

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Case No. 246 of 2023

Case of Captive Power Producers Association seeking amendments in existing Regulations for establishing, operating, scheduling and commercial settlement of Wind-Solar-Thermal hybrid power plants to be setup for utilisation under Open Access by the consumers in the State of Maharashtra

Coram

**Sanjay Kumar, Chairperson
Anand M. Limaye, Member
Surendra J. Biyani, Member**

Captive Power Producers Association (CPPA).....Petitioner
Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL).....Respondent No. 1
Maharashtra State Electricity Transmission Co. Ltd. (MSETCL-STU).....Respondent No. 2
Maharashtra State Load Despatch Centre (MSLDC)Impleaded Respondent No. 3

Appearance:

For the PetitionerAdv. Aditya Singh
For MSEDCL.....Adv. Anup Jain
For MSETCL-STU.....Mr. Peeyush Sharma (Rep.)
For MSLDC.....Mr. Shashank Jewalikar (Rep.)

ORDER

Date: 4 February 2025

1. Captive Power Producers Association (**CPPA or the Petitioner**) has filed this Petition on 15 October 2023, being Case No. 246 of 2023, seeking amendments in existing Open Access Regulations for establishing, operating, scheduling and commercial settlement of Wind-Solar-Thermal hybrid power plant to be setup in accordance with the *National Wind-Solar Hybrid Scheme, 2018* and the '*Scheme for flexibility in generation and scheduling of thermal/hydro power stations through bundling with Renewable Energy and Storage Power, 2022 (MoP Bundling Scheme)* under Open Access (**OA**) by the consumers in the State of Maharashtra.

2. The Petition has been filed under Section 86(1) (b), 86(1)(c), 86(1)(e) and 86(1) (k) and Section 181 of the Electricity Act 2003 (**EA**) read with Regulation 39 and 41 of the MERC (Transaction of Business and Fees and Charges) Regulations, 2022 read with Regulations 36 and 37 of the MERC (Distribution Open Access) Regulations, 2016 (**DOA Regulations**) read with Regulations 32, 33 and 36 of the MERC (Transmission Open Access) Regulations, 2016 (**TOA Regulations**) and amendments thereunder, read with other applicable Regulations.
3. The Petitioner has also sought an interim relief seeking direction to Maharashtra State Electricity Distribution Co. Ltd. (**MSEDCL**) and Maharashtra State Electricity Transmission Co. Ltd. (**MSETCL-STU**) to allow connectivity to the members of CPPA with their distribution and transmission system for operating wind-solar-thermal hybrid power plant in the State of Maharashtra.
4. **Prayers of the Petitioner are as follows:**
 - i. *“Initiate Process of issuance of appropriate clarification/amendments in existing regulations for establishing, operating, scheduling and commercial settlement of wind-solar-thermal hybrid power plant to be setup for utilisation under open access by a consumer in the state of Maharashtra.*
 - ii. *In the interim, issue direction to Maharashtra State Electricity Distribution Company Limited and Maharashtra State Transmission Company Limited and other authorities to allow members of the Captive Power Producer Association to set up wind-solar-thermal hybrid power plants and to connect with distribution and transmission system, for bundling of renewable energy with existing thermal capacity;”*
5. **The Petitioner, in its Petition, has stated that:**
 - 5.1 The Present Petition is filed seeking appropriate amendments in existing Open Access Regulations for establishing, operating, scheduling and commercial settlement of wind-solar-thermal hybrid power plants to be set up in accordance with the *National Wind-Solar Hybrid Scheme, 2018* and the ‘*Scheme for flexibility in generation and scheduling of thermal/hydro power stations through bundling with Renewable Energy and Storage Power, 2022 (MoP Bundling Scheme)*’ under open access by the consumers in the State of Maharashtra and in the interim, seeking appropriate direction to MSEDCL and MSETCL-STU to allow connectivity to the members of CPPA with their distribution and transmission system for operating wind-solar-thermal hybrid power plant in the State of Maharashtra.
 - 5.2 On 5 April 2018, the Ministry of Power (**MoP**), Government of India issued the ‘*Flexibility in generation and scheduling of thermal power stations to reduce emissions*’ (**MoP Bundling Scheme 2018**) to provide power generators an opportunity to optimally utilize generation from RE sources and also help in reducing emissions.
 - 5.3 The National Wind-Solar Hybrid Policy was released on 14 May 2018 by the Ministry of National Renewable Energy for promotion of large grid connected wind-solar PV hybrid system. Different State Governments like Rajasthan, Gujarat, Andhra Pradesh, Odisha, Karnataka, Madhya Pradesh etc. have formulated policies/regulations for inclusion of hybrid power projects.

- 5.4 The Commission has issued the MERC (Terms and Conditions for Determination of Renewable Energy Tariff), Regulations, 2019 (**RE Tariff Regulations, 2019**) to include the RE hybrid projects for the purposes of procurement of power and Tariff determination.
- 5.5 The MoP Bundling Scheme 2018 was revised, in November, 2021, to cover replacement of thermal and hydro power with RE Power or RE combined with battery energy storage systems which was known as '*Renewable Energy Power Bundling and Flexibility in Generation and Scheduling of Thermal/Hydro Power Stations*' (**MoP Bundling Scheme, 2021**).
- 5.6 The MoP vide its notification dated 12 April 2022, issued the revised '*Scheme for flexibility in generation and scheduling of thermal/hydro power stations through bundling with renewable energy and storage power*' (**MoP Bundling Scheme, 2022**) which is applicable to all new and existing thermal or hydro power station. The scheme allows any generating company having a Generating Station to establish RE power plant which can either be co-located within the premises or at new locations. Key features of the Scheme are as follow: -
- i. In case of RE plant co-located within the premise of a Generating Station under Section 62 of the EA, the appropriate Commission will determine the Tariff of RE supplied. However, if the same is not co-located, then the power has to be procured on a competitive bid.
 - ii. No additional Transmission charges shall be levied for bundling of RE power with thermal/ hydro when the RE power plant is co-located within the premises of the Generating Station. If the RE Generating Station is not co-located, it shall require transmission access/GNA for scheduling the RE power to the thermal Generating Station.
 - iii. The thermal generating station and the RE generating station shall ensure that connectivity is obtained for full installed capacity including overload if applicable to ensure full evacuation.
 - iv. The RE generator and the thermal generator shall provide the required information for scheduling to the respective Regional Load Despatch Centre (**RLDC**)/State Load Despatch Centre (**SLDC**) on a day-ahead basis.
 - v. The net injection schedule for thermal and the RE generator will form the reference for DSM calculations as per the applicable regulations.
 - vi. Changes, if any, required in the Regulations for implementation of the above scheme shall be made by an appropriate Commission.
- 5.7 The intention is to promote the renewable sector including but not limited to the use of bundled and hybrid power for captive purposes.
- 5.8 Further, vide letter dated 26 May 2022, MoP has issued trajectory for replacement of thermal energy by renewable energy.
- 5.9 Recently on 21 June 2023, the MoP has issued Bundling Scheme, 2022 being '*Amendment in the Scheme for Flexibility in Generation and Scheduling of Thermal/Hydro Power Stations through bundling with renewable energy and storage power*' (**Amendment**

- 2023)** which allows RE plants to be set up in EPC mode, which are not co-located and through Joint Venture (**JV**).
- 5.10 Taking guidance of MoP bundling scheme, 2022 and various State policies, the members of the Petitioner Association intend to replace respective captive thermal power plant with captive RE hybrid power plant, in different phases.
- 5.11 However, considering the intermittent nature of RE power, 100% replacement of coal-based power consumption with RE power consumption at this stage appears to be difficult. Therefore, the endeavor is to bundle the coal-based generation with maximum possible RE power without compromise on reliability of power supply to the consumer/buyer.
- 5.12 MSEDCL was followed up for providing its approval to establish a new hybrid power plant in order to replace consumption from the thermal power plant. However, there has been no response from the MSEDCL.
- 5.13 There is regulatory vacuum in the State of Maharashtra for establishment and operation of thermal-wind-solar hybrid plants for captive use especially with respect to open access, deviation and settlement mechanism, connectivity etc. to implement MoP directions under reference.
- 5.14 For setting up of the hybrid power plant for captive consumption, the Commission is requested to issue clarification/regulations amendments on the following issues:
- i. Connectivity related issues (co-location and multi-location) – TOA Regulations
 - ii. Metering related issues– MERC (State Grid Code) Regulation, 2020 (**State Grid Code**)
 - iii. Forecasting and Scheduling of wind and solar related- MERC (Forecasting, Scheduling and Deviation Settlement for Solar and Wind Generation), Regulations, 2018 (**RE F&S Regulations**)
 - iv. Scheduling of hybrid power bundled with thermal related- MERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2019 (**DSM Regulations, 2019**)
 - v. Applicability of merit order dispatch related- DSM Regulations, 2019
 - vi. Transmission and wheeling charges related– TOA and DOA Regulations
 - vii. Energy accounting related issues- DSM Regulations, 2019
- 5.15 Certain guidelines/regulations should be introduced, or existing ones should be amended to enable the stakeholders such as members of the Petitioner Association to reduce their thermal consumption. Hence, certain guidelines and directions are required for bundling hybrid power with thermal power so that the dependence on conventional power can be reduced. Hence, the Petitioner has been compelled to approach the Commission:
6. **On 21 June 2024, MSEDCL filed its reply stating that:**
- 6.1 No State has a policy for wind-solar-thermal hybrid projects. There are only wind-solar hybrid policies pursuant to the policies and guidelines issued by the respective State

Governments. The absence of specific guidelines or policies in Maharashtra regarding RE and non-RE combined hybrid projects precludes the invocation of Section 86(1)(b) to grant the relief as sought.

6.2 The Petitioner has also mentioned the MoP notification dated 5 April 2018 issued the '*Flexibility in generation and scheduling of thermal power stations to reduce emissions*' (**MoP Bundling Scheme, 2018**).

6.3 A Petition was filed by Maharashtra State Power Generation Co. Ltd. (**MSPGCL**) seeking removal of difficulties regarding procurement of Solar Power generation under the aforesaid mechanism issued on 5 April, 2018 by MoP.

6.4 The Commission, vide its Order dated 5 November 2019, passed in Case No. 121 of 2019 observed that:

2) *Due to issues mentioned at para 14 above, it is not the right time to introduce changes in the extant/proposed frameworks like FBSM and DSM for implementing flexibility in Generation. However, the Commission directs Maharashtra State Load Dispatch Center to keep appropriate provisions in DSM and related procedures /software so that such scheme can be introduced smoothly without causing major changes in prevailing systems at latter date. **At an appropriate time, the Commission will introduce the same.***

6.5 Further, the reliance of the Petitioner on the MoP bundling/flexibility scheme 2022 is misplaced as same is not applicable for captive thermal power plant. The introductory part of said scheme clarifies that, the scheme is restricted to the thermal power tied to distribution licensees only.

6.6 As per Section 62 or Section 63 of the EA, CPPA and its members are not party to any PPA. Without existing PPAs, provision of the MoP scheme does not directly apply in the present case.

Maintainability of the present Petition:

6.7 The Petitioner seeks to establish Regulations and policies through the present Petition, which is not the correct legal recourse.

6.8 Regulation and policy formulation require the issuance of public notice, hearing of all stakeholders and related compliances. Hence, the prayers for policy formulation cannot be accomplished through individual Petition.

6.9 The Petitioner's proposal to bundle thermal and hybrid power requires legislative endorsement, not a regulatory directive through an individual Petition.

6.10 The Petitioner's contention qua the power of the Commission to remove difficulties is intended to address minor procedural issues and cannot be used to substantively alter or create new regulatory norms.

6.11 The Commission has regulatory jurisdiction but within the bounds of existing laws and Regulations. The Petitioner's attempt to extend this jurisdiction to policy creation through an independent separate Petition is legally flawed.

Submissions on merits:

6.12 The current policy framework does not encompass the bundling of thermal power with RE

hybrid projects.

- 6.13 The existing State Regulations and Guidelines pertain specifically to Solar-Wind Hybrid projects and do not cover Thermal power integration with these Hybrid projects. This gap necessitates a new regulatory framework to address the complexities involved in such hybrid projects.
- 6.14 The proposed mechanism by the Petitioner in the present Petition will not be operationally effective due to various factors.
- 6.15 According to the DOA Regulations, separate applications for Open Access (OA) connectivity must be submitted for non-RE and RE generators. Further, the DOA Regulations require separate bank guarantees for non-RE and RE generator-based power transactions.
- 6.16 In the existing DOA and TOA Regulations, there are no provisions regarding the existing OA permissions for thermal power plants being used to connect Hybrid RE power plants and as such the existing provisions qua RE power plants cannot be made applicable without any rationale to the thermal power plant.
- 6.17 Thermal power follows a two-part Tariff and RE power follows a single-part Tariff. The proposed mechanism in the Petition fails to address how the fixed charges of thermal power will be adjusted when supplying the cheaper RE, thereby overlooking the one-sided benefit for generators regarding fixed charge computation. This could lead to a situation where the generator remains eligible for the entire fixed cost despite the unavailability of the thermal plant.
- 6.18 There is no clarity or guideline regarding the scheduling mechanism and the implications of the fixed charges for such bundled power in existing regulations.
- 6.19 The deviation of wind, solar and hybrid (wind and solar) is settled as per F&S Regulations 2018 and amendment thereof. However, there is no provision related to deviation of wind-solar-thermal hybrid plant in DSM Regulations, 2019.
- 6.20 In the DOA First Amendment Regulations, 2019, the provision is only for Wind and Solar Hybrid RE projects and as such, there is no provision for Thermal, Wind and Solar Hybrid. If the prayers of the Petitioner are to be accepted then first the DOA Regulations needs to be amended to that effect.
- 6.21 Further, the Thermal Generation is subject to Scheduling as per Regulation 19 of DOA Regulations and the said Regulation is not applicable to RE sources. On the other hand, banking is applicable to Solar and Wind Generations and same is not applicable to Thermal. So, in order to allow Hybrid Generation comprising of Thermal + Solar + Wind, it is necessary to clarify methodology for application of Scheduling Regulations and Banking Regulations and first and foremost, the DOA Regulations needs to be amended to that effect.
- 6.22 Billing of Thermal Open Access is a scheduled generation based billing and that of RE generators are as per actual generation. Both the methodologies are different and by allowing Hybrid Generator of Thermal + Wind + Solar, may cause tremendous problems in billing of such open access consumers and thereby raising several disputes.
- 6.23 The proposed mechanism has a lot of ambiguity to be addressed:

- Computation of OA Charges, such as wheeling and transmission charges, because the same are levied to Thermal power based on capacity but for RE power the same are charges on per unit basis.
 - Monitoring of source of power (Thermal / RE) supplied by the Generator and
 - Scheduling of Power, because the Thermal Power is subjected to scheduling, whereas RE Power is must run.
- 6.24 Discoms are given RPO targets. Since DISCOMs across country have themselves initiated necessary action to encourage RE, the need doesn't arise for generators to perform the same through bundling of power.
- 6.25 The Petitioner has also mentioned the Hybrid Policies framed by different State Governments in India. It is observed from such State Policies that, hybridization of only RE Sources has been envisaged under the said policies and not conventional and RE power. Maharashtra Energy Development Authority (**MEDA**), the State nodal agency, will be the appropriate authority to comment on the same. The Petitioner has not made MEDA a party and in order to have a fair discussion on the related State Policy, MEDA may be made a party to present Petition.
- 6.26 Further, bundling of RE Power with thermal power will lead to unnecessary complications in existing Regulations and will add up to further uncertainty in availability of power in real time.
- 6.27 In view of the above, the Commission should dismiss the present Petition as being not maintainable. If found necessary, the Commission may address the issue only through new regulations through a public consultation process. In absence of regulatory provisions, the interim prayer of the Petitioner shall also not be considered.
7. **At the E-Hearing held through videoconferencing on 25 June 2024:**
- The Advocate of the Petitioner requested time to file Rejoinder on MSEDCL's reply. Accordingly, she requested an adjournment of the hearing. MSETCL also sought 15 days' time to file their reply. The Commission adjourned the hearing directing filing of reply/Rejoinder within 3 weeks.
8. **STU, vide its submission dated 9 July 2024, stated that:**
- 8.1 MSLDC is responsible for scheduling and despatch of electricity within the State of Maharashtra. MSLDC is also the implementation agency for commercial implementation of the DSM Regulations and RE F&S Regulations, 2019. Hence, the Petitioner ought to have made MSLDC, a Party Respondent in the matter. STU requests the Commission to implead MSLDC in the matter.
- 8.2 Grant of connectivity to the Intra-State Transmission system (**InSTS**) is governed by the TOA Regulations and these Regulations mandate filing of separate applications for grant of connectivity for RE generators and non-RE generators.
- 8.3 TOA Regulations also mandate submission of separate bank guarantees for applications for grant of long-term open access for RE transactions and Non-RE transactions.
- 8.4 STU had been processing applications for grant of connectivity under the "*Procedure for*

Grant of Grid Connectivity to InSTS' framed in accordance with the TOA Regulations and approved by the Commission.

- 8.5 Further, STU has also streamlined processing of grid connectivity applications for RE projects from time to time as per the Government of Maharashtra, Renewable Energy Policy, 2020 and methodology issued thereunder subject to regulatory framework laid down by the Commission.
- 8.6 As per the Government of Maharashtra, Renewable Energy Policy, 2020 (**GoM RE Policy, 2020**) following projects shall be prioritized:
- a. Until the objectives of the policy are met, priority will be given to the development of hybrid projects by combining wind and/or solar projects with other conventional / non-conventional energy sources and incorporating storage capacity as required. Such projects will be categorized with those objectives according to their source.
 - b. As per the Wind Power generation policy, priority will be given to hybrid projects constructed by integrating wind energy projects with other non-conventional energy source projects and incorporating storage capacity.
- 8.7 In view of the GoM RE Policy, 2020 and methodology issued thereunder, STU has prepared a separate detailed draft "*Procedure for grant of connectivity of projects based on Renewable Energy sources to the Intra-State Transmission System*" after considering the TOA Regulations, 2016, grid connectivity procedure issued by the Central Electricity Regulatory Commission (**CERC**), GoM RE Policy, 2020.
- 8.8 For connectivity to Thermal +RE Hybrid projects (Co-located or Multi located), as per its interpretation, connectivity to such projects is not allowed as per the present regulatory provisions. The same can be allowed as and when approved by the Commission through relevant Regulations and/or Orders of the Commission. However, as per the TOA Regulations, applicant is required to submit separate applications for grant of connectivity to the InSTS.
- 8.9 Use of open access permission granted for thermal plant to connect the hybrid plant which could be located at different location can be allowed as and when such Hybrid RE Projects are allowed to operate at different location through relevant Regulations and/or Orders of the Commission.
- 8.10 For applicability of transmission charges for bundling of RE power with thermal (when RE plant co-located and multi located within the State or outside the State), the Commission is requested to clarify.
- 9 **At the E-Hearing held through video conferencing on 1 October 2024:**
- 9.1 The Petitioner sought additional time for filing rejoinder on replies filed by MSEDCL and MSETCL.
- 9.2 The representative of MSETCL requested the Commission to implead MSLDC in the matter.
- 9.3 On the Petitioner's adjournment request, the Commission noted that at the E-Hearing dated 25 June 2024, the Advocate of the Petitioner had sought adjournment to the hearing

stating that they intended to file rejoinder on MSEDCL's reply. Based on the Petitioner's request, the Commission had adjourned the hearing and granted 3 weeks' time to the Petitioner for filing the rejoinder. The Commission noted that the Petitioner had not been able to file its rejoinder inspite of lapse of three months since the last hearing held on 25 June 2024. Accordingly, a last opportunity was granted to the Petitioner for filing its rejoinder within 15 days.

9.4 The Commission also directed that MSLDC be impleaded in the present matter and the Petitioner was directed to serve the copy of the Petition, Rejoinder and pleadings (including the reply filed by MSEDCL and MSETCL) on MSLDC within 15 days. MSLDC was directed to file its replies within 15 days thereafter

10 **Vide its rejoinder dated 7 October 2024 filed in response to MSEDCL's reply, the Petitioner stated that:**

Re: Policy regarding hybridization of conventional power plants with RE plants

- 10.1 The objective of the MoP schemes is to promote bundling of RE with Thermal Power, promote energy transition to meet the commitments made by India at COP-26 Summit (UN Climate Change Conference 2021 at Glasgow), facilitate further RE capacity addition. It will also help in reducing emissions. In terms of the above, existing coal based thermal generating station can establish or procure RE from a RE power plant which is either co-located within the premises of said thermal generating station or at new locations. Further, the above scheme notified by MoP explicitly provides that the Appropriate Commission shall carry out changes (if required) in Regulations for implementation of the said scheme.
- 10.2 MSEDCL has misconstrued the MoP revised Scheme since MoP has provided an enabling scheme for bundling of thermal power with renewable energy.
- 10.3 The Tariff Policy notified by MoP on 28 January 2016 provides for bundling of thermal power generation with renewable energy.
- 10.4 On 31 December 2020, Government of Maharashtra has notified Unconventional Energy Generation Policy 2020. This Policy explicitly provides that priority will be given to the development of hybrid projects by combining wind and solar projects with other conventional energy sources (such as coal based thermal power projects).
- 10.5 The Policy has trapping of law. The EA expressly recognizes the need to provide promotional measures in relation to generation of electricity from renewable sources of energy. The legislators highlighted the fundamental idea of pursuing environmentally benign policies in developing the electricity sector in the preamble to the EA.
- 10.6 Accordingly, the Commission may be pleased to initiate the process of issuance of appropriate clarification/amendments in existing regulations for establishing, operating, scheduling and commercial settlement of wind-solar-thermal hybrid power plants in consonance with objectives of Unconventional Energy Generation Policy 2020 notified by Government of Maharashtra.
- 10.7 The Rajasthan Renewable Energy Policy 2023 unequivocally provides that the State will promote hybridization of existing conventional thermal power plants with RE by allowing setting up of RE Plants by the Conventional Power Generators.

- 10.8 Karnataka Renewable Energy policy 2022-2027 notified by the Government of Karnataka recognizes bundling of Renewable Energy with Thermal Power
- 10.9 Madhya Pradesh Renewable Energy Policy 2022 notified by the Government of Madhya Pradesh provides for bundling of renewable energy hybrid projects with conventional energy projects.
- 10.10 The reliance placed by MSEDCL on the Order dated 5 January 2019 of the Commission in Case No.121 of 2019 filed by MSPGCL is misplaced since the same is distinguishable on facts and circumstances. In the said Order, the Commission stated that it is not the right time to introduce changes in the extant/proposed frameworks like FBSM implemented on 1 August 2011 and DSM for implementing the mechanism of "*Flexibility in Generation and Scheduling of Thermal Power Stations to Reduce Emissions*" issued by Ministry of Power on 05.04.2018.

Re: Maintainability of Petition

- 10.11 MSEDCL has misconstrued that the present Petition has been filed seeking amendment in the Regulations. By way of the present Petition, the Petitioner is seeking initiation of the process of issuance of appropriate clarification/amendments in existing Regulations for establishing, operating, scheduling and commercial settlement of wind-solar-thermal hybrid power plant to be setup for utilisation under open access by a consumer in the state of Maharashtra. The Petitioner has not prayed for amendment of Regulations through an Order. This Petition has been filed to remove difficulties faced by Petitioner for bundling of thermal power with wind-solar hybrid power.
- 10.12 The State Electricity Regulatory Commissions are empowered to issue directions through the Orders, for initiation of amendment to the existing Regulations and for initiation of framing of new Regulations and the Commissions are issuing such Orders from time to time as and when required.
- 10.13 The Commission is vested with the power to make, amend, and modify the regulations under Section 181 of the EA.
- 10.14 The Commission has wide powers under power to regulate. The power to regulate, carries with it full power over the thing subject to regulation. The power to regulate embraces within its fold the powers incidental to the regulations.
- 10.15 The Regulation 39 of the Transaction of Business Regulations, 2022 confers inherent powers to the Commission, therefore, enabling the Commission with power to grant relief as sought for in the present Petition
- 10.16 The Commission has been conferred with 'Power to amend' and 'Power to remove Difficulties' under Regulations 32 and 33 respectively of the TOA Regulations and amendments thereof, under regulations 36 and 37 respectively of DOA Regulations and amendments thereof and other applicable regulations.
- 10.17 MSEDCL has contended that the present regulatory mechanism does not support case of the Petitioner. However, the present Petition has been filed for the specific reason that the Commission should initiate framing of specific regulations recognizing bundling of

renewable hybrid power with thermal power as a composite plant to reap maximum benefits out of this structuring.

10.18 This exercise will benefit every stakeholder including MSEDCL which has recently concluded the bidding process for procurement of blending power (thermal + solar). The Commission, vide Order dated 26 September 2024 in Case No.155 of 2024, has approved procurement from 1600 MW thermal power and 5000 MW solar power.

11 **Vide, its rejoinder dated 7 October 2024 filed in response to MSETCL's reply, the Petitioner stated that:**

Re: Connectivity related

11.1 MSETCL has contended that TOA Regulations mandate separate applications and separate bank guarantees for RE and Non-RE projects. However, in absence of the regulations governing bundling of thermal power with wind-solar hybrid power, the Petitioner through the present Petition is seeking for initiation of the process of issuance of appropriate clarification/amendments in existing regulations.

11.2 The reliance placed by MSETCL on the CERC (Connectivity and General Network Access to the inter-state transmission system) Regulations 2022 and CERC (Terms and Conditions for Tariff determination from renewable energy sources) Regulations) 2024 to claim that definition of Renewable Hybrid Projects in the above regulations only provide for co-located renewable Hybrid projects is misplaced.

11.3 MoP Bundling Scheme provide that coal based thermal generating station can establish wind-solar hybrid power plant (RE Project) which is either co-located within the premises of said thermal generating station or at new locations. Further, the above scheme explicitly provides that the Appropriate Commission shall carry out changes (if required) in regulations for implementation of the said scheme.

11.4 This Revised Scheme is scheme framed by the MoP for bundling of thermal with the solar and have the force of law.

11.5 The Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Wind Solar Hybrid Projects notified by MoP on 21 August 2023 have provided connectivity of hybrid generating plants at multiple locations.

11.6 CERC, vide its Order dated 1 August 2024 passed in Petition No.193/AT/2024, adopted Tariff of projects under the Scheme for flexibility in Generation and Scheduling of Thermal/Hydro Power Stations through bundling with Renewable Energy and Storage Power. CERC, in the said Order, specifically recorded provisions of MoP Bundling Scheme which allows co-located projects.

11.7 Madhya Pradesh Commission, in its recent Order dated 7 February 2024 passed in Petition No. 53 of 2023, clearly stated that each State Commission is independent to frame its own Regulation and stated that hybrid project can be located at multiple locations.

11.8 MSETCL has stated that in view of priority envisaged under Maharashtra Unconventional Energy Generation Policy 2020 to development of hybrid projects by combining wind and/or solar projects with other conventional/non-conventional, MSETCL has already proposed relevant clauses related to present matter in a separate draft detailed procedure

which it shall be submitting for approval of Commission. The Petitioner reserves its right to participate and comment on the draft procedure at the relevant time.

Re: Transmission charges

- 11.9 The reliance placed by MSETCL on the Guidelines dated 26 August 2022 is misconceived. These Guidelines do not include within its scope, captive power projects and third-party sale.
- 11.10 The relationship between generator and consumers are unregulated in terms of Section 49 of Electricity Act 2003. The Commission can determine charges in terms of applicable law.
- 12 **Vide its additional submission dated 15 October 2024, the Petitioner stated that as per the directives of the Commission vide Daily Order dated 1 October 2024, Petitioner has impleaded MSLDC as a Respondent in the present Petition and has served the copy of the pleadings on it.**
- 13 **Vide its reply dated 29 November 2024, MSLDC stated that:**
- 13.1 Presently Grid Connectivity, Open Access, RE Forecasting, Scheduling and Deviation Settlement are governed by State Grid Code, TOA and DOA Regulations, DSM Regulations, F&S Regulations, its Procedures and subsequent amendments. These Regulations do not have specific provisions wherein all the issues arising out of implementation of the MoP Bundling Scheme 2022 can be addressed.
- 13.2 Hence, necessary amendments need to be made in these Regulations to accommodate the transactions proposed in MoP Scheme.
- 13.3 The following issues need to be addressed for accommodating transactions proposed under MoP Bundling Scheme 2022.

Grid Connectivity to Bundled Power Plant

- 13.4 The clarity is required for Grid Connectivity in case of Wind, Solar, and Thermal components of the hybrid power plant located at different connectivity points.
- 13.5 The existing TOA and DOA Regulations and the procedures made thereunder for granting grid connectivity will require amendments to explicitly include provisions for bundled power plants.

Scheduling of Bundled Power

- 13.6 Regulatory provisions for scheduling of RE bundling power with Thermal/Hydro are to be needed in following cases:
- i. Bundling with Intra-state RE power plant co-located and located at different locations.
 - ii. Bundling with Inter-state RE power plant.
- 13.7 The existing Scheduling and Despatch Code under the State Grid Code will require amendments to explicitly include provisions for bundled power plants for facilitating above different modes of transactions and will also require modifications in the DSM Procedure.

Deviation Settlement of Bundled Power:

- i. Deviation calculation of Thermal/Hydro Plant in case of bundled operation with RE Power.
 - ii. Deviation calculation in the case of bundled RE power is partial of total capacity.
 - iii. Deviation calculation in case of sale of surplus RE Capacity.
 - iv. Deviation calculation in case Intra-State RE power plant is bundled with Inter-State Thermal/Hydro generator.
- 13.8 The existing DSM Regulations, 2019 will require amendments to explicitly include provisions to accommodate the RE power as per MoP Bundled scheme 2022, separate injection schedules for different modes of transactions and adjustments in the deviation settlement mechanism and will also require modifications in the Procedure for Settlement of DSM prepared by MSLDC according to amended DSM Regulations along with modification in existing DSM software modules.

Applicability of Transmission Charges and Losses

- 13.9 In case of RE power is being scheduled to Thermal/Hydro generating stations as a replacement power wherein RE plant is located at different location in the State or outside the State, it needs to be clarified whether InSTS charges and losses for such transaction is applicable or not
- 13.10 The existing TOA and DOA Regulations will require amendments to explicitly include provisions for RE power bundled with Thermal/Hydro plants, Open Access procedure for granting of Short-Term Open Access (STOA) of MSLDC will also require modifications along with modification in existing STOA software modules.

GNA applicability

- 13.11 For any Inter-State power transactions by conventional generator, the provisions of CERC Connectivity, GNA Regulations and its subsequent amendment shall be applicable.
- 13.12 Considering the case where RE generator is selling power to the conventional generator through bundling scheme, for such generators, connectivity GNA Regulations and subsequent amendment shall be applicable. In such cases, the extant Regulations and Procedures of F&S Regulations and NOAR Regulations need to be followed while carrying out transactions through this mentioned scheme.
- 13.13 As per the MoP Bundling Scheme 2022, during certain periods, the replacement of Thermal/Hydro power may not be feasible on account of technical minimum schedule or forced/planned shutdown of a Generating Station. To avoid stranding of RE power, it is provided that the Generating Station shall be allowed to sell such RE power to third parties/ Power exchange. This implies that power from Thermal/Hydro will be used for meeting demand of its contracted buyer and surplus RE power will be sold by the generator. Hence, for such transactions, required permissions/NoC from appropriate authorities needs to be taken in accordance with the extant regulations.
- 13.14 In such case, the applicability of F&S Regulations 2018 and DSM Regulations 2019 needs to be defined for following cases:

- i. Sale of total surplus RE power in the market in case of technical minimum, forced shutdown/planned shutdown of Thermal/Hydro power plant.
 - ii. Sale of surplus partial RE power in the market.
 - iii. If RE capacity is partially or wholly not feasible for replacement and if the surplus capacity is not sold in the market or contracted with any other buyer, then, there will not be any schedule for this RE capacity and this power will remain as a surplus in the grid.
- 13.15 The existing F&S Regulation 2018 will require amendments to explicitly include provisions for bundled power plants separate injection schedules for different modes of transactions and adjustments in the deviation settlement mechanism and will also require modifications in the Procedure for Settlement of DSM prepared by MSLDC according to amended DSM Regulations along with change request in existing RE DSM software modules.
- 13.16 By addressing the above identified issues through regulatory amendments, interim directions, stakeholder consultations and technical standards, the establishment and operation of wind-solar-thermal hybrid power plants can be facilitated effectively.
- 14 **At the E-Hearing held through video conferencing on 3 December 2024:**

The Advocate appearing on behalf of the Petitioner reiterated its submissions as made out in the Petition and its rejoinders and requested the Commission to grant the relief sought in the present Petition. The Representative of MSETCL sought liberty of the Commission to file its say on the rejoinder filed by the Petitioner.
- 15 **Vide its reply dated 13 December 2024 to the rejoinder of the Petitioner, STU stated that:**
 - 15.1 STU, in its reply, had submitted that it has prepared a separate detailed draft procedure for grant of connectivity of RE projects to the InSTS. Subsequently, STU, vide its letter dated 23 August 2024, submitted the revised procedure to the Commission. This is done after considering the relevant provisions of the TOA Regulations, CERC approved detailed grid connectivity procedure, GoM RE Policy, 2020.
 - 15.2 STU, vide its letter dated 21 October 2024, published the above-mentioned revised procedure and invited stakeholders' comments on the same by 5 November 2024.
 - 15.3 STU has also apprised the Commission regarding publication of aforementioned revised procedure in Case No. 106 of 2024, the matter similar to the present proceedings. The Commission, vide its Daily Order dated 25 October 2024, has recorded the submission of STU.
 - 15.4 Subsequently, based on request of some of the stakeholders for time extension of submission of comments, STU, on 6 November 2024, extended the deadline for submitting feedback by 7 days till 12 November 2024.
 - 15.5 The Petitioner, in its Rejoinder dated 7 October 2024, has stated that the Petitioner reserves its right to comment on the draft procedure at the relevant time. However, STU has not received any comment from the Petitioner during the period in which comments from stakeholders are sought i.e., the period from 21 October 2024 to 12 November 2024.

- 15.6 Grant of connectivity to the InSTS is governed by the TOA Regulations. STU has to process the Grid Connectivity applications as applicable TOA Regulations.
- 15.7 STU has prepared the Revised Procedure in line with the Commission directions to consider the “relevant” provisions of TOA Regulations and its amendments, CERC approved detailed Grid Connectivity Procedure, GoM RE Policy and other relevant Commission’s Regulations/Order.
- 15.8 The expectation that the issues/recent changes which have not yet been adopted by the CERC or the Commission should be adopted/covered that too, in the Procedure framed under the Regulations is misplaced and in contravention to the directions issued by the Commission.

Commission’s Analysis and Ruling

- 16 The Petitioner, through the present Petition, has approached the Commission seeking appropriate amendments in existing Open Access Regulations for establishing, operating, scheduling and commercial settlement of wind-solar-thermal hybrid power plant to be setup in accordance with the MoP Bundling scheme 2022 under open access by the consumers in the State of Maharashtra. The scheme is aimed at bringing flexibility in generation and scheduling of thermal /hydro power stations through bundling with RE power and storage power. Clause 9.6 of the above scheme states as follows:

“9.6 Changes, if any, required in the regulations for the implementation of the above scheme shall be done by the Appropriate Commission.”

- 17 Based on the above, the Petitioner is requesting the Commission to initiate the necessary steps for amendments in the existing Regulations/issuance of new Regulations/clarifications etc.
- 18 MSEDCL has objected to the Petition, inter alia, stating as follows:
- i. No State, including the State of Maharashtra, has a policy for wind-solar-thermal hybrid projects.
 - ii. On the Petition filed by MSPGCL seeking removal of difficulty in regarding procurement of Solar Power generation under the MoP Bundling Scheme, 2018, the Commission held that it was not appropriate time for introduce any major change in the then existing/proposed FBSM and DSM framework and the Commission shall introduce the same at an appropriate time.
 - iii. The MoP bundling/flexibility scheme 2022 is not applicable for captive thermal power plant.
 - iv. The prayers for policy formulation or issuance of Regulations cannot be accomplished through individual Petitions. Hence, the present Petition is not maintainable.
 - v. Existing Regulations such DOA Regulations, TOA Regulations and Regulations related deviation settlement treat RE power and thermal power differently and hence, there is difficulty in bundling these two powers in the existing regulatory

framework.

- vi. There are differences in RE power and conventional thermal power as far as aspects such as banking, energy billing, MoD operations etc. are concerned.
- vii. Bundling of RE Power with thermal power will lead to unnecessary complications in existing Regulations and will add up to further uncertainty in availability of power in real time.
- viii. The Commission should dismiss the present Petition as being not maintainable. If found necessary, the Commission may address the issue only through new regulations through a public consultation process.

19 MSETCL, in its replies, has stated as follows:

- i. TOA Regulations mandate filing of separate applications for grant of connectivity and separate bank guarantees for applications for grant of long term open access for RE generators and all Non-RE Generators.
- ii. In view of the GoM RE Policy, 2020 and methodology issued thereunder, STU has prepared a separate detailed draft "*Procedure for grant of connectivity of projects based on Renewable Energy sources to the Intra-State Transmission System*".
- iii. STU has prepared the above Procedure in line with the Commission's directions to consider the "relevant" provisions of TOA Regulations and its amendments, CERC approved detailed Grid Connectivity Procedure, GoM RE Policy and other relevant Commission's Regulations/Order.
- iv. Connectivity to Thermal +RE Hybrid projects (Co-located or Multi located) can be allowed as and when approved by the Commission.
- v. Use of open access permission granted for thermal plant to connect the hybrid plant which could be located at different location can be allowed as and when such Hybrid RE Projects are allowed to operate at different location through relevant Regulations and/or Orders of the Commission.
- vi. For applicability of transmission charges for bundling of RE power with thermal, the Commission is requested to clarify.
- vii. The expectation that the issues/recent changes which have not yet been adopted by the CERC or the Commission should be adopted/covered that too, in the Procedure framed under the Regulations is misplaced and in contravention to the directions issued by the Commission.

20 MSLDC, in its replies, has stated as follows:

- i. Presently Grid Connectivity, Open Access, RE Forecasting, Scheduling and Deviation Settlement are governed by State Grid Code, TOA and DOA Regulations, DSM Regulations, F&S Regulations, Procedures made under these Regulations and subsequent amendments. These Regulations do not have specific provisions wherein all the issues arising out of implementation of the MoP Bundling Scheme 2022 can be addressed.

- ii. Hence, necessary amendments need to be made in these Regulations to accommodate the transactions proposed in MoP Scheme.
 - iii. Clarity is required for Grid Connectivity in case of Wind, Solar, and Thermal components of the hybrid power plant located at different connectivity points.
 - iv. The existing TOA and DOA Regulations and its procedure for granting of grid connectivity will require amendments to explicitly include provisions for bundled power plants.
- 21 Based on submissions of the Parties, the Commission notes that following issues are arised for the consideration of the Commission:
- i. Maintainability of the Petition
 - ii. Applicability of the MoP Bundling scheme to the CPP/OA transactions
 - iii. Way forward
- 22 The Commission has discussed the above issues in the following paragraphs:
- 23 **Issue I:- Maintainability of the Petition**
- 23.1 MSEDCL has stated that the Petitioner is seeking to establish Regulations and policies through the present Petition, which is not the correct legal recourse. MSEDCL has further stated that Regulation and policy formulation requires issuance of public notice, hearing of all stakeholders and the related compliances. Hence, the prayers for policy formulation cannot be accomplished through individual Petitions. As per MSEDCL, the Petitioner’s contention qua the power of the Commission to remove difficulties is intended to address minor procedural issues and cannot be used to substantively alter or create new regulatory norms.
- 23.2 Per contra, the Petitioner has stated that the Petitioner has not prayed for amendment of Regulations through an Order. The State Electricity Regulatory Commissions are empowered to issue directions through the Orders, for initiation of amendment to the existing Regulations and for initiation of framing of new Regulations. The Commissions are issuing such Orders from time to time as and when required.
- 23.3 The Commission notes that the Petitioner, in present Petition, has made the following prayer:
- i. *Initiate Process of issuance of appropriate clarification/amendments in existing regulations for establishing, operating, scheduling and commercial settlement of wind-solar-thermal hybrid power plant to be setup for utilisation under open access by a consumer in the state of Maharashtra.*
-
- 23.4 Thus, the Petitioner is not seeking any amendment in the existing Regulations through an Order in the present Petition and it is just seeking to initiate the process for issuance of appropriate clarifications/amendments in the existing Regulations. Amendment in the existing Regulations and issuance of new Regulations has to follow the public consultation process, considering suggestions/comments of the stakeholders before finalising the amended Regulations or new Regulations. That being the case, **the Commission does not**

find any merit in the objection raised by MSEDCL regarding maintainability of the present Petition.

24 Issue II:- Applicability of the MoP Bundling scheme to the CPP/OA transactions

24.1 Through present Petition, the Petitioner is essentially seeking implementation of the MoP Bundling Scheme 2022 for its members who are users of captive power plants and seeking a framework for implementation of the above scheme under the Captive Open Access mode. Since the main basis for filing of the present Petition is the MoP Bundling Scheme 2022, it would be imperative to examine the scheme to decide the applicability to CPP/OA transactions.

24.2 The salient features of the scheme are as follows:

- i. All new and existing coal/lignite/gas-based thermal generating stations or hydropower stations for the purpose of the Scheme are referred to as a 'Generating Station', and any generating company having such generating station(s) may establish or procure renewable energy from a Renewable Energy (RE) power plant which is either co-located within the premises or at new locations. The generating companies shall be allowed to utilize such renewable energy for supplying power against their existing commitments/PPAs i.e., replacement of the thermal/hydro power to procurers anywhere in India. The RE in the mix shall count towards the RPO compliance of the distribution licensee. (Clauses 2.1, 2.2 & 2.3).
- ii. In case of RE power plant co-located within the premises of a generating station under Section 62, the Appropriate Commission shall determine the tariff of RE supplied. Provided that such RE power plant shall be established through a competitive EPC tendering. A Central or State generating company may establish a RE power plant which is not co-located within the premises of its generating station through competitive EPC tendering mode, after taking authorization from the Appropriate Government. Also, a generating company under Section 62 or its subsidiary shall also be allowed to establish an RE power plant through tariff based competitive bidding process under Section 63 provided the bids are called by a Central Government approved third party (Clauses 3.1, 3.2 & 3.4).
- iii. No transmission charges shall be levied for bundling of RE power with thermal/hydro power when the RE power plant is co-located within the premise of the generating station. Also, no transmission charges for use of ISTS shall be levied when RE power from RE power plant is being scheduled to the thermal/hydro generating stations as a replacement power; for supply to the procurers of another generating station located at a different location and owned by the same generating company (Clauses 4.1 & 4.2).
- iv. Separate scheduling, metering, accounting and settlement shall be carried out for the RE generation and the thermal/ hydro generation whose power is being replaced. This shall facilitate RPO compliance for the beneficiaries and the sharing of gains between the beneficiary and the generating station. Declared Capacity (DC) shall be given by the generating station(s) as per the extant regulations. Once the schedule for the next day is received, the generating station(s) shall have the flexibility to use the thermal/ hydro

power or RE Power from the plant set up for the bundling to meet its scheduled generation (Clauses 6.1 & 6.2).

- v. The declared capacity of the thermal/ hydro generating station shall be with respect to the terms of the Power Purchase Agreement (PPA) and the availability of primary fuel. The declared capacity of the thermal/hydro generating station shall not be based on the availability of additional RE power. The RE power, wherever found feasible shall replace the thermal/ hydro power of any of the generating station of the generating company (Clauses 6.3 & 6.4).
- vi. The RE power (with or without an energy storage system) shall be supplied to the beneficiaries at a tariff which shall be less than the Energy Charge Rate (ECR) of the generating station which was originally scheduled. Such a tariff would include the balancing cost and the tariff risk to be taken by the generator (Clause 6.7).
- vii. The net savings realized, if any, from the supply of RE power instead of thermal or hydro power under the existing PPA shall be passed on to the beneficiary by the generating company on a monthly basis. If required, at the end of each year, truing-up shall be done by the Appropriate Commission. The net savings shall be shared between the generator and the beneficiary in the ratio of 50:50 basis. (Clause 6.8) (h) The net injection schedule for the thermal/hydro generating station and the RE Generator would form the reference for DSM calculation as per the extant Regulations (Clause 7.2) (i) The renewable energy procured by the beneficiaries under these guidelines shall qualify towards meeting their Renewable Purchase Obligations (RPO) (Clause 8.1).
- viii. The distribution licensee will have the flexibility to procure the RE power within the existing PPA to meet their RPO. There shall not be any requirement of signing the additional agreement in cases where the landed tariff of the RE power (with or without energy storage system) is less than the ECR of the generating station (Clause 9.1).
- ix. During certain periods, the replacement of the thermal/hydropower may not be feasible on account of the technical minimum schedule or forced/planned shutdown of a generating station. To avoid stranding of RE power, it is provided that the generating station shall be allowed to sell such RE power to third parties/ Power exchange and no clearance is required from the beneficiaries of the station. However, the right to schedule power from the generating stations shall first rest with the PPA holders and in case, they do not schedule the power, the generating station shall have the right to sell the unscheduled RE power in the market. As during such conditions an RE power plant would not be operating under the flexibility scheme, there shall not be any requirement of sharing gains/losses derived through sale of such RE power in the market. The concerned RLDC shall facilitate sale of such power in the power market by separate scheduling of RE power for both co-located and other RE stations from which energy has been procured (Clause 9.3)
- x. The generating company may take up procuring RE power in tranches. Accounts of the quantum of RE Power supplied to the beneficiaries under the scheme will be submitted to the Appropriate Commission on a quarterly basis. (Clause 9.4)
- xi. The trajectory for the bundling of RE Power with the thermal/ hydro power will be

worked out by the generation company so as to meet the objectives, namely (a) continuous supply of reliable power at least cost to the PPA holder, and (b) enabling the PPA holder/ obligated entity to meet its RPO obligations. The maximum quantity of the bundling will be determined by technical consideration. The proposed mix for the bundling shall be submitted to the PPA holder for comments; with copies to MNRE and MOP. The mix shall be finalised after considering the comments of the PPA holder (Clauses 9.4.1, 9.4.2 & 9.4.3).

- xii. The Central Electricity Authority shall monitor the implementation and suggest changes, if required, in the scheme to the Central Government. In doing so, CEA may consult MNRE, POSOCO, CERC, Distribution Licensee, and other stakeholders. Changes, if any, required in the regulations for the implementation of the above scheme shall be done by the Appropriate Commission (Clauses 9.5 & 9.6).

24.3 The Commission notes that clause 2.3 of the aforesaid scheme reads as follows:

“ The generating companies shall be allowed to utilize such renewable energy for supplying power against their existing commitments/PPAs i.e., replacement of the thermal/hydro power to procurers anywhere in India. The RE in the mix shall count towards the RPO compliance of the distribution licensee.”

24.4 Further, clause 3.1 and 3.3 of the scheme read as follows:

3.1 In case of RE power plant co-located within the premises of a generating station under Section 62, the Appropriate Commission shall determine the tariff of RE supplied....

...

3.3 Also, a generating company under Section 62 or its subsidiary shall also be allowed to establish an RE power plant through tariff based competitive bidding process....

24.5 Further, clause 6.3 and 3.8 of the scheme read as follows:

6.3 The declared capacity of the thermal/ hydro generating station shall be with respect to the terms of the Power Purchase Agreement (PPA) and the availability of primary fuel.

.....

6.8 The net savings realized, if any, from the supply of RE power instead of thermal or hydro power under the existing PPA shall be passed on to the beneficiary by the generating company on a monthly basis. If required, at the end of each year, truing-up shall be done by the Appropriate Commission. The net savings shall be shared between the generator and the beneficiary in the ratio of 50:50 basis.

24.6 Clause 9.1 of the scheme reads as under:

“ The distribution licensee will have the flexibility to procure the RE power within the existing PPA to meet their RPO....”

24.7 The clauses mentioned above indicate that the scheme is applicable to the Generating Stations which have Power Purchase Agreements (PPA) with the Distribution Licensees as there is a repeated reference to Section 62 of the EA. Further, the scheme entails truing up, if required, at the end of each year by the Commission for passing the savings realized.

Truing up happens only in case there is a PPA between the Generating Company and the Distribution Licensee. In the case of Captive transaction, there is normally no need of any PPA as the captive power plant is established for self-use. Also, there is no truing up in Case of Open Access transactions which is governed by Section 49 of the EA and not covered under Section 62 of the EA.

- 24.8 Further, the background of the scheme clearly specifies that the objective of the scheme is to ensure that the Distribution Licensees can meet their Renewable Purchase Obligation (RPO) within the existing contracted capacity and without facing any additional financial burden. The relevant extract of the scheme reads as under:

*“ Ministry of Power vide letter dated 05th April 2018 introduced a detailed mechanism for allowing Flexibility in Generation and Scheduling of Thermal Power Stations. **The objective of the mechanism was to promote bundling of cheaper Renewable Energy (RE) with costlier Thermal Power and to promote Renewable Purchase Obligation (RPO) of Distribution Licensees. Recently, changes in energy-mix and the larger procurement by distribution licensees has brought new issues** to the forefront needing policy attention. Accordingly, the detailed mechanism that was issued earlier in this regard is now being revised to comprehensively cover replacement of thermal and hydro power with standalone renewable energy power or renewable energy combined with battery energy storage systems; **so that the distribution licensees can meet their Renewable Purchase Obligation (RPO) within the existing contracted capacity and without facing any additional financial burden.**”*

- 24.9 Further, clause D(vii) of the original scheme issued by MoP on 5 April 2018 for “Flexibility in Generation and Scheduling of Thermal Power to reduce emissions” clearly stated that the scheme is applicable only to thermal projects developed under Section 62 of the EA. The relevant extract of the scheme reads as under:

*“ (vii) **The proposed scheme shall be applicable only for the Thermal Projects developed /being developed under Section 62 of the Electricity Act, 2003, “Regulated Tariff based Projects.”**”*

- 24.10 The MoP Bundling scheme does not mention anything about applicability to Open Access or Captive transactions. Further, banking is the key provision in the RE Open Access transaction. The MoP Bundling scheme is silent on this aspect.

In view of the above discussion, the Commission is of the view that the MoP Bundling scheme is applicable to the PPAs between the Generating Stations and the Distribution Licensees and its applicability to the Open Access or Captive transactions is not clearly established.

25 Issue III:- Way forward

As mentioned earlier, the MoP Bundling scheme is applicable to the PPAs between the Generating Stations and the Distribution Licensees. Further, the MoP has foreseen following objectives or advantages of the scheme:

- i. Meeting the RPO obligations by the Distribution Licensees

- ii. Facilitation of further RE capacity addition
 - iii. Reduction in environmental emissions
 - iv. Availability of balancing power
 - v. Possibility of optimization of power purchase by the Distribution Licensee
- 25.1 Further, the Unconventional Energy Generation Policy 2020 issued by GoM on 31 December 2020, states that until the objectives of this policy are met, priority will be given to the development of hybrid projects by combining wind and/or solar projects with other conventional / non-conventional energy sources and incorporating storage capacity as required.
- 25.2 **In view of the above, the Commission is of the view that implementation of the MoP bundling scheme at the State level could be explored, however, as highlighted by MSEDCL, MSETCL and MSLDC, the existing Regulations do not support such an integrated operation of RE generator and non-RE generator. There is substantial difference in the treatment of RE Power and thermal power when it comes to scheduling, Open Access permissions, Open Access Billing, banking, energy billing, DSM accounting, MoD operations etc. In the present regulatory framework, there is no concept of bundled thermal/hydro power with RE and Thermal combined. To accommodate such power, major regulatory changes would be required in Open Access Regulations, DSM Regulations, Grid Code Regulations, RE Tariff Regulations etc.**
- 25.3 **Further, before considering the implementation of the scheme at the State level, it would be necessary to understand the steps taken by CERC, through its Orders/Regulations/procedures for the operationalization of the MoP Bundling Scheme.**
- 25.4 The Commission understands that the Grid Controller of India has prepared a procedure for scheduling thermal and RE and has submitted the procedure to CEA, which is the monitoring agency for the scheme. However, no information is available in the public domain regarding the implementation of the scheme at the national level. Hence, before considering the implementation of the scheme in the State, there is a need to undertake a comprehensive study for understanding the national-level experience of the scheme implementation, actual benefits achieved, and the amendments required in the existing Regulations. The Commission is of the view that a group with members having experience in dealing with technical issues, particularly Distribution, Transmission and Grid related issues, could be assigned the task of undertaking such a comprehensive study.
- 25.5 The Commission notes that under State Grid Code Regulations, the Grid Co-ordination Committee (GCC) has been constituted which, inter alia, has been entrusted with the function of proposing amendments to these Regulations. Grid Code Regulations specify the following functions of the GCC:
- i. Facilitating the implementation of these Regulations and procedures developed under these Regulations;
 - ii. Assessing and recommending remedial measures for issues that arise during the

implementation of these Regulations and procedures developed under these Regulations; Provided that, the GCC shall formulate suitable procedures, code of operation, manual and guidelines or revise such procedures/guidelines/manuals/code under these Regulations by undertaking stakeholder consultation and shall submit the same to the Commission.

iii. Review of the MEGC, in accordance with the provisions of these Regulations and propose amendments required if any to the Commission;

iv. **Other matters as may be directed by the Commission from time to time.**

25.6 Further, GCC has a wider representation of key stakeholders in the State such as Generating Companies, Transmission Licensees, Distribution Licensees, STU and MSLDC.

25.7 In view of the above, the Commission deems it appropriate to direct GCC to undertake a detailed study for exploring the implementation of the MoP Bundling Scheme in the State. GCC may take inputs from the Grid Controller of India and CEA regarding experiences of the scheme implementation at the national level and regarding operationalization of the scheme in the State. Further, GCC shall undertake deliberations with the stakeholders in the State such as Generating Companies, Distribution Licensees, RE generators, STU etc. on various aspects such as metering, connectivity, scheduling, energy accounting and settlement, DSM accounting, transmission and wheeling charges etc. and submit a draft framework to the Commission covering all relevant aspects including the implementation aspects such as need of new software, metering, communication etc. GCC shall submit the said draft framework to the Commission within six months of this Order, which may be considered by the Commission for initiating the amendments to the existing Regulations or for notifying new Regulations if required.

26 Hence, the following Order:

ORDER


1. **The Petition in Case No. 246 of 2023 is rejected**
2. **Grid Co-ordination Committee is directed to undertake a detailed study for exploring implementation of the MoP Bundling Scheme in the State.**
3. **Grid Co-ordination Committee may take inputs from the Grid Controller of India and Central Electricity Authority regarding experiences of the scheme implementation at the national level and regarding operationalization of the scheme in the State.**
4. **Grid Co-ordination Committee shall undertake deliberations with the stakeholders in the State such as Generating Companies, Distribution Licensees, RE generators, State Transmission Utility etc. on various aspects such as metering, connectivity, scheduling, energy accounting and settlement, DSM accounting, transmission and wheeling charges etc. and submit a draft framework to the Commission covering all relevant aspects including the implementation aspects such as need of new software, metering, communication etc.**
5. **Grid Co-ordination Committee shall submit the said draft framework to the Commission within six months of this Order, which may be considered by the**

Commission for initiating the amendments to the existing Regulations or for notifying new Regulations if required.

**Sd/-
(Surendra J. Biyani)
Member**

**Sd/-
(Anand M. Limaye)
Member**

**Sd/-
(SanjayKumar)
Chairperson**


**(Dr. Rajendra G. Ambekar)
Secretary**

