

MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION
BHOPAL

Subject: In the matter of Petition filed u/s. 86 (1)(b) of the Electricity Act, 2003 r/w. Regulation 4.3 of MPERC (Cogeneration and Generation of Electricity from Renewable Sources of Energy) Regulations, 2021 (Revision-II) and Regulations 32, 54 and 55 of MPERC (Power Purchase and Procurement Process) Regulations, (Revision 1), 2006 for approval of Renewable Energy Capacity Addition.

ORDER

(Date of hearing 12th July' 2022)

(Date of Order: 28th July' 2022)

Petition No. 32 of 2022

MP Power Management Company Limited,
Shakti Bhawan, Rampur, Jabalpur.

- **Petitioner**

V/s

1. Rewa Ultra Mega Solar Ltd.
Urja Bhawan Link Road No. 2
Shivaji Nagar, Bhopal - M.P.

2. M.P. Urja Vikas Nigam
Urja Bhawan Link Road No. 2
Shivaji Nagar, Bhopal – M.P.

3. Solar Energy Corporation of India
A- Wing, D-3, District Centre,
Saket, New Delhi – 110017

- **Respondents**

Shri Manoj Dubey, Advocate and Shri Rajnish Kumar Reja appeared on behalf of the petitioner.

Shri Avaneesh Shukla appeared on behalf of Respondent No. 1.

Ms. Tanya Sareen, Advocate appeared on behalf of Respondent No. 3.

- The petitioner, M.P. Power Management Co. Ltd. has filed the subject petition under Section 86 (1)(b) of the Electricity Act, 2003 read with Regulation 4.3 of MPERC (Cogeneration and Generation of Electricity from Renewable Sources of Energy) Regulations 2021 (Revision –II) and Regulation 32, 54 & 55 of MPERC (Power Purchase & Procurement Process) Regulation – 2004 (Revision- I) (2006) for approval of Renewable Energy Capacity Addition to the extent of 3740 MW consisting of 2800 MW from Solar PV sources and 940 MW from wind-solar Hybrid sources for fulfilling their Renewable Purchase Obligation (RPO). Project wise details in the petition are as below:

Particulars	Approval Sought	
	Solar Capacity in MW	Wind Capacity in MW
600 MW Omkareshwar Floating Solar Park and 700 MW Chhatarpur Solar Park of RUMSL	1100 MW	Nil
750 MW Hybrid Project of RUMSL	250 MW	500 MW
1200 MW Tranche-XI Project of SECI	Nil	440 MW
KUSUM - A	200 MW	Nil
KUSUM - C	1250 MW	Nil
Total	2800 MW	940 MW

2. Brief description of the parties in the subject matter is as below:
- i. The petitioner, MP Power Management Co. Ltd. is a Holding Company of the three DISCOMs of the State. The petitioner has also signed a “Management and Corporate Functions Agreement” on 5th June, 2012, wherein it has been agreed that the petitioner shall, inter-alia, in consultation with the DISCOMs, undertake long term / medium term / short term planning and assessment of the power purchase requirements for the DISCOMs and explore opportunities for power procurement as per the regulations notified by the Commission from time to time.
 - ii. The Respondent No. 1, Rewa Ultra Mega Solar Limited (‘RUMSL’) is a joint venture company incorporated as a 50:50 share between Solar Energy Corporation of India (SECI) and Madhya Pradesh Urja Vikas Nigam Limited (MPUVNL). RUMSL intends to develop and provide the park infrastructure for Floating Solar Park and invites developers to bid and develop floating solar power projects at the Floating Solar Park in Madhya Pradesh.
 - iii. The Respondent No. 2, M.P. Urja Vikas Nigam Limited (MPUVNL) is a nodal agency for implementing various programs and policies of Government of India as well as the State Government for renewable energy sector. The scope of activities extends from implementing various schemes for meeting the energy needs by use of renewable energy. Besides, implementing Government sponsored programs and projects in this sector, MPUVN, creates awareness about the benefits of energy conservation and renewable energy among users of various forms of energy.
 - iv. The Respondent No. 3, Solar Energy Corporation of India Ltd. (SECI) is a CPSU under the administrative control of MNRE, set up to facilitate implementation of National Solar Mission and achievement of targets set therein. The company is one of the nodal agencies for implementation of number of schemes of MNRE. The company also has a power trading license and is active in this domain through trading of renewable power from projects set up under schemes being implemented by it.

3. Earlier, the petitioner had filed petition No. 65 of 2020 seeking approval for electricity purchase and procurement process including price from solar and non-solar power projects for the capacities already added / to be added in future. Vide order dated 27th May' 2021, the Commission approved the capacity addition with the direction that for any capacity addition in future towards power procurement including from renewable sources for RPO compliance, the petitioner must first approach the Commission for prior approval.
4. Subsequently, the petitioner had filed Petition No 55 of 2021 seeking approval for procurement of power from solar and non-solar projects for fulfilling their Renewable Purchase Obligation (RPO). Vide Order dated 31st March' 2022, the Commission approved the proposed capacity addition. The Commission also directed that for any capacity addition in future towards power procurement including from renewable energy sources for meeting RPO compliance, prior approval of the Commission be necessarily sought.
5. The petitioner initially filed the subject petition seeking approval for proposed capacity addition from renewable sources of energy. The petitioner broadly submitted following in the subject petition:
 - i. *In an endeavor to achieve its RPOs in successive financial years, the petitioner is seeking for capacity approval of following capacities:-*

Sr. No.	Particulars	Solar Capacity in MW	Wind Capacity in MW	Present Status
1	600 MW Omkareshwar Floating Solar Park and 700 MW Chhatarpur Solar Park of RUMSL	1100 MW	Nil	Consented, Tariff yet to be determined
2	750 MW Hybrid Project of RUMSL	250 MW	500 MW	Consented, Tariff yet to be determined
3	1200 MW Tranche-XI Project of SECI	Nil	440 MW	Consented @ Rs 2.69 per kWh Plus trading margin of Rs. 0.07 per kWh
4	KUSUM – A	200 MW	Nil	To be procured as per guidelines issued by MNRE, Gol, dated 22.07.2019
5	KUSUM - C	1250 MW	Nil	
	<i>Total</i>	2800 MW	940 MW	

- ii. *MPPMCL issued a consent to RUMSL for procurement of power from their Solar PV Project 600 MW capacity proposed at Omkareshwar which is expected to be commissioned in two phases each comprising of 3 Nos. 100 MW units of floating solar photovoltaic power plants to be set up by distinctive Solar Power Developer(s) (SPDs). Thus, the total capacity for each phase will be 300 MW. It is to further submit that RUMSL as Nodal agency is carrying out competitive Bidding Process to select suitable*

- solar power developers and the successful developer shall operate and maintain their Solar PV Project. The distinctive SPDs for the six units will be separately executing power purchase agreement(s) (PPAs) with RUMSL and MPPMCL. Since, the bidding process is under progress therefore tariff of this Project is yet to be discovered.*
- iii. *It is further submitted that, MPPMCL also issued consent to RUMSL for procurement of solar power from their proposed solar power project to be developed approximately 3000 ha land has been identified for project and out of which 1,900 ha of revenue land has been allotted to New and Renewable Energy department (NRED), who is conducting Baseline survey for Chhatarpur Solar Park. The power generated from this solar power project too will be evacuated through national grid (CTU). The tariff of this Project is yet to be discovered.*
- iv. *In addition to above, MPPMCL also issued consent to RUMSL for procurement of Hybrid power from their proposed 750 MW Hybrid Project consisting of 500 MW Wind & 250 MW (Solar capacity) for which the land parcel is yet to be identified and as per intimation received from RUMSL this project is expected to be commissioned during FY 2025 and the tariff will be discovered through competitive bidding, for which the upper ceiling of the hybrid power tariff shall be Rs. 2.78/kWh.*
- v. *SECI, vide its letter no. 44946 dated 21.09.2021 has informed the petitioner that it invited Tranche-XI bids for 1200 MW Wind capacity for the State of MP. The Petitioner vide its letter no. 62 dated 25.01.2022 issued consent for procurement of 440 MW Wind Power at a tariff of Rs. 2.69 per Kwh plus trading margin of SECI Rs. 0.07 per kWh.*
- vi. *MNRE, GoI, vide its OM No. 32/645/2017-SPV Division dated 22.07.2019 issued guidelines for implementation of various components PM KUSUM Scheme detailed below and had nominated MPUVN as Nodal Agency for implementation of same:-*
- (a) *KUSUM-A, mainly attributes for increasing income of farmers having unutilized land parcels available with them which could be used for setting up of Solar PV Plant from 500 KW & up to 2 MW and the power generated from such PV Plants is to be mandatorily procured by MPPMCL tariff discovered through reverse bidding process with ceiling of feed in tariff determined by MPERC.*
- (b) *KUSUM-B, mainly consisted of solarisation of un-electrified agricultural pumps.*
- (c) *KUSUM-C, consist of providing power to agricultural consumers during day time, by way of connecting the existing 11 KV agricultural feeders through Solar PV Plants of appropriate capacities and connected to Grid at HV Level as per supply code. The Scheme has CFA of 30% of the Benchmark cost (3.5 Cr./MW).*
- vii. *MPUVN, vide letter dated 15.02.2022 has informed the implementation schedule of KUSUM- A & C scheme and the year-wise expected capacity addition will be as under:-*

Name of Scheme	Dec-2022	Mar-2023	Dec-2023	Total (MW)
KUSUM-A	50 MW	250 MW	200 MW	500
KUSUM-C	50 MW	500 MW	700 MW	1250

- viii. Subsequently, by affidavit dated 18.07.2022, the petitioner submitted that the Respondent No. 02 (MPUVNL) vide letter dated 12.07.2022, wherein, the expected availability of solar PV capacity has been amended from proposed 200 MW to now 0 MW in respect of PM KUSUM-A Scheme (300 MW solar Capacity already approved in Petition no. 55 of 2021) and from proposed 1250 MW to now 100 MW in respect of PM KUSUM- C Scheme. Vide aforesaid additional dated 18.07.2022, the petitioner has also revised Omkareshwar Floating Solar Power Project and Chhatarpur Solar PV Project from 600 MW and 700 MW to 600 MW and 500 MW respectively.
- ix. Recently the petitioner and the Respondent No. 1 had filed Petition No. 12/2022 seeking approval of deviations from guidelines for 600 MW Omkareshwar Floating Solar Power Project. Vide order dated 30th March, 2022 passed in the said Petition, the Commission was pleased to approve the deviations sought and was further pleased to direct the parties to obtain a prior Capacity Approval to that extent and also obtain approval of the PPAs that may be executed in this regard.
- x. The Commission has approved “Aggregate Revenue Requirement for FY 2022-23 to FY 2026-27 and retail Supply Tariff Order for FY 2022-23” on 31.03.2022” and in table 47 of the said order Energy requirement (MU) and Energy procurement from Hydel Resources (MU) is provided from FY 2022-23 to 2026-27 for the purpose of Renewable Purchase Obligation. The assessment of additional capacity for fulfillment of Solar and Non-Solar RPO against the RPO Targets notified by MPERC was made according to the ARR approved by MPERC on 21.03.2022 for control period from FY 2022-23 to FY 2026-27 including the capacities for which present petition is prepared is as under:

Assessment of Solar RPO against MPERC Solar RPO Targets (as per ARR for Control Period from FY 2022-23 to FY 2026-27) with KUSUM – (A) & (C) Scheme)						
Sr. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
1.	RPO Target as Notified by MPERC on in Cogen Regulations up to FY 2026-27 (%)	9%	10%	11%	12%	13%
2.	Solar RPO Target to be achieved including proposed capacity addition achieved (%)	8.2%	14.1%	18.4%	17.2%	15.9%
3.	Achievement against target (%)	91.0%	140.9%	167.3%	143.5%	122.6%

Assessment of Non-Solar RPO against MPERC Non-Solar RPO Targets (as per ARR for Control Period from FY 2022-23 to FY 2026-27) with KUSUM – (A) & (C) Scheme)						
Sr. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
1.	RPO Target as Notified by MPERC on 12.11.2021 in Cogen Regulation up to FY 2026-27 (in%)	9.50%	10%	10.50%	11%	11.5%
2.	Non-Solar RPO Target to be achieved including proposed capacity addition achieved (%)	7.05%	9.54%	11.52%	10.78%	9.98%
3.	Achievement against target (%)	74.17%	95.42%	109.70%	98%	86.75%

xi. The above assessment made considering the following assumptions:-

(a) All the tied up Solar PV capacities will be commissioned as per the timeline of PSA/In principle Consent and none of the project gets abandoned by the Developer.

(b) Ex- Bus Energy requirement by DISCOM and Hydro Generation are as per the ARR FY 2022-23 to FY 2026-27 approved by Hon'ble MPERC, in its order dated 31.03.2022.

(c) Looking to minuscule quantum of the solar power from roof top and net metered consumers respectively has not been taken into consideration for assessment of RPO deficit / surplus, however while considering achievement of RPOs it is being / will be accounted.

xii. The relevant provisions of the MPERC (Cogeneration and Generation of Electricity from Renewable Source of Energy), (Revision-II), Regulation-2021, notified on 12.11.2021 are as under:-

“ Clause No. 3.1

..... Provided that on achievement of Solar RPO compliance to the extent of 85% and above, remaining shortfall if any, can be met by excess Non-Solar Energy purchased beyond specified Non-Solar RPO for that particular year:

Provided further that on achievement of Non-Solar RPO compliance to the extent of 85% and above, remaining shortfall if any, can be met by excess Solar Energy purchased beyond specified Solar RPO for that particular year.

*“3.2 If the Distribution Licensees fulfill the minimum purchase obligation and still have offers from renewable energy generators including Co-generators from Renewable Sources, then either the Distribution Licensee or the Investor / Developer can approach the Commission for approval of such additional procurement offers”
MPERC”*

- xiii. *From above it can be seen that Solar RPO achievement is in excess from FY 2023-24 to FY 2026-27, whereas, there is shortfall in the Non-Solar achievement except FY 2024-25. As per Regulations mentioned as above the shortfall in Non-Solar RPO achievement may be compensated by excess solar energy available up to FY 26-27.*
- xiv. *MPERC (Power Purchase and Procurement Process) Regulations, 2006, Revision 1, 2006 (RG-19(I) of 2006) does not mandate obtaining a separate and/or prior approval in relation to any new Capacity Addition only in relation to procurement of power. Regulation 32 of the said Regulations provide for prior approval in relation to any new power purchase arrangements and agreements. It is only when the licensee intends to execute an agreement for power procurement, then it needs to approach the Commission for seeking a prior approval of the same.*
- xv. *Regulation 3.1 of the MPERC (Cogeneration and Generation of Electricity from Renewable Sources of Energy) (Revision-II) Regulations, 2021 provide for a minimum quantum of electricity to be procured by the Obligated Entities from generators of Renewable Sources of Electricity including Co-generation from Renewable Sources of Electricity. That is to say, in other words, the capacity to the extent of procuring minimum quantum stands pre-approved by the said Regulation. Further, Regulation 3.2 of the said Regulations provide that it is in case the Distribution Licensee fulfils the minimum purchase obligation and still has offers from renewable energy generators, then it may approach the Commission for approval of such additional procurement offers. In present case, the petitioner is exceeding its minimum purchase obligation for Solar Capacity. Therefore, the petitioner, is required to obtain a prior approval of RE Capacity addition.*
- xvi. *Even after obtaining prior approval of Capacity Addition and subsequent PPAs, several related projects, subsequently, do not complete their projects and / or get abandon and do not witness financial closures and commissioning. In such cases, prior-approvals obtained get disturbed. The petitioner submits that up to the extent of minimum purchase obligation, it need not obtain any prior approval in respect of Capacity Addition or for execution of the PPA. However, the present practice expecting it to first obtain a prior approval for capacity addition and subsequently obtain a prior approval of the PPA has created a situation of difficulty to the petitioner. That, under Regulation 18 of the Co-gen Regulations, the Commission is vested with vast powers to remove the difficulties. It is humbly prayed that the Commission may be pleased to exercise such powers and remove the present difficulty.”*

6. With the aforesaid submissions, the petitioner prayed the following in this matter:
- (i) accord approval of Capacity Addition of 2800 MW of Solar Power and 940 MW of Wind Power totaling to 3740 MW and as stated above;
 - (ii) remove the difficulty as to whether till the distribution licensee is in its endeavor to achieve its minimum purchase obligations in terms of Renewable Energy, it is still required to first obtain a prior Capacity Approval and subsequently a prior-approval of the related Power Purchase Agreement.”

7. By affidavit dated 18.07.2022, the petitioner filed additional submission and reduced the solar capacity addition from 2800 MW (as sought in the petition) to 1450 MW. Therefore, the total renewable capacity addition as sought in the petition has now reduced from 3740 MW to 2390 MW. The petitioner in the aforesaid additional submission has mentioned the following:

- i. Respondent No. 02 (MPUVNL) vide letter dated 12-07-2022, wherein, the expected availability of solar PV capacity has been amended from proposed 200 MW to now 0 MW in respect of PM KUSUM-A Scheme (300 MW solar Capacity already approved in Petition no. 55 of 2021) and from proposed 1250 MW to now 100 MW in respect of PM KUSUM- C Scheme. Therefore, now the aggregate capacity available to Petitioner, for fulfillment of RPO Obligation under these Schemes will be 1450 MW, subject to timely commissioning of these projects.
- ii. As per directives of Energy Department, GoMP, the consented capacity for 600 MW Omkareshwar Floating Solar Power Project and 700 MW Chhatarpur Solar PV Project was revised but consented aggregate capacity will remain unchanged, this has been conveyed to RUMSL vide Letter dated 27.05.2022 as per following particulars:-

Sr. No.	Name of Project	Capacity in MW for which consent given on 20.11.2020	Revised capacity in MW
1	600 MW Omkareshwar Floating Solar Power Project	400	600
2	700 MW Chhatarpur Solar PV Power Project	700	500
	Total	1100	1100

- iii. In view of above, it is submitted that the capacity approval sought for procurement of solar power in the successive years, be amended to 1450 MW instead of 2800 MW as submitted in the Petition.

8. Considering the above additional submission of the petitioner, the total capacity addition as sought in the petition has now been revised. The project wise details of the revised

capacity addition as follows:

Particulars	Approval Sought	
	Solar Capacity in MW	Wind Capacity in MW
400 MW Omkareshwar Floating Solar Park and 700 Chhatarpur Solar Park of RUMSL	1100 MW	Nil
750 MW Hybrid Project of RUMSL	250 MW	500 MW
1200 MW Tranche-XI Project of SECI	Nil	440 MW
KUSUM - A	Nil	Nil
KUSUM - C	100 MW	Nil
Total	1450 MW	940 MW

9. The subject petition was admitted on 31.5.2022. Vide order dated 2nd June' 2022, the petitioner was directed to serve copy of the petition to Respondents within seven days. The Respondents were directed to file reply to the subject petition within three weeks. The petitioner was directed to file its rejoinder within two weeks, thereafter.
10. At the next hearing held on 12.07.2022, the Commission had noted the following:
- Vide letter dated 27.06.2022, Respondent No. 3 (SECI) filed reply to the petition;
 - By affidavit dated 05.07.2022, Respondent No. 1 (RUMS) filed reply to the petition.
 - The representative of Respondent No. 1 (RUMSL) submitted that the configuration of solar and wind components in total hybrid capacity is not firm at this stage and shall be finalized after the completion of bid process.
11. By affidavit 5th July' 2022, Respondent No. 1 (RUMSL) broadly submitted the following:

"It is submitted that based on RUMSL's request, MPPMCL, vide its letter dated 02.02.2022 has provided the in-principle consent for procurement of 500 MW wind power and 250 MW solar power from 750 MW hybrid power projects with ceiling tariff of Rs. 2.78 per kWh. However, during the pre-bid meetings conducted by RUMSL the feedback/ responses received from the prospective bidders, were such that restrictions on the configuration of solar and wind components may increase the discovered tariff because the cost of per unit wind power is slightly higher than the cost of per unit solar power. And also, the said predetermined configuration is against the genesis of Hybrid Bidding Guidelines. Further, if we restrict the configuration, this may be considered as a deviation from para 3.1 of the Tariff-based Competitive Bidding Process for procurement of power from Grid Connected Wind-Solar Hybrid Projects (Hybrid Bidding Guidelines) which allows

any one of the two resources should be 33% of the total capacity.” Therefore, RUMSL has made changes in its RfP proposal and allowed Bidders to make their configuration subject to the condition that one of the two resources should be 33% of the Contracted Capacity/ PPA Capacity. This will increase the competition during the bid and help RUMSL and MPPMCL in discovery of lower tariffs. Thus, the petitioner shall be allowed for the capacity addition of a 750 MW Hybrid power project. However, the capacity consideration for the RPO compliance may be done after the execution of the PPA.

12. By affidavit 10th June’ 2022, Respondent No. 3 (SECI) broadly submitted the following reply to the subject petition:

- i. The Respondent No.3, Solar Energy Corporation of India Limited (‘SECI’) is the nodal agency of the Government of India and the intermediary trader for purchase and resale of electricity, primarily from renewable energy sources. SECI is supporting the approval for procurement of 440 MW Wind Power under the Power Sale Agreement (hereinafter ‘PSA’) to be signed between Petitioner, Madhya Pradesh Power Management Company Limited (hereinafter ‘Petitioner’) and SECI.
- ii. The allocation of 440 MW wind power under the PSA to be signed between Petitioner and SECI will on pro-rata basis from all the Wind Power Developers selected under the Competitive Bidding Process under Tranche-XI Wind Scheme at the following tariff plus trading margin of Rs.0.07/kWh as under:

Name of Wind Power Developer	Capacity of Project (MW)	Tariff (Rs/kWh)	Power Allocated to Petitioner (MW)
ReNew Naveen Urja Pvt. Ltd.	300	2.69	110
Green Infra Wind Energy Ltd.	180	2.69	66
Anupavan Renewables Pvt. Ltd.	150	2.69	55
Adani Renewable Energy Ltd.	450	2.70	165
Azure Power India Pvt. Ltd.	120	2.70	44
Total	1200		440

- iii. The tariff of Rs 2.69/kWh and Rs 2.70/kWh has been discovered in the Competitive Bidding Process in pursuance of the Request for Selection Document (RfS) dated 25.05.2021 issued by SECI for selection of the Wind Power Developers for setting up of 1200 MW ISTS connected Wind Power Projects (‘Tranche-XI Wind Scheme’). The allocation of power procured from the Wind Power Developers selected in the Competitive Bidding Process on pro-rata basis to all the Buying Entities/Distribution Companies which will sign the PSA(s) with SECI is consistent with the terms of the

bidding documents namely Standard Power Sale Agreement forming part of the RfS Document which provides as under:

4.2 Energy Accounting and Scheduling

4.2.5 Energy procured from the Project under the PPA shall be allocated on a pro-rata basis, to all the Buying Entities which have signed their respective Power Sale Agreements with SECI under the referred RfS.

- iv. SECI vide its email dated 22.04.2022 has clarified the position to the Petitioner that allocation of wind power will be on pro-rata basis from all Wind Power Developers selected in the Competitive Bidding at tariff of Rs 2.69/kWh and Rs 2.70/kWh plus trading of Rs 0.07/kWh. The Petitioner was also informed that SECI has received consents from many Buying Utilities apart from the Petitioner to off-take the Wind Power under the Tranche-XI Wind Scheme. In view of the above, SECI has requested the Petitioner to sign the PSA with SECI at the earliest.*
- v. In the circumstances, the Commission may be pleased to approve the procurement of 440 MW Wind Power by the Petitioner at the applicable tariff of Rs 2.69/kWh and Rs 2.70/kWh [as per the Table in Para 3 above] plus trading margin of Rs 0.07/kWh under the PSA to be signed with SECI. Accordingly, the capacity approval sought for by the Petitioner with respect to procurement of power from SECI in Paragraph 6 at Page 4 of the Petition may be considered by the Commission as per the above-mentioned submissions of SECI.*

13. By affidavit 27th June' 2022, Respondent No. 3 (SECI) in its second reply further submitted the following:

SECI had filed its reply submissions on 10.06.2022 in the above-mentioned Petition. Subsequently, on 15.06.2022, SECI has signed Power Sale Agreement ('PSA') with the Petitioner, Madhya Pradesh Power Management Company Limited for 440 MW Wind Power at the tariff as mentioned in Article 5.1 read with Schedule-I of the PSA. Article 5.1 and Schedule-I of the PSA reads as under:

5.1.1 SECI shall be entitled to receive Tariff as indicated in Schedule-I of the Agreement plus trading margin of Rs. 0.07/ kWh, fixed for the entire Term of the Agreement, with effect from the SCD subject to Article 5.1.4 of the PSA, for the power sold by the Buyer to the Buying Entity as per the scheduled energy reflected in the energy accounts.

The Commission may be pleased to approve the procurement of 440 MW Wind Power by the Petitioner under the PSA dated 15.06.2022 signed with SECI at the

applicable tariff as per Article 5.1 read with Schedule-I of the PSA plus trading margin of Rs 0.07/kWh in terms of Section 86 (1) (b) of the Electricity Act.

Commission’s Observations and Findings:

14. Minimum quantum of electricity to be procured by all Obligated Entities from generators of Renewable Energy (including Co-generation from Renewable Sources of electricity) 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 was provided under MPERC (Cogeneration and Generation of Electricity from Renewable Sources of Energy) (Revision-I) Regulations, 2010 and subsequent amendments. Further, the RPO trajectory from FY 2022-23 to FY 2026-27 for Solar and Non-solar energy has been provided in aforesaid Regulations notified on 12th November 2021 which is as follows:

Financial Year	Generation/Cogeneration from Renewable Sources of Energy		
	Solar (%)	Non-Solar (%)	Total (%)
2021-22	8.00%	9.00%	17.00%
2022-23	9.00%	9.50%	18.50%
2023-24	10.00%	10.00%	20.00%
2024-25	11.00%	10.50%	21.50%
2025-26	12.00%	11.00%	23.00%
2026-27	13.00%	11.50%	24.50%

15. Regulation 3.1 of the MPERC (Cogeneration and Generation of Electricity from Renewable Sources of Energy) (Revision-II) Regulations, 2021 also provides that on achievement of Solar RPO compliance to the extent of 85% and above, remaining shortfall if any, can be met by excess Non-Solar Energy purchased beyond specified Non-Solar RPO for that particular year. Aforesaid Regulation further provides that on achievement of Non-Solar RPO compliance to the extent of 85% and above, remaining shortfall if any, can be met by excess Solar Energy purchased beyond specified Solar RPO for that particular year.
16. In accordance to the aforesaid Regulations, being obligated entities, Discoms have to fulfill Renewable Purchase Obligation as specified for each financial year under the Regulations. On behalf of the Discoms, the petitioner executed PPA/PSA with RE generators and inter-mediatory procurers for procurement of Renewable Energy for fulfillment of RPO. In the subject petition followed by additional submission, the petitioner is now seeking approval for procurement of 2390 MW power from renewable energy sources consisting 1100 MW Solar Power through RUMSL, 750 MW Solar & Wind Power

(Hybrid) through RUMSL, 440 MW Wind Power through SECI and 100 MW under Component-C of PM KUSUM Scheme.

17. The petitioner further stated that even after getting prior clearance for a capacity addition and subsequent PPAs, number of connected projects may fail to reach their completion milestones or abandoned or fail to reach financial closures and commissioning. In such cases, prior-approvals obtained gets disturbed. According to the petitioner, no prior approval is required for the execution of the PPA or for the addition of capacity up to the extent of the minimum purchase obligation. The petitioner has emphasized that the current practice of expecting it to first acquire a prior approval for capacity augmentation and then obtain a prior approval of the PPA, has put the petitioner in a difficult situation. The petitioner prayed the Commission to remove the present difficulty.
18. With regard to prior approval for capacity addition, Regulation 32 of MPERC (Power Purchase and Procurement Process) Regulations, 2006, Revision 1, 2006 (RG-19(I) of 2006) provides as under:
- “32. Any new power purchase arrangements and agreements or amendments to existing Power Purchase Agreements (PPA’s) entered into by the Distribution Licensee shall be subject to the prior approval of the Commission in view of necessity, reasonableness of cost of power purchase and promotion of working in an efficient, economical and equitable manner.”*
19. Further, relevant clause of MPERC (Cogeneration and Generation of Electricity from Renewable Sources of Energy) (Revision-II) Regulations, 2021 is reproduced as below:
- 4.3 “the MP Power Management Company Limited on behalf of the State-owned Distribution Licensees shall have to obtain the approval of Power Purchase Agreement from the Commission.”*
- 3.2 “If the Distribution Licensees fulfil the minimum purchase obligation and still have offers from renewable energy generators including Co-generators from Renewable Sources, then either the Distribution Licensee or the Investor/Developer can approach the Commission for approval of such additional procurement offers.*
20. Aforesaid Regulations provide prior approval for any new power purchase arrangements and agreements. In view of the above regulatory requirement, the petitioner is required to approach the Commission prior to any renewable capacity addition. Therefore, the prayer of the petitioner regarding prior approval for capacity addition is not considered in this regard.

21. On perusal of the subject petition and submissions made by the parties, the Commission has observed the following:

- (i) MPPMCL issued a consent to RUMSL for procurement of power of 600 MW capacity project proposed at Omkareshwar to be set up by Solar Power Developer in two phases each comprising of 3 units of 100 MW of floating solar photovoltaic power plants.
- (ii) MPPMCL also issued consent to RUMSL for procurement of 700 MW solar power from their proposed solar power project to be developed as Chhatarpur Solar Park. By additional affidavit dated 18.07.2022, the petitioner has submitted that the capacity from Chhatarpur Solar Power Project has been revised from 700 MW to 500 MW.
- (iii) In addition to above, MPPMCL issued consent to RUMSL for procurement of Hybrid power from proposed 750 MW Hybrid Project consisting of 500 MW Wind & 250 MW solar. This project is expected to be commissioned during FY 2025 and the tariff will be discovered through competitive bidding, for which the upper ceiling of the hybrid power tariff shall be Rs. 2.78/kWh. However, the Respondent No 1 & 2 submitted that at the final stage after completion of bidding process, the composition of solar and wind component in total hybrid of 750 MW may vary.
- (iv) SECI vide letter 21.09.2021 has informed to the petitioner that it has invited Tranche-XI bids for 1200 MW Wind capacity for the State of MP out of which the petitioner has consented for procurement of 440 MW Wind Power.
- (v) The petitioner has submitted the expected capacity addition under Component A&C of KUSUM Scheme which is approved by GoI, MNRE. Year wise details are as follows:

Scheme	Dec-2022	Mar-2023	Dec-2023	Total (MW)
KUSUM-A	50 MW	250 MW	200 MW	500
KUSUM-C	50 MW	500 MW	700 MW	1250

- (vi) The petitioner by its additional submission dated 18.07.2022 has submitted that the Respondent No. 02 (MPUVNL) vide letter dated 12.07.2022 has amended the expected availability of solar PV capacity from proposed 200 MW to now 0 MW in respect of PM KUSUM-A Scheme (300 MW solar Capacity already approved in Petition no. 55 of 2021) and from proposed 1250 MW to now 100 MW in respect of PM KUSUM- C Scheme. Accordingly, capacity addition proposal has been

revised, which is shown at page 8 of this order.

- (vii) Petitioner informed that out of above approval under Kusum- A and Kusum-C Scheme, capacity approval of 300 MW solar capacity under KUSUM-A Scheme already been provided by the Commission in earlier Petition No 55 of 2021.
- (viii) The petitioner has submitted that from FY 2023-24 to FY 2026-27, the Solar RPO achievement shall be in excess, whereas, there would be shortfall in the Non-Solar achievement except in FY 2024-25. Shortfall in Non-Solar RPO achievement may be compensated by excess solar energy available up to FY 2026-27 in accordance to the provisions under Regulations. Further, hybrid of 750 MW is also not firmed up in terms of composition of solar and wind components.

22. By affidavit 5th July' 2022, Respondent No. 1 (RUMSL) has submitted that based on the feedback / responses received from the prospective bidders, the restrictions on the configuration of solar and wind components may increase the discovered tariff because the cost of per unit wind power is slightly higher than the cost of per unit solar power. Therefore, RUMSL has made changes in its RfP proposal and allowed Bidders to make their configuration subject to the condition that one of the two resources should be 33% of the Contracted Capacity/ PPA Capacity. This will increase the competition during the bid and help RUMSL and MPPMCL in discovery of lower tariffs. Thus, the petitioner shall be allowed for the capacity addition of a 750 MW Hybrid power project. However, capacity consideration for the RPO compliance may be done after the execution of the PPA.
23. The Commission while noting the aforesaid submission of the Respondent No. 1 has provisionally considered the configuration of solar and wind components in proposed hybrid capacity addition of 750 MW as filed in the subject petition. However, the petitioner shall be at liberty to approach the Commission as and when the configuration of solar and wind components in hybrid projects is finalized along with the petition for approval of PPAs / PSAs of the respective projects.
24. To arrive at the total availability of Solar and Non-Solar energy for RPO compliance after addition of above proposed capacity during FY 2022-23 to FY 2026-27, the petitioner has considered following basis for Solar capacities and Non-Solar capacities:
- a. All the tied up Solar PV capacities will be commissioned as per the timeline of PSA/In principle Consent and none of the project gets abandoned by the Developer.
 - b. Ex- Bus Energy requirement by DISCOM and Hydro Generation are as per the ARR for FY 2022-23 to FY 2026-27 approved by Hon'ble MPERC, in its order

dated 31.03.2022.

- c. Looking to minuscule quantum of the solar power from roof top and net metered consumers respectively has not been taken into consideration for assessment of RPO deficit / surplus, however while considering achievement of RPOs it is being / will be accounted.

25. It is noted that for computation of net energy against annual RPO targets, the petitioner has considered ex-bus energy requirement of Discoms and projections made by State Power Cell under MPPMCL. The Discoms are required to fulfill Renewable Purchase Obligations on the energy requirement to be calculated on the basis of normative losses. Therefore, the Commission, in this order, has considered the base figure of power purchase requirement for FY 2022-23 (after taking into account the normative losses) and energy requirement from Hydro sources as per retail supply tariff order for FY 2022-23 and considered in order dated 31st March' 2022 in petition No. 55 of 2021 filed by MPPMCL. Further, the energy requirement for FY 2022-23 onwards is considered as per approved ARR for MYT period in the Retail Supply Tariff Order for FY 2022-23.
26. Accordingly, the Commission has considered the following status of RPO compliance, based on the generation of Solar and Non-Solar energy from the capacities already commissioned upto FY 2021-22 (as submitted by the petitioner) and the assessed generation from the capacity additions proposed in this petition during FY 2022-23 to FY 2026-27:

A. Solar:

Sr. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
1	Energy Requirements of Discoms as per ARR (MU)	85,696	91,667	97,663	1,04,036	1,11,863
2	Less Hydro Generation as per availability as per ARR (MU)	6,640	6,744	7,053	7,220	7,247
3	Net energy qualifying for RPO fulfilment (MUs)	79,056	84,923	90,610	96,816	1,04,616
4	RPO target as Notified by MPERC on 12.11.2021 in Cogen Reg. upto FY 2026-27 (%)	9%	10%	11%	12%	13%
5	Solar energy required as per RPO Targets (MU)	7,115	8,492	9,967	11,618	13,600
6	Expected Solar capacity addition during the year (MW)	2,150	1,431	1,328	-	-

7	Assessed Generation from Capacity Installed till last financial year (MUs)	2,881	8,110	11,136	13,918	13,918
8	Assessed Generation from Solar Capacity addition during the financial year (MUs)	2684	2388	2453	-	-
9	Total Solar energy availability (MUs)	5,565	10,498	13,589	13,918	13,918
10	Solar RPO Target achieved (%)	7.0%	12.4%	15.0%	14.4%	13.3%
11	Against MPERC RPO Target: Deficit (-)/ Surplus (+) energy (MU)	(-)1550	2,005	3,622	2,300	318

***Approval for capacity addition of 300 MW for KUSUM –A accorded vide order dated 31.3.2022 in P- No 55 of 2021.**

B. Non-Solar:

Sr. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
1	Energy Requirements of Discoms as per ARR (MU)	85,696	91,667	97,663	1,04,036	1,11,863
2	Less Hydro Generation as per availability as per ARR (MU)	6,640	6,744	7,053	7,220	7,247
3	Net energy qualifying for RPO fulfilment (in MUs)	79,056	84,923	90,610	96,816	1,04,616
4	RPO target as Notified by MPERC on 12.11.2021 in Cogen Reg. upto FY 2026-27 (in %)	9.5%	10.0%	10.5%	11.0%	11.5%
5	Non Solar energy required for fulfilment of RPO (in MU)	7,510	8,492	9,514	10,650	12,031
6	Expected Solar capacity addition during the year (MW)	457	1,108	500	-	-
7	Assessed Generation from Capacity Installed till last financial year (MUs)	4,021	5,622	9,123	10,437	10,437
8	Assessed Generation from Non Solar Capacity addition during the financial year (MUs)	1549	2482	1314		
9	Total Non Solar energy availability (MUs)	5,570	8,103	10,437	10,437	10,437
10	Non Solar RPO Target achieved (%)	7.05%	9.54%	11.52%	10.78%	9.98%

11	Against MPERC RPO Target: Deficit (-)/ Surplus (+) energy (MU)	(-)1940	(-)389	923	(-)213	(-)1594
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27. From the above, it is observed that after proposed capacity addition, the solar power would be surplus from FY 2023-24 onwards with respect to RPO target; whereas, non-solar would be in deficit. It has been observed that during the FY 2020-21, the petitioner being an obligated entity was unable to fulfill the RPO targets and therefore, penalty had to be imposed on them. Therefore, adequate capacity tied up is required from renewable sources to ensure fulfillment of RPO targets. Further, solar capacity addition would be based on the competitive bidding process envisaged under Section 63 of the Electricity Act' 2003 which would take care of economics of power purchase cost from solar projects. Moreover, the deficit in non-solar category may be compensated by surplus from solar projects, in accordance with the Regulations.
28. It is further observed that, approval for solar and non-solar capacity additions in this order is over and above the capacity additions already approved vide Commission's order dated 27th May' 2021 in petition No. 65 of 2020 and dated 31st March' 2022 in petition No. 55 of 2021. While the Commission has decided to consider and approve the capacity additions proposed in the subject petition, the petitioner is directed to ensure appropriate capacity addition in a timely manner so that there is no default in meeting Renewable Purchase Obligations in Madhya Pradesh. It is also reiterated that any capacity addition in future towards power procurement including renewable energy sources for meeting RPO compliance, prior approval of the Commission will have to be necessarily sought.

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

(Gopal Srivastava)
Member (Law)

(Mukul Dhariwal)
Member

(S.P.S. Parihar)
Chairman