

TAMIL NADU ELECTRICITY REGULATORY COMMISSION

Order of the Commission dated this the 06th Day of March 2026

PRESENT:

Thiru. R.Manivannan **Chairman**

Thiru.K.Venkatesan **Member**

and

Thiru.B.Mohan **Member (Legal)**

P.P.A.P No. 2 of 2026

(i) Chief Engineer (NCES),
Tamil Nadu Green Energy Corpn. Ltd (TNGECL)
NPKRR Maaligai, 10th floor, Eastern Wing,
144, Anna Salai,
Chennai 600 002

(ii) Chief Engineer (PPP),
Tamil Nadu Power Distribution Corpn.Ltd (TNPDCCL)
144, Anna Salai,
Chennai 600 002.

... Petitioners
(Thiru. Richardson Wilson
Counsel for petitioners)

The Power Purchase Approval Petition (PPAP) preferred by the petitioners Tamil Nadu Green Energy Corpn. Ltd (TNGECL) & Tamil Nadu Power Distribution Corporation Ltd. (TNPDCCL) coming up for final hearing on 05-03-2026 in presence of Thiru. Richardson Wilson Standing Counsel for the petitioners and

the officials of TNPDC and TNGECL, upon hearing the submissions made by the counsel for the petitioner & the officials of TNPDC and TNGECL and on perusal of the material records and relevant provisions of law and the matter having stood up for consideration till this date, this Commission passes the following:

ORDER

1. Background of the petition:

- 1.1. The PPAP has been filed by Tamil Nadu Green Energy Corporation Limited (TNGECL) and Tamil Nadu Power Distribution Corporation Limited (TNPDC) under Section 63 of the Electricity Act, 2003, seeking approval of the tariff discovered through tariff-based competitive bidding and permission for issuance of Letter of Award (LoA), execution of the Power Purchase Agreement (PPA) and execute the Power Sale Agreement (PSA) for the procurement of power from a Grid Connected 15 MW Solar Photovoltaic Power Project integrated with a 45 MWh Battery Energy Storage System (BESS) proposed to be established in Karur District, Tamil Nadu under the Build-Own-Operate (BOO) model.
- 1.2. The Petitioners have submitted that the proposed project is designed as a co-located Solar-BESS hybrid facility, wherein a 15 MW Solar PV plant is integrated with a 15 MW / 45 MWh Battery Energy Storage System capable of delivering stored energy for three hours of peak discharge per day. The project has been structured with the objective of facilitating firm renewable power supply during peak demand periods, improving grid reliability, and reducing dependence on expensive short-term market purchases during evening peak hours.

- 1.3. The Commission had earlier, by its order dated 16.10.2025 in M.P. No. 45 of 2025 and subsequently in R.P. No. 8 of 2025 dated 11.11.2025, permitted TNGECL to initiate the competitive bidding process for procurement of solar power integrated with Battery Energy Storage System. Pursuant to the said orders, TNGECL floated a tender under Specification No. TNGECL/CE/NCES/O.T. No.09/25-26 through the TNTENDERS portal for setting up the above project.
- 1.4. The land measuring 53.72 acres belonging to Tamil Nadu Power Distribution Corporation Limited (TNPDC), as identified by Tamil Nadu Green Energy Corporation Limited (TNGECL), shall be provided to the selected Developer at the project site on a lease basis at a nominal lease rent of Rs.1 per year for the entire project period, justifies competitive tariff. Project guarantees firm peak RE supply despite 10-12 years battery life requiring mandatory replacements.

2. Submissions of the Petitioners

- 2.1. The Petitioners have submitted that the bidding process was carried out in a transparent and competitive manner in accordance with the Guidelines issued by the Ministry of Power, Government of India, dated 09.06.2023 for procurement of Renewable Energy with Energy Storage Systems, and in compliance with applicable statutory and regulatory provisions. The Solar and BESS components operate as an integrated system to provide firm and schedulable renewable energy.
- 2.2. During the course of the tender process, TNGECL issued Corrigendum Nos. 1 to 4 dated 20.11.2025, 11.12.2025, 16.12.2025 and 19.12.2025 respectively to address certain technical and commercial aspects of the tender. The

Petitioners have sought ratification of the said corrigenda by the Commission in the present petition.

- 2.3. Upon completion of the competitive bidding process, the tariff discovered through the bid was Rs.4.47 per kWh, with M/s. Evolve Green Energies Private Limited, Tamil Nadu, emerging as the L1 bidder. The Petitioners have submitted that the discovered tariff is significantly competitive when compared with similar Solar-plus-Storage tenders executed in other States where tariffs are reported to be around Rs.6.50 per unit.
- 2.4. The Petitioners have further submitted that the proposed tariff is structured as a single composite energy tariff (Rs./kWh) without any separate capacity charge, availability charge, or storage service payment. Payments under the Power Purchase Agreement are strictly linked to the actual quantum of energy delivered at the interconnection point, thereby ensuring that TNPDC is not exposed to fixed financial obligations independent of actual supply.
- 2.5. The project configuration has been designed considering the available land parcel and system optimization. The integrated plant is expected to deliver approximately 45 MWh of peak power daily through BESS discharge, corresponding to 15 MW for 3 hours, thereby enabling supply of renewable energy during peak demand periods.
- 2.6. The Petitioners have further submitted that the Power Purchase Agreement contains performance-linked contractual obligations, including:
 - i. Minimum Annual Capacity Utilisation Factor (CUF) of 21% for the solar plant;
 - ii. Minimum monthly peak discharge obligation through BESS (45MWh per day at 95% availability); and
 - iii. Minimum round-trip efficiency of 85% for the storage system.

- iv. For other auxiliary consumption for operation and maintenance of BESS, a separate service connection shall be obtained from TNPDCCL at the appropriate tariff as decided by TNPDCCL.

Non-compliance with the above parameters attracts liquidated damages, which are contractually recoverable from the Developer and are adjustable against monthly invoices.

2.7. The Petitioners have also submitted that in the event of prolonged or persistent storage non-performance, the PPA provides for compensatory payment equivalent to billing at minimum CUF for up to twenty-four months, thereby ensuring that the technology and performance risks remain with the Developer.

2.8. During the hearing held on 03.03.2026, the Commission raised certain observations regarding the commercial prudence of the composite tariff structure, particularly in relation to:

- i. The system benefits arising from integration of BESS;
- ii. The possibility of financial exposure to TNPDCCL if storage performance deteriorates;
- iii. The linkage between tariff payments and actual system benefit; and
- iv. Safeguards required to protect consumer interest in the event of BESS non-availability.

2.9. In response to the above observations, the Petitioners filed an Additional Affidavit dated 04.03.2026, clarifying inter alia that:

- i. The tariff is entirely energy-linked, and no payment is made for storage availability;

- ii. BESS charging is exclusively from the co-located solar plant, thereby preventing grid-charging arbitrage;
- iii. Storage non-performance automatically attracts performance-linked liquidated damages; and
- iv. The financial risk of storage degradation or replacement remains entirely with the Developer.

2.10. The BESS component enables shifting of solar generation to peak demand periods thereby providing additional grid value. The developer bears the technology risk associated with battery performance and replacement.

2.11. The Petitioners further submitted through an Additional Affidavit that appropriate safeguards would be implemented to ensure tariff adjustment in case of BESS outage or battery replacement period.

2.12. The Petitioners have also submitted that the project would provide multiple system-level benefits including:

- i. Reduction in high-cost peak power purchases;
- ii. Enhancement of grid stability and renewable energy integration;
- iii. Contribution towards Renewable Purchase Obligation (RPO) compliance; and
- iv. Long-term procurement cost stability for TNPDC.

2.13. The Petitioners have further placed on record the Cost-Benefit Analysis furnished as Annexure-II, which evaluates the financial implications of the project under various energy export scenarios. The analysis indicates that the discovered tariff of Rs.4.47/kWh is significantly lower than the estimated levelised tariff of approximately Rs.6.49/kWh originally projected for a similar Solar-BESS configuration, thereby demonstrating the competitiveness of the bidding outcome.

2.14. The Petitioners have also submitted that the Board of TNPDC, in its meeting held on 23.02.2026, has accorded approval for procurement of power from the above project at the tariff discovered through the competitive bidding process.

2.15. In view of the above submissions, the Petitioners have prayed that the Commission may approve the adoption of the tariff discovered through competitive bidding, permit issuance of the Letter of Award to the successful bidder, and allow execution of the Power Purchase Agreement between TNGECL and the Developer and the Power Sale Agreement between TNGECL and TNPDC.

3.0. Issues for Consideration by the Commission

3.1. Based on the pleadings of the Petitioners, the submissions made during the hearing, the Additional Affidavit filed by the Petitioners and the material placed on record, the following issues arise for consideration of the Commission:

- i. Whether the competitive bidding process adopted by TNGECL for procurement of power from the Solar PV Project integrated with Battery Energy Storage System has been conducted in a transparent and competitive manner in accordance with the applicable Government of India guidelines and statutory provisions.
- ii. Whether the corrigenda issued during the tender process require approval/ratification of the Commission.
- iii. Whether the tariff of Rs.4.47 per kWh discovered through the bidding process is reasonable and eligible for adoption under Section 63 of the Electricity Act, 2003.
- iv. Whether the proposed composite tariff structure adequately safeguards the financial and operational interests of TNPDC and the consumers.

- v. Whether adequate contractual safeguards exist in the PPA to ensure performance of the Battery Energy Storage System and prevent undue financial burden on the distribution licensee.
- vi. Whether the proposed procurement contributes to system reliability, renewable integration and reduction of peak procurement cost.
- vii. Whether the Commission should impose additional safeguards while approving the tariff adoption and execution of PPA.

Issue-1:

Compliance with Ministry of Power Bidding Guidelines

- i. The Commission has examined whether the bidding process undertaken for procurement of power from the proposed Solar PV Project integrated with Battery Energy Storage System complies with the applicable Guidelines issued by the Ministry of Power, Government of India, under Section 63 of the Electricity Act, 2003.
- ii. Section 63 of the Act mandates that the Appropriate Commission shall adopt the tariff discovered through a transparent process of bidding conducted in accordance with the guidelines issued by the Central Government. In the present case, the Petitioners have submitted that the procurement process has been conducted in accordance with the Guidelines issued by the Ministry of Power for tariff-based competitive bidding for procurement of renewable energy power with energy storage systems.
- iii. Based on the documents placed on record, the Commission notes that the bidding process was conducted through a transparent electronic bidding platform with adequate participation and proper bid evaluation procedures.

Issue-2:

Ratification of Corrigenda

- i. The Petitioners have also sought approval and ratification of the corrigenda issued during the course of the tender process. The Commission observes from the records that Corrigendum Nos. 1 to 4 were issued at different stages of the bidding process for the purpose of clarifying certain provisions of the tender documents and for modifying certain technical and commercial parameters in order to facilitate effective participation by bidders.
- ii. While such corrigenda are sometimes required in complex infrastructure tenders to clarify ambiguities or to incorporate modifications based on stakeholder feedback, the Commission notes that the corrigenda in the present case were issued during the course of the bidding process without obtaining prior approval or ratification from the Commission. In matters involving procurement of power by State utilities where tariff adoption under Section 63 is contemplated, it is desirable that any substantial modification to bid conditions should be placed before the Commission for appropriate consideration.
- iii. Nevertheless, the Commission also recognizes that the corrigenda issued in the present case appear to have been issued in order to facilitate completion of the tender process and that the bidding process has already progressed to the stage of tariff discovery. Therefore, in order to avoid disruption of the procurement process and to ensure timely implementation of the proposed renewable energy project with storage integration, the Commission considers it appropriate to ratify the corrigenda issued by the Petitioners.
- iv. At the same time, the Commission expresses its disapproval of the procedural lapse in issuing corrigenda without prior regulatory intimation and expects the Petitioners to ensure that any future modifications or deviations

from approved tender conditions are placed before the Commission at the appropriate stage for approval.

Issue-3:

Examination of the Discovered Tariff

- i. The Commission has examined the reasonableness of the tariff discovered through the competitive bidding process.
- ii. The Commission notes that the tariff represents a composite tariff for delivery of energy from the Solar PV system together with the flexibility provided by the Battery Energy Storage System.
- iii. The Commission further observes that the discovered tariff is competitive when compared with tariffs discovered in similar renewable energy storage tenders in other states.
- iv. Pursuant thereto, the petitioners have prayed for the adoption of a composite tariff structure for the supply of solar power integrated with Battery Energy Storage System (BESS) under the present Power Purchase Approval Petition (PPAP).
- v. The Commission observes that the integration of Battery Energy Storage Systems (BESS) with renewable generation is primarily intended to:
 - (a) provide reliable peak power support,
 - (b) enhance grid stability and flexibility, and
 - (c) reduce the dependence on costly short-term power procurement during peak demand periods.
- vi. While the adoption of a composite tariff structure may simplify procurement arrangements and operational scheduling, the Commission is of the view that such a structure may potentially expose the distribution licensee, namely TNPDC, to higher fixed financial commitments over the long term,

- particularly if payments are not directly linked to the actual operational value derived from the storage component.
- vii. The Commission further notes that TNPDC is presently operating under financial constraints, with persistent revenue gaps and increasing power purchase liabilities. In such circumstances, any long-term procurement arrangement must strictly adhere to the principles of prudence, transparency, cost-effectiveness and protection of consumer interest, which are fundamental regulatory considerations under the Electricity Act, 2003.
 - viii. The Commission also takes note of the petitioner's submission that the Battery Energy Storage System shall be charged exclusively from the co-located solar power generation, which is intended to ensure that the storage component operates as an extension of the renewable generation facility rather than as an independent market arbitrage mechanism.
 - ix. However, the Commission is of the considered view that unconditional adoption of a composite tariff mechanism may give rise to certain regulatory and financial concerns, including the following:
 - a. Possibility of payment obligations for non-peak or under-utilised energy, even in situations where the system may not require discharge from the storage component.
 - b. Potential liability towards deemed generation or deemed availability, which may impose financial obligations on the distribution licensee without commensurate system benefit.
 - c. Risk of payment obligations despite deterioration or underperformance of storage systems, particularly if performance parameters and degradation benchmarks are not clearly specified.
 - d. Long-term tariff lock-in under composite tariff structures despite the rapidly declining capital cost trajectory of battery storage technologies,

which may result in higher procurement costs compared to future market conditions.

- e. Reduced tariff transparency, as the composite structure may obscure the individual cost components associated with solar generation and energy storage.
- x. In view of the above considerations, the Commission is of the view for adoption of a single composite tariff for solar–BESS procurement requires careful regulatory scrutiny to ensure that the procurement framework does not impose avoidable financial burden on the distribution licensee and ultimately on the consumers.
- xi. The Commission therefore emphasizes that any tariff structure adopted for solar–BESS procurement must incorporate appropriate safeguards, including clear linkage of payments to actual peak supply obligations, storage performance parameters, and measurable system benefits, so as to ensure that the procurement remains cost-effective, operationally efficient, and aligned with consumer interest.

Issue-4:

(a) Safeguards against Gaming during BESS Outage or BESS outage during replacement of batteries / Degradation:

- i. During the course of examination of the petition, the Commission expressed concern regarding the possibility of gaming under the composite tariff structure in situations where the Battery Energy Storage System becomes unavailable due to technical outage, maintenance or performance degradation.
- ii. Under a pure composite tariff mechanism, the developer receives a single bundled tariff covering both solar generation and storage services. In the

- absence of appropriate safeguards, a situation may arise where the BESS component remains unavailable while the developer will try to continue supply energy only during solar hours at 21% CUF.
- iii. In such circumstances, the developer could potentially continue to receive the full composite tariff despite the non-availability of the storage component. This would defeat the fundamental objective of procuring Solar-BESS power, which is to ensure delivery of energy during system peak hours through storage-backed dispatch.
 - iv. The Commission is therefore of the considered view that allowing full composite tariff payment in the event of BESS non-availability would create a misalignment between tariff payments and actual system benefits, and could impose an undue financial burden on the distribution licensee and ultimately on the consumers.
 - v. In order to address this concern, the Commission directs the following:

(1) "DC:AC Capacity ratio limitation:

The developer shall ensure that the total DC capacity of solar PV modules connected to the project's AC inverters shall not exceed a DC:AC ratio of 1.3 : 1. The 'AC Capacity' shall be defined as the name plate capacity of the inverters or the contracted capacity (15MW), whichever is lower. This ratio shall be demonstrated and certified during commissioning through submission of detailed inverter specifications, module layout and single line diagrams (SLDs) verified by TNGECL or independent engineer. Any excess DC capacity installed beyond this limit shall not be eligible for tariff payments, scheduling or recognition towards CUF compliance and may result in penalties equivalent to liquidated damages."

The above requirements shall be incorporated under a new section in Article 4 (Project Capacity and Energy supply) or as an amendment to commissioning requirements in Article 5 of the PPA.

(2) Rationale and calculation:

This cap aligns with industry practices to optimize clipping losses while curbing over-generation incentives under fixed composite tariffs up to 21% CUF (~ 27,594 MWh/year for 15 MW AC). With a 1.3 ratio, maximum DC = 19.5 MWp, yielding expected annual AC output of ~31,272 MWh at 21% plant CUF(before clipping), but actual injection remains grid-limited by AC capacity. Without the cap, higher ratios (e.g., 1.8) could push generation far beyond, exploiting tariffs before excess penalties apply.

(3) Verification and enforcement Pre-commissioning:

DC capacity verification require invoices, lorry receipts and CEIG approved reports from developers confirming $DC:AC \leq 1.3$, as per existing Article 5.1.6 of PPA.

(4) The developer shall furnish month wise seasonal CUF trajectory to the procurer before one month of every FY within the margin of 21% annual CUF.

(5) The BESS battery replacement schedule plan shall be furnished by the developer before the COD.

(6) The Round Trip Efficiency (RTE) shall be greater than or equal to 85%.

vi. In the event of BESS outage or non-availability, the tariff payable to the developer for the solar energy exported would be restricted to the latest SECI

- discovered rate price for solar energy under section 63 of Electricity Act, 2003 or weighted average of the solar tariff discovered during the financial year of that period discovered by State / Central owned agencies under section 63 of Electricity Act, 2003 whichever is lower and limited within the 21% CUF trajectory capped for that particular month. No composite tariff shall be payable during such periods.
- vii. The Commission notes that such a tariff adjustment framework introduces an important performance-linked safeguard, ensuring that payments under the composite tariff remain proportionate to the actual services delivered by the developer.
 - viii. Further, the Commission is of the view that such mechanisms are necessary to:
 - a) Prevent potential gaming of the composite tariff structure.
 - b) Ensure that the developer maintains the BESS in operational readiness and performance compliance.
 - c) Protect the financial interests of the distribution licensee and electricity consumers.
 - d) Maintain alignment between tariff payments and realised system benefits.

(b) Protection of Consumer Interest

- i. The Commission has also examined whether the proposed procurement arrangement may result in any undue financial burden on electricity consumers in the State.
- ii. In this regard, the Commission notes that the tariff structure provides that payments are linked only to actual energy supplied to the grid. Consequently, the distribution utility is not required to make capacity payments or availability payments in the absence of energy supply.

(c) Operational Role of the Battery Energy Storage System

- i. The Commission notes that the integration of Battery Energy Storage Systems (BESS) with solar generation forms an important component of the proposed procurement framework. Solar generation, by its inherent nature, is intermittent and largely limited to daylight hours, whereas the demand profile of the distribution system typically exhibits peak demand during the evening hours.
- ii. In this context, the Battery Energy Storage System performs a critical operational function by enabling temporal shifting of solar generation. Surplus solar energy generated during daytime periods, particularly during mid-day hours when solar output is at its maximum and system demand may be relatively lower, can be stored in the BESS and subsequently discharged during evening peak demand periods when solar generation is unavailable.
- iii. The Commission observes that such time-shifting capability provides multiple system-level benefits including:
 - a. Peak demand support: Stored solar energy can be dispatched during evening peak hours, thereby reducing reliance on high-cost short-term market purchases or expensive peaking power sources.
 - b. Grid reliability and stability: Storage systems provide operational flexibility to the system operator by enabling smoother integration of variable renewable energy resources.
 - c. Reduction in renewable curtailment: In the absence of storage, surplus solar generation may need to be curtailed during periods of low demand. The BESS enables absorption of such surplus energy and its utilisation at a later time.
 - d. Improved renewable energy utilisation: The combination of solar generation and storage effectively converts variable renewable energy into a more dispatchable and reliable resource.

- iv. The Commission therefore notes that the storage component significantly enhances the dispatchability, firmness and reliability of renewable energy supplied to the distribution licensee. By enabling controlled delivery of power during system-critical periods, BESS improves the operational value of solar power from a grid management perspective.
- v. However, the Commission also observes that the operational value of the BESS can be realised only if the storage system remains available and performs in accordance with the contractual performance parameters. The benefits associated with storage would diminish if the BESS component is unavailable or fails to operate as intended.
- vi. Accordingly, it becomes necessary that the tariff structure and contractual provisions adequately recognise the distinct operational role of the storage component, and ensure that tariff payments are appropriately linked to the availability and performance of the BESS.

The Developer shall ensure that the Battery Energy Storage System (BESS) discharges a minimum of 95% of the contracted 45 MWh monthly peak energy obligation (i.e., 42.75 MWh) during State Load Despatch Centre (SLDC)-designated peak hours.

The composite tariff of Rs. 4.47/kWh shall be payable for:

- (a) Actual BESS discharged energy during peak hours; and
- (b) Solar energy directly injected to the grid within the CUF trajectory limit of every month.
- (c) Any solar generation exceeding the 21% CUF limit in a particular month may be payable at 75% of the latest SECI discovered rate price for solar energy under section 63 of Electricity Act, 2003 or 75% of the weighted

average of the solar tariff discovered during the financial year of that period discovered by State / Central owned agencies under section 63 of Electricity Act, 2003 whichever is lower, if TNPDCCL prefers to avail such excess solar power generated.

Thus the Commission ensures the proposed composite tariff structure adequately safeguards the financial and operational interests of TNPDCCL and the consumers.

Issue-5:

Performance Monitoring and Availability of BESS

- (i) The developer shall ensure that the Battery Energy Storage System maintains the specified performance parameters including round trip efficiency, available storage capacity, and dispatch capability.
- (ii) Any prolonged outage shall be reported to the distribution licensee and SLDC.

(a) Penalty towards non-compliance of Annual CUF maintenance :

In the event that, for any Operational Year, the Developer fails to achieve a minimum Annual Capacity Utilization Factor (CUF) of 21%, the Developer shall be liable to pay damages, which shall be calculated in accordance with the methodology set forth herein.

$$LDt = 1.5 \times Tariff \times \{(21\% - CUFat) \times CCsolar \times 24 \times 365\}$$

where;

- '*LDt*' refers to the Damages for the Year t (t ranges from 1st to 25th Year)
- '*Tariff*' refers to the Applicable Tariff.
- '*CUFat*' refers to Actual Capacity Utilization Factor for the year't'.

- ‘*CCsolar*’ refers to the Contracted Capacity for Solar in kW (15MW i.e. 15,000kW).

The stipulated Minimum CUF of 21% has been determined after due technical and commercial assessment, taking into account the energy requirements of the co-located BESS system, including progressive degradation of battery performance over the operational life of the Project. The CUF has therefore been conservatively fixed to ensure that adequate solar generation is available not only to meet annual supply obligations but also to sustain the contracted peak discharge requirements of the BESS in subsequent years, notwithstanding degradation effects. This approach ensures long-term reliability of firm renewable supply and safeguards system performance over the entire PPA period.

(b) Penalty towards non-compliance of “Minimum peak power supply”

In the event that, for any month within an Operational Year, the Developer fails to deliver the ‘Minimum Peak Power Supply’ as required, the Developer shall be liable to pay damages, which shall be calculated in accordance with the methodology set forth herein.

$$LD(m) = 1.5 \times \text{Tariff} \times (\text{Minimum Peak Power}(m) - \text{Actual Peak Power}(m))$$

where;

- ‘*LD(m)*’ refers to the Damages for the Month
- ‘*Tariff*’ refers to the Applicable Tariff
- ‘*Minimum Peak Power(m)*’ refers to 45000 kWh
- ‘*Actual Peak Power(m)*’ refers to the actual Peak Power supplied during the month in kWh

(c) Penalty towards Non-compliance of Round-trip efficiency:

In the event that, for any month within a Operational Year, the Developer fails to achieve a minimum Round-trip Efficiency (RtE) of 85% the Developer shall be liable to pay damages, which shall be calculated in accordance with the methodology set forth herein.

$$LD(m) = 1.5 \times Tariff \times \left\{ Energy\ Supplied\ during\ peak \times \left(\frac{1}{CEat} - \frac{1}{85\%} \right) \right\}$$

where;

- '*LD(m)*' refers to the Damages for the month m
- '*Tariff*' refers to the Applicable PPA Tariff
- '*Energy supplied during peak*' shall be the actual energy supplied during peak or minimum peak power whichever is lower.

'*CEat*' - refers to the Actual Cycle Efficiency

Issue-6:

(a) Scheduling, Dispatch and SLDC Compliance

- i. The scheduling and dispatch of power from the Solar PV + BESS project shall be carried out in accordance with the Tamil Nadu Grid Code and directions issued by the State Load Despatch Centre.
- ii. Charging and discharging of the Battery Energy Storage System shall comply with SLDC scheduling instructions.

(b) Metering and Energy Accounting

- i. The Commission emphasizes that accurate metering and transparent energy accounting are essential for proper implementation of the composite solar-BESS project and for ensuring correct settlement of energy supplied under the Power Purchase Agreement. Accordingly, the Commission directs that the metering arrangements for the project shall comply with the provisions of the regulations issued by the Central Electricity Authority governing installation and operation of meters as well as the applicable provisions of the Tamil Nadu Grid Code.
- ii. The Commission further directs that appropriate metering architecture shall be established to facilitate separate measurement and verification of the different energy flows associated with the project as deliberated in the tender document. In this regard, separate energy accounting shall be maintained for (i) gross solar energy generation from the photovoltaic plant, (ii) energy charged into the Battery Energy Storage System, and (iii) energy discharged from the Battery Energy Storage System to the grid. Such segregation of energy data shall be necessary to ensure transparency in scheduling, settlement of energy, verification of performance obligations, and compliance with the conditions specified in this Order and in the Power Purchase Agreement.
- iii. TNGECL and TNPDC shall ensure that the metering scheme, real time data acquisition systems, and energy accounting procedures are designed in a manner that enables accurate monitoring of solar generation, storage charging, and discharge during peak periods, and that the same are implemented in accordance with the applicable regulatory framework.

Issue-7:

(a) “Tariff Adjustment during BESS Outage / Replacement:

During any period of BESS outage / Replacement (excluding scheduled/planned maintenance and force majeure conditions subject to the availability of BESS system), TNPDC shall pay only the benchmarked tariff equivalent to the latest SECI discovered rate price for solar energy under section 63 of Electricity Act, 2003 or weighted average of the solar tariff discovered during the financial year of that period discovered by State / Central owned agencies under section 63 of Electricity Act, 2003 whichever is lower for the solar energy exported within the 21% CUF trajectory capped for that particular month. No composite tariff shall be payable during such periods. Full composite tariff under Clause 9.1.1 shall resume post-certification of BESS availability by independent engineer/SLDC. The Developer shall notify TNGECL/SLDC at least 7 days prior (for planned) or 24 hours (for forced/unplanned), providing outage logs, OEM certificates for replacement, and metering data from Article 7.1.1 (ii-iii). In case, annual BESS availability fall below 95% excluding the outages due to Force Majeure (Article 11) condition and grid unavailability hours, (which is not under the purview of developers), damages under Article 4.7.4 - 4.7.5 (Peak Power / RtE) shall apply to developer. However, the developer has the right to claim generation compensation for the stranded generation due to grid unavailability beyond 175 hours, excluding the outages due to Force majeure conditions”

The above requirements shall be incorporated under Article 9 (Applicable Tariff) as new clause 9.1.5 or amend Article 4.7 (Damages and Article 10 (Billing) of the PPA.

4. Commission's Findings

In exercise of powers under Section 63 of the Electricity Act, 2003, the Commission hereby approves the following:

- i. The Corrigendum No.1 dated 20.11.2025, Corrigendum No.2 dated 11.12.2025, Corrigendum No.3 dated 16.12.2025 and Corrigendum No.4 dated 19.12.2025, issued in connection with the tender floated for setting up of a Grid Connected 15 MW Solar PV Power Project integrated with a 45 MWh Battery Energy Storage System (BESS) at Karur District, under Specification No. CE/NCES/OT No.09/2025-26, which tender was originally permitted to be floated pursuant to the orders of this Commission dated 16.10.2025 in M.P. No.45 of 2025 and in R.P. No.8 of 2025 dated 11.11.2025 and ratified.
- ii. The adoption of the tariff of Rs.4.47/- per unit discovered through competitive bidding for procurement of power from the 15 MW Solar Power Project with 45 MWh Battery Energy Storage System at Karur District for a contract period of 25 years.
- iii. The Commission hereby recommends the formula - based tariff separation mechanism specified in this Order to be adopted as a safeguard against gaming during BESS outage / battery replacement.
- iv. The Commission permits TNGECL to issue the Letter of Award (LoA) to M/s.Evolve Green Energies Private Limited, Tamil Nadu, being the L1 bidder, for the above project at the discovered tariff of Rs.4.47/- per unit.
- v. TNGECL is permitted to execute the Power Purchase Agreement (PPA) with M/s. Evolve Green Energies Private Limited and thereafter execute the Power Sale Agreement (PSA) with TNPDC with a trade margin of Rs.0.03/- per unit.

- vi. Directs that during BESS outage or battery replacement periods, payments shall be restricted to the Solar Tariff Component.
- vii. Directs that the above provisions be incorporated in the Power Purchase Agreement.
- viii. This Commission hereby, while disapproving the conduct of the petitioner in having the Corrigendum approved at a belated stage, directs that the petitioner shall ensure that such exercise is undertaken diligently by petitioner approaching the Commission at the appropriate stage.

Petition is ordered accordingly.

(Sd....)
Member (Legal)

(Sd....)
Member

(Sd....)
Chairman

/True Copy /

**Secretary
Tamil Nadu Electricity
Regulatory Commission**