UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

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Statement of Reasons for the "Draft UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) (Second Amendment) Regulations, 2014" and "Draft UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) (First Amendment) Regulations, 2010"

Statement of Reasons

INTRODUCTION

1. The Commission had issued the UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2013 (hereinafter referred to as "Principal Regulations-1") vide notification dated April 15th, 2013 repealing earlier UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2010 (hereinafter referred to as "Principal Regulations-2"). Both the Regulations have options to be exercised by the generator in respect of applicability of the tariff i.e. "generic tariff" (as specified in the regulations) or "project specific tariff" (to be determined by the Commission based on petition filed by the generators). Keeping in view the main objective of the applicability of option exercised by the generator during the currency of PPA (i.e. life of the project), the Principal Regulations-1 have been amended vide notification dated October 15, 2013 wherein, Regulation 3 of Chapter 1, Chapters 4 and 5 of the Principal Regulation-2 were reinstated. These reinstated regulations were made applicable on the projects commissioned prior to coming into force of the Principal Regulations-1.
2. The Commission received three Petitions from M/s Birahi Ganga Hydro Power Ltd., M/s Rishiganga Power Corporation Ltd and M/s Himalaya Hydro Private Ltd. wherein, request were made as following:

   i. To review the Capacity Utilization Factor specified in RE Regulations, 2010 & 2013 and refix them at a lower level for recovery of AFC.

   ii. To adjust capital subsidy only after it has been received by the generators.

   iii. Capital cost indexation mechanism should be in place.

   iv. To allow additional capitalization on account of force majeure condition as applicable for large hydro stations.

3. The Petitioners had submitted the data of CUF of the existing generating stations in the State since FY 2007-08 contending that most of the plants are unable to achieve the normative CUF of 45% as specified by the Commission in RE Regulations, 2010 & 2013. A hearing was held in the matter on March 19, 2014 regarding admissibility of the Petitions wherein the generators alongwith UPCL was heard in the matter. UPCL submitted that review of Regulations could not be undertaken by the Commission through a judicial order. They also contended that the petitions were barred by limitation.
4. The Commission vide its Order dated March 19, 2014, held as under:

   "*The Commission holds that the petitions are not maintainable as review/modification of Regulations cannot be undertaken by the Commission while discharging its judicial function. However, considering the contention taken by the petitioners regarding difficulties in achieving norms of operation prescribed in Regulations, the Commission orders that Secretary may get the data of CUF submitted by the petitioners examined as also the other issues raised by the petitioners and, if required, frame an appropriate draft amendment to RE Regulations, 2010 & 2013 for inviting comments from all stakeholders.*

   With the above observations, the petition stands disposed off as not maintainable.**"**
5. The Commission's staff based on the information available from UPCL regarding the energy purchased from the SHP's since FY 2008-09, examined the data related to CUF and other issues raised by the Petitioners. Since some of the concerns raised by the Petitioners were found to be genuine, accordingly, the Commission feels the need to examine the issues and issue an amendment Regulations to RE Regulations, 2010 & 2013 for inviting comments from all stakeholders. The issues raised by the three generators are discussed hereunder:
6. **Capacity Utilization Factor**

6.1 The normative CUF of 45% is applicable on the SHPs who have opted for generic tariffs under the Principal Regulation-1 & 2. In accordance with the Regulations referred above, the tariffs have been specified based on the CUF of 45%. Accordingly, if the CUF is less than 45%, it will result in under-recovery of Annual Fixed Charges (AFC) and in case the CUF exceeds 45%, it results in an incentive to the generators. However, the CUF in case of SHPs is dependent on the vagaries of nature which makes the SHPs more riskier.

6.2 In the past two to three years, the State of Uttarakhand has witnessed catastrophe which has not only affected the projects significantly but has also led to the poor CUF, resulting in under-recoveries of the AFC based on the norms specified by the Commission. From the Table below it is evident that since FY 2009-10, the average CUF of the SHPs in the State has been in the range of 31% to 38% with only 3-4 plants out of 12 existing SHPs operating consistently over the normative CUF of 45%.

Station	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Mohammadpur	0.00%	54.52%	52.25%	36.14%	18.59%	0.00%
Pathri	0.00%	54.06%	46.37%	47.85%	31.59%	0.00%
Rajwakti	69.80%	62.34%	53.56%	53.27%	44.07%	49.03% *
Hanuman Ganga SHP	34.63%	36.95%	39.50%	29.72%	38.72%	16.62%
Debal	22.44%	46.26%	43.68%	42.78%	45.09%	39.24%
LoharKhet	0.00%	45.84%	42.89%	41.17%	50.24%	44.43%
Agunda Thati	0.00%	0.00%	38.23%	47.98%	55.51%	58.94%
Bhilangana(Swasti)	0.00%	0.00%	13.94%	34.69%	38.57%	42.40%
Vanala	0.00%	0.00%	4.84%	23.60%	32.51%	30.28%
Motigad	0.00%	0.00%	0.00%	0.00%	31.05%	31.40%
Rishiganga	0.00%	0.00%	0.00%	0.00%	5.23%	16.68%
Birahi Ganga	0.00%	0.00%	0.00%	0.00%	13.08%	30.21%
Average PLF	41.14%	51.52%	31.34%	37.89%	30.59%	33.91%

* Not covered by this regulation

6.3 Hence, based on the data for the last 4 years, there is a need to review the norms specified in the Regulations so that the SHPs are able to recover atleast their AFCs based on the norms specified by the Commission in the Regulations.

6.4 The Commission is well aware with the risks involved in the SHP business. Due to remote location there is associated problem of access to the SHPs, hence, risk is inevitable in construction as well as during operations of the SHPs. The Commission also appreciates that in case of Small Hydro Projects, CUF is an important parameter and is a measure of the estimated energy likely to be generated as a percentage of maximum energy that could have been generated with full capacity utilization of the installed capacity of the project. The CUF for a hydel project would depend to a large extent on parameters such as the prevailing hydrology in the river basin and rainfall (or snowfall) in the catchment area. Thus, project developers are exposed to the risk (referred to as hydrology risks) that if in a particular year water availability falls below normative levels, which is not unusual, the developers revenues will fall short of what is required for earning the stipulated returns given that revenues are linked to actual generation. Therefore, hydrological risk is the single largest risk that a SHP faces post commissioning and a number of SHPs have seen underperformance with respect to design energy. This underperformance typically arises from two reasons. Firstly, because of inaccurate estimates about design energy and secondly, because of natural factors such as adverse weather patterns affecting rainfall (and/or) snowfall or environmental degradation resulting in either reduced waterflows or flooding or excessive siltation which affects plant performance.

However, the Commission also understands that such variation in hydrology may also turn in favour of the developers since the single part tariff structure could result in an SHP developer earning much higher returns if actual generation is in excess (which should be deemed as an incentive for higher generation).

6.5 In view of the above, considering the fact that underachievement of CUF by the SHPs vis-à-vis normative CUF specified in the Principal Regulations lead to shortfall in revenue generation. Under recovery of AFC as compared to the normative AFC in accordance with the Principal Regulations creates problem of servicing of financial obligations as well as routine expenditures also. Therefore, the Commission is of the view that normative CUF of SHPs as specified in Regulation 26 of the Principal Regulations-1 and Regulation 27 of the Principal Regulations-2 may be relaxed and reduced to 40%.

6.6 However, the intent of the Commission by relaxing the CUF is not to allow the SHPs to maximise their returns but to enable them to recover the normative fixed costs. Accordingly, the Commission has proposed to calculate the tariffs for SHPs opting for generic tariffs at an annual CUF of 40%. However, for generation beyond annual CUF of 40%, when entire fixed cost has been recovered, the tariff shall be the levelised generic rates equal to the O&M expenditure as the plant would incur some amount of O&M expenses which is required to be met. Further, for generation beyond annual CUF of 45%, the incentive shall be equal to the levelised generic rates specified in the Principal Regulations at a CUF of 45%.

However, as already discussed above, the intent of the Regulation is not to allow maximisation of returns, the Commission has proposed an adjustment mechanism in case the actual CUF of the SHP exceeds 45%.

7. **Capital Subsidy**

7.1 The generators had requested the Commission to adjust the capital subsidy only after it has been received by them. In this regard, the Commission is of the view that capital subsidy is provided for promotion of RE based power generation and also to reduce financial burden on the project developers and make their tariffs attractive. If adjustment of capital subsidy only after receipt of the same is allowed, as requested by the generators, then all the project developers shall be getting higher tariffs and they would stop making efforts for availing capital subsidy. Moreover, the Principal Regulations already specify the correction mechanism in case the subsidy amount is reduced by

MNRE provided the reduction in subsidy amount is not due to the inefficiency of the generator. Accordingly, Commission is not making any changes in the regulation for this request of the generators.

8. **Capital Cost Indexation Mechanism**

8.1 With respect to the introduction of capital cost indexation mechanism, as requested by the generators, the Commission observes that Principal Regulations-2 were made applicable from 06.07.2010 almost four years back from now, none of the project developers made representation in the matter during the currency of these Regulations. Moreover, the Principal Regulations-1 & 2 have been introduced by the Commission after due course of proceedings including comments/suggestions on draft Regulations from all the Stakeholders. However, no representation in the matter has been received during the above proceeding. The Commission is of the view that in case request of the applicants is considered, revision of tariff would take place retrospectively consequent to revision of capital cost which is not allowed under law. Therefore, the Commission does not find any merit in the request for introduction of capital cost indexation mechanism.

8.2 generators contention of additional capitalisation on account of Force Majeure events, it is a recognised fact that the SHPs are riskier as compared to other renewable sources of energy. These projects are dependent on the vagaries of nature and considering their size they are more prone to damages. In the past 2-3 years, the State of Uttarakhand has witnessed calamities in the form of flash floods/landslides, etc. which has also affected most of the hydro projects. The Commission also takes note of the existing MYT Regulations, 2011 namely UERC (Terms and Conditions for Determination of Tariff) Regulations, 2011 which provides for such additional capitalisation for large hydro generating stations. Therefore, the Commission is of the view that provisions akin to MYT Regulations, 2011 for additional capitalisation on account of Force Majeure may be introduced in both the Principal Regulations as force majeure events are unforeseen and cannot be planned and they are distinct from the normal additional capitalisation works already in the original scope and incurred within the cut-off date. However, such provisions would only apply if the generator has taken adequate insurance cover for its SHP.

By the order of the Commission

(Neeraj Sati)
Secretary