

Ref: IESA/Policy/CERC/2024/29

16th February'2024

To:

Shri Harpreet Singh Pruthi,

Hon'ble Secretary,

Central Electricity Regulatory Commission,

3rd & 4th floor, Chanderlok Building,

36, Janpath New Delhi - 110001

Sub: IESA Comments/Suggestion on Draft CERC (Terms and Conditions of Tariff) Regulations, 2024.

Ref: 1. CERC Public Notice dated 04.01.2024, File No. L-1/268/2022/CERC
2. IESA comments/suggestion on CERC Approach Paper on Terms and Conditions of Tariff Regulations for Tariff Period 01.04.2024 to 31.03.2029.

Respected Sir,

Greeting from India Energy Storage Alliance (IESA)!

This is in reference to your invitation (Public Notice dated 04.01.2024, File No. L-1/268/2022/CERC) for comments/suggestions on CERC (Terms and Conditions of Tariff) Regulations, 2024. In this regard, we are writing this letter to highlight the importance of including Energy Storage System in Tariff regulation for Tariff Period 01.04.2024 to 31.03.2029 and beyond.

To assist you in future endeavours and for your kind information, IESA is a leading industry alliance focused on the development of energy storage, electric vehicle, renewable integration & microgrids, green hydrogen for the past 10+ years. We have ~180 ecosystem players as part of IESA, which work on different energy storage including hydrogen storage, fuel cell and EV technologies, along with a few global Energy Storage Project Developers and R&D community.

Based on the discussions and inputs received from our Industry members, we are enclosing our comments/recommendations on the Approach paper for your kind consideration.

Key Recommendations from India Energy Storage Alliance:

- **Tariff Structure for Energy Storage System:** The regulation has very well analyzed the requirements of tariff structures, incentives required for better utilization of hydro, and thermal resources. However, it is silent on the requirement of tariff structure and incentivization required for the resources supporting the Grid integration with renewables. Renewable Energy and Energy Storage Hybrid power plants can meet all the requirements for India's peaking power capacity even as on today's date in a cost-effective way. Hence it is highly recommended to include the tariff structure required

for Battery Energy Storage systems and incentives are required for supporting the resources supplying peak power requirements of the Grid. It is also recommended that tariff determination for BESS will be under the purview of CERC and said regulation must include terms and conditions of tariff for ESS as well.

- **Generation Tariff Determination:** Any sale of electricity from ESS or sale/ lease of Storage space shall be either through open competitive bidding or through the Exchange or through tariff fixed u/s 62. Tariff Regulations should include tariff determination for BESS and include possibilities of Section 62 under the regulated mechanism.
- **Determination of Tariff for Ancillary Services:** CERC through the Ancillary Service regulation and IEGC Regulation 2023 has identified energy storage system to be used for providing PRAS, SRAS and TRAS. For enabling ESS to participate in electricity markets and ancillary services its extremely important to include procedure under tariff regulations. We request Hon'ble commission to enable clauses relevant to ESS for participation in Ancillary Services and regulated through Tariff Regulations.
- **Procedure for Distribution Licensee:** There should be an option for DISCOM to procure power from the generating companies who have untied capacities and have installed storage, which can be utilized for state requirements such as peak power, ancillary services etc. It is important to include this procedure under tariff regulations. This will encourage adoption of advanced technologies at the state for grid management and ease the process of tariff approval at the regulatory commissions.
- **Consideration of Emerging Technologies for Tariff determination:** High power demand growth is anticipated with penetration of Electric Vehicles (EV). This shall put a burden on the existing transmission & distribution (T&D) assets. Therefore, it is pertinent to have time-of-day tariffs (Peak/ Off-peak). This shall enable smooth integration of EV charging infrastructure into the grid.

Detailed explanation for the key recommendations is attached as **Annexure -1** of the document. We hope our submissions are considered positively in the best interest of the industry. IESA, on behalf of our Industry members, assure full support and cooperation to Hon'ble Commission towards development of the sector.

Wishing you continued success.

Yours Sincerely,



Dr Rahul Walawalkar
President,
India Energy Storage Alliance



Making India a Global Hub For R&D, Manufacturing and Adoption of Advanced Energy Storage, EV and Green Hydrogen Technologies

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PLATINUM

GOLD

SILVER

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Annexure -1

**IESA's comments/Suggestions on
CERC (Terms and Conditions of Tariff) Regulations, 2024**

S. No.	Clause No & Description	Suggested Clause & Rationale
1	<p>Chapter 8, Computation of Annual Fixed Cost for PHP Pt 66 Computation and Payment of Capacity Charge and Energy Charge for Pumped Storage Hydro Generating Stations</p>	<p>The regulation has very well analyzed the requirements of tariff structures, incentives required for better utilization of hydro, and thermal resources. However, it is silent on the requirement of tariff structure and incentivization required for the resources supporting the Grid integration with renewables.</p> <p>Renewable Energy and Energy Storage Hybrid power plants can meet all the requirements for India's peaking power capacity even as on today's date in a cost-effective way, allowing us to retire older fossil fuel-based plants and avoid building any new fossil fuel-based Peaker plants.</p> <p>Storage Systems will also benefit consumers by bringing down peak deficits, peak tariffs, reduction of carbon emissions, deferral of transmission and distribution capex, and energy arbitrage. For energy transition, shifting from fossil fuel-based capacity to Renewable Energy capacity- it is necessary that the Renewable Energy becomes dispatchable, and available 24x7. This is possible only with Energy Storage. PHP is already regulated under CERC Tariff Regulations as well as a few other State regulations. CERC's 2019 Tariff Regulations include requirements of PHP include return on equity, interest on loan, interest on working capital, depreciation, and O&M expenses in calculations for annual fixed charges. However, the same has not been included for BESS.</p> <p>Hence it is highly recommended to include the tariff structure required for Battery Energy Storage systems and incentives are required for supporting the resources supplying peak power requirements of the Grid.</p>
2	<p>Tariff Structure for ESS</p>	<p>As per Section 61 (b), CERC is responsible for determination of tariff for generation, transmission of electricity. MOP in the year 2022 has accorded legal status under section 2 (50) to ESS based on its application area i.e., generation, transmission, and</p>

		<p>distribution. The cost of setting up and utilizing the resources of ESS, whether BESS, PSP, or any other form of storage shall be passed on to the consumer and will impact consumer tariffs, storage options and the treatment of their cost impacts should be included in CERC's tariff regulation. The mechanism of computation and recovery of capital expenditure in terms of tariff should be detailed in the tariff regulations. Hence CERC is also responsible for determining tariff for BESS.</p> <p>Hence, it is recommended that tariff determination for BESS will be under the purview of CERC and said regulation must include terms and conditions of tariff for BESS as well.</p>
3	Generation tariff determination	<p>Any sale of electricity from ESS or sale/ lease of Storage space shall be either through open competitive bidding or through the Exchange or through tariff fixed u/s 62. For projects under Section 62 of the Act, the tariff for the ESS may be built in either the fixed cost of the generating station (in case of renewable stations a fixed cost component may be allowed) or the revenue may be recovered as part of peak energy charges.</p> <p>Tariff Regulations should include tariff determination for BESS and include above mentioned possibilities of Section 62 under the regulated mechanism.</p> <p>For the non-renewable generating stations, if they can identify Standalone BESS or can utilize the land for Solar +BESS and use the existing transmission infrastructure to supply power to the allocated beneficiary of the power plant. This arrangement of generation should also be encouraged in the tariff regulation by the CERC.</p>
4	Determination of tariff for Ancillary Services	<p>CERC through the Ancillary Service regulation and IEGC Regulation 2023 has identified energy storage system to be used for providing PRAS, SRAS and TRAS. For enabling ESS to participate in electricity markets and ancillary services its extremely important to include procedure under tariff regulations.</p> <p>As per section 26 & 27 of EA 2003, load despatch centers are only eligible to schedule and despatch of power. However, to procure power for meeting the ancillary requirements, it has to approach regulatory commissions for the permissions on case-to-case basis. Eg: procurement of PRAS from 1000 MW first standalone project. To</p>

		<p>address such challenges and speed up the process tariff regulations must include a procedure for meeting such requirements.</p> <p>Multi part tariffs like in the international markets can also be reviewed while drafting the tariff regulations for ancillary markets. In US, FERC order 755, pay for performance’s compensation is based on Capacity payment and a performance cost based on their regulation performance. Likewise, the Enhanced Frequency Response (EFR) of the UK through which a cumulative capacity of 200MW of storage assets were chosen makes a two-level payment, Capacity Payment, and an Availability payment. All these services are provided through a market-based model and the same would be ideal for India in the long run.</p> <p>Hence, we request Hon’ble commission to enable clauses relevant to ESS for participation in Ancillary Services and regulated through Tariff Regulations.</p>
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Other Suggestions:

5	Procedure for Distribution Licensee	<p>There should be an option for DISCOM to procure power from the generating companies who have untied capacities and have installed storage, which can be utilized for state requirements such as peak power, ancillary services etc.</p> <p>This should also be applicable to existing RE generating companies who already have a PPA with Discom for the RE capacity, they can add storage equivalent to the transmission connectivity to offer a peak power supply to Discom with a hybrid tariff that should be under a competitive tariff bidding mechanism.</p> <p>State DISCOMs which are willing to deploy ESS in the State load ancillary services, reactive power requirements, DSM mechanisms etc. may have to get a tariff approval from appropriate commission. Hence it is important to include this procedure under tariff regulations. This will encourage adoption of advanced technologies at the state for the grid management and ease the process of tariff approval at the regulatory commissions</p>
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6	Consideration of emerging technologies for tariff determination	High power demand growth is anticipated with penetration of Electric Vehicles (EV). This shall put a burden on the existing transmission & distribution (T&D) assets. Therefore, it is pertinent to have time-of-day tariffs (Peak/ Off-peak). Battery Storage Solutions can be used as remedy for peak power demand shaving as well as for T&D capex deferral. This shall enable smooth integration of EV charging infrastructure into the grid.
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