

Report of Joint Committee

1. Background

- 1.2 The Electricity Act, 2003 entrusts on the appropriate Commission, the responsibility of promotion of co-generation and generation based on renewable energy sources. The policy framework of the Government of India also stresses on the encouragement of renewable energy sources keeping in view the need for energy security of the country. Delhi Solar Policy, 2016 issued by the Government of NCT of Delhi (GoNCTD) vide notification dated 27.09.2016 considers solar power to be the most viable form of green energy in Delhi which has the potential of lowering the state's expenditure on energy, strengthening its energy security, and reducing its reliance on unsustainable fossil fuels. The copy of Delhi Solar Policy, 2016 is enclosed as 'Annexure-I'.

2 Provisions of Delhi Solar Policy, 2016 in context of developing framework for Group Net Metering and Virtual Net Metering.

The Delhi Solar Policy, 2016 specifies that Delhi Electricity Regulatory Commission(DERC), the State Power Department and State Nodal Agency (SNA) will form a joint committee to achieve following policy objective:-

- (a) Framework for Group Net Metering.
- (b) Framework for Virtual Net Metering.
- (c) Framework for exemption on open access charges for solar electricity generated or consumed in Delhi.
- (d) Framework for exemption on wheeling, banking, and transmission charges.
- (e) Framework for Cross subsidy charges.

The relevant provisions under Delhi Solar Policy 2016 are as under:-

I. Group Net Metering

To encourage solar plants on rooftops of buildings that cannot consume all of the energy generated locally, DISCOMS shall facilitate Group Net Metering, whereby surplus energy exported to the grid from a solar plant at the location of the solar plant can be adjusted in any other (one or more) electricity service connection(s) of the consumer within the NCT of Delhi, provided these connections are in the same DISCOM territory. The purpose of this provision is to help maximize the utilization of rooftop space for solar energy generation for consumers with multiple buildings and service connections.

The State Government shall work with DERC to develop group net metering framework, pending finalization of the framework, consumers of all categories who wish to avail Group Net Metering facility shall make a written request to DERC, which shall review the requests in a timely manner

and grant approval on a case-by-case basis. Within 30 days of notification of this policy, DERC shall make available on its website a simple document form to handle such written requests.

The State Government shall work with DERC to develop Group Net Metering framework for government buildings no later than 1 April 2016 and for other consumer categories no later than 1 April 2017. DERC, the state power department and SNA will form a joint committee to achieve this policy objective.

II. Virtual Net Metering

To give access to the Solar Net Metering facility for consumers who do not have a suitable roof for installing a solar system (e.g. residential consumers who live in apartments, consumers with shaded rooftops) there will be the facility of Virtual Net Metering. In Virtual Net Metering consumers can be beneficial owners of a part of a collectively owned solar system. All energy produced by a collectively owned solar system will be fed into the grid through an energy meter and the exported energy as recorded by that meter will be pro-rata credited in the electricity bill of each participating consumer on the basis of beneficial ownership.

Collective ownership of solar plants may be established through housing societies, RWAs, trusts or section 25 Companies or any other legal entity that safeguards the interests of participating consumers, including rights which are at par with the rights enjoyed by consumers who have solar net metering with a solar system installed on their own roof.

The State Government shall work with DERC to develop Virtual Net Metering framework for all consumers not later than 1 April 2017. DERC, the state power department and SNA will form a joint committee to achieve this policy objective.

III. Exemption on Open Access Charges

The state government in consultation with DERC shall prepare a suitable framework for Open Access for solar electricity generated or consumed within the state. Such framework will be finalized and approved no later than 1 April, 2017. DERC, the State Power Department and SNA will form a joint committee to achieve this policy objective.

IV. Exemption on wheeling, banking, and transmission charges

The state government in consultation with DERC shall prepare a suitable framework for exemption on wheeling, banking and transmission charges for solar electricity generated or consumed within the state. Such framework will be finalized and approved no later than 1-April-2017. DERC, the State Power Department and SNA will form a joint committee to achieve this policy objective.

V. Cross subsidy charges

The State Government in consultation with DERC shall prepare a suitable framework for cross subsidy charges for solar electricity generated or consumed within the state. Such framework will be finalized and approved no later than 1-April-2017. DERC, the State Power Department and SNA will form a joint committee to achieve this policy objective.

3 Constitution and Terms of Reference (ToR) of Joint Committee under Delhi Solar Policy 2016

3.1. In pursuance to the notification of Delhi Solar Policy, 2016, DERC vide letter dated 10.11.2016 had issued letter to GoNCTD and State Nodal Agency to nominate representative for Constitution of Committee to achieve policy objectives. Subsequently, GoNCTD vide letter dated 06.01.2017 nominated Sh. A.K. Jha, Executive Officer, Energy Efficiency & Renewable Energy Management Centre (EE&REMC), Department of Power, GoNTCD. DERC vide order No.F.9(158)/DERC/DS/15-16/C.F.No.4994/2507 dated 15.03.2017 has constituted a Committee as under :-

- (a) Sh. Prashant Kumar, Joint Director (Tariff -Finance), DERC – Member
- (b) Sh. Sanjay Kumar Sharma, Joint Director (Performance, Standard & Engineering), DERC – Member
- (c) Sh. AK. Jha, Executive Officer, EE&REMC, DoP, - Member
- (d) Sh. Abhishek Moza, Deputy Secretary, DERC –Member Secretary

The committee may co-opt experts as may be considered necessary. The Order dated 15.3.2017 is enclosed as ‘Annexure-II’.

3.2. **The terms of reference of the Committee areas under :-**

- (a) To address all issues and develop framework for virtual Net Metering.
- (b) To address all issues and develop framework for Group Net metering.
- (c) To prepare suitable framework for applicability of various open access charges on solar energy generated or consumed in Delhi and address its financial impact.
- (d) The committee shall take stake-holders / public comments while preparing the report.

4 Approach of the Committee

4.1. In order to address the issues as contained , the Committee held series of meetings with the representative of DISCOMs & Delhi Metro Rail Corporation (DMRC) on 24.03.2017, 05.06.2017, 13.09.2017 and 17.10.2017 . The Committee has also studied & analyzed the following:

- I. Delhi Solar Policy, 2016
- II. Delhi Electricity Regulatory Commission (Net Metering for Renewable Energy) Regulations, 2014
- III. Guidelines issued under Delhi Electricity Regulatory Commission (Net Metering for Renewable Energy) Regulations, 2014

- IV. Delhi Electricity Regulatory Commission (Terms and Conditions for Open Access) Regulations, 2005
- V. Orders issued under Delhi Electricity Regulatory Commission (Terms and Conditions for Open Access) Regulations, 2005
- VI. International framework on virtual/ group Net Metering, etc.

5 Renewable Energy Installed Capacity & Net Metering Experience in Delhi

The Committee observed that there is significant growth in proliferation of solar plant installation in Delhi as compared to the status of solar power plants installed before DERC Net Metering Regulations. The total installed capacity of solar power in Delhi was approximately 7MW upto FY2014. The Solar power installed capacity in Delhi as on 30.09.2018 is 106.5 MW. This indicates that despite of the various constraints in Delhi like scarcity & expensive land, shared rooftop etc., there is tremendous growth in installation of solar energy due to appropriate level of regulatory framework enforced by the Commission.

- 6** In order to achieve the ambitious target set by the Delhi Solar Policy 2016 & National Tariff Policy 2016, there is a need to further review of Regulatory framework. Therefore, after deliberations in the various meetings, the Committee identified the following issues and analyzed the same to be addressed in the framework:

A. Technical Issues

- (i) Any Local grid penetration issues on limit**

Comments of DISCOMs

BRPL

BRPL has undertaken a detailed study on the topic and a copy of the GIZ Report has been submitted. Study simulation results indicated that higher PV penetration levels of distribution transformer capacity can be implemented in comparison to the limits prescribed by regulators in most Indian states without having to undertake any measures to contain voltage problems or overloading.

Accordingly, the limits at Distribution capacity may be revised under Net-Metering for Renewable Energy regulations.

TPDDL.

The limits specified under existing DERC (Net Metering for Renewable Energy) Regulations, 2014 and the Guidelines issues under the same are appropriate.

Analysis

The Committee deliberated upon the issue and felt that at present there is no need for prescribing any limit on injection of solar power into local grid and if required, the distribution licensees may approach the Commission on need basis in future.

(ii) Metering Arrangement / smart meters for remote data collection

Comments of DISCOMs

BYPL

Multiple Generation meters may be permitted at one site but the cost of the Generation meters should be borne by the applicant only. DISCOMs to provide one Net meter. Automated Meter Reading (AMR) provision will be there in all the meters (Net/ Generation meter) and the cost of the same should be borne by the consumer.

BRPL

Multiple generation meters be allowed at one site but the cost of the generation meters be borne by the consumer only. Discom will provide one net meter. Automated Meter Reading (AMR) provision will be there in all the meter (Net/ Generation meter) and the cost of the same shall be borne by the consumer.

TPDDL.

TPDDL proposes to install smart meters in all solar projects.

Analysis

The DISCOMs submitted that there were many cases in the past where DISCOMs had to install more than one solar meter for single net meter connection and there is no clarity in the Net Metering Regulations who will bear the cost of solar meter for more than one meter. The DISCOMs also pointed out that vendors procure and install solar meter himself and therefore it is suggested that cost of Net Meter may be borne by the Discom and solar meter to be borne by the Consumer. It was suggested that the primary responsibility for procurement and installation of the solar meter may be kept with the DISCOMs in lieu of the compatibility of the meter with the IT system of DISCOMs, however, the Consumer may be given the right to exercise its choice for procurement of meter.

The DISCOMs also suggested that DISCOMs may be given remote connectivity with the inverter of the consumer as there may be a possibility for forced majeure curtailment to control reactive power and voltage regulation issues.

The matter regarding location of installation of solar meter was also discussed during the meeting and DISCOMs submitted that installation of solar meter and net meter at the same

place leads to increase in cost for the consumer as extra cables have to be laid for installation of the meter at the particular location.

Accordingly, it was discussed that if smart meters may be installed as these may be read from remote locations.

(iii) Any Changes required for IT system and timelines for the same.

Comments of DISCOMs

BYPL

As it is not possible in existing SAP PSU billing system, assistance from SAP India have been sought for the resolution. The timeline shall be intimated once.

BRPL

SAP and Billing Software modification is required and timelines could only be ascertained post finalization of the counters and level of modification to made, the preliminary assessment suggest that for phase 1 revision as per the Draft policy will take at least 6 months to roll-out the modification.

TPDDL

Changes required in our existing IT process have been evaluated and it will require major development through SAP developer. Any limit can be specified only after freezing all developmental requirements. This will also have cost implications which will require approval of DERC. Development of the same will require some time.

Analysis

The Committee deliberated upon the issue and felt that there may not be much difficulty for DISCOMs to implement the same.

(iv) Synchronization of different consumers accounts

Comments of DISCOMs

BYPL

In Group and Virtual net metering, there will be adjustment of excess solar energy generated by Solar roof-tops. In the case of TOD consumers, the adjustment is done on the basis of TOD time slots. In the event where there is a combination of TOD and non TOD consumers (In Group Net Metering& Virtual Net Metering), the adjustment needs to be done on first for TOD and then for non TOD consumers and vice versa. Such logic creation is not feasible in IT system. We

propose that in such event, all the consumer should be treated in either TOD consumer or non TOD consumers.

BRPL

There will be technical issues in case of synchronization of TOD vs. non-TOD consumers.

TPDDL

No comments

Analysis

The issue regarding energy accounting of different consumer accounts having at least one TOD connection and other non-TOD connection was discussed. During the discussion, the DISCOMs submitted that the energy accounting may be difficult in such scenario and proposed that all the Connections needs to be converted into TOD Connection.

Therefore, the Committee is of the view that in case of one or more ToD connection under Group Net Metering or virtual net metering, TOD meters shall be installed at all connections and settlement should be done accordingly.

B. Energy Accounting & Commercial arrangement.

- (i) Capital Expenditure for augmentation of the Network where sanctioned load of the consumer is less than the proposed solar PV plant capacity.**

Comments of DISCOMs

BYPL

This may be applicable for consumers whose sanctioned load is less than the proposed solar PV plant capacity.

The applicant shall pay the service line cum development charges to the distribution Licensee as per the DERC Order dated 31.8.2017 on schedule of charges and procedure for implementation of DERC (Supply Code and Performance Standards) Regulations, 2017.

BRPL

This may be applicable for consumers whose sanctioned load is less than the proposed solar PV plant capacity.

The applicant shall pay the service line cum development charges to the distribution Licensee as per the DERC Order dated 31.8.2017 on schedule of charges and procedure for implementation of DERC (Supply Code and Performance Standards) Regulations, 2017.

TPDDL

In case the connection where solar power plant is installed, is on LT and higher capacity plant is installed which requires it to be connected at HT, the cost of the augmentation should be as per DERC (Supply Code and Performance Standards) Regulations, 2017.

Analysis

The issue regarding Capital Expenditure for augmentation of the Network was deliberated. It was also discussed that a situation may also arise wherein the consumer may have connection on Low Tension (LT) supply and require connectivity of solar PV plant under Group Net Metering and Virtual Net Metering at High Tension (HT) level, which will require augmentation of the network. Regulation 5(4) of DERC (Net Metering for Renewable Energy) Regulations, 2014 stipulates that if the consumer installs a Renewable Energy system of capacity higher than the existing sanctioned load of the consumer at the premises, the consumer should pay the differential amount of SLD charges between the capacity of renewable energy system and the existing sanctioned load.

Further, the question arises before the Committee was that as the consumer is eligible to adjust the surplus energy exported to the grid in other electricity connections, whether the sanctioned load of other electricity connection is to be counted for computation of differential SLD charges. It was discussed that the network augmentation is required at the site where solar plant is proposed to be installed. Therefore, sanctioned load of other electricity connections under VNM and/or GNM has no relevance for the purpose of computation of capacity required to be augmented due to higher capacity of renewable energy plant compared to sanctioned load at the site. In view of the Regulation 5(4) of DERC (Net Metering for Renewable Energy) Regulations, 2014, the Committee is of the view that the consumer may be required to pay differential Service line cum development charges as per the provisions of Delhi Electricity Regulatory Commission (Supply Code and Performance Standards) Regulations, 2017 as the solar plant is located at one place.

- (ii) What should be the sequence for settlement of excess energy for consumer accounts / What proportionate excess energy will be distributed between number of beneficiaries/ energy accounting.**

Comments of DISCOMs

BRPL & BYPL

Group Net-Metering (GNM):

Bucket Filling Approach should be followed for adjustment of excess energy generated from Solar roof tops. The priority order of adjustment to be provided by the consumers of the

premises. Further, we propose that upon synchronization of different categories, first adjustment should be done from lower tariff category only.

Virtual Net Metering (VNM):

Percentage sharing of adjustment of excess energy generated by Solar roof-tops should be provided by the consumers and the same should not be revised frequently, the same may be permitted only on 3 months prior intimation and that too should be restricted to only one such revision over a period of one yr.

TPDDL

Group Net Metering (GNM):

In case of GNM the solar generation consumer should declare the ratio of settlement at the time of application.

Virtual Net Metering (VNM):

In case of VNM sharing has to be as per the equity invested in the plant.

Analysis

The Committee deliberated upon the issue and it was proposed that in case of group net metering, firstly, settlement may be done for that account where the solar plant is located and after that consumer may exercise its choice for settlement of energy at different electricity connections.

In case of virtual net metering, the energy shall be settled in the ratio of percentage of beneficial ownership. It was further discussed that the word 'beneficial ownership' may also be elaborated so as to avoid any ambiguity.

It was further discussed that if the applicant wants to change his choice, this may be allowed only once in a financial year with prior intimation of two months in advance.

An issue has also come to the Committee that in case of Government entity, there is case that connections are taken in the name of an officer but are related to one organization e.g. For MCD schools, the connection is generally taken in the name of Principal, but the schools are of MCD. Therefore, in such cases, these connections may be allowed to be covered under group net metering.

(iii) Minimum consumption per connection

Comments of DISCOMs

BYPL, BRPL & TPDDL

No Comments.

Analysis

The DISCOMs suggested that there should not be criteria for minimum consumption per account. The Committee noted the suggestion. Accordingly recommends that there should not be any limit of minimum consumption per connection.

(iv) Monthly settlement rate of different category accounts.

BYPL

Monthly settlement should be done as per the practices adopted by other Regulatory commissions such as Gujarat and Rajasthan Electricity Regulatory Commission. The relevant clauses of Gujarat Electricity Regulatory Commission (Net Metering Rooftop Solar PV Grid Interactive Systems) Regulations, 2016 is as under:

“9.3 In the event the electricity supplied by the distribution licensee during any billing period exceeds the electricity generated by the Eligible Consumer’s Rooftop Solar PV System, the distribution licensee shall raise invoice for the net electricity consumption at the consumer’s prevailing tariff; In the event the electricity injected exceeds the electricity consumed during the billing period, such excess injected electricity after adjustment of consumption shall be purchased by the concerned Distribution Licensee at the APPC rate determined by the Commission for the year in which the Rooftop Solar PV System is commissioned for whole life of the Rooftop Solar PV System;”

The settlement rates should be either Average Power Purchase Cost (APPC) of the respective Discom or a lower rate if the Solar Project Developer is a RESCO player and had quoted a rate lower than APPC.

BRPL

Monthly settlement be done as the same in line the regulation of other States. The settlement rates should be either APPC or a lower rate if the Solar Project Developer is a RESCO player and had quoted a rate lower than APPC.

TPDDL

The settlement will be as per existing DERC (Net Metering for Renewable Energy) Regulations, 2014 and the Guidelines issues under the same.

Analysis

The Committee noted that as per DERC (Net Metering for Renewable Energy) Regulations, 2014 and its Guidelines, if during any billing period, the export of units exceeds the import of units consumed, such surplus units injected by the consumer shall be carried forward to the next billing period as the energy credit and shown as energy exported by the consumer for adjustment in the subsequent billing periods within the settlement period. Further the net

energy credits which remain unadjusted at the end of the financial year shall be paid as per the rates notified by the Commission.

Therefore, the Committee is of the view that if any different methodology is adopted for adjustment, this will be at variance with the said Regulations. In order to promote group net metering and virtual net metering, the adjustment of surplus energy shall be done as per the provisions of DERC (Net Metering for Renewable Energy) Regulations, 2014 and its Guidelines.

(v) Annual Payout rate.

Comments of DISCOMs

BYPL

As per APPC or a lower rate if the Solar Project Developer is a RESCO player and had quoted a rate lower than APPC. Further, it is also proposed to limit the final settlement from yearly to either quarterly or monthly basis as being done in the other State Commissions such as Gujarat, Rajasthan etc.

BRPL

As per APPC or a lower rate if the Solar Project Developer is a RESCO player and had quoted a rate lower than APPC. Further, it is also proposed to limit the final settlement from yearly to either quarterly or monthly basis in line with regulation of other States like Gujarat, Rajasthan etc.

TPDDL

This should be as per existing DERC (Net Metering for Renewable Energy) Regulations, 2014 and the Guidelines issues under the same.

Analysis

The Committee noted that, at present, as per the guidelines issued by DERC under DERC (Net Metering for Renewable Energy) Regulations, 2014, the consumer shall be paid for net energy credits which remain unadjusted at the end of the financial year at the rate of Average Power Purchase Cost (APPC) of the distribution licensee for the respective year on provisional basis, subject to finalization as per the true-up Order issued by DERC for relevant year.

Therefore, the Committee is of the view that in order to promote renewable energy generation, annual settlement may be kept as per existing provisions of DERC (Net Metering for Renewable Energy) Regulations 2014 and guidelines.

(vi) TOD Settlement at different location and settlement arrangement.

Comments of DISCOMs

BYPL

The Settlement of excess units generated from Solar roof tops should be done against the lowest Tariff first, followed by normal tariff and finally the higher tariff charged to a TOD consumer.

BRPL

Settled against the lowest Tariff first than normal tariff and finally the higher tariff charged.

TPDDL

This should be as per existing DERC (Net Metering for Renewable Energy) Regulations, 2014 and the Guidelines issues under the same.

Analysis

The Committee is of the view that settlement shall be done as per the methodology prescribed in guidelines issued by DERC under DERC (Net Metering for Renewable Energy) Regulations, 2014 for settlement of ToD tariff energy.

(vii) Open access charges to be waived off for entire life of the plant commissioned during next 3 years.

Comments of DISCOMs

The matter was discussed and the DISCOMs submitted that open access charges should be waived off to promote and achieve National Solar Mission.

BRPL & BYPL

Waiver towards Open Access (OA) charges should be for a limited period of 5 Years, and not for the entire life of the Plant. The same also would be in line with the business planning of DISCOM. This would be good enough for recovering the additional cost towards erecting transmission line.

TPDDL

In the case of Industrial and Commercial consumer the payback period for installation of solar power plant is about 3-5 years. For the residential consumer the same is about 6-7 years. Therefore, any waiver of open access charges should be limited 3-7 years depending on the category of the consumer installing solar roof top plant.

Analysis

At present, open access is allowed for the consumers having contract demand of 1MW and above. The Committee noted that the DERC Order dated 1.6.2017 in the matter of determination of Open Access Charges and related matters, the charges are exempted as under:-

“6. Quantum of Renewable Purchase Obligation (RPO):

(1) Open Access consumer shall fulfill its RPO as per Delhi Electricity Regulatory Commission (Renewable Purchase Obligation and Renewable Energy Certificate Framework Implementation) Regulations, 2012 as amended from time to time.

(2) Wheeling, Transmission and Additional surcharge shall not be applicable on Open Access Consumers availing energy from all renewable energy sources within or outside Delhi. Open Access consumer receiving electricity from renewable energy sources shall be exempted from the cross subsidy surcharge to the extent of RPO:

Provided that the generators using renewable energy sources shall certify that no REC/RPO claim for this power has been made.

(3) No banking facility shall be provided for supply of electricity from renewable energy sources through Open Access.”

DERC (Net Metering for Renewable Energy) Regulations, 2014 states that the capacity of renewable energy system to be installed at the premises of the consumer shall not be less than one kilo watt peak. Further, DERC (Net Metering for Renewable Energy) Regulations, 2014 states that renewable energy system under net metering arrangement shall be exempted from wheeling, banking, cross subsidy and other charges for a period of five years, unless extended further.

As these charges are already exempted to the extent as per the provisions of DERC Open Access Order and DERC (Net Metering for Renewable Energy) Regulations, 2014. Therefore, the Committee is of the view that the provisions already exists in the existing rules and Regulations. There may not be any need to specify them separately.

C. Legal & other Issues.

(i) Same Discom/ Inter Discom.

Comments of DISCOMs

BYPL

Proposal for GNM and VNM could be executed for same Discom at present. Inter Discom proposal can be evaluated and undertaken post stabilization of processes at same Discom level

BRPL

Proposal for Same Discom could be executed at present. Inter Discom proposal shall be evaluated and can be undertaken post stabilization of processes at same Discom level.

TPDDL

GNM and VNM should be initially for consumers in the same DISCOM and should be of same tariff category.

Analysis:-

The Committee noted from Delhi Solar Policy, 2016 that in case of group net metering, adjustment of surplus energy is allowed in other connection(s) of the consumer with same DISCOM. The Committee is also of the view that at present, adjustment of surplus energy shall be allowed only for the connections within the same distribution licensee under group net metering.

However, under virtual Net metering, there is no restriction on intra DISCOM or inter DISCOM transfer of surplus energy as per Delhi Solar policy, 2016. Therefore, committee is of the view that in case of inter DISCOM transfer of power due to physical location of either of Generation plant or Consumer in different DISCOM area, normative distribution losses on account of transfer of power shall be borne by the consumer. Distribution licensees shall account for the unit of energy transferred after taking into consideration the normative distribution losses applicable in the area of distribution licensee where generation plant is located. Any surplus unit transferred from one DISCOM to other DISCOM on account of VNM consumers at the yearend should be settled as per provisions of DERC (Net Metering for Renewable Energy) Regulations 2014 and guidelines.

7 Recommendation of the Committee:

After discussion and analysis of the issues, the Committee recommends the following:-

(A) Group Net Metering Framework:-

(1) Distribution Licensees shall facilitate Group Net metering, whereby surplus energy exported to the grid from a solar plant at the location of the solar plant can be adjusted

in any other (one or more) electricity service connection(s) of the consumer within the same distribution licensee area:

Provided that the different connections in the name of individuals of different departments /organizations under the state/ central government within the same distribution licensee area shall be treated as single consumer for the purpose of eligibility under Group Net Metering

{Explanation: Say for schools owned by Municipal Corporation of Delhi (MCD), the connection is generally taken in the name of Principal. Therefore, in such cases, these connections taken for the schools owned by a single Government Organization i.e. MCD shall be covered under group net metering.}

- (2) In case if the capacity of solar plant is more than the sanctioned load of the premises of the consumer on which solar plant is installed, the consumer shall pay the differential amount of SLD charges as per Regulation 5(4) of DERC (Net Metering for Renewable Energy) Regulations, 2014.
- (3) Smart meters shall be installed at Generation point(s) and the cost shall be borne by the distribution licensee.
- (4) The priority of the adjustment of energy generated from solar plant shall be as under:-
 - (i) to the consumption recorded for the premises on which solar plant is located;
 - (ii) thereafter, the consumer shall give the priority list for adjustment of the balance surplus energy to other electricity connection(s), once in every financial year with an advance notice of two months:

Provided that if no choice is given by the consumer, the priority as existing on last day of previous financial year shall continue.
- (5) The distribution licensee for the purpose of settlement under Net Metering Regulations for any ToD connection(s) under Group Net Metering framework shall replace the existing meter with ToD compliant meter:

Provided that the tariff for different category of connections shall be as per applicable tariff schedule of the Commission issued from time to time.
- (6) The Distribution Licensee shall show, separately, the energy units exported, the energy units imported, the net energy units billed and/or the energy units carried forward, if any, to the consumer in their bill for the respective billing period.

- (7) During any billing cycle, the distribution licensee shall raise invoice for the net electricity consumption, as per applicable tariff, only after adjusting / netting off of the unadjusted energy credits of the previous billing cycle(s) of the consumers under group Net Metering.
- (8) The surplus energy measured in kilo-watt hour shall be utilized to offset the consumption measured in kilo-watt hour only unless otherwise allowed by the Commission from time to time. In case the consumer is billed on kVAh, during injection of surplus energy to the grid, the Power Factor shall be assumed equal to unity.
- (9) At the end of the each Financial Year, any net energy credits, which remain unadjusted, shall be paid for by the distribution licensee to the consumer as per the rates notified by the Commission under DERC (Net Metering for Renewable Energy) Regulations, 2014.

(B) Virtual Net Metering Framework:-

- (1) Consumer(s) can collectively own a solar system under the arrangement of Virtual Net metering.
- (2) In case if the capacity of solar plant is more than the sanctioned load of the premises on which solar plant is installed, the consumer(s) shall pay the differential amount of SLD charges as per Regulation 5(4) of DERC (Net Metering for Renewable Energy) Regulations, 2014.
- (3) Smart meters shall be installed at Generation point(s) and the cost shall be borne by the distribution licensee.
- (4) The adjustment of energy generated from solar plant shall be credited in the electricity bill of each participating consumer on the basis of share of beneficial ownership in the solar plant at the time of application for connectivity under Virtual Net Metering framework.

Provided that the consumer(s) shall have the option to change the share of credit of electricity from solar plant once in a financial year with an advance notice of two months.

(Explanation”:- ‘Beneficial Ownership’ for the purpose of computation of share of credit of electricity from solar plant shall be declared by such consumers}

- (5) The energy exported to the grid from a solar plant can be adjusted in (one or more) electricity service connection(s) of each participating consumer within the same distribution licensee area:
- (6) In case if the share of electricity generated of a participant consumer is adjusted in more than one electricity connection and any of the service connection of that consumer is under ToD tariff regime, the distribution licensee shall convert all the electricity service connections of that participating consumer into ToD compliant meters:

Provided that the tariff for different category of connections shall be as per applicable tariff schedule of the Commission issued from time to time.

- (7) The Distribution Licensee shall show, separately, the energy units exported, the energy units imported, the net energy units billed and/or the energy units carried forward, if any, to the consumer in their bill for the respective billing period of the consumers under Virtual Net Metering.
- (8) If during any billing period, the export of units exceeds the import of units consumed, such surplus units injected by the consumer shall be carried forward to the next billing period as energy credit and shown as energy exported by the consumer for adjustment against the energy consumed in subsequent billing periods within the settlement period.
- (9) During any billing cycle, the distribution licensee shall raise invoice for the net electricity consumption, as per applicable tariff, only after adjusting / netting off of the unadjusted energy credits of the previous billing cycle(s).
- (10) The surplus energy measured in kilo-watt hour shall be utilized to offset the consumption measured in kilo-watt hour only unless otherwise allowed by the Commission from time to time. In case the consumer is billed on kVAh, during injection of surplus energy to the grid, the Power Factor shall be assumed equal to unity.
- (11) At the end of the each Financial Year, any net energy credits, which remain unadjusted, shall be paid for by the distribution licensee to the consumer as per the rates notified by the Commission under DERC (Net Metering for Renewable Energy) Regulations, 2014.
- (12) Under Virtual Net Metering, there is no restriction on intra DISCOM or inter DISCOM transfer of surplus energy as per Delhi Solar policy, 2016. Therefore, in case of inter DISCOM transfer of power due to physical location of either of Generation plant or Consumer in different DISCOM area, normative distribution losses on account of transfer of power shall be borne by the consumer. Distribution licensees shall account

for the unit of energy transferred after taking into consideration the normative distribution losses applicable in the area of distribution licensee where generation plant is located. Any surplus unit transferred from one DISCOM to other DISCOM on account of VNM consumers at the yearend should be settled as per provisions of DERC (Net Metering for Renewable Energy) Regulations 2014 and guidelines.

- (C) In the initial phase, Group Net Metering Framework and Virtual Net Metering Framework may be made applicable for government entities. Once the smooth implementation of Group Net Metering Framework and Virtual Net Metering Framework is in place, the same may be extended for other consumers of Delhi.
- (D) Annual Settlement Rate may be governed as per the provisions of Net Metering Guidelines issued under Delhi Electricity Regulatory Commission (Net Metering for Renewable Energy) Regulations, 2014, which may be revised by the Commission from time to time.
- (E) The provisions for providing land space shall be governed as per provisions Delhi Electricity Regulatory Commission (Supply Code and Performance Standards) Regulations, 2017 as amended & Orders issued under these Regulations from time to time.
- (F) The provisions for framework for forecasting, scheduling & handling deviations may be as per applicable Regulations or directions of the Commission from time to time.
- (G) Suitable amendments may be incorporated in DERC (Net metering for Renewable Energy) Regulations, 2014 and/or its guidelines for its implementation based on the comments from the stakeholders.

-Sd/-
(Abhishek Moza)
Deputy Secretary, DERC
Member Secretary

-Sd/-
(AK. Jha)
Executive Officer
EE&REMC
Member

-Sd/-
(Prashant Kumar)
JD(T-F), DERC
Member

-Sd/-
(Sanjay Kumar Sharma)
JD(PSE), DERC
Member