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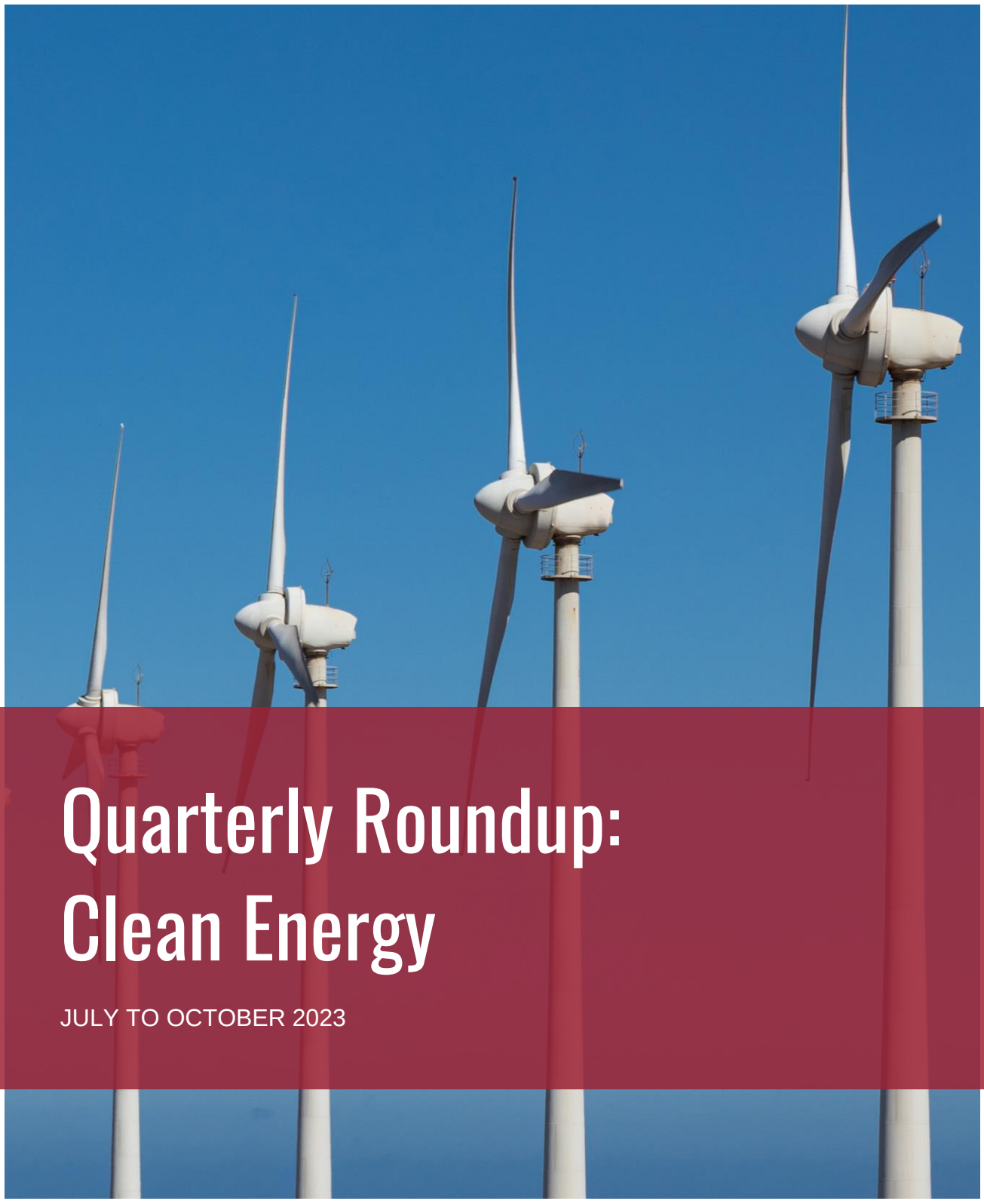

Quarterly Roundup: Clean Energy

JULY TO OCTOBER 2023

Executive Summary

This is the third issue of our quarterly roundup series on clean energy, covering the period between **July and October 2023**.

UPDATES

- Regulatory updates have been divided month-wise (i.e., relating to July, August, September and October, respectively, in that order). Under each month, updates on renewable/clean energy ("**RE**") and electric vehicles ("**EVs**"), respectively, are summarized under separate categories.

- Further, within the monthly updates for RE, central and state government updates are listed separately.

- Similarly, within the monthly updates for EVs, India-related updates and international developments are listed separately.

- Links to primary (or secondary) sources related to each update across all categories have been embedded within item headings (or are embedded in-line).

ANALYSIS

Following the updates, we provide an overview of carbon credits, including in respect of trading and market transactions involving such credits.

Contents

UPDATES

July 2023

August 2023

September 2023

October 2023

ANALYSIS

Carbon Credits: An Overview

July 2023

RE

Central Government

The Ministry of Power issues the Electricity (Second Amendment) Rules, 2023

Pursuant to a notification dated July 26, 2023, the Ministry of Power ("**MoP**") issued the Electricity (Second Amendment) Rules, 2023 for the purpose of further amending the Electricity Rules, 2005 (the "**Electricity Rules**") – including with the aim to enhance the financial stability of electricity distribution companies ("**discoms**"), as well as to establish a sustainable framework for the power sector. Accordingly, the amended Rule 15 and the newly added Rule 20 of the Electricity Rules seek to provide a framework for: (i) subsidy accounting and payment by discoms, and (ii) the financial sustainability of such discoms.

The applicability of the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2019 is extended

Pursuant to a notification dated July 3, 2023, and in exercise of powers under the Electricity Act, 2003 (the "**Electricity Act**"), the period of applicability of the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2019 was extended until the earlier of: (i) further orders of the Joint Electricity Regulatory Commission for the state of Goa and union territories ("**JERC"**) in this regard; or (ii) the notification of new terms and conditions for tariff determination from renewable energy sources under applicable regulation.

The MoP issues guidelines for a tariff-based competitive bidding process for procuring power from grid-connected wind power projects

The MoP, by a resolution dated July 26, 2023, notified the Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Wind Power Projects (the "**Wind Guidelines**"). The Wind Guidelines are aimed at facilitating the renewable capacity addition and fulfilment of renewable purchase obligation ("**RPO"**) requirements of discoms. Further, the Wind Guidelines seek to establish a transparent and equitable procurement framework through open competitive bidding, with risk-sharing among stakeholders, in order to enhance the affordability of power procurement. The Wind Guidelines also seek to improve a project's bankability and ensure reasonable returns for investors, ultimately creating a sustainable framework for risk mitigation in the sector.

The Central Electricity Authority releases new norms for forecasting power demand

The Central Electricity Authority ("**CEA**") on July 27, 2023 released new guidelines for medium- and long-term power demand forecasting (the "**Demand Forecast Guidelines**"). The Demand Forecast Guidelines provides for specific timelines and modalities for long-term (*i.e.*, at least for the next 10 years) and medium-term (more than 1 year and up to 5 years) power demand forecasting by discoms/ states/ union territories.

A draft roadmap for the green hydrogen ecosystem in India is released

On July 1, 2023, the Ministry of New and Renewable Energy ("**MNRE**") issued a draft roadmap detailing the research and development for the green hydrogen ecosystem in India. The objective of the roadmap is to encourage the efficient, secure and affordable end-use applications, as well as the storage, of green hydrogen – with the aim to promote its widespread adoption as a source of sustainable energy.

The MoP issues the National Electricity Plan Notification (Amendment) Rules, 2023

On July 5, 2023, the MoP notified the National Electricity Plan Notification (Amendment) Rules, 2023 (the "**Electricity Plan Amendment**"). The Electricity Plan Amendment substitutes Rule 3 of the National Electricity Plan Notification Rules, 2004. The substituted rule provides that a draft National Electricity Plan, drafted under the provision of the Section 3(4) of the Electricity Act, will be published on the CEA's website to solicit feedback and objections from various stakeholders.

The MoP issues guidelines for a tariff-based competitive bidding process for procuring power from grid-connected solar power projects

On July 28, 2023, the MoP issued guidelines for a tariff-based competitive bidding process ("**TBCB**") for the procurement of power from grid-connected solar photovoltaic power projects ("**Solar Bidding Guidelines**"). The Solar Bidding Guidelines have been issued with the aim to facilitate power procurement by reducing the overall cost of such procurement and fostering the development of power markets.

The MNRE extends the deadline for the self-certification of solar inverters until December 31, 2023

Pursuant to a notification dated July 27, 2023 the MNRE has extended the implementation of the Solar Photovoltaics, Systems, Devices and Components Goods (Requirements for Compulsory Registration) Order, 2017 for solar photovoltaic inverters to December 31, 2023 or until further orders from the MNRE in this, whichever is earlier, for the purpose of providing more time for compliance to manufacturers. Accordingly, pursuant to this notification, manufactures can now issue self-certification on solar photovoltaic inverters until December 31, 2023.

The CEA amends the Procedure for Approval and Facilitating Import/Export (Cross Border) of Electricity by the Designated Authority

Pursuant to a letter dated July 31, 2023, the CEA notified Amendment-1 to the Procedure for Approval and Facilitating Import/Export (Cross Border) of Electricity by the Designated Authority (the "**Cross Border Electricity Procedure**"). The Cross Border Electricity Procedure was amended to enable power transfer through the real-time market segment of Indian power exchanges to neighboring countries.

The MoP issues a revision to its previous order on the preference to 'Make in India' with respect to public procurement in order to provide for a purchase preference linked with local content in respect of the power sector

The MoP issued an order dated July 3, 2023 to amend its earlier order number A-1/2021-FSC-Part (5) dated November 26, 2021 that had provided for a list related to public procurement (preference to make in India) (the "**Preference List Order**"). The amendment provides for a purchase preference linked with local content with respect to the power sector. Pursuant to this revision, the MoP has included smart meters under the Preference List Order.

The MoP finalizes the Carbon Credit Scheme, 2023

On June 28, 2023, the MoP notified the Carbon Credit Trading Scheme, 2023 ("**CCTS**"). The CCTS is aimed at developing a domestic carbon market and encouraging industries and entities to reduce carbon emissions. The CCTS provides for an 18-member National Steering Committee which will be responsible for the functioning of the Indian carbon market. The CCTS also provides for the issue of carbon credit certificates. Under the CCTS, the Grid Controller of India Limited ("**GCI**") is the designated registry and the Central Electricity Regulatory Commission ("**CERC**") is mandated to regulate trading activities in the Indian carbon market.

The CEA proposes reconductoring to align with changing demand-and-supply scenarios

On June 27, 2023, the CEA issued a draft paper on the reconductoring of transmission lines in the Inter-State Transmission System ("**ISTS**," and such paper, the "**Draft Paper**"). Reconductoring a line with high-capacity high performance conductors is an important measure to adapt with changing demand, as well as to strengthen the transmission capacity of transmission systems. The Draft Paper discusses the planning of reconductoring, approval and its mode of implementation.

State Government

CSERC issues (Grid Interactive Distributed Renewable Energy Sources) (Second Amendment) Regulations, 2023

The Chhattisgarh State Electricity Regulatory Commission ("**CSERC**") on July 25, 2023 issued the CSERC (Grid Interactive Distributed Renewable Energy Sources) (Second Amendment) Regulations, 2023 ("**CSERC GRE Regulations**"). The CSERC GRE Regulations introduce new rules for green energy open access to facilitate wider access to renewable energy sources and provide for new banking and charges to be levied for open access on independent distributed renewable

energy systems. Effective from September 1, 2023, the CSERC GRE Regulations have also lowered the minimum capacity requirement for open access from 500 kW to 100 kW and also eliminate the previous limit for maximum capacity.

OERC issues a discussion paper on determination of generic tariffs for renewable projects for FY 2024-26

Pursuant to a public notice dated July 20, 2023, the Odisha Electricity Regulatory commission ("**OERC"**) issued a discussion paper for comments from interested stakeholders related to the determination of generic tariffs and norms in respect of renewable power projects in the state of Odisha for the fourth control period, i.e., from financial year 2023-24 to 2025-26.

KSERC adopts tariff of INR 3.50 per unit under Component A of PM KUSUM Scheme in the state

The Kerala State Electricity Regulatory Commission ("**KSERC**"), pursuant to an order dated July 12, 2023, in the petition of Kerala State Electricity Board Limited, has adopted a tariff of INR 3.50 per unit for procurement of power from decentralized solar power of capacity of 500kW to 2 MW to be set up under Component A of Pradhan Mantri - Kisan Urja Suraksha Evam Utthan Mahabhiyan ("**PM KUSUM**").

TNERC issues the Revised Tariff Order (FY 2023-24)

The Tamil Nadu Electricity Regulatory Commission ("**TNERC**") issued a revised tariff order for the financial year 2023-24 on June 30, 2023, applicable from July 1, 2023. The TNERC has increased retail electricity tariff for high tension industrial consumers by 2.2% to INR 6.90/kWh from the previous tariff of INR 6.75/kWh. Also, the retail tariff for commercial consumers has been increased by 2.4% to INR 8.70/kWh from INR 8.50/kWh.

TERC approves net metering up to 85% of transformer capacity for consumers

The Tripura Electricity Regulatory Commission ("**TERC"**) on June 23, 2023, issued an amendment to the TERC (Group Net Metering and Virtual Net Metering for Renewable Energy) Guidelines, 2023 ("**TERC Guideline Amendment**"). Among other things, the TERC Guideline Amendment authorize state discoms to allow net metering arrangements for eligible consumers up to 85% of the rated capacity of the distribution transformer.

Assam Government to provide duty exemption on the electricity generated from renewable sources

Pursuant to a cabinet decision dated July 21, 2023, the Assam Government has granted approval for a three-year exemption of electricity duty on power generated from renewable energy sources by a consumer on captive consumption, starting from April 1, 2023.

Himachal Pradesh regulatory commission allows state discom to barter its hydro power with wind power

Pursuant to an order dated June 23, 2023, the Himachal Pradesh Electricity Regulatory Commission ("**HPERC**") allowed the Himachal Pradesh State Electricity Board Limited ("**HPSEB**") to offset the shortfall of wind RPO with the excess Hydro Purchase Obligation of Power available with the HPSEB during the corresponding period.

APERC issues draft regulations on net/gross metering with respect to solar projects

On July 1, 2023, the Andhra Pradesh Electricity Regulatory Commission ("**APERC**") issued the draft APERC (Grid Interactive Solar Rooftop Photovoltaic System under Gross/Net Metering) Regulations, 2023 ("**Draft APERC Solar Regulations**"). Among other things, the Draft APERC Solar Regulations deal with (i) net metering upper cap for rooftop solar projects, (ii) gross metering upper cap, (iii) cumulative capacity of all grid-connected rooftop solar systems, (iv) transmission and wheeling charges and losses, and (v) application process for grid connected solar rooftop systems.

APERC issues order for the levelized tariff for wind power projects

Pursuant to a common order dated July 7, 2023, the APERC determined a levelized tariff of INR 2.64 per unit, applicable from the 11th year to the 20th year of the commercial operation date for wind power plants of the New & Renewable Energy Development Corporation of Andhra Pradesh Limited.

OERC issues draft RPO regulations

Pursuant to a public notice dated July 1, 2023, the OERC issued the draft First Amendment to OERC (Procurement of Energy from Renewable Sources and its Compliance) Regulations, 2021 ("**OERC PERSC Regulation**"), inviting objections/ suggestions from stakeholders. This draft first amendment seeks to amend Regulation 4.2 to 4.9 and 5.1 of the OERC PERSC Regulation to align the RPO trajectory for Odisha in line with the RPO trajectory notified by the MoP in its order dated July 22, 2022.

EV

India

The Odisha Cabinet approves the state's Semiconductor Manufacturing and Fabless Policy

The State Cabinet of Odisha on July 21, 2023 approved a semiconductor policy. Among other things, the Odisha Semiconductor Manufacturing and Fabless Policy provides for 25% additional subsidy on capital investment to those who approach the state through the Indian Government, in addition to 50% subsidy offered by the Central Government.

The Union Government starts work on FAME- III

The Central government has initiated work on the third phase of the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles ("**FAME**") financial assistance scheme (such third phase of FAME, "**FAME-III**"). According to reports, FAME-III is expected to encompass hydrogen-powered vehicles, offer enhanced support for electric three-wheelers, and provide reduced support for two-wheelers.

Union Cabinet approves amendments to the Mines and Minerals (Development and Regulation) Act, 1957 to allow mining of lithium and other minerals

The Union Cabinet on July 12, 2023 approved amendments to the Mines and Minerals (Development and Regulation) Act, 1957. The proposed amendment seeks to allow, among other things, the mining of lithium and other minerals – which, in turn, is perceived to be an important step towards the future of electric vehicles ("**EV**") in India. The amendments also propose to provide for an exploration licence granted through auction for undertaking reconnaissance and prospecting operations for mining.

Chandigarh Administration amends EV Policy

Pursuant to a notification dated July 7, 2023, the Science and Technology and Renewable Energy Department of the Chandigarh Administration issued amendments to the Chandigarh EV Policy, 2022. To accelerate the adoption of EVs in Chandigarh, the amended Chandigarh EV Policy, 2022, among other things, provides incentives for EVs purchased by permanent residents of Chandigarh from Chandigarh, as well as from anywhere else in the country. The incentives are being offered for up to 42,000 vehicles of different categories, including 25,000 e-cycles, 1,000 e-bikes, and 3,000 cars. Moreover, the road tax on registration for all EVs has been waived. The incentive will remain in operation through the five-year policy period until September 19, 2027, or until the time the Chandigarh Administration decides otherwise.

The TNERC revises energy tariff for public EV charging stations

The TNERC, pursuant to an order dated June 30, 2023, revised energy tariffs for public EV charging stations. In its order, the TNERC pronounced new rates for EV charging stations in Tamil Nadu. Further, the peak hour rate has been reduced to INR 9/kWh (from INR 12/kWh). Also, the fixed monthly charges per kW have been reduced to the following: (i) INR 25 from INR 100 (for 0–50 kW connections); (ii) INR 75 from INR 300 (for 51–112 kW connections); and (iii) INR 138 from INR 550 (for above 112 kW).

International

The UAE updates its national EV policy

The UAE updated its national EV policy with the aim to promote collaboration between Government, local partners and private companies to set up a countrywide network of charging stations for electric cars. The policy, among other things, seeks to lower the amount of energy used in transportation by 20%

and to make it easier for people with electric cars to charge such cars, thereby ensuring the UAE's leading position in global road quality. In Dubai, the Road and Transport Authority aims to change all the city's taxis into eco-friendly vehicles by 2027.

August 2023

RE

Central Government

MoP issues framework for promoting energy storage systems

The MoP on August 31, 2023 released a national framework for promoting energy storage systems ("**ESS**," and such framework, the "**National Framework**"). The National Framework aims to promote the adoption of energy storage by offering incentives for the implementation of ESS. ESS are vital for storing energy generated from renewable energy sources, ultimately contributing to both (i) environmental sustainability – by reducing reliance on fossil fuel power plants, as well as (ii) financial viability of the power sector.

MNRE updates the ALMM list with a total enlisted capacity of 17,577 MW until August 2023

Pursuant to an office memorandum dated August 23, 2023, the MNRE issued Revision-XV to the approved list of models and manufacturers for solar photovoltaic modules (ALMM List-I), thus increasing its total enlisted capacity to 17,577 MW.

MoP issues Guidelines for Tariff-Based Competitive Bidding for Solar-Wind Hybrid Projects

Pursuant to a resolution dated August 21, 2023, the MoP issued the Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Wind Solar Hybrid Projects (the "**Hybrid Project Guidelines**"). The Hybrid Project Guidelines aim to promote the competitive procurement of electricity from grid-connected wind-solar hybrid power projects by discoms, with the ultimate purpose of protecting consumer interests. Among other things, the Hybrid Project Guidelines also provide indicative bidding timelines, bidding parameters and a power purchase agreement period.

India sets Green Hydrogen Standard to define carbon emission threshold

On August 18, 2023, the MNRE officially released the Green Hydrogen Standard for India. This

standard provides for specific emission limits which must be adhered to during the production of green hydrogen. According to the MNRE, hydrogen production can be categorized as 'green' when it maintains an emission level of no more than 2 kilograms of carbon dioxide equivalent for each kilogram of hydrogen produced.

MNRE releases strategy paper for offshore wind power projects

The MNRE on August 17, 2023 released a strategy for the establishment of offshore wind energy projects ("**Strategy**"). The Strategy (i) outlines a structured 'three models' approach to facilitate a holistic development of offshore wind energy projects – especially across the southern and western shorelines of India; and (ii) aims to fast-track the process.

MoP issues amendment in the SBDs for procurement of ISTS through TBCB process to include provisions of aggregate capital cost for HVDC systems

Pursuant to a letter dated August 8, 2023, the MoP, in consultation with the CEA, modified the Request for Proposal ("**RfP**") among the standard bidding documents ("**SBDs**") for the procurement of interstate transmission services ("**ISTS**") through a tariff-based competitive bidding ("**TBCB**") process. The letter modified the standard RfP document for the purpose of providing certain relaxations to bidders in respect of technical qualification requirements with regard to High Voltage Direct Current ("**HVDC**") systems for a period of two years from the date of issue of the letter.

CERC issues staff paper on "Market Coupling"

The CERC on August 21, 2023 issued a staff paper on Market Coupling ("**Staff Paper**") containing comments and suggestions from stakeholders. The Staff Paper, among other things, discusses the regulatory provisions for market coupling, international experience, the objectives of market coupling in India, and the issues and challenges in the implementation of market coupling.

State Government

UERC adopts a levelized generic tariff for solar projects of INR 4.64/kWh until March 2026

The Uttarakhand Electricity Regulatory Commission ("**UERC**"), pursuant to an order dated August 16, 2023 in the petition of Uttarakhand Renewable Energy Development Agency, adopted a levelized generic tariff of INR 4.64/kWh – as specified by the UERC for the financial year 2023-24, which will be applicable until March 31, 2026 for projects to be allotted under a state scheme called the *Mukhyamantri Saur Swarojgar Yojana*.

MERC approves the procurement of 7000 MW on long term basis from solar generator under MSKVY 2.0

The MERC, pursuant to an order dated August 11, 2023, approved the petition of Maharashtra State Electricity Distribution Company Limited, which had sought approval for the initiation of a competitive bidding process through MSEB Solar Agro Power Limited for the long-term procurement of 7,000 MW solar power under the *Mukhyamantri Saur Krushi Vahini Yojana* 2.0 ("**MSKVY 2.0**").

KERC issues order for green energy open access for consumers having demand of 100kW or more

On August 9, 2023, the Karnataka Electricity Regulatory Commission ("**KERC"**) allowed open access to such consumers – who have a contracted demand or a sanctioned load of 100 KW or more – to source power through green energy open access under the KERC (Terms and Conditions to Green Energy Open Access) Regulations, 2022.

OERC issues a draft for Promotion of Renewable Energy through Green Energy Open Access) Regulations, 2023

Pursuant to a public notice dated August 1, 2023, the OERC issued the draft OERC (Promotion of Renewable Energy through Green Energy Open Access) Regulations, 2023 ("**OERC Open Access Regulations**") for objections and suggestions from stakeholders. The OERC Open Access Regulations aim to promote green energy through open access in Odisha, and also aim to allow the banking of such energy.

MERC issues Draft (Distribution Open Access) (Second Amendment) Regulations, 2023

Pursuant to a draft notification dated August 1, 2023, the MERC released the MERC (Distribution Open Access) (Second Amendment) Regulations, 2023 (the "**Draft MERC Open Access Second Amendment**"). The Draft MERC Open Access Second Amendment seeks to incorporate such sectoral changes in the MERC (Distribution Open Access) Regulations, 2016 (the "**MERC Principal Regulations**") which have come in to force since the issue of the first amendment to the MERC Principal Regulations.

MERC issues Draft (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) (First Amendment) Regulations, 2023

Pursuant to a draft notification dated August 1, 2023, the MERC issued the MERC (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) (First Amendment) Regulations, 2023 (the "**Draft MERC REC First Amendment**"). The Draft MERC REC First Amendment seeks to align the MERC (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) Regulations, 2019 with changes introduced by the MoP through: (i) the Order related to RPO and Energy Storage Obligation Trajectory until 2029-30; and (ii) the Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022.

MERC issues Draft (Grid Interactive Rooftop Renewable Energy Generating Systems) (First Amendment) Regulations, 2023

The MERC, pursuant to a draft notification dated August 1, 2023, released the MERC (Grid Interactive Rooftop Renewable Energy Generating Systems) (First Amendment) Regulations, 2023 with the aim to align the MERC (Grid Interactive Rooftop Renewable Energy Generating Systems) Regulations, 2019 with changes introduced by the MoP pursuant to the notification of the Electricity (Rights of Consumers) Rules, 2020 and the Electricity (Rights of Consumers) Amendment Rules, 2021.

West Bengal discom to procure 150 MW of ISTS-connected wind solar hybrid power from Amp Energy at INR 2.92/kWh

Pursuant to an order dated August 31, 2023, the West Bengal Electricity Regulatory Commission approved the Power Purchase Agreement ("**PPA**") for the purchase of 150 MW wind-solar hybrid power by CESC Limited from AMP Energy Green Seventeen Private Limited at a uniform price of INR 2.92 /kWh for a period of 25 years.

Government of Rajasthan Energy Department issues Rajasthan draft Energy Policy 2050

On August 31, 2023, the Energy Department of the Government of Rajasthan released the draft Rajasthan Energy Policy 2050 ("**Draft Energy Policy**") for comments and suggestions from the general public and all other stakeholders. The Draft Energy Policy seeks to guide the state of Rajasthan's transition towards a secure and clean energy future. Among other things, the Draft Energy Policy seeks to achieve 70% of the total electricity generation in the state from non-fossil energy sources by the year 2050.

EV

India

The Union Cabinet approves a bus scheme called "PM-eBus Sewa" with respect to e-buses

On August 16, 2023, the Union Cabinet approved the "PM-eBus Sewa" scheme for upgrading city bus operations through the deployment of 10,000 e-buses on a public-private partnership model. The PM-eBus Sewa scheme is projected to have an estimated cost of INR 57,613 crore, out of which a sum of INR 20,000 crore is to be contributed by the Union Government.

The Union Government may introduce a payment security mechanism to support the rollout of large-scale e-buses

The Union Government has planned to introduce a payment security mechanism to help the large-scale rollout of electric buses as part of its efforts to promote eco-friendly public transportation in India.

The Union Government prepares the first draft of FAME-III

The Union Government prepared a first draft of FAME-III pursuant to its efforts to promote the adoption of EVs in India. It was reported that the Government is considering an allocation of INR 40,000 - 50,000 crores for FAME-III, based on inputs from industry and pursuant to discussions between different government departments. FAME-III is expected to extend support for the adoption of electric buses, trucks, cycles and quadracycles, in addition to electric cars, buses as well as electric two- and three-wheelers – with a substantial portion of such allocation earmarked for electric buses.

The Karnataka Government and US-based IBC signs an MoU to establish a recyclable lithium-ion battery manufacturing unit in the state

The Government of the state of Karnataka has signed a memorandum of understanding with US-based International Battery Company ("**IBC**") for the purpose of establishing a lithium-ion battery manufacturing facility with an investment of INR 8,000 crore. The manufacturing facility is proposed to be situated on a 100-acre tract of land in the Bengaluru Rural district of Karnataka.

A new national EV policy may be issued to reduce import taxes for automobile manufacturers subject to a local manufacturing commitment

India is working on a new EV policy that may significantly reduce import taxes for car manufacturers which commit to manufacture their vehicles in India. Under the proposed EV policy, companies may be able to import EVs into the country with only a 15% tax – as opposed to the current 100% tax for cars priced at over USD 40,000 (and 70% for other cars).

Road tax exemptions under the Chandigarh EV Policy 2022 will be limited to EVs and hybrid vehicles that are both purchased and registered locally

The Chandigarh Administration clarified that, unlike other incentives, the road tax exemption provided by the amended Chandigarh EV Policy, 2022 will not be extended to such EVs and hybrid vehicles that are purchased from different states – even if such vehicles are registered in the city of Chandigarh.

The Central Government may introduce an incentive scheme especially tailored for the purchase of electric buses by private operators

The Union Government seeks to launch a specialized incentive scheme aimed at encouraging private operators to purchase electric buses. The scheme will be part of the Government's endeavours towards achieving a target of 40% e-bus penetration by 2030, as well as to reach carbon neutrality by 2070.

India starts preparations for the auction of mineral blocks

India started preparations for an auction process in respect of about 100 critical mineral blocks for the purpose of securing the domestic supplies of necessary raw materials related to a green energy transition. Such blocks involve minerals like nickel, lithium, cobalt and platinum, along with some rare earths.

Telangana withdraws road tax exemption previously available for electric cars and replaces it with a levy

The road tax exemption for electric cars provided in the state of Telangana has now been removed, while a levy ranging from 11% to 15% has also been introduced. The levy introduced on electric cars has been fixed at 11% for those priced below INR 10 lakh (ex-showroom); 14% for those in the range of INR 10-20 lakh range; and 15% for cars priced at above INR 20 lakh. An additional 2% levy will also be applicable if the buyer already has a car registered under their name, or if the buyer is an organization.

International

The US Department of Energy announces a USD 15.5 billion package for funding and loans towards an EV transition

The US Department of Energy announced a funding and loan package worth USD 15.5 billion with a major focus on upgrading existing factories for the purpose of facilitating a shift towards EVs. This policy is also aimed to create jobs, as well as to facilitate fairness in respect of the transition to EVs. The policy is projected to offer USD 2 billion in grants, and up to USD 10 billion in loans, for the purpose of supporting automotive manufacturing conversion projects that retain high-quality jobs in

such communities where these manufacturing facilities are currently located.

Indonesia changes its EV policy with respect to availing subsidies for two-wheelers

For the purpose of encouraging the widespread adoption of electric motorcycles in the country, the Government of Indonesia has expanded the eligibility conditions for subsidies. This change was initiated because the previous limited eligibility conditions resulted in low participation. Indonesia intends to allocate about USD 458.87 million from State funds to: (i) promote the sale of 800,000 new electric motorcycles; and (ii) convert 200,000 gasoline-powered motorcycles into electric ones by the year 2024.

Texas passes a new state law imposing a fee on EVs

Starting September, EV drivers in the US state of Texas will have to pay an extra USD 200 each year to register their vehicles. Pursuant to a new state law that imposes a new fee on EVs to replace gasoline taxes lost to electrification, buying an additional EV will cost USD 400 upfront. This fee will not apply to hybrid vehicles.

Japan plans to create tax breaks for domestically-made EV batteries and semiconductors from April 2024

Japan is planning to introduce tax incentives for such EV batteries and semiconductors that are produced within the country, starting from April 2024, for the purpose of bolstering economic security. The Ministry of Economy, Trade and Industry of Japan plans to propose these tax reductions as part of the government's tax code revision for the fiscal year 2024. These incentives are aimed at companies that manufacture strategically crucial products in Japan.

Indonesia announces that automobile manufacturers will be provided two more years to qualify for EV incentives

On August 10, 2023, it was announced that automobile manufacturers in Indonesia will be provided two more years to qualify for EV incentives – with the ultimate aim of attracting more investments in the country's EV sector. According to these relaxed rules, automotive manufacturers will now have until 2026 for the purpose of committing to produce a minimum of 40% of EV content in Indonesia to be eligible for incentives.

The EU approves new rules related to EV charging stations

The European Union ("**EU**") has approved a new package of rules related to EV charging stations. Under such rules, there will have to be a fast-charging station available every 60 kilometers (approx.) along all key transportation routes of Europe by the year 2025. The new rules are designed to enhance the accessibility of fast chargers, as well as to increase the use of EVs across the continent.

September 2023

RE

Central Government

MNRE proposes to hold bids for the development of offshore wind energy sites in Tamil Nadu

According to a strategy paper dated September 26, 2023 with respect to the establishment offshore wind energy projects, the MNRE proposes to hold bids for the allocation of offshore wind sites off the coast of Tamil Nadu through its nodal agency, the National Institute of Wind Energy ("**NIWE**"). Pursuant to the strategy and according to reports (such as here, here and here), bids will be invited in two tranches. For the first tranche – comprising four sites and covering an area of 828 square kilometres off the coast of Tamil Nadu – bids will be invited on February 1, 2024. Bids for the second tranche, which will include three sites covering an area of 615 square kilometres along the Tamil Nadu coast, will be invited sometime during the financial year 2024-25.

CERC approves high price bilateral market segment in PXIL

Pursuant to an order dated September 21, 2023, the CERC approved the petition of Power Exchange India Limited ("**PXIL**") for the introduction of a high-price bilateral market segment with contracts. The CERC also approved the introduction of a high-price term-ahead market as well as contingency contracts by PXIL.

CERC issues an order stating the adoption of tariffs assigned in the PPA

Pursuant to an order dated September 13, 2023 in the petition of the Solar Energy Corporation of India Limited ("**SECI**"), the CERC approved a tariff of INR 2.53/kWh for successful bidders related to 1170 MW of wind-solar hybrid power projects (Tranche-V) connected with ISTS.

CERC issues a letter to implement the scheme for pooling of tariff of those plants whose PPAs have expired

The CERC on September 11, 2023 notified a scheme for the pooling of tariffs with respect to those plants whose PPAs have expired (the "**Pooling Scheme**"). The Pooling Scheme supersedes the guidelines issued by the MoP pursuant to letters dated Match 22, 2021 and July 5, 2021. The Pooling Scheme is formulated with the objective of maintaining resource adequacy, conserving capital expenditure, and utilizing the capacity that is already available in the grid.

MNRE extends the waiver of domestic content requirements for solar cells under Component C of the PM-KUSUM Scheme

Pursuant to an office memorandum dated September 11, 2023, the MNRE decided to waive the domestic content requirement under component C (Feeder Level Solarization) of the *Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyaan* ("**PM-KUSUM**") scheme until March 31, 2024.

Cabinet approves INR 37.6 billion viability gap funding for development of battery energy storage systems

On September 6, 2023, the Union Cabinet approved the scheme for Viability Gap Funding ("**VGF**") with respect to the development of Battery Energy Storage Systems ("**BESS**"). The approved scheme aims to create 4,000 MWh of BESS projects by 2030-31 by offering financial support of up to 40% of the total capital cost as budgetary assistance through VGF.

MoP issues the Electricity Rules (Third Amendment) to resolve the matter of captive generation plants

Pursuant to a gazette notification dated September 1, 2023, the MoP issued the Electricity (Third Amendment) Rules, 2023 ("**Third Amendment**"). The Third Amendment seeks to clarify such doubts regarding the status of group captive generation plants ("**CGP**") that had arisen after the June 2023 amendment of the Electricity Rules. The Third Amendment also incorporates a new provision designating the CEA as the authority for verifying the captive status of such generating plants, where the CGP and its captive users are located in more than one state.

State Government

UERC approves an additional surcharge for open-access consumers

Pursuant to an order dated September 25, 2023, the UERC approved the levy of an additional surcharge of INR 1.05 per unit until March 31, 2024 on open access consumers in the state of Uttarakhand to meet the fixed cost of Uttarakhand Power Corporation Limited arising out of its obligation to supply electricity to open access consumers.

Gujarat Government allows all ISTS /In-STS connected RE projects to be set up in the state

The Energy and Petrochemicals Department of the Government of Gujarat, pursuant to a letter dated September 21, 2023, allowed all ISTS /Intra-State Transmission System-connected renewable energy projects to be set up in the state of Gujarat, and accordingly issued instructions related to the giving of all necessary permissions for the registration, installation and commissioning of all such projects in Gujarat.

Rajasthan extends the validity of its multi-year tariff order by one year until March 2025

The Rajasthan Electricity Regulatory Commission ("**RERC**"), pursuant to an order dated September 21, 2023, extended the applicability of the RERC (Terms and Conditions for Determination of Tariff) Regulations, 2019 for a further period of one year, *i.e.*, until March 21, 2025.

JSERC allows state discom to procure 100 MW of floating solar power at a price of INR 3.50/kWh

Pursuant to an order dated September 12, 2023, the Jharkhand State Electricity Regulatory Commission ("**JSERC"**) allowed Jharkhand Bijli Vitran Nigam Limited (a discom) to purchase 100 MW of power from a floating solar photovoltaic plant to be commissioned by SECI at Getalsud Dam, Ranchi at the ceiling price of INR 3.50/kWh.

TNERC proposes a draft for forecasting, scheduling and deviation settlement related to wind and solar generation

Pursuant to a public notice dated September 11, 2023, the TNERC has invited objections or suggestions from stakeholders on the draft of the TNERC (Forecasting, Scheduling and Deviation Settlement and related matters for wind and solar generation) Regulations, 2023 ("**Draft Deviation Settlement Regulations**"). The Draft Deviation Settlement Regulations seek to revise the deviation settlement policy concerning solar and wind power producers.

Government of Gujarat issues Gujarat Renewable Energy Policy 2023

On September 1, 2023, the Gujarat Government issued the state's Renewable Energy Policy for 2023 ("**Renewable Energy Policy**") with the aim to promote the setting up of renewable generation projects based on wind, solar and wind-solar hybrid technologies. The Renewable Energy Policy aims to develop a total cumulative capacity of 100 GW of renewable energy in Gujarat by the year 2030.

TSERC issues Draft Open Access Regulations which allow monthly banking at 8% of the energy banked

On September 1, 2023, the Telangana State Electricity Regulatory Commission ("**TSERC**") issued the draft TSERC (Terms and Conditions of Open Access), Regulation, 2023 ("**Draft Open Access Regulations**") for comments and suggestions of stakeholders. Among other things, the Draft Open Access Regulations allows consumers with a contracted demand or sanctioned load of 100 KW or higher to avail of green energy open access. The Draft Open Access Regulations also allows monthly banking for green energy open access consumers at 8% of the energy banked.

EV

India

The Government of India finalizes plans to award rebidding of the unutilized 20 GWh of the ACC Scheme into packets of 5 GWh each

The Government of India finalized plans to award a re-bidding of an unutilized capacity of 20 GWh in connection with the scheme for Advanced Chemistry Cell ("**ACC**") battery storage into 4 packets of 5 GWh each to multiple bidders. This action is expected to enhance the electric mobility and battery storage infrastructure in the country.

Delhi's EV Policy 2.0 may focus on incentivizing the retrofitting of vehicles

The State Government of Delhi is set to introduce the Delhi EV Policy 2.0 after the expiry of the Delhi EV Policy, 2020 on August 8, 2023. The Delhi EV Policy 2.0 is said to be focused on incentivizing the retrofitting of vehicles by providing subsidies or alternative incentives to make such retrofitting feasible.

The Ministry of Heavy Industries is planning to increase the FAME-II subsidy outlay for two-wheelers

The Ministry of Heavy Industries ("**MHI**") is considering an increase in the subsidy outlay for the second phase of FAME ("**FAME-II**") in connection with two-wheelers through the fresh infusion of INR 1,500 to 2,000 crores – especially given that the government may soon exhaust the originally allocated fund of INR 5,124 crore. The plan to inject fresh funds seeks to ensure that there are adequate resources available for the scheme before it lapses in March 2024, thus allowing the momentum in respect of market penetration related to the two-wheeler EV segment to continue.

Delhi's outcome budget sets revised targets for 2023-24

The Transport Department of the Delhi Government revised its goals for various transportation initiatives, including those related to EV registration and the establishment of public charging stations, as outlined in its outcome budget document. The Transport Department aims to increase the total number of EVs registered in Delhi to 223,988 by the end of March 2024. Additionally, the Transport Department intends to raise the proportion of EVs among new vehicles registered in Delhi to 20.94% within such deadline. The total number of public charging points are also aimed to be increased to 5,468 from the existing 2,734.

The Union Government may sue electric two-wheeler companies for not complying with FAME-II norms

The Union Government continues to consider legal actions against two-wheeler manufacturers which have failed to comply with FAME-II norms. The Union Government has sent notices in this regard to several electric two-wheeler manufacturers which were found to have not complied with FAME-II requirements despite having claimed incentives under such scheme. The Government is asking for the return of funds related to such incentives.

Production of ACC batteries in India is likely to start by January 2024

India is poised to produce ACC batteries locally. The manufacturing of the initial batch of ACC batteries in India is expected to begin by January 2024. Previously, the government had authorized a production-linked incentive ("**PLI**") scheme to encourage the production of ACC batteries in India in May 2021 with an estimated budget of INR 18,100 crore.

The Ministry of Housing and Urban Affairs releases guidelines for the PM-eBus Sewa scheme

The Ministry of Housing and Urban Affairs, on August 25, 2023, issued guidelines for the PM-eBus Sewa scheme. The PM-eBus Sewa scheme is divided into two segments: improving city bus services in 169 cities and supporting green urban mobility project in 181 cities. E-buses will be deployed in cities with a population ranging between 3 lakhs and 40 lakhs. The Central Government will provide support for bus operations over a 10-year period. The guidelines for the PM-eBus Sewa scheme stipulate that cities with the highest bus deficit will be prioritized for the issue of central grants.

The Government of Himachal Pradesh seeks to introduce a policy for the purpose of developing EV charging stations in the state

The Himachal Pradesh State Government is planning to introduce a policy to promote the development of charging stations for EVs in the state with the aim to address accessibility, convenience and employment opportunities in the e-mobility sector. The policy may offer substantial incentives, including a 50% subsidy, to private operators which are willing to set up such EV charging stations within the state.

The US and India intend to collaborate on a project to deploy 10,000 made-in-India electric buses in Indian cities

The US and India aim to collaborate on a project that seeks to introduce 10,000 made-in-India electric buses to Indian cities. A significant aspect of this project is the introduction of a new payment security system, which will reduce financial risks and accelerate new and sustainable investment. The partnership aims to mobilize financing for a fleet of 10,000 electric buses across India, thus expanding options related to electric public transportation in India and creating cleaner cities and healthier communities.

Jammu and Kashmir will auction its lithium reserves soon

The Government of Jammu and Kashmir is poised to auction its lithium reserves. In February 2023, India's first lithium deposits were found in Jammu and Kashmir with estimated reserves of 5.9 million tonnes.

Vanadium, a critical raw material, found in sediment samples from the Gulf of Khambhat

The Geological Survey of India found Vanadium, a critical raw material for many industrial applications, in sediment samples collected from the Gulf of Khambhat – which opens into the Arabian Sea off Alang in the state of Gujarat. Vanadium is used for storing energy and in making critical electronic components like electric batteries.

India's new proposed EV policy may seek to attract foreign EV makers and foreign investment

The new EV policy currently being considered by India's Central Government may seek to promote foreign investment in the EV sector, along with a focus on local manufacturing.

International

The UK Government postpones the ban on the sale of new petrol- and diesel-engine cars from 2030 until 2035

The UK Government is set to postpone the ban on the sale of new petrol and diesel engine cars. Originally scheduled for 2030, this ban will now be postponed to 2035 – thus allowing the sale of such vehicles to continue until such time.

Indonesia's financial regulator considers making coal-fired power plants connected with EV batter-makers eligible for green financing

Indonesia's financial regulatory body is considering making coal-fired power plants that supply electricity to EV battery manufacturers eligible for green financing. The financial regulator is also considering the expansion of the green label to loans for coal-fired power plants used by industries that produce sustainable products, such as batteries for EV.

October 2023

RE

Central Government

CERC determines tariff of Ramagundam Super Thermal Power Station Stages-I&II (2100 MW) for 2019-24

Pursuant to an order dated October 5, 2023, the CERC disposed of a petition (filed by NTPC Limited) related to the determination of tariffs for Stages I and II (2100 MW) with respect to the Ramagundam Super Thermal Power Station for the period between 2019 and 2024.

CERC issues order clarifying issues raised by Grid India related to implementation of General Network Access (GNA)

The CERC, pursuant to an order dated October 7, 2023, addressed difficulties in relation to implementing the General Network Access ("**GNA**") regulations for projects connected to both state and central transmission utilities. The challenges dealt with include the scheduling of Kanti Bijlee Utpadan Nigam Limited Stage-II, as well as the operation of the first unit at Dhariwal Infrastructure Power Station.

CERC allows fortnightly trading of renewable energy certificates for six months

The CERC, through an order dated October 8, 2023, directed Grid Controller of India Limited to organize two renewable energy certificate trading sessions every month starting from October 2023 for the purpose of enabling obligated entities to meet RPO obligations.

MNRE unveils the R&D Roadmap for National Green Hydrogen Mission

On October 8, 2023, the MNRE released the 'R&D Roadmap for Green Hydrogen Ecosystem in India' (such roadmap, the "**R&D Roadmap**") in connection with the country's National Green Hydrogen Mission, providing for a budget of INR 400 crores for the purpose of developing the research and development ("**R&D**") ecosystem to commercialize green hydrogen. The R&D Roadmap focuses on developing new material, technology and infrastructure to improve the efficiency, reliability and cost- effectiveness of green hydrogen – including its production, storage and transportation.

MoP proposes a significant cut in renewable generation obligations for new power plants

The MoP, through a draft notification dated October 6, 2023, proposed a cut in renewable generation obligation for new power plants to a range of 6 - 10% (from the existing 40%) based on a plant's commissioning date.

MNRE directs independent power producers to continue blending of imported coal

Pursuant to a notification dated October 25, 2023, the MoP directed all power generating companies ("**gencos**") – including independent power producers ("**IPPs**") – to ensure the timely import of coal for the purpose of blending and maximizing production in captive coal mines until March 2024.

Cabinet approves Green Energy Corridor Phase-II – Inter-State Transmission System (ISTS)

The Cabinet approved the Green Energy Corridor Phase II - ISTS for 13 GW of a renewable energy project in Ladakh (the "**Phase-II Project**"). The Phase-II Project is expected to be set up by 2030.

MNRE notifies penalties for violation of norms of domestic content requirement under solar PV power projects under MNRE schemes

Pursuant to an office memorandum dated October 16, 2023, the MNRE laid down penalties for the violation of norms related to domestic content requirements under solar photovoltaic power projects in connection with the MNRE's schemes. Such penalties include the filing of a criminal complaint, blacklisting, forfeiting of bank guarantees and disciplinary actions.

Amendment to the CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020

Pursuant to a notification dated October 20, 2023, the CERC amended the CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 (such amendment, the "**ISTS Regulations Amendment**"). Among other things, the ISTS Regulations Amendment (i) defines a 'Deemed COD' to be the commercial operation date for a transmission system or its parts; and (ii) deals

with scenarios where one ISTS licensee causes a delay in another licensee's system that has achieved a Deemed COD.

MoP extends directions to generating companies under Section 11 of the Electricity Act up to June 30, 2024

Pursuant to a notification dated October 23, 2023, the MoP extended the time period directive under Section 11 of the Electricity Act with respect to imported coal-based generators until June 30, 2024 for the purpose of meeting a surge in electricity demand.

CERC notifies CERC (Conduct of Business) Regulations, 2023

Pursuant to a notification dated October 19, 2023, the CERC notified the CERC (Conduct of Business) Regulations, 2023 (the "**2023 Conduction of Business Regulations**") by replacing the earlier (Conduct of Business) Regulations, 1999. The 2023 Conduction of Business Regulations will regulate the practices and procedures with respect to the discharging of functions by the CERC under the Electricity Act.

MoP revises RPO targets up to 2029-30

The MoP, in consultation with Bureau of Energy Efficiency ("**BEE**"), issued a notification on October 20, 2023, amending the Energy Conservation Act, 2001 to specify a target trajectory for the minimum share of consumption of renewable energy by designated consumers until the financial year 2029-30.

MoP releases procedure for implementation of uniform renewable energy tariff

Pursuant to a letter dated October 25, 2023, the MoP approved the procedure for the implementation of a uniform renewable energy tariff for end-procurers of power, including discoms and open-access consumers. The uniform renewable energy tariff, determined in accordance with the approved procedure, will be applicable to renewable energy projects connected with ISTS.

MoP issues circular to declare charges levied by State Government on generation of electricity as illegal

The MoP issued a circular on October 25, 2023 declaring that the imposition of any additional charges/ fees in the form of any tax/ duty on generation of electricity by state governments is illegal and unconstitutional. Pursuant to such circular, the MoP directed state governments to promptly remove any kind of tax/ duty/ cess levied in the guise of development fee/ charges/ fund on the generation of electricity from any source – including in respect of thermal, hydro- or renewable sources.

CEA issues guidelines for slope stability in hydro power projects

On October 5, 2023, the MoP issued guidelines for slope stability in hydropower projects. (the "**Slope Stability Guidelines**"). The Slope Stability Guidelines are applicable to hydropower project developers for the purpose of recommending to such developers, among other things, certain necessary remedial measures for the slope stabilization of their hydropower projects, including across various stages of such projects such as: (i) prior to construction, (ii) during construction, and (iii) post-commissioning.

The Government launches Standards & Labelling Program for solar panels

On October 20, 2023, a Standards and Labelling Program, developed by BEE, was launched in connection with solar modules to indicate the quality and energy efficiency of such modules. According to the government, the first two years of implementation of the Standards and Labelling Program will be voluntary, and thereafter, it may be made mandatory.

State Government

Rajasthan Government issues Rajasthan Renewable Energy Policy, 2023

Pursuant to a notification dated October 6, 2023, the Rajasthan Government released the state's Renewable Energy Policy, 2023 (the "**Rajasthan RE Policy**"). The Rajasthan RE Policy aims to leverage Rajasthan's wind and solar energy potential.

APERC issues Draft (Green Energy Open Access, Charges, and Banking) Regulation, 2023

The APERC issued a draft of the APERC (Green Energy Open Access, Charges and Banking) Regulation, 2023 (the "**Andhra Pradesh Open Access Regulations**"). Among other things, the Andhra Pradesh Open Access Regulations focus on granting open access for electricity generated from renewable energy sources.

Telangana increases additional surcharge for open access by 408%

Pursuant to a common order dated September 29, 2023, the TSERC increased the additional surcharge for open access consumers in the state of Telangana to INR 1.98/kWh (from INR 0.39/kWh). The increased additional surcharge will be effective from October 1, 2023.

RERC allows RUVNL to procure 490 MW of hybrid power at an average tariff of INR 4/kWh

Pursuant to an order dated October 10, 2023 the RERC has approved the petition of Rajasthan Urja Vikas Nigam Limited ("**RUVNL**") in respect of RUVNL procuring 490 MW of hybrid power through SECI from Greenko Energies Private Limited at an annual weighted average tariff of INR 4/kWh or less.

GERC increases additional surcharge for open access users to INR 0.87/kWh

Pursuant to an order dated September 30, 2023, the GERC determined INR 0.87/kWh to be the increased additional surcharge (from INR 0.76/kWh) with respect to open access consumers in the state of Gujarat for the period between October 1, 2023 and March 31, 2024.

PSERC allows additional surcharge of INR 1.29/kWh for open access consumers

Pursuant to an order dated October 6, 2023, the PSERC allowed a levy of INR 1.29/kWh as additional surcharge on open access consumers in the state of Punjab for the purpose of availing open access beyond the contract demand maintained with discoms. The order also allowed the levy of INR 0.92/kWh as an additional surcharge payable by partial open access consumers for availing open access up to the contract demand maintained with discoms.

EV

India

MNRE launches dashboard for data on adoption and forecast of EVs

On October 16, 2023, the Government announced the launch of a dashboard (accessible at: evreadyindia.org) with respect to data on forecasts and adoption related to EVs (the "**Dashboard**"). The Dashboard seeks to focus on near real-time data on EV adoption in India and projections for the future – including in connection with battery demand, charging density and market growth trends.

Union Cabinet approves reduced royalty rates for critical minerals

On October 11, 2023, the Union Cabinet approved an amendment of the Second Schedule to the Mines and Minerals (Development and Regulation) Act, 1957 with respect to specifying the rate of royalty in respect of lithium, niobium and rare earth elements. Such specification of the rate of royalty is expected to enable the government to auction blocks of lithium, niobium and rare earth elements – all of which are critical and strategic minerals, especially for the EV sector.

International

China restricts export of graphite used in EV batteries

The Commerce Ministry of China has made it mandatory, starting from December 1, 2023, for exporters to obtain permits for exporting high-purity, high-hardness and high-intensity synthetic graphite material, as well as natural flake graphite and its products – all of which are generally used to manufacture EV batteries.

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Carbon Credits: An Overview

To meet national and international net-zero targets, companies need to reduce emissions over time. Such efforts include the measuring of, and reporting on, progress made in this regard for the purpose of showcasing environmental accountability to investors and other stakeholders. Technological advances notwithstanding, some companies may find it prohibitively expensive to meet desired sustainability claims and aims. For example, making cement at industrial scale typically involves a chemical reaction. These hard-to-abate emissions may never be fully eliminated.

In this respect, dealing in carbon credits, and participating in the carbon market, may prove useful. Accordingly, it has become important today for a variety of entities to understand what such credits entail and how these can benefit their respective businesses.

CARBON CREDITS AND CARBON OFFSETS

Carbon credits

Carbon credits ("**CCs**") are a way of reducing greenhouse gas ("**GHG**") emissions by giving a monetary value to carbon dioxide ("**CO2**") or its equivalent ("**CO2e**"), using a metric ton of CO2e as the unit of measurement (such unit, "**MTCO2e**" or "**tCO2e**"). According to India's 'Carbon Credit Trading Scheme, 2023' (the "**Final CCTS**"), GHGs represent those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation.

Each CC is a marketable permit or certificate which reflects one MTCO2e that a business is *allowed* to emit. Thus, CCs are commonly used in the context of emissions trading in which companies are given a fixed amount of credits depending on their emissions. These companies can later purchase more credits or sell their surplus, as required. In other words, companies with low(er) emissions can sell their extra allowance to larger emitters in a 'compliance' market (discussed below).

Accordingly, when a company obtains a CC – usually from the government or a regulator – it gains the right to generate one MTCO2e. In some cases, revenues may flow vertically from companies to regulatory bodies, although companies which end up with excess CCs can sell them to other private entities.

The number of CCs issued each year is typically based on emission targets. CCs are often issued under what is known as a 'cap-and-trade' ("**CAT**") system. When regulators set a limit on emissions, that forms the 'cap'. Such cap slowly decreases over time, making it harder for businesses to stay within that limit. Companies are thus incentivized to reduce their emissions to stay within such ceiling.

Carbon offsets

Carbon offsets ("**Offsets**"), on the other hand, are typically created when companies or individuals finance projects that reduce GHG emissions elsewhere either by lowering emissions or sequestering them. For example, reforestation and wetland restoration are natural sequestration solutions that collect carbon in the environment. Further, carbon reduction projects may involve investments in new technology that result in higher efficiencies or lower emissions: *e.g.*, renewable energy projects or direct carbon capture technologies. Additional examples include carbon-storing agricultural practices or waste and landfill management.

Offsets are granted to project owners, who sell them to third parties that want to balance the CO2 they put into the atmosphere by paying to remove CO2 from some other location. The importance of Offsets comes from their horizontal flow, involving carbon trading between companies. When a company removes a unit of carbon from the atmosphere, they can generate an Offset. Other entities may then purchase that Offset from such company to reduce their own carbon footprint.

Thus, Offsets can be considered a unit of measurement to *compensate* a business for investing in green projects/initiatives that aim to reduce emissions. CCs, on the other hand, are a measurement unit to *cap* emissions.

Contextualizing CCs and Offsets

CC and Offsets form part of a larger ecosystem with respect to carbon markets where entities can trade, sell or buy CO2e-linked instruments to meet their emission targets, or for the purpose of supporting environmental goals.

The concept of CCs and 'offsetting' was created by the United Nations Framework Convention on Climate Change ("**UNFCCC**") as a way to tax polluters for carrying on polluting activities. Monetization of pollution is effectively an environmental tax designed to change human, governmental and corporate behavior – including in terms of sustainability and energy efficiency.

While the UNFCCC (which enjoys near-universal membership, comprising almost 200 countries) remains the parent treaty, other international accords like the Kyoto Protocol of 1997 and the Paris Agreement of 2015 established global decarbonization goals, including in terms of stabilizing atmospheric GHG concentrations at a level – and within a timeframe – that might allow climate and ecological systems to adapt naturally and sustainably. Over time, these agreements gave rise to national emissions targets, along with supporting domestic regulations to secure compliance and/or voluntary pledges.

CARBON MARKET

Within the broader carbon marketplace, there are two separate markets. One is a regulated compliance market (the "compliance carbon market" or "**CCM**"), punctuated by limits imposed on the volume of GHG emissions that an entity or industry is permitted to generate. Such limits are pre-defined – *i.e.*, these are set by law and/or via dedicated rules-based regimes, usually at the regional or state level. Eligible or obligated entities need to compulsorily comply with such pre-set limits.

In India, for instance, the Power Ministry ("**MoP**"), in consultation with the Bureau of Energy Efficiency ("**BEE**"), issued the Final CCTS pursuant to a gazette notification dated June 28, 2023.

The other kind of carbon market is a voluntary one (the "voluntary carbon market" or "**VCM**") where businesses and individuals may buy (or sell) CO2e-linked instruments of their own volition to offset their respective GHG emissions.

On account of the carbon marketplace (comprising both the CCM and the VCM, respectively), the amount of GHG emitted gets converted into a marketable commodity by attributing a price to such emissions. Accordingly, this commodification falls into two categories – CCs and Offsets – where the carbon market allows investors and companies to trade both such instruments simultaneously.

CC trading

CCs are especially relevant when a CAT system exists. From a regulatory perspective, a CAT regime aims to reduce the aggregate volume of GHG produced by a group of emitters by establishing a ceiling on permitted emissions. This market-based approach promotes lower emissions and higher investments into energy efficiency, along with an increased use of fossil fuel alternatives.

From a business/entity-level perspective, CCs can be used by those that have a legal obligation to reduce their emissions under a CAT system – such as the emissions trading system ("**ETS**") of the European Union (the "**EU ETS**") – the world's first ETS – or the Regional Greenhouse Gas Initiative ("**RGGI**") in the US.

Offset trading

Since Offsets are typically traded on a voluntary market, such VCMs may include businesses which aim to decrease their carbon footprint without a legal mandate to do so. Thus, market participants purchase Offsets to achieve internal emission targets and/or for the purpose of reducing emissions for ethical, social or business reasons (including when the intent is to signal a level of environmental consciousness to the wider market and/or if such goals have been publicly pledged to investors, shareholders and/or other stakeholders). By buying Offsets, entities can fund projects that fight climate change, instead of taking actions to lower their own carbon emissions. This way, the buyer's CO2 emissions are 'offset' with an equal amount of CO2 reductions in a different place.

Offsets can come from a variety of sources, such as the Clean Development Mechanism ("**CDM**"), the Gold Standard and the Verified Carbon Standard ("**VCS**"). Such programs outline the criteria that Offsets should achieve in order to obtain appropriate certifications. Projects are then examined and accredited pursuant to such standards.

In general, Offsets are supposed to direct private financing to climate-action projects that would not otherwise materialize. These projects can have additional benefits such as biodiversity protection, pollution prevention, public-health improvements and job creation. Offsets also support investments into necessary innovations for the purpose of lowering the cost of emerging climate technologies.

For instance, the China Certified Emission Reduction ("**CCER**") scheme – a VCM poised to relaunch soon – aims to complement China's ETS (the world's largest national carbon market). The CCER scheme involves emissions reduction activities conducted by companies on a voluntary basis that are certified by the Chinese government, including renewable power generation, waste-to-energy and forestry projects.

REGULATORY FRAMEWORK

As discussed, in response to the Paris Agreement and other international accords, several countries and businesses have pledged emissions reduction goals. Accordingly, national governments and regulators seek to put a cap on the amount of CO2 that a business in a particular industry can emit in order to achieve such goals. These regulations allow entities to convert the margin below their emission limit into an equivalent amount of CCs, which can then be sold to another entity that requires such CCs to comply with applicable regulations.

India

On March 27, 2023, India's MoP had shared a copy of a proposed carbon credit trading scheme (the "**Draft CCTS**"). The ultimate objective of the Draft CCTS was to decarbonize the Indian economy by pricing GHG emissions through the trading of CC certificates ("**CCCs**"). This Draft CCTS had contemplated both CCM (compliance) and VCM (voluntary) components.

VCM

Under the proposed VCM of the Draft CCTS, 'non-obligated' entities had been permitted to voluntarily register their projects for reducing or removing GHG emissions in order to get CCCs issued in their favor. However, the Final CCTS does not refer to a VCM – except to the extent that non-obligated entities can purchase CCCs on a voluntary basis.

Nevertheless, pursuant to a gazette notification dated June 26, 2023, the Ministry of Environment, Forest and Climate Change ("**MoEFCC**") proposed the Draft Green Credit Programme Implementation Rules, 2023 ("**Draft Green Credit Rules**"). These rules seek to establish the 'Green Credit' program in the form of a voluntary market mechanism. Thus, green credits, which may arise from a range of sectors and entities, are proposed to be made available for trading on a domestic platform. Recent reports also suggest that the National Stock Exchange of India Limited ("**NSE**") is exploring opportunities in the voluntary CC market.

CCM

Under the *compliance* regime of the Final CCTS – the framework for which has remained largely similar to the one contemplated under the Draft CCTS – 'obligated' entities will need to adhere to prescribed GHG emission norms, as notified by the central government.

OBLIGATED AND NON-OBLIGATED ENTITIES

'Obligated entities' are those which are required to register for the Final CCTS, as notified under the CCM, including designated consumers ("**DCs**"). On the other hand, 'non-obligated entities' – while requiring registration under the Final CCTS – are those which can purchase CCCs on a voluntary basis (*i.e.*, despite not being notified under the compliance mechanism). However, the Final CCTS makes no mention of whether such non-obligated entities can *register their projects* for CCC issuances.

The Final CCTS also states that a detailed procedure – as later developed for the purpose of

operationalizing the Indian carbon market – will contain specific criteria for CCC issuances.

CONCLUSION

In the past, with the aim of developing a voluntary energy market in India, the BEE had proposed the eventual adoption of a CAT system for the Indian carbon market. In this regard, the BEE had referred to the untapped potential of carbon pricing, anticipating that a BEE-driven market would generate the necessary confidence to overcome entry barriers – such as a lack of consistent and clearly defined price-setting benchmarks – for the purpose of encouraging new entrants to join a widened Indian VCM.

In this regard, the BEE had contemplated increasing VCM *demand* by opening it up to buyers other than DCs, expecting demand to mainly stem from: (i) voluntary buyers; (ii) existing DCs which are part of the 'Perform, Achieve and Trade' ("**PAT**") scheme – a trade-based regulatory framework established through a 2010 amendment to the Energy Conservation Act, 2001 (the "**EC Act**") for the purpose of reducing energy consumption in energy-intensive industries involving certifications related to excess energy savings ("**ESCerts**"); (iii) designated state agencies which may be permitted to participate in India's VCM, (iv) state-owned electricity distribution companies ("**discoms**") with renewable purchase obligations ("**RPOs**") – *i.e.*, the requirement to purchase a minimum percentage of electricity from renewable energy ("**RE**") sources under India's Electricity Act, 2003, while RE certificates ("**RECs**"), which are market-based tradeable instruments that represent the environmental attributes of RE, can be used to meet such RPOs; and (v) the aviation sector as a whole – given global concern with respect to growing emissions from the airlines industry.

Further, the BEE had also proposed to increase the *supply* of CCs in the voluntary market by opening it up to sellers other than DCs. This could involve the registration and validation of emissions reduction projects – which may subsequently issue CCs. The BEE had hoped that the voluntary market could eventually evolve into a mandatory CAT system, in which DCs will be required to restrict their emissions within a pre-fixed cap.

Ultimately, a functional CAT regime – along the lines of the EU ETS – may be launched with sectors and entities that are already part of PAT. Obligated entities may be provided with emissions intensity targets, and the allocation of CCCs could be made on that basis. Subject to their performance with respect to GHG intensity as well as compliance with such pre-set targets, these entities may then choose to abate or trade in emissions.

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