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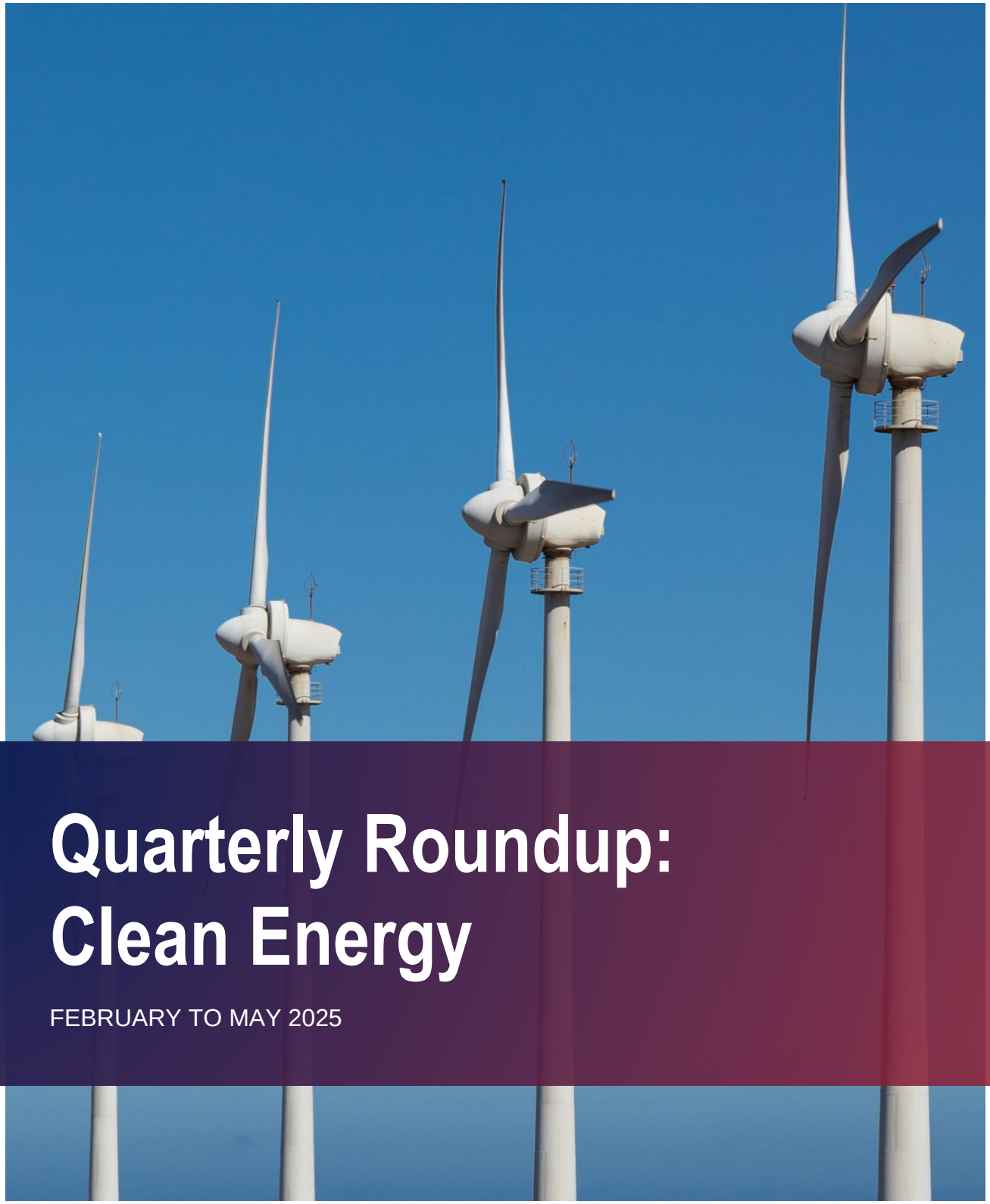

Quarterly Roundup: Clean Energy

FEBRUARY TO MAY 2025

Executive Summary

The latest Issue of our Quarterly Roundup Series on Clean Energy covers the period between the months of February and May 2025. The period under review witnessed various regulatory changes in India with respect to clean energy, both at the central and state level, as well as certain key judicial developments. This Issue tracks and analyzes such developments in connection with the following:

- Solar generation
- Green hydrogen/ ammonia production
- Wind generation
- Tariff
- Connectivity
- Biogas
- Electric vehicles (EVs)
- Nuclear energy
- Miscellaneous

Within such themes, major developments include the following:

Solar Energy Generation

- Updates on List-I of the Approved List of Models and Manufacturers (ALMM) for solar photovoltaic (SPV) modules
- Domestic content requirement (DCR) norms and eligibility criteria for SPV cells
- Proposed guidelines for series approval of SPV modules for laboratory testing

Green Hydrogen Production

- Initiation of pilot projects under the National Green Hydrogen Mission with respect to the use of hydrogen in buses and trucks
- Issuance of the Green Hydrogen Certification Scheme of India
- Issuance of the draft Punjab Green Hydrogen Policy

Wind Energy Generation

- Proposed amendments to the procedure for including/updating wind turbine models in the Revised List of Models and Manufacturers (RLMM) of wind turbines
- Revised draft guidelines for the installation of prototype wind turbine models
- Amended guidelines for tariff-based competitive bidding (TBCB) for power procurement from grid-connected wind solar hybrid projects
- A significant decision delivered by the Appellate Tribunal for Electricity (APTEL) clarifying the interpretation of a Commercial Operation Date (COD) in non-conventional energy projects in a dispute regarding the termination of a power purchase agreement (PPA) for a wind energy project

Tariff

- Amendments in respect of hydro pumped storage projects (PSPs) and co-located battery energy storage system (BESS) projects and waivers of charges related to the inter-state transmission system (ISTS)
- A landmark decision in an appeal involving the Nuclear Power Corporation of India Limited and the Central Electricity Regulatory Commission (CERC) on whether the CERC had jurisdiction under the Electricity Act, 2003 to adjudicate tariff-related disputes concerning nuclear power generation – which is governed by the Department of Atomic Energy (DAE) under the Atomic Energy Act, 1962
- A decision on whether wheeling charges and losses can be imposed by a distribution licensee on power generators connected directly to the transmission grid (i.e., without any actual use of the distribution licensee's infrastructure/ network)
- A decision on the procurement of 750 MW standalone BESS capacity through a competitive bidding process, including on the question of whether (i) the discovered tariff was competitive and in line with industry rates, (ii) the tariff determination process was conducted in a transparent and fair manner, and pursuant to the guidelines issued by the Ministry of Power, and (iii) the quantum of BESS procurement was reasonable
- A decision on whether solar power developers were entitled to a revised annuity and discounting from the COD under change-in-law provisions, including if (i) such a developer was entitled to a carrying cost/ discounting factor at 10.41% from the COD for the entire annuity period; (ii) late payment surcharge is payable on delayed annuity payments; and (iii) future annuities should be paid at a revised rate, including the discounting factor from COD
- Draft regulations in Andhra Pradesh with respect to tariff determination for renewable energy sources
- The release of a discussion paper in Karnataka with respect to fixing norms and determining tariffs for power procurement from electricity generating plants based on municipal solid waste (MSW) and waste-to-energy technologies
- New regulations in Rajasthan with respect to terms and conditions for tariff determinations
- Issuance of draft regulations in Uttar Pradesh to overhaul tariff structures and procurement processes for captive and renewable energy plants

Connectivity

- Proposals to delegate authority for approving low-cost ISTS projects
- Draft amendments to regulations on connectivity and general network access
- Draft amendments to regulations on deviation settlement
- Proposed amendments in Andhra Pradesh with respect to the state's 2024 regulations on GEOA, charges, and banking
- New regulations in Assam with respect to the grant of connectivity to the intra-state transmission system
- Amendments in Haryana with respect to the state's 2023 GEOA regulations

- New regulations in Karnataka with respect to terms and conditions for open access, providing a regulatory framework for all open access consumers, including GEOA consumers, after the Karnataka High Court had struck down the state's 2022 GEOA regulations in December 2024

- New regulations in Rajasthan with respect to terms and conditions for GEOA

Biogas

Notification of a dedicated scheme for investments in, and the implementation of, biofuel projects in Madhya Pradesh under the state's renewable energy policy of 2025

EVs and E-mobility

- Operational guidelines to promote the domestic manufacturing of electric passenger vehicles

- Amendments to the PM E-DRIVE Scheme to encourage domestic manufacturing and self-reliance in India's EV sector, including stricter localization requirements

- Amendments to the State Electric Vehicle Policy, 2022 of Chhattisgarh, including with respect to purchase incentives

- 5% vehicle tax exemption in Gujarat for buyers of fully electric EVs until March 2026 to promote green mobility

- Launch of the Karnataka Clean Mobility Policy 2025-2030

- Clarifications on energy adjustment, billing, and banking of solar power for electricity supplied to EV public charging stations with SPV plants in Kerala

- Notification of the Madhya Pradesh Electric Vehicle Policy 2025 with the objective of building EV infrastructure, incentivizing EV adoption across private and public sectors, and promoting local manufacturing

- Roll out of the new Maharashtra Electric Vehicle Policy 2025 until FY 2029-2030 with the aim of 30% EV penetration by 2030

Nuclear Energy

- Announcements on India's Nuclear Energy Mission, including with the aim to enhance domestic nuclear production, promote private sector participation, and accelerate the use of advanced nuclear technologies such as small modular reactors (SMRs)

- Government discussions on a roadmap for the development of nuclear power generation in India

- U.S. Department of Energy authorizations to export U.S.-made SMRs to India and share such technology with Indian entities

- Constitution of taskforces for introducing legislative and regulatory changes in the nuclear energy sector, including with respect to the Atomic Energy Act, 1962 and the Civil Liability for Nuclear Damage Act, 2010

Miscellaneous Updates

- Revisions to erstwhile guidelines for small hydro power schemes for the purpose of promoting the development of small hydro power projects and addressing existing challenges
- Detailed procedures related to the offset mechanism under India's Carbon Credit Trading Scheme (CCTS)
- Amendments to standard bidding documents for the procurement of ISTS services through the TBCB process
- Proposed guidelines for virtual PPAs (VPPAs) with the aim to facilitate the evolution of VPPAs as instruments pursuant to which obligated entities can meet their targets on renewable consumption obligations (RCO)
- Proposed amendments to RCO regulations
- Proposed guidelines for designating a company as a Renewable Energy Implementing Agency (REIA)
- Issuance of operational guidelines for Andhra Pradesh's Integrated Clean Energy (ICE) Policy, 2024
- Issuance of Assam's Integrated Clean Energy Policy, 2025
- Proposed amendments to net metering for renewable energy guidelines in Delhi
- New regulations in Himachal Pradesh with respect to a framework for resource adequacy
- Proposed regulations in Kerala with respect to renewable energy and related matters
- Amendments in Kerala to regulations on conditions of licence for existing distribution licensees
- Issuance of the Madhya Pradesh Renewable Energy Policy – 2025 for a period of five years
- Issuance of a scheme for the implementation of pumped hydro storage projects in Madhya Pradesh

UPDATES

- Regulatory, legislative, and judicial updates have been provided (1) thematically (i.e., under the heads of Solar generation, Wind generation, Green Hydrogen/ Ammonia production, etc.), and (2) reverse chronologically.
- Within every theme, Central and State Government updates are listed separately. Further, State-level updates have been alphabetically ordered, based on the name of the State in respect of which a thematic update relates.
- Links to primary sources are embedded in headings and/or have been provided in-line.

OTHER PUBLICATIONS

- For quarterly roundups on environmental law, see Issues 1 and 2 of our Environmental Law newsletter here and here.

- For a discussion on implementing the Environment (Construction and Demolition) Waste Management Rules, 2025 by project developers, including an analysis of key provisions in such rules from the perspective of infrastructure and real estate developers and contractors, as well as considerations for risk allocation, see our note here.

- For a deep dive into the draft guidelines for virtual power purchase agreements (VPPAs), see our note here.

- For an overview of electricity consumer rights in relation to energy storage systems under draft amendments to the Electricity Rules, 2005, see our note here.

- For an overview of regulatory initiatives on Environment, Social and Governance (ESG)-related disclosure requirements in India, including an examination of evolving ESG disclosure frameworks implemented by various regulators and the gaps that such initiatives seek to fill, as well as proposed solutions to enhance such frameworks, see our note here.

- For an evaluation of the operational framework for ESG debt securities, including an analysis of changes to the existing regulatory regime introduced by the Securities and Exchange Board of India (SEBI) pursuant to its circular dated June 5, 2025, as well as key concerns for relevant stakeholders in this regard, see our note here.

Contents

Solar Generation

CENTRAL

ALMM

MNRE issues updated list-I under ALMM Order for solar PV modules

May 21, 2025, April 21, 2025 and March 27, 2025: Pursuant to a notification dated May 21, 2025, the Ministry of New and Renewable Energy ("**MNRE**") has by way of an office memorandum dated May 21, 2025 updated list-I of the approved list of models and manufacturers ("**ALMM**," and such list, as first published on March 10, 2021, the "**ALMM List-I**,") for solar photovoltaic ("**SPV**") modules. Only such models of SPV module manufacturers are enlisted under the ALMM which comply with the standards of the Bureau of Indian Standards ("**BIS**") and have the specified minimum module efficiency.

Pursuant to office memoranda issued in March 2025, April 2025 and May 2025, respectively, the MNRE has revised the ALMM List-I providing for provisional enlistment for:

- Australian Premium Solar (India) Private Limited
- Bluebird Solar Private Limited
- ReNew Photovoltaics Private Limited
- FS India Solar ventures Private Limited
- Insolation Green Energy Private Limited
- ECE (India) Energies Private Limited

DCR

MNRE issues DCR norms for Solar PV Cells

March 11, 2025: Pursuant to an office memorandum dated March 11, 2025, the MNRE issued certain eligibility criteria in relation to domestic content requirement ("**DCR**") for SPV cells, including the following criteria:

- An SPV cell (based on crystalline-silicon technology) will be considered to be domestically manufactured only if it has been manufactured in India using undiffused silicon wafer;
- If diffused silicon wafer (generally called 'Blue Wafer') is imported and used as raw material for the manufacturing of SPV cells in India, such SPV cells will not qualify as domestically manufactured SPV cells.

Other

MNRE issues draft guidelines for series approval of SPV Modules for conducting testing in test labs for implementation of "solar systems, devices and components goods order"

May 27, 2025: The MNRE has by way of an office memorandum dated May 27, 2025 issued draft guidelines for series approval of SPV modules for conducting testing in test laboratories for the implementation of the Solar Systems, Devices and Components Goods Order, 2025 (the "**Draft Guidelines**").

The Draft Guidelines have been issued to facilitate labs or manufacturers in the formation of a series of products for the approval of the product family, including with respect to changes in design and materials, among other things, for testing the performance of SPV modules in test labs. The Draft Guidelines aim to simplify the approval process for several different products with design or material variations for compulsory registration with the BIS for implementation of the Solar Systems, Devices and Components Goods Order, 2025.

Green Hydrogen/ Ammonia Production

CENTRAL

Government initiates Pilot Projects on Hydrogen Fueled Buses and Trucks under the National Green Hydrogen Mission

March 3, 2025: Pursuant to a press release dated March 3, 2025, the MNRE announced that the Government has initiated five pilot projects for using hydrogen in buses and trucks ("**Transport Pilot Projects**") under the National Green Hydrogen Mission ("**NGHM**"). Earlier, on February 14, 2024, the MNRE had issued guidelines for the implementation of pilot projects in the transport sector ("**NGHM Transport Guidelines**") under the NGHM.

In furtherance of the NGHM Transport Guidelines, proposals were invited for different types of hydrogen-based vehicles, routes, and hydrogen refueling stations, and five pilot projects were sanctioned consisting a total of 37 vehicles (buses and trucks) and 9 hydrogen refuelling stations.

Salient Features of the Transport Pilot Projects

- **Vehicles for Trial Deployment**
  - 15 hydrogen fuel cell-based vehicles
  - 22 hydrogen internal combustion engine ("**ICE**")-based vehicles
- **Trial Routes across India**
  - Greater Noida – Delhi – Agra
  - Bhubaneshwar – Konark – Puri
  - Ahmedabad – Vadodara – Surat
  - Sahibabad – Faridabad – Delhi
  - Pune – Mumbai
  - Jamshedpur – Kalinga Nagar
  - Thiruvananthapuram – Kochi
  - Kochi – Edappally
  - Jamnagar – Ahmedabad
  - NH-16 Visakhapatnam – Bayyavaram
- **Companies to which Transport Pilot Projects have been awarded**
  - Tata Motors Limited
  - Reliance Industries Limited
  - NTPC
  - ANERT (Agency for Non-conventional Energy and Rural Technology)
  - Ashok Leyland
  - HPCL (Hindustan Petroleum Corporation Limited)
  - BPCL (Bharat Petroleum Corporation Limited)
  - IOCL (Indian Oil Corporation Limited)

Implementation

These pilot projects are likely to be commissioned in the next 18-24 months.

Funding

Around INR 2.08 billion will be made available by the Government as the total financial support for selected projects.

Objectives of the NGHM Transport Guidelines

1. Development of commercially viable technologies for the utilization of hydrogen
2. Pilot deployment of green hydrogen ("**GH**") as fuel in buses and trucks in a phased manner
3. Demonstrate safe and secure operations of hydrogen vehicles and refueling stations
4. Assess the technical feasibility and performance of hydrogen-based transport solutions
5. Evaluate economic viability under real-world operating conditions.

Background and Rationale of the NGHM Transport Guidelines

In January 2023, the Union Cabinet had approved the NGHM with an outlay of INR 197.44 billion until FY 2029-30, including INR 14.66 billion earmarked for pilot projects. The NGHM made a commitment to exploring innovative models to source GH (*see 4.2 of the NGHM, at p. 5*) and creating demand in

domestic markets by, inter alia, blending hydrogen in existing natural gas networks (*see 7.1 of the NGHM, at p. 11*).

For more background and context related to the NGHM, see pp. 1-4 of our Quarterly Roundup: Clean Energy, Issue 1 of 2023, January – March 2023, here.

As mentioned above, the NGHM Transport Guidelines, released under the NGHM, dealt specifically with pilot projects in the transport sector. Thrust areas with respect to providing support under the scheme, which has a separate sectoral budgetary allocation of INR 4.96 billion under the NGHM until FY 2025-26, include (i) the use of GH as fuel in buses and trucks (Component A); and (ii) supporting infrastructure like hydrogen refueling stations (Component B).

For more background and context related to the NGHM Transport Guidelines, see pp. 20 of our Quarterly Roundup: Clean Energy, Issue 1 of 2024, January -March 2024, here.

MNRE issues GH certification scheme

April 29, 2025: Pursuant to a letter dated April 29, 2025, the MNRE released the Green Hydrogen Certification Scheme of India ("**GHCI**") under the NGHM. Previously, the MNRE had released the draft GHCI on September 27, 2024 for stakeholder feedback.

The draft GHCI was released in furtherance of India's broader strategy under the NGHM to transition to a low-carbon economy and position itself as a global leader in GH production. The GHCI aims to provide a comprehensive framework to: (i) establish a standardized mechanism for certifying and regulating GH production in India, and (ii) promote transparency, accountability, and environmental credibility in the sector to strengthen trust among domestic and international stakeholders.

For more background and context related to the draft GHCI, see pp. 20 of our Quarterly Roundup: Clean Energy, Issue 3 of 2024, July – September 2024, here.

Objectives of the GHCI

- **Establishing Standards**: Creating clear guidelines and a detailed methodology for calculating emissions from greenhouse gases ("**GHGs**") during GH production, ensuring that producers adhere to environmental standards.
- **Certification Process**: Setting up a rigorous certification process that guarantees the origin of GH, thereby enhancing its credibility in both domestic and international markets.
- **Monitoring and Reporting**: Establishing monitoring requirements for GH production and creating a robust verification-based approach, including by designating accreditation authorities, as well as by developing a reporting and data tracking system.
- **Facilitating Exports**: By ensuring adherence to high standards, the GHCI is expected to boost India's GH exports, providing assurance to international buyers regarding the quality and sustainability of hydrogen produced in India.
- **Encouraging Investment**: The GHCI is designed to attract investments in GH production and related technologies, supporting India's goal of becoming a renewable energy hub.

Eligible Pathways

Currently, two primary pathways of GH production have been identified as eligible for certification:

- Electrolysis, and
- Biomass conversion.

The scheme allows for proposing new pathways, subject to review by the technical committee.

Applicability

A GH certificate is mandatory if the producer:

- Receives any central/state incentive or concession,

- Sells or uses hydrogen in India, or
- Partially sells in India and exports the rest.

Exemptions:

- Facilities producing less than or equal to 10 tons per year are exempted. However, they can apply voluntarily.
- 100% export-oriented producers with no incentives/concessions are exempt from certification, but they must report quantity and emissions pursuant to the importing country's standards.

Certification Process under GHCI

1. **Registration**: GH producers must register on a designated portal and provide information as per the measurement, reporting, and verification framework outlined by the scheme.
2. **Monitoring Plan**: Producers are required to develop a monitoring plan that details project boundaries, data collection methods, and emission sources.
3. **Verification**: Accredited Carbon Verification ("**ACV**") agencies will conduct annual validation and verification activities, and conduct checks on the claims made by GH producers and ensure compliance with the established standards.

Voluntary Reporting

Producers may voluntarily report emissions beyond the defined system boundary, based on verification by accredited ACV agencies. These can be included in provisional/final certificates upon request.

Issuance of Certificates

The scheme outlines two types of certificates, as described below.

- *Concept Certificate:* A voluntary certificate confirming that the design of a GH production facility meets the prerequisites and requirements.
- *Facility Level Certificate:* Mandatory for GH production facilities to apply for provisional or final certificates.

In case the GH facility is built in multiple phases at a single location, the GH producer will be required to apply for multiple facility-level certificates

In addition, two types of production certificates are proposed:

1. Provisional Certificate: An auto-generated voluntary certificate based on actual production details, available for periods of 1-11 months. This provisional certificate guarantees that the hydrogen produced during the specified period meets the GH standards, based on the data submitted by the producer. However, its validity is conditional upon the issuance of a final certificate, which will be granted following due verification by ACV agencies.
2. Final Certificate: Mandatory annual certificate guaranteeing that the hydrogen produced during the specified evaluation cycle is 'green' as per GHCI standards.

Certificate Details

The GH certificate serves as a Guarantee of Origin (GO) label, containing:

- Unique identification for each ton of hydrogen produced
- Project details
- Production year
- Emission intensity values

Compliance and Auditing

To ensure the integrity of the certification process, the GHCI includes provisions for compliance and auditing. The MNRE or its designated agency may conduct random audits during or after the financial year to verify compliance with the certification requirements.

While retaining the broader objectives and eligible pathways, *inter alia*, the GHCI departs from its draft regarding certain particulars as listed below.

Particulars	Draft GHCI (September 2024)	GHCI (April 2025)
Nodal Authority/ Implementing Agency	The Bureau of Energy Efficiency ("**BEE**") was designated as the nodal authority for the GHCI. The BEE was supposed to accredit agencies responsible for monitoring, verifying, and certifying GH projects. Such accredited agencies were required to play an important role in ensuring compliance with the certification standards. A technical committee, chaired by the Mission Director of the NGHM, would provide strategic oversight and guidance with respect to the implementation of the scheme.	The MNRE will designate an Implementing Agency ("**IA**") as the nodal authority responsible for monitoring and certification of GH projects based on the verification reports from accredited agencies. The IA will be the chairman of the technical committee.
Certification Scope	Encompassed all stages up to the compression and purification of hydrogen for transport.	Encompasses onsite storage in addition to other stages.
Clarification on Input Materials	Mentioned input materials with examples like water, oxygen, salts, catalysts, solvents, and acids.	Clarifies that the IA will consider specifying such emissions for each potential input material for consideration by ACV agencies.
Co-product Emission Allocation Method	• Emissions may be allocated to co-products such as oxygen and biochar only if the co-products have been valorized. • Based on Economic Value Allocation Method.	Based on the Energy Content Allocation Method. Any co-product with no calorific value will not be assigned any emissions.
Data Monitoring	Detailed records of hydrogen production (covering production to consumption processes) were required to be maintained, and records on the final use of hydrogen generated or sold needed to be kept.	Detailed records of hydrogen production (covering sale up to the first purchaser) for at least five evaluation cycles must be maintained, and records up to the stage of captive use or sale to the first purchaser need to be kept.
Engagement of ACV agency	Engage an ACV agency within one month of completion of evaluation cycle.	Engage an ACV agency (accredited by the BEE) by March 31 for the respective evaluation cycle.
Non-Compliance	Penalized under three cases: 1. high emission intensity; 2. quantity mismatch; and 3. failure to apply for final certificate. Specific multiplier values and penalty calculations provided. • For the first occurrence of any non-compliance, the GH producer would not be eligible for provisional certificate for the next evaluation cycle, and any provisional certificate already issued for that	Identified as an instance of non-compliance of GH standard under two cases: 1. actual emissions above threshold; and 2. failure to apply for final certificate. Specific penalty calculations (multiplier values, etc.) removed from the general scheme document and implied to be provided by other means. • For the first occurrence of any non-compliance, any provisional certificate already issued to the

Particulars	Draft GHCI (September 2024)	GHCI (April 2025)
	evaluation cycle would be canceled. • For the second occurrence of non-compliance within 3 years, the GH producer would not be eligible for a provisional certificate for the next three evaluation cycles, and any provisional certificate already issued for those evaluation cycles would be canceled. • Not explicitly mentioned beyond the second occurrence.	GH producer for that evaluation cycle will be withdrawn. • For the second occurrence of non-compliance within 3 years, the GH producer is not eligible for a provisional certificate for the next evaluation cycle, and any provisional certificate already issued for these evaluation cycles will be canceled and the GH producer must apply for the facility certificate again. • The MNRE reserves the right to take additional actions, including barring the GH producer from applying for provisional/final certificate for a specific period. The MNRE may issue a separate executive order.
Identification Unit	Unique identification for each ton of hydrogen produced.	Unique identification for each 100 kg of hydrogen produced.
Transferability	Certificate was non-transferable or tradeable.	Certificate will be transferable as per the procedure laid down by the MNRE to maintain and track the chain of custody.
Carbon Credits	The GH certification could not be utilized for the purpose of claiming any emissions reduction credits. However, it could be referred for highlighting possible emissions reduction.	Certificate can be used for the purpose of claiming carbon credit under the Carbon Credit Trading Scheme, 2023 ("**CCTS**"), subject to additional requirements under the CCTS.

Global Context and Strategic Importance

In Quarterly Roundup: Clean Energy, Issue 3 of 2024, July – September 2024, available here, it was noted that the draft GHCI scheme marks a major step in India's clean energy transition. The scheme aims to align India with global efforts to promote GH, and takes cues from similar schemes in the European Union (EU) and other countries. We also pointed out key opportunities, such as boosting growth in the renewable energy sector. At the same time, we raised concerns for smaller producers. These included the burden of meeting verification rules, short timelines, and strict data requirements.

The final framework continues to include detailed rules for tracking emissions, third-party checks, and reporting. It also requires ongoing data management. As mentioned in our earlier update, these rules may still be challenging for small producers and new players, since the compliance burden remains high.

STATE

Punjab

PEDA issues draft green hydrogen policy

April 2025: The Punjab Electricity Development Authority ("**PEDA**") issued the draft Punjab Green Hydrogen Policy with the aim of making the state of Punjab a preferred destination for investments in GH production and marketing, along with a conducive eco-system, and to make Punjab a producer of GH/ green ammonia with a production capacity of 100 kilo tonnes per annum by the year 2030.

Wind Generation

CENTRAL

Wind Turbines

MNRE releases draft amendment to Procedure for inclusion/updating Wind Turbine Model in the Revised List of Models and Manufacturers of Wind Turbines

April 17, 2025: Pursuant to a notification dated April 17, 2025, the MNRE issued a draft amendment to the procedure for including/updating wind turbine models in the Revised List of Models and Manufacturers of Wind Turbines ("**RLMM**") for comments from stakeholders.

Background:

The amendments are proposed to apply with respect to the erstwhile/ existing procedure, as issued through an office memorandum dated November 1, 2018.

The following amendments are proposed:

- The type certificate required to be provided by wind turbine manufacturers and models approved for RLMM are to mandatorily include Blade, Tower, Gearbox, and generator manufacturing facility in India, and the components are to be sourced only from such facilities.
- To strengthen cybersecurity, data centers and/or servers are required to be mandatorily located in India. Transferring real-time operational data outside India is prohibited.
- Research and Development (R&D) center must be mandatorily located in India within six months.

MNRE releases draft revised guidelines for installation of prototype wind turbine models

April 9, 2025: Pursuant to a notification dated April 9, 2025, the MNRE issued revised draft guidelines for installation of prototype wind turbine models, inviting comments from stakeholders.

Background:

These guidelines are proposed to be issued in supersession of the guidelines issued on the same subject on May 22, 2012 and amended on September 20, 2012 and June 1, 2016, respectively.

These guidelines will be applicable to all wind turbine manufacturers in India who wish to install prototype wind turbine models in the country. They will be implemented by the National Institute of Wind Energy, Chennai ("**NIWE**").

The installation of a prototype wind turbine model is proposed to be allowed only to carry out type testing and for obtaining type certificates from internationally accredited certifying agencies, subject to certain conditions. The draft guidelines also provide for mandatory operation and maintenance standards. A maximum period of three years from the date of issuance of a recommendation letter from the NIWE is prescribed, during which period prototype wind turbine models will be allowed to complete testing and for obtaining type certificates.

Other

MoP notifies amendment to the Guidelines for TBCB process for procurement of power from grid connected wind solar hybrid projects

February 12, 2025: Pursuant to a notification dated February 12, 2025, the Ministry of Power ("**MoP**") notified an amendment to the Guidelines for Tariff Based Competitive Bidding ("**TBCB**") Process for Procurement of Power from Grid Connected Wind Solar Hybrid Projects.

Background:

While such amendments relate to wind solar hybrid projects, previously, a different set of guidelines were notified and amended for SPV power projects. The Guidelines for the TBCB Process for the Procurement of Power from Grid Connected Solar PV Power Projects were notified on August 21, 2023, and amended on November 17, 2023 and February 2, 2024, respectively.

The amendments to the TBCB guidelines for power procurement from grid-connected wind solar hybrid projects include the following:

- In the event the generator fails to maintain energy supply corresponding to the minimum capacity utilization factor ("**CUF**") as declared in the power purchase agreement ("**PPA**") for two consecutive years, the generator will be in default and its yearly minimum CUF obligation will get reduced to the average of actual CUF for the two default years. Further, such generator will be obligated to pay to the procurer lump-sum damages equivalent to 24 months or the balance PPA period, whichever is lesser.
- The developer is required to install and maintain global positioning system (GPS)-enabled Automatic Weather Station (AWS) as per the technical specifications and standards specified by the relevant Central Government agency.
- A period of 30 days (extendable up to 12 months) from the issuance of the letter of approval has been prescribed for signing the PPA and the power sale agreement, failing which such approval letter will be canceled.
- New instruments for the establishment of earnest money deposit and performance bank guarantee have been added.

Judgments

Guttaseema Wind Energy Company Private Limited v. A.P. State Electricity Regulatory Commission & Anr

The Appellate Tribunal for Electricity ("**APTEL**") delivered a significant decision in a dispute between Guttaseema Wind Energy Company Private Limited and the Southern Power Distribution Company of Andhra Pradesh Limited regarding the termination of a PPA for a wind power project. The dispute centered around the question of whether such project had achieved its Commercial Operation Date ("**COD**") as per the contractual terms, and whether the distribution company was justified in terminating the PPA for the uncommissioned capacity. The APTEL's ruling clarifies the interpretation of COD in non-conventional energy projects and underscores the importance of adhering to the agreed intent of contractual provisions.

Facts

Guttaseema Wind Energy Company Private Limited ("**Appellant**") entered into a PPA dated May 9, 2016 with Southern Power Distribution Company of Andhra Pradesh Limited ("**2nd Respondent**") for a sale of 80 MW of wind power. The Government of Andhra Pradesh's Wind Power Policy, as articulated in GoM No. 48 dated April 11, 2008, mandated that projects exceeding 20 MW capacity would require approval from the New & Renewable Energy Development Corporation of Andhra Pradesh ("**NREDCAP**").

Pursuant to a letter dated March 21, 2018, the 2nd Respondent granted approval for the synchronization of 10 MW (out of 80 MW) with respect to the proposed wind power project, and pursuant to another letter dated February 1, 2019, approved the synchronization of a further 10MW, thereby taking the cumulative capacity commissioned until such date to 20 MW. The Appellant was required to complete the project within 24 months from the agreement date.

A show cause notice was issued by the NREDCAP on April 22, 2019 regarding the non-implementation of the remaining 60 MW of wind power. The Appellant challenged the show cause notice in the Andhra Pradesh High Court, which temporarily restrained the NREDCAP from taking coercive action against the Appellant. The concerned state electricity regulatory commission, the Andhra Pradesh Electricity Regulatory Commission ("**APERC**"), upheld the termination of the PPA for 60 MW due to the Appellant's failure to achieve commercial operation of the third unit within the stipulated timeframe, as per Articles 1.4 and 9 of the PPA.

Extracts of relevant articles of the PPA

*"**Article 1.4 Commercial Operation Date (COD):** means, with respect to each Generating unit, the date on which such Generating unit is declared by the Wind Power Producer to be operational, provided that the Wind Power Producer will not declare a Generating unit to be operational until such*

Generating unit has completed its performance acceptance test as per standards prescribed.

Explanation: *In respect of non-conventional based power projects the date of synchronization of the first unit of the project will be treated as the Commercial Operation Date of the project."*

*"**Article 9.1** The Wind Power Producer will achieve Commercial Operation Date within 2 (two) years from the date of signing of the Agreement, default of which, the Agreement is liable for termination and the same can be done at the option of DISCOM with due notice."*

Decision

Interpretation of Article 1.4 of the PPA:

The APTEL held that there was no conflict between the main clause and the explanation attached to Article 1.4 of the PPA. The explanation clarifies that for non-conventional energy projects like wind energy, the date of synchronization of the first unit would be treated as the COD of the entire project. The APTEL also held that the interpretation aligned with the intent of the parties when they entered into their agreement, and accordingly, such intent must be respected.

Termination under Article 9.1 of the PPA:

The APTEL held that since the first unit was commissioned on March 22, 2018, within the stipulated two-year period from the date of execution of the PPA (which was May 9, 2016), the entire project was deemed to have achieved COD on this date. Thus, the distribution company had no legal basis to terminate the PPA for the remaining 60 MW capacity under Article 9.1 of the PPA.

Relief

The distribution company was directed to do the following: (a) synchronize the second 20 MW wind turbine generator; (b) provide deemed generation benefits; and (c) allow synchronization of the remaining 40 MW capacity in accordance with the original PPA.

Comments

The APTEL applied the rule that explanations to contractual clauses are meant to clarify ambiguities, and not contradict or conflict with the main provision. Further, the tribunal relied on the judgment in *S. Sundaram Pillai v. V.R. Pattabhiraman*, where it was held that in order to preserve and protect the intent of the leading term, such term will gain precedence over the explanation.

There was an attempt to invoke the principle of business efficacy, which is normally invoked to read a term in an agreement or contract for the purpose of achieving the result or the consequence intended by the parties, when they act as prudent businessmen. Business efficacy means the power to produce intended results. However, the tribunal rejected this argument, holding, instead, that the contract was entered into with the same intent by both parties, and therefore, the terms of such contract must be honored unless they were legally impermissible.

Tariff

CENTRAL

Guidelines and Regulations

MoP issues notification for waiver of ISTS charges for ESS

June 10, 2025: On June 10, 2025, the MoP made certain amendments with respect to hydro PSPs and BESS projects. Pursuant to such amendments, the inter-state transmission system ("**ISTS**") charges have been waived off to 100% for hydro PSPs for which the construction work has been awarded on or before June 30, 2028. The amendments further provide that ISTS charges have been waived off to 100% for co-located BESS projects commissioned on or before June 30, 2028. However, for BESS projects, if the power is consumed outside the state in which such BESS project is commissioned, the waiver will apply. A BESS project will be considered as co-located only if the BESS and renewable energy projects are connected to the same ISTS sub-station. Further, there will not be any ISTS charge waivers for hydro PSPs and co-located BESS projects for which the construction work is awarded, and commissioned, respectively, after June 30, 2028.

Comments

The economic feasibility of energy storage facilities in India is likely to improve as a result of this notification, increasing their appeal to developers and investors. This notification is likely to offer an incentive to hasten the deployment of energy storage systems ("**ESS**") by reducing a significant amount of transmission expenses. These amendments are critical for integrating higher penetrations of variable renewable energy into the grid, ensuring stability and reducing curtailment.

Judgments

APTEL holds CERC lacks jurisdiction over nuclear-tariff dispute governed by the Atomic Energy Act

The APTEL delivered a significant ruling in the case of *Nuclear Power Corporation of India Limited v. Central Electricity Regulatory Commission & Gujarat Urja Vikas Nigam Limited* (Appeal No. 134 of 2024). This appeal related to whether the Central Electricity Regulatory Commission ("**CERC**") had jurisdiction under Sections 79(1)(a) and 79(1)(f) of the Electricity Act, 2003 to adjudicate a tariff-related dispute concerning nuclear power generation, which is governed by the Department of Atomic Energy ("**DAE**") under the Atomic Energy Act, 1962 ("**Atomic Energy Act**"). The APTEL ultimately held that the Atomic Energy Act operates independently in matters of nuclear tariffs, and accordingly, the CERC does not have jurisdiction over such disputes.

Brief Facts

Pursuant to an order dated March 27, 2025, the APTEL set aside the interim order passed by the CERC on January 13, 2024 under Sections 79(1)(a) and 79(1)(f) of the Electricity Act, 2003.

The matter arose out of two PPAs between Nuclear Power Corporation of India Limited ("**NPCIL**") and Gujarat Urja Vikas Nigam Limited. ("**GUVNL**"). In such PPAs, the DAE had been assigned the task of determining tariffs for the supply of electricity from NPCIL's Kakrapar and Tarapur Atomic Power Stations under the Atomic Energy Act.

Key Issues for the APTEL's Consideration

Whether the CERC had jurisdiction under Sections 79(1)(a) and 79(1)(f) of the Electricity Act, 2003 to adjudicate disputes relating to nuclear tariffs determined under the Atomic Energy Act?

Key Submissions of Parties

Appellant (NPCIL)

NPCIL argued that setting tariffs in this case was covered solely under the Atomic Energy Act, and therefore, the CERC lacked jurisdiction to adjudicate disputes relating to such tariffs. NPCIL further argued that the matter should be governed entirely

by the mechanism laid out under the Atomic Energy Act and the terms of the PPA.

Respondent (GUVNL)

GUVNL alleged that the DAE's tariff orders included post-tax returns, resulting in double taxation. GUVNL applied for a refund of INR 1.1995 billion. In its interim order, the CERC held that it can adjudicate disputes falling under the Electricity Act, 2003.

APTEL's Order

In its 2025 judgment, the APTEL held that, although it is a government-owned company, NPCIL is still governed under the Companies Act and is not included in the exemption under Section 184 of the Electricity Act, 2003. The APTEL also held that Section 22 of the Atomic Energy Act contains a non-obstante clause and takes priority over the Electricity Act, 2003 regarding matters related to nuclear power tariffs.

The tribunal observed that there is no inconsistency between the Atomic Energy Act and the Electricity Act, 2003 to permit concurrent jurisdiction. It further pointed out that the CERC's jurisdiction under Sections 79(1)(a) and (f) applies only to tariffs governed by the Electricity Act, 2003. Since nuclear tariffs are covered under the Atomic Energy Act, Section 79(1)(f) of the Electricity Act, 2003 has no effect in this situation. As a result, the APTEL held that the CERC does not have jurisdiction to address the dispute, and directed that such dispute be settled according to the arbitration and civil remedies set out in the PPAs.

MSEDCL permits procurement of 750 MW BESS capacity through competitive bidding under Ministry of Power guidelines

March 20, 2025: In *Maharashtra State Electricity Distribution Co. Ltd. v. Pace Digitek Private Limited* (Case No. 173 of 2024), the Maharashtra Electricity Regulatory Commission ("**MERC**") approved a procurement of 750 MW/ 1,500 MWh of standalone BESS capacity through a competitive bidding process. The MERC examined whether the discovered tariff was competitive, and the bidding process fair and transparent. The MERC found the process compliant with regulatory guidelines and market conditions, and accordingly, authorized the procurement along with a green shoe option.

Brief Facts

Pursuant to an order dated March 20, 2025, the MERC approved the petition filed by Maharashtra State Electricity Distribution Company Limited ("**MSEDCL**") to obtain tariff for the procurement of up to 750 MW/ 1,500 MWh (250 MW/ 500 MWh base capacity and 500 MW/1,000 MWh green shoe option) of standalone BESS capacity through a competitive bidding process conducted according to the guidelines issued by the MoP. The procurement sought to install standalone BESS facilities at 25 MSEDCL substations to control peak and off-peak loads, integrate solar energy under the Mukhyamantri Saur Krishi Vahini Yojana 2.0, and renewable purchase obligations.

Key Issues for the MERC's Consideration

1. Whether the discovered tariff was competitive and in line with industry rates?
2. Whether the tariff determination process was conducted in a transparent and fair manner?
3. Whether the quantum of BESS procurement was reasonable?

Key Submissions of Parties

Petitioner (MSEDCL)

MSEDCL submitted that the offered tariff was much lower than the rates of the same-sized tenders in India, and therefore such tariff was more favorable for the project.

The MERC's Order

The MERC held that the bidding process was conducted with transparency and as per the guidelines issued by the MoP through a two-phase bidding framework on the relevant electronic trading system (ETS) (the Bharat-ETS platform). The MERC further noted that the lowest tariff was taken into account and a level playing field was assured throughout the process.

With respect to the amount of procurement, the MERC recognized MSEDCL's need for adequate storage to effectively manage integration of renewable energy, cut peak-hour power purchases, and comply with new energy storage obligation

targets set under the amended MERC (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) Regulations, 2019.

Accordingly, the MERC authorized the procurement of 250 MW/ 500 MWh of BESS capacity, in addition to 500 MW/ 1,000 MWh extra capacity as a green shoe option. Further, the MERC directed MSEDCL to execute the battery energy storage purchase agreement with Pace Digitek Private Limited within 30 days and submit a copy to the MERC.

MERC holds wheeling charges not payable in absence of actual use of distribution network

March 20, 2025: In *TP Solapur Saurya Ltd. & Ors. v. Maharashtra State Electricity Distribution Co. Ltd*. (Case No. 100 of 2024), the MERC issued an opinion on the issue of whether MSEDCL could impose wheeling charges and losses on solar power generators connected directly to the transmission system. The petitioners, operating under Tata Power Renewable Energy Limited, had raised the contention that their projects were not using MSEDCL's distribution infrastructure, and therefore should not be subject to such charges. The MERC upheld this position, clarifying that wheeling charges are applicable only when electricity is physically routed through the distribution licensee's network, which was not the case here.

Brief Facts

Pursuant to an order dated March 20, 2025, the MERC allowed the petition filed by TP Solapur Saurya Limited and other solar power generators operating under Tata Power Renewable Energy Limited ("**TPREL**"), seeking relief from the imposition of wheeling charges and wheeling losses by MSEDCL.

The petitioners operated solar power projects directly connected to the Maharashtra State Electricity Transmission Company Limited's transmission network at the 132 kV voltage level via dedicated 33/ 132 kV lines owned by them. These projects generated electricity for high-voltage open access users without using MSEDCL's distribution network. Nonetheless, MSEDCL imposed wheeling charges and deducted 2.10 million units ("**MUs**") from the accounts of open access consumers between May 2023 and March 2024, citing wheeling losses. It was alleged that MSEDCL also levied energy deductions from these consumers under the pretext of transmission losses.

Key Issue for MERC's Consideration

Whether MSEDCL could impose wheeling charges and losses without any actual use of its distribution infrastructure?

Key Submissions of Parties

Petitioners (TPREL entities)

The petitioners argued that the deductions were contrary to Regulation 14.6(b) of the MERC (Distribution Open Access) (First Amendment) Regulations, 2019, which expressly states that wheeling charges and losses are inapplicable when there is direct transmission from the generator to the consumer and no electricity is routed through the distribution network.

Respondent (MSEDCL)

MSEDCL contended that wheeling charges were justified because the petitioners drew auxiliary or start-up power from its system. MSEDCL also claimed that shared substations amounted to indirect usage of the distribution network.

The MERC's Order

The MERC held that wheeling charges are payable only when electricity is transmitted through a licensee's distribution system. Since the petitioners' solar plants were directly connected to the transmission grid, and there was no physical use of MSEDCL's distribution network, the MERC found that imposition of wheeling charges and losses was not supported by law.

The MERC rejected MSEDCL's argument related to auxiliary consumption, clarifying that it is a separate activity and does not amount to usage of the distribution network for wheeling. It also dismissed the argument of shared substations being tantamount to indirect usage, holding that in the absence of physical interconnection, no wheeling charges could be levied.

Accordingly, the MERC directed MSEDCL to:

1. refund the wheeling charges wrongfully levied;

2. reverse the deduction of 2.10 MUs from the accounts of open access consumers;

3. pay interest on the refunded amount at the applicable rate prevailing under the MERC's norms.

Further, the MERC restrained MSEDCL from levying such charges in the future unless electricity is physically routed through its distribution system.

CERC holds solar developer entitled to revised annuity and discounting from COD under Change-in-Law provisions

March 24, 2025: In *Solitaire Powertech Private Limited v. Solar Energy Corporation of India Limited & Ors*. (Petition No. 377/MP/2023), the CERC addressed the issue of whether a solar power developer was entitled to a discounting factor at 10.41% per annum on its change-in-law claim from the date of commissioning of the project. Solitaire Powertech Private Limited ("**SPPL**"), the petitioner, SPPL, had sought the application of this discounting factor from the COD on compensation arising from the implementation of Goods and Services Tax (GST) laws. The CERC upheld SPPL's contention, directing Solar Energy Corporation of India Limited ("**SECI**") to revise the monthly annuity, pay arrears with late payment surcharge, and amend contractual documents accordingly.

Brief Facts

Pursuant to an order dated March 24, 2025, the CERC allowed the petition filed by SPPL under Section 79(1)(b) and 79(1)(f) of the Electricity Act, 2003. The petition sought the application of a discounting factor at 10.41% per annum on change-in-law compensation, starting from the COD of the project (April 7, 2018), for a period of 13 years. The compensation arose due to additional costs incurred as a result of the implementation of GST laws effective July 1, 2017.

SPPL operates a 30 MW solar power plant in Karnataka, developed under NSM Phase II, Batch III Tranche V, with a PPA signed with SECI on August 2, 2016. SPPL claimed it was entitled to receive a monthly annuity of INR 8,16,880 inclusive of the discounting factor, following the CERC's order in Petition No. 536/MP/2020. However, SECI was making payments of only INR 6,77,474 per month, excluding any discounting costs.

Key Issues for the CERC's Consideration

1. Whether SPPL is entitled to a carrying cost/ discounting factor at 10.41% from the COD for the entire annuity period;

2. Whether late payment surcharge is payable on any delayed annuity payments;

3. Whether future annuities should be paid at INR 8,16,880 including the discounting factor from COD.

Key Submissions of Parties

Petitioner (SPPL)

SPPL argued that in line with the CERC's previous ruling, the full annuity, including the 10.41% discounting factor from COD, must be paid. SPPL emphasized that its provisional acceptance of partial payments was "without prejudice," reserving its right to claim the full compensation.

Respondent (SECI)

SECI submitted that its liability commenced only from the 60th day after the date of the CERC's order or the submission date of the claim, whichever was later. It also contended that since SPPL had earlier accepted provisional payments, the current petition was barred by *res judicata*.

The CERC's Order

The CERC ruled in favour of the petitioner and held that the discounting factor should be applied from the COD. The monthly annuity must be computed from the COD of the project using a discounting factor of 10.41% per annum on the principal sum related to GST, and should be paid over 13 years from the COD.

Accordingly, the CERC directed SECI to:

1. pay the revised monthly annuity amount of INR 8,16,880 (up from INR 6,77,474);

2. pay the differential amount due for past payments along with late payment surcharge at 1.25% per month beyond the 60-day payment window; and

3. amend the PPA and letter of intent to reflect the revised annuity structure.

The CERC also held that the petition was not barred by *res judicata* since SPPL's earlier undertakings had been issued "without prejudice" and thus SPPL had not waived its right to full compensation.

STATE

Andhra Pradesh

APERC issues draft regulation for tariff determination for renewable energy sources

May 27, 2025: The APERC introduced the Draft APERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2025 ("**Draft APERC Regulations**") on May 27, 2025.

Subject to its provisions, the Draft APERC Regulations extends to all cases where the tariff, for a grid-connected generating station or a unit thereof commissioned during the period when the tariff determination norms specified in the Draft APERC Regulations will remain valid (the "**Control Period**") and based on renewable energy sources, is to be determined by the APERC under Section 62, read with Section 86, of the Electricity Act, 2003.

The Draft APERC Regulations also sets forth certain eligibility criteria including in relation to (i) wind power projects; (ii) small hydro projects; (iii) biomass power projects with rankine cycle technology; (iv) non-fossil fuel based co-generation projects; (v) SPV power projects, floating solar projects, and solar thermal power projects; (vi) renewable hybrid energy projects; (vii) biomass gasifier-based power projects; (viii) biogas-based power projects; (ix) municipal solid waste-based power projects; (x) refuse-derived fuel-based municipal solid waste power projects; and (xi) renewable energy with storage projects.

Karnataka

KERC issues discussion paper on fixation of norms and determination of tariff for procurement of power from MSW based power generating plants for FY26

March 5, 2025: With the formulation of the national action plan on climate change, the development of renewable energy has gained importance. While there have been certain improvements in waste management because of the Swachh Bharat Mission, it still remains a challenge. The promotion of waste-to-energy technologies may help address this issue.

In this regard, the Karnataka Electricity Regulatory Commission ("**KERC**") released a discussion paper on March 5, 2025, observing that refuse-derived fuel combustion and incineration-based waste-to-energy technologies have emerged as viable policy options for waste management. These technologies require a continuous supply of high-quality waste with sufficient calorific value and low moisture content to remain feasible.

A broad summary of the discussion paper is provided below.

Prior Efforts to Promote Waste-To-Energy Projects

By way of OP No. 20/2016, Bangalore MSW Limited sought tariff determination for its Municipal Solid Wate ("**MSW**") plant. Pursuant to its order dated September 19, 2016, the KERC fixed a generic tariff of INR 7.08 per unit for power purchase from MSW plants by electricity supply companies, applicable for 20 (twenty) years from the COD. The tariff applied to all MSW-based power plants commissioned from September 19, 2016 to March 31, 2025, with the KERC continually extending the period while keeping the tariff unchanged. These regulatory interventions reflect continued efforts to promote waste-to-energy projects and align waste management with India's energy security and sustainability goals. Under Section 61(a) of the Electricity Act, 2003, the KERC will determine the tariff for the supply of electricity by a generating company to a distribution licensee.

Relevant Conditions

Any delay in the commissioning of a MSW plant will be governed by the terms and conditions of the PPA. The tariff to be determined for FY 2025-26 would be applicable only to projects for which a PPA has been executed in FY 26. It would not apply to projects that face commissioning delays.

Tariff Components

Operating Parameters:

The KERC proposed to consider the life of an MSW plant to be 20 years for the purpose of tariff determination. Since the stabilization period is not more than six months from the COD of the project, the KERC proposed to consider normative plant load factor level of 65% in the first year and 80% for the balance period of useful life of the plant as the plant load factor for determining tariff. The KERC also proposed to consider 15% auxiliary consumption for tariff determination.

Financial Parameters:

The KERC proposed to consider INR 210 million per MW as the capital cost for determining generic tariff. The capital cost includes costs for equipment and machinery. The KERC also proposed to consider 70:30 as the debt-equity ratio for determining generic tariff. Further, it has been proposed that 14% should be considered as the return-on-equity for determining generic tariff.

In addition, the KERC has proposed that the tenure for loan repayment will be 13 years without moratorium, and the interest rate will be 11.10% per annum. The depreciation rate considered by the KERC is on 90% of the capital cost at a rate of 5.387% for the first 13 years for recovery of debt, and the KERC proposed to consider 11.50% per annum for the calculation of interest on working capital, equal to two months' receivables.

Tariff

After considering the parameters discussed above, the KERC proposed a levelized generic tariff of INR 7.08 per unit for a period of 20 years from date of achieving commercial operation during the effective period as per the computation.

Comments

Through this discussion paper, the KERC has put forth its proposed policy decisions and expectations for the solid waste-to-energy generation model and has called for views and remarks from stakeholders and the general public. Since the importance of solid waste management projects is well appreciated at present, the draft discussion paper is a welcome measure to accelerate the growth and development of such projects.

Rajasthan

RERC issues terms and conditions for determination of tariff regulations

February 18, 2025: The Rajasthan Electricity Regulatory Commission ("**RERC**") introduced the Rajasthan Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2025 (the "**RERC Tariff Regulations**") pursuant to a state gazette notification dated February 18, 2025.

The RERC Tariff Regulations will be applicable for the determination of tariff from FY 2026 until FY 2030. However, the RERC Tariff Regulations will not apply for tariff determinations of captive generating plants and plants of renewable energy sources, although they will be applicable for mini- and micro-hydel plants.

Specifically, the RERC Tariff Regulations set forth the scope and extent of application, including in relation to the supply of electricity by a generating company to a distribution licensee, intra-state transmission of electricity, intra-state wheeling of electricity, recovery of state load dispatch center ("**SLDC**") expenses, retail sales of electricity, surcharge, and additional surcharge, subject to the provisions of the RERC Tariff Regulations.

Further, the RERC Tariff Regulations introduce several amendments based on stakeholder feedback and cover factors such as transparency in cost calculations and tariff determinations, as well as definitions of debt-equity ratio for power projects and return-on-equity to reflect changes like inflation and the government's policies towards renewable energy.

A detailed summary of the RERC Tariff Regulations is provided below.

Tariff Determination and Tariff Principles

The tariff principles for the calculation of the Aggregate Revenue Requirement ("**ARR**"), i.e., the recovery through tariffs of allowable expenses and return on equity capital, and expected revenue from tariff and charges of generating stations, transmission licensees, distribution licensees, and SLDCs are as follows:

Applicants are required to submit a forecast of ARR, the expected revenue from the existing tariffs, and the proposed tariff for the next year, which will be determined by the RERC. Further, the RERC will undertake the truing up of the previous year's expenses and revenue based on audited accounts *vis*-à-*vis* the approved forecast and categorization of variation in performance as those caused by controllable and uncontrollable factors, respectively.

The RERC will conduct the annual tariff determination for generating stations, transmission licensees, SLDCs, and distribution licensees for each financial year within the control period, based on the approved forecast and results of the truing up exercise. Further, if the licensee or the SLDC has opted for multi-year tariff determination, it will submit the forecast of ARR, expected revenue from existing tariffs and proposed tariff for each remaining year of the control period, and the RERC will determine the ARR and tariff for each year of the control period.

The licensee is required to submit the petition for truing up of ARR for the previous year during each year of the control period, and may submit the petition to re-determine the ARR and tariff for the ensuing year based on truing up of the previous year. Further, the managing director of the concerned company opting for multi-year tariff determination will be responsible for the timely filing of true-up petitions, and any excess earning will be suitably adjusted in the next true-up petitions.

Debt-Equity Ratio

It is proposed that for new projects, the debt-equity ratio of 70:30 as on the COD will be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% will be treated as normative loan. However, where equity actually deployed is less than 30% of the capital cost, the actual equity will be considered for tariff determination. Further, any grant obtained for the execution of the project will not be considered as a part of capital structure for the purpose of debt-equity ratio.

Return-on-Equity

The return-on-equity will be computed at the rate of 14% for transmission licensees and SLDCs, 15% for generating companies, and 16% for distribution licensees.

Interest and Finance Charges on Long Term Loans

The loans arrived at, in the manner indicated under the debt-equity ratio, will be considered as gross normative loan for the calculation of interest on such loans. The rate of interest will be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the regulated business of the generating company, the licensee, or the SLDC, as applicable.

The generating company, licensee, or SLDC will endeavor to re-finance/ restructure the actual loan as long as it results in net savings on interest, and in such event, the costs associated with such re-financing/ re-structuring will be allowed by the RERC at the time of truing up for the respective year, subject to prudence checks. The changes to the terms and conditions of the loans will be reflected from the date of such re-financing for computing the interest on loan.

Depreciation

The value base for the purpose of depreciation will be the capital cost of the asset admitted by the RERC. The salvage value of the asset will be considered as 10% and depreciation will be allowed up to maximum of 90% of the capital cost of the asset.

Interest Charges on Working Capital

The amount of normative working capital covers the following: (a) generation; (b) transmission; and (c) distribution. The rate of interest on working capital will be determined on a normative basis and will be

considered as the reference rate of interest as on April 1, 2025, or as on April 1 of the year during the tariff period of 2026-30 in which the generating station or a unit thereof or the transmission system/ SLDC/ distribution system, as the case may be, is declared under commercial operation, whichever is later.

Uttar Pradesh

UPERC issues draft captive and REGP regulations

Pursuant to a public notice dated May 7, 2025, the Uttar Pradesh Electricity Regulatory Commission ("**UPERC**") issued the draft UPERC (Captive and Renewable Energy Generating Plants) Regulations, 2024 for the control period from April 1, 2024 to March 31, 2029. These draft regulations propose to replace the UPERC (Captive and Renewable Energy Generating Plants) Regulations, 2019 and introduce a comprehensive overhaul of tariff structures and procurement processes for captive and renewable energy plants.

Connectivity

CENTRAL

Transmission

MoP proposes to delegate authority for approving low-cost ISTS projects

Pursuant to a letter dated March 28, 2025, the MoP invited comments from stakeholders for proposed amendments to the Electricity (Transmission System Planning, Development and Recovery of Inter State Transmission Charges) Rules, 2021, pursuant to which the MoP proposes to include provisions related to delegating powers to the National Committee on Transmission and Central Transmission Utility for approving ISTS projects in the country according to the cost limits specified by the Central Government.

CERC issues draft amendment to connectivity and general network access regulations

March 3, 2025: Pursuant to a draft notification dated March 3, 2025, the CERC issued the draft CERC (Connectivity and General Network Access to the inter-State Transmission System) (Fourth Amendment) Regulations, 2025 ("**Draft GNA Amendment**") with the aim of fostering renewable energy integration into the grid and simplifying grid access to renewable energy sources. The Draft GNA Amendment, among other things, proposes to include: (i) a definition of 'entities with restricted access' in the CERC (Connectivity and General Network Access to the inter-State transmission System) (Second Amendment) Regulations, 2024 to define renewable energy generating stations ("**REGS**") and ESS that have limited rights to inject power into the grid according to the solar and non-solar hours (as determined by the National Load Dispatch Center); and (ii) provisions to allows REGS (with or without ESS) based in wind sources or ESS to seek connectivity with scheduling rights during non-solar hours at an ISTS substation.

Deviation Settlement Mechanism

CERC issues draft amendment to DSM Regulations

May 10, 2025: Pursuant to a notification dated May 10, 2025, the CERC issued a draft of the CERC (Deviation Settlement Mechanism and Related Matters) (Second Amendment) Regulations, 2025 ("**Draft DSM Amendment**") and invited comments from stakeholders. Among other things, the Draft DSM Amendment seeks to amend the regulation 8 (charges for deviation) of the CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2024 to provide for charges relating to the injection of infirm power into the grid.

STATE

Andhra Pradesh

APERC releases draft amendment to the APERC (Green Energy Open Access, Charges and Banking) Regulation, 2024

March 26, 2025: The APERC released a draft of the first amendment to the APERC (Green Energy Open Access, Charges and Banking) Regulations, 2024, which were notified by the APERC on May 2, 2024 and outline specific terms and conditions for green energy open access ("**GEOA**") in the state of Andhra Pradesh. The primary regulations allow open access to electricity generated from green energy sources and provide the criteria, categories, and procedures for such access. The draft amendments provide clarifications in respect of connectivity for new green energy generators, regulates hours of supply to ensure grid stability, and creates further exemptions from surcharges for various renewable energy projects.

Pursuant to the proposed amendments, wind turbine manufacturing projects will be exempted from cross subsidy surcharge.

Assam

AERC issues grant of connectivity to the InSTS regulations

March 25, 2025: Pursuant to a notification dated March 25, 2025, the Assam Electricity Regulatory Commission ("**AERC**") issued the AERC (Grant Of Connectivity To The Intra State Transmission System), Regulations, 2025 ("**AERC InSTS Regulations**") with an aim to plan, develop, maintain, and operate transmission systems within the state, a part of the North Eastern Regional Grid System (NERGS), in the most efficient, reliable, economically viable, and secure manner possible, while facilitating healthy competition in the generation and supply of electricity. The AERC InSTS Regulations will apply to all applications made to State Transmission Utilities ("**STUs**") in the state of Assam for the grant of connectivity with respect to the intra-state transmission system.

Haryana

HERC issues amendment to green energy open access regulations

February 25, 2025: Pursuant to an order dated February 25, 2025, the Haryana Electricity Regulatory Commission ("**HERC**") issued the HERC (Green Energy Open Access) Regulations, 2023, 1st Amendment Regulations, 2025 ("**HERC GEOA Amendment**") to amend the HERC (Green Energy Open Access) Regulations, 2023. The HERC GEOA Amendment was issued to align the primary regulations with the updated version of the (central) Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022 ("**GEOA Rules**"), as issued by the MoP. Pursuant to the HERC GEOA Amendment, the HERC, among other things, has expanded upon the eligibility for GEOA to include consumers with a sanctioned load of 100 kW or more through single or multiple connections (aggregating 100kW) in the same electricity operation division.

Karnataka

KERC issues new open access regulations

March 26, 2025: Pursuant to a notification dated March 26, 2025, the KERC issued the KERC (Terms and Conditions for Open Access Regulation), 2025 providing a regulatory framework for all open access consumers, including GEOA consumers, and to allow open access in the state of Karnataka. Earlier, in January 2025, the KERC had issued a draft of the KERC (Terms and Conditions for Open Access) Regulations, 2025 after the Karnataka High Court, pursuant to its order dated December 20, 2024, had struck down the MoP's GEOA Rules, along with the KERC (Terms and Conditions for Green Energy Open Access) Regulations, 2022.

Rajasthan

RERC issues GEOA Regulations

May 2025: The RERC issued the RERC (Terms and Conditions for Green Energy Open Access) Regulations, 2025 ("**RERC GEOA Regulations**") pursuant to stakeholder consultations and public comments on draft regulations published on October 1, 2024. The final regulations aim to promote the use of renewable energy and provide a structured framework for consumers to access green energy through open access.

Categorization of Green Energy Open Access

The consumers of green energy open access ("**GEOA**") are classified on the basis of duration of use, where long-term GEOA means the right to use ISTS or distribution system for a period exceeding 12 years but not exceeding 25 years; medium-term GEOA means the right to use ISTS or distribution system for a period exceeding three months but not exceeding three years; and short-term GEOA means the right to use ISTS or distribution system for a period up to one month at a time. The consumer may relinquish their rights or obligations under long-term or medium-term GEOA, only after approval of the nodal agency and payment of compensation.

Eligibility Criteria For Applying for GEOA

Consumers are eligible for GEOA subject to required regulatory provisions and system availability.

However, renewable energy generators with an existing PPA are not entitled to apply for GEOA for that specific capacity unless (i) it aligns with the terms of the PPA, or (ii) if such access has been granted already. Further, entities declared insolvent, with outstanding dues that are in excess of two months, or if they are facing charges of electricity theft, are ineligible for GEOA. Further, captive generating plant owners have rights of open access under Section 9 of the Electricity Act, 2003 as long as they meet the eligibility conditions.

Eligible consumers must have a contract demand or sanctioned load of at least 100 kW, either through a single or aggregated multiple connections within the same electricity division. However, captive users are exempt from this requirement and face no minimum load requirement. New renewable energy projects over 5 MW on the Rajasthan STU network (excluding hydro) must install an ESS of at least 5% of renewable energy capacity. Renewable captive plants can have a maximum capacity of up to 200% of contract demand, with those above 100% required to install a BESS for at least 20% of additional generation. GEOA consumers cannot alter their consumption quantum within 12 time blocks to prevent demand fluctuations for distribution companies.

Nodal Agency

All of the applications for GEOA are required to be submitted through the central nodal agency's portal, which will be forwarded to the respective State Nodal Agency ("**SNA**") for processing. Such processing must be completed within 15 days of receipt. The Rajasthan STU serves as the SNA for long-term and medium-term GEOA, while the Rajasthan SLDC acts as the SNA for short-term GEOA. Further, the STU must submit detailed procedures—including bank guarantees, rejection criteria, timelines, fees, energy accounting, and settlement mechanisms—for RERC approval within 30 days of the notification of the regulations. Additionally, the SNA must coordinate with transmission and distribution licensees to publish all relevant GEOA information on the central nodal agency portal for public access.

Treatment of Existing Consumers

The existing consumers who have already been using open access may continue to avail renewable energy under open access under their existing agreements or government policies for the duration specified. However, they must pay applicable charges either as per their existing agreements or as determined by the RERC. GEOA after the expiry of such existing agreements will be governed by the RERC GEOA Regulations, and if additional renewable energy capacity is required beyond the capacity agreed upon, it will be considered as a new GEOA application for such additional quantum. Further, existing consumers may, on a one-time basis, convert their current renewables-based open access agreements to the new GEOA framework for the remaining validity of their agreements, subject to the provisions of the RERC GEOA Regulations.

Charges For GEOA

Transmission Charges

The RERC GEOA Regulations provide for the transmission charges that are applicable to consumers availing GEOA. For ISTS, charges are determined by the CERC. For intra-state transmission, the RERC determines the charges based on the prevailing tariff regulations. These rates are specified in the RERC's tariff orders and are subject to the provisions of the RERC's tariff determination regulations for renewable energy. This ensures that renewable energy consumers are charged systematically while maintaining regulatory consistency.

Wheeling Charges

Wheeling charges are to be paid by GEOA consumers to the distribution licensee for the use of their infrastructure. The RERC determines these charges through tariff orders, and these charges must be aligned with the 2020 tariff regulations with respect to renewable energy, unless otherwise stated.

Cross-Subsidy Surcharge and Additional Surcharge

Under the RERC GEOA Regulations, GEOA consumers must pay a cross-subsidy surcharge on top of the prescribed transmission and wheeling charges. This surcharge is calculated per unit of energy consumed, and will not exceed 20% of the average cost of supply. Additional surcharge does not apply if the fixed demand charges up to the

sanctioned load is paid by the consumer. However, in case of excess consumption beyond the contracted demand without the payment of any fixed charges, an additional surcharge can be levied at a rate not exceeding the unit-based fixed cost of the distribution licensee.

Comments

The RERC GEOA Regulations provide an inclusive and robust framework that boosts the adoption of renewable energy in the state of Rajasthan. The RERC GEOA Regulations includes detailed definitions of relevant terms, such as green energy and renewable energy, which broadens its scope to electricity generated from sources such as wind, solar, hydro (including pumped storage), biomass, and bagasse-based co-generation plants, as well as MSW-to-energy systems. This also includes ESS that are charged solely with renewable energy, and any technology notified by the Government of India. Further, it covers systems or processes that use renewable energy to replace fossil fuels, including the production of GH or green ammonia.

By providing consumers with a sanctioned load of 100 kW or more, and no minimum limit for captive users, to access green and renewable energy through open access, the RERC GEOA Regulations democratize the use of clean energy across industries. The inclusion of certain provisions, such as mandatory BESS for larger projects, helps enhance grid stability and supports efficient and reliable power supply. Further, transparent charging mechanisms, various exemptions from surcharges, and a streamlined processes for applications further enhance operational efficiency. These measures foster an ecosystem for large-scale renewable integration, thereby contributing to clean energy targets and India’s national climate goals.

Biogas

STATE

Madhya Pradesh

Madhya Pradesh introduces a dedicated biofuel investment and implementation scheme

April 4, 2025: Pursuant to a notification dated April 4, 2025, the New and Renewable Energy Department of the Madhya Pradesh State Government ("**MP NRED**") notified a 'Scheme for implementation of Biofuel Projects' ("**MP Scheme**") in the state of Madhya Pradesh under the Madhya Pradesh Renewable Energy Policy – 2025 and its associated guidelines. The MP Scheme offers, among other things, the following: (i) basic investment promotion assistance for each project, limited to a maximum of INR 2 billion, provided in seven equal annual instalments; (ii) infrastructure development assistance of 50% and a maximum of INR 50 million for developing power, water, gas pipeline, drainage; (iii) 50% reimbursement on stamp duty paid for the acquisition of private land; (iv) 100% exemption from payment of electricity duty on consumption of electricity for a period of 10 years; (v) agricultural land under the jurisdiction of the revenue department at 50% of the circle rate; (vi) additional subsidy of 30% from the Madhya Pradesh State Government up to a maximum of INR 2 million per set of equipment, in addition to the subsidy given by the Government of India.

EVs

CENTRAL

E-Mobility

Centre notifies guidelines to boost Electric Car manufacturing in India

June 2, 2025: The Ministry of Heavy Industries ("**MHI**") issued operational guidelines in relation to the 'Scheme to Promote Manufacturing of Electric Passenger Cars in India' to boost the domestic manufacturing of electric passenger vehicles. This initiative offers concessional import duty benefits to incentivize international electric vehicle ("**EV**") players to invest in local production facilities.

MHI notifies amendments to the PM E-DRIVE scheme

March 3, 2025: The MHI notified amendments to the PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme to encourage domestic manufacturing and self-reliance in India's EV sector. These amendments introduce stricter localization requirements under the Phased Manufacturing Program ("**PMP**") impacting various categories of EVs, such as electric two-wheelers, three-wheelers, and buses.

The key changes for electric two-wheelers (L1 and L2) and three-wheelers (L5, E-Rickshaws, and E-Carts) include the following:

- Key EV components, such as traction battery packs, battery management systems, DC-DC converters, vehicle control units, and traction motors are required to be domestically produced.
- Stringent restrictions have been imposed to prevent imports of battery modules and other essential parts.
- The definition of "manufacturing" has been aligned with the Central Goods and Services Tax Act, 2017 to ensure standard compliance for domestic products.
- These conditions came into effect from May 1, 2025.

The key changes for electric buses (M2/ M3) include the following:

- Key EV components, such as traction battery packs, electric compressors for braking, charging inlets, and Heating, Ventilation, and Air Conditioning (HVAC) systems are required to be domestically produced within six months from the notification date.
- Batter management systems and DC-DC convertors have been allowed an additional transition period of 12 months from the notification date.

PMP for e-ambulances, e-trucks, and other new emerging EV categories are proposed to be notified separately.

STATE

Chhattisgarh

Chhattisgarh government issues amendments to State Electric Vehicle Policy, 2022

May 29, 2025: Pursuant to a notification dated May 29, 2025, the Chhattisgarh State Government has introduced the following amendments with respect to purchase incentives under Clause 12.1 of the Chhattisgarh State Electric Vehicle Policy 2022 (the "**Chhattisgarh EV Policy**"):

- Revised limits for state subsidy: The State Government of Chhattisgarh will support up to 10% of the cost of the vehicle (excluding tax) or INR 0.1 million (revised from the earlier limit of INR 0.15 million), whichever is lower, for the purchase of EVs for five years until 2026-2027. Further, it has been clarified that subsidies will not be given on vehicles above INR 2 million.
- Subsidy for hybrid vehicles discontinued: Under the Chhattisgarh EV Policy, hybrid EVs were eligible to receive 50% of the purchase incentive amount given to a fully electric EV. The condition has now been discontinued.

Gujarat

5% EV tax relief in Gujarat to boost green mobility until March 2026

April 20, 2025: The Gujarat State Government introduced a 5% vehicle tax exemption for buyers of fully electric EVs until March 31, 2026. Accordingly, the motor vehicles tax on EVs will now be charged an at effective rate of 1% (instead of the erstwhile 6%).

A proposal with respect to such tax exemption had been initially announced by the Finance Minister of the State Government of Gujarat during the budget speech. This measure is aimed to encourage green mobility.

Karnataka

Karnataka Government introduces Clean Mobility Policy 2025-2030

The Commerce and Industries Department, Karnataka has introduced the Karnataka Clean Mobility Policy 2025-2030 ("**Karnataka EV Policy**") to position Karnataka as the premier destination for clean mobility vehicle manufacturing by leveraging strategic advantages and nurturing a skilled workforce to support sustainable growth and create a comprehensive clean mobility vehicle ecosystem in the state.

The key objectives of the Karnataka EV Policy are as follows:

- Making Karnataka a leader in Asia with respect to the future of clean mobility, fueled by equitable and sustainable development
- Accelerating clean mobility vehicle adoption in Karnataka through a robust charging infrastructure network and/or hydrogen stations.
- Creating a clean mobility vehicle ecosystem that fosters innovation in the state of Karnataka.

The Karnataka EV Policy covers the following activities and products:

- Clean mobility vehicles and clean mobility components:
  - Manufacturing/ assembly of EVs (fixed battery/ swappable battery), hydrogen-based vehicles, fuel cell-based EVs.
  - Manufacturing of clean mobility cells, clean mobility battery pack/ module manufacturing, and assembly (lithium ion cells, fuel cells, hydrogen cells, or any advanced chemistry battery cells).
  - Manufacturing of clean mobility vehicle components.
- Lithium ion and fuel cell components.
- Manufacturing of EV charging/ swapping infrastructure equipment and hydrogen stations.
- Re-use and recycling of batteries through recycling centers set up by clean mobility battery manufacturers and other players.
- Clean mobility vehicle testing facility includes testing of battery/ cell materials and components.

The Karnataka EV Policy and the package of incentives and concessions offered therein came into effect from February 11, 2025 and will be valid for a period of 5 years or until a new policy is announced.

Kerala

Kerala issues clarifications on banking adjustments of EV Public Charging Stations with Solar PV Plants

April 28, 2025: The KSERC issued new clarifications regarding energy adjustment, billing, and banking of solar power for electricity supplied to EV charging stations – particularly those which have SPV plants.

EV charging stations with SPV installations are now allowed to adjust the energy exported from the SPV plants between 9 a.m. and 4 p.m. against the electricity imported during solar hours between 9 a.m. to 4 p.m. during a billing cycle without any

charges, including fixed charges, grid support charges, energy adjustments, etc.

Further, the electricity exported, if any, from SPV stations during non-solar hours (4 p.m. to 9 a.m.) are now allowed to be adjusted against the electricity imported during non-solar hours in a billing cycle without any charges including fixed charges, grid support charges, energy adjustments, etc.

Madhya Pradesh

Madhya Pradesh notifies electric vehicle policy 2025

March 27, 2025: The Urban Development and Housing Department, Government of Madhya Pradesh notified the Madhya Pradesh Electric Vehicle Policy 2025 ("**MP EV Policy**") with the objective of building robust infrastructure, incentivizing EV adoption across private and public sectors, and promoting local manufacturing to create job and economic opportunities.

The key objectives of the MP EV Policy are as follows:

- To attain a future where EVs are the preferred mode of transportation for everyone.
- To develop robust and accessible EV charging infrastructure for all.
- To foster collaboration between government entities, private sector, research institutions, and civil society organizations.
- To establish Madhya Pradesh as the prime destination for establishment of EV infrastructure and related manufacturing industries.
- To bolster skill development initiatives and expand job prospects within the EV sector.

The MP EV Policy is applicable to only battery EVs and fuel cell EVs, and will remain active for five years from the notification of the policy or until an updated or revised policy is introduced.

The key targets of the MP EV Policy are as follows:

- Target Cities: To designate Bhopal, Indore, Jabalpur, Gwalior, and Ujjain as model EV cities.
- Electric two-wheeler target: To achieve 40% of all new registrations, and 100% of all new registrations in commercial fleets, by the end of the policy period.
- Electric three-wheeler target: To achieve 40% of all new registrations in passenger and freight segments by the end of the policy period.
- Electric four-wheeler target: To achieve 15% of all new registrations by the end of the policy period.
- Electric two-wheeler target: To achieve 40% of all new registrations by the end of the policy period.
- Others: 80% of all of state government vehicles, including vehicles under government corporations, boards, government ambulances, etc.

The MP EV Policy provides motor vehicles tax exemptions based on specified parameters for different categories of EVs. However, the incentives are not applicable to any type of hybrid vehicles.

Maharashtra

Maharashtra government notifies new Maharashtra EV policy for 2025-2030

May 23, 2025: The implementation period for the Maharashtra Electric Vehicle Policy 2021 ended on March 31, 2025. Accordingly, the Government of Maharashtra rolled out the new Maharashtra Electric Vehicle Policy 2025 ("**Maharashtra EV Policy**") for the period from April 1, 2025 to March 31, 2030, with the aim of 30% EV penetration by 2030.

The key objectives of the Maharashtra EV Policy are as follows:

- Boost EV Adoption: Increase the adoption of EVs in passenger, commercial, public

transport, and city utility vehicle segments, through specific purchase subsidies across different vehicle categories.

- Enhance Public Transport Electrification: Transition of public transport buses, shared mobility fleets, and city utility vehicles from ICE to EVs.

- Strengthen EV Charging Infrastructure: Develop a robust EV charging network across the state, ensuring EV accessibility in both urban and rural areas, and across key highways.

- Strengthen EV Manufacturing Ecosystem: Promote EV production, strengthen the EV supply chain, focus on battery development, battery recycling, component manufacturing through incentives, as well as policy support.

- Promotion of R&D: Promote R&D and innovation, along with skill and talent development, across the EV ecosystem in the state.

- Clean Mobility Transition Model: The Maharashtra EV Policy aims to curb vehicular PM 2.5 emissions. In that regard, it is estimated that this policy may help reduce approximately 325 tonnes of vehicular PM 2.5 emissions, and approximately 1 million tonnes of GHG emissions from the state's transport sector by 2030.

A Steering Committee has been constituted to monitor and guide the implementation of the Maharashtra EV Policy. This committee will also be supported by a dedicated cell called the "Maharashtra State EV Cell".

Nuclear Energy

CENTRAL

Nuclear Energy Mission

Central Government announces a Nuclear Energy Mission

February 1, 2025: In the Union Budget announced on February 1, 2025, the Central Government announced a Nuclear Energy Mission ("**NEM**") with an outlay of INR 200 billion for achieving 100 GW of nuclear power generation by 2047. The NEM aims to enhance domestic nuclear production, promote private sector participation, and accelerate the use of advanced nuclear technologies such as small modular reactors ("**SMRs**"). Further, the Central Government aims to develop at least five indigenously designed and operational SMRs by 2033.

SMRs are advanced nuclear reactors that have a capacity of 300 MW per unit, which is one-third the capacity of conventional nuclear power reactors. SMRs have a smaller carbon footprint and can be manufactured and then shipped and installed on site, making them a cost-efficient alternative to conventional reactors. Further, these reactors can be used both on-grid (as additions to the existing grid) and off-grid, thereby obliterating the requirement to establish grids in remote areas which lack sufficient lines of transmission and grid capacity.

Other

Consultative Committee of Members of Parliament for the Ministry of Power discusses "Roadmap for Development of Nuclear Power Generation"

April 28, 2025: During a meeting of the Consultative Committee of the Members of Parliament ("**Committee**") for the MoP, the Union Minister for Power recognized the need to enhance the share of non-fossil fuel-based power in the total energy produced and consumed in India to achieve India's net-zero carbon emissions target by 2070. The Union Minister underscored the role of nuclear energy as a non-fossil and stable power source in achieving such target. Currently, the 25 nuclear reactors located in India have a total installed capacity of 8,800 MW. Pursuant to the Viksit Bharat @2047 vision, the Government aims to achieve 100 GW of nuclear energy capacity by 2047.

The current aim to enhance nuclear power capacity faces certain key challenges. *First,* the Atomic Energy Act and the Civil Liability for Nuclear Damage Act, 2010 ("**CLNDA**") need to be amended to enhance the participation of private sector entities. The Atomic Energy Act currently limits the role of private sector entities to the supply chain. Private sector entities are barred from controlling nuclear power generation in India.

However, the Request for Proposal dated December 31, 2024 ("**RfP**") released by NPCIL enhanced the scope of private sector entities by inviting them to develop Bharat Small Reactors, i.e., compact, 220 MW pressurized heavy water reactors tailored for captive use in power plants near hard-to-abate industries such as steel, aluminum, and metals. However, the RfP mandated NPCIL supervision over such private entities and required the transfer of the concerned asset(s) to NPCIL post-construction (*for a detailed analysis of the RfP, see here*.)

Further, section 17 of the CLNDA exposes suppliers of nuclear power plants to open-ended liability claims from plant operators if such operators are required to pay compensation for nuclear damage under the CLNDA. This exposure to liability is contrary to international principles related to nuclear liability, as provided in the Amended Vienna Convention and the Convention on Supplementary Compensation for Nuclear Damage ("**CSC**"). While India signed the CSC in 2010 and ratified it in 2016, section 17 of the CLNDA is a roadblock to private sector participation in the nuclear energy sector in India.

Secondly, the Union Minister of the MoP recognized the need to generate awareness about the safety and benefits of nuclear energy for the purpose of developing positive public perceptions. Currently, the DAE has dedicate units such as SCOPE and PAD which focus on public outreach and generating awareness about radiation contamination and the sustainable nature of nuclear energy. Similarly, the

AERB engages in public awareness initiatives about nuclear and radiation safety.

Thirdly, the Committee identified certain challenges with respect to the establishment of nuclear power plants in relation to high upfront capital costs, costly and complicated land acquisition process, and widespread local opposition to the establishment of such plants. While compensation is awarded to land owners in cash or through employment opportunities, pursuant to the provisions of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, land acquisition processes in India are often long drawn due to public opposition.

Further, in 2016, the Central Government accorded approval for 10 indigenous Pressurized Heavy Water Reactors of 700 MW each in fleet mode to reduce costs and ensure business continuity. 'Fleet mode' refers to a strategy of simultaneous, standardized, and streamlined construction of numerous nuclear power plants, similar to a fleet of ship sailing together. Such initiatives are aimed to enhance the commercial viability of undertaking nuclear power generation in India.

The extent of delays in nuclear power projects can be understood in relation to the Jaitapur Nuclear Power Plant. The plant was approved in 2008. However, due to commercial and technical fallouts with French partner entities on the project, there were significant delays. Further, there was significant opposition from local inhabitants due to the ecological and safety concerns stemming from the location of the plant. The delays prolonged to an extent that, while the environmental clearance granted to the plant expired in December 2022, the construction of the plant has not yet commenced. Currently, the Central Government is negotiating the commercial terms of the project with the French stakeholders concerned, which, once complete, may lead to commencement of project construction.

The Union Minister of the MoP also recognized the need to introduce tax concession and long-term financing options, enhance domestic competition in manufacturing, and strengthen local skilled manpower, for enhancing the scale of nuclear power generation in India.

US Department of Energy authorizes Holtec International to build reactors in India

March 31, 2025: Pursuant to section 810.9 of the US Code of Federal Regulations, the Department of Energy ("**DoE**") of the United States of America granted a specific authorization to Holtec International to export U.S.-made SMRs in India. This approval permits Holtec International to share its SMR technology with Holtec Asia (i.e., the Indian subsidiary of Holtec International), Tata Consulting Engineers Limited, and Larsen & Toubro Limited.

However, such DoE authorization is subject to certain conditions. *First*, the approval granted is valid for 10 years, subject to review on the completion of five years. *Further*, SMR technology can only be used for peaceful nuclear activities. The technology cannot be shared further with any third-party entity without the prior approval of the U.S. government.

The grant of this specific authorization is significant for the India-US Civil Nuclear Agreement (also known as the "**123 Agreement**") which was signed in 2007. The 123 Agreement was signed by the India and the U.S. to end the sanctions previously imposed by the U.S. upon India after India's 1974 nuclear test. The 123 Agreement provides for cooperation between India and the U.S. for civil nuclear development, provided that India adheres to the safety standards and protocols of the International Atomic Energy Agency (IAEA) and commits to a voluntary moratorium in nuclear testing.

DAE constitutes a taskforce for legislative and regulatory upgrade

March 20, 2025: The DAE constituted a taskforce to propose amendments to the Atomic Energy Act. The taskforce will also look into aspects of building, owning, and operating nuclear power plants by private sector entities, nuclear safety and security, waste management, spent fuel reprocessing, etc. Currently, pursuant to section 17(1) of the Atomic Energy Act, the Atomic Energy Regulatory Board ("**AERB**") has developed a network of rules, safety codes, and standards for site selection with respect to nuclear power plants, construction of nuclear power plants, steps to be taken to prevent leakage of radiation, decommissioning of discarded plants, etc.

Similarly, another taskforce has been constituted to review the CLNDA and address the concerns of private sector entities acting as suppliers, as discussed above.

Miscellaneous

CENTRAL

Hydropower

MNRE introduces revisions to Guidelines for Small Hydro Power Schemes

May 26, 2025: By way of an office memorandum dated May 26, 2025, the MNRE (Small Hydro Power Division) introduced certain revisions to the Guidelines for Small Hydro Power Schemes, which were previously circulated on December 11, 2009 and July 2, 2014 to promote the development of small hydro power projects, in order to address the challenges faced by the stakeholders of small hydro power projects. The amendments include, *inter alia*, changes in criteria for the release of balance amount under Central Financial Assistance and proportionate reduction of financial assistance if projected generations are not achieved; a grace period of 12 months for delays in commissioning of projects due to unforeseen reasons; extensions for completion of projects on a case-to-case basis, provided that the project achieves at least 50% aggregate physical progress.

Carbon Credit

BEE issues detailed procedure for offset mechanism under CCTS

March 27, 2025: Being the administrator of the CCTS, the BEE is responsible for issuing carbon credit certificates under the offset mechanism of the CCTS. Under such offset mechanism, non-obligated entities are allowed to register activities that lead to GHG emission reductions or avoidance or removals for issuance of carbon credit certificates to such entities.

In this regard, on March 27, 2025, the BEE issued a detailed procedure in respect of the offset mechanism under the CCTS, including for the purpose of ensuring clarity and consistency for stakeholders engaged in carbon offset projects, by outlining, among other things, the following: (i) the steps required to develop and register a project under the offset mechanism, and the subsequent issuance of carbon credits; (ii) the criteria and guidelines that projects must adhere to in order to qualify for carbon credits; and (iii) the processes and guidelines for ACV agencies to assess projects under the offset mechanism of the CCTS.

Competitive Bidding

MoP issues amendment to standard bidding documents for procurement of inter-state transmission services through TBCB

June 5, 2025: On June 5, 2025, the MoP made certain amendments to the standard bidding documents for the procurement of ISTS services through the TBCB process under Section 63 of the Electricity Act, 2003.

Inclusion of New Financial Instruments

The definition of a bid bond had previously included unconditional and irrevocable bank guarantee. However, the new notification amends this definition to include an Insurance Surety Bond ("**ISB**"), which is defined as an unconditional and irrevocable bond issued by an insurance company authorized by the Insurance Regulatory and Development Authority of India (IRDA). The amendment also includes a Payment on Order Instrument ("**POI**"), which is defined as a letter of undertaking that has the same legal effect as a public sector bank guarantee. POIs must be issued with appropriate collateral and security.

Prior to these amendments, the Contract Performance Guarantee ("**CPG**") that a selected bidder needed to provide to the nodal agency was limited to only bank guarantees issued by banks. CPGs were provided to ensure that the bidder was committed to fulfil their contractual obligations and had the ability to do so. However, after the amendment, there is more flexibility in the form of the CPG, which now includes ISBs and POIs within its ambit.

The new amendments make the process more flexible by including more financial instruments such as ISBs and POIs, thereby increasing access and making it easier to meet performance guarantees. Further, these amendments help provide more options to the selected bidder by expanding the scope of the CPG.

MoP issues amendment to guidelines for TBCB process for procurement of firm and dispatchable power from grid connected renewable energy power projects with ESS

February 12, 2025: Pursuant to a resolution dated February 12, 2025, the MoP issued amendments to the guidelines for TBCB process for procurement of firm and dispatchable power from grid connected renewable energy power projects with ESS.

Among other provisions of the primary guidelines, this amendment does the following: (i) amends clause 3.1.1 of the primary guidelines to provide that deviations in the draft bidding documents must be approved by the appropriate commission; (ii) inserts a new clause 3.3 to allow procurers to specify the sub-station(s) where the developers will connect the renewable energy power project in location-specific bids; and (iii) modifies clause 7.7 of the primary guidelines in accordance with the Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021.

MoP issues TBCB guidelines for procurement of storage capacity/ stored energy from PSPs

February 6, 2025: Pursuant to a resolution dated February 6, 2025, the MoP issued TBCB guidelines for the procurement of storage capacity/ stored energy from PSPs with an aim to provide a transparent, fair, and standardized procurement framework based on open competitive bidding.

While the guidelines for the procurement and utilization of BESS are already in place, there were no separate guidelines for PSPs. Given the distinct requirements of PSPs in several aspects, such as land acquisition, permits and clearances, project timelines, and performance parameters, these guidelines were formulated to address the specific nuances of PSP technologies.

Other

CERC issues draft guidelines for VPPAs

May 22, 2025: Pursuant to a public notice dated May 22, 2025, the CERC issued draft guidelines for virtual PPAs ("**VPPAs**," and such guidelines, "**Draft VPPA Guidelines**") with the aim to facilitate the evolution of VPPAs as instruments pursuant to which obligated entities can be enabled to meet their renewable consumption obligation ("**RCO**") targets. The Draft VPPA Guidelines, among other things, propose to allow a consumer or a designated consumer to enter into a long-term bilateral VPPA with a renewable energy generator at a mutually agreed price and enabling them to receive renewable energy certificates ("**RECs**") for achieving their RCO target or for claiming green attributes. The Draft VPPA Guidelines clarify that the RECs received by a consumer or a designated consumer pursuant to a VPPA cannot be traded.

For a detailed overview of VPPAs and the Draft VPPA Guidelines, see our note here.

CERC invites comments from public on petition filed by IEX to allow real time trading in renewable energy

Pursuant to a public notice dated April 7, 2025, the CERC invited comments from stakeholders on a proposal received from the Indian Energy Exchange (IEX) seeking approval from the CERC to introduce Green Real Time Market (G-RTM) in the Real Time Market (RTM) segment on its platform for providing exclusive trading in renewable energy.

MoP issues draft amendment to Renewable Energy Consumption Obligation notification

March 27, 2025: Pursuant to a letter dated March 27, 2025, the MoP issued a draft amendment to the gazette notification on RCO, as previously notified on October 20, 2023, and invited comments from stakeholders. The draft amendment on RCO, among other things, provides obligated entities with some flexibility to fulfil RCOs by allowing them to offset their shortfall of certain energy consumption obligations with their consumption from other renewable energy sources. The draft amendment further proposes to allow multiple compliance options to obligated entities, including through the purchase of RECs issued under the CERC's regulations on RECs, or paying a buyout price as specified by the CERC, and allowing compliance for multiple designated consumers under common control on an aggregate basis at a holding company level.

CEA issues draft amendment to installation and operation of meters regulations

March 5, 2025: Pursuant to a public notice dated March 5, 2025, the Central Electricity Authority ("**CEA**") issued the draft CEA (Installation and Operation of Meters) (5th Amendment) Regulations, 2025, inviting comments from stakeholders. This amendment, among other things, proposes to: (i) revise the definition of 'interface meter'; (ii) mandate that the consumer connected at a voltage level not exceeding 650 V and who is permitted open access should be supplied electricity through smart meters; and (iii) include a provision providing that "Advanced Metering Infrastructure" systems should be consistent with the 'Guidelines for Standardization and Interoperability in Advanced Metering Infrastructure systems for End to End communication between Smart Meter, Head End System and Meter Data Management'.

MoP issues draft guidelines for designating a company as REIA

February 2025: Pursuant to a letter issued in February 2025, the MoP issued draft guidelines for designating a company as a Renewable Energy Implementing Agency ("**REIA**") and invited comments from stakeholders. The draft guidelines, among other things, provide for eligibility criteria, the period for which a company will be designated as an REIA, and the termination of such REIA designation when a company fails to perform its duties as an REIA.

STATE

Andhra Pradesh

Andhra Pradesh issues operational guidelines for integrated clean energy policy

February 28, 2025: Pursuant to an order dated February 28, 2025, the State Government of Andra Pradesh issued Operational Guidelines for Andhra Pradesh's Integrated Clean Energy (ICE) Policy, 2024, as issued in October 2024, providing a detailed roadmap for implementing such policy and a streamlined process to facilitate the execution of clean energy projects and renewable energy manufacturing projects across the state in accordance with such policy.

Assam

Assam government issues integrated clean energy policy

February 24, 2025: Pursuant to a notification dated February 24, 2025, the State Government of Assam issued the Assam Integrated Clean Energy Policy, 2025 ("**Assam ICE Policy**") for a period ending on March 31, 2030. The Assam ICE Policy aims to (i) establish Assam as a prominent player in the GH/ green ammonia economy of India, (ii) create an ecosystem for the development of sustainable and green energy in the state of Assam, and (iii) facilitate the development of 11.70 GW of additional renewable energy projects with or without ESS in the state, including up to 1.90 GW of rooftop SPV projects.

Delhi

DERC issues first amendment to net metering for renewable energy guidelines

May 1, 2025: The Delhi Electricity Regulatory Commission ("**DERC**") issued the DERC (Net Metering for Renewable Energy) (First Amendment) Guidelines, 2025 ("**DERC MNRE Amendment Guidelines**") on May 1, 2025.

The DERC MNRE Amendment Guidelines amended certain guidelines under the DERC (Net Metering for Renewable Energy) Regulations, 2014, including by excluding domestic consumers of rooftop solar connections of up to 10 kW under PM Surya Ghar: Muft Bijli Yojna from the requirement to pay application fees and registration charges.

Himachal Pradesh

HPERC issues regulations on framework for resource adequacy

April 28, 2025: The Himachal Pradesh Electricity Regulatory Commission ("**HPERC**") issued the HPERC (Framework for Resource Adequacy) Regulations, 2025 ("**HPERC FRA Regulations**") on April 28, 2025.

The HPERC FRA Regulations apply to generating companies, distribution licensees, SLDCs, state transmission utilities, other grid-connected entities, and stakeholders within the state of Himachal Pradesh.

The objective of the HPERC FRA Regulations is to enable the implementation of a resource adequacy framework by outlining a mechanism for the planning of generation and transmission resources for reliably meeting the projected demand, in compliance with specified reliability standards for serving the load with an optimal generation mix. The resource adequacy framework will cover a mechanism for demand assessment and forecasting, generation resource planning, procurement planning, as well as its monitoring and compliance.

As per the HPERC FRA Regulations, the term "resource adequacy" is defined as a mechanism to ensure adequate supply of generation to serve expected demand (including peak, off peak, and in all operating conditions) reliably in compliance with specified reliability standards for serving the load with an optimal generation mix with a focus on the integration of environmentally benign technologies after taking into account, inter alia, the need for flexible resource storage systems for energy shifts and demand response measures for managing the intermittency and variability of renewable energy sources.

Kerala

KSERC issues draft renewable energy and related matters regulations

May 30, 2025: The Kerala State Electricity Regulatory Commission ("**KSERC**") by way of a notice dated May 30, 2025 (the "**Notice**") released the Draft Kerala State Electricity Regulatory Commission (Renewable Energy and Related Matters) Regulations, 2025 ("**Draft KSERC RERM Regulations**").

The Draft KSERC RERM Regulations apply, among others, to all existing and new: (i) grid-interactive renewable energy systems; (ii) consumers and prosumers; (iii) captive consumers and captive generating plants; (iv) generating companies and distribution licensees; and (v) other obligated entities, and in matters of: (i) determination of energy tariffs from renewable energy systems, including battery energy storage systems ("**BESS**") and pumped storage plants/ projects ("**PSPs**"); (ii) renewable purchase obligations and related compliance; (iii) renewable energy metering and billing; (iv) technical feasibility, registration, connectivity, metering, energy accounting, and billing of prosumers; (v) storage, banking, and open access of renewable energy, including inter-licensee transfers of renewable energy; (vi) enhancing the capacity of renewable energy systems of existing prosumers; as well as (vii) other methods of renewable energy injection and withdrawal and related matters.

The Draft KSERC RERM Regulations aim to promote renewable energy in the state of Kerala in alignment with the national and state renewable energy targets and net zero commitments, ensure grid stability, and promote sustainable energy practices, among other things.

The Draft KSERC RERM Regulations remained open for suggestions and objections for a month from the date of publication of the Notice.

KSERC issues third amendment to conditions of licence for existing distribution licensees regulations

February 28, 2025: Pursuant to a notice dated February 28, 2025, the KSERC released the KSERC (Conditions of Licence for Existing Distribution Licensees) (Third Amendment) Regulations, 2025 to provide that the licence fee for the next three financial years be remitted to the KSERC at the rate of 0.015% of the revenue from the sale of power for the previous financial year.

Madhya Pradesh

Madhya Pradesh government issues renewable energy policy 2025

April 4, 2025: Pursuant to a notification dated April 4, 2025, the MP NRED issued the Madhya Pradesh Renewable Energy Policy – 2025 for a period of five years with the aim of developing the state into a renewable energy hub, including with a focus on creating a renewable energy equipment manufacturing ecosystem in the state, and adding a

renewable energy capacity of 36,000 MW along with energy storage capacity of 12,000 MW by FY 2035.

Madhya Pradesh government issues scheme for implementation of PHS project in the state

February 24, 2025: Pursuant to a notification dated February 24, 2025, the MP NRED issued a scheme for the implementation of pumped hydro storage ("**PHS**") projects in Madhya Pradesh with an aim to develop a holistic ecosystem to promote the development of PHS projects in the state.

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