



Quarterly Roundup: Clean Energy

JANUARY TO MARCH 2024

Executive Summary

This is the first Issue of 2024 with respect to S&R's Quarterly Roundup Series on Clean Energy, covering the period between January and March 2024.

The period covered under this Issue witnessed several transformational developments, including with respect to the following:

- Major amendments to the Electricity Rules, 2005, such as those involving the delicensing of transmission lines and the capping of open access charges;
- A renewed focus on distributed/decentralized solar energy;
- Requirements with respect to the approved list of manufactures and models related to solar photovoltaic modules;
- Green hydrogen policies at the state level (e.g., Uttar Pradesh);
- Incentive schemes and guidelines for pilot projects across key sectors (like shipping, steel and transport) related to the production and supply of Green Hydrogen and Green Ammonia, as well as detailed scheme guidelines for the manufacture of electrolyzers, the setting up of hydrogen hubs, research and development, and skilling.

UPDATES

- Regulatory and legislative updates have been divided month-wise (i.e., relating to January, February and March 2024, respectively, in that order).
- Under each month, updates on clean energy and electric vehicles ("**EV**"), respectively, are summarized under separate categories.
- Within each month's updates for clean energy, central and state government updates are listed separately.
- Links to primary (or secondary) sources in respect of each update across all categories have been embedded within item headings or are inserted in-line.

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Glossary

Term	Definition
ACC	Advanced Chemistry Cell
AEM	Anion Exchange Membrane
ALMM	Approved List of Manufactures and Models
ALMM List-I	List-I of the Approved List of Manufactures and Models
ALMM List-II	List-II of the Approved List of Manufactures and Models
ALMM Order	Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirements for Compulsory Registration) Order, 2019
APMV Act	Andhra Pradesh Motor Vehicles Taxation Act, 1963
APPC	Average Power Purchase Cost
APPPC	Average Pooled Power Purchase Cost
ARR	Annual Revenue Requirement
BEE	Bureau of Energy Efficiency
BESS	Battery Energy Storage System
BEVs	Battery-Powered EVs
BIS	Bureau of Indian Standards
C&I	Commercial and Industrial
CBU	Completely Built-up
CCMs	Catalyst-Coated Membranes
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CFA	Central Financial Assistance
CGP	Captive Generating Plant
CHT	Center for High Technology
CIF	Cost, Insurance, and Freight
CO2	Carbon Dioxide
CO2e	CO2 equivalent
Consumer Rights Rules	Electricity (Rights of Consumers) Rules, 2020
Consumer Rules Amendment	Electricity (Rights of Consumers) Amendment Rules, 2024
CPP	Central Public Procurement
CSS	Cross-subsidy Surcharge
CTU	Central Transmission Utility
CTUIL	Central Transmission Utility of India Limited
DCR	Domestic Content Requirement
DERC	Delhi Electricity Regulatory Commission
Delhi P2P Guidelines	DERC (Peer-to-Peer Energy Transaction) Guidelines, 2024
Delhi Solar Policy	Delhi Solar Energy Policy, 2023
Discoms	State-owned Electricity Distribution Companies
Draft Blockchain Regulations	Draft KERC (Implementation of Peer-to-Peer Solar Energy Transaction through block-chain based platform) Regulations, 2024
Draft CERC Tariff Regulations	CERC (Terms and Conditions of Tariff) Regulations, 2024
DRI	Direct Reduction of Iron

Term	Definition
DVA	Domestic Value Addition
E-2W	Two-Wheeler EVs
E-3W	Three-Wheeler EVs
E-4W	Four-Wheeler EVs
Electricity Act	The Electricity Act, 2003
Electricity Rules	The Electricity Rules, 2005
EESL	Energy Efficiency Services Limited
EPA	Energy Purchase Agreements
EPC	Engineering, Procurement and Construction
ESS	Energy Storage System
ESS Bidding Guidelines	Guidelines for Tariff Based Competitive Bidding Process for Procurement of Firm and Dispatchable Power from Grid Connected Renewable Energy Power Projects with Energy Storage Systems, as notified by the MoP through a resolution dated March 23, 2023 and published in the Gazette of India on June 9, 2023
EV	Electric Vehicle
Exempted Entities	Certain specified entities allowed by the First Amendment to establish, operate or maintain a dedicated transmission line to connect to the grid without being required to obtain a license under the Electricity Act
FAME India	Faster Adoption and Manufacturing of Electric Vehicles in India
FAME II	Second Phase of FAME India
FAME Press Release	Press Release dated February 9, 2024 issued by the Ministry of Heavy Industries announcing an increase in the budgetary allocation for FAME II
First Amendment	Electricity (Amendment) Rules, 2024
FLS	Feeder-Level Solarization
FoR	Forum of Regulators
GDLs	Gas Diffusion Layers
GDP	Gross Domestic Product
Gencos	Generating Companies
GEOA	Green Energy Open Access
GEOA Rules	Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022
GERC	Gujarat Electricity Regulatory Commission
GH	Green Hydrogen
GH+	GH and its derivatives
GHG	Greenhouse Gas
GNA	General Network Access
Gujarat GEOA Regs	GERC (Terms and Conditions for Green Energy Open Access) Regulations, 2024
GW	Gigawatt
GWh	Gigawatt Hours
Haryana GH Policy	Draft of the "Haryana Green Hydrogen Policy 2024"
HEV	Hybrid EV
ICE	Internal Combustion Engine
INR	Indian Rupees
InSTDS	Intra-State Transmission and/or Distribution System(s)
IPP	Independent Power Producers
ISTS GEC-II	Project called "Green Energy Corridor Phase-II – Inter-State Transmission System for 13 GW Renewable Energy Project in Ladakh"
JERC	Joint Electricity Regulatory Commission

Term	Definition
JSERC	Jharkhand State Electricity Regulatory Commission
KERC	Karnataka Electricity Regulatory Commission
KPTCL	Karnataka Power Transmission Corporation Limited
Kg	Kilogram
kT	Kilotonnes
kW	Kilowatt
KWh	Kilowatt Hours
KWp	Kilowatt peak
LVA	Local Value Addition
MEAs	Membrane Electrode Assemblies
MERC	Maharashtra Electricity Regulatory Commission
MERC RE Tariff Regs	MERC (Terms and Conditions for Determination of Renewable Energy Tariff), Regulations, 2019
MHI	Ministry of Heavy Industries
MME	Minimum Module Efficiency
MNRE	Ministry of New and Renewable Energy
MoP	Ministry of Power
MoPNG	Ministry of Petroleum and Natural Gas
MoPSW	Ministry of Ports, Shipping and Waterways
MoRTH	Ministry of Road Transport and Highways
MoSDE	Ministry of Skill Development and Entrepreneurship
MoU	Memorandum of Understanding
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MW	Megawatt
NCT	National Capital Territory
NEP	National Electricity Plan
New EV Policy	Scheme to Promote the Manufacturing of Electric Passenger Cars in India, issued by the MHI pursuant to a Notification dated March 15, 2024
NGHM	National Green Hydrogen Mission
NGHM Mission Document	Mission Document of the NGHM
NGHM Shipping Guidelines	Scheme Guidelines for the Implementation of Pilot Projects with respect to the Use of Green Hydrogen in the Shipping Sector under the NGHM
NGHM Steel Guidelines	Scheme Guidelines for the Implementation of Pilot Projects with respect to the Use of Green Hydrogen in the Steel Sector under the NGHM
NGHM Transport Guidelines	Scheme Guidelines for the Implementation of Pilot Projects with respect to the Use of Green Hydrogen in the Transport Sector under the NGHM
November Resolution	Resolution dated November 17, 2023 pursuant to which the MoP first amended the ESS Bidding Guidelines
OEM	Original Equipment Manufacturers
Old Policy	Andhra Pradesh Electric Mobility Policy 2018-2023
Open Access Charges	Specified Charges Levied and/or Leviable under Open Access
P2P	Peer-To-Peer
PEM	Protein Exchange Membrane
PGCIL	Power Grid Corporation of India Limited
PGE	Platinum Group of Elements
PHEV	Plug-in Hybrid EV

Term	Definition
PLI	Production-Linked Incentives
PPA	Power Purchase Agreement
PSGMBY	PM-Surya Ghar: Muft Bijli Yojana
PV	Photovoltaic
PVTG	Particularly Vulnerable Tribal Groups
QCA	Qualified Coordinating Agency
QCBS	Quality and Cost Based Selection
R&D	Research and Development
RE	Renewable Energy
REE	Rare Earth Elements
REIA	Renewable Energy Implementing Agency
REPD	Renewable Energy Power Developer
RERC	Rajasthan Electricity Regulatory Commission
RERC DREGS Regs	RERC (Grid Interactive Distributed Renewable Energy Generating Systems) Regulations, 2021
RESCO	Renewable Energy Services/Supply Company
RfP	Request for Proposal
RfS	Request for Selection
RPO	Renewable Purchase Obligations
RTC	Round-the-Clock
RTS	Rooftop Solar
RWA	Resident Welfare Association
SEC	Specific Energy Consumption
SECI	Solar Energy Corporation of India
Second Amendment	Electricity (Second Amendment) Rules, 2024
SERC	State Electricity Regulatory Commission
SIA	State Implementing Agencies / Scheme Implementing Agencies
SIGHT	Strategic Interventions for Green Hydrogen Transition
SLDC	State Load Dispatch Center
SOECs	Solid Oxide Electrolyzers
SOFCs	Solid Oxide Fuel Cells
SRTPV	Solar Rooftop Photovoltaic
STU	State Transmission Utility
TANGEDOC	Tamil Nadu Generation and Distribution Corporation
TERC	Tripura Electricity Regulatory Commission
TNERC	Tamil Nadu Electricity Regulatory Commission
Third Amendment	Draft of the Electricity (Third Amendment) Rules, 2024
TNERC Forecasting Regulations	TNERC (Forecasting, Scheduling and Deviation Settlement and Related Matters for Wind and Solar Generation) Regulations, 2024
TN Policy	Tamil Nadu Repowering and Life Extension Draft Policy for Wind Power Projects, 2024
ToD	Time-of-Day
Tranche I	Detailed Scheme Guidelines for the Implementation of Component I of the SIGHT Program involving the First Tranche of an Incentive Scheme for Electrolyzer Manufacturing
Tranche II	Detailed Scheme Guidelines for the Implementation of Component I of the SIGHT Program involving the Second Tranche of an Incentive Scheme for Electrolyzer Manufacturing

Term	Definition
TREDA	Tripura Renewable Energy Development Agency
Tripura Draft Regulation	Draft TERC (The Grid Interactive Solar Rooftop Photovoltaic System under Gross/Net Metering) Regulation, 2024
TSERC	Telangana State Electricity Regulatory Commission
TSNPDCL	Northern Power Distribution Company of Telangana Limited
TSSPDCL	Southern Power Distribution Company of Telangana Limited
UP GH Policy	Uttar Pradesh Green Hydrogen Policy, 2024
UPNEDA	Uttar Pradesh New and Renewable Energy Development Agency
xEVs	All Sub-Types of EVs

January 2024

CLEAN ENERGY

Central Government

MoP Issues Notification to Amend the Electricity Rules

Pursuant to a notification dated January 10, 2024, the Ministry of Power (“**MoP**”) issued the Electricity (Amendment) Rules, 2024 to amend the Electricity Rules, 2005 (the “**Electricity Rules**,” and such amendment, the “**First Amendment**”).

The First Amendment allows certain specified entities (such entities, the “**Exempted Entities**”) to establish, operate or maintain a dedicated transmission line to connect to the grid *without being required to obtain a license* for this purpose under the Electricity Act, 2003 (the “**Electricity Act**”). Such Exempted Entities are as follows:

1. generating companies (“**gencos**”);
2. persons setting up a captive generating plant (“**CGP**”) or an energy storage system (“**ESS**”); and
3. consumers having a load of not less than 25 megawatt (“**MW**”) (in case of interstate transmission system) and 10 MW (in case of intrastate transmission system), respectively.

However, the Exempted Entities will still need to comply with the regulations, technical standards, guidelines and procedures, as issued under various provisions of the Electricity Act, for the purpose of enjoying the benefit of such license exemption with respect to establishing, operating or maintaining a dedicated transmission line to connect to the grid.

Further, the First Amendment has capped various open access charges, including in respect of charges related to:

1. wheeling (for which a formula has been specified with regard to computation that involves the annual revenue requirement (“**ARR**”) towards wheeling);

2. using the network of state transmission utilities (with respect to availing short-term open access or temporary General Network Access (“**GNA**”), where such charges cannot be more than 110% of the charges levied on consumers that use such network on a long-term or GNA basis); and
3. additional surcharge (where the surcharge levied on any open access consumer cannot be more than the per unit fixed cost of power purchase of the concerned distribution licensee, subject to certain qualifications).

In addition, to make the tariff more reflective of the costs involved, a new rule 23 has been added to the Electricity Rules which mandates that there should not be any gap between (i) the approved ARR, and (ii) the estimated annual revenue from the approved tariff, except under conditions of natural calamity and subject to certain specified qualifications.

Background and Context

Last year, pursuant to a [notification](#) dated June 28, 2023, the MoP had issued the Draft Electricity (Amendment) Rules, 2023 for the purpose of seeking comments to certain proposed reforms. Such reforms stemmed from concerns raised by various stakeholders. Specifically, a request had been received to allow large consumers with a specified quantum of load (such as, manufacturers of green hydrogen) and ESS to establish, operate or maintain dedicated transmission lines without the requirement of a license (similar to the allowance provided to gencos and captive generators through an order dated June 8, 2005).

Further, stakeholders had also raised the issue of prohibitively high open access charges across different states. Accordingly, rationalization of such charges had been sought through a new rule that prescribed the methodology of computation.

Analysis

Delicensing:

Under the provisions of the Electricity Act, every person that undertakes power transmission through a dedicated transmission line is required to obtain a license from the applicable state government, along with approvals related to ‘right of way’. Such

regulatory requirement applied to gencos (including those producing power in CGPs) when they used dedicated lines to transmit power from the points of generation to consumption, respectively.

The removal of this mandatory license requirement for establishing, operating or maintaining a dedicated transmission line to connect to the grid may lead the Exempted Entities to develop their own dedicated transmission lines.

Such potential rise in transmission capacity may improve the stability of the national grid on account of the resultant reduced burden. Further, bulk power consumers may potentially shift to standalone transmission systems in the future.

In addition, by including ESS within the scope of a new delicensed regime, the First Amendment provides an opportunity for dedicated energy storage providers (*i.e.*, those which are not involved with power generation or distribution at present) to design and offer bespoke services related to both electricity transmission and storage.

Limiting, regulating, and simplifying the calculation of, open access charges:

Earlier, power consumers were bound to purchase electricity from state-owned electricity distribution companies (“**discoms**”). Accordingly, discoms had a monopoly over electricity distribution as well as retail in their respective jurisdictions. In turn, discoms were required to (i) source power from various sources (gencos or the open market), and then (ii) supply such power at regulated tariffs to their respective customers.

For the purpose of promoting competition and to increase efficiency in the power sector, the Electricity Act had introduced significant changes to the manner in which electricity was generated, transmitted and distributed in the country. For instance, the Electricity Act mandates transmission utilities at both the central and state levels, as well as discoms at the state level, to provide non-discriminatory open access to their network upon the payment of certain specified charges (“**open access charges**”). Thus, the owner of a grid network (*i.e.*, wired channels for the transmission and supply of electricity) is obligated to allow other entities (that are involved in the power business) to use its channel

upon the payment of open access charges (e.g., with respect to cross-subsidy).

Importantly, the Electricity Act allows for open access in the context of both transmission and distribution of power. In case of transmission, for example, transmission licensees are required to provide other licensees (including traders and discoms) and gencos, respectively, non-discriminatory open access to its own transmission network.

Open access can be further classified into inter- and intra-state open access. Inter-state open access is governed by regulations framed by the Central Electricity Regulatory Commission (“**CERC**”), where the purchasing and selling entities, respectively, operate in different states. Intra-state open access is governed by regulations framed by the appropriate state electricity regulatory commission (“**SERC**”), where the purchasing and selling entities, respectively, operate within the same state. Based on tenor, both inter- and intra-state open access may be further classified into short, medium and long term, respectively.

In effect, the open access mechanism provides power consumers the option to choose their supplier of electricity, and thus, allows consumers with a minimum contracted demand/sanctioned load to buy energy directly from gencos instead of purchasing from discoms. However, in return for providing non-discriminatory access through the use of their transmission lines or distribution systems (including the facilities associated with such lines or systems), corresponding transmission and distribution licensees impose certain charges on users. For instance, discoms levy open access charges on consumers that purchase electricity from any other source.

The Electricity Act specifies the roles and responsibilities of SERCs with respect to introducing open access in their respective states in a phased manner, including in connection with determining the applicable charges to be levied on consumers that opt for open access for utilizing the applicable power distribution network.

Accordingly, open access charges vary from state to state. Key components of open access charges include those relating to central and state

transmission (such as the fees paid by a consumer or generator to a central (“**CTU**”) or state transmission utility (“**STU**”), respectively, for the use of its transmission system and related facilities to transport electricity), as well as the transmission losses (*i.e.*, apportioned energy losses in either the central or state transmission systems, respectively) which need to be absorbed by consumers and generators based on the CERC’s specification.

Further, open access charges also include those related to wheeling or distribution paid to discoms, as well as wheeling/distribution losses – *i.e.*, the technical losses with respect to a distribution system, as determined by SERCs for various voltage levels in a given year. During transmission through grid networks, discoms encounter a major loss of electricity.

In general, wheeling or distribution charges refer to the fees payable by a consumer or genco to a discom for using the latter’s infrastructure (*i.e.*, its distribution system and associated facilities) for the purpose of transporting electricity from a power plant to end-users. Since these charges are calculated by state discoms pursuant to the methodology prescribed by SERCs, wheeling or distribution charges vary across states. Accordingly, in order to make such charges uniform across states, and with the aim of further incentivizing power procurement via open access, the First Amendment specifies a formula for the calculation of wheeling charges.

In addition, cross-subsidy and additional surcharge are also included within open access charges. Most open access consumers which buy at cross-subsidized or higher rates are commercial and industrial (“**C&I**”) entities purchasing power in bulk from other sources. This leads to a loss for the discom of the area which owns the network, in the sense that such discoms end up losing out on high-paying clients.

In order to help discoms provide electricity to certain categories of consumers (e.g., financially weaker sections) at subsidized rates – which deficit could be balanced by providing electricity at comparatively higher rates to C&I and other high-paying consumers, the cross-subsidy surcharge (“**CSS**”) is a fee payable to discoms to help the latter meet the requirements of the current level of cross-subsidy within their area of supply. Essentially, the CSS is a

compensatory payment made to discoms for the purpose of enabling them to recover the loss of the element of cross-subsidy (which is built into the tariff of certain consumers) on account of power procurement by C&I and other high-paying consumers through alternative sources of supply under open access.

Similarly, the additional surcharge is included under open access charges for the purpose of compensating discoms for the fixed costs of developing and maintaining their distribution systems, where such costs arise from their statutory obligation to supply electricity in cases where consumers are permitted to access the open access route. The Electricity Act requires discoms to supply power on demand to consumers. In the event that a consumer wishes to purchase electricity from an entity other than the discom of that area, such discom nevertheless remains obliged to supply that power to such consumer on demand. Thus, the additional surcharge is designed to cover the fixed costs incurred by discoms stemming from their statutory commitment under the Electricity Act to supply power on demand in an effort to balance (i) a customer’s right to obtain power from a source of their choice *with* (ii) the financial interests and operational viability of discoms.

Further, the majority of power procurement by discoms is long-term in nature. Discoms typically have long-term arrangements or power purchase agreements (“**PPAs**”) with gencos based on their sales forecasts. Accordingly, discoms pay a fixed/capacity charge and variable/energy charge to such gencos. Once an open access consumer shifts to an alternative source of supply, these fixed charges are still applicable to be paid by discoms to gencos. Accordingly, for the purpose of preventing an under-recovery of the fixed expenditure incurred by discoms for long-term power procurement in situations where consumers procure power through alternative sources of supply under open access, the additional surcharge needs to be calculated appropriately to recover stranded costs on account of stranded PPAs and stranded assets.

The First Amendment requires the additional surcharge levied on any open access consumer to not be more than the per unit fixed cost of power purchase of the concerned discom. However, additional qualifications to which such requirement

remains subject specify that the additional surcharge (i) will not be applicable for open access consumers to the extent that their contract demand with the appropriate discom is maintained; and (ii) will be applicable only for such open access consumers which are, or have been, consumers of the concerned discom.

Further, for a person availing GAN or open access, the additional surcharge is required to be linearly reduced from the value corresponding to the year in which GAN or open access was granted, such that it gets eliminated within four years from the date of that grant – if such person continues to avail of GAN or open access.

Other open access charges also include charges related to state load dispatch centers (“**SLDCs**”), standby, banking, scheduling and deviation settlement, among others. SLDC charges includes a composite of operating charges (typically levied on a daily basis) and a one-time application fee. Banking charges are levied by discoms (usually as a percentage of the energy generated) to allow power plants to bank a portion of such generated energy which is not required by their open access consumer (*i.e.*, storing such surplus energy for subsequent withdrawal, as and when needed).

Standby arrangements could be required by open access consumers to tide over electricity deficits in extraordinary situations, such as when power outages are suffered by gencos and/or transmission assets. In such situations, an open access consumer may be forced to procure power from an alternative source (*e.g.*, a discom). However, the leviable charges for maintaining such standby arrangements need to account for the costs incurred by discoms for providing such support services on sudden demand. While standby charges for long-term open access consumers often stem from contractual arrangements with discoms, those for short-term open access are generally defined by SERCs from time to time.

MoP Further Amends the Electricity Rules

Pursuant to a gazette notification dated January 17, 2024, the MoP further amended the Electricity Rules through the Electricity (Second Amendment) Rules, 2024 (the “**Second Amendment**”). The Second Amendment specifies that sub-rule (1) of rule 22 will

be substituted with a revised formulation such that a proviso is included. Pursuant to the First Amendment, a formula was specified for the purpose of computing wheeling charges such that such charge would be equal to the ARR towards wheeling divided by the energy wheeled during the year. While the Second Amendment retains such formula, it adds a proviso to specify that the appropriate commission may determine the wheeling charges at different voltage levels separately in accordance with such formula.

CERC Releases Draft Formulating Terms and Conditions for Determining Tariff

Pursuant to a draft notification dated January 4, 2024, the CERC issued a draft of the CERC (Terms and Conditions of Tariff) Regulations, 2024 (“**Draft CERC Tariff Regulations**”). The Draft CERC Tariff Regulations provide for the terms and conditions of tariff determination in cases where the tariff is required to be determined by the CERC under section 62 of the Electricity Act, read with section 79, to specify the tariff for the next control period, *i.e.*, for 2024-29.

MNRE Increases Central Financial Assistance for Residential Rooftop Solar Projects

Pursuant to an office memorandum dated January 5, 2024, the Ministry of New and Renewable Energy (“**MNRE**”) increased the central financial assistance (“**CFA**”) for residential rooftop solar project installed under Phase-II of the grid-connected [Rooftop Solar Program](#). The CFA for systems ranging from 1 kilowatt (“**kW**”) to 3 kW installed through tendering and national portal applications was increased from INR 14,588 to INR 18,000 for general states, and from INR 17,662 to INR 20,000 for special category states. Rooftop solar systems of above 3 kW and up to 10 kW capacities will receive CFA of INR 9,000 (relative to the erstwhile INR 7,294) in general states, and INR 10,000 (relative to the erstwhile INR 8,831) in special category states.

MNRE Launches New Solar Power Scheme for Solarization of Tribal Households

Further to the President’s approval for implementation and pursuant to an order dated January 4, 2024, the MNRE issued implementation guidelines for a New Solar Power Scheme (for habitations and villages of particularly vulnerable

tribal groups (“PVTG”) under PM-JANMAN until 2025-26. The scheme is aimed at electrifying 0.1 million un-electrified households across 18 states in PVTG areas identified by the Ministry of Tribal Affairs by providing off-grid solar systems and solar lighting in multi-purpose centers where the supply of electricity through the grid is not techno-economically feasible.

MNRE Issues Order to Simplify the Procedure for Solar Rooftop Installation

Recognizing the potential and advantages of grid-connected rooftop solar (“RTS”) – including with respect to decentralized generation, and for the purpose of facilitating wide-scale adoption of RTS, pursuant to an office memorandum dated January 11, 2024, the MNRE simplified the implementation of the grid-connected [Rooftop Solar Program](#) by listing out uniform documents required to be filed by applicants for RTS through such program. The MNRE also directed relevant discoms and implementing agencies to ensure that (i) no other documents is sought from consumers during the application process (to ensure ease of RTS installation), and (ii) they have sufficient stock of smart/net meters required for RTS, including for the purpose of avoiding delays in commissioning of RTS projects.

MNRE Instructs REIAs to Solve Disputes Within 21 Days

Pursuant to an order dated January 12, 2024, the MNRE directed all renewable energy implementing agencies (“REIAs”) to give a final decision with respect to any dispute application submitted by renewable energy power developers (“REPDs”) or engineering, procurement and construction (“EPC”) contractors within 21 days from the date of such application. This order stemmed from a [previous MNRE order dated June 7, 2023](#) with respect to the setting up of a transparent and unbiased dispute resolution mechanism (comprising an independent committee) to address unforeseen disputes that may arise with respect to (i) the implementation of contractual arrangements, as well as (ii) issues that are beyond the scope of contractual arrangements involving REPDs and EPC contractors (on the one hand) and government agencies or any other REIA designated by the MNRE (on the other hand).

Further, if REPDs or EPC contractors are unsatisfied with the decision of the REIA, they can prefer an appeal before the dispute resolution committee within 21 days of the relevant REIA’s order.

MNRE Issues Incentive Schemes for the Production and Supply of Green Ammonia and Green Hydrogen, respectively

Pursuant to letters dated January 16, 2024, the MNRE issued detailed scheme guidelines for the implementation of Component II of the Strategic Interventions for Green Hydrogen Transition (“**SIGHT**”) program, involving incentive schemes for the procurement of green ammonia and green hydrogen (“**GH**”) production under Mode-2A and Mode-2B, respectively, of the National Green Hydrogen Mission (“**NGHM**” – *discussed below*).

The objectives of these schemes are to: (i) maximize the production of green ammonia and GH in India; (ii) enhance the cost-competitiveness of green ammonia and GH vis-à-vis fossil-based alternatives; and (iii) encourage large-scale utilization of green ammonia and GH.

While the scheme on green ammonia will be implemented by the MNRE through the Solar Energy Corporation of India (“**SECI**”) as the implementing agency, the scheme on GH will be implemented by oil and gas companies and the Center for High Technology (“**CHT**”) – which are the implementing agencies nominated by the Ministry of Petroleum and Natural Gas (“**MoPNG**”). Such implementing agencies will aggregate demand and call for bids with respect to the production and supply of green ammonia and GH at the lowest cost (for a single refinery or multiple refineries in the case of GH) pursuant to a competitive selection process with the incentive being fixed.

Previously, the Union Cabinet had [approved the NGHM](#) with an outlay of INR 197.44 billion until FY 2029-30. The SIGHT program is a major financial measure under the NGHM, with an independent outlay of INR 174.9 billion. With the aim to enable rapid scaling up, technological development and cost reduction, the SIGHT program proposes two distinct financial incentive mechanisms to support domestic manufacturing of electrolyzers and green ammonia/GH production.

While there could be several modes for implementing incentive schemes for green ammonia and GH production, the two modes which have been presently identified are as follows:

1. *Mode 1:* Bidding on least incentive demanded over a three-year period, through a competitive selection process; and
2. *Mode 2:* Aggregating demand and calling for bids for the production and supply of GH and its derivatives at the lowest cost through a competitive selection process.

Further, Mode 2, as described above, has been divided into two types based on *what* is being sought to be produced and supplied (*i.e.*, whether green ammonia or GH), as follows:

- i. **Mode 2A:** The implementation agency/agencies will aggregate demand and call for bids for the production and supply of **green ammonia** at the lowest cost through a competitive selection process with the incentive being fixed; and
- ii. **Mode 2B:** The implementation agency/agencies will aggregate demand and call for bids for the production and supply of **GH** at the lowest cost for a single refinery or multiple refineries, as decided by the implementing agency, through a competitive selection process with the incentive being fixed.

Accordingly, the detailed scheme guidelines provided in the MNRE's letters dated January 16, 2024 involving Component II of the SIGHT program under the NGHMs lay down the framework for the production and supply of green ammonia and GH under Mode 2A and Mode 2B, respectively, as described above.

GH standard

Under Mode 2A, to qualify for incentives under the scheme, the bidder has to ensure that GH utilized in the production and supply of green ammonia aligns with the detailed criteria outlined in the 'National Green Hydrogen Standard', as notified by the MNRE, and estimated pursuant to a prescribed conversion/equivalence factor. Accordingly, the equivalence factor that is applicable for the calculation of GH quantity for a specific quantity of

green ammonia and the resultant incentive is as follows: 0.1765 kilogram ("**kg**") of GH per kg of green ammonia.

Under Mode 2B, to qualify for incentives under the scheme, the bidder has to ensure that the GH produced and supplied aligns with the detailed criteria outlined in the 'National Green Hydrogen Standard', as notified by the MNRE.

National Green Hydrogen Standard

Pursuant to an [office memorandum dated August 18, 2023](#), the MNRE defined GH to mean hydrogen produced using RE, including, but not limited to, production through electrolysis or conversion of biomass. In this regard, RE includes such electricity generated from renewable sources which is stored in an ESS or banked with the grid according to applicable regulations.

For GH produced through electrolysis, the non-biogenic greenhouse gas ("**GHG**") emissions arising from water treatment, electrolysis, gas purification, and drying and compression of hydrogen should not be greater than 2 kg of carbon dioxide ("**CO₂**") equivalent ("**together, "CO_{2e}"**") per kg of hydrogen, taken as an average over the last 12-month period.

Similarly, for GH produced through conversion of biomass, the non-biogenic GHG emissions arising from biomass processing, heat/steam generation, conversion of biomass to hydrogen, gas purification, and drying and compression of hydrogen should not be greater than 2 kg of CO_{2e} per kg of hydrogen, taken as an average over the last 12-month period.

The Bureau of Energy Efficiency ("**BEE**") will be the nodal authority for the accreditation of agencies for the purpose of monitoring, verification and certification of GH production projects.

Incentives

Under Mode 2A, the incentive will be INR 8.82/kg, 7.06/kg and 5.30/kg of green ammonia in the first, second and third year, respectively, of production and supply of green ammonia.

Under Mode 2B, the incentive will be INR 50/kg, 40/kg and 30/kg of GH in the first, second and third year, respectively, of production and supply of GH.

MNRE Forms Wind Repowering Committee

Pursuant to an office memorandum dated January 17, 2024, the MNRE formed an eight-member wind repowering committee to execute the National Repowering and Life Extension Policy for Wind Power Projects, 2023 – as issued through a circular dated December 7, 2023, including with respect to the terms of reference for such committee.

MNRE issues a Guideline for Implementation of KUSUM Scheme

Pursuant to an order dated January 17, 2024, the MNRE issued comprehensive guidelines for the implementation of the [PM-KUSUM scheme](#). The PM-KUSUM scheme was launched on March 8, 2019 for the benefit of farmers, including to provide energy and water security to them and enhance their income, de-dieselize the farm sector, and reduce environmental pollution. Components of such scheme include (i) the setting up of 10,000 MW of decentralized ground-/stilt-mounted grid-connected solar or other renewable energy-based power plants by farmers on their land (Component-A); (ii) the installation of 1.4 million standalone solar agriculture pumps (Component-B); and (iii) the solarization of 3.5 million grid-connected agriculture pumps, including feeder-level solarization (Component-C).

MNRE Updates ALMM List-I With an Enlisted Capacity of 22,191 MW

Pursuant to an office memorandum dated January 24, 2024, the MNRE revised its List-I of the [approved list of manufactures and models](#) (“ALMM,” and such list, “ALMM List-I,” as first published on March 10, 2021). The ALMM List-I relates to solar photovoltaic (“PV”) modules under the Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirements for Compulsory Registration) Order, 2019 (“ALMM Order”), as issued on January 2, 2019.

The MNRE periodically approves solar PV models and manufacturers and updates the ALMM List-I. The ALMM List-I was last updated on November 16, 2023. This office memorandum lists out the details of provisional enlistments under the ALMM List-I granted by the MNRE in respect of solar PV module models to the following entities: Gautam Solar Private Limited, Waaree Energy limited, Agrawal Renewable Energy Private Limited, HR Solar

Solution and Sahai Solar Limited. It also specifies that enlistment under ALMM remains subject to valid registration under the Bureau of Indian Standards (“BIS”), the national standards body of India.

In general, the ALMM Order states that only listed solar PV/cell models and module manufacturers can be used for solar projects in India. Such projects include government projects, government-assisted projects, projects under the government, government schemes and programs, as well as open access and net metering projects. In other words, the ALMM List-I applies to government-tendered utility-scale solar projects, rooftop solar projects (net metering), the corporate PPA market, as well as to government schemes like PM-KUSUM.

Accordingly, the ALMM initiative plays a significant role in the Indian solar energy sector. It consists of two lists: while the ALMM List-I specifies MNRE-approved models and manufacturers of solar *PV modules*, the second list under the ALMM Order (“ALMM List-II”) is expected to specify MNRE-approved models and manufacturers of solar *cells*. While the ALMM List-I for solar modules was issued in March 2021, the ALMM List-II for solar PV cells has not yet been issued.

To get enlisted, manufacturers require a product and performance certificate from the BIS. Such enlistment is valid for two years. While the BIS ensures product quality certification, the ALMM covers certification for the process, manufacturer, and the manufacturing facility. Since one of the key objectives of the ALMM was to ensure the quality of solar panels and a manufacturer’s reliability, enlisted models and manufacturers are subject to quality assurance procedures that include random quality checks and tests, such as inspections of manufacturing facilities. If enlisted manufacturers fail to: (i) meet necessary standards, or (ii) comply with applicable regulations, they will be removed from the ALMM. Enlisted units must reimburse the costs incurred for such inspections or audits within one month. Failure to do so will result in removal from the ALMM lists.

While both domestic and foreign solar PV module manufacturers can have their products enlisted in the ALMM List-I, there are no foreign manufacturers on such list as on date.

CEA Issues the Draft National Electricity Plan (Volume II) for transmission

Pursuant to a letter dated January 24, 2024, the Central Electricity Authority (“CEA”) released a [draft](#) of the National Electricity Plan (Volume-II: Transmission) dated December 2023 and invited suggestions and objections from stakeholders.

Pursuant to the Electricity Act, the CEA is mandated to prepare the National Electricity Plan (“NEP”) once every five years. The Electricity Act also stipulates that while preparing the NEP, the CEA is obliged to publish a draft of the NEP for the purpose of inviting suggestions and objections from licensees, gencons and the public.

MNRE Issues Clarifications Regarding Component C (FLS) of PM-KUSUM Scheme

In continuation of the MNRE order dated January 17, 2024 through which comprehensive guidelines for the implementation of the [PM-KUSUM scheme](#) had been issued, the MNRE clarified pursuant to a subsequent order dated January 29, 2024 that the prevailing CFA announced under Component C (relating to feeder-level solarization (“FLS”)) of the PM-KUSUM scheme will remain valid until any update is announced by the MNRE. It further confirmed that the provision relating to the requirement of indigenous solar cells (domestic content requirement (“DCR”)) under such Component C (FLS) of the PM-KUSUM scheme had already been relaxed until March 31, 2024. In addition, this MNRE order requested state implementing agencies (“SIAs”) to expedite the implementation of the PM-KUSUM scheme in their respective states and report on progress.

State Government

KERC Issues Draft for Implementation of Peer to Peer Solar Energy Transaction Through Blockchain Platform Regulations

Pursuant to a notification dated January 12, 2024, the Karnataka Electricity Regulatory Commission (“KERC”) invited objections, views and suggestions from stakeholders and interested persons with respect to the draft KERC (Implementation of Peer-to-Peer Solar Energy Transaction through blockchain based platform) Regulations, 2024 (“**Draft Blockchain Regulations**”).

The KERC acknowledged that existing arrangements related to solar rooftop photovoltaic (“SRTPV”) projects only recognize the sale of energy between consumers and discoms, respectively. However, a new concept of energy sales *between* consumers has emerged, including in respect of SRTPV projects – where the sale of surplus power by a consumer or [prosumer](#) to another consumer at an agreed-upon tariff can be facilitated as peer-to-peer (“P2P”) solar transactions through a blockchain-based platform. This concept is not only now well-known and popular –but has also gained recognition as a promising innovation in the energy sector – especially with respect to greater decentralization and integration of renewable power, cost savings, community engagement and grid resilience. Other than fostering flexibility, efficiency and empowerment (for prosumers), as well as having a positive impact on the environment, regulatory evolution and technological innovation, such P2P transactions can enable a quicker recovery on investments made, relative to existing arrangements.

Noting this reality, the KERC issued the Draft KERC Blockchain Regulations, including with the aim to promote both RTS and the efficient utilization of existing assets, as well as to implement innovative technologies that can facilitate RTS transactions through a blockchain-based P2P platform for the purpose of ensuring reasonable returns on investments.

KERC Issues Methodology for TOD Settlement in Karnataka

Pursuant to a notification dated January 10, 2024, the KERC issued a methodology for, and procedures for the implementation of, the time-of-day (“ToD”) settlement for green energy open access (“GEOA”) banking charges in the state of Karnataka, including in light of (i) the ToD settlement procedures issued by other states; (ii) the methodology set out by the Forum of Regulators (“FoR”) with respect to the determination of charges under GEOA; (iii) previous orders issued by the KERC (including tariff orders); (iv) stakeholder comments and public submissions in respect of a draft discussion paper on the ToD settlement procedure; as well as (v) the rules issued by the MoP on GEOA.

TANGEDCO Issues Repowering and Life Extension Draft Policy for Wind Power Projects

On January 2, 2024, the Tamil Nadu Electricity Regulatory Commission (“**TNERC**”) and the Tamil Nadu Generation and Distribution Corporation (“**TANGEDCO**”) released a draft of the Tamil Nadu Repowering and Life Extension Draft Policy for Wind Power Projects, 2024 (“**TN Policy**”), as circulated during a stakeholders’ consultation meeting held on the same day. The TN Policy will be effective from the date of its issuance until March 31, 2030, or until a new repowering policy is announced, whichever is earlier.

Previously, the MNRE had issued the National Repowering and Life Extension Policy for Wind Power Projects, 2023 through a circular dated December 7, 2023, through which it had projected the total repowering potential in the country as 25,406 MW. Given that (i) the state of Tamil Nadu has the largest share of such potential (7,387 MW), and (ii) the MNRE has provided only a national framework, the TN Policy represents a more detailed and state-specific policy to address local realities with respect to repowering opportunities in Tamil Nadu.

The ultimate objective of the TN Policy is to promote the optimal utilization of wind energy resources by providing an enabling framework for the repowering and/or refurbishment of old windmills. The TN Policy also lays down an exhaustive list of incentives such that repowering remains commercially attractive for old gencos with respect to wind energy.

JSERC Issues Public Notice Inviting Comments on Draft Regulations Relating to CGPs, Net Metering and Open Access

The Jharkhand State Electricity Regulatory Commission (“**JSERC**”) issued a public notice on January 11, 2024 to invite stakeholder comments on: (i) the Draft JSERC (Verification of Captive Generating Plants and Captive Consumers) Regulations, 2024 (see [here](#)); (ii) the Draft JSERC (Group Net Metering and Virtual Net Metering) Regulations, 2024 (see [here](#)); and (iii) the Draft JSERC (Terms and Conditions for Green Energy Open Access) Regulations, 2024 (see [here](#)), respectively.

JERC Issues Draft Discussion Paper on the Determination of Green Energy Tariff for Chandigarh

Pursuant to a public notice, the [Joint Electricity Regulatory Commission](#) for the State of Goa and Union Territories (“**JERC**”) invited comments and suggestions from the public and stakeholders on a draft discussion paper related to the determination of green energy tariff for Chandigarh with particular reference to various provisions of the Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022 – as previously [notified](#) by the MoP on June 6, 2022 and subsequently [amended](#) from time to time (such rules, the “**GEOA Rules**”).

Specifically, rule 4(2) of the GEOA Rules provides that the tariff for the supply of green energy by discoms will be determined separately by the appropriate SERC, and such tariff will comprise the average pooled power purchase cost (“**APPPC**”) of renewable energy (“**RE**”), cross-subsidy charges (if any) and service charges covering the prudent cost of the discom for providing green energy. Accordingly, the GEOA Rules request all SERCs and joint commissions (such as the JERC) to take appropriate action for the determination of green tariff under such provision at the earliest.

Taking note of such mandate under the GEOA Rules and pursuant to a communication from the MoP with respect to aligning state/union territory regulations related to GEOA with such central rules, the JERC is in the process of issuing a Draft Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Procurement of Renewable Energy), (Sixth Amendment) Regulations, 2023 for public consultation.

Other than the (central) GEOA Rules, the JERC draft discussion paper also refers to, and seeks instruction from, (i) various provisions of the Electricity Act; (ii) the central government’s vision to achieve net-zero emissions by the year 2070 and the corresponding short-term targets in this regard; as well as (iii) the approaches adopted by various SERCs with respect to aligning their respective state regulations on GEOA with the (central) GEOA Rules.

Ultimately, through its draft discussion paper, the JERC adopts a specific approach for determining the green energy tariff for consumers that opt to

purchase green energy from the Electricity Wing of the Engineering Department of Chandigarh. Such bespoke approach involves and includes the following: (i) the APPPC for RE; (ii) the landed cost of RE; (iii) the CSS; (iv) service charges related to the cost of discoms (but other than – (a) the costs associated with purchasing power, including transmission charges, as well as (b) the fixed cost of power purchase related to stranded capacity or backing down), including those related to distribution services and the fixed cost of thermal generating stations; (v) the total green energy tariff; along with (vi) incremental green energy charges.

TNERC Issues Regulations to appoint a QCA for Forecasting, Scheduling, and Deviation Settlement for Renewable Energy Generators

Pursuant to a notification dated January 22, 2024, the TNERC issued the TNERC (Forecasting, Scheduling and Deviation Settlement and Related Matters for Wind and Solar Generation) Regulations, 2024 (“**TNERC Forecasting Regulations**”), with a commercial implementation date of April 1, 2024.

The TNERC Forecasting Regulations aim to facilitate the grid-integration of wind and solar energy generated in the state of Tamil Nadu while maintaining grid security and stability in accordance with the state grid code and other applicable legislation (like the Electricity Act) through forecasting, scheduling and a mechanism for the settlement of deviations by applicable gencos.

Further, the TNERC Forecasting Regulations specify that, for the purpose of maintaining system security, reliability and stability, the SLDC will consider forecasts for week-ahead, day-ahead and intra-day operations, as well as longer-term forecasts for planning purposes. In this regard, the SLDC is required to make use of the flexibility provided by conventional generating units and the capacity of inter-grid tie-lines to accommodate wind and solar energy generation to the largest possible extent, subject to grid security. The regulations also specify how deviation charges will be levied and collected.

The TNERC Forecasting Regulations will apply to all wind and solar energy gencos – including hybrid systems (*i.e.*, wind and solar), but excluding grid-interactive solar PV energy generating system projects (rooftop PV solar power projects) with a

capacity of less than 1 MW – in Tamil Nadu that are connected to the intra-state transmission or distribution system, including those connected through pooling sub-stations, and using the power generated for self-consumption or sale within or outside the state of Tamil Nadu.

The TNERC will review these regulations, including in respect of the formulation for absolute error, accuracy band and related deviation charges after two years (or earlier if it considers necessary). Among other things, the TNERC Forecasting Regulations specify certain technical arrangements through a dedicated forecasting and scheduling code. Pursuant to such code, wind/solar energy gencos are required to appoint a qualified coordinating agency (“**QCA**”) to represent on their behalf, and comply with, the requirements of forecasting and scheduling separately. In general, the regulations specify a comprehensive list of qualifications, provisos and conditions (e.g., most applicable gencos can appoint a single QCA, while individual gencos can appoint their own or use SLDC services), as well as certain overarching principles, subject to which all QCA appointments must be made and the scope of QCA operations and services must be limited by/extended to.

Further, the TNERC Forecasting Regulations also address commercial (including with respect to deviation settlement for both intra- and inter-state transactions) and implementation arrangements (such as in respect of metering, QCA communication with the SLDC, deviation accounting, the payment mechanism for deviation settlement and payment security, de-pooling of deviation charges, intimation of curtailment, and energy accounting).

EV

MHI issued a global tender to select bidders for setting up giga-scale ACC manufacturing facilities under the PLI ACC scheme

The Ministry of Heavy Industries (“**MHI**”) announced the re-bidding of production-linked incentives (“**PLI**”) for Advanced Chemistry Cell (“**ACC**”) manufacturing in January 2024. Pursuant to a global tender notice dated January 24, 2024, the MHI issued a Request for Proposal (“**RfP**”) for the purpose of bidder selection with the aim of setting up ACC manufacturing facilities with a cumulative capacity of 10 gigawatt hours (“**GWh**”), and with a maximum

budgetary outlay of INR 36.2 billion. Prospective applicants submitting bids to set up domestic manufacturing facilities aim to qualify for incentives under the PLI ACC scheme.

The bid due date was announced as April 22, 2024. The bidding process was held online through a transparent two-stage process, under the 'Quality and Cost Based Selection' ("QCBS") mechanism through the central public procurement ("CPP") portal. Further details about this scheme, including with respect to the second round of bidding, can be accessed [here](#).

Earlier, the [national program](#) on ACC battery storage was approved by the Union Cabinet on May 12, 2021 for achieving a manufacturing capacity of 50 GWh of ACC with a budgetary outlay of INR 181 billion. The overarching aim is to strengthen the ecosystem related to electric mobility and battery storage in the country. In this regard, the scheme's [targets](#) include boosting India's manufacturing capabilities of ACCs by setting up of giga-scale ACC and battery manufacturing facilities with an emphasis on maximum domestic value-addition – consistent with the 'Make in India' initiative.

The scheme's requirements with respect to a beneficiary firm include: (i) achieving a domestic value addition ("DVA") of at least 25%; (ii) raising such DVA to 60% within 5 years; (iii) making a mandatory investment of INR 2.25 billion/GWh for the committed capacity within 2 years. Initially, the scheme has a gestation period of 2 years from the appointed date (January 1, 2023 to December 31, 2024). The performance period sets in 5 years after the lapse of such gestation period (January 1, 2025 to December 31, 2029).

The first round of bidding related to ACC PLI was concluded in March 2022. The program agreement with the selected entities was signed in July 2022. After three beneficiary entities were allotted a total capacity of 30 GWh, a capacity of 20 GWh is still available for allocation.

Andhra Pradesh authorized a tax waiver on the APMV Act for eligible vehicles

Pursuant to an [order](#) dated January 31, 2024, the state government of Andhra Pradesh granted an exemption to motor vehicles operated with batteries,

ultracapacitors or fuel cells ("**Eligible Vehicles**") from the payment of taxes payable under the Andhra Pradesh Motor Vehicles Taxation Act, 1963 ("**APMV Act**"). According to this order, the tax waiver applies to only those Eligible Vehicles which are registered between February 1, 2024 and July 7, 2024 or until the enactment of a new e-mobility policy, whichever is earlier.

Previously, in June 2018, the state government of Andhra Pradesh had [issued](#) the 'Electric Mobility Policy 2018-2023' ("**Old Policy**") with a vision of making the state a major hub for electric mobility. Specifically, the Old Policy aimed to have 1 million EVs and 0.1 million slow- and fast-charging stations by 2024. The Old Policy also aimed to convert all government vehicles to EVs by 2024.

Pursuant to the signing of a Memorandum of Understanding ("**MoU**") with Energy Efficiency Services Limited ("**EESL**") – a joint venture of public sector undertakings under the MoP – for the supply of 10,000 EVs under lease, and for the purpose of extending the incentives provided under the Old Policy to government departments and undertakings, statutory corporations and organizations, as well as to urban and rural bodies for the additional promotion of EVs in the state, the government of Andhra Pradesh had [announced](#) certain amendments to the Old Policy in August 2018 – including for the purpose of extending: (i) exemptions with respect to registration fees and road taxes until 2024; and (ii) applicable incentives for setting up charging infrastructure or hydrogen generation and refuelling stations to government departments and undertakings.

Also in 2018, Andhra Pradesh had granted an exemption under the Old Policy from the payment of taxes payable under the APMV Act to Eligible Vehicles registered on or before June 7, 2023. Pursuant to an earlier [order](#) dated September 22, 2023, and further to (i) stakeholder requests to extend the Old Policy for an additional period; and (ii) recommendations made by the Commissioner of Industries, the state government had extended the Old Policy for a period of six months or until the issuance of a new policy, whichever was earlier.

February 2024

CLEAN ENERGY

Central Government

MNRE Issues Green Hydrogen Guidelines for Pilot Projects in the Shipping Sector

Pursuant to a letter dated February 1, 2024, the MNRE issued scheme guidelines for the implementation of pilot projects with respect to the use of green hydrogen (“GH”) in the shipping sector under the [National Green Hydrogen Mission](#) (“**NGHM**,” and such guidelines, the “**NGHM Shipping Guidelines**”). Among other things, the NGHM Shipping Guidelines aim to support the deployment of GH and its derivatives (together, “**GH+**”) as a fuel for ship propulsion, including for the purposes of bunkering and refuelling, on a pilot basis – especially with respect to validating the technical feasibility and performance of such use under real-world operational conditions; as well as evaluating the overall performance, areas for improvement, economic viability and effectiveness, along with demonstrating the safety and security of such use, in the shipping sector.

Thrust areas with respect to the scheme of implementing pilot projects for the use of GH in the shipping sector, which has a separate sectoral budgetary allocation of INR 1.15 billion under the NGHM until FY 2025-26, include (i) retrofitting existing ships to run on GH+ (Component-A); and (ii) developing bunkering and refueling facilities on ports for GH-based fuels (Component-B).

(i) The Shipping Corporation of India (or its successor entity in the event of disinvestment), and (ii) the agency nominated by the Ministry of Ports, Shipping and Waterways (“**MoPSW**”), will be the implementing agencies for Components-A and B, respectively.

MNRE Issues Green Hydrogen Guidelines for Pilot Projects in the Steel Sector

Pursuant to a letter dated February 2, 2024, the MNRE issued scheme guidelines for the implementation of pilot projects with respect to the use of GH in the steel sector under the [NGHM](#) (such

guidelines, the “**NGHM Steel Guidelines**”). Among other things, the NGHM Steel Guidelines aim to: (i) advance technologies and expertise for the utilization of GH in the steelmaking process, as well as addressing existing gaps; (ii) support the deployment of GH+ in the steel sector on a pilot basis; (iii) validate the technical feasibility and performance of GH+ in iron and steel manufacturing under real-world operational conditions; (iv) evaluate the economic viability of the use of GH+ in the iron and steel sector; (v) evaluate the performance of GH+-based low-carbon iron and steel sectors, including for the purpose of identifying areas for improvement; as well as (vi) demonstrate the safe and secure operations of GH+-based production of low-carbon iron and steel.

Thrust areas with respect to the scheme of implementing pilot projects for the use of GH in the steel sector, which has a separate sectoral budgetary allocation of INR 4.55 billion under the NGHM until FY 2029-30, include: (i) the use of 100% hydrogen in the process of direct reduction of iron (“**DRI**”) using a vertical shaft or kiln; (ii) the use of hydrogen in blast furnaces within prescribed limits; (iii) the gradual substitution of fossil fuels with hydrogen in the DRI process; and (iv) any other innovative use of hydrogen for the purpose of reducing carbon emissions in iron and steel production.

The NGHM Steel Guidelines take note of the [mission document](#) of the NGHM (the “**NGHM Mission Document**”), where it has been stated under paragraph 7.7.1 (“*Green Steel*”) that the NGHM will support efforts to enhance low-carbon steel production capacity. Pursuant to the NGHM Mission Document, the NGHM Steel Guidelines also suggest that, given the high cost of GH at present, steel plants could begin by blending a small percentage of GH in their processes. Such blending proportion could be progressively increased as the economics of cost improve and technology advances. Further, upcoming steel plants ought to be capable of operating with GH – this would ensure that such plants are able to participate in global low-carbon steel markets of the future. Lastly, the NGHM Steel Guidelines specify that greenfield projects aiming for 100% green steel production will also be considered under the NGHM.

As noted in the [NGHM Mission Document](#), steel production is a potential sector where GH can replace fossil fuels. The [National Steel Policy 2017](#) states that natural gas is a greener alternative to meeting India's goal of reducing the carbon intensity of its gross domestic product ("GDP") under the Paris Climate Agreement. However, with falling costs of both renewable energy and electrolyzers, it is expected that GH-based steel can become cost-competitive in the coming decade. Carbon credits and the imposition of market barriers on carbon-intensive steel are likely to further enhance the viability of such GH-based steel.

MNRE Puts in Abeyance its Plan to Reimpose Requirement of ALMM from April 1, 2024

Pursuant to an office memorandum dated February 15, 2024, the MNRE put in abeyance its previous office memorandum dated February 9, 2024 until further orders are made in this regard.

The previous MNRE office memorandum dated February 9, 2024 had provided for the re-imposition of the ALMM Order with effect from April 1, 2024 – with exemptions for open access and CPP projects in cases where projects were in advanced stages of construction, as well as for those assets where orders for solar modules had been placed before March 31, 2024.

However, it appears that the ALMM Order was put in abeyance (pursuant to the MNRE's office memorandum dated February 15, 2024) due to concerns about (i) inadequate domestic module manufacturing capacity, (ii) the lower quality of domestic modules compared to foreign (including tier-I Chinese) manufacturers, and (iii) the higher prices of domestic modules. Further, such abeyance was presumably imposed to provide adequate time to: (i) manufacturers to secure the certifications necessary; and (ii) the wider industry for the purpose of developing necessary domestic supply chain capabilities.

Nevertheless, the MNRE's decision to put the ALMM Order in abeyance was expected to negatively affect those domestic manufacturers which might have sought to expand their market share in India. On the other hand, RE project developers which were expecting to procure, imported modules would benefit from such abeyance. Given that no foreign

manufacturers have been enlisted under ALMM as on date, those foreign manufacturers which command a significant market share in India would also stand to benefit from such abeyance.

MoP Issues Amendment to the Guidelines for Procurement of Firm and Dispatchable Power with Energy Storage Systems, Renewable Energy Projects

Pursuant to a resolution dated February 2, 2024, the MoP made an amendment to its 'Guidelines for Tariff Based Competitive Bidding Process for Procurement of Firm and Dispatchable Power from Grid Connected Renewable Energy Power Projects with Energy Storage Systems' ("**ESS Bidding Guidelines**"). Pursuant to the resolution of February 2, 2024, the MoP deleted clause 14.3(b)(ii) of the ESS Bidding Guidelines and changed the heading of such clause to 'Delay in Commencement of Supply of Power'.

Previously, pursuant to a resolution dated November 17, 2023 (the "**November Resolution**"), the MoP had amended the ESS Bidding Guidelines – which, in turn, it had notified through a resolution dated March 23, 2023 and published in the Gazette of India on June 9, 2023.

The November Resolution had substituted clause 14.5 of the ESS Bidding Guidelines with one related to the early commencement of power supply from a single component outside the scope of a PPA. In other words, in case of multiple project components, and if one or more of such components – whether wind, solar or any other renewable power generating system – is ready to inject power into the grid, but the remaining component(s) is/are unable to commence power supply, the relevant genco will be allowed to commence such supply from the component which is ready, outside the ambit of a PPA. The November Resolution had provided for such allowance subject to certain conditions, such as those related to: (i) advance notice and acceptance requirements (involving both end- and intermediary-procurers vis-à-vis the relevant genco) with respect to the advance commissioning of full or part capacity; (ii) when a genco can sell such power in power exchanges or via bilateral arrangements, to the extent that such power has not been accepted by either of the procurers within the stipulated period despite an advance notice; and (iii) the order of priority to be accorded with respect to the availing of

such power when both end- and intermediary-procurers accept to purchase it, as well as the limits of the tariff payable in such cases.

In general, the ESS Bidding Guidelines had been first issued under section 63 of the Electricity Act to enable the procurement of firm and dispatchable RE by discoms from grid-connected RE power projects with ESS through a tariff-based competitive bidding process, where firm and dispatchable RE power means the supply of electricity as per the demand profile specified in the documents related to the request for selection (“RfS”) or bidding.

Despite the implementation of several de-risking initiatives undertaken by the central government to address the risks associated with the solar and wind power sectors, respectively, such as ‘bundling’ (where relatively expensive solar power was bundled with cheaper thermal power from the unallocated quota of the MoP, as generated by NTPC coal-based stations); advance arrangements for land and evacuation through solar parks; green energy corridors; a secure and standardized PPA for 25 years with an elaborate mechanism for risk apportionment and compensations; payment security; and so forth, coupled with the advancement of technologies and economies of scale – which, in turn, have led to a reduction of tariffs in such sectors and thereby enabled the rapid deployment of solar and wind capacity in the country, the inherently intermittent and variable nature of RE, together with low-capacity utilization of the transmission system, need further intervention. Such residual problems may even get exacerbated with the addition of large-scale renewable capacity.

Accordingly, in order to manage the infirm nature of power, discoms now need to procure balancing power for the purpose of providing grid stability and meeting their requirements, especially during hours or periods of RE non-availability.

In light of the above, there is a clear requirement for the supply of round-the-clock (“RTC”)/demand-based renewable power to discoms – especially given current developments in the country within the RE sector, together with an increased demand for green power and a national vision for achieving energy independence. Such RE power should have the elements of both ‘firmness’ and ‘dispatchability’ with the objective to address an offtaker’s

requirements based on demand from RE sources alone.

It is in this background and context that the ESS Bidding Guidelines were issued, including for the purpose of facilitating renewable capacity addition with respect to discoms, as well as to enable the fulfilment of both renewable purchase obligations (“RPOs”) and storage power obligations (“SPOs”) for discoms, pursuant to the latter’s statutory requirements.

In addition, the ESS Bidding Guidelines seek to provide a transparent, fair and standardized procurement framework based on an open and competitive bidding process, where (i) underlying risks are appropriately distributed among various stakeholders to enable power procurement at competitive prices in the consumers’ interest, (ii) the bankability of projects stands improved, and (iii) a reasonable return on investment is ensured. Further in this regard, the ESS Bidding Guidelines seek to provide a framework for inter- and intra-state, as well as long-term, sale and purchase of power, as an additional measure to de-risk the RE sector.

MoP Directs States for Adoption of RE Green Energy Open Access Rules

Pursuant to a letter dated February 12, 2024, the MoP requested all states and union territories to take appropriate action towards the implementation of the (central) GEOA Rules – as notified by the MoP, and as amended from time to time. In this regard, the MoP specifically asked all states and union territories to align their respective open access regulations on an ‘aggregation basis’ for the purpose of complying with amended provisions of the (central) GEOA Rules, including with respect to statutory modifications introduced through the Electricity (Promoting Renewable Energy Through Green Energy Open Access) ([Second Amendment](#)) Rules, 2023, as previously issued by the MoP further to a notification dated May 23, 2023.

Finally, the MoP asked all states and union territories to send the status of their compliance within 15 days from the issue of such letter.

MNRE Issues Guidelines for Implementation of Pilot Projects for Use of Green Hydrogen in the Transport Sector

Pursuant to a letter dated February 14, 2024, the MNRE issued scheme guidelines for the implementation of pilot projects related to the use of GH in the transport sector under the NGHM (such guidelines, the “**NGHM Transport Guidelines**”). Among other things, the NGHM Transport Guidelines aim to support the deployment of GH as fuel in buses, truck and four-wheeler vehicles in a phased manner and on a pilot basis. Other objectives in this regard include (i) the validation of technical feasibility and performance of GH-operated vehicles under real-world operational conditions; (ii) the evaluation of the economic viability and performance of hydrogen-based vehicles, including for the purpose of identifying areas of improvement; (iii) the assessment of efficacy of hydrogen refueling stations; as well as (iv) the demonstration of safe and secure operations with respect to both hydrogen-based vehicles and hydrogen refueling stations.

The implementing agencies for this scheme will be nominated by the Ministry of Road Transport and Highways (“**MoRTH**”). 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).

MNRE Issues a Notification to Set Up 13 GW of Renewable Energy and 12 GWh BESS Projects in Ladakh

Pursuant to a letter dated February 15, 2024, the MNRE notified its sanction of a project called “Green Energy Corridor Phase-II – Inter-State Transmission System for 13 GW Renewable Energy Project in Ladakh” (such project, “**ISTS GEC-II**”). This project aims to facilitate the evacuation of power from RE projects comprising 13 gigawatt (“**GW**”) capacity, along with a 12 GWh Battery Energy Storage System (“**BESS**”) in Ladakh.

The ISTS GEC-II project will be implemented by Power Grid Corporation of India Limited (“**PGCIL**”) (and monitored by the CEA, the MNRE and Central Transmission Utility of India Limited (“**CTUIL**”) – a

wholly-owned subsidiary of PGCIL) in a single phase, currently scheduled for completion by FY 2029-30.

MoP Issues Draft Electricity (Third Amendment) Rules, 2024

Pursuant to a letter dated February 16, 2024, the MoP issued a draft of the Electricity (Third Amendment) Rules, 2024 (the “**Third Amendment**”), inviting comments and suggestions from stakeholders. Like the First and Second Amendments, respectively, the draft Third Amendment also seeks to modify the Electricity Rules. In particular, the draft Third Amendment seeks to replace rule 19(1)(a) of the Electricity Rules with a provision which specifies that the central government may notify a distinct pool for distinct categories of renewable energy sources. Further, according to the Third Amendment, the duration of each such central pool will be required to be three years from the date of commencement, as notified by the central government.

MoP Amends the Electricity (Rights of Consumers) Rules, 2020

For the purpose of further amending the Electricity (Rights of Consumers) Rules, 2020 (“**Consumer Rights Rules**”), the MoP issued the Electricity (Rights of Consumers) Amendment Rules, 2024 (“**Consumer Rules Amendment**”) pursuant to a notification dated February 22, 2024. Among other things, the Consumer Rules Amendment has inserted new provisions to, and substituted certain other provisions in, the Consumer Rights Rules for the purpose of (i) speeding up the grant of electricity connections, and (ii) promoting the adoption of electric vehicles (“**EVs**”) and SRTPV systems. In this regard, the Consumer Rules Amendment has also added new definitions for ‘owner’ and ‘resident welfare association,’ respectively.

MNRE Updates ALMM List-I With an Enlisted Capacity of 33,994 MW in February 2024

Pursuant to an office memorandum February 24, 2024, the MNRE issued Revision-XXI to the ALMM List-I (which was last updated on January 24, 2024) to further revise such list. With such revision, the total enlisted capacity increased to 33,994 MW.

The details of provisional enlistments granted by the MNRE in the ALMM List-I have also been provided in the office memorandum February 24, 2024, with the regular qualification that ALMM enlistment remains subject to valid BIS registration – failing which the concerned entity will be deemed to have been delisted.

State Government

RERC Approves Net Metering Capacity to 1 MW from 500 kW

Pursuant to an order dated February 7, 2024, the Rajasthan Electricity Regulatory Commission (“RERC”) directed that the net metering arrangement will be applicable for loads up to 1 MW or up to the sanctioned load/contract demand, whichever is lower, for all categories of consumers, under the RERC (Grid Interactive Distributed Renewable Energy Generating Systems) Regulations, 2021 (“RERC DREGS Regs”).

Earlier, amendments made to the (central) Consumer Rights Rules in 2021 had provided that where applicable SERC regulations do not provide for net metering, net-billing or net feed-in, such SERC may allow net metering to the prosumer for loads of up to 500 kW or up to the sanctioned load, whichever is lower, and net billing or net feed-in for other loads.

Nevertheless, through such 2021 amendment to the Consumer Rights Rules, the MoP had also mandated SERCs to decide the capacity under net metering arrangements, including by providing that the arrangements for net metering, gross-metering, net-billing or net feed-in would be in accordance with the regulations made by SERCs from time to time.

Accordingly, pursuant to an order dated September 7, 2021, the RERC had decided that the net metering arrangement would be applicable for loads of up to 500 kW or up to the sanctioned load, whichever was lower, for all categories of consumers in Rajasthan.

However, given (i) India’s, and the state of Rajasthan’s, ambitious RE targets by 2030; (ii) the need to promote higher penetration of RTS projects through net metering and gross metering mechanisms in Rajasthan – which state, despite having the highest potential (among all states) and a

quarter of the total installed solar capacity in the country, lags in RTS capacity; (iii) recent power shortages in Rajasthan which forced discoms to purchase costly power from exchanges; as well as (iv) the observed ability (in terms of having space and financial resources available) among certain establishments to install higher capacity RTS plants on their premises, the RERC decided to increase the erstwhile capacity limit with respect to net metering arrangement from 500 Kw to 1 MW pursuant to its authority to do so under regulation 7 of the RERC DREGS Regs, subject to the condition that the maximum capacity will not exceed 100% of the sanctioned load/contract demand of the consumer.

Since storing electricity often proves expensive, systems can be connected to the grid so that the surplus can be exported to the grid –while the deficit can be imported from the grid. While framing regulations for solar rooftop systems, governments typically define two kinds of arrangements – gross metering and net metering.

Gross metering is an arrangement where a consumer is compensated at a fixed feed-in-tariff for the total number of units of solar energy generated and exported to the grid. Such consumer is required to pay the discom at the tariff related to retail supply tariff for the electricity it consumes from the grid. This is accounted for by a unidirectional ‘gross meter’. Typically, the feed-in-tariff and the retail supply tariff vary.

On the other hand, as the name suggests, the concept of net metering provides an arrangement where electricity exports are adjusted against imports. Accordingly, the electricity produced is deducted from the total electricity consumed over a fixed period of time. Such adjustment may be done on a monthly, half-yearly or annual basis. A bidirectional ‘net meter’ may account for both electricity imports and exports. If the exported power is higher than that imported, a consumer may or may not be compensated for the excess electricity fed into the grid. Such compensation will depend on a state’s net metering policy.

Under gross metering, the compensation to consumers (for exporting power to the grid) is typically lower than the retail supply tariff (*i.e.*, the rate at which consumers purchase electricity from discoms). Under net metering, where electricity

imports are adjusted against exports, the compensation is effectively at retail supply tariff. Accordingly, discoms may prefer to adopt gross metering for grid-connected solar rooftop systems.

Haryana Issues Draft Green Hydrogen Policy 2024

Pursuant to a public notice dated February 15, 2024, the Directorate of New and Renewable Energy, Haryana issued a draft of the “Haryana Green Hydrogen Policy 2024” (“**Haryana GH Policy**”) dated January 2024, inviting comments and suggestions from stakeholders.

The proposed Haryana GH Policy aims to make the state of Haryana a national leader in respect of the GH+ ecosystem, with an annual GH production target of 250 kilotonnes (“**KT**”) by the year 2030, along with 2 GW of electrolyzer manufacturing capacity (including associated components). The Haryana GH Policy may remain in force, once finalized, until March 31, 2030 or until a new policy is announced by the Haryana state government. Its ultimate vision is to drive decarbonization across industries, enhance energy security, and encourage exports. More specifically, the Haryana GH Policy seeks to:

1. accelerate the development and adoption of GH+ as alternative fuel and feedstock sources, consistent with the aims of the NGHM;
2. harness the potential of clean energy and enhance energy security, including by making the best use of available RE resources and biomass for the purpose of replacing the deployment of fossil fuels;
3. promote the manufacture of electrolyzers and other critical equipment related to GH;
4. attract investments in the GH and RE sector, create job opportunities, and develop the state’s economy;
5. reduce emissions from crop burning by using biomass for GH production;
6. make Haryana a leader in research and development (“**R&D**”), including with respect to electrolyzers, fuel-cells and other enabling

technologies that are necessary for the GH ecosystem; and

7. enable the skilling of the workforce with respect to, and generating employment opportunities across, the GH+ value chain.

TERC Issues a Draft Regulation for Solar Rooftop Under Net/Gross Metering in 2024

Pursuant to a notification dated February 21, 2024, the Tripura Electricity Regulatory Commission (“**TERC**”) issued a draft of the TERC (The Grid Interactive Solar Rooftop Photovoltaic System under Gross/Net Metering) Regulation, 2024 (“**Tripura Draft Regulation**”). The Tripura Draft Regulation seeks to bring in a comprehensive and grid-interactive SRTPV system under gross/net metering regulation to (i) address various issues raised by consumers/prosumers, discoms and the Tripura Renewable Energy Development Agency (“**TREDA**”), as well as (ii) revise the erstwhile guidelines, which regulate grid-interactive SRTPV systems of prosumers in the state of Tripura, as approved by the TERC from time to time; (iii) align state regulation, to the extent possible, with various provisions of the (central) Consumer Rights Rules; and (iv) promote the generation of distributed RE in the state of Tripura in lieu of existing guidelines in this regard.

GERC issues Green Energy Open Access Regulations, 2024

Pursuant to a notification dated February 21, 2024 the Gujarat Electricity Regulatory Commission (“**GERC**”) issued the GERC (Terms and Conditions for Green Energy Open Access) Regulations, 2024 (“**Gujarat GEOA Regs**”) to provide non-discriminatory open access for RE, including with respect to the grant of open access for using intra-state transmission and/or distribution system(s) (“**InSTDS**”) of relevant licensee(s) in the state of Gujarat – including those InSTDS that are incidental to the inter-state transmission of electricity. The Gujarat GEOA Regs also seek to establish a methodology for the determination of open access and banking charges, along with other applicable charges, for GEOA consumers in the state of Gujarat.

The Gujarat GEOA Regs will be applicable for certain entities that wish to avail of GEOA. Such

entities include licensees, RE gencos and consumers which have a contracted demand or sanctioned load of 100 kW or more – either through a single or multiple connections – in the same electricity division of a discom.

However, no capacity restrictions will apply in connection with the setting up of RE projects for captive use with respect to a consumer's contract demand/sanctioned load with discoms.

DERC Issues Draft Peer-to-Peer Guidelines for Renewable Energy with up to 200 KW Load

On February 26, 2024, the Delhi Electricity Regulatory Commission (“**DERC**”) issued a draft of the DERC (Peer to Peer Energy Transaction) Guidelines, 2024 (“**Delhi P2P Guidelines**”). The draft Delhi P2P Guidelines aim to provide flexibility to prosumers and consumers that have a sanctioned load/contract demand of up to 200 kW to mutually sell and purchase electricity through P2P transactions in a secure and reliable way.

Further, the DERC seeks to adopt a progressive view for the purpose of (i) promoting the use of RE and embedded generation within the distribution network, and (ii) enabling prosumers to generate additional avenues of income through innovative technologies and by ensuring net savings to consumers.

In this regard, the DERC lists out certain eligibility criteria for P2P transactions. For instance, once approved and finalized, the Delhi P2P Guidelines will apply to (i) prosumers, except ground-mounted projects, and (ii) consumers which opt to transact energy among themselves through the online platform of a service provider, or through a discom within its area of supply.

Further, the sanctioned load or contract demand of prosumers and consumers under a P2P metering arrangement is required to be less than, or equal to, 200 kW (or equivalent kVA). In addition, the capacity of an RE system that is installed, or is proposed to be installed, at the prosumer's end for P2P transactions, will be capped at 500% of its sanctioned load.

At any point of time, both consumers and prosumers can avail of the benefits of any one of the following: virtual, group and P2P metering arrangements,

respectively. However, eligible consumers and prosumers can switch from virtual or group net metering to P2P energy transaction arrangements (or vice-versa) only once every financial year.

Further, consumers that opt for P2P transactions will be deemed to have terminated the connectivity agreement with respect to their virtual or group net metering, if applicable.

In addition, the RE system, or the BESS charged through the RE system, will be governed pursuant to the provisions of the DERC (Net Metering) Regulations, 2014 and need to comply with the standards and technical specifications prescribed by relevant authority from time to time.

KERC Revises Tariff Order for Financial Year 2024-25

Pursuant to a tariff order dated February 28, 2024 further to an application made by the Karnataka Power Transmission Corporation Limited (“**KPTCL**”) – a transmission licensee under the provisions of the Electricity Act, the KERC revised the ARR, transmission tariff and SLDC charges for the financial year 2024-25.

EV

India launched the second tranche of its auction of critical mineral blocks (see [here](#) and [here](#))

On February 29, 2024, the Ministry of Mines launched the second tranche of its auction of 18 critical and strategic mineral blocks – with 17 such blocks auctioned for composite licenses, and one for mining leases. These auctioned blocks are spread across eight states – Andhra Pradesh, Arunachal Pradesh, Chhattisgarh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Tamil Nadu. The last date for the purchase of tender documents and submission of bids was April 18 and April 23, 2024, respectively. Previously, in the first tranche, 20 blocks had been put up for auction.

The blocks that were auctioned in the second tranche are valued at around INR 30 trillion (approx. \$362 billion), representing a diverse array of critical and strategic minerals which are essential for various industries. Specifically, the auctioned minerals include tungsten, vanadium, cobalt, nickel, potash, graphite, glauconite, rare earth elements

("REE"), platinum group of elements ("PGE"), and phosphorite. Among other key industries, these minerals are crucial for clean energy and therefore remain in high demand, including on account of their use in significant sectors like RE, defence, agriculture, pharmaceuticals, high-tech electronics, telecommunications, transport, and gigafactories.

MHI increased the financial outlay for FAME II

Pursuant to a [press release](#) dated February 9, 2024 ("FAME Press Release"), the Ministry of Heavy Industries ("MHI") announced an increase in the budgetary allocation for Phase II of the scheme related to, and called, 'Faster Adoption and Manufacturing of Electric Vehicles in India' ("FAME India," and such second phase of FAME India, "FAME II").

The budgetary allocation for [FAME II](#) was enhanced from INR 100 billion to INR 115 billion, including for the purpose of providing a further boost to clean mobility in the country. Previously, the Indian government had approved FAME II with an outlay of INR 100 billion for a period of 3 years starting from April 1, 2019. Out of such total budgetary support, about 86% of the aggregate funds have been allocated for demand incentives with the purpose of creating greater market demand for all sub-types of EVs in the country ("xEVs," which include battery-powered EVs ("BEVs"), hybrid EVs ("HEV"), and plug-in hybrid EVs ("PHEV")).

FAME II aims to generate demand by supporting 7,000 e-buses; 0.5 million three-wheeler EVs ("e-3W"); 55,000 four-wheeler EV passenger cars (including HEVs) ("e-4W"); and 1 million two-wheeler EVs ("e-2W"). Depending upon the offtake of different categories of xEVs, such numbers may vary over time. Only advanced battery and registered vehicles are incentivized under the scheme. With greater emphasis on providing affordable and environment-friendly mass public mobility, FAME II is applicable mainly to vehicles used for public transport or those registered for commercial purposes in the e-3W, e-4W and e-bus segments, respectively. However, privately-owned and registered e-2Ws are also covered under FAME II as a mass segment.

Further, pursuant to another notification dated February 9, 2024, the MHI partially modified its

[guidelines](#) related to FAME II. In case of e-3W and e-4W, the cost of vehicle, as referred to in clause 26 of the MHI notification dated March 8, 2019, will mean the "ex-factory price" of a vehicle – i.e., the price of the vehicle at the factory gate before applicable taxes. However, the MHI clarified that its notification dated May 19, 2023 with regard to e-2W will remain in force.

MoP amended the Consumer Rights Rules to promote EV adoption

As discussed above, for the purpose of further [amending](#) the Consumer Rights Rules, the MoP issued the Consumer Rules Amendment pursuant to a [notification](#) dated February 22, 2024. The Consumer Rules Amendment has inserted new provisions to, and substituted certain other provisions in, the Consumer Rights Rules for the purpose of (i) speeding up the grant of electricity connections, and (ii) promoting the adoption of EVs, among other things.

In particular, consumers can now obtain separate electricity connections for charging their EVs. Thus, the Consumer Rules Amendment has inserted a new sub-rule (15) under rule 4 of the Consumer Rights Rules which specifies that upon the request of a resident welfare association ("RWA") or an 'owner' of the flat or house in an RWA or any other consumer, the discom is required to provide a separate connection for the supply of electricity for an EV charging system.

In this regard, both 'RWA' and 'owner' are newly added definitions in the Consumer Rights Rules. Pursuant to the Consumer Rules Amendment, while an 'RWA' means an association comprising all the property owners within a co-operative group housing society, multistoried building, residential colony or a similar body registered with the state government, an 'owner' means the person who has the absolute right over the property – including their legal heirs.

Guidelines for implementing pilot projects for the use of GH in the transport sector

As discussed above, the MNRE [issued](#) the NGHM Transport Guidelines pursuant to a letter dated February 14, 2024. Among other things, the NGHM Transport Guidelines aim to support the deployment of GH as fuel in buses, truck and four-wheeler vehicles in a phased manner and on a pilot basis,

based on fuel-cell- and internal combustion engine (“ICE”)-based propulsion technology. Other thrust areas of the scheme include support for the development of infrastructure such as hydrogen refueling stations.

The scheme will also seek to support any other innovative use of hydrogen for reducing carbon emissions in the transport sector, such as the blending of (i) methanol and ethanol based on GH, and (ii) other synthetic fuels derived from GH, in automobile fuels.

With declining costs of RE and electrolyzers, it is expected that vehicles based on GH can become cost-competitive over the next few years. Future economies of scale and technological advancements with respect to hydrogen-powered vehicles may further improve the viability of transport based on GH.

In light of the above, the MNRE will implement pilot projects under the NGHM, along with other initiatives, to replace fossil fuels in the transport sector with GH+. These pilot projects will be implemented by MoRTH and the implementing agencies nominated under this scheme (such scheme implementing agencies, “SIAs”).

The use of GH in the transport sector through such proposed pilot projects is expected to lead to the development of necessary infrastructure, including refueling facilities and distribution infrastructure. In turn, such infrastructure development is expected to result in the establishment of a GH ecosystem in the transport sector. At the same time, with an expected decline in the production cost of GH over the next few years, the utilization of GH in the transport sector is expected to rise.

March 2024

CLEAN ENERGY

Central Government

MNRE Reimposes ALMM Requirements Starting from April 1, 2024

Pursuant to an office memorandum dated March 29, 2024, the MNRE clarified that the ALMM Order for solar PV modules (*i.e.*, the ALMM List-I) will come into effect from April 1, 2024.

However, certain projects will be examined separately – specifically those which (i) were unable to get commissioned by March 31, 2024 on account of reasons beyond the control of the RE developer, and (ii) received the solar PV modules at the project site by March 31, 2024.

Previously, pursuant to an office memorandum dated March 10, 2023, the MNRE had put in abeyance the ALMM Order for one financial year (FY 2023-24). This memorandum had also stated that projects commissioned by March 31, 2024 would be exempted from the requirement of procuring solar PV modules from the ALMM List-I.

Subsequently, pursuant to another office memorandum dated February 15, 2024, the MNRE put in abeyance an earlier office memorandum dated February 9, 2024 until further orders. Such earlier memorandum dated February 9, 2024 had provided for the re-imposition of the ALMM Order with effect from April 1, 2024.

Further, the office memorandum dated February 9, 2024 had also specified as follows:

The ALMM Order would apply to:

1. only those projects which are sponsored or subsidized by the government;
2. the government or its agencies procuring power for its own consumption or for distribution among people through discoms;
3. SRTPV and PM-KUSUM, which are subsidized.

The ALMM Order would not apply to:

1. projects set up under open access or as captive by private parties. In other words, ALMM would not be applicable for people who set up their own capacity.

Further, the memorandum of February 9, 2024 had also indicated that the relaxation in ALMM would apply to all cases where the projects were in advanced stages of construction and the order for modules had been placed before March 31, 2024 (both subject to verification).

However, unlike the memorandum dated February 9, 2024, no exemption has now (*i.e.*, pursuant to the MNRE memorandum dated March 29, 2024) been allowed for projects that are set up as captive or under open access by private parties. Previously, pursuant to the memorandum dated February 9, 2024, open access-based and captive solar power projects could have sourced PV modules from the most cost-competitive sources by availing of the exemption granted to them from the requirement of procuring such modules only from MNRE-approved models and manufacturers under the ALMM List-I.

The re-imposition of ALMM from April 1, 2024 is expected to help domestic original equipment manufacturers (“OEMs”). Currently, the ALMM List-I comprises only domestic solar OEMs. It is possible that domestic module manufacturing has increased over the past year while the ALMM was in abeyance. If domestic manufacturing has indeed risen under the government’s PLI scheme, there may be fewer concerns about the availability of domestic solar modules relative to periods in the past.

Nevertheless, it appears that there is yet no visibility of entities under the ALMM List-II of the ALMM Order. The solar energy sector remains dependent on imports with respect to sourcing solar PV cells, and cell manufacturing capacity in India remains limited.

Given current costs, buying imported solar PV modules – as opposed to relying solely on modules made by domestic OEMs – appears to be a cheaper option for captive RE projects, gencos and independent power producers (“IPPs”), even after import duties are factored in. In this regard, the re-imposition of ALMM from April 1, 2024 is likely to

affect private open access and captive solar power projects.

MNRE allows Solar Mini Grid Installations for Tribal Habitations

Pursuant to an office memorandum dated March 26, 2024, the MNRE issued amendments to the New Solar Power Scheme under PM-JANMAN (for PVTG habitations and villages), based on requests from state implementing agencies with respect to the inclusion of a CAPEX mode to the mode of installing solar mini-grids for the purpose of providing electrification to households under such scheme.

Accordingly, among other things, the amended scheme now allows for solar mini-grid installations through a CAPEX mode for PVTG habitations/villages.

Previously, pursuant to an [order](#) dated January 4, 2024, the MNRE had issued implementation guidelines for such new solar power scheme under PM-JANMAN until 2025-26. The scheme aims to provide electricity to 0.1 million un-electrified households across 18 states in PVTG areas by providing off-grid solar systems and solar lighting in multi-purpose centers where the supply of electricity through the grid is not techno-economically feasible.

The order dated January 4, 2024 through which the MNRE had issued implementation guidelines for the new solar power scheme under PM-JANMAN had provided (under paragraph 2.1.4) that solar mini-grids of appropriate capacity may be installed for a cluster of households in a PVTG habitation or hamlet through 'RESCO' mode with support in the form of CFA support provided by the MNRE.

RESCO – or renewable energy services/supply company – implies a solar power system that involves a third-party service-provider (*i.e.*, the RESCO), where such RESCO owns, installs, operates and maintains such system on behalf of the customer. The consumer pays a pre-determined monthly tariff which is lower than the prevailing grid power tariff. Accordingly, the RESCO model proves especially useful for such end-users that seek to utilize solar power but lack the ability to incur heavy capital expenditure.

Unlike a CAPEX model, where the consumer owns the system and invests upfront, the RESCO model requires no investment, and the consumer only pays for the electricity generated – while ownership of the solar power system remains with the RESCO developer.

Pursuant to requests from state implementing agencies with respect to allowing the installation of solar mini-grids through a CAPEX mode, the MNRE office memorandum dated March 26, 2024 amends the previous memorandum of January 4, 2024 and now specifies that solar mini-grids may be installed *either* through a CAPEX or RESCO mode.

Irrespective, (i) the developer of the solar mini-grids will remain responsible for operating and maintaining such mini-grids for a period of at least 5 years; and (ii) CFA will be provided by the MNRE (limited to INR 50,000 per household in both cases).

Previously, when only the RESCO model had been contemplated under the scheme, the implementing agency was required to obtain additional funding, if necessary, from other sources. However, in case of the CAPEX mode (based on the amended provision of the scheme, further to the MNRE memorandum of March 26, 2024), the implementing agency will be required to obtain additional funding, if necessary, from the state government.

Now that the CAPEX model has been permitted, consumers can reduce their power costs by setting up a rooftop solar project and sell surplus power to the area discom.

MNRE Updates ALMM LIST-I With addition of 3.5 GW of New Solar Module Capacity

Pursuant to an office memorandum dated March 22, 2024, the MNRE granted provisional enlistment to certain other entities in the ALMM List-I: Alpex Solar Limited, Pixon Green Energy Private Limited, Swelect HHV Photovoltaics Private Limited, Ganesh Green Bharat Limited, Pahal Solar, and Credence Solar Panels Private Limited.

MNRE Modifies End-use Category-wise Minimum Module Efficiency Thresholds for Enlistment in ALMM

Pursuant to an office memorandum dated March 22, 2024, the MNRE modified the thresholds for end-use category-wise minimum module efficiency (“MME”) for the purpose of ALMM enlistment as provided below:

Category-I: Utility/Grid-Scale Power Plants	
MME required to be eligible for ALMM enlistment with respect to crystalline-silicon technology based solar PV modules	20%
MME required to be eligible for ALMM enlistment with respect to cadmium telluride thin film technology based solar PV modules	19%
Category-II: Rooftop and Solar Pumping	
MME required to be eligible for ALMM enlistment with respect to crystalline-silicon technology based solar PV modules	19.5%
MME required to be eligible for ALMM enlistment with respect to cadmium telluride thin film technology based solar PV modules	18.5%
Category-III: Solar Lighting	
MME required to be eligible for ALMM enlistment with respect to crystalline-silicon technology based solar PV modules	19%
MME required to be eligible for ALMM enlistment with respect to cadmium telluride thin film technology based solar PV modules	18%

BEE Launches Standards and Labeling Program for Solar Inverters

On March 15, 2024, the BEE, in coordination with the MoP, launched a standards and labeling program for grid-connected solar inverters on a voluntary basis. The voluntary phase will start from March 15, 2024 and will remain valid until December 31, 2025.

MoP Issues Electricity (Third Amendment) Rules, 2024

Pursuant to a notification dated March 12, 2024, the MoP issued the Electricity (Third Amendment)

Rules, 2024, substituting rule 19(1)(a) with a revised formulation which provides that the central government may, by order, form distinct central pools for different categories of RE sources for a period of 3 years from the date provided in such order.

MNRE Issues Scheme Guidelines for Setting up Hydrogen Hubs in India under the NGHM

Pursuant to a letter dated March 15, 2024, the Hydrogen Division of the MNRE conveyed the sanction of the President of India for the implementation of a scheme related to the setting up of hydrogen hubs in India under the NGHM. The budgetary outlay for this scheme is INR 2 billion until FY 2025-26.

In this regard, the detailed scheme guidelines were released with respect to providing support for the development of core infrastructure at hydrogen hubs for common services and facilities related to (i) storage and transportation facilities for GH and its derivatives; (ii) development and upgradation of pipeline infrastructure; (iii) facilities in respect of GH-powered vehicle refuelling; (iv) hydrogen compression and/or liquefaction technologies, as required; (v) hydrogen storage systems; (vi) water treatment and associated storage facilities; (vii) development of bunkering facilities in ports; (viii) infrastructure upgrades for shipping, including the expansion of port/jetty infrastructure for the purpose of exports; (ix) power transmission infrastructure; (x) land re-development; (xi) energy storage for the purpose of addressing RE intermittency; (xii) effluent treatment plants; and (xiii) any other infrastructure, as necessary.

The objectives of the scheme include identifying and developing regions that are capable of supporting large-scale production and/or utilization of hydrogen as GH hubs. In this regard, the scheme aims to develop GH projects inside such hubs in an integrated manner for the purpose of allowing for the pooling of resources and achieving operational scale. Further, the scheme aims to enhance the cost-competitiveness of GH and its derivatives, maximize GH production, encourage large-scale utilization and exports of GH, as well as enhance the viability of GH assets across the value chain.

MNRE Issues Scheme Guidelines for the implementation of the R&D Scheme under the NGHM

Pursuant to a letter dated March 15, 2024, the Hydrogen Division of the MNRE conveyed the sanction of the President of India with respect to the implementation of the R&D scheme under the NGHM. The budgetary outlay for this scheme is INR 4 billion until FY 2025-26.

The R&D scheme aims to make the production, storage, transportation and utilization of GH more affordable. It also aims to improve the efficiency, safety and reliability of the relevant processes and technologies involved in the GH value chain. Further, the scheme aims to foster partnerships among industry, academia and the government in order to establish an innovation ecosystem for GH technologies. Relatedly, the R&D scheme is expected to help with the scaling up and commercialization of GH technologies by providing necessary policy and regulatory support.

The broad support areas contemplated under the R&D scheme include all components of the GH value chain, such as in respect of production, storage, compression, transportation, utilization, testing and techno-economic analysis. The R&D projects supported under the NGHM will need to be goal-oriented, time-bound and suitable for scaling up for the purposed of achieving quantifiable returns. In addition, the following types of projects may be supported:

1. Mission mode projects with a short-term horizon of 0-5 years, where the focus will remain on end-product development in partnership with industry. The projects likely to be taken up under this mode may include, among others, the development of indigenous modular electrolyzers and proton exchange membrane (“PEM”)-based fuel cells. Biomass-based hydrogen generation will also be scaled up for commercial application.
2. Grand challenge projects with a mid-term impact horizon of 0-8 years, which will be initiated with a focus on critical technologies to overcome licensing challenges and supply constraints. It is likely that such projects will be built around the manufacture of critical electrolyzer and fuel cell components such as

membrane electrode assemblies (“MEAs”), electrocatalysts, catalyst-coated membranes (“CCMs”), gas diffusion layers (“GDLs”), bipolar plates, and others.

3. Blue sky projects with a long-term horizon of 0-15 years, which will focus on establishing technical prowess and competitive advantage for Indian industry. These projects will aim to develop and demonstrate the capabilities of Indian R&D in the GH sector across a wide array of subjects, such as the development of 3rd-generation electrocatalysts, reversible solid oxide electrolyzers (“SOECs”), solid oxide fuel cells (“SOFCs”), seawater electrolysis, thermos-catalytic and plasma pyrolysis, salt cavern surveys, high entropy alloys for reversible hydrogen storage, and others.
4. Centers of excellence, which will be identified and supported under the R&D scheme by building subject-matter expertise and research infrastructure.

In addition to industrial and institutional research, innovative MSMEs and start-ups working on indigenous technology development will be encouraged under the R&D scheme.

Background:

An R&D roadmap for developing the GH ecosystem in India was released by the MNRE in October 2023.

Subsequent Developments:

Subsequent to the issuance of detailed scheme guidelines related to the R&D scheme, the MNRE invited proposals from eligible entities under such scheme on March 16, 2024 pursuant to an office memorandum dated March 15, 2024. In this regard, the MNRE provided details related to eligibility, evaluation criteria, funding pattern, spectrum of activities to be supported, the application form and proposal submission guidelines, intellectual property rights, and other matters.

On account of the encouraging response received to such call for proposals, as well as stakeholder requests to allow sufficient time for submitting better proposals, the MNRE extended the deadline for

proposal submission to April 27, 2024 pursuant to an [office memorandum dated April 9, 2024](#).

MNRE Issues Guidelines for Electrolyzer Manufacturing Under SIGHT II Program

Pursuant to a letter dated March 16, 2024, the Hydrogen Division of the MNRE issued detailed scheme guidelines for the implementation of Component I of the SIGHT program (related to strategic interventions for a GH transition) involving the second tranche (Tranche – II) of an incentive scheme for electrolyzer manufacturing (together, “**Tranche II**”) under the NGHM for the period starting from FY 2025-26 to FY 2029-30 with a total outlay of INR 44.4 billion.

Previously, pursuant to a letter dated June 28, 2023, the Hydrogen Division of the MNRE had issued detailed scheme guidelines for the implementation of the previous tranche of incentive schemes for electrolyzer manufacturing under Component I of the SIGHT program (together, “**Tranche I**”). Several of the salient features of Tranche II are similar to those of Tranche I. For instance, the SECI will remain the implementing agency for Tranche II, as it was for Tranche I.

Among other things, Tranche II aims to: (i) maximize indigenous electrolyzer manufacturing capacity; (ii) achieve a lower levelized cost of hydrogen production; (iii) ensure globally competitive performance and product quality; (iv) progressively enhance DVA; and (v) support established and promising technologies.

The salient characteristics of Tranche II are as follows:

- Base incentive = INR 4,440/kW in Year 1
- Support will correspond to the annual manufacturing capacity
- Support will taper down annually after Year 1, with the base incentive available reducing to INR 3,700, INR 2,960, INR 2,220 and INR 1,480 in Years 2, 3, 4 and 5, respectively.
- Incentives to be provided for 5 years from the date of commencement of manufacturing of electrolyzers.

The factors to be considered for calculating incentives under Tranche II are as follows:

- Specific energy consumption (“**SEC**”) (in terms of kilowatt hour (“**kWh**”)/kg of hydrogen)
- Local value addition (“**LVA**”) and DVA
- Electrolyzer sales volume.

SEC

SEC will be relevant because: (i) the scheme aims to incentivize the manufacture of efficient and high-quality electrolyzers in India; and (ii) SEC of electrolyzers will directly impact the cost of GH.

LVA/DVA

A key objective of the scheme is to progressively indigenize the electrolyzer value chain. Accordingly, bidders will need to demonstrate a certain minimum LVA for each year of production of electrolyzers based on a prescribed format, as well as a pre-defined LVA factor, for each of (i) alkaline electrolyzers; and (ii) PEM/SOECs/Anion Exchange Membrane (“**AEM**”) electrolyzers.

The DVA for a given year will be calculated pursuant to a prescribed table linked to the quoted value of the LVA by the bidder for such year.

Additional guidelines

In addition, the scheme guidelines detail the bidding process, the bid selection parameter, the selection process, and eligibility criteria for bidding.

Further, for the purpose of promoting indigenously developed electrolyzer technologies, bids for Tranche II comprising an aggregate of 1500 MW (similar to Tranche I) will be called in three separate buckets, with two buckets reserved for electrolyzer manufacturing capacity based on (i) indigenously developed stack technology (300 MW); and (ii) indigenously developed stack technology – smaller units (100 MW). Previously, under Tranche I, there had been two buckets only, with 300 MW reserved for indigenously developed stack technology. Accordingly, the additional bucket of 100 MW for ‘smaller units’ is a variation introduced in Tranche II.

Previously, as discussed above, pursuant to letters dated January 16, 2024, the MNRE had issued detailed scheme guidelines for the implementation of Component II of the SIGHT Program involving incentive schemes for the production and supply of green ammonia and GH under Mode 2A and Mode 2B, respectively, of the NGHM.

MNRE Issues Guidelines for a Scheme on Skilling under the NGHM

Pursuant to an office memorandum dated March 16, 2024, the Hydrogen Division of the MNRE conveyed the sanction of the President of India with respect to guidelines on a scheme related to skilling, upskilling and re-skilling under the NGHM for the period between FY 2023-24 and FY 2029-30 with a total outlay of INR 350 million.

The objectives of this scheme include the following:

1. Undertaking a comprehensive skill gap analysis covering key areas of the GH ecosystem on an ongoing basis;
2. Creating and updating a registry of skills, as necessary for the purpose of the GH value chain;
3. Designing and developing curricular elements for use in schools, industrial training institutes, as well as polytechnic and higher education institutions with respect to various levels and segments of the GH value chain;
4. Developing qualification packs and training content, including training manuals and online study resources for GH and allied sectors;
5. Encouraging private sector participation with a greater focus on industrial and on-the-job training;
6. Enabling cross-utilization of available infrastructure across schools, as well as higher education and government institutions, for the purpose of delivering skills-based training;
7. Laying down criteria and mechanisms for the purpose of identifying institutions that can deliver skilling courses;
8. Creating a certified pool of trainers across the GH value chain;
9. Implementing learning-centric training programs, including for the purpose of certifying participants on approved courses related to GH in consultation with the Ministry of Skill Development and Entrepreneurship (“**MoSDE**”);
10. Facilitating the creation of model centers of excellence for the purpose of skilling, training trainers and supporting content creation with respect to the GH ecosystem.

MNRE Issues Revised CFA Under New Rooftop Solar Program

Pursuant to an order dated March 16, 2024, the MNRE announced the launch of the ‘PM-Surya Ghar: Muft Bijli Yojana’ (“**PSGMBY**”) scheme, which relates to the installation of rooftop solar plants in 10 million households with a total financial outlay of INR 750.2 billion (including all sub-components of such scheme).

Previously, the second phase (Phase – II) of the grid-connected rooftop solar program was launched by the government on February 13, 2024. Such phase and scheme will be deemed subsumed under the PSGMBY scheme, along with the remaining financial outlay and liabilities, with effect from the launch of the PSGMBY scheme.

The financial outlay for the PSGMBY scheme includes, among other things, (i) CFA to residential customers (which is the largest component, with an independent financial outlay of INR 657 billion); (ii) incentives for discoms (the second largest component, with a financial outlay of INR 49.5 billion – inclusive of the aggregate expenditure made under the erstwhile scheme, *i.e.*, Phase – II of the grid-connected rooftop solar program); (iii) incentives for local bodies (the third largest component, with a financial outlay of INR 10 billion); and (iv) certain other sub-components, including model solar villages across districts, innovative projects, payment security mechanisms, capacity-building, along with awareness and outreach).

The CFA structure applicable for the purpose of setting up rooftop solar systems has been provided as follows: (i) rooftop solar plants of a capacity of up

to 2 kW in residential households will receive CFA of INR 30,000/kW or a part thereof, while (ii) additional capacity between 2 kW and 3 kW will be eligible to receive INR 18,000 for additional kW (or a part thereof); (iii) group housing societies or RWAs may receive INR 18,000/kW as CFA, subject to certain conditions; while (iv) any additional capacity beyond 3 kW will not receive any additional CFA.

State Government

MSEDCL Issues Guidelines for Rooftop Solar Installations at Sugar Factories

Pursuant to a circular dated March 18, 2024, the Maharashtra State Electricity Distribution Company Limited (“MSEDCL”) issued guidelines for the installation of rooftop solar in the premises of sugar factories which have energy purchase agreements (“EPAs”) or PPAs with MSEDCL for their bagasse-based cogeneration plants, in compliance with orders dated January 11, 2022 and July 21, 2022, respectively, as issued by the Maharashtra Electricity Regulatory Commission (“MERC”).

MERC Issues Public Notice Inviting Comments on Draft Regulations Relating to Resource Adequacy, Multi Year Tariff, and Electricity Ombudsman

Pursuant to a public notice dated March 7, 2024, the MERC invited comments, suggestions and/or objections from stakeholders with respect to: (i) the Draft MERC (Framework for Resource Adequacy) Regulations, 2024 (see [here](#)); (ii) the Draft MERC (Multi Year Tariff) Regulations, 2024 (see [here](#)); (iii) the Draft MERC (Consumer Grievance Redressal Forum and Electricity Ombudsman) (First Amendment) Regulations, 2024 (see [here](#)); and (iv) the Draft MERC (Recruitment and Conditions of Service of Employees) Regulations, 2024 (see [here](#)).

TSERC Sets INR 1.40/kWh Additional Surcharge for Open Access Consumers

Pursuant to a common order dated March 15, 2024 with respect to applications filed by Southern Power Distribution Company of Telangana Limited (“TSSPDCL”) and Northern Power Distribution Company of Telangana Limited (“TSNPDCL”) (together, “TS Discoms”) for the determination of additional surcharge, the Telangana State Electricity

Regulatory Commission (“TSERC”) approved a levy of INR 1.40/kWh of additional surcharge on open access consumers for the period starting from March 1, 2024 to September 30, 2024, subject to (i) certain terms and conditions, as well as (ii) directions issued to TS Discoms with respect to their future additional surcharge filings.

KERC Lowers Retail Electricity Tariff for Commercial and Industrial Consumers

Pursuant to a press note, the KERC notified a revision of the electricity tariff for FY 2024-25. The KERC approved such revision with respect to the retail supply tariff for such financial year for all discoms.

For commercial and industrial (“C&I”) consumers, as well as for domestic consumers consuming above 100 units per month, the KERC significantly reduced the applicable tariff, including such as follows:

- *Low Tension Domestic Lighting:* energy charges reduced by INR 1.1 per unit for consumption above 100 units.
- *High Tension Commercial:* energy charges reduced by INR 1.25 per unit; demand charges reduced by INR 10 per KVA; and
- *High Tension Industrial:* energy charges reduced by INR 0.5 per unit; demand charges reduced by INR 10 per KVA.

In addition, the KERC tariff order reduced the cross-subsidization levels for C&I and residential consumers.

MERC notifies a Generic Tariff of INR 2.90/kWh for Rooftop Solar projects for financial year 2025

Pursuant to an order dated March 6, 2024 under the MERC (Terms and Conditions for Determination of Renewable Energy Tariff), Regulations, 2019 (“MERC RE Tariff Regs”), the MERC notified, among other things, that INR 2.90/kWh would be the generic tariff rate for the procurement of surplus power from SRTPV projects under net metering and net-billing arrangements for FY 2024-25. In this regard, the MERC also specified that it was mandatory for discoms to procure such surplus power – which would, in any case, be counted towards meeting their solar RPO.

In addition, the MERC also notified the discom-wise rate of the average power purchase cost (“**APPC**”) for FY 2024-25, including as applicable for entering into a PPA/EPA involving rooftop PV under a gross metering arrangement for projects commissioned in FY 2024-25 – where such APPC rate will remain constant for the entire period of the PPA/EPA.

Further, the MERC notified the provisional variable charges of biomass and non-fossil fuel-based cogeneration projects as INR 6.23/kWh and INR 4.80/kWh, respectively, for FY 2024-25.

The RE tariff pursuant to such MERC order is applicable with effect from April 1, 2024.

Uttar Pradesh Notifies Green Hydrogen Policy, 2024

The Uttar Pradesh Green Hydrogen Policy, 2024 (“**UP GH Policy**”) (see [here](#)) was approved by the Uttar Pradesh state government on March 5, 2024.

Among other things, the UP GH Policy [aims](#) to ensure the production of one million metric tonnes (1 MMT) of GH per annum by 2028. Further, it introduces incentives and subsidies for businesses setting up operations within the next 5 years. GH projects will be provided capital subsidies within a prescribed range (10% - 30%) based on the geographical area and scale of investment in a project. In addition, long-term leases on land are expected to be made available.

Applicable waivers (up to 100%) include those on land stamp duty, as well as on open access charges (including those related to transmission, wheeling, cross-subsidy and electricity duty) for a period of 10 years.

The Uttar Pradesh New and Renewable Energy Development Agency (“**UPNEDA**”) will be the nodal agency with respect to the UP GH Policy.

Delhi Government Notifies ‘Solar Energy Policy 2023’

Pursuant to a notification dated March 14, 2024, the government of the National Capital Territory (“**NCT**”) of Delhi notified the Delhi Solar Energy Policy, 2023 (“**Delhi Solar Policy**”) with a vision of making solar energy accessible and affordable for all consumers, including by creating targeted incentives and green

jobs, as well as by promoting innovative models for solar adoption, in the NCT of Delhi.

The Delhi Solar Policy will be applicable to any solar energy generating system of a capacity of 1 kilowatt peak (“**KWp**”) or more. It applies to all electricity consumers and all entities that set up and/or operate solar power plants in Delhi. Further, it extends economic incentives for all consumers, additional benefits for group housing societies and residential consumers, as well as generation-based incentives.

EV

MHI introduces new EV Policy (see [here](#))

Pursuant to a notification dated March 15, 2024, the MHI has issued a ‘scheme to promote the manufacturing of electric passenger cars in India’ (“**New EV Policy**”). Under the New EV Policy, approved applicants can set up manufacturing facilities in India with a minimum investment of INR 41.5 billion for manufacturing e-4W. Such manufacturing facilities need to: (i) be made operational within a period of 3 years from the date of issuance of the MHI’s approval letter; and (ii) achieve a minimum DVA of 25% within the same period. Further, the approved applicant will be required to achieve a minimum DVA of 50% within a period of 5 years from the date of issuance of the MHI’s approval letter.

The applicant will be allowed to import completely built-up (“**CBU**”) e-4Ws manufactured by them at a reduced customs duty of 15%, subject to the conditions under the New EV Policy. Further, passenger e-4W can initially be imported with a minimum cost, insurance, and freight (“**CIF**”) value of USD 35,000 at a duty rate of 15% for a period of 5 years from the date of issuance of the MHI’s approval letter. The maximum number of e-4W allowed to be imported at such reduced duty rate will be capped at 8,000 a year. Unutilized annual import limits are permitted to be carried forward.

MHI launches INR 5 billion program to promote electric mobility (see [here](#))

Pursuant to a notification dated March 13, 2024, the MHI issued the Electric Mobility Promotion Scheme - 2024 with an outlay of INR 5 billion for the period starting from April 1, 2024 to July 31, 2024. This scheme aims to promote the faster adoption of e-2W

and e-3W in the country, including for the purpose of providing further impetus to green mobility and the development of an EV manufacturing ecosystem in India.

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