# MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION

**BHOPAL**

**Sub: Filing of Petition under section 86(1) of the Electricity Act, 2003 read with Regulation 4.22 of Madhya Pradesh Electricity Regulatory Commission (Power Purchase and Procurement Process) Regulations, 2023 {RG-19(II) of 2023} dated 17th February 2023 and Regulation 16.1 of Madhya Pradesh Electricity Regulatory Commission (Framework for Resource Adequacy) Regulations, 2024 {RG-19(III) of 2024} dated 8th March 2024 for Approval of Capacity Addition to the extent of power from 800 MW Wind with Additional 800 MW under Greenshoe Option, 1290 MW Solar under Component-A of PM KUSUM Scheme and 252 MW Hydro Power from Dibang Multipurpose Project.**

## ORDER

**(Hearing through video conferencing)**
**(Date of Order: 16.06.2025)**

**Managing Director,**
MP Power Management Co. Ltd.,
Block No. – 15, Shakti Bhawan,
Rampur, Jabalpur, (MP) 482008 - **Petitioner**

**Vs.**

**Managing Director,**
MP Urja Vikas Nigam Ltd.,
Urja Bhawan, Link Road No. 2,
Shivaji Nagar, Bhopal (MP) - 462016 - **Respondent**

Shri Manoj Dubey, Advocate alongwith Shri Rajneesh Reja appeared on behalf of the Petitioner.
Shri Devashish Mathur, Advocate appeared on behalf of the respondent.

The subject petition is filed by MP Power Management Co. Ltd., (MPPMCL) under Section 86(1) of the Electricity Act, 2003 read with Regulation 4.22, (Power Purchase and Procurement Process) Regulations, 2023 and Regulation 16.1 of MPERC (Framework for Resource Adequacy) Regulations, 2024.

2. By affidavit dated 2nd July 25, the petitioner filed the petition and subsequently vide affidavit dated 5th July 25, petitioner made additional submission. The Petitioner broadly submitted the following:

*The MP Power Management Company Limited (MPPMCL), had duly submitted a petition on the 03th April, 2025, seeking approval of Capacity Addition to the extent of power from 800 MW Wind with Additional 800 MW under Greenshoe Option, 1290 MW Solar under Component-A of PM KUSUM Scheme and 252 MW Hydro Power from Dibang Multipurpose Project and same was admitted bearing no. 33/2025. Subsequent to the filing of this Petition, certain new developments have transpired as indicated in Table 1 as under:-*

*Table 1: Additional Capacity Addition Plan*

| S. No | Particular | Remark |
|---|---|---|
| 1. | Capacity allocation is reduced from 227 MW to 95 MW from Teesta (45 MW), Rangit (16 MW) & Ratle (31 MW) Hydro projects | MoP Letter dated 25.02.2025 and 15.04.2025.<br><br>Annexure-IX & X |
| 2. | Consent issued to SECI for procurement of 1650 MW Solar Power on a tariff discovered through competitive bidding | MPPMCL Letter No. 857 dated 27.05.2025 Annexure - XI |
| 3. | Consent issued to SJVN for procurement of 1650 MW Solar Power on a tariff discovered through competitive bidding | MPPMCL Letter No. 859 dated 27.05.2025<br><br>Annexure - XII |
| 4. | Procurement of 250 MW/500 MWh through competitive bidding | Bidding is to be conducted by MPPMCL |
| 5. | Procurement of 1000 MW/2000 MWh through competitive bidding on complementarity basis with UPPCL | Bidding is to be conducted by MPPMCL |
| 6. | Procurement of 1000 MW Power on a complementary basis with UPPCL for Medium Term | Bidding to be conducted by UPPCL |

*MPPMCL accordingly submitted additional submission seeking approval on additional capacity addition to the extent of 1650 MW Solar Power from SECI, 1650 MW Solar Power from SJVN, 1000MW/2000MWh Storage Capacity (2 Hour 2 Cycles) from BESS on complementarity basis with UPPCL on a tolling tariff model and 250MW/500MWh Storage Capacity (2 Hour 2 Cycles) from BESS with 100% Greenshoe Option and Medium Term (for 5 year) 1000 MW power on complementarity basis with UPPC over and above the capacity addition already filed i.e. 800 MW Wind with Additional 800 MW under Greenshoe Option, 1290 MW Solar under Component-A of PM KUSUM Scheme and 252 MW Hydro Power from Dibang Multipurpose Project.*

## *1. RATIONALE FOR ADDITIONAL CAPACITY ADDITION*

*1.1. The Petitioner requests the Commission for approval of following capacity addition plan:*

*Table 2: Capacity Addition Plan*

| Sr. No. | Particulars | Solar Capacity | Wind Capacity | Hydro Capacity | Storage | Medium Term | Expected COD | Tariff discovered / to be discovered |
|---|---|---|---|---|---|---|---|---|
| 1 | 800 MW Wind with additional 800 MW under Greenshoe option | - | 1600 MW | - | - | - | October 2027 | To be discovered through tariff based competitive bidding carried out by MPPMCL |
| 2 | Component-A under PM KUSUM | 1290 MW | - | - | - | - | March 2027 | Through prefixed levelized tariff |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Scheme | | | | | | | determined by commission or Competitive bidding as the case may be by MPUVN |
| 3 | Hydro Power from Dibang Multipurpose Project | - | - | 252 MW | - | - | February 2032 | To be determined by Hon'ble CERC under Section 62 of Electricity Act 2003 |
| 4 | 1650 MW Solar Power from SECI | 1650 MW | - | - | - | - | June 2027 | Rate discovered through competitive bidding |
| 5 | 1650 MW Solar Power from SJVN Ltd. | 1650 MW | - | - | - | - | June 2027 | Rate discovered through competitive bidding |
| 6 | 1000 MW/2000 MWh power (2 cycles) on complementarity basis with UPPCL on a tolling tariff model connected at ISTS | - | - | - | 1000 MW / 2000 MWh (2 Hour 2 Cycle) | | September 2027 | To be discovered through tariff based competitive bidding carried out by MPPMCL |
| 7 | 250 MW/500 MWh power (2 cycles) with 100% Greenshoe Option from BESS on tolling tariff model connected at InSTS | - | - | - | 250 MW / 500 MWh (2 Hours 2 Cycle) | | September 2027 | To be discovered through tariff based competitive bidding carried out by MPPMCL |
| 8 | Procurement of Mid-term (for 5 year) 1000 MW power on complementarity basis with UPPCL | - | - | - | | 1000 MW | October 2025 | To be discovered through tariff based competitive bidding carried out by UPPCL |
| | **Total** | **4590 MW** | **1600 MW** | **252 MW** | **1250 MW/2500 MWh** | **1000 MW** | | |

## *2. RPO ASSESSMENT STATUS TILL FY 2030 AND CAPACITY ADDITIONS REQUIREMENTS*

*2.1. As per Central Electricity Authority (CEA) Report on Resource Adequacy Plan for MP (2024-25 to 2034-35), following capacities are proposed by CEA to be additionally contracted by MP in order to ensure reliability in supply and meeting its demand for successive financial years along with fulfilment of its RPO as notified by MoP. The requirement of capacity from Solar PV includes the capacity requirement for fulfilment of RPO for DRE as per MoP notification.*

*Table 3: Capacity Addition Proposed by CEA in RA Plan for MP*

| Year | Coal | Solar | Solar (On Complementarity basis) | Wind | Storage (4 Hours) |
|---|---|---|---|---|---|
| **2025-26** | - | 3000 | - | - | 1066 |
| **2026-27** | - | 3047 | - | 800 | 515 |
| **2027-28** | - | 1047 | 2000 | 800 | 3271 |
| **2028-29** | 3300 | 1806 | 400 | 400 | - |
| **2029-30** | - | 2172 | 400 | 400 | 721 |
| **2030-31** | - | 2384 | 400 | 400 | 746 |
| **2031-32** | 800 | 1957 | 400 | 400 | 1403 |
| **2032-33** | 800 | 1763 | 400 | 400 | 1312 |
| **2033-34** | 700 | 2073 | 500 | 400 | 1373 |
| **2034-35** | 300 | 1890 | 500 | 400 | 1536 |
| **Total** | **5,900** | **21,139** | **5,000** | **4,400** | **11,943** |

*2.2. Though the above capacity addition proposed is in line to meet the RPO Targets notified by MoP, however petitioner has evaluated the RPO Assessment as per the targets notified by Hon'ble MPERC and the same assessment is mentioned in subsequent paras*

*2.3. As per RPO Assessment, the petitioner is proposing the capacity required to be contracted which will support partially in meeting the RPO targets and petitioner hereby also submits that for the remaining shortfall in meeting the RPO targets, the petitioner will approach the Hon'ble MPERC for seeking additional capacity approval as and when the proposals are received from the distinctive intermediary procurer (NTPC, NHPC, SJVN, SECI & RUMSL) or through bidding plan prepared by MPPMCL.*

*2.4. The status of RPO targets notified by Hon'ble Commission till FY 2030 and corresponding RE Capacity addition is as under:*

*Table 4: Wind RPO Assessment*

| **WIND RPO** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S. No** | **Particulars** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 97,318 | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | RPO Targets % - Wind | 2.46% | 3.36% | 4.29% | 5.23% | 6.16% | 6.94% |
| **3** | Wind Energy Required - MUs | 2,394 | 3,496 | 4,799 | 6,253 | 7,873 | 9,481 |
| **4** | Wind Energy Available - Assessed MUs | 1,376 | 3,145 | 3,300 | 3,300 | 3,300 | 3,300 |
| **5** | Achievement % | 1.41% | 3.02% | 2.95% | 2.76% | 2.58% | 2.42% |
| **6** | Target Achieved % | **57%** | **90%** | **69%** | **53%** | **42%** | **35%** |
| **7** | Surplus/Deficit - MUs | **(1,018)** | **(350)** | **(1,499)** | **(2,953)** | **(4,573)** | **(6,181)** |
| **8** | Additional Capacity Required @38% CUF - MW | **306** | **105** | **450** | **887** | **1,374** | **1,857** |

*Table 5: HPO Assessment*

| HPO | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S. No** | **Particulars** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 97,318 | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | RPO Targets % - HPO | 1.08% | 1.48% | 1.80% | 2.15% | 2.51% | 2.82% |
| **3** | Hydro Energy Required - MUs | 1,051 | 1,540 | 2,014 | 2,571 | 3,208 | 3,852 |
| **4** | Hydro Energy Available - Assessed MUs | 205 | 508 | 1,284 | 1,563 | 1,563 | 1,563 |
| **5** | Achievement % | 0.21% | 0.49% | 1.15% | 1.31% | 1.22% | 1.14% |
| **6** | Target Achieved % | **19%** | **33%** | **64%** | **61%** | **49%** | **41%** |
| **7** | Surplus/Deficit - MUs | **(846)** | **(1,032)** | **(730)** | **(1,008)** | **(1,645)** | **(2,290)** |
| **8** | Additional Capacity Required @48% PLF - MW | **201** | **245** | **174** | **240** | **391** | **545** |

*Table 6: Other RPO Assessment*

| Other RPO | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S. No** | **Particulars** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 97,318 | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | RPO Targets % - Other RPO | 25.63% | 26.13% | 26.63% | 27.13% | 27.63% | 28.13% |
| **3** | Renewable Energy Required - MUs | 24,943 | 27,185 | 29,789 | 32,439 | 35,312 | 38,428 |
| **4** | Renewable Energy Available - Assessed MUs | 21,688 | 24,540 | 28,815 | 30,065 | 30,065 | 30,065 |
| **5** | Achievement % | 22.29% | 23.59% | 25.76% | 25.14% | 23.52% | 22.01% |
| **6** | Target Achieved % | **87%** | **90%** | **97%** | **93%** | **85%** | **78%** |
| **7** | Surplus/Deficit - MUs | **(3,255)** | **(2,644)** | **(975)** | **(2,374)** | **(5,247)** | **(8,363)** |
| **8** | Additional Capacity Required @28% CUF - MW | **1,327** | **1,078** | **397** | **968** | **2,139** | **3,410** |

*Table 7: Energy Storage Obligation (ESO) Assessment*

| STORAGE | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S. No** | **Particulars** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 97,318 | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | Targets % - Storage | 0.00% | 1.00% | 1.50% | 2.00% | 2.50% | 3.00% |
| **3** | Renewable Energy Required - MUs | - | 1,040 | 1,678 | 2,391 | 3,195 | 4,098 |
| **4** | Storage Capacity Available - MUs | - | - | - | - | - | - |
| **5** | Achievement % | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| **6** | Target Achieved % | **-** | **0%** | **0%** | **0%** | **0%** | **0%** |
| **7** | Surplus/Deficit - MUs | **-** | **(1,040)** | **(1,678)** | **(2,391)** | **(3,195)** | **(4,098)** |
| **8** | Storage Capacity Required MW - 2 | **-** | **713** | **1,149** | **1,638** | **2,188** | **2,807** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Hours & 2 Cycle (BESS) | | | | | | |
| **9** | Storage Capacity Required MW - 6 Hours & 1 Cycle (PSP) - 365 Days | **-** | **475** | **766** | **1,092** | **1,459** | **1,871** |
| **10** | Storage Capacity Required MW - 6 Hours & 1 Cycle (PSP) - 6 Months | **-** | **950** | **1,532** | **2,184** | **2,918** | **3,743** |

*2.5. The above RPO assessment status indicates a consistent deficit across various Renewable Purchase Obligations (RPO) targets, including Solar, Wind, Hydro, Other RPOs, and Storage, over the period from 2024-25 to 2029-30. There is a growing deficit, with a significant shortfall noted in the later years. This indicates a pressing need for increased renewable energy capacity additions to set off these deficits and achieve the RPO targets across all categories.*

*2.6. In view of above the present Petition is filed for approval of additional capacity for fulfilment of RPO target notified by the Hon'ble Commission. The details of the capacity addition requested are provided above in Table -2.*

*2.7. For fulfilling Other RPO, the petitioner has engaged in comprehensive deliberations concerning the procurement of solar power to fulfil its Other RPO under applicable regulatory frameworks. Notably, offers were received from various intermediary procurers, including the SECI and SJVN Ltd., for a total of 7850 MW of Solar Power. This procurement is intended to align with the tariff outcomes established through competitive bidding processes and the proposals having visible connectivity and reasonable tariff selected under bucket filling approach have been short listed as per under mentioned tabulation: -*

*Table 8: List of Projects shortlisted for Procurement from SECI & SJVN*

| **Sr. No.** | **Name of Intermediary Procurer and Project** | **Name of SPD** | **Capacity offered in MW** | **Tariff in Rs. Per kWh including trading margin of Rs. 0.07 per kWh** | **Schedule commencement of supply date** | **Connectivity Status** |
|---|---|---|---|---|---|---|
| 1. | SECI 500 MW ISTS Trench XVI under URET | SAEL Industries Ltd. | 250 | 2.55 | 24 months from PPA | March-2027 (Tentative) Kurnool-IV |
| 2. | | NTPC Renewable Energy Ltd. | 200 | 2.55 | 24 months from PPA | Nov.-2026 Bikaner-IV |
| 3. | SJVN 1200 MW Solar 2 under URET | ACME Solar Holdings | 300 | 2.59 | 24 months from PPA | Applied for 31.12.2026 Tumkur-II PS |
| 4. | | SAEL Industries | 300 | 2.59 | 24 months from PPA | Final connectivity granted from Nov. – 2026 Tumkur-II |
| 5. | | M/s Onward Solar Power Pvt. Ltd. | 100 | 2.59 | 24 months from PPA | Final connectivity granted from Nov. – 2026 Bikaner-IV |

| Sr. No. | Name of Intermediary Procurer and Project | Name of SPD | Capacity offered in MW | Tariff in Rs. Per kWh including trading margin of Rs. 0.07 per kWh | Schedule commencement of supply date | Connectivity Status |
|---|---|---|---|---|---|---|
| 6. | | M/s Essar Renewable Ltd. | 300 | 2.59 | 24 months from PPA | Applied for 31.12.2026 Tumkur-II |
| 7. | | M/s NTPC REL | 200 | 2.60 | 24 months from PPA | Final connectivity granted from Nov.–2026 Bikaner-IV |
| 8. | SJVN 1450 MW Solar 1 | M/s GRT Jewellers (India) Pvt. Ltd. | 150 | 2.59 | 24 months from PPA | Final connectivity granted from May–2026 Tutikoran-II |
| 9. | | M/s Furies Solarin Pvt Ltd | 300 | 2.60 | 24 months from PPA | Final connectivity granted from Nov–2026 Bikaner -IV |
| 10. | SECI 1500 MW ISTS Trench XIV | Engie Energy India Pvt. Ltd. (Litsolaira Energy Pvt. Ltd.) | 100 | 2.64 | 24 months from PPA | Dec.-2025 Bikaner-II |
| 11. | | SAEL Industries Ltd. | 600 | 2.64 | 24 months from PPA | 300 MW Sep.-2026 Tumkuar-II 300 MW April -2026 Bidar PS |
| 12. | | NTPC Renewable Energy Ltd. | 200 | 2.65 | 24 months from PPA | Nov.-2026 Bikaner-IV |
| 13. | SECI 2000 MW ISTS Trench –XI | Renew Solar Power Pvt. Ltd. | 250 | 2.67 | 18 months from PPA | March-2026 (Interim) Fatehgarh-IV |
| 14. | | Jakson Ltd. (MRS Build Vision Pvt. Ltd.) | 50 | 2.67 | 18 months from PPA | August-2026 Bikaner-III |
| | | **Total** | **3300** | | | |

*2.8. In light of the significant shortfalls experienced in achieving RPO targets as mandated by the Hon'ble Commission for preceding financial years. Hence, through this petition MPPMCL submits for approval to procure above-mentioned capacities to address RPO shortfalls in successive financial years.*

*2.9. The RPO Assessment Status as per the targets given by the Hon'ble Commission till FY 2030 after including the proposed capacity addition is as under:*

*Table 9: Revised Wind RPO Assessment post addition of Wind Capacities as per above:*

| WIND RPO | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S. No** | **Particulars** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 97,318 | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | RPO Targets % - Wind | 2.46% | 3.36% | 4.29% | 5.23% | 6.16% | 6.94% |
| **3** | Wind Energy Required - MUs | 2,394 | 3,496 | 4,799 | 6,253 | 7,873 | 9,481 |
| **4** | Wind Energy Available - Assessed MUs | 1,376 | 3,145 | 3,300 | 5,963 | 8,626 | 8,626 |
| **5** | Achievement % | 1.41% | 3.02% | 2.95% | 4.99% | 6.75% | 6.31% |
| **6** | Target Achieved % | **57%** | **90%** | **69%** | **95%** | **110%** | **91%** |
| **7** | Surplus/Deficit - MUs | **(1,018)** | **(350)** | **(1,499)** | **(290)** | **753** | **(854)** |
| **8** | Additional Capacity Required @38% CUF - MW | **306** | **105** | **450** | **87** | **(226)** | **257** |

*Table 10: Revised HPO Assessment post revision of Hydro Capacities as per above:*

| HPO | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S. No** | **Particulars** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 97,318 | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | RPO Targets % - HPO | 1.08% | 1.48% | 1.80% | 2.15% | 2.51% | 2.82% |
| **3** | Hydro Energy Required - MUs | 1,051 | 1,540 | 2,014 | 2,571 | 3,208 | 3,852 |
| **4** | Hydro Energy Available - Assessed MUs | 205 | 413 | 851 | 1,000 | 1,000 | 1,000 |
| **5** | Achievement % | 0.21% | 0.40% | 0.76% | 0.84% | 0.78% | 0.73% |
| **6** | Target Achieved % | **19%** | **27%** | **42%** | **39%** | **31%** | **26%** |
| **7** | Surplus/Deficit - MUs | **(846)** | **(1,127)** | **(1,163)** | **(1,570)** | **(2,207)** | **(2,852)** |
| **8** | Additional Capacity Required @48% PLF - MW | **201** | **268** | **277** | **373** | **525** | **678** |

*Since the RPO Targets is only upto FY 2030 and the Dibang project will be commissioned by February 2032 hence it has not impact in the table 10 above.*

*Table 11: Revised Other RPO Assessment post addition of Solar Capacities as per above:*

| Other RPO | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S. No.** | **Particulars** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 97,318 | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | RPO Targets % - Other RPO | 25.63% | 26.13% | 26.63% | 27.13% | 27.63% | 28.13% |
| **3** | Renewable Energy Required - MUs | 24,943 | 27,185 | 29,789 | 32,439 | 35,312 | 38,428 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **4** | Renewable Energy Available - Assessed MUs | 21,688 | 24,540 | 28,815 | 38,509 | 40,533 | 40,533 |
| **5** | Achievement % | 22.29% | 23.59% | 25.76% | 32.21% | 31.71% | 29.67% |
| **6** | Target Achieved % | **87%** | **90%** | **97%** | **119%** | **115%** | **105%** |
| **7** | Surplus/Deficit - MUs | **(3,255)** | **(2,644)** | **(975)** | **6,070** | **5,220** | **2,105** |
| **8** | Additional Capacity Required @28% CUF - MW | **1,327** | **1,078** | **397** | **(2,475)** | **(2,128)** | **(858)** |

*Table 12: Revised Energy Storage Obligation (ESO) Assessment post addition of Storage Capacities as per above*

| **STORAGE** | | | | | | |
|---|---|---|---|---|---|---|
| **S. No** | **Particulars** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | Targets % - Storage | 1.00% | 1.50% | 2.00% | 2.50% | 3.00% |
| **3** | Renewable Energy Required - MUs | 1,040 | 1,678 | 2,391 | 3,195 | 4,098 |
| **4** | Storage Capacity Available - MUs | - | - | 1,095 | 1,460 | 1,460 |
| **5** | Achievement % | 0.00% | 0.00% | 0.92% | 1.14% | 1.07% |
| **6** | Target Achieved % | **0%** | **0%** | **46%** | **46%** | **36%** |
| **7** | Surplus/Deficit - MUs | **(1,040)** | **(1,678)** | **(1,296)** | **(1,735)** | **(2,638)** |
| **8** | Storage Capacity Required MW - 2 Hours & 2 Cycle (BESS) | **713** | **1,149** | **888** | **1,188** | **1,807** |
| **9** | Storage Capacity Required MW - 6 Hours & 1 Cycle (PSP) - 365 Days | **475** | **766** | **592** | **792** | **1,205** |
| **10** | Storage Capacity Required MW - 6 Hours & 1 Cycle (PSP) - 6 Months | **950** | **1,532** | **1,184** | **1,585** | **2,409** |

*2.10. From the table of Other RPO assessments, it can be evidently inferred that there will be surplus RE power under Other RPO Category from FY 2028 to FY 2030 which may be utilized to offset the pending RPO shortfalls for the year FY 2023 & FY 2024 which as per the order passed by Hon'ble Commission in the Petition No. SMP 38 of 2024 dated 18.12.2024. The verbatim of the order is reproduced below:*

***"11. In light of the above findings and analysis, the Commission hereby issues the following directions: -***

***i. ……***

***ii. The request to waive of the shortfall in RPO for the period FY 2022-23 and FY 2023-24 or to carry forward the shortfall of FY 2020-21 to FY 2023-24 till 2030 is found untenable and hence is hereby rejected. However, if the respondent wishes to carry forward the shortfall towards RPO for the FY 2023-24 to FY 2024-25, then it has to file a separate petition under relevant regulations seeking such a dispensation.***

*Table 13: RPO Shortfalls during FY 2023 & FY 2024 and Excess in Upcoming Years (in MUs)*

| Category | 2023-24 | 2024-25 | Total Shortfall | Excess in FY 2028 | Excess in FY 2029 | Excess in FY 2030 | Total Excess |
|---|---|---|---|---|---|---|---|
| **Wind RPO** | 1041 | 1282 | 2323 | - | 753 | - | 753 |
| **HPO** | 391 | 845 | 1236 | - | - | - | - |
| **Other RPO** | 3677 | 1372 | 5049 | 6070 | 5220 | 2105 | 13395 |
| **Total** | 5109 | 3499 | 8608 | 6070 | 5973 | 2105 | 14148 |

*2.11. From the above excess generation available post capacity additions, petitioner intends to utilize such excess in meeting the shortfall of prior years and request commission to allow the carry forward the RPO shortfall compliance.*

*2.12. The Petitioner was apprised of the conclusions drawn from the Resource Adequacy Study carried out by the CEA, which detailed the energy storage requirements for Madhya Pradesh covering the fiscal years 2025-26 to 2034-35. The study emphasized the necessity for a gradual increase in contracted Storage capacity to adequately address the state's peak power demand and fulfil Energy Storage Obligation (ESO) targets as stipulated by the Hon'ble Commission.*

*2.13. Further, validation regarding the importance of BESS for meeting ESO targets and managing peak demand was obtained. This validation underscored the critical role of BESS in ensuring effective energy management.*

*2.14. Further, given the complementary demand patterns between MP and neighbouring states such as UP and Punjab, discussions have been conducted with UPPCL. Following a meeting on 04.09.2024, UPPCL provided in-principle consent for a collaborative power-sharing arrangement pertaining to the proposed Morena Solar Park. This arrangement was reaffirmed in a subsequent meeting on 25.04.2025, where both states agreed to proceed with a tolling tariff-based power-sharing structure, with formal consent from UPPCL is awaited.*

## *3. Deficit/Surplus from FY 2026 to FY 2030*

*3.1. Further, it is submitted that the Chief Engineer (Planning) of UPPCL, in a letter dated 23.04.2025, requested MPPMCL's consent to participate in a fuel-agnostic tender for the acquisition of 1000 MW of mid-term power (for 5 years) commencing from FY 2025-26, as well as 2000 MW of long-term power (for 25 years) beginning from FY 2026-27, to be allocated on a semi-annual basis. A similar arrangement was previously discussed during a meeting on 04.09.2024 as mentioned above, resulting in the in-principle consent for procurement from the Morena Solar Park.*

*3.2. In a subsequent meeting held on 25.04.2025, both MPPMCL and UPPCL agreed to provide in-principle consent for power sharing based on complementary demand patterns. It was proposed that MP could bank its surplus solar power generated during the non-Rabi season (from April to September) to be returned by UPPCL during the Rabi season (from October to March). Formal consent from UPPCL for this proposal is*

*awaited.*

*3.3. Further, The Resource Adequacy Committee of MPPMCL discussed the proposal in its meeting on 28.04.2025 and recommended granting in-principal consent for participation in the mid-term power procurement tender. This recommendation was based on the complementary demand dynamics between MP and UP and the anticipated power shortages in the upcoming years which is including the capacities approval sought above however excluding the medium-term capacity proposed.*

*3.4. during two time slots from 6 AM to 11 AM and from 4 PM to 9 PM if power swapping is agreed upon; second, sourcing power continuously from 6 AM to 9 PM from October to March if the swapping arrangement is not approved by UPPCL.*

3. With the aforesaid submissions the petitioner prayed the following:

1. *Approve the capacity addition for procurement of power as mentioned in Para 1.2 Table 2 of additional submission.*
2. *Carry forward the RPO Shortfall during FY 2023 & FY 2024 to subsequent years as submitted in Para 2.11 Table 13.*
3. *Condone any inadvertent omissions/ errors/ shortcomings /delay and permit the Petitioner to add/ change/ modify/ alter portion(s) of this filing and make further submissions as may be required at a later stage; and*
4. *Pass such an Order as the Hon'ble Commission deems fit and proper as per the facts and circumstances of the case.*

4. At the motion hearing held on 07.05.2025, the petitioner reiterated the genesis of the petition and prayed to admit the petition. Having heard the petitioner, petition was admitted. The petitioner was directed to serve copy of petition to the respondents through email as well as in hard copy within seven days and report compliance of service to the Commission. The respondent was directed to file their response to the petition within the next 15 days, with a copy of the aforesaid response served to the petitioner, simultaneously. The petitioner was allowed to file rejoinder, if any, within a week, thereafter. The case was listed for hearing on 11.06.2025.

5. By Affidavit, dated 4th June 2025, Respondent i.e. MP Urja Vikas Nigam Ltd., broadly submitted following in their response:

*i. That, the answering Respondent, Madhya Pradesh Urja Vikas Nigam Limited ("MPUVNL"), is the nodal agency for the State of Madhya Pradesh for implementation of various renewable energy programs including, inter alia, Component-A of the Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM KUSUM) Scheme, and has been entrusted with the task of overseeing and facilitating decentralized solar project development in accordance with the guidelines issued by the Ministry of New and Renewable Energy (MNRE), Government of India.*

*ii. That, the Respondent notes that the Petition encompasses three distinct components: the proposed procurement of 1600 MW wind power capacity (comprising 800 MW base capacity and 800 MW under the Greenshoe option), 1290 MW of solar capacity to be implemented under the PM KUSUM-A Scheme, and the allocation of 252 MW of*

*hydro power from the Dibang Multipurpose Project. These capacity additions have been proposed by MPPMCL as necessary to fulfil the RPO targets notified by the Hon'ble Commission for the period up to FY 2029-30, in view of the projected energy deficits set out in the Resource Adequacy Plan and accompanying documents placed on record with the petition.*

iii. *That, in relation to the proposed wind capacity addition, the Respondent respectfully acknowledges the Petitioner's prayer for the Hon'ble Commission's approval for procurement of 800 MW wind power, alongside an additional 800 MW under a Greenshoe Option. It is understood that this procurement is intended to fulfil the Renewable Purchase Obligation (RPO) targets for wind energy, as notified by the Ministry of Power and subsequently adopted by this Hon'ble Commission in its regulatory framework. The Respondent supports the Petitioner's decision to pursue direct procurement of renewable power through competitive or pre-approved mechanisms, thereby reducing dependency on Renewable Energy Certificates (RECs) and strengthening the indigenous development of renewable generation within Madhya Pradesh. The proposed wind capacity addition is squarely aligned with the State's energy policy directives and long-term resource adequacy goals, and the Respondent affirms Act, 2003 and Regulation 16.1 of the Madhya Pradesh Electricity Regulatory Commission (Framework for Resource Adequacy) Regulations, 2024. Additionally, the Respondent wishes to apprise the Hon'ble Commission that the Respondent, in coordination with Rewa Ultra Mega Solar Limited (RUMSL) bids, is actively planning the development of a 1600 MW Wind Park by FY 2027-28. This initiative, presently under structured planning, is aimed at substantially augmenting wind-based generation capacity and further contributing to the State's compliance with its RPO trajectory in the wind category.*

iv. *That, in so far as Component-A of the PM KUSUM Scheme is concerned, the Respondent confirms that it continues to serve as the designated State Nodal Agency for Madhya Pradesh and has been implementing the Scheme in accordance with the revised guidelines issued by MNRE on 17.01.2024. The MNRE has sanctioned an aggregate capacity of 1790 MW under Component-A (comprising 300 MW, 200 MW, 100 MW, 890 MW, and 300 MW as per MNRE's letters dated 13.01.2021, 18.05.2022, 28.06.2023, 21.10.2024, and 31.01.2025 respectively). The Respondent confirms that the allocation of 1790 MW under KUSUM-A is presently active and in various stages of implementation, and that Power Purchase Agreements (PPAs) for a significant portion of the initially sanctioned and approved around 500 MW have already been executed with the distribution licensees in the State through the Petitioner. Letter of Awards have been issued for a total capacity of 1379.91MW so far.*

v. *That, with respect to the procurement of 252 MW of hydroelectric capacity from the Dibang Multipurpose Project allocated to the State by the Government of India, the Respondent acknowledges that the proposed capacity forms part of a long-term resource planning initiative for hydro-based firm power availability, and that its inclusion in the RPO compliance framework (as Hydro Purchase Obligation, or HPO) would contribute meaningfully towards a diversified renewable energy mix. The Respondent does not object to the said proposal and leaves the matter of approval, including any financial or contractual considerations, to the sound discretion of the Hon'ble Commission.*

***The Respondent respectfully submits that it has no objection to capacity additions proposed in the instant petition, and prays that this Hon'ble Commission may be pleased to pass appropriate orders on the Petition as it deems ft, proper and in accordance with law.***

6. At the last hearing held on 11.06.2025, the Petitioner and Respondent concluded their arguments. Respondent did not object to the prayer made by the petitioner. Having heard the parties, case was reserved for order.

**Commission's observations and findings:**

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

**i)** Commission has specified RPO trajectory for obligated entities through MPERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2021 as amended from time to time as under:

**Table 14**

| Financial Year | Wind RPO | HPO | Other RPO | Total RPO | Storage on Energy basis (ESO) |
|---|---|---|---|---|---|
| 2022-23 | 0.81% | 0.35% | 23.44% | 24.60% | Nil |
| 2023-24 | 1.60% | 0.66% | 25.13% | 27.39% | Nil |
| 2024-25 | 2.46% | 1.08% | 25.63% | 29.17% | Nil |
| 2025-26 | 3.36% | 1.48% | 26.13% | 30.97% | 1.0% |
| 2026-27 | 4.29% | 1.80% | 26.63% | 32.72% | 1.5% |
| 2027-28 | 5.23% | 2.15% | 27.13% | 34.51% | 2.0% |
| 2028-29 | 6.16% | 2.51% | 27.63% | 36.30% | 2.5% |
| 2029-30 | 6.94% | 2.82% | 28.13% | 37.89% | 3.0% |

**ii)** As per the provisions of MPERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2021 as amended from time to time, RPO is to be met as under:

a. Wind RPO shall be met by energy procured from Wind Power Projects (WPPs) commissioned after 31st March 2022 and the wind energy procured over and above 7% from WPPs commissioned till 31st March 22.
b. HPO shall be met only by energy procured from Hydro Power Projects [including Pumped Storage Projects (PSPs) and Small Hydro Projects (SHPs)] commissioned after 8th March 2019.
c. Other RPO may be met by energy procured from any RE power project not mentioned in (a) and (b) above.
d. From FY 2022-23 onwards, the energy procured from all Hydro Power Projects (HPPs) shall be considered as part of RPO.
e. RPO shall be computed in energy terms as a percentage of total procurement of electricity.

f. HPO obligations may be met from the power procured from eligible Hydro Power Projects [including Pumped Storage Projects (PSPs) and Small Hydro Projects (SHPs)] commissioned on and after 8th March 2019 to 31st March 2030.

g. HPO Obligation of the State/ Discoms may be met out of the free power being provided to the State from Hydro Power Projects [including Pumped Storage Projects (PSPs) and Small Hydro Projects (SHPs), commissioned after 8th March 2019 as per agreement at that point of time excluding the contribution towards Local Area Development Fund (LADF), if consumed within the State/Discom. Free power (not that contributed for Local Area Development) shall be eligible for HPO benefit.

h. In case, the free power mentioned above is insufficient to meet the HPO obligations, then the State would have to procure additional hydro power to meet its HPO obligations or may have to buy the corresponding amount of Renewable Energy Certificate corresponding to Hydro Power.

i. The Renewable Energy Certificate mechanism corresponding to Hydro Power to be developed by CERC to facilitate compliance of HPO Obligation would be applicable for HPO compliance.

j. The above HPO trajectory shall be trued up on an annual basis depending on the revised commissioning schedule of Hydro projects. The HPO trajectory for the period between 2030-31 and 2039-40 shall be notified subsequently.

k. Hydro imported from outside India shall not be considered for meeting HPO.

l. Any shortfall remaining in achievement of 'Other RPO' category in a particular year can be met with either the excess energy procured from Wind Power Projects (WPPs) commissioned after 31st March 2022 beyond 'Wind RPO' for that year and the wind energy procured over and above 7% from WPPs commissioned till 31st March 2022 or with excess energy procured from eligible Hydro Power Projects [including Pumped Storage Projects (PSPs) and Small Hydro Projects (SHPs)], commissioned after 8th March, 2019 beyond 'HPO' for that year or partly from both. Further, any shortfall in achievement of Wind RPO in a particular year can be met with excess energy procured from Hydro Power Plants, which is in excess of 'HPO' for that year and vice versa. Moreover, any excess energy consumption under Other renewable energy category in a particular year, can be utilised to meet the shortfall in RPO compliance of Wind renewable energy or Hydro renewable energy."

**iii)** Relevant provisions of Madhya Pradesh Electricity Regulatory Commission (Framework for Resource Adequacy) Regulations, 2024 regarding procurement resource mix are as under: -

*13.1. In power procurement strategy, MPPMCL shall ensure an optimal procurement generation resource mix and also facilitate smooth integration of Renewable Energy (RE) sources in its portfolio of power procurement resource options, while meeting reliability standards and Renewable Purchase Obligation targets. Further, the future capacity mix may comprise existing capacities, planned capacities and capacity addition required to meet the increasing demand of the Distribution Licensees considering appropriate gestation period of the generation resource.*

*13.2. For identification of the optimal generation procurement resource mix, optimization techniques and least-cost modelling shall be employed by MPPMCL in*

*order to avoid stranded capacity. MPPMCL shall demonstrate the same in LT-DRAP to be submitted to Commission for approval.*

*13.3. MPPMCL shall contract the optimal portfolio of resources to meet Distribution Licensees' future demand and Resource Adequacy Requirement (RAR) obligations, based on the output derived from the LT-NRAP study results.*

*13.4. MPPMCL shall consider Long / Medium / Short-term contracts of generation resources towards the contribution for meeting RAR:*

*Provided that power procurement through Day-Ahead Market (DAM), shall not be considered towards the contribution for meeting RAR.*

*13.5. MPPMCL shall contract additional resources based on the LT-DRAP to meet its own peak demand.*

*13.6. The power capacity procurement from Renewable Energy sources for fulfilling the RPO targets shall be carried out as per Madhya Pradesh Electricity Regulatory Commission (Cogeneration and Generation of Electricity from Renewable Sources of Energy), (Revision-II), Regulations, 2021 and amendments thereof.*

*13.7. The power procurement from Wind, Solar PV, Wind Solar Hybrid, and Round the Clock (RTC) generation sources shall be carried out as per the guidelines for tariff based competitive bidding process notified by the Ministry of Power.*

*13.8. MPPMCL shall contract storage capacity corresponding to the results of LT-DRAP capacity addition requirement for future years from Battery Energy Storage System (BESS) or Pumped Storage Projects (PSP) or any other storage technology as per the guidelines for tariff based competitive bidding process notified by the Ministry of Power.*

*13.9. MPPMCL may contract power through State Generating Stations/ Central Generating Stations/ Independent Power Producers (IPPs)/ Captive Power Plants (CPPs)/ Renewable Power Plants including Co-Generation Plants/ Central Agencies /State Agencies/ Intermediaries / Traders / Aggregators / Power Exchanges or through Bilateral Agreements / Banking Arrangements with other Distribution Licensees and any other sources as may be approved by the Commission.*

*13.10. MPPMCL may procure power on Short-term and Medium-term basis through DEEP and PUShP portal and OTC Platform.*

**iv)** DISCOMs being an obligated entity are required to seek prior permission of Commission for new capacity arrangements to meet its peak demand as well as to achieve RPO targets by procuring Renewable Power. Regulation 16.1 of Madhya Pradesh Electricity Regulatory Commission (Framework for Resource Adequacy) Regulations, 2024 dated 8th March 2024 stipulates as follows:

***"16. Approval of Power Purchase Agreement:***

***16.1. Any new capacity arrangement/tie-up 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."***

**v)** Commission notes that Central Electricity Authority (CEA) has approved Resource Adequacy Plan for MP vide its report dated 11.09.2024 for the period from 2024-25 to 2034-35 and additional capacity required for MP has been determined as under (in MW): -

**Table 15**

| Year | Coal | Solar | Solar (Complementarity) | Wind | Storage (4 Hours) | STOA/MTOA/ Banking |
|---|---|---|---|---|---|---|
| **2025-26** | - | 3000 | - | - | 1066 | 1700 |
| **2026-27** | - | 3047 | - | 800 | 515 | 1700 |
| **2027-28** | - | 1047 | 2000 | 800 | 3271 | 1700 |
| **2028-29** | 3300 | 1806 | 400 | 400 | - | 1700 |
| **2029-30** | - | 2172 | 400 | 400 | 721 | 1700 |
| **2030-31** | - | 2384 | 400 | 400 | 746 | 1800 |
| **2031-32** | 800 | 1957 | 400 | 400 | 1403 | 1900 |
| **2032-33** | 800 | 1763 | 400 | 400 | 1312 | 2000 |
| **2033-34** | 700 | 2073 | 500 | 400 | 1373 | 2100 |
| **2034-35** | 300 | 1890 | 500 | 400 | 1536 | 2200 |

It is further noted that the above capacity addition has been computed by CEA based on RCO targets notified by MoP, but the petitioner has assessed the renewable power requirement as per the RPO targets specified by the Commission. **The proposed additional capacity will support partially in meeting the RPO targets and for the remaining shortfall in meeting the RPO targets, the petitioner has submitted that they will approach the Commission seeking additional capacity approval as and when the proposals are received from the distinctive intermediary procurer (NTPC, NHPC, SJVN, SECI & RUMSL) or through bidding plan prepared by MPPMCL.**

**vi)** The petitioner has prayed for capacity addition broadly in line with the provisions contained in regulation 13 and 16.1 of the Madhya Pradesh Electricity Regulatory Commission (Framework for Resource Adequacy) Regulations, 2024 and based on the additional capacity requirement determined by CEA in its Resource Adequacy Plan approved for the State. The details of the capacity addition requested are as under: -

**Table 16**

| Sr. No. | Particulars | Solar Capacity | Wind Capacity | Hydro Capacity | Storage | Medium Term | Expected COD | Tariff discovered / to be discovered |
|---|---|---|---|---|---|---|---|---|
| 1 | 800 MW Wind with additional 800 MW under Greenshoe option | - | 1600 MW | - | - | - | October 2027 | To be discovered through tariff based competitive bidding carried out by MPPMCL |
| 2 | Component-A under PM | 1290 MW | - | - | - | - | March 2027 | Through prefixed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | KUSUM Scheme | | | | | | | levelized tariff determined by Commission or Competitive bidding as the case may be by MPUVN |
| 3 | Hydro Power from Dibang Multipurpose Project | - | - | 252 MW | - | - | February 2032 | To be determined by Hon'ble CERC under Section 62 of Electricity Act 2003 |
| 4 | 1650 MW Solar Power from SECI | 1650 MW | - | - | - | - | June 2027 | Rate already discovered by CERC through competitive bidding |
| 5 | 1650 MW Solar Power from SJVN Ltd. | 1650 MW | - | - | - | - | June 2027 | Rate already discovered by CERC through competitive bidding |
| 6 | 1000 MW/2000 MWh power (2 cycles) on complementarity basis from BESS with UPPCL on a tolling tariff model connected at ISTS | - | - | - | 1000 MW / 2000 MWh (2 Hour 2 Cycle) | | September 2027 | To be discovered through tariff based competitive bidding carried out by MPPMCL |
| 7 | 250 MW/500 MWh power (2 cycles) with 100% Greenshoe Option from BESS on tolling tariff model connected at InSTS | - | - | - | 250 MW / 500 MWh (2 Hours 2 Cycle) | | September 2027 | To be discovered through tariff based competitive bidding carried out by MPPMCL |
| 8 | Procurement of Mid-term (for 5 year) 1000 MW power on complementarity basis with UPPCL | - | - | - | | 1000 MW | October 2025 | To be discovered through tariff based competitive bidding carried out by UPPCL |
| | **Total** | **4590 MW** | **1600 MW** | **252 MW** | **1250 MW/2500 MWh** | **1000 MW** | | |

**vii)** Commission notes that prior to this petition, petitioners earlier approached the Commission for approval of capacity addition for procurement of power from renewable energy sources through various petitions. Capacity addition approved by this Commission prior to this petition for the requirement of renewable energy is summarized as under: -

**Table 17**

| SN | Petition no. | Order dated | Capacity Approval | | | |
|---|---|---|---|---|---|---|
| | | | Solar | Wind | Hydro | Storage |
| 1 | 65 of 2020 | 27.05.2021 | **1000 MW -NHPC<br>900 MW-SECI (Tranche-IV)<br>600 MW-RUMS<br>100 MW-SECI (JNNSM Phase-II)** | **500 MW-SECI(Tranche-IV)<br>450 MW-SECI** | | |
| 2 | 55 of 2021 | 31.03.2022 | **140 MW- SECI (Blended)<br>1199 MW-Agar, Neemuch, Shajapur RUMSL Solar Park<br>300 MW- Kusum A** | **560 MW-SECI (Blended)** | | |
| 3 | 32 of 2022 | 28.07.2022 | **100 MW-Kusum C<br>400 MW Omkareshwar Floating + 700 MW RUMS, Chhatarpur<br>250 MW-RUMS Hybrid** | **440 MW-SECI Tranche XI Project<br>500 MW- RUMS Hybrid** | | |
| 4 | 51 of 2023 | 05.01.2024 | **(a) Capacity addition of 2350 MW Solar (Comprising 200 MW Kusum A, 1150 MW Kusum C, 500 MW SECI & 500 MW NTPC Solar), 650 MW RE RTC (comprising 800 MW Solar and 3200 MW Wind capacity) and<br><br>(b) Revision in capacity mix in RUMSL Hybrid Project of 750 MW from 250 MW Solar + 500 MW Wind granted in petition no. 32 of 2021 to 441 MW Solar +309 MW Wind.** | | **227 MW** | **500 MW Pump Storage** |

**viii) Solar Capacity under KUSUM A & C Scheme:**

MNRE, GoI, vide its OM No. 32/645/2017-SPV Division dated 22.07.2019 issued guidelines for implementation of various components under PM KUSUM Scheme for components A, B & C. Respondent MPUVNL has submitted that MNRE has sanctioned aggregate capacity of 1790 MW to the State (comprising 300 MW , 200 MW, 100 MW, 890 MW and 300 MW as per MNRE's letters dated 13.01.2021, 18.05.2022, 28.06.2023, 21.10.2024 and 31.01.2025) and allocation of 1790 MW under Kusum-A is presently active. The capacity additions already approved by Commission prior to this petition under KUSUM-A & C scheme are as under: -

**KUSUM A**

300 MW in Petition 55/2021
200 MW in Petition 51 of 2023
**Total 500 MW**

**KUSUM C**

100 MW in Petition no. 32/2022
1150 MW in Petition 51 of 2023
**Total 1250 MW**

Additional 1290 MW Solar Capacity under KUSUM – A Scheme is proposed for approval of Capacity Addition in the present petition. **Thus, the aggregate capacity under KUSUM-A scheme would be 1790 MW after approval of additional 1290 MW in the instant petition and for KUSUM-C, aggregate capacity would be 1250 MW.**

**ix)** Commission notes that petitioner has computed the estimated power procurement considering the existing as well as proposed capacity additions of Wind, Solar and Hydro power to arrive at estimated RPO compliance from various RE sources as per trajectory of Commission in MPERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2021. For this purpose, petitioner has considered power requirement approved by Commission from 2024-25 to 2026-27 as per MYT Tariff order dated 31.03.2022 passed in Petition No. 04/2022 and ARR & Tariff order dated 28.03.2023 passed in Petition No. 84/2022 and extrapolated the power requirement till 2029-30 based on CAGR worked out on the basis of power procurement approved by Commission from 2024-25 to 2026-27.

**x)** Commission also notes that the Petitioner is aware of the renewable consumption obligation notified by Ministry of Power vide notification no. No. S.O. 4617(E) dated 20.10.2023 under Energy Conservation Act, 2001 and that the current level of RPO specified by Commission is well within the limit of RCO notified by Ministry of Power, GoI.

**xi)** Considering the existing tied up/ approved capacity plus proposed capacity in this petition, Commission has accepted the computation of RPO compliance submitted by petitioner as under:

**Table 18**

Wind RPO Assessment

| WIND RPO | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S. No** | **Particulars** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 97,318 | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | RPO Targets % - Wind | 2.46% | 3.36% | 4.29% | 5.23% | 6.16% | 6.94% |
| **3** | Wind Energy Required - MUs | 2,394 | 3,496 | 4,799 | 6,253 | 7,873 | 9,481 |
| **4** | Wind Energy Available - Assessed MUs | 1,376 | 3,145 | 3,300 | 5,963 | 8,626 | 8,626 |
| **5** | RPO Achievement % | 1.41% | 3.02% | 2.95% | 4.99% | 6.75% | 6.31% |
| **6** | Target Achievement % | **57%** | **90%** | **69%** | **95%** | **110%** | **91%** |
| **7** | Surplus/Deficit - MUs | **(1,018)** | **(350)** | **(1,499)** | **(290)** | **753** | **(854)** |
| **8** | Additional Capacity Required @38% CUF - MW | **306** | **105** | **450** | **87** | **(226)** | **257** |

HPO Assessment

| HPO | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S. No** | **Particulars** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 97,318 | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | RPO Targets % - HPO | 1.08% | 1.48% | 1.80% | 2.15% | 2.51% | 2.82% |
| **3** | Hydro Energy Required - MUs | 1,051 | 1,540 | 2,014 | 2,571 | 3,208 | 3,852 |
| **4** | Hydro Energy Available - Assessed MUs | 205 | 413 | 851 | 1000 | 1000 | 1000 |
| **5** | RPO Achievement % | 0.21% | 0.40% | 0.76% | 0.84% | 0.78% | 0.73% |
| **6** | Target Achievement % | **19%** | **27%** | **42%** | **39%** | **31%** | **26%** |
| **7** | Surplus/Deficit - MUs | **(846)** | **(1,127)** | **(1163)** | **(1,570)** | **(2,207)** | **(2,852)** |
| **8** | Additional Capacity Required @48% PLF - MW | **201** | **268** | **277** | **373** | **525** | **678** |

Other RPO Assessment

| Other RPO | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S. No** | **Particulars** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 97,318 | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | RPO Targets % - Other RPO | 25.63% | 26.13% | 26.63% | 27.13% | 27.63% | 28.13% |
| **3** | Renewable Energy Required - MUs | 24,943 | 27,185 | 29,789 | 32,439 | 35,312 | 38,428 |
| **4** | Renewable Energy Available - Assessed MUs | 21,688 | 24,540 | 28,815 | 38509 | 40533 | 40533 |
| **5** | RPO Achievement % | 22.29% | 23.59% | 25.76% | 32.21% | 31.71% | 29.67% |
| **6** | Target Achievement % | **87%** | **90%** | **97%** | **119%** | **115%** | **105%** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **7** | Surplus/Deficit - MUs | **(3,255)** | **(2,644)** | **(975)** | **6070** | **5220** | **2105** |
| **8** | Additional Capacity Required 28% CUF - MW | **1,327** | **1,078** | **397** | **(2475)** | **(2128)** | **(858)** |

Energy Storage Obligation (ESO) Assessment

| **STORAGE** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S. No** | **Particulars** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **1** | Energy Requirements (MUs) - Till FY 2026-27 as per MYT and from FY 2028 to 30 extrapolated at same growth. Energy requirements is updated with yearly ARR | 97,318 | 104,036 | 111,863 | 119,568 | 127,805 | 136,609 |
| **2** | Targets % - Storage | 0.00% | 1.00% | 1.50% | 2.00% | 2.50% | 3.00% |
| **3** | Renewable Energy Required - MUs | - | 1,040 | 1,678 | 2,391 | 3,195 | 4,098 |
| **4** | Storage Capacity Available - MUs | - | - | - | - | - | - |
| **5** | RPO Achievement % | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| **6** | Target Achievement % | **-** | **0%** | **0%** | **46%** | **46%** | **36%** |
| **7** | Surplus/Deficit - MUs | - | **(1,040)** | **(1,678)** | **(1296)** | **(1735)** | **(2638)** |
| **8** | Storage Capacity Required MW - 2 Hours & 2 Cycle (BESS) | **-** | **713** | **1,149** | **888** | **1,188** | **1,807** |
| **9** | Storage Capacity Required MW - 6 Hours & 1 Cycle (PSP) - 365 Days | **-** | **475** | **766** | **592** | **792** | **1205** |
| **10** | Storage Capacity Required MW - 6 Hours & 1 Cycle (PSP) - 6 Months | **-** | **950** | **1,532** | **1,184** | **1585** | **2409** |

**xii)** Commission notes that while the capacity of the projects proposed to be contracted in this petition would contribute to the management of peak demand from 2024-25 onwards, it would also generate significant surplus RE energy from Other Category Sources over and above RPO target during the period from 2024-25 to 2026-27 and for Wind Category during 2028-29. There would be deficit during 2024-25 to 2029-30 in other Categories viz Wind and HPO. Commission noted that as per the provisions of MPERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2021, surplus of other categories sources can be utilised in HPO and Wind RPO deficit, as such, the surplus of other categories sources would be fully utilised for meeting HPO and Wind RPO during 2024-25 to 2026-27.

**xiii)** Commission notes that even after capacity addition as proposed in the instant petition, there would be further capacity requirement to meet the existing RPO targets specified by Commission. The petitioner has submitted that they shall approach the Commission for bridging the gap as and when proposals from CPUs received and Board of Company approves the same.

**xiv)** The energy surplus of other categories sources in the years between 2024-25 to 2026-27 can be utilized by petitioner for offsetting the shortfall in HPO and Wind RPO as per the fungibility allowed in MPERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2021 as amended from time to time. Commission has worked out the surplus energy from RE sources after considering fungibility allowed in MPERC (Co-

generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2021 as amended as under: -

**Table 19**

| Status of Surplus RE Energy after adjustment as per allowed fungibility | | | | | | |
|---|---|---|---|---|---|---|
| **Source/ FY** | **2024-25** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** |
| **Gross Energy as per approved ARR/ Truing up** | 97318 | 104036 | 111863 | 119568 | 127805 | 136609 |
| **(Surplus/ Deficit)-Wind Energy (A)** | -1018 | -350 | -1499 | -290 | 753 | -854 |
| **(Surplus/ Deficit)-Hydro Energy (B)** | -846 | -1127 | -1163 | -1570 | -2207 | -2852 |
| **Total C= (A+B)** | -1864 | -1477 | -2662 | -1860 | -1454 | -3706 |
| **(Surplus/ Deficit)-Other (D)** | -3255 | -2644 | -975 | 6070 | 5220 | 2105 |
| **(Surplus/ Deficit)-Final Status after fungibility E=C+D** | **-5119** | **-4121** | **-3637** | **4210** | 3766 | -1601 |

**xv) In light of above computations, Commission hereby grants in-principle approval for capacity addition of renewable generation as mentioned in Table 17 above.**

**xvi)** Petitioner further submitted that for excess generation available post capacity additions during 2027-28 and 2029-30, petitioner intends to utilize such excess in meeting the shortfall of prior years and has again requested the Commission to allow the carry forward the RPO shortfall compliance of prior years to 2027-30. The MPERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2021 has the provisions to allow carry forward the RPO compliance requirement to the next year only on genuine grounds only. Commission observes that such prayer of the petitioner has already been dealt in SMP no. 38 of 2024 in which Commission vide its order dated 18.12.2024 directed as under:-

***"11. In light of the above findings and analysis, the Commission hereby issues the following directions: -***

***i. ……***

***ii. The request to waive of the shortfall in RPO for the period FY 2022-23 and FY 2023-24 or to carry forward the shortfall of FY 2020-21 to FY 2023-24 till 2030 is found untenable and hence is hereby rejected. However, if the respondent wishes to carry forward the shortfall towards RPO for the FY 2023-24 to FY 2024-25, then it has to file a separate petition under relevant regulations seeking such a dispensation.***

**In light of the above directions, Commission is not inclined to consider the prayer of petitioner to carry forward the RPO shortfall compliance of prior years to 2027-30.**

8. Petitioner has also submitted that even after addition of renewable energy capacities as mentioned in Table 17 above, they have anticipated further shortfall during 2025-26 to 2029-30 as per hourly assessment submitted in Table 14 of the petition. In this regard, it is submitted by

petitioner that the Chief Engineer (Planning) of UPPCL, in a letter dated 23.04.2025, requested MPPMCL's consent to participate in a fuel-agnostic tender for the acquisition of 1000 MW of mid-term power (for 5 years) commencing from FY 2025-26, as well as 2000 MW of long-term power (for 25 years) beginning from FY 2026-27, to be allocated on a semi-annual basis. A similar arrangement was previously discussed during a meeting on 04.09.2024 as mentioned above, resulting in the in-principle consent for procurement from the Morena Solar Park. In a subsequent meeting held on 25.04.2025, both MPPMCL and UPPCL agreed to provide in-principle consent for power sharing based on complementary demand patterns. It was proposed that MP could bank its surplus solar power generated during the non-Rabi season (from April to September) to be returned by UPPCL during the Rabi season (from October to March). Formal consent from UPPCL for this proposal is awaited. Petitioner has therefore considered capacity addition of 1000 MW on mid-term basis (for 5 year) on complementarity basis with UPPCL for which tariff shall be discovered through tariff based competitive bidding carried out by UPPCL.

Commission noted that power of 1000 MW on complimentary basis with UPPCL is expected to be commenced from Oct 2025. The data submitted by petitioner in Table 14 of the Petition clearly demonstrates that the State shall face power shortage to the extent of about 7000 MW during the period 2025-26 to 2029-30 even after considering additional capacities tie-ups as proposed in this petition. Commission also noted that CEA in its resource adequacy report dated 11.09.2024 has also approved STOA/MTOA power of 1700 MW for the period 2024-25 to 2029-30. Sourcing the STOA/MTOA power on complimentary basis with other State will result in saving of fixed cost and it would be a win-win situation for both the States. **Commission thus allows the prayer of petitioner for capacity addition through procurement of 1000 MW power on complimentary basis with UPPCL for mid-term period (5 years) and grants in-principle approval for the same.**

**Order**

9. Considering the submissions made by petitioner and respondent, the Commission hereby accords following in-principle approvals for renewable power procurement of: -

    a. 800 MW Wind with additional 800 MW under Greenshoe option, with price discovery through tariff based competitive bidding carried out by MPPMCL.

    b. 1290 MW power under Component-A under PM KUSUM Scheme, through prefixed levelized tariff determined by Commission or Competitive bidding as the case may be.

    c. 252 MW Hydro Power from Dibang Multipurpose Project, to be determined by Hon'ble CERC under Section 62 of Electricity Act 2003

    d. 1650 MW Solar Power from SECI, for which rate is already discovered through competitive bidding and adopted by CERC.

e. 1650 MW Solar Power from SJVN Ltd., rate is already discovered through competitive bidding and adopted by CERC.

f. 1000 MW/2000 MWh power (2 cycles) on complementarity basis from BESS with UPPCL on a tolling tariff model connected at IST to be discovered through tariff based competitive bidding carried out by MPPMCL

g. 250 MW/500 MWh power (2 cycles) with 100% Greenshoe Option from BESS on tolling tariff model connected at InSTS, to be discovered through tariff based competitive bidding carried out by MPPMCL.

h. Procurement of Mid-term (for 5 year) 1000 MW power on complementarity basis with UPPCL, to be discovered through tariff based competitive bidding carried out by UPPCL.

i. The prayer of petitioner to carry forward the RPO shortfall compliance of prior years to 2027-30 is rejected.

j. Petitioner is directed to approach this Commission for approval of power purchase/ supply agreement to be executed with RE generators promptly after the tariff is adopted / determined by the appropriate Commission in terms of regulation 16.3 of the MPERC (Framework for Resource Adequacy) Regulations, 2024.

k. Petitioner is directed to make proper cost benefit analysis for purchase of surplus RE power over and above the RPO targets before entering into power purchase agreements with RE generators so that the interests of end consumers are protected.

l. Managing Director, MPPMCL is directed to review the project commissioning as well as fulfilment of RPO on quarterly basis and in case of any slippage or shortfall, prompt action be taken for procurement of RE power from alternate sources or for purchase of RE certificates in order to fulfil the RPO targets.

m. The surplus RE power for any duration and time blocks should be utilised / disposed of in an optimum and efficient manner. The surplus RE power may be used to meet overall demand of retail consumers and also of green tariff consumers. After meeting the demand of consumers, surplus RE power may be disposed of at Green DAM on power exchanges.

n. Petitioner is further directed to approach this Commission for balance capacity addition as envisaged in the computations submitted in the instant petition in due course of time.

o. As per regulation 26.1of the MPERC (Framework for Resource Adequacy) Regulations,

2024, monthly/weekly/day-ahead/intraday power procurements/sale by the Licensees and generator schedule should be made available on the websites of petitioner who is handling power procurement on behalf of the distribution licensees and SLDC within 45 days of such procurements/sale with ease of access to the current as well as archived data.

With the aforesaid directions, subject petition stands disposed of.

**(Prashant Chaturvedi)**
**Member**

**(Gopal Srivastava)**
**Acting Chairman**