FORUM OF REGULATORS (FOR)

REPORT ON

"DEVELOPING MODEL REGULATIONS ON METHODOLOGY FOR CALCULATION OF OPEN ACCESS CHARGES AND BANKING CHARGES FOR GREEN ENERGY OPEN ACCESS CONSUMERS"

.

September 2022

Secretariat: Central Electricity Regulatory Commission Chanderlok Building, 36 Janpath, New Delhi

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1. INTRODUCTION

1.1 The Ministry of Power by Gazette notification issued 'Electricity (Promoting Renewable Energy through Green Energy Open Access) Rules, 2022' on 6th June 2022 **(Annexure-I).** As per Rule 12 of the said notification, the Forum of Regulators shall frame model regulations on methodology for calculation of open access charges and banking charges within a period of four months from the date of commencement of these rules. Relevant extract from the rule is as below:

> *"**12. Model regulation on methodology.**– (1) In order to have a common methodology for calculation of all the open access charges, the forum of regulators shall prepare a model regulations on methodology for calculation of open access charges, as well as banking charges within a period of four months from the date of commencement of these rules.*
>
> *(2) The framing of methodology referred to in sub-rule (1), of the forum of regulators shall ensure that various permissible charges are not be onerous and shall meet the prudent cost of the distribution licensee in order to fulfil the objective of promoting the procurement of green energy by Green Energy Open Access Consumers."*

1.2 The Forum of Regulators, in its 81st meeting held on 8th July, 2022 deliberated on the 'Electricity (Promoting Renewable Energy through Green Energy Open Access) Rules, 2022 and after discussion, it was agreed to constitute a Working Group (WG) to frame the model regulation on Methodology for Calculation of Open Access Charges and Banking Charges for Green Energy Open Access Consumers.

2. WORKING GROUP OF FOR

2.1 The Working Group constituted by the FOR has the following composition.

a. Chairperson, Uttar Pradesh Electricity Regulatory Commission–Chairman
b. Chairperson, Chhattisgarh Electricity Regulatory Commission–Member
c. Chairperson, Himachal Pradesh Electricity Regulatory Commission–Member
d. Chairperson, Karnataka Electricity Regulatory Commission–Member
e. Chairperson, Rajasthan Electricity Regulatory Commission–Member
f. Chairperson, Tripura Electricity Regulatory Commission–Member
g. Member (Finance), CERC-Member
h. Member (Technical), Telangana Electricity Regulatory Commission– Member
i. Member (Technical), Gujarat Electricity Regulatory Commission–Member

2.2 The scope of Work of the Working Group is as follows:

a. Study and analyze the issues around implementation of Green open Access according to the Rules issued by Ministry of Power on Green energy Open Access;
b. Seek and examine comments of SERCs on Green Open Access Rules;
c. Study and analyze various Open Access charges issued in various States under Open Access Regulations;
d. Study and analyze banking charges applicable in various States for Renewable Energy
e. Suggest various permissible charges under green open access to promote Green Energy while ensuring to meet prudent cost of the distribution licensee;
f. Suggest methodology for calculation of green energy open access charges and banking charges;
g. Formulate Model Regulations in this regard;

2.3 A copy of the letter on the constitution of the Working Group is at **Annexure–II.**

2.4 The first meeting of the Working Group was held on 25th July 2022 at CERC, New Delhi wherein a preliminary review was carried out on the compilation of methodology for determination of various charges being followed in various States. Theses charges include Transmission Charges, Wheeling Charges, Cross subsidy Surcharge, Additional Surcharge, Standby Charges and Banking Charges

The Working Group also highlighted some issues in the said Green Energy Open Access Rules which was not in line with certain provisions of the Electricity Act 2003 and Tariff Policy and some other implementation difficulties. It was opined that while some SERCs have furnished their observations/comments on Green Energy Open Access, other Working Group members may also provide their comments/suggestions with specific reference to methodology on

determination/applicability of various charges. The minutes of the first meeting of the Working Group is placed at **Annexure-III**

2.5. The second meeting of the Working Group was convened on 22nd August 2022 where detailed discussions were held on the issues as highlighted in the first meeting. The Working Group also suggested few modifications in some of the clauses of the Rule for consideration of Ministry of Power. Further, a detailed presentation was made by the Consultant engaged for the Working Group on the different methodology for calculating Open Access Charges and Banking Charges followed by discussion by the Working Group. The minutes of the second meeting of the Working Group is placed at **Annexure-IV.**

2.6. After discussions on various aspects, the Working Group arrived at the findings and recommendations which were presented to the Forum of Regulators for consideration. The Forum deliberated the report in detail during the 82nd meeting of the FOR held on 16.9.2022, and finalized the draft Model Regualation and the suggestions to be sent to Ministry of Power on the issues which was not in line with the Electricity (Promoting Renewable Energy through Green Energy Open Access) Rules, 2022 as outlined in subsequent sections.

3. ANALYSIS AND RECOMMENDATIONS OF THE FOR

3.1 The Forum discussed and suggested the following methodology for calculation of Open Access Charges and Banking Charges for Green Energy Open Access:

3.1.1 *Transmission Charges:*

a) It is observed that SERCs are following different methodologies for determination of transmission charges and losses. Transmission charges are on Rs. /MW/month or Rs/kWh basis. Further charges are linked with either Average Coincident Peak Demand (CPD) or Non-coincident Peak Demand (NCPD) or ratio of both or Available Transmission Capacity (ATC).

b) While deriving the methodology for transmission charges for Green Energy Open Access, the Transmission Capacity Utilisation and transmission capacity rights of transmission users need to be ascertained. Further, the treatment of long/medium/short term Open Access may be different.

c) It is proposed to consider "energy" and "demand" both in the denominator for computation of transmission charges with higher weightage to the energy and lower weightage to the demand.

d) It is also observed that some of the SERCs are providing waiver or concessions for RE Open Access. It may be continued as per the provisions of the respective SERCs Regulations.

e) As far as Transmission loss is concern, average 52-week Transmission loss as declared by SLDC may be considered.

f) For Long-Term and Medium-Term Green Energy Open Access: Total Transmission system Cost for Intra State Transmission System shall be calculated by aggregating ARR of Transmission Licensee(s) in the State. Computation of base transmission tariff for long term open access shall be calculated as Total Transmission System Charges (TTSC) / peak load served

g) Transmission Charges may be calculated as Rs/kW/monthorRs/MW/day.

h) Similarly, for short term open access, base transmission tariff shall be computed as TTSC/ ((*Energy Transmitted by Tx* licensee) (Rs/kWh)

i) The Transmission Charges shall be trued up by considering the Transmission charges recovered from the Short-term Users.

3.1.2 *Wheeling Charges:*

a) The wire ARR is expected to be recovered through wheeling charges, and therefore, the wheeling charges are required to be computed considering the wire charges of the distribution licensee. However, for computation of separate wire ARR, the allocation of cost to wire business and supply business is pre-requisite.

b) Distribution Licensees need to maintain separate accounting records for the Wires Business and Retail Supply Business and prepare an allocation statement based on the

allocation ratio specified by the Commission in the Multi Year Tariff (MYT) Regulations or any other Regulation/Order as the case may be, for determination of separate tariff or wire business.

c) Wheeling charges requires the determination of wire cost for which voltage-wise segregation of assets is expected, however, if the same has not been segregated, the SERC may continue with determination of wheeling charges for all categories.
d) Wheeling charges shall be computed based on wheeling ARR as below:
Wheeling Charge= (Wheeling ARR)/ (Energy Units wheeled) (in Rs. /kWh).
e) As far as wheeling losses are concerned, only technical losses are expected to be considered for the Green Energy Open Access. The Average 52-week loss for HT/LTnetwork may be considered. If feeder-wise data of losses is not available, the sample feeder methodology may be adopted.
f) If the SERC is determining the voltage-wise wheeling losses, it may continue to do so.
g) If the SERC is providing waiver or concessions to wheeling losses for RE Open Access, it may be continued as per the provisions of the respective SERC's Regulations.

3.1.3 ***Cross subsidy Surcharges:***

a) The Cross-Subsidy Surcharge is required to be determined for meeting the current level of cross subsidy in the tariff categories.
b) It is noted that as per the Tariff Policy, 2016, the SERCs are expected to notify a roadmap for bringing the tariffs within ± 20% of Average Cost of Supply (ACoS) and Cross Subsidy Surcharge should not exceed 20% of the tariff applicable to the category of the consumers seeking Open Access.
c) It is also noted that the Tariff Policy 2016 specifies the formula for determination of Cross Subsidy Surcharge (CSS). Further, Surcharge formula envisages establishment of Voltage-wise Cost to serve (C) to Consumer category. This would necessitate determination of other parameters (Loss, Wheeling charge etc) for each voltage level (EHV/HT/LT).
d) It is observed that most of SERCs are considering the Cross-Subsidy Surcharge formula provided in the Tariff Policy, 2016. However, some of the SERCs are computing Cross Subsidy Surcharge by considering Average Billing Rate (ABR) and Cost of Supply.
e) CSS provided in the Tariff Policy, 2016 may be considered for determination Cross Subsidy Surcharge for Green Energy Open Access.
f) Some of the SERCs are providing waiver or concession in Cross Subsidy Surcharge for RE Open Access, which they may continue.
g) Cross Subsidy Surcharge may also be determined separately for each consumer category(T).

3.1.4 ***Additional Surcharge:***

a) It is noted that as per the provisions of the Electricity Act 2003, Open Access consumer shall be liable to pay additional surcharge (ASC) on the charges of wheeling, as may be specified by the SERC, to meet the fixed cost of such distribution licensee arising out of

his obligation to supply.

b) It is also noted that as per the Tariff policy, the additional surcharge shall be applicable only if it is conclusively demonstrated that the obligation of alicensee, in terms of existing power purchase commitments, has been and continues to be stranded, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. Fixed costs related to network assets would be recovered through wheeling charges.

c) The methodology for determination of Additional Surcharge may not be required to be specified as it may vary from State to State.

d) The SERCs may follow provisions of its own Regulations for applicability of additional surcharge.

3.1.5 *Standby Charges*:

a) The provisions of Tariff Policy states that, in case ofoutages, standby arrangement shall be provided to Open Access consumer by licensee on payment of temporary connection and charges shall not be more than 125% of normal tariff

b) The Stand-by charges should reflect cost of power procurement on short term basisand deviation settlement charges liable to be paid by distribution utilities in lieu of supply of such power.

c) In case of RE Open Access, the consumers taking power from such RE Generator may maintain its contract demand with distribution licensee. In such case, the distribution licensee is obligated to supply power to such consumer under universal service obligations and Open Access consumer shall continue paying fixed charges to the distribution licensee.

d) The standby charges shall be linked with tariff of the consumer category under Green Energy Open Access. Accordingly, Standby Charges shall be 125% of normal tariff of the consumer category.

3.1.6 *Banking Charges*:

a) The banking facility is a major enabler for Renewable Energy Open Access. When consumer's demand schedule and power generation schedule cannot be matched, enabling provisions of banking has bearing on other consumers of distribution licensee.

b) Banking charges shall be 'in kind' or 'in Rs/kWh'of the banked energy. The banking may be happening for some of the time blocks or across various Time-of-Day (ToD) slots. The banking charges if determined in Rs/kWh, may be required to determine Time blockwise or Time-of Day (ToD) which may be complex for implementation.

c) The Time-of-Day (ToD) slab wise banking may be allowed.

d) The Banking settlement period may be calendar month. There would be no "carry forward" or "deemed purchase" of un-utilized banked quantum of energy. Such un-utilized energy shall be considered as lapsed at the end of each calendar month.

e) There may be some restriction on drawal of surplus Banked Energy during specific Time-of-Day (ToD) slabs or specific months. Injection in Peak hours will be allowed to

draw/set-off against Peak consumption. Injection in Off-peak hours will be allowed to draw/set-off against Off-peak consumption.

f) Injection in Peak hours will be allowed to draw/set-off against Off-peak consumption but vice-versa will not be allowed.
g) SERCs may consider the possibility of providing conversion factor for allowing the energy banked in off- peak hours to be consumed during peak hours. The conversion factor may be similar to conversion fact or applicable for Time-of-Day (ToD) slabs.
h) Restrictions for drawl during certain seasons (high demand) may not be relevant with Monthly banking. It may be relevant in case of annual banking.
i) Banking Charge (in kind) may be considered at 8%.

3.1.7 *Other Charges:*

a) It is observed that rule 9(1)(e) of the Green Energy Open Access Rules does not include SLDC/RLDC fees/charges, scheduling/rescheduling charges, DSM/Deviation charges etc. and these charges cannot be avoided.
b) SERCs may determine the SLDC fees and charges, scheduling charges and deviation settlement (DSM) charges as per the relevant regulations of the Commissions.

3.2 The Forum also discussed the issues in the Green Energy Open Access Rules which need to be aligned with the Electricity Act 2003 and the Tariff Policy. The analysis and recommendations suggested for consideration by the Ministry of Power is given below:

3.2.1 *Interpretation of Monthly Banking, permitted quantum of banked energy and determination of Banked Energy*

Rule 8(1) provides for Banking *at least* on a monthly basis. Further, proviso to Rule 8(2) states that the credit of energy banked *during the month* shall be adjusted during *the same month*. Rule 8(1) and Rule 8(2) contradicts each other. Therefore, it is recommended that the words 'at least' on monthly basis under Rule 8(1) may be deleted.

Further, Rule 8(2) also states that the permitted quantum of banked energy by the Green Energy Open Access consumers shall be at least 30% of the total monthly consumption of electricity from the distribution licensee by the consumers. It is suggested that since this is monthly banking, no percentage needs to be fixed. So, Rule 8(2) may be deleted

3.2.2 *Implicit waiver from DSM charges for Green Energy Open Access*

Rule 9(e) states that no other charges except the following charges shall be levied, which includes Transmission Charges, Wheeling Charges, Cross subsidy Surcharge, Additional Surcharge, Standby Charges and Banking Charges. The Rule does not include SLDC/ RLDC fees/ charges, scheduling /rescheduling charges, DSM/ Deviation charges etc. and these charges cannot be

avoided. Therefore, it is recommended that provisions for inclusion of applicable scheduling Fees/ Charges of SLDC/ RLDC and DSM/ Deviation charges should be provided.

3.2.3 ***Cross-subsidy surcharge & conditions for Green Energy Open Access not aligned with Cross-subsidy surcharge formulation under Tariff Policy***

The 1st proviso under Rule 9(2) states that the cross-subsidy surcharge for Green Energy Open Access Consumer purchasing green energy, from a generating plant using renewable energy sources, shall not be increased, during twelve years from the date of operating of the generating plant using renewable energy sources, by more than fifty percent of the surcharge fixed for the year in which open access is granted. It may be noted that as per the Tariff Policy formulation, Cross-subsidy surcharge is computed in such a way that it compensates the distribution licensee, for the loss of cross-subsidy as provide in the formula as under:

$S=T-[C\ (1+L/100)+D+R]$

Further, there are other conditions/provisions stipulated under the Electricity Act and Tariff Policy for determination of 'Surcharge' as under:

- Since single formula may not work for all states, the SERCs while keeping overall objectives of Electricity Act in view, may review and vary the same taking into consideration different circumstances prevalent in the state
- The cross-subsidy surcharge should be brought down progressively in line with cross-subsidies to various other categories of consumers, as far as possible, at linear rate to a maximum of 20% its operative level.

Thus, Surcharge determination is function of utility cost/tariff for consumer category and not really linked to generation cost of green energy resource and its year of commissioning. Therefore, it is recommended that the 1st proviso under Rule 9(2) may be deleted because the same is inconsistent with the Electricity Act and Tariff Policy.

3.2.4 ***Treatment for Waste-to-Energy plant and scope of exemption***

The 3rd Proviso of Rule 9(2) states that cross subsidy surcharge and additional surcharge shall not be applicable in case power produced from a Waste-to-Energy plant is supplied to the Open Access Consumer. There is a need to specify the type of Waste-to-Energy plants exempted under the Rule. It is suggested that such exemption of Surcharge and Additional Surcharge may be extended only to non-fossil fuel or MSW based Waste-to-Energy Plants under Green Energy Open Access. Therefore, the words, 'non-fossil fuel based or MSW based' Waste to Energy plant may be added under 3rd Proviso of Rule 9(2).

3.2.5 ***Applicability of waiver of Open Access charges on generation or consumption of green hydrogen and green ammonia***

The 4th proviso under Rule 9(2) states that Cross subsidy surcharge and additional surcharge shall not be applicable if green energy is utilized for production of green hydrogen and green ammonia. It is observed that as the cost of generation and storage of green hydrogen and green ammonia is very high, providing such waivers will result in subsidizing the industries at the cost of the other power sector consumers. So, it is recommended that the 4th proviso under Rule 9(2) may be deleted.

3.2.6 ***Applicability of Additional Surcharge***

2nd proviso under Rule 9(2) states that the additional surcharge shall not be applicable for Green Energy Open Access Consumers, if fixed charges are being paid by such a consumer. It is observed that the waiver of Additional Surcharge (which is resulting due to stranded capacity due to open access) just because fixed charges are being paid, does not appear to be reasonable and not aligned with regulatory principle of cost reflective recovery. So, it is recommended that the 2nd proviso under Rule 9(2) may be deleted.

3.2.7 ***Applicability of Standby charges and associated conditions and Explanations***

Rule 9(4) states that the standby charges shall be specified by the State Commission and such charges shall not be applicable if the Green Energy Open Access Consumers have given notice, in advance at least twenty-four hours before the time of delivery of power, for standby arrangement to the distribution licensee. It also states that the applicable standby charges shall not be more than Ten per cent of the energy charges applicable to consumer tariff category. It is recommended that the proviso to the rule relating to the charges of standby power should be modified to as not to be more than Twenty-Five per cent over and above the energy charges applicable to consumer tariff category. Also, for non-applicability of standby charges, the condition of advance notice should be such that the notice should be given atleast a day in advance before gate closure in DAM on D-1 day of delivery of power.

A tabulation of the above recommendations is prepared and attached at **Annexure- V**.

4. SUMMARY OF RECOMMENDATIONS

The recommendations, as suggested by the Forum on determination of the Open Access charges and Banking charge is summarised below:

4.1 Transmission Charge-

a) For use of inter-State transmission system: As specified by the Central Commission from time to time.

b) For use of intra-State transmission system:

i. Transmission Charges for Long-Term/Medium-Term Green Energy Open Access, shall be as below:

Transmission Charge = Total Transmission System Charges (TTSC) / Peak load served (PLS)

Where, Total Transmission system Cost for InSTS shall be sum of Annual Revenue Requirement (ARR) or annual transmission service charge of Transmission Licensee(s) in the State approved or adopted by the Commission.

PLS is the Peak load served by the State transmission system during the year: Provided that, in case of multiple transmission licensees in the States, the ARR for all the Transmission licensees shall be pooled together for computation of TTSC. Transmission Charges will be calculated as Rs/kW/month or Rs/MW/day.

ii. Transmission Charges for Short-Term Green Energy Open access, shall be computed as:

Transmission Charge (STOA) = Total Transmission System Charges (TTSC) / Energy transmitted by transmission licensee during the year.

Transmission Charge shall be computed in Rs/kWh and it shall be charged on the actual energy transmitted. The existing waivers or concessions in the Transmission Charges applicable for green energy open access transactions under the State ERC Open Access Regulations shall continue as specified by the SERC.

iii. While determining transmission charges for the ensuing year, Transmission ARR will be trued up by the Commission as per provisions of the MYT Regulations and on considering the Transmission revenue recovered from the Short-term Green Energy Open Access consumers for the previous year.

iv. In case, where a dedicated transmission system used for open access has been constructed for exclusive use of an open access consumer, the transmission charges for

such dedicated system shall be worked out by transmission licensee for their respective systems and get the same approved by the Commission. The charges shall be borne entirely by such open access consumer till such time the surplus capacity is allotted and used for by other persons or purposes.

v. In addition to Transmission Charge, Intra-State Transmission loss shall be applicable to consumers seeking Green Energy Open Access. It shall be determined as average of 52-week Intra-State Transmission loss for the previous financial year as approved by the Commission.

4.2 Wheeling Charge

Wheeling Charges for Long-Term/Medium-Term/Short-Term Green Energy Open Access, shall be computed as:

Wheeling Charge = Wheeling ARR / Energy wheeled during the year

i. Wheeling ARR of Distribution Licensee will be as approved by the Commission under MYT Tariff Regulations or Order as the case may be.

ii. Distribution Licensees need to maintain separate accounting records for the Wires Business and Retail Supply Business and prepare an allocation statement based on the allocation ratio specified by the Commission in the MYT Regulations or any other Regulation or Order as the case may be, for determination of Wheeling ARR for wire business and for determination of wheeling charges thereof.

iii. In case, voltage-wise segregation (HT/LT) of assets (Gross Fixed Assets) and data of energy wheeled / loss levels over (HT/LT) network is available, separate wheeling charges (HT/LT) shall be determined as under:

a. Wheeling Charge (HT) = Estimated/Allocated Wheeling ARR (HT) / Energy wheeled (HT)
b. Wheeling Charge (LT) = Estimated/Allocated Wheeling ARR (LT) / Energy wheeled (LT)

Where,

Estimated Wheeling ARR = Wheeling ARR (HT) + Wheeling ARR (LT)

HT (Loss) = Average of 52-week Loss at HT distribution system based on sample feeder level Energy Audit (viz. technical loss assessment)

LT (Loss) = Average of 52-week Loss at LT distribution system based on sample feeder level Energy Audit (viz. Technical loss assessment)]

iv. Wheeling Charge shall be computed in Rs/kWh and it shall be charged on the actual energy

wheeled. The existing waivers or concessions in the Wheeling Charges applicable for renewable energy open access transactions under State ERC Open Access Regulations shall continue as specified SERC.

v. While determining Wheeling Charges for the ensuring year, Wheeling ARR shall be trued up by the Commission as per the provisions of the MYT Regulations and upon considering the shortfall (excess) revenue recovered from Wheeling Charges for the previous year.

vi. In case, where a dedicated distribution system used for open access has been constructed for exclusive use of an open access consumer, the wheeling charges for such dedicated system shall be worked out by distribution licensee for their respective systems and get the same approved by the Commission. Such charges shall be borne entirely by such open access consumer till such time the surplus capacity is allotted and used for by other persons. An open access consumer connected to the Intra State Transmission system shall be liable to pay the wheeling charges determined under this regulation, if such consumer was paying wheeling charges directly or indirectly before availing the green energy open access.

vii. In addition to Wheeling Charge, Wheeling loss shall be applicable to consumers seeking Green Energy Open Access and it shall be determined as average of 52-week Wheeling loss for the previous year as approved by the Commission. The Wheeling loss shall include only technical loss and not Aggregate Technical and Commercial loss of that Distribution Licensee. The Commission shall consider the Average 52-week loss for HT/LT network, as applicable. If feeder-wise data of losses is not available, the Commission shall consider the voltage-wise sample feeder for determining the wheeling losses.

4.3 Cross subsidy surcharge

If Green energy open access facility is availed by a cross-subsidising consumer of a distribution licensee of the State, then such consumer, in addition to transmission and wheeling charges, shall pay cross subsidy surcharge determined by the Commission. Cross subsidy surcharge determined on Per Unit basis shall be payable, monthly by the green energy open access consumers based on the actual energy drawn during the month through open access. The amount of surcharge shall be paid to the distribution licensee of the area of supply from whom the consumer was availing supply before seeking open access.

The Cross-Subsidy Surcharge (CSS) shall be determined in accordance with the following formula specified in Tariff Policy, 2016 as amended time to time:

$$CSS\ (S) = T - [C/\ (1-L/100) + D + R]$$

Wherein:

S – surcharge,

T – Tariff payable by the relevant category of consumers, including reflecting the Renewable

Purchase Obligation,

C – Per unit weighted average cost of power purchase by Licensee, including meeting Renewable Purchase Obligation,

L – Aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level,

D -Aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level,

R – Per unit cost of carrying regulatory assets. Provided that in case the above formula gives negative value of surcharge, the same shall be zero.

The Cross-Subsidy Surcharge shall not exceed 20% of the tariff or Average Billing Rate (ABR) applicable to the category of the consumers seeking Green Energy Open Access. The Commission may fix a lower surcharge in the situation of shortages and load shedding by the distribution licensee. Such cross-subsidy surcharge shall not be levied in case distribution access is provided to a person who has been availing green power from the plant established as captive generation plant for his own use. Also, cross subsidy surcharge and additional surcharge shall not be applicable in case power produced from a non-fossil fuel-based Waste-to-Energy plant is supplied to the Open Access Consumer. Cross-Subsidy Surcharge for Green Energy Open Access shall be computed in Rs/kWh and shall be charged on the actual energy consumed by the consumer under Green Energy Open Access.

4.4 Standby Facility and Charges

The Standby Charges for standby arrangement to the green energy open access consumer in case of non-procurement/non-scheduling of power from the generating sources with whom they have the agreements to procure power due to outages of generator, transmission systems or the like shall be 125% of normal tariff of the consumer category. Such Standby Charges shall not be applicable if the Green Energy Open Access Consumers have given notice, atleast a day in advance before gate closure in DAM on ‘D-1’ day, ‘D’ being the day of delivery of power, for standby arrangement to the distribution licensee. The Standby Charges shall be computed in Rs/kWh and it shall be charged on the actual energy drawn by the consumer from distribution licensee during the period of standby availed by Green Energy Open Access consumer in case of outage of RE generator under Green Energy Open Access.

4.5 Banking Facility and Charges

Banking facility shall be provided to the consumers availing Green Energy Open Access. The surplus energy from a ‘Green Energy’ Generating Station after set off shall be banked with the Distribution Licensee. The banking facility including injection of surplus energy and drawal of banked energy shall be subject to scheduling. The Banking Charges shall be adjusted in kind @ 8% of the energy banked. The Banking of energy shall be permitted only on monthly basis as

per Calendar month. The credit for banked energy banked during a month shall not be permitted to be carried forward to subsequent months and the credit shall be adjusted during the same month as per the energy injected in the respective Time of Day ('TOD') slots determined by the Commission in its Orders determining the tariff of the Distribution Licensee. The energy banked during peak TOD slots shall be permitted to draw during peak as well as off-peak TOD slot. However, the energy banked during off-peak TOD slots shall be permitted to draw during off-peak TOD slot by only paying the banking charges and from off peak TOD slot to peak TOD slot by paying additional charges as may be specified by Appropriate Commission in addition to the banking charges. The un-utilised surplus banked energy at the end of the month shall be considered as lapsed at the end of each month. The RE Generating Station would be entitled to Renewable Energy Certificates to that extent.

4.6 Other Charges

In addition to the above charges, the consumer availing Green Energy Open Access shall also pay applicable SLDC fees and charges, Scheduling charges and RE Deviation Settlement Charges (RE-DSM) as determined by the Commission.

4.7 Based on the above recommendations, Model Regulation for calculation of Open Access charges and Banking charges for Green Energy Open Access Consumers is prepared and attached at **Annexure VI**.

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रजिस्ट्री सं. डी.एल.- 33004/99 REGD. No. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

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असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (i)
PART II—Section 3—Sub-section (i)

प्राधिकार से प्रकाशित
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विद्युत मंत्रालय

अधिसूचना

नई दिल्ली, 6 जून, 2022

सा.का.नि. 418(अ).—केंद्रीय सरकार, विद्युत अधिनियम, 2003 (2003 का 36) की धारा 176 की उप-धारा (2) के खंड (य) के साथ पठित उप-धारा (1) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, निम्नलिखित नियम बनाती है, अर्थात्: -

1. **संक्षिप्त नाम और प्रारंभ-** (1) इन नियमों का संक्षिप्त नाम विद्युत (हरित ऊर्जा खुली पहुंच के माध्यम से नवीकरणीय ऊर्जा का संवर्धन) नियम, 2022 है।

   (2) ये राजपत्र में उनके प्रकाशन की तारीख से प्रवृत्त होंगे।

2. **परिभाषाएं** – (1) इन नियमों में, जब तक कि संदर्भ से अन्यथा अपेक्षित न हो:-

   (क) "अधिनियम" से विद्युत अधिनियम, 2003 (2003 का 36) अभिप्रेत है;

   (ख) "इकाई" से कैप्टिव उपभोक्ताओं के सिवाय कोई ऐसा उपभोक्ता अभिप्रेत है जिसकी अनुबंधित मांग अथवा स्वीकृत भार 100 किलोवाट या उससे अधिक है:

   परंतु कैप्टिव उपभोक्ताओं के मामले में कोई भार सीमा नहीं होगी;

   (ग) "विनियामकों का मंच" से अधिनियम की धारा 166 की उप-धारा (2) में यथानिर्दिष्ट मंच अभिप्रेत है।

   (घ) "हरित ऊर्जा" से ऊर्जा जिसमें हाइड्रो और भंडारण (यदि भंडारण नवीकरणीय ऊर्जा का प्रयोग करता है) या समय-समय पर भारत सरकार द्वारा यथा-अधिसूचित किसी अन्य प्रौद्योगिकी सहित, ऊर्जा के नवीकरणीय स्रोतों से

वैद्युत ऊर्जा अभिप्रेत है और नियम (4) के उप-नियम (2) के खंड (छ) के उपबंध के अनुसार हरित हाइड्रोजन या हरित अमोनिया के उत्पादन सहित जीवाश्म ईंधनों को प्रतिस्थापित करने के लिए हरित ऊर्जा का उपयोग करने वाला कोई तंत्र भी सम्मिलित होगा;

(ङ) "बाध्य इकाई" से नवीकरणीय क्रय बाध्यता की पूर्ति के लिए अधिनियम की धारा 86 की उप-धारा (1) के खंड (ङ) के अधीन अधिदेशित इकाईयां अभिप्रेत हैं, जिनमें वितरण अनुज्ञप्तिधारी, कैप्टिव उपयोगकर्ता और खुली पहुंच उपभोक्ता सम्मिलित हैं।

(2) यहां प्रयोग किए गए और परिभाषित नहीं किए गए लेकिन अधिनियम में परिभाषित शब्दों और अभिव्यक्तियों का अर्थ वही होगा जो अधिनियम में क्रमशः उनका है।

3. लागू होना - यह नियम अपशिष्ट-से-ऊर्जा संयंत्र से ऊर्जा सहित, नियम 2 के खंड (ग) के अधीन यथा-परिभाषित हरित ऊर्जा के उत्पादन, खरीद और उपभोग के लिए प्रयोग होगा।

4. **नवीकरणीय क्रय बाध्यता** – (1) इन नियमों के लागू होने की तारीख से ही, वितरण अनुज्ञप्तिधारी के क्षेत्र में सभी बाध्य इकाईयों के संबंध में, एकसमान नवीकरणीय क्रय बाध्यता होगी।

(2) कोई इकाई, चाहे वह बाध्य हो या नहीं, निम्नलिखित में से किसी एक या अधिक पद्धति से अपनी अपेक्षानुसार नवीकरणीय ऊर्जा के उत्पादन, खरीद और उपभोग का चयन कर सकेगीः

(क) नवीकरणीय ऊर्जा स्रोतों से स्वयं का उत्पादन:- अपने स्वयं के उपभोग के लिए, इकाईयों द्वारा, नवीकरणीय ऊर्जा स्रोतों से विद्युत संयंत्रों की संस्थापना के लिए कोई क्षमता सीमा नहीं होगी और ऐसे संयंत्र भारत में किसी भी स्थान पर स्थापित किए जा सकेंगे और खुली पहुंच का प्रयोग कर विद्युत का पारेषण किया जाएगाः

परंतु उत्पादन संयंत्र की स्थापना स्वयं इकाई द्वारा अथवा किसी ऐसे विकासकर्ता द्वारा की जा सकेगी जिसके साथ कंपनी ने विद्युत क्रय करार किया हो।

(ख) किसी विकासकर्ता से खुली पहुंच के माध्यम से नवीकरणीय ऊर्जा की या तो सीधे या व्यापार अनुज्ञप्तिधारी के माध्यम से या विद्युत बाजारों के माध्यम से खरीद द्वारा।

स्पष्टीकरण: (1) विकासकर्ता से वह उत्पादन कंपनी अभिप्रेत है जो ऊर्जा के नवीकरणीय स्रोतों से विद्युत ऊर्जा उत्पादित करती है।

(2) वितरण अनुज्ञप्ति से वह व्यक्ति अभिप्रेत है जिसे समुचित आयोग द्वारा विद्युत के पुनर्विक्रय के लिए खरीद हेतु अनुज्ञप्ति दिया गया है।

(ग) वितरण अनुज्ञप्तिधारी से अध्यपेक्षा द्वारा – (क) कोई इकाई या तो उपभोग के एक निश्चित प्रतिशत या अपने संपूर्ण उपभोग तक हरित ऊर्जा खरीदने का विकल्प चुन सकेगी और वे इसके लिए अपने वितरण अनुज्ञप्तिधारी से अध्यपेक्षा कर सकेंगे, जो हरित ऊर्जा की ऐसी मात्रा उपाप्त करेगा और इसकी आपूर्ति करेगा और इसलिए उपभोक्ता के पास सौर एवं गैर-सौर के लिए अलग-अलग अध्यपेक्षा देने का लचीलापन होगा।

(ख) उपभोक्ता स्वैच्छिक आधार पर अपनी बाध्यता से अधिक नवीकरणीय ऊर्जा की खरीद कर सकेगा और कार्यान्वयन में सुविधा के लिए, यह पच्चीस प्रतिशत के चरणों में हो सकेगी और शत-प्रतिशत तक जा सकेगी;

(ग) हरित ऊर्जा के लिए टैरिफ समुचित आयोग द्वारा पृथक रूप से अवधारित किया जाएगा, जिसमें नवीकरणीय ऊर्जा की औसत पूलबद्ध विद्युत क्रय लागत, क्रॉस-सब्सिडी प्रभार, यदि कोई हो, और हरित ऊर्जा प्रदान करने के लिए वितरण अनुज्ञप्तिधारी की विवेकपूर्ण लागत को कवर करने वाले सेवा प्रभार सम्मिलित होंगे।

(घ) वितरण अनुज्ञप्तिधारी से हरित ऊर्जा के लिए कोई अध्यपेक्षा न्यूनतम एक वर्ष की अवधि के लिए होगी।

(ङ) हरित ऊर्जा की मात्रा कम से कम एक वर्ष के लिए पूर्व-निर्दिष्ट की जाएगी।

(च) वितरण अनुज्ञप्तिधारी अथवा वितरण अनुज्ञप्तिधारी के अतिरिक्त नवीकरणीय ऊर्जा स्रोतों से बाध्य इकाई के नवीकरणीय क्रय दायित्व से अधिक खरीदी गई हरित ऊर्जा की गणना वितरण अनुज्ञप्तिधारी के नवीकरणीय क्रय दायित्व के अनुसार की जाएगी।

(छ) वितरण अनुज्ञप्तिधारी स्तर पर आपूर्ति की गई नवीकरणीय ऊर्जा का लेखांकन मासिक आधार पर होगा।

(घ) कैप्टिव विद्युत संयंत्र से हरित ऊर्जा के उपभोग द्वारा।

(ङ) लागू विनियमों के अनुसार नवीकरणीय ऊर्जा प्रमाणपत्रों की खरीद द्वारा।

(च) हरित हाइड्रोजन या हरित अमोनिया की खरीद; "बाध्य इकाई हरित हाइड्रोजन या हरित अमोनिया के क्रय द्वारा भी अपने नवीकरणीय क्रय दायित्व को पूरा कर सकती है और ऐसी हरित हाइड्रोजन या हरित अमोनिया की मात्रा की गणना नवीकरणीय स्रोतों से एक मेगावाट प्रति घंटा विद्युत या इसके गुणकों से उत्पादित हरित हाइड्रोजन या हरित अमोनिया की समतुल्यता पर विचार करते हुए की जाएगी तथा इस संबंध में मानदंड केंद्रीय आयोग द्वारा अधिसूचित किए जाएंगे।

(छ) केंद्रीय सरकार द्वारा यथाअवधारित, कोई अन्य स्रोत, यदि कोई हों।

5. **हरित ऊर्जा खुली पहुंच**- (1) हरित ऊर्जा के उपभोक्ताओं को हरित ऊर्जा की खुली पहुंच प्रदान करने के लिए, समुचित आयोग, यदि आवश्यक हो, अपने द्वारा बनाए गए संगत विनियमों में संशोधन कर सकेगा और ऐसे विनियम इन नियमों के अनुरूप होंगे।

(2) इस संबंध में हरित ऊर्जा की खुली पहुंच के लिए नोडल अभिकरण द्वारा पंद्रह दिनों की अवधि के भीतर सभी आवेदनों को अनुज्ञा दी जाएगी:

परंतु केवल वे उपभोक्ता जो हरित ऊर्जा खुली पहुंच के माध्यम से विद्युत लेने के पात्र होंगे जिनके पास सौ किलोवाट और उससे अधिक की अनुबंधित मांग अथवा स्वीकृत भार है तथा हरित ऊर्जा खुली पहुंच के अंतर्गत विद्युत लेने वाले कैप्टिव उपभोक्ताओं के लिए विद्युत की आपूर्ति की कोई सीमा नहीं होगी।

परंतु यह और कि टाइम ब्लॉकों की न्यूनतम संख्या, जो बारह टाइम ब्लॉकों से अधिक नहीं होगी, जैसी यथोचित शर्तें अधिरोपित की जा सकें, जिसके लिए उपभोक्ता खुली पहुंच के माध्यम से खपत की गई विद्युत की मात्रा में परिवर्तन नहीं करेगा, ताकि वितरण अनुज्ञप्तिधारी द्वारा पूरी की जाने वाली मांग में अधिक उतार-चढ़ाव से बचा जा सके।

6. **नोडल अभिकरण** – (1) केंद्रीय सरकार द्वारा नवीकरणीय ऊर्जा के लिए सिंगल विंडो हरित ऊर्जा खुली पहुंच प्रणाली की स्थापना और प्रचालन के लिए एक केंद्रीय नोडल अभिकरण को अधिसूचित किया जाएगा।

(2) केंद्रीय नोडल अभिकरण सभी हरित ऊर्जा खुली पहुंच वाले उपभोक्ताओं के लिए एक केंद्रीकृत रजिस्ट्री स्थापित करेगा और हरित ऊर्जा खुली पहुंच से संबंधित सभी आवेदन केंद्रीय नोडल अभिकरण द्वारा स्थापित पोर्टल पर प्रस्तुत किए जाएंगे और ये आवेदन हरित ऊर्जा खुली पहुंच की स्वीकृति के लिए समुचित आयोग द्वारा अधिसूचित संबंधित नोडल अभिकरण को भेजे जाएंगे।

(3) समुचित आयोग, अल्पावधि के लिए हरित ऊर्जा खुली पहुंच प्रदान करने के लिए उपयुक्त भार प्रेषण केंद्र को, नोडल अभिकरण के रूप में, और समुचित आयोग द्वारा परिभाषित किए जाने वाले, मध्यम और दीर्घावधि के लिए हरित ऊर्जा खुली पहुंच प्रदान करने के लिए, यथास्थिति, राज्य या केंद्रीय पारेषण यूटिलिटी, को नोडल अभिकरण के रूप में अधिसूचित करेगा।

(4) नोडल अभिकरण केंद्रीय नोडल अभिकरण के पोर्टल पर जनता के लिए हरित ऊर्जा खुली पहुंच के संबंध में सभी प्रासंगिक जानकारी उपलब्ध कराएंगे।

7. **हरित ऊर्जा खुली पहुंच प्रदान करने की प्रक्रिया** - (1) केंद्रीय नोडल अभिकरण, इन नियमों के प्रारंभ होने के साठ दिनों की अवधि के भीतर, हरित ऊर्जा खुली पहुंच के लिए विनियामक मंच के परामर्श से एक सामान्य आवेदन प्रारूप तैयार करेगा तथा इस प्रारूप में हरित ऊर्जा खुली पहुंच के लिए आवेदन किए जाएंगे।

(2) हरित ऊर्जा खुली पहुंच के लिए, पूर्ण रूप से भरे हुए सभी आवेदन, केन्द्रीय नोडल अभिकरण द्वारा स्थापित पोर्टल पर प्रस्तुत किए जाएंगे।

(3) संबंधित नोडल अभिकरण, लिखित में एक आदेश द्वारा, पंद्रह दिनों की अवधि के भीतर हरित ऊर्जा खुली पहुँच के लिए आवेदनों को अनुमोदित करेगी, जिसमें विफल रहने पर इसे समुचित आयोग द्वारा यथाविनिर्दिष्ट तकनीकी अपेक्षाओं की पूर्ति के अधीन अनुमोदित समझा जाएगा।

परंतु हरित ऊर्जा खुली पहुंच के लिए ऐसे आवेदनों को प्रक्रियागत करने का क्रम फर्स्ट इन फर्स्ट आउट के अनुसार होगा।

(4) अल्प अवधि और मध्य अवधि खुली पहुंच की अनुज्ञा तब दी जाएगी, जब पारेषण प्रणाली में किसी अभिवृद्धि के बिना पर्याप्त अतिरिक्त क्षमता उपलब्ध हो, जबकि दीर्घावधिक खुली पहुंच के लिए पारेषण प्रणाली में, यदि अपेक्षित हो, अभिवृद्धि की जा सके।

परंतु यदि अतिरिक्त क्षमता उपलब्ध हो तो, विद्यमान प्रणाली में दीर्घावधि को प्राथमिकता दी जाएगी और इसके अतिरिक्त, गैर-जीवाश्म ईंधन स्रोतों के लिए खुली पहुंच को जीवाश्म ईंधन से खुली पहुंच पर प्राथमिकता दी जाएगी।

स्पष्टीकरण: इस नियम के प्रयोजनों के लिए, "जीवाश्म ईंधन" अभिव्यक्ति में ईंधन जैसे कोयला, लिग्नाइट, गैस, तरल ईंधन या इनके संयोजन ऊर्जा के प्राथमिक स्रोत के रूप में सम्मिलित हैं, जिनका उपयोग विद्युत उत्पादन के लिए ताप विद्युत स्टेशन में किया जाता है।

(5) खुली पहुँच के लिए किसी भी आवेदन को तब तक अस्वीकार नहीं किया जाएगा जब तक कि आवेदक को मामले में सुनवाई का अवसर नहीं दिया गया है और खुली पहुँच से इनकार करने वाले सभी आदेश सकारण आदेश होंगे।

(6) संबंधित नोडल अभिकरण के आदेश के विरुद्ध सभी अपीलें, नियम 7 के उप-नियम (4) के अधीन आदेश प्राप्त होने की तारीख से तीस दिनों की अवधि के भीतर, समुचित आयोग के समक्ष होंगी।

(7) समुचित आयोग तीन महीने की अवधि के भीतर अपील का निपटारा करेगा और उसके द्वारा जारी आदेश, पक्षकारों के लिए बाध्यकारी होगा।

8. **बैंकिंग** – (1) बैंकिंग द्वारा वितरण अनुज्ञप्तिधारी को अतिरिक्त लागत, यदि कोई हो, की प्रतिपूर्ति के लिए प्रभारों के भुगतान पर मासिक आधार पर बैंकिंग की अनुमति दी जा सकेगी और समुचित आयोग लागू प्रभार नियत करेगा।

(2) हरित ऊर्जा खुली पहुंच उपभोक्ताओं द्वारा एकत्रित ऊर्जा की अनुमत मात्रा उपभोक्ताओं द्वारा वितरण अनुज्ञप्तिधारी से विद्युत की कुल मासिक खपत की कम से कम तीस प्रतिशत होगी।

स्पष्टीकरण: इस नियम के प्रयोजनों के लिए, "बैंकिंग" अभिव्यक्ति से ग्रिड में अंतःक्षेपित अधिशेष हरित ऊर्जा अभिप्रेत है और हरित ऊर्जा खुली पहुँच उपभोक्ताओं द्वारा वितरण अनुज्ञप्तिधारी ऊर्जा में जमा की जाती है और इसे अतिरिक्त लागतों, यदि कोई हो, की क्षतिपूर्ति के लिए प्रभारों के साथ लिया जाएगा:

परंतु एकत्रित ऊर्जा को जमा करने के पश्चात के महीनों में अग्रनीत किए जाने की अनुज्ञा नहीं दी जाएगी और माह के दौरान एकत्रित ऊर्जा के जमा किए जाने को उसी महीने के दौरान समायोजित किया जाएगा।

9. **खुली पहुँच के लिए वसूला जाने वाला प्रभार -** (1) हरित ऊर्जा खुली पहुँच उपभोक्ताओं पर लगाया जाने वाला प्रभार निम्नानुसार होगा: -

(क) पारेषण प्रभार;

(ख) व्हीलिंग प्रभार;

(ग) क्रॉस सब्सिडी प्रभार;

(घ) आपातोपयोगी प्रभार जहां भी लागू हो; और

(ङ) उपर्युक्त प्रभार के अलावा, कोई अन्य प्रभार, वसूला नहीं जाएगा।

(2) क्रॉस सब्सिडी अधिभार अधिनियम के अधीन केंद्रीय सरकार द्वारा अधिसूचित टैरिफ नीति के उपबंधों के अनुसार होगाः

परंतु नवीकरणीय ऊर्जा स्रोतों का प्रयोग करते हुए उत्पादन संयंत्र से, हरित ऊर्जा खरीदने वाले हरित ऊर्जा खुली पहुंच उपभोक्ता के लिए क्रॉस अधिभार, नवीकरणीय ऊर्जा स्रोतों का प्रयोग करने वाले उत्पादन संयंत्र के प्रचालनीकरण की तारीख से बारह वर्षों के दौरान खुली पहुंच प्रदान करने के वर्ष के लिए नियत अधिभार के पचास प्रतिशत से अधिक नहीं बढ़ाया जाएगा।

परंतु यह और कि यदि ऐसे उपभोक्ता द्वारा नियत प्रभारों का भुगतान किया जा रहा है, तो हरित ऊर्जा खुली पहुंच उपभोक्ताओं के लिए अतिरिक्त अधिभार लागू नहीं होगा।

परंतु यह भी कि खुली पहुंच उपभोक्ता को अपशिष्ट-से-ऊर्जा संयंत्र से उत्पादित विद्युत की आपूर्ति किए जाने की स्थिति में क्रॉस सब्सिडी अधिभार और अतिरिक्त अधिभार लागू नहीं होंगे।

परंतु यह भी कि यदि हरित ऊर्जा का उपयोग हरित हाइड्रोजन तथा हरित अमोनिया के उत्पादन के लिए किया जाता है तो क्रॉस सब्सिडी अधिभार और अतिरिक्त अधिभार लागू नहीं होंगे।

(3) किसी उपभोक्ता द्वारा संदेय क्रॉस सब्सिडी अधिभार ऐसा होगा जो वितरण अनुज्ञप्तिधारी की आपूर्ति के क्षेत्र में क्रॉस सब्सिडी के वर्तमान स्तर को पूरा करे।

(4) आपातोपयोगी प्रभार, जहां भी लागू हो तो, राज्य आयोग द्वारा विनिर्दिष्ट किया जाएगा और यदि हरित ऊर्जा खुली पहुंच उपभोक्ताओं ने वितरण अनुज्ञप्तिधारी को आपातोपयोगी व्यवस्था के लिए, विद्युत के परिदान के समय से कम से कम चौबीस घंटे पहले अग्रिम रूप से, नोटिस दिया है, तो ऐसे कोई प्रभार लागू नहीं होंगे।

परंतु लागू आपातोपयोगी प्रभार उपभोक्ता टैरिफ प्रवर्ग के लिए लागू ऊर्जा प्रभारों के दस प्रतिशत से अधिक नहीं होंगे।

स्पष्टीकरण: इस नियम के प्रयोजनों के लिए, (i) "आपातोपयोगी प्रभार" अभिव्यक्ति से वितरण अनुज्ञप्तिधारी द्वारा दी गई आपातोपयोगी व्यवस्था की तुलना में खुली पहुँच उपभोक्ताओं पर लागू प्रभार अभिप्रेत हैं, यदि खुली पहुँच उपभोक्ता उत्पादन स्रोतों से विद्युत उपाप्त करने में असमर्थ हैं, जिन स्रोतों के साथ उत्पादक, पारेषण परिसंपत्तियों और इसी तरह की अन्य कटौतियों के कारण विद्युत उपाप्त करने के लिए उनके करार हैं।

(ii) यह स्पष्ट किया जाता है कि ऐसी स्थितियों में खुली पहुँच उपभोक्ता को वितरण अनुज्ञप्तिधारी जैसे वैकल्पिक स्रोतों से विद्युत लेनी पड़ती है और ऐसे उपभोक्ताओं के लिए इन सहायक सेवाओं को प्रदान करने के लिए वितरण अनुज्ञप्तिधारी द्वारा आपातोपयोगी व्यवस्था बनाए रखने के लिए उपगत लागत को दर्शाना चाहिए।

10. **हरित प्रमाण-पत्र -** वितरण अनुज्ञप्तिधारी उपभोक्ताओं के नवीकरणीय क्रय आक्षेप से परे अनुज्ञप्तिधारी द्वारा उपभोक्ता को उसके अनुरोध पर आपूर्ति की जाने वाली हरित ऊर्जा के लिए उपभोक्ताओं को वार्षिक आधार पर हरित प्रमाण पत्र देगा।

11. **रेटिंग -** राज्य आयोग, वितरण अनुज्ञप्तिधारी के उपभोक्ता की रेटिंग की अवधारणा को, ऐसे उपभोक्ता द्वारा खरीदी गई हरित ऊर्जा के प्रतिशत के आधार पर, प्रस्तुत कर सकेगा।

12. **कार्यपद्धति संबंधी मॉडल विनियम** – (1) समस्त खुली पहुंच प्रभारों की गणना हेतु एक सामान्य कार्यपद्धति के लिए, विनियामक मंच इन नियमों के आरंभ होने की तारीख से चार माह की अवधि के भीतर खुली पहुंच प्रभार, साथ ही बैंकिंग प्रभार की गणना की कार्यपद्धति के संबंध में एक मॉडल विनियम तैयार करेगा।

(2) विनियामक मंच के उप-नियम (1) में विनिर्दिष्ट कार्यपद्धति का विरचन यह सुनिश्चित करेगा कि विभिन्न अनुमेय प्रभार कष्टकर न हों और हरित ऊर्जा खुली पहुंच उपभोक्ताओं द्वारा हरित ऊर्जा के उपापन को बढ़ावा देने के उद्देश्य की पूर्ति के लिए वितरण अनुज्ञप्तिधारी की विवेकपूर्ण लागत की पूर्ति करें।

[फा. सं. 23/09/2021-आर एंड आर]

घनश्याम प्रसाद, संयुक्त सचिव

MINISTRY OF POWER

NOTIFICATION

New Delhi, the 6th June, 2022

G.S.R. 418(E).—In exercise of the powers conferred by sub-section (1) read with clause (z) of sub-section (2) of section 176 of the Electricity Act, 2003 (Act 36 of 2003), the Central Government hereby makes the following rules, namely:-

1. Short title and commencement.–(1)These rules may be called the Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. Definitions. – (1) In these rules, unless the context otherwise, requires: -

(a) "Act" means the Electricity Act, 2003 (36 of 2003);

(b) "entity" means any consumer who has contracted demand orsanctioned load of 100 kW or more except for captive consumers:

Provided that in case of captive consumers there shall not be any load limitation;

(c) "forum of regulators" means the forum as referred to in sub-section (2) of section 166 of the Act.

(d) "green energy" means the electrical energy from renewable sources of energyincluding hydro and storage (if the storage uses renewable energy) or any other technology asmay be notified by the Government of Indiafrom time to time andshall also include any mechanism that utilises green energy to replace fossil fuels including production of green hydrogen or green ammonia as perprovision of clause G of sub-rule(2) of rule 4;

(e) "obligated entity" means the entities mandated under clause (e) of sub-section(1) of section86 of theAct to fulfill Renewable Purchase Obligation, which includes distribution licensee, captive user, andopen access consumer.

(2) The words and expressions used and not defined herein but defined in the Act shall have the meaningsrespectively assigned to them in the Act.

3. Applicability.– This rules shall be applicable forgeneration, purchase and consumption of green energy as defined under clause (c) of rule 2,including the energy from Waste-to-Energy plant.

4. Renewable Purchase Obligation.– (1) On and from the date of commencement of these rules,there shall be an uniform renewable purchase obligation, on all obligated entities in area of a distribution licensee.

(2) Any entity, whether obligated or not may elect to generate, purchase and consume renewable energy as per their requirements by one or more of the following methods:-

(A) Own Generation from renewable energy sources**.**–There shall not be any capacity limit for installation of power plants from renewable energy sources, by entitiesfor their own consumption and such plants may be set up at any location in India and power shall be transmitted by usingopenaccess:

Provided that the generating plant may be set up by the entity itself or by a developer with which the entity enters into a power purchase agreement.

(B) By procuring Renewable Energy through Open Access from any Developer either directly or through a trading licensee or through power markets.

Explanation: (1) Developer means the generating company who generate electrical energy from renewable sources of energy.

(2) Trading Licenseemeans a person who has been granted a licence by appropriate commission, for purchase of electricity for resale thereof.

(C) By requisition from distribution licensee**.**–(a) Any entity may elect to purchasegreen energy eitherupto a certain percentage of the consumption or its entire consumption and they may place a requisition for this with their distribution licensee, which shall procure such quantity of green

energy and supply it and the consumer shall have the flexibility to give separate requisition for solar andnon-solar;

(b) The consumer may purchase on a voluntary basis, more renewable energy, than he is obligated to do and for ease of implementation, this may be in steps of Twenty five per cent and going upto Hundred per cent;

(c) The tariff for the green energy shall be determined separatelyby the Appropriate Commission, which shall comprise of the average pooled power purchase cost of the renewable energy, cross-subsidy charges if any, and service chargescovering theprudent cost of the distribution licensee for providing the green energy;

(d) Any requisition for green energy from a distribution licensee shall be for a minimum period of one year;

(e) The quantum of green energy shall be pre-specified for at least one year;

(f) The green energy purchased from distribution licensee or from Renewable Energy sources other than distribution licensee in excess of Renewable Purchase Obligation of obligated entity shall be counted towards Renewable Purchase Obligation compliance of the distribution licensee;

(g) The Accounting of renewable energy supplied at distribution licensee level shall be on a monthly basis;

(D) By consuming green energy from captive power plant.

(E) By purchasing of renewable energy certificates in accordance with the applicable regulations.

(F) Purchase of green hydrogen or green ammonia; "the obligated entity can also meet their Renewable Purchase Obligation by purchasing green hydrogen or green ammonia and the quantum of such green hydrogen or green ammonia would be computed by considering the equivalence to the green hydrogenor green ammonia produced from one MWh of electricity from the renewable sources or its multiples and norms in this regard shall be notified by the Central Commission.

(G) Any other sources, as may be, determinedby the Central Government.

5. Green Energy Open Access.– (1) To provide Green Energy Open Access to consumers of green energy, the appropriate Commission may, if necessary, amend the relevant regulations made by it and such regulations shall be consistent with these rules.

(2) All applications for open access of green energy in this regard shall be allowed by the nodal agency within a period of fifteen days:

Provided that only consumers who have contracted demand or sanctioned load of hundred kW and above shall be eligible to take power through Green Energy Open Access and there shall be no limit of supply of power for the captive consumers taking power under Green Energy Open Access:

Provided further that reasonable conditions such as the minimum number of time blocks, which shall not be more than twelve time blocks, for which the consumer shall not change the quantum of power consumed through open access may be imposed so as to avoid high variation in demand to be met by the distribution licensee.

6. Nodal Agency.– (1) A Central Nodal Agency shall be notified by the Central Government to set up and operate a single window green energy open access system for renewable energy.

(2) The Central Nodal agency shall set up a centralised registry for all Green Energy Open Access consumers and all the applications related to green energy open access shall be submitted on the portal set up by the said the Central Nodal Agency and these applications shallget routed to the concerned nodal agency notified by the Appropriate Commission for grant of green energy open access.

(3) The Appropriate Commission shall notify the appropriate Load Despatch Centre as the nodal agency for grant of green energy open access for short term, to be defined by the Appropriate Commission,andthe State or Central Transmission Utility, as the case may be, as the nodal agency for grant of Green Energy Open Access, for medium and long term.

(4) The nodal agencies shall make available all relevant information regarding green energy open access to the public on the portal of the Central Nodal Agency.

7. Procedure for grant of Green Energy Open Access.– (1) The Central Nodal Agency shall prepare, within a period of sixty days of commencement of these rules, a common application format for the Green Energy Open Access in consultation with the Forum of Regulators and applications for the Green Energy Open Access shall be made in this format.

(2) All the applications for the Green Energy Open Access complete in all respects, shall be submitted on the portal set up by the Central Nodal Agency.

(3) The concerned nodal agency shall, by an order in writing, approve the applications for the Green Energy Open Access within a period of fifteen days, failing which it shall be deemed to have been approved subject to the fulfillment of the technical requirements as specified by the appropriate Commission:

Provided that the order of processing of such applications for Green Energy Open Access shall be first in first out.

(4) The Short term and medium term open access shall be allowed, if there is sufficient spare capacity available in the transmission system without any augmentation whereas for long term open access, the transmission system may be augmented if required:

Provided that priority shall be given to long term in the existing system if spare capacity is available and further, open access for non-fossil fuel sources shall be given priority over the open access from the fossil fuel.

Explanation: For the purposes of this rule, the expression "Fossil Fuel"includes the fuels such as coal, lignite, gas, liquid fuel or combination of these as its primary source of energy, which are used in Thermal Generating Station for generating electricity.

(5) No application for open access shall be denied unless the applicant has been given an opportunity of being heard in the matter and all orders denying open access shall be speaking orders.

(6) Appeals against an order of the concerned nodal agency, shall lie beforethe Appropriate Commission, within a period of thirty days from the date of receipt of order under sub-rule (4) of rule 7.

(7) The Appropriate Commission shall dispose the appeal within a period of three months and the order issued by it, shall be binding on the parties.

8. Banking.– (1) Banking shall be permitted at least on a monthly basis on payment of charges to compensate additional costs, if any, to the distribution licensee by the Banking and the Appropriate Commission shall fix the applicable charges.

(2) The permitted quantum of banked energy by the Green Energy Open Access consumers shall be at least thirty percent of the total monthly consumption of electricity from the distribution licensee by the consumers.

Explanation: For the purposes of this rule, the expression"Banking" means the surplus greenenergy injected in the grid and credited with the distribution licensee energy by the Green Energy Open Access consumers and that shall be drawn along with charges to compensate additional costs if any:

Provided that the credit for banked energy shall not be permitted to be carried forward to subsequent months and the credit of energy banked during the month shall be adjusted during the same month.

9. Charges to be levied for Open Access.– (1) The charges to be levied on Green Energy Open Access consumers shall be as follows:-

(a) Transmission charges;

(b) Wheeling charges;

(c) Cross subsidy Surcharge;

(d) Standby charges wherever applicable; and

(e) No other charges except the charges above, shall be levied.

(2) The Cross subsidy surcharge shall be as per the provisions of tariff policy notified by the Central Government under the Act :

Provided that the cross subsidy surcharge for Green Energy Open Access Consumer purchasing green energy, from a generating plant using renewable energy sources, shall not be increased, during twelve years from the date of operating of the generating plant using renewable energy sources, by more than fifty percent of the surcharge fixed for the year in which open access is granted;

Provided further thatthe additional surcharge shall not be applicable for Green Energy Open Access Consumers,if fixed charges are being paid by such a consumer:

Provided also that cross subsidy surcharge and additional surcharge shall not be applicable in case power produced from a Waste-to-Energy plant is supplied to the Open Access Consumer.

Provided also that Cross subsidy surcharge and additional surcharge shall not be applicable if green energy is utilized for production of green hydrogen and green ammonia.(3) The cross subsidy surcharge payable by a consumer shall be such as to meet the current level of cross subsidy within the area of supply of the distribution licensee.

(4) The standby charges, wherever applicable, shall be specified by the State Commission and suchcharges shall not be applicable if the Green Energy Open Access Consumers have givennotice, in advance at least twenty four hours before the time of delivery of power, for standby arrangement to the distribution licensee:

Provided that the applicable standby charges shall not be more than Ten per cent of the energy charges applicable to consumer tariff category.

Explanation: For the purposes of this rule, (i) the expression "standby charges" means the charges applicable to open access consumers against the standby arrangement provided by the distribution licensee, in case the open access consumer is unable to procure power from the generating sources with whom they have the agreements to procure power due to outages of generator, transmission assets and the like.

(ii) It is hereby clarified that in such situations the open access consumer has to take power from an alternate sources like the distribution licensee and the charges for maintaining standby arrangements for such consumers should be reflective of the costs incurred by distribution licensee for providing these support services.

10. **Green certificate.**–The distribution licensee shall give green certificate on yearly basis to the consumers for the green energy supplied by the licensee to consumer on his request beyond the renewable purchase obligation of the consumers.

11. **Rating.**–The State Commission may introduce the concept of rating of the consumer of the distribution licensee, based on the percentof green energy purchased by such consumer.

12. **Model regulation on methodology.**– (1) In order to have acommon methodology for calculation of all the open access charges, theforum of regulators shall prepare a model regulations on methodology for calculation of open access charges, as well as banking charges within a period of four months from the date of commencement of these rules.

(2) The framing of methodology referred to in sub-rule (1), of the forum of regulators shall ensure that various permissible charges are not beonerous and shall meet the prudent cost of the distribution licensee in order to fulfil the objective of promoting the procurement of green energy by Green Energy Open Access Consumers.

[F. No. 23/09/2021-R&R]

GHANSHYAM PRASAD, Jt. Secy.

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विनियामक मंच
(विद्युत अधिनियम 2003 की धारा 166 (2) के तहत)
FORUM OF REGULATORS
(Under Section 166 (2) of The Electricity Act, 2003)

Harpreet Singh Pruthi
Secretary

No.FOR-11011(12)/1/2022-CERC Dated: 14th July, 2022

Subject: Constitution of FOR Working Group on "Developing Model Regulations on methodology for calculation of open access charges and banking charges for Green Energy Open Access Consumers".

The Forum of Regulators in its 81st meeting held on 8th July 2022 deliberated on the issue of framing Model Regulations on methodology for calculation of open access charges and banking charges, in accordance with Rule 12 of the Electricity (Promoting Renewable Energy through Green Energy Open Access) Rules, 2022.

2. After discussion, it was agreed to constitute a Working Group, with the following composition:

1) Chairperson, Uttar Pradesh ERC – Chairman of Working Group.
2) Chairperson, Chhattisgarh ERC – Member
3) Chairperson, Himachal Pradesh ERC – Member
4) Chairperson, Karnataka ERC – Member
5) Chairperson, Rajasthan ERC – Member
6) Chairperson, Tripura ERC – Member
7) Member (Finance), CERC – Member
8) Member (Technical), Telangana ERC – Member
9) Member (Technical), GERC – Member

3. The Terms of Reference of the Working Group shall be as under: -

a. Study and analyze the issues around implementation of Green open Access according to the Rules issued by Ministry of Power on Green energy Open Access;
b. Study and analyse various Open Access charges issued in various States under Open Access Regulations;
c. Study and analyse banking charges applicable in various States for Renewable Energy;
d. Suggest methodology for calculation of green energy open access charges and banking charges;
e. Suggest Model Regulations in this regard;
f. Any other matter related and incidental to the above.

4. The Working Group may co-opt Chairperson/ Member of any other SERC and/or any other expert as deemed fit. The Working Group may also avail the services of a consultant/ consulting-firm/ research organisation in the process of examining the issues related to the subject matter.

5. The Secretariat of the Forum of Regulators would provide secretariat services to this Working Group.

(**Harpreet Singh Pruthi**)

Copy to
Members of the Working Group

Copy for information to:

a. Sr. Exec. to Chairperson, CERC / FOR.
b. Sr. PPS to Secretary, CERC.
c. Sr. ExecStenoto Chief (RA), CERC.
d. PS to Deputy Chief (RA), CERC.

MINUTES OF THE FIRST MEETING OF "FOR WORKING GROUP ON GREEN ENERGY OPEN ACCESS"

Venue	:	Conference Hall, Upper Ground floor, CERC, New Delhi
Date	:	25 July 2022 – Monday
List of Participants	:	Annexure-1 (Enclosed)

1. The first Meeting of the FOR Working Group (WG) on "Green Energy Open Access" (GEOA) was held on 25th July 2022 at CERC, New Delhi, under the chairmanship of Shri Raj Pratap Singh, Chairperson, Uttar Pradesh Electricity Regulatory Commission (UPERC). Chairperson of the WG welcomed all members and gave a brief background on the constitution of the WG which stemmed from the decision taken by the Forum in the 81st meeting of the FOR wherein the "Electricity (Promoting Renewable Energy through Green Energy Open Access) Rules, 2022 notified by the Ministry of Power (MoP), on 6th June 2022 was discussed

2. At the outset, Chairperson of the WG highlighted the importance of GEOA and the need for a common implementation strategy.

3. Members of the WG felt that while Rule 12 of the GEOA Rules mandates FOR to frame Model Regulations with respect to formulating common methodology for open access charges and Banking charges, each SERC should be free adopt the same and modify the Model Regulations to suit their State. As such, the same would be guiding/advisory in nature.

AGENDA 1: DISCUSSION ON GEOA

4. Dy Chief (RA), CERC presented preliminary compilation of methodology for determination of various charges being followed in various States. The following Open Access Charges were covered for the purpose of these discussions:

   a. Transmission charges
   b. Wheeling Charges
   c. Cross subsidy surcharge
   d. Additional Surcharge
   e. Standby Charges
   f. Banking Charges

5. In this context, the WG highlighted conflicts with certain provisions of the Electricity Act 2003 and implementation difficulties for operationalising provisions/formulations as stipulated under Tariff Policy vis-à-vis said GEOA Rules, as outlined below:

    a. Permitted quantum of banked energy as at least 30% of total consumption (Rule 8(2).
    b. Interpretation of Monthly Banking and determination of Banked Energy linked to billing cycle or calendar month (Rule 8 (1) and Explanation)
    c. Provisos under Rule 9(2) for Cross Subsidy Surcharge & conditions for GEOA not aligned with CSS formulation under Tariff Policy
    d. Accounting treatment for operationalizing inter-State and intra-State green energy open access [schedule vs actual]
    e. Principle of discrimination vis-à-vis preferential treatment [waste to energy] (Rule 9(2)3rd proviso)
    f. Applicability of waiver on generation or consumption [green hydrogen, green ammonia] (Rule 9(2) 4th proviso)
    g. Applicability of Standby charges and associated conditions and Explanations (Rule 4)
    h. Applicability of Additional Surcharge (Rule 9(1) and Rule 9(2)2nd proviso)
    i. Computation of RPO against Green Energy/Green Hydrogen if generation & consumption taking place in 2 different States or discoms.
    j. Preferential treatment in open access to green energy vs. non-discriminatory open access under the EA2003
    k. Implicit waiver from DSM charges for GEOA (Rule 9 (e))

6. **Minimum banking criteria**: There was a detailed discussion on the criteria for banking being 'at least' 30%. The members felt that there is a need for clarity in this regard, and that the expression "atleast 30%" should ideally be substituted by "not exceeding 30%"

7. **Wheeling charges**: The WG discussed that while computation of transmission charges is straightforward, computation for wheeling charges for use of distribution system poses a challenge, especially, w.r.t ascertaining network related costs. Allocation of cost at voltage levels is possible only if there is 100% metering at all voltage levels and cost information of asset base at voltage levels is available. It was noted that Model MYT regulations outline principles for determination of Wire related costs; however, there exists diversity of approaches in ascertaining wire related costs and determination of wheeling charges thereof.

8. **Standby charges**: The WG decided to further explore issue of levy & determination of standby chargers in terms of energy or capacity charges, or both, upon evaluating practices across States.

9. **Banking charges**: The WG discussed that banking charges cannot be uniform across States as each State has a unique load curve and is subjected to seasonal variation. It was noted that banking charges in kind are the prevalent practice in many States. The WG members also felt that banking charges linked to market price or ToD charges could also be considered although it would depend upon time of injection or drawl of banked power

10. **Surcharge**: The WG briefly discussed the role and feasibility of any cross-subsidy surcharge or additional surcharge under the GEOA.

11. The WG also highlighted certain inconsistencies in the text of the GEOA and remarked that while some SERCs have furnished their observations/comments on GEOA, other WG members may also provide their comments/suggestions on GEOA, with specific reference to methodology on determination/applicability of various charges.

Action Points/Decisions

1. FOR Secretariat to seek comments/inputs from all States on the GEOA, with specific reference to methodology on determination/applicability of various charges.

2. Subsequently, FOR Secretariat would collate such inputs and undertake comparative analysis of approaches/methodologies in determination of various charges, applicable concessions/preferential treatment for RE (if any), obtain guidance of the MoP on above implementation challenges (para 5) and suggest framework for development of model regulations on methodology in next meeting.

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ANNEXURE-1

LIST OF PARTICIPANTS OF THE "FOR WORKING GROUP ON GREEN ENERGY OPEN ACCESS" HELD ON 25TH JULY 2022 AT 11 AM IN CERC, NEW DELHI

MEMBERS OF THE WORKING GROUP

1. Sh. Raj Pratap Singh, Chairperson, UPERC - Chairperson of the Working Group
2. Sh. Hemant Verma, Chairperson, CSERC – Member
3. Sh. D. K. Sharma, Chairperson, HPERC – Member
4. Mr Ravi Kumar, Chairperson, KERC – Member
5. Dr. B. N. Sharma, Chairperson, RERC – Member
6. Sh. D. Radhakrishna, Chairperson, TERC – Member
7. Sh. Arun Goyal, Member, CERC - Member
8. Sh. Satyendra Pandey, Member (Technical), GERC – Member
9. Sh. M.D. Manohar Raju, Member (Technical), TSERC - Member
10. Sh. Harpreet Singh Pruthi, Secretary, CERC
11. Dr. S.K. Chatterjee, Chief (RA), CERC

OTHER PARTICIPANTS

1. Smt. Rashmi Nair, Dy. Chief (RA), CERC
2. Sh. P.M. Antony, Assistant Secretary(FoR)
3. Sh. Ravindra Kadam, Sr Advisor (RE), CERC
4. Sh Saurabh, PRO, CERC
5. Ms Jijnasa, RO, FOR
6. Ms Nausheen, RA, CERC
7. Sh Souravdasgupta, RA, CERC
8. Sh Ajit Pandit, Consultant on behalf of USAID
9. Smt. Richa Karve, Consultant on behalf of USAID

MINUTES OF THE SECOND MEETING OF "FOR WORKING GROUP ON GREEN ENERGY OPEN ACCESS"

Venue	:	Conference Hall, Upper Ground floor, CERC, New Delhi
Date	:	22nd August 2022 – Monday
List of Participants	:	Appendix -1 (Enclosed)

The second Meeting of the FOR Working Group (WG) on "Green Energy Open Access" (GEOA) was held on 22nd August 2022 at CERC, New Delhi, under the chairmanship of Shri R.P.Singh, Chairperson, Uttar Pradesh Electricity Regulatory Commission (UPERC). At the outset, Chairperson of the WG welcomed all members to the 2nd meeting of the Working Group and summarized the discussions of 1st meeting.

Agenda 1: Confirmation of minutes of the 1st meeting of the working group held on 25th July 2022.

The Working Group was updated about the action taken on the minutes of the 1st meeting held on 25th July 2022 after which the WG confirmed the minutes .

Agenda 2: Suggestions / Clarifications on Green Energy Open Access Rules 2022

The Working Group during the 1st meeting had highlighted some conflicts with certain provisions of the GEOA Rules. In this regard, Assistant Chief (RA), CERC presented the preliminary compilation of proposed suggestions to be sent to MoP and suggestions for consideration of the Working Group.

After detailed discussions, the suggestions of the Working Group are placed at ***Annexure-I***

The Working Group recommended that all the said suggestions may be placed before the FOR in the next meeting and then forwarded to Ministry of Power.

Agenda 3: Deliberation on Terms of Reference of the Working group of Green Energy Open Access Rules 2022

The Working Group discussed the presentation from Member, GERC on determination of various charges under GEOA rule ***(Annexure-II)***. Further, the Consultant engaged for the WG presented ***(Annexure-III)*** various methodologies on determination of various charges as being followed by the SERCs. The following points were discussed :

A) Transmission Charges and Losses:

a) The Working Group noted that SERCs are following different methodologies for determination of transmission charges and losses. Transmission charges are on Rs. /MW/month or Rs/kWh basis. Further charges are linked with either Average

Coincident Peak Demand (CPD) or Non-coincident Peak Demand (NCPD) or ratio of both or Available Transmission Capacity (ATC).

b) The methodology for transmission charges for short term, medium term and long-term OA are different.

c) The Working Group discussed that, while devising the methodology for transmission charges for GEOA, the Transmission Capacity Utilisation and transmission capacity rights of transmission users need to be ascertained. Further, the treatment of long/medium/short term OA may be different.

d) It was proposed to consider "energy" and "demand" both in the denominator for computation of transmission charges with higher weightage to the energy and lower weightage to the demand.

e) Further, some of the SERCs are providing waiver or concessions for RE Open Access which may be continued as per the provisions of the respective SERCs Regulations.

f) With regards to Transmission loss, average 52-week Transmission loss as declared by SLDC may be considered.

Based on the above discussions, the Working Group recommended the following methodology for Transmission charges for GEOA:

i. For Long-Term and Medium-Term GEOA: Total Transmission system Cost for InSTS shall be calculated by aggregating ARR of Transmission Licensee(s) in the State. Computation of base transmission tariff for long term open access shall be calculated as Total Transmission System Charges (TTSC) / peak load served

ii. Transmission Charges may be calculated as Rs/kW/month or Rs/MW/day.

iii. Similarly, for short term open access, base transmission tariff shall be computed *TTSC / (Energy Transmitted by transmission licensee (Rs/kWh)*

iv. The Transmission Charges shall be trued up by considering the Transmission charges recovered from the Short-term Users.

v. Transmission losses shall be computed as average of 52-week Transmission loss as declared by SLDC.

B) Wheeling charges

a) The Working Group discussed that the wire ARR is expected to be recovered through wheeling charges, and therefore, the wheeling charges are required to be computed considering the wire charges of the distribution licensee. However, for computation of separate wire ARR, the allocation of cost to wire business and supply business is pre-requisite.

b) Distribution Licensees need to maintain separate accounting records for the Wires Business and Retail Supply Business and prepare an allocation statement based on the allocation ratio specified by the Commission in the MYT Regulations or any other Regulation/Order as the case may be, for determination of separate tariff for wire business.

c) For determination of wire cost, voltage-wise segregation of assets is expected, however, if the same has not been segregated, the SERC may continue with determination of wheeling charges for all categories.

d) Further, if the SERCs are providing waiver or concessions for RE Open Access, the SERC may continue with the same as per the provisions of the SERC Regulations.

Based on the discussions the Working Group proposed that,

i. Wheeling losses shall be computed based on wheeling ARR as below:

Wheeling Charge = (Wheeling ARR)/ (Energy Units wheeled) (in Rs. /kWh).

ii. With regards to wheeling losses, only technical losses are expected to be considered for the GEOA. The Average 52-week loss for HT/LT network may be considered. If feeder-wise data of losses is not available, the sample feeder methodology may be adopted. If the SERC is determining the voltage-wise wheeling losses, it may continue to do so.

iii. If the SERC is providing waiver or concessions to wheeling losses for RE Open Access, it may be continued as per the provisions of the respective SERC's Regulations.

C) Cross-Subsidy Surcharges

a) The Working Group discussed that CSS is required to be determined for meeting the current level of cross subsidy in the tariff categories.
b) As per the Tariff Policy, 2016, the SERCs are expected to notify a roadmap for bringing the tariffs within ± 20% of ACoS and CSS should not exceed 20% of the tariff applicable to the category of the consumers seeking OA.
c) The Tariff Policy 2016 specifies the formula for determination of CSS. Further, Surcharge formula envisages establishment of Voltage-wise Cost to serve (C) to Consumer category. This would necessitate determination of other parameters (Loss, Wheeling charge etc) for each voltage level (EHV/HT/LT).
d) Most of SERCs are considering the CSS formula provided in the Tariff Policy, 2016. However, some of the SERCs are computing CSS by considering ABR and CoS.

Based on the discussions, the Working Group proposed that, **the formula for CSS** provided in the Tariff Policy, 2016 may be considered for determination CSS for GEOA as below:

CSS (S) = T – [C/ (1-L/100) + D+ R]
Wherein:
S – surcharge
T - Tariff payable by the relevant category of consumers, including reflecting the RPO
C - Per unit weighted avg. cost of power purchase by Licensee, including meeting RPO
D -is the aggregate of Tx., DL and wheeling charge applicable to relevant voltage level
L - is the aggregate of TX, DL and commercial losses, expressed as a % applicable to the relevant voltage level
R - Per unit cost of carrying regulatory assets.

The Working Group also discussed that, some of the SERCs are providing waiver or concession in CSS for RE OA, which they may continue. Further, the CSS may be determined separately for each consumer category (T).

D) Additional Surcharge

a) The Working Group discussed that, as per the provisions of the EA, 2003, OA consumer shall be liable to pay additional surcharge (ASC) on the charges of wheeling, as may be specified by the SERC, to meet the fixed cost of such distribution licensee arising out of his obligation to supply.

b) Further as per the Tariff policy, the ASC shall be applicable only if it is conclusively demonstrated that the obligation of a licensee, in terms of existing power purchase commitments, has been and continues to be stranded, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. Fixed costs related to network assets would be recovered through wheeling charges.

c) **The Working Group proposed that**, the methodology for determination of ASC may not be required to be specified as it may vary from State to State. The SERCs may follow provisions of its own Regulations for applicability of ASC.

E) Standby Charge

a) The Working Group discussed the provisions of Tariff Policy that, in case of outages, standby arrangement shall be provided to OA consumer by licensee on payment of temporary connection and charges shall not be more than 125% of normal tariff

b) The Stand-by charges should reflect cost of power procurement on short term basis and deviation settlement charges liable to be paid by distribution utilities in lieu of supply of such power.

c) The Working Group also discussed that, in case of RE OA, the consumers taking power from such RE generator, may maintain its contract demand with distribution licensee. In such case, the distribution licensee is obligated to supply power to such consumer under universal service obligations and OA consumer shall continue paying fixed charges to the distribution licensee.

d) **The Working Group, proposed that,** standby charges shall be linked with tariff of the consumer category under GEOA. Accordingly,

Standby Charges shall be 125% of normal tariff of the consumer category.

F) Banking Charges

a) The Working Group discussed that, Banking facility is a major enabler for RE OA. When consumer's demand schedule and power generation schedule cannot be matched, enabling provisions of banking has bearing on other consumers of distribution licensee.

b) Banking charges shall be in kind or in Rs/kWh of the banked energy. The banking may be happening for some of the time blocks or across various ToD slots. The banking charges if determined in Rs/kWh, may be required to determine Time block wise or ToD which may be complex for implementation. The working group proposed that, banking charges should be in kind as it will be easy for implementation.

c) The Working Group also discussed that, the study conducted by the Prayas Energy Group for Karnataka may be referred for Banking impact on the distribution licensee and consumer tariff.

d) The ToD slab wise banking may be allowed. The Banking settlement period may be calendar month. There would be no "carry forward" or "deemed purchase" of un-utilized banked quantum of energy. Such un-utilized energy shall be considered as lapsed at the end of each calendar month.
e) Further, there may be some restriction on drawal of surplus Banked Energy during specific ToD slabs or specific months. Injection in Peak hours will be allowed to draw/set-off against Peak consumption. Injection in Off-peak hours will be allowed to draw/set-off against Off-peak consumption.
f) Injection in Peak hours will be allowed to draw/set-off against Off-peak consumption but vice-versa will not allowed.
g) SERCs may consider the possibility of providing conversion factor for allowing the energy banked in off- peak hours to be consumed during peak hours. The conversion factor may be similar to conversion factor applicable for ToD slabs.
h) Restrictions for drawl during certain seasons (high demand) may not be relevant with Monthly banking. It may be relevant in case of annual banking.
i) Banking Charge (in kind) may be considered at 8%.

In addition to above, SERC may require to determine SLDC fees and charges, scheduling charges and deviation settlement (DSM) charges as per the relevant regulations of the SERCs.

Action Points/Decisions

1. FOR Secretariat to prepare draft model regulations and circulated to the members of the working group. The Members will offer their comments/suggestions on the draft model regulations which will be duly incorporated .

2. Thereafter, the draft model regulation for calculation of green energy open access charges and banking charges will be placed for discussion in the next FOR meeting.

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APPENDIX -1

LIST OF PARTICIPANTS OF THE "FOR WORKING GROUP ON GREEN ENERGY OPEN ACCESS" HELD ON 22ND AUGUST 2022 AT 1330 HRS IN CERC, NEW DELHI

MEMBERS OF THE WORKING GROUP

1. Sh. R.P Singh, Chairperson, UPERC - Chairperson of the Working Group
2. Sh. D. K. Sharma, Chairperson, HPERC – Member
3. Dr. B. N. Sharma, Chairperson, RERC – Member
4. Sh. Hemant Verma, Chairperson, CSERC – Member
5. Mr Ravi Kumar, Chairperson, KERC – Member
6. Sh. Arun Goyal, Member, CERC - Member
7. Sh. Satyendra Pandey, Member (Technical), GERC – Member
8. Sh. M.D. Manohar Raju, Member (Technical), TSERC - Member
9. Sh. Harpreet Singh Pruthi, Secretary, CERC
10. Dr. S.K. Chatterjee, Chief (RA), CERC

OTHER PARTICIPANTS

1. Smt. Rashmi Nair, Dy. Chief (RA), CERC
2. Sh. P.M. Antony, Asstt. Secretary (FOR), CERC
3. Smt. Sukanya Mandal, Asst. Chief (RA), CERC
4. Sh. Ravindra Kadam, Sr Advisor (RE), CERC
5. Sh Saurabh, PRO, CERC
6. Ms Jijnasa, RO, FOR
7. Sh Sourav Dasgupta, RA, CERC
8. Sh Anant Sant, Consultant engaged for the WG
9. Ms. Shivali Dwivedi, Consultant engaged for the WG

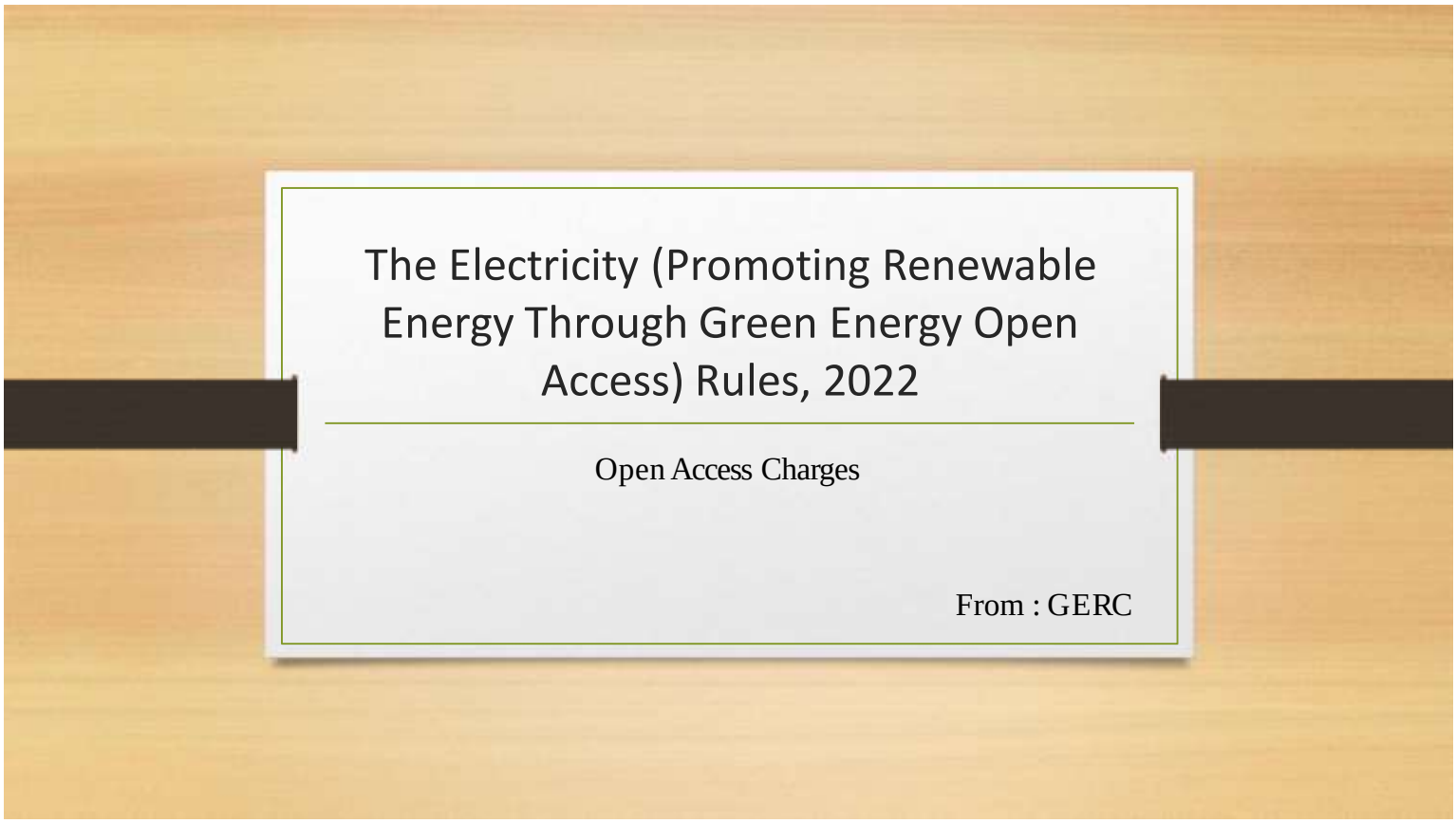
		COMPILATION OF SUGGESTIONS FOR DISCUSSION AND TO BE SENT TO MOP		ANNEXURE - I
SL. NO.	**ISSUE/PARAMETER**	**GEOA CLAUSE**	**VIEWS/ACCEPTANCE OF SUGGESTIONS BY THE WORKING GROUP**	**SUGGESTIONS TO BE SENT TO MOP**
1	Preferential treatment in open access to green energy vs. non-discriminatory open access under the EA2003	**5 (1)** To **provide Green Energy Open Access** to consumers of green energy, the appropriate Commission may, if necessary, **amend the relevant regulations made by it** and such regulations **shall be consistent with these rules**.	The Working Group concluded that Section 61(h) and Section 86(1)(e) of Electricity Act 2003 empowers the Appropriate Commission to promote generation from renewable energy sources including adopting measures for promotion/ preference in tariff".	
2	Interpretation of Monthly Banking, permitted quantum of banked energy and determination of Banked Energy	**8(1)** Banking shall be permitted **at least on a monthly basis** on payment of charges to compensate additional costs, if any, to the distribution licensee by the Banking and the Appropriate Commission shall fix the applicable charges. **8(2)** The permitted quantum of banked energy by the Green Energy Open Access consumers shall be at least 30% of the total monthly consumption of electricity from the distribution licensee by the consumers	The WG agreed that **'monthly banking'** would operate on **'calendar month'** and that the Banking charges to be in **kind**. However, the Working Group did not decide whether the quantum of banked energy should be **at least 30%** or **not exceeding 30%.** **It was decided to place the issue before the FOR.**	The words **'at least'** on monthly basis under Rule 8(1) may be deleted, as it contradicts with provisions stipulated under Proviso to Rule 8 (2).
3	Implicit waiver from DSM charges for GEOA	**9 (1)** The charges to be levied on Green Energy Open Access consumers shall be as follows: - (a) Transmission charges;	The Working Group concluded that rule 9(1)(e) does not include SLDC/RLDC fees/charges, scheduling/rescheduling charges,	• Following point may be added under Rule 9(1) (e) and current Rule 9(1)(e) may be renamed as Rule 9 (1)(f) and read as under:

		(b) Wheeling charges; (c) Cross subsidy Surcharge; (d) Standby charges wherever applicable; and **(e) No other charges except the charges above, shall be levied**	DSM/Deviation charges etc. and these charges cannot be avoided.	**(e) Applicable scheduling Fees/Charges of SLDC/RLDC and DSM/Deviation charges**
4	CSS & conditions for GEOA not aligned with CSS formulation under Tariff Policy	**9(2)** The **Cross-subsidy surcharge** shall be as per the **provisions of tariff policy** notified by the Central Government under the Act: Provided that the **cross-subsidy surcharge** for Green Energy Open Access, Consumer purchasing green energy, from a generating plant using renewable energy sources, **shall not be increased**, **during twelve years** from the date of operating of the generating plant using renewable energy sources, by more than **fifty percent of the surcharge** fixed for the year in which open access is granted;	The conditions outlined under first proviso of Rule 9(2) of GEOA Rules are **not aligned with the Tariff Policy** formulation for CSS	The 1st proviso under Rule 9(2) should be deleted.
5	Treatment for [waste to energy] plant and scope of exemption	**9(2)** The Cross-subsidy surcharge shall be as per the provisions of Tariff Policy notified by the Central Government under the Act: …… Provided also that **cross subsidy surcharge and additional surcharge** shall not be applicable in case power produced from a	There is a need to specify the type of WtE plants exempted under the Rule. Such exemption of Surcharge and Additional Surcharge may be extended only to non-fossil fuel or MSW based WtE Plants under GEOA	The words, **'non-fossil fuel based or MSW based' Waste to Energy** plant may be added **under 3rd Proviso of Rule 9(2).**

		Waste-to-Energy plant is supplied to the Open Access Consumer.		
6	Applicability of waiver of OA charges on generation or consumption [green hydrogen, green ammonia]	**9(2)** The Cross subsidy surcharge shall be as per the provisions of Tariff Policy notified by the Central Government under the Act: ….... …... Provided also that **Cross subsidy surcharge** and **additional surcharge** shall **not be applicable** if **green energy is utilized** for production of **green hydrogen and green ammonia**	As the cost of generation and storage of green hydrogen and green ammonia is very high, providing such waivers will result in subsidizing the industries at the cost of the power sector. **It was decided to place the issue before the FOR.** The Working Group also recommended that in case waiver is to be given, such waiver may be limited for **upto FY 2025** on the grounds of promoting Green Hydrogen and Green Ammonia.	
7	Applicability of Additional Surcharge	**9(2)** The Cross subsidy surcharge shall be as per the provisions of Tariff Policy notified by the Central Government under the Act: ……. Provided further that the **additional surcharge shall not** be applicable for Green Energy Open Access Consumers, **if fixed charges are being paid** by such a consumer	The Working Group accepted the fact that **waiver of Additional Surcharge** (which is resulting due to stranded capacity due to open access) just because fixed charges are being paid, **does not appear to be reasonable and not aligned with regulatory principle of cost reflective recovery**	2nd proviso under Rule 9(2) may be deleted.
8	Applicability of Standby charges and associated	**9(4)** The **standby charges**, wherever applicable, shall be specified by the State Commission		Modify the proviso: "standby charges shall not be more than **Ten per cent** of the energy charges applicable to

	conditions and Explanations	and such charges **shall not be applicable** if the Green Energy Open Access Consumers have given notice, **in advance at least twenty four hours** before the time of delivery of power, for standby arrangement to the distribution licensee: Provided that the applicable standby charges shall **not be more than Ten per cent** of **the energy charges** applicable to consumer tariff category		consumer tariff category" as "not be more than **Twenty-Five per cent** over and above the energy charges applicable to consumer tariff category." Also, for non-applicability of standby charges, the condition of advance notice "**at least twenty-four hours** before the time of delivery of power", may be rephrased as: "**atleast a day in advance before gate closure in DAM on D-1 day of delivery of power.**
9	Accounting treatment for operationalizing inter-State and intra-State green energy open access	**10. Green certificate.**–The distribution licensee shall give green certificate on yearly basis to the consumers for the green energy supplied by the licensee to consumer on his request beyond the renewable purchase obligation of the consumers	For the purpose of GDAM/GTAM, the concerned RLDC and SLDC have been directed to indicate in their NOC for Open Access, the source of generation (whether wind or solar of eligible hydro) to enable compliance of solar RPO or HPO may be adopted for Green Certificate. The Working Group agreed that **similar principle** may be adopted for Green Certificate' under Rule 10.	

ANNEXURE - II


The Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022
Open Access Charges
From : GERC

Banking

Rule on Banking

Banking. *(1) Banking shall be permitted* ***at least on a monthly basis on payment of charges*** *to compensate additional costs, if any, to the distribution licensee by the Banking and the Appropriate Commission shall fix the applicable charges.*

(2) The ***permitted quantum*** *of banked energy by the Green Energy Open Access consumers shall be* ***at least thirty percent of the total monthly consumption*** *of electricity from the distribution licensee by the consumers.*

Explanation: For the purpose of this rule, the expression "Banking" means the surplus green energy injected in the grid and credited with the distribution licensee energy by the Green Energy Open Access consumers and that shall be drawn along with charges to compensate additional costs if any:

Provided that the credit for banked energy shall not be permitted to be carried forward to subsequent months and the credit of energy banked during the month shall be adjusted during the same month.

FOR is mandated to prepare methodology for calculation of Banking Charge

Factors to be considered

- Banking is a *service* by the DISCOMs to OA Consumers.
- Banking service is the alternative of installing energy storage, which attracts significant costs.

- Time of injection/withdrawal and value of such injection/withdrawal changes by time of the day and by seasons.
- There is a hardship caused to the DISCOMs due to Banking, cost of which falls on non-OA consumers.

Issues to be considered

- Banking is to be allowed on actual energy or scheduled energy ?
- It is necessary to decide as to whether the banking be allowed on scheduled energy or actual energy. It is preferable that the banking be allowed on actual energy and not on scheduled energy. The example and reason for the same are as under:

- The RE generators give scheduled of 10 MW. The RE generators having Must Run status. The generation from such generators considered as generate 10 MW. However, actual generation is only 7 MW by such generator. The set off of energy be given to the consumer's place as generation from 10 MW capacity. Thus, the drawl of energy from distribution network by such generators/consumers against the under-injection up to scheduled generation by paying UI charges having quite low charges and to avoid the payment against the tariff of such consumers payable by them.
- The RE generators give scheduled of 10 MW. The RE generators having Must Run status. The generation from such generators considered as generate 10 MW. The consumers' contracted demand is 7 MW. The generation from RE generators is only 6 MW. The set off of energy be given to the consumer's place given against scheduled generation of 10 MW capacity. Thus, the drawl of energy from distribution network by such generators/consumers against the under-injection up to 10 MW scheduled generation received by the generators/consumers. In such situation,. An additional energy up to 1 MW (i.e., 7 MW of contracted demand of consumers and 6 MW actual generation from generators) drawn by the consumers against scheduled generation though there is no actual generation from RE generators. Further, also 3 MW energy from RE egenrators be qualified as banking as the drawl up to 7 MW set of at consumer's place against the schedule generation. The generator has though not generated 3 MW energy (i.e., 10 MW – 6 MW) and injected into the grid, the banking of 3 MW energy available to the generator at such place by paying UI charges having quite low charges and to avoid the payment against the tariff of such consumers payable by them.

- The banking is allowed on billing cycle basis (monthly) or it is on calendar month basis?

  It is preferable that the banking be allowed on billing cycle basis (monthly) instead of calender month basis because as the distribution licensee having huge numbers of consumers above 100 kW and their billing are carried out on different dates of the month

by the licensees wherein energy consumed between the first date and last date of billing period are considered. Therefore, if any banking period other than the first date and last date of billing period be considered, in that case, the chances of banking period may vary due to the variance in the dates of State Energy Accounts (SEA) prepared by SLDC published on weekly/bimonthly or monthly. In such case, the effect of banking period may vary and no correct banking period be evaluated and reflected in the bills issued by the distribution licensees.

- What are the options for allowing banking?

  There are different options for allowing banking, –

  - 15 minutes time blocks basis;
  - Daily Basis;
  - Weekly basis;

- Monthly basis;
- Peak and nonpeak hours basis;

- What are different options/methodology for determining the banking charges?

  Linked with market rate i.e.,

  - Exchange rate in different time blocks when the energy banked and drawn from the distribution system by the consumers;
  - The difference of average power procurement cost of licensee in the month of banking energy utilised by the OA consumers i.e., actual power procurement cost of the licensees minus approved power procurement cost of the licensees by the Commission;
  - The average power procurement cost of the licensee approved/trued up by the Commission in tariff Order.

- Can the banked energy utilised in different time block, hours or day be qualify as renewable energy?

The renewable energy banked in different time blocks of the day and period by the generators/consumers as actual surplus renewable energy be allowed to utilise on different time blocks or same time blocks on different dates drawn by the Open Access consumers from the Grid against such bank energy. Such energy may be either renewable or conventional energy drawn by the consumers. It is difficult to classify and certify that such energy is renewable energy. Thus, it is not possible to certify that the bank energy utilised by the consumer/generator is actual renewable energy.

- Ceiling of banking is 30% specified in rules be minimum and whether any cap be provided on upper ceiling limit?

Energy Banking Framework

- Banking charge could be on a per unit basis (Rs/kWh), instead of the present energy in-kind practice.
- This charge is to be determined based on the difference between power purchase cost at the time of banking of energy and its drawl, which is revenue neutral to both the DISCOM and the consumers eligible for banking.

  This can be done by linking energy banking with the weighted Average market clearing price in Power Exchanges .
- Energy banked (up to of 30% of total monthly consumption) would be valued by the DISCOM at the market clearing price on the Green-TAM or Green-DAM, whichever is lower.
- Energy drawl for each 15-minute block would be charged by the DISCOM at the highest variable cost of the dispatched power (incl. any power bought from bilateral contracts/exchanges).

- Credit for energy banking and charges for drawl would be calculated for each 15-minute block and would be settled at the end of the month.

Standby Charge

Issues

- OA consumers has to take power from an alternate sources e.g from Discoms, in case of outages of generator , transmission asset etc.
- Charges for maintaining standby arrangement should be reflective of cost incurred by Discoms
- Clause 8.5.6 of the Tariff Policy 2016 specifies that:

"In case of outages of generator supplying to a consumer on open access, standby arrangements should be provided by the licensee on the payment of tariff for temporary connection to that consumer category as specified by the Appropriate Commission.
Provided that such charges shall not be more than 125 percent of the normal tariff of that category."

Prevailing Practices - Determination of Stand by charges

- **Two Part Structure** -
- Fixed and Energy charges are determined separately by adopting various approaches

Fixed Charges

- Rate defined by SERC (Rs/kVA)
- Applicable fixed charges as per tariff schedule (with cap of Minimum no. of day in a year of applicability)

Energy Charges

- Applicable variable charges as per tariff schedule
- Applicable temporary tariff
- **Negotiated/ agreed standby charges** between the Open Access Consumer and the provider of alternate source of power to the Open Access consumer.

Suggestions

- Standby charges should be designed to reflect the actual fixed cost and variable cost liability incurred by the DISCOMs to supply back up power to Open Access consumer.

- FOR should design two- part standby charges with fixed charge and variable charge components. In line with the provisions specified under Para 8.5.6 of the Tariff Policy 2016 the limit of 125% should be applied separately on the rate for fixed charge and variable charge.
- Standby charge should be determined annually by SERCs to reflect the variation in costs over time or Auto- indexation mechanism may be designed for periodic (quarterly/annual) revision of standby charges.

Cross Subsidy Surcharge

Issues & Prevailing Practices

- Section 8.3 (2) of the Tariff Policy 2016 specifies that:

"For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the Appropriate Commission would notify a roadmap such that tariffs are brought within ±20% of the average cost of supply. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy"

- The Tariff Policy provides that SERCs should notify a roadmap such that tariffs are in ±20% of ACoS. The First proviso to para 8.5.1 of Tariff Policy 2016 also specifies that Cross Subsidy Surcharge (CSS) should be capped at 20% of the tariff applicable to the category of the consumers.

Formulas used for calculation of CSS by various SERCs

- CSS = T-[C(1-L/100)+D +R]
- CSS = (ABR - CoS) * Factor
- CSS = (ABR - ACoS) * Factor
- CSS = T - (avoided PPC + Wheeling Charge)

Where

- T -applicable Tariff

- C -Weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation renewable power
- L -System losses D -Wheeling Charge R -Cost of carrying Regulatory Assets

Proposal

The Tariff Policy 2016 mandates SERCs to determine roadmap for reduction of cross subsidy and bring tariff at +/- 20% Average Cost of Supply, however it restricts Cross Subsidy Surcharge at 20% of the consumer tariff. In case the consumer tariff is more than 120% of Average Cost of Supply, DISCOM will not be able to recover losses through cross subsidy surcharge in case consumer opts for open access. It is essential for SERCs to implement both Para 8.3 -2 and First proviso to para 8.5.1 of the Tariff Policy 2016
simultaneously. If one of the provision could not be implemented due to some reason, the second provision should also not be implanted to that extent.

- SERCs should determine Cross Subsidy Surcharge (CSS) based on category wise cost of supply, thus identifying real cross subsidy. SERCs may initially determine CSS on Voltage wise Cost of Supply and later based on Category wise Cost of Supply. As a first step SERCs should develop guidelines for DISCOMs to calculate Voltage wise cost of supply. DISCOMs should capture and maintain details of voltage wise and consumer category wise details of assets and costs. In the next phase SERCs should develop guidelines and for DISCOMs to calculate category wise cost of supply.
- SERCs should introduce differential Cross Subsidy Surcharge - for peak, normal and off peak hours based on the ToD tariff. Time of the day sensitive pricing can also help address the issue of uneven scheduling by Open Access consumers during the day.

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Technical Assistance to Forum of Regulators (FOR)

2nd Meeting of FOR Working Group on
"ON GREEN ENERGY OPEN ACCESS"

(Draft for discussion)

South Asia Regional Energy Partnership (SAREP)

22 August 2022

Recap of Discussions during 1st meeting of WG -GEOA

- **"Electricity (Promoting Renewable Energy through Green Energy Open Access) Rules, 2022** notified by the Ministry of Power (MoP), on 6th June 2022
- 1st meeting of WG highlighted conflicts with certain provisions of the Electricity Act 2003 and implementation difficulties for operationalising provisions/formulations as stipulated under Tariff Policy vis-à-vis said GEOA Rules, as outlined below:

  a) Permitted quantum of banked energy as at **least 30% of total consumption** (Rule 8(2) and Interpretation of **Monthly Banking**

  b) Provisos under Rule 9(2) for **Cross Subsidy Surcharge** & conditions for GEOA not aligned with CSS formulation under Tariff Policy

  c) Accounting treatment for **operationalizing inter-State and intra-State green energy** open access [schedule vs actual]

  d) Principle of **discrimination vis-à-vis preferential treatment** [waste to energy] (Rule 9(2)3rd proviso)

  e) Applicability of waiver on generation or consumption [**green hydrogen, green ammonia**] (Rule 9(2) 4th proviso)

  f) Applicability of **Standby charges** and associated conditions and Explanations (Rule 4)

  g) Applicability of **Additional Surcharge** (Rule 9(1) and Rule 9(2)2nd proviso)

  h) Computation of **RPO against Green Energy**/Green Hydrogen if generation & consumption taking place in 2 different States or discoms.

  i) Preferential treatment in open access to green energy vs. non-discriminatory open access under the EA2003

  j) Implicit **waiver from DSM charges** for GEOA (Rule 9 (e))

To focus on development of methodology for determination of various OA charges

Methodology to be framed for determination of OA charges

Rule 12 of the GEOA Rules, 2022 stipulates that FOR may frame Model Regulations for formulating common methodology for following open access charges incl. banking charges

1. Transmission charges
2. Wheeling charges
3. Cross-subsidy surcharge
4. Additional Surcharge
5. Standby Charge
6. Banking Charge

Transmission Charges and Losses

Transmission Charge Determination – 1/2

S.No.	Formulation	Transmission Tariff Determination – Formulation and Important Factors
A1	Formula-1	• **Base Transmission Tariff (long-term/medium-term) = TTSC / Base TCR (Rs/kW/month or Rs/MW/day)** • Base Transmission Tariff (t) (Short-term) = TTSC (t)/ ∑n i=1($Energy\ Transmitted\ by\ Tx$ (i) (Rs/kWh) • *[Total Transmission System Cost for InSTS - Sum of ARR for all Tx Licensee, Base TCR – Avg of CPD/NCPD by TSUs]*
A2	Formula-2	• **Transmission Charges = ATC/(PLS-T X365) (Rs./MW/day)** • *[ATC is approved Annual Tx charges, PLS-T is Peak Load served by Tx system previous year]*
A3	Formula-3	• **Transmission Tariff = ATC/(ALS-T X365) (Rs./MW/day)** • *[ATC is approved Annual Tx charges, ALS-T is Average Load projected to be served by Tx system]* • *[Long/Medium to pay Contracted Capacity, Short term on Scheduled Load – prorate for part of day, min 6 hrs]*
A4	Formula-4	• **Transmission Charges (Long term) = ARR X (NDM/NDY) x (TAFM/NATAF) (Rs per month)** • **Transmission Charges (Short term) = ATC/(PLS-T X8760) (Rs/MWh)** • *[ATC is approved Annual Tx charges, PLS-T is Peak Load projected to be served by Tx system]* • *[Linked to No. of days per month and Monthly Transmission Availability, Normative Annual Tx Availability]*
A5	Formula-5	• **Transmission Charges (Long term) = AFC / (SCL x 12) (Rs/MW/month)** • **Transmission Charges (Short term) = AFC X 10 / (SCL x 365 x 24) (Paise/unit)** • *[AFC is approved Annual Tx charges, SCL is Sum of Allotted Tx capacity to LT Users to be served by Tx system]*
A6	Formula-6	• **Transmission Tariff = ATC / (Units delivered to DISCOMs) (Rs/kWh)** • *[ATC is approved Annual Tx charges and Units catered to DISCOMs at T<>D periphery?]*
A7	Formula-7	• **Transmission Charges (LT/MT) = ARR/12 x Contracted Cap.by User /Total Contracted Cap. (Rs per month)** • **Transmission Charges (Short term) = ARR / (Total Energy Input to InSTS) (Rs/unit)** • *[ARR is approved Annual Tx charges, Contract Cap. is Capacity contracted by LT/MT Users]*
A8	Formula-8	• **Transmission Charges) = [TSC /Av-Cap] / 365 (Rs/MW/day)** • *[TSC is approved Tx Service charges, Av_Cap is Average capacity catered in previous year, STRate is 25% of LT Rate]*

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Transmission Charge Determination – 2/2

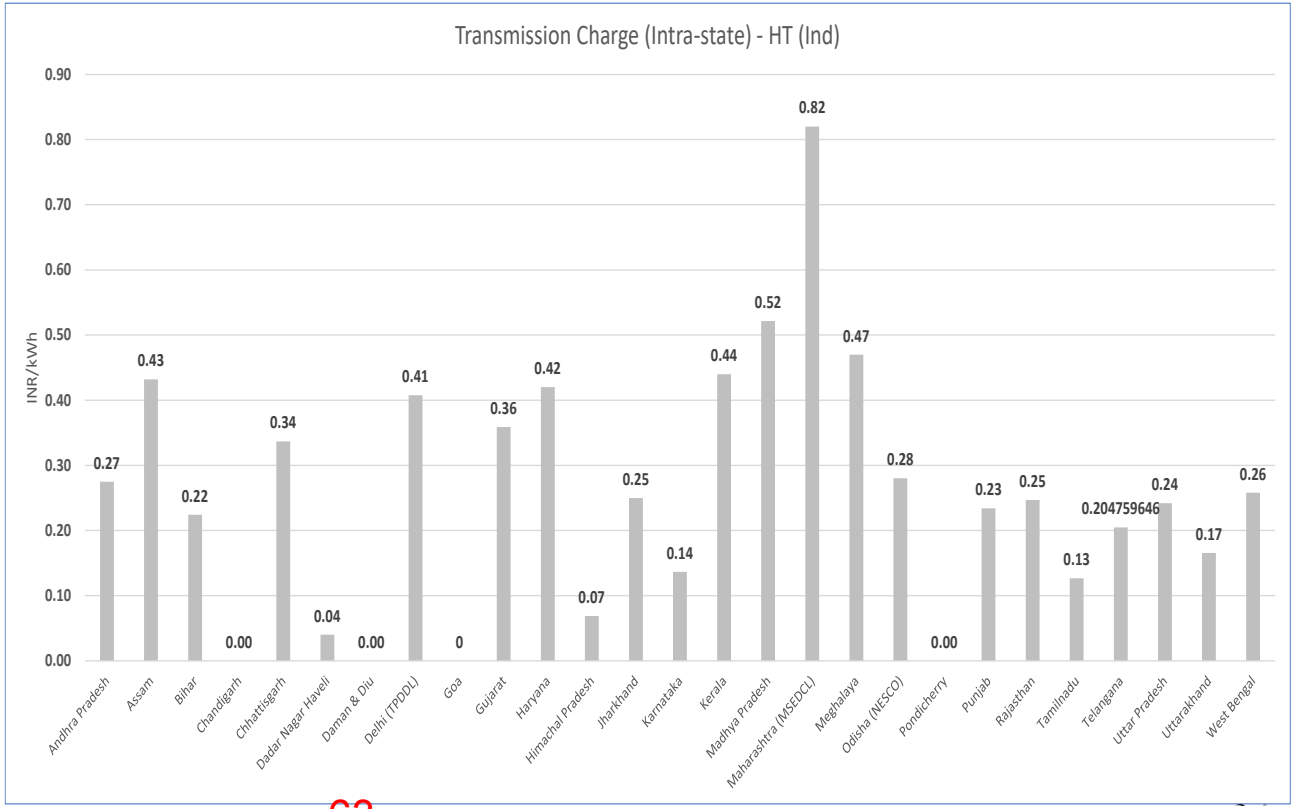
S.No.	Parameters	Transmission Tariff Determination – Formulation and Important Factors
		Important Considerations and Discussion Points
B1	Ascertaining Transmission System Cost for InSTS	• Multiple Transmission Licensees at State level, so **TTSC approach** is necessary in case of (S62 – ARR determination and S63 – Adoption of TSC for Competitively Bid Tx projects) • Adjustment in TTSC/ARR on account of revenue from short term OA transactions in Previous Year or estimates for Ensuing Year.

B2	Ascertaining Transmission Capacity Right / Utilisation by TSUs	• Multiple ways of Tx Capacity Utilisation and Sharing by (LT/MT) Tx Users
		  • (a) Share in Contracted/ Installed Gen. Capacity
		  • (b) Share in Peak Demand/CPD (12 month)
		  • (c) Share in Avg. CPD/NCPD (12 month)
		  • (d) Energy Units handled by InSTS (Ex-bus or T<>D periphery – delivered to DISCOMs)
		• Historical performance or Approved projections for Ensuing Year

B3	Treatment for Long term / Medium term and Short term	• Long term/Medium to have preference over short term transactions in terms of curtailment priority, hence pricing to reflect the same. • ST charges - 25% or 100% of LT/MT charges (with pro-rata min 6 hours Per day) or • ST charges – to be determined as Per Unit (INR/MW/day x 24 hrs) or (INR/kW/mth x 24 x30)
B4	Denomination (INR/MW/day, INR/kW/month, INR/kWh)	• Per unit Transmission charge (INR/kWh) is simple and easy to implement. But, volume risk/benefit passed onto Utility. • kVAh billing introduced in many states for HT categories. Linkage to PF at consumer category is necessary.
B5	Waiver or concession for RE	• Solar – 50% (Raj, UP, Kar, TN), 80% (Odi), 100% (Cha), (MH – recognise lower Tx Utilisation factor by RE-2x for fossil OA) • Wind - 50% (Kar, TN), 75% (Raj), (MH – recognise lower Tx Utilisation factor by RE, 2x for fossil OA) • Hybrid/Storage/Repower - 50% (), 75% (Raj)

Transmission Charge and Losses

- **Key Discussion Points**
  - Formulation
  - Ascertaining Tx Service Charge
  - Ascertaining Transmission Capacity Utilisation / TCR rights of TSUs
  - Treatment of Long/medium/short term
  - Denomination
  - Waiver or concession for RE (types of RE)
  - Transmission loss
    - Average 52-week Tx loss



Wheeling Charges and Losses

Wheeling Charge determination – 1/2

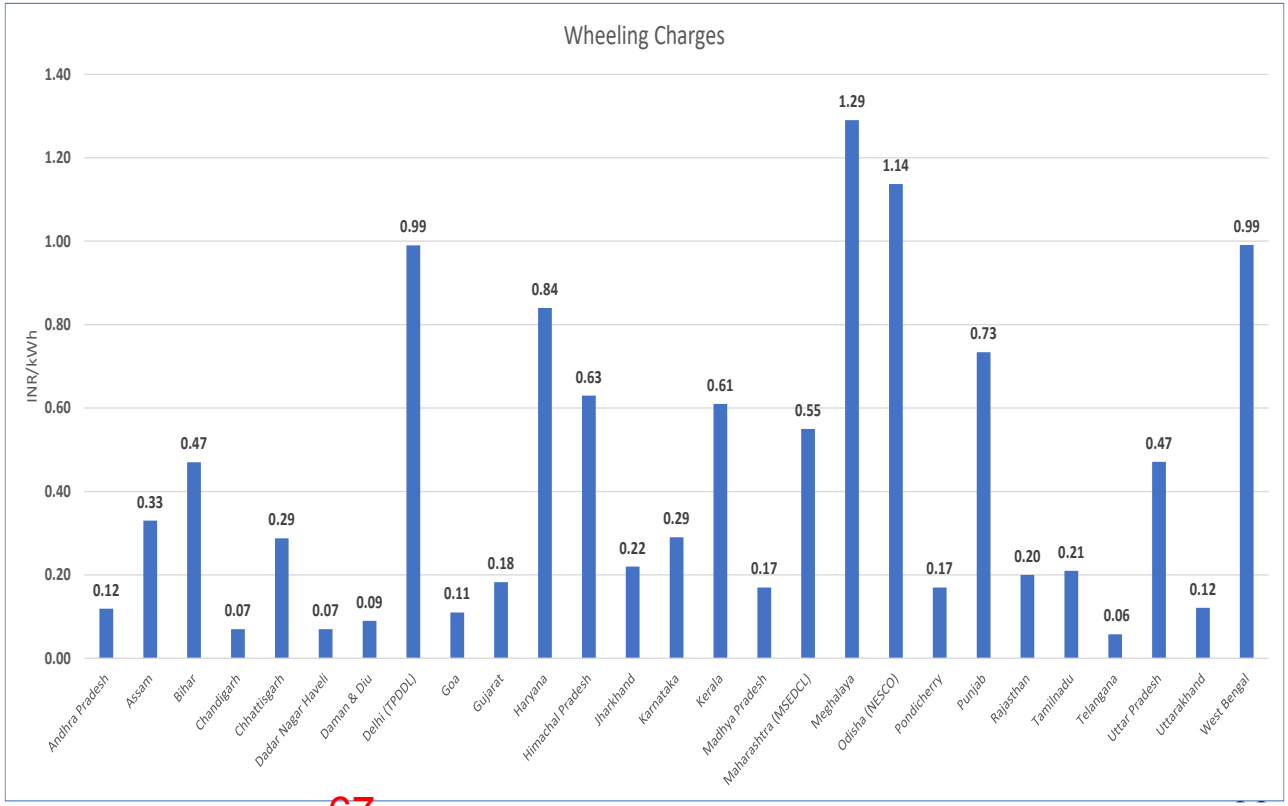
S.No.	Formulation	Wheeling Charge Determination – Formulation and Important Factors
A1	Formula-1	• **Wheeling Charge = (ARR–PPC–TC) /(PLSD X365) (INR/MW/Day)** • *[Annual Revenue Requirement, Power purchase Cost, Transmission Cost, Peak Load served]*
A2	Formula-2	• **Wheeling Charge = (Wheeling Cost) /(ALSDX365) (in INR/MW-day)** • *[Cost of Wire business, Avg. load projected for contract year]*
A3	Formula-3	• **Wheeling Charge = (Wheeling ARR) /(Energy Units*) (in INR/kWh)** • *[Allocation of Fixed cost to Network related costs, Energy Units* (units sale or wheeled units)]*
A4	Formula-4	• **Wheeling Charge (HT and LT) = (Wheeling ARR) /(Wheeled Energy Units) (in INR/kWh)** • *[Allocation of Wheeled ARR to HT/LT, on basis of GFA, Ckt-km, MVA capacity, Energy units, loss level]*

Wheeling Charge determination – 2/2

S.No.	Parameters	Wheeling Charge Determination – Formulation and Important Factors
		Important Considerations and Discussion Points
B1	Determination of wire costs	• Every Distribution Licensee shall maintain **separate accounting records** for the Wires Business and Retail Supply Business and shall prepare an **Allocation Statement** to enable the Commission to determine the **Tariff separately**. • Different RoE for Wire (15.5%) and Supply Business (17.5%) • Ensuring principle of **recovery of Wire ARR** through **Wheeling Charges**. • Treatment for **past period revenue gaps /(surplus)** in Wheeling ARR.
B2	Voltage-wise Segregation (EHV,HT,LT)	• Voltage-wise segregation (or allocation) of GFA and Energy Units wheeled thru (EHT/HT/LT) is necessary. • OA consumers (above 1 MW) are typically connected at HT/EHV.
B3	Denomination (INR/MW/day, INR/kWh)	• Per unit wheeling charge (INR/kWh) is simple and easy to implement. But, volume risk/benefit passed onto Utility. • kVAh billing introduced in many states for HT categories. Linkage to PF at consumer category is necessary.
B4	Waiver or concession for RE	• Solar – 50% (Raj, UP, Kar, TN, Jha), 80% (Odi), 100% (Cha) • Wind - 50% (Guj, Kar, TN), 75% (Raj) • Hybrid/Storage/Repower - 50% (Guj), 75% (Raj)

Wheeling Charge and Losses

- **Key Discussion Points**
  - Formulation
  - Determination of Wire Cost
  - Voltage-wise segregation
  - Denomination
  - Waiver or concession for RE (types of RE)
  - Wheeling loss
    - voltage-wise (HT/LT)
    - Only Technical loss to be considered
    - Average 52-week loss for HT/LT network (based on sample feeder analysis)



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Cross Subsidy Surcharge

Cross-subsidy Surcharge determination – 1/2

#	Principles of CSS	EA,2003	Tariff Policy 2016	FOR Model Reg
1	Purpose of CSS	**s/s (2) of Sect 42 of the EA** • Surcharge for meeting current level of cross subsidy. • such surcharge and cross subsidies shall be progressively eliminated in the phased manner as may be specified by the SERC. • CSS not be leviable for OA by CPP.	SERCs would notify a roadmap such that tariffs are brought within ± 20% of ACoS and (b) CSS shall not exceed 20% of the tariff applicable to the category of the consumers seeking OA. CSS and ASC should not be so onerous that it eliminates competition through open access.	CSS Per Unit basis shall be payable to Discom, on monthly basis, by OA consumers based on the actual energy drawn during the month through OA.
2	Applicable to	3rd Party OA Transactions. Captive OA transactions are exempted		
3	CSS Formula (as per Tariff Policy 2016)	**S= T – [C/ (1-L/100) + D+ R]** Wherein: S - surcharge T - Tariff payable by the relevant category of consumers, including reflecting the RPO C - Per unit weighted avg. cost of power purchase by Licensee, including meeting RPO D -is the aggregate of Tx., DL and wheeling charge applicable to relevant voltage level L - is the aggregate of TX, DL and commercial losses, expressed as a % applicable to the relevant voltage level R - Per unit cost of carrying regulatory assets.		
3	Band of CSS		shall not exceed 20% of the tariff applicable for respective consumer category.	

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Cross-Subsidy Surcharge determination – 2/2

#	Parameters	Method-1	Method-2	Method-3	Method-4
1	CSS Formula	As per Tariff Policy 2016 formulation i.e. **S= T – [C/ (1-L/100) + D+ R]**	CSS (S)=Tariff payable by the relevant category (T) – Cost of Supply (C) **for respective consumer category** **S = ABR – CoS**	**S = T – C** Where, S = CSS; T = Tariff payable by relevant category ; C = ACOS of Discom	Difference between tariff applicable for OA consumer and cost avoided by licensee S = T - AvoC
2	RE specific provisions	100% waiver – Captive OA **100% waiver for 3rd Party OA - Raj** for RE, **UP** – for Solar , **Odisha** -100% for RE 50% waiver for **3rd Party OA - Guj** – Wind/Hybrid , **CS** – Solar/Wind 60% waiver for **3rd Party OA - TN** Wind 70% waiver for **3rd Party OA – TN** – Solar			

Important points for consideration:

1. Tariff Policy formula envisages Surcharge to be determined **separately for each consumer category (T)**.
2. Further, Surcharge formula envisages establishment of **Voltage-wise Cost to serve (C)** to Consumer category. This would necessitate determination of other parameters (Loss, Wheeling charge etc) for each voltage level (EHV/HT/LT).
3. CSS and ASC should not be so onerous that it eliminates competition through open access.

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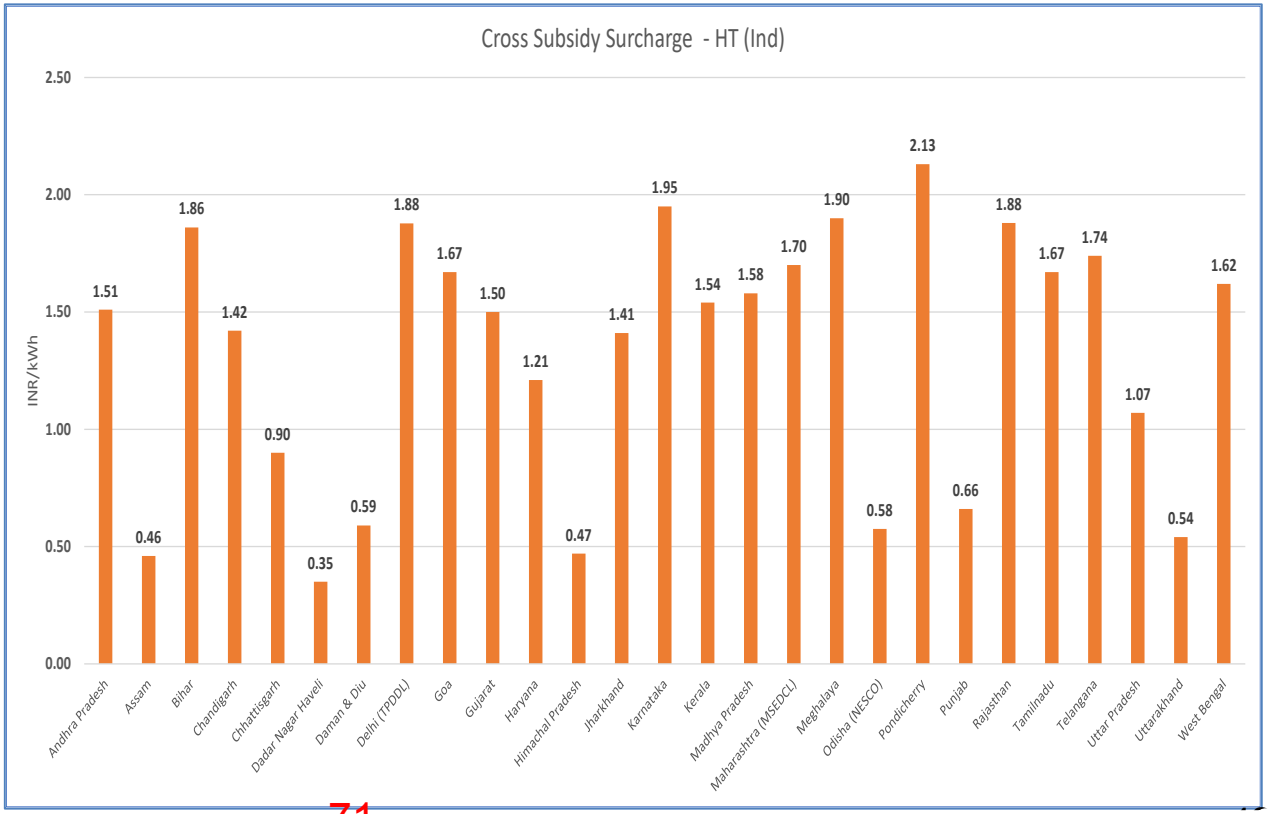
Cross-Subsidy Surcharge

- **Key Discussion Points**
  - Formulation
  - Determination of Voltage-wise Cost/Losses
  - Waiver or concession for RE (types of RE)
  - Capping of CSS vis-à-vis prevalent cross-subsidy
  - Compliance with trajectory for CSS reduction



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CSS & conditions for GEOA not aligned with CSS formulation under Tariff Policy

GEOA Clause:

- 9(2) The **Cross-subsidy surcharge** shall be as per the **provisions of tariff policy** notified by the Central Government under the Act:
- Provided that the **cross-subsidy surcharge** for Green Energy Open Access, Consumer purchasing green energy, from a generating plant using renewable energy sources, **shall not be increased**, **during twelve years** from the date of operating of the generating plant using renewable energy sources, by more than **fifty percent of the surcharge** fixed for the year in which open access is granted;

Suggestion for Discussion:

- The conditions outlined under first proviso of Rule 9(2) of GEOA Rules are **not aligned with the Tariff Policy** formulation for CSS and **hence the 1st proviso under Rule 9(2) should be deleted.**

Additional Surcharge

Additional Surcharge (ASC) determination – 1/2

#	Principles of ASC	EA,2003	Tariff Policy, 2016	FOR Model Reg
1	Purpose of ASC	**s/s (4) of Sect 42 of the EA** • OA consumer shall be liable to pay an additional surcharge on the charges of wheeling, as may be specified by the State Commission, **to meet the fixed cost of such distribution licensee arising out of his obligation to supply.**	8.5.4 The additional surcharge for obligation to supply as per section 42(4) of the Act should become applicable **only if it is conclusively demonstrated that the obligation of a licensee, in terms of existing power purchase commitments, has been and continues to be stranded, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract**. Fixed costs related to network assets would be recovered through wheeling charges.	24 (2) This additional surcharge shall become applicable only if the obligation of the licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges.
2	Applicable to	No specific provision. However recent Supreme Court Judgement dated 10 Dec 2021 has clarified that ASC shall not be applicable to Captive and Group Captive OA consumers.	No specific applicability	24(3) Provided that any additional surcharge so determined by the Commission shall be applicable only to **the new open access customers.** 24 (4) ASC on Per Unit basis shall be payable, on monthly basis, by OA consumers on Energy drawn. ASCs shall not be levied on Captive OA.

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Additional Surcharge (ASC) determination – 2/2

#	Parameters	Method-1	Method-2	Method-3	Method-4	Method-5
1	ASC Computation	• Details of fixed cost incurred by Dist. Licensee on 6- monthly basis for meeting supply obligations • The Commission shall scrutinize the data submitted for such stranded fixed costs to determine ASC	• Discom shall submit detailed calculation statement of fixed cost which the licensee is incurring towards its obligation to supply, **mentioning the hourly stranded data with its merit order dispatch**	• ASC=Total Power Purchase Fixed Cost approved (excluding transmission charges) / Energy Sales	• ASC is computed by considering the weighted average monthly fixed rate of surrendered power, which is based on daily weighted fixed rate of the generating station in the surrendered power.	• [(Shortfall in recovery of Fixed Cost to be considered for recovery of additional surcharge)/ (Total HT/EHT Sales of ESCOMs)] X (Fixed cost recoverable in wheeling and banking charges (transmission charges + SLDC + Distribution network costs)
2	Specific exclusion	• Any additional surcharge so determined by the Commission shall be applicable only to the **new open access** customers. • In case of RE OA, if there is no reduction in Contract Demand, there is no reduction in Fixed revenue but only part recovery of Fixed Cost would be affected due to migration of sales through RE OA.				
3	RE specific provisions	100% waiver – Captive OA (in all states except Mah, MP, WB), **100% waiver for 3rd Party OA - UP** – for Solar, **Odisha** 50% waiver for **3rd Party OA - Guj** – Wind/Hybrid , **CS** – Solar/Wind 87% Waiver for **3rd Party OA** – **KAR** Solar/Wind 100% waiver for **3rd Party OA** – **TN , AP, Odisha, Jharkhand, CS**				

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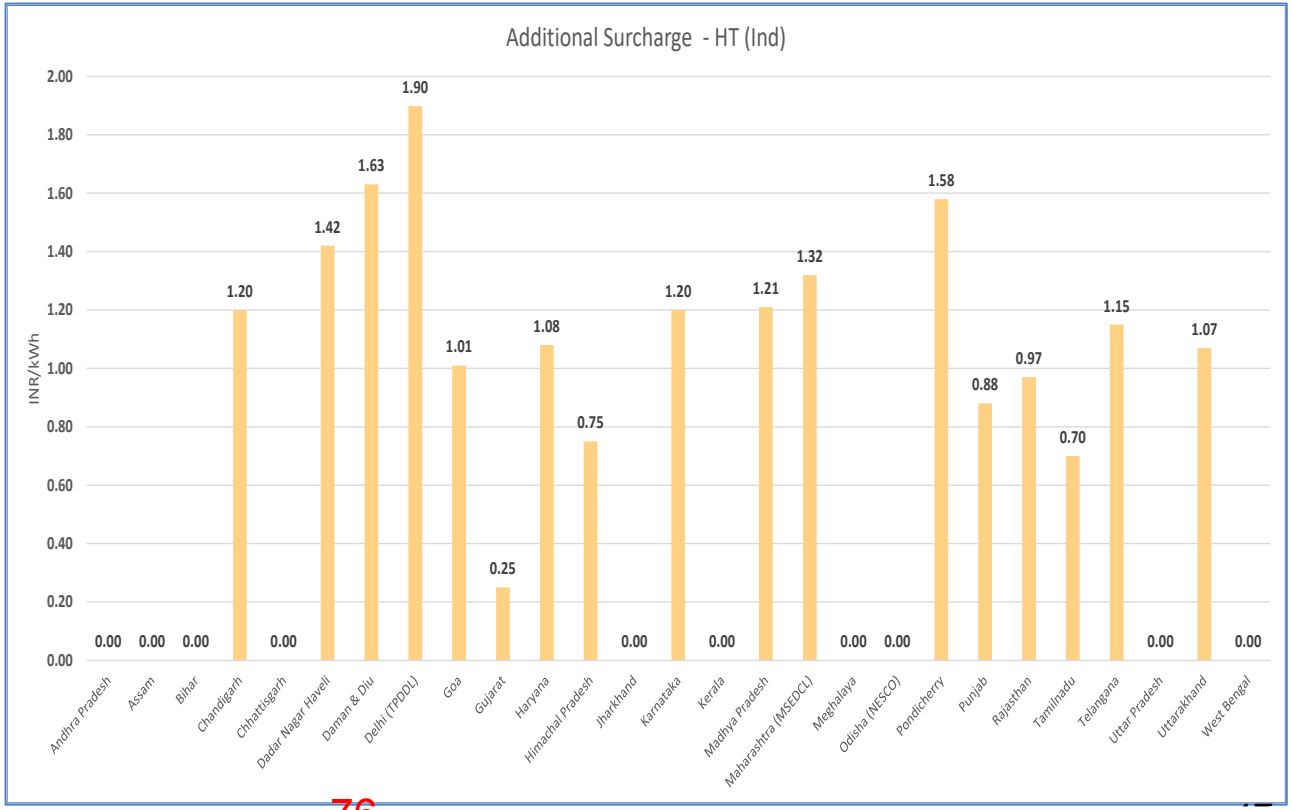
Additional Surcharge

- **Key Discussion Points**
  - Formulation
  - Applicability to OA (Existing vs New)
  - Conditions for ascertaining stranded fixed cost
  - Denomination
  - Waiver or concession for RE (types of RE)



Applicability of Additional Surcharge

GEOA Rule:

- 9(2) The Cross-subsidy surcharge shall be as per the provisions of tariff policy notified by the Central Government under the Act:
- Provided further that the **additional surcharge shall not** be applicable for Green Energy Open Access Consumers, **if fixed charges are being paid** by such a consumer:

Suggestion for discussion:

- 2nd proviso under Rule 9(2) should be deleted.

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Banking Related Provisions

Banking charges and related conditions – 1/2

#	EA 2003	Tariff Policy	FOR Model Reg	FOR Study Report 2019	SC/APTEL Judgement
1	No specific provision of Banking	No specific provision of Banking	No specific provision of Banking	• Enabling provisions of banking has bearing on OA consumers. • Banking facility is major enabler for RE OA, wherein consumer's demand schedule and power generation schedule cannot be matched.	**Aptel Judgement dated 28 Jan 2021 in Appeal 191 of 2018,** held that, • denial of a banking facility to a third party sale is contrary to Sections 86 and 49 of the Electricity Act. • The banking facility should be provided for the whole year, since a one month banking period affected the fundamental functioning of wind (and solar) power projects.

Banking charges and related conditions – 2/2

#	Principles for Banking	Particulars
1	Purpose of Banking	Banking of RE allows consumers to utilise RE injected but not consumed during a particular time period to be compensated against consumption later.

2	Key considerations for banking	• **Banking Period** : Time-block, ToD-slots, Daily
		• **Restriction on Drawal of Surplus Banked Energy**:
		  • Injection Peak hours and allowed to draw/set-off against Peak consumption
		  • Injection in Off-peak hours and allowed to draw/set-off against Off-peak consumption
		  • Injection in Peak hours and allowed to draw/set-off against Off-peak consumption but vice-versa not allowed.
		  • Restrictions for drawl during certain seasons (high demand) – Not relevant with Monthly
		• **Settlement period**: Monthly
		• **Rate for Settlement**: No carry-forward. Either lapse or deemed purchase by DISCOM at APPC

3	Banking applicable to	• Consumers undertaking OA thru variable RE (Wind and Solar) under Captive /3rd Party OA • In some states, banking restricted only for solar and captive wind transactions (Guj)
4	Banking Charges	Method -1 : Banking Charges **in Kind (% of Energy Banked)** [varies from 2% (Kar, CS, MH) to 14% (TN)] Varies as per RE types [Nil for Hybrid (Guj), 12% for solar and 6% for wind (UP)] Method -2 : **Charges** for Banked Energy **(in Rs/kWh) – difference in ToD Rate (Peak/Off-peak)**
5	Other conditions	• **Implementation aspects** of Banking in case of **Inter-State Green Energy Open Access**. Credit/banking facility to be provided by **DISCOM where drawal point** is situated. • Framework/Rules for **Green certification (Certification of Origin)** by SLDC **at injection end**, in case of inter-state Green Energy Open Access to be established for **RPO compliance**.

Banking Charges and other conditions

- **Key Discussion Points**
  - Banking tenure and period
  - Restrictions on drawal and settlement
  - Distinction between Captive/Third party
  - Banking charges (kind or cash)
  - Waiver or concession for RE (types of RE)

#	parameters	UP	CS	HP	KAR	RAJ	Tripura	GJ	TS	MH	TN	MP
1	Banking Applicability	RE based generation and co-gen plants		-	RE plants		-	RE plants			**Solar** - Not allowed Wind – 3rd Party OA not allowed	RE plants
2	Banking Period		Yearly	-	Yearly	Yearly	-	Monthly	Yearly	Monthly	-	Yearly
3	Specific conditions	Withdrawal of power allowed only under TOD system	Withdrawal not allowed in peak month	-	-	25% of banking allowed	-	-	Quantum of banked energy capped at 10%	Withdrawal not allowed during peak hours	-	-
4	Current Banking Charges in kind	12% for solar and 6% for wind Energy Banked	2%	-	2%	10% of energy delivered at point of drawl	-	Solar: INR 1.5 (HT) Wind (3rd Party) Not allowed **Hybrid** - no Banking Charges	2% of energy Banked	2%	**Wind** - 14% of energy banked	5%

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Interpretation of Monthly Banking and determination of Banked Energy

GEOA Clause:

- 8(2) The permitted quantum of banked energy by the Green Energy Open Access consumers shall be **at least 30% of the total monthly consumption** of electricity from the distribution licensee by the consumers
- 8 (1) Banking shall be permitted **at least** on a monthly basis on payment of charges to compensate additional costs, if any, to the distribution licensee by the Banking and the Appropriate Commission shall fix the applicable charges
- 8(1) Banking shall be permitted at least monthly on payment of charges to compensate additional costs, if any, to the distribution licensee by the Banking and the Appropriate Commission shall fix the applicable charges.

Suggestion:

- The words **'at least'** on monthly basis under Rule 8(1) may be deleted, as it contradicts with provisions stipulated under provision of Explanation.
- The wording at Rule 8(2) could be rephrased as "**not exceeding thirty percent of total monthly consumption**" for **calendar month**.
- For sake of ample clarity the 'monthly banking' may be clarified as '**calendar month'**.
- Flexibility to Appropriate commission to define banking period and banking charges (in kind or otherwise) to be retained in view of state specific considerations.

Standby Charges

Principles of Standby Charges

#	Principles for determination of Standby Charges	EA 2003	Tariff Policy	FOR Model Reg	FOR Study Report 2019	SC/APTEL Judgement
1	Purpose of Standby Charges	No specific provisions	In case of outages, standby arrangement provided to OA consumer by licensee on payment for temporary connection	In case of outages, standby arrangements shall be made by distribution licensee		
2	Standby Charges Formula	-	Charges shall not be more than 125% of normal tariff	Temporary rate of charge for the category	Two-part standby charges should by determined by SERCs, but most states define standby charges as a factor of ABR	

Applicability of Standby Charges under GEOA

- **Key Points for Discussions**
  - Standby charges for long term open access consumers is as per contract signed with distribution licensees whereas standby charges for short term open access consumers are generally defined from time to time by the SERCs.
- **As per MOP Discussions paper dated 24 August 2017 following methods are proposed :**
  - **Method-1 : Two Part Structure -**
  - **Fixed and Energy charges are determined separately by adopting various approaches**
  - Fixed Charges : - Rate defined by SERC (Rs/kVA) - Applicable fixed charges as per tariff schedule (with cap of Minimum no. of day in a year of applicability)
  - **Energy Charges :** Applicable variable charges as per tariff schedule or Applicable temporary tariff
  - **Method -2 :** *Factor x ABR category* - SERC may notify Standby Charges through separate Orders
  - **Method-3:** Negotiated/ agreed standby charges between the Open Access Consumer and the provider of alternate source of power to the Open Access consumer.

- **Two Part Standby charges need to be determined by the SERCs periodically.**
- **Stand-by charges should reflect cost of power procurement on short term basis and deviation settlement charges liable to be paid by DIOSCOMs in lieu of supply of such power.**

Standby Charges

- **Key Discussion Points**
  - Period of Standby
  - Minimum notice for standby and obligations of parties
  - Conditions for activation/de-activation of standby
  - Mandatory or voluntary standby
  - Options for determination of Standby charges
    - Two part
    - Single part

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Applicability of Standby charges and associated conditions and Explanations

GEOA Rule:

- 9(4) The **standby charges**, wherever applicable, shall be specified by the State Commission and such charges **shall not be applicable** if the Green Energy Open Access Consumers have given notice, **in advance at least twenty four hours** before the time of delivery of power, for standby arrangement to the distribution licensee:
- Provided that the applicable standby charges shall **not be more than Ten per cent** of **the energy charges** applicable to consumer tariff category.

Suggestion for discussion:

- The condition under 1st proviso of Rule 9(4) restricting standby charges to 10% of energy charges is prohibitive and not congruent with the clause (ii) under Explanation and hence, **the 1st Proviso of Rule 9(4) should be deleted.**

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Other conditions of GEOA Rules

Accounting treatment for operationalizing inter-State and intra-State green energy open access

GEOA Clause:

- **10. Green certificate.**–The distribution licensee shall give green certificate on yearly basis to the consumers for the green energy supplied by the licensee to consumer on his request beyond the renewable purchase obligation of the consumers

Suggestion:

- A clause 10 (2) may be added to enable introduction of Green Certificate or Certificate of Origin to facilitate RPO compliance of inter-state green energy open access transactions

Treatment for [waste to energy] plant and scope of exemption

GEOA Clause:

- 9(2) The Cross-subsidy surcharge shall be as per the provisions of tariff policy notified by the Central Government under the Act
- Provided also that **cross subsidy surcharge and additional surcharge** shall not be applicable in case power produced from a **Waste-to-Energy** plant is supplied to the Open Access Consumer.

Suggestion:

- Such exemption of Surcharge and Additional Surcharge may be extended only to non-fossil fuel or MSW based Waste to Energy Plants under Green Energy open access framework. Accordingly, following words **i.e. 'non-fossil fuel based or MSW based' Waste to Energy** plant may be added **under 3rd Proviso of Rule 9(2).**

Applicability of waiver of OA charges on generation or consumption [green hydrogen, green ammonia]

GEOA Clause:

- 9(2) The Cross subsidy surcharge shall be as per the provisions of tariff policy notified by the Central Government under the Act:
- Provided also that **Cross subsidy surcharge** and **additional surcharge** shall **not be applicable** if
- **green energy is utilized** for production of **green hydrogen and green ammonia**

Suggestion:

- OA charges and waiver thereof would be applicable for drawl state where Green Hydrogen or Green Ammonia facilities are situated and the rules for certification of ‘captive’ and ‘green’ shall be governed as per extent procedures to be developed by Nodal Agency (NLDC) (as per Rule 7) with approval of Central Commission.

Preferential treatment in open access to green energy vs. non-discriminatory open access under the EA2003

GEOA Rule:

- (1) To **provide Green Energy Open Access** to consumers of green energy, the appropriate Commission may, if necessary, **amend the relevant regulations made by it** and such regulations **shall be consistent with these rules**.

Suggestion:

- **Alt-1**: S38(2), S39(2), 42(2)(3) of EAct envisages provision of open access 'non-discriminatory' and applicable conditions for levy/exemption of OA charges thereof. Any deviation thereof or additional waivers could be construed as 'non-discriminatory' in nature.
- **Alt-2**: S61(h) and S86(1)(e) of EAct empowers Appropriate Commission to promote generation from renewable energy sources including adopting measures for promotion/preference in tariff.

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Determination of Wheeling Charges for GEOA

GEOA Rule:9(1)(a)(b)

- 9(1) The charges to be levied on Green Energy Open Access consumers shall be as follows: -
  - **(a) Transmission charges;**
  - **(b) Wheeling charges;**
  - (c) Cross subsidy Surcharge;
  - (d) Standby charges wherever applicable; and
  - (e) No other charges except the charges above, shall be levied

Suggestion:

- Rule 12 envisages FOR to formulate methodology for determination of wheeling charges /transmission charges. FOR has framed Model MYT Regulations but there are state specific different approaches being followed. WG would review to evolve uniform methodology or common principles for determination of same. No specific suggestion/comment on GEOA Rules, *per se*.

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Implicit waiver from DSM charges for GEOA

GEOA Rule: 9(1)(e)

- 9(1) The charges to be levied on Green Energy Open Access consumers shall be as follows: -
  - (a) Transmission charges;
  - (b) Wheeling charges;
  - (c) Cross subsidy Surcharge;
  - (d) Standby charges wherever applicable; and
  - **(e) No other charges except the charges above, shall be levied**

Suggestion:

- Following point may be added under Rule 9(1) (e) and current Rule 9(1)(e) may be renamed as Rule 9 (1)(f).
- Revised Rule 9(1)(e) may be read as under:
- **(e) Applicable scheduling Fees/Charges of SLDC/RLDC and DSM/Deviation charges**

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THANK YOU

Monali Hazra
Regional Energy and Clean Energy Specialist
Indo Pacific Office
USAID/India, mhazra@usaid.gov

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Supreme Court Judgement (CIVIL APPEAL NOS. 5074-5075 OF 2019) dated 10 December 2021 on Applicability of CSS and ASC to Captive Consumers. The case was JSW Vs MSEDCL on levy of Additional Surcharge on Captive Consumers.

Key Issue - "Whether the captive consumers/captive users are liable to pay the additional surcharge leviable under Section 42(4) of the Electricity Act, 2003?"

The Judgement -

"*sub-section (4) of Section 42 shall be applicable only in a case where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the person – distribution licensee of his area of supply.* ***So far as captive consumers/captive users are concerned, no such permission of the State Commission is required and by operation of law namely Section 9 captive generation and distribution to captive users is permitted***. ***Therefore, so far as the captive consumers / captive users are concerned, they are not liable to pay the additional surcharge under Section 42(4) of the Act, 2003***. *In the case of the captive consumers/captive users, they have also to incur the expenditure and/or invest the money for constructing, maintaining or operating a captive generating plant and dedicated transmission lines. Therefore, as such the Appellate Tribunal has rightly held that so far as the captive consumers/captive users are concerned, the additional surcharge under sub-section (4) of Section 42 of the Act, 2003 shall not be leviable*."

Key Recommendations for GEOA Charges

Proposed Methodology for GEOA Charges

#	GEOA Charges	Proposed Methodology
1	**Transmission Charges and Losses**	**1. For Long-Term and Medium-Term GEOA:** • Total Transmission system Cost for InSTS to be calculated by aggregating ARR of all Transmission Licensees in the State. - TTSC • Calculate Sum of Average of Non-Coincident and Coincident Peak Demand all Transmission Users for ensuing year in MW. • **Base Transmission Tariff (long-term/medium-term) = TTSC / Sum (Avg of NCPD & CPD)** • Transmission Charges may be calculated as Rs/kW/month or Rs/MW/day. • **The Transmission Charges shall be trued up by considering the Transmission charges recovered from the Short-term Users.** **2. For Short-Term GEOA:** • **Base Transmission Tariff (t) (Short-term) = TTSC (t)/** $\sum n\ i=1(Energy\ Transmitted\ by\ Tx\ (i)$ **(Rs/kWh)** **3. Transmission loss : Average 52-week Tx loss as declared by SLDC.** **4. Specific concessions provided by the SERC to RE OA, if any may be continued.**

Proposed Methodology for GEOA Charges

#	GEOA Charges	Proposed Methodology
2	**Wheeling Charges and losses**	• **Allocation of Wire and Supply ARR in the ratio as specified in the MYT Regulations** • **Voltage-wise segregation (or allocation) of GFA and Energy Units wheeled thru (EHT/HT/LT)** • **Wheeling Charge = (Wheeling ARR) /(Energy Units wheeled) (in Rs./kWh)** • **Wheeling loss** - Only Technical loss to be considered. **Average 52-week loss for HT/LT network** (based on sample feeder analysis) • **Waiver or concession for RE if any may be continued**
3	**Cross-subsidy surcharge** **(Shall not be applicable to Captive OA)**	**As per Tariff Policy, 2016:** **S= T – [C/ (1-L/100) + D+ R] in Rs/kWh** Wherein: S - surcharge T - Tariff payable by the relevant category of consumers, including reflecting the RPO C - Per unit weighted avg. cost of power purchase by Licensee, including meeting RPO D -is the aggregate of Tx., DL and wheeling charge applicable to relevant voltage level L - is the aggregate of TX, DL and commercial losses, expressed as a % applicable to the relevant voltage level R - Per unit cost of carrying regulatory assets. **CSS shall not exceed 20% of the tariff applicable for respective consumer category.**

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Proposed Methodology for GEOA Charges

#	GEOA Charges	Proposed Methodology
4	**Additional Surcharge** **(Shall not be applicable to Captive OA)**	• Identifying generating stations / contracted capacity projected to be stranded (fully or partially backed down) • Assessing Fixed Cost pertaining to Generating stations / contracted capacity (fully or partially backed down) • Identifying part load operation of Generating stations above technical minimum • Assessing the Fixed Cost of Generating stations (fully and partially backed down), which were backed down below technical minimum (**55%)** • Assessing the extent of OA sales / OA capacity during the year (MU & MW) • Allocation of Impact of Fixed Cost on Distribution Licensee related to OA • **Determining PU Additional surcharge to meet the fixed cost of stranded capacity** • **Additional Surcharge= [(Net stranded charges recoverable) / (Open Access Sales)] Rs./kWh)**
5	**Standby Charge**	• **Stand-by charges should reflect cost of power procurement on short term basis and deviation settlement charges liable to be paid by DIOSCOMs in lieu of supply of such power.** • **Standby Charge = *Factor x ABR category*** (Standby Charges through separate Orders by SERC) • **Standby Charges shall not be more than 125% of normal tariff**

Proposed Methodology for GEOA Charges

#	GEOA Charges	Proposed Methodology

6	Banking Charge	• **Banking Period** : Time-block, ToD-slots, Daily
		• **Restriction on Drawal of Surplus Banked Energy**:
		  • Injection Peak hours and allowed to draw/set-off against Peak consumption
		  • Injection in Off-peak hours and allowed to draw/set-off against Off-peak consumption
		  • Injection in Peak hours and allowed to draw/set-off against Off-peak consumption but vice-versa not allowed.
		  • Restrictions for drawl during certain seasons (high demand) – Not relevant with Monthly
		• **Settlement period**: Monthly
		• **Rate for Settlement**: No carry-forward. No Deemed Purchase / un-utilized Energy shall be lapsed

RECOMMENDATIONS OF THE FORUM OF REGULATORS ON ISSUES IN THE RULES WHICH NEED TO BE ALIGNED WITH THE ELECTRICITY ACT 2003 AND THE TARIFF POLICY

SL. NO.	ISSUE/PARAMETER	GEOA CLAUSES	SUGGESTIONS
1	Interpretation of Monthly Banking, permitted quantum of banked energy and determination of Banked Energy	**8(1)** Banking shall be permitted **at least on a monthly basis** on payment of charges to compensate additional costs, if any, to the distribution licensee by the Banking and the Appropriate Commission shall fix the applicable charges. **8(2)** The permitted quantum of banked energy by the Green Energy Open Access consumers shall be at least 30% of the total monthly consumption of electricity from the distribution licensee by the consumers **Explanation**: For the purposes of this rule, the expression—Banking means the surplus green energy injected in the grid and credited with the distribution licensee energy by the Green Energy Open Access consumers and that shall be drawn along with charges to compensate additional costs if any: Provided that the credit for banked energy shall not be permitted to be carried forward to subsequent months and **the credit of energy banked during the month shall be adjusted during the same month.**	The words **'at least'** on monthly basis under Rule 8(1) **may be deleted**, as it contradicts with provisions stipulated under Proviso to Rule 8 (2): Provided that the credit for banked energy shall not be permitted to be carried forward to subsequent months and **the credit of energy banked *during the month* shall be adjusted during *the same month*.** Further, since this is monthly banking, no percentage needs to be fixed. Hence, **Rule 8(2) may be deleted**
2	Implicit waiver from DSM charges for GEOA	**9 (1)** The charges to be levied on Green Energy Open Access consumers shall be as follows: - (a) Transmission charges; (b) Wheeling charges; (c) Cross subsidy Surcharge; (d) Standby charges wherever applicable; and	Rule 9(1)(e) does not include SLDC/ RLDC fees/ charges, scheduling /rescheduling charges, DSM/ Deviation charges etc. and these charges cannot be avoided. Therefore, the following point **may be added** under Rule

		(e) No other charges except the charges above, shall be levied	9(1) (e) and current Rule 9(1)(e) may be renamed as Rule 9 (1)(f) and read as under: **(e) Applicable scheduling Fees/ Charges of SLDC/ RLDC and DSM/ Deviation charges**
3	Cross-subsidy surcharge & conditions for GEOA not aligned with Cross-subsidy surcharge formulation under Tariff Policy	**9(2)** The **Cross-subsidy surcharge** shall be as per the **provisions of tariff policy** notified by the Central Government under the Act: Provided that the **cross-subsidy surcharge** for Green Energy Open Access, Consumer purchasing green energy, from a generating plant using renewable energy sources, **shall not be increased**, **during twelve years** from the date of operating of the generating plant using renewable energy sources, by more than **fifty percent of the surcharge** fixed for the year in which open access is	As per the Tariff Policy formulation, CSS is computed in such a way that it compensates the distribution licensee, for the loss of cross-subsidy as provide in the formula as under: S=T-[C (1+L/100)+D+R] Further, there are other conditions/provisions stipulated under the Electricity Act and Tariff Policy for determination of 'Surcharge' as under: o Since single formula may not work for all states, the SERCs while keeping overall objectives of Electricity Act in view, may review and vary the same taking into consideration different circumstances prevalent in the state o The cross-subsidy surcharge should be brought down progressively in line with cross-subsidies to various other categories of consumers, as far as possible, at linear rate to a maximum of 20% its operative level. Thus, Surcharge determination is function of utility cost/tariff for consumer category and not really linked to generation cost of green energy resource and its year of commissioning. **The 1st proviso under Rule 9(2) may be deleted** as the same is inconsistent with the Electricity Act and Tariff Policy

		granted;	
4	Treatment for **Waste-to-Energy** plant and scope of exemption	**9(2)** The Cross-subsidy surcharge shall be as per the provisions of Tariff Policy notified by the Central Government under the Act: …… Provided also that **cross subsidy surcharge and additional surcharge** shall not be applicable in case power produced from a **Waste-to-Energy** plant is supplied to the Open Access Consumer.	There is a need to specify the type of WtE plants exempted under the Rule. Such exemption of Surcharge and Additional Surcharge may be extended only to non-fossil fuel or MSW based WtE Plants under GEOA The words, **'non-fossil fuel based or MSW based' Waste to Energy plant may be added under 3rd Proviso of Rule 9(2).**
5	Applicability of waiver of Open Access charges on generation or consumption of green hydrogen and green ammonia	**9(2)** The Cross-subsidy surcharge shall be as per the provisions of Tariff Policy notified by the Central Government under the Act: …... …... Provided also that **Cross subsidy surcharge** and **additional surcharge** shall **not be applicable** if **green energy is utilized** for production of **green hydrogen and green ammonia**	As the cost of generation and storage of green hydrogen and green ammonia is very high, providing such waivers will result in subsidizing the industries at the cost of the other power sector consumers. Therefore, the 4th proviso **under Rule 9(2)** may be deleted.
6	Applicability of Additional Surcharge	**9(2)** The Cross-subsidy surcharge shall be as per the provisions of Tariff Policy notified by the Central Government under the Act: ……. Provided further that the **additional surcharge shall not** be applicable for Green Energy Open Access Consumers, **if fixed charges are being paid** by such a consumer	The waiver of Additional Surcharge (which is resulting due to stranded capacity due to open access) just because fixed charges are being paid, does not appear to be reasonable and not aligned with regulatory principle of cost reflective recovery. Hence, **2nd proviso under Rule 9(2) may be deleted.**
7	Applicability of Standby charges and associated conditions and Explanations	**9(4)** The **standby charges**, wherever applicable, shall be specified by the State Commission and such charges **shall not be applicable** if the Green Energy Open Access Consumers have given notice, **in advance at least twenty-four hours** before the time of delivery of power, for standby arrangement to the distribution licensee:	

		Provided that the applicable standby charges shall **not be more than Ten per cent** of **the energy charges** applicable to consumer tariff category	**The proviso may be modified from** : "Standby charges shall not be more than **Ten per cent** of the energy charges applicable to consumer tariff category" **to** "not be more than **Twenty-Five per cent** over and above the energy charges applicable to consumer tariff category." For non-applicability of standby charges, the condition of advance notice "**at least twenty-four hours** before the time of delivery of power", **may be rephrased** as: "**atleast a day in advance before gate closure in DAM on D-1 day of delivery of power.**

STATE ELECTRICITY REGULATORY COMMISSION

Model Regulation on Methodology for calculation of Open Access charges and Banking charges for Green Energy Open Access Consumers– (DRAFT)

No…….. Date: ……..

NOTIFICATION

In exercise of the powers conferred under section 181 of the Electricity Act, 2003 (36 of 2003), read with section 42, section 61 and section 86 thereof and all other powers enabling it in this behalf, and after previous publication, the……State Electricity Regulatory Commission hereby makes the following Regulations, namely-

CHAPTER1

PRELIMINARY

1. Short Title, Extent and Commencement

(1) These regulations is called the …… State Electricity Regulatory Commission (Methodology for determination of Green Energy Open Access Charges) Regulations,2022.

(2) These Regulations will come into force from the date of their notification in the Official Gazette.

(3) These Regulations shall extend to the whole of the State of……..

2. Objective

The objective of these regulations is to provide a methodology for the determination of Open Access charges and Banking charges for Green Energy Open Access consumers.

3. Definitions

(1) In these regulations, unless the context otherwise requires,

(a) "Act"meanstheElectricityAct,2003(36of2003);

(b) “Banking” means the surplus green energy scheduled and injected into the grid and credited with the distribution licensee by the Green Energy Open Access consumers;

(c) ‘Central Commission’ means the Central Electricity Regulatory Commission referred to in sub-section (1) of Section 76 of the Act;

(d) “Central Nodal Agency” means a Central Nodal Agency as notified by the Central Government to set up and operate a single window green energy open access system for renewable energy;

(e) “Commission” means the ……. (Name of State) Electricity Regulatory Commission constituted under the Act;

(f) “Day Ahead Market (DAM)” means a market where Day Ahead Contracts are transacted on the Power Exchange(s);

(g) “Forum of Regulators” means the Forum as referred to in sub-section (2) of section 166 of the Act;

(h) “Fossil Fuel” means fuels such as coal, lignite, gas, liquid fuel or combination of these as its primary source of energy, which are used in Thermal Generating Station for generating electricity;

(i) “Green Energy” means the electrical energy from renewable sources of energy including hydro and storage (if the storage uses renewable energy) or any other technology as may be notified by the Government of India from time to time and shall also include any mechanism that utilises green energy to replace fossil fuels including production of green hydrogen or green ammonia as per provision of clause G of sub-rule (2) of rule 4 of Green Energy Open Access Rules, 2022;

(j) “Green Open Access Consumer” means any person who has contracted demand or sanctioned load of 100kW or more or such other limit as may be specified by Commission from time to time, except for captive consumers, who are supplied with electricity from green energy sources for their own use by a licensee or the Government or by any other person engaged in the

business of supplying electricity to the public under this Act or any other law for the time being in force and includes any person whose premises are for the time being connected for the purpose of receiving green energy with the works of a licensee, the Government or such person, as the case may be.

(k) "Rules" means the Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022 and subsequent amendments;

(l) "SERC" means the State Electricity Regulatory Commission;

(m) "Standby charges" means the charges applicable to green energy open access consumers against the standby arrangement provided by the distribution licensee, in case such green energy open access consumer is unable to procure/schedule power from the generating sources with whom they have the agreements to procure power due to outages of generator, transmission systems and the like;

(2) Words and expressions used and not defined in these regulations but defined in the Act or IEGC or any other regulation of the Appropriate Commission shall have the meaning assigned to them under the Act or the IEGC or the State Grid Code or any other regulation of the Commission as the case may be.

4. Scope

These regulations shall be applicable for allowing Open Access to electricity generated from green energy sources as defined under clause (1) (i) of Regulation 3 of these Regulations, including the energy from non-fossil fuel-based Waste-to-Energy plant for use of Intra-State Transmission System (InSTS) or distribution system or both, which are incidental to Inter-State Transmission of electricity.

CHAPTER2

GREEN ENERGY OPENACCESSCHARGES

5. Charges for Green Energy Open Access

The charges on Green Energy Open Access consumers shall be as follows: -

(1) Transmission charges;

(2) Wheeling charges;

(3) Cross subsidy Surcharge;

(4) Standby charges wherever applicable;

(5) Banking Charge and

(6) Other fees and charges such as SLDC fees and scheduling charges, deviation settlement (DSM) charges as per the relevant regulations of the Commission.

6. Transmission Charges

a) For use of inter-State transmission system: As specified by the Central Commission from time to time.

b) For use of intra-State transmission system:

i. Transmission Charges for Long-Term/Medium-Term Green Energy Open Access, shall be as below:

$$\text{Transmission Charge} = \frac{\text{Total Transmission System Charges (TTSC)}}{\text{Peak load served (PLS)}}$$

Where, Total Transmission system Cost for InSTS shall be sum of Annual Revenue Requirement (ARR) or annual transmission service charge of Transmission Licensee(s) in the State approved or adopted by the Commission.

PLS is the Peak load served by the State transmission system during the year:

Provided that, in case of multiple transmission licensees in the States, the ARR for all the Transmission licensees shall be pooled together for computation of TTSC.

Transmission Charges will be calculated as Rs/kW/month or Rs/MW/day.

ii. Transmission Charges for Short-Term Green Energy Open access, shall be computed as:

$$\text{Transmission Charge (STOA)} = \frac{\text{Total Transmission System Charges (TTSC)}}{\text{Energy transmitted by transmission licensee during the year}}$$

Transmission Charge for Short-Term Green Energy Open Access shall be computed in Rs/kWh and it shall be charged on the actual energy transmitted:

Provided that the existing waivers or concessions in the Transmission Charges applicable for green energy open access transactions under ___(State) SERC open Access Regulations shall continue as specified by the ____(State) SERC.

iii. While determining transmission charges for the ensuing year, Transmission ARR will be trued up by the Commission as per provisions of the MYT Regulations and on considering the Transmission revenue recovered from the Short-term green energy Open Access Consumers for the previous year.

iv. In case, where a dedicated transmission system used for open access has been constructed for exclusive use of an open access consumer, the transmission charges for such dedicated system shall be worked out by transmission licensee for their respective systems and get the same approved by the Commission. The charges shall be borne entirely by such open access consumer till such time the surplus capacity is allotted and used for by other persons or purposes.

v. In addition to Transmission Charge, Intra-State Transmission loss shall be applicable to consumers seeking Green Energy Open Access. It shall be determined as average of 52-week Intra-State Transmission loss for the previous financial year as approved by the Commission.

7. Wheeling Charges

a) Wheeling Charges for Long-Term/Medium-Term/Short-Term Green Energy Open Access, shall be computed as:

$$\text{Wheeling Charge} = \frac{\text{Wheeling ARR}}{\text{Energy wheeled during the year}}$$

(i) Wheeling ARR of Distribution Licensee will be as approved by the Commission under MYT Tariff Regulations or Order as the case may be.

(ii) Distribution Licensees need to maintain separate accounting records for the Wires Business and Retail Supply Business and prepare an allocation statement based on the allocation ratio specified by the Commission in the MYT Regulations or any other Regulation or Order as the case may be, for determination of Wheeling ARR for wire business and for determination of wheeling charges thereof.

[1][(iii)In case, voltage-wise segregation (HT/LT) of assets (Gross Fixed Assets) and data of energy wheeled / loss levels over (HT/LT) network is available, separate wheeling charges (HT/LT) shall be determined as under:

i. $\text{Wheeling Charge (HT)} = \frac{\text{Estimated/Allocated Wheeling ARR (HT)}}{\text{Energy wheeled (HT)}}$

ii. $\text{Wheeling Charge (LT)} = \frac{\text{Estimated/Allocated Wheeling ARR (LT)}}{\text{Energy wheeled (LT)}}$

Where,

Estimated Wheeling ARR = Wheeling ARR (HT) + Wheeling ARR (LT)

HT (Loss) = Average of 52-week Loss at HT distribution system based on sample feeder level Energy Audit (viz. technical loss assessment)

LT (Loss) = Average of 52-week Loss at LT distribution system based on sample feeder level Energy Audit (viz. Technical loss assessment)]

[1]This provision may be adopted by States where voltage-wise wheeling charges are being determined.

(iii) Wheeling Charge for Green Energy Open Access shall be computed in Rs/kWh and it shall be charged on the actual energy wheeled:

Provided that the existing waivers or concessions in the Wheeling Charges applicable for renewable energy open access transactions under ___(State) SERC open Access Regulations shall continue as specified by the ____(State) SERC.

b) While determining Wheeling Charges for the ensuring year, Wheeling ARR shall be trued up by the Commission as per the provisions of the MYT Regulations and upon considering the shortfall (excess) revenue recovered from Wheeling Charges for the previous year.

c) In case, where a dedicated distribution system used for open access has been constructed for exclusive use of an open access consumer, the wheeling charges for such dedicated system shall be worked out by distribution licensee for their respective systems and get the same approved by the Commission. Such charges shall be borne entirely by such open access consumer till such time the surplus capacity is allotted and used for by other persons:

Provided also that an open access consumer connected to the Intra State Transmission system shall be liable to pay the wheeling charges determined under this regulation, if such consumer was paying wheeling charges directly or indirectly before availing the green energy open access.

d) In addition to Wheeling Charge, Wheeling loss shall be applicable to consumers seeking Green Energy Open Access and it shall be determined as average of 52-week Wheeling loss for the previous year as approved by the Commission:

Provided that, the Wheeling loss shall include only technical loss and not Aggregate Technical and Commercial loss of that Distribution Licensee. The Commission shall consider the Average 52-week loss for HT/LT network, as applicable;

Provided that if feeder-wise data of losses is not available, the Commission shall consider the voltage-wise sample feeder for determining the wheeling losses.

8. Cross subsidy surcharge

a) If Green energy open access facility is availed by a cross-subsidising consumer of a

distribution licensee of the State, then such consumer, in addition to transmission and wheeling charges, shall pay cross subsidy surcharge determined by the Commission. Cross subsidy surcharge determined on Per Unit basis shall be payable, monthly by the green energy open access consumers based on the actual energy drawn during the month through open access. The amount of surcharge shall be paid to the distribution licensee of the area of supply from whom the consumer was availing supply before seeking open access.

b) The Cross-Subsidy Surcharge (CSS) shall be determined in accordance with the following formula specified in Tariff Policy,2016 as amended time to time:

CSS (S) = T – [C/ (1-L/100) + D+ R]

Wherein:

S – surcharge

T – Tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation

C – Per unit weighted average cost of power purchase by Licensee, including meeting Renewable Purchase Obligation

L – Aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level

D -Aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level

R – Per unit cost of carrying regulatory assets.

Provided that in case the above formula gives negative value of surcharge, the same shall be zero;

c) The Cross-Subsidy Surcharge shall not exceed 20% of the tariff or Average Billing Rate (ABR) applicable to the category of the consumers seeking Green Energy Open Access:

Provided that the Commission may fix a lower surcharge in the situation of shortages and load shedding by the distribution licensee;

Provided further that such cross-subsidy surcharge shall not be levied in case distribution access is provided to a person who has been availing green power

from the plant established as captive generation plant for his own use;

Provided also that cross subsidy surcharge and additional surcharge shall not be applicable in case power produced from a non-fossil fuel-based Waste-to-Energy plant is supplied to the Open Access Consumer;

d) Cross-Subsidy Surcharge for Green Energy Open Access shall be computed in Rs/kWh and shall be charged on the actual energy consumed by the consumer under Green Energy Open Access.

9. Standby Facility and Charges

a) In case the green energy open access consumer is unable to procure/schedule power from the generating sources with whom they have the agreements to procure power due to outages of generator, transmission systems and the like, standby arrangement shall be provided to Green Energy Open Access consumer by the distribution licensee of the area of its supply.

b) The Standby Charges for Green Energy Open Access for such standby arrangement shall be 125% of normal tariff of the consumer category:

Provided that such Standby Charges shall not be applicable if the Green Energy Open Access Consumers have given notice, atleast a day in advance before gate closure in DAM on 'D-1' day, 'D' being the day of delivery of power, for standby arrangement to the distribution licensee.

c) The Standby Charges for Green Energy Open Access shall be computed in Rs/kWh and it shall be charged on the actual energy drawn by the consumer from distribution licensee during the period of standby availed by Green Energy Open Access consumer in case of outage of RE generator under Green Energy Open Access.

10. Banking Facility and Charges

a) Banking facility shall be provided to the consumers availing Green Energy Open Access. The surplus energy from a 'Green Energy' Generating Station after setoff shall be banked with the Distribution Licensee.

b) The banking facility including injection of surplus energy and drawal of banked

energy shall be subject to scheduling.

c) The Banking Charges shall be adjusted in kind @ 8% of the energy banked.

d) The Banking of energy shall be permitted only on monthly basis as per Calendar month:

Provided that the credit for banked energy shall not be permitted to be carried forward to subsequent months and the credit for energy banked during the month shall be adjusted during the same month as per the energy injected in the respective Time of Day ('TOD') slots determined by the Commission in its Orders determining the tariff of the Distribution Licensee;

Provided further that, the energy banked during peak TOD slots shall be permitted to draw during peak as well as off-peak TOD slot. However, the energy banked during off-peak TOD slots shall be permitted to draw during off-peak TOD slot by only paying the banking charges and from off peak TOD slot to peak TOD slot by paying additional charges as may be specified by Appropriate Commission in addition to the banking charges

d) The un-utilised surplus banked energy at the end of the month, shall be considered as lapsed at the end of each month:

Provided that, the RE Generating Station would be entitled to Renewable Energy Certificates to that extent.

11. Other Charges

In addition to above charges, the consumer availing Green Energy Open Access shall also pay the following charges determined by the Commission as per the provisions of the relevant regulations of the Commission:

a) Applicable SLDC fees and charges

b) Scheduling charges

c) RE Deviation Settlement Charges (RE-DSM)

CHAPTER 3

MISCELLANEOUS

12. Power to give directions

The Commission may from time to time issue such directions and orders as considered appropriate for implementation of these Regulations.

13. Power to relax

The Commission may by general or special order, for reasons to be recorded in writing, and after giving an opportunity of hearing to the parties likely to be affected, may relax any of the provisions of these Regulations on its own motion or on an application made before it by an interested person.

14. Power to amend

The Commission may from time to time add, vary, alter, suspend, modify, amend, or repeal any provisions of these Regulations.

15. Power to remove difficulties

If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by an order, make such provisions, not inconsistent to the provision of the Act and these Regulations, as may appear to be necessary for removing the difficulty.

(Secretary)

SERC