

Before

UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

In the matter of:

Petition for seeking carry forward of Renewable Purchase Obligation of FY 2016-17 amounting to 787.68 MU (Non-Solar) and 161.32 MU (Solar) as per the provisions of UERC (Compliance of Renewable Purchase Obligation) Regulations, 2010.

In the matter of:

Uttarakhand Power Corporation Ltd. ... Petitioner

AND

In the matter of:

Uttarakhand Renewable Energy Development Agency (UREDA) ... Respondent

CORAM

Shri Subhash Kumar Chairman

Date of Hearing: May 30, 2017

Date of Order: Sept. 15, 2017

This Order relates to the Petitions filed by Uttarakhand Power Corporation Limited (hereinafter referred to as "UPCL" or "Petitioner" or "licensee") seeking carry forward of unmet Renewable Purchase Obligation for FY 2016-17 amounting to 787.68 MU (Non-Solar) and 161.32 MU (Solar) as per the provisions of UERC (Compliance of Renewable Purchase Obligation) Regulations, (hereinafter referred to as "RPO Regulations, 2010").

1. Background

1.1 The Petitioner submitted that the Commission vide its Order dated 20.06.2016 had permitted the Petitioner to carry forward the unmet RPO for FY 2015-16 for both Solar as well as Non-Solar. The Petitioner further submitted that it has achieved the RE obligations for FY 2015-16, however, despite its efforts it has not been able to complete the obligation for FY 2016-17 amounting to 787.68 MU (Non-Solar) and 161.32 MU (Solar). The instant Petition has been filed for approval of the Commission for carry forward of unmet RPO for FY 2016-17 as per UERC (Compliance of Renewable

2. Petitioner's submission

2.1 The Petitioner submitted that the Commission vide its Order dated 12.01.2017 had directed UPCL to submit the Action Plan for meeting the unmet RPO for the period upto FY 2016-17 and Action Plan for the ensuing FY 2017-18 & FY 2018-19 and in compliance to the same, UPCL had submitted the Action Plan for meeting out the unmet RPO of 1000 MU (approx.) as follows:

Month	RE Power through Tender (In MU)	Cost of RE Power (@ Rs. 4.75/kwh) (A)	REC (In '000.)	Cost of REC (@ Rs. 1.50/kwh) (B)	Total Purchase Cost (A+B)
Feb-17	0	0	100	15 Cr	15 Cr
Mar-17	0	0	100	15 Cr	15 Cr
Apr-17	50	23.7 Cr	50	7.5 Cr	31.2 Cr
May-17	50	23.7 Cr	50	7.5 Cr	31.2 Cr
Jun-17	50	23.7 Cr	50	7.5 Cr	31.2 Cr
Jul-17	50	23.7 Cr	50	7.5 Cr	31.2 Cr
Aug-17	50	23.7 Cr	50	7.5 Cr	31.2 Cr
Sep-17	50	23.7 Cr	50	7.5 Cr	31.2 Cr
Oct-17	50	23.7 Cr	50	7.5 Cr	31.2 Cr
Nov-17	50	23.7 Cr	50	7.5 Cr	31.2 Cr
Total	400	189.6 Cr	600	90 Cr	279.6 Cr

2.2 The Petitioner also submitted that in view of the financial health of the Corporation and based on a realistic approach, the plan to meet out the unmet RPO pertaining to FY 2016-17 was proposed to be met in 10 months instead of achieving it on or before 31.03.2017 as directed by the Commission vide its Order dated 20.06.2016. The Petitioner also submitted that it had purchased RECs against 100 MUs amounting to Rs. 15.00 Crore in the month of February 2017. Further, CERC had proposed the reduced forbearance price and floor price of RECs and subsequently, the Petitioner requested the Commission to withhold the implementation of Action Plan till the final decision of CERC regarding determination of floor price of Non-Solar REC and the same was accepted by the Commission and had permitted the Petitioner to defer from its Action Plan as requested.

2.3 The Petitioner submitted that as per the proposed Action Plan there was a deficit of around 1000 MU (approx.), however, at the time of filing the instant Petition UPCL was having a deficit of 787.68 MU (Non-Solar) and 161.32 MU (Solar) only. The detailed summary of the RPO as submitted by the Petitioner for FY 2016-17 is as follows:

Total Electricity Purchased	12772.38 MU
Obligation Non-Solar (8% of total electricity purchased)	1021.79 MU
Obligation Solar (1.50 % of total electricity purchased)	191.59 MU
Total RPO obligation for Non-Solar upto FY 2016-17 (Including carry forward of previous year RPO i.e. 700 MU (Non-Solar))	1721.79 MU
Total RPO obligation for Solar upto FY 2016-17 (Including carry forward of previous year RPO i.e. 8.1 MU (Solar))	199.69 MU
RE Purchase (Non-Solar) at Preferential Tariff for FY 2016-17	605.54 MU
Through Tender (Non-Solar)	176.07 MU
Through purchasing REC's (Non-Solar)	152.50 MU
Total RE Purchase (Non-Solar)	934.11 MU
RE Purchase (Solar) for FY 2016-17	38.37 MU
Unmet RPO (Non-Solar)	787.68 MU
Unmet RPO (Solar)	161.32 MU

- 2.4 The Petitioner submitted that based on the past trends of increase in the generation from SHP projects, it had projected the generation from SHPs as 737 MU (approx.) in FY 2016-17, however, actual generation from such projects was only 605 MU (Approx.). The Petitioner also submitted that instead of increase in the generation by SHPs, the generation from SHP sources at preferential tariff is even lower than that of previous year by approx. 52 MU as per actual which shows the inefficiency of the generator. Further, with regard to solar deficit, the Petitioner submitted that the delay in date of commissioning of 181 MW Solar PV Plant from 31.03.2016 to 31.03.2017 has drastically impacted the solar power purchase of the corporation and due to these reasons, there is a financial burden on the Petitioner of Rs. 94 Crore (@ of Re. 1/kWh for both Solar and Non-Solar).
- 2.5 The Petitioner also submitted that to meet out the unmet RPO, it had already tied up with M/s Mittal Processors Pvt. Ltd. to procure 126 MU, M/s GMR Energy Trading Ltd. to procure 156.42 MU and M/s Tata Power Trading Company Ltd. to procure 160.25 MU during FY 2017-18. The Petitioner also submitted that in comparison to previous year, UPCL has secured more Non-Solar RE Power through tender within the specified rate at State periphery which is around 442.67 MU in FY 2017-18 as against 176.07 MU in FY 2016-17.
- 2.6 Further, the Petitioner submitted the detailed Renewable Purchase Obligation for FY 2017-18 as follows:

Total Electricity Purchased	14167 MU
Obligation Non-Solar (8% of total electricity purchased)	1133.33 MU
Obligation Solar (2.50 % of total electricity purchased)	354.17 MU
Total RPO obligation for Non-Solar upto FY 2017-18	1921.01 MU
Total RPO obligation for Solar upto FY 2017-18	515.48 MU
RE Purchase (Non-Solar) at Preferential Tariff for FY 2017-18 (including 442.67 MU RE power through tender)	1127.72 MU
RE Purchase (Solar) for FY 2017-18	425.9 MU
Estimated deficit till FY 2017-18 (Non-Solar)	793.29 MU
Estimated deficit till FY 2017-18 (Solar)	89.58 MU

2.7 The Petitioner also submitted that GoI has given an opportunity to the Petitioner to buy wind power at competitive rate without payment of ISTS charges and losses to fulfil its non-solar RPO. The said proposal was under consideration of UPCL and would be finalised in upcoming months. The Petitioner further submitted that the deficit of Solar RPO of 89.58 MU is due to the backlog of FY 2016-17 wherein the Solar Plant having cumulative capacity of 181 MW did not commission within the specified period, however, the same got commissioned in March 2017 and will contribute in FY 2017-18.

3. Respondent's Submission

3.1 UREDA submitted that according to RPO statement provided by UPCL to UREDA cumulative shortfall in case of Non-Solar RPO and Solar RPO was 778 MU and 158.63 MU respectively till FY 2016-17 which do not reconcile with the details of RPO shortfall submitted to the Commission. The Respondent also submitted that UPCL was unable to ensure compliance according to their action plan.

3.2 With regard to delay in commissioning of 181.04 MW solar power plants, the Respondent referred to the Commission's Order dated 20.09.2017 vide which the Commission had pointed out towards the inefficiency of UPCL in signing the PPA. The Respondent also submitted that the Petitioner has proposed to fulfil solar RPO obligation at some extent by the proposed 33 MW solar roof-top power projects. In this regard, the Respondent added that these 33 MW roof-top solar power plants have not been commissioned till date and these projects could be commissioned only if UPCL supports in timely achieving the various activities during execution of the project. UREDA also submitted that the Petitioner should not depend on roof-top solar power project for fulfilling their solar RPO as these projects are captive and based on net metering.

3.3 UREDA also submitted that as a nodal agency, UREDA could only facilitate the development of solar power plant under type-1 category of policy on behalf of UPCL. Further, it would take around one and half year for commissioning of new solar projects from the date of additional capacity requirement projected by UPCL for fulfilling their RPO requirement and as per the data provided by UPCL in the instant petition, UPCL will be requiring an additional capacity of 100 MW solar projects assuming solar RPO @ 3% in FY 2018-19.

4. Commission's Analysis and view

4.1 Section 86 (1)(e) of the Electricity Act, 2003 provides the following as one of the function of the State Electricity Regulatory Commission:

"promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licence;"

4.2 Accordingly, the Commission in its RE Regulations, 2013 and in subsequent amendments thereto had specified the Renewable Purchase Obligation (RPO) to be met by the Obligated Entities. However, in case the obligated entity or the distribution licensee (UPCL in this case) fails to meet its RPO obligation through procurement of power from renewable energy sources for meeting its electricity requirement then the Regulations provides for supplementing the RPO through purchase of RECs, which is a valid instrument for discharge of the mandatory obligation of the obligated entity. The relevant provision in this regard are specified under Regulation 4(1) of RPO Regulations, 2010 which is reproduced below:

"Subject to the terms and conditions contained in these regulations the Certificates issued under the CERC (Terms and Conditions for recognition and issue of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010, shall be the valid instruments for the discharge of the mandatory obligations set out in these regulations for the obligated entities to purchase electricity from renewable energy sources.

Provided that in the event of the obligated entity fulfilling the renewable purchase obligation by purchase of certificates, the obligation to purchase electricity from generation based on solar as renewable energy source can be fulfilled by purchase of solar certificates only, and the obligation to purchase electricity from generation based on renewable energy other than solar can be fulfilled by purchase of non- solar certificates".

- 4.3 Thus, from the above reading of the Regulations, it is amply clear that UPCL has to purchase a minimum percentage (RPO) of its total electricity requirement (in kWh) from renewable energy sources during each financial year as specified by the Commission and the REC shall be the valid instruments for the discharge of the mandatory obligations set out in the Regulations for the obligated entities to purchase electricity from renewable energy sources in case of shortfall in meeting the RPO requirement.
- 4.4 In the instant Petition, UPCL has sought carry forward of unmet RPO of FY 2016-17 amounting to 787.68 MUs for Non-Solar and 161.32 MU for Solar to be purchased in FY 2017-18. The Petition was heard on 30.05.2017 and the Commission vide its Order dated 30.05.2017 directed the Petitioner to submit the concrete action plan for meeting RPO compliance for FY 2017-18 alongwith the deficit for the previous years. The Petitioner was also directed to submit its preparedness for meeting the RPO compliances for the ensuing years in accordance with the National Action Plan on Climate change, i.e. upto 15% RPO by 2022.
- 4.5 Meanwhile, the Commission had proposed an amendment in the RE Regulations, 2013 on 06.06.2017 whereby the RPO targets have been proposed to be amended in line with the MoP Order dated 22.07.2016 in the interest of UPCL and consumers of the State. Subsequently, the Petitioner vide its submission dated 12.06.2017 requested the Commission to grant relaxation w.r.t. submission of action plan till the finalisation of amendment in RE Regulations 2013. The Commission directed the Petitioner to submit the action plan for meeting its RPO compliance for FY 2017-18 including the shortfall in RPO compliance for FY 2016-17 based on the existing RE Regulations as well as revised RPO targets proposed vide the aforesaid amendment. The Petitioner vide its submission dated 10.07.2017 submitted the reply according to which the estimated deficit in RPO compliance was 95.05 MUs and 810.80 MUs for solar and non-solar respectively. Here, it is to be noted that the Petitioner was directed to submit concrete action plant for meeting RPO compliance, however, as per submission of the Petitioner there was still a shortfall in meeting the solar as well as non-solar RPOs in FY 2017-18. Accordingly, the Commission issued show cause notice to UPCL directing it to submit why appropriate action should not be taken against it due to repeatedly failure to comply with the Commission's Order and directions.
- 4.6 The Petitioner vide its letter dated 29.07.2017 submitted that UPCL had re-evaluated its

action plan for meeting the RPO upto FY 2017-18 and found some deficiencies and hence, submitted revised action plan based on the proposed draft RE Regulations which is reproduced hereunder:

Total Electricity Purchased	14385.45 MU
Total Hydro Energy purchased	7569.44 MU
Energy Excluding Hydro Energy (A)	6816.01 MU
Obligation Non-Solar (9.50% of (A))	647.52 MU
Obligation Solar (4.75 % of (A))	323.76 MU
Deficit for FY 2016-17 (Non-Solar)	787.68 MU
Deficit for FY 2016-17 (Solar)	161.32 MU
Total RPO obligation for Non-Solar upto FY 2017-18	1435.20 MU
Total RPO obligation for Solar upto FY 2017-18	485.08 MU
RE Purchase (Non-Solar) at Preferential Tariff for FY 2017-18	685.72 MU
RE Purchase (Solar) for FY 2017-18	404.77 MU
Estimated deficit till FY 2017-18 (Non-Solar)	749.48 MU
Estimated deficit till FY 2017-18 (Solar)	80.31 MU

4.7 With regard to UPCL's submission that delay in date of commercial operation of 181.04 MW Solar PV power plant from 31.03.2016 to 31.03.2017 has impacted its action plan of Solar RPO compliance, it is pertinent to mention that delay in the commercial operation of such plant was also due to the lacklustre approach and inefficiency of UPCL. The Commission vide its Order dated 29.07.2016 had directed UPCL and developers to sign supplementary PPA within 2 days from the issue of the Order. Relevant Para of the said Order is as follows:

"4. Accordingly, keeping in view the requirement of financial closure to be achieved by the project developers by 31.07.2016, both UPCL and the generators are directed to incorporate the changes discussed above in the respective PPAs by executing a Supplementary PPA within 2 days of the issuance of the Order and submit the compliance immediately."

However, UPCL after one month from the date of the Order requested the developers for signing of supplementary PPA. Subsequently, the Commission vide its Order dated 20.09.2016 also took cognizance of the fact that delay in achieving financial closures and consequently commissioning of the projects was due to the inefficiency of UPCL on account of delay in signing of the PPAs. Relevant extract of the Order is as follows:

"3.2 In this regard, it is pertinent to mention that this scheme was introduced to facilitate UPCL in meeting its Solar Renewable Purchase Obligation. However, it is also not denied from the facts that delay in achieving financial closures and consequently the commissioning of the projects is due to the inefficiency of UPCL in delaying the signing of the PPA....."

Further, some of the solar power generators namely M/s Emami Power Limited, M/s ACME, M/s Technique Solarie and others had brought the issue of non-availability of the evacuation system/backing down/frequent outage of the grid to the notice of the Commission during the public hearing in the matter of sixth amendment to RE Regulations, 2013. With regard to the comments of UPCL on reduction in generation from SHP sources as compared to the previous years due to inefficiency of the generators, it is pertinent to mention that during the public hearing on sixth amendment to RE Regulations 2013, hydro power generators namely M/s Uttar Bharat Hydro Power Pvt. Ltd., M/s Birahi Ganga Hydro Power Ltd., M/s Himalaya Hydro Power Ltd and other have raised the issue of loss of generation due to frequent/numerous failure of UPCL's distribution system including high voltage condition beyond the control of the generators. These issues have also been dealt by the Commission in its earlier orders mentioned above.

Admittedly, based on the above the reasons for inability of UPCL to comply with Solar and Non-solar RPO obligation are due to its own inefficiency for not taking proper actions/steps towards facilitating solar developer in signing of PPA promptly and getting connectivity to the grid expeditiously in accordance with the specific Orders/direction of the Commission in this regard. Also despite Commission's specific Orders/directions, UPCL failed to take effective measures to prevent outages of its distribution system including occurrence of high voltage condition affecting loss of generation from existing RE Projects/SHPs.

- 4.8 Further, it has been observed from the Action plan of UPCL that the Petitioner has considered 28 MW of solar power from roof-top power plants to be commissioned through bidding and 5 MW to be commissioned under "Suryodaya Swarozgar Yozna". In this regard, UREDA has submitted that these projects are yet to be commissioned and these plants are captive in nature and based on net metering. Any change in consumption/load pattern of the consumer may affect the predicted net energy injected into the grid. In this regard, the Commission is of the view that the Petitioner in coordination with UREDA should prepare an action plan for alternative arrangement/procurement of solar power in accordance with the Central/State Government schemes/guidelines for development of Solar Power henceforth.
- 4.9 UPCL had filed a review Petition on Commission's Order dated 29.03.2017 on True up for FY 2015-16, Annual Performance Review for FY 2016-17 and Annual Revenue

Requirement for FY 2017-18 and one of the ground of review was that the Commission did not allow any cost for the RPO shortfall amounting to 787.68 MU and 161.32 MU of non-solar and solar respectively as on 31.03.2017. Accordingly, the Commission vide its Order dated 03.08.2017 has allowed the Petitioner to recover additional amount of Rs. 51.24 Crore to meet its remaining RPO Obligations till FY 2017-18. The relevant extract of the Review Order dated 03.08.2017 is as follows:

“3.6.7 Thus, against the deficit of 447.61 MU approved in the Tariff Order dated 29.03.2017, the revised RPO deficit of the Petitioner for FY 2017-18 works out to 798.68 MU (both solar as well as non-solar RPO). The Commission in the Tariff Order dated 29.03.2017, has already allowed cost of Rs. 212.61 Crore towards procurement of power to meet RPO based on the power purchase requirement for the year. The Petitioner in a separate proceeding was asked to submit an action plan for meeting the RPO deficit till FY 2017-18. The Petitioner vide its letter dated 29.07.2017 submitted an Action Plan for meeting the RPO deficit which is summarised hereunder:

Table 2.8: Action Plan submitted by UPCL for fulfilling RPO till FY 2017-18

Particulars	Non-solar	Solar	Total
Deficit (MU)	749.98	80.31	829.79
Through Tender Purchase (MU)	400.00	-	400.00
Cost (Rs. Crore) (A)	190.00	-	190.00
Through REC (MU)	350.00	80.00	430.00
Cost of REC (B)	52.50	15.00	67.50
Total Cost in meeting RPO deficit (Rs. Crore) (A+B)	242.50	15.00	257.50

Thus, as is evident from the Table above, UPCL has proposed a total cost of Rs. 257.50 Crore in meeting its RPO till FY 2017-18. It is to be observed UPCL has considered its RPO on total power purchase approved by the Commission. However, the Act and the Regulations specifies RPO as a percentage of the total consumption of electricity in the area of a distribution licensee. The Commission has in its Tariff Order considered the total requirement for UPCL as 14166.67 MU whereas the total estimated energy available from firm sources is 14385.45 MU leaving an overall surplus of 218.78 MU. This balance surplus was left to be banked for the next financial year. Accordingly, the RPO of UPCL has to be worked out on 14166.67 MU as approved by the Commission in Table 2.7 above. Hence, the cost towards meeting the RPO for FY 2017-18 to UPCL would be as under:

Table 2.9: Cost to UPCL for fulfilling RPO till FY 2017-18

Particulars	Non-solar	Solar	Total
Deficit (MU)	728.74	69.94	798.68
Through Tender Purchase (MU)	400.00	-	400.00
Cost (Rs. Crore) (A)	190.00	-	190.00
Through REC (MU)	329.00	70.00	399.00
Floor price of REC (Rs. Per unit)	1.50	3.50	
Cost of REC (B)	49.35	24.50	73.85
Total Cost in meeting RPO deficit (Rs. Crore) (A+B)	239.35	24.50	263.85

3.6.8 *The Commission in its Tariff Order dated 29.03.2017 has already allowed UPCL, Rs. 212.61 Crore as cost to meet the RPO obligation for FY 2017-18. Hence, UPCL is allowed an additional cost of Rs. 51.24 Crore to meet its remaining RPO obligation.*

3.6.9 *However, UPCL is directed to explore other sources of power so as to meet its RPO for solar as well as non-solar from purchase of power rather than ensuring to meet the RPO through purchase of RECs. Such power purchased by UPCL may be utilised during the period of shortages or for banking of the same which can be used in the next financial year for meeting its energy requirement."*

4.10 Besides lack of advance planning for development of Solar & Non-Solar RE power by UPCL in coordination with UREDA, as discussed above, the shortfall in RPO compliance by UPCL is also on account of generation loss from existing RE based projects due to enormous outages/breakdowns in distribution system of the licensee including high voltage issues. Therefore, the licensee is directed to plan in advance and work expeditiously in augmentation and strengthening of its distribution system including evacuation system of the project in advance not only to achieve RPO compliance but also to obviate demand supply gap and contribute towards better utilisation of the available natural resources in the State. As discussed in Order dated 03.08.2017 of Review Petition, UPCL has been allowed additional Rs. 51.24 Crore to purchase renewable energy and to meet its RPO obligation. Accordingly, with regard to unmet non-solar and solar RPO upto 31.03.2017, the Commission allows UPCL the carry forward of the unmet solar as well as non-solar RPO of FY 2016-17 to fulfil the same alongwith its obligation for FY 2017-18. The carry forward of the unmet RPO of previous year is being allowed for the last time after which no carry forward of the RPO will be allowed. **The Commission directs the Petitioner to meet the overall RPO as per action plan either through purchase of energy from RE sources or through purchase of RECs by March 2018 in a transparent manner failing which appropriate action may be initiated against the concerned officers of the licensee under appropriate provisions of the Electricity Act, 2003.**

4.11 The Commission also conveys its displeasure on the conflicting information filed by UPCL before the Commission and with the State Agency (UREDA). Under the REC Regulations, 2010 every obligated entity is required to submit prescribed reports/information to the State Agency. Any case of erroneous/wrong submission of reports/information to UREDA is construed as non-compliance of the Regulations. Accordingly,

UPCL is cautioned to submit the complete information as required under the Regulations in the prescribed formats within the stipulated timelines in future.

4.12 Ordered accordingly.

(Subhash Kumar)
Chairman