

ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
4th Floor, Singareni Bhavan, Red Hills, Hyderabad 500004

THURSDAY, THE TWENTY SECOND DAY OF FEBRUARY
TWO THOUSAND AND TWENTY-FOUR
(22.02.2024)

Present

Justice C.V. Nagarjuna Reddy, Chairman

Sri Thakur Rama Singh, Member

Sri P.V.R. Reddy, Member

In the matter of

**APERC (THE GRID INTERACTIVE SOLAR ROOFTOP PHOTOVOLTAIC SYSTEM
UNDER GROSS/NET METERING) REGULATION, 2023.**

(Regulation 4 of 2023)

The Commission issued a draft comprehensive Grid Interactive Solar Rooftop Photovoltaic Systems under gross/net metering regulation to address the various issues raised by the consumers & some of the concerns raised by the DISCOMS, align to the extent possible with the various provisions of the Government of India Rules, and to promote the distributed Renewable Energy generation in the state of Andhra Pradesh in the place of guidelines dated 18.02.2016 of APEPDCL approved by the Commission.

Accordingly, a Public Notice along with a copy of the draft amendment Regulation was hosted on the Commission's website on 06.06.2023 inviting objections/views/suggestions from all the stakeholders and interested parties. In response to the public notice, the Commission received several objections/views/suggestions from stakeholders. The Commission examined all the objections/views/suggestions so received while finalising the Regulation. The objections/views/suggestions received clause-wise, and the Commission's analysis and decisions on the same are discussed as detailed hereunder.

1. DEFINITIONS AND INTERPRETATIONS:

(i) Sub-Clause 2.1.(ix)

Draft

“2.1.

(ix) “Gross Meter” means a Bi/Unidirectional meter used for accounting and billing of electricity supplied to/from the Distribution licensee by a prosumer(s).”

Objections/Views/Suggestions

APEPDCL & APSPDCL have suggested that a Gross Meter is a unidirectional energy meter installed at an interconnection point at which electricity is generated by a Solar Photovoltaic (SPV) system and it is supposed to measure electricity supplied to the DISCOM.

Commission’s analysis and decision:

It is intended to record the energy in two directions for any solar rooftop power plant and hence the definition is retained.

(ii) Sub-Clause 2.1.(x)

Draft

“2.1.

(x) “Gross-metering” means a mechanism whereby the total energy exported from the Grid-Interactive Solar Rooftop Photovoltaic system and the total energy consumed by the prosumer from the DISCOM is measured separately through appropriate metering arrangements and for billing purposes, the total energy consumed by the prosumer is accounted for at the applicable retail tariff as per Tariff Order and total energy exported to the DISCOM is accounted for at feed-in tariff as decided by the Commission.”

Objections/Views/Suggestions

FAPCCI contended that Gross Metering as defined in the draft regulation is an injustice to Prosumers where all generated units are to be paid at a fraction of APPPC, while all consumption is charged at the full Tariff rate. This is highly discouraging and not in the interest of the Consumer or the Climate.

Further, FAPCCI has requested that 15-minute time block metering may be adopted for reading the energy generated/ consumed/ exported and that it would be desirable to set off generated units against Consumption in

real-time on a 15-minute block period basis and pay for the Units exported to Grid as decided by the Commission. Accordingly, the Commission may modify the Gross Metering definition suitably.

Commission’s analysis and decision:

As a principle, Gross metering is intended to promote distributed solar generation in open spaces of consumer premises keeping in view the capacity cap under net metering and without any financial implications on DISCOMS. As regards the Feed-in Tariff, the Commission dealt with this issue while addressing similar suggestions in subsequent paragraphs. As regards the request to set off generated units against Consumption in real-time on a 15-minute block period basis, the payment for energy exported from the SRTPVSs in Gross Metering will be computed at Feed-in Tariff and the amount so arrived will be adjusted against the total billing demand for consumption of energy by the prosumers which is computed at Retail supply tariff. Hence, setting-off energy does not arise under gross metering.

(iii) Sub-Clause 2.1. (xi)

Draft

“2.1.....

(xi) “Group Net Metering” means a mechanism whereby total energy exported from the Grid-Interactive Solar Rooftop Photovoltaic system of a group of prosumers/society is exported to the grid through a gross meter. The exported such energy is adjusted in the electricity service connection(s) of the same Group (society) prosumers in proportion to the share in their Grid-Interactive Solar Rooftop Photovoltaic system in units (kWh/kVAh) to arrive at the net imported or exported energy by an individual prosumer in the Group/Society from/to the Distribution licensee during the applicable billing period/cycle located within the same city/town of distribution licensee’s area of supply. The net energy imported by the prosumers is billed by the distribution licensee on the basis of the applicable retail tariff as per Tariff Order. The net energy exported by the prosumers is paid by the Distribution licensee at the Feed-In-Tariff as decided by the Commission.”

Objections/Views/Suggestions

SWAPNAM has stated that to encourage group net metering systems, such groups may be allowed to install small solar systems in Areas other than

their premises since most of the apartments/gated communities in the towns do not find sufficient space. The Commission may allow connecting such small solar systems at 11 kV level (11 kV bus of the sub-stations) where agriculture consumption is high. In such a case, a portion of energy may be allocated to the DISCOM to compensate for 11kV losses. However, the location of the plant to be specified to fall in the same distribution licensee area or District at Least.

M/s Sun Rays Green Power Solutions and Others have requested to amend the last line of the draft as “the Net Energy Exported by the prosumers is paid by the Distribution Licensee at the Retail Tariff as decided by the Commission”.

M/s Edgegrid has stated that Group Net-Metering means multiple locations of the same consumer, and Virtual Net-metering means multiple locations of multiple consumers i.e. participating consumers (similar to the group of persons introduced by APERC). The states like Delhi, Goa, Jammu & Kashmir, Chandigarh, Orissa, etc have adopted the same definitions. It has requested to adopt the same definitions to have consistency of regulatory frameworks between the states. Further, it has requested that

- a. Group Net Metering be replaced by Virtual Net Metering to be consistent with MNRE guidelines.
- b. The gross meter used in the definition of Group Net Metering. The gross meter has to be replaced with a Net meter to rectify the apparent error.
- c. Providing a modification option for change in share of installed capacity only once in a financial year would be a constraint. The consumers' consumption profiles would vary for various reasons like incentives, payment security, force majeure, holiday season, vacation, building renovation etc. Hence, a change in installed capacity share at least 3 times a year in line with MNRE guidelines may be permitted.

M/s Eshan Energy Private Limited has requested to align the Group Net Metering and Virtual Net Metering in line with the SoP for implementation of Virtual Net Metering and Group Net Metering issued by MNRE, Govt of India.

APEPDCL & APSPDCL have submitted that in the Group Net Metering, energy allocated by the Generator is the energy produced by the prosumer,

this phrase may please be reworded as “The net energy allocated by the Group Net Metering generator shall be netted off against time block-wise consumption of the prosumer and the balance surplus energy shall be treated as energy export to the Grid for net metering.”

Commission’s analysis and decision:

As regards connecting group SRTPVs at the 11 kV level (11 kV bus of the sub-stations) within the area of distribution licensee in open spaces, as the suggestion is in line with MNRE guidelines, the same is accepted. However, the minimum capacity of SRTPV for 11 kV as specified by the Commission from time to time shall be met.

The request to provide payment for the Net Energy Exported by the prosumers at the Retail Tariff is not acceptable as net metering is intended primarily for the promotion of captive use and the tariff for net exported energy under net metering is only to compensate the prosumers suitably for the unutilised power generated by them. Further, payment at Retail Tariff for such excess energy will impose an undue burden on the DISCOMS.

There is no apparent error in using the Gross meter in the definition of group metering since the SRTPVS of group consumers is independently connected to the Grid and hence, the fixing of the gross meter is justified, and the gross meter may be bi-directional as per the definition.

The suggestion to align “Group Net Metering”, and “Net Metering” titles with GOI Rules/MNRE guidelines is accepted.

As regards the request to modify the share declared in the agreement 3 times a year, the Commission is of the view that such a proposal will increase the operational difficulties for DISCOMS. Hence, the Commission is not inclined to accept the suggestion.

With regard to the request of APEPDCL & APSPDCL that the net energy exported by the Group Net Metering generator may be netted off against time block-wise consumption of the prosumer under net metering, the same is not accepted. The energy injected under group net metering shall be adjusted in a similar manner that was adjusted in individual net metering. However, wherever, the consumer's billing is done on a kVAh basis and ToD is applicable, in such cases, the energy exported shall be adjusted only during the off-peak hours as stipulated in RST orders from time to time.

In view of the above, the draft is modified as below.

2.1 (xi) “Virtual Net Metering” means a mechanism whereby total energy exported from the Grid-Interactive Solar Rooftop Photovoltaic system of a group of prosumers/society is exported to the grid through a gross meter. The exported such energy is adjusted in the electricity service connection(s) of the same Group (society) prosumers in proportion to the share in their Grid-Interactive Solar Rooftop Photovoltaic system in units (kWh/kVAh) to arrive at the net imported or exported energy by an individual prosumer in the Group/Society from/to the Distribution licensee during the applicable billing period/cycle located within the same Electricity Revenue Office (ERO) of distribution licensee’s area of supply. The net energy imported by the prosumers is billed by the distribution licensee on the basis of the applicable retail tariff as per Tariff Order. The net energy exported by the prosumers is paid by the Distribution licensee at the Feed-In-Tariff as fixed by the Commission.”

Provided that in case the prosumer(s) is/are in the ambit of the Time of Day (ToD) tariff, the share of exported energy of such prosumer(s) under virtual net metering shall be netted off against his/their electricity consumption during off-peak hours.

Provided also that the applicable T&D losses and charges as per MYT orders of the Commission applicable for relevant periods from injection point to drawal point shall be deducted while adjusting the generation against the consumption

(iv) Sub-Clause 2.1.(xii)

Draft

“2.1.

(xii) “Net Metering for multiple services of individual consumer” means a mechanism whereby energy exported from the Grid-Interactive Solar Rooftop Photovoltaic system of an individual Prosumer at one or more points is adjusted in consumption by multiple electricity service connection(s) of her/him in units (kWh/kVAh) to arrive at the net imported or exported energy from/to the Distribution licensee during the applicable billing period/cycle located within the same city/town of distribution licensee’s area of supply. The net energy imported by the prosumer is billed by the distribution licensee on the basis of the applicable retail tariff as per Tariff Order. The net energy exported by the prosumers is paid by the Distribution licensee at the

Feed-In-Tariff as decided by the Commission.

Objections/Views/Suggestions

M/s Sun Rays Green Power Solutions and Others have requested to amend the last line of the draft as “the Net Energy Exported by the prosumers is paid by the Distribution Licensee at the Retail Tariff as decided by the Commission”.

M/s Edgegrid has requested to change the heading Net Metering for multiple services of individual consumers as Group Net metering in line with MNRE guidelines.

SWAPNAM has suggested elaborating the words ‘same city/town’ used in the definition and the ERO may be taken as the reference area of supply to avoid confusion for the consumers and also to minimise discretionary powers of the officers. It submitted that all service connections of an individual consumer falling under an ERO may be allowed to aggregate for calculation of net energy imported/exported.

M/s Edgegrid has suggested that GNM could be ideally applicable within a control area. VNM should preferably be linked to a particular substation and feeder area which could be a control area so that there is a more methodological approach for solar penetration. The generation can be better mapped, planned and settled within a control area i.e. Feeder/substation/Revenue office level. In the State of AP, this is confined to the Electricity Revenue Office (APEREC Order dated 20th May 2019) level.

Commission’s analysis and decision:

The suggestion to change the title of the clause as Group net metering is accepted by the Commission as the same is in line with GoI, Rules. The suggestion to confine the Electricity Revenue Office (ERO) as the jurisdiction for GNM for multiple services of individual consumers/VNM for better coordination, planning and Energy accounting & settlement is also accepted. The other suggestions have already been discussed earlier. After taking into suggestions, the draft is modified as below.

2.1 (xii) “Group Net Metering” means a mechanism whereby energy exported from the Grid-Interactive Solar Rooftop Photovoltaic system of an individual Prosumer at one or more points is adjusted in consumption by multiple electricity service connection(s) of her/him in units (kWh/kVAh) to arrive at the net imported or exported energy from/to the Distribution licensee during

the applicable billing period/cycle located within the same Electricity Revenue Office (ERO) of distribution licensee's area of supply. The net energy imported by the prosumer is billed by the distribution licensee on the basis of the applicable retail tariff as per Tariff Order. The net energy exported by the prosumer is paid by the Distribution licensee at the Feed-In-Tariff as fixed by the Commission.

Provided that in case the prosumer is in the ambit of the Time of Day (ToD) tariff, the exported energy of such prosumer under Group net metering shall be netted off against electricity consumption of his multiple services during off-peak hours.

Provided also that the applicable T&D losses and charges as per MYT orders of the Commission applicable for relevant periods from injection point to drawal point shall be deducted while adjusting the generation against the consumption

(v) Sub-Clause 2.1. (xiii)

Draft

"2.1.....

(xiii) "Individual net-metering" means a mechanism whereby energy exported to the Grid from the Grid-Interactive Solar Rooftop Photovoltaic system of an individual Prosumer is adjusted from energy imported from the DISCOM in units (kWh/kVAh) to arrive at the net imported or exported energy from/to the Distribution licensee during the applicable billing period/cycle using a Net Meter at the point of supply. The net energy imported by the prosumer is billed by the distribution licensee on the basis of the applicable retail tariff as per Tariff Order. The net energy exported by the prosumers is paid by the Distribution licensee at the Feed-In-Tariff as decided by the Commission.;

Objections/Views/Suggestions

Similar objections/suggestions as received in the case of virtual net metering, and group metering have been raised/made.

Commission's analysis and decision:

After taking objections & suggestions into consideration, the definition is modified as below.

2.1 (xiii) "Individual net-metering" means a mechanism whereby energy exported to the Grid from the Grid-Interactive Solar Rooftop Photovoltaic

system of an individual Prosumer is adjusted from energy imported from the DISCOM in units (kWh/kVAh) to arrive at the net imported or exported energy from/to the Distribution licensee during the applicable billing period/cycle using a Net Meter at the point of supply. The net energy imported by the prosumer is billed by the distribution licensee on the basis of the applicable retail tariff as per Tariff Order. The net energy exported by the prosumers is paid by the Distribution licensee at the Feed-In-Tariff as fixed by the Commission.;

Provided that in case the prosumer is in the ambit of the Time of Day (ToD) tariff, the exported energy of such prosumer under individual net metering shall be netted off against his/her electricity consumption during only off-peak hours.

(vi) Sub-Clause 2.1. (xix)

Draft

(xix) “Solar Rooftop Photovoltaic Power Plant” or “Solar Rooftop Photovoltaic System” “(SRTPVS)” means the Grid Interactive Solar Photovoltaic Power Plant that uses the sunlight for direct conversion into electricity through photovoltaic technology, which is owned and operated by a prosumer(s) with his/her/their own investment/third-party investment installed on his/her/their rooftops or walls or open land/ space within their premises.

Objections/Views/Suggestions

M/s BHEL has requested clarification on whether the Draft APERC SRTPVS Regulations are also applicable for ground-installed PV Plants in addition to Rooftop Plants.

Commission’s analysis and decision:

It has already been made clear in the draft that SRTPVS can be installed on rooftops or walls or open land/space within the premises of the consumers. Therefore, the ground-mounted SRTPVS were to be part of SRTPVS under net/gross metering as per the Regulation.

However, to promote distributed solar generation, the Commission has decided to modify the definition of SRTPVS as below:

(xix) “Solar Rooftop Photovoltaic Power Plant” or “Solar Rooftop Photovoltaic System” “(SRTPVS)” means the Grid Interactive Solar Photovoltaic Power Plant that uses the sunlight for direct conversion into electricity through

photovoltaic technology, which is owned and operated by a prosumer(s) with his/her/their own investment/third-party investment installed on his/her/their rooftops or walls or open land/space within their premises or any open land outside the premises of the consumer(s) in case of group and virtual net metering.

(vii) Sub-Clause 2.1. (xxi)

Draft

“2.1....

(xxi) “Third-party investment” means an investment by a third party (RESCO/ESCO/Any Developer) for exporting the energy from the Grid Interactive Solar Rooftop Photovoltaic system under the gross/net metering on a rooftop/wall/open space within the consumer’s premises through a commercial agreement between such consumer(s) and third party.”

Objections/Views/Suggestions

APCPDCL has requested to remove the definition of Third Party Investment in clause 2.1(xxii) quoting Section 12 of the Electricity Act 2003.

M/s Edgegrid has submitted that Third Party Investors are similar to aggregators and requested that naming them as TPI or Aggregators could bring consistency with the MNRE regulation and Smart Grid regulations.

M/s Eshhan Energy Private Limited has requested to add a “Third-party owned Rooftop PV net metering model” under the Third-party investment definition. In the third-party-owned rooftop PV net metering model, the developers or intermediaries lease out solar PV systems to interested rooftop owners. This can be a popular model for residential homeowners, where turnkey installers lease rooftop systems to individual owners who, in turn, pay them a monthly lease rental. The owner of the house provides the rooftop and engages a turnkey installer to design and install the system. Alternatively, the installers can also offer an integrated service of leasing, commissioning and maintaining the systems to owners and guaranteeing standards of performance. The electricity generated from such a system is used to meet the rooftop owner’s internal electricity needs while the excess generation is fed into the grid on a net metering basis.

Commission’s analysis and decision:

As regards the request of APCPDCL to remove “Third Party Investment” in the definition quoting Section 12 of the Electricity Act 2003, Section 12 of

the Electricity Act, is reproduced below.

“Section 12. (Authorised persons to transmit, supply, etc., electricity):

No person shall

(a) transmit electricity, or

(b) distribute electricity; or

(c) undertake trading in electricity,

unless he is authorised to do so by a licence issued under section 14 or is exempt under section 13.”

Further, Sections 2(17) and 2(71) of the Electricity Act, 2003 are reproduced below.

“2(17) distribution licensee” means a licensee authorised to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply;

2(71) “trading” means purchase of electricity for resale thereof and the expression “trade” shall be construed accordingly;”

Third-party investment or investor is one who is carrying on either trading or the distribution licensee’s activity as can be seen from the above provisions of the Electricity Act, 2003. The consumers intending to establish SRTPVS with the third party (RESCO/ESCO/Any developer) investment are utilising the energy primarily for themselves under permissible financing models approved by the Commission. The MNRE (GoI) is also promoting this concept for the development of distributed solar generation. Therefore, the captive use of distributed solar generation installing SRTPVS by consumers with any kind of third-party investment does not fall under the distribution or trading of electricity under Section 12 of the Electricity Act 2003. Hence, there is no merit in the objection of APCPDCL.

As regards the suggestion of M/s Edgegrid to term Third-Party Investors as “TPI or Aggregators” to bring in consistency with the MNRE regulation and Smart Grid regulations, the Commission is of the view that there is no need to add an aggregator in the definition as the same covers all kinds of financing models including the aggregators.

With respect to the suggestion of M/s Eshan to add the Third-party Rooftop net metering model to the definition, as for the consumer(s) using the energy produced from SRTPVS under any financing model, this Regulation

does not impose any limitation on the models explained in suggestion.

However, keeping in view the decisions of the Commission Supra/Infra, the draft is modified as below.

“2.1....

(xxi) “Third-party investment” means an investment by any third party developer for exporting the energy from the Grid Interactive Solar Rooftop Photovoltaic system under the gross/net metering/ net billing or net feed-in on a rooftop/wall/open space within the consumer’s premises or any open space outside the consumer(s) premises through a commercial agreement between such consumer(s) and third party.”

(viii) Sub-Clause 2.1. (xxii)

Draft

“2.1.....

(xxii) “Feed in Tariff ” means the tariff decided by the Commission at which the exported energy under Net/Gross metering shall be paid by the distribution licensee to the prosumers;”

Objections/Views/Suggestions

M/s Sun Rays Green Power Solutions and others have requested to amend the definition as “Feed in Tariff means the tariff decided by the Commission at which the exported energy under Gross Metering Shall be paid by the Distribution Licensee to the prosumers”.

Commission’s analysis and decision

There is no rationale in the suggestion. Hence rejected.

2. GENERAL:

(i) Suggestion to add New Clause in sub-Clause 3

Objections/Views/Suggestions

M/s Eshhan Energy Private Limited has requested to add the following new clause “SRTPVS a grid-connected solar rooftop/ground-mounted photovoltaic system established under CAPEX, OPEX, RESCO, ESCO, PPA, PSA model”.

Commission’s analysis and decision

As regards the suggestion, the CAPEX, OPEX, and RESCO models may be utilised by the prosumers at their discretion under third-party investment

as per this Regulation. Hence there is no need to add a new clause.

(ii) Sub-Clause 3.2

Draft

“3.2 The distribution licensee shall offer the provision of net/gross metering arrangement to the consumer, who intends to install the grid-interactive SRTPVS, in its area of supply on a non-discriminatory and first come first serve basis.”

Objections/Views/Suggestions

M/s Eshhan Energy Private Limited has requested to delete the words 'First Come First Serve basis' in clause 3.2 stating the reason that the distribution licensee shall offer provision of connectivity to the applicant of SRTPVS in its area of supply.

M/S Argo Solar Private Limited has stated that only Gross & Net Metering are offered in the proposed regulations, and net-billing or net feed-in mechanism was ignored and that the draft Regulation is not fully compliant with the Electricity (Rights of Consumers) Rules 2020, as amended via gazette notification dated 28 June 2021, under sub-rule (4) of Rule (11). It suggested providing for the net-billing option to the consumers who would like to set up plants of more than 500 kW, subject to a maximum of their connected load and allow them to export power to DISCOMs under a net-billing model, where the exported energy is to be paid based on generic tariff decided by the Commission. This is more crucial for increased adoption of Renewable Energy because the Gross metering model has been a total failure, even at the present tariff of 100% of APPC cost. With the proposed 65 to 75% APPC tariff offered in the draft regulations, it is obvious that the gross metering model will be dead on arrival. It has requested to offer the third alternative in the form of net-billing or net feed-in, which has already been there in the Electricity (Rights of Consumers) Rules 2020.

M/s Fourth Partner Energy has stated that Net Billing provisions mandated in the Electricity (Rights of Consumers) Rules, 2020, have been completely ignored. The same needs to be provided as a third option along with Net Metering and Gross metering. The gross metering scheme is a complete failure due to its un-viability even at the current APPC rate of Rs.4.60/kWh. So, expecting consumers to set up projects under gross metering at 65 to 75% of the APPC rate is a far-fetched imagination.

Commission's analysis and decision:

As regards the suggestion on a "First Come First Serve basis" in clause 3.2 of the draft regulation, it was incorporated keeping in view the technical feasibility issue. However, the DISCOMS shall be non-discriminatory while dealing with applications for the establishment of SRTPVS under this Regulation.

As regards the suggestion on Net-Billing or Net Feed-in mechanism, the Commission accepts the suggestion to align the Regulation with the Electricity [Rights of Consumers] Rules.

Regarding the request for the determination of a generic tariff for SRTPVS plants set up through the net-billing option, the feed-in tariffs in the draft Regulation are fixed based on the market prices of solar generation at different voltage levels, and its efficacy and success will be known only after a certain period. The Commission would conduct the Regulatory Impact Assessment(RIA) one year from the date of publication of this Regulation to take stock of the ground situation on different frameworks mentioned in the Regulation based on the capacity additions realised.

After considering the suggestions, the Net-Billing or Net Feed-in mechanism is included in the final Regulation as under.

2.1 (xxiii) "Net-billing or Net feed-in" means a single bidirectional energy meter used for net-billing or net feed-in at the point of supply wherein the energy imported from the Grid and energy exported from Grid-Interactive Rooftop Solar photovoltaic system of a Prosumer are valued at two different tariffs, where-

- (i) the monetary value of the imported energy is based on the applicable retail tariff;*
- (ii) the monetary value of the exported solar energy is based on a feed-in tariff determined by the Commission;*
- (iii) the monetary value of the exported energy is deducted from the monetary value of the imported energy to arrive at the net amount to be billed (i.e., credited);*

Given the addition of the Net-Billing or Net Feed-in mechanism, clauses 2.1 and 3.2 are modified as under.

"2.1.....

(xxii) "Feed in Tariff " means the tariff fixed by the Commission at which the exported energy under Net/Gross metering or Net billing/Net feed-in

arrangement shall be paid by the distribution licensee to the prosumers;”

“3.2 The distribution licensee shall offer the provision of net metering / gross metering / Net billing or Net feed-in arrangement to the consumer, who intends to install the grid-interactive SRTPVS, in its area of supply on a non-discriminatory and first come first serve basis.”

(iii) Sub-Clause 3.4

Draft

“3.4 The consumer may install an SRTPVS with or without Battery storage. Provided that the battery charging shall be done from only an SRTPVS”

Objections/Views/Suggestions

M/s Edgegrid has requested that there should be a specific provision regarding mutual agreement between utility and consumers for rolling out use cases using battery systems. Considering the multiple use cases available w.r.t to battery systems, Utility can take benefit of the same.

APEPDCL & APSPDCL submitted that when the Solar Rooftop plant is installed in conjunction with BESS, the drawing of the system shall need to be certified by the concerned DISCOM Engineer and enough care is to be taken such that, under no circumstances DISCOM Grid power used to charge the Battery.

Commission’s analysis and decision:

With regard to the suggestion for mutual agreement between utility and consumers for rolling out use cases on battery storage, the Commission will look into the same as and when the proposals on the same are received from DISCOMs and decide based on merits and benefits.

As regards the submission of DISCOMS, if the battery system is charged with DISCOMS’ power supply, the same will be billed at Retail Supply Tariffs and there by there would be no financial impact on DISCOMS. With the addition of the new clause on net billing, the draft is modified as below.

“3.4 The consumer may install an SRTPVS with or without Battery storage. Provided that the battery charging shall be either from an SRTPVS or from DISCOMS’s supply.” In the later case, the consumer shall pay charges for the power consumed at the DISCOM’s tariff.

(iv) Sub-Clause 3.5**Draft**

“3.5 The consumers of the EHT network shall approach the Transco through the DISCOM for connecting the SRTPVSs under the Gross Metering.”

Objections/Views/Suggestions

M/s Amplus Energy Solutions Private Limited has stated that restricting the EHT consumers only to opt for Gross Metering will discourage the prosumers from installing decentralised solar power. Decentralised solar power is installed to provide electricity at competitive rates to domestic category consumers, State Govt. buildings, local bodies and public undertakings of the State Govt. A consumer opts for net metering to reduce its consumption from the DISCOMs. Further, restricting EHT consumers only to opt for Gross Metering will impact the RoI of SRTPVS because the electricity sold from a Gross Metering project will get settled at Feed-in-Tariff which is 65% of the Average Pooled Power Purchase Cost as proposed in clause 8.5 in the Draft Regulations. It has requested to allow HT/EHT consumers to opt for both Net Metering and Gross Metering.

APEPDCL & APSPDCL have submitted that since all the consumers are in the DISCOM fold, the clause may be reworded as “In respect of EHT consumers intending to install SRTPVS, upon proper application, the territorial DISCOM shall take up the matter with STU and be responsible for effective coordination”.

Commission’s analysis and decision:

There is no restriction on consumers at any voltage level to install SRTPVS under net/gross metering as per the minimum and maximum capacities specified in the Regulation. Hence, there is no merit in the objection of M/s. Amplus Energy Solutions Private Limited. The DISCOMS’ submissions are already taken care of in the draft.

(v) Sub-Clause 3.7**Draft**

“3.7 The Distribution Licensee shall have the right to disconnect the SRTPVS from its network at any time in the event of any threat of accident or damage from such System to its distribution system so as to avoid any accident or damage to it or the prosumer violating any of the terms of this regulation or the terms of the agreement between it and the DISCOM.”

Provided that the Distribution Licensee, considering the criticality, may call upon the prosumer to rectify the defect within a reasonable time/to refrain from indulging in such violations in the future.”

Objections/Views/Suggestions

M/s Argo Solar Private Limited has stated that this clause is one-sided (right to disconnect anytime) and offers the DISCOMs the discretion to threaten the consumers regarding the disconnection of SRTPVs from its network without any prior notice. There should be some basic checks and balances in this regard, where the DISCOM should give notice to the consumer in advance in case there is any perceived threat to their distribution network and offer reasonable time to rectify the deficiencies. The deficiencies should be recorded in writing including the corrective action as required by the DISCOMs. Only in case of no corrective action from the prosumer, the DISCOM can proceed to disconnect the SRTPVs from the Grid.

Commission’s analysis and decision:

Since the provision is intended to protect the people working on the Grid during maintenance in the event of any backfeeding of SRT supply for any reason and to prevent disturbances to the grid due to violations committed by the prosumer, notice to the prosumer before disconnection will not serve the intended purpose. However, considering the concern of the objector, the proviso is modified. The finalised Clause reads as under:

“3.7 The Distribution Licensee shall have the right to disconnect the SRTPVS from its network at any time in the event of any threat of accident or disturbance from such System to its distribution system so as to avoid any accident or damage to it or the prosumer violating any of the terms of this regulation or the terms of the agreement between it and the DISCOM.

When SRTPV is disconnected, the Distribution Licensee shall within 24 hrs of such disconnection call upon the prosumer to rectify the defect and immediately on such rectification the licensee shall restore connection to the SRTPV concerned.”

(vi) Sub-Clause 3.8

Draft

“3.8 The Grid Interactive SRTPVS must have appropriate protection for

islanding the SRTPVS from the Distribution Licensee's network to prevent any power feeding into the grid in case of failure of supply or grid.”

Objections/Views/Suggestions

APEPDCL & APSPDCL requested to modify the Clause below

3.8 “The Grid Interactive SRTPVS must have appropriate protection for islanding the SRTPVS from the Distribution Licensee's network to prevent any power feeding into the grid in case of failure of incoming supply from the Grid. The protection scheme shall be designed such that under no circumstances, when there is no incoming supply owing to an outage in the network or load shedding by the DISCOM, there be any power injection from the Solar Rooftop plant or Battery connected thereto into the Grid, to prevent return supply/accidents”.

Commission’s analysis and decision:

Considering the suggestion of the DISCOMS, the draft is modified as below.

“3.8 The Grid Interactive SRTPVS must have appropriate protection for islanding the SRTPVS from the Distribution Licensee's network to prevent any power feeding into the grid in case of failure of incoming supply from the Grid. The protection scheme shall be installed such that when there is no incoming supply owing to an outage in the network or load shedding by the DISCOM, under no circumstances, there be any power injection from the Solar Rooftop Plant or Battery System connected thereto into the Grid, to prevent back feeding of supply and thus accidents.”

(vii) Sub-Clause 3.9

Draft

“3.9 In the case of the establishment of the SRTPVS by an individual consumer/Group of consumers/Society with the Third Party Investment through a commercial agreement, a copy of such commercial agreement shall be furnished to the DISCOM before synchronization of such SRTPVS to the Grid.”

Objections/Views/Suggestions

APCPDCL has requested to delete clause 3.9 quoting section 12 of the Electricity Act 2003.

M/s Amplus Energy Solutions Private Limited has stated that as per clause 13.1 in the draft Regulation, the consumers are required to enter

into a connection agreement with DISCOMs within four months from the date of receipt of the technical feasibility approval as per the Annexure-IX (A) wherein consumers are already indemnifying the DISCOMs towards damages and to pay charges levied by DISCOMs. Therefore, the requirement of submitting commercial agreements to DISCOMs before synchronisation of such SRTPVS requires more clarifications/ explanations.

M/s Edge Grid has stated that Energy generation activity is a delicensed business and hence should be market driven and the commercial agreements need not be shared with the Utility. Open Access Transactions are also on similar lines where the commercial arrangements in Open Access are not disclosed to the utility. The utility is not a party to the commercial agreement and should refrain from asking for a copy of the commercial agreement. It suggests deletion of the clause to the extent of asking for a copy of the commercial agreement.

Commission's analysis and decision:

As regards the request to delete the clause, the Commission already discussed the applicability of Section 12 of the Electricity Act, 2003 in clause 2.1(xxi)

As regards the requirement of submitting copies of commercial agreements of Third Party Investment to DISCOMs, the Commission is of the view that the DISCOM should have information about the establishment of the SRTPVS by consumers through Third Party Investors to ensure transparency and the type of arrangement between the consumers and third-party investors as per law. It will avoid the exploitation of consumers.

3. ELIGIBILITY

(i) Sub-Clauses 4.1 & 4.2

Draft

“4.1 All registered companies, Government entities, partnership companies/firms/individuals who are the consumers of AP Discom(s) are eligible for setting up of the Grid-Interactive SRTPVS with/without Battery Energy Storage System.

4.2 Group of persons/Societies who are the consumers are also eligible for setting up the Grid Interactive SRTPVS with/ without Battery Energy Storage Systems.”

Objections/Views/Suggestions

M/s Eshhan Energy Private Limited has requested to amend the clause Eligibility as “Eligible Consumer” means a consumer of electricity in the area of supply of the Distribution Licensee, who uses a self-owned or third-party-owned solar power project, to offset part or all of the consumer's electricity requirements with or without battery storage.

M/s Sun Rays Green Power Solutions has requested to include the line “The Consumer(s) are free to choose either Net or Gross Meter option for the sale of power to DISCOM.” in eligibility.

APEPDCL & APSPDCL have requested to include Registered Cooperative Societies, User Associations, and Trusts in clause 4.1.

Commission’s analysis and decision:

After examining the suggestions, the draft is modified as below.

“4.1 All consumers of AP Discom(s) are eligible for setting up of the Grid-Interactive SRTPVS with/ without Battery Energy Storage System with their investment or through third party investment.

4.2. The Consumer(s) are free to choose Net metering or Gross Metering or Net Billing/Net Feed-in option for the sale of power to DISCOM.”

4. CAPACITY OF ROOFTOP SYSTEMS**(i) Sub-Clause 5.1****Draft**

“5.1 The capacity of a Grid-Interactive SRTPVS with/without Battery Energy Storage System under Net/Gross metering to be installed at the premises of any individual prosumer shall not be less than 1 kWp.”

Objections/Views/Suggestions

M/s Eshhan Energy Private Limited has suggested adding the word Minimum in clause 5.1 as “The Minimum capacity of a Grid- Interactive SRTPVS with/ without Battery Energy Storage System under Net/Gross metering to be installed at the premises of any individual prosumer shall not be less than 1 kWp.”

APEPDCL & APSPDCL have suggested that to avoid unbalancing of injections & Loads, single-phase consumers should not be allowed for installation of Rooftop Solar under this Regulation and the clause may be reworded as “ the minimum capacity of rooftop plant shall be 3 KWp and

the connectivity with the DISCOM be three phases’.

Commission’s analysis and decision:

The suggestion of M/s Eshan is already taken care of in the draft.

As regards the submission of DISCOMS to not allow single-phase consumers, the unbalancing injection of single-phase loads of less than 3kW may not affect the system as contended, and such capacities in single-phase supply in the system were allowed since the inception of the Rooftop policy. Hence the objection is devoid of merit. However, the draft is modified as below to take care of the new clause on net billing.

“5.1 The capacity of a Grid-Interactive SRTPVS with/without Battery Energy Storage System under Net/Gross metering or net billing mechanism or net feed-in to be installed at the premises of any individual prosumer shall not be less than 1 kWp.”

(ii) Sub-Clause 5.2

Draft

“5.2 The capacity of the Grid-Interactive SRTPVS with/without Battery Energy Storage System under the multiple services of an individual consumer/Group Net Metering framework to be installed by any consumer(s) shall not be less than 5 kWp.”

Objections/Views/Suggestions

APEPDCL & APSPDCL have submitted that the Minimum capacity of the plant under the multiple services of an individual consumer/Group Net Metering framework shall be 15 KWp to cover at least five connections at the LT level.

Commission’s analysis and decision:

The Commission finds no rationale in the suggestion of APEPDCL & APSPDCL. However, the draft is modified to align with the latest changes incorporated.

“5.2 The capacity of the Grid-Interactive SRTPVS with/ without Battery Energy Storage System under the multiple services of an individual consumer under Group Net Metering, and a group of consumers under the virtual net metering framework to be installed shall not be less than 5 kWp.”

(iii) Sub-Clause 5.3**Draft**

“5.3 The capacity of the Grid-Interactive SRTPVS with/ without Battery Energy Storage System under the Net Metering framework to be installed by any consumer(s) shall not be more than 500 kWp or the contracted demand(s) whichever is less.”

Objections/Views/Suggestions

M/s Sun Rays Green Power Solutions and Others have requested to increase the maximum capacity from 500 kW to 1000 kW under net metering.

APEPDCL & APSPDCL have requested that the Maximum Installation Capacity under the Gross Metering framework be limited to 1000 kWp and Net Metering framework be limited to 100 kWp as the large capacity addition of RE power at the consumer end may cause deficiencies & inaccuracies to licensees’ energy forecasting requirements, thereby creating scenarios of sustained over drawl or under drawl of committed generation sources for which DISCOMs have to pay huge penalties in the form of Central DSM or UI charges. This unwarranted power to the DISCOMs would obscure the power procurement process and quantities.

M/s Amplus Energy Solutions Private Limited has stated that clause (D) of the AP Solar Policy, 2018 permits the installation of Solar Rooftop projects up to 1000 kWp at a single location under Net Metering. Restricting/ capping capacities that are permissible under net metering to 500 kWp in the draft Regulations will discourage the consumers from installing decentralised solar power projects and economies of solar projects. It has requested to amend the said clause in line with AP Solar Policy, 2018.

M/s Argo Solar Private Limited has stated that the draft regulation limiting the capacity under net metering to a maximum of 500 kWp is not in line with the Electricity (Rights of Consumers) Rules 2020. The sub-rule (4) of Rule 11 of Electricity (Rights of Consumers) Rules 2020 clearly states that the maximum limit for Net Metering should be 500 kilowatt (kW) and not kilowatt peak (kWp). Given the above, it has requested to correct the anomaly and allow the maximum capacity under Net Metering as kW (i.e total of inverter AC capacity and not the kWp total of ratings of Solar

Panels), or the contracted demand of the consumer (which is also AC rating), whichever is less.

M/s AP Textile Mills Association has requested that restricting Net Metering to 500 KWp from 1000 KWp should be reconsidered. Solar energy usage will have a salutary effect on the peak load demands and should be encouraged by DISCOMs as a DSM measure. Land is scarce and expensive and Solar rooftop encourages the cause of Green Energy. It has also requested to retain 1000 KWp for “net metering “ as a positive enablement provision for Green Energy.

Fourth Partner Energy has requested to change the Net Metering capacity from 500 kWp to 500 kW in line with the Electricity (Rights of Consumers) Rules, 2020, as amended in 2021 as per which the limit is 500 kW. Regarding the earlier disputes on AC capacity (kW) vs DC capacity (kWp), MNRE has already clarified vide F. No. 283/63/2019-GRID SOLAR dated 5th November 2019, that for all Grid connected Solar Projects, the contractual capacity with DISCOMs should be AC kW and not DC kWp. Hence the proposed regulations should allow up to 500 kW (AC) capacity or up to connected load whichever is less for Rooftop Solar Plants, with the AC capacity being the sum of Grid Tie Inverters rating in AC kW.

M/s Danieli India Ltd. has submitted that their Factory's current demand is more than 1100 KVA. They are planning to install a rooftop solar system with 1 MW capacity under a net metering thereby promoting their factory with green energy and reducing the electricity bill. However, the draft Regulation restricts the industries to limit the solar Rooftop installation capacity up to 500 Kwp under Net Metering which results in the industries not being able to install the required capacity of the solar plants. It has requested to allow the industries to install solar plants with net metering as per the demand required for industries.

FAPCCI has requested that the restriction in Net Metering to 500 kWp should be reconsidered in the interest of the promotion of Distributed Renewable Energy Sources with broader Social gains and an earlier limit of 1000 kWp should be restored.

BHEL HPVP has requested to permit Net Metering up to 3 MW for Government organizations and PSUs.

FTCCI has stated that the proposal for reducing the Net Metering capacity

from 1000 kWp to 500 kWp is a retrograde step and could potentially discourage large consumers from taking sustainable energy initiatives. It also requested to increase the limit for net metering from 1 MW to 2 MW (AC capacity) to encourage greater adoption of solar energy among large consumers.

M/s SolarBull Energy LLP has requested to raise the capacity limit for Net Metering from 1000 kWp to 2000 KW (AC Capacity).

M/s Edgegrid has requested to increase the maximum Capacity for Group Net Metering to 5000 kWp instead of the existing 500 kWp as there is a possibility for adoption by more consumers.

NREDCAP has requested to enhance the installation capacity from the proposed 500 kWp to 1000 kWp under Grid Interactive Solar Photovoltaic System under the Net Metering framework to encourage more beneficiaries to adopt this technology as most of the beneficiaries/beneficiary organisations like Temples, Municipalities and Universities etc. under Net Metering framework have more than 500 kWp Capacity.

Commission's analysis and decision:

The DISCOMS have requested to decrease the maximum capacity under net metering whereas the other stakeholders have requested for enhancement of the maximum capacity under net metering. Net metering is primarily to promote distributed generation of solar power at the point of consumption. The unutilised energy injected into the grid during solar hours shall be netted off with power supplied by the DISCOMS during non-solar hours. This net-off arrangement will have financial implications for DISCOMS and its consumers finally. The GoAP policy is not per se binding on the Commission. The Promotion of renewable energy is one of the functions of SERCs under 86 (1) (e) of the Electricity Act, 2003. However, keeping in view the financial implications on DISCOMs because of the net-off arrangement under net-metering and also the capacity limit of loads of the consumers in Electricity (Rights of Consumers) Rules, 2020 under net metering, the request of the stakeholders to increase the capacity from 500 kWp to 1000 kWp is rejected. Further, the request of the stakeholders to make the solar plant capacities in kW AC of inverters instead of kWp solar DC capacity is also rejected since the Electricity (Rights of Consumers) Rules, 2020 do not stipulate the plant capacity. The Rules provide that where the regulations do not provide for net-metering, net-billing or net feed-in, the Commission

may allow net metering to the Prosumer for loads up to five hundred Kilowatt or up to the sanctioned load, whichever is lower and net-billing or net feed-in for other loads. Thus, Rules refer to the consumer's loads under different arrangements but not to plant capacities. MNRE has issued the clarification on the representations from various Solar Developers/ Solar Developer Associations regarding the questions raised and concerns around the globally adopted practice of installing additional DC capacity, over and above the nameplate/contracted AC capacity, with the objective of meeting the committed Capacity Utilisation Factor (CUF) in Power Purchase Agreements (PPAs) / Power Supply Agreements (PSAs). There is no such commitment by Rooftop prosumers under net metering.

Thus, the MNRE issued clarification in a different context and the same is not applicable in the present context. As per the Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019, the installed capacity means the summation of the nameplate capacities of solar generating units i.e. DC panels. Therefore, to avoid future litigations on DC panels, the Commission is inclined to define the solar plant capacity in DC terms under net/gross/net billing arrangements. However, as the Commission has included net billing/net feed-in mechanism in the final Regulation, the maximum capacity of SRTPVS is increased from 500 kWp to 1000 kWp under this arrangement keeping in view the requests of the stakeholders and to balance the interest of the DISCOMS.

Accordingly. The draft is modified as below:

“5.3 The capacity of the Grid-Interactive SRTPVS with/ without Battery Energy Storage System by any prosumer(s) under the Net Metering framework shall not be more than 500 Kw and under the net billing/net feed in framework to be installed shall not be more than 1000 kWp or the contracted demand(s) whichever is less.”

(iv) Sub-Clause 5.4

Draft

“5.4 The capacity of the Grid-Interactive SRTPVS with/ without Battery Energy Storage System under the Gross Metering framework to be installed by any consumer(s) shall not be more than 5000 kWp or the contracted demand(s) whichever is less.”

Objections/Views/Suggestions

FAPCCI has requested that in respect of Gross Metering, it should not be restricted to a maximum of 5000 kWp but should be permitted up to 80% of CMD.

M/s AP Textile Mills Association has stated that it is unable to understand the need to restrict Gross Metering to 5000 kWp. The limit should be the current Contracted Maximum Demand. Such a Regulation will protect the revenue interests of the DISCOMs, encourage consumers to consume green energy and will also protect grid code compliance. It has requested to consider their request and amend the draft regulation suitably.

Commission’s analysis and decision:

The primary objective of this Regulation is to promote distributed solar generation. The DISCOMS’ distributed sub-stations have capacities in the range of 3.2 MVA to 8 MMVA. Under the gross metering arrangement, the entire energy from SRTPV shall be supplied to the DISCOMS. Any capacity of 5 MWp size, mostly will be locally consumed by the System without modifications to the network. The higher capacities of more than 5 MW under gross metering may not be consumed locally and it may require investments in the network for modifications. Hence, to discourage the large concentrated capacities at one place and keeping in view the capacities of DISCOMS’s substations, to penetrate the distributed solar generation without any hindrance due to connectivity or network issues, the Commission fixed the maximum capacity of 5 MWp under the gross metering arrangement. Notwithstanding this Regulation, the consumers may establish higher capacities under the captive model as per Section 9 of the Electricity Act, 2003.

(v) Sub-Clause 5.6

Draft

“5.6 The summary of the capacities that are permissible under the Net/Gross metering is shown in the table below:

Particulars	Capacity that can be availed		
	Min	Max	Capped Up to
<i>Individual Net Metering</i>	<i>1KWp</i>	<i>500KWp</i>	<i>Contracted Load/ Contracted Demand of the</i>
<i>Net Metering of Multiple Services of an</i>	<i>5KWp</i>	<i>500KWp</i>	

<i>individual</i>			<i>consumer</i>
<i>Group Net Metering</i>	<i>5KWp</i>	<i>500KWp</i>	
<i>Gross Metering</i>	<i>1KWp</i>	<i>5000KWp</i>	

Objections/Views/Suggestions

M/s Sunrays Green Power Solutions has requested to amend the clause 5.6 as below:

Particulars	Capacity that can be availed		
	Min	Max	Capped Up to
Individual Net Metering	1KW	1000KWp	Contracted Load/Contract ed Demand of the consumer
Net Metering of Multiple Services of an individual	5KW	1000KWp	
Group Net Metering	5KW	1000KWp	
Gross Metering	1KW	5000KWp	

Commission’s analysis and decision:

The above request has been discussed earlier. As per the decisions supra, the draft is modified as below.

Particulars	Capacity that can be availed		
	Min	Max	Capped Up to
<i>Individual Net Metering</i>	<i>1kWp</i>	<i>500kWp</i>	<i>Contracted Load/Contract ed Demand of the consumer</i>
<i>Group Net Metering</i>	<i>5kWp</i>	<i>500kWp</i>	
<i>Virtual Net Metering</i>	<i>5kWp</i>	<i>500kWp</i>	
<i>Gross Metering</i>	<i>1kWp</i>	<i>5000kWp</i>	
<i>Net Billing or Net feed-in</i>	<i>1kWp</i>	<i>1000kWp</i>	

(vi) Sub-Clause 5.7

Draft

“5.7 The permissible capacity of the Grid-Interactive SRTPVS at various voltage levels is shown in the table below:

Sl No	Voltage	Phase	Capacity
1	LT, 240V	Single Phase	upto to 3kWp

2	LT, 415V	Three Phase	3kWp to 56kWp
3	HT, 11kV	Three Phase	56kWp to 1500kWp
4	HT, 33kV	Three Phase	1501kWp to 5000kWp
5	EHT, 132 kV and above	Three Phase	5000kWp

Objections/Views/Suggestions

APEPDCL & APSPDCL have requested to modify the Capacities of LT, 415 V Three Phase (3KWp to 56 KWp) to LT, 415 V Three Phase (3KWp to 75 KWp) and 11 KV Three Phase – (56 KWp to 1500 KWp) to 11 KV Three Phase – (>75 kWp to 1500 kWp).

SWAPNAM has requested to remove the capacities of lower limits against Sl.Nos-2,3 & 4 in the table at clause 5.7 to enable the consumers to set up lower capacity SRTPVS.

M/s Amplus Energy Solutions Private Limited has submitted that at present in the State of Andhra Pradesh prosumers who are operating under net metering up to 1000 kWp are interconnected with Discoms at LT S/s. Therefore, the requirement of SRTPVS project capacity above 56 kWp to 1500 kWp to connect at 11 kV HT as proposed in the draft Regulations would require prosumers to install an HT transformer which would further increase the capital expenditure of the project.

M/s Sun Rays Green Power Solutions and Others have requested to amend Clause 5.7 as “The permissible capacity of the Grid-Interactive SRTPVS at various voltage levels is shown in the table below”:

Sl No	Voltage	Phase	Capacity
1	LT, 240V	Single Phase	1kWp to 5kWp
2	LT, 415V	Three Phase	5kWp to 56kWp
3	HT, 11kV	Three Phase	57kWp to 1500kWp
4	HT, 33kV	Three Phase	1501kWp to 5000kWp
5	EHT, 132 kV and above	Three Phase	5000kWp

M/s Argo Solar Private Limited has stated that the Voltage level mentioned in Clause 5.7 in the table provided creates confusion as to the actual level at which the Solar Plant can be interconnected to the grid. It has been a standard industry practice in India, and as also accepted by

APERC earlier, to allow interconnection of Solar output to the LT network of HT consumers. Since the consumer will either be exporting or importing but not both at any given instance, there is no need for a separate transformer to be erected to step up the voltage of solar plant output to 11KV or 33 kV and can be safely connected to the distributed LT Network of the HT Consumer. The same dedicated transformer of the HT Consumer will act as a step-up transformer when needed for the export of power. Hence it has requested to add a clarification note to this clause to the effect that "interconnection of SRTPV output is permitted in the LT network of HT Consumers".

M/s AP Textile Mills Association has stated that the objective of clause No.5.7 is not clear. Restricting a 33 KV input consumer to go Green only between 1500 to 5000 KWp is a restrictive clause and does not appear to Serve any visible purpose. It has requested to remove the restriction and amend this clause without any lower limit while keeping the upper limit not exceeding the CMD.

Fourth Partner Energy has requested to make appropriate modifications to clause 5.7 by allowing connection of solar plants at LT bus bars of HT consumers while complying with overall capacity restrictions. The customers should be allowed to terminate the solar plants locally at the LT level without having to add Transformers and related infrastructure. In the absence of this clarification, the DISCOMs will arm-twist the consumers to provide a separate transformer to upgrade the voltage from 415 V to 11 kV/ 33 kV and connect at the respective HT Voltage level.

FAPCCI has stated that in clause 5.7, 33 KV consumers are bracketed between 1500 to 5000 KWP which implies an entry threshold of minimum of 1500 KWP which is not appropriate and bars a consumer to opt for anything less, say 1000 KW. Hence it is requested to drop the lower limits and 'up to the upper limit to be incorporated.

M/s Eshan Energy Private Limited stated that since the LT capacity is 75kW or 100 HP for the industry category as per the Tariff Order but not 56kW, the capacity of 3 kWp to 56 kWp, is to be changed to 3 kWp to 75kWp. It is requested that 75 kWp to 1500 kWp may be considered for 11 kV HT.

Commission's analysis and decision:

The Commission specified the capacities of SRTPVS to be connected to the grid directly under gross metering at various voltage levels keeping the GTCS in view. After examining the requests of all stakeholders including DISCOMS, the draft is modified as below.

5.7 The permissible capacity of the Grid-Interactive SRTPVS at various voltage levels where the SRTPVS is connected directly to the grid is shown in the table below.

Sl No.	Voltage	Phase	Capacity
1	LT, 240V	Single Phase	upto to 3kWp
2	LT, 415V	Three Phase	3kWp to 75kWp
3	HT, 11kV	Three Phase	76kWp to 1500kWp
4	HT, 33kV	Three Phase	1501kWp to 5000kWp
5	EHT, 132 kV and above	Three Phase	5000kWp

Note: Where the SRTPVS is integrated with consumers' load bus bar such as in net-metering or net billing, the above table does not apply.

(vii) Sub-Clause 5.8**Draft**

"5.8 The cumulative capacity of all Grid-Interactive SRTPVSs under Net/Gross Metering Arrangements connected to a particular Distribution Transformer/feeder of the Licensee shall not exceed 80% of its rated capacity: Provided that the Distribution Licensee may allow Net Metering/ Gross Metering exceeding 80% of such rated capacity upon consideration of a detailed load study carried out by it."

Objections/Views/Suggestions

APEPDCL and APSPDCL have stated that given the practical difficulties regarding the transformer's quality after their overhauls or repairs, and practical considerations like excess generation of solar power, the Commission may allow the cumulative capacity of all Grid-Interactive SRTPVSs under Net/Gross Metering Arrangements connected to a particular Distribution Transformer/feeder to be limited to 60 per cent as did in many

SERCs. The criteria for assessing the rated capacity of 11 kV & 33 kV Feeders may please be standardised and specified by the Commission otherwise it is prone to discretion at field level and may trigger complications.

FTCCI has proposed that the capacity of Solar Rooftop Photovoltaic Systems (SRTPVS) be allowed to go up to 100% of the consumer's contract demand, rather than the current limit of 80%. This would provide consumers with more flexibility to meet their energy needs through renewable sources.

M/s Argo Solar Private Limited has stated that the limit of 80% specified in clause 5.8 should apply only to the LT Distribution network of DISCOMS, where a single distribution transformer caters to many consumers through its feeders, and not to HT Consumers who have dedicated step down transformer at their premises. For HT Consumers the dedicated step-down transformer should be equal to 100% of the SRTPV capacity in kW, That is why it was approved by the Commission in current SRT guidelines, and hence it is requested to maintain the same for the sake of clarity.

Commission's analysis and decision:

The Commission fixed the 80 per cent limitation for DTR as per the present guidelines under implementation and there was no issue reported so far. Hence, there is no merit in the stand of the DISCOMS. The feeder-rated capacities shall be interpreted as per the applicable standards in vogue based on the conductor size. However, after examining the suggestions and apprehensions in view, the draft is modified as below.

“5.8 The cumulative capacity of all Grid-Interactive SRTPVSs under Net/Gross Metering Arrangements connected to a particular Distribution Transformer shall not exceed 80% of its rated capacity and 100 % in respect of the feeder capacity.”

(viii) Sub-Clause 5.9

Draft

“5.9 The Distribution Licensee shall provide information on its website regarding the capacity available on each Distribution Transformer and 11/33 kV feeder of a substation for connecting the SRTPVSs under the Net/Gross Metering arrangements within three months from the notification of this Regulation. The Distribution Licensee shall thereafter update this information

quarterly and also provide the Distribution Transformer-wise, 11/33 kV feeder-wise the cumulative capacity of the SRTPVs installed under the Net/Group Metering arrangements category-wise at all voltage levels.”

Objections/Views/Suggestions

FAPCCI has submitted that Declaring the status of capacities available on feeder transformers on the Website is a welcome move and it would be appropriate to update the information every month instead of quarterly so that it would be more useful to the applicants.

Commission’s analysis and decision:

Quarterly periodicity for updating the information in the draft is fixed keeping in view the practical operational limitations of DISCOMS. Hence, there is no ground to modify the draft Regulation.

5. INTERCONNECTION WITH THE GRID

(i) Sub-Clause 6.2

Draft

“6.2 The Solar rooftop developers/ MNRE channel partners may be allowed to attend the departmental procedures on behalf of the applicant, except in the case of signing the agreement.”

Objections/Views/Suggestions

M/s Eshan Energy Private Limited has requested to remove MNRE channel partners and to change the word from “Solar Power Developer” to “Solar System Integrators “ as the program was discontinued.

M/s Argo Solar Private Limited has stated that MNRE has discontinued the channel partner programme vide notification no: F.No. 5/22/2013-14-GCRT, dated 23 Nov 2017. Hence the words “channel partner” be replaced with “SRTPV vendors" for clarity.

M/s Edgegrid requested to allow Solar rooftop developers/ MNRE channel partners also to sign the Agreement subject to power of attorney.

Commission’s analysis and decision:

The DISCOMS shall allow the signing of the agreement as per law. The channel partner may be reintroduced by MNRE which is a general word. However, after examination of the suggestions of M/s Eshan and M/s Agro, the draft is modified as below:

“6.2 The Solar rooftop developers/ Vendors of SRTPVS/MNRE channel partners may be allowed to attend the departmental procedures on behalf of the applicant, except in the case of signing the agreement.”

6. METERING

(i) Sub-Clause 7.2

Draft

“7.2 All the consumers installing the SRTPVS have to bear the cost of Gross/Net Meter. The DISCOMS shall provide the information on the cost of the meter/metering equipment applicable to SRTPVSs on their website within one month from the date of notification of this Regulation. The DISCOMS shall provide the Gross/Net meter. Where the meters are not available with the DISCOMS, the consumers may procure the meter which shall comply with the CEA (Installation and Operation of Meters) Regulations, 2006, and subsequent amendments thereof. All meters procured by the consumers may be installed after testing by the DISCOMs or on verification of a third-party testing certificate from NABL.”

Objections/Views/Suggestions

APCPDCL has requested to delete the sentence "The Discom shall provide the Gross/Net meter", since as per section 46 of the Electricity Act 2003, the distribution licensee is authorised to charge a person requiring a supply of electricity in pursuance of section 43 any expense reasonably incurred in providing any electric line or plant used to give that supply. As such Discom shall not provide the Gross/Net metering free of cost.

M/s Argo Solar Private Limited has stated that allowing the consumers to procure the meter under net metering or gross metering is a welcome change for consumers, which can potentially save months in commissioning the bigger projects. However, the Commission may elaborate the said process, and specify that no prior approval is required from the DISCOM for the consumer to purchase the meters unless the DISCOMs have stock of the meters. The DISCOMs should provide the specification of the bi-directional or gross meters, (and also CTPT ratings if required) to be purchased for this purpose, as part of their feasibility report sent to the consumer, along with the charges to be paid, in case the meters and CTPT equipment are available with the DISCOMs.

The draft Regulation provides a relief to the consumers by allowing the

testing of meters by DISCOM at their labs, or on verification of third-party testing certificates. The consumers may thus purchase the meters in the open market, get them tested in any NABL laboratory or simply pay the meter testing charges approved by the Commission as part of ARR and get the same tested in DISCOM labs. It would be appropriate for the Commission to clearly state that the DISCOM officials need not witness the testing of the meters in NABL labs. The Commission may modify Annexure-IV accordingly, for the meter specifications, CTPT ratings and quantities and to be clearly indicated by DISCOMs, and the availability of equipment at their store is also clarified. The prior approval from DISCOMs should be waived automatically if there is no stock available with DISCOMs.

Fourth Partner Energy has requested to clarify whether the choice of purchase of meters is with the consumer or with DISCOM.

M/s Eshan Energy Private Limited has stated that the Discoms shall only procure and supply the Gross / Net meter. The turnkey approval of the estimate, meter procurement, and testing in the NABL lab are taking more than 3 months and the cost incurred is 300% in this transaction. Discom procuring and providing net/gross meters will solve this problem. The Turnkey approval of the meters from the CMD, CGM, and SE operations is taking more than 45 working days. The Procurement of the meter(s), testing and calibration as per NABL standard by DEE supervision and fixation of the same in the customer premises is taking more than 3 months. The cost is increasing by 200% and the consumer who has installed the Solar Rooftop PV unit is losing the generation for 3 months reducing the ROI on SRTPV units. It has requested that DISCOMs procure the meters and supply the same to the SRT consumer which will avoid the delay, lose the solar production and save much time.

Commission's analysis and decision:

The consumers shall bear the cost of the meter under any arrangement and the same is already specified in the draft. Hence DISCOM's suggestion in this regard is of no relevance.

Keeping the apprehensions of the stakeholders in view, the Commission modifies the draft as below for further clarity.

"7.2. All the consumers installing the SRTPVS have to bear the cost of Gross/Net Meter. The DISCOMS shall provide the information on the cost of the meter/metering equipment (CTPT sets etc,) with detailed specifications,

applicable to SRTPVSs on their website within one month from the date of notification of this Regulation. The DISCOMS should provide the Gross/Net meter on payment of cost. When the meters are not available with the DISCOMS, the same shall be informed to the consumers at the time of communicating technical feasibility so that the consumers may procure the meter complying with the CEA (Installation and Operation of Meters) Regulations, 2006, and subsequent amendments thereof. All meters procured by the consumers may be installed after testing by the DISCOMs preferably in their meter testing laboratories or on verification of a third-party testing certificate from NABL. There shall be no requirement of the meter testing being witnessed either at DISCOMS's or NABL's meter testing lab."

(ii) Sub-Clause 7.4

Draft

"7.4 The consumers shall raise a request as per the format shown in ANNEXURE-X for metering equipment through online mode/ Mee seva by paying the requisite amount. The DISCOM shall subject to its availability deliver the metering equipment within 15 working days in case of LT/within 30 working days in case of HT/ within 90 working days in case of EHT. The consumers shall be responsible for the safekeeping of the metering equipment during the interim period until grid synchronisation."

Objections/Views/Suggestions

M/s Argo Solar Private Limited has welcomed the draft regulation which specifies timelines for the DISCOMs to deliver metering equipment in a certain number of days upon receipt of payment. However, this clause needs further elaboration and strengthening for effective implementation. Currently, the DISCOMs are generally issuing demand notes for meters only after the work completion report is submitted. Due to this a lot of time is getting wasted in paperwork, while the plant is ready and sitting idle. Hence, the Commission may modify the feasibility report format to provide for meter specifications required to be purchased by consumers or to be paid to the DISCOMs. This will allow the consumer to plan ahead of time and procure the meters in parallel with the SRTPV installation so that the commissioning activity can be speeded up after the submission of the work completion report.

M/s Fourth Partner Energy has stated that APERC may modify the draft regulations to mandate the decision on the purchase of meters by

consumer/ supply of meters by DISCOM along with feasibility approval so that the metres can be purchased and tested along with construction work in parallel. Currently, the decision on meters is made after the work completion report is submitted, leading to delays from 2 to 6 months or more, after the plant is fully constructed and ready for operation.

Commission’s analysis and decision:

All the above apprehensions have already been addressed. The format for feasibility reports will be modified as per the decisions in this Order.

The final clause 7.4 shall read as under:

“7.4 The consumers shall raise a request as per the format shown in ANNEXURE-X for metering equipment through online mode/ Mee seva by paying the requisite amount. The DISCOM shall subject to clause 7.2 deliver the metering equipment within 15 working days in case of LT/within 30 working days in case of HT/ within 90 working days in case of EHT. The consumers shall be responsible for the safekeeping of the metering equipment during the interim period until grid synchronisation.”

7. Feed-in Tariff (FIT)

(i) Sub-Clause 8.1

Draft

“8.1 Feed-in Tariff as decided by the Commission for the year during which the SRTPVS is commissioned will be applicable for 25 years under both Net metering and Gross metering in case of domestic prosumers and for other categories, such feed-in tariff shall be for 12 years. Whenever the feed-in tariff is not decided for any financial year, the tariff of the latest feed-in tariff shall be applicable till a feed-in tariff for that particular year is determined and accordingly the billing shall be reconciled.”

Objections/Views/Suggestions

APEPDCL has requested that the agreement should be in force for 10 years or up to the tenure of the project whichever is earlier from the date of commencement of the agreement in respect of Domestic Consumers and 7 years in respect of the other categories.

Andhra Pradesh Solar Integrators Welfare Association (APSIWA) and Others have objected to limiting the Feed-in Tariff to 12 years for other categories because Solar PV Panels have 25 years of life. All the

manufacturers of Solar PV Panels warrant the Panels for 25 years for linear power generation. In fact, for some Panels, the manufacturers give a 30-year warranty for linear power generation. It has requested to consider increasing the agreement period to 30 years. Another problem in limiting solar generation for 12 years is e-waste generated by scrapping them in just 12 years. This e-waste is a matter of concern for scientists and environmentalists. In 25 years, which is the life of the solar panels, a solution may be found to dispose of the waste.

M/s Edgegrid has requested that no retrospective amendments be made and let the new model be applicable from the year in which it was decided. This would comply with the regulatory certainty principle.

M/s Argo Solar Private Limited has stated the tariff proposed by the Commission is grossly inadequate for net metering projects for commercial and industrial consumers. There is no logic or reason behind offering tariffs only for 12 years when the life of those plants is 25 years, and there is no clarity on what will happen to the exported energy from such projects after the expiry of 12 years. If the DISCOMs are saving 50% on APPC, as proposed, then what is the harm in buying more power, and supply to Commercial and Industrial consumers at a 20% discount from the normal tariff?

Commission's analysis and decision:

There is no rationale in the request of the DISCOMS. However, keeping in view the suggestions of other stakeholders, particularly regarding the life of the solar plants, the draft is modified as below.

“Feed-in Tariff as fixed by the Commission will be applicable for 25 years or the life of the SRTPVs whichever is less under both Net metering, net billing/net feed in and Gross metering for all categories of consumers.”

(ii) Sub-Clauses 8.2, 8.3, 8.4 & 8.5

Draft

“8.2 The feed-in tariff shall be 50 per cent of the Average Pooled power Purchase cost of the financial year as determined by the Commission during which the SRTPVS is commissioned under net metering.”

“8.3 The feed-in tariff shall be 75 per cent of the Average Pooled Power Purchase cost of the financial year as determined by the Commission during which the SRTPVS is commissioned under Gross metering in LT Supply.”

“8.4 The feed-in tariff shall be 70 per cent of the Average Pooled Power Purchase cost of the financial year as determined by the Commission during which the SRTPVS is commissioned under Gross metering in HT Supply up to 1500 kWp of plant capacity.”

“8.5 The feed-in tariff shall be 65 per cent of the Average Pooled power Purchase cost of the financial year as determined by the Commission during which the SRTPVS is commissioned under Gross metering in HT/EHT Supply of plant capacity from 1501 kWp to 5 000 kWp.”

Objections/Views/Suggestions

M/s Sun Rays Green Power Solutions and Others have requested to delete the entire clause 8.2 and include a separate clause Retail Tariff as decided by the Commission for the year during which the SRTPVS is commissioned will be applicable for 25 years under the Net metering for all categories of Prosumers. Whenever the Retail tariff is not decided for any financial year, the tariff of the latest Retail tariff shall be applicable till a Retail tariff for that particular year is determined and accordingly the billing shall be reconciled.

A.P Solar Integrators Welfare Association (APSIWA) has requested to increase the feed-in tariff to 80 per cent of the Average Pooled Power Purchase cost of the financial year as determined by the Commission during which the SRTPVS is commissioned under net metering. Most of the Prosumers who opt for Net Meter are from middle-class communities. It will give a boost to Rooftop Solar if the feed-in tariff is enhanced to 80%. It has requested the Agreement and Annexures also be changed to reflect the feed-in tariff of 80%.

M/s Eshan Energy Private Limited has stated that the Feed-In Tariff is considered for the tariff of non-renewable energy tariff and not renewable energy tariff. Linking the pooled cost to the Feed In Tariff is not recommended. The Feed-in tariff and Pooled cost are not synced. The Grid parity should be achieved first and then the same tariff for either purchase/sale can be considered. Defining separate tariffs for Gross and Net meters for additional solar units is not recommended. The DISCOM should purchase the additional unit injected into the grid as per the same pooled cost for Net metering and Gross metering connections under the SRT program as similar to the other Discoms in the country.

APEPDCL has requested that the feed-in tariff for all categories shall be 50

per cent of the Average Pooled Power Purchase cost of the financial year during the Solar hours (09:00-17:00) since the difference between APPC of solar and non-solar hours has been increasing in the past years and is bound to increase further in the coming years. This shall be applicable for all classifications of Gross / Net Metering.

FAPCCI has stated that the proposed feed-in tariff is very low to attract meaningful adoption.

M/s AP Textile Mills Association has contended that the Feed-in Tariff in the clauses goes against the slogan “encourage to green Energy usage” and regrets these clauses and feels this clause is either to discourage “generate and usage” or worse consumers are being regulated to subsidise the DISCOMs. This will not be the intent of these clauses. Therefore, the Commission may amend this clause for a just and equitable Feed-in Tariff of “ Average power purchase cost “as they get RPO benefits and /or an option of sale of REC certificates.

FTCCI has stated that the proposed Feed-In Tariffs (FIT) are relatively low and may not effectively incentivize the adoption of renewable energy. It has requested to reassess the FIT rates to ensure they are more attractive and aligned with market dynamics, which would encourage increased investment in renewable energy projects.

M/s Argo Solar Private Limited has stated that the DISCOMs have also been propagating false notions against SRTPVs as causing loss to their exchequer and citing lower tariffs for large-scale utility solar plants as the reason to lower the feed-in tariffs to SRTPVs (refer to their petition OP no: 08 of 2020). This is simply false and devoid of any logic, as there is no apple-to-apple comparison between utility-scale solar tariffs and SRTPV feed-in tariffs. The landed tariff of utility scale solar power at the DISCOM boundary (11/33 kV) will be about Rs.7 per unit after factoring in the losses and transmission charges. These facts were presented in detail to the Commission during an earlier hearing on SRT Guidelines 2018. SRTPVs have the potential to become DISCOMs’ business partners, where the SRTPVs can supply power to DISCOMs directly inside their boundary at a very low rate thereby doubling the gross profit margin of DISCOMs during solar hours. The DISCOMs can thus avoid paying expensive transmission charges for utility scale solar power. The objector referred to sub-rule (4) of Rule 11 of Electricity (Rights of Consumers) Rules 2020 in this context.

That the tariff to be paid for gross metering should be based on the tariff regulations which take into account the capital costs, financing costs, operational expenditure and other costs, to arrive at a tariff that will provide a reasonable rate of return to the SRTPV prosumer opting for gross metering, and not arbitrary tariffs fixed as a certain percentage of APPC.

That given the above, the Commission may offer a tariff that is beneficial to both the DISCOMs and the prosumers, and not one-sided for the DISCOMs, which will only mean the dead-on-arrival scenario for gross metering projects, as prevailing right now.

SWAPNAM has stated that the applicable period of Feed-in-tariff is different for domestic consumers and other than domestic consumers. But at the same time, the consumer is allowed to avail of net metering facility for multiple services. Hence, the Commission may specify the applicable period of FIT categorically, in case the consumer avails net metering facility for multiple services having both domestic and other categories.

Commission's analysis and decision:

The DISCOMS have requested to provide common Feed-in Tariff (FIT) under both net/gross metering which defies logic and reason. The other stakeholders in one or another way have stated that the FIT fixed under different scenarios is low and hence requested the Commission to revisit the FITs. There is another request to determine the generic tariffs for SRTPVS under gross metering as per tariff regulations. There is also the contention that linking FIT to APC is not correct. It may be noted that the SRTPVS under net metering is primarily meant to promote self-consumption and therefore should not be compared with other generating plants set up exclusively for the sale of electricity to the distribution licensee. Accordingly, the tariff for surplus energy injected into the licensee's grid from SRTPVS under net metering after meeting self-consumption shall be treated differently and hence different tariffs need to be fixed for net metering and gross metering. Further, the FIT for net metering/net billing mode is compensatory in nature for the unlisted energy injected into the Grid by the prosumers after their captive consumption and this unutilised energy may not be useful at times by the DISCOMS. Hence, the tariff for net-metering /netbilling should not be compared with the tariff at which DISCOM procures power from different sources. Therefore, any requests by the stakeholders for higher tariffs for net metering/net billing have no

justification. Further, the suggestion not to link FIT to APPPC has a force and hence the same is accepted by the Commission. Hence, keeping the present market prices in view at different economies of scale, the Commission proposes to fix the FITs for different configurations/modes. Further, when the market-determined prices are available as a ready reference for SRTPVS, there is no necessity to determine generic tariffs for the same based on norms. Accordingly, by modifying the clauses in the draft, the Commission fixes the FITs as shown below.

- 8.1 Feed-in Tariff as fixed by the Commission will be applicable for 25 years or the life of the SRTPVs whichever is less under both Net metering, net billing/net feed in and Gross metering for all categories of consumers.
- 8.2 The feed-in tariff shall be Rs.2.09 per unit under net metering/net billing or net feed-in.
- 8.3 The feed-in tariff shall be Rs.3.13 per unit under Gross metering in LT Supply.
- 8.4 The feed-in tariff shall be Rs.2.92 per unit under Gross metering in HT Supply up to 1500 kW of plant capacity.
- 8.5 The feed-in tariff shall be Rs.2.71 per unit under Gross metering in HT/EHT Supply of plant capacity up to 5000 kW.
- 8.7 The feed-in tariff shall be the same for the total agreement period and shall not be subject to any variation.

However, given the objections, after conducting the Regulatory Impact Assessment (RIA) after one year from the date of notification of this regulation, based on the capacities established under different modes, the Commission may review the FITs.

(iii) Sub-Clause 8.6

Draft

“8.6 The feed-in tariff shall be the 100 per cent of the Average Pooled power Purchase cost of the financial year as determined by the Commission during which the SRTPVS is commissioned under Gross metering in HT/EHT Supply if it supplies the power during the day with Battery Storage as per the requirement of the DISCOMS.”

Objections/Views/Suggestions

M/s Edggrid has stated that the above pricing could be a constraint for

Energy Storage deployments. Utility and consumers would be more beneficial if energy from BESS could be supplied during peak times or peak demand or for frequency response. The above FIT may not be sufficient to enable such services. Therefore, the Commission may provide flexibility between the utility and consumer to agree upon such pricing or incentives given the nascent stage of BESS deployments.

Commission’s analysis and decision:

The provision for BESS is primarily intended to encourage the local storage with SRTPVS systems and use as per the prosumer’s requirement and avoid excess injection into the Grid from SRTPVS under the net metering arrangement. As the deployment of BESS is still in the nascent stage as opined by the stakeholders, the FITs for the same will be revisited in due course of time. However, in line with the earlier decisions of the Commission in the present order, the draft is modified as below.

“8.6. The feed in tariff shall be the Rs.4.17 per unit under Gross metering in HT/EHT Supply if SRTPVs supplies the power during the peak hours as decided in the Tariff order with Battery Storage as per the requirement of the DISCOMS.”

8. WHEELING CHARGES AND LOSSES

Clause 9

Draft

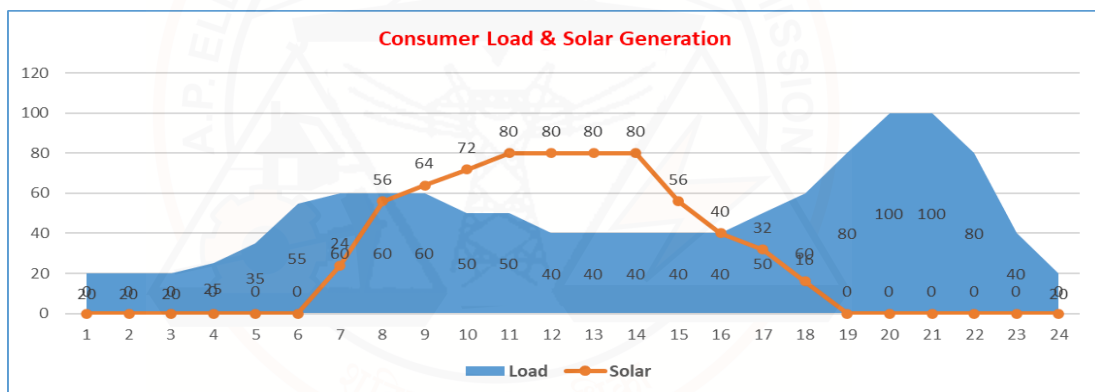
“No Transmission and Wheeling charges & losses shall be collected from the prosumers under the Gross/Net Metering, wherever the SRTPVSs and Consumption are at the same point of the grid. In other cases, 5% of energy injected into the grid by SRTPVSs in kind shall be collected/adjusted towards T&D charges and losses. The Grid support charges as determined by the Commission in the tariff orders from time to time shall be applicable”

Objections/Views/Suggestions

APCPDCL has requested to remove the words “GRID” and "No" from the clause stating that GRID means One Nation One Grid. It has also stated that the units consumed from the grid by SRP at peak hours from 6 AM to 9 AM and 6 PM to 12 AM shall not be adjusted.

APEPDCL & APSPDCL have submitted that 5% compensation in energy kind, is not sufficient to cover the existing wheeling charges & losses as specified by the Commission in the relevant tariff orders. Transmission charges shall be made

equal to the OA/ Transmission charges determined by the Commission from time to time. However, the Commission may adopt per unit/ KWh charges to encourage Solar Rooftop. The transmission/ wheeling losses shall be applicable for prosumers. For providing a Net Metering facility, the DISCOMs have to provide a balancing of power. The load profile of the consumer is not controllable by the utility and during morning & evening peak load hours and night time, the Consumer draws power from the Grid. When Solar generation is not there the consumer switches to the DISCOM fold. The surplus generation during solar hours is absorbed by the Grid and the same is to be released back when the consumer uses the same. The load profile of a consumer exactly matches the supply profile from the DISCOMs when the entire consumption is procured from the DISCOMs. In the case where the Consumer installs a net metering solar rooftop plant, the supply profile of DISCOM will undergo a drastic change and the Consumer avails DISCOM power during morning & evening peak loads and during night time as indicated in the following diagram.



Providing Balancing & Banking facilities entails ramping up & ramping down thermal generators which result in part load operation of the plants and compensation to be paid to the Generators. The balancing & banking activity comes with a cost. All the Gross/Net Metering facilities shall be permitted to charge balancing & banking support provided by the DISCOMs. These charges may be based on the market clearing price in the DAM market in the particular time block towards balancing & banking provided by the DISCOMs.

The DISCOMs are facing stern financial constraints and are not in a position to provide their network for facilitating the wheeling of electricity to the points of destination of the net metering consumers. The existing Voltage wise losses & charges as applicable to an Open Access User shall be made applicable for

facilitating wheeling service to Group Net Metering/Multiple Individual sectors, in the Regulation.

APEPDCL has submitted that settlement of energy shall be done every 15 min block by computing the actual consumption and actual generation. Excess generation will be considered as banked energy. The Banking charges shall be applicable and withdrawal of banked energy shall not be permitted during peak time.

M/s Amplus Energy Solutions Private Limited has contended that levying of grid support charges on Grid Interactive SRTPVS under Net Metering and Gross Metering would restrain the consumers from installing solar rooftop projects in the state of A.P. Further, it is pertinent to mention that distributed generation and especially rooftop solar is helping in reducing T&D losses of DISCOMs and meeting RPO. Therefore, the Commission may delete the provision about Grid Support charges and amend the clause.

M/s Edgegrid has requested to not impose 5% for GNM and VNM transactions. Today local generation and consumption helps the utilities to reduce T&D losses and reduces the need for further investments on the T&D network. Therefore, an enabling framework to be provided to promote local generation in line with the local demand requirements. Today SECI projects also have a waiver of Transmission charges and losses. This also would have implications on the utility by socialising the costs. As compared to centralised generation (connected to ISTS or STU network), local generation helps in reducing losses and investments in T&D thereby helping the Discoms and Consumers to reduce Cost of Supply. Therefore, the Commission may not impose a 5% charge for such transactions for the first regime. The Commission can review the success of this program and then introduce such charges for future capacity.

Cleanmax Enviro Energy Solutions Pvt. Ltd has requested that no charges viz. cross subsidy, additional surcharge etc. be applied to the power consumed by such establishments under CAPEX / RESCO mode. No Charges shall be imposed on the rooftop solar power projects in all categories till a target of 50% is achieved by the State. Considering the merits of the rooftop solar power deployment under distributed mode over the ground-mounted mega projects, the rooftop solar power generation and consumption shall be encouraged against the ground mounted by not levying any charges viz. CSS, Additional Surcharge, Wheeling Charges etc. till such time the State achieves a minimum of 50% of its rooftop solar target.

M/s Eshan Energy Private Limited has stated that Transmission and Distribution (Wheeling) Charges & losses are related to Open Access and Not for Net / Gross Metering.

Commission's analysis and decision:

There is no rationale for the request of APCPDCL to remove the work Grid since the SRTPVs are grid interactive. APCPDCL has also requested not to adjust the energy with the energy consumed by prosumers during peak hours. The Request of the APCPDCL has merit and hence, the Commission is inclined to accept this request. Further, the DISCOMS have requested to make applicable the T&D charges and losses as applicable to all OA users to SRTPVS under group/virtual metering whereas the stakeholders have requested to waive the same or reduce apart from not levying the GSCs. As per the Retail Supply Order for FY 2023-24, the ToD Peak is from 06-10 & 18-22 Hours, Off-Peak is from 10-15 & 00-06 Hours, and Normal Hours are 15-18 and 22-24 Hours during a day. The maximum solar energy is generated during the daytime mostly in Off-Peak Hours. Such maximum generation during the off-peak hours from SRTPVS would lower the Demand for DISCOMS and consequently may result in the backing down of thermal stations to some extent if SRTPVS are deployed in large capacities which need to be observed in due course of time. To minimise the above impact to some extent on the Power Purchase cost of DISCOMS, the Commission has proposed Grid Support Charges on the SRTPVS in the Draft Regulations. Further, undoubtedly any under-recovery of transmission and wheeling charges and losses from SRTPVS results in under-recovery of the Distribution/Transmission ARR having implications on other Consumers. But it may be noted that the promotion of environmentally friendly Renewable Energy is one of the key objectives of the Electricity Act, 2003 and the Commission under section 86 (1) (e) of the Act, shall formulate promotional measures for the installation of Renewable Energy power plants. Moreover, the promotion of distributed RE generation will reduce the T&D losses and also reduce the investment requirement of the DISCOMS and TRANSCO on the network as contended by the stakeholders whose benefit would be passed on to all consumers. However, considering the views of the DISCOMS, to ensure a level playing field between RE users and Non-RE users, the Commission decides to make applicable charges and losses as per its Orders issued from time to time on the energy transmitted of SRTPVS from the generation point to point of consumption. The Commission also does not permit the netting of the energy

during peak hours if the eligible consumers are in the ambit of TOD. Accordingly, the changes are made to appropriate clauses in the final Regulation. The modified draft is given below.

“No Transmission and Wheeling charges & losses shall be collected from the prosumers under the Gross/Net Metering, wherever the SRTPVSs and Consumption are at the same point of the grid. However, The applicable T&D losses and charges as per orders of the Commission from time to time from the injection point to the drawal point shall be deducted while adjusting the generation against the consumption where the generation and consumption are at different points on the Grid. Further, in case the prosumer(s) is/are in the ambit of the Time of Day (ToD) tariff, the share of exported energy of such prosumer(s) under virtual net metering shall be netted off against his/their electricity consumption during off-peak hours. Further more, The Grid support charges as determined by the Commission in the tariff orders from time to time shall be applicable. In any case, the CSS is not applicable to the prosumers for the energy availed from SRTPVS established under this Regulation.”

9. Subsidy

Clause 10

Draft

“The consumers are entitled to avail of the applicable subsidies as per MNRE notifications/guidelines from time to time. The feed-in tariff decided by the Commission under Gross/Net metering is after taking into account the subsidy provided by MNRE.”

Objections/Views/Suggestions

M/s Eshan Energy Private Limited has requested that the DISCOMs must participate in the DBT scheme of MNRE and pass on the subsidies to the consumers.

Commission’s analysis and decision:

As regards the DISCOMs participating in the DBT scheme to pass on the subsidies to the consumers, the draft already made it clear that the consumers are entitled to avail of the applicable subsidies or CFA as per MNRE notifications/guidelines from time to time. The DISCOMS and the consumers shall act accordingly. After making alterations in the form, the finalised Clause reads as under:

“The consumers are entitled to avail of the applicable subsidies as per MNRE notifications/guidelines from time to time. The feed-in tariff fixed by the Commission under Gross/Net metering shall be after taking into account the subsidy provided by MNRE.”

10. Application

(i) Sub-clause 11.1

Draft

“The consumer shall make an application to Discom for setting up the SRTPVS by paying the requisite application fee either on AP Discoms websites and/or through designated mee seva centers or through National Portal for Solar Rooftop <https://solarrooftop.gov.in/>. The DISCOMS shall make their websites accordingly have provisions and also shall register at National Portal for Solar Rooftop. The prescribed format for application is shown in the ANNEXURE-I of this Regulation. The application for the Consumers intended to apply through National Portal for Solar Rooftop, the application in the portal shall be used.

Objections/Views/Suggestions

M/s Eshan Energy Private Limited has stated that the application timelines, processing, and fees may be the same as the MNRE solar rooftop portal <https://solarrooftop.gov.in>. The timelines suggested in the MNRE portal may apply to the DISCOMs and in case the DISCOMs are not able to sanction and provide the connectivity, the same are considered to be deemed to be approved.

Novel Renewable Energy Pvt. Ltd has requested to ensure the net meters are made available & permissions are given on time following central government guidelines

M/s Argo Solar Private Limited welcomed the Commission’s proposal to allow the consumer to apply for setting up of SRTPV connections through multiple sources. It however stated that, recently many consumers have faced difficulties when the website of a certain DISCOM didn’t allow only the net metering applications while working for all other online activities. Since Mee Seva centres cannot accept applications on a standalone basis without interfacing with DISCOM servers, it will be of no practical use if all the application sources are again centrally linked to DISCOMS’ servers. He

requested the Commission to allow acceptance of net metering applications offline by paying the requisite challan at the mee seva centre, in case of server failures or non-availability. The DISCOM can be provided with an additional 3 working days cushion to consider the logistical delays in case of offline applications.

It welcomed the provision in Clause 20, enabling the Commission to issue practice orders and directions. The current practices of DISCOMs vary to a large extent from one DISCOM to another, and from one district to another in SPDCL. EPDCL follows a well-maintained online process for feasibility application process etc, whereas CPDCL's online application is highly unreliable and it mysteriously rejects acceptance of applications from time to time. SPDCL has an offline process of submitting applications in mee seva. To streamline the processes, they suggested that the Commission may instruct the DISCOMs to appoint a **nodal officer** at their respective corporate offices, who should be a single point of contact to streamline the processes and ensure that delays on the part of DISCOMs are minimized. The nodal officer should have sufficient authority to clarify the process to each circle or field officer to alleviate the pain of consumers and streamline the process.

Commission's analysis and decision:

As regards the suggestion for fixing timelines as per the MNRE solar rooftop portal <https://solarrooftop.gov.in>, it is to be noted that the timelines mentioned in the MNRE solar rooftop portal are for guidance purposes to develop the set of timelines while formulating the Regulations by SERCs. The Commission proposed the timelines in the draft Regulation after considering the process, procedures, and work involved which are reasonable and practically implementable. All the suggestions in this regard are accordingly rejected.

As regards ensuring that net meters are made available, the Commission already discussed the issue in Clause 7.2.

As for the suggestion to accept the offline application, the Commission is not inclined to accept it since the online process was introduced to ensure transparency and accountability. With respect to the appointment of a nodal officer, the same is also rejected since sufficient provisions safeguarding consumers' interests are already in place.

However, after making some corrections to the draft clause, the finalised clause reads as under:

“11.1 The consumer shall make an application to Discom for setting up the SRTPVS by paying the requisite application fee either on AP Discoms websites and/or through designated mee seva centres or through National Portal for Solar Rooftop <https://solarrooftop.gov.in/>. The DISCOMS shall make ready their websites accordingly and also shall register at National Portal for Solar Rooftop. The prescribed format for application is shown in the ANNEXURE-I of this Regulation. The Consumers intending to apply through National Portal for Solar Rooftop, shall use the applications in the portal.”

(ii) Sub-Clause 11.2

Draft

“11.2 The application fee as specified below shall be collected;

Capacities upto 5 kWp : Rs.1,000/-

Capacities above 5 kWp and up to 100 kWp : Rs.5,000/-

Capacities above 100 kWp to 1000 kWp : Rs.10,000/-

Capacities above 1000 kWp : Rs.1,00,000/-”

Objections/Views/Suggestions

M/s Eshan Energy Private Limited has stated that the fees prescribed in the draft are on the higher side. Hence, the same may be kept on par with the other ERCs and DISCOMs as notified by CERC.

Commission’s analysis and decision:

The fees in the draft are prescribed based on the current fee under existing guidelines which, in the Commission’s view are reasonable.

11. TECHNICAL FEASIBILITY

(i) Sub-Clause 12.1

Draft

“12.1 DISCOMS officers shall carry out and communicate the technical feasibility study on the application submitted by the consumers. This study shall be carried out and communicate the technical feasibility approval in the format shown in the ANNEXURE-IV to consumers within 7 working days in the case of the LT network, 15 working days for 11 kV and 33 kV networks,

and 30 working days for the EHT network from the date of submission of the application in full shape. After undertaking the study as stated above, if technical feasibility is not possible, the same shall be communicated to the consumer by letter as per the format shown in ANNEXURE-V.

Objections/Views/Suggestions

APEPDCL has requested to consider 15 Working days for the LT network to communicate technical feasibility approval.

Commission's analysis and decision:

The DISCOM has not stated the reasons for changing 7 days to 15 days. Hence, the request is rejected. The Clause after correcting the grammar, reads as follows.

“12.1 DISCOMS officers shall carry out and communicate the technical feasibility study on the application submitted by the consumers. This study shall be carried out and the technical feasibility approval shall be communicated to the applicants in the format shown in the ANNEXURE-IV within 7 working days in the case of the LT network, 15 working days for 11 kV and 33 kV networks, and 30 working days for the EHT network from the date of submission of the application in full shape. After undertaking the study as stated above, if technical feasibility is not possible, the same shall be communicated to the consumer by letter as per the format shown in ANNEXURE-V.

(ii) Sub-Clause 12.2 (B)

Draft

“12.2 DISCOM shall communicate technical feasibility approval to consumers on a first come first serve basis duly following the capacity limits specified in this regulation. In case of non-feasibility, the Distribution Licensee shall communicate to the consumer:

(a) Particulars of deficiencies (as per the format shown in ANNEXURE-VI) with reference to the interconnection of the proposed SRTPVS with the Distribution System of the Licensee/Transco;

(b) Cost estimate for removal of such deficiencies including augmentation of the transformer, distribution or transmission system as the case may be if required.”

Objections/Views/Suggestions

FAPCCI contended that there should not be any extra augmentation charges for existing consumers with already contracted demands setting up the Generating System well within their CMD. It would only tantamount to exploiting the Consumer's need for undue enrichment of DISCOMs and creating more hurdles. It hence requested the Commission to drop the proposal.

M/s AP Textile Mills Association has stated that it is regretful to state this clause is without any merit for obvious reasons that Rooftop capacity for any consumer is within their CMD and therefore there is no augmentation involved, as proposed and requested that this clause be deleted.

Commission's analysis and decision:

The augmentation charges are to be paid wherever required and are not mandatory in all cases. Hence, this clause is retained.

12. AGREEMENT AND COMPLETION TIME OF THE PROJECT**(i) Sub-Clause 13.1****Draft**

"13.1 The consumers shall enter into an agreement with the DISCOMS concerned within four months as per the format shown in the ANNEXURE -IX (A) & ANNEXURE- IX (B) from the date of receipt of the technical feasibility approval. In case, within four months of issuing Technical feasibility, if the Agreement is not entered by the consumer, the application is deemed to be cancelled."

Objections/Views/Suggestions

M/s Argo Solar Private Limited has stated that the draft may be modified to make the 4-month timeline for the consumer to submit the agreement signed from his end and submitted to DISCOM, with an acknowledgement of receipt. Annexure-IX (A) and (B) do not specify who is the signing authority on behalf of the DISCOMs. In such a scenario the consumer should not be burdened with the responsibility of pushing the agreement from one desk to another to get the final signature done by the unspecified representative of DISCOM, within the stipulated timeline. Hence the draft

may be modified to specify the signing authority on behalf of the DISCOM, and a specific period be mandated for the DISCOM to sign and return the consumer's copy of the agreement.

Commission's analysis and decision:

The draft is modified given the apprehensions expressed by the stakeholders as below.

“13.1 The agreement (Annexure-IX (A) /(B) as applicable) duly filled and signed in by the consumer shall be submitted to DISCOM within four months from the date of receipt of the technical feasibility and DISCOM shall provide the acknowledgement for the same. The agreement is deemed to have come into force if there are no remarks communicated by DISCOM within two weeks from the date of receipt of the agreement. In case, within four months of issuing Technical feasibility, if the Agreement is not submitted by the consumer, the application is deemed to be cancelled. The officers designated for the release of new services of supply as per present DISCOMS's orders in vogue shall sign the agreement.”

(ii) Sub-Clause 13.2:

Draft

“13.2 The SRTPVS by the consumer shall be installed within three (3) months from the date of the Agreement up to 100 kWp, (6) months from 101 kWp to 1 000 kWp, and one year from 1001 kWp to 5000 kWp. In case of any delay beyond three months, a one-time extension of another three months for plants up to 1000 kWp and 6 months from 1001 kWp to 5000 kWp shall be provided after which the agreement shall be deemed to be terminated without any reason.”

Objections/Views/Suggestions

SWAPNAM has requested to delete the words 'beyond three months' in line 3 to remove the ambiguity.

FTCCI has submitted that Consumers, including industrial, commercial, and domestic users, often encounter various difficulties when attempting to install solar power plants. It is suggested to mandate the DISCOMs to establish an online consumer redressal mechanism with defined timelines and accountability for addressing consumer complaints. The appointment of dedicated nodal officers to oversee this process would greatly enhance

consumer satisfaction.

Commission’s analysis and decision:

As regards FTCCI submissions, sufficient provisions to protect the interests of consumers through online consumers' grievance cells are already in place. However, the draft is modified to remove the ambiguity as pointed out by SWAPNAM.

“13.2 The SRTPVS by the consumer shall be installed within three (3) months from the date of the Agreement up to 100 kWp, (6) months from 101 kWp to 1 000 kWp, and one year from 1001 kWp to 5000 kWp. In case of any delay, a one-time extension of another three months for plants up to 1000 kWp and 6 months from 1001 kWp to 5000 kWp shall be provided after which the agreement shall be deemed to be terminated without any reason.”

(iii) Sub-Clause 13.3

Draft

“13.3 The agreement will be in force for a period of 25 years or up to the tenure of the project whichever is earlier from the date of commencement of the agreement in respect of Domestic Consumers and 12 years in respect of the other categories.”

Objections/Views/Suggestions

AP Solar Integrators Welfare Association (APSIWA) and others have requested to amend the draft as “The agreement will be in force for a period of 25 years or up to the tenure of the project whichever is earlier from the date of commencement of the agreement in respect of all Categories of Consumers [Domestic & Others.]”

APEPDCL has requested to include an Additional Clause as suggested below.

“If the agreement of Consumer with DISCOM is terminated, then the agreement of Consumer for SRTPVS is deemed to be terminated. If the bill stopped SRTPVS service is revoked, then the consumer shall enter a new agreement with DISCOM”.

Commission’s analysis and decision:

Having regard to the decisions of the Commission supra and APEPDCL’s suggestion, the draft is modified as below.

“13.3 The agreement shall be in force for 25 years or up to the life of the project whichever is earlier, from the date of commencement of the agreement for all categories of consumers.

Provided that If the agreement of Consumer for supply with Discom is terminated, then the agreement of Consumer for SRTPVS is deemed to have been terminated. For the bill stopped service with SRTPVS to be restored, the consumer shall enter a new agreement with DISCOM for the balance agreement period from the date of first commissioning of the project”.

13. PRE-COMMISSIONING CHECK AND COMMISSIONING OF THE SRTPVSS

(i) Sub-Clause 14.1:

Draft

“14.1 Post installation of the SRP, the consumer shall make an online request for inspection as per the format shown in ANNEXURE-XI along with the work completion report in the format shown in ANNEXURE-XII. The DISCOM personnel shall inspect the system within 10 working days and provide approval. In the absence of the response within the stipulated time, it shall be considered as deemed inspection approval. In case, any deficiency identified by the Discom shall be intimated to the consumer as per the format specified ANNEXURE-XIII”

Objections/Views/Suggestions

Fourth Partner Energy has requested that the Commission should allow the consumers to operate the solar plant as behind the meter plant in case there is a delay beyond the stipulated period in DISCOM's response. Currently, the consumer is having to suffer immense loss of savings and is burdened with loan EMIs for delays on the part of DISCOM in granting work completion approval, meter purchase approvals and final synchronization. Even though there is a deemed approval provision in guidelines approved by APERC in 2019, the same is not being followed by any DISCOM and consumers who are utilizing the solar plant before meters installation by DISCOM are threatened with disconnection of service u/s 135 of Electricity Act.

M/s Argo Solar Private Limited has stated that concerning Clause 14.1 and 14.2 of the draft Regulation, the timelines proposed in this clause are impossible to meet if the DISCOMs continue their current operating

practices on the subject matter. The process currently takes from 1 to 6 months (for HT Connections). It has welcomed the Commission's intent to set a firm deadline and offer deemed approval. However, deemed approval has no practical use, unless the next step in the process starts automatically based on deemed approval. The deadlines set forth by the Commission can be met only when the meters are tested and ready by the time the inspection request is filed for work completion, and a clear online approval process is defined within the DISCOMs to meet the deadline. In cases of delay on the part of DISCOM beyond 7 working days to complete the meter installation process, the prosumer should have the option to operate the plant temporarily as a behind-the-meter plant.

Most SRTPVs are financed by lenders who do not offer any moratorium on interest and principal payments. Due to this, the consumers are facing financial stress by having to service their debt, while the plant is sitting idle due to procedural delays on the part of DISCOMs.

Currently, the DISCOMs are not allowing the operation of SRTPVs between submission of work completion and completion of meter installation, even though such a period is extending up to 6 months in some cases. In such cases, the DISCOMs are threatening cases u/s 135 of the Electricity Act, 2003 if the consumer is found to be generating solar power before installation of meters. Section 135 of the Electricity Act, 2003 relates to the theft of power from the grid. Hence, this aspect needs to be dealt with by the Commission to clarify the recourse available to consumers in case of delays on the part of DISCOMs in completing the meter installation and synchronization process.

Government of Andhra Pradesh's GO MS No: 35 dated 18 Nov 2019, vide sub-clause (ii) of clause 2 provides a supporting provision for this intermittent operation of plants, which says:

"Any injection of energy between synchronization and declaration of Commercial Operation Date (CoD) shall be treated as inadvertent power and no cost shall be paid by DISCOMs."

Given the above, it has requested to clarify that delay in inspection approval and/or installation of meters on the part of DISCOM should automatically provide deemed approval status for the prosumer to utilise solar power generation for captive use, though the net metering or net billing benefit

would start only after the meter installation process has been completed, and commercial operation under Net Metering has been completed.

Commission’s analysis and decision:

After examining the suggestions of the stakeholders, the draft is modified as below.

“14.1 Post installation of the SRP, the consumer shall make an online request for inspection as per the format shown in ANNEXURE-XI along with the work completion report in the format shown in ANNEXURE-XII. The DISCOM personnel shall inspect the system within 10 working days, decide and communicate approvals or otherwise as the case may be. In the absence of the response within the stipulated time, it shall be considered as deemed inspection approval. In case, any deficiency is identified by the Discom, the same shall be intimated to the consumer as per the format specified in ANNEXURE-XIII

Provided that Post installation of SRP and receipt of the request for inspection from the concerned if the DISCOM fails to take further action as stipulated in this Regulation, the same may be treated as the SRP being installed behind the meter under Section 9 of the Electricity Act, 2003 with intimation to the DISCOM. If any energy is injected into the grid during such period from such SRP, the same shall be treated as inadvertent energy.”

14. PROVISIONS APPLICABLE TO PROSUMERS

Clause 15:

Draft

“Subject to the above regulation, all the provisions of GTCS, Supply Code, and other relevant regulations/guidelines applicable to the consumers, in general, shall also be applicable to prosumers. Erection of SRTPVSSs behind the meter without the permission of the DISCOMs by any existing consumer shall be treated as a violation of the present regulation. In such cases, the DISCOMS shall disconnect the SRTPVSSs.

Objections/Views/Suggestions

M/s Edgegrid has requested the Commission to remove clause 15 considering the scenarios if they are not exporting the power, have an island with more or zero export devices and the capacity is lower than the consumption.

APEPDCL & APSPDCL have submitted that mere disconnection of solar systems without penal provisions would encourage third-party solar developers to install such systems aggressively, and later the developers or prosumers may try to regularise such *installations* without paying any penalties for such unauthorised installations. Hence, penal charges like two times demand charges for the connected capacity of such installations for the period of such unauthorised usage need to be provided by the Commission, as was done by the other SERCs like MERC, TNERC, GERC, etc. The Commission may make certain provisions about the connection of solar Rooftop systems behind metres as well.

Approval of the single line diagram duly indicating the location of the Gross Meter/Net Meter of the SRSTPVS by the concerned Distribution Engineer is necessary to prevent unwanted incidents related to safety and reverse power operation which may endanger the life of the staff of DISCOMs and the general public.

M/s Argo Solar Private Limited and M/s Fourth Partner Energy submitted that currently there is no stated policy or APERC-approved process or guidelines for the consumers to follow and seek grid connectivity for behind-the-meter projects. The TOOs notified by APTRANSCO/SLDC apply only for greater than 1 MW behind-the-meter projects that need permission from SLDC. These approvals are also so cumbersome that take anywhere between 6 months to 1 year. For projects less than 1 MW and those that do not come under the purview of TRANSCO/SLDC, there is no defined process to approve grid connectivity applications for behind-the-meter projects, nor any application forms or guidelines are defined and posted on any DISCOM websites. In such a scenario where there is no information available to consumers about what is the process to be followed for setting up behind-the-meter projects, the DISCOMs cannot treat them as a violation of the Regulation. Section 9(1) of the Electricity Act provides the right to all consumers to set up captive power plants for their use. The DISCOMs are arm-twisting consumers with Section 135 proceedings on behind-the-meter plant issues. Hence, the Commission may elaborate on this clause and stipulate the procedure for approvals of behind-the-meter plants. They referred to the Hon'ble Supreme Court judgment in CIVIL APPEAL NOS. 5074-5075 OF 2019 on the captive power plants.

Solar Bull Energy LLP has submitted that the draft Regulation prohibits consumers from installing Behind the Meter solar plants exceeding 500 kWp for captive power consumption. It has requested to remove this clause and rather

incorporate specific clauses to encourage and create specific guidelines for approval of Behind the Meter Solar Plants. Other states like Tamil Nadu, Madhya Pradesh, and Karnataka, specifically permit Behind the Meter solar power plants for capacities up to 100% of the contracted demand for captive power consumption. The APERC may advise the DISCOMs to create an online portal for applications and approvals.

Cleanmax Enviro Energy Solutions Pvt. Ltd has requested to provide a simple mechanism for projects which do not intend to avail any benefit from the Grid under Gross/Net Metering/Net feeding billing. It has requested that a comprehensive mechanism for self-consumption/behind-the-meter projects should also be issued with a grace period of 3-6 months for availing such regularisation/connectivity as per the provisions of the regulations without any penal provisions.

FTCCI has submitted that the draft regulation prohibits consumers from installing Behind the Meter solar plants with a capacity exceeding 500 kWp for captive power consumption. This restriction may infringe the fundamental rights of consumers under the Electricity Act. It has suggested that APERC align its approach with other states like Tamil Nadu, Madhya Pradesh, and Karnataka, where Behind the Meter solar power plants are allowed for capacities up to the Contracted Demand for captive power consumption.

FAPCCI has requested that the behind-the-meter Plants with Battery or without Battery Storage facilities may be encouraged to participate in 'Grid stabilization measures like frequency correction' as a part of Ancillary Services with attractive promotional rates. Such a policy would encourage investment in such instruments and help strengthen the Electricity Market as well.

Novel Renewable Enegrsys Pvt. Ltd has requested to avoid permission for off-grid & zero export devices. It has requested to make sure the option of a net meter (detection of the export unit to consumed units) is given to the consumer.

Commission's analysis and decision:

The Commission has carefully examined the apprehension of the stakeholders and the DISCOMS' submissions. It may be noted that there is no restriction imposed by the draft Regulation to install the SRTPVS behind the meter when it has been established following the applicable laws. It only mandates permission of the DISCOMS concerned. Undoubtedly, the installation of SRTPVS behind the meter needs some modification to the Consumer's installation. In this regard,

clause 5.10.1 of GTCS is produced below.

“The Consumers shall not make any alteration to his installation or make any extension to any other adjacent premises, except as provided hereunder. Should the consumer at any time after the supply of energy has been commenced, desire to increase the number or size of lights, fans, motors etc on his premises or in any way alter the position of his wiring therein, notice thereof shall be sent in writing to the Company whose representative will call and inspect the proposed alteration within two weeks of the receipt of the request in writing and if, necessary, change the Meters and fuse and alter the service lines.”

As can be seen from the above, for any alterations in his installation by the Consumer, he shall send notice in writing to the DISCOM and the DISCOM’s designated officer shall inspect within two weeks from thereof. Hence, permission is mandated in the draft. The permission is required to avoid any back feeding of supply to Grid from such behind-the-meter SRTPVS installations in case any maintenance is undertaken by the utilities. The Hon’ble Supreme Court judgement quoted by some stakeholders has no relevance as it has only dealt with the question of whether the captive consumers/captive users are liable to pay the additional surcharge leviable under Section 42(4) of the Electricity Act, 2003. However, keeping in view all the objections holistically on this issue, the draft is modified as below.

“15. “Subject to the present regulation, all the provisions of GTCS, Supply Code, and other relevant regulations /guidelines applicable to the consumers, in general, shall also be applicable to prosumers. The SRTPVS behind the Consumer’s meter, not involving either Net Metering Arrangement or Net Billing Arrangement, shall not be installed without prior intimation to the DISCOM concerned.

Provided that the prosumer shall furnish an undertaking to pay the applicable charges as determined by the Commission from time to time for such capacity of SRTPVS installed behind the meter.

Provided also that in case the Consumer installs SRTPVs behind the Consumer’s meter without prior intimation to the DISCOM concerned, or such installation does not conform to Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 the SRTPVS shall be disconnected from the Grid after notice to the prosumer.”

For SRTPVs behind the meter already connected to the electricity system on the date of commencement of this regulation, the consumer shall take all necessary

steps to meet the technical standards specified by CEA within sixty days of the coming into force of this Regulation and intimate the same to the DISCOM concerned.

15. Energy Settlement and Billing

(i) Sub-Clause 16.1:

Draft

“16.1 Energy settlement and Billing shall be done on a monthly basis.”

Objections/Views/Suggestions

Cleanmax Enviro Energy Solutions Pvt. Ltd has requested to align the settlement mechanism of the net metering as per the provision of the Rules 2021. It has requested to introduce the settlement mechanism of net billing/feed-in without any capacity restriction (up to the load) in line with the provisions of the Rules 2020 and its amendments.

Commission’s analysis and decision:

The net billing/net feed in as defined in the Rules has been adopted in this Regulation.

(ii) Sub-Clause 16.2

Draft

“16.2 The Distribution Licensee shall show, separately, the energy units exported, the energy units imported, and the net energy units billed to the prosumers in their bill for the respective billing period.”

Objections/Views/Suggestions

APEPDCL & APSPDCL have submitted that in the Net Metering scheme, DISCOMs propose to bill net imported energy (energy drawn from the DISCOM Grid) and net exported energy (Energy exported to DISCOM Grid) distinctly and settle the bill on monthly basis. Given this the clause may be reworded as follows:

“The Distribution Licensee shall show, separately, the energy units exported, the energy units imported, to the prosumers in their bill for the respective billing period.

The Billing method to the Gross/Net metering domestic consumers shall be

changed to non-telescopic instead of telescopic and ToD tariff as determined by the Commission shall be made mandatory for all prosumers availing this scheme.”

Commission’s analysis and decision:

The Commission finds no reason to change the definition in the draft.

(iii) Sub-Clause 16.4

Draft

“16.4 Net Metering: The energy exported from the SRTPVS shall be adjusted against the consumption of energy from the DISCOM in every billing month. In the case of different rooftops belonging to a single owner in a city or town, the combined energy exported from SRTPVSs shall be adjusted against the combined consumption recorded in various multiple connections of the same consumer. In the case of a group of persons/ societies setting up SRTPVSs, the generation from such SRP shall be treated as a collective generation for the supply of power to the households of for each society /group member. Such energy generated from SRTPVSs shall be prorated as per the installed capacity share indicated in the Agreement between the group/society and DISCOM. This computed energy share shall be adjusted against the consumption of energy for each consumer of such group in every billing month. In the case of Apartments/Group Houses, a common service meter may be used for net metering.”

Objections/Views/Suggestions

APEPDCL has submitted that the energy exported from the SRTPVS should not be adjusted against the consumption of energy from DISCOM. Both are to be treated exclusively and distinctly. If export energy is deducted from the consumption, the energy billed would get reduced and due to the telescopic nature of billing the effective tariff paid by the consumers further falls thus causing a huge financial burden to the DISCOMs. In the case of group net metering or multiple consumers/generation points availing net metering facility, the energy generation would be adjusted against the energy consumption on a 15-minute time block basis and aggregated for a month for billing purposes. This is necessitated because, in the case of in-house generation, the production is consumed locally by the load and the excess generation gets exported and recorded as it is in the net meter.

Whereas in the group net metering, generation injection happens on a standalone basis and is exported to the Grid as it is. The exported generation is allocated to different consumers in similar lines of OA transactions. That is the reason why the DISCOMs are seeking time block-wise settlement for these transactions. The energy generated from SRTPVs shall be prorated as per the installed capacity share in the Agreement between the group/society and DISCOM. If there is any modification in the ratio of shares in SRTPV, then a revised agreement to that effect shall be entered with DISCOM and billing with shareholding shall commence from next month billing onwards.

APSPDCL has submitted that net metering causes significant losses to DISCOM as the cost of supply of power to the prosumer is in the range of Rs.7.53 per unit as per the Retail Supply Tariff Order for FY2023-24. Adjusting of generation of power from the solar rooftop causes under-recovery of transmission, PGCIL, ULDC, SLDC & Distribution cost which the DISCOMs incurs to supply power to the prosumer. The same is against the provisions of Section 61 (b) of the Electricity Act, 2003 where it is stated that the appropriate Commission shall specify the terms and conditions for the determination of tariff and in doing so shall be guided by the provision that the generation, transmission, distribution and supply of electricity are conducted on commercial principles. Also, it is against natural justice.

Also, the prosumer consumes roughly 1/3rd of his consumption during solar hours(Daytime). Balance 2/3rd consumption occurs during non-solar hours (Evening and nighttime). During this period, the consumer draws from the grid. Hence, the DISCOM has to purchase from thermal plants/open market at higher tariffs and supply. Net metering causes a financial burden to the DISCOM. Hence, only gross metering may be allowed.

APCPDCL has submitted that during daytime APDISCOMs have excess power generation. More Solar power may not be required as DISCOMs and GoAP have entered P.S.A. with SECI for the supply of 7000 MW Power for 25 Years. That Discoms are already having excess RPPO than required. The rate of sale of excess RE Certificates is less than the average pooled power purchase cost at which DISCOMs are paying to the SRTPVS consumers. The Govt. of AP encourages the pumped storage power and hydrogenation

in the state of Andhra Pradesh. Large sections of consumers do not have solar rooftop plants and only cash-rich consumers are being benefited. The present system of energy settlement is a burden and the same is being passed on to the poor consumers.

APCPDCL has submitted that the Government of Andhra Pradesh has issued amendments to the Andhra Pradesh Solar Policy, 2018 vide G.O.Ms.No.35 and withdrawn the facility of Energy banking and drawl. The Energy exported by Solar Rooftop consumers to the APDISCOM grid shall be treated as null and void as per Govt. of AP Policy G.O.Ms.No.35 to be considered and incorporated.

SWAPNAM has submitted that while billing the net imported energy from the licensee, such imported energy shall be billed on a pro-rata basis i.e., the total net imported energy shall be divided by the number of service connections/connected load and then billed for individual service connections as per the tariff orders.

Commission's analysis and decision:

As regards the DISCOMS submissions, of a similar kind have already been discussed supra. Nevertheless, the promotion of solar rooftops is national and State policy. Under section 86 (1) (e) of the Electricity Act, 2003, the Commission shall also provide suitable measures to promote renewable energy. As generation from solar rooftops is distributed generation it has advantages to the system as well as to individual consumers. For a system or other stakeholders, despite a clean environment, reduces further investments in the network due to less projected future demand and aids in reducing T&D losses. Further, the Commission is not introducing net metering for the first time and it has been under implementation since 2015 in the State. This Regulation is only intended to address all the issues of the prosumers and the DISCOMS holistically in the place of guidelines in vogue. Hence, all the concerns expressed by the DISCOMS on net metering lack merit. *Regarding the suggestion on the revised agreement when the share of the individual consumers changes, the change in shareholding is permitted already once a year and this condition will be made as part and parcel of the agreement hence entering a revised agreement does not arise. Hence, the draft is retained.*

(iv) Sub-Clause 16.5

“16.5 In case of excess import/consumption over the export of energy in any billing month, payment shall be made by the prosumers for the net energy at the applicable retail supply tariff as determined by the Commission. In case of excess export of energy over the import of energy in any billing month, payment shall be made by the Discom monthly for such excess energy at the Feed-in Tariff as decided by the Commission”

Objections/Views/Suggestions

M/s Sun Rays Green Power Solutions and others have requested to amend the last line of Clause 16.5 as “In case of excess export of energy over the import of energy in any billing month, payment shall be made by the DISCOM monthly for such excess energy at the Retail Tariff as decided by the Commission.”

M/s Edgegrid requested to include Net energy in the Regulation in case of excess import/export.

APEPDCL has requested to modify the draft that “ in case of excess import/ consumption over the export of energy in any billing month, payment shall be made by the prosumers for the net energy at the applicable retail supply tariff as determined by the Commission. Further, if net energy is less than minimum energy as per the APERC tariff order, then payment shall be made by the prosumers for minimum energy at the applicable retail supply tariff as determined by the Commission. In case of excess export of energy over the import of energy in any billing month, payment shall be made by DISCOM quarterly for the net energy computed at the Feed-in-Tariff as decided by the Commission”

Commission’s analysis and decision

The request for payment of Retail Supply Tariff for the net exported energy as requested by stakeholders is already declined by the Commission. The Commission is also not inclined to accept the request of APEPDCL for the quarterly payment since the payments are already being made monthly as per the present guidelines in vogue. However, after examining the suggestions of APEPDCL on the payment for minimum energy, the draft is modified as below.

“16.5 In case of excess import/consumption over the export of energy in any

billing month, payment shall be made by the prosumers for the net import energy at the applicable retail supply tariff as determined by the Commission. In case of excess export of energy over the import of energy in any billing month, payment shall be made by the Discom monthly for such net Export excess energy at the Feed-in Tariff as fixed by the Commission”

Provided that in case the net energy drawn by the prosumers is less than the minimum energy specified in RST Orders issued from time to time, then payment shall be made by the prosumers for minimum energy at the applicable retail supply tariff as determined by the Commission from time to time.

(v) Sub-Clause 16.6

Draft

“16.6 The quantum of electricity units exported by the prosumers shall be measured in kVAh in case the applicable tariff to the respective prosumers provides for energy billing on a kVAh basis.”

Objections/Views/Suggestions

APEDCL has submitted that all the net exported units by the prosumer to the grid shall be billed as per KWH only

M/s Eshan Energy Private Limited has requested that the quantum of units injected into the grid be in Kwh, the same has to be billed by DISCOM in Kwh only.

M/s Argo Solar Private Limited has submitted that the Commission’s clarification on measuring the exported energy in kVAh and not kWh, for consumers who are billed in kVAh is welcome. Currently, some DISCOMs are considering exported energy in kWh while offsetting the energy imported in kVAh.

Fourth Partner Energy has requested the Commission to clarify that the export kVAh should only be net off against import kVAh, where billing is done on a kVAh basis. Currently, DISCOMs are using export kWh to be netted off against import kVAh without any reason.

Commission’s analysis and decision:

The draft is self-speaking and needs no further explanation.

(vi) Sub-Clause 16.7**Draft**

“16.7 Where a prosumer is within the ambit of the Time of Day (ToD) tariff, the electricity consumption in each time block during the billing month is netted off with the total export quantum of electricity injected during the billing month divided by the time blocks in a billing month.”

Objections/Views/Suggestions

APEPDCL & APSPDCL have submitted that even for the Consumers covered under the ToD mechanism, average allocation duly dividing the consumption in the month by time blocks can not be allowed. Time block-wise settlement needs to be carried out.

Commission’s analysis and decision:

The draft is modified in line with the decisions taken elsewhere in this order of the Commission as under

“16.7 Where a prosumer is within the ambit of the Time of Day (ToD) tariff, the electricity consumption in each time block during the off-peak hours in the billing month is netted off with the total export quantum of electricity injected during the billing month divided by the number of time blocks during the off-peak hours in a billing month”

(vii) Sub-Clause 16.8**Draft**

“16.8 Gross Metering: The payment for energy exported from the SRTPVSSs will be computed at Feed-in Tariff as decided by the Commission. This shall be adjusted against the total billing demand for consumption of energy by the prosumers from DISCOM in every billing month. In case gross energy exported from SRP billing amount exceeds the billing demand of the DISCOMS during any billing month, such an excess amount shall be made by the Discom to the prosumers.”

Objections/Views/Suggestions

M/s Edgegrid has requested for illustration for billing under gross metering in the Regulation.

APEPDCL has requested that in case of gross energy exported from SRP, the billing amount exceeds the billing demand of the DISCOMs during any billing month, payment shall be made by DISCOM quarterly for excess amount.

Commission’s analysis and decision:

The DISCOMS’s request was already addressed earlier and for easy understanding of the billing, the illustrations are provided in the final Regulation for all metering models. However, after correcting the grammar, the draft is modified as below.

“16.8 Gross Metering: The payment for energy exported from the SRTPVSSs will be computed at Feed-in Tariff as fixed by the Commission. This shall be adjusted against the total billing demand for consumption of energy by the prosumers from DISCOM in every billing month. In case gross energy exported from SRP billing amount exceeds the billing demand of the DISCOMS during any billing month, such an excess amount shall be paid by the Discom to the prosumers.”

16. CAPACITY TARGETS TO DISCOMS

Clause 17

Draft

“As the DISCOMS’ overall RE power procurement is over and above the RPO specified by it, the Commission is not inclined to fix any capacity-specific targets under Group/Net Metering. However, the Commission will review the cumulative capacities of SRTPVSSs from time to time based on the information furnished by the DISCOMS on the cumulative capacities achieved during each financial year keeping in view its advantages to the overall power system and future energy requirements.”

Objections/Views/Suggestions

M/s Argo Solar Private Limited has suggested setting a yearly target for net metering, gross metering, net billing and behind-the-meter solar power generation, which is all forms of distributed solar generation, so that the energy shortfall projected by DISCOMs in their load forecast plans (as presented to APERC recently) can be mitigated sustainably, without much investment burden on the DISCOMs, TRANSCO and GENCO.

APEPDCL & APSPDCL have stated that as noted by the Commission, DISCOMs are already exceeding the compliance requirements of their RPPO. Even as per the future RE capacity additions approved by the Commission particularly 7000 MW Solar procurement from M/s SECI commencing from September 2024, the DISCOMs are expected to outperform the targets specified by the Commission shortly. The Gross Metering is almost akin to procurement of power through a Long Term PPA and the quantum of procurement shall be subjected to regulatory scrutiny under the provisions of section 86 of the Electricity Act 2003. Presently all new capacity contracts are entered into with the prior approval of the Commission subject to the need & necessity of such procurement. If Gross Metering is allowed, as the Solar installations achieved Grid parity in terms of cost of production, more capacity is likely to be added without coming into the ambit of planning & knowledge of the DISCOMs. The DISCOMs requested the Commission to specify a cap of capacity that could be added to Gross Metering every year. Further, within the capacity allowed by the Commission, the DISCOMs may permit the developers on a first come first serve basis. If permitted by the Commission, DISCOMs may conduct reverse tendering to seek a discount on the feed-in tariff approved by the Commission to the extent of permitted annual capacity.

Commission's analysis and decision

The draft already made it clear the object behind making the Regulation. However, if the DISCOMs receive an unprecedented response for Gross Metering, they shall approach the Commission for practice directions under clause 20 of the Regulation. Be that what it may, the Commission will conduct the Regulatory Impact Assessment one year from the date of publication of this Regulation to take stock of the Ground situation as noted earlier. **The DISCOMs are directed to update the Commission on the number of applications received and total expected capacity addition from such applications under different models under this Regulation to the Commission at the end of every month.**

17. SHARING OF CLEAN DEVELOPMENT MECHANISM (CDM) BENEFITS IF ANY

Clause 18

Draft

"The Consumer shall retain the entire proceeds of CDM benefits in the first year after the date of commissioning of SRP. In the second year, the share of the Distribution Licensees shall be 10% which shall be progressively increased by 10%

every year till it reaches 50%, after that, the proceeds shall be shared in equal proportion by the Consumer and the Distribution Licensees.”

Comments received from Stakeholders

Fourth Partner Energy has submitted that since the Distribution Licensee is not investing any amount in setting up the solar power plant, they cannot be entitled to any of the CDM benefits.

Fourth Partner Energy has submitted that CDM benefits should accrue only to the investor of solar assets, and not to DISCOM, as they are already charging Grid Support Charges, and benefitting by paying less than APPC for net exported energy. The CDM mechanisms keep changing and prices vary a lot. The realisation from these proceeds is very inconsistent and miniscule for rooftop plants, and a lot of transaction costs go into availing these benefits. So, sharing gross proceeds with DISCOM will only lead to commercial disputes between DISCOMs and consumers.

M/s Argo Solar Private Limited has submitted that they object to the clause proposing to share CDM benefits with the DISCOMs. This is a potential litigant and nuisance for the consumers who could be harassed by DISCOMs to share the financial details of CDM transactions, if any. CDM mechanisms have different names and different markets, often very illiquid and without any periodic transactions happening, it is difficult to project any financial benefits and timeline for receiving pay-outs from such mechanisms today, and no one knows what could happen in future. In such a scenario this type of mandate will only lead to unnecessary litigation between the consumer and DISCOMs, who are not going to invest any money in the project. Hence it requested the Commission to drop this clause from the final regulations.

Commission’s analysis and decision:

Keeping the potential issues in view, and also the present CDM status, the Commission is inclined to delete the clause from the final Regulation.

18. REPEAL AND SAVINGS

Clause 23

Draft

“23. Repeal and Savings

The SRTPVSs commissioned under the provisions of earlier/existing Guidelines shall stand governed by those guidelines till the completion of the term of such

agreements regarding the feed-in tariff. The internal procedures of the DISCOMS specified in existing guidelines on SRTPVs by EPDCL letter dated 18.02.2019 that are approved by the Commission by its order dated 25.05.2019 which are not in conflict with the present regulation shall stand saved.”

Objections/Views/Suggestions

Fourth Partner Energy has requested that the existing SRT Guidelines should be continued for under-construction projects to avail the benefits available in existing policy and applicable for applications submitted before the date of issue of new regulations since the draft regulations envisage a reduction in the capacity applicable for net metering. It has also stated that the under-process projects were envisaged and executed considering the benefits available in existing SRT Guidelines.

SWAPNAM has stated that projects having a capacity between 500 to 1000 kW may suffer unless clarity is issued on the treatment of ongoing projects. Further, it suggested that the prosumers may be allowed to complete projects within the time specified by the DISCOMS in feasibility certificates. Thereafter, the new regulations can be applied even for these projects.

M/s Argo Solar Private Limited has submitted that there will be many under-construction SRTPVs for which feasibility has been already issued or is under process, or the plants are in the construction stage, before the date of notification of these final regulations. It requested the Commission to clarify that such projects will continue to be operated under the current guidelines since their financial viability has been assessed by lenders or investors based on current guidelines, and not proposed.

M/s Edgegrid has submitted that instead of SRTPV “commissioned” wording should have been “contracted” as a significant amount of investment is invested once contracted on the solar projects. Such regulatory uncertainty will affect the investments. Savings should not be restricted to Feed-In-Tariff but also other terms. For example, there are no T&D charges currently. This draft is introducing 5% charges which should not affect the past projects and contracts till the term of their agreement.

Commission's analysis and decision:

This Regulation has a prospective effect from the date of publication in the Gazette. After examination of the suggestions, the Commission modifies the draft as below.

*“23 The **SRTPVSs** already Commissioned and those under various stages of construction including the cases wherein feasibility report was issued under the provisions of earlier/existing Guidelines shall stand governed by those guidelines till the completion of the term of such agreements in all respects including the feed-in tariff. However, in the cases, where after the issue of technical feasibility the projects are not completed as per the timelines stipulated in the existing guidelines as on the date of this Regulation coming into force, all such projects shall come under the purview of this Regulation. The internal procedures of the DISCOMS specified in existing guidelines on **SRTPVSs** by EPDCL letter dated 04.01.2019 that are approved by the Commission by its order dated 25.05.2019 which are not in conflict with the present regulation shall stand saved”*

- 19.** There are Objections/Views/Suggestions on aspects in Annexures also. Wherever the decisions are already made in this order on the aspects falling under Annexures, they have not been discussed. The aspects which are not discussed earlier in the Order have been discussed in the following paragraphs.

20. ANNEXURE-IV: TECHNICAL FEASIBILITY APPROVAL FORMAT

Objections/Views/Suggestions

FTCCI has requested that the requirement of CEIG approval for solar plants of capacities up to 2000 KW (AC capacities) be done away with. Consumer Self-certification along with a certificate from a Grade A Licenced Contractor should replace the CEIG certificates for Solar Plants of capacities up to 2000 KW (AC Capacity).

Solar Bull Energy LLP has submitted that currently, the solar plants above 75 kW require approval from CEIG whereas MNRE guidelines specify that Solar Plants up to 500 KW should be permitted with self-certification of electrical safety. Andhra Pradesh being a leader in the Renewable Energy sector, it is proposed that the requirement for CEIG approval be waived, allowing consumers to provide self-certification to the DISCOMs for Electrical Safety alongside a certificate from a Grade A Licensed Contractor for Solar Plants of capacities up to 2000 KW (AC Capacity).

M/s Sun Rays Green Power Solutions and others requested to include the line “CEIG approval is not required for SRTPV installations up to 56KWp [inclusive].” in Clause 8 of the terms and conditions

Commission’s analysis and decision:

The safety aspects of any electrical installation is under the purview of the Electrical Inspectors in terms of the Section 54 and 162 of the Electricity Act, 2003. The Orders issued from time to time by the Electrical Inspector/government are applicable however, the DISCOMS shall follow the same procedure in respect of SRTPVS as being followed in the release of new services. Accordingly, the draft will be modified.

21. There are some suggestions which do not concern any clause in the draft Regulation. Some of them which are relevant to the subject of the draft Regulation are discussed below.

- (i) **FTCCI** has requested that Government & Private Buildings, (Government, Residential, Commercial, Institutional & Industrial) having HT Connections with a Contract demand of 100 KVA and above be mandated to install solar power plants with a minimum capacity of 25% of their Contract demand.

Solar Bull Energy LLP has submitted that to promote Solar Power in the state of Andhra Pradesh, it is proposed that all the HT Consumers with a contract demand of 100 KVA and above be mandated to go for solar power plants with a minimum capacity of 50% of their contract demand or up to the maximum capacity permitted by their rooftops. This will increase environmental consciousness, promote distributed solar power plants and reduce the burden on HT and EHT transmission networks.

Commission’s analysis and decision:

The DISCOMS in the state of Andhra Pradesh have been procuring the RE over and above the obligations. Hence, there is no need to impose such conditions. The imposition of such a condition may badly affect the interest of DISCOMS and its other consumers.

- (ii) **FTCCI** has requested to ensure a more inclusive and comprehensive decision-making process, suggesting that APERC establish a committee of consumers, where the representatives of various consumer bodies can voice the concerns and issues faced by their members. This committee

would provide a platform for routine discussions and collaboration, ensuring that consumer perspectives are adequately considered.

Commission’s analysis and decision:

It is to be noted that the Commission appoints a State Advisory Committee (SAC) under Section 87 of the Electricity Act, 2003 to represent the interests of commerce, industry, transport, agriculture, labour, consumers, non-governmental organisations and academic and research bodies in the electricity sector.

- 22.** The Commission has decided to adopt the remaining clauses proposed in the draft without alterations where stakeholders have neither submitted comments for modification nor opposed the same. However, the appropriate corrections are made wherever necessary inline with the decisions in the Order.
- 23.** In terms of the above decisions of the Commission, the Regulation is finalised and the same is enclosed as Annexure-II to this Order. The list of objectors is attached as Annexure-I.

Sd/-
Thakur Rama Singh
Member

Sd/-
Justice C.V. Nagarjuna Reddy
Chairman

Sd/-
P.V.R Reddy
Member

Annexure-I

S.No.	Stake Holder Name
1	Sri. Prabhakar B.N. Society for Water, Power & Natural resources conservation Awareness and Monitoring (SWAPNAM), Address: B-229, JK Poojitha's Waterfront Apartment, Opp. YSRCP Central Office, Tadepalli-522501.
2	Sri. Anubhav Das, BHEL-Vizag
3	M/s. Sunrays Green Power Solutions, S.No: 196/1, Vellatur Road, Bhattiprolu(V& M), Guntur-522256.
4	M/s. B. Viswa Prasad, (Andhra Pradesh Solar Integrators Welfare Association, Regd. Office : 2-15-48/4/19, Sector-9, MVP Colony, Visakhapatnam-530017,
5	M/s. Southern Global Energy, H.No #48,11/2-5B, Beside Sri Mahitha School, 4 th Road , Currency Nagar, Vijayawada-520008
6	M/s. Eshaan Energy Pvt Ltd, Flat No 210, APHB Towers, Opp GVR Music College, BRTS Road, Vijayawada-520003.
	<u>Eshan Energy dated 27.09.2023</u>
7	Sri. B. Roja Ramani - LG Infrastructures,50-77-3, Ground Floor, Sai Satya Nilayam, Seethampeta, Visakhapatnam - 530016
8	Sri. P.T.V.R Krishna Rao, Sunrise solar solutions, Visakhapatnam
9	Sri. M. Ham Kumar- Rockland Industries Pvt Ltd
10	Sri Ashu Gupta -Clean Max Enviro Energy Solutions Pvt Ltd, 4th Floor, The international, 16 Maharshi Karve Road, New Marine Lines Cross Road No. 1 , Churchgate, Mumbai-400020.
11	Sri. IL Solar, 22B-9-22, ValluriVari Street, Opp CPI (M) office, PowerPet, Eluru, West Godavari-534002.
12	Sri. Nagaraju.P, Ray Power Solutions, Plot N0-287, Sector-5, MVP Colony office. Visakhapatnam-17.
13	Sri. Virat Mody Solar Sity , 8-9-23/B Chittaranjan Street, Srikakulam 532001.
14	Sri. D.Satish Kumar, Eco Mitra Solar Pvt Ltd, #9-14-7/10, 303, Amma Apartments, V.I.P Road, C.B.M Compound, Visakhapatnam-530003.

S.No.	Stake Holder Name
15	Sri. Rajesh Peddu, Argo Solar Private Limited- #401, 4th Floor, Shanmukh Empire, Plot No 83, Swamy Ayyappa Society, Madhapur, Hyderabad
16	M/s. RAM & Shyam Technologies India Pvt. Ltd. #401, 4th floor, Pampana Plaza, Rama Talkies Road, Opp. Laxmi Hyundai Car Showroom, Visakhapatnam-530016.
17	Sri. K Srinivas- SolarBull Energy LLP, Regd. Office: A202, Aditya Hilltop, Near Senor Valley Villas, Filmnagar, Hyderabad-500096.
18	Sri. M Gangadhar- Sree Arka Greentech Pvt. Ltd.- D. No: 4-56/2, Vadisaleru, Rangampeta Mandal, East Godavari District.
19	Sri. Babu Naidu-Assure Energy System- # 51, Aruna Enclave, Trimulgherry, Secunderabad - 500015.
20	Sri. I V Bhadra- Bandaru Energies Pvt Ltd- #21, H.No.: 6-3-569/1/2/1, Rockdale Compound, Somajiguda, Hyderabad-500082. .
21	M/s. Federation of Andhra Pradesh Chambers of Commerce and Industry (FPCCI), O/o 54-16-½-A, 3rd Floor, Central Exceise Colony, Road No. 1, Gunadala, Vijayawada
22	Sri. B.Chinna Alluraiah- Seven Rays Net Metering Pvt Ltd, Sanjeev Reddy Road , Beside paragon polymer products, Nunna village, Vijayawad rural, Krishna District.
23	Sri. R. Shiv Kumar, ANDHRA PRADESH TEXTILE MILLS ASSOCIATION.
24	M/s. Muneer-Sure Energy One Private Limited, #12-2-709/C/191, Padmanabhanagar Colony, Hyderabad-500 028
25	M/s. Andhra Pradesh Chambers of Commerce & Industry Federation, #40-1-144, 3rd Floor, Corporate Building, Hotel Fortune Murali Junction, M.G. Road , Vijayawada-520010.
26	Sri. P.T.Kutumbarao, Novel Renewable Enegrsys Pvt. Ltd.,#40-25-54, 1st Floor, Sevaniketan Road, Patamatalanka, Vijayawada - 520010,
27	Sri. Paila Venkata Ramana Projects - Fourth Partner House, Plot No. N46, House No.4-9-10, HMT Nagar, Hyderabad-500076
28	Sri. Vivek Ranjan,Amplus Energy Solutions Private Limited. A-57, DDA Sheds, Okhla Industrial Area, Phase-II, New Delhi-110020.
29	Sri. M. Chandrabose, M/s Surya Power Tree, 8-52-1/2, Chinna Waltair, Visakhapatnam - 530003.

S.No.	Stake Holder Name
30	Sri. T. Sujatha, The Federation of Telangana Chambers of Commerce and Industry-FTCCI, 11-6-841, Federation House, Federation Marg, Red Hills, Hyderabad - 500 004
31	Sri. T.Bhaskara Rao, -Bhaskara New Electronics-Shop No.1&2, Gunduvari Complex, Opp:Reliance Super, Bhimavaram-1.
32	Sri. B. Raja Sekhar-Andhra Pradesh Chambers of Commerce and Industry Federation, 40-1-144, 3rd floor, Corporate Centre, Beside Chandana Grand, Brindavan Colony, M.G. Road, Vijayawada-520010
33	Sri. Chakka jayababu,(Managing Partner), Qbarons Natural Energy Systems, D.no.49-56-3/2, Viduthnagar Narshimnagar, Visakhapatnam-530016
34	Sri. Praveen Bandhakavi
35	Sri. J V Rao
36	Sri. S V Rao-MSL Renewable Energy power private limited-Visakhapatnam
37	M/s. Southern Global Energy
38	Certain Group of Consumers
39	Sri. P Nagesh kumar
40	Sri. Mahaboob Arab
41	M/s. Jai Energy Solutions
42	Namburu Padmaja
43	Sri. Chanukya Nuthalapati
44	Sri. GSR Ravi
45	Sri. Sudeepthi Karra
46	Sri. S.K.Fathima
47	Sri. Kaneesh Kumar
48	Sri. Deepika Yarra
49	Sri. Satya

S.No.	Stake Holder Name
50	Sri. Vemuri Hari Kiran
51	M/s. Solar Systems
52	Sri. MM Rao
53	Sri. Nithiyandam Mani
54	Sri. Kavuri Satyanarayana
55	Sri. KRC Raju
56	Sri. Seetharama Filling Stations
57	Sri. Yagala Venkatesh
58	Perumalla Uma
59	M/s. GTR Solar Power
60	Sri. GSK Gopi Shankar
61	Sri. Kotaa Kishore
62	Sri. Naaga Sathesh
63	M/s. Yash Agency
64	Sri. Pamidi Uday Bhaskar
65	Sri. Naga Manikanta
66	Sri. Kalluri Nisanth
67	Sri. Dr Kallaganti Nagarjuna Rao
68	Sri. Bharat
69	Chief General Manager, RA & PP, APEPDCL, Visakhapatnam.
	Managing Director , APCPDCL, Vijayawada.
70	The Managing Director , APCPDCL, Vijayawada. Dated 27.12.2023
71	Chief General Manager, RAC & IPC, APSPDCL, Tirupati
72	Sri. Charan Teja Reddy
73	New and Renewable Energy Development Company of AP (NREDCAP)

Annexure-II
ANDHRA PRADESH ELECTRICITY REGULATORY
COMMISSION
HYDERABAD

APERC (The Grid Interactive Solar Rooftop Photovoltaic System under Gross/Net Metering) Regulation, 2023.

(Regulation 4 of 2023)

Introduction

Hitherto, the Grid Interactive Solar Rooftop Photovoltaic Systems of a prosumer in the State of Andhra Pradesh are regulated by the Guidelines approved by the Commission from time to time. The guidelines last prepared by APEPDCL in its letter dated 04.02.2019 were approved by the Commission by its Order dated 25.05.2019. Subsequently, the Government of India issued the Electricity (Rights of Consumers) Rules 2020 inter alia envisaging the promotion of Solar Rooftop power plants. The Commission is also vested with the responsibility to promote the generation of electricity from Renewable sources, captive, and co-generation of energy in the state of Andhra Pradesh under the Electricity Act, 2003 (Act No.36 of 2003). Further, many consumers have brought to the notice of the Commission during public hearings of the RST Order for FY 2023-24 certain issues relating to the Solar Rooftop Photovoltaic plants and the implementation of Solar Rooftop guidelines by DISCOMS. The DISCOMS have also addressed a letter to the Commission expressing some concerns in the implementation of the Solar Rooftop Guidelines. In view of the foregoing, the Commission issued a comprehensive draft Grid Interactive Solar Rooftop Photovoltaic Systems under gross/net metering regulation to address the various issues raised by the consumers & some of the concerns raised by the DISCOMS effectively, align to the extent possible with the various provisions of the Government of India Rules, and to promote the distributed Renewable Energy generation in the state of Andhra Pradesh in the place of existing guidelines. After considering all the views/objections/suggestions in this regard as discussed in the Order dated 22.02.2024, in exercise of powers under

Sections 9, 61, 66, 86 (1) (e) and 181 of the Electricity Act, 2003 conferred on it and all other powers enabling it in this behalf, the Commission makes the final Regulation as under:

1. Short title, Applicability, and Commencement:

1.1 This regulation shall be called the Andhra Pradesh State Electricity Regulatory Commission (**The Grid Interactive Solar Rooftop Photovoltaic Systems under Net/Gross Metering**) Regulation, 2023.

1.2 This Regulation shall come into force from the date of its publication in the Official Gazette.

1.3 This Regulation shall be applicable to all the Grid-Interactive Solar Rooftop Photovoltaic systems with/ without Battery Energy Storage Systems (BESS), installed and commissioned in the areas of Distribution licensees, Andhra Pradesh as per the provisions stipulated herein.

2. Definitions and interpretations:

1.4 In this regulation, unless the context otherwise requires,

- (i) **“Act”** means the Electricity Act, 2003 (Act No.36 of 2003) as amended from time to time;
- (ii) **“Agreement”** means an agreement entered into by a Distribution Licensee and a consumer for executing a Net Metering/Gross Metering connection;
- (iii) **“Billing Cycle or Billing Period”** means the period for which the regular electricity bills are prepared for different categories of consumers by the Distribution licensee as specified by the Commission;
- (iv) **“Commission”** means the Andhra Pradesh Electricity Regulatory Commission constituted under the Act;
- (v) **“Consumer”** means a consumer as defined in sub-section (15) of Section 2 of the Act;
- (vi) **“Contracted load / Contracted demand”** means as defined in the General Terms and Conditions of Supply (GTCS) approved by the Commission;
- (vii) **“Distribution Licensee”** means a licensee authorised to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply;
- (viii) **“ESCO”** means energy service company.

- (ix) **“Gross Meter”** means a Bi/Unidirectional meter used for accounting and billing of electricity supplied to/from the Distribution licensee by a prosumer(s).
- (x) **“Gross-metering”** means a mechanism whereby the total energy exported from the Grid-Interactive Solar Rooftop Photovoltaic system and the total energy consumed by the prosumer from the DISCOM is measured separately through appropriate metering arrangements and for the billing purpose, the total energy consumed by the prosumer is accounted for at the applicable retail tariff as per Tariff Order and total energy exported to the DISCOM is accounted for at feed-in tariff as fixed by the Commission
- (xi) **“Virtual Net Metering”** means a mechanism whereby total energy exported from the Grid-Interactive Solar Rooftop Photovoltaic system of a group of prosumers/society is exported to the grid through a gross meter. The exported such energy is adjusted in the electricity service connection(s) of the same Group (society) prosumers in proportion to the share in their Grid-Interactive Solar Rooftop Photovoltaic system in units (kWh/kVAh) to arrive at the net imported or exported energy by an individual prosumer in the Group/Society from/to the Distribution licensee during the applicable billing period/cycle located within the same Electricity Revenue Office (ERO) of distribution licensee’s area of supply. The net energy imported by the prosumers is billed by the distribution licensee on the basis of the applicable retail tariff as per the Tariff Order. The net energy exported by the prosumers is paid by the Distribution licensee at the Feed-In-Tariff as fixed by the Commission.”

Provided that in case the prosumer(s) is/are in the ambit of the Time of Day (ToD) tariff, the share of exported energy of such prosumer(s) under virtual net metering shall be netted off against his/their electricity consumption during off-peak hours.

Provided also that the applicable T&D losses and charges as per MYT orders of the Commission applicable for relevant periods from injection point to drawal point shall be deducted while adjusting the generation against the consumption.

- (xii) **“Group Net Metering”** means a mechanism whereby energy exported from the Grid-Interactive Solar Rooftop Photovoltaic system of an

individual Prosumer at one or more points is adjusted in consumption by multiple electricity service connection(s) of her/him in units (kWh/kVAh) to arrive at the net imported or exported energy from/to the Distribution licensee during the applicable billing period/cycle located within the same Electricity Revenue Office (ERO) of distribution licensee's area of supply. The net energy imported by the prosumer is billed by the distribution licensee on the basis of the applicable retail tariff as per the Tariff Order. The net energy exported by the prosumer is paid by the Distribution licensee at the Feed-In-Tariff as fixed by the Commission.

Provided that in case the prosumer is in the ambit of the Time of Day (ToD) tariff, the exported energy of such prosumer under Group net metering shall be netted off against electricity consumption of his multiple services during off-peak hours.

Provided also that the applicable T&D losses and charges as per MYT orders of the Commission applicable for relevant periods from injection point to drawal point shall be deducted while adjusting the generation against the consumption.

- (xiii) "Individual net-metering" means a mechanism whereby energy exported to the Grid from the Grid-Interactive Solar Rooftop Photovoltaic system of an individual Prosumer is adjusted from energy imported from the DISCOM in units (kWh/kVAh) to arrive at the net imported or exported energy from/to the Distribution licensee during the applicable billing period/cycle using a Net Meter at the point of supply. The net energy imported by the prosumer is billed by the distribution licensee on the basis of the applicable retail tariff as per the Tariff Order. The net energy exported by the prosumers is paid by the Distribution licensee at the Feed-In-Tariff as fixed by the Commission.;

Provided that in case the prosumer is in the ambit of the Time of Day (ToD) tariff, the exported energy of such prosumer under individual net metering shall be netted off against his/her electricity consumption during only off-peak hours.

- (xiv) "**Interconnection point**" means the interface of the Solar Rooftop Photo Voltaic System with the network of distribution licensee/Transco;

- (xv) **“Net Meter”** means a Bi-directional meter used for accounting and billing of electricity supplied to and from the prosumer(s) by a Distribution licensee.
- (xvi) **“kWp”** means kilo Watt peak;
- (xvii) **“Prosumer”** means a person who consumes electricity from the grid and also injects electricity into the grid of a distribution licensee.
- (xviii) **“RESCO” means** the Renewable energy service company.
- (xix) **“Solar Rooftop Photovoltaic Power Plant” or “Solar Rooftop Photovoltaic System” “(SRTPVS)”** means the Grid Interactive Solar Photovoltaic Power Plant that uses the sunlight for direct conversion into electricity through photovoltaic technology, which is owned and operated by a prosumer(s) with his/her/their own investment/third-party investment installed on his/her/their rooftops or walls or open land/space within their premises or any open land outside the premises of the consumer(s) in case of group and virtual net metering.
- (xx) **“Tariff Order”** means the Retail Supply Tariff Order issued by the Commission from time to time.
- (xxi) **“Third-party investment”** means an investment by any third party developer for exporting the energy from the Grid Interactive Solar Rooftop Photovoltaic system under the gross/net metering/net billing or net feed-in on a rooftop/wall/open space within the consumer’s premises or any open space outside the consumer(s) premises through a commercial agreement between such consumer(s) and third party.
- (xxii) **“Feed in Tariff ”** means the tariff fixed by the Commission at which the exported energy under Net/Gross metering or Net billing/Net feed-in arrangement shall be paid by the distribution licensee to the prosumers;
- (xxiii) **“Net-billing or Net feed-in”** means a single bidirectional energy meter used for net-billing or net feed-in at the point of supply wherein the energy imported from the Grid and energy exported from Grid-Interactive Rooftop Solar photovoltaic system of a Prosumer are valued at two different tariffs, where-
 - (i) the monetary value of the imported energy is based on the applicable retail tariff;

- (ii) the monetary value of the exported solar energy is based on a feed-in tariff determined by the Commission;
- (iii) the monetary value of the exported energy is deducted from the monetary value of the imported energy to arrive at the net amount to be billed (i.e., credited);

2.1 The words and expressions used and not defined in this Regulation but defined in the Act, shall have the meanings assigned to them in the Act. Expressions used herein but not specifically defined in this Regulation or in the Act but defined under any regulations made by the Commission or under any law passed by a competent legislature and applicable to the electricity industry in the State shall have the meaning assigned to them in such law.

3. General

3.1 The Solar **Rooftop Photovoltaic Power Plant**” or **“Solar Rooftop Photovoltaic System”** shall be hereinafter referred to as **“SRTPVS”**

3.2 The distribution licensee shall offer the provision of net metering /gross metering / Net billing or Net feed-in arrangement to the consumer, who intends to install the grid-interactive SRTPVS, in its area of supply on a non-discriminatory and first come first serve basis.

3.3 The consumer is eligible to install the grid-interactive **SRTPVS** of the rated capacity as specified under these Regulations; A Minimum vacant roof area of 10 sq mtr or 100 sq. ft is required for the installation of 1 KWp system.

3.4 The consumer may install an SRTPVS with or without Battery storage. Provided that the battery charging shall be either from an SRTPVS or from DISCOMS’s supply.” In the later case, the consumer shall pay charges for the power consumed at the DISCOM’s tariff.

3.5 The consumers of the EHT network shall approach the Transco through the DISCOM for connecting the SRTPVSs under the Gross Metering.

3.6 The prosumer shall be responsible for the safe operation, maintenance, and rectification of any defect in the **SRTPVS** up to the point of Net/Gross Meter.

3.7 The Distribution Licensee shall have the right to disconnect the SRTPVS from its network at any time in the event of any threat of accident or disturbance from such System to its distribution system so as to avoid any

accident or damage to it or the prosumer violating any of the terms of this regulation or the terms of the agreement between it and the DISCOM.

When SRTPV is disconnected, the Distribution Licensee shall within 24 hrs of such disconnection call upon the prosumer to rectify the defect and immediately on such rectification the licensee shall restore connection to the SRTPV concerned.

3.8 The Grid Interactive SRTPVS must have appropriate protection for islanding the SRTPVS from the Distribution Licensee's network to prevent any power feeding into the grid in case of failure of incoming supply from the Grid. The protection scheme shall be installed such that when there is no incoming supply owing to an outage in the network or load shedding by the DISCOM, under no circumstances, there be any power injection from the Solar Rooftop Plant or Battery System connected thereto into the Grid, to prevent back feeding of supply and thus accidents.”

3.9 In the case of the establishment of the **SRTPVS** by an individual consumer/Group of consumers/Society with the Third Party Investment through a commercial agreement, a copy of such commercial agreement shall be furnished to the DISCOM before synchronization of such **SRTPVS** to the Grid.

4. Eligibility

4.1 All consumers of AP Discom(s) are eligible for setting up of the Grid-Interactive SRTPVS with/without a Battery Energy Storage System with their investment or through third party investment.

4.2 The Consumer(s) are free to choose Net metering or Gross Metering or Net Billing/Net Feed-in option for the sale of power to DISCOM.

5. Capacity of Rooftop Systems

5.1 The capacity of a Grid-Interactive SRTPVS with/without Battery Energy Storage System under Net/Gross metering or net billing mechanism or net feed-in to be installed at the premises of any individual prosumer shall not be less than 1 kWp.”.

5.2 The capacity of the Grid-Interactive SRTPVS with/ without Battery Energy Storage System under the multiple services of an individual consumer under Group Net Metering, and a group of consumers under the virtual net

metering framework to be installed shall not be less than 5 kWp.”

- 5.3 The capacity of the Grid-Interactive SRTPVS with/ without Battery Energy Storage System by any prosumer(s) under the Net Metering framework shall not be more than 500 kWp and under the net billing/net feed in framework to be installed shall not be more than 1000 kWp or the contracted maximum demand(s)(CMD) whichever is less.
- 5.4 The capacity of the Grid-Interactive SRTPVS with/ without Battery Energy Storage System under the Gross Metering framework to be installed by any consumer(s) shall not be more than 5000 kWp or the contracted demand(s) whichever is less.
- 5.5 Projects of capacity up to **5000 kWp** at a single location shall be permitted.
- 5.6 The summary of the capacities that are permissible under the Net/Gross metering is shown in the table below

Particulars	Capacity that can be availed		
	Min	Max	Capped Up to
<i>Individual Net Metering</i>	<i>1kWp</i>	<i>500 kWp</i>	<i>Contracted Load/Contracted Maximum Demand (CMD) of the consumer</i>
<i>Group Net Metering</i>	<i>5kWp</i>	<i>500 kWp</i>	
<i>Virtual Net Metering</i>	<i>5kWp</i>	<i>500 kWp</i>	
<i>Gross Metering</i>	<i>1kWp</i>	<i>5000 kWp</i>	
<i>Net Billing or Net feed-in</i>	<i>1kWp</i>	<i>1000 kWp</i>	

- 5.7 The permissible capacity of the Grid-Interactive SRTPVS at various voltage levels where the SRTPVS is connected directly to the grid is shown in the table below.

SNo	Voltage	Phase	Capacity
1	<i>LT, 240V</i>	<i>Single Phase</i>	<i>upto to 3kWp</i>
2	<i>LT, 415V</i>	<i>Three Phase</i>	<i>3kWp to 75kWp</i>
3	<i>HT, 11kV</i>	<i>Three Phase</i>	<i>76kWp to 1500kWp</i>
4	<i>HT, 33kV</i>	<i>Three Phase</i>	<i>1501kWp to 5000kWp</i>
5	<i>EHT, 132 kV and above</i>	<i>Three Phase</i>	<i>5000kWp</i>

Note: Where the SRTPVS is integrated with consumers’ load bus bar such as in

net-metering or net billing, the above table does not apply.

- 5.8 The cumulative capacity of all Grid-Interactive SRTPVSs under Net/Gross Metering Arrangements connected to a particular Distribution Transformer shall not exceed 80% of its rated capacity and 100 % in respect of the feeder capacity.
- 5.9 The Distribution Licensee shall provide information on its website regarding the capacity available on each Distribution Transformer and 11/33 kV feeder of a substation for connecting the **SRTPVSs** under the Net/Gross Metering arrangements within three months from the notification of this Regulation. The Distribution Licensee shall thereafter update this information quarterly and also provide the Distribution Transformer-wise, 11/33 kV feeder-wise the cumulative capacity of the **SRTPVSs** installed under the Net/Group Metering arrangements category-wise at all voltage levels.

6. Interconnection with the Grid

- 6.1 The Distribution Licensee/Transco shall ensure that the inter-connection of the **SRTPVS** with their Network complies with the CEA (Technical Standard for Connectivity of the Distributed Generation Resources) Regulations, 2013, the CEA (Measures relating to Safety and Electric Supply), Regulations, 2010, and Andhra Pradesh State Electricity Regulatory Commission State Electricity Grid Code Regulation or any other relevant regulation, and amendments issued to all these regulations from time to time.
- 6.2 The Solar rooftop developers/ Vendors of SRTPVS/MNRE channel partners may be allowed to attend the departmental procedures on behalf of the applicant, except in the case of signing the agreement.
- 6.3 The SRTPVS to be connected to the network as per this regulation at any voltage level under gross metering at the same point of supply shall be provided the gross meter in the upstream network of the supply grid of the distribution licensee after the regular billing meter of the consumer concerned by making suitable modification without insisting a separate service wire/feeder. The modification expenditure is to be borne by the consumers.

7. Metering

- 7.1 All meters installed under Gross/Net metering at the **SRTPVS** shall comply with the CEA (Installation and Operation of Meters) Regulations, 2006, and subsequent amendments thereof.
- 7.2 All the consumers installing the SRTPVS have to bear the cost of Gross/Net Meter. The DISCOMS shall provide the information on the cost of the meter/metering equipment (CTPT sets etc,) with detailed specifications, applicable to SRTPVSs on their website within one month from the date of notification of this Regulation. The DISCOMS should provide the Gross/Net meter on payment of cost. When the meters are not available with the DISCOMS, the same shall be informed to the consumers at the time of communicating technical feasibility so that the consumers may procure the meter complying with the CEA (Installation and Operation of Meters) Regulations, 2006, and subsequent amendments thereof. All meters procured by the consumers may be installed after testing by the DISCOMs preferably in their meter testing laboratories or on verification of a third-party testing certificate from NABL. There shall be no requirement for the meter testing to be witnessed either at DISCOMS's or NABL's meter testing lab.
- 7.3 All HT consumers shall be provided with main and check meters under Gross/Net metering.
- 7.4 The consumers shall raise a request as per the format shown in ANNEXURE-X for metering equipment through online mode/ Mee seva by paying the requisite amount. The DISCOM shall subject to clause 7.2 deliver the metering equipment within 15 working days in case of LT/within 30 working days in case of HT/ within 90 working days in case of EHT. The consumers shall be responsible for the safekeeping of the metering equipment during the interim period until grid synchronisation.
- 7.5 Meter reading shall be done as per the prevailing procedure.

8. Feed-in Tariff

- 8.1 Feed-in Tariff as fixed by the Commission will be applicable for 25 years or the life of the SRTPVs whichever is less under both Net metering, net billing/net feed in and Gross metering for all categories of consumers.

- 8.2 The feed-in tariff shall be Rs.2.09 per unit under net metering/net billing or net feed-in.
- 8.3 The feed-in tariff shall be Rs.3.13 per unit under Gross metering in LT Supply.
- 8.4 The feed-in tariff shall be Rs.2.92 per unit under Gross metering in HT Supply up to 1500 kW of plant capacity.
- 8.5 The feed-in tariff shall be Rs.2.71 per unit under Gross metering in HT/EHT Supply of plant capacity up to 5000 kW.
- 8.6 The feed-in tariff shall be Rs.4.17 per unit under Gross metering in HT/EHT Supply if SRTPVs supply the power during the peak hours as decided in the Tariff order with Battery Storage as per the requirement of the DISCOMS.
- 8.7 The feed-in tariff shall be the same for the total agreement period and shall not be subject to any variation.

9. Transmission and Distribution (Wheeling) Charges & losses.

No Transmission and Wheeling charges & losses shall be collected from the prosumers under the Gross/Net Metering, wherever the SRTPVs and Consumption are at the same point of the grid. However, the applicable T&D losses and charges as per MYT orders of the Commission applicable for relevant periods from the injection point to the drawal point shall be deducted while adjusting the generation against the consumption where the generation and consumption are at different points on the Grid. Further, in case the prosumer(s) is/are in the ambit of the Time of Day (ToD) tariff, the share of exported energy of such prosumer(s) under virtual net metering shall be netted off against his/their electricity consumption during off-peak hours. Furthermore, The Grid support charges as determined by the Commission in the tariff orders from time to time shall be applicable. In any case, the CSS is not applicable to the prosumers for the energy availed from SRTPVS established under this Regulation.

10. Subsidies

The consumers are entitled to avail of the applicable subsidies as per MNRE notifications/guidelines from time to time. The feed-in tariff fixed by the Commission under Gross/Net metering shall be after taking into

account the subsidy provided by MNRE.

11. Application

11.1 The consumer shall make an application to Discom for setting up the SRTPVS by paying the requisite application fee either on AP Discoms websites and/or through designated mee seva centres or through National Portal for Solar Rooftop <https://solarrooftop.gov.in/>. The DISCOMS shall make ready their websites accordingly and also shall register at the National Portal for Solar Rooftop. The prescribed format for application is shown in the ANNEXURE-I of this Regulation. The Consumers intending to apply through the National Portal for Solar Rooftop shall use the applications in the portal.

11.2 The application fee as specified below shall be collected;

Capacities upto 5 kWp	: Rs. 1 000/-
Capacities above 5 kWp and up to 100 kWp	: Rs. 5 000/-
Capacities above 100 kWp to 1000 kWp	: Rs. 10 000/-
Capacities above 1000 kWp	: Rs. 1 00 000/-

11.3 The Discom shall intimate the consumers for incomplete details if any in the application as per the format is shown in the ANNEXURE-II of this regulation within 7 working days. The Discom shall provide the acknowledgement as shown in ANNEXURE-III of this regulation indicating that it has received all the documents required for the establishment of **SRTPVS** within 7 working days if the information furnished in the application is as required. The DISCOMS shall provide a link on their website to track the application in respect of the establishment of **SRTPVS** right from registration to extension of subsidy till the commissioning of the project.

12. Technical Feasibility:

12.1 DISCOMS officers shall carry out and communicate the technical feasibility study on the application submitted by the consumers. This study shall be carried out and the technical feasibility approval shall be communicated to the applicants in the format shown in the ANNEXURE-IV within 7 working days in the case of the LT network, 15 working days for 11 kV and 33 kV networks, and 30 working days for the EHT network from the date of submission of the application in full shape. After undertaking the study as stated above, if technical feasibility is not

possible, the same shall be communicated to the consumer by letter as per the format shown in ANNEXURE-V.

12.2 DISCOM shall communicate technical feasibility approval to consumers on a first come first serve basis duly following the capacity limits specified in this regulation. In case of deficiencies for issue of technical feasibility, the Distribution Licensee shall communicate to the consumer:

- (a) Particulars of deficiencies (as per the format shown in (ANNEXURE-VI) with reference to the interconnection of the proposed **SRTPVS** with the Distribution System of the Licensee/Transco;
- (b) Cost estimate for removal of such deficiencies including augmentation of the transformer, distribution or transmission system as the case may be if required.

12.3 The Distribution Licensee/Transco, on receipt of the willingness of the consumer in the format shown in the ANNEXURE-VII and the estimated amount, shall promptly take steps to remove the deficiencies in the distribution system/ Transmission system including augmentation as per the timelines stipulated in the standards of performance regulation notified by the Commission.

Provided that if the consumer is not willing to bear the estimated amount /not paid by the consumer from the date of receipt of such communication, the application shall stand cancelled and the application fee shall be forfeited.

12.4 On removal of deficiencies if any in the system including augmentation of the distribution/transmission network, the distribution licensee shall immediately convey the approval for interconnection of the proposed **SRTPVS** to the consumer. A copy of such approval shall also be forwarded to the State Nodal Agency and the Chief Electrical Inspector if necessary by the distribution licensee for necessary action by them as per this Regulation.

12.5 In the absence of any intimation from the DISCOM on technical feasibility within the timelines specified in this regulation, the application shall be considered as deemed approval. The feasibility so communicated shall be valid for a period of four (4) months unless extended by the Distribution Licensee for a reasonable cause.

Provided that the feasibility communicated by the Distribution Licensee shall not exceed a period of Ten (10) months including the extended time from the date of the first feasibility communication.

- 12.6 In the case of the requirement of APSLDC permission for synchronization of any **SRTPVS**, such permission shall be given by APSLDC within 7 working days from the date of request received from the DISCOM/Consumer.
- 12.7 Before rejecting any application for setting up an SRTPVS at a particular location of the consumer for any defects in his installation, the Distribution Licensee shall serve the applicant with a notice to rectify the defects in the consumer's installation within 15 working days or such longer period as may be necessary as per the format shown in ANNEXURE-VIII.

13. Agreement and Completion time of the project

- 13.1 The agreement (Annexure-IX (A) / (B) as applicable) duly filled and signed in by the consumer shall be submitted to DISCOM within four months from the date of receipt of the technical feasibility and DISCOM shall provide the acknowledgement for the same. The agreement is deemed to have come into force if there are no remarks communicated by DISCOM within two weeks from the date of receipt of the agreement. In case, within four months of issuing Technical feasibility, if the Agreement is not submitted by the consumer, the application is deemed to be cancelled. The officers designated for the release of new services of supply as per present DISCOMS's orders in vogue shall sign the agreement.
- 13.2 The SRTPVS by the consumer shall be installed within three (3) months from the date of the Agreement up to 100 kWp, (6) months from 101 kWp to 1 000 kWp, and one year from 1001 kWp to 5000 kWp. In case of any delay, a one-time extension of another three months for plants up to 1000 kWp and 6 months from 1001 kWp to 5000 kWp shall be provided after which the agreement shall be deemed to be terminated without any reason.
- 13.3 The agreement shall be in force for 25 years or up to the life of the project whichever is earlier, from the date of commencement of the agreement for all categories of consumers.

Provided that If the agreement of Consumer for supply with Discom is terminated, then the agreement of Consumer for SRTPVS is deemed to have been terminated. For the bill stopped service with SRTPVS to be restored, the consumer shall enter a new agreement with DISCOM for the balance agreement period from the date of first commissioning of the project”.

14. Pre-commissioning check and commissioning of the SRTPVSSs

- 14.1 Post installation of the SRP, the consumer shall make an online request for inspection as per the format shown in ANNEXURE-XI along with the work completion report in the format shown in ANNEXURE-XII. The DISCOM personnel shall inspect the system within 10 working days, decide and communicate approvals or otherwise as the case may be. In the absence of the response within the stipulated time, it shall be considered as deemed inspection approval. In case, any deficiency is identified by the Discom, the same shall be intimated to the consumer as per the format specified in ANNEXURE-XIII

Provided that Post installation of SRP and receipt of the request for inspection from the concerned if the DISCOM fails to take further action as stipulated in this Regulation, the same may be treated as the SRP being installed behind the meter under Section 9 of the Electricity Act, 2003 with intimation to the DISCOM. If any energy is injected into the grid during such period from such SRP, the same shall be treated as inadvertent energy.

- 14.2 The SRP shall be synchronized within seven (7) working days of inspection approval. Before synchronization of the SRP with the grid, the DISCOM shall test-check the meter, seal the meter, and ensure the installation of safety features/precautions. A commissioning certificate would be issued by DISCOM as per the format shown in ANNEXURE-XIV after synchronisation.
- 14.3 The officers concerned shall send commissioning reports of the SRP along with the agreement to the concerned ERO. The billing process shall start within one month/ next Billing cycle of commissioning of the SRP. In the case of HT services, Dy.EE/EE operation shall send the Commissioning Report to the Senior Accounts Officer of the concerned circle.

- 14.4 DISCOMs have reserved the right to inspect the **SRTPVS** routinely at any time during the term of the Agreement.

15. Provisions applicable to prosumers

Subject to the present regulation, all the provisions of GTCS, Supply Code, and other relevant regulations /guidelines applicable to the consumers, in general, shall also be applicable to prosumers. The SRTPVS behind the Consumer's meter, not involving either Net Metering Arrangement or Net Billing Arrangement, shall not be installed without prior intimation to the DISCOM concerned.

Provided that the prosumer shall furnish an undertaking to pay the applicable charges as determined by the Commission from time to time for such capacity of SRTPVS installed behind the meter.

Provided also that in case the Consumer installs SRTPVS behind the Consumer's meter without prior intimation to the DISCOM concerned, or such installation does not conform to Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 the SRTPVS shall be disconnected from the Grid after notice to the prosumer.”

For SRTPVS behind the meter already connected to the electricity system on the date of commencement of this regulation, the consumer shall take all necessary steps to meet the technical standards specified by CEA within sixty days of the coming into force of this Regulation and intimate the same to the DISCOM concerned.

16. Energy Settlement and Billing:

- 16.1 Energy settlement and Billing shall be done on a monthly basis.
- 16.2 The Distribution Licensee shall show, separately, the energy units exported, the energy units imported, and the net energy units billed to the prosumers in their bill for the respective billing period.
- 16.3 All prosumers have to submit their bank details and payments shall be made through electronic transfer by APDISCOMs. The prosumer shall submit a cancelled cheque with bank a/c No. & IFSC Code along with Application form

- 16.4 **Net Metering:** The energy exported from the **SRTPVS** shall be adjusted against the consumption of energy from the DISCOM in every billing month. In the case of different rooftops belonging to a single owner in a city or town, the combined energy exported from **SRTPVSs** shall be adjusted against the combined consumption recorded in various multiple connections of the same consumer. In the case of a group of persons/societies setting up **SRTPVSs**, the generation from such SRP shall be treated as a collective generation for the supply of power to the households of each society /group member. Such energy generated from **SRTPVSs** shall be prorated as per the installed capacity share indicated in the Agreement between the group/society and DISCOM. This computed energy share shall be adjusted against the consumption of energy for each consumer of such group in every billing month. In the case of Apartments/Group Houses, a common service meter may be used for net metering.
- 16.5 In case of excess import/consumption over the export of energy in any billing month, payment shall be made by the prosumers for the net import energy at the applicable retail supply tariff as determined by the Commission. In case of excess export of energy over the import of energy in any billing month, payment shall be made by the Discom monthly for such net Export excess energy at the Feed-in Tariff as fixed by the Commission”
- Provided that in case the net energy drawn by the prosumers is less than the minimum energy specified in RST Orders issued from time to time, then payment shall be made by the prosumers for minimum energy at the applicable retail supply tariff as determined by the Commission from time to time.
- 16.6 The quantum of electricity units exported by the prosumers shall be measured in kVAh in case the applicable tariff to the respective prosumers provides for energy billing on a kVAh basis.
- 16.7 Where a prosumer is within the ambit of the Time of Day (ToD) tariff, the electricity consumption in each time block during the off-peak hours in the billing month is netted off with the total export quantum of electricity injected during the billing month divided by the number of time blocks during the off-peak hours in a billing month”

- 16.8 In case of net billing, the billing shall be done as defined in the definitions.
- 16.9 Gross Metering: The payment for energy exported from the SRTPVSs will be computed at Feed-in Tariff as fixed by the Commission. This shall be adjusted against the total billing demand for consumption of energy by the prosumers from DISCOM in every billing month. In case gross energy exported from SRP billing amount exceeds the billing demand of the DISCOMS during any billing month, such an excess amount shall be paid by the Discom to the prosumers.”

17. Capacity Targets to DISCOMS

As the DISCOMS' overall RE power procurement is over and above the RPO specified by it, the Commission is not inclined to fix any capacity-specific targets under Group/Net Metering. However, the Commission will review the cumulative capacities of **SRTPVSs** from time to time based on the information furnished by the DISCOMS on the cumulative capacities achieved during each financial year keeping in view its advantages to the overall power system and future energy requirements.

18. 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, relax or waive any of the provisions of these Regulations on its own motion or on an application made to it by any interested person.

19. Issue of orders and practice directions:

Subject to the provisions of the Electricity Act, 2003 and this Regulation, the Commission may, from time to time, issue orders and practice directions about the implementation of the Regulation and procedure to be followed and various matters which the Commission has been empowered by this Regulation to specify or direct.

20. Power to Remove difficulties:

If any difficulty arises in giving effect to any of the provisions of this Regulation, the Commission may, by a general or special order, do or undertake or direct the Licensees to do or undertake things which in the opinion of the Commission are necessary or expedient for removing the difficulties.

21. Power to Amend:

- (1) The Commission may at any time, vary', alter, modify, or amend any provisions of the Regulation.
- (2) In particular the Commission may review after three years from the date of notification of this regulation or at any other time if considered necessary. However, This Regulation shall continue to be in force until it is modified based on such review.

22. Repeal and Savings

The **SRTPVSs** already Commissioned and those under various stages of construction including the cases wherein a feasibility report was issued under the provisions of earlier/existing Guidelines shall stand governed by those guidelines till the completion of the term of such agreements in all respects including the feed-in tariff. However, in the cases, where after the issue of technical feasibility the projects are not completed as per the timelines stipulated in the existing guidelines as of the date of this Regulation coming into force, all such projects shall come under the purview of this Regulation. The internal procedures of the DISCOMS specified in existing guidelines on **SRTPVSs** by EPDCL letter dated 04.01.2019 that are approved by the Commission by its order dated 25.05.2019 and are not in conflict with the present regulation shall stand saved.

- 23.** The Commission will review this Regulation in all aspects after one year from the date of notification in the Gazette.

(BY ORDER OF THE COMMISSION)

Place: Hyderabad
Date: 22.02.2024

Sd/-
P.MURALI KRISHNA
Commission Secretary (I/C)

ANNEXURE-I: APPLICATION FORM

APPLICATION FORM FOR GRID INTERACTIVE SOLAR ROOF-TOP PHOTOVOLTAIC SYSTEM

Affix recent Passport size photo of the Applicant

For Office Use:
Reg. No.:

Date:

Application fee details:
DD No.:

**To.
The**

(Designated Officer)

1	Name of the applicant	
2	Applicant full Address	H.No.:
		Street Name:
		Village Name
		Mandal name
		District Name
		Pin code
3	Phone/Mobile No	
4	Email ID	
5	Social Group	(SC/ST/BC/Others)
6	Applicant has to submit self-attested photo ID proof (Voter ID card/ Passport /PAN card/Aadhar card/ Driving licence & etc.,)	
	Type of ID card submitted	
	ID card No.	

Site details		
7	Address of the site for installation	H.No.:
		Street Name:
		Village Name
		Mandal name
		District Name
		Pin code
8	SCNo.	
9	Category	
10	Contracted Load	----- KW
11	Distribution/Section	
12	If Non-Domestic, Specify type of building (Shop/ Industry/ Govt./ Educational/ others (specify))	
13	Pole No. if known	
14	DTR Code/Location if known	
15	a) Shade free area available for installation for solar panel (Minimum requirement is nearly 15 m ²)	----- m ²
	b) Proposed Capacity of SRTPVs	-----KWp
16	Average monthly consumption of electricity	----- Units
17	Applying for Net Metering/Net Billing or Net Feed-in/Gross Metering.	

DECLARATION

I hereby declare that the information furnished above is true to the best of my knowledge and behalf. If false,(DISCOM) has the right to reject/cancel the application. Further, I hereby agree with the specifications, terms and conditions stipulated by(DISCOM)for the selection and installation of roof-top solar power plant.

Place:

Signature:

Date:

Name:

CHECK LIST:

1. Copy of photo ID card (YES/NO)
2. Copy of electricity bill (YES/NO)
3. Demand Draft (YES/NO)
4. Self-addressed Rs. Stamped envelope (YES/NO)



ANNEXURE-I (A) : DECLARATION FOR GROUPS/SOCIETIES

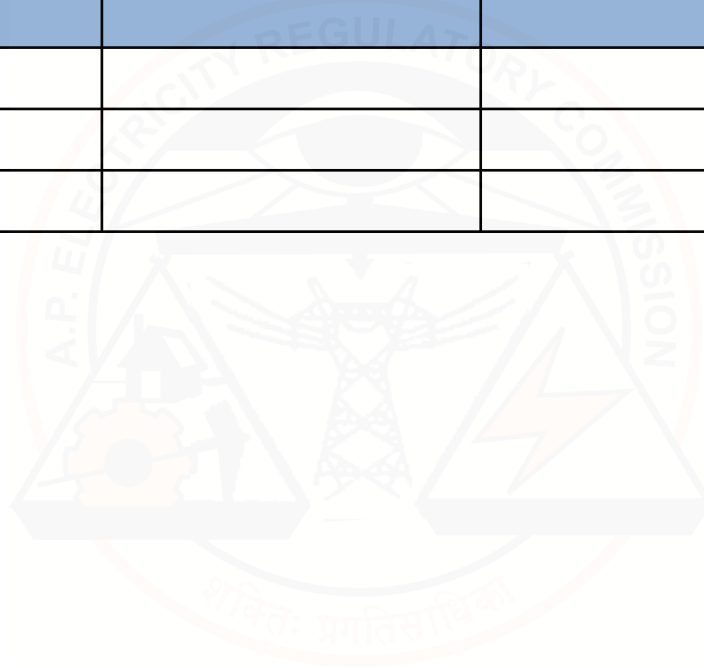
DECLARATION FOR GROUPS/SOCIETIES

We hereby declare that the information furnished above is true to the best of my knowledge and belief. If found false,(DISCOM) has the right to reject/cancel the application. Further, I hereby agree with the specifications, terms and conditions stipulated by(DISCOM) for the selection and installation of roof-top solar power plant.

Place:

Date:

S. No.	Consumer Name	Installation capacity share (%)	Consumer Service Number	Signature for consent



ANNEXURE-II: FORMAT FOR REMOVAL DEFICIENCY IN APPLICATION

Intimation for Removal of Deficiency in the Application

(To be filled by DISCOM)

To:

(Consumer applicant's name) M/S / Mr. / Mrs. ____

Date: _____

Ref: Your application No. _____ dated _____

Subject: Intimation for Removal of Deficiency in Application

This is to inform you that we have received your above mentioned application and on scrutiny have found that:

The application is not complete and the following are the lacunae observed:

-
- _____
- (others, if any)

Please complete the application formality by fulfilling the above lacunae within 7 working days of receipt of this letter. In case you have not completed the formality within this period your application shall stand cancelled and paid fees, if any, shall not be refunded.

Based on this communication, the applicant can:

1. Either submit the above details;
2. Or, withdraw the application.

Signature of Officer:

Designation

ANNEXURE III: ACKNOWLEDGEMENT FORMAT

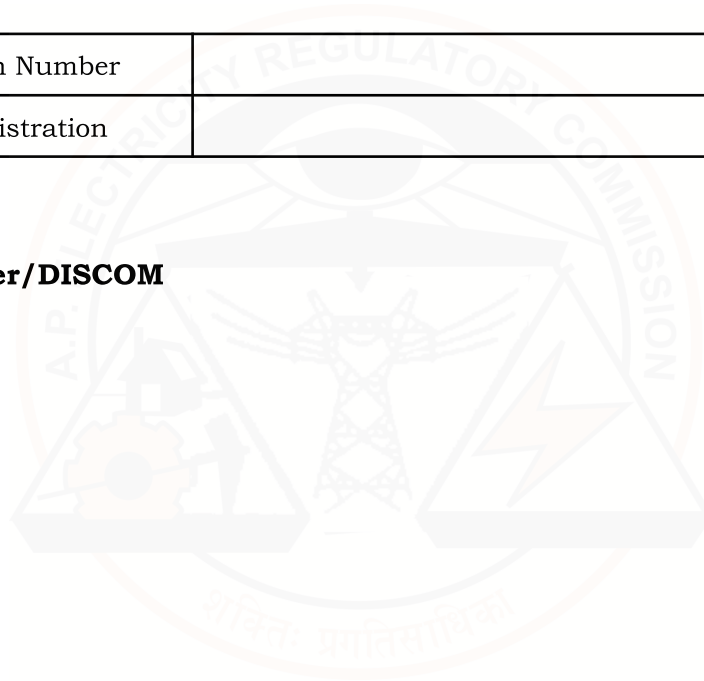
ACKNOWLEDGEMENT by the Distribution Licensee

Your application for setting up of Grid Interactive solar rooftop system under the APREC (The Grid Interactive Solar Rooftop Photovoltaic System under Gross/Net Metering) Regulation, 2023 and amended from time to time, has been received along with registration fee.

The following Registration Number has been allotted to your application.

Registration Number	
Date of Registration	

Designated Officer/DISCOM



ANNEXURE IV: TECHNICAL FEASIBILITY APPROVAL LETTER FORMAT

Approval Letter for Consumer with respect to the Application for Net Metering /Net Billing or Net Feed in/Gross Metering for Grid Connectivity of Grid interactive Solar PV System
(To be filled by the DISCOM)

Date:

To:

(Applicant's name) M/s / Mr. / Mrs. _____

(Consumer

No.) _____

Ref: Your application No. _____ dated _____

With reference to your above mentioned application number, approval is herewith accorded for installing Grid Interactive Solar Rooftop Photovoltaic System of _____ KWp Capacity in your premises under Net Metering/Net Billing or Net Feed-in / Gross Metering (as applied for) as per following terms and conditions;

1. It is recommended that you select an empanelled system installer of your choice to install the SRTPV system from the list of empanelled installers of grid-connected SRTPVS with MNRE/NREDCAP/DISCOMS. " The list of vendors registered is available under the 'Vendors in my area' tab of the beneficiary interface at National Portal after login.
2. All components of the SRTPV system must comply with applicable BIS/IEC standards.
3. Applicant must submit a copy of Manufacturers Test Certificates for all components for having complied with relevant BIS/IEC standards of the selected model along with a work completion report.
4. In case of any changes required at the premises of the proposed site due to this proposed installation, these shall be performed by the applicant at his /her own cost.
5. The grid connectivity of the system shall be in accordance with the Solar Rooftop Regulations of the APERC and any amendments thereof from time to time.
6. The required meter for the installation of SRTPVS is available with the DISCOM. The Cost of the meter is Rs. _____/- (in words).

The consumer should intimate the same to DISCOM by filling Format in ANNEXURE-X along with the meter fee at least 30 days prior to the expected installation (fee details & technical specifications can be found on the website of

DISCOM).

(or)

The required meter for the installation of SRTPVS is not available with the DISCOM. The consumers may procure the meter which shall comply with the CEA (Installation and Operation of Meters) Regulations, 2006, and subsequent amendments thereof. All meters procured by the consumers shall be installed after testing by the DISCOMs or on verification of a third-party testing certificate from NABL.

7. The Discom shall follow the same procedure in respect of SRTPVS as being followed in the release of New Services in respect of safety aspects.
8. Installed systems must comply with safety requirements as stated in CEA/APERC Regulations and all standards referred to in those regulations.
9. Please submit the following documents after installation of the SRTPV system:
 - a. Work Completion report in the provided format;
 - b. Test Certificate of Net meter if applicable;
 - c. Copy of signed Net Metering/Net billing or Net feed-in/Gross Metering Interconnection Agreement.
 - d.Any other document required as per APERC Regulation.

This approval is valid for 120 days from the date of this letter and the SRTPV system is to be commissioned within this period, failing which the approval will be treated as cancelled.

You may download all technical specifications, standards and other requirements of the solar rooftop system from the website of MNRE.

Signature of Officer:

Designation:

Date & Stamp:

ANNEXURE-V: FORMAT FOR INTIMATION FOR NON-FEASIBILITY

Intimation for Non-Feasibility and termination of the Application

(To be filled by DISCOM)

To:

(Consumer applicant's name) M/S / Mr. / Mrs. _____

Date: _____

Ref: Your application No. _____ dated _____

Subject: Intimation for Non-feasibility and termination of Application

This is to inform you that we have received your above mentioned application and on Technical scrutiny have found that:

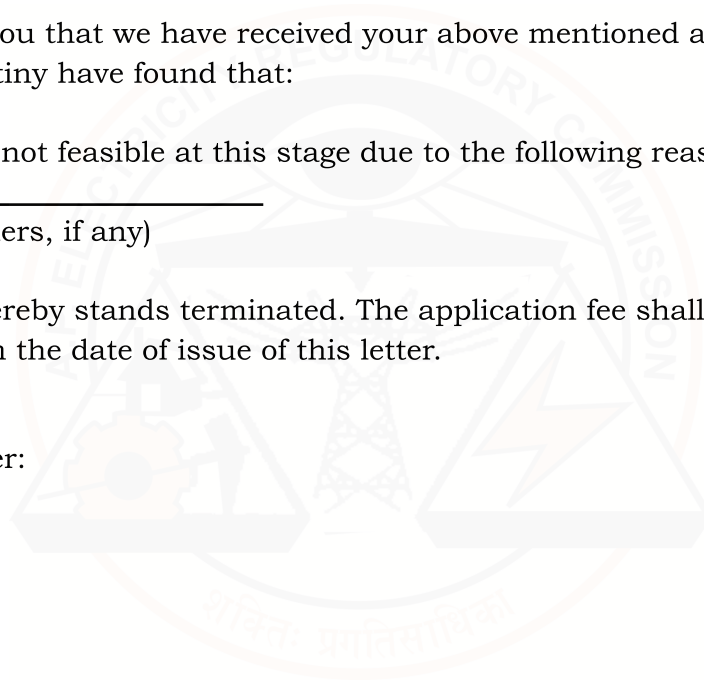
The application is not feasible at this stage due to the following reasons:

- _____
- _(others, if any)

The application hereby stands terminated. The application fee shall be refunded within 7 days from the date of issue of this letter.

Signature of Officer:

Designation:



ANNEXURE-VI:

FORMAT FOR INTIMATING DEFICIENCIES for issue of TECHNICAL FEASIBILITY

(To be filled by DISCOM)

To:

(Consumer applicant's name) M/S / Mr. / Mrs. ____

Date: _____

Ref: Your application No. _____ dated _____

Subject: Intimation for Removal of Deficiency

This is to inform you that we have received your above mentioned application and on technical feasibility verification have found that:

The following deficiencies are observed/augmentation is required for technical feasibility:

-
- _____
- (others, if any)

Further, it is found that due to above mentioned constraints it is not feasible for the DISCOM to provide connectivity. However, the above deficiencies can be removed if you are ready to bear the costs approximately

Based on this communication, the applicant can either approach the DISCOM (Division Office) to process the case Or, withdraw the application. If you withdraw the application, the fee paid by you will be refunded within 7 working days from the date of the withdrawal letter.

Signature of Officer:
Designation

**ANNEXURE VII: RESPONSE FOR REMOVAL OF DEFICIENCIES
FORMAT**

**Response of the Applicant for Removal of Deficiencies/system
augmentation**

(To be filled by Applicant)

To:

The Concerned Engineer of DISCOM

_____ (Distribution Licensee Name)

_____ (Name of the Division)

_____ (Name / Address of office)

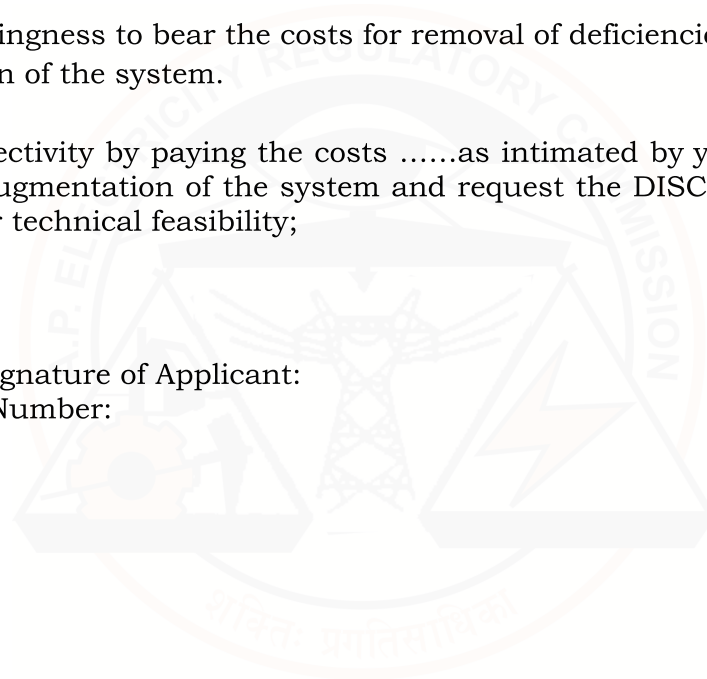
Date:

Subject: Willingness to bear the costs for removal of deficiencies or
augmentation of the system.

I accept the connectivity by paying the costsas intimated by you for removal
of deficiencies/ augmentation of the system and request the DISCOM to process
the application for technical feasibility;

Name and Signature of Applicant:

Application Number:



**ANNEXURE-VIII: INTIMATION FOR REMOVAL OF DEFICIENCIES IN
CONSUMER'S INSTALLATION**

(To be filled by the DISCOM)

To:

(Consumer applicant's name) M/S / Mr. / Mrs. _____

Date: _____

Ref: Your application No. _____ dated _____

Subject: Intimation for Removal of Deficiency in consumer installation

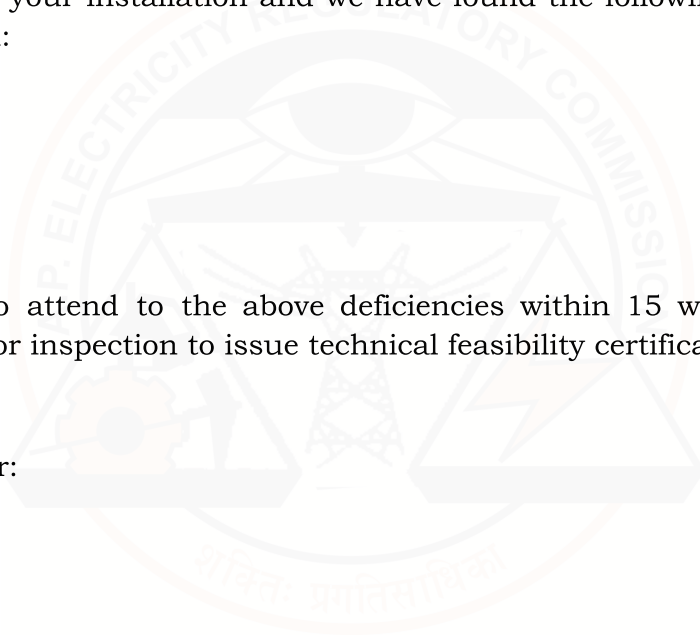
With reference to your application dated For the installation of _____kWp system, inspected your installation and we have found the following deficiencies in the the installation:

- a)
- b)
- c)etc

We request you to attend to the above deficiencies within 15 working days and submit a request for inspection to issue technical feasibility certificate.

Signature of Officer:

Designation



ANNEXURE -IX (A): AGREEMENT FOR INDIVIDUAL CONSUMER

(Individual Consumer)

Solar Rooftop Net Metering/Net billing or Net Feed-in /Gross Metering Connection Agreement

(On Non-Judicial stamp paper worth Rs. 100/-)

This Agreement is executed and entered into at (location) _____ on this (date)____ day _____ of____(month)____(Year)between _____ the _____ consumer, M/s/Mr./Mrs. _____ S/o, D/o, W/o _____ residing at _____(address) _____which means their/his/its/ theirs, successors as first party AND _____Power Distribution Company Ltd. (hereinafter called as Discom) and having its registered office at _____(address) _____ as a DISCOM incorporated under the provisions of Companies Act 1956 consequent to the AP Electricity Reforms Act, 1998 (Which means its authorized representatives assigns, executors and its successors) as other party hereinafter called the 'Discom'.

Whereas, the consumer has taken the responsibility to set up or facilitate the requisite Photovoltaic system and injection of Power into the Discom's grid

And whereas, the Discom agrees to benefit the consumer for the electricity generated and as per conditions of this agreement and Solar rooftop Regulations of the APERC.

Both the party hereby agrees to as follows:

1. Eligibility

- 1.1 All consumers of AP Discom(s) are eligible for setting up of the Grid-Interactive SRTPVS with/ without Battery Energy Storage System with their investment or through third party investment.
- 1.2 The Consumer(s) are free to choose Net metering or Gross Metering or Net Billing/Net Feed-in option for the sale of power to DISCOM.

2. Capacity of the Solar Rooftop Photovoltaic System and Maximum Contracted Load of the Premises

The consumer is proposing to install a rooftop solar power plant of ____kWp capacity under Solar _____Net metering/Net billing or Net Feed-in/ Gross metering facility at D.No. ____,Street____, ____(V), ____ (M),____(Dist) having electrical service Connection No.____,Category____,Distribution____ for a contracted load of ____kW/HP/KVA.

3. Governing Provisions

The consumer hereby undertakes to comply with all the requirements of the Electricity Act, 2003, the Rules and Regulations framed under, provisions of the tariffs, applicable Charges and General Terms and Conditions of Supply prescribed by the Discom with the approval of the Andhra Pradesh Electricity Regulatory Commission hereinafter called as “Commission” from time to time and agree not to dispute the same.

4. Technical and Interconnection Requirements

4.1 The consumer hereby agrees to comply with CEA (Technical Standard for Connectivity of the Distributed Generation Resources) Regulations, 2013, the CEA (Measures relating to Safety and Electric Supply), Regulations, 2010, CEA (Grid Standards) Regulations, 2010 and Andhra Pradesh State Electricity Regulatory Commission State Electricity Grid Code Regulation or any other relevant regulation, and amendments issued to all these regulations from time to time.

5. The consumer hereby inter alia agrees that Metering and synchronization of Solar Rooftop Photovoltaic System, feed-in tariff, Energy Settlement and Billing as per the APERC (Grid Interactive Rooftop Solar Photovoltaic System Regulations, 2023 and its amendments thereof.

6. Liabilities

6.1 The consumer and Discom will indemnify each other for damages or adverse effects from either party's negligence or intentional misconduct in the connection and operation of the photovoltaic system or Discom's distribution system.

- 6.2 Discom and the consumer will not be liable to each other for any loss of profits or revenues, business interruption losses, loss of contract or loss of goodwill, or for indirect, consequential, incidental or special damages, including, but not limited to, punitive or exemplary damages, whether any of the said liability, loss or damages arise in contract, or otherwise.
- 6.3 Discom shall not be liable for delivery or realization by the consumer for any fiscal or other incentive provided by the central /State government.

7. Duration of the Agreement

The agreement shall be in force for 25 years or up to the life of the project whichever is earlier, from the date of commencement of the agreement for all categories of consumers.

Provided that If the agreement of Consumer for supply with Discom is terminated, then the agreement of Consumer for SRTPVS is deemed to have been terminated. For the bill stopped service with SRTPVS to be restored, the consumer shall enter a new agreement with DISCOM for the balance agreement period from the date of the first commissioning of the project.

8. Dispute Resolution

Any disputes arising under/ out of this agreement entered into in accordance with APERC (Grid Interactive Solar Rooftop Photovoltaic System Gross/Net Metering) Regulation, 2023 shall be resolved promptly in good faith and in an equitable manner by both the parties. Failing resolution of the dispute, the party may approach the Commission under Section 86 (1) (f) of EA 2003.

9. Termination

- 9.1 Discom has the right to terminate the Agreement on 30 days prior written notice, if the consumer breaches a term of this Agreement and does not remedy the breach within 30 days of receiving written notice from Discom of the breach.
- 9.2 The consumer can terminate the agreement at any time by providing Discom with 90 days prior notice.
- 9.3 The consumer agrees that upon termination of this Agreement, he must disconnect the photovoltaic system from Discom's distribution system in a timely manner and to Discom's satisfaction. However, he is not prevented from connecting his system under any other applicable provisions of the Electricity Act, 2003.

10. Re-Sale of Electric Power

The consumer shall not sell electricity generated from his solar rooftop plant under this agreement to any party without the sanction in writing obtained from the DISCOM.

11. Obligation of Consumer to pay all charges levied by DISCOM

The Consumer shall abide by the rules and shall pay the Maximum Demand Charges, energy charges, surcharges and other charges, if any, to the DISCOM in accordance with the notified Tariff besides the applicability of the General Terms and Conditions of Supply prescribed by the APERC from time to time.’

The consumer shall also abide by any other charges applicable with respect to the Connection of the Solar Rooftop Power Plant to the grid as per APERC Regulations.

12. Theft of electricity or unauthorized use of electricity

The consumer found indulging in theft of electricity or unauthorized use of electricity shall pay the penal/additional charges as may be levied by the DISCOM besides disconnection of supply as per the provisions of IE Act 2003 and General Terms and Conditions of supply.

13. Knowledge of facts and rules

Knowledge of Facts and Rules The consumer shall be deemed to have full knowledge of the provisions of the Electricity Act, 2003, the A.P. Electricity Reform Act, 1998 and all regulations and notifications made thereunder, as also all laws relating to the supply of electricity.

In the witness, where Mr. _____ for and on behalf of _____ (consumer) and Mr. _____ for and on behalf of _____ (Discom) agree to this agreement.

Signature of the Consumer

Signature of the Discom Representative

Date:

Date:

Witness 1:

Witness 2:

Signature:

Signature:

Name & Address:

Name & Address:

Date:

Date:

ANNEXURE-IX (B) : AGREEMENT FOR GROUP OF CONSUMERS/ SOCIETIES

(Group of Consumers/ Societies)

Solar Rooftop Net Metering/Net billing or Net Feed-in /Gross Metering
Connection Agreement

(On Non-Judicial stamp paper worth Rs. 100/-)

This Agreement is made and entered into at (location) _____ on this (date) ___ day of _____(month) ____ (Year) between The Group of persons/society (herein after called as Eligible /Consumer), Represented by Sri/Smt _____ S/o, _____ residing at _____ (address) _____ as first party AND _____ Power Distribution Company of Andhra Pradesh Ltd. (herein after called as Discom) and having its registered office at _____ (address) _____ as a DISCOM incorporated under the provisions of Companies Act 1956 consequent to the AP Electricity Reforms Act, 1998 (Which means its authorized representatives assigns, executors and its successors) as other party herein after called the "DISCOM".

Whereas, the consumer has taken the responsibility to set up or facilitate the requisite Solar Photovoltaic system and injection of Power into the Discom's grid

And whereas, the Discom agrees to benefit the consumer for the electricity generated and as per conditions of this agreement and Solar rooftop Regulations of the APERC.

Both the party hereby agrees to as follows:

1. Eligibility

1.1 All consumers of AP Discom(s) are eligible for setting up of the Grid-Interactive SRTPVS with/ without Battery Energy Storage System with their investment or through third party investment.

1.2 The Consumer(s) are free to choose Net metering or Gross Metering or Net Billing/Net Feed-in option for the sale of power to DISCOM.

2. Capacity of the SPV Plant and Maximum Contracted Load of the Premises

2.1 The Group of persons/society is proposing to install a rooftop solar power plant of ____kWp capacity under Solar _____Net metering/Net billing or Net Feed-in/ Gross metering facility at D.No. ____, Street____, __V, ____ (M)____ (Dist) against Common Service Connection No____, Category____, Distribution____ and having individual electrical service connections details furnished in the table below for a total contracted load of ____kW/HP/KVA and individual installed capacity share.

2.2 The installed capacity shares of members of the Group of persons/societies are as follows:

Sl.No.	Consumer Name	Installed Capacity share	Consumer Service number

2.3. The Share can be revised only once in a financial year.

3. Governing Provisions

The consumer hereby undertakes to comply with all the requirements of the Electricity Act, 2003, the Rules and Regulations framed under, provisions of the tariffs, applicable Charges and General Terms and Conditions of Supply prescribed by the Discom with the approval of the Andhra Pradesh Electricity Regulatory Commission hereinafter called as "Commission" from time to time and agree not to dispute the same.

4. Technical and Interconnection Requirements

The consumer hereby agrees to comply with CEA (Technical Standard for Connectivity of the Distributed Generation Resources) Regulations, 2013, the CEA (Measures relating to Safety and Electric Supply), Regulations, 2010, CEA (Grid Standards) Regulations, 2010 and Andhra Pradesh State Electricity Regulatory Commission State Electricity Grid Code Regulation or any other relevant regulation, and amendments issued to all these regulations from time to time.

5. The consumer hereby agrees that Metering and synchronization of Solar Rooftop Photovoltaic System, feed-in tariff, Energy Settlement and Billing as per the

APERC (Grid Interactive Rooftop Solar Photovoltaic System Regulations, 2023 and its amendments thereof.

6. Liabilities

- 6.1 The consumer and Discom will indemnify each other for damages or adverse effects from either party's negligence or intentional misconduct in the connection and operation of the photovoltaic system or Discom's distribution system.
- 6.2 Discom and the consumer will not be liable to each other for any loss of profits or revenues, business interruption losses, loss of contract or loss of goodwill, or for indirect, consequential, incidental or special damages, including, but not limited to, punitive or exemplary damages, whether any of the said liability, loss or damages arise in contract, or otherwise.
- 6.3 Discom shall not be liable for delivery or realization by the consumer for any fiscal or other incentive provided by the central /State government.

7. Duration of the Agreement

The agreement shall be in force for 25 years or up to the life of the project whichever is earlier, from the date of commencement of the agreement for all categories of consumers.

Provided that If the agreement of Consumer for supply with Discom is terminated, then the agreement of Consumer for SRTPVS is deemed to have been terminated. For the bill stopped service with SRTPVS to be restored, the consumer shall enter a new agreement with DISCOM for the balance agreement period from the date of the first commissioning of the project.

8. Dispute Resolution

Any disputes arising under/ out of this agreement entered into in accordance with APERC (Grid Interactive Solar Rooftop Photovoltaic System Gross/Net Metering) Regulation, 2023 shall be resolved promptly in good faith and in an equitable manner by both the parties. Failing resolution of the dispute, the party may approach the commission under Section 86 (1) (f) of EA 2003.

9. Termination

- 9.1 Discom has the right to terminate the Agreement on 30 days prior written notice, if the consumer breaches a term of this Agreement and does not remedy the breach within 30 days of receiving written notice from Discom of the breach.
- 9.2 The consumer can terminate the agreement at any time by providing Discom with 90 days prior notice.

9.3 The consumer agrees that upon termination of this Agreement, he must disconnect the photovoltaic system from Discom’s distribution system in a timely manner and to Discom’s satisfaction. However, he is not prevented from connecting his system under any other applicable provisions of the Electricity Act, 2003.

10. Re-Sale of Electric Power

The consumer shall not sell electricity generated from his solar rooftop plant under this agreement to any party without the sanction in writing obtained from the DISCOM.

11. Obligation of Consumer to pay all charges levied by DISCOM

The Consumer shall abide by the rules and shall pay the Maximum Demand Charges, energy charges, surcharges and other charges, if any, to the DISCOM in accordance with the notified Tariff besides the applicability of the General Terms and Conditions of Supply prescribed by the APERC from time to time.’

The consumer shall also abide by any other charges applicable with respect to the Connection of the Solar Rooftop Power Plant to the grid as per APERC Regulations.

12. Theft of electricity or unauthorized use of electricity

The consumer found indulging in theft of electricity or unauthorized use of electricity shall pay the penal/additional charges as may be levied by the DISCOM besides disconnection of supply as per the provisions of IE Act 2003 and General Terms and Conditions of supply.

13. Knowledge of facts and rules

Knowledge of Facts and Rules The consumer shall be deemed to have full knowledge of the provisions of the Electricity Act, 2003 the A.P. Electricity Reform Act, 1998, and all regulations and notifications made thereunder, as also all laws relating to the supply of electricity

In the witness, where of Mr. _____ for an on behalf of _____ (Eligible consumer) and Mr. _____ for and on behalf of _____ (Discom) agree to this agreement.

Signature of the Office-bearer
of Group/ Society

Signature of the Discom
Representative

Date:

Date:

Witness 1:

Witness 2:

Signature:

Signature:

Name & Address:

Name & Address:

Date:

Date:



ANNEXURE-X : INTIMATION FOR METER PROCUREMENT

Intimation of Meter Procurement

(To be filled by Applicant)

To,

_____ (Concerned Authority)

_____ (Name of the DISCOM)

_____ (Date)

Ref: Application No. _____ dated _____

Dear Sir,

With reference to above- mentioned my Application number and receiving the Letter of the technical feasibility, I/we intend to install _____KWp of RTSPV system. In this regard, I/we request DISCOM to provide a meter/metering equipment _____for SRTPV installation. The meter shall be as per the Net metering/Net Billing or Net Feed-in/ Gross metering clause in Solar Rooftop Regulations of the APERC.

I/We agree to pay fee of INR _____- as mentioned in DISCOM website via online mode/ DD _____/ cheque _____.

Name of Consumer/Sign

ANNEXURE-XI: INTIMATION TO DISCOM FOR READINESS OF SYSTEM CHECK

Intimation to the DISCOM for readiness of the system for System Check Synchronisation with the DISCOM grid and Installation of Meters.

(To be submitted by the Applicant)

To,
The Executive Engineer
------(Name of the Division)
------(Name of the DISCOM)
------(Address of the Division Office)

Sir/Madam,

Sub:

1. System Checks;
2. Synchronisation with the DISCOM Grid;
3. Installation of Meter(s);

Ref: Our Application No.: _____

With reference to the above, I hereby confirm to you that the Solar Rooftop Photovoltaic System has been installed as per the technical and safety standards laid out by CEA/ APERC/ DISCOM.

The system is ready for synchronisation with the DISCOMs grid and installation of meter(s).

Name of the Applicant: _____

Signature: _____

Enclosures:

1. NOC from CEI/EI, if applicable
2. A copy of the Work Completion Report along with the details of all components of SRTPVS
3. Manufacturer's test certificate of all the components used in the installation of the Solar Rooftop Photovoltaic System.

ANNEXURE-XII: WORK COMPLETION REPORT**Work Completion Report***(To be submitted by the applicant for systems inspection)***To,****Sir/Madam,**

Sub: Submission of work completion report (to be submitted by the applicant) for system documentation requirements.

Ref: Our Application No.: _____ dated: _____

With reference to the above, I hereby confirm to you that we have completed the work of installation of the renewable energy system and submit the following basic information for your perusal and request you to arrange to Inspect and Commission the system at the earliest:

A. Details of the Solar PV module

1 .	Model No.	
2 .	Name and address of manufacturer	
3 .	Capacity of each Module (Wp)	
4 .	No. of Modules	
5 .	Total Capacity (kWp)	
6 .	Date of Installation	
7 .	Applicable Standard (BIS/IEC)	

B. Details of the Inverter

1 .	Name and address of the inverter manufacturer	
2 .	Brand Name of the inverter	
3 .	Model No.	

4 .	AC capacity of individual inverter (kW)	
5 .	No. of inverters installed	
6 .	Total AC capacity of inverter (kW)	
7 .	Serial Nos.	
8 .	Date of Installation	
9 .	Applicable Standard (BIS/IEC)	
1 0 .	Is anti-islanding protection provided?	Yes/No

C. Module Mounting Structure

1 .	Does the Module Mounting Structure withstand wind capacity up to 150 kmph?	Yes/No
2 .	Is the total load of the structure + panel less than 60 kg/m ² ?	Yes/No
3 .	Applicable Standard (BIS/IEC)	

D. Details of the Cables: DC

1 .	Make / Name of manufacturer	
2 .	Size & Type	
3 .	Applicable Standard (IEC)	

E. Details of the AC wiring

1 .	Make / Name of manufacturer	
2	Size & Type	

1 .	Make / Name of manufacturer	
.		
3 .	Applicable Standard (IEC)	

F. Details of the DC distribution box

1 .	Make / Name of manufacturer	
2 .	Sl. No.	
3 .	High quality suitable capacity MOVs/ SPDs along with suitable reverse blocking diodes	
4 .	MCB / Isolator quantity & capacity	
5 .	Size & Type	
6 .	Applicable Standard (IEC)	

G. Details of the AC distribution box

1 .	Make / Name of manufacturer	
2 .	Sl. No.	
3 .	AC Surge Protection Device	
4 .	MCB /MCCB quantity & capacity	
5 .	Size & Type	
6 .	Applicable Standard (IEC)	

H.Details of the Earthing

1	Earth resistance (shall be less than 5 ohms)	
---	--	--

2	Size of the Earth wire / flat*	
3	Three separate Earthing points	Yes / No
	Modules, mounting structure & DC Surge protection device	Yes / No
	Inverter, AC Surge protection device	Yes / No
	Lightening Arrester	Yes / No
4	Size & Type	
5	Applicable Standard (BIS/IEC)	

Note:*Earthing shall be done in accordance IS 3043-1986, provided that Earthing conductors shall have a minimum size of 4 mm² copper wire or 10 mm² aluminium wire or 3 mm² X 70 mm² hot dip galvanized iron flat strip.

I. Details of the Net/Gross meter details, if purchased by the consumer (please enclose the test report of the net meter tested at the laboratory of the DISCOM/designated agency)

1.	Make	
2.	Serial No.	
3.	Procured from DISCOM/ Outside Agency	
4.	Manufacturer's Name	
5.	Capacity	
6.	Type / Model	
7.	Single ph./Three ph.	
8.	Rated Current & CT Ratio	
9.	Reference Voltage & PT Ratio	
10.	Date of Test by MT, DISCOM	
11.	Applicable Standard (BIS/IEC)	
12.	Month & Year of Manufacture	
13.	Class of meter	

J. Details of the Caution Signage

K. Provision of manual and automatic switches: Yes / No

L. G.P.S. Coordinates of the SRTPV System Installation

(i) Latitude:

(ii) Longitude:

M. Whether Operation and Maintenance Manual provided to the consumer: Yes/ No

Certified that the above said SRTPV system was installed and the equipment used comply with the Technical and Safety standards as specified by the MNRE/ CEA/ DISCOM under net metering program.

Signature of the Applicant

Name and Signature of the System Installer

Name:

Name of the firm and address:

Address

Seal

Date:

Date:

Enclosures:

1. Test report of net/gross meter tested at the laboratory of the DISCOM.
2. Copy of the IEC/IS Test certificates of PV modules, Inverter, Cable etc.
3. Data sheets/Drawing for the array mounting System.
4. Staad Pro report – Module mounting structure. (If required)
5. Actual Single line wiring diagram (SLD) of the Solar Rooftop Photovoltaic System and estimated energy generation report.
6. Copy of Maintenance & Operation information manual provided by the System Installer
7. Copy of commercial agreement with the third party if any.
8. Certificate from CEI / EI, if applicable.

ANNEXURE-XIII: INTIMATION FOR REMOVAL OF SYSTEM DEFICIENCY

Intimation for Removal of Deficiency in the system installed

(To be filled by the DISCOM)

To:

(Consumer applicant's name) M/S / Mr. / Mrs. _____

Date:_____

Ref: Your application No._____ dated _____

Subject: Intimation for Removal of Deficiency found during inspection

As requested by you in the letter dated to carry out inspection &

synchronization of your_____KWp system, inspected the premises and we have found the following deficiencies in the system:

- a)
- b)
- c)etc

We request you to attend the above deficiencies within 15 working days and submit a re-request for inspection.

Signature of Officer:

Designation



ANNEXURE-XIV: SYNCHRONISATION CERTIFICATE

Synchronisation with the DISCOM grid, Installation of Meter(s) and COD.

(To be filled by the DISCOM)

To,

(Applicant's name) M/s / Mr. / Mrs. _____

(Consumer No.)_____

Ref: Your application No._____ dated _____

Sir/Madam,

Sub:

1. Synchronization with the DISCOM Grid;
2. Installation of Meter(s);
3. Commercial Operation Date.

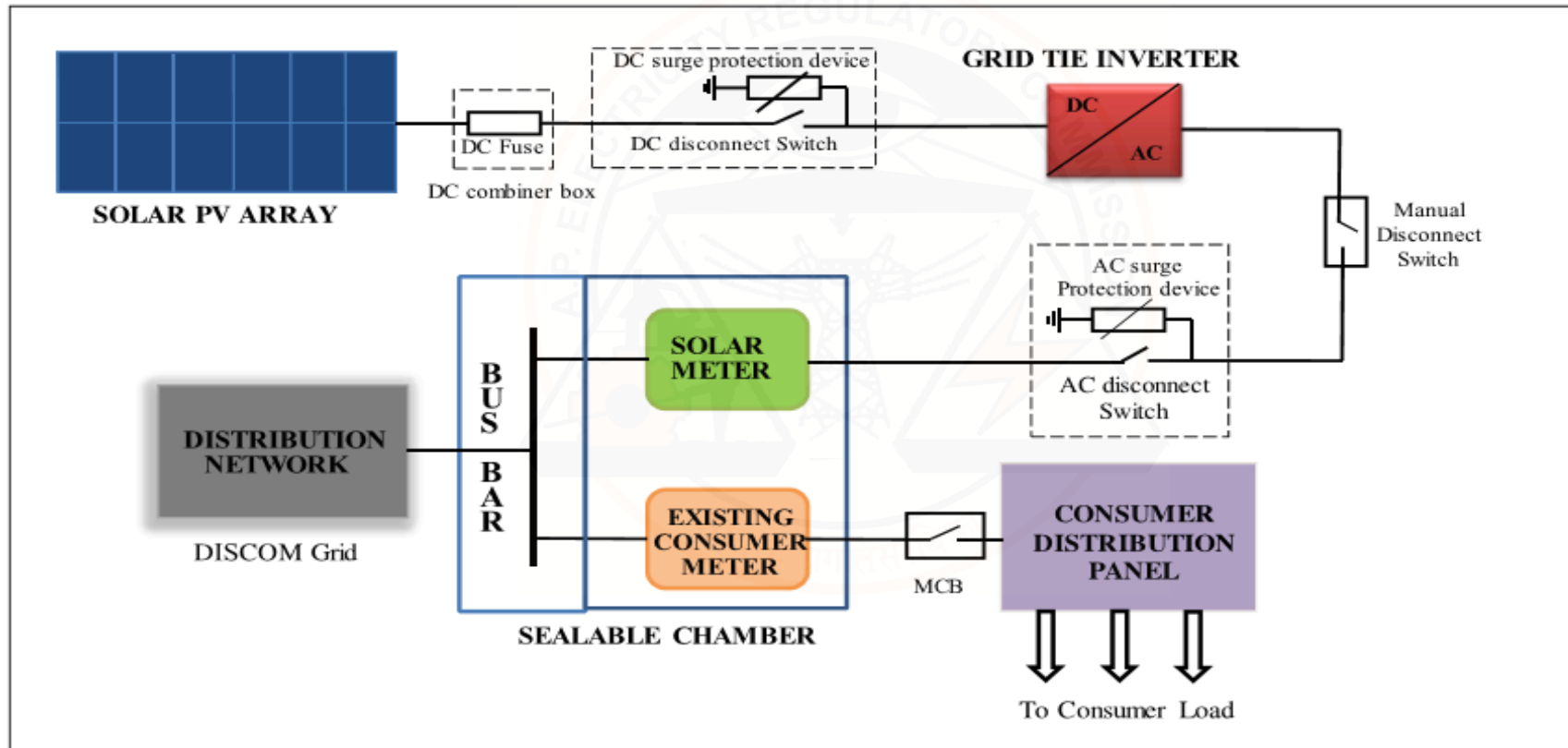
Synchronization test of Solar Rooftop PV system of____ kWp, installed on the roof of your installation bearing Application No_____ has been conducted and your RTSPV system found satisfactory and successfully synchronized with the grid. Meter with no has been installed and sealed.

Yours faithfully,

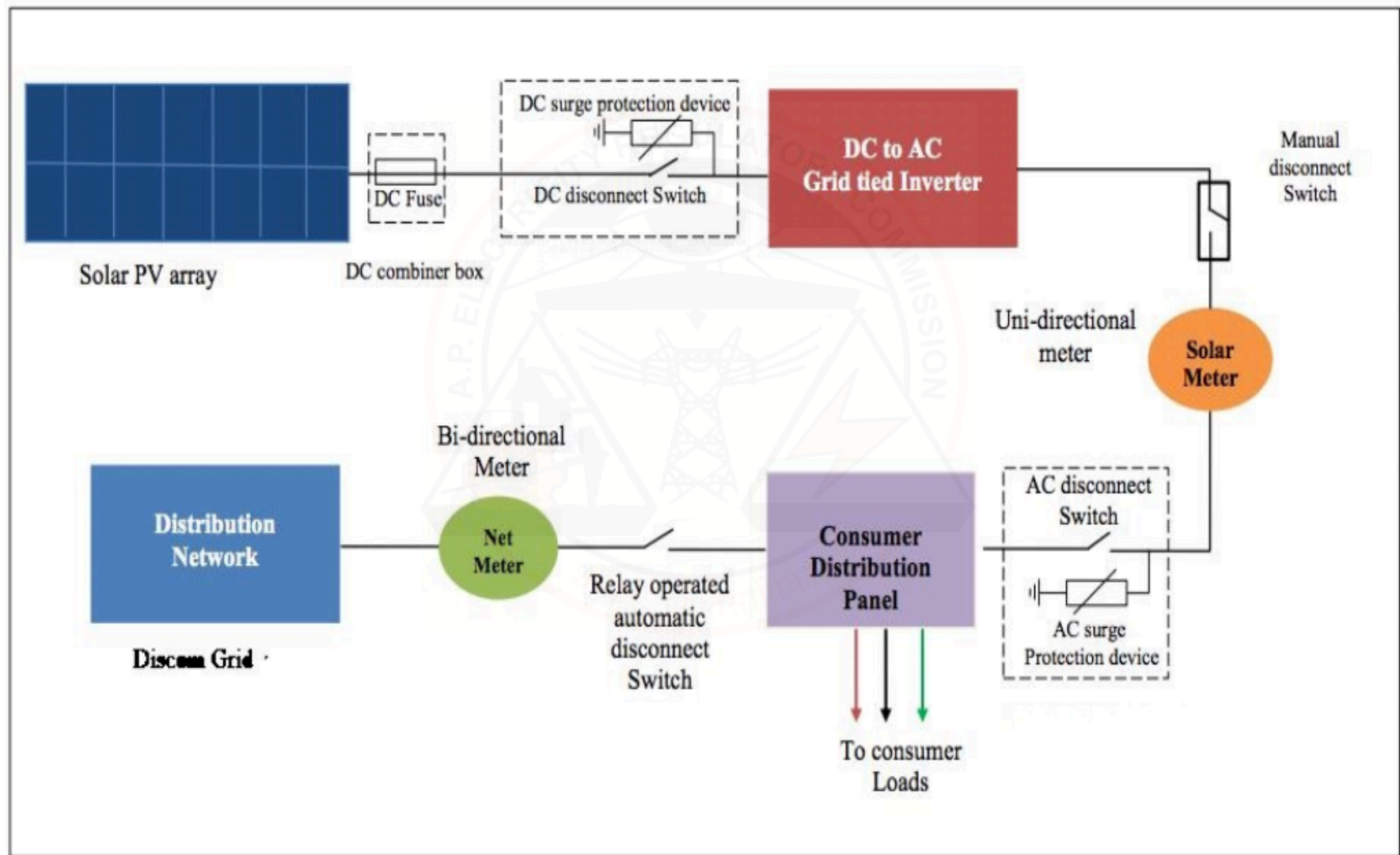
Signature of Officer:

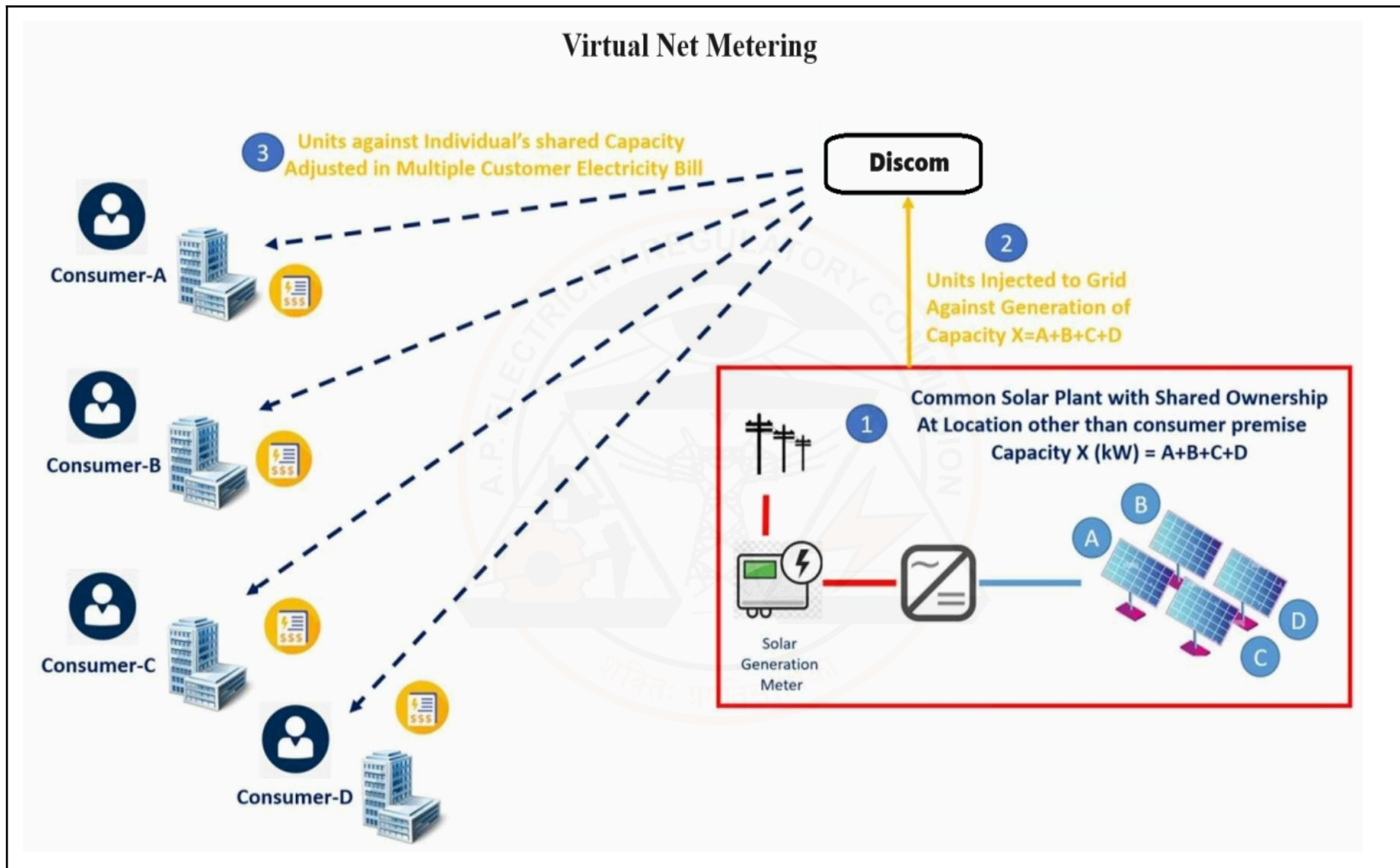
Designation

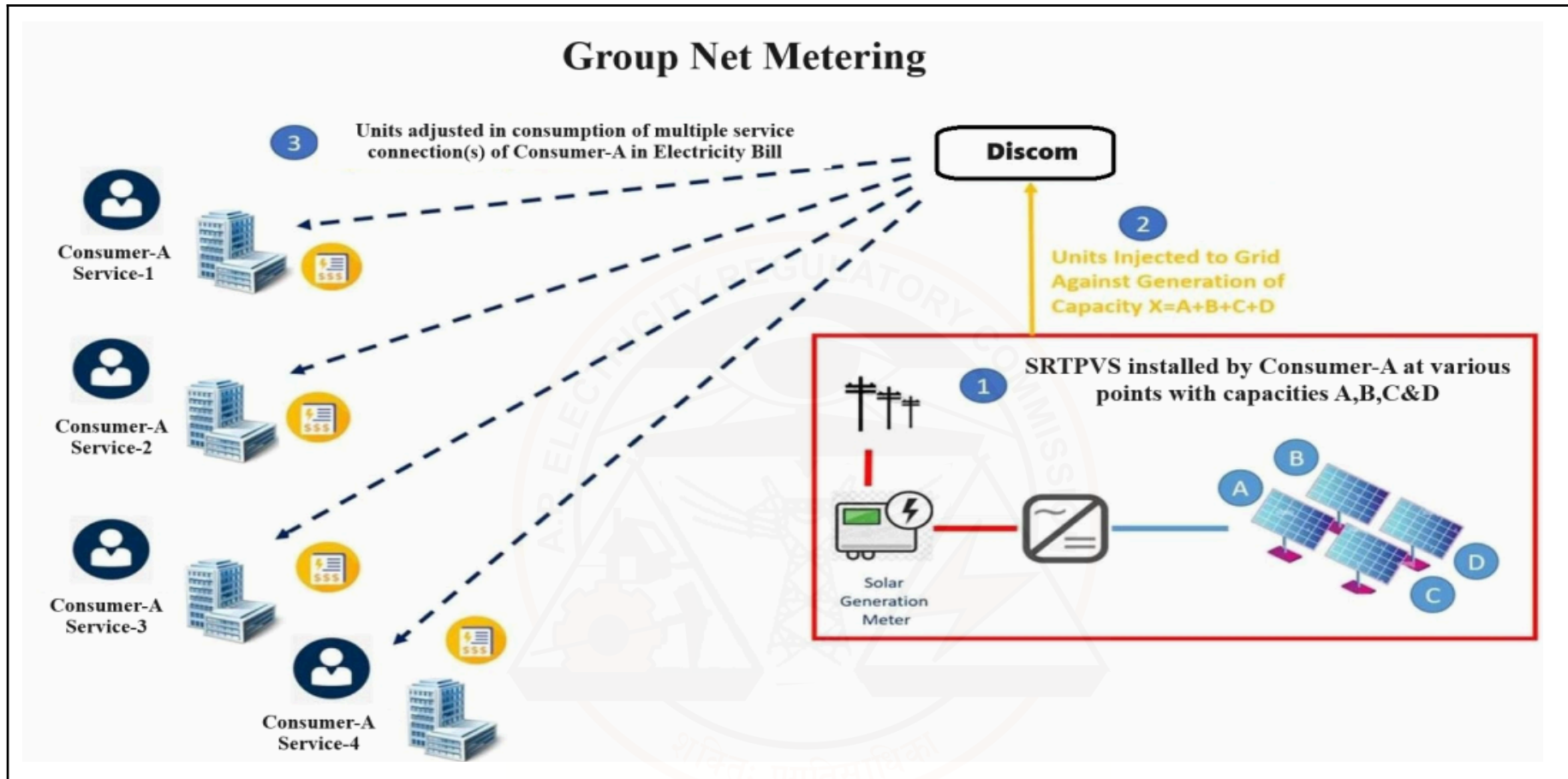
Schematic Diagram of Rooftop Facility for Gross Metering Interconnection



Single Line Diagram of Rooftop Facility for Net Metering Interconnection







Illustrations of Net Metering/Net Billing or Net Feed In/Gross metering

Assumption-1: Applicable Retail Tariff as per TO FY 2023-24

Assumption 2: Feed In Tariff

For Net Metering/Net Billing projects	2.09
Gross Metering at LT Supply	3.13
Gross metering in HT Supply up to 1500 kWp	2.92
Gross metering in HT/EHT Supply of plant capacity from 1501 kWp to 5000 kWp	2.71
Gross metering in HT/EHT Supply with Battery Storage	4.17

Assumption 3: 65% of Energy Generated from SRTPVS is exported to the grid in case of Net Metering and Net Billing.

Assumption 4: This illustration is for individual cases under LT Supply, whereas, the losses and charges as per the Orders of the Commission shall be accounted for while netting of the energy/bill in the Case of Group/Virtual Net Metering.

Prior to SRTPVs installation

Month	Energy Requirement of Consumer (i.e., Energy Consumption from Discom prior to installation of SRTPVS)	Retail Supply Tariff for LT-III (A) Industrial-General Category	Actual Energy Charges without SRTPV System (Rs)
Jan	425	6.70	2,848
Feb	525	6.70	3,518
Mar	575	6.70	3,853

Case 1: Net Metering

Energy Generated by SRTPVS	Self Consumption	Exported Units by SRTPVS to DISCOM (Units)	Billed Demand/ Consumption from DISCOM (Units)	# Net Energy (Units)	FIT (Rs./kWh)	Net Monthly Payment by DISCOM to Consumer in Bill (Rs.)	Retail Supply Tariff for LT-III (A) Industrial-General Category	Net Monthly Payment by Consumer to DISCOM in Bill (Rs.)
A	B	C=A-B	D	E=D-C	F	G=E*F (if C>D)	H	I=D*H (if C<D)
500	175	325	250	-75	2.09	156	6.70	-
500	175	325	350	25	2.09	0	6.70	168
500	175	325	400	75	2.09	0	6.70	503

#If +VE, Consumer has to pay to DISCOM vice versa

Case 2: Net Billing or Net Feed-In

Month	Energy Generated by SRTPVS	Self Consumption	Energy injected to DISCOM at Net Meter (Units)	Consumption from DISCOM recorded at net Meter (Units)	Retail Supply Tariff for LT-III (A) Industrial-General Category	Monetary value of the Imported Energy by the Consumer (Rs.)	FIT (Rs./kWh)	Monetary Value of the Exported Energy @ FIT (Rs)	Net Monthly Payment by Consumer to DISCOM in Bill (Rs.)#
	A	B	C=A-B	D	E	F=D*E	G	H=C*G	I=F-H
Jan	500	175	325	250	6.70	1,675	2.09	678	997
Feb	500	175	325	350	6.70	2,345	2.09	678	1,667
Mar	500	175	325	400	6.70	2,680	2.09	678	2,002

#If +VE, Consumer has to pay to DISCOM vice versa

Case 3: Gross Metering

Month	Energy Generated by SRTPVS and injected to DISCOM through Gross Meter (Units)	Consumption from DISCOM (Units)	FIT (Rs./kWh)	Retail Supply Tariff for LT-III (A) Industrial-General Category	Monthly Credit Amount to be paid by DISCOM to Consumer (Rs.)	Monthly Bill Amount to be paid by Consumer to DISCOM (Rs.)	Net Monthly Payment by Consumer to DISCOM in Bill (Rs.)
	A	B	C	D	E=A*C	F=B*D	G=F-E
Jan	500	425	3.13	6.70	1,564	2,848	1,284
Feb	500	525	3.13	6.70	1,564	3,518	1,954
Mar	500	575	3.13	6.70	1,564	3,853	2,289

- All the Figures rounded off up to two decimals