



Quarterly Roundup: Clean Energy

APRIL TO JUNE 2024

Executive Summary

This is the second issue of 2024 under S&R's Quarterly Roundup Series on Clean Energy.

The period under discussion witnessed various regulatory changes and updates in India at the central and state levels, respectively, pursuant to certain transformational developments on clean energy governance in the previous quarter, as covered in our last series update (Issue 1 of 2024).

Issue 2 of 2024 covers the period between the months of April and June 2024, tracking and analyzing major regulatory developments in such period, including with respect to the following:

- the approved/revised list of manufacturers and models (related to solar photovoltaic modules and wind turbine models, respectively)
- rooftop solar projects
- the optimal utilization of power generating stations
- the National Green Hydrogen Mission
- the determination of fees and charges to be collected by regional load dispatch centers
- deviation settlement
- EV charging infrastructure
- quality control standards for electrical equipment
- biomass utilization
- the electricity grid code, and
- renewable energy tariff determination.

In addition, Issue 2 of 2024 tracks and discusses regulatory developments across states, such as those with respect to:

- open access (including green energy open access)
- consumer rights (e.g., related to metering)
- resource adequacy
- renewable purchase obligations
- peer-to-peer energy transactions, and
- battery energy storage systems.

UPDATES

- Regulatory and legislative updates have been divided month-wise (i.e., relating to April, May and June 2024, respectively).
- Under each month, updates on clean energy and electric vehicles, 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 – including with respect to laws, regulations, notifications, announcements, etc. – across all categories are embedded within item headings or have been inserted in-line.

OTHER PUBLICATIONS

- For an overview and analysis of the landmark March 2024 judgement delivered by the Supreme Court of India in *MK Ranjitsingh & Others vs. Union of India & Others*, where the Supreme Court sought to balance the goal of safeguarding biodiversity with that of mitigating climate change, see our note [here](#).
- For a discussion on the Indo-Pacific Economic Framework for Prosperity, which, among other things, aims to address emerging economic challenges related to clean energy and promote sustainable growth in the Indo-Pacific region, see our note [here](#), including in the context of opportunities for Indian companies.

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Glossary

Term	Meaning
April 10 Memo	Office memorandum dated April 10, 2024 issued by the MNRE revising the ALMM List-I
April 22 Letter	Letter dated April 22, 2024 issued by the MoP with clarifications regarding the Optimal Utilization Guidelines
April 29 Memo	Office memorandum dated April 29, 2024 issued by the MNRE revising the ALMM List-I
ALMM	Approved List of Manufacturers and Models
ALMM List-I	List-I of the Approved List of Manufacturers and Models
ALMM List-II	List-II of the Approved List of Manufacturers and Models
ALMM Order	Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirements for Compulsory Registration) Order, 2019
Andhra Pradesh Open Access Regulation	Draft APERC (Green Energy Open Access, Charges and Banking) Regulation, 2023
APERC	Andhra Pradesh Electricity Regulatory Commission
APERC INST Regulation	APERC (Threshold Limit for the Development of Intra-State Transmission (INST) Projects Under the Tariff Based Competitive Bidding) Regulation, 2024
APPPC	Average Pooled Power Purchase Cost
APERC	Arunachal Pradesh State Electricity Regulatory Commission
ARR	Annual Revenue Requirement
BEE	Bureau of Energy Efficiency
BERC	Bihar Electricity Regulatory Commission
BESS	Battery Energy Storage System
BIS	Bureau of Indian Standards
BiPV	Building-integrated PV
C&I	Commercial and Industrial
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CFA	Central Financial Assistance
CHT	Center for High Technology
CIL Rules	Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
COD	Commercial Operating Date
Consumer Rules Amendment	Electricity (Rights of Consumers) Amendment Rules, 2024
Consumer Rights Rules	Electricity (Rights of Consumers) Rules, 2020
CPP	Captive Power Plant
CSERC	Chhattisgarh State Electricity Regulatory Commission
CSERC Notice	Public notice dated July 25, 2023 issued by CSERC releasing the Draft CSERC DRE Amendment Regulations
CSS	Cross-Subsidy Surcharge
CTU	Central Transmission Utility

Term	Meaning
DERC	Delhi Electricity Regulatory Commission
DERC P2P Guidelines	DERC (Peer to Peer Energy Transaction) Guidelines, 2024
discoms	Distribution Companies
DOA Amendment	MERC (Distribution Open Access) (Second Amendment) Regulations, 2023
DOCO	Declaration of Commercial Operation
Draft BERC GEOA Regulations	Draft BERC (Terms and Conditions of Green Energy Open Access) Regulations, 2024
Draft BERC Net Metering Regulation	Draft BERC (Rooftop Solar Grid Interactive Systems Based on Net and Gross Metering) (First Amendment) Regulation, 2024
Draft CFA Guidelines	Draft guidelines for the CFA component issued by the MNRE on April 16, 2024
Draft CSERC DRE Amendment Regulations	CSERC (Grid Interactive Distributed Renewable Energy Sources) (Second Amendment) Regulations, 2023
Draft DERC P2P Guidelines	Draft DERC (Peer to Peer Energy Transaction) Guidelines, 2024
Draft DERC RPO REC Regulations	Draft DERC (Renewable Purchase Obligation and Renewable Energy Certificate Framework Implementation) Regulations, 2024
Draft Grid Code Amendment	CERC (Indian Electricity Grid Code) (First Amendment) Regulations, 2024
Draft Gujarat GEOA Regs	Draft GERC (Terms and Conditions for Green Energy Open Access) Regulations, 2023
Draft KERC P2P Blockchain Regulations	Draft KERC (Implementation of Peer-to-Peer Solar Energy Transaction through blockchain based platform) Regulations, 2024
Draft MERC REC First Amendment	Draft MERC (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) (First Amendment) Regulations, 2023
Draft Resource Adequacy Regulations	Draft JSERC (Framework for Resource Adequacy) Regulations, 2024
Draft RLDC Fees Regulations	Draft CERC (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2024
Draft TNERC GEOA Regulations	Draft TNERC (Terms and Conditions for Green Energy Open Access) Regulations, 2024
Draft TNERC Grid Solar PV Regulations	Draft TNERC (Grid Interactive Solar PV Energy Generating Systems) Regulations, 2024
Electricity Act	The Electricity Act, 2003
ESS	Energy Storage System
Electricity Rules	The Electricity Rules, 2005
EV	Electric Vehicles
EV Charging Guidelines	Charging Infrastructure for Electric Vehicles – “Guidelines and Standards”, as issued by MoP on December 14, 2018
EOU	Export Oriented Unit
February 9 Memo	Office memorandum dated April 10, 2024 issued by the MNRE reimposing the ALMM Order with effect from April 1, 2024
February 12 Letter	Letter dated February 12, 2024 issued by MoP requesting all states and union territories to take appropriate action towards the implementation of the GEOA Rules
First Amendment	Electricity (Amendment) Rules, 2024

Term	Meaning
FoR	Forum of Regulators
FSAs	Fuel Supply Agreements
GA	Green Ammonia
gencos	Generating Companies
GEOA	Green Energy Open Access
GEOA Rules	Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022
GEOA Second Amendment	Electricity (Promoting Renewable Energy Through Green Energy Open Access) (Second Amendment) Rules, 2023
GERC	Gujarat Electricity Regulatory Commission
GERC Rooftop Solar Amendment	Draft GERC (Net Metering Rooftop Solar PV Grid Interactive Systems) (Fourth Amendment) Regulations, 2024
GH	Green Hydrogen
GHG	Greenhouse Gas
GISS	Grid-interactive Solar PV Energy Generating Systems
GL	Germanischer Lloyd
GNA	General Network Access
GSC	Grid Support Charges
Gujarat GEOA Regs	GERC (Terms and Conditions for Green Energy Open Access) Regulations, 2024
Haryana GEOA Regulations	HERC (Green Energy Open Access) Regulations, 2023
HERC	Haryana Electricity Regulatory Commission
HPERC	Himachal Pradesh Electricity Regulatory Commission
IACB	Internationally Accredited Certification Body
IEC	International Electrotechnical Commission
InSTDS	Intra-State Transmission and/or Distribution System(s)
IPP	Independent Power Producers
IS	Indian Standards
JERC	Joint Electricity Regulatory Commission
JERC GUT	Joint Electricity Regulatory Commission for the State of Goa and Union Territories
JERC MM	Joint Electricity Regulatory Commission for Manipur and Mizoram
JSERC	Jharkhand State Electricity Regulatory Commission
June 8 KERC Order	Order dated June 8, 2023 issued by KERC clarifying various issues that arose in connection with implementing the KERC GEOA Regulations
KERC	Karnataka Electricity Regulatory Commission
KERC GEOA Regulations	KERC (Terms and Conditions for Green Energy Open Access) Regulations, 2022
Late Payment Surcharge Rules	Electricity (Late Payment Surcharge and Related Matters) Rules, 2022
March 29 Memo	Office memorandum dated March 29, 2024 issued by the MNRE clarifying that the ALMM Order for solar PV modules would come into effect from April 1, 2024 with certain modifications
MERC	Maharashtra Electricity Regulatory Commission
MERC Principal Regulations	MERC (Distribution Open Access) Regulations, 2016
MHI	Ministry of Heavy Industries
MNRE	The Ministry of New and Renewable Energy

Term	Meaning
MNRE PSGMBY Order	Order dated March 16, 2024 issued by the MNRE announcing the launch of the PSGMBY scheme
MoP	Ministry of Power
MoPNG	Ministry of Petroleum and Natural Gas
MPERC	Madhya Pradesh Electricity Regulatory Commission
MSERC	Meghalaya State Electricity Regulatory Commission
MT	Metric Tonnes
NGHM	National Green Hydrogen Mission
NZIA	Net-Zero Industry Act of the European Union
OEM	Original Equipment Manufacturers
OERC	Odisha Electricity Regulatory Commission
OERC Open Access Regulations	Draft OERC (Promotion of Renewable Energy through Green Energy Open Access) Regulations, 2023
Onshore Wind Guidelines	Guidelines for the Development of Onshore Wind Power Projects
open access charges	Specified Charges Levied and/or Leviable under Open Access
Optimal Utilization Guidelines	Guidelines for operationalizing optimal utilization of generating stations as per the requirement in the electricity grid dated October 8, 2021
P2P	Peer-to-Peer
p.a.	Per annum
PLI	Production Linked Incentive
Policy on Biomass Utilization	Revised Policy for Biomass Utilization for Power Generation through Co-firing in Coal-based Power Plants dated October 8, 2021
POSOCO	Power System Operation Corporation
PPA	Power Purchase Agreement
Principal RERC Green Energy Tariff Regulations	RERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020
PSERC	Punjab State Electricity Regulatory Commission
PSERC OA Amendment	PSERC (Terms and Conditions for intra-State Open Access) (10 th Amendment) Regulations, 2023
PSGMBY	PM-Surya Ghar: Muft Bijli Yojana
PSGMBY Operational Guidelines	Operational guidelines for the implementation of the sub-component related to CFA to residential consumers under the ‘capex mode’ for eligible consumer categories with respect to the PSGMBY scheme, as issued by the MNRE pursuant to an office memorandum dated June 7, 2024
PV	Photovoltaic
R&D	Research and Development
RAPF Guidelines	Guidelines for Resource Adequacy Planning Framework for India dated June 28, 2023
RE	Renewable Energy
RERC	Rajasthan Electricity Regulatory Commission
RE Tariff Regulations	CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2024
RERC Green Energy Tariff Amendment	Draft RERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) (First Amendment) Regulations, 2023
RESCO	RE Services/Supply Company
RLDCs	Regional Load Dispatch Centers
RPO	Renewable Purchase Obligation

Term	Meaning
RTS	Rooftop Solar
SECI	Solar Energy Corporation of India
Second Amendment	Electricity (Second Amendment) Rules, 2024
SERC	State Electricity Regulatory Commission
SEZ	Special Economic Zone
SIGHT	Strategic Interventions for Green Hydrogen Transition
SRTPV	Solar Rooftop Photovoltaic
STU	State Transmission Utility
Tariff Policy	Tariff Policy, 2016
TANGEDCO	Tamil Nadu Generation & Distribution Corporation Limited
Telangana Draft OA Regulations	Draft TSERC (Terms and Conditions of Open Access), Regulation, 2023
Third Amendment	MPERC (Terms and Conditions for Intra-State Open Access in Madhya Pradesh)(Revision -I) Regulations, 2021 (Third Amendment)
TNERC	Tamil Nadu Electricity Regulatory Commission
ToD	Time of Day
TS Discoms	TSNPDCL and TSSPDCL
TSERC	Telangana State Electricity Regulatory Commission
TSNPDCL	Northern Power Distribution Company of Telangana Limited
TSSPDCL	Southern Power Distribution Company of Telangana Limited
UERC	Uttarakhand Electricity Regulatory Commission
Wind Turbine List	Revised List of Models and Manufacturers for Wind Turbine Models

April 2024

CLEAN ENERGY

Central Government

MNRE updates ALMM list

Pursuant to an office memorandum dated April 10, 2024 (the “**April 10 Memo**”), the Ministry of New and Renewable Energy (“**MNRE**”) revised its List-I of the [approved list of manufacturers and models](#) (“**ALMM**,” and such list, the “**ALMM List-I**,” as first published on March 10, 2021). For background and context to the ALMM procedure, see our note [here](#) (Quarterly Roundup: Clean Energy, Issue 1 of 2024, January – March 2024).

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 by the MNRE pursuant to an [office memorandum dated March 22, 2024](#), granting provisional enlistment to certain specified entities.

Pursuant to the April 10 Memo, the MNRE further revised the ALMM List-I, and such revision (Revision-XXIII) is enclosed at Annexure-1 of the April 10 Memo. The details of provisional enlistments granted by the MNRE in the ALMM List-I are provided in the pages following such Annexure-1, including through a letter dated April 10, 2024 to Saatvik Green Energy Private Limited.

Background

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 (“**RTS**”) projects (net metering), the corporate power purchase agreement (“**PPA**”) market, and government schemes like [PM-KUSUM](#) (which was launched on March 8, 2019 for the benefit of farmers). Previously, pursuant to an [order dated January 17, 2024](#), the MNRE had issued comprehensive guidelines for the implementation of the PM-KUSUM scheme. For a discussion on corporate PPAs based on renewable energy (“**RE**”) in India, see our note [here](#). For a discussion on ‘virtual’ PPAs in India, see our note [here](#), and for an analysis of the potential regulatory and governance framework with respect to virtual PPAs, see [here](#) and [here](#).

The ALMM initiative plays a significant role in the Indian solar energy sector. It consists of two lists. The ALMM List-I specifies MNRE-approved models and manufacturers of *solar PV modules*. The second list under the ALMM Order (the “**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 Bureau of Indian Standards (“**BIS**”), the national standards body of India. 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 process was to ensure the quality of solar panels as well as the reliability of manufacturers involved, the enlisted models and manufacturers are subject to quality assurance procedures that include random quality checks and tests, such as inspections of manufacturing facilities.

Accordingly, if enlisted manufacturers fail to: (i) meet necessary standards, or (ii) comply with applicable regulations, they will be removed from the ALMM process. 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.

Previous Developments

February 2024

Previously, pursuant to an [office memorandum dated February 15, 2024](#), the MNRE had put in abeyance its earlier office memorandum dated February 9, 2024 (the “**February 9 Memo**”) until further orders were made in this regard.

The February 9 Memo had provided for the re-imposition of the ALMM Order with effect from April 1, 2024 – with exemptions for open access and captive power plant (“**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.

Further, the February 9 Memo had also specified as follows:

The ALMM Order would apply to:

- Only those projects which are sponsored or subsidized by the government;
- The government or its agencies procuring power for its own consumption or for distribution among people through state-owned/licensed power distribution companies (“**discoms**”);
- Solar rooftop photovoltaic (“**S RTPV**”) projects and PM-KUSUM, which are subsidized.

The ALMM Order would not apply to:

- 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 February 9 Memo had 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, 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:

1. inadequate domestic module manufacturing capacity,
2. the lower quality of domestic modules compared to foreign (including tier-I Chinese) manufacturers, and
3. the higher prices of domestic modules.

Further, such abeyance was presumably imposed to provide adequate time to:

1. manufacturers to secure the certifications necessary; and
2. 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 had been enlisted under the ALMM process as of such date, those foreign manufacturers which commanded a significant market share in India would also stand to benefit from such abeyance.

March 2024

Subsequently, pursuant to an [office memorandum dated March 29, 2024](#) (the “**March 29 Memo**”), the MNRE clarified that the ALMM Order for solar PV modules (*i.e.*, the ALMM List-I) would come into effect from April 1, 2024.

However, the March 29 Memo specified that certain projects would be examined separately – specifically, those projects which:

1. were unable to get commissioned by March 31, 2024 on account of reasons beyond the control of the RE developer, and

- received the solar PV modules at the project site by March 31, 2024.

Unlike the February 9 Memo, the March 29 Memo allowed no exemption for projects which were set up as captive or under open access by private parties. Previously, pursuant to the February 9 Memo, 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 with respect to the requirement of procuring such modules only from MNRE-approved models and manufacturers under the ALMM List-I.

The re-imposition of the ALMM Order from April 1, 2024 was expected to help domestic original equipment manufacturers (“OEMs”). As of April 2024, the ALMM List-I comprised only domestic solar OEMs. It is possible that domestic module manufacturing increased over the past year while the ALMM was in abeyance. If domestic manufacturing indeed rose under the government’s ‘Production Linked Incentive’ (“PLI”) scheme for the [National Program on High Efficiency Solar PV Modules](#), 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, power generating companies (“gencos”) and independent power producers (“IPPs”), even after import duties are factored in. In this regard, the reimposition of ALMM from April 1, 2024 is likely to affect private open access and captive solar power projects.

April 2024

Other than the April 10 Memo, pursuant to an [office memorandum dated April 29, 2024](#), (the “**April 29 Memo**”) the MNRE further revised the ALMM List-I, and such revision (Revision-XXIV) is enclosed at Annexure-1 of the April 29 Memo. The April 29 Memo lists out the details of provisional enlistments under the ALMM List-I granted by the MNRE in

respect of solar PV module models to certain entities. Such details are provided in the pages following the Annexure-1, including through letters dated April 29, 2024 issued by the MNRE to Emmvee Photovoltaic Power Private Limited, Tata Power Solar Systems Limited and SASA Energy LLP. The April 29 Memo also specifies that enlistment under ALMM remains subject to valid registration under the BIS.

MNRE issues Draft Guidelines for the CFA component related to the implementation of the PSGMBY scheme

Pursuant to an office memorandum dated April 16, 2024 under its [Grid-Connected Rooftop Solar Program](#), the MNRE issued draft guidelines for the Central Financial Assistance (“CFA”) component (*i.e.*, ‘Component A’, and such guidelines, the “**Draft CFA Guidelines**”) with respect to the implementation of a scheme called the [PM-Surya Ghar: Muft Bijli Yojana](#) (“PSGMBY”) for the residential sector.

Previously, the Government of India had [launched](#) the PSGMBY scheme on February 13, 2024 with the aim of installing RTS plants and providing free electricity up to 300 units every month in 10 million households with a total financial outlay of INR750.21 billion across all of the scheme’s sub-components.

Thereafter, pursuant to an [order dated March 16, 2024](#), the MNRE had announced the launch of the PSGMBY scheme, clarifying, among other things, that the second phase (Phase – II) of the grid-connected RTS program would be deemed subsumed under the PSGMBY scheme, along with the remaining financial outlay and liabilities, with effect from the launch of the PSGMBY scheme (such MNRE order, the “**MNRE PSGMBY Order**”). For background and context, along with a discussion on the MNRE PSGMBY Order, see pp. 31-32 of our note [here](#) (Quarterly Roundup: Clean Energy, Issue 1 of 2024, January – March 2024).

The Draft CFA Guidelines relate to the implementation of ‘Sub-component 1: CFA to residential consumers’ with a financial outlay of INR657 billion pursuant to the relevant administrative approval. The Draft CFA Guidelines are proposed to be applicable for all applications received on the national portal from the date of the launch of the scheme (*i.e.*, February 13, 2024).

For an update on the Draft CFA Guidelines, see below.

Ministry of Power clarifies guidelines for gencos to sell surplus power in the power market

Pursuant to a letter dated April 22, 2024 (the “**April 22 Letter**”), the Ministry of Power (“**MoP**”) issued a clarification regarding the guidelines for operationalizing optimal utilization of generating stations as per the requirement in the electricity grid (such guidelines, the “**Optimal Utilization Guidelines**”).

Pursuant to the [Tariff Policy, 2016](#) (the “**Tariff Policy**”), power stations are required to be available and ready to dispatch power at all times. For optimal utilization of unrequisioned generating capacity of any generating station regulated under Section 62 of the Electricity Act, 2003 (the “**Electricity Act**”), as well as those having PPAs under Section 63 of the Electricity Act, power generators have been permitted to sell power in the power market pursuant to the policy laid down by the central government.

As per the provisions of the Tariff Policy, and pursuant to a letter dated October 8, 2021, the MoP had [issued](#) the Optimal Utilization Guidelines. Further, Section 9(5) of the Electricity (Late Payment Surcharge and Related Matters) Rules, 2022 (the “**Late Payment Surcharge Rules**”) provides for the sale of surplus power, which is within the declared generation capacity, but which has not been requisitioned by discoms. Recently, pursuant to a [notification dated February 28, 2024](#), the MoP had issued the Electricity (Late Payment Surcharge and Related Matters) (Amendment) Rules, 2024 to amend the Late Payment Surcharge Rules.

In the April 22 Letter, the MoP clarified that, in accordance with the Tariff Policy and the Late Payment Surcharge Rules, as amended (including in 2024) – gencos, including gencos which have long-term coal linkage under existing fuel supply agreements (“**FSAs**”), are allowed to offer the unrequisioned surplus power in the power market.

MNRE extends the deadline for R&D proposal submissions with respect to Green Hydrogen

Pursuant to an office memorandum dated April 26, 2024, the MNRE extended the deadline to submit proposals for research and development (“**R&D**”) projects under the [National Green Hydrogen Mission \(“NGHM”\)](#) until May 12, 2024.

Previously, pursuant to a [letter dated March 15, 2024](#), the Hydrogen Division of the MNRE had 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 INR4 billion until FY 2025-26. For background and context related to the detailed scheme [guidelines](#) with respect to the implementation of the R&D scheme under the NGHM, see pp. 29-30 of our note [here](#) (Quarterly Roundup: Clean Energy, Issue 1 of 2024, January – March 2024).

The R&D scheme under the NGHM aims to make the production, storage, transportation, and utilization of Green Hydrogen (“**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.

Subsequent to the issuance of such detailed guidelines with respect to the implementation of the R&D scheme under the NGHM, the MNRE had invited proposals from eligible entities under such scheme on March 16, 2024 pursuant to an [office memorandum dated March 15, 2024](#) with a deadline of April 12, 2024. In this regard, the MNRE had 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 proposals, the MNRE had previously [extended the deadline](#) for proposal submission to April 27, 2024 pursuant to an [office memorandum dated April 9, 2024](#).

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

In addition, see our note [here](#) (Quarterly Roundup: Clean Energy, Issue 1 of 2024, January – March 2024) for discussions on the following aspects of the NGHM:

- [scheme guidelines](#) for the 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](#) ("**GA**") and [GH](#) production and supply under Mode-2A and Mode-2B, respectively (pp. 10-11);
- [scheme guidelines](#) for the implementation of pilot projects with respect to the use of GH in the shipping sector (p. 17);
- [scheme guidelines](#) for the implementation of pilot projects with respect to the use of GH in the steel sector (pp. 17-18);
- [scheme guidelines](#) for the implementation of pilot projects related to the use of GH in the transport sector (pp. 20, 24-25);
- [guidelines](#) for the implementation of a scheme related to the setting up of hydrogen hubs in India (p. 28);
- [scheme guidelines](#) for the implementation of Component I of the SIGHT program involving Tranche – II of an incentive scheme for electrolyzer manufacturing for the period starting from FY 2025-26 to FY 2029-30 (pp. 30-31); and
- [scheme guidelines](#) related to skilling, upskilling and re-skilling for the period between FY 2023-24 and FY 2029-30 (p. 31).

CERC issues a draft of the Fees and Charges of Regional Load Despatch Centre and Other Related Matters Regulations, 2024

Pursuant to a [notification dated April 4, 2024](#), the Central Electricity Regulatory Commission ("**CERC**") issued a draft of the CERC (Fees and Charges of

Regional Load Despatch Centre and other related matters) Regulations, 2024 ("**Draft RLDC Fees Regulations**"). The Draft RLDC Fees Regulations provide a framework for the determination of fees and charges to be collected by regional load dispatch centers ("**RLDCs**") from various stakeholders, including gencos, discoms, bulk consumers, inter-state transmission licensees, buyers, sellers, inter-state trading licensees, settlement nodal agencies, and any other users.

Stakeholders were permitted to submit their comments and suggestions with respect to the Draft RLDC Fees Regulations [by May 6, 2024](#).

CERC issues Draft Deviation Settlement Mechanism Regulation

Pursuant to a draft notification dated April 30, 2024, the CERC issued a draft of the CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2024 with the aim of ensuring through a commercial mechanism that grid users do not deviate from, but rather adhere to, their schedule of drawing and injecting electricity in the interest of the security and stability of the grid.

State Government

GERC approves additional surcharge for open access consumers

Pursuant to an order dated April 8, 2024, the Gujarat Electricity Regulatory Commission ("**GERC**") levied an additional surcharge of INR1.00/kWh for the period between April 1, 2024 and September 30, 2024 with respect to consumers of the Gujarat Urja Vikas Nigam and other discoms which avail power through 'open access' from any source other than their respective discoms.

Background

Earlier, power consumers were bound to purchase electricity from discoms. Accordingly, discoms enjoyed 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 (from 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 additional surcharge).

Amendments to the Electricity Rules

Pursuant to a [notification dated January 10, 2024](#), the 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 capped various open access charges, including in respect of charges related to 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.

Additional Surcharge

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 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

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 General Network Access (“**GNA**”) or open access, the additional surcharge is required to be linearly reduced from the value corresponding to the year in which GNA 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 GNA or open access, as applicable.

Open Access

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 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.

Open Access and States

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.

Other Charges under Open Access

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 specified a formula for the calculation of wheeling charges. In this regard, 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 specified that sub-rule (1) of rule 22 would be substituted with a revised formulation, such that a proviso was included.

Earlier, 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 Annual Revenue Requirement (“**ARR**”) towards wheeling divided by the energy wheeled during the year. While the Second Amendment retained such formula, it added a proviso to specify that the appropriate commission may determine the wheeling charges at different voltage levels separately in accordance with such formula.

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 tend to be 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.

Other States/SERCs

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”) had 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, and (ii) directions issued to TS Discoms with respect to their future additional surcharge filings.

Previously, pursuant to a common [order dated September 29, 2023](#), the TSERC had increased the additional surcharge for open access consumers in the state of Telangana to INR1.98/kWh (from INR 0.39/kWh). The increased additional surcharge was effective from October 1, 2023.

JSERC issues Draft Resource Adequacy Framework Regulations

Pursuant to a notification dated April 22, 2024, the Jharkhand State Electricity Regulatory Commission

(“JSERC”) issued a draft of the [JSERC \(Framework for Resource Adequacy\) Regulations, 2024](#) (the “Draft Resource Adequacy Regulations”).

The Draft Resource Adequacy Regulations were issued with the aim to implement a resource adequacy framework in the state of Jharkhand by outlining a mechanism for the planning of generation and transmission resources towards reliably meeting the state’s power demands in compliance with specified reliability standards.

KERC issues Draft Terms and Conditions for Determination of Generation Tariff Regulations

Pursuant to a notification dated April 19, 2024, the Karnataka Electricity Regulatory Commission (“KERC”) issued the Draft KERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2024 to specify the terms and conditions for the determination of tariff for supplying power by gencos to discoms in the state.

UERC issues Draft Amendment to (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and Non-Fossil Fuel Based Co-Generating Stations) Regulations

Pursuant to a draft notification, the Uttarakhand Electricity Regulatory Commission (“UERC”) issued a draft of the UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) (First Amendment) Regulations, 2024 – which sought to amend the UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2023.

The proposed amendment, among other things, seeks to introduce certain provisions related to the renewable purchase obligation (“RPO”) of discoms in the state of Uttarakhand.

JERC for Manipur and Mizoram releases Methodology for determination of Green Energy Open Access Charges Regulations

Pursuant to a notification April 9, 2024, the Joint Electricity Regulatory Commission (“JERC”) for Manipur and Mizoram (such JERC, the “JERC MM”) issued the JERC for Manipur and Mizoram (Methodology for determination of Green Energy Open Access Charges) Regulations, 2024. These

regulations aim to provide a methodology for the determination of open access charges and banking charges for consumers of 'green energy open access' ("**GEOA**").

Background

The Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022 were [notified by the MoP on June 6, 2022](#), and have been subsequently [amended](#) by the MoP from time to time (such rules, the "**GEOA Rules**").

The GEOA Rules

Through the GEOA Rules, the reduction of the open access transaction limit from 1 MW to 100 kW, along with appropriate provisions for cross-subsidy surcharge, additional surcharge and stand-by charge, were expected to incentivize common consumers to get 'green power' at reasonable rates. Further, since the GEOA Rules addressed other issues which were perceived to have previously hindered the growth of open access, common consumers were expected to get access to RE-based power easily.

The [main features of the GEOA Rules](#) were as follows:

- The rules were notified for the purpose of promoting the generation, purchase, and consumption of green energy, including energy from waste-to-energy plants.
- GEOA was allowed for all consumers and the limit related to open access transactions was reduced from 1 MW to 100 kW for green energy for the purpose of enabling small consumers to purchase renewable power through open access.
- Consumers were entitled to demand the supply of green power from discoms. Discoms would be obligated to procure and supply green power to eligible consumers.
- The GEOA Rules were also expected to streamline the overall approval process for the granting of open access. Time-bound processing, including by bringing uniformity and transparency in the application and

approval process related to open access through a national portal, was mandated. Approval for GEOA was required to be granted in 15 days, failing which such approval would be deemed to have been granted.

- C&I consumers were allowed to purchase green power on a voluntary basis.
- The GEOA Rules were also expected to provide certainty with respect to those open access charges which were to be levied on GEOA consumers. Such charges include transmission charges, wheeling charges, cross-subsidy surcharge, and stand-by charges. Further, a cap was imposed with respect to increasing the cross-subsidy surcharge. In addition, the additional surcharge was removed to incentivize consumers to procure green power.
- There would be a uniform RPO on all obligated entities in the area of a discom. GH and GA were included for the purpose of RPO compliance.
- Consumers would be given 'Green Certificates' if they consumed green power.

As per the Electricity Act, the tariff is determined by the appropriate SERC. Accordingly, rule 4(2) of the GEOA Rules specifically 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 RE, cross-subsidy charges (if any), and service charges covering the prudent cost of the discom for providing green energy to consumers.

Accordingly, the GEOA Rules request all SERCs and joint commissions (such as the JERC MM) to take appropriate action for the determination of green tariff under such provision at the earliest.

State Adoption of the GEOA Rules

Pursuant to a [letter dated February 12, 2024](#) (the "**February 12 Letter**"), the MoP had requested all states and union territories to take appropriate action

towards the implementation of the (central) GEOA Rules, 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 made by the MoP, such as those introduced through the [Electricity \(Promoting Renewable Energy Through Green Energy Open Access\) \(Second Amendment\) Rules, 2023](#) ("GEOA Second Amendment").

The GEOA Second Amendment was issued by the MoP further to a notification dated May 23, 2023. Among other things, GEOA Second Amendment prescribed eligibility criteria for consumers who wanted to draw power through GEOA and clarified that no additional surcharge would be applicable on the electricity that was (i) produced from offshore wind projects commissioned until December 2032, and (ii) supplied to open access consumers thereafter.

Finally, pursuant to the February 12 Letter, the MoP asked all states and union territories to send the status of their compliance within 15 days from the issue of such letter.

Previously, pursuant to a [letter dated May 13, 2023](#), the MoP had instructed all SERCs to: (i) determine green tariffs, and (ii) notify GEOA regulations within their respective states, in alignment with the central GEOA Rules.

Other States/Union Territories

Certain states and union territories have taken initiatives to align their respective regulations in respect of GEOA with the central GEOA Rules. A few instances of such initiatives are provided below.

Goa and Union Territories

Previously, pursuant to a [public notice issued in January 2024](#), the [JERC for the State of Goa and Union Territories](#) (such JERC, the "JERC GUT") had 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 (central) GEOA Rules.

Since the (central) GEOA Rules had requested all SERCs and JERCs to take appropriate action for the determination of green tariff under rule 4(2) of the GEOA Rules (which provision provides that the tariff for the supply of green energy by discoms will be determined separately by the appropriate SERC or JERC, as applicable) at the earliest, taking note of such mandate under the (central) 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 GUT had initiated a 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 GUT draft discussion paper had also referred to, and had sought 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 GUT adopted 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 involved and included 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.

Gujarat

Pursuant to a [notification dated February 21, 2024](#), the GERC had issued the GERC (Terms and

Conditions for Green Energy Open Access) Regulations, 2024 (the “**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 sought 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 are 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.

Previously, pursuant to a [notification dated June 23, 2023](#), the GERC had issued a draft of the then-proposed GERC (Terms and Conditions for Green Energy Open Access) Regulations, 2023 (“**Draft Gujarat GEOA Regs**”). The Draft Gujarat GEOA OA Regs had proposed rules with respect to the eligibility for open access, procedures for granting open access, banking, and other open access charges applicable on open access consumers. Such open access consumers were categorized into long-term, medium-term and short-term GEOA, respectively, based on the duration of use with respect to the intra-state transmission and/or distribution system for open access.

Karnataka

Pursuant to an [order dated June 8, 2023](#) (the “**June 8 KERC Order**”), the KERC had issued clarifications with respect to various issues that arose in connection with implementing the KERC (Terms and Conditions for Green Energy Open Access)

Regulations, 2022 (the “**KERC GEOA Regulations**”).

Previously, the KERC had issued the KERC GEOA Regulations with respect to the state of Karnataka pursuant to a Karnataka State Gazette notification on January 19, 2023 in line with the (central) GEOA Rules.

Among other things, the June 8 KERC Order included clarifications relating to the implementation of the time-of-day (“**ToD**”) settlement for energy injected and drawn, bill settlement priority for different generation sources, transmission charges for intra-state wheeling of energy, and charges applicable under the KERC GEOA Regulations.

Subsequently, pursuant to an [order dated August 9, 2023](#), the KERC allowed open access to consumers who had a contracted demand or a sanctioned load of 100 kW or more to source power through GEOA under the KERC GEOA Regulations.

Thereafter, pursuant to a [notification dated January 10, 2024](#), the KERC issued a methodology for, and procedures for the implementation of, the ToD settlement for 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.

Maharashtra

Pursuant to a [notification dated November 10, 2023](#), the Maharashtra Electricity Regulatory Commission (“**MERC**”) issued the MERC (Distribution Open Access) (Second Amendment) Regulations, 2023 (the “**DOA Amendment**”) along with a statement of reasons for the purpose of incorporating changes in industry, as well as pursuant to amendments notified by the MoP to the (central) GEOA Rules.

Among other things, the DOA Amendment substituted regulation 20.4 of the original regulations

to increase banking charges from two percent (2%) to eight percent (8%).

Previously, pursuant to a draft notification dated August 1, 2023, the MERC had released a draft of the DOA Amendment. The draft DOA Amendment had sought to incorporate such sectoral changes in the MERC (Distribution Open Access) Regulations, 2016 (the “**MERC Principal Regulations**”) which had entered into force since the issuance of the first amendment to the MERC Principal Regulations.

At the same time, pursuant to a draft notification dated August 1, 2023, the MERC issued the [Draft MERC \(Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework\) \(First Amendment\) Regulations, 2023](#) (the “**Draft MERC REC First Amendment**”), along with a related [explanatory memorandum](#).

The Draft MERC REC First Amendment sought to align the MERC (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) Regulations, 2019 with changes introduced by the MoP through, among other things, the (central) GEOA Rules, 2022.

Arunachal Pradesh

Pursuant to a [public notice dated November 29, 2023](#), the Arunachal Pradesh State Electricity Regulatory Commission (“**APSERC**”) issued the draft APSERC (Terms and Conditions for Green Energy Open Access and Methodology for Calculation of Charges) Regulations, 2023, inviting comments and suggestions from interested parties.

Such draft regulations aimed to enable open access for electricity generated from RE sources for the purpose of use in relation to the state’s intra-state transmission and distribution system.

Chhattisgarh

Pursuant to a [public notice](#) issued by the Chhattisgarh State Electricity Regulatory Commission (“**CSERC**”) [on July 25, 2023](#) (the “**CSERC Notice**”), a draft of the [CSERC \(Grid Interactive Distributed Renewable Energy Sources\) \(Second Amendment\) Regulations, 2023](#) (the “**Draft**

CSERC DRE Amendment Regulations”) was released, along with an [explanatory memorandum](#).

The Draft CSERC DRE Amendment Regulations sought to further amend the CSERC (Grid Interactive Distributed Renewable Energy Sources) Regulations, 2019.

Further, the Draft CSERC DRE Amendment Regulations introduced new rules in respect of GEOA to facilitate wider access to RE sources, as well as to provide for new banking and charges to be levied for open access on independent distributed RE systems. Proposed to be effective from September 1, 2023, the Draft CSERC DRE Amendment Regulations also sought to (i) lower the minimum capacity requirement for open access from 500 kW to 100 kW, and (ii) eliminate the previous limit for maximum capacity.

Odisha

Pursuant to a [public notice dated August 1, 2023](#), the Odisha Electricity Regulatory Commission (“**OERC**”) had issued the draft OERC (Promotion of Renewable Energy through Green Energy Open Access) Regulations, 2023 (“**OERC Open Access Regulations**”) inviting suggestions, objections, and opinions from stakeholders. The OERC Open Access Regulations aimed to (i) promote GEOA in Odisha, and (ii) allow for the banking of such energy.

Andhra Pradesh

The Andhra Pradesh Electricity regulatory Commission (“**APERC**”) had issued a draft of the [APERC \(Green Energy Open Access, Charges and Banking\) Regulation, 2023](#) (the “**Andhra Pradesh Open Access Regulation**”) in October 2023. Among other things, the Andhra Pradesh Open Access Regulation focused on granting open access for electricity generated from RE sources (see below for an update on the Andhra Pradesh Open Access Regulation).

Telangana

On September 1, 2023, the TSERC issued the draft [TSERC \(Terms and Conditions of Open Access\) Regulation, 2023](#) (“**Telangana Draft OA Regulations**”) for comments and suggestions from stakeholders. Among other things, the Telangana

Draft OA Regulations allowed consumers with a contracted demand or sanctioned load of 100 KW or higher to avail of GEOA. The Telangana Draft OA Regulations also allowed for monthly banking with respect to GEOA consumers at 8% of the energy banked.

Haryana

Pursuant to an [order dated April 24, 2023](#), the Haryana Electricity Regulatory Commission (“**HERC**”) approved the HERC (Green Energy Open Access) Regulations, 2023 (the “**Haryana GEOA Regulations**”). Among other things, the Haryana GEOA Regulations provided for eligibility criteria and necessary procedures for the grant of open access, banking, and banking charges for CPPs to avail of open access, and leviable charges on GEOA.

Rajasthan

Pursuant to a [public notice](#) containing a draft notification issued in May 2023, the Rajasthan Electricity Regulatory Commission (“**RERC**”) invited comments/suggestions from interested persons on a draft of the RERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) (First Amendment) Regulations, 2023 (“**RERC Green Energy Tariff Amendment**”). The draft RERC Green Energy Tariff Amendment sought to amend the RERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 (the “**Principal RERC Green Energy Tariff Regulations**”).

Among other things, the draft RERC Green Energy Tariff Amendment also proposed to amend provisions in the Principal RERC Green Energy Tariff Regulations related to transmission and wheeling charges, respectively, as well as banking, and sought to introduce green tariffs through green certificates and ratings in line with the (central) GEOA Rules to promote RE-based power generation.

Subsequently, pursuant to a [notification dated September 4, 2023](#), the RERC issued the final version of the RERC Green Energy Tariff Amendment. After the erstwhile regulation 94 of the Principal RERC Green Energy Tariff Regulations, the RERC Green Energy Tariff Amendment introduced changes related to open access charges

through the addition of new Regulations 94A, 94B and 94C – which deal with green energy tariff, green certificates, and ratings, respectively.

In addition, the RERC Green Energy Tariff Amendment made other changes to the Principal RERC Green Energy Tariff Regulations, including with respect to banking, exemptions for intra-state transmission and wheeling charges, respectively, as well as exemptions for surcharge and additional surcharge for certain GEOA consumers, subject to conditions.

Tamil Nadu

Pursuant an [order dated April 25, 2023](#), the Tamil Nadu Electricity Regulatory Commission (“**TNERC**”) approved the additional levy of a 10% green energy tariff and the issuance of green energy certificates by the Tamil Nadu Generation & Distribution Corporation Limited (“**TANGEDCO**”) for high-tension electricity consumers which wished to avail of such green energy certificates.

Punjab

Pursuant to [gazette notification dated June 2, 2023](#), the Punjab State Electricity Regulatory Commission (“**PSERC**”) notified the PSERC (Terms and Conditions for intra-State Open Access) (10th Amendment) Regulations, 2023 (“**PSERC OA Amendment**”). The PSERC introduced the PSERC OA Amendment to promote green energy adoption by consumers. The PSERC OA Amendment also allowed consumer with an aggregate sanctioned contract demand of 100 kVA and above to procure power through GEOA and modified various provisions relating to cross-subsidy surcharges, standby charges, scheduling, and imbalance charges.

Madhya Pradesh

Pursuant to [notifications dated March 9, 2023 and July 26, 2023](#), respectively, the Madhya Pradesh Electricity Regulatory Commission (“**MPERC**”) issued and amended state regulations with respect to GEOA, including the [MPERC \(Methodology for determination of Open Access Charges and Banking Charges for Green Energy and Open Access Consumers\) Regulations, 2023](#) and its [First Amendment](#).

Further, pursuant to various [notifications on intra-state open access](#), the MPERC has amended the MPERC (Terms and Conditions for Intra-State Open Access in Madhya Pradesh) Regulations, (Revision-I) 2021 several times to make them consistent with the (central) GEOA Rules, including through notifications dated [January 16, 2023](#) (First Amendment), [April 5, 2023](#) (Second Amendment), and [July 26, 2023](#) (“**Third Amendment**”). The Third Amendment was in line with the (central) GEOA Second Amendment.

For additional updates and discussions on other initiatives by states with respect to adopting, and/or aligning their respective state regulations with, the (central) GEOA Rules, see below.

MPERC unveils the Regulation for Renewable Energy Integration in 2024

Pursuant to a notification dated March 14, 2024, the MPERC issued the MPERC (Grid Interactive Renewable Energy Systems and Related Matters) Regulations [Revision II], 2024. These regulations will be applicable to all grid-interactive RE generating systems operating under net metering, group net metering, gross metering, and virtual net metering arrangement.

TSERC refuses to impose GSC on solar rooftop plants

Pursuant to an order dated March 27, 2023, the TSERC determined grid support charges (“**GSC**”) as INR15.50/kW per month. Pursuant to this order, the TSERC [refused](#) to levy GSC on non-captive power plants and roof-top solar plants either under net-metering or gross metering policies, respectively.

MSERC notifies Green Energy Open Access Regulations

Pursuant to a notification dated April 3, 2024, the Meghalaya State Electricity Regulatory Commission (“**MSERC**”) issued the MSERC (Terms and Conditions of Green Energy Open Access) Regulations, 2023 to provide for a methodology with respect to GEOA consumers in the state of Meghalaya.

ELECTRIC VEHICLES

The BEE proposed amendments to the EV Charging Guidelines

On April 18, 2024, the Bureau of Energy Efficiency (“**BEE**”) proposed revisions to the Charging Infrastructure for Electric Vehicles – “Guidelines and Standards”, as [issued](#) by MoP on December 14, 2018 (such guidelines, the “**EV Charging Guidelines**”). Subsequently, the EV Charging Guidelines have been amended thrice, including through a [notification dated January 14, 2022](#).

The BEE has now proposed additional revisions to the EV Charging Guidelines with the aim to accelerate the proposed electric mobility transition in the country, including by ensuring safe, reliable, accessible, and affordable charging infrastructure and EV charging ecosystem, respectively.

May 2024

CLEAN ENERGY

Central Government

MHI issues Electrical Equipment (Quality Control) Second Amendment Order

Pursuant to a notification dated May 3, 2024, the Ministry of Heavy Industries (“MHI”), in consultation with the BIS, issued the Electrical Equipment (Quality Control) Second Amendment Order, 2024 to amend the Electrical Equipment (Quality Control) Order, 2020 and the Electrical Equipment (Quality Control) Amendment Order, 2023, respectively.

Pursuant to the 2024 amendment, the MHI substituted the table providing for Indian Standards (“IS”) for certain electric equipment and the date of applicability of such IS.

MNRE clarifies applicability of ALMM Order for Solar Projects

Pursuant to an office memorandum dated May 20, 2024, the MNRE clarified that the ALMM Order in respect of the ALMM List-I will not be applicable for all projects where the last date of bid submission was prior to April 10, 2021.

MoP issues clarification to its Revised Policy for Biomass Utilization for Power Generation through Co-firing in Coal based Power Plants

Pursuant to a letter dated May 14, 2024, the MoP issued a clarification with respect to tariff-related provisions of its [Revised Policy for Biomass Utilization for Power Generation through Co-firing in Coal-based Power Plants](#) (“**Policy on Biomass Utilization**”).

Previously, pursuant to a letter dated October 8, 2021, the MoP had issued the Policy on Biomass Utilization, which had included provisions related to the determination of tariff. Specifically, the Policy on Biomass Utilization had mandated the use of 5% biomass pellets made primarily of agro residue, along with coal, in thermal power plants. The Policy on Biomass Utilization had further specified that for projects established through competitive bidding under Section 63 of the Electricity Act, the increase

in ‘energy charge rate’ due to biomass co-firing could be claimed under ‘Change in Law’ provisions of the relevant PPA.

However, pursuant to its letter dated May 14, 2024, the MoP clarified that in respect of PPAs which provided for a ‘fuel cost pass through’, the cost of biomass pellets would also be passed through in the ‘energy charge rate’ – and not under the corresponding ‘Change in Law’ provision.

Context

An [automatic pass-through model for fuel costs](#) requires discoms to pay higher tariffs to power plants when fuel costs increase. The goal is to (i) ensure that gencos are compensated on time, (ii) reduce delays in the power cost vetting process, and (iii) improve the liquidity of power generators.

Previously, pursuant to consultations with stakeholders in the power sector, the MoP had notified the Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021 (the “**CIL Rules**”) through a [notification dated October 22, 2021](#), providing for an automatic pass through of the impact in terms of cost on account of change in law based on a formula.

Subsequently, pursuant to a [notification dated November 9, 2021](#), the MoP had observed that, based on its learning from recent experience, and further, in order to ensure that the power sector did not face constraints in terms of maintaining an assured supply of power to meet corresponding demand, all stakeholders in the power sector’s value chain needed to ensure a timely recovery of cost. Such recovery involved two steps: (i) cost pass through by gencos to discoms; and (ii) cost pass through from discoms to consumers.

The MoP had further observed that the fuel charge adjustment mechanism through state-specific formulae, as prevalent in certain states and as prescribed and approved by relevant SERCs, was not an automatic pass through and thus led to delays. Accordingly, the MoP had suggested that such mechanism should be changed to provide for automatic pass through in tariff change in costs on account of a change in law and/or power purchase costs, in accordance with a formula laid down by SERCs.

Specifically, the MoP suggested that discoms would pass through the change in costs pursuant to such formula whenever there occurred a change in costs on account of a change in law or change in power purchase costs. Until a suitable formula was prescribed by SERCs, the formula provided in the CIL Rules could be adopted.

In this regard, the MoP had requested SERCs to implement such suggested mechanism with immediate effect.

MNRE exempts RE power plants in SEZs and EOUs from the ALMM Order

Pursuant to an office memorandum dated May 27, 2024, the MNRE exempted certain RE-based power plants from the purview of the ALMM Order for solar PV modules. The exempted RE plants are those which satisfy two conditions:

- They must be located inside a Special Economic Zone (“SEZ”) or an Export Oriented Unit (“EOU”); *and*
- They must be supplying power exclusively for production plants of GH (or its derivatives), where such plants are also located inside an SEZ or set up as an EOU (either the same or a different SEZ/EOU).

MNRE Exempts RE Power Plant in SEZs and EOUs from RLMM Order

Pursuant to an office memorandum dated May 27, 2024, the MNRE exempted certain RE-based power plants from the purview of the [Revised List of Models and Manufactures for Wind Turbine Models](#) (the “Wind Turbine List”).

The exempted RE plants are those which satisfy two conditions:

- They must be located inside a SEZ or an EOU; *and*
- They must be supplying power exclusively for production plants of GH (or its derivatives), where such plants are also located inside an SEZ or set up as an EOU (either the same or a different SEZ/EOU).

Context

The Wind Turbine List is based on a provision related to type certification and quality assurance of wind turbines in India, as contained in the guidelines for the development of onshore wind power projects (the “Onshore Wind Guidelines”) [issued](#) by the MNRE pursuant to [a notification dated October 22, 2016](#).

According to the Onshore Wind Guidelines, ‘type certification’ is to confirm that the wind turbine type is designed, documented and manufactured in conformity with design assumptions, specific standards, and other technical requirements. For manufacturers of wind turbines and components, type and quality certification, respectively, by an internationally accredited certification body (“IACB”) is a mandatory requirement.

Accordingly, wind turbine models are required to possess a valid type certificate, as issued by any IACB as per the certification scheme of the International Electrotechnical Commission (“IEC”) or Det Norske Veritas (DNV) - Germanischer Lloyd (“GL”), along with certified power curve. In addition, the type certificate of the wind turbine model is required to mandatorily include hub and nacelle assembly/manufacturing facilities in India. The Onshore Wind Guidelines further stipulate a wind turbine model will not be allowed for installation in the country until it has obtained such type and quality certification.

To facilitate the work of state nodal agencies, investors, lenders, and developers, the MNRE brings out the Wind Turbine List, comprising type- and quality-certified wind turbine models that are eligible for installation in the country. The list is regularly updated by the MNRE through an online automated tracking and approval process.

MNRE appoints mission directorate for overseeing Rooftop Solar Program

Pursuant to an office memorandum dated May 29, 2024, the MNRE constituted a mission directorate within the MNRE headed by a joint secretary to the Government of India for the purpose of overseeing day-to-day operations related to the implementation of the PSGMBY scheme. The ‘Rooftop Solar Division’ of the MNRE will operate as the mission directorate in terms of assisting the mission director

(*i.e.*, the joint secretary in charge of the MNRE's Rooftop Solar Division) with the implementation of such scheme.

State Government

APERC notifies Green Energy Open Access, Charges, and Banking Regulation, 2024

Pursuant to a notification dated May 2, 2024, the APERC issued the Andhra Pradesh Open Access Regulation with the aim of providing regulatory clarity and simplifying the process of granting open access to RE generators and consumers. The Andhra Pradesh Open Access Regulation is also applicable with respect to the use of intra-state transmission systems and distribution systems by transmission licensees and discoms in the state of Andhra Pradesh, including intra-state transmission and/or distribution systems that are incidental to inter-state electricity transmission.

APERC notifies Transmission License Regulations, 2024

Pursuant to a notification dated May 17, 2024, the APERC issued the APERC Transmission License Regulation, 2024 with the aim of consolidating the procedure for granting transmission licenses and the development of intra-state transmission systems.

APERC notifies Threshold Limit for the Development of Intra-State Transmission Projects Under the Tariff Based Competitive Bidding Regulations

Pursuant to a notification dated May 17, 2024, the APERC issued the APERC (Threshold Limit for the Development of Intra-State Transmission (INST) Projects Under the Tariff Based Competitive Bidding) Regulation, 2024 ("**APERC INST Regulation**"). Among other things, the APERC INST Regulation provides that new intra-state transmission projects (*i.e.*, yet to be approved by the APERC) will be awarded through tariff-based competitive bidding if such projects (i) cost above INR2.50 billion (excluding land cost), (ii) are formulated by the state transmission utility, and (iii) are implemented by the APERC.

GERC Issues Draft Net Metering Rooftop Solar PV Grid Interactive Systems (Fourth Amendment) Regulations, 2024

Pursuant to a [public notice dated May 18, 2024](#), the GERC invited objections/suggestions on various amendments proposed to be made to the GERC (Net Metering Rooftop Solar PV Grid Interactive Systems) Regulations, 2016 through the [Draft GERC \(Net Metering Rooftop Solar PV Grid Interactive Systems\) \(Fourth Amendment\) Regulations, 2024](#) (the "**GERC Rooftop Solar Amendment**").

Among other things, the GERC Rooftop Solar Amendment seeks to align with the Electricity (Rights of Consumers) Amendment Rules, 2024 ("**Consumer Rules Amendment**"), as notified by the MoP in February 2024.

Context

For the purpose of further amending the Electricity (Rights of Consumers) Rules, 2020 ("**Consumer Rights Rules**"), the MoP had issued the Consumer Rules Amendment pursuant to a [notification dated February 22, 2024](#). Among other things, the Consumer Rules Amendment had inserted new provisions to, and had substituted certain other provisions in, the Consumer Rights Rules, including 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 had also added new definitions for the terms 'owner' and 'resident welfare association,' respectively.

KERC issues Draft Framework for Resource Adequacy Regulations

Pursuant to a notification dated May 14, 2024, the KERC issued the draft KERC (Framework for Resource Adequacy) Regulations, 2024 to seek comments and suggestions from stakeholders. Such draft regulations were proposed to be in compliance with the '[Guidelines for Resource Adequacy Planning Framework for India](#)' ("**RAPF Guidelines**"), as issued by the MoP pursuant to a [notification dated June 28, 2023](#). The RAPF Guidelines were framed by the MoP in consultation with the Central Electricity Authority ("**CEA**") under rule 16 of the Electricity

(Amendment) Rules, 2022, as issued by the MoP pursuant to a [notification dated December 29, 2022](#).

CSERC issues Draft Order for determination of tariff for various renewable and non-fossil fuel-based co-generation plants for FY 2025

The CSERC issued a draft order dated May 15, 2024 for the purpose of determining the generic levelized generation tariff of those RE-based power projects which are achieving a commercial operating date (“COD”) during FY 2024-25 in the state of Chhattisgarh. Such generic levelized tariff was determined as below:

RE Projects	Levelized Tariff, INR/kWh
Small Hydro projects below 5 MW	7.05
Small Hydro projects 5 MW to 10 MW	6.33
Small Hydro projects 10 MW to 25 MW	5.97
Mini/Micro Hydro projects (up to 2 MW)	7.55
Biomass-based projects – Energy Charges	6.20
Non-fossil Fuel-based Co-generation projects – Fixed Cost	3.89
Non-fossil Fuel-based Co-generation projects – Variable Cost	4.83
Solar PV projects 0.5 MW to 2 MW	4.34
Biogas-based power projects (without capital subsidy) – Fixed Charges	4.27
Biogas-based power projects (with capital subsidy) – Fixed Charges	3.70
Biogas based power projects – Energy Charges	7.52

HPERC issues Draft (Third Amendment) for Rooftop Solar PV Grid Interactive System Regulations, 2024

Pursuant to a notification dated May 13, 2024, the Himachal Pradesh Electricity Regulatory Commission (“**HPERC**”) issued draft regulations for the proposed HPERC (Rooftop Solar PV Grid

Interactive System) (Third Amendment) Regulations, 2024 and invited suggestions and comments from stakeholders. The proposed amendment seeks to incorporate provisions on exempting the requirement of a technical feasibility study for SRTPV systems of up to 10 kW capacity, including for the purpose of aligning the HPERC (Rooftop Solar PV Grid Interactive System) Regulations, 2015 with the Consumer Rules Amendment.

BERC proposes new guidelines to accelerate rooftop solar adoption

Pursuant to a public notice dated May 22, 2025, the Bihar Electricity Regulatory Commission (“**BERC**”) issued a draft of the BERC (Rooftop Solar Grid Interactive Systems Based on Net and Gross Metering) (First Amendment) Regulation, 2024 (“**Draft BERC Net Metering Regulation**”) and invited comments and suggestions from stakeholders. The BERC sought to align the Draft BERC Net Metering Regulation with the Consumer Rules Amendment.

HPERC issues New Deviation Settlement Mechanism Regulation

Pursuant to a notification dated May 20, 2024, the HPERC issued the HPERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2024 for maintaining grid discipline and security.

RERC issues order amending Grid Interactive Distributed Renewable Energy Generating Systems Regulations

The RERC issued an order dated May 31, 2024 to align the RERC (Grid Interactive Distributed Renewable Energy Generating Systems) Regulations, 2021 with the Consumer Rules Amendment.

ELECTRIC VEHICLES

US Doubles Tariff on Chinese Solar Cells, EVs and Batteries Imports

According to a White House statement dated May 14, 2024, the United States significantly increased the tariff rate on several Chinese imports, including batteries (from 7.5% to 25%), EVs (from 25% to 100%) and solar cells (from 25% to 50%).

European Council gives Final Approval to the NZIA

According to press release dated May 27, 2024, the European Council adopted a regulation on establishing a framework of measures for strengthening Europe's net-zero technology manufacturing ecosystem, better known as the 'Net-Zero Industry Act' ("**NZIA**"). This is the last step in the EU decision-making process. The NZIA aims to boost the industrial deployment of net-zero technologies that are needed to achieve the EU's climate goals, using the strength of the single market to reinforce Europe's position as a leader in industrial green technologies. Accordingly, the NZIA seeks to scale up clean technology production in the EU with a target to provide at least 40% of the EU's annual deployment needs for strategic net-zero technologies by 2030.

June 2024

CLEAN ENERGY

Central Government

MNRE issues Amendment Guidelines for NGHM, Revises Production Targets for Green Ammonia to 7,50,000 Tonnes

Pursuant to a letter dated June 21, 2024, the MNRE issued an amendment to the scheme guidelines for Component-II of the SIGHT program, which involves incentive schemes for the procurement of GH production under Mode-2A of the NGHM.

The amendment involved a change in the erstwhile provision (paragraph 5.4.5 (i) of the scheme guidelines), which specified the capacity available for bidding under Tranche I of Mode-2A. Such available capacity has been revised upwards, from 5,50,000 metric tonnes (“MT”) per annum (“p.a.”) of GA to 7,50,000 MT p.a. of GA.

Further, the amendment states that such capacity may be further enhanced by the MNRE, if required. In addition, based on demand, the MNRE may decide to issue subsequent tranches.

Context

Pursuant to a [letter dated January 16, 2024](#), the MNRE had issued detailed scheme guidelines for the implementation of Component II of the SIGHT program involving an incentive scheme for the procurement of GA production under Mode-2A of the NGHM. Pursuant to a separate [letter dated January 16, 2024](#), the MNRE had also detailed scheme guidelines for the implementation of an incentive scheme for the procurement of GH production under Mode-2B of the NGHM within Component II of the SIGHT program.

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

While the scheme on GA 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”), respectively – 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 GA 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.

Background

Previously, in January 2023, the [Union Cabinet had approved the NGHM](#) with an outlay of INR197.44 billion until FY 2029-30. The SIGHT program is a major financial measure under the NGHM, with an independent outlay of INR174.9 billion. With the aim of enabling rapid scaling up, technological development, and cost reduction, the SIGHT program proposes two distinct financial incentive mechanisms to support domestic manufacturing of electrolyzers and GA/GH production.

While there can be several modes for implementing incentive schemes for GA ammonia and GH production, the two modes which have been identified as of now are as follows:

- (i) **Mode 1:** Bidding on least incentive demanded over a three-year period, through a competitive selection process; and
- (ii) **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 has been divided into two types, based on what is being sought to be produced and supplied (GA or GH), as follows:

- (a) **Mode 2A:** The implementation agency/agencies will aggregate demand and call for bids for the production and supply of GA at the lowest cost through a competitive selection process with the incentive being fixed; and

- (b) **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 NGHM lay down the framework for the production and supply of GA 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 the GH utilized in the production and supply of GA aligns with the criteria outlined in the 'National Green Hydrogen Standard', as notified by the MNRE, and as estimated pursuant to a prescribed conversion/equivalence factor. Accordingly, the equivalence factor that is applicable to the calculation of GH quantity for a specific quantity of GA and the resultant incentive is 0.1765 kg of GH per kg of GA.

Under Mode 2B as well, 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 GH Standard

Pursuant to an [office memorandum dated August 18, 2023](#), the MNRE had 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 energy storage system ("**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 ("**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 BEE is 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 INR8.82/kg, 7.06/kg and 5.30/kg of GA in the first, second and third year, respectively, of production and supply of GA. Under Mode 2B, the incentive will be INR50/kg, 40/kg and 30/kg of GH in the first, second and third year, respectively, of production and supply of GH.

CERC issues Draft Amendment to Indian Electricity Grid Code Regulations

Pursuant to a draft notification dated June 12, 2024, the CERC issued the CERC (Indian Electricity Grid Code) (First Amendment) Regulations, 2024 ("**Draft Grid Code Amendment**"). The Draft Grid Code Amendment proposes to amend regulations 19, 22, 27, 45 and 49 of the CERC (Indian Electricity Grid Code) Regulations, 2023, dealing with: (i) 'drawal' of start-up power and injection of infirm power; (ii) trial runs of generating units; (iii) declaration of commercial operation ("**DOCO**") and COD; (iv) general provisions; and (v) the procedure for scheduling and dispatch with respect to inter-state transactions, respectively.

CERC issues Renewable Energy Tariff Regulations for period 2024-2027

Pursuant to a notification dated June 12, 2024, the CERC issued the CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2024 ("**RE Tariff Regulations**") for the period between July 1, 2024

and March 31, 2027 (unless reviewed earlier or extended by the CERC).

The RE Tariff Regulations will apply to cases where the CERC will determine the tariff under section 62 read with section 79 of the Electricity Act for grid-connected generating stations (or units of such stations) which:

1. are commissioned during the 'control period' (*i.e.*, the period during which the norms for tariff determination as specified in the RE Tariff Regulations will remain valid), and
2. are based on RE sources.

Further, for certain specified kinds of RE-based projects, the applicability of the RE Tariff Regulations will be subject to certain additional eligibility criteria.

MNRE issues operational guidelines for PSGMBY

Pursuant to an office memorandum dated June 7, 2024, the MNRE issued operational guidelines for the implementation of the sub-component related to CFA to residential consumers under the 'capex mode' for eligible consumer categories with respect to the PSGMBY scheme (such guidelines, the "**PSGMBY Operational Guidelines**").

Context

Capex Mode

The 'capex mode' is considered to be one where the consumer itself, either through its own capital or through borrowings from financial institutions or otherwise, funds the initial investment into the RTS system. The PSGMBY Operational Guidelines do not cover 'RESCO' models (where a third-party entity other than the consumer makes the initial investment) or Utility Led/State Led Aggregation Models (where a state entity invests on behalf of consumers on an aggregate basis). These modes will be dealt separately in other guidelines.

RESCO

'RESCO' – or an RE services/supply company – involves a solar power system that involves a third-party service-provider (*i.e.*, the RESCO itself), 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.

PSGMBY Operational Guidelines

Among other things, the PSGMBY Operational Guidelines specify that:

- The guidelines are applicable for all applications received on the PM Surya Ghar National Portal from the date of the launch of the PSGMBY scheme (*i.e.*, February 13, 2024). Any eligible consumer can avail the benefits of the PSGMBY scheme only through such portal.
- Any interested consumer with a valid consumer account number (or its equivalent consumer ID) for a discom (or in some cases, the power/energy department of the state, as applicable) may apply as an eligible consumer on the PM Surya Ghar National Portal.
- The CFA for the residential sector will be as per a prescribed table. No CFA will be provided to non-residential consumer segments (including government and C&I segments).
- The implementation period of the PSGMBY scheme will be until March 31, 2027.

Eligibility under the PSGMBY Operational Guidelines

For the purpose of CFA, an eligible residential RTS plant would be the grid-connected solar power system that is tagged to a particular residential power connection of the local discom. This will only include installations on a roof, terrace or balcony, or

on top of elevated structures. Special RTS installations such as building-integrated PV (“**BiPV**”) systems will also be considered eligible for CFA support.

Further, installations under metering mechanisms, such as ‘Group Net Metering’ and ‘Virtual Net Metering’, respectively, will also be eligible for CFA if the installations are on any roof, terrace or balcony, or on top of elevated structures, or as BiPV systems where the metering arrangement is approved by the relevant discom.

Context

Recognizing the potential and advantages of grid-connected RTS systems – 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 had simplified the implementation of the ‘[Grid-Connected Rooftop Solar Program](#)’ by listing out certain uniform documents required to be filed by applicants for RTS through such program. The MNRE had also directed relevant discoms and implementing agencies to ensure that: (i) no other documents are sought from consumers during the application process (to ensure the 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 the commissioning of RTS projects.

Metering

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: (i) gross metering, and (ii) 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, 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 the same as the retail supply tariff. Accordingly, discoms may prefer to adopt gross metering for grid-connected RTS systems.

MNRE issues Framework for Enlistment of Models of OEMs of Solar PV Modules and Inverters

Pursuant to an office memorandum dated June 21, 2024, the MNRE issued a framework for the enlistment of models of OEMs with respect to solar PV modules and inverters under the PSGMBY scheme. The framework was issued by the MNRE for the purpose of enabling consumers to make informed choices in terms of selecting products that offer higher efficiency and warranty.

State Government

TNERC issues Draft Amendment to the Regulation for Renewable Energy Purchase Obligation 2024

Pursuant to a draft notification dated June 26, 2024, the TNERC issued the draft TNERC (Renewable Energy Purchase Obligation) (Amendment) Regulation, 2024 and invited comments and suggestions from stakeholders. In such draft amendment, the TNERC proposed to substitute regulation 2(1)(i) of the TNERC (Renewable Energy Purchase Obligation) Regulations, 2023 by re-defining the ‘pooled cost of power purchase’.

DERC issues Peer to Peer Energy Transaction Guidelines

Pursuant to a notification dated June 24, 2024, the Delhi Electricity Regulatory Commission (“**DERC**”) issued the DERC (Peer to Peer Energy Transaction) Guidelines, 2024 (“**DERC P2P Guidelines**”). Under the DERC P2P Guidelines, the DERC has allowed (i) eligible consumers, and (ii) consumers who can inject RE into the grid, to mutually sell and purchase electricity, respectively, through peer-to-peer transactions.

Background

Previously, pursuant to a [notification dated February 26, 2024](#), the DERC had issued a draft of the DERC P2P Guidelines (“**Draft DERC P2P Guidelines**”). The Draft DERC P2P Guidelines had aimed to provide flexibility to prosumers and consumers which have a sanctioned load/contract demand of up to 200 kW to mutually sell and purchase electricity through peer-to-peer (“**P2P**”) transactions in a secure and reliable way.

Further, the DERC had sought to adopt a progressive view through the Draft DERC P2P Guidelines 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 had listed out certain eligibility criteria for P2P transactions. For instance, once approved and finalized, the Draft DERC P2P Guidelines would apply to (i) prosumers, except ground-mounted projects, and (ii) consumers which opted 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 was required to be less than, or equal to, 200 kW (or equivalent kVA). In addition, the capacity of an RE system that was installed, or was proposed to be installed, at the prosumer’s end for P2P transactions, would be capped at 500% of its sanctioned load.

At any point of time, both consumers and prosumers could avail of the benefits of any one of the following: virtual, group and P2P metering arrangements, respectively. However, eligible consumers and prosumers could switch from virtual or group net metering to P2P energy transaction arrangements (or vice-versa) only once every financial year.

Further, consumers that opted for P2P transactions would 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 battery energy storage system (“**BESS**”) charged through the RE system, would be governed by the provisions of the DERC (Net Metering) Regulations, 2014, and would need to comply with the standards and technical specifications prescribed by relevant authorities from time to time.

Context

Other States and Other Considerations

Pursuant to a [notification dated January 12, 2024](#), the KERC had 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 KERC P2P Blockchain Regulations**”).

Draft KERC P2P Blockchain Regulations

The KERC had acknowledged that existing arrangements related to SRTPV projects only recognized the sale of energy between consumers, on the one hand, and discoms, on the other hand.

However, a new concept of energy sales *between* and *among* consumers had 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 could be facilitated as P2P solar transactions through a blockchain-based platform.

This concept was not only well-known and popular – but it had 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 could enable quicker recoveries on investments made relative to existing arrangements.

Noting this reality, the KERC had issued the Draft KERC P2P 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 could facilitate RTS transactions through a blockchain-based P2P platform for the purpose of ensuring reasonable returns on investments.

BERC issues Draft Green Energy Open Access Regulations

Pursuant to a [notice dated June 11, 2024](#), the BERC released a consultative paper along with a draft of the BERC (Terms and Conditions of Green Energy Open Access) Regulations, 2024 (“**Draft BERC GEOA Regulations**”), inviting comments and suggestions from stakeholders.

The Draft BERC GEOA Regulations were issued with the aim to provide a methodology for the determination of open access and banking charges for GEOA consumers in the state of Bihar.

Accordingly, the Draft BERC GEOA Regulations propose a change in the minimum capacity requirement for open access from 1 MW to 100 kW, thereby allowing smaller consumers to participate in green energy procurement.

In addition, the draft regulations contemplate that consumers choosing green energy will be able to procure green power from their discoms. The Draft BERC GEOA Regulations also establish a framework for determining the charges related to open access.

GEOA consumers will be obligated to pay inter-state transmission charges as determined by the CERC. However, GEOA consumers will be required to pay intra-state transmission charges in multi-year tariff order from time to time, as determined by the BERC. Additional surcharge, cross-subsidy surcharge, and

wheeling charges will be paid by GEOA consumers, as determined by the BERC, in its retail supply tariff order from time to time.

Background

After the notification of the (central) GEOA Rules, pursuant to a notification dated July 8, 2022, the MoP had [notified](#) the Grid Controller of India Limited ([earlier](#), the Power System Operation Corporation (“**POSOCO**”)) as the central nodal agency for the purpose of setting up and operating a single-window GEOA system for RE under the GEOA Rules.

On February 27, 2024, in light of the (central) GEOA Rules, the [North Bihar Power Distribution Company Limited](#) had filed a petition with the BERC on behalf of the discoms of Bihar for the formulation and notification of regulations and tariff determination for GEOA consumers.

Pursuant to an order dated May 25, 2024, the BERC directed its secretariat to publish a draft regulation for the purpose of being notified in conformity with the (central) GEOA Rules, inviting comments/suggestions/objections from the general public and stakeholders.

Accordingly, the BERC notified Draft BERC GEOA Regulations.

PSERC announces tariff increase

Pursuant to a tariff order for FY 2024-25, the PSERC increased the tariff for domestic supply, non-residential supply, and industrial supply in the range of INR 10 to 15 paise per unit for the period between June 16, 2024 and March 31, 2025. Pursuant to such tariff order, the PSERC also determined the wheeling charges and cross-subsidy surcharge for the same period as follows:

Wheeling Charges:

For Long Term/Medium Term Open Access Customers	INR 2,53,876/MW/Month
For Short Term Open Access Customers	INR648.78/MWh

Cross Subsidy Surcharge:

Large Supply	49 paise/kWh
Domestic Supply	0 paise/kWh
Non-Residential supply	116 paise/kWh
Bulk Supply	90 paise/kWh

TNERC issues Draft of Green Energy Open Access Regulations

Pursuant to a draft notification dated June 13, 2024, the TNERC issued a draft of the TNERC (Terms and Conditions for Green Energy Open Access) Regulations, 2024 (“**Draft TNERC GEOA Regulations**”), inviting comments and suggestions from stakeholders. The Draft TNERC GEOA Regulations were issued with the aim of providing a statutory mechanism in the state of Tamil Nadu for (i) the granting of open access, as well as (ii) a methodology for the determination of open access and banking charges for GEOA consumers.

TNERC issues Draft Regulation for Grid Interactive Solar PV

Pursuant to a draft notification released in June 2024, the TNERC issued a draft of the TNERC (Grid Interactive Solar PV Energy Generating Systems) Regulations, 2024 (“**Draft TNERC Grid Solar PV Regulations**”), inviting comments and suggestions from stakeholders. While the TNERC sought to repeal the TNERC (Grid Interactive Solar PV Energy Generating Systems) (GISS) Regulations, 2021, the Draft TNERC Grid Solar PV Regulations were issued with the aim of formulating a revised comprehensive regulation to govern the matters related to grid-interactive solar PV energy generating systems (“**GISS**”), along with BESS, in the state of Tamil Nadu.

The Draft TNERC Grid Solar PV Regulations are proposed to be applicable to eligible consumers, prosumers, generators, licensees, government/local bodies, and any person which uses the supporting licensee’s grid for its GISS.

DERC issues Draft Green Energy Open Access Regulations

Pursuant to a notification dated June 7, 2024, the DERC issued the draft DERC (Terms and Conditions for Green Energy Open Access) Regulations, 2024 with the objective of providing a statutory mechanism for the granting of open

access, as well as a methodology for the determination of open access and banking charges for GEOA consumers.

DERC issues Draft RPO and REC Framework Regulation

Pursuant to a notification dated June 7, 2023, the DERC issued the Draft DERC (Renewable Purchase Obligation and Renewable Energy Certificate Framework Implementation) Regulations, 2024 (“**Draft DERC RPO REC Regulations**”).

ELECTRIC VEHICLES

BIS introduces two New Safety Standards for EVs

The BIS issued two new standards for EVs called IS 18590: 2024 and IS 18606: 2024. These standards are aimed to enhance the safety of EVs and focus on critical components, including the powertrain.

*This update has been authored by **Dr. Deborshi Barat** (Counsel) and **Pradhumna Mohan Dixit** (Associate). They can be reached on d Barat@snrlaw.in and pdixit@snrlaw.in, respectively, for any questions.*

S&R
ASSOCIATES
ADVOCATES

NEW DELHI

Max House
Tower C, 4th Floor
Okhla Industrial Estate Phase III
New Delhi 110 020
India

T: +91 11 4069 8000
F: +91 11 4069 8001

MUMBAI

One World Center
1403 Tower 2 B
841 Senapati Bapat Marg, Lower Parel
Mumbai 400 013
India

T: +91 22 4302 8000
F: +91 22 4302 8001

www.snrlaw.in

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