and spreading the reimbursements for these over twelve months shall lead to recurring liquidity issues. Accordingly, it is requested that the language be modified so that pass-through water use charges are payable as and when incurred by the company and subject to the same payment cycle as the sale of electricity under the power purchase agreement.

Similarly, since any taxes and duties assessed on the company prior to COD are payable by the company when imposed but can only be invoiced to the power purchaser post-COD, adding another twelve months for payment of the same would pose a financial burden on the company. The Authority may please consider spreading the reimbursement in this case over a six month period instead.

12. The Determination currently stipulates a validity of 12 months, following which financial close has to be achieved within 18 months. It is submitted it can routinely take up to six months or more to have a draft feasibility study approved by the relevant agency after multiple rounds of changes and reviews. The emphasis placed on proper certification of the feasibility in the Determination will likely increase the timelines. It is recommended that the two timelines be reversed, so that validity period of the tariff is 18 months and subsequent time for financial close is 12 months. This change would enable maximum number of sponsors to opt for the upfront tariff.

13. It is requested that the validity period for the Determination be counted from the date of the Authority's decision in the matter of this and any other motions for leave for review.

14. It is pointed out that ECC-approved standardized hydropower security documents already exist for hydropower, so many months of delays due to drafting of new documents as in other cases can be avoided. The documents were prepared by PPIB, which has been acting as the coordinating agency for larger hydropower IPPs generally, as well as for small hydro projects in AJK. Accordingly, it is suggested that AEDB 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 may please also note in the Determination that any unnecessary redrafting should be avoided on this account.

15. It is clarified that the market for carbon credits has collapsed in recent years and most projects no longer even apply for carbon credits. While there is no objection to sharing the proceeds of any carbon credits with the power purchaser as per applicable policy, the language at para xx)(c) on page 64 may 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.

16. For the sake of abundant clarity, the Authority may please also confirm the following:

   a) The tariff granted to projects located in AJK through NTDC under the Interim Power Procurement (Procedures and Standards) Regulations, 2005 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 shall only apply in case the power producer petitions for it and otherwise no project-specific adjustment on this account shall be made.

I would be grateful for timely admission and consideration of this Motion for Review and remain at the Authority's disposal in case any further information or clarification is required.

Yours truly,
for KATHAI-II HYDRO (PVT.) LIMITED

(Rana Uzair Nasim)
Chief Executive
Encl: Affidavit in support of Motion for Review

E905320

Rupees 50 روپیہ ۵۰

BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

AFFIDAVIT

I, Rana Uzair Nasim, Chief Executive of Kathai-II Hydro (Pvt.) Limited having its registered office at 1485/C – 2A, Asad Jan Road, Lahore Cantt., hereby solemnly affirm that the contents of the accompanying 'Motion for Review' dated 10 April 2015 are true and correct to the best of my knowledge and belief and nothing has been concealed.

I also affirm that all further documentation and information to be provided by me in connection with the accompanying 'Motion for Review' shall be true to the best of my knowledge and belief.

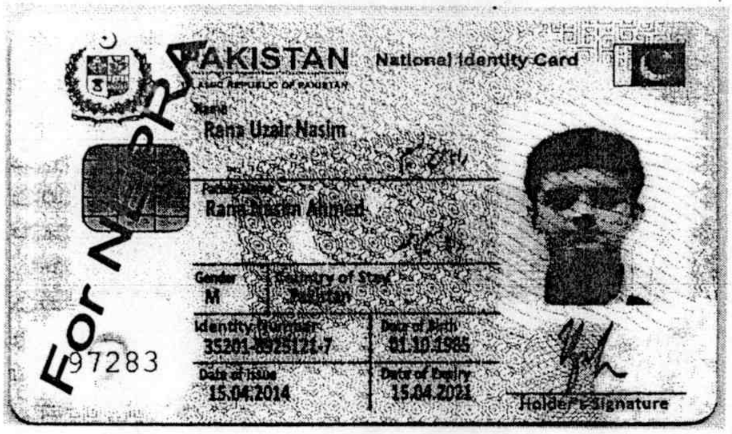
DEPONENT
Rana Uzair Nasim
CNIC No. 35201-8925121-7

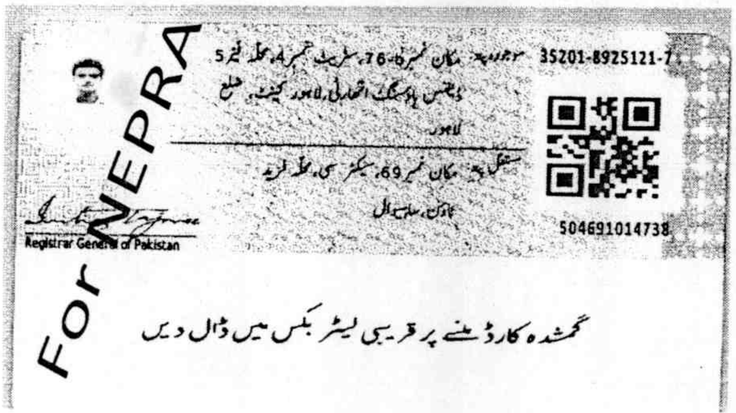
Verification

Verified on oath at Lahore on this 10th day of April 2015 that the contents of the above affidavit are correct and true to the best of my knowledge and belief.

DEPONENT
Rana Uzair Nasim
CNIC No. 35201-8925121-7

ATTESTED


PAKISTAN
ISLAMIC REPUBLIC OF PAKISTAN
National Identity Card
Name
Rana Uzair Nasim
Father Name
Rana Nasim Ahmed
Gender
M
Country of Stay
Pakistan
Identity Number
35201-8925121-7
Date of Birth
01.10.1985
Date of Issue
15.04.2014
Date of Expiry
15.04.2021
Holder's Signature
97283
For NEPRA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ڈیفنس ہاؤسنگ اتھارٹی، لاہور کینٹ، ضلع
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For NEPRA