



ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION

Vidyut Niyantrana Bhavan, Adjacent to 220/132/33 kV AP Carbides Sub-Station,
Dinnedevarapadu Road, Kurnool-518002, Andhra Pradesh

**TUESDAY, THE THIRTIETHDAY OF JUNE
TWO THOUSAND AND TWENTY SIX**

(30.06.2026)

Present

Sri P.V.R.Reddy,
Member & Chairman i/c

O.P.No.18 of 2026

In the matter of granting approval for the tripartite Battery Energy Storage Purchase Agreements (BESPAs) executed between developers, APTRANSCO and APDISCOMS on 30.03.2026 & 06.04.2026 for procurement of 1000 MW/2000 MWh BESS capacity on long term basis for a period of 12 years from the Commercial Operation Date (COD) and for adoption of tariff discovered under Section 63 of the Electricity Act, 2003, in accordance with APERC Conduct of Business Regulations, 1999, the AP Electricity Reform Act, 1998 and Sections 62, 63 & 86 of the Electricity Act, 2003.

Between

- 1. Andhra Pradesh Central Power Distribution Corporation Limited (APCPDCL)**
- 2. Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL)**
- 3. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL)**

... Petitioners

And

- 1. Bondada Hindupur BESS Project Private Limited**
- 2. Brahmasagar Renewables Private Limited**
- 3. POWERGRID Energy Services Limited**
- 4. Bhagawati Green Energy P1 Pvt Ltd**
- 5. Legion Energy BESS-Simhachalam Private Limited**
- 6. Gajuwaka BESS IPP Private Limited**
- 7. Transmission Corporation of Andhra Pradesh Limited (APTRANSCO)**

... Respondents

The Original Petition has come up for final hearing on 10.06.2026 in the presence of Sri Ch. Babu Rao, State Secretariat Member, CPI (M); Sri M.Venugopala Rao, Senior Journalist; Sri T.S. Rajasekhar Reddy, GM/IPC&RAC/APSPDCL; Sri L. Mahendranath, CGM/RAC&PP/APEPDCL; Sri G. Vamsee Mohan, DGM/APPCC; Smt. P.Jyostna Rani, DGM/Regulatory Affairs/APTRANSCO; Sri. B.H. Surya Narayana Rao, DEE/RAC/APTRANSCO; Sri R. Rama Krishna Dy.EE (the Petitioners hereinafter are referred to as APDISCOMs or the DISCOMs). After hearing all the parties and after carefully considering the material available on record, the Commission passes the following:

ORDER

1. APCPDCL, on behalf of all the DISCOMs, filed the present Petition dated 06.04.2026 requesting the Commission to approve the tripartite BESPAs executed between developers, APTRANSCO and APDISCOMS on 30.03.2026 & 06.04.2026 for procurement of 1000 MW/2000 MWh BESS capacity on long term basis for a period of 12 years from the COD and for adoption of tariff discovered under Section 63 of the Electricity Act, 2003, in accordance with APERC Conduct of Business Regulations, 1999, the AP Electricity Reform Act, 1998 and Sections 62, 63 & 86 of the Electricity Act, 2003. The Commission admitted the Petition, and numbered it as O.P. No. 18 of 2026.
2. The Commission posted a Public Notice on its website on 22.04.2026, along with copies of the Petition and the related material, inviting views/objections/suggestions, if any, from interested persons and stakeholders, to be submitted to the Secretary/APERC by 13.05.2026. Further, the Petitioners and Respondents were directed to submit replies to the views/objections/suggestions received, if any, by 25.05.2026. In response to the Public Notice, 3 persons submitted their views/objections/suggestions. Through the Public Notice dated 26.05.2026 posted on its website, the Commission intimated that the Public Hearing on the Petition will be held from 11.00 AM onwards on 10.06.2026 in the

Court Hall of APERC at Kurnool in both in-person and online modes. Accordingly, the Commission conducted the public hearing on 10.06.2026.

Background:

- 3.** APCPDCL, acting on behalf of all DISCOMs and vide the letter dated 05.05.2025, requested the Commission's consent for setting up an additional 1500 MWh of BESS capacity under the Viability Gap Funding (VGF) scheme. The gist of the letter is as follows:
 - A.** While the Commission previously gave in-principle approval for 1000 MWh, the Ministry of Power (MoP) has now allocated an additional 1500 MWh to Andhra Pradesh
 - B.** The project is proposed under the VGF scheme through Power System Development Funding (PSDF), with a proposed VGF amount of ₹18 Lakhs per MWh provided by the Government of India (GoI).
 - C.** APDISCOMs will provide the necessary input power for charging these batteries during solar hours.
 - D.** The GoAP has officially requested the GoI to allocate 500 MWh of capacity, in addition to the initial allocation above, to accommodate upcoming solar projects.
- 4.** The Commission, vide the letter dated 15.05.2025, granted in-principle approval to the DISCOMs' proposal based on the following key considerations:
 - A.** The GoI and GoAP's initiative to develop storage systems for hassle-free integration of renewable energy.
 - B.** The Commission's earlier directions to the DISCOMs in the Resource Plan Order dated 27.06.2024 (for the 5th and 6th control periods) to explore BESS or pumped storage for intra-day energy banking.
 - C.** The surplus power during solar hours and the shortage during morning and evening hours.
 - D.** The advantage of tariff reduction for energy storage due to VGF.

Additionally, the Commission observed that according to the MoP document, the Levelised Cost of Storage (LCoS) for a 4-hour, single-cycle BESS is approximately ₹4.75/kWh after VGF. Consequently, the Commission directed the DISCOMs to utilise the BESS for two cycles daily, charging it with lower-cost input power to address morning and evening deficits, thereby reducing the effective cost of energy storage and optimising total power procurement costs.

5. In the letter dated 27.06.2025, APCPDCL, on behalf of all DISCOMs, informed the Commission that the MoP approved the setting up of an additional 500 MWh BESS by AP under the VGF Scheme, apart from the already sanctioned 1500 MWh. Consequently, the DISCOMs requested the Commission to consider 2000 MWh of BESS capacity in place of the 1500 MWh already approved by the Commission vide letter dated 15.05.2025 and to permit them to proceed further.
6. The Commission, vide letter dated 04.07.2025, approved the additional 500 MWh of BESS capacity and directed the DISCOMS to ensure that the procurement of the proposed 2000 MWh of BESS services is not inferior to the first 1000 MWh of BESS services through the NHPC as BIA.
7. In the letter dated 30.07.2025, APTRANSCO stated that the GoAP, vide GO Ms No. 66, Energy (Power-III) Department, dated 28.07.2025, authorised it to act as the Bidding and Nodal Agency for the deployment of the above BESS, i.e., to float tenders, identify L1 bidders, and enter into BESPA with the DISCOMs and the BESS developers as per the terms and conditions of RfS. Therefore, it requested the Commission to approve APTRANSCO to act as the Bidding and Nodal Agency for the implementation of the 2000 MWh BESS projects. In the letter dated 01.08.2026, the Commission authorised APTRANSCO to act as the Bidding and Nodal Agency for the implementation of the said BESS projects.
8. APDISCOMs, vide letter dated 18.12.2025, informed the Commission that APTRANSCO invited tenders on behalf of APDISCOMs for the selection of developers for the setting up of 1000 MW/2000 MWh BESS projects and

discovered the lowest rates offered by the 7 successful bidders after evaluation of the bidding process and subsequent e-reverse auction as detailed in the following table:

S.No	Name of Substation/Project	Project Capacity	L1 Bidder Name	Discovered Price (L1) (₹/MW/Month)
1	400/220 kV SS Hindupur	225 MW/450 MWh	Bondada Engineering Ltd, Hyderabad	1,63,999/-
2	400/220 kV SS Talaricheruvu	275 MW/550 MWh	Consortium of Sudhakara Infratech Ltd and Ecoren Energy India Pvt Ltd	1,50,000/-
3	400/220 kV SS Kalikiri	150 MW/300 MWh	PGCIL, Gurugram	1,64,000/-
4	220/132 kV SS Pampanuruthanda	225 MW/450 MWh	Consortium of Sudhakara Infratech Limited and Ecoren Energy India Pvt Ltd	1,65,000/-
5	400/220 kV SS Maradam	75 MW/150 MWh	Bhagawati Lacto Vegetarian Exports (P) Ltd, Punjab	1,50,000/-
6	132/33 kV SS Simhachalam	25 MW/50 MWh	Legion Energy Products Pvt Ltd, Bangalore	1,50,000/-
7	132/33 kV SS Gajuwaka	25 MW/50 MWh	SVR Electro Projects Pvt Ltd, Hyderabad	1,48,000/-

After stating the above, the DISCOMs requested the Commission's consent to the tariffs discovered through e-RA and to enter into a tripartite BESPAs with the developers, APTRANSCO.

9. The Commission, vide the letter dated 07.01.2026, permitted the DISCOMs to initiate further steps and enter into the requisite agreements, including BESPAs, with the successful bidders and APTRANSCO, subject to the following conditions:

A. APTRANSCO shall develop the requisite evacuation and connectivity infrastructure, including, but not limited to, the extension of EHT buses, installation of power transformers, formation of LV buses and associated bays, at the identified substations for the integration of the BESS projects. Any delay in the readiness of the transmission

infrastructure attributable to the STU/transmission licensee is beyond the BESS developers' control and will affect the Scheduled Commissioning Date. Therefore, the DISCOMs shall pursue with APTRANSCO, for the undertaking and completion of the infrastructure works strictly in line with the BESS requirements and within the timelines envisaged under the RfS and agreements. Furthermore, the necessity of extending the 220 kV Bus and installing separate PTRs to integrate the BESS, whose interconnection point is at 33 kV, should be reviewed in accordance with the agreements, as this will save time and significantly reduce integration costs.

- B.** As per the terms of the agreements, within 120 days after the Effective Date of the BESPAs, APDISCOMS shall obtain the Commission's adoption of the tariff on the terms and conditions set out in the Agreements, read with those set out in the RfS. If the Commission does not issue the order to adopt the tariff as mentioned above within the specified period, it will result in a corresponding extension of the Scheduled Financial Closure and the Scheduled Commissioning Date of the Projects by the number of days the order is delayed beyond the deadline. Therefore, APDISCOMS were directed to approach the Commission promptly after entering into the tripartite BESPAs with the developers and APTRANSCO by filing appropriate petitions seeking approval/adoption of the discovered tariffs, along with the executed agreements.
- C.** The consent given is only to enter into the agreements and shall not be construed as approval of the tariffs or commercial terms. Final approval of tariffs and related contracts shall be subject to a separate order of the Commission, which will be issued after completion of the due regulatory process upon filing of a petition by the DISCOMs.

Gist of the Petition:

- 10.** Accordingly, the DISCOMs filed the present Petition. The submissions in the Petition, in brief, apart from that already stated above, are as follows:

- A.** The MoP allocated 2000 MWh of BESS capacity to Andhra Pradesh under the VGF scheme (initially 1500 MWh, plus an additional 500 MWh). The Commission granted in-principle approval for 2000 MWh. The GoAP authorised APTRANSCO as the implementing and bidding agency , with the Commission's approval following. APTRANSCO conducted tariff-based competitive bidding via the Bharat ETS portal, followed by an e-reverse auction.
- B.** Letters of Award were issued in December 2025. The BESPAs were signed with the respective Special Purpose Vehicles (SPVs) of the L1 bidders. Key Terms of the BESPAs are:
- I. Effective Date: 30.03.2026/06.04.2026.
 - II. Scheduled COD: 18 months from BESPAs.
 - III. Operation: 2 full charge-discharge cycles per day.
 - IV. Round Trip Efficiency (RtE): Guaranteed 85% monthly.
 - V. Penalties for efficiency below 85%.
 - VI. Incentive of ₹0.50 per unit for efficiency above 85%.
 - VII. Availability: Minimum 95% annual average.
 - VIII. Capacity Degradation: Gradual reduction allowed (down to 70% by the end of year twelve).
 - IX. Scheduling: By APSLDC on behalf of the DISCOMs.
 - X. Early Commissioning: Allowed with payment of applicable tariff.
- C.** APTRANSCO is responsible for providing power evacuation infrastructure up to 33 kV level within 18 months; otherwise, it must reimburse BESS charges. Condition precedent: APERC tariff adoption within 120 days of BESPAs execution. All bidding documents (event list, amendments, evaluation report, and auction snapshots, BESPAs) have been submitted to demonstrate transparency.
- D.** The Commission is requested to approve the BESPAs and adopt the competitively discovered tariff.

Views/Objections/Suggestions (related to the BESS)

(List of Objectors is as per Annexure-I)

11. Sri M. Venugopala Rao and two others (submitted on 04.05.2026)

- A.** The current petition for final tariff approval is largely a formality, since the Commission had already allowed the process to proceed without public consultation.
- B.** How much energy will the seven selected companies supply during peak hours (morning and evening), and what are their individual tariffs?
- C.** Will BESS store and supply only solar power, or will surplus thermal power also be used?
- D.** What are the specific hours of power supply under the proposed BESS arrangements?
- E.** How do the tariffs discovered in this tender compare with the BESS tariffs previously approved by the Commission? (Increase or decrease?).
- F.** PGCIL is one of the successful bidders. By appointing APTRANSCO as the nodal agency for tendering, the scope for APTRANSCO itself to participate in bidding and set up BESS units in Andhra Pradesh has been eliminated.
- G.** Question on why APGENCO and APDISCOMs cannot also participate in competitive bidding to set up BESS projects in the state.

Reply of APDISCOMs:

- A.** BESS developers must supply the grid with 4000 MWh per day at 95% availability during peak hours. Charging will be done during surplus power periods as per the schedules given by APSLDC. DISCOMs supply input power for charging. Round-trip efficiency: 85% (as per RfS). One MW BESS can deliver 2 MWh per cycle $\times$ 2 cycles/day = 4 MWh/day or 120 MWh per month. Example calculation (Pampanur thanda): Storage cost $\approx$ ₹1.375/kWh in the first year. The other 6 projects have lower per-unit storage cost.

- B.** The storage tariffs for the current 1000 MW/2000 MWh BESS projects are lower than those for the earlier 500 MW/1000 MWh BESS projects approved under VGF.
- C.** APTRANSCO conducted the bidding on behalf of APDISCOMs through the Bharat e-portal. Participation of APGENCO was left to APGENCO's discretion. In future tenders initiated by APDISCOMs, APGENCO will also be informed and allowed to participate.

12. Sri M. Venugopala Rao (submitted on 09.06.2026)

- A.** APTRANSCO finalised prices for the 7 selected companies range from ₹1,48,000 to ₹1,65,000 per MW per month. Why could APTRANSCO not negotiate with the other six companies to bring their prices down to the level of the lowest bidder? Reasons for the price variation have not been explained.
- B.** If the bidding for both cases (earlier 500 MW/1000 MWh approved by the Commission and the present BESS) had been combined, the state would have saved ₹413.827 Crores, plus 0.5% of the earlier allowed capacity charges, due to the falling BESS capital costs in the market.

13. During the Public Hearing on 10.06.2026, Sri G. Vamsee Mohan, DGM/APPCC, representing APDISCOMs, made a presentation on the Petition filed by APDISCOMs. The highlights of the presentation are:

- A.** Andhra Pradesh has significant renewable energy capacity (installed ~12 GW, with ~8.5 GW tied up by the DISCOMs). It is committed to achieving 50% RE in its energy mix, in line with the Central and State targets.
- B.** Grid demand is growing rapidly (~8% annually) due to data centres, green hydrogen hubs, RE manufacturing units, and PSPs.
- C.** High RE penetration is causing stress on the grid during morning and evening peak hours when RE generation is low.

- D.** BESS are essential for storing surplus RE during off-peak hours and discharging it during peak hours to ensure grid stability and a reliable, economical power supply.
- E.** The MoP allocated 1000 MW/2000 MWh of BESS capacity under the VGF support of ₹18 lakh per MW. This is in addition to the already approved 500 MW/1000 MWh capacity processed earlier through NHPC.
- F.** With in-principle approval from APERC and GoAP approval, APTRANSCO conducted a transparent tariff-based competitive bidding on the Bharat E-Portal. Twenty-three bidders participated. A reverse auction was conducted after technical evaluation. After the reverse auction, the discovered tariffs ranged from ₹1.48 lakh to ₹1.65 lakh per MW per month. The discovered prices are reasonable, especially after factoring in the ₹18 lakh per MW VGF support.
- G.** These prices are substantially lower than the earlier NHPC-conducted bidding (which ranged from ₹2.08 lakh to ₹2.22 lakh per MW per month).
- H.** The Commission is requested to approve the seven tripartite agreements entered into by APDISCOMs with APTRANSCO and the successful developers, and to adopt the tariffs determined through the competitive bidding process.

14. Further, during the Public Hearing, Sri Ch. Baburao from CPI(M) and Sri M. Venugopala Rao orally submitted the following views/objections /suggestions:

Sri Ch. Babu Rao:

- A.** BESS is essential given the evolving needs of the grid, particularly for managing peak demand.
- B.** Stakeholder consultation on all options and in-principle approvals before processing tenders would enable more comprehensive

decision-making. The Commission is urged to adopt this practice for future proceedings.

- C.** Renewable energy costs have fallen sharply over the past 20 years. Given rapid technological advances and declining capital expenses, a 12-year commitment warrants scrutiny, as fixed rates may burden consumers. Shorter terms of 5 to 7 years are advisable to better leverage future progress.
- D.** Welcomed the reduction from ₹2.08–2.22 lakh (previous BESS) to ₹1.48–1.65 lakh (the present BESS), but questioned why earlier rates for 500 MW/1000 MWh BESS were high.
- E.** Pointed out that the same company quoted differently at different locations; requested deeper scrutiny.
- F.** Questioned why state companies were not allowed to participate; wanted them included in future.
- G.** The lowest bid is ₹1.48 lakh. Taking that as the basis, the Commission should examine how much further reduction is possible to reduce the burden on consumers.
- H.** Beyond BESS, Pumped Hydro Storage offers more economical power generation. Given the range of available technologies and BESS's peak-hour advantages, future efforts should also integrate emerging solutions, such as pumped-storage systems.
- I.** Raised concerns about BESS fire/explosion risks (citing international incidents).

Sri M. Venugopala Rao:

- A.** While APTRANSCO conducted the bidding and reverse auction, the effectiveness of the negotiations is doubtful. Out of twenty-three bidders, seven were selected. Prices were reduced through a reverse auction, but full details of the original quoted prices versus the final negotiated prices are not transparently disclosed in the petition. APTRANSCO should have negotiated more aggressively with the other

six companies to bring their prices closer to the lowest bid (₹1.48 lakh vs up to ₹1.65 lakh per MW per month).

- B.** Highlighted the sharp fall in BESS charges within a few months: OP No. 65 (2025): Average $\approx$ ₹2,13,333 per MW per month versus OP No. 18 (2026): Average $\approx$ ₹1,55,857 per MW per month. The calculated savings would have been ₹413.82 Crores over 12 years (for 500 MW) if the two tenders had been combined. This proves that the Commission's earlier rejection of the "wait-and-see" argument (on falling battery prices) was incorrect.
- C.** Strongly questioned the claim that only cheap solar power will be stored. Due to the surplus of available thermal power (due to the must-run status of solar plants), high-variable-cost thermal power is likely to be stored and discharged during peak hours and called for clarity on what is actually being stored and supplied.
- D.** Suggested shorter agreements (5–6 years) so the State can benefit from rapidly falling battery prices in the future. Suggested applying average charges based on the useful life of the BESS instead of locking in higher initial rates for 12 years
- E.** Questioned the very need for large-scale BESS when there is already surplus power and a limited requirement for market purchases.
- F.** Urged the Commission to take a holistic view rather than accepting simplistic comparisons (BESS + solar vs market/exchange prices).
- G.** Requested the Commission to examine all interlinked issues thoroughly and issue prudent directions in the interest of consumers

Commission's Analysis and Decision

- 15.** Andhra Pradesh is a Renewable Energy (RE) rich state with a significant installed base of wind and solar power. While this supports decarbonization, it creates severe daily grid management challenges: Solar generation peaks in the middle of the day, when overall power demand is

relatively low. This leads to a massive surplus of daytime energy, causing a deep "belly" in net demand known as the "duck curve".

- 16.** As the sun sets, solar generation drops to zero precisely when the state's evening peak demand surges. The grid requires steeply ramping resources to address this sudden deficit. Without storage, the state has to curtail (waste) free daytime solar energy (in extreme cases, since solar generation is a must-run) or back down thermal generation to keep the grid stable, while simultaneously purchasing extremely expensive power from the short-term spot market to meet evening demand.
- 17.** Recognising these issues, the APERC's Resource Plan Order dated 27.06.2024 for the 5th and 6th control periods explicitly recommended that APDISCOMs contract BESS capacity to manage intra-day banking—storing cheap daytime solar surplus and discharging it to mitigate morning and evening shortages.
- 18.** The necessity of BESS is not merely a state-level preference; it is a foundational requirement mandated by the Central Electricity Authority (CEA) for the national grid's survival. To safely integrate India's target of 500 GW of non-fossil capacity by 2030, the CEA's updated Optimal Generation Mix report mandates deploying 41.65 GW of BESS capacity and 208.25 GWh of BESS storage nationwide. BESS is no longer an optional accessory; it is a mandatory grid asset for balancing intermittent renewable sources.
- 19.** GRID-India and the CEA have noted that large-scale RE integration without storage can lead to dangerous frequency fluctuations outside the permissible bands set by the Indian Electricity Grid Code (IEGC). Unlike conventional thermal plants, which take significant time to ramp up, BESS provides instantaneous (millisecond) response times, offering crucial ancillary services such as frequency regulation and voltage support that help prevent grid failures.
- 20.** The AP ICE Policy 2024 mandates the deployment of 25 GWh of BESS to manage this massive influx of targeted intermittent power of 160 GW in the

State. The proposed BESS projects will help meet the target. Further, the APERC (Planning, Procurement, Deployment, and Utilisation of Battery Energy Storage Systems) Regulations, 2025, are intended to catalyse large-scale deployment of battery energy storage systems in the state, aligning with the Andhra Pradesh Integrated Clean Energy Policy 2024.

21. The MoP has notified a mandatory, long-term Energy Storage Obligation (ESO) trajectory for all distribution utilities. Under this policy, DISCOMs must incrementally increase the share of energy procured through storage systems to reach 4% of their total electricity consumption by 2029-30. Procuring this 1000 MW/2000 MWh capacity ensures APDISCOMs remain compliant with these binding national trajectories.
22. The procurement is heavily supported by GoI financial schemes and statutory compliance targets, making it highly advantageous for Andhra Pradesh at present. Since APDISCOMs secured a 2000 MWh allocation in time, the Developers could successfully avail VGF coverage of ₹18 lakh per MWh. This central subsidy directly reduces the Levelized Cost of Storage (LCOS), transferring substantial benefits to AP consumers.
23. The ultimate goal of electricity regulation is to protect consumer interests, a principle validated by the highest appellate authority in the power sector. The Honourable Appellate Tribunal for Electricity (APTEL), in the recent ruling of JSW Renew Energy Five Ltd. v. CERC, extensively reviewed the role of BESS technology. The APTEL observed that BESS, rather than being an added cost, actually reduces the overall tariff burden. By eliminating DISCOMs' reliance on predatory spot-market pricing during peak hours and preventing the curtailment of already-paid-for surplus renewable energy when thermal backdown is insufficient to maintain grid stability, BESS aligns with prevailing market economics and directly safeguards consumers' financial interests.

24. Views of the Commission on the objectors' contentions

A. The current petition for final tariff approval is largely a formality, since the Commission had already allowed the process to proceed without public consultation.

View: The in-principle approvals by the Commission were expressly limited to permitting the bidding process and execution of agreements, subject to the condition that APDISCOMs file a separate petition for the approval of BESPAs and tariff adoption under Section 63 after competitive discovery. Specifically, in the letter dated 07.01.2026 to the DISCOMs, the Commission clearly stated that the consent given is only to enter into the agreements and shall not be construed as approval of the tariffs or commercial terms and that the final approval of tariffs and related contracts shall be subject to a separate order of the Commission, which will be issued after completion of the due regulatory process upon filing of a petition by the DISCOMs.

The Commission posted Public Notices on its website, along with copies of the full petition and all other related documents, inviting views/objections/suggestions, thereby providing an opportunity for all stakeholders to participate in the process. Three written submissions were received, to which DISCOMs submitted replies; a Public Hearing was conducted on 10.06.2026 in a hybrid (in-person + online) mode. Full due process under the APERC Conduct of Business Regulations, 1999 and the Electricity Act, 2003, has been followed. Before issuing this Order, the Commission has considered all the written and oral views/objections/suggestions and thoroughly scrutinised: (i) all seven executed tripartite BESPAs dated 30.03.2026 & 06.04.2026; (ii) the complete RfS document, amendments, and bidding documents; (iii) the tender evaluation committee report dated 04.12.2025 and e-reverse auction snapshots; (iv) the demonstrated need for 1000 MW/2000 MWh BESS capacity (grid stability, duck curve mitigation, RE integration, CEA mandates, Energy Storage Obligation trajectory, AP ICE Policy 2024 target of 25 GWh, and the Commission's own Resource Plan Order dated 27.06.2024); and (v) full compliance of the

bid process with MoP guidelines, GoAP GO Ms. No. 66, and Section 63 requirements. Only after being fully satisfied that all requirements have been met has the Commission proceeded to grant approval for the BESPAs and adopt the discovered tariffs in this Order. Had any of the requirements not been met during this scrutiny process, the Commission would have rejected the petition and declined to adopt the tariffs.

B. How many units will the seven selected companies supply during peak hours (morning and evening), and what are their individual tariffs?

View: The total units supplied will be 3,800 MWh (3.8 MU) per day during morning and evening peak hours (after accounting for 95% annual availability) in the first year. The effective tariff per unit ranges from ₹1.51/unit (lowest) to ₹1.68/unit (highest) during the first year, after accounting for 95% annual availability and 85% round-trip efficiency.

C. Since solar generation enjoys must-run status, it is not surplus solar power that will be stored in BESS, but surplus thermal power. Hence, the DISCOMs' claim that BESS will store cheap solar power is not correct.

View: The objector raised a valid point. In the near future, BESS will be charged primarily from surplus thermal generation during periods of low demand or high renewable injection, since RE generation, including solar, has a must-run status. However, the above position will not remain static. As AP adds more solar capacity in the coming years (as per the state's renewable energy targets), the dynamics of grid management will undergo a fundamental change: There will be increasing hours when solar generation will be very high, and simply backing down thermal generation will no longer be sufficient to maintain grid stability during high solar periods. At that stage, the system may need to curtail even solar generation to protect the grid. In such a scenario, BESS becomes essential for absorbing surplus solar generation rather than curtailing it. This will help in: Maximising the

utilisation of renewable energy, reducing curtailment of solar power, and storing cheap solar power for use during peak hours.

Even if BESS charges from surplus thermal generation in the current situation, the arrangement remains economically advantageous for the following reason: The variable cost of thermal power (which is usually backed down) is significantly lower than spot market/power exchange prices during peak hours (energy from spot market/power exchange is not available sometimes, even at the highest rates, denying the consumers 24x7 supply). When this backed-down thermal power is stored in BESS and discharged during peak hours, the effective cost per unit (thermal variable cost + storage cost) remains lower than the cost of purchasing power from the market or through short-term contracts during peak periods. Thus, even the utilisation of surplus thermal power through BESS results in net savings for DISCOMs and, ultimately, for consumers.

D. What are the specific power-supply hours under the proposed BESS arrangements?

View: No fixed clock hours prescribed in BESPAs - this flexibility is a key advantage. Discharge is dynamically scheduled by APSLDC on behalf of APDISCOMs based on day-ahead/real-time demand-supply positions, typically targeting the morning peak (approx. 06:00-09:00) and the evening peak (approx. 18:00-21:00) when RE is low, and deficit is acute. The mandated two cycles/day allow for one cycle per major peak period. Exact timing varies daily per grid requirements and is not static.

E. By appointing APTRANSCO as the nodal agency for tendering, the scope for APTRANSCO itself to participate in bidding and to set up BESS units in Andhra Pradesh has been eliminated.

View: The tender was fully open on the Bharat ETS portal. Any qualified bidder (private or PSU) could have participated. APTRANSCO was authorised as the nodal/bidding agency (not developer) to ensure a transparent process on behalf of the DISCOMs. Self-bidding by the

nodal agency would create a conflict of interest. However, APTRANSCO's role here as nodal agency does not preclude it from bidding on other future projects.

F. Why can not APGENCO and APDISCOMs also participate in competitive bidding to set up BESS projects in the state?

View: RfS was technology-neutral and open to all entities — whether private developers or Public Sector Undertakings — that meet the prescribed technical and financial qualification requirements. There was no restriction on participation by state-owned entities. Therefore, it is for the APGENCO management to decide whether to participate. As for APDISCOMs, their position is fundamentally different. APDISCOMs are the Buying Entities and Procurers under the present arrangement. They are responsible for the offtake of power/storage capacity and for making payments to the successful bidders. Allowing APDISCOMs to participate as bidders in the same tender would create an inherent conflict of interest, as they would effectively be both the procurer calling for bids and a bidder competing in the same process. However, if APDISCOMs wish, they may establish their own BESS facilities to meet their internal requirements, provided the per-kWh rates are competitive, and the DISCOMs can secure the required capital.

G. Stakeholder consultation on all options and in-principle approvals prior to tenders for better decision-making.

View: Requiring detailed stakeholder consultation at the stage of in-principle approval, prior to bidding, would have delayed the process unnecessarily and could have resulted in missing the timelines prescribed under the Ministry of Power's VGF scheme. As explained earlier in this Order, the Commission has thoroughly scrutinised the executed BESPAs, RfS documents, the tender evaluation process, the need for the proposed capacity, and compliance with the applicable guidelines and statutory provisions. Only after being satisfied that all requirements had been met did the Commission proceed to approve

the BESPAs and adopt the discovered tariffs in this Order. Had any requirement not been fulfilled, the Commission would have rejected the petition. The process followed in the present case, therefore, provided adequate opportunity for stakeholder participation at the appropriate stage, while also ensuring that the final decision on tariff adoption was taken only after comprehensive examination of all relevant aspects.

H. 12-year commitment is too long given falling RE/storage costs and tech shifts; suggested 5-6 years to leverage future progress; fixed rates for 12 years may burden consumers.

View: While it is true that battery storage costs have declined in recent years, it would not be prudent to assume that such declines will continue indefinitely. Battery prices are influenced by global supply chains, raw material costs (lithium, nickel, cobalt, etc.), manufacturing capacity, and policy support. Historical trends in several technologies show that after an initial phase of rapid decline, prices tend to stabilise or even increase due to supply constraints, rising demand, and geopolitical factors. Therefore, assuming continuous and significant price reductions in future years is highly uncertain.

Moreover, a shorter contract tenure of 5–6 years would result in higher tariffs. Developers would need to recoup their capital investment over a shorter period, resulting in front-loaded and higher capacity charges. This would increase the immediate burden on consumers rather than reduce it. The 10 to 25-year term, as stipulated in the RfS and the Ministry of Power's Viability Gap Funding scheme, provides the necessary revenue certainty for developers to offer competitive tariffs, make the projects bankable, and arrange financing on reasonable terms.

It is also relevant to note that aggressive underbidding to win projects with shorter tenures carries the risk of developer default or non-performance during the contract period, which could lead to delays, disputes, and ultimately higher costs for the distribution

licensees. The present bidding process, conducted through a transparent e-reverse auction with twenty-three participating bidders, has already discovered reasonable and sustainable rates.

Furthermore, the benefit of VGF at the rate of ₹18 lakh per MWh, which has significantly reduced the effective cost of storage in the present case, may not be available at the same level — or may be withdrawn altogether — in future tranches, as has been observed in several Central Government schemes in the past. Locking in current competitive rates, along with 12 years of VGF support, provides long-term price certainty and protects consumers from potential future increases in BESS tariffs.

The BESPA also contains adequate safeguards, including penalties for lower Round Trip Efficiency and availability, etc. These provisions ensure that consumers continue to receive value for money throughout the contract period.

For the reasons stated above, the Commission is of the considered view that the 12-year tenure is reasonable, balanced, and in the overall interest of consumers.

I. Welcomed reduction from ₹ 2.08-2.22 L to ₹ 1.48-1.65 L, but why were the earlier rates for 500 MW/1000 MWh high?

View: The tariffs discovered through competitive bidding reflect the market conditions, equipment costs, bidder participation, and risk perception prevailing at the time of bidding. The earlier tender conducted by NHPC had its e-reverse auction in June 2025, whereas the present tender conducted by APTRANSCO had its e-reverse auction in late November 2025.

During this intervening period, there was increased bidder participation, greater clarity on the VGF scheme, and further softening of battery prices due to improved global supply conditions. These factors contributed to more competitive rates in the present tender. It would not be appropriate to compare tariffs discovered at two different

points in time under different bidding conditions and expect them to be identical.

It is also worth noting that battery storage costs are subject to volatility. While costs have declined in recent times, they do not move in only one direction. Global supply chain disruptions, rising raw material prices, or a surge in demand can lead to higher costs. Had battery prices increased between the two tenders, or had the present tender discovered higher rates than the earlier one, the same objectors would likely have raised serious objections regarding the high tariffs and questioned the prudence of the present bidding.

The fact that both tenders were conducted through transparent competitive bidding with e-reverse auction, and that the rates were discovered based on the bids received, demonstrates that the process was fair and market-reflective at the respective times. Consumers stand to benefit from the lower rates discovered in the present tender. At the same time, it would be incorrect to assume that future tenders will necessarily yield even lower rates, as Viability Gap Funding support may also change.

In view of the above, the Commission finds no infirmity in the rates discovered in either of the two tenders. Both were outcomes of competitive bidding processes conducted at different points in time under the then-prevailing market conditions.

J. Same company quoted differently at different locations; deeper scrutiny needed.

View: In location-specific tenders for infrastructure projects such as BESS, it is normal and expected for the same bidder to quote different rates at different locations. Each project location has its own distinct characteristics that influence the overall project cost and, consequently, the tariff quoted by bidders.

The variations in quoted rates can arise due to several site-specific factors, including but not limited to: Varying requirements and costs

associated with power evacuation infrastructure; site-related development costs; Variations in transportation and logistics costs depending on the location of the project; Soil conditions, topography, and other technical parameters affecting civil and structural works; and perceived differences in implementation risks and timelines at each location.

In the present case, APTRANSCO invited bids for seven distinct projects at different substation locations. The bidding process was designed such that each project was evaluated and auctioned separately. All bids underwent a detailed technical evaluation by the Tender Evaluation Committee, followed by an e-reverse auction. The Evaluation Committee Report and the e-reverse auction snapshots have been placed on record. The Commission has reviewed the bidding documents and the evaluation process and finds no infirmity in the manner in which the successful bidders were selected for each location.

It may be further noted that the discovery of different rates by the same bidder at different locations does not, by itself, indicate any irregularity. On the contrary, it reflects the competitive and location-specific nature of the bidding process, in which bidders factor in site-specific costs and risks when submitting their offers.

For the reasons stated above, the Commission is satisfied that the bidding process was conducted in a fair, transparent, and competitive manner in accordance with the relevant provisions, and no additional scrutiny is warranted on this ground.

K. Lowest bid ₹1.48L; Commission should examine how much further reduction is possible to reduce consumer burden.

View: The role of the Commission under Section 63 is limited to examining whether the bidding process was conducted transparently and in accordance with the applicable guidelines. Once the

Commission is satisfied on these aspects, it is required to adopt the discovered tariff.

The Commission has examined the bidding documents, including the RfS, amendments, Tender Evaluation Committee Report dated 04.12.2025, and e-reverse auction snapshots, and is satisfied that the bidding process was fair, transparent, and conducted in accordance with the guidelines issued by the Central Government.

In these circumstances, the Commission is statutorily required to adopt the discovered tariff under Section 63 of the Electricity Act, 2003. The Commission does not have the mandate to further negotiate, re-determine, or direct the reduction of the tariff discovered through a transparent competitive bidding process. Any attempt to do so would be contrary to the scheme of Section 63 and the principles of tariff-based competitive bidding.

These are the lowest rates discovered after aggressive bidding by the developers. Further reduction may increase the risk of defaults by successful bidders, and ultimately affect the timely implementation of the projects to the detriment of consumers.

In view of the above, the Commission finds the discovered tariffs to be reasonable and adopts the same under Section 63 of the Electricity Act, 2003.

L. Beyond BESS, Pumped Hydro Storage (PSP) offers more economical long-duration power; Emerging solutions should also be integrated.

View: BESS offers distinct advantages in terms of modularity, faster deployment, quick ramping capability (in milliseconds), and the provision of ancillary services such as frequency regulation and voltage support. These characteristics make BESS particularly suitable for managing the diurnal mismatch between solar generation and peak demand, commonly referred to as the “duck curve”. In contrast, while PSP is more economical for long-duration storage, it is highly

capital-intensive, has a significantly longer gestation period (typically 5–8 years or more), and requires multiple statutory and environmental clearances, including forest and environmental approvals.

The Commission, in its Order dated 16.03.2026 in OP No. 65 of 2025, had approved procurement of BESS capacity while recognising that both BESS and PSP have complementary roles in the overall storage mix. The Resource Plan Order dated 27.06.2024 for the 5th and 6th Control Periods had specifically directed the DISCOMs to explore both BESS and PSP options for intra-day energy banking needs.

It may be further noted that the State is already taking steps to develop PSP projects in parallel, in accordance with its overall integrated power planning. The present tender for BESS is designed to meet the immediate and medium-term requirements of grid stability and peak management, which can be addressed more quickly with BESS. Both technologies — BESS for short to medium-duration storage and PSP for long-duration storage — are expected to form part of the State's future energy storage portfolio, depending on the specific requirements of the grid at different points in time.

For the reasons stated above, the Commission is of the view that the present procurement of BESS is justified and it does not preclude the development of PSP or other emerging storage technologies in the State.

M. Concerns about BESS fire/explosion risks (citing international incidents).

View: The Commission notes the concern regarding the safety of BESS, which is of paramount importance. The Commission expects the highest safety standards to be maintained in all such projects.

In this regard, it may be noted that all BESS projects must comply with the safety guidelines and technical standards prescribed by the Central Electricity Authority (CEA), and other statutory authorities. The projects must adhere to the relevant Bureau of Indian Standards

(BIS), IEC, and UL standards for battery cells, modules, Battery Management Systems (BMS), fire detection, fire suppression systems, thermal management, gas detection, explosion venting, and compartmentation. The BESPAs also mandate that developers obtain the necessary safety certifications and maintain adequate insurance coverage for fire and other risks.

Most of the international incidents referred to were associated with early-generation battery technologies or installations that did not fully comply with modern safety standards and protocols. With advancements in battery chemistry (particularly Lithium Iron Phosphate - LFP), improved Battery Management Systems, and robust safety designs, the risk profile of utility-scale BESS projects has significantly improved. Properly designed and operated BESS projects globally have demonstrated a strong safety record.

It is further relevant to note that the developers have significant financial and commercial stakes in maintaining safety standards. Any incident of fire or explosion would result in substantial losses to the developer, including damage to assets, invocation of performance security, termination of agreements, loss of insurance claims, reputational damage, and potential legal liabilities. The BESPAs also provide for penalties in the event of non-performance and require the developers to adhere to prudent utility practices and applicable safety norms throughout the term of the agreement. Therefore, it is in the developers' best interest to maintain safety standards.

In this regard, the Commission directs that APDISCOMs and APTRANSCO shall ensure strict compliance with all safety standards during the construction, commissioning, and operation of the BESS projects. Periodic safety audits, submission of safety compliance reports, and maintenance of robust emergency response systems shall be ensured. The Commission expects all stakeholders to treat safety as a non-negotiable priority in the implementation of these projects.

N. Original vs final prices not transparently disclosed; APTRANSCO should have negotiated more aggressively with the other six selected bidders to bring tariffs to the lowest (₹1.48L).

View: The E-Reverse Auction on the Bharat ETS portal is a transparent, competitive negotiation mechanism. All original bids, technical evaluation, and e-RA snapshots/price trajectories were submitted in the Petition. Bidders competed live to reduce prices. Price variation across locations reflects site factors + competition outcome. Twenty-three qualified bidders demonstrate a robust process; Seven L1s after e-RA is a fair outcome.

O. Sharp fall in BESS charges (OP-65 avg ~₹2.13L vs OP-18 avg ~₹1.56L); calculated savings ₹ 413 Crores over 12 yrs (for 500 MW) if tenders had been combined. Proves Commission's earlier rejection of 'wait-and-see' (on falling prices) was incorrect.

View: The reasons for the difference in quoted prices were already explained in detail at para 24(I). With regard to the suggestion that both tenders should have been combined to avail the benefit of falling prices, it may be noted that such a combination was not practically feasible. The two tenders were floated under different schemes — the earlier one under the Central CPSU component of the VGF scheme with NHPC as the Bidding and Implementing Agency, and the present one with APTRANSCO as the nodal agency. The RfS documents, timelines, qualification requirements, and VGF structures were different. Combining them would not have been administratively or legally feasible within the prescribed timelines.

It is also relevant to note that the decision to proceed with the earlier tender was made after considering the urgency of grid requirements, the need to address the growing duck curve, and the risk of losing the VGF capacity allocation if the prescribed timelines were not met. At that point in time, there was no certainty about the extent or timing of future price reductions. A “wait-and-see” approach would have carried

the risk of losing the allocated VGF support and delaying much-needed storage capacity addition.

Furthermore, the calculation of savings on the assumption that the same low rates would have been discovered even if the tenders were combined is based on hindsight. There was no certainty that a combined tender would have attracted the same level of competition or resulted in similarly low rates. Battery prices are subject to volatility and do not move in only one direction.

The Commission is of the view that the decisions taken at the respective points of time were prudent based on the information and circumstances then prevailing.

P. Pay average tariffs for a shorter term based on useful life rather than locking in higher initial tariffs for 12 years.

View: As already explained in Para 24(K), the Commission is statutorily required to adopt the discovered tariff under Section 63 of the Electricity Act, 2003. The Commission does not have the mandate to adopt the average tariff in place of the levelized tariff discovered through a transparent competitive bidding process.

Q. Question on why there is a need for large-scale BESS when there is already surplus power and limited requirement for market purchases.

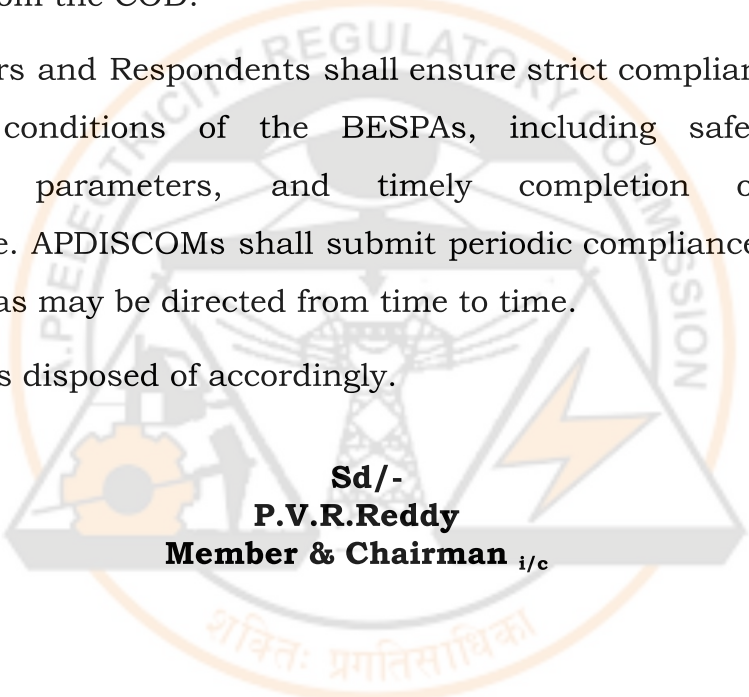
View: Surplus is a diurnal/time-of-day phenomenon, not 24x7 firm power (duck curve explanation in Paras 15-16). Daytime surplus must be absorbed or curtailed; evening/morning deficit requires expensive spot purchases. BESS time-shifts energy economically, avoids curtailment of energy, reduces spot market exposure, provides ancillary services (frequency regulation), and complies with national mandates. Without it, consumer costs rise via costlier alternatives.

- 25.** In view of the foregoing discussions and after carefully considering all the written and oral submissions made by the Experts/Objectors, the material placed on record, the transparency of the bidding process, the need for the

proposed BESS capacity, and compliance with the applicable statutory and regulatory framework, the Commission is satisfied that the tripartite BESPAs have been executed following a transparent competitive bidding process in accordance with the guidelines issued by the Ministry of Power. The discovered tariffs are reasonable and in the interest of consumers. Accordingly, the Commission hereby approves the seven tripartite BESPAs executed between the Developers, APTRANSCO, and APDISCOMs on 30.03.2026 and 06.04.2026, and adopts the tariffs discovered through the e-reverse auction under Section 63 of the Electricity Act, 2003, for a period of 12 years from the COD.

The Petitioners and Respondents shall ensure strict compliance with all the terms and conditions of the BESPAs, including safety standards, performance parameters, and timely completion of evacuation infrastructure. APDISCOMs shall submit periodic compliance reports to the Commission as may be directed from time to time.

The Petition is disposed of accordingly.



Sd/-
P.V.R.Reddy
Member & Chairman *i/c*

ANNEXURE-I**(List of Objectors)**

S.No	Name of the Objector
1	Sri M. Venugopala Rao, Senior Journalist & Convener, Centre for Power Studies, H.No.1-100/MP/101, Monarch Prestige, Journalists' Colony, Serilingampally Mandal, Hyderabad.
2	Sri Ch. Baburao, State Secretariat Member, AP Committee, CPI (M), H.No.27-30-9, Akulavari Street, Governorpeta, Vijayawada.
3	Sri Kandharapu Murali, Secretariat Member, CPI(M), Tirupati District Committee, Tirupati.

