

RAJASTHAN ELECTRICITY REGULATORY COMMISSION, JAIPUR

Suo-Motu

Coram: Sh. Shreemat Pandey, Chairman
Sh. S.C.Dinkar, Member
Sh. Prithviraj, Member

In the matter of

Rajasthan Electricity Regulatory Commission (Power Purchase & Procurement Process of Distribution Licensees) (Fifth Amendment) Regulations, 2018.

Rajasthan Electricity Regulatory Commission (Renewable Energy Obligation) (Fifth Amendment) Regulations, 2018.

Date of hearing: **3.10.2018**

Date of order: **11.01.2019**

Memo on Statement of Objects & Reasons and consideration of comments/suggestions received from various stakeholders:

1 Introduction

1.1 Commission has specified RPO targets for Distribution Licensees under the RERC (Power Purchase & Procurement Process of Distribution Licensees) Regulations, 2004 as amended from time to time. Further, the Commission has specified RPO targets for open access (OA) and captive consumers under the RERC (Renewable Energy Obligations) Regulations, 2007 as amended from time to time. The RPO targets specified by the Commission in the above Regulations for the obligated entities are applicable upto the FY 2018-19.

1.2 The Central Government has notified the revised Tariff Policy on 28.01.2016. According to Para 6.4 (1) of the said Policy, the Appropriate Commission shall, pursuant to the provisions of Section 86 (1) (e) of the Act, fix a minimum percentage of the total consumption of electricity in

the area of a distribution licensee for purchase of energy from renewable energy sources taking into account availability of such resources and its impact on retail tariffs. Cost of purchase of renewable energy shall be taken into account while determining tariff by SERCs. Long term growth trajectory of Renewable Purchase Obligations (RPOs) will be prescribed by the Ministry of Power in consultation with MNRE.

1.3 In view of the above provisions and in order to achieve the target of setting up of 1,75,000 MW of renewable energy (RE) capacity by March 2022, Ministry of Power (MoP) in consultation with Ministry of New and Renewable Energy (MNRE), vide its Order No.23.03.2016 – R&R dated 14.06.2018, notified the Long Term growth trajectory of Renewable Purchase Obligations (RPOs) for non-solar as well as solar energy uniformly for all States/ Union Territories initially for three years from FY 2019-20 to 2021-22. Further, the obligations notified by MoP will be on total consumption of electricity by an obligated entity, excluding consumption met from hydro sources of power and a flexibility of 15% is also allowed to the obligated entities in meeting RPO from either of their solar and non-solar power.

1.5 In light of the above, the following Amendments in Regulations were proposed by the Commission:

Draft Rajasthan Electricity Regulatory Commission (Power Purchase & Procurement Process of Distribution Licensees) (Fifth Amendment) Regulations, 2018; and

Draft Rajasthan Electricity Regulatory Commission (Renewable Energy Obligation) (Fifth Amendment) Regulations, 2018.

1.6 As required under the Electricity (Procedure for Previous Publication) Rules, 2005, the public notices inviting comments/suggestions from the

persons likely to be affected were published in the following newspapers on the date mentioned against each of them:

- | | |
|--|------------|
| 1. Dainik Bhaskar (All Rajasthan) | 30.08.2018 |
| 2. Rajasthan Patrika (All Rajasthan) | 30.08.2018 |
| 3. The Times of India (Jaipur Edition) | 31.08.2018 |

The draft Regulations along with explanatory memorandum were also placed on the website of the Commission. The last date of receipt of comments/ suggestions was 20.09.2018.

- 1.7 The Commission has received eight (08) comments from stakeholders out of which three (03) comments/suggestions received late. The letter dated 5.09.2018 received from Rajasthan Urja Vikas Nigam Limited (RUVNL) has also been considered as comment/suggestion for the purpose of the present proceedings in addition to their comments/suggestions received on 5.10.2018. Commission has considered all the suggestions/comments including those received late and oral submissions made during the hearing. The list of the persons who have submitted their suggestions/comments is placed at **Annexure - I**.

- 1.8 The broad issues raised and Commission's findings thereon are as follows:

2 Renewable Purchase Obligation percentage

- 2.1 Comments/suggestions received:

- 2.1.1 Sh. Shanti Prasad submitted as under:

- 2.1.1.1 Due to lower wind speeds and lesser windy days and hence, the lower capacity utilization factor (CUF), RPO target of 8.75% during FY 2018-19 to 2020-21 for wind power may not be met. Due to rising biomass prices and high uncertainty in the fuel supply, the biomass generation is also progressively going down.

- 2.1.1.2 Solar RPO of FY 2018-19 is likely to be met but cannot cover the

shortfall in wind generation. Besides being cheap, the solar power is also a clean power beneficial in containing the global warming and adverse climate changes. From these considerations, raising of solar RPO is desirable and State has the great potential for the same also.

2.1.1.3 CPPs or OA consumers may not have balancing mechanism and will be dependent on Discoms' supply to effect balancing. Discoms are reluctant to purchase power at APPC under renewable energy certificate (REC) mechanism on account of lower price of RE. The RE certificates in near future may not be available in market to meet increasing RPO. Commission may consider total RPO requirement (as applicable for less than 10 MW capacity) for them and also permit Discoms to trade RE power with CPP and OA consumers. The RPO requirement of OA and CPP consumers (742 MUs) quite high compared to REC mechanism solar projects (471 MUs) in Rajasthan. Commission may consider permitting REC mechanism power stations in Rajasthan to terminate PPA with Discoms after opting out of the scheme with no liability of LD/penalty on one month's notice and to (i) effect sales to CPP and OA consumers and (ii) effect sales to Discoms on long term basis at tariff discovered through rounds of reverse competitive biddings with last average cost of power vide order dated 24.01.2018 (i.e., Rs 3.68/kWh) as base price and trading of this power on round the clock (RTC) or specified time blocks basis to CPP and OA consumers on average cost of RE power purchase plus specified margin to cover deviations and trading charges. RE purchase by Discoms may then be reduced by this sale while assessing their RPO.

2.1.1.4 Commission may consider total RPO requirement (as applicable

for less than 10 MW capacity OA & CPP consumers) for deemed licensee (e.g., Railways) also.

- 2.1.1.5 Wind and solar power is infirm in nature have associated grid management problems, which SLDC is likely to face in containing drawl from NR within permissible deviation from the schedule. More accurate scheduling and balancing mechanism is necessary with increasing RPO. More accurate forecasting and scheduling and balancing requirement is utmost necessary to keep pace with higher RPO.
- 2.1.1.6 Increase in solar RPO due to lower solar tariff is in consumers' interest, so Commission may have technical sessions with SLDC, RVPN, RUVN, solar & wind power producers for (i) commencement of mechanism to have more and more accurate forecasting and scheduling of RE power (ii) balancing mechanism.
- 2.1.1.7 It is desirable to remove bottle necks in forecasting and scheduling of RE power. If necessary, provisions of the Regulations or Procedure may be relaxed to have trial operations for first few months. Provision of regulation 9 of the RERC (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2017 allowing 16 revisions in schedule needs to be reviewed considering SLDC's capability of having web based scheduling. Forecasting and scheduling of RE power through more than one agency may be specified to be carried by SLDC at its level. To achieve more accuracy, schedules and performance parameters (max. deviation %, average % deviation on daily and monthly basis etc.,) may be displayed on SLDC's website on daily basis so that poor forecasting agency may be replaced by better forecasting

agency by power producers and SLDC. In addition, frequent change of QCA may also be permitted.

2.1.1.8 Backing down of thermal generation to accommodate high solar generation will enhance the fuel cost of generation and in case of shut down, huge quantity of oil is to be burnt during start up. For most economic merit order operation, SLDC will have to factor above in load dispatching. It will be appropriate to specify generating company to supply, matching with normative oil consumption (with say 3 startup per year), data of oil required for startup, consumption of oil and coal with load as % of rated installed capacity and also to specify these in tariff regulations.

2.1.1.9 RE generation variation has to be balanced immediately. State has limited hydro, use of hydro generation capacity of partnership projects would require redrawing of interstate agreements for scheduling, transmission losses and tariff for power interchanges among beneficiaries. One of the mechanism of effective balancing within 3-5 minutes is that RE (solar & wind) generating stations and its balancing hydro, pumped hydro and gas power stations and storage system is considered a virtual island for the purpose of scheduling and deviation settlement. The criterion of revision from 6th block is to be applied only for injection schedule or drawal schedule of this virtual island from the region. The intra-pool exchanges (between RE generation and hydro generation) not to be governed by 6th time block, but by the agreements between beneficiaries. This will require change in the CERC Regulations.

2.1.1.10 Balancing of solar generation with gas based thermal generation will require part load open cycle with/without combined cycle operation so that gas thermal generation can be

- reduced/enhanced to balance the increase/decrease in solar generation. This will require appropriate tariff structure to be evolved by the Commission.
- 2.1.1.11 At present energy storage by way of batteries is quite costly compared to the tariff of solar and wind generation. For no or narrower deviations from schedule, a study based on cost of storage system, volume deviation of solar (and wind) generation and volume deviation of Discoms in NR will be required. It would be appropriate that Commission may initiate such studies.
- 2.1.2 Indian Wind Energy Association ('InWEA') submitted as under:
- 2.1.2.1 Annual incremental RPO trajectory for solar is 1.5% for FY 2020-21 and 1.75% for FY 2021-22, whereas, incremental trajectory for wind energy RPO has not been stipulated. For uniform future development, it is necessary that trajectory for all renewable energy sources is uniform as these resources are complimentary and support the grid through diurnal variations as well as seasonal variations. Annual incremental trajectory for wind may be stipulated as 1.25% .p.a., whereas, annual incremental RPO target trajectory for solar be stipulated as 1.5% p.a.
- 2.1.2.2 Long term trajectory for RPO may be set at least till FY 2021-22, co-terminus with the target period set by the Ministry for an aggregate RE capacity of 175 GW for the country.
- 2.1.3 Rajasthan Urja Vikas Nigam Limited ('RUVNL') submitted as under:
- 2.1.3.1 The incremental RPO for a particular year should not be more than the increase in energy consumption of that year.
- 2.1.3.2 On account of its comparative advantages over the wind power such as lower tariff, higher CUF, matching generation profile with demand curve of the State and comparatively firm nature, solar power needs to be given preference.

- 2.1.3.3 The flexibility allowed under MoP order is less in the context of Rajasthan. The State Discoms may be allowed full flexibility in meeting RPO, i.e., if there is shortfall in fulfillment of RPO, the licensee may be permitted to adjust the shortfall by purchasing any of the three types of renewable energy to achieve the total RPO target.
- 2.1.3.4 The Amendment may be made applicable with immediate effect so as to get benefit of full flexibility from this year itself.
- 2.1.4 Rajasthan Renewable Energy Corporation Limited ('RRECL') submitted as under:
- 2.1.4.1 Rajasthan has the highest solar potential in the country and generation of the power per MW is maximum, therefore, it is in the interest of the Discoms as well as public in large to procure more solar. It is recommended that RPO for solar may be enhanced by 25% and RPO for wind and biomass may be reduced by 25% or alternatively flexibility of 25% in favour of solar in the proposed RPO may be granted.
- 2.1.4.2 In partial modification to the earlier comments, it is requested that the total RPO of 21% may be achieved by the year 2023-24 instead of 2021-22 and the trajectory may be modified from the year 2018-19 onwards.
- 2.1.5 Rudraksh Energy submitted as under:
- 2.1.5.1 Before specifying RPO for FY 2019-20, 2020-21, 2021-22, the actual RPO met during FY 2017-18 and expected RPO to be met during FY 2018-19 may be obtained from Discoms as they are unlikely to meet target RPO of 17% during FY 2018-19.
- 2.1.5.2 Specifying very high RPO targets compared to the availability of RE power may result in problems in terms of penalty provisions specified under Section 142 and 146 of the Electricity Act, 2003

- resulting in litigation. National level RE power generation was only 6.6% of total generation during FY 2016-17 (Rajasthan 9%). Similarly, during FY 2017-18, RE generation was 7.8% of total generation. In view of this, very high RPO targets, which cannot be achieved, may not be specified for obligated entities including Discoms.
- 2.1.5.3 In terms of installed capacity, RE power stations are more than 30% of installed capacity of the State, which is creating problems in their integration with grid and scheduling.
 - 2.1.5.4 Due to 'MUST RUN' status of RE, the existing thermal power stations are required to curtail their generation, which will reduce the PLF of these power stations. Discoms have to pay fixed charges without purchase of electricity, resulting in high cost of power purchase and thus, increase in retail tariff of the consumers.
 - 2.1.5.5 If the long term growth trajectory of RPOs as notified by MoP, Gol dated 14.06.2018 is to be adopted, then Commission should have sufficient powers to relax/modify the RPO targets, if not met by the Discoms and other obligated entities, on reasonable grounds.
 - 2.1.6 Jaipur Vidyut Vitran Nigam Limited ('JVVNL') submitted as under:
 - 2.1.6.1 The proposed RPOs of 17%, 19%, 21% for FY 2019-20, FY 2020-21 and FY 2021-22 respectively are highly ambitious and unjustified. The status of target vis-à-vis achievement of RPO in the past years is as under:

Table-1: Target vis-à-vis achievement of RPO for Discoms

Year	wind		biomass		solar		total	
	Target (%)	Ach. (%)	Target (%)	Ach. (%)	Target (%)	Ach. (%)	Target (%)	Ach. (%)
2013-14	5.70	5.92	1.50	0.42	1.00	0.87	8.20	7.21
2014-15	6.80	5.60	0.70	0.41	1.50	0.69	9.00	6.71
2015-16	7.30	6.27	0.90	0.35	2.00	0.96	10.20	7.58
2016-17	7.80	7.41	1.10	0.40	2.50	1.17	11.40	8.98
2017-18 (Prov.)	8.20	7.22	1.30	0.52	4.75	2.89	14.25	10.62

2.1.6.2 Rajasthan Discoms have made efforts to fulfill their RPOs and have continuously increased the purchase from RE Sources. However, the Discoms have still been unable to fully meet the requirements.

Non-Solar RPO targets:

2.1.6.3 Wind power generation is infirm in nature and huge variations in actual generation and forecast have been observed in the recent past, which makes it very difficult to precisely assess the day ahead deficit/surplus. In case of wind generation more than forecast, conventional sources have to be surrendered equivalent to the excess wind generation, which makes grid operations uneconomical. In case where wind generation is lesser than the forecast, Discoms may have to resort to load shedding to match the availability of power, which affects the quality of power supply in the State.

2.1.6.4 Rajasthan State neither has the sufficient hydel sources nor has the sufficient commercially viable gas based power generation. This leaves Discoms only with conventional sources, which take time to ramp up and ramp down their generation. Wind energy is intermittent in nature and at times available for a duration of 1-2 hours, which is the time required to alter generation schedule of thermal power generation. Further, it is difficult to plan boxing-up

- of coal based thermal generating stations as per merit order dispatch based on day ahead forecast of wind power generators. To accommodate energy from such must run sources, Discoms have to surrender power even from sources with much lower variable cost making the grid operations uneconomical.
- 2.1.6.5 The agriculture load with seasonal character is 40% of total load. There is inverse relation between wind generator and the demand in the State, i.e., wind is available during monsoon season, when there is lean demand and limited wind power is available during winter rabi season, when energy demand peaks.
- 2.1.6.6 The State is having wind generation in excess of 4300 MW. Regulations allow a tolerance band of 15% (equivalent to 600 MW of deviation) and there is no penalty on wind generators in this band. However, Discoms start attracting UI penalty for any deviation beyond 250 MW.
- 2.1.6.7 The transmission system of a State is to be planned to evacuate the RE power upto its installed capacity. However, due to lower CUF of wind plants there is an increase in the transmission cost and results in an additional burden on the Discoms and ultimately to the consumers of the State.
- 2.1.6.8 Biomass power plants are already striving for survival due to non-availability of biomass fuel, RPO targets for purchase of biomass energy may be kept in line with the current availability of power from such sources. In meeting the short fall of biomass RPO, the RPO for wind further increases the difficulties due to its variability, which have been elaborated in aforesaid paras.

Solar RPO targets:

- 2.1.6.9 Even though State has the lowest solar tariff in country, average

power purchase cost in the State is still lower than the cost of power from solar with storage cost not considered. Thus, there will be an additional burden on the Discoms while purchasing solar power. Due to imposition of safeguard duty of 25% by Gol on imported solar panels for next 2 years, the solar tariffs are likely to increase in the going future till the country develops a sustainable and quality module manufacturing base.

- 2.1.6.10 Long term growth trajectory is common for all States. Along with the National targets, it is equally important to consider State specific issues. As per the Energy Assessment Committee, the State is already having sufficient energy sources tied up and planned to be commissioned in the coming years to meet its RTC demand upto FY 2022. In such a scenario, adding additional sources to fulfil RPO will lead to stranded capacity for which fixed charges will still have to be borne by the Rajasthan Discoms. This will have a negative impact on the costs as well as public at large. The State is already in power surplus situation and in case energy demand does not increase in line with increase in RPO trajectory, then the Discoms will have to back down power from expensive units based on merit order principle from stations like RVUN stations, which would decrease PLF of such stations and would further increase stress in the generating assets of the State.
- 2.1.6.11 The Rajasthan Discoms are making all out efforts to achieve the set targets under UDAY. The financial projections made under the tripartite agreement also did not envisage such huge increase in RPO. The financial implication of increasing RPO to the extent provided in the draft regulations will provide a set back to the efforts being made by the Rajasthan Discoms to achieve financial turnaround.

2.1.6.12 Commission in its order dated November 14, 2017 passed in the petition filed by RRECL had also noted the difficulty faced by the Discoms in meeting their RPO requirement and had directed the Discoms to meet their short fall in next five years. Therefore, it is apparent that if higher RPO targets are specified for Discoms then it would be very difficult for them to procure renewable power according to such higher RPO targets while also meeting shortfall in RPO of past years.

2.1.6.13 Commission is requested to adopt the targets for purchase from renewable sources of energy as given in the table below.

Table-2: Suggested RPO targets

S. No.	Year	Obligation expressed as percentage of energy consumption (%) excluding consumption met from Hydro source of power				
		Wind	Biomass	Non-Solar	Solar	Total
1	2019-20	8.20	1.30	9.50	4.75	14.25
2	2020-21	8.20	1.30	9.50	4.75	14.25
3	2021-22	8.20	1.30	9.50	4.75	14.25

2.1.6.14 Any increase in RPO targets beyond the targets suggested above would burden the State Discoms and the consumers of the State as elaborated in these comments. It is prayed that the above mentioned operational, commercial and financial challenges may be considered while fixing the RPO targets to aid the Discoms in achieving turnaround.

2.1.7 The Rajasthan Solar Association ('RSA') submitted as under:

2.1.7.1 Obligation for the different RE sources, i.e., solar, wind & biomass or solar & non- solar, should not be expressed separately as the main aim of the Regulations is to promote environment friendly energy sources and to restrict/avoid the 'polluting, or 'hazardous to environment' energy generating sources.

2.1.7.2 In case the obligation is expressed in total, for all types of RE

- sources, then sources which are economically viable to Licensee/obligated entity shall be promoted by the Developers.
- 2.1.7.3 Hybrid Renewable Energy Sources are sources of future and if obligation is expressed in total, there will be no need to bid for different sources separately and system will concentrate only on non-hazardous energy on lower generating cost/tariff.
- 2.2 Analysis and Decision
- 2.2.1 It is observed that varied comments/suggestions have been received. Some stakeholders have expressed that the RPO targets may be fixed considering current compliance levels of Discoms and availability of RE power in the State. RUVNL, Discoms and other stakeholder, in view of comparative advantage of solar power such as lower tariff, higher CUF and high potential in the State etc., considered higher solar RPO as desirable.
- 2.2.2 RUVNL have requested for full flexibility to the State Discoms allowing them to purchase any of the three types of renewable energy to achieve their RPO target. RSA have suggested not to express RPO separately so that sources which are economically viable to licensee/obligated entities shall be promoted by the developers. On the other hand, the State Nodal Agency, i.e., RREC have recommended that RPO for solar may be enhanced by 25% and RPO for wind and Biomass may be reduced by 25% or alternatively, flexibility of 25% may be allowed in favour of solar.
- 2.2.3 Some of the stakeholders including Discoms have also brought the negatives of higher penetration of RE such as backing down of the existing conventional power and paying fixed charges to them to avail power from Must run RE power plants. It is also pointed out that higher share of RE has associated grid management problems for which accurate scheduling and

forecasting is necessary. In this regard, it is also suggested that Commission may have technical sessions with SLDC, RVPN, RUVN & solar, wind power producers and bottle necks in forecasting and scheduling of wind and solar power generation may be removed. For economic load dispatching, consumption of oil and coal with load as percentage of rated installed capacity may be specified under tariff regulations. For balancing solar generation with gas based thermal generation, appropriate tariff structure may be evolved by the Commission. Further, for balancing with storage batteries, appropriate studies based on cost of storage system, volume deviation of solar (and wind) generation and volume deviation of Discoms with NR need to be initiated.

2.2.5 Commission has received a suggestion of specifying the RPO targets for all CPP, OA consumers and deemed licensee as the same presently applicable to CPP and OA consumers of capacity less than 10 MW. However, earlier in view of a huge solar potential, Commission has consciously specified a separate solar RPO for CPP and OA consumers having total capacity 10 MW and above and looking to their small consumption, a combined RPO target has been specified for CPP & OA consumers with capacity 1 MW and above but below 10 MW. Further, the Tariff Policy 2016 at para 6.4 (1)(i) provides that while fixing a minimum percentage of total consumption of electricity for purchase of energy from renewable energy sources, SERCs to reserve a minimum percentage for purchase of solar energy.

2.26 In view of above, Commission considers appropriate to continue with the existing practice of specifying separate solar RPO for CPP and OA consumers having total capacity 10 MW and above.

- 2.2.7 Commission has received a suggestion that for the purpose of balancing of CPP and OA consumer the power stations of Rajasthan under REC mechanism may be allowed to terminate their PPA with Discoms. In this regard, It is mentioned that the Commission has already issued a staff paper to deal with such situation and comments/suggestions have been invited from the persons likely to be affected. Commission will consider this as also a suggestion for the same.
- 2.2.8 A suggestion is received that if long term growth trajectory of RPOs as notified by MoP is to be adopted, Commission should have sufficient powers to relax/modify the RPO targets, if not met by Discoms and obligated entities. It is stated that there already exists a provision in the RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010 that in case of genuine difficulty in complying with RPO because of the non-availability of renewable energy and/ or certificates, the obligated entities can approach the Commission to carry forward the compliance requirement to the next year or seek its waiver. In addition, Commission is also allowing flexibility in meeting of solar and non- solar RPO as dealt with in later para.
- 2.2.9 Commission has received suggestion from Discoms that in consideration of the State specific condition, the total RPO level of 14.25% specified for FY 2018-19 may be kept same for FY 2019-20 to FY 2021-22. A stakeholder has requested to increase the incremental RPO trajectory for non- solar (wind) to have uniform development of RE in the State. Another suggestion is also received that in view of falling prices and higher potential of solar energy available in the State, higher solar RPO may be specified.

It is observed that MoP order provide for flexibility to the extent of 15% in meeting the RPO. However, suggestion for allowing full flexibility in meeting over all RPO is also received, whereas, recommendation of allowing 25% flexibility to the Discoms in meeting their RPO has also been received. One of the suggestions is also that no separate RPO targets may be specified so that sources economically viable to licensees/obligated entities are promoted by developers. Commission has considered the above position. In order to provide suitable flexibility to both Discoms and other obligated entities in meeting either of the solar or non-solar RPO, Commission considers flexibility to the extent of 20% as reasonable. Accordingly, the draft Regulations have been appropriately modified.

- 2.2.10 Commission has proposed RPO trajectory for three years, i.e., FY 2019-20 to FY 2021-22 in line with MoP order dated 14.06.2018. Commission would like to draw the reference to the Hon'ble APTEL judgment dated 14.05.2015 passed in IA No.187 of 2015 in Appeal No. 258 of 2013, wherein it is held as under:

“We feel that in the present case where we have described various conditions under which the Commission may revise RPOs targets, it is necessary for us to give the clarification regarding implementation of judgment without any way changing the finding in the judgment. We, therefore, clarify that in case the State Commission decides to revise targets due to in adequate capacity addition in the State the same may be done keeping in view overall availability of renewable energy resources in the State and other availability of renewable energy resources in the State and other relevant factors and after hearing all concerned and not merely on the basis of actual RPO achievement by the

various entities. With this clarification the application is disposed off."

- 2.2.11 Therefore, before proceeding further for fixation of RPO targets it would be appropriate to consider certain aspects elaborated in subsequent paras.
- 2.2.12 RREC had filed Petition No. 867/16 seeking directions against the State Discoms for non-compliance of RPO. Commission vide order dated 14.11.2017 considering facts and circumstances of the case and after being satisfied with efforts made by the Discoms, allowed them to make-up the past shortfall in meeting RPO in the next five years. Therefore, while specifying the RPO for the coming years, this aspect also needs to be considered.
- 2.2.13 It is mentioned that earlier Commission has fixed the RPO targets for FY 2017-18 and FY 2018-19 in line with MOP, where there was an steep increase as compared to the RPO trajectory specified for earlier years. It is observed from the data submitted by the Discoms regarding RPO target vis-a-vis achievement from FY 2013-14 to FY 2017-18 (provisional) that actual achievement is less than the targets, in particular for FY 2017-18, this gap is huge. Considering that in addition to making up for the past shortfall in meeting RPO directed in the order dated 14.11.2017, Discoms will also have to fulfill the RPO targets to be decided now for which some more time will be needed. Commission also feels that the position also reflects the lack of advance action plan for installation of RE power projects commensurate with the RPO targets fixed for the State. RREC, the State Nodal Agency to promote renewable energy, in future is to ensure that advance action plans are prepared in coordination with Discoms to enable them to achieve their stipulated RPO without any fail.

- 2.2.14 It is further to mention that for large integration of wind and solar power in to the State Grid, Commission has notified the RERC (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind generation) Regulations, 2017. However, the targeted integration of RE capacity has to be achieved over the time. In addition, implementation of the forecasting and scheduling of such plants may also require some more time to achieve accuracy.
- 2.2.15 It is noticed that the planning and tendering for procurement of RE power by Discoms/SECI/NVVN etc., takes time. Further, such assured evacuation of power from projects, the development of transmission network both Intra as well as inter-state takes longer time at least two to three years. Further, in order to achieve the National targets now a days SECI/NVVN etc., are conducting bidding for higher projects sizes, i.e., of the capacity even upto 250 MW or 300 MW. Such large capacity projects require longer time period for the financial closure as well as for their commissioning that is why in such bids too, a time period of 24 to 30 months is given for their commissioning after signing of PPAs. One of suggestions received is for specifying a longer RPO trajectory.
- 2.2.16 It is observed from the past experience that when RPO was increased steeply, a huge gap is observed in achievement of RPO targets by the State Discoms even for FY 2017-18 as elaborated earlier. Commission is of the considered view that the RPO trajectory may be so designed and notified in such a manner that it becomes practical for the Discoms to achieve their targets without failure. Considering the increase of 6.32% p.a. adopted in 18th meeting of Energy Assessment Committee (EAC) in

consumption of Discoms for FY 2017-18. On working out the capacity of each technology (Solar CUF- 21%, wind CUF-20% and Biomass CUF as 80%, Commission feels that with addition of 700-750 MW of solar and 250-300 MW of non-solar is achievable every year. This renewable energy Capacity of approx. 1000 MW, which will generate around 1700 MU/year, which can easily be procured and absorbed by the Discoms as their demand will also increase every year by 4000 MU at the rate of at least 5%. Further, 20% flexibility in meeting RPO would also be available.

2.2.17 RUVNL on behalf of Discoms have requested that the total RPO of 21% may be achieved by the year 2023-24 instead of 2021-22 and the trajectory may be modified from the year 2018-19 onwards.

2.2.18 Considering all the above aspects, Commission considers it fit to revise the RPO for the year 2018-19 and to notify RPO upto FY 2023-24 (i.e., for next 5 years) as under for Discoms:

Table- 3 : Final RPO targets approved for the State Discoms

S.No.	FY	Obligation expressed as percentage of energy consumption (%) excluding consumption met from hydro sources of power.			
		Non-solar		Solar	Total
		Wind	Biomass		
1	2018-19 (revised)	8.00%	0.60%	4.75%	13.35%
2	2019-20	8.30%	0.70%	6.00%	15.00%
3	2020-21	8.60%	0.80%	7.25%	16.65%
4	2021-22	8.90%	0.90%	8.50%	18.30%
5	2022-23	9.10%	1.00%	9.50%	19.60%
6	2023-24	9.40%	1.10%	10.50%	21.00%

Further, the conditions of allowing 20% flexibility in meeting RPO as decided in the earlier paras shall apply. Accordingly, the draft Regulations have been appropriately amended.

2.2.19 On the similar lines, the RPO percentages for CPP and OA consumers have been appropriately revised such that the solar

RPO, non-solar RPO and total RPO percentages have been kept the same as specified for Discoms as above.

- 2.2.20 As regards the suggestions received pertaining to the accurate forecasting and scheduling requirement of wind and solar power, it is stated that the present proceedings are limited to fixation of RPO targets. However, importance of accurate forecasting and scheduling with increase in share of such sources cannot be ignored. Commission is of the view that accurate forecasting and scheduling of wind and solar generation is essential for safe, secured and reliable operation of the State grid. Commission has also notified the Regulations for the same and a procedure is also approved under these Regulations. Under the Act, SLDC is responsible for scheduling and despatch of power in the State and exercises supervision and control over the intra-state transmission system through the State grid. SLDC is, therefore, directed to examine the suggestions and thereafter appropriate proposal with proposed changes, if any, may be placed before the Commission for consideration.
- 2.2.21 Commission has also received suggestions regarding balancing requirement in a scenario of high RE share. Commission has taken note of suggestions relating to tariff and the same will be considered at the time of specifying Tariff Regulations for the next control period commencing from FY 2019-20.
- 2.2.22 Commission has received suggestion regarding energy storage system for balancing of the RE generation. It has been suggested that storage system with no or narrower deviation from schedule are close to economic viability, which requires a study based on cost benefit analysis in terms of benefits derived by generator, savings in transmission system cost and benefit to Discoms (lower

transmission charges due to better load factor and lower volume deviation charges). The share of renewable energy generation will increase in future, there will be balancing requirement and energy storage is one of them. To start with, as a pilot, the State Discoms may consider for energy storage as a certain percentage of the total solar/wind capacity in their future auctions/bidding. In the meantime, SLDC is directed to initiate the studies based on cost of storage system, volume deviation of solar (and wind) generation and volume deviation of Discoms at NR.

- 2.2.23 As regards the suggestion of balancing the RE generation with hydro generation capacity of partnership projects, the matter being of inter-state nature, thus, lies outside the jurisdiction of the present proceedings.

3 Exclusion of hydro from total consumption

3.1 Comments/suggestions received

- 3.1.1 Indian Wind Energy Association submitted that as per clause 6.4(1) (i) of the Tariff Policy 2016, the exclusion of consumption met from hydro power from the total consumption is specific to solar RPO and there is no mention of the non-solar RPO. Further, Section 86(1)(e) of the Act has not provided any exclusions in the energy consumption quantum. Present proposal of applying RPO target to the total annual procurement of electrical energy 'excluding consumption met from hydro sources of power' should be deleted and RPO targets should be continued to be applicable on the total annual procurement of the electrical energy. Alternatively, if consumption met from hydro power is to be excluded from the total consumption, the same should not be made applicable to non-solar RPO as per the Tariff Policy.

3.2 Analysis and Decision

3.2.1 It has been held at different forums that Tariff Policy is not binding on the Commission as also pointed out by one of the stakeholders. Commission after taking the conscious decision has adopted the same approach of excluding consumption met from hydro sources earlier also while specifying the RPO targets for FY 2017-18 and FY 2018-19. The Policy notified by Ministry of Power under the Act shall necessarily to be in line with provisions of the Act. Going through the preamble and Section 86(1)(e) of the Act, it is observed that the primary objective of the Act is to promote clean energy sources such as renewable energy sources. Hydro sources, akin to RE sources, are clean sources and need to be promoted. GoI in the Tariff Policy recognizing the same, therefore, excluded the consumption met from hydro from the total consumption.

3.2.2 In view of the above, the suggestion is not agreed.

4 Captive Power Plants (CPPs) as a separate class of the obligated entities

4.1 Comments/suggestions received

4.1.1 DCM Shriram Limited submitted as under:

4.1.1.1 It is difficult for captive power plants (CPPs) to procure RE like a distribution licensee, which can tie up with RE generators for procurement of RE power based on bidding process. The open access (OA) consumers generally consume power from third party sources including IEX for commercial considerations generally on short term basis even for part of a day. CPPs need to be placed on different footing which has established the plant as necessity that its manufacturing operations requiring quality and continuity of supply are not prejudiced, which is not possible to be met by

the Distribution Licensee. Further, the nature of their manufacturing is very essential goods such as urea, which is regulated by Gol and is very essential for the country as a whole.

- 4.1.1.2 The primary purpose of the RPO Regulations is to ensure that the RE is procured from various sources. However, having such steep targets for CPPs would be virtually impossible to achieve in its true sense by purchase of RE, the only result would be promotion of REC market, which is not the purpose of RPO Regulations but only a mitigating mechanism for obligated entities to fulfill RPO targets. The process of establishment of RE capacities takes few years' time, sudden increase in capacity to such high levels would render compliance of RPO targets impossible to be achieved and would render disincentivising the Captive Power Plants.
- 4.1.1.3 The Electricity Act and the Policies framed thereunder are with the object to promote CPPs. This is also settled by the decision of the Hon'ble APTEL.
- 4.1.1.4 The Ministry Notification dated 14.06.2018 providing guidelines for fulfillment of RPO is not in any way binding on the Commission. Even Tariff Policy has been held to be only a guidelines factor and not binding on the Commission. Commission is empowered U/s 86(1) (e) of the Act to frame Regulations for RPO and that can in no manner be restricted or circumscribed by any Notification. The Notification of Gol in no manner can be stated to be binding.
- 4.1.1.5 RPO targets by its very nature need to be specific to States and class of obligated entities. There cannot be one target for all classes of obligated entities and for all States. APTEL has acknowledged that if State Commission decides to revise the RPO targets the State Commission may take into consideration the relevant factors which may affect the decision on RPO targets,

including the availability of RE, the capacity additions etc. The relevant part of the order dated 14.05.2015 passed in IA No.187 of 2015 in Appeal No.258 of 2013 is as under.

“We feel that in the present case where we have described various conditions under which the Commission may revise RPOs targets, it is necessary for us to give the clarification regarding implementation of judgment without any way changing the finding in the judgment. We, therefore, clarify that in case the State Commission decides to revise targets due to in adequate capacity addition in the State the same may be done keeping in view overall availability of renewable energy resources in the State and other availability of renewable energy resources in the State and other relevant factors and after hearing all concerned and not merely on the basis of actual RPO achievement by the various entities. With this clarification the application is disposed off.”

- 4.1.1.6 Therefore, the Commission is to consider the present RE situation in the State, the capacity addition possible, the sources of supply and counter-party to the supply etc. It would not be possible for CPPs to fulfill targets as the distribution licensee who can enter into PPAs based on bidding process for large capacity at the same time the CPPs cannot take commercial decisions on purchase of RECs and taking OA supply as regular OA consumers.
- 4.1.1.7 In the circumstances, it is incumbent that Commission create a separate class for CPPs as obligated entities and exempt the entities from RPO targets or at least maintain the same level as present for CPPs without any further increase.

4.2 Analysis and Decision

4.2.1 As per Section 86(1)(e) of the Act, Commission is mandated to specify for the purpose of RE, a percentage of the total consumption of electricity in the area of a distribution licensee. The consumption in the area of a distribution licensee is done by the obligated entities such as distribution licensee, captive and open access consumers. Therefore, without there being any discrimination, a uniform RPO has to be specified for them. Further, it would be appropriate to refer the Hon'ble APTEL judgment dated 16.04.2015 in Appeal No.258 of 2013 & Appeal No.21 of 2014 & IA-28 of 2014, where in summary of findings it is held that:

“(vii) Admittedly there was substantial reduction in capacity addition of wind energy and other sources of renewable energy in the State during FY 2012-13 due to reasons beyond the control of the distribution licensee. Under such a condition the State Commission can reduce RPO targets for the wind energy and other energy. However, such reduction due to capacity constraints has to be uniform for all the obligated entities in the State.”

4.2.2 Hon'ble APTEL in its judgment dated 14.05.2015 in IA No187 of 2015 in Appeal No. 258 of 2013 & Appeal No. 21 of 2014 has further clarified as under:

“3. Once the court gives a judgment, it becomes functus officio. Therefore, we do not want to change or in any way dilute the judgment dated 16.04.2015. However, in the present case the Tribunal while interpreting the regulations has also discussed the various conditions under which the State Commission may revise the RPO targets after the completion of the financial year under Regulation 4.2 due to supply constrains or factors

beyond the control of the licensee. The Tribunal has held that if RPOs are revised due to the inadequate capacity addition in the State, the same percentage will be applicable to all the obligated entities."

4.2.3 In view of the above, the request for creating a separate class of obligated entity for CPP cannot be agreed.

5 General

5.1 Comments/suggestions received

5.1.1 Sh. Shanti Prasad submitted as under:

5.1.1.1 It would be appropriate that there be one Regulation for RE obligation covering CPP, OA consumers, distribution and deemed licensees and Regulation 4(1A) of RERC (Power Purchase & Procurement Process of Distribution Licensee) Regulations, 2004 may refer to that provision.

5.1.2 RUVNL submitted as under:

5.1.1.2 It is requested to include a sub-regulation (3) in Regulation 9 of the RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010 as under:

"(3) For the purpose of calculating the shortfall by a distribution licensee, renewable energy consumption by the distribution licensee from a power plant with which it has a PPA shall be calculated as the higher of the actual energy generated from the power plant and the energy that would have been generated from it at normative CUF. Normative CUF for a solar & wind power plant will be 20% and for biomass power plant, it shall be 80%."

5.1.1.3 For a better clarity, the whole Regulation 4(1A) of the RERC (Power Purchase & Procurement Process of Distribution Licensee) Regulations may be substituted with a complete table depicting year wise RPO targets beginning with FY 2011-12 till FY 2021-22.

5.1.3 Indian Wind Energy Association submitted as under:

5.1.3.1 The provision for consequence of default in RERC REC Regulations may be clarified such that the fund created as consequence of default should only be utilized by way of procurement of RECs or at best for increasing visibility in-firm renewable energy at SLDC level and setting up the required telemetry features, which will facilitate effective implementation of the forecasting and scheduling mechanism in the State.

5.1.3.2 Implementation of web based framework for RPO compliance monitoring and reporting for all obligated entities (including CPP/OA consumers) may be expedited and effect implementation within three months from the date of notification of the Regulations. The ongoing development of the institutional structure to ensure that an operative framework is developed for RPO compliance monitoring and reporting may also be expedited. In order to facilitate information exchange on a regular basis from all concerned agencies, it is suggested the following to be added in the Section 6 (Regulation 6) of the RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010 :

“The SNA shall set up an online portal for effective reporting of compliance by obligated entities and monitoring of the same, which shall also facilitate timely compliance reporting and enforcement thereof.”

The will enhance the enforcement powers of the State Nodal Agency (SNA), as a result, will ensure a better RPO compliance.

- 5.1.3.3 Commission vide order dated 23.03.2017 directed CPP/OA consumers to comply the RPO and REC Regulations and submit the compliance report. However, none of the respondents (CPP and OA consumers) complied the same. Necessary action may be taken under Section 142 and Section 146 of the Electricity Act, 2003 and penalize them.
- 5.1.3.4 The MNRE circular dated 29.03.2017 states that power generated from waste heat generated in fossil fuel based energy plants cannot be considered for RPO, including in hybrid mode with renewables or otherwise. Accordingly, the same may specifically be mentioned.
- 5.1.4 Sh. Madhav Singh submitted as under:
 - 5.1.4.1 Open access and captive consumers could not avail waiver of 50% transmission charges which was available upto 31st of last FY 2017-18 because of prevailing impediments. In addition, the increase in equity participation from 26% to 100% creates hurdles for renewable energy entrepreneurs contributing towards building of solar plants to supply power to customers under open access. The huge potential of modular solar capacity which makes available the distributed generation needs to be promoted.
 - 5.1.4.2 Presently tariff of RE sources is reasonably lower than the tariff of energy supplying licensees and there is no need to announce RPO for further FYs, instead of this, facilities should be provided to promote the renewable power in the State. The wheeling charges may be applied on the basis of active renewable energy instead of renewable energy contracted capacity.

5.2 Analysis and Decision

5.2.1 Commission has received the suggestion that there may be one regulation for RE obligation covering CPP, OA consumers, distribution licensee and deemed licensee and Regulation 4(1A) of the RERC (Power Purchase & Procurement Process of Distribution Licensee) Regulations, 2004 may refer to that provision. However, another suggestion is also received that for better clarity the same regulation 4(1A) of the RERC (Power Purchase & Procurement Process of Distribution Licensee) Regulations, 2004 may be substituted with a consolidated table depicting year wise RPO targets beginning with FY 2011-12 till FY 2021-22. For the sake of ease of compliance and monitoring, Commission accepts the former suggestion and accordingly, the draft Regulations have been appropriately amended.

5.2.2 A suggestion has been received to include a new sub-regulation (3) under Regulation 9 of the RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010 that for calculation of shortfall by a distribution licensee the consumption to be considered higher of the actual energy generated or the energy generated that would have generated considering a normative CUF. For this purpose, the normative CUF is to be considered as 20% for a solar & wind power plant and for biomass power plant, it shall be 80%. Commission while disposing off the petition No.RERC-867/16 filed by RREC in its order dated 14.11.2017 has observed as under:

“16. Commission has observed that even though adequate quantum of PPAs were signed by Discoms in the past, the generation in terms of energy was not to the expected level and consequently there is shortage in RPO

in terms of energy. Therefore, Commission advise the Respondent Discoms to assess the energy requirement for compliance of RPO more realistically in advance and sign the PPA accordingly in future and comply with RPO Regulations without fail. So far as past shortfall is concerned, Commission directs Discoms to make up the shortfall in the next five years by buying renewable energy which is now available in plenty through reverse bidding as being done now.”

In accordance with above, the Distribution licensee have already been advised to assess the energy requirement more realistically in advance and sign the PPA accordingly in future and comply with RPO Regulations.

5.2.3 In the present proceeding no Amendment is contemplated in the RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010 for which the procedure of the previous publication notified under the Electricity (Procedure for Previous Publication) Rules, 2005 needs to be followed. In view of the position above, the suggested is not accepted.

5.2.4 One of the suggestions received is that the fund created as a consequence of default should be utilized for procurement of RECs or at best for increasing visibility of infirm renewable energy. The existing Regulation 9(1) (d) of the RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010 provides for a broad guidance on utilization of the fund created as a consequence of default, which reads as under:

“(d) The obligated entities in default shall pay, by

30th November of the Assessment Year, the RPO charge assessed equivalent to the product of shortfall and forbearance price of solar or non-solar REC, as applicable on 31st March of the relevant Financial Year, to a separate account maintained by the State Agency. All sums received by the State Agency shall be paid to STU for crediting in a fund created and maintained by the STU within one month from the last day of the month in which such sums are received.

Provided that the fund so created shall be utilized by STU for development of transmission infrastructure for evacuation of power from Renewable Energy generating stations or promoting renewable energy sources as approved by the Commission for which the STU shall submit the proposal(s)."

5.2.5 It is observed from above that the manner specified for utilization of the said fund is far broader. Therefore, utilization of the fund cannot be allowed to get restricted to the suggested ways alone. The existing provisions are fair enough. In the present proceeding, no Amendment is contemplated in the RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010 for which the procedure of the previous publication needs to be followed. In view of the above, the suggestion is not accepted.

5.2.6 One of the suggestions received is towards making the monitoring and compliance of RPO as web based. In this respect, it is noticed that for making monitoring and compliance of RPO more effective, RREC has already developed a web tool. However, it would be appropriate that the suggestion is examined by RREC from view point of requirement of an Amendment in the RERC

(Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010, which is not contemplated in the present proceedings.

5.2.7 A suggestion has also been received to specifically mention that that power generated from waste heat generated in fossil fuel based energy plants cannot be considered for RPO, including in hybrid mode with renewables or otherwise. This issue has already been dealt with by the Commission in its order dated 23.03.2017 in the matter of petition nos. 839/2016 and 840/2016 filed by RREC for enforcement of RPO. The Commission in the said order has held that a captive power plant generating electricity through waste heat recovery cannot be fastened with RPO liability under section 86(1)(e) of the Electricity Act. Further, the co-generation is already included in the definition of renewable energy under the RERC (Renewable Energy Obligation) Regulations 2007. In view of the above, the suggestions is not accepted.

5.2.8 As regards concerns about promotion of RE Generation by CPP and OA consumers, as mandated under the Act, Commission is committed to promote RE in the state. RREC is directed to look into the issues raised and take appropriate steps to remove the impediments being faced, if any.

6. With above considerations, Commission finalizes the following Regulations:

Rajasthan Electricity Regulatory Commission (Power Purchase & Procurement Process of Distribution Licensees) (Fifth Amendment) Regulations, 2019.

Rajasthan Electricity Regulatory Commission (Renewable Energy Obligation) (Fifth Amendment) Regulations, 2019.

The above Regulations are placed below for issue and publication

in the official Gazette.

7. Copy of the finalized regulations may also be sent to the State Government, the State Nodal Agency, i.e., RREC, concerned utilities and persons who have offered the suggestions/comments.

(Prithviraj)
Member

(Suresh Chandra Dinkar)
Member

(Shreemat Pandey)
Chairman

Annexure-I**List of persons offering written or oral comments/suggestions:**

S.No.	Company/Individual
1	Sh. Shanti Prasad (Ex-Chairman RERC), individual, Jaipur.
2	Rajasthan Urja Vikas Nigam Limited (RUVNL), Jaipur.
3	Rajasthan Renewable Energy Corporation Limited (RRECL), Jaipur.
4	Indian Wind Energy Association (InWEA), New Delhi.
5	Rudraksh Energy, Jaipur.
6	Jaipur Vidyut Vitran Nigam Limited (JVVNL), Jaipur.
7	Rajasthan Solar Association (RSA), Jaipur.
8	M/s DCM Shriram Limited (DSL) (through MSA Advocates & Solicitors), Kota.
9	Sh. Madhav Singh, individual, Jaipur.

RAJASTHAN ELECTRICITY REGULATORY COMMISSION

NOTIFICATION

Jaipur, January, 2019

No. RERC/Secy/Regulation-

In exercise of the powers conferred under Section 86(1)(e) read with section 181 of the Electricity Act, 2003 and all power enabling it in this behalf, the Rajasthan Electricity Regulatory Commission makes the following Regulations to amend the RERC (Power Purchase & Procurement Process of Distribution Licensees) Regulations, 2004 (hereinafter referred to as 'the Principal Regulations'), namely:

1. Short title and commencement

- (1) These Regulations shall be called the "Rajasthan Electricity Regulatory Commission (Power Purchase & Procurement Process of Distribution Licensees) (Fifth Amendment) Regulations, 2019."
- (2) These Regulations shall come into effect from 01.04.2019.

2. Amendment in Regulation 4 (1A) of the Principal Regulations:

The following proviso shall be added to the sub-regulation (1A) of Regulation 4:

" Provided that the revised RPO for FY 2018-19 and RPO targets beyond this for distribution licensee and deemed licensee shall be governed by the RERC (Renewable Energy Obligation) Regulations, 2004 as amended from time to time or any subsequent enactment thereof."

By Order,

Secretary

Note:

1. Principal Regulations were published in Rajasthan Gazette Extraordinary Part-7 on 06.07.2004.
2. The Principal Regulations were amended vide:
 - i. Rajasthan Electricity Regulatory Commission (Power Purchase & Procurement Process of Distribution Licensees) (First Amendment)

- Regulations, 2006 notified in Rajasthan Gazette Extraordinary Part-7 on 02.01.2007.
- ii. Rajasthan Electricity Regulatory Commission (Power Purchase & Procurement Process of Distribution Licensees) (Second Amendment) Regulations, 2011 notified in Rajasthan Gazette Extraordinary Part-7 on 31.05.2011.
 - iii. Rajasthan Electricity Regulatory Commission (Power Purchase & Procurement Process of Distribution Licensees) (Third Amendment) Regulations, 2014 notified in Rajasthan Gazette Extraordinary Part-7 on 10.07.2014.
 - iv. Rajasthan Electricity Regulatory Commission (Power Purchase & Procurement Process of Distribution Licensees) (Fourth Amendment) Regulations, 2017 notified in Rajasthan Gazette Extraordinary Part-7 on 10.07.2017.

RAJASTHAN ELECTRICITY REGULATORY COMMISSION

NOTIFICATION

Jaipur, January, 2019

No. RERC/Secy/Regulation-

In exercise of the powers conferred under Section 86(1)(e) read with section 181 of the Electricity Act, 2003 and all power enabling it in this behalf, the Rajasthan Electricity Regulatory Commission makes the following Regulations to amend the RERC (Renewable Energy Obligation) Regulations, 2007 (hereinafter referred to as the 'Principal Regulations'), namely:

1. Short title and commencement

- (1) These Regulations shall be called the "Rajasthan Electricity Regulatory Commission (Renewable Energy Obligation) (Fifth Amendment) Regulations, 2019."
- (2) These Regulations shall come into effect from 01.04.2019.
Provided that the revised RPO for FY 2018-19 shall become applicable from 1.04.2018.

2. Amendment in Regulation 4 of the Principal Regulations:

- (1) The following table along with proviso shall be added below the existing tables appearing under the heading (A) of sub-regulation (2):

S.No.	Year	Obligation expressed as percentage of energy consumption (%) excluding consumption met from hydro sources of power.		
		Non-solar	Solar	Total
1	2018-19 (revised)	8.60%	4.75%	13.35%
2	2019-20	9.00%	6.00%	15.00%
3	2020-21	9.40%	7.25%	16.65%
4	2021-22	9.80%	8.50%	18.30%
5	2022-23	10.10%	9.50%	19.60%
6	2023-24	10.50%	10.50%	21.00%

Provided that on achievement of Solar RPO Compliance to the extent of 80% and above remaining shortfall if any, can be met by excess Non-solar energy purchased beyond specified Non-solar RPO for that particular year:

Provided further that on achievement of Non-Solar RPO Compliance to the extent of 80% and above, remaining shortfall if any, can be met by excess solar energy purchased beyond specified Solar RPO for that particular year."

- (2) The following table shall be added below the existing tables appearing under the heading (B) of sub-regulation (2):

S.No.	Year	Obligation expressed as percentage of energy consumption(%) excluding consumption met from hydro sources of power
1	2018-19 (revised)	13.35%
2	2019-20	15.00%
3	2020-21	16.65%
4	2021-22	18.30%
5	2022-23	19.60%
6	2023-24	21.00%

- (3) The sub-regulation (3) shall be substituted with the following:

“(3) The RE Obligation for a distribution licensee including deemed licensee for FY 2018-19 and onwards shall be as under:

S.No.	Year	Obligation expressed as percentage of energy consumption (%) excluding consumption met from hydro sources of power.			
		Non-solar		Solar	Total
		Wind	Biomass		
1	2018-19 (revised)	8.00%	0.60%	4.75%	13.35%
2	2019-20	8.30%	0.70%	6.00%	15.00%
3	2020-21	8.60%	0.80%	7.25%	16.65%
4	2021-22	8.90%	0.90%	8.50%	18.30%
5	2022-23	9.10%	1.00%	9.50%	19.60%
6	2023-24	9.40%	1.10%	10.50%	21.00%

Provided that the energy generated from Biomass, Biogas, Biomass Gasifier and Municipal Solid Waste (MSW)/Waste-to-Energy (WtE) based sources shall be covered under the Biomass category:

Provided further that in case of insufficient availability of energy from Biomass based sources during a year, the shortfall can be made good by Wind Energy and to this extent, RPO for wind would be increased:

Provided also that on achievement of Solar RPO Compliance to the extent of 80% and above remaining shortfall if any, can be met by excess Non-solar energy purchased beyond specified Non-solar RPO for that particular year:

Provided also that on achievement of Non-Solar RPO Compliance to the extent of 80% and above, remaining shortfall if any can be met by excess solar energy purchased beyond specified Solar RPO for that particular year."

By Order,

Secretary

Note:

1. Principal Regulations were published in Rajasthan Gazette Extraordinary Part-7 on 28.03.2007.
2. The Principal Regulations were amended vide:
 - i. Rajasthan Electricity Regulatory Commission (Renewable Energy Obligation) (First Amendment) Regulations, 2011 notified in Rajasthan Gazette Extraordinary Part-7 on 31.05.2011.
 - ii. Rajasthan Electricity Regulatory Commission (Renewable Energy Obligation) (Second Amendment) Regulations, 2014 notified in Rajasthan Gazette Extraordinary Part-7 on 26.06.2014.
 - iii. Rajasthan Electricity Regulatory Commission (Renewable Energy Obligation) (Third Amendment) Regulations, 2015 notified in Rajasthan Gazette Extraordinary Part-7 on 30.03.2015.
 - iv. Rajasthan Electricity Regulatory Commission (Renewable Energy Obligation) (Fourth Amendment) Regulations, 2017 notified in Rajasthan Gazette Extraordinary Part-7 on 10.07.2017.