
MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION BHOPAL

Sub: In the matter of petition under Section 86(1)(b) of the Electricity Act, 2003 seeking approval for electricity purchase and procurement process including the price at which electricity is being procured from generating companies under the PSAs/PPAs mentioned under Para 6 of the petition.

Petition No.65 of 2020

ORDER

(Date of Order: 27th May' 2021)

M.P. Power Management Co. Ltd.

Through its Managing Director,

CF Block, Shakti Bhawan, Rampur, Jabalpur – 482 001

- Petitioner

Shri Manoj Dubey, Advocate and Shri Jaswant Pasricha appeared on behalf of the Petitioner.

The subject petition was filed by M.P. Power Management Co. Ltd. under Section 86(1)(b) of the Electricity Act, 2003 seeking approval for electricity purchase and procurement process including the price at which electricity is being procured from generating companies under the PSAs/PPAs mentioned in Para 6 of the petition.

2. The petitioner broadly submitted the following in the subject petition:

“(1) That, for the present, RPO trajectory is available only for the period till FY 2021-22 and not for a period thereafter. Seeking RPO trajectory for the period post FY 2021-22, the Petitioner has filed a separate petition bearing Petition No. 15/2020 before the Hon’ble Commission, which is pending final adjudication till date. The Petitioner apprehends that it may take substantial time for the RPO trajectory to be determined and notified for the period post FY 2021-22. The Petitioner believes that the RPO targets for procurement of energy from new and renewable sources may change in times to come. In this spirit, the Petitioner has to take steps in advance to arrange sufficient energy from new and renewable sources at competitive price to comply RPO Target as fixed by Hon’ble Commission. Even otherwise, there is no embargo on the Petitioner in procuring energy from new and renewable sources to a little upper side in quantum as prescribed by RPO targets in vogue, provided the procurement price is competitive.

(2) Petitioner has endeavored to consistently comply with the RPO targets set by the state commission. RPO Achievements against MPERC Targets for last four years and current financial year is summarized below

Financial Year	RPO Fixed by MPERC vide order dated 31-08-2017			RPO Achieved		
	Solar (in %)	Non-solar	Total (in %)	Solar (in %)	Non-Solar	Total (in %)
2016-17	1.25	6.50	7.75	1.73	7.11	8.84
2017-18	1.50	7.00	8.50	2.05	6.60	8.65
2018-19	1.75	7.50	9.25	2.75	6.95	9.70
2019-20	4.00	8.00	12.00	3.98	7.02	10.99

- (3) *In order to comply with RPO targets set by the Hon'ble Commission, petitioner has contracted Renewable Capacity to achieve the same in future also. A summary of Tied Up and commissioned Capacity (in MW) from Solar and Non-Solar renewable sources is as below*

Category	No. of Agreements (PPA/PSA)	Total Capacity Tied- up (MW)	Total Capacity Commissioned (MW)
Solar	38	3487	1537
Non-Solar			
Wind	274	3399.35	2392
MSW	1	11.5	11.5
Biogas	1	1.2	1.2
Biomass	3	23.2	23.2
SmallHydro	15	117.405	85.805
Total Non-Solar	294	3552.655	2513.705

*List extracting relevant details of PPAs/PSAs of above mentioned tied-up capacity is enclosed herewith **Annexure P/1**.*

- (4) *That, as the RPO Regulations do not provide for set-off of excess energy procured from Solar and Non-Solar sources and set-off of excess / short procurement in one financial year with subsequent financial year(s), the Petitioner has to plan sufficiently in advance for procurement of energy from such sources by way of Long Term Power Purchase Agreements in an endeavor to procure RE power at most competitive rates. While doing so, the Petitioner has also to take into consideration the effective cost price of energy from new and renewable sources, which gets increased in proportion to backing down Firm Power from Conventional Sources of Energy. That is to say, that the effective purchase price of energy from New and*

Renewable Sources gets increased by the backing down cost of Firm Power. Thus, the overall average purchase price of RE power gets substantially increased.

- (5) *That, under present regime of tariff based competitive bidding, availability of RE power at competitive rates has become possible and same has reached grid parity. Long Term PPAs as compared to Medium and Short Term is found to be a better option for getting competitive rates. Various organizations like SECI, NTPC, NHPC, and RUMSL, over the period, have come-up with large scale RE projects at very competitive rates discovered through transparent tariff based bidding process and offering the same to DISCOMs and other bulk procurers on a reasonable trading margin.*
- (6) *That, in an endeavor to meet the RPOs to the extent possible, the Petitioner has executed PSAs / PPAs with Solar Power Developers under RUMSL project / SECI / NHPC and other entities for following capacities:*

Sr. No.	Nodal Agency	Scheme / Name of Project	Tariff (Rs./Unit)	PSA / PPA date	PSA Capa-city (MW)	Details of Bidder/ Developer		Remarks
						Name	Cap: allocated (in MW)	
1	SECI (Solar Energy Corporation of India: a nodal agency of MNRE, Gol))	750 MW Solar Power, JNNSM Ph-II, B-I scheme of MNRE Gol	Rs 5.50/kWh (Including trading margin 5.0 paisa /kWh)	15.10.14	60	Fortum Finsurya Energy Pvt Ltd	10	Unit Commissioned on 31.12.14
						SEI L'Volta Pvt Ltd.	20	Unit Commissioned on 26.02.15
						SEI Sitara Pvt Ltd	30	Unit Commissioned on 26.02.15
2		750 MW Solar Power, JNNSM Ph-II, B-I scheme of MNRE Gol	Rs 5.50/kWh (Including trading margin 5.0 paisa /kWh)	22.01.16 (Supplementary PSA against PSA dtd. 15.10.2014, for additional 40 MW Capacity	40	Clean Solar Power (Dhar)	30	Unit Commissioned on 31.03.15
						Focal Photovoltaic (I) P. Ltd	10	Unit Commissioned on 01.06.15

				<i>under same scheme)</i>				
3	RUMSL (a joint venture of SECI and MPUVN)	750 MW Rewa Ultra Mega Solar Power Project Near Gurh, District REWA	2.979+escalation of 5 paisa at the start of each Contract Year for a total of 15 Contract Years	17.04.17	200*	M/s. Mahindra Renewables Pvt. Ltd.	MPPMCL has 78% energy share from the 250 MW Unit	Unit Commissioned on 03.01.20
4			2.970+escalation of 5 paisa at the start of each Contract Year for a total of 15 Contract Years	17.04.17	200*	M/s. ACME Jaipur Solar Pvt. Ltd.	MPPMCL has 78% energy share from the 250 MW Unit	Unit Commissioned on 28.04.19
5				2.974+escalation of 5 paisa at the start of each Contract Year for a total of 15 Contract Years	17.04.17	200*	M/s. Arinsun Clean Energy Pvt. Ltd.	MPPMCL has 78% energy share from the 250 MW Unit
6	SECI	2000 MW ISTS connected Wind Power	Rs 2.52/kWh (Including trading margin 7.0 paisa /kWh)	22.03.2018	450	M/s Torrent Power Ltd.	450	Yet to be commissioned
7	SECI	2000 MW Wind Power Bid under Tranche-IV Scheme.	Rs 2.59/kWh (Including trading margin 7.0 paisa /kWh)	13.06.18	500	Srijan Energy Systems	250	Yet to be commissioned
						BLP Energy	185	Yet to be commissioned
						ReNew Wind Energy (TN) Pvt Ltd.	65	Yet to be commissioned
8	SECI	1200 MW Solar Power	Rs 2.61/kWh	16.10.19	900	Ayana Renewabl	300	Yet to be commissioned

		Bid under Tranche - IV Scheme.	(Including trading margin 7.0 paisa /kWh)			e Power P. Ltd		
						Renew Solar Power P. Ltd	300	Yet to be commissioned
						Azure Power Maple P. Ltd.	300	Yet to be commissioned
9	NHPC (National Hydro Power Development Corporation: an undertaking MoP, GoI)	2000 MW Solar ISTS Connected Bid	Rs 2.62/kWh (Including trading margin 7.0 paisa /kWh)	28.08.20	1000	O2 Power SG PTE Ltd	380	Yet to be commissioned
						Eden Renewable Passy Pvt Ltd	300	Yet to be commissioned
						SBE Renewables Seventeen Pvt Ltd	320	Yet to be commissioned
TOTAL					3550 MW			

Copies of PPAs/PSAs in respect of above-mentioned procurement are filed herewith as **Annexure P/2 to P/9**.

- (7) That, the tariffs of the above mentioned RE projects of SECI, RUMSL and NHPC are derived through transparent competitive bidding as per the Standard Bid Guidelines issued by GoI, MoP. SECI and NHPC are charging trading margin @ 7.0 paisa /kWh above the tariff discovered through competitive bidding as per Trading Margin mentioned in MNRE guidelines dated 14.03.2016, as contained in **Annexure P/10** hereto, for setting up 5000 MW Grid Connected Solar Power Project. The effective rates of these RE projects of SECI and NHPC (Tariff discovered through competitive bidding and trading margin 7.0 paisa /kWh) are reasonable as compared to offers available to petitioner for achieving Solar and Non-Solar RPO Targets and prevailing rates of Solar and Wind Projects.
- (8) That, the projects mentioned in para 6 under Sr. No 3, 4, 5, 6, 7, 8 & 9 are ISTS connected projects for supplying generated Solar/Wind Energy to utilities in different States including Madhya Pradesh. As the projects, as mentioned against their names in para 6 are implemented by Central Govt. agencies and are ISTS

connected inter-state beneficiary projects, the Central Electricity Regulatory Commission is the Appropriate Commission for adoption of tariff u/s. 63 of Electricity Act.

- (9) *That, SECI, vide its letter dated 05-03-2020, as contained in **Annexure P/11** hereto, has informed that they have approached to the Central Commission for adoption of tariff u/s. 63 of Electricity Act, in respect of above projects mentioned against its name in para 6 hereinbefore. SECI has also requested the Petitioner to obtain capacity approvals in respect of aforesaid PPAs. Further, the Secretary, MNRE, GoI, vide its letter dated 28-07-2020, as contained in **Annexure P/12** hereto, has expected the DISCOMs of the State to ensure necessary approvals of the State Commission for procurement of power from above projects.*
- (10) *That, the Petitioner believes that the PSAs /PPAs, as detailed in para 6 herein before, are executed on tariff discovered through transparent bidding process as per standard bidding guidelines and offer competitive procurement price to the Petitioner, with additional advantage of waiver of Inter-State Transmission losses and charges, as per order of Ministry of Power Govt. of India, as contained in **Annexure P/13**. The PSAs / PPAs, executed ~~and~~ as mentioned in para 6 hereinbefore, were necessary to meet the RPO targets that have been set /may be set by Hon'ble Commission in times to come. Hence, it has become necessary for the Petitioner to approach the Hon'ble Commission by way of this petition and seek approval of electricity procured / tied up for procurement and procurement process including the capacity and price at which the same is being procured from generating companies as set out in para 6 hereinbefore.*
- (11) *That, as being sought by way of instant Petition, the developers in these competitive bidding projects, require the capacity approvals from State Regulator under 86(1)(b) of the Electricity Act in respect of aforesaid PPAs for their financial closure and in absence, there is strong likelihoods that the developers may either not execute the respective back-to-back PPAs or may even surrender or abandon their projects after signing of the PPAs. Hence, in an endeavor to ensure sufficient and cheaper power at present and for times to come, at competitive rates and to ensure that the respective developers come up with their projects as per schedule, it has become necessary for the Petitioner to institute instant petition.*
- (12) *That, in order to keep timelines for signing of PSA/PPA with the agencies as per timelines prescribed in respective bidding documents and as these biddings were based on standard bid guidelines issues by Central Government, MPPMCL had signed PSA/PPA with the agencies as mentioned in para 6 above, from time to time, in anticipation of approval of Hon'ble Commission. That the act does not describe*

the capacity approval, therefore petitioner is filing the petition for Ex-Post Facto approval of PSA/PPA executed with Non-Conventional / Renewable source of Energy for fulfillment of RPOs. In the present petition, petitioner seeking for the approval of 9 nos. PSA/PPA of 3550 MW and depositing the Fees of Rs. 500000 (Five Lakhs) as per MPERC (fees, fines and charges) (REVISION-I) REGULATIONS, 2010 [RG-21 (I) of 2010] schedule I Sr. no.15 (b) considering single Ex Post Facto approval of 3550MW.

- (13) *That, similar approvals for procurement of capacity as being sought by the way of present Petition, has been granted by Haryana State Electricity Regulatory Commissions. Copy of the order passed in such Petition is filed herewith as **Annexure P/14**.*
- (14) *That, the Hon'ble Commission has all jurisdiction u/s. 86(1)(b) of the Electricity Act to adjudicate instant petition. The Petition is being preferred under all bonafides.*
- (15) *That, the Petitioner has tendered the requisite filing fee and details of which are separately informed to the registry of Hon'ble Commission."*

3. With the above submissions, the petitioner prayed the following:

"It is therefore prayed that, the Hon'ble Commission may be pleased to grant approval for electricity purchase and procurement process including the price at which electricity is being procured from generating companies, as set out in para 6 hereinbefore, to meet the ends of justice."

4. At the motion hearing held on 24.11.2020, Ld. Counsel who appeared for the petitioner broadly submitted the following:

- (i) In order to comply with RPO targets, the petitioner has contracted Renewable Capacity to achieve the same in future also.
- (ii) To meet the RPOs to the extent possible, the petitioner has executed PSAs/ PPAs for various capacities with Solar Power Developers under RUMSL project / SECI/ NHPC and other entities.
- (iii) The petitioner, in para 6.0 of the subject petition has mentioned a list of PSAs/ PPAs along with the details about the Nodal agencies, Scheme/ name of project, tariff, bidder/ developer & date of commissioning.
- (iv) The PPAs/ PSAs for which approval is being sought in the subject petition have been executed on 15.04.2014, 22.01.2016, 17.04.2017, 22.03.2018, 13.06.2018, 16.10.2019, 28.08.2019. Hence all aforesaid PPAs/ PSAs have been executed and the petitioner is seeking ex-post facto approval for aforesaid PPAs/ PSAs along with the approval of

Tariff mentioned in these agreements under Section 86(1)(b) of the Electricity Act'2003.

5. In view of the above, Ld. Counsel for the petitioner was asked to inform the following:
- (i) The reasons for approaching the Commission for approval of the PSAs/ PPAs already executed in the years 2014, 2015, 2016, 2017, 2018 and 2019 after a long delay. Further, the reasons for not obtaining prior approval of the Commission in terms of Regulation 32 of MPERC (Power Purchase and Procurement Process) Regulations, 2004 provisions were sought from the petitioner.
 - (ii) Most of the PSAs/PPAs filed in the subject petition pertain to inter-state supply the Central Commission is an appropriate Commission for adoption of tariff under Section 63 of the Electricity Act, 2003 for inter-state supply. Therefore, the petitioner was asked to explain the reasons for seeking approval of price from this Commission for such PSAs/PPAs as the request in the subject petition was not as per the provisions of the Electricity Act, 2003 and the Electricity Rules, 2005.
 - (iii) No details/ calculations for arriving at the requirement of power to be procured under the PSAs/PPAs in the subject matter for fulfilling RPOs was provided. Therefore, the basis of considering the capacity addition for fulfillment of RPO was sought from the petitioner.
6. Vide Commission's order dated 26.11.2020, the petitioner was asked to submit the information explaining all above-mentioned issues. The petitioner was also asked to provide the basis of considering the renewable capacity addition along with the details/ calculations for arriving at the requirement of power to be procured under the PSAs/PPAs filed with the subject petition. As sought, the petitioner was allowed to submit all such details by 10th December'2020 and the case was re-scheduled for motion hearing on 05.01.2021.
7. By affidavit dated 24.12.2020, the petitioner filed the following information/ clarifications sought by the Commission:

- (i) The reason for not obtaining prior approval of RE procurement:
 - (a) *That, in pursuance of Section 181(2) (zp) read with Section 86(1)(e) of the Electricity Act, apart from the general regulations for procurement of Electricity, Hon'ble Commission has notified Regulations for Renewable Energy separately from time to time to promote/ facilitate RE Generation and consumption in the State. Regulation 4.8 of first amendment/ addendum to Madhya Pradesh Electricity Regulatory Commission (Cogeneration and Generation of electricity*

from Renewable Sources of Energy) (Revision-I) Regulations, 2010, provides as under;

“4.8 Procedure for execution of Power Purchase Agreement(s) {PPAs} and Power Purchase and Wheeling Agreement (s) {PP&WAs}:

- (a) The Generator shall approach the M.P. Power Trading Company with the proposal for sale of power generated from their machine(s). The proposal for sale of power shall include details of Company/ Project in the applicable format C (i) to (v) as specified in MPERC (Furnishing of Technical details by Generating Companies) Regulations, 2011.*
- (b) Simultaneously, Generator shall also approach the Transmission Licensee and the Distribution Licensee furnishing the requisite details as at (a) enabling them to conduct interconnection studies. If found feasible, permission shall be granted to the Generator along with an estimate of the cost of extension/ bay and other charges within 30 days from the date of receipt of application with a copy to M.P. Power Trading Company. For long term access, M.P. Power Transmission Company shall grant permission, if found technically feasible, within 15 days of receipt of application.*
- (c) Thereafter, the M.P. Power Trading Company shall execute the Power Purchase Agreement(s)/Power Purchase and Wheeling Agreement(s), as the case may be, within 15 days from the date of receipt of proposal for sale of power in cases where new interconnection is not required. In cases where new interconnection is required, these agreements shall be executed within 15 days of receipt of permission from the Distribution Licensee and the Transmission Licensee (as applicable).*

*....
...”*

Thus, it is evident from the above generic provisions of the regulations that prior approval for procurement/tie-up of Capacity on case to case basis is not required in case of RE procurement.

- (b) With regard to reasonableness of cost of power purchase and promotion of working in an efficient, economical and equitable manner, it is submitted that the procurement made vide PPAs/ PSAs as mentioned in Petition are based on tariff discovered through transparent competitive bidding process, which are substantially less than the generic tariff as determined by the Hon’ble Commission, from time to time. Further it needs to mention here that Clause 7.1 of the MPERC Tariff order dated 06.06.2010 for procurement of power from Solar Energy Based Power Generation in Madhya Pradesh provides as under;*

“7.1 Bidding for Power Procurement

The tariff indicated above is the maximum tariff and the State Nodal Agency, M.P. Urja Vikas Nigam Limited or M.P. Power Trading Co. on behalf of the Distribution Licensee, as the case may be, shall be free to invite bids from developers. The developer bidding the lowest tariff will be allowed to install the power plant and sell the generated power to state utilities.”

Thus, it is evident that procurement against PPAs/PSAs under Petitions are done as per provisions made in Solar Tariff of Hon'ble Commission as mentioned above.

(ii) Explanation for the reasons for seeking approval of price from the Hon'ble Commission for such PSAs/PPAs:

That, the Developers/Nodal agencies with whom the PSAs/PPAs has been executed, as mentioned in the Petition, have already commissioned their projects and are perusing to get approvals of the procurement of electricity including capacity and price, from respective SERC as regulatory requirement to avoid any legal complications in future. Now, such approval is also required by the developers to get financial closure of the projects.

That, in respect of the PPAs/PSAs, as mentioned in the Petition, the Petitioner is not at all seeking adoption of tariffs as required u/s. 63 of the Electricity Act, 2003. It is understood that in case of inter-state supply of electricity, it is the responsibility of the generator to approach the Central Commission for determination / approval /adoption of tariff u/s. 61, 62 or 63, as the case may be, and while doing so the Central Commission discharges its functions vested in its favour vide Section 79 (1) (b). But, a similar facility of getting his procurement approved is not available to the procurer under Section 79 (1) and instead the procurer has to approach the Appropriate State Commission. In cases of inter-state procurements, the Petitioner, by way of instant petition u/s. 86(1)(b) of the Act is seeking approval/ regulation of such procurement – the fixation/ determination/ adoption of tariff u/ss. 61, 62 or 63 of the Act, as the case may be would have been or would be regulated by the Central Commission by way of discharge of its functions u/s. 79 (1) of the Act and relating to the Generator for inter-state supply. But, the Petitioner feels and is of the view that for a consequential procurement, which may or may not have witnessed its regulation u/s. 79(1) of the Act on the instance of the Generator/ supplier, it would be incumbent upon the procurer to have the same approved/ regulated by the State Commission u/s. 86(1)(b) of the Act and which function is entirely different from fixation/ determination/ adoption of tariff of inter-state supply of electricity. The Petitioner is seeking approval/ regulation of inter-state procurement at indicative price which shall ultimately be subject to the adoption of tariff u/s. 63 of the Act by the Central Commission in discharge of its functions u/s. 79 (1) of the Act. It is submitted that such inter-state procurement shall be subject to its regulation by the Hon'ble Commission u/s. 86(1)(b) of the Act. Hence, it has become necessary for the Petitioner to approach the Hon'ble Commission for approval / regulation of such inter-state procurement.

(iii) Basis of considering the capacity addition for fulfillment of RPO:
Details/ calculations for arriving at the requirement of Solar and Non-Solar power to be procured under the PSAs/PPAs in the subject matter for fulfilling RPOs is as detailed out in Annexure P/15 and P/16 respectively, filed herewith.

(iv) That, by way of instant petition, the Petitioner is seeking in principal approval of the procurement of RE capacity under PPAs/ PSAs on indicative prices mentioned therein. Price approval shall be subject to its adoption u/s. 63 of the Act by the Appropriate Commission."

8. Taking on record the above submissions filed by the petitioner, the subject petition was admitted only for approval of capacity addition as proposed in the subject petition. It was made clear to the petitioner that the request for approval of PSAs/ PPAs would be considered separately only after adoption of tariff by the Appropriate Commission.

9. On examination of the various assumptions and the figures in the calculation sheet for additional Solar and Non-solar capacity proposed by the petitioner in Annexure P-15 and P-16 of its submissions dated 24.12.2020, the petitioner was asked to clarify the following issues:

- (a) Basis of Ex Bus energy required by Discoms and SEZ as indicated at Sr. No 1 in Annexure P-15 and P-16.
- (b) Basis of considering CUF of 21% in Solar Projects and CUF of 21.5% in Non-Solar Projects.
- (c) Basis of projecting RPO increment of 1.5% for solar from FY 2022-23 to FY 2024-25.
- (d) Basis of considering 1.84 factor for Solar capacities to arrive at the deficit in MW indicated at Sr. No 18 of Annexure P-15.
- (e) Excel sheet in soft for all the formulae used was sought.

10. The petitioner by affidavit dated 31.03.2021 submitted the following reply to the above issues:-

"(1) Basis of Ex-Bus energy required by Discoms and SEZ as indicated at Sr. No 1 in Annexure P-15 and P-16:

*That, in view of letter no. 5762/13/2011 dated 5th July, 2011 issued by the Energy Department, Government of Madhya Pradesh, the State Planning Cell having its office at Shakti Bhawan, Jabalpur and working in the administrative control of the Energy Department is responsible for future planning for the power sector in the State. The State Planning Cell is responsible for projection of future requirements, maximum and average demand projections, energy requirement projections and also the functions relating to the Planning Commission of India. The Petitioner relies upon the methodology of assessment made by the State Planning Cell, a copy of which is annexed hereto as **AnnexureP-17**.*

*The Ex- bus energy required by Discoms and SEZ is based largely on the assessment conveyed by the State Planning Cell. A copy of same is appended heretoas **AnnexureP-18***

(2). Basis of considering CUF of 21% in Solar Projects and CUF of 21.5% in Non-Solar Projects:

Para No. 47 of Chapter 7 of CERC notification dated 23rd June, 2020 provides for parameters for Solar PV Power Projects, Solar Thermal Power Projects and Floating Solar Projects. Regarding Capacity Utilization Factor it provides as “Provided that the minimum capacity utilization factor for solar PV power projects shall be 21%”. Accordingly, 21% CUF was considered for Solar Projects.

Similarly, Chapter 3 of CERC notification dated 23rd June, 2020, provides for Parameters for wind power projects at para no. 25 for Capacity Utilization Factor as:

Annual Mean Wind Power Density (W/m²)	Capacity Utilization Factor
Up to 220	22%
221-275	24%
276-330	28%
331-440	33%
> 440	35%

Most of the area of MP comes under the annual mean wind power density up to 220 w/m², accordingly a CUF of 21.5% is considered for wind power project. A copy of notification 23rd June, 2020 is attached herewith as **Annexure P-19**

(3) Basis of projecting RPO increment of 1.5% for solar from FY 22-23 to FY 24-25:

The 6th Amendment to MPERC Co-Generation & Generation of Electricity from Renewable Source of Energy (Revision-I) Regulation-2010 provides for Solar RPOs for the Financial Year 2019-20, 2020-21 & 2021-22 as 4%, 6% and 8% respectively. Therefore, looking to the trend, an increment of 1.5% per year, for Solar RPO from FY 2022-23 to FY 2024-25 was considered by the Petitioner.

(4) Basis of considering 1.84 factor for Solar Capacities to arrive at the deficit in MW indicated at Sr. No 18 of Annexure P-15:

For calculation of Energy available from Solar PV Projects 21% CUF is considered. For calculation of Energy multiplying factor of 1.84% is derived from 21% CUF. The calculation is as under: -

For 100 MW

Total Energy Generated in a year with 100% CUF
 = 100 MW x 1000 x 366 days x 24 / 1000000 MU
 = 878.4 MU

Total Energy Generated in a year with 21% CUF
 = 878.4 MU x 0.21
 = 184.464
 Therefore, multiplying factor for 1 MW with 21% CUF
 = 184.464 / 100
 = 1.84

(5) Excel sheet in soft for all the formulae used be submitted:

An Excel sheet, in soft, for all the formulae used is separately emailed to the Commission Secretary on email ID 'secretary@mperc.nic.in'. **(Annexure P-20)**.

That, vide order dated 26th February, 2021, the Hon'ble Commission was pleased to direct the Petitioner to submit the information as mentioned in para 1 above within a period of 10 days from the date of said order. In view of the information sought, the said period was too short for the information to be gathered from various departments of the petitioner. It took some additional time for the Petitioner to collect the information from the various departments including the State Planning Cell. After gathering the information the counsel was contacted and briefed over the matter. The present reply was prepared thereafter and is being submitted after obtaining the required procedural vetting and approvals of competent authorities. The information as submitted hereinbefore involves merit and would reveal far reaching effects on the case of the Petitioner, if the delay caused in filing the same is condoned. Hence, prayed that the delay caused in filing the present information be condoned and the same be taken on records of the case, in the interest of justice."

11. The petitioner vide additional submission dated 06.05.2021 submitted the following:

- (1) Apropos above cited subject and references it is to mention that in compliance to the directives contained in daily order dated 26.02.2021 the desired information has been submitted vide this office letter No. 05-01/65 of 2020/ MPERC /375, dated 31.03.2021.*
- (2) In continuation to above it is to inform that for achieving Financial Year-wise RPO Targets, MPPMCL has executed a PSA with NTPC Limited on 30.04.2021 for procurement of 200 MW Solar Power from their upcoming 300 MW ISTS connected Solar Power Project at the tariff Rs. 2.70 per kWh, which is inclusive trading margin of Rs. 0.07 per kWh. The project is expected to be commissioned by 30.07.2022.*
- (3) The salient particulars of the PSA are tabulated as under: -*

Sr. No.	Nodal Agency	Scheme/ Name of Project	Tariff (Rs/ Unit)	PSA Date	PSA Capacity	Details of Developer		Remark
						Name	Capacity	
10.	NTPC Ltd.	300 MW Solar PV Project	Rs. 2.63 + Rs. 0.07 (trading margin) = Rs. 2.70	30.04.2021	200 MW	M/s ABC Renewable Energy (RJ-01) Pvt. Ltd.	300 MW	Expected to be commissioned by 30.07.2022

(4) In view of above, it is requested that, the 200 MW Solar PV Capacity indicated as in above table may please be considered as Sr. 10 in the Para No. 6, Page No. 22 of the Petition No. 65/2020 and instead of 3550 MW Capacity approval as indicated in the table may kindly be treated as 3750 MW.

(5) A copy of PSA executed on 30.04.2021 along with revised annexure P/15 after incorporating the instant capacity of PSA i.e. 200 MW is also appended herewith for kind perusal of the Hon'ble Commission for considering and according capacity approval of the PPA / PSA aggregating to 3750 MW as on date executed for procurement of RE Power by MPPMCL."

Commission's Observations and Findings:

12. The Commission has observed the following from the petition and the additional submissions of the petitioner in this matter:

(i) The minimum quantum of electricity to be procured by all the Obligated Entities from generators of Renewable Energy including Co-generation from Renewable Sources of electricity expressed as percentage of their total annual procurement of Electrical Energy excluding consumption met from hydro sources of power during each financial year up to FY 2021-22 is provided under MPERC (Cogeneration and Generation of Electricity from Renewable Sources of Energy) (Revision-I) Regulations, 2010 and its amendments.

(ii) A summary of tied up and commissioned capacity (in MW) from Solar and Non-Solar renewable sources has also been submitted in para 3 of the subject petition.

(iii) The petitioner submitted that MPPMCL has executed PSAs/ PPAs for various Solar and Non-Solar capacities with Renewable Power Developers under RUMSL project / SECI/ NHPC and other entities in order to meet the RPO targets.

(iv) As submitted by the petitioner, the Solar Energy Corporation of India (SECI) have approached the Central Commission for adoption of tariff under Section 63 of Electricity

Act 2003, in respect of the projects mentioned in para 6 of the subject petition. SECI has requested the petitioner to obtain capacity approvals in respect of aforesaid PPAs. The petitioner further submitted that the Secretary, MNRE, Government of India, vide its letter dated 28-07-2020, has expected the DISCOMs of the State to ensure necessary approvals of the State Commission for procurement of power from the projects in the subject petition.

(v) As mentioned in Commission's daily order dated 05.01.2021, the subject petition was admitted only for approval of capacity additions as proposed for compliance with the Renewable Purchase Obligations. It was mentioned in the aforesaid order that the request for approval of PSAs/PPAs may be considered separately only after adoption of tariff by the Appropriate Commission. Therefore, the Commission has examined the information and details with regard to Solar and Non-solar capacity addition during FY 2020-21 to FY 2024-25 filed in the subject petition for RPO compliance by the petitioner.

(vi) In para 6.0 of the subject petition, the petitioner has mentioned the details of various Nodal agencies, Scheme/ Project along with the date of commissioning/ expected date of commissioning. Further, by an additional submission dated 06.05.2021, the petitioner submitted that it has executed another PSA with NTPC Limited on 30.04.2021 for procurement of 200 MW Solar Power from their upcoming 300 MW ISTS connected Solar Power Project and the aforesaid project is expected to be commissioned on 30.07.2022. Accordingly, the status of capacity addition proposed by the petitioner through various nodal agencies, schemes with date/expected date of commissioning is as given below:

S.No.	Nodal Agency	Scheme/Project	Capacity allocation	Date of Commissioning/Expected date(s) of commissioning	Remarks
1.	SECI (a nodal agency of MNRE, GoI)	750 MW Solar Power, JNNSM Ph-II, B-I scheme of MNRE GoI	10 MW+20MW+30 MW=60 MW	31.12.2014 for 10MW and 26.02.2015 for other two.	-----
2.	SECI	750 MW Solar Power, JNNSM Ph-II, B-I scheme of MNRE GoI	30 MW+ 10 MW=40 MW	31.03.2015 and 01.06.2016	-----
3.	RUMSL (a joint venture of SECI and MPUVN)	750 MW Rewa Ultra Mega Solar Power Project Near Gurh, District, Rewa	200 MW	03.01.2020	-----
4.	RUMSL	Same as above	200 MW	28.04.2019	-----

5.	RUMSL	Same as above	200 MW	17.05.2019	----
6.	SECI	2000 MW ISTS connected Wind Power	450 MW	Yet to be commissioned	WPD has terminated PPA with SECI
7.	SECI	2000 MW Wind Power Bid under Tranche-IV Scheme.	250 MW+185MW+65 MW= 500MW	Yet to be commissioned	WPD has terminated PPA for 65 MW with SECI hence balance capacity is 435 MW only.
8.	SECI	1200 MW Solar Power Bid under Tranche - IV Scheme.	3x300 MW=900 MW	Yet to be commissioned	
9.	NHPC	2000 MW Solar ISTS Connected Bid	380 MW +300MW +320MW	Yet to be commissioned	
10	NTPC	300 MW Solar PV Project	200 MW	30.07.2022	

(vii) To arrive at the total availability of Solar and Non-Solar energy for RPO compliance after addition of above proposed capacity during FY 2020-21 to FY 2024-25, the petitioner has considered the following basis in Annexure P-16 (for Non-Solar capacities) filed with its submission dated 24.12.2020 and Revised Annexure P-15 (for Solar capacities) filed with its additional submission dated 06.05.2021:

- (a) RPO targets for FY 2020-21 and FY 2021-22 as provided in MPERC Co-generation Regulations, 2010 and its amendment.
- (b) RPO targets for FY 2022-23 to FY 2024-25 as per draft MPERC Co-generation Regulations, 2021.
- (c) Ex Bus Energy requirement of DISCOMS and SEZ for FY 2020-21-to FY 2024-25 as assessed by the State Power Cell (SPC)
- (d) Hydro generation for FY 2020-21-to FY 2024-25 as assessed by the SPC.
- (e) Assumptions as mentioned in para 10 of this order

(viii) It is noted that for computation of net energy against annual RPO targets, the petitioner has considered ex-bus energy requirement of Discoms and SEZ based on certain assessments by State Power Cell. The Discoms are required to fulfill Renewable Purchase Obligations on the energy requirement calculated on the basis of normative losses. Therefore, the Commission, in this order, has considered the base figure of power purchase requirement for FY 2020-21 (after taking into account the normative losses) and energy requirement from Hydro sources as per retail supply tariff order for FY 2020-21. Similarly, the power purchase

requirement for FY 2021-22 (after taking into account the normative losses) and the energy requirement from Hydro sources for FY 2021-22 is considered on the basis of the petition filed for determination of ARR and retail supply tariff for FY 2021-22. Further, the energy requirement for FY 2022-23 onwards is projected by considering the same escalation rate of the energy requirement as assessed by SPC for FY 2022-23 onwards. Accordingly, the Commission has considered the following status of Solar and Non-Solar energy for RPO compliance, based on the generation of Solar and Non-Solar energy from the capacities already commissioned upto last financial year i.e., FY 2019-20 (as submitted by the petitioner) and the assessed generation from the capacity additions proposed in this petition during FY 2020-21 to FY 2024-25:

(A) Solar:

S.No.	Particulars	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
1.	Energy requirement by DISCOMS (MUs)	71954	79508	84453	89276	93989
2.	Less Hydro generation (MUs)	6840	7357	7357	7357	7357
3.	Net energy requirement for calculation of RPO	65114	72151	77096	81919	86632
4.	RPO Targets (%)	6.0	8.0	9.0	10.00	11.00
5.	Solar energy requirement as per RPO targets (MUs)	3907	5772	6939	8192	9530
6.	Proposed capacity addition in each financial year (MW)	0.0	1900	1300	0.0	0.0
7.	Generation of energy from the proposed capacity addition in each financial year (MUs)	0.0	1257	1595	0.0	0.0
8.	Assessed generation from capacity already available up to last financial year (MUs)	2781	2781	6277	8669	8669
9.	Total availability of Solar Energy (Mus) after proposed capacity addition including assessed generation from already installed capacity till last financial year	2781	4038	7872	8669	8669
10.	Deficit (-)/Surplus (+) Solar energy (MUs). (9-5)	(-) 1126	(-) 1734	933	477	(-) 861

(B) Non-Solar:

S.No.	Particulars	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
1.	Energy requirement by DISCOMS (MUs)	71954	79508	84453	89276	93989

2.	Less Hydro generation (MUs)	6840	7357	7357	7357	7357
3.	Net energy requirement for calculation of RPO	65114	72151	77096	81919	86632
4.	Non-Solar RPO Targets (%)	8.5	9.0	9.5	10.0	10.5
5.	Non-Solar energy requirement as per RPO targets (MUs)	5535	6494	7324	8192	9096
6.	Proposed capacity addition in each financial year (MW)	0.0	435	0.0	0.0	0.0
7.	Generation of energy from the proposed capacity addition in each financial year (MUs)	0.0	1143	0.0	0.0	0.0
8.	Assessed generation from capacity already available up to last financial year (MUs)	4572	4572	5715	5715	5715
9.	Total availability of Non-Solar Energy (Mus) after proposed capacity addition including assessed generation from already installed capacity till last financial year	4572	5715	5715	5715	5715
10.	Deficit (-)/Surplus (+) Non-Solar energy (MUs). (9-5)	(-) 963	(-) 779	(-) 1609	(-) 2477	(-) 3381

(ix) It is observed that the petitioner is seeking approval of the Commission in this petition for solar and non-solar capacity additions for the capacities already added / to be added in future. The Commission would like to point out that such an approach of obtaining ex-post-facto approval for the capacities already added and for which the PPAs/PSAs have been executed, is not acceptable to the Commission. Notwithstanding the aforesaid observations, the Commission is considering and approving the proposed capacity additions as only one time exception and this should not be quoted as precedence in future. For any capacity additions in future towards power procurement including from renewable sources for RPO compliance, the petitioner must approach the Commission for prior approval.

With the aforesaid observations and directions, the subject petition is disposed of.

(Shashi Bhushan Pathak)
Member

(Mukul Dhariwal)
Member

(S.P.S. Parihar)
Chairman