Rajasthan Electricity Regulatory Commission

Petition No. RERC-2340/2025

Petition filed under Section 86(1)(b) and other applicable provisions of the Electricity Act, 2003 for seeking approval for procurement of 500 MW RTC power for 5 years on the basis of the Model Bidding documents viz RFQ, RFP and APP issued under MoP, GoI Guidelines dated 29.01.2019 and amendments thereon for medium term Procurement of Electricity from Power Stations set up on Finance, Own and Operate (FOO) basis for meeting the power requirement of Rajasthan Discoms.

Coram:

Dr. Rajesh Sharma, Chairman

Sh. Hemant Kumar Jain, Member

Petitioner : Rajasthan Urja Vikas and IT Services Limited (RUVITL).

Respondents :

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.
2. State Load Dispatch Centre (SLDC)

Stakeholders :

1. Sh. Shanti Prasad
2. Sh. Dharam Deo Agarwal
3. Sh. Anil Kumar Middha
4. Sh. Y K Bolia
5. Sh. L N Nimawat
6. Sh. G L Sharma

Date of hearing : 26.09.2025, 29.10.2025 and 14.11.2025

Present :

1. Sh. Kartik Seth, Advocate for Petitioner.

2. Sh. Umang Gupta and Ms. Vidhi Mitruka, Advocate for Respondents SLDC.
3. Sh. D.D. Agarwal, Stakeholder.
4. Sh. Anil Midha, Stakeholder.
5. Sh. G. L. Sharma, Stakeholder.
6. Sh. L.N. Nimawat, Stakeholder.

Date of Order: **16.01.2026**

ORDER

1. Rajasthan UrjaVikas and IT Services Limited (RUVITL) under Section 86(1)(b) and other applicable provisions of the Electricity Act, 2003 has filed the instant petition for seeking approval for procurement of 500 MW RTC power for 5 years on the basis of the Model Bidding documents viz RFQ, RFP and APP issued under MoP, GoI Guidelines dated 29.01.2019 and amendments thereon for medium term Procurement of Electricity from Power Stations set up on Finance, Own and Operate (FOO) basis for meeting the power requirement of Rajasthan Discoms.

2. Commission vide its letter dated 30.06.2025directed the Petitioner to publish the petition. Accordingly, public notice with salient features of the petition inviting comments/ suggestions/objections from desirous persons, was published in the following newspapers on the dates mentioned against each:

Sr. No.	Name of News Paper	Date of publishing
1.	DainikBhaskar	07.07.2025
2.	DainikNavjyoti	07.07.2025
3.	Times of India	06.07.2025

3. The petition was also placed on the website of the Commission and the Petitioner. The objections/comments/suggestions were received from Sh.

Shanti Prasad, Sh. Dharam Deo Agarwal, Sh. Anil Kumar Middha, Sh. Y K Bolia, Sh. L N Nimawat and Sh. G L Sharma. Accordingly, RVUN filed its reply on the comments of stakeholders on 22.08.2025 and 11.11.2025.

4. Thereafter the matter was listed for hearing in 26.09.2025 wherein the Commission passed the following directions:

   "*(i)The RVPN/SLDC shall also be made party to the Petition.*

   (ii) Petitioner is directed to clarify about the deviations (if any) in SBD issued by GOI"

5. Accordingly, Petitioner vide application dated 10.10.2025 impleaded RVPN and SLDC as party in the matter. RVPN and SLDC submitted their reply on 13.10.2025.

6. Petitioner also filed written submissions in the matter on 27.10.2025 and submitted that the Petitioner has not proposed any additional or new deviations from the Standard Bidding Documents issued by the Ministry of Power, Government of India, other than those already approved by the Commission vide Order dated 23.08.2023 in Petition No. 2138/2023. Deviations proposed in the present bidding process are Identical to the deviations already approved by this Commission.

7. Further during the hearing dated 29.10.2025, Commission on request of Stakeholders, directed the Petitioner to provide the copy of deviations to all the stakeholders. Sh. L. N. Nimawat, Stakeholder also submitted additional submissions. Petitioner on 11.11.2025 submitted the reply on the additional submissions.

8. The matter was finally heard on 14.11.2025. Sh. Kartik Seth, Advocate appeared for Petitioner. Ms. Vidhi Mitruka, Advocate appeared for

Respondents SLDC. Sh. D.D. Agarwal, Sh. Anil Midha, Sh. Y. K. Bolia, Sh. L.N. Nimawat and Sh. G. L. Sharma appeared as a Stakeholder.

9. Commission vide ROP 14.11.2025 also granted liberty to the parties for filing their written submissions within one week time, if they wish to do so. Accordingly written submissions were received from Sh. Anil Midha, Stakeholder. On 02.12.2025 written submissions were filed on behalf of the Petitioner.

10. Petitioner in its petition, reply to comments, written submissions and during hearing has submitted as under:

10.1. The Petitioner, through the present Petition, intends to seek approval of the Commission for procurement of 500 MW RTC power for 5 year starting FY 2025-26 through a bidding process. The procurement shall be based on the guidelines dated 29.01.2019 and amendments thereon for medium term Procurement of Electricity from Power Stations set up on 'Finance, Own and Operate (FOO)' model bidding documents prescribed by the Ministry of Power, Government of India, as amended from time to time.

10.2. In light of the power deficit in the state of Rajasthan as assessed by the EAC in its meeting held on 12.04.2023 & 17.04.2023, reviewed the additional RTC capacity requirement up to FY 2029-30, as finalized in the 28th meeting held on 07.01.2022 on account of 1) CEA advisory dated. 20.01.2023 prohibiting the retirement of thermal units until 2030; 2) Allocation of 281 MW from Khurja TPS; and 3) RAPS-B Unit-1 outage of 62.5 MW (unavailable until 28.05.2024). EAC determined the following cumulative power deficits to meet the Discoms' base load;

FY	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**	**2029-30**
Cumulative Deficit (MW)	160	316	1021	1930	2895	3919	5007

10.3. Pursuant of this, GoR vide letter dated 20.04.2023, accorded approval for the procurement of 160 MW RTC power in FY 2023-24 for medium term, i.e. 5 years on Lump Sum Tariff basis as per guideline issued by MoP, GoI as detailed below:-

S. No.	Year	Cum Capacity (in MW) to be procured
1	2023-24	160
2	2024-25	316
3	2025-26	1021
4	2026-27	1930

10.4. Subsequently, the Petitioner filed petition No. 2097/2023, and Commission, vide it's order dated 31.03.2023, approved the procurement of 160 MW RTC power for 5 years. A tender was initiated on 24.05.2023 via the DEEP portal, using MoP's Model Bidding Documents. On 12.05.2023, MoP amended the Model APP, which was uploaded for bidders' reference. Following bidder queries, RUVITL sought deviations in Petition No. 2138/2023, approved by Commission on 23.08.2023, including amendments to RFQ Clause 2.2.2, APP Clause 11.8.1, and deletion of APP Clause 13.1. But this tender was cancelled due to a higher tariff (Rs. 5.30/unit).

10.5. The MoP, in consultation with CEA, issued Guidelines for Resource Adequacy Planning, mandating Discoms to prepare RAPs and tie up a judicious mix of Long, Medium and Short term contracts to ensure power supply security of consumers at minimal cost.

10.6. The CEA's RAP for Rajasthan projects a thermal capacity requirement of 18,520 MW by FY 2029-30 (17,698 MW coal + 822 MW gas), against the current 13,775 MW, indicating a 4,745 MW deficit, aligning with EAC's 5,007 MW estimate. Planned capacities include 281 MW (FY 2023-24), 300 MW (FY 2025-26), 1320 MW (FY 2027-28), and 925 MW (FY 2028-29), with additional requirements of 477 MW to 1328 MW from FY 28-29 to FY 31-32.

10.7. The EAC, in its 34th meeting on 16.05.2025, adopted the CEA's RAP and recommended procuring 500 MW RTC power for 5 years. RUVITL's Board approved this procurement on a Lump-Sum Tariff basis in its 67th meeting on 26.05.2025, subject to RERC approval.

10.8. The Lump-Sum Tariff, as per MoP's Model Bidding Documents, comprises a Base Variable Charge (covering generation, transmission charges, and losses) and a Fixed Charge, ensuring competitive tariff discovery. This fuel-agnostic approach includes all fuel options except (b) and (c), allowing renewable sources (per Footnote 20 of the FOO Model Bidding Document) and broader bidder participation.

10.9. The procurement complies with MoP Guidelines and Model Bidding Documents, as approved by RERC vide order dated 23.08.2023. The Change in Law provision aligns with the Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021, and the Late Payment Surcharge rate is set at MCLR + 2%. The proposed procurement is critical to avoid financial strain on the Discoms, which could lead to increased electricity charges, burdening consumers.

10.10. Petitioner submitted that deviations proposed are those which were already examined and approved by this Commission in its Order dated 23.08.2023 in Petition No. 2138/2023; no new deviation, modification or alteration is sought in the present case. The Petitioner has reiterated that these previously-approved deviations were necessitated to bring clarity to the eligibility criteria and commercial framework and that the same bidding framework is being retained without change for the present proposal of 500 MW.

10.11. This power procurement sought in the present petition is essential for the Petitioner to meet the power deficit assessed by the EAC in the year 2025-26 and onwards.

10.12. The CEA's RAP for Rajasthan up to FY 2029-30 and thereafter up to 2035-36 has been relied upon to assess the medium-term capacity shortages. As summarised in the petition, the CEA RAP projects that Rajasthan requires thermal capacity of about 18,520 MW by FY 2029-30 (17,698 MW coal and 822 MW gas) against the existing 13,775 MW capacity, implying a deficit of about 4,745 MW, broadly consistent with the Energy Assessment Committee (EAC)'s assessment of a requirement of around 5,007 MW. The RAP also indicates an annual short- to medium-term power requirement in the range of 1,687 MW to 6,029 MW across FY 2025-26 to FY 2035-36, demonstrating a continuing need for additional firm capacity in the medium term beyond already planned projects.

10.13. Energy Assessment Committee (EAC) recommendations:As per the minutes of the 34th Energy Assessment Committee meeting held on 16.05.2025 and the minutes of the 67th Board Meeting of RUVITL, it was decided to seek procurement of 500 MW RTC power on a medium-term basis. The EAC, having regard to the projected deficits and taking into account the RAP, recommended the procurement of 500 MW RTC power on medium-term basis (5 years) to address the assessed power deficit in FY 2025-26 onwards.

10.14. The EAC's recommendation of 500 MW RTC power is conservative in the context of an assessed requirement of about 1,000 MW RTC capacity; therefore, the present quantum is the minimum essential procurement, not an over-contracting.

10.15. The Board of RUVITL, in its 67th meeting held on 26.05.2025, approved the procurement of 500 MW RTC power in FY 2025-26 on medium-term (5-year) basis on a lump-sum tariff model under the MoP Guidelines, subject to approval of this Commission.

10.16. It is specifically averred in the petition that the proposed procurement is essential to meet the power deficit assessed by the EAC from FY 2025-26 onwards and that the Petitioner is strictly complying with the MoP Guidelines and using the standard Model Bidding Documents (with previously-approved deviations), as already recognized by the Commission in its earlier orders.

10.17. Further, the State Load Despatch Centre (SLDC), through its affidavit filed on 13.10.2025 in compliance with this Commission's direction, has expressly recorded that it has "no objection to the proposed procurement of 500 MW RTC power for 5 years as sought by the Petitioner", affirming that the proposed procurement is consistent with the power planning framework and supports the system requirement of the State.

10.18. In the view of above submissions Petitioner prayed to approve 500 MW power procurement for 5 years "Lump-Sum Tariff" on the basis of medium-term power procurement guidelines issued by the Ministry of Power, Government of India and corresponding model bidding documents with certain deviations earlier approved by the commission vide order dated 23.08.2023 prescribed therein under Section 86 (1) (b) of the Electricity Act, 2003.

11. Respondents RVPN and SLDC in their common reply and during the hearing have submitted as under:

11.1. The recommendation of the Energy Assessment Committee has been made after due consideration of the demand-supply position, project commissioning timelines, and future capacity additions. The procurement of 500 MW RTC power on a medium-term basis is necessary and justified to ensure reliable supply to the consumers and to maintain grid stability in the State.

11.2. Respondents SLDC and RVPN have no objection to the proposed procurement of 500 MW RTC power for 5 years as sought by the Petitioner, as it is consistent with the power planning framework and supports the overall system requirement of the State.

12. Stakeholders in their written reply and during the hearing have submitted as under:

12.1. Stakeholders submitted that EAC has assessed power requirement based on RAP of CEA, however from RAP it is observed that Rajasthan Discoms load varies hourly and it has month wise variation in energy requirement. Therefore, this 500 MW additional generation will not be required throughout the year. RTC power purchase will be in order for some months only but not appropriate for other months when RUVITL will have to either procure 500 MW and will effect sale of unutilised at throw away price during low load periods in grid or to effect lesser power scheduling for which fixed charges will be applicable. This will not be in proportion to schedule below contracted capacity. In both options, price payable for kWh of sent out power will be much more than bid tariff and may cross Rs.5.30 per KWh at which petition for 160 MW power purchase was rejected.

12.2. In view of this, RVUITL may review RTC power purchase and may consider following:

(i) For Morning and evening peak hours, 500 MW thermal power purchase for 4-5 months; or

(ii) Incorporate alternative in bid document of power purchase on long term basis from Solar power based stand-alone 3000MWh (=500 MWx6 h) BESS.

12.3. This will enable flexibility in scheduling of power purchase i.e power purchase for 4-5 months may be during peak hours or longer hours for other months during non-sun shine hours or solar+BESS power during off peak period and also during sun shine hours when solar generation is picking up in morning or is dropping during evening hours not matching with generator ramp rate. It will also serve future long term power requirement. Compared to sr.no. (i) Operating for part of day and part of the year, this may be economical and will also facilitate grid operation.(iii) combination of (i) and (ii) say in proportion to 50:50.

12.4. Further EAC has recommended procurement of 500 MW power on RTC basis up to FY29-30 only and EAC has not indicated period for this power purchase. RUVITL has filed petition for procurement of 3200 MW power purchase petition no. RERC/2298/2025, which is under considerations of the Commission. This 3200 MW power may be available in 42 months. Considering the same period for issuing LOI for 500 MW medium term RTC power purchase and 3200 MW long term power purchase, 500 MW power purchase requirement will be required for 42 months i.e. 3 year 6 months only. Thus proposed period of 5 years for medium term power purchase is longer than its requirement was recommended by EAC and it may be appropriate to consider 42 month's period for RTC power purchase and if required at that stage, then to have extension of contract under proviso of clause 3.1.1.

12.5. Petitioner has not clarified whether they have considered the Revival of 250 MW Giral lignite Thermal Power Plant (GLTPP) while filing this petition.

12.6. Stakeholders submitted that the petition is not admissible in view of new report of CEA RAP for long term basis FY 2025-2026 to 2035-2036 which clearly states that no RTC Power from coal/Lignite based thermal plant is not required during next five years, except already planned power 140 MW in 2025-2026 & 2395 MW in FY2029-2030 As such no purchase power on RTC from thermal plants are required.

12.7. Discoms are already not meeting targets of RPO, as such purchasing thermal power will further burden in compliance of RPO targets and hence not advisable to purchase thermal power.

12.8. Further the solar power with two hours peaking two times in a day is available R/s. 3.18per unit, as per RPA shortage of peak power and energy requirement can be met by procuring this power as this power is quite cheaper than thermal power, which is likely to cost around Rs. 5 per unit.

12.9. RUVN to provide month wise following data for FY24, FY 25 and Apr to July FY26:

a. Actual energy purchased (MU) along with data for energy Surplus / Deficit

b. Month wise Peak load demand for the same period.

12.10. RUVN to provide data for project wise expected contracted capacity growth in next 3 years.

12.11. Stakeholders submitted that RVPN to indicate feasible Grid connecting points where it can receive desired 500 MW RTC power. And transmission

charges of State and Central sector should be included in Rate to be quoted by bidder.

12.12. RUVITL has considered coal-based generation requirement of 500 MW for medium term period but no effort for assessment of power requirement and RE generation with storage has been made. With Rajasthan rich in solar power generation with large non-agricultural arid land, requirement of thermal generation can be reduced by energy storage.

12.13. Power shortage in peak hours can be managed by employing good practices of DSM and short to medium term specific peaking power can be managed from battery storage system.

12.14. The basis of purchase of RTC power is not indicated by Petitioner and is not reflected in their capacity expansion / demand plan. On other hand there is no energy requirement in next five years as per 20th EPS. There is minor manageable requirement with respect RUVIT projections of first three years. Therefore, there is no requirement of 500 MW RTC power.

12.15. CEA has also allowed not to retire any unit till 2029-30, therefore, RUVITL has to consider reasonable higher availability from old units.

12.16. Some projects which are likely to come up in next couple of years are not considered by RUVIT (not reported to CEA in RAP) are as under:

i. Revival of 1100 MW lignite based Power Plant in Rajasthan.
ii. 600 MW Gas based (330 MW- Dholpur& 270 MW Ramgarh Gas) stations is to be operated and bundled with 750 MW Solar by a Joint venture company of GAIL & RVUNL.
iii. 630 MW FDRE (Firm Dispatchable RE Power) by SECI for (2hrs each in morning and evening time) RUVIT Board approve this proposal on 26.05.2025.

iv. 6000 MW battery based Solar projects, KUSUM-C projects of 6000 MW.

12.17. If CEA has considered these generating projects while preparing RAP, than gap in Max Demand would have been positive.

12.18. With the shift of Agriculture load in day time by FY29, the max demand will shift in day hours and morning/evening peaks will also reduce.

12.19. PSA should have provision of full or part reduction (by assignment of capacity to third party or permitting generator to effect open access supply. etc) of contracted capacity if such need arises in future.

12.20. Contracted Capacity of Rajasthan upto March 2025 and proposed addition* in forthcoming Financial years (as provided by RUVITL in their reply) is as under:

Source				Contracted Capacity(MW) & proposed addition in Forthcoming years			
FY 25		FY 26*		FY 27*		FY 28*	
Thermal (Coal)		13425			140		
Gas				601			
Nuclear		457			700		
Hydro	1962		86		93		37
Wind				4566			
Solar		5623			3090		
DRE		678		2500		3000	
Biomass		182		14.9		6	
Total	**27494**		**6530.9**		**3099**		**37**
Battery		1000MW/2000MWh			1500MW/4000MWh		
MTOA/STOA				Data to be received			

12.21. Shortage of power due to low availability of state TPS is as under:

Source	Capacity (MW)	% Availability FY 25	Spared Capacity
STPS	1500	< 69 / 83 %	210 MW
SSCTPS	1320	< 67 / 85 %	238 MW
CSCTPS	1320	< 75 / 85 %	132 MW
KaTPS	1200	< 80 / 85 %	60 MW
Ramgarh Gas	270	< 20/ 70 %	50 MW (L.S.) gas shortage
Total		**690 MW**	

12.22. State Generation Company is running its power stations inefficiently and requirement of 500 MW is generated on account of it. It is required to improve upon operation of the power stations. It shall enhance capacity

generation by 690 MW. In case of its availability, the proposed capacity of 500 MW will be a burden to consumers.

12.23. Refer to Resource Adequacy Plan FY 26 to FY 36, Month wise average hourly demand (MW) in FY 24 is shown. This pattern is considered as a base for forthcoming years and assumed to remain similar. It may observed that Load demand remains 9000 MW to 13000 MW from 06:00 PM to 06:00 AM and 11000 MW to 17000 MW from 06:00 AM to 06:00 PM.

12.24. It may also be noted that, Load demand is high during day hours when availability of solar power meets the demand and thermal capacity is backed down, however no such issue in 2nd half during night hours and load is met with thermal(13565 MW), nuclear (1157 MW), gas(100 MW0, hydro(1962 MW) , Biomass (182 MW) and wind (4566 MW, Although uncertain availability but cannot be ignored) i.e. 21193 MW . This contracted capacity is adequate to meet 2nd half load (9000-13000 MW) of the day provided that state thermal power stations and Hydels are properly maintained and operated. Shortage of power can arise in early morning hours (0600 AM to 0900 AM) and evening hours (0400 PM to 0700 PM) occasionally for which suitable arrangements shall be looked for as per requirement.

12.25. To meet out this shortage , stakeholders suggested that

i. Battery Energy storage and Pump storage shall suitably be arranged,

ii. Available hydro power in state. RPS 172 MW and JS 99 MW are irrigation purpose dams and possibilities shall be explored to use on full capacity in peak hours. Also Mahi ph II 2x45 MW has storage reservoir and can be utilized in peak hours. Other mini micro Hydels are also to be taken care which is being ignored.

iii AT&C Losses in the state are quite high > 28%, Thus reduction of losses by 1% can add availability to about 140 MW RTC. Consumer need not to be burdened for inefficiency.

12.26. Power Management as available from various sources is needed to improve to meet demand load. For this all the power companies are required to coordinate as a team to meet out variable demand by feeding agriculture load in day time and manage flexible generation by state Genco.

12.27. Flexible operation of Coal based Thermal power stations (CTPS):

(i) SLDC / RUVNITL directs state coal TPS to lower load and boxing up of units as per load requirements.

(ii) Load requirements from TPS varies more frequently due to injection of solar/ wind power and actual requirements in day time however more steady in evening.

(iii) CEA directed for flexible operation of the CTPS and stable operation of up to 55% capacity and further amended to operate at 40% capacity and fast increase / decrease in generation with ramp up or ramp down @ 2-3% / minute of unit capacity.

(iv) Operation of Coal TPS at lower loads causes to increase Station Heat Rate (SHR) Auxiliary Power Consumption (APC) and Oil Consumption while restarting of units from boxing up.

12.28. CERC has decided Technical Minimum for operation of TPS and mechanism for compensation towards SHR and APC for running at lower capacity and Oil Consumption against restart of units if boxed up on

directions of SLDC or Load requirement. The aforesaid compensations are evaluated on cumulative monthly and annual basis.

12.29. All the state TPS should be directed to train for stable running on 40% capacity and ramp up / ramp down @ 2-3% .

12.30. RVUN to decide for boxing up or restart of units at their convenience in place of SLDC directions.

12.31. RVUN to maintain necessary spares stock for timely maintenance of equipments because running of TPS at lower capacity shall cause more wear and tear.

12.32. Stakeholders concluded that the requirement of 500 MW RTC power cannot be accepted and proper management of available capacity shall serve the load requirement.

13. In response to comments by the stakeholders the Petitioner has submitted as under:

13.1. The RAP by CEA provides a long-term indicative assessment that assumes around 5 to 6 years gestation period for new capacity. In preparing the RAP, the CEA has included capacity that is already planned or committed and is expected to be commissioned in the respective years mentioned in RAP. RAP also indicates an annual short to medium-term power requirement of 1,687 MW to 6,029 MW for each year from FY 2025–26 through FY 2035–36.

13.2. Concerns on RPO compliance:

(i) The proposed RTC procurement does not imply abandoning RPO obligations. In fact, Rajasthan DISCOMs are actively contracting renewable energy to meet RPO trajectories.

(ii) RTC procurement can be structured to include renewable energy blended with thermal to provide firm supply (as permitted under MoP guidelines), thereby supporting both reliability and RPO compliance.

(iii) Firm power from thermal sources acts as balancing support for variable renewables, ensuring grid stability and preventing curtailment of solar/wind.

(iv) The power from renewable sources shall not meet the RTC requirement as it will be available mostly during solar hours with assurance to store power for 2/4 hours. With the increased industrialisation & rapid urbanisation, base load requirement is also increasing and no new capacity has been tied up for meeting the increasing base load requirement for the next 5 years.

13.3. Restriction of coal utilization parameters in the tender documents:

(i) The tender documents do not aim to exclude bids from coal based project; rather, it specifies operational and environmental parameters in line with statutory norms to ensure efficiency, cost-effectiveness, and compliance with emission standards.

(ii) Such parameters are standard practice to safeguard consumer interest, and do not preclude coal-based supply within approved limits.

13.4. Cheaper alternative in terms of solar + storage power:

(i) The instant procurement is to meet out the base load requirement and it is further clarified that the tender is on Lump Sum Tariff model as per the Model Bidding Documents. Under the said model, the bidder can supply power from any source including Renewable and is not restricted to Thermal Power.

(ii) It is acknowledged that rate of Solar plus storage power has reduced and is currently available at a rate of approx. Rs 3.18 to 3.50 per unit. However, power from such sources shall be available only for two hours peaking two times in a day, i.e., only approx. 8 - 10% capacity utilization whereas most of the capacity shall be utilized during daytime (around 30 %) when power is available at a rate of approx. Rs. 2.50 to 2.70 per unit. Thus, effective rate of peak power from such source is envisaged at approx. Rs. 7.5 to Rs. 8 Rs/unit.

(iii) RTC procurement through competitive bidding process ensures firm, dispatchable capacity at all hours, complementing and enabling greater renewable integration at optimum cost.

(iv) The objective is not to choose between thermal and solar, but to maintain a balanced portfolio that ensures both cost efficiency and reliability.

13.5. Petitioner submitted that the commissioning of the first unit under the proposed 3200 MW power tender is scheduled to commence supply of power 42 months from the appointed date. The appointed date is defined as one year from the signing of the Power Purchase Agreement (PPA), with a provision for extension of up to 180 days. Currently, the bidding process for procuring power from the 3200 MW project is at an early stage and is expected to take approximately 4 to 6 months to conclude, subject to approval by the Commission. Therefore, a medium-term power procurement plan for five years is considered appropriate to prevent potential shortages, load shedding, or reliance on costly short-term market purchases. This approach is essential to ensure a continuous and reliable power supply to consumers.

13.6. It is clarified that the future projection of Availability by RUVITL/ RAP does not consider retirement of plants.

13.7. Further, the EAC has not accounted for power availability from the Giral power plant, as the project has been non-operational since 2016. Efforts to revive the units are hindered by the unavailability of fuel.

13.8. RAP has already considered the 600 MW gas based thermal power plants viz. Dholpur 330 MW & Ramgarh 270 MW, however due to lack of availability of economical APM gas their PLF is very low. If the gas based plants is operated during peak hours, it will operate in open cycle and effective rate will be approx. Rs. 15/kWh. Accordingly, even if such power is bundled with solar power shall be high making it unviable. The bundling of gas power plant with solar is the purview of generator.

13.9. Further, power from Solar and FDRE sources shall be available only during limited duration of the day and accordingly, certain percentage of RTC power is must for meeting base load requirement of the state as RTC power is essential to safeguard the state's energy security and grid stability, enabling greater integration of variable, intermittent renewable energy.

13.10. The tender documents require the supplier to commence power supply within 90 days of signing the PPA. Accordingly, it is expected that only the existing projects shall participate in the tender and such project shall already be connected to the grid. Further, the bidders shall be evaluated at RVPN periphery and accordingly, ISTS Transmission Charges and Losses applicable to the state shall be added to the quoted tariff of Inter-state suppliers to bring level playing field for both Intra and Inter State bidders.

14. SLDC and RVPN in their reply have submitted that they have no objection to the proposed procurement of 500 MW RTC power for 5 years as sought by the Petitioner as it is consistent with the power planning framework and supports the overall system requirement of the state.

Commission's view

15. The Commission has carefully considered the submissions, replies, written statements, and comments/suggestions submitted by the Petitioner and various Stakeholders, as well as the oral arguments advanced during the course of the proceedings. It has also examined in detail the revised amendments proposed in the Model Bidding Documents placed on record by the Petitioner and the views expressed by the Stakeholders thereon.

16. The Commission has duly taken note of all comments, suggestions, and observations furnished by the Stakeholders both in writing and during the hearing along with the responses and clarifications provided by the Petitioner. Every effort has been made to comprehensively capture and address these inputs in this Order. However, if any specific comment or suggestion is not expressly referred to, it shall not be construed as having been overlooked. The Commission affirms that all relevant issues raised by the Stakeholders, as well as the submissions and justifications offered by the Petitioner, have been thoroughly examined and duly taken into account while undertaking the detailed analysis presented in the subsequent paragraphs of this Order.

17. The Petitioner has filed instant petition seeking the Commission's approval for procurement of 500 MW Round-the-Clock (RTC) power for a period of five years, through a competitive bidding process based on the MoP's Guidelines dated 29.01.2019 for medium-term procurement under the Finance, Own and Operate (FOO) model, along with the corresponding Model Bidding Documents (RFQ, RFP and APP) and the deviations already approved by the Commission in Order dated 23.08.2023. The Petitioner has stated that this procurement is necessitated due to the power deficit assessed by the Energy Assessment Committee (EAC), which projected cumulative base-load shortfall rising to 1021 MW in FY 2025-26 and further

increasing in subsequent years, prompting the Government of Rajasthan to approve phased procurement of RTC power starting 2023-24.

18. The Petitioner further submitted that earlier approval for 160 MW RTC procurement had already been granted by the Commission, though the corresponding tender was cancelled due to high tariff discovery. Subsequently, with the issuance of Resource Adequacy Planning (RAP) Guidelines by the Ministry of Power and the CEA's RAP 2024 for Rajasthan, the requirement for additional tied-up firm capacity has been reaffirmed. The CEA's RAP 2024 indicates adeficit in thermal capacity by FY 2029-30, aligning with the EAC's assessment, and the EAC in its 34th meeting dated 16.05.2025 recommended procurement of 500 MW RTC power for five years. The Petitioner's Board has accordingly approved this procurement on a lump-sum tariff basis, which includes a fixed charge and a base variable charge and is fuel-agnostic, allowing supply from thermal, renewable or hybrid sources, consistent with Footnote 20 of the FOO Model Bidding Documents.

19. The Petitioner has submitted that the proposed procurement complies with the MoP guidelines, ensures competitive tariff discovery, aligns with Change in Law and LPS rules, and is critical to prevent shortfalls in meeting the State's base load. It has therefore prayed that the Commission approve procurement of 500 MW RTC power for five years under Section 86(1)(b) of the Electricity Act, 2003, using the Model Bidding Documents with deviations already approved by the Commission, to ensure reliable supply and protect consumers from price volatility and load-shedding risks.

20. The Respondents, RVPN and SLDC, in their common reply and during the hearing, submitted that the recommendations of the Energy Assessment Committee were made after duly considering the prevailing demand–supply position, the commissioning timelines of upcoming projects, and the

anticipated future capacity additions. They stated that procurement of 500 MW RTC power on a medium-term basis is both necessary and justified to ensure reliable supply to consumers and to maintain grid stability in the State. Accordingly, RVPN and SLDC expressed that they have no objection to the Petitioner's proposal, as the procurement aligns with the established power planning framework and adequately supports the overall system requirements of Rajasthan.

21. The Stakeholders, in their written submissions and during the hearing, contended that the EAC's assessment and the CEA's RAP indicate significant hourly and seasonal variation in the State's load profile, and therefore a uniform 500 MW RTC procurement would not be required throughout the year. They argued that such procurement may result in periods where the contracted power remains underutilised, compelling RUVITL either to sell surplus power at throwaway prices or to schedule below contracted levels while still bearing fixed charges. Stakeholders suggested that instead of a constant annual RTC contract, RUVITL may consider seasonal procurement for 4–5 peak months or explore options such as long-term Solar + BESS, which would provide greater flexibility for managing peak demand and improving economic efficiency.

22. Several Stakeholders also submitted that the EAC had recommended procurement of 500 MW RTC power only up to FY 2029-30, without specifying a five-year duration. They noted that RUVITL has already filed a separate petition for 3200 MW long-term power, expected to commence supply within approximately 42 months. Therefore, according to them, the present procurement may only be required for a period of 3.5 years, and the proposed five-year term is not aligned with system requirements. They further raised concerns regarding non-consideration of potential upcoming capacity additions such as revival of lignite-based plants, gas-solar hybrid

projects, SECI's FDRE capacity, and large battery-based solar additions, which, if included in the RAP, would reduce or eliminate the projected deficit.

23. Stakeholders additionally argued that reliance on RTC thermal power would adversely impact RPO compliance, especially when the State is already lagging in achieving mandated targets. They maintained that alternatives such as solar + storage, demand-side management, flexible operation of State thermal units, utilisation of available hydro resources during peak hours, and reduction of high AT&C losses could address peak shortages more effectively. They also submitted that, according to the latest RAP, no additional thermal RTC capacity is required in the next five years beyond what is already planned, and that increased availability of existing generating units particularly since no retirement is permitted until 2029-30should be factored in before contracting new thermal capacity.

24. A concern was also raised about transmission and operational readiness, suggesting that RVPN should identify feasible interconnection points for receiving 500 MW RTC power and that State and Central transmission charges should be mandatorily included in the tariff quoted by bidders. Overall, the Stakeholders submitted that the present proposal lacks adequate justification in light of renewable expansion, evolving demand patterns, DSM potential, and upcoming generation resources, and therefore may not be required in its present form.

25. The petitioner also submitted that the EAC, in its meeting dated 16.05.2025, resolved to adopt the Resource Adequacy Plan (RAP) prepared by the CEA for Rajasthan. Considering the year-to-year power deficit, the EAC recommended procurement of 500 MW Round-the-Clock (RTC) power on a medium-term basis, i.e., for 5 years. The petitioner further submitted that the Board of RUVITL, in its meeting dated 26.05.2025, accorded approval for the

procurement of 500 MW power in FY 2025-26 for a medium-term period of 5 years, on a lump-sum tariff basis, as per the guidelines issued by the Ministry of Power (MoP).

26. Relevant para of the minutes of the EAC dated 16.05.2025 is reproduced hereunder:

> *"…….*
> *2 . There is a year wise requirement of additional RTC capacity to meet the base load of the discoms. The proposed thermal power projects are not expected before FY 2029-30, considering the timeline for completion of various coal based power plants, the committee recommended to procure 500 MW RTC power on medium term basis to meet the base load of the Discoms.*
> *……."*

27. Relevant para of the meeting of Board of RUVITL dated 26.05.2025 is reproduced hereunder:

> *"……*
> *9.4 After detailed deliberations, the Board unanimously passed the following resolution for the purpose:*
>
> *"Resolved that subject to the approval of RERC, the consent of Board be and is hereby accorded for procurement of 500 MW RTC power in FY 2025-26 for medium term i.e. 5 years on Lump sum tariff basis as per the guidelines issued by MoP ,GoI."*
> *……"*

28. The petitioner also submitted that they will adopt a fuel-agnostic lump-sum tariff approach, encompassing all fuel options, to ensure the most competitive tariff discovery. It was further submitted that Footnote 20 of the FOO Model Bidding Documents (MBD) specifies that the lump-sum tariff includes the supply of electricity irrespective of the source of fuel, including renewable sources of energy.

29. The Commission observed that the CEA has issued the Resource Adequacy Plan (RAP) 2024 for the period up to 2031-32 for the State of Rajasthan. The RAP highlights that, based on the monthly pattern of unserved energy for

the year 2029-30, unserved energy is likely during the winter months when the contracted capacity, including the existing, planned and additional renewable energy capacities required for meeting RPO obligations, is unable to meet the projected demand. To address this issue, various energy investment options including short term/medium term have been evaluated to identify the least-cost optimal capacity mix needed to meet the projected demand up to 2031-32. The RAP further notes that the seasonal STOA/MTOA requirement may be met through procurement from power exchanges or bilateral agreements.

30. The Commission notes that the latest Resource Adequacy Plan (RAP) 2025 issued by the CEA for the period up to 2035-36 projects the optimal contracted capacity required for Rajasthan to reliably meet its future peak and energy demand. The RAP 2025 states that the optimal capacity mix identified through long-term studies is capable of meeting demand at every instance while adhering to the prescribed reliability criteria.

31. The RAP also presents the year-wise source-wise capacity requirement and emphasizes that the STOA/MTOA requirement reflects seasonal needs, which are to be met through power exchanges or bilateral arrangements. This is consistent with the earlier RAP 2024, which had similarly concluded that Rajasthan would need to depend upon market-based procurement or bilateral contracts to meet short-term and medium-term resource adequacy gaps when planned and contracted capacities fall short.

32. The Commission would like to reiterate the observations recorded in RAP-2024 and RAP-2025 regarding the utilisation of Short-Term Open Access (STOA) and Medium-Term Open Access (MTOA) for addressing the State's temporal and seasonal demand variations. Both reports are fully consistent in recognising that Rajasthan faces shortages predominantly during specific

months, while the availability during non-peak periods remains largely adequate.

33. The Commission also observes that while examining the requirement of firm power, we are required to strike a careful balance between protecting consumer interest through procurement of affordable power and ensuring grid safety and system stability. In this regard, it is noted that Rajasthan is witnessing very high penetration of renewable energy, particularly solar and wind, which are inherently variable and intermittent in nature. Such variability, if not adequately balanced, poses operational challenges to the grid. Accordingly, the adequate availability of firm and dispatchable power assumes critical importance for balancing renewable energy variability, maintaining frequency discipline, and ensuring secure and reliable grid operation. Therefore, considerations of cost prudence must be viewed in conjunction with the overarching requirement of grid safety and stability, especially in a high renewable penetration State like Rajasthan.

34. In this context, the Commission considers it necessary to refer to the Order dated 14.08.2023 passed by the Central Electricity Regulatory Commission (CERC) in Petition No. 156/MP/2022 (Northern Region Load Despatch Centre vs. STUs/SLDCs of Northern Region). In the said order, CERC categorically emphasised that repeated over-drawal from the grid, particularly during low-frequency conditions, poses a serious threat to grid security and highlighted the regulatory expectation that States must maintain adequate contracted resources, avoid excessive dependence on short-term market purchases, and strengthen resource adequacy planning.

35. The analysis in the said order brings out the operational risks faced by States, including Rajasthan, during periods of high demand and supply stress. CERC specifically observed that Rajasthan, being the State with the highest renewable energy penetration in the country, has a uniquely stressed grid

profile due to the intermittent and variable nature of solar and wind generation concentrated in regions such as Bhadla, Jaisalmer and Bikaner. The State, as part of the Northern Regional Grid, experienced prolonged low-frequency operation during March–April 2022, with frequency remaining below 49.90 Hz for extended hours and even touching 49.5 Hz, thereby placing the system in an Insecure State. The order further records that Rajasthan materially contributed to the stressed conditions by remaining in over-drawal for a substantial portion of the period and by over-drawing even when grid frequency was below critical thresholds.

36. In view of the above, the Commission observes that Rajasthan's high dependence on renewable generation, coupled with the absence of significant pumped storage potential, limits its ability to support the grid during periods of sharp demand–supply imbalance. In such circumstances, the adequate availability of firm and dispatchable Round-the-Clock (RTC) power assumes importance for maintaining grid stability and improving frequency discipline. While the Energy Assessment Committee (EAC) has recommended medium-term RTC procurement of 500 MW to address emerging deficits, the Commission is of the considered view that any such procurement must be proportionate, demand-linked, and aligned with the seasonal nature of shortages identified in the RAPs, so as to balance grid security requirements with consumer tariff prudence.

37. The Commission notes that vide its Orders dated 31.03.2023 and 23.08.2023, approval was granted for procurement of 160 MW of firm power, including specific deviations from the Model Bidding Documents, after detailed consideration of the State's demand–supply position, grid requirements, and consumer interest. The said approval was based on the assessment prevailing at that time and was intended to provide limited but firm support

to the State's power system. However, the procurement of the said capacity has not yet materialised.

38. The Commission observes that the Discoms have submitted that the procurement process for the approved 160 MW could not be finalised on account of the high tariff discovered after the Tariff Based Competitive Bidding (TBCB) process.

39. The Commission notes that both RAP 2024 and RAP 2025 consistently indicate that Rajasthan's power deficits are seasonal and peak-oriented, particularly during winter months and specific peak hours, and therefore highlight the role of STOA and MTOA for addressing such requirements through market-based or bilateral arrangements. At the same time, the Commission observes that while looking at requirement of firm power we cannot undermine the necessity of firm and dispatchable capacity for maintaining grid stability, frequency discipline, and system reliability, especially in a State like Rajasthan with very high renewable energy penetration, where balancing the variability of renewable generation remains a critical operational requirement.

40. The Commission is therefore of the considered view that while large-scale round-the-clock (RTC) procurement, such as the proposed 500 MW, may not be justified in light of the seasonal nature of the deficits identified in the RAPs, a limited quantum of RTC or firm power is nevertheless essential to provide baseline grid support and operational flexibility.

41. In this context, the already approved 160 MW of firm power vide orders dated 31.03.2023 and 23.08.2023, represents a balanced and proportionate approach and it serves as a middle path. The Commission notes that procurement of 160 MW would contribute to strengthening grid stability, reducing exposure to volatile exchange prices during peak stress periods,

and improving frequency discipline, while at the same time limiting the fixed cost burden on consumers, if arises. Such limited procurement is consistent with the principles of prudence, proportionality, and demand-linked planning reflected in both RAP 2024 and RAP 2025.

42. Accordingly, while the Commission is not inclined to approve the procurement of 500 MW RTC power as proposed, it finds it appropriate to reiterate and uphold the approval for procurement of 160 MW firm power, strictly in terms of the conditions and deviations already allowed vide Orders dated 31.03.2023 and 23.08.2023.

43. The Commission further clarifies that if, based on updated demand projections and detailed analysis in line with RAP 2024 and RAP 2025, the Discoms identify any additional seasonal or peak-period power requirement, they may approach the Commission with a separate, well-substantiated proposal, supported by a comprehensive demand supply study, justification of quantum and duration, and assessment of consumer tariff impact.

44. The petition is disposed of accordingly.

(Hemant Kumar Jain)
Member

(Dr. Rajesh Sharma)
Chairman