GUJARAT ELECTRICITY REGULATORY COMMISSION

GANDHINAGAR

<u>In the matter of:</u>

<u>Procurement of Energy from Renewable Sources (Second Amendment), Regulations, 2018</u>.

<u>CORAM:</u>

Shri Anand Kumar, Chairman
Shri K.M. Shringarpure, Member
Shri P.J. Thakkar, Member

<u>STATEMENT OF REASONS</u>

1. BACKGROUND:

The Electricity Act, 2003, inter-alia, seeks to promote renewable and alternative sources of energy. With this in view, the Act mandates the State Electricity Regulatory Commissions (SERCs) to promote cogeneration and generation from renewable energy sources by providing suitable measures for connectivity with the grid, and also to specify for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee.

Government of India, Ministry of Power has framed various policies including the National Electricity Policy which reiterate that the power purchase obligation from non-conventional sources of energy, as envisaged in Section 86(1)(e) of the Electricity Act, 2003 should be specified by the SERCs. Progressively the share of electricity from non-conventional sources would need to be increased as prescribed by the State Commission and the same should be reflected in tariff.

With considerations of the above aspects, the Commission had notified Regulation No. 15 titled 'Gujarat Electricity Regulatory Commission (Power Procurement from Renewable Sources) Regulations, 2005 on 29th October, 2005, in which the Renewable Purchase Obligations (RPO) was specified for the Distribution Licensees for FY 2006-07, FY 2007-08 and FY 2008-09. The aforesaid Regulations have been repealed by Notification No. 03 of 2010 titled GERC (Procurement of Energy from Renewable Sources) Regulations, 2010. In the aforesaid Regulations, the Commission has specified Renewable Power Purchase Obligation up to FY 2012-13. The Commission thereafter notified GERC (Procurement of Energy from Renewable Sources) (First Amendment) Regulations, 2014 and specified the RPO for FY 2010-11 to FY 2016-17.

Government of India, Ministry of Power and Ministry of New and Renewable Energy Sources have issued a letter to SERCs stating that the SERCs should set the minimum percentage for purchase of Solar energy so that it reaches 8% of total consumption of energy excluding Hydro Power by March, 2022. It is also stated that SERCs may notify the RPO trajectory that is aligned with the trajectory as notified by Ministry of Power, Government of India, as it would be crucial in achieving the commitment that Government of India has made under Paris Climate Agreement for reducing carbon emission in the economy and also for having 40% electric power installed capacity from clean energy sources so as to reach target of 175 GW by 2022.

Since the present Regulations notified by the Commission specify the RPO percentage up to FY 2016-17, the Commission has decided to specify RPO for the period from FY 2017-18 to FY 2021-22 with an objective to achieve a target of purchase of solar energy equivalent to 8% of total consumption of energy as envisaged by the Government of India. Accordingly, a draft GERC (Procurement of Energy) (Second Amendment) Regulations, 2017 was issued by the Commission. Notice was given to invite comments/suggestions from the stakeholders including public.

In response to the above, the objections/suggestions from 14 stakeholders were received. The list of the objectors, who submitted their objections/suggestions on these draft Regulations is kept at **Annexure – 1.**

The Commission conducted public hearing for the aforesaid draft Regulations, 2017 on 1st September 2017. The list of the Respondents who had participated in the hearing is given at **Annexure – 2.**

2. VIEWS OF THE STAKEHOLDERS, ANALYSIS AND FINDINGS OF THE COMMISSION THEREON

2.1 The Commission considered the comments received from the stakeholders on the draft Regulations and the submissions made by the stakeholders who had participated in the public hearing conducted on 1st September 2017 as well as their written submissions received during and after the public hearing. The Regulations have been finalised after detailed analysis and due consideration of the various issues raised by the stakeholders.

3. OBJECTIONS TO THE REGULATIONS AND FINDINGS OF THE COMMISSION

(a) Some of the objectors have contended that the Renewable Purchase Obligation is required to be decided with consideration of sale of energy by the obligated entities viz., distribution licensee and the said sale will have to be grossed up by T & D losses to arrive at the purchase of RE by the distribution licensees i.e. input energy of the distribution licensees. While in case of OA and captive generating consumers, the RPO should be computed as a percentage of metered consumption recorded at drawal/consumption point. Thus, the renewable energy requirement of the distribution licensees be determined based on input energy of such licensees while in case of OA and captive generating plant, the same be computed as percentage of metered consumption.

Commission's decision

Section 86 (1) (e) of the Electricity Act, 2003 provides that the Renewable Purchase Obligation needs to be defined as a part of total consumption by various entities in the licensed area of distribution licensees. Therefore, the renewable purchase obligation of the obligated entities needs to be specified with reference to the consumption in the licensee area. Further, Regulation 4.1 of the existing Regulations provides that the obligated entity shall purchase electricity (in kWh) from renewable sources, at a defined minimum percentage of total consumption of energy including T&D losses. The obligated entities are, therefore, required to purchase energy from defined sources at the percentage specified by the Commission as percentage of total consumption of energy of such entities. Thus, the RPO of the obligated entities is in accordance with the provisions of the Act.

(b) The distribution licensees of the State have submitted that they have initiated competitive bidding for procurement of power from Renewable sources as the tariff discovered under the competitive bidding is quite lower than generic tariff determined by the Commission. Moreover, the Commission has also directed to procure the renewable energy through competitive bidding process. The distribution licensees have signed the PPAs with Wind Energy Generators for more than 800 MW during various months of FY 2016-17 but its generation may not be available fully during FY 2017-18. Further, the distribution licensees initiated the competitive bidding for procurement of energy for 500 MW each from Wind and Solar and it will take some time for finalisation of the bids. Hence, the energy from such projects may not be available fully during FY 2017-18. Thus, the additional energy as anticipated in the Regulations may not be available fully for FY 2017-18. Hence, the Commission may keep the percentage of Renewable energy for FY 2017-18 as per FY 2016-17 and for FY 2018-19 to FY 2021-22 RPO may be considered as proposed in draft Regulations.

Some of the objectors have contended that Ministry of Power, Government of India has issued guidelines specifying trajectory for Solar and Non-Solar RPOs for a period from 2016-17 to 2018-19. As per the aforesaid trajectory, RPO for Non-Solar proposed for FY 2016-17 as 8.75%, FY 2017- 18 as 9.5% and FY 2018-19, the same may be 10.25%. Thus, the aforesaid guidelines provide that the annual increase proposed by the Government of India is 0.75% while the Commission has proposed the annual increase for the wind energy generation at rate of 0.10% which is quite lower. Further, the State has potential of 84000 MW as assessed by NIWE and MNRE has envisaged tentative target of wind capacity addition of 8800 MW by 2022. The present installed wind power capacity in the State is 3600 MW which is hardly 4% of total potential in the State and less than 50% of MNRE set target for the State. To achieve the target of 8800 MW by 2022 addition of 1000 MW every year is required. Therefore, RPO percentage needs to be increased at the rate of 2% every year i.e. 10% for FY 2017-18, 12% for FY 2018-19, 14% for FY 2019-20, 16% for FY 2020-21 and 17% for FY 2021-22.

Some of the objectors have proposed that RPO percentage for Solar may be increased at rate of 1 % and for Wind at the rate of 0.25% p.a. They have also suggested to procure the power only through Competitive Bidding Process by the Distribution Licensees.

Commission's decision

The Commission had specified and considered RPO of Wind as 7.75%, Solar as 1.75% and Others (Biomass, Bagasse, Hydro and MSW) as a 0.5%, totalling to 10.00% as a part of power procurement of the distribution licensees for FY 2016-17. The Commission has proposed RPO for FY 2017-18 for Wind as 7.85%, Solar as 3% and Others (Biomass, Bagasse, Hydro and MSW) as a 0.5%, totalling to 11.35%. We note that the addition in Wind Generation Capacities during past few years prior to FY 2016-17 was quite less in comparison to the requirement of wind energy whereas the availability of Solar energy is higher than the RPO requirement of such energy. Further, the Ministry of Power, Government of India has envisaged that by March 2022 solar energy consumption will be 8% of total consumption of energy in the licensee area. Thus, it is necessary to specify RPO% of Solar energy in such a manner so as to meet the target of 8% RPO by March 2022 as envisaged by the Government of India. As submitted by the licensee, we also observed that the tariff for wind energy discovered under (i) SECI – I Competitive Bidding was Rs. 3.46 per unit, (ii) in Competitive Bidding of the SECI – II, it was Rs. 2.64 per unit and (iii) in Competitive Bidding of the SECI – III, it was Rs. 2.44 and Rs. 2.45 per unit. The aforesaid rates are quite lower in comparison to the generic tariff of Rs. 4.19 determined by the Commission vide Order No. 02 of 2016 dated 30.08.2016. We also note that GUVNL has initiated Competitive Bidding for procurement of 500 MW Solar energy from the generators and tariff discovered under the said Competitive Bidding process was Rs. 2.64 to Rs. 2.67 per unit which is quite lower than the existing generic tariff of Rs. 5.34 per unit determined by the Commission for the project availing the AD benefit and Rs. 5.86 per unit for the projects not availing the AD benefit. Thus, the tariff discovered under Competitive Bidding is quite lower in comparison to the present generic tariff. Therefore, the Commission has directed the distribution licensees to procure the Renewable Energy from the aforesaid sources by following Competitive Bidding process.

We also note that GUVNL has initiated the Competitive Bidding process for procurement of power from the Wind Energy Generators for 500 MW during July, 2017, but the said bidding process was delayed due to various reasons. In December, 2017 tariff discovered under the said Competitive Bidding Process was Rs. 2.43 to Rs. 2.45 per unit for 500 MW. As the successful bidder requires 18 to 24 months to set up wind or solar power projects, it is incorrect to anticipate that the renewable energy would be available from such projects during FY 2017-18. Therefore, the capacity addition of renewable energy envisaged from such sources, i.e. Wind and Solar may not be available for FY 2017-18 or the same may be less in comparison to the requirement of such energy. We, therefore, agree to the objections of the distribution licensees and decide that RPO % for FY 2017-18 for Wind, Solar, and Others shall be as per RPO percentage of FY 2016-17. We also decide that from FY 2018-19 to FY 2021- 22, the RPO percentage specified by the Commission shall be same as proposed in the draft Regulations.

Some of the objectors have contended that as per MoP guidelines and target set by the MNRE, it is necessary to increase the RPO percentage at the rate of 2% from FY 2017-18 to FY 2021 – 22 so that the RPO for wind energy for FY 2017 – 18 will be 10% and for FY 2021-22, it will be 17%. We note that the addition of wind capacity in the State during past many years except FY 2016-17 was quite lower. Thus, the wind energy generation from such lower additional capacity may not be adequate for the obligated entities if higher RPO target is fixed by the Commission. It is also noted that the State has high potential of Wind energy generation but the capacity addition of such energy is quite lower. Therefore, if higher RPO target is fixed by the Commission, the same may not be achieved which will lead to non-compliance of RPO by the obligated entities. As noted in earlier para the addition in Wind Capacity during FY

2017-18 may be quite less. In such a situation, addition of 2% of total consumption of energy from Wind Projects procured by the obligated entities will further add the shortage of such energy than present. Hence, the contention of the objectors to increase the RPO for Non-Solar @ 2% from 2017-18 does not seem valid. We are, therefore, of the view that the proposed increase of 2% of Non-Solar RPO by the objectors is not acceptable and the same is rejected.

The Solar RPO is proposed by the Commission with the consideration that the Government of India has envisaged that by March, 2022, the solar consumption may be 8%. Further, the potential of solar energy in the State is quite higher. The gestation period to set up the Solar plant is quite lower. Hence, it is possible to achieve higher target for solar energy generations. Further, the tariff discovered under Competitive Bidding Process conducted by GUVNL is also quite lower which will be helpful to reduce the cost of power procurement of the distribution licensees. Therefore, the Commission has considered higher percentage of RPO of Solar energy. While in case of Wind energy generation, there is shortfall in availability of Wind energy and further increase in RPO percentage of Wind energy will widen the existing gap of such energy requirement. Therefore, the contention of the objectors is not acceptable and hence the same is rejected.

(c) Some of the objectors have contended that the Government of India has envisaged a target of 175 GW renewable energy based generation. To achieve this target, it is necessary to keep higher RPO percentage as set by MoP/MNRE for the respective year for the growth of renewable energy sector. It is submitted that the capacity addition targets envisaged to be achieved by 2022 are 8020 MW Solar, 8800 MW Wind, 25 MW small hydro and 228 MW Biomass. The Wind Energy capacity target is 60 GW by 2022 at National level. It is also stated that as the Hon'ble APTEL has in its judgement held that the technology specific capacity addition targets to be made by the State, the Commission may retain wind/technology specific target and its compliance only through procurement of wind/technology specific sources/REC respectively.

Commission's decision

The Commission has envisaged the RPO target with consideration of the availability of various technology based renewable energy generation in the State of Gujarat and also considered the year on year addition to installed capacity of the renewable energy in the State. It is necessary to specify the target as envisaged by the Central Government with consideration of the aforesaid factors so that the target may be fulfilled by the obligated entities. We note that the Wind energy generation is a proven technology, however, the addition of such technology based generation in the State is varying from year to year. It is also necessary to consider the addition of renewable energy based generation done by the Central Government and State Government/distribution licensees by following the competitive bidding process. We also note that up till now the installation of wind energy generations, though was initiated in the State in 1984, the capacity addition is only 5483 MW as on 31.08.2017. We also note that though the biomass capacity is envisaged at 288 MW by 2022 but the existing capacity is only 39 MW as no new capacity addition happened after 2009. It is necessary to examine the actual status of such energy based generation and also how the capacity addition has happened in the past for deciding the RPO. Thus, prior to fixing any target for RPO, it is also necessary to assess the capacity addition possible or achievable in the State. Therefore, the Commission has proposed the RPO percentage in the proposed Regulations based on the availability of various renewable energy sources and possibility of the addition of such generation sources in the State.

The objectors have also raised the issue that the availability of REC also needs to be considered. In this regard, we note that the REC price and their availability is dependent on the market mechanism and the Commission does not have any hold on the same. We, therefore, decide not to accept the contention of the objectors and the same is rejected.

(d) Some of the objectors have contended that the RPO of co-generation plants with co-located CPP may be kept at 50% of percentage applicable to other obligated entities considering the merits of CGP that it is installed by the industries to meet their requirement of energy and steam so that the price of their product may be reduced. It would also be helpful to avoid the T&D loss borne by the distribution licensees and reduce the power procurement cost of the licensees. Any increase in RPO percentage will lead to operating the CGP/co-generation plants of the industries at lower efficiencies and it would lead to polluting the environment. Therefore, the Commission may keep the RPO of such plants at 50% of RPO applicable to other obligated entities.

Commission's decision

We note that the Electricity Act, 2003 has envisaged to promote the renewable energy and co-generation based generation. Moreover, Section 86 (1) (e) of the Act provides that the Commission needs to specify the RPO on the consumption of the energy in the distribution licensee area. Therefore, the RPO percentage needs to be specified with consideration of total consumption in the licensee area. Moreover, the Central Government through MoP and MNRE have envisaged to achieve the target of installation of 175 GW of renewable energy generation capacity by 2022. To achieve the aforesaid target, it is necessary that the persons who are consuming the energy need to purchase Renewable energy out of its total consumption equally so that the target may be achieved otherwise, if 50% RPO is specified for co-generation/CGP, in that case, the shortfall in such target may be required to be fulfilled by the other entities which is not the intent of the Act. Further, any surplus energy if available after 51% consumption by CGP holders, they are eligible to sell the same to the licensees or consumers. Therefore, it is incorrect to say that the CGP holders may be affected by keeping higher RPO percentage for them. We, therefore, decide that the contention of the objectors that the RPO of CGP holders be kept at 50% of the RPO applicable to other obligated entities is not acceptable and the same is rejected.

(e) Some of the objectors have contended that the renewable energy from solar is available at lower rate than the wind energy generation. Therefore, the different percentage specified by the Commission earlier for different categories of technology based generation is now not relevant and the Commission may specify single percentage of RPO which may be fulfilled by obligated entities specifically the captive generating plants or OA consumers who need to fulfill their RPO can set up the higher capacity of RE generation and operate with optimal cost and efficiencies.

Commission's decision

We note that different types of renewable energy based generation potential is available in the State. However, the addition of such energy based generation varies from technology to technology and time to time. Such variation could be due to benefit provided to the generators in the policy, tariff, the availability of the requisite sites to the developers, evacuation facility, etc. However, it is also necessary to see that all types of renewable energy based generation available in the State get promoted. We note that the Solar and Wind energy potential in the State is quite higher. Further, for Solar energy generation gestation period is quite lower than the wind energy generation. The installation of Solar energy generation in the State is flexible with regard to site of the projects for setting up such plant by the project developers. Therefore, the addition in solar energy generation capacity in the country increased drastically. Further, the NEP and Tariff Policy framed under the Act also envisage to promote all types of renewable energy generations. We, therefore, decide to keep separate percentage of RPO for Wind, Solar and other categories.

(f) Some of the objectors have proposed following amendments:

(i) to amend para 2 of the Principal Regulation 4.1 by replacing FY 2020-21 to FY 2021-22.

(ii) MSW based energy projects are RE projects and the Commission has not considered the same for meeting shortfall of RPO of Wind/Solar/Others. Therefore, the Commission may consider the MSW based energy projects for fulfilment of RPO and delete the word "excluding energy from MSW" in the proposed amendment at para 2 of the Principal Regulation 4.1.

(iii) Regarding addition of new third para after para 2 of the Principal Regulation 4.1, GUVNL submitted that Gujarat Waste to Energy (GWE) Policy, 2016 stipulates that competitive bids shall be invited for development of Waste to Energy Projects by Urban Development Department on generic tariff determined by the Commission and viability gap funding per kWh to be quoted by bidder and the basis for selection of the developer shall be the lowest VGF per Kwh and proposed as under:

"Distribution Licensee(s) shall compulsorily procure 100% power produced from all the Waste-to-Energy Projects in the ratio of their procurement of power from all sources including their own, at the tariff discovered through a Competitive Bidding Process as envisaged in the GWE Policy, 2016 subject to ceiling of generic tariff as determined by GERC".

Commission's decision:

The aforesaid objections raised by the objectors are valid. Hence, we decide to incorporate the same in the relevant Regulation as suggested by the objectors.

(g) Some of the objectors have raised the following objections:

(i) For the purpose of RPO compliance and monitoring and reporting the State Agency shall formulate the procedure and develop the RPO web portal.

(ii) All obligated entities shall mandatorily register themselves with RPO web portal and furnish requisite information to State Agency through RPO web portal.

(iii) Electrical Inspector and nodal agency for Open Access or third party verifier appointed by the State Agency shall verify and confirm the data submitted by the obligated entities.

(iv) State Agency shall submit quarterly report of RPO compliance of obligated entities to the State Commission.

(v) Failure to provide the necessary information/data/report by obligated entities shall attract the penal actions under Section 142 of the Electricity Act, 2003.

(vi) The RPO target for the obligated entities other than distribution licensees shall be on the actual energy consumption recorded at drawal point or consumption point of such obligated entities.

(vii) The quantum of electricity generated by the eligible consumers from the Rooftop PV system under the Net Metering arrangement shall be considered to meet the Solar RPO of the distribution licensees.

(viii) If the eligible consumers desire to utilise the Solar Energy generation from the Rooftop Solar Power Project to meet the RPO compliance, in that case, such consumers shall install at its cost the necessary meters etc. and shall be maintained by the distribution licensee at its cost.

(ix) Some of the objectors have raised the objection stating that the Commission may direct the licensees to procure RE power through competitive bidding only and not from their sister company.

Commission's decision

The aforesaid objections do not fall within the scope of the proposed amendment draft regulations and hence, the same are not considered in this order.

The Commission directs that the Second Amendment in the GERC (Procurement of Energy from Renewable Sources) Regulations, 2010 be published in the Official Gazette after incorporating the changes as decided and indicated in the foregoing paragraph of this order.

Sd/-	**Sd/-**	**Sd/-**
[P. J. THAKKAR]	**[K. M. SHRINGARPURE]**	**[ANAND KUMAR]**
Member	**Member**	**Chairman**

Place: Gandhinagar.
Date: 21/04/2018.

Annexure – I

The Commission has received objections/suggestions from the following stakeholders in pursuant to public notice dated 01.08.2017, in the matter of Draft Regulations of Gujarat Electricity Regulatory Commission (Procurement of Energy from Renewable Sources) (Second Amendment) Regulations, 2017:

Sr. No.	Name of Objectors
1.	Clean Energy and Environment Office
2.	Gujarat Urja Vikas Nigam Limited (GUVNL)
3.	Shri K.K. Bajaj
4.	Indian Wind Turbine Manufacturer Association (IWTMA)
5.	Indian Wind Power Association (IWPA)
6.	Reliance Industries Limited (RIL)
7.	Utility Users' Welfare Association (UUWA)
8.	Ultratech Cement Limited
9.	Hindalco Industries Limited
10.	Grasim Industries Limited
11.	Indian Wind Energy Association (InWEA)
12.	Confederation of Indian Industry
13.	Energy Policy and Regulation, GE South Asia
14.	Sahajanand Power Management Private Limited

Annexure – II

The following stakeholders were present during the hearing on 01.09.2017, in the matter of Draft Regulations of Gujarat Electricity Regulatory Commission (Procurement of Energy from Renewable Sources) (Second Amendment) Regulations, 2017:

Sr. No.	**Name of Objectors**
1.	Gujarat Urja Vikas Nigam Limited (GUVNL)
2.	Indian Wind Power Association (IWPA)
3.	Reliance Industries Limited (RIL)
4.	Utility Users' Welfare Association (UUWA)
5.	Ultratech Cement Limited
6.	Hindalco Industries Limited
7.	Grasim Industries Limited
8.	Indian Wind Energy Association (InWEA)
9.	Confederation of Indian Industry
10.	Energy Policy and Regulation, GE South Asia