

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

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**Maharashtra Electricity Regulatory Commission (Renewable Purchase Obligation, its
Compliance and Implementation of Renewable Energy Certificate Framework)
Regulations, 2019**

STATEMENT OF REASONS

Dated: 27 December, 2019

Introduction

On 30 March 2016, the Commission notified the Maharashtra Electricity Regulatory Commission (Renewable Purchase Obligation, Its Compliance And Implementation Of Renewable Energy Certificate Framework) Regulations, 2016 for a five year Control Period from FY 2016-17 to FY 2019-20. With the existing Regulations due to expire on 31 March 2020, the Commission on 26 October 2019 had notified the Draft Maharashtra Electricity Regulatory Commission (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) Regulations, 2019 (Draft RPO-REC Regulations, 2019) along with Explanatory Memorandum (EM) on its website www.merc.gov.in in downloadable format and also published a Public Notice in daily newspapers in Marathi (Maharashtra Times and Loksatta) and English (Indian Express and Times of India). Comments, suggestions and/or objections were invited from all stakeholders by 18 November 2019.

Comments, suggestions and objections were received from 18 stakeholders, organizations, and individuals, etc., which include State Power utilities, State Nodal Agency (MEDA), Power Producers Associations, Non-Profit Organization, Renewable Energy Generators, etc. List of stakeholders/individuals who submitted their comments / suggestions / objections is given at Appendix-I.

After due consideration of the comments / suggestions / objections received, the Commission has finalized the RPO-REC Regulations, 2019. The main issues raised during the public consultation process, and the Commission's analysis and decisions on them which underlie the Regulations as finally notified are set out below.

1. Definitions

1.1 Proposed in draft RPO-REC Regulations, 2019

“2.1. (i) *“Obligated Entity” means a Distribution Licensee, a user owning a captive power plant, and Open Access Consumer in the State of Maharashtra required to comply with the Renewable Purchase Obligation (“RPO”) under these Regulations subject to fulfilment of conditions in Regulation 5;”*

1.2 Comments received

Captive Power Producers Association (CPPA) has relied upon judgments dated 2 January 2019 and 9 April 2019 of the Appellate Tribunal for Electricity (ATE) seeking exemption from RPO to Captive Power Plants (CPP) based Co-generation.

1.3 Analysis and Commission’s Decision

The Commission notes that Section 86 (1) (e) of the Electricity Act (EA) 2003 reproduced below requires the Commission to specify percentage of total consumption of electricity to be met from renewable energy (RE) sources:

“(e) 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 licensee”

Intent of the above provision is to mandate a generation mix which includes RE sources and thereby replace certain percentage of fossil fuel-based energy with commensurate consumption of energy from RE sources. Same has been emphasized by Tariff Policy 2016, notified by the MoP under Section 3 of the EA 2003. Relevant part of the Tariff Policy, 2016 is reproduced below:

“6.4 Renewable sources of energy generation including Co-generation from renewable energy sources:

(1) Pursuant to provisions of section 86(1)(e) of the Act, the Appropriate Commission shall 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.

Provided that cogeneration from sources other than renewable sources shall not be excluded from the applicability of RPOs.

(i)...”

The Tariff Policy, 2016, stipulates that fossil fuel (other than RE sources) based Co-generation cannot be excluded from RPO. Based on such provisions on the Tariff Policy, the Commission in its RPO Regulations, 2016 has imposed RPO on fossil fuel based co-generation plants. Aggrieved by said Regulations, CPPA has filed Write Petition No. 269 of 2019 before Hon’ble Bombay High Court which is pending, and no stay has been granted by the High Court. Thereafter, CPPA in its Petition in Case No. 68 of 2019 requested the Commission for deferment of RPO compliance till disposal of Writ Petition by High Court on the ground that if it succeeds in its Writ Petition, then expenses incurred on complying with RPO would cause financial loss to it. On this issue, the Commission in its Order dated 22 May, 2019 has suggested following alternative:

12. Alternately, as highlighted in para 10 above, the Commission will be initiating the RPO Compliance verification process for FY 2014-15 to FY 2016-17 for CPP users and OA Consumers. After crystallization of the verification process is completed by the Commission, the shortfall (if any) will be ascertained, and the petitioner shall deposit the amount equivalent to the REC floor prices of the shortfall units and further on year to year basis to meet its RPO, with the MEDA till such time the writ petition is decided by the High Court. The Commission opines that this alternative option will address the concerns of the petitioner about the possible hardship in case it succeeds in the High Court.

In view of above, as issue is subjudice before the Hon’ble Bombay High Court and also considering alternative option allowed to co-generating plants for protecting their interest till disposal of Write Petition, the Commission deems it fit to continue with its dispensation of not excluding fossil fuel based co-generation CPP from RPO.

Accordingly, the Commission has decided to retain the provisions of the Draft RPO-REC Regulations, 2019.

2. Scope of Regulations and extent of application

2.1 Proposed in draft RPO-REC Regulations, 2019

“3.1 These Regulations shall apply in all cases where the State Commission is to promote Co-generation from renewable sources and generation of electricity from renewable sources and is to specify a percentage for procurement of energy generated from such sources on the basis of total consumption of electricity within the area of a Distribution Licensee.

Provided that total consumption of electricity shall exclude the consumption met from Hydro power.”

2.2 Comments received

The Tata Power Company Ltd. (TPCL) by relying on MoP notification dated 8 March, 2019 has requested to consider Hydro power procurement by Distribution Licensee towards meeting Non-Solar RPO. Further, it has also suggested to replace the term ‘*consumption met from*’ in the proviso of the Clause 3.1 with ‘*procurement from hydro*’ as it will be in sync with the Clause 7.1 and 10.2 of the Draft RPO-REC Regulations, 2019.

Prayas Energy Group (Prayas) has suggested that since the targets proposed by the Commission in the Draft RPO-REC Regulations, 2019 are minimum procurement percentage, same needs to be reflected in Regulations.

2.3 Analysis and Commission’s Decision

The Commission notes that MoP notification dated 8 March, 2019 has clearly specified that MoP will be specifying the trajectory for Hydropower Purchase Obligation (HPO) separately which would be in addition to existing Non-Solar RPO percentage. Further such HPO can be met from newly tied-up hydro source and not from existing sources. Hence, TPCL’s request of considering hydro power procurement for meeting Non-Solar RPO cannot be accepted. Regarding changes suggested in proviso, the Commission opines that the change will provide consistency with other provisions of the Regulations and hence, is accepted.

As this Regulations only stipulate minimum percentage of RPO and allow Obligated Entity to achieve higher targets stipulated by the Government of India (GoI), the Commission is inclined to accept suggestion of Prayas for clearly mentioning that this Regulations stipulate minimum percentage for procurement of RE.

Accordingly, the Commission has revised the Regulation 3.1 as below:

“3.1 These Regulations shall apply in all cases where the State Commission is to promote Co-generation from renewable sources and generation of electricity from renewable sources and is to specify a minimum percentage for procurement of energy generated from such sources on the basis of total consumption of electricity within the area of a Distribution Licensee.

Provided that total consumption of electricity shall exclude the electricity procured from Hydro power.”

3. Eligible Renewable Energy sources

3.1 Proposed in draft RPO-REC Regulations, 2019

“4.2 The eligible RE sources shall include without limitation the following :

- (a) Non-fossil fuel (including bagasse) based Co-generation (both qualifying and non-qualifying Co-generation)
- (b) Wind Energy

- (c) *Biomass Power based on Rankine Cycle technology*
- (d) *Small Hydro, Mini Hydro, Micro Hydro Power*
- (e) *Waste to Energy based on technologies approved by MNRE*
- (f) *Solar Power*
- (g) *Hybrid RE based on RE technologies and sources approved by MNRE and the State Commission*
- (h) *Any other source recognised or approved by MNRE and the State Commission;”*

3.2 Comments received

UltraTech Cement Limited has suggested to include the Fossil Fuel based co-generation plants as eligible RE sources. CPPA has highlighted that Ministry of New and Renewable Energy’s (MNRE) notification dated 26 September 2019 has clarified that power generated from co-firing of biomass in thermal power plants is RE and hence it requested the Commission to include such power generated from co-firing of biomass as an eligible RE source.

3.3 Analysis and Commission’s Decision

The Commission has followed the MNRE’s criteria for considering eligible RE sources. Fossil Fuel based co-generation plant is yet to be notified as RE by MNRE and hence the Commission cannot consider it.

As far as co-firing of biomass in thermal power plant is concerned, MNRE’s notification dated 26 September, 2019 has clarified that such power produced from co-firing of biomass is RE. Hence, the Commission is modifying the Regulation 4.2 to include such energy produced from co-firing of biomass as eligible RE source.

Accordingly, the Commission has revised the Regulation 4.2 as below:

- “4.2 *The eligible RE sources shall include without limitation the following :*
- (a) *Non-fossil fuel (including bagasse) based Co-generation (both qualifying and non-qualifying Co-generation)*
 - (b) *Wind Energy*
 - (c) *Biomass Power based on Rankine Cycle technology*
 - (d) *Small Hydro, Mini Hydro, Micro Hydro Power*
 - (e) *Waste to Energy based on technologies approved by MNRE*
 - (f) *Solar Power*
 - (g) *Hybrid RE based on RE technologies and sources approved by MNRE and the State Commission*
 - (h) *Power generated from co-firing of biomass in the thermal power plants*
 - (i) *Any other source recognised or approved by MNRE and the State Commission;”*

4. Obligated Entities

4.1 Proposed in draft RPO-REC Regulations, 2019

“5.1 The percentage specified in Regulation 7.1 shall be applicable to all Obligated Entities covering Distribution Licensees, Open Access Consumers and captive users within Maharashtra, subject to the following conditions:

- (a) Any person who owns a grid-connected Captive Generating Plant based on conventional fossil fuel with installed capacity of 1 MW and above, or such other capacity as may be stipulated by the State Commission from time to time, and consumes electricity generated from such Plant for his own use shall be subject to RPO to the extent of a percentage of his consumption met through such fossil fuel-based captive source;*
- (b) Any person having a Contract Demand of not less than 1 MVA and who consumes electricity procured from conventional fossil fuel-based generation through Open Access shall be subject to RPO to the extent of a percentage of his consumption met through such fossil fuel-based Open Access source: ...”*

4.2 Comments received

Maharashtra Energy Development Agency (MEDA), Ultratech Cement and CPPA have opposed the proposed change of lowering the threshold for Open Access (OA) and Captive users from 5MW/5MVA to 1MW/MVA as Obligated Entities. They have cited different reasons like, hardship to small consumers, captive set-up becoming economically unviable, technical issues like reduction in steam generation output of co-generation projects for accommodating RE, etc.

Adani Electricity Mumbai Ltd. – Distribution (AEML) has suggested to reduce the capacity in a phased manner to create the infrastructure/system for compliance. Prayas has welcomed the proposed change.

CPPA has further suggested that RPO Obligation should be at legal entity level as a group of different consumers (in a state) as a whole and not at the project/site or unit level and RPO obligation of subsidiary and group companies should be allowed to be set off against each other.

4.3 Analysis and Commission’s Decision

The Commission in the EM for Draft RPO-REC Regulations, 2019 has highlighted that in the earlier Control Period (FY 2010-11 to 2015-16) the Commission had specified the similar threshold for the OA and Captive users. Further, the Commission underscored that various State Electricity Regulatory Commissions have specified OA Consumers and Captive users with capacities of 1 MW or above as Obligated Entities. Further, the Commission has strengthened the RPO monitoring and verification process and has also proposed to make it a Web-based

application which will ease out issues in monitoring. The Commission is of the opinion that there are no major operational and technical hurdles in restoring the minimum threshold capacity for OA and Captive users as 1 MW/1MVA.

Regarding the request for allowing group companies to meet their RPO target on combined basis, the Commission is of the view that such arrangement would require monitoring agencies to verify ownership of each of such subsidiary and keep track of any change on ownership. As RPO is linked to consumption of Obligated Entity and each OA consumer is separate Obligated Entity, in the opinion of the Commission RPO needs to be monitored for each of such Obligated Entity separately. However, for providing ease of complying with RPO, as explained in subsequent section, the Commission is allowing Obligated Entity other than Distribution Licensee to meet their RPO on composite basis instead of separate RPO for Solar and Non-Solar.

Accordingly, the Commission has decided to retain the provisions of the Draft RPO-REC Regulations, 2019.

5. Renewable Purchase Obligation target

5.1 Proposed in draft RPO-REC Regulations, 2019

7.1 Every Obligated Entity shall procure electricity generated from eligible RE sources to the extent of the percentages, out of its total procurement of electricity from all sources excluding energy from Hydro power in a year, set out in the following Table:

Year	Quantum of purchase (in %) from Renewable Energy sources (in terms of energy equivalent in kWh)		
	Solar	Non-Solar (other RE)	Total
	(a)	(b)	(c)
2020-21	4.50%	11.50%	16.00%
2021-22	6.00%	11.50%	17.50%
2022-23	8.00%	11.50%	19.50%
2023-24	10.50%	11.50%	22.00%
2024-25	13.50%	11.50%	25.00%

7.2 RPO target stipulated above are minimum target to be achieved. Obligated Entity shall endeavour to achieve RPO target notified by the Central Government from time to time for which it will be eligible for incentive as per Regulation 12.”

5.2 Comments received

Continuum Wind, Indian Wind Energy Association (InWEA), Indian Wind Power Association (IWPA), Maharashtra Biomass Energy Developers Association (MBEDA), MEDA have requested to increase the Non-Solar RPO targets by 0.5% - 1.5%. Shree Cement has suggested

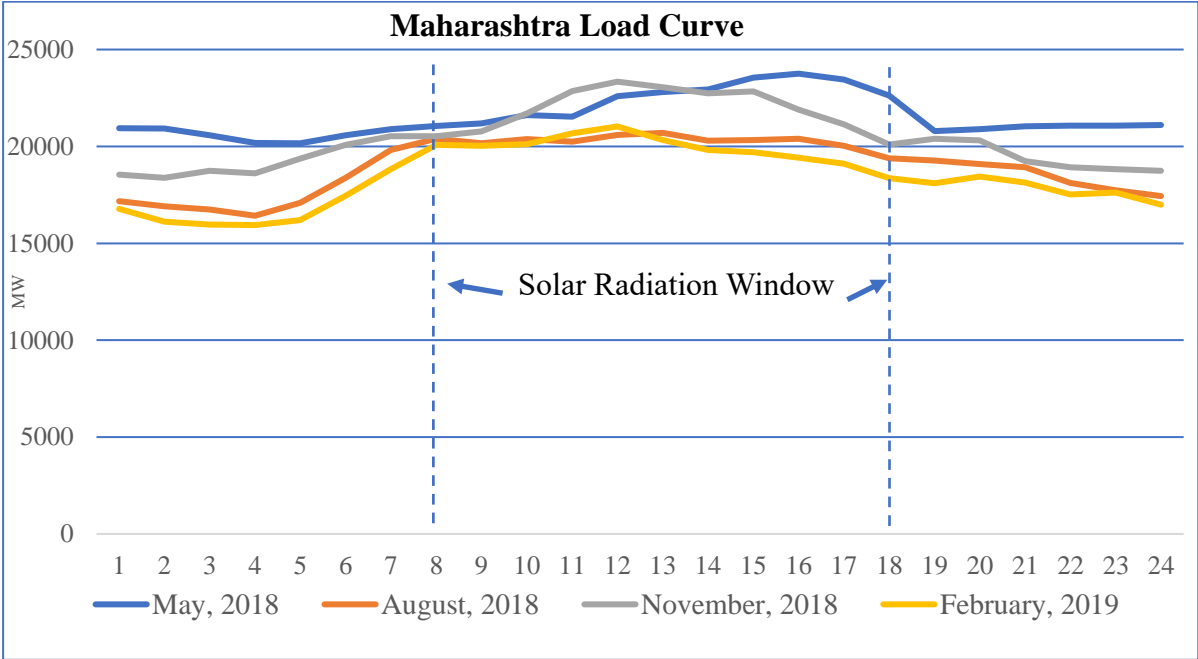
to set the targets with gradual increase, while Shri T. P. Vartak has suggested to continue with the 0.2% RPO target for Mini/Micro hydro. Tata Steel has suggested to provide relaxation to carry forward the RPO shortfall to next year without any penalty.

Prayas has also suggested to increase the share of Non-solar RPO to a higher extent and proposed RPO target reaching upto 30% (15%-Solar and 15%-Non-Solar) in FY 2024-25. Prayas has also cited its in-house study suggesting that a 30% RPO can be reliably integrated into the State power system without any additional cost.

CPPA, JSW Steel, Tata Steel and Technocraft Industries have cited the MoP’s notification dated 1 February 2019 and subsequent notification dated 1 October 2019 on the issue of capping of RPO Targets for Captive Power Plants (CPP). Accordingly, they have requested the Commission to peg the RPO target for CPP to that as was applicable on date of commissioning of the project as per MoP notifications.

5.3 Analysis and Commission’s Decision

As mentioned in EM, before projecting RPO targets, the Commission has analysed the State Load Curve for FY 2018-19. Graph below indicates, Load Curves for representative day (day on which peak demand has been recorded for the month) of each quarter:



As can be seen from above Load Curve, peak demand of Maharashtra system is in the afternoon. Even after considering seasonal variation, peak demand requirement is during the daytime unlike some parts of the Country where peak demand is recorded during evening period i.e. after sun set.

Maharashtra’s Load Curve having peak demand in the afternoon, is thus suitable for integration of Solar Energy which is available at its peak in the afternoon. Typical Solar generation curve starts with lower generation in the morning, peaking at afternoon and then reduction in

generation in the evening. Such generation pattern of Solar energy will reduce the energy balancing requirement for Distribution Licensees in Maharashtra as Solar generation is naturally increasing at the time of peak demand i.e. in afternoon and reducing thereafter. Based on this factual aspect, the Commission had proposed the RPO targets for new control period by gradually increasing only the Solar RPO targets.

Further, Maharashtra's Non-Solar RPO target is much ahead of national level target of 10.50% which is to be achieved by FY 2021-22. The Commission underscores that even if the Non-Solar RPO percentages is not increased, the Obligated Entities will be required to continue incremental contracting of Non-Solar RE power to match the increasing Gross Energy Consumption. The Obligated Entities will also be required to contract such incremental requirement against expired contracts of Non-Solar RE sources.

With regard to retaining the 0.2% RPO target for Mini/Micro hydro, the Commission in the EM has clarified that since no new generation capacity from Mini and Micro Hydro project has been added in the State for the past few years and the Obligated Entities are fulfilling this obligation through procurement of Non-Solar REC (no separate REC is available for Mini and Micro Hydro), there is no merit in retaining separate targets for Mini and Micro Hydro projects. Also such target was part of Non-Solar RPO, hence if any Mini/Micro Hydro project is commissioned in future, energy generated from it can always be used for meeting Non-Solar RPO. Hence, these projects would not be facing any adverse impact because of non retention of 0.2% separate RPO within Non-Solar RPO for Mini/Micro Hydro projects.

Regarding suggestion of stipulating higher RPO targets, the Commission notes that RPO target stipulated in Regulations are minimum target to be achieved and the Obligated Entities are free to achieve higher RPO as per their system requirement. In fact, the Commission is incentivizing higher procurement of RE by providing incentive of Rs. 0.25/kWh for procurement of RE more than the target stipulated in the Regulations upto the target indicated for the State by the MoP.

The Commission notes that Tariff Policy clearly stipulates that while setting the RPO target, the Commission needs to consider availability of RE resources for complying with notified RPO targets. The Commission also notes that recent competitive bidding conducted by various agencies for procurement of RE does not get adequate response which will have impact on new capacity addition. Also, availability of RECs (which is alternative for complying with RPO) is limited (as per <http://recregistryindia.nic.in/> ~15.5 Lakhs as on 5 December 2019). Considering all these aspects, the Commission has specified minimum RPO target and has incentivised additional procurements by the Obligated Entities.

Regarding issue of pegging RPO Targets of CPP to that applicable at the time of commissioning of the CPP, the Commission notes that MoP's notification dated 1 February 2019 reads as follows:

"2. The request of various stakeholders regarding capping of RPO for Captive Power Plant (CPP) has been examined in consultation with Ministry of New and Renewable Energy and it is clarified that RPO of the CPP may be pegged at the RPO level applicable in the year in which the CPP was commissioned. As and when the company adds to the capacity of the CPP,

it will have to provide for additional RPO as obligated in the year in which new capacity is commissioned. There should not be an increase in RPO of CPP without any additional fossil fuel capacity being added.”

Vide its subsequent notification dated 1 October 2019, the MoP has provided further clarification in this aspect as follows:

“ i) For CPPs commissioned before 1.04.2016, RPO should be at the level as mandated by the appropriate Commission for the year 2015-16. For CPPs commissioned from 1.04.2016 onwards, the RPO level as mandated by the appropriate Commission or Ministry of Power, whichever is higher, for the year of commissioning of the CPP shall be applicable.

ii) In case of any augmentation in the capacity, the RPO for augmented capacity shall be the RPO applicable for the year in which the CPP has been augmented.

iii) In case, for meeting the RPO obligation, CPP has surplus power than its consumption requirements, such a CPP may sell its surplus power to the DISCOMs under the prevailing arrangements or in the power exchange.”

In view of above, the Commission notes that MoP has pegged the RPO targets for the energy generated from the CPP commissioned before 1 April 2016 to the RPO target applicable for FY 2015-16 and for subsequently commissioned CPP to the RPO target applicable for the year in which such CPP has been commissioned. The Commission notes that MoP has issued these notifications as per its mandate of issuing long term RPO trajectory under Tariff Policy, 2016.

As per MERC (Renewable Purchase Obligation, Its Compliance And Implementation Of Renewable Energy Certificate Framework) Regulations, 2010, composite RPO targets for FY 2015-16 was 9%. Same shall be applicable for CPP commissioned before 1 April 2016. Thus, CPP user sourcing power from such CPP has to meet 9% RPO on the energy procured from such CPP. For balance power, if any, procured from third party (other than Distribution Licensee), CPP user has to meet the RPO targets as specified by the Commission from time to time. Further, for CPP commissioned after 1 April 2016 or for augmented capacity of CPP, RPO target applicable for the year of commissioning of such CPP or augmented capacity of CPP shall become applicable.

Accordingly, the Commission has added following provisos to the Regulation 7.5 of RPO-REC Regulations, 2019.

Provided that in case of Captive User of a Captive Generating Plant commissioned before 1 April 2016, the composite RPO target with respect to the energy procured from such Captive Generating Plant shall be 9%;

Provided further that in case of Captive Generating Plant commissioned on or after 1 April 2016, the composite RPO target shall be equal to the target applicable for the year in which project is commissioned;

Provided further that in case of any augmentation of the Captive Generating Plant, the RPO target for augmented capacity shall be equal to the RPO target applicable for the year in which such augmented capacity has been commissioned.

6. Cross-over of technology specific Renewable Purchase Obligation target

6.1 Proposed in draft RPO-REC Regulations, 2019

*“7.3 Obligated Entity can use surplus Solar energy upto 15% of total RPO target to meet short fall in non-Solar RPO target and vice-versa;
Provided that Obligated Entity by providing detailed justification may seek prior approval of the Commission for adjusting more than 15% surplus energy from one category against short fall in other RPO category.”*

6.2 Comments received

TPCL, AEML, CPPA and Ultratech Cement have requested to increase the crossover percentage from proposed 15% to 25% - 100%.

InWEA, IWPA and MBEDA have suggested not to allow such interchangeability.

Prayas has commented that allowing for crossover/interchangeability more than 15% would make the separate RPOs redundant and undermine the whole process.

6.3 Analysis and Commission's Decision

The Commission, in the EM of Draft RPO-REC regulations, 2019 had reasoned out the flexibility to the Obligated Entities in procuring RE to meet their RPO targets, which was in accordance with the MoP's notification dated 14 June, 2018. Further, to meet any exigency, the Commission proposed that Obligated Entities may approach the Commission with adequate justification for allowing crossover of technology specific RPO beyond 15%. As Solar has achieved the tariff parity, the Commission is of the opinion that Obligated Entities need to be allowed the flexibility in procurement of RE which is suitable for their load curve thereby minimizing expenses on energy balancing requirement.

Accordingly, the Commission has decided to retain the provisions of the Draft RPO-REC Regulations, 2019.

7. RPO targets for CPP and OA

7.1 Proposed in draft RPO-REC Regulations, 2019

“7.5 Distribution Licensee with peak demand less than 10 MW, a Captive User of a Captive Generating Plant with installed capacity less than 10 MW and Open Access Consumers

with Contract Demand of less than 10 MVA, shall be required to meet only their composite RPO target set out in column (c) of the Table above annually;

Provided also that each Distribution Licensee shall include its plan for procurement of power from RE sources in its long-term power procurement plan such as would meet the RPO target specified above.”

7.2 Comments received

CPPA has suggested that CPP and OA consumers shall be allowed to meet their composite RPO target without any capacity limit. Shree cement has suggested to change the proposed capacity of ‘less than 10MW/10MVA’ to ‘less than 15MW/15MVA’.

7.3 Analysis and Commission’s Decision

The Commission opines that Obligated Entities other than Distribution Licensees have smaller consumption and hence have very limited flexibility in adjusting its consumption for procurement of Solar and Non-Solar RE for meeting these technology specific RPOs. With the parity of rates achieved between solar and wind energy, such Obligated Entities shall thrive to procure actual RE rather than RECs. Hence, the Commission modifies the draft Regulation to allow Obligated Entities other than Distribution Licensees to meet their RPO target on composite basis instead of Solar and Non-Solar separately.

Accordingly, the Commission has revised the Regulation 7.5 as below:

“7.5 Distribution Licensee with peak demand less than 10 MW, a Captive User of a Captive Generating Plant with installed capacity of 1 MW and above and Open Access Consumers with Contract Demand of 1 MW and above, shall be required to meet only their composite RPO target set out in column (c) of the Table above annually;”

8. Renewable Purchase Obligation target

8.1 Proposed in draft RPO-REC Regulations, 2019

“7.6 An Obligated Entity may meet its RPO target by way of its own generation or procurement of power from another RE Project or by purchase from a Licensee or by purchase of RECs or by a combination of these options:

Provided that procurement of RE power by a Distribution Licensee at a Generic Tariff rate approved by the State Commission or at a rate discovered through transparent process of competitive bidding and duly approved/adopted by the Commission shall be considered as eligible quantum for fulfilment of the RPO of such Distribution Licensee;”

8.2 Comments received

Maharashtra State Electricity Distribution Company Ltd (MSEDCL) has suggested that Procurement of RE power from RE generators at a mutually agreed price or rate decided by State Government; prior to notification of MERC (RPO, its Compliance and implementation of REC) Regulations, 2010 shall also be considered as eligible quantum for fulfillment of the RPO of such Distribution Licensee.

8.3 Analysis and Commission's Decision

The Commission notes that RPO Regulations 2010 stipulated that RE procured by Obligated Entity at a Generic Tariff determined by the Commission shall be treated as eligible energy for meeting RPO. Same provision continues in RPO Regulations, 2016. However as competitive bidding becomes mandate for discovering RE tariff in recent years, the Commission adopted such competitively discovered rates and makes such energy eligible for meeting RPO. However, there are cases prior to notification of RPO Regulations, 2010 wherein Power Purchase Agreement (PPA) has been entered based on competitive bidding conducted by the Government of Maharashtra (GoM) or on the basis of lease rent / royalty to be paid to the GoM. Most of such cases are related to Small Hydropower Plants. Historically, the Commission has considered such energy for meeting RPO of Obligated Entity. Also, such power producers were paid as per agreed tariff in their respective PPA. Hence, such energy procurement needs to be continued and be considered as an eligible source for meeting RPO even if agreed tariff for such projects is varying from Generic tariff.

Accordingly, the Commission has revised the Regulation 7.6 as below:

“7.6 An Obligated Entity may meet its RPO target by way of its own generation or procurement of power from another RE Project or by purchase from a Licensee or by purchase of RECs or by a combination of these options:

Provided that procurement of RE power by a Distribution Licensee at a Generic Tariff rate approved by the State Commission or at a rate discovered through transparent process of competitive bidding and duly approved/adopted by the Commission shall be considered as eligible quantum for fulfilment of the RPO of such Distribution Licensee;

Provided further that RE power procurement as per agreement signed before notification of MERC (Renewable Purchase Obligation, its compliance and implementation of REC) Regulations, 2010 shall be considered as eligible quantum for fulfilment of the RPO of such Distribution Licensee.”

9. Incentives

9.1 Proposed in draft RPO-REC Regulations, 2019

“12.2 Obligated Entity shall endeavour to achieve total RPO target notified by the Central Government and for doing so it will get incentive of Rs 0.25 per kWh for RE procured

above the minimum percentage specified in Regulation 7 upto the percentage notified by the Central Government as under or as may be notified from time to time:

<i>Year</i>	<i>Solar</i>	<i>Non-Solar</i>	<i>Total</i>
<i>2020-21</i>	<i>8.75%</i>	<i>10.25%</i>	<i>19.00%</i>
<i>2021-22</i>	<i>10.50%</i>	<i>10.50%</i>	<i>21.00%</i>

Provided such incentive will not applicable if Obligated Entity have not fulfilled Renewable Purchase Obligations on cumulative basis;

Provided further that RE procured during the year for meeting RPO of previous years shall be deducted while determining eligible RE quantum for incentives.”

9.2 Comments received

AEML has suggested that the incentive shall be applicable on Cumulative basis not on annual basis. Continuum Wind has suggested to provide incentive for over-achieving Non-Solar RPO. Prayas has welcomed the proposal of introducing the provision of incentive to exceed the proposed minimum RPO targets and to achieve the national targets. Further, it has suggested that the incentives should only be available for DISCOMs, since these will be paid for by their regulated consumers through the ARR process. Incentives for over-compliance by OA and CPP obligated entities should not be provided by the State.

9.3 Analysis and Commission’s Decision

AEML’s suggestion to provide incentive on cumulative basis rather than annual basis will be against the objective of specifying year wise RPO targets as it would incentivize Obligated Entity to defer RPO to subsequent year(s) and earn more incentives. Hence, such suggestion cannot be accepted. Further, the other related activities of penalty, monitoring and compliance are proposed on annual basis and shall be in sync with each other.

Incentives are for achieving RPO Targets above minimum stipulated and not on technology specific RPO targets. Providing incentive on over achieving one of the technology specific RPO even after not meeting total RPO target would be in contradiction of the very purpose of introducing incentive as under such circumstances Obligated Entity will still be short of its RPO. Therefore, such suggestion cannot be accepted.

The Commission finds merits in Prayas’s suggestion of restricting incentive for overachievement of RPO only to Distribution Licensees and not to Other Obligated entities. This is because, for Distribution Licensees, such incentive would be funded through Aggregate Revenue Requirement (ARR) whereas incentives for Other Obligated Entities could only be funded through penalty collected if there is shortfall in RPO. Procuring higher amount of RE which is available at much lower rate would always be beneficial to Obligated Entity for reducing its power purchase cost. Distribution Licensees need to be incentivized to procure more renewable power so that benefit of lower cost of power is passed on to the end consumer. Whereas in case of Other Obligated Entities, they themselves are sole beneficiaries of such

reduced cost and hence no further incentive would be necessary to other Obligated Entities. Further, major share of cost incurred for integrating RE is absorbed by the Distribution Licensees and other Obligated Entities are getting benefit of such investments at no additional cost or at nominal cost.

Accordingly, the Commission has revised the Regulation 12.2 as below:

“12.2 *Distribution Licensee shall endeavour to achieve total RPO target notified by the Central Government and for doing so it will get incentive of Rs 0.25 per kWh for RE procured above the minimum percentage specified in Regulation 7 upto the percentage notified by the Central Government as under or as may be notified from time to time:*

<i>Year</i>	<i>Solar</i>	<i>Non-Solar</i>	<i>Total</i>
<i>2020-21</i>	<i>8.75%</i>	<i>10.25%</i>	<i>19.00%</i>
<i>2021-22</i>	<i>10.50%</i>	<i>10.50%</i>	<i>21.00%</i>

Provided such incentive will not be applicable if Distribution Licensee have not fulfilled Renewable Purchase Obligations on cumulative basis;

Provided further that RE procured during the year for meeting RPO of previous years shall be deducted while determining eligible RE quantum for incentives.”

10. Penalty

10.1 Proposed in draft RPO-REC Regulations, 2019

“12.3 *Any shortfall in meeting the minimum percentage of RE as specified in Regulation 7 shall be carried forward to next year and Obligated Entity shall meet such shortfall on cumulative basis;*

Provided that Distribution Licensee shall be subjected to reduction in Annual Revenue Requirement at a rate of Rs 0.10 per kWh for shortfall in total RE procurement target for each year;

Provided further that other Obligated Entities shall be subjected to penalty of Rs. 0.10 per kWh for shortfall in total RE procurement target for each year.”

10.2 Comments received

InWEA and Radiance Renewables have suggested to link the penalty rates to the Forbearance Price of the RECs. MEDA has suggested Rs. 5/unit as the penalty rate. Prayas has suggested that penalty of Rs. 0.10/unit with perpetual carry forward would go against the spirit of the REC framework. Maximum carry forward with a penalty of Rs 0.25/kWh should be limited to 2 years and a higher penalty be levied if the carry forward extends to the third year.

AEML, MSEDCL, TPCL and Tata Steel have suggested to not implement Penalty and Obligated Entities should be allowed to carry forward the shortfall during the control period.

10.3 Analysis and Commission's Decision

The Commission observes that rather than earning from the penalty the intention of this Regulations is to see that Obligated Entities procure stipulated percentage of energy from renewable sources on annual basis. At the same time, the Commission also agrees that if penalty amount is very small then Obligated Entities may not be interested in procuring RE and this will go against the intent of REC framework.

Hence, the Commission is modifying the penalty framework proposed in the draft Regulations to include the penalty on cumulative shortfall i.e. The Obligated Entities will be required to pay penalty for RPO shortfall not only in that year but in all subsequent years in which such shortfall continues. Further, carry forward of RPO shortfall is allowed only upto 3 years and thereafter for 2 years over the entire Control Period of 5 years. The shortfall of FY 2020-21 and FY 2021-22 (individual or cumulative) shall be allowed for carry forward only upto FY 2022-23, after subjecting the penalty of Rs. 0.10/unit for cumulative shortfall in total RE procurement target for each year. The cumulative shortfall at the end of FY 2022-23 shall be adjusted by imposing reduction in ARR for Distribution Licensees and imposing penalty for other Obligated Entities, at rate of floor price of respective REC as on that date. Similar approach would be adopted for remaining two years of the Control Period. This will ensure that Obligated Entities resort to timely procurement of REC failing which they may incur penalty amount on cumulative RPO shortfall plus cost of REC as on cut off date.

While the Commission has made penalty mechanism more stringent to ensure compliance of RPO targets by Obligated Entities, the Commission cannot ignore the possibility of non availability of sufficient amount of renewable energy or RECs in the market for meeting RPO. Hence, the Commission has added enabling provision in the Regulations to allow Obligated Entities to seek lower penalties under such circumstances.

Accordingly, the Commission has revised the Regulation 12.3 as below:

“12.3 Any shortfall in meeting the minimum percentage of RE as specified in Regulation 7 may be carried forward from FY 2020-21 and FY 2021-22 to FY 2022-23 and from FY 2023-24 to FY 2024-25 and Obligated Entity shall meet such shortfall on cumulative basis by 31 March 2023 and 31 March 2025, respectively;

Provided that Distribution Licensee shall be subjected to reduction in Annual Revenue Requirement at a rate of Rs 0.10 per kWh for cumulative shortfall in total RE procurement target for each year;

Provided further that other Obligated Entities shall be subjected to penalty of Rs. 0.10 per kWh for cumulative shortfall in total RE procurement target for each year;

Provided further that any cumulative shortfall in RE procurement as on 31 March 2023 and/or 31 March 2025 shall not be carried forward for next year and be adjusted by imposing reduction in ARR for Distribution Licensees and imposing penalty for other Obligated Entities, at rate of floor price of respective REC as on that date;

Provided further that if Obligated Entity is able to demonstrate that even after taking all possible measures including procurement of RECs, it is not able to meet RPO then the Commission may reduce the penalty amount subject to conditions as may be stipulated in that Order.”

11. RPO Fund

11.1 Proposed in draft RPO-REC Regulations, 2019

“12.5 Incentives and Penalties for other Obligated Entities shall be determined and collected or paid by the State Agency;

Provided that State Agency shall maintain separate account in the name of RPO Fund for this purpose;

Provided further that at the end of each Financial Year, State Agency shall submit certified details of all transaction under RPO Fund and also suggest options for utilising surplus or funding deficit in the RPO Fund.”

11.2 Comments received

AEML has commented that if incentive payable is more than the penalty receivable, then from where will the State Agency arrange the fund. Also, no mechanism has been provided to deal with the situation where an Obligated Entity defaults on payment of penalty.

Prayas has suggested that utilisation principles of the RPO fund be pre-specified by the Commission rather than keeping them open ended. Possible use of this fund could include funding transmission, battery systems, improvement in Forecasting & Scheduling systems, and other research studies.

11.3 Analysis and Commission’s Decision

As no incentives are to be paid to Other Obligated Entities from RPO Fund, there would not be any shortfall of fund. Incentives to Distribution Licensee would be paid through their respective ARR.

Provision of Delayed payment Charge for delayed payment of penalty amount has been introduced in subsequent section of the Regulations.

Regarding utilisation of RPO Fund, the Commission finds it appropriate to allow such fund to be utilised by the State Agency for creating and maintaining RPO Web-portal. However, the State Agency needs to take prior approval of the same from the Commission. Any balance fund needs to be deposited in the State Deviation Pool Account created as per MERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2019 which as specified in that Regulations would be used for various studies / work related to system improvement.

Accordingly, the Commission has revised the Regulation 12.5 as below:

“12.5 Penalties for other Obligated Entities shall be collected by the State Agency through RPO Web-portal;

Provided that State Agency shall maintain separate account in the name of RPO Fund for this purpose;

Provided further that with prior approval of the Commission, the State Agency may utilise such amount for meeting its expenses for creating and maintaining RPO Web-portal, and any surplus left thereafter shall be deposited in to the State Deviation Pool Account created as per MERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2019 on quarterly basis and shall be utilised as per Regulation 15 (D) of those Regulations;

Provided further that at the end of each Financial Year, State Agency shall submit certified details of all transactions under RPO Fund.”

12. Monitoring and Implementation Framework

12.1 Proposed in draft RPO-REC Regulations, 2019

“13.1 Within three months from notification of this Regulations, State Agency shall develop RPO Web-portal for RPO compliance monitoring and reporting.”

12.2 Comments received

MEDA which is the State Agency under these Regulations has requested to utilize for the State of Maharashtra the National RPO Portal (<https://rpo.gov.in>), developed and maintained by MNRE RPO Cell team.

12.3 Analysis and Commission's Decision

The Commission opines that if the envisaged web portal is already available, then the State Agency need not create another portal. However, the State Agency needs to ensure that such available portal covers all the requirements (including but not limited to Web-based monitoring mechanism including raising of invoices and payment of penalty through same portal) of these Regulations. The State Agency may co-ordinate with MNRE concerned section for

incorporating necessary changes for using it in the State. In the alternative, the State Agency is at liberty to take all necessary actions so as to ensure web based monitoring mechanism is implemented in true spirit of these Regulations. This clarification does not require any change in the draft Regulations.

Accordingly, the Commission has decided to retain the provisions of the Draft RPO-REC Regulations, 2019.

13. Monitoring and Implementation Framework

13.1 Proposed in draft RPO-REC Regulations, 2019

13.4 Every Obligated Entity shall submit its electricity consumption and details of RE procured for previous month by 7th of each month on the Web based portal.

13.5 Details of electricity consumption of Distribution Licensee shall be verified by MSLDC and that of other Obligated Entities shall be verified by concerned Distribution Licensee or Electrical Inspector, whichever is applicable.

Provided such verification of the web based data shall be completed by 15th of every month.

13.6 At the end of each quarter, State Agency shall publish RPO compliance status of Obligated Entities on RPO Web-portal.

13.7 At the end of Financial Year, Obligated Entities shall upload/submit documentary evidence of procurement of RE or REC to State Agency through RPO Web-portal; Provided that such document shall be submitted within 30 days from end of Financial Year;

Provided further that State Agency shall complete verification process within 45 days of end of Financial Year.

13.8 Subsequent to completion of verification process, State Agency shall publish RPO compliance of each of Obligated Entity on RPO Web-portal.

13.9 Based on RPO compliance status, State Agency shall compute incentive or penalty to be levied to Obligated Entity;

Provided that incentive or penalty leviable to Distribution Licensee shall be finalised and adjusted in Annual Revenue Requirement;

Provided further that incentive payable to Other Obligated Entity shall be paid by the State Agency from RPO Fund;

Provided further that penalty payable by Other Obligated Entity shall be levied by the State Agency with 15 days as due date of payment which shall be deposited in RPO Fund.

13.10 Non-payment of penalty or non-submission of required details by Obligated Entity shall be treated as non-compliance of Regulations and State Agency shall recommend the Commission to initiate action against such Entity under Section 142 of the Act.”

13.2 Comments received

MSEDCL and AEML have proposed longer time period to comply with various activities listed in the aforementioned Clauses. They have cited that they need to compile huge amount of the data and the timelines as proposed in the Draft RPO-REC Regulations, 2019 will not be sufficient.

Prayas has welcomed the step for proposing web-based monitoring and implementation framework. It has further requested that such data should be available in public domain.

13.3 Analysis and Commission’s Decision

The Commission notes the submissions of AEML and MSEDCL and has revised timelines for various actions as proposed in the Draft Regulations. Further, the Commission has introduced penalty mechanism for not abiding by the timelines as provided in these Regulations. The Commission at its own discretion may also take stringent actions against the habitual defaulters

Accordingly, the Commission has revised the Regulation 13.4 to 13.10 and has further added new Regulation 13.11 as below:

“13.4 Every Obligated Entity shall submit its electricity consumption and details of RE procured in a month within 30 days from end of the month on the Web based portal.

13.5 Details of electricity consumption of Distribution Licensee shall be verified by MSLDC and that of other Obligated Entities shall be verified by concerned Distribution Licensee or Electrical Inspector, whichever is applicable.

Provided such verification of the web based data shall be completed within 45 days from end of the month.

13.6 Within 60 days from end of each quarter, State Agency shall publish RPO compliance status of Obligated Entities on RPO Web-portal.

13.7 At the end of Financial Year, Obligated Entities shall upload/submit documentary evidence of procurement of RE or REC to State Agency through RPO Web-portal;

Provided that such document shall be submitted within 45 days from end of Financial Year;

Provided further that State Agency shall complete verification process within 60 days from end of Financial Year.

13.8 *Any delay in performing activities stipulated in Regulation 13 shall attract penalty of Rs. 100 per day of delay;*

Provided that continuous or repeated default or delay in performing activities shall be treated as non-compliance of the Regulations and may attract action under Section 142 of the EA.

13.9 *Subsequent to completion of verification process, State Agency shall publish RPO compliance of each of Obligated Entity on RPO Web-portal.*

13.10 *Based on RPO compliance status within 60 days from end of Financial Year, State Agency shall compute incentive or penalty to be levied on Obligated Entity using RPO Web-portal;*

Provided that incentive or penalty leviable to Distribution Licensee shall be finalised and communicated through RPO Web-portal for adjustment in Annual Revenue Requirement; Provided further that penalty payable by Other Obligated Entities shall be finalised and communicated through RPO Web-portal for payment within 15 days which shall be deposited in RPO Fund through online payment facility on RPO Web-portal;

Provided further that non-payment of penalty within 15 days shall attract delayed payment charges on simple interest basis at the one-year Marginal Cost of Funds-based Lending Rate ('MCLR') as declared by the State Bank of India applicable as on 1st of the respective month plus 350 basis points per annum on the penalty amount for the period of delay.

13.11 *Non-payment of penalty or non-submission of required details by any Obligated Entity shall be treated as non-compliance of Regulations and the Commission suo motu or on the recommendation from the State Agency may initiate action against such Entity under Section 142 of the Act."*

14. Renewable Energy Pricing

Provision relating to Renewable Energy Pricing which recognized REC mechanism was absent in Draft RPO-REC Regulations, 2019. The Commission notes that such provision was there in RPO-REC Regulations notified in 2010 and 2016. Such provision needs to be continued as REC mechanism is operational and RE generators from the State have registered under this mechanism.

Accordingly, the Commission has added following Regulation:

14. Pricing Principles for Renewable Energy Projects commissioned during the Operating Period

All RE Projects commissioned during the Operating Period specified in these Regulations shall have the option of participate in competitive bidding process or following the Tariff structure and other conditions as specified in the Regulations of the State Commission governing the terms and conditions for determination of RE Tariff or adopt the REC mechanism for pricing of the electricity generated from such Projects:

Provided that Projects that choose one or the other option shall have to continue with that option during the entire Tariff Period or until validity of the Power Purchase Agreement, whichever is later;

Provided also that such RE Projects shall exercise their choice of pricing mechanism prior to execution of the PPA with a Distribution Licensee or an Open Access Consumer, as the case may be.

15. Grid Connectivity Framework

15.1 Proposed in draft RPO-REC Regulations, 2019

“14 The concerned Licensee shall be responsible for development of evacuation infrastructure beyond the inter-connection point, while the Generating Company shall develop evacuation infrastructure from the generation facility up to the inter-connection point at its own expense:

Provided that the evacuation infrastructure cost beyond the inter-connection point shall be borne by the Licensee and shall be recovered from its Consumers as per the pricing framework developed by the State Commission.”

15.2 Comments received

MSEDCL has submitted that the maximum evacuation infrastructure per MW to be borne by licensee should be limited to Rs 25 lakh / MW only subject to overall ceiling of Rs. 1 Crore only. The evacuation infrastructure involves the cost of constructing express feeder from an interconnection point to grid. Owing to the remote locations, expenditure required to be incurred on evacuation infrastructure is huge. Further in case of hydro projects, due to smaller installed capacity [Mini Hydro (> 500 kW and < 1 MW)-and micro projects < 500 kW)], the power generated from these project will be low. It is observed that in some cases cost of evacuation infrastructure is considerably high in comparison with total project cost and power generated from such projects is not economically viable.

15.3 Analysis and Commission's Decision

The Commission notes that with the changing environment of development of RE projects (specifically solar and wind projects) from preferential tariff to competitive bidding based regime, the evacuation infrastructure cost upto the inter-connection point is being borne by the

developer. The per unit rates arrived from competitive bidding are inclusive of such cost. Rest of the RE technologies are either being tied-up through competitive bidding or as so proposed in RE Tariff Regulations 2019, tariff would be determined based on project specific tariff. Under such circumstances, it would be appropriate to include such cost of evacuation under project cost and allow the project developer to claim such expenses in capital cost of the project.

Accordingly, the Commission has revised the Regulation as below:

“15 Development of evacuation infrastructure shall be responsibility of concerned Generating Company and it shall be treated as integral part of project for the purpose of tariff determination.”

16. Other Comments

16.1 Prayas has suggested that since, the targets are announced in last year of Control Period, this leaves very little time to procure RE. It has also suggested that the Commission should mention long term trajectory of RPO which would act as guiding framework for all stakeholders.

16.2 Analysis and Commission’s Decision

The Commission notes that as stated in the Tariff Policy, 2016, MoP would be specifying long term targets for RPO. In the present Regulations, the Commission has stipulated minimum RPO targets to be achieved by Obligated Entities with incentives to achieve higher targets as indicated by the MoP. The Commission in its EM of the Draft RPO-REC Regulations, 2019, has clearly recognized 2030 targets of GoI (to have about 40% cumulative installed capacity from non-fossil fuel based energy resources by 2030). Such target set by the GoI needs to be acted upon as a benchmark for all stakeholders viz. Obligated Entity, industry, System Operators, System planners etc. The Commission need not specify any different long term trajectory to the one given by MoP. Hence, the Commission is of the view that at state level proposing RPO targets beyond 2025 may not be necessary at this point of time. The Commission may decide on the future targets at appropriate time, while doing so the Commission would consider long term trajectory for RPO set by the GoI applicable at that point of time.

Sd/-
(Mukesh Khullar)
Member

Sd/-
(I. M. Bohari)
Member

Sd/-
(Anand B. Kulkarni)
Chairperson

Appendix-1

List of stakeholders/individuals who submitted their comments / suggestions / objections

1. Adani Electricity Mumbai Limited – Distribution.
2. Aditya Birla (Ultratech Cement)
3. Captive Power Producers Association.
4. Continuum Wind Energy India Ltd.
5. Dr. S.L.Patil
6. Indian Wind Energy Association.
7. Indian Wind Power Association.
8. JSW Steel Coated Products Ltd.
9. Maharashtra Biomass Energy Developers Association.
10. Maharashtra Energy Development Agency.
11. Maharashtra State Electricity Distribution Company Ltd.
12. Prayas (Energy Group)
13. Radiance Renewables.
14. Shree Cement.
15. Shri T.P Vartak
16. Tata Steel
17. Technocraft Industries India Ltd.
18. The Tata Power Company Limited.