

**ODISHA ELECTRICITY REGULATORY COMMISSION
BUDYUT NIYAMAK BHAWAN
PLOT NO.-4, CHUNOKOLI, SHAILASHREE VIHAR
BHUBANESWAR - 751021**

PRESENT

**Shri G. Mohapatra, Officiating Chairperson
Shri S K Ray Mohapatra, Member**

THURSDAY, THE 23RD DAY OF FEBRUARY, 2023

SUO MOTU CASE NO.35 OF 2022

BETWEEN

PETITIONER:

Director (Regulatory Affairs) OERC, Bhubaneswar

AND

RESPONDENTS:

Department of Energy, Government of Odisha & Others

In the matter of: Application for seeking directions of the Commission to the Department of Energy, Govt. of Odisha, GRIDCO Ltd, DISCOMs of Odisha & OREDA for issuance of Standard Operating Procedure (SoP) as well as streamlining the process and procedure for Solar Net-metering, flawless Solar billing, quick disbursal of subsidy for roof-top Solar projects to be adopted anywhere in Odisha with hassle-free procedure.

For Petitioner: Shri Priyabrata Patnaik, Director (Regulatory Affairs), OERC.

For Respondents: Ms. Sonali Patnaik, ALO I/c., DoE, GoO, Shri Chandrashekhar Mishra, RE Booster (A Quarterly Renewable Energy Magazine), Ms. Shaswati Mohapatra, Manager(PP) and Shri Prasant Kumar Das, CGM (PP), GRIDCO Ltd., Shri V. Wagle, TPSODL, Shri K. C. Nanda, GM (Fin.), TPWODL, Ms. Malancha Ghose, DGM (RA), TPNODL, Shri PuneetMunjhal, (Head Legal & Regulatory Affairs), TPCODL, Shri Bijay Das, GM (RT&C), OPTCL and Ms. Sasmita Patjoshi, Joint Director, OREDA, M/s. Sea View, Mr. Kishore Kumar Mishra, Mr. Khirod Khandayatray, Mr. Sanjay Swain, Shri Mihir Kumar Bal, Shri Avas Kumar Kanungo, Mrs. Pravat Nalini Jena, Shri Sanjay Kumar Parmar, Shri Suresh Chandra Mohapatra, Shri Pramod Dhal, Shri Gouranga Swain, Shri Ishan Mohanty, Mrs. Mamata Rout, Shri Akura Charan Bhuyan, Mrs. Anjali Acharya, Shri Ramesh Chandra Samntaray, Shri Golakh Bihari Acharya, Mrs. Umarani Maity, Shri D. K. Pattanaik, Shri Khageswar Khandayatray, Shri Abani Ranjan Pattnaik, Mrs. Puspallata Panda, Mr. Gagan Bihari Pattnaik, Shri Lakhmi Chandra Pattnaik, Shri Bibekananda Tripathy, Shri Sarat Chandra Pradhan, Shri Lokanath Pradhan, Shri Mohit Ranjan Panda, Shri Sankarananda Giri, Mrs. Namita Mohanty, Shri L. N. Pattnaik, Mrs. Basanti Biswal, Shri Bhismadev Mohanta, Shri R. K.

Rajguru, Shri Fakir Mohan Rout, Shri K. P. Mohapatra, Shri Subhas Chandra Mishra, Shri Jagadananda, Shri Etibanta Sahoo, Shri Gati Krushna Acharya, Shri Arun Kumar Nayak, Shri Ashis Parida, Mrs. Bishnupriya Tripathy, Shri Benimadhab Das, Shri Surajit Jenamani, Shri Bibhu Charan Swain of Power Tech Consultants Pvt. Ltd., Shri S.S. Bhagat and Shri R. P. Mahapatra. Nobody is present on behalf of Shri Prabhakar Dora.

ORDER

Date of Hearing: 20.12.2022

Date of Order: 23.02.2023

In accordance with the provision under Section 86(1)(e) of Electricity Act, 2003, the Commission is mandated to promote Co-generation and Generation of electricity from Renewable Sources of Energy by providing suitable measures for connectivity with the Grid and sale of electricity to any person and also specify for purchase of electricity from such sources a percentage of total consumption of the electricity in the area of a distribution licensee. Keeping in view the above provision, the Commission had issued an order [Order No.OERC-Engg.02/2010/ (Vol-III)/ 1597(A) dated 26-11-2014] relating to Net-metering/ Bi-directional metering for solar generation project including its connectivity for Government/ PSU owned/ other buildings which was amended from time to time.

2. The Ministry of Power, Government of India, vide its Notification dated 28.06.2021 has made amendments to the Electricity (Rights of Consumers) Rules, 2020 and has limited the capacity for Net Metering of a Prosumer to 500 kW (five hundred kilowatt) or upto the sanctioned load, whichever is lower. Subsequently, the Ministry of New and Renewable Energy (MNRE), Government of India, vide its letter dated 30.01.2022, has requested all State Electricity Regulatory Commissions/ Joint Electricity Regulatory Commissions to issue guidelines facilitating Group Net Metering (GNM) and Virtual Net Metering (VNM) for promotion of Renewable Energy.
3. In view of the notification of Ministry of Power and advisory of MNRE, Government of India (GoI) and considering suggestions from various stakeholders, the Commission had further amended the previous Order and issued an Order (Order no. 468 dt. 05.05.2022) relating to Net Metering (NM)/ Bi-Directional Metering/ Gross Metering (GM)/ Group Net Metering (GNM) / Virtual Net Metering (VNM) for Solar PV power Projects.
4. The above order was issued by the Commission with the objective to create an enabling environment to promote Renewable generation in general and solar generation in

particular, in the State of Odisha, which is not a renewable rich State so that all categories of electricity consumers including Government departments, educational institutions, hospitals, industries, commercial establishments and residential consumers will be able to contribute towards development of green and environmental friendly Renewable source of generation.

5. Shri Chandrashekhar Mishra, RE Booster (A Quarterly Renewable Energy Magazine) had filed a petition on 07-07-2022 seeking directions/ instructions of the Commission to the DoE, GoO, GRIDCO Limited, DISCOMs and OREDA as the purpose of the orders on Net Metering has not been fulfilled and the consumers have been facing lot of difficulties, particularly in case of installation of roof top solar system. Shri Mishra has requested for framing of appropriate Standard Operating Procedure (SoP) for the interested consumers of the State and the DISCOMs for streamlining the process of approval, timely installation of Net Meters, flawless solar billing, quick disbursal of subsidy for Roof Top Solar (RTS) projects etc. Many other consumers, who were affected because of non-availability of any SoP or Guideline joined as Respondents in this matter.
6. The Commission disposed of the petition of Shri Mishra with observation that the same was not maintainable in view of the restrictive provision under Section 86 of the Electricity Act, 2003. However, considering the significance of the matter raised by the petitioner in his petition, the Commission felt that there is need for issuance of guidelines or Standard Operating Procedure for solar net metering to address the issues & challenges faced by the prosumers/ consumers interested to set up their solar installation in the State of Odisha. Therefore, the Commission feels it expedient to initiate the action suo-motu on the subject matter for issuance of appropriate directions keeping in view the power conferred on the Commission under Regulation 9 (3) & (4) of the OERC (Conduct of Business) Regulations, 2004.
7. Therefore, the Commission had directed the Director (RA) of the Commission to change the nomenclature of the proceeding in Case No. 35/2022 and initiate the matter through a Suo Motu proceeding under Regulation 9(3) & (4) of the OERC (Conduct of Business) Regulations, 2004 and issue Public Notice inviting suggestions/ objections from the stakeholders/ institutions/ individuals.
8. Accordingly, the Director (RA) of the Commission has filed the petition and the nomenclature of the proceeding in Case No. 35/2022 is changed to a Suo-Motu proceeding under Regulation 9(3) & (4) of the OERC (Conduct of Business)

Regulations, 2004 and has prayed for admission of the matter. Thereafter, Public Notice was issued inviting suggestions/ objections from the stakeholders/ institutions/ individuals on Net-metering/ bi-directional metering/ Gross Metering/ GNM/ VNM and their connectivity order of the Commission as amended till 05.05.2022. Director (RA) has also prayed for issue of suitable directions/ guidelines or Standard Operating Procedure (SoP) for solar Net Metering/ bi-directional metering, Gross Metering, GNM, VNM in order to address the issues & challenges faced by the grid connected/ likely to be connected consumers /prosumers/ solar developers in the State of Odisha.

9. **Background on Grid connected Rooftop Solar (RTS) Programme of MNRE:**

- (a) MNRE, vide its Order No.318/331/2017-GCRT Division dated 08.03.2019, had launched Grid Connected Rooftop Solar (RTS) programme for achieving cumulative capacity of 40 GW from RTS projects by the year 2022 with total Central Financial support of Rs.11,814 crores including capacity building and service charges to the implementing agencies. Much success could not be achieved as expected.
- (b) MNRE had rolled out Phase-I programme initially wherein M/s OREDA was the implementing agency. The DISCOMs provided the Net Metering Arrangements. The Subsidy was availed by the consumer and was disbursed through OREDA.
- (c) The Phase-II programme of MNRE was introduced in March 2019. DISCOMs are the implementing agency for Phase II. Unlike Phase-I, the subsidy would be provided by MNRE to the solar Vendor (not to the consumer) through the DISCOM under Phase-II. However, the tendering and identification of vendor and price of installation of RTS was done by OREDA under Phase-I.
- (d) MNRE, vide office Memorandum No.318/6/2022-GCRT dated 10.06.2022, has conveyed the following about empanelment of vendors & their role in assisting the beneficiary.
- In order to protect the interests of beneficiaries and ensure that the vendors installing the rooftop solar plants have the requisite expertise, follow minimum specifications and standards specified by the Ministry and maintain the plant for at least five years from the date of installation, it has been decided that such vendors have to register/ empanel themselves with the beneficiaries' Distribution Utility (DISCOM).
 - The vendors currently empaneled with the beneficiaries' DISCOM through tendering process under RTS Programme Ph-II will be considered as empaneled

vendors for this purpose. Other vendors willing to register/empanel themselves in the Programme under simplified procedure may get themselves registered with the DISCOM by submitting an application along with declaration and depositing a Performance Bank Guarantee (PBG) of Rs. 2,50,000/- (Rupees Two Lakh Fifty Thousand only) valid for at least five years. The vendors can submit the application at the Division/ Circle level and the name of the vendor will be included in the list of registered/ empanelled vendors within a period of one month from the date of submission of the application. Registration/ empanelment of vendors will be valid initially for one year from the date of empanelment and can be renewed thereafter on yearly basis. The DISCOM will notify the registered/empaneled vendors on its website for information of residential consumers and update the same every month.

- The registered/empaneled vendor selected by the beneficiaries will conduct the physical survey to assess the RTS capacity and guide the beneficiary on the RTS capacity that can be installed in the beneficiary's premises considering technical and financial parameters. The vendor shall also provide assistance to the beneficiary in getting necessary approvals, installing the net-meter and facilitating inspection by the DISCOM.
 - MNRE has allocated 20 MW of RTS capacity to all 4 DISCOMs (5 MW to each DISCOM) and TPCODL is the Nodal agency on behalf of all DISCOMs for tendering.
- (e) In 'Virtual Net Metering' arrangement, entire electricity generated from a Solar Project installed at Consumer premise or any other location is injected through Solar Electricity Meter and the electricity exported is adjusted in either one or more than one electricity service connection(s) of participating Consumer(s) located within the same Distribution Licensee's area of supply. Instead of small solar plants on individual roofs, a common solar plant of higher capacity will have advantage of economies of scale, higher efficiencies and lower maintenance cost, thus solar power can be generated at lower per unit cost. Under the VNM arrangement, the solar plant need not be set up on consumer premises, rather it can be anywhere within the same Distribution licensee area. The solar plant can be set up on any adjoining land or rooftops or mix of land & roof(s) (i.e. single roof/multiple roofs) by a group of households within the same distribution license area either in CAPEX or RESCO mode. The units generated from the solar plant will be shared among the

participating consumers in proportion to their share in the installation and will be adjusted against the consumption of units from the grid by the individual consumer.

(f) In VNM arrangement, a group of consumers of a Distribution company can install a solar plant within the same distribution licensee's area of supply and avail benefits of net metering against the solar power fed into the grid from that solar plant. MNRE, vide its office memorandum No.318/27/2022-GCRT dated 03.10.2022, has clarified that Central Financial Assistance (CFA) applicable under RTS programme Phase-II of MNRE will also be applicable to solar plants setup under VNM arrangement, subject to following conditions:

- CFA would be available only for residential consumers of rural areas,
- Considering that connected load of a residential consumer in rural areas would generally be not more than 3 kW, each participating consumer under VNM would be allowed to install capacity upto 3 kW and avail subsidy available under RTS Programme Ph-II.
- Solar plant installed under VNM shall supply power to the same distribution sub-station (HT or LT side) through which the participating consumers are connected. This will ensure reliable power supply to the participating consumers and other benefits of co-locating power generation and consumption.

10. Heard the petitioners and Respondents through virtual mode. We have considered their submissions during hearing including their written submissions. A good number of Objectors/ Respondents have filed their written submissions and also have participated during the hearing to raise their issues/ concerns. The Commission has directed the respondent OREDA to prepare a draft Standard Operating Procedure (SoP) for smooth implementation of Net Metering (NM), Gross Metering (GM), Virtual Net Metering (VNM) and Group Net Metering (GNM) in line with draft SoP of MNRE circulated on 04.08.2022 considering the issues/ concerns of the stakeholders. OREDA was also required to mention the activities to be undertaken, organizations to be responsible for the same and timelines for smooth and timely execution of Roof Top Solar (RTS) power plant. The Commission has also requested all respondents to submit their views/ suggestions (if any) in this regard so that the same can be addressed in the SoP.

11. The views of the Respondents are summarised below:

- (i) Mr. Benimadhab Das, Plot No.479, Rakhali Nivas, Tarinigoda, Paradeep, Jagatsinghpur; Mrs. Bishnupriya Tripathy, Qr.No.L-7, OSHB, Kapil Prasad, Bhubaneswar; The Principal, UN Autonomous College, Adarspur, Cuttack; Sri

Jagadananda, Plot No.17, Govind Vihar, Bomikhal, Bhubaneswar; Mr. Subhash Chandra Mishra, PL-3393, Palasuni, Rasulgarh, Bhubneswar; Mr. K P Mohapatra, Plot No.486(A), Nayapalli, Bhubaneswar; Mr. F. M. Rout, Raghunathpur, Puruna Odapada, Pin-754132; Mr. R K Rajguru, Koel Nagar, Rourkela, Sundargarh; Mr. Bhisnadev Mohanta, Ichinda, Rairangpur; Mrs. Basanti Biswal, Plot No.1903/1904, Sriram Nagar, Old Town, Bhubaneswar; Mr. Laxmi Narayan Pattnaik, Radhakrushna Street, Berhampur, Ganjam; Mr. Sankarananda Giri, Secretary, KYA & Prabhuji English Medium School, Plot No.4735/5168, V.S.S.Nagar, Bhubaneswar-751 007; Mr. Mohit Ranjan Panda, Flat No.AF/2, Sibya Homes, KananVihar, Bhubaneswar; Mr. Lokanath Pradhan, Principal, DAV Public School, Ring Road Chowk, Basanti Nagar, Rourkela, Mr. Sarat Chandra Pradhan, LIG-180, K-4, K.Nagar, Bhubaneswar, Mr. Bibekananda Tripathy, Balabhadrapur, Cuttack, Mr. Lakhmi Chandra Pattnaik, B-17, Padmapani Vihar, Bargarh, Mr. Abani Ranjan Pattanaik, House No.RP-27, Baragada, Bhubaneswar, Mr. Khageswar Khandayatray, 31-SC, (RB Nagar), Bhubaneswar, Mr, D K Pattanaik, Plot No.D-1, Behind Kalpana Area, Bhubaneswar, Mrs. Umarani Maity, Plot No.2814, Gadhakana, Mancheswar, Bhubaneswar, Mr. Golak Bihari Acharya, Tulasipur, Cuttack, Mr. Ramesh Chandra Samantaray, Duplex-123, Prestige Green, Pokhariput, Bhubaneswar, Mrs. Anjali Acharya, Duplex-114, Metro Satellite City, Bhubaneswar, Mr. Akrura Charan Bhuyan, HIG-115, Kalinga Nagar, Bhubaneswar, Mrs. Mamata Rout, Kanjia, Sakhigopal, Puri, Mr. Ishan Mohanty, MIG-48, Ananta Vihar, Phase-II, Pokhariput, Bhubaneswar, Mr. Gouranga Swain, BL-54, V.S.S.Nagar, Bhubaneswar, Mr. Promod Dhal, D/9, Monsoon Green, Raghunathpur, Bhubaneswar, Mr. Suresh Chandra Mohapatra, Plot No.1595/1596, Bhoi Nagar, Unit-9, Bayababa Road, Bhubaneswar, Mr. Sanjaya Kumar Parmar, Patera Sahi, Cuttack, Mrs. Pravati Nalini Jena, HIG- 414, K-5, Kalinga Vihar, Bhubaneswar, Mr. Mihir Kumar Bal, HIG-201, Kalinga Vihar, Bhubaneswar, Mr. Sanjay Swain, Sanachanchotangi, Cuttack, Mr. Khirod Khandayatray, 31-SC, Malvi Nagar, Bhubaneswar, Mr. Kishore Kumar Mishra, Choudhuri Bazar, Cuttack, Mrs. Namita Mohanty, Principal, DAV Public School, Sector-6, CDA, Cuttack and Mr. Etibanta Sahoo, Zonal Manager of Skill Development Institute, Taraboi, Khordha have raised the following issues:

- a. Issuance of hassle-free procedure/guidelines for installation of RTS plant with net meter.
 - b. Timely and flawless/proper billing by DISCOMs, and
 - c. Timely release of subsidy to solar prosumers.
- (ii) Mr. Gagan Bihari Pattanaik, Bhubaneswar, Mrs. Puspalata Panda, Bhubaneswar, Mr. Avas Kumar Kanungo, Fakirpur, Jagatpur and M/s. Hotel Sea View, Puri have raised the following issues:
- a. Issuance of hassle-free procedure/guidelines for installation of RTS plant with net meter.
 - b. Timely and flawless/proper billing by DISCOMs
- (iii) Mr. Ashis Parida, Director of M/s Grinity Intellect Pvt. Ltd., Bhubaneswar has raised the following issues:
- a. Provision of detailed procedure and guidelines to be followed by the stakeholders.
 - b. Virtual net metering and Group net metering may be allowed upto 500 kWp maximum power to all category consumers.
 - c. Special consideration/ benefits for relaxation on transmission charges & wheeling charges, waiver of cross subsidy charges may be allowed for faster adoption of solar energy through Open Access route.
- (iv) Mr. Gati Krushna Acharya, CEO of M/s. Crux Power Pvt. Ltd has raised the following issues:
- a. The SoP Submitted by OREDA needs revision since the timeline of approximately 72 days is very high
 - b. Issuance SoP for a time bound service i.e., approval may be completed within 7 days of application, Installation of Net meter within 15 days and subsidy disbursement may be made within 30 days
 - c. Timely and proper billing by DISCOMs
 - d. Provision of subsidy to the Prosumers of RTS plants installed under RTS-I & II schemes.
- (v) Sri Surjit Jenamani, M/s. Crux Power Pvt. Ltd. has raised the following issues:
- a. Installation of net metering with a time line of 72 days will no way be helpful to a consumer.

- b. Provision for less time for implementation of solar PV system will benefit consumers and will help in meeting solar RPO target of the state.
- (vi) Sri Sharthak Bhagat, CEO, M/s. White Shark Energy Pvt. Ltd. has raised the following issues:
- a. Hybrid net metering with battery enable solar system may be allowed in semi urban and rural areas of Odisha.
 - b. Relaxation of capping of 500 kW on solar NM/ VNM/ GNM to at least 2 MW to empower MSMEs within the States
 - c. SoP may clearly specify about separate metering in case of HT and LT.
 - d. A single portal for all consumers across all DISCOMs may be created for better implementation and tracking of net metering and release of subsidy.
- (vii) Shri Bibhu Charan Swain, Power Tech Consultants Pvt. Ltd., Bhubaneswar has raised the following issues, which should be addressed.
- a. The condition for limiting the capacity of the solar power plant within sanctioned load in virtual/ group metering is against the spirit/philosophy for promotion of renewable power and may be deleted.
 - b. No need for connection agreement prior to installation of the solar power plant and hence the said condition may be removed.
 - c. Two months' time period for installation of Roof Top Solar Plant may be replaced with at least one-year time.
 - d. For net metering there should not be any capping of electricity generated from a solar PV project at 90% of electricity consumption by the eligible consumers.
 - e. There should be provision for reimbursement of inadvertent/ infirm injection at APPC price.
 - f. Higher capacity plant is required to be installed for battery energy storage system.
 - g. Guideline may be made generic and should be applicable to any type of RE projects.
 - h. Deemed generation charges should be payable to the solar generators/ RESCO.

- i. Project Developer shall have the option to change the share of credit in VNM model and to change the priority list of the various connections of the consumer in GNM model by providing advance notice of 2 months to the DISCOM during the year.
 - j. The time-block based adjustment energy consumption by the consumer vis-à-vis energy generation from the renewable based energy may kindly be deleted as this will lead to lot of complexity in data repository. The entire consumption may be adjusted from the solar generation irrespective of time block.
 - k. Auxiliary consumption settlement should be made on net metering basis for the solar generation project as well.
- (viii) Submissions of Shri Pravakar Dora, Member Advisor, SAC has raised the following issues:
- a. Standard Format of Permission letter may be specified to maintain uniformity.
 - b. Permission cum feasibility report should mention the details of meters and size of service wire including the type /rating and specification of the net meter.
 - c. The existing working meter may be used as generation meter.
 - d. The permission for net metering (along with feasibility) may be released to existing consumers within 7 days instead of 15 days since all the documents are already available with the licensee.
 - e. The SoP shall specify, that the permission shall release within 10 day to the new consumer.
 - f. The charging of net metering installation may be completed within 7 days from the date of submission of completion certificate by the prosumer.
 - g. It may be specified that no inspection is required from Electrical Inspectorate upto 50 KVA. The inspection for the installation of the capacity less than 50 KVA may be made by the lisensees within three days by the designated officer otherwise it may be treated as deemed completion of the inspection.

- h. The application itself may be treated as an agreement upto 5 KVA (Single Phase) and upto 50 KVA for all (Three Phase) prosumer.
 - i. Both bi-directional meter and generation meter may be installed at one place.
 - j. Meter testing facility may be provided by the licensees since it is difficult on the part of a prosumer of remote area to reach the STL at Bhubaneswar to get their meters tested.
 - k. Both on-line and off-line mode of application for net metering may be allowed.
- (ix) Submissions of GRIDCO Ltd. are as follows:
- a. Monthly generation data of RTS is required for assessment of solar RPO, generation pattern and demand forecasting. Therefore, metering and its reporting should be properly mentioned in the SoP.
 - b. Provision of penalty of Rs. 500/- per day (in line with the MNRE Memorandum dt. 19.12.2022) in case of default by the distribution utilities. Timeline as set by MNRE may also be mentioned in the SoP likely to be implemented in our state.
- (x) Submissions of TP Central Odisha Distribution Limited (TPCODL) are as under:
- a. Steps may be taken to encourage the consumer to generate solar energy for sole consumption instead of keeping the motive to sell excess energy. The Commission has taken the right steps by limiting the maximum plant size as 500 kWp or the sanctioned load whichever is less, 75% of transformer capacity and limiting the generation capacity to 90% of the total consumption.
 - b. Connectivity permission for LT and HT level only may be allowed to inject energy into the network of the distribution system. Further, the clarification issued by the Commission on dated 19-09-2022 in certain issues regarding of VNM & GNM may be incorporated in the SoP.
 - c. Levy of cross subsidy surcharges, wheeling charges and distribution loss of distribution network used by HT consumer in case of VNM & GNM may be considered. Further applicability of Group captive rule of minimum 26% ownership may be allowed for GNM.

- d. The MNRE vide their letter dated 03-10-2022 has clarified to consider different financial models, i.e, CAPEX Model, RESCO Model & Utility Model. RESCO model may applied for better participation of consumers, reliable daytime power etc.
 - e. Compulsory online platform for application to installation and standardization of workflow process may be adopted by all DISCOMs for convenience of all the stakeholders.
 - f. Apart from OERC guidelines for NM, prescribed formats and agreements as available in the MNRE guideline dated 04-08-2022 may be considered at the time of framing of SoP.
 - g. Budget provision of about Rs.75 lakh per year for first two years per DISCOMs may be allowed to spread awareness among the consumers and the expenditures on this account may be allowed in ARR.
- (xi) Submissions of TP Southern Odisha Distribution Limited (TPSODL) are as under:
- a. Rs.75 lakh per year for first two years may be allowed for spreading awareness amongst the consumers to avail of the benefits arising out of net metering arrangement.
 - b. Request for amendment of clause 10 (d) of the order dated 17-01-2018 of the Commission to allow testing of meter by Standard Testing Lab (STL) of Government of Odisha.
 - c. Wheeling Charges and Wheeling Losses may not be made applicable initially upto FY 2024-25 for VNM & GNM consumers.
 - d. VNM & GNM arrangement may be extended to Irrigation and Pumping category along-with the Domestic & Specified Public Purpose category.
 - e. The SoP/ guidelines as well as timelines for implementation of RTS installations as mentioned by MNRE may be followed by the Commission in order to bring uniformity in the two SoP, i.e., by MNRE & SoP of the Commission.
- (xii) Submissions of TP Western Odisha Distribution Limited (TPWODL) & TP Northern Odisha Distribution Limited (TPNODL) are as under:
- a. WESCO had been allocated 1 MW capacity under RTS-Phase I from MNRE, GoI in FY 2019-20 for implementation of Grid Connected RTS plant in residential sector. OREDA has floated tender to empanel

vendors to execute the above target on behalf of WESCO. But due to Covid-19, market price escalation and GST rate revision etc., the selected vendors were not able to execute a single project in the prevailing discovered price. The allocation target of 1 MW was taken back by MNRE.

- b. TPWODL again received allocation of 5 MW for installation of roof top plants in residential sector with CFA vide MNRE letter dt. 19.01.2022. At present, TPWODL is following a SoP for handling Net metering applications and also has in the process of simplification of the installation of grid connected RTS as per MNRE guideline 10-06-2022. As per this guideline, the national portal (www.solarroofptop.gov.in) is under process where a consumer can directly apply and get subsidy directly in his bank account and DISCOMs will act as facilitator.
- c. TPWODL has suggested for a unified SoP for handling net metering applications within time lines and responsibility for smooth installation of RE plants for consumers. Regarding billing issue of net metering, consumers are tagged separately to provide them net meter bills based on actual import and export data.
- d. Technical Feasibility Analysis to be completed within 7 working days from the date of application by the consumer.
- e. Provision of deemed approval in absence of intimation by the DISCOMs may be deleted.
- f. Arrears & other pending dues shall be cleared before allowing net metering connection.
- g. Consumer may procure duly tested meters for installation.
- h. Plant to be synchronised within 7 days of installation of plant.
- i. No ToD benefit should be extended to the consumers on imported energy.
- j. There should not be any late payment surcharge on delayed payment of the solar injection compensation in case of gross metering. OERC Distribution (Conditions of Supply) Code may not be referred for this purpose.
- k. Compensation of electricity consumption in any time block with similar time blocks may not be allowed since it will be difficult for implementation.

- l. Roles and responsibility of personnel may be modified in line with staff structure of TPWODL.
 - m. There should be a provision of penalty in case of unauthorised capacity addition by the consumers.
12. The prayer of Shri Pravakar Dora and Shri R. P. Mahapatra to implead them as intervener of this case was accepted by the Commission and they were directed to file their submissions, if any, on this matter. However, no written submission was received from the Respondent Shri Mohapatra though he participated in the hearing by making oral submissions.
13. The Commission, vide their interim order dated 29-11-2022, had directed OREDA to submit the modified draft SoP indicating net metering arrangement, auxiliary consumption and gross metering aspects including the queries made by the Commission mentioning the activities to be undertaken, organisation to be responsible for the same and timelines for implementation and execution. OREDA has submitted the modified draft SoP on 05.12.2022. The matter was again heard on 13.12.2022 and on 20.12.2022. The Commission has carefully gone through the draft SoP submitted by OREDA. It may be noted that matters relating to disbursal of subsidy does not come under the jurisdiction of this Commission. However, DISCOMs are expected to cooperate and facilitate the process of release of subsidy under RTS program of MNRE (Phase-II).
14. In addition to the effective implementation of Roof Top Solar system with net metering arrangement, there are issues relating to metering, billing etc., which are required to be addressed by the DISCOMs as per the provisions in the Electricity Act, 2003, OERC Distribution (Conditions of Supply) Code, 2019 as amended from time to time and other relevant Regulations/ Orders issued in this regard. Therefore, the Commission feels that a Standard Operating Procedure (SoP) may be framed to address the concerns of the consumers/ prosumers opting to avail the benefit on installation of Roof Top Solar Plant.
15. Accordingly, exercising the power conferred under Regulation 199 of OERC Distribution (Conditions of Supply) Code, 2019 and considering the notification of Ministry of Power and advisory of MNRE, Government of India as well as suggestions from various stakeholders including the draft SoP submitted by OREDA, the Commission hereby approves the Standard Operating Procedure (SoP) for implementation of solar net metering/ bi-directional metering/ Gross Metering /Group

Net-Metering/ Virtual Net-Metering and their connectivity order which is attached to this order as Appendix.

16. Most of the Roof Top Solar (RTS) installation in residential sector have been installed in urban areas as the concrete structure of roof of house has sufficient strength for such installation. Inadequate strength of the civil structure of rural households to install RTS and insufficient resources for initial investment of RTS are two main reasons for limited RTS installations in rural areas. Instead of installing RTS on individual household basis, MNRE has proposed GNM & VNM to encourage solar installation in rural areas in RESCO/ CAPEX mode on aggregated basis so that solar plant is installed on lease or on panchayat land for a group of rural households.
17. The proposed mechanism will improve the electricity supply in the rural area resulting in development of economic activities & improvement in standard of living, reduce T&D loss, and improve financial health of DISCOMs as the consumption of subsidized category will reduce. The commission has already notified regulation relating to NM, GM, GNM & VNM and SOP will facilitate the implementation of NM, GM, GNM & VNM and promote development of RE & economic activities in rural areas.
18. Salient features covered in SOP:
 - a) Responsibility of DISCOM(s) to carry out Technical feasibility
 - b) Connection agreement with DISCOM(s)
 - c) Metering & Synchronization of Plant with the Grid
 - d) Energy Accounting and settlement
 - e) Inspection by DISCOM officials to ensure Solar Photo Voltaic (SPV) system including panels, inverters etc. meet the requirement of National & International Standards and all protective equipment of SPV system are in place & are functioning as per specifications.
 - f) Application format for Grid connectivity for NM, GM, VNM, and GNM
 - g) Online platform; Meter Testing; application of Cross Subsidy Surcharge (CSS), Wheeling Charges & Distribution Loss and Penalty or Compensation etc.
 - h) Installation of isolating device (both automatic and in built within inverter & external manual relays) and access to DISCOM(s) for operation, shutdown of PV system in case of power outage of DISCOM(s)

- i) Comply with safety as per CEA (Measure relating to safety & electric supply) Regulations 2010 as amended from time to time
- j) Settlement of Auxiliary consumption
- k) Billing & payment for NM, GM, VNM, and GNM
- l) Standard agreement format NM, GM, VNM, and GNM covering eligibility, technical & interconnection requirement, access & disconnection, liabilities, commercial settlement, termination of agreement and governing law and jurisdiction etc.
- m) Procedure for installation & metering connection of grid connected RTS PV system.
- n) Changes in sharing ratios in case VNM
- o) Parent & Child concept in GNM

19. Some of the Respondents have prayed for directions on following issues:

- (a) Release/ Disbursement of subsidy under RTS programme Phase-I from Nodal agency
- (b) Irregularity in billing by DISCOM for grid connected RTS installations with Net Metering arrangement.

20. Regarding release/ disbursement of subsidy, the Commission has limited scope/role to interfere in the matter. The affected consumers may approach the Nodal agency OREDA/ DISCOMs (as the case may be) for settlement/ payment of subsidy under RTS program Phase-I & Phase-II. However, regarding irregularities in billing by DISCOM for grid connected RTS installations with NM arrangement, the Commission directs the respective DISCOM to take early necessary action for streamlining and address the billing related issues of consumers having RTS installations with NM arrangement.

21. The DISCOMs shall furnish the information/ data of solar energy generated by the eligible consumers to GRIDCO on monthly basis for consideration of the same towards fulfillment of Renewable Purchase Obligation (RPO).

22. If any change is required in the SoP, the same shall be carried out by the Nodal Agency with approval of the Commission.

23. The Secretary, OERC is directed to take necessary action for circulation of the above mentioned Standard Operating Procedure (SoP) and directions of the Commission

among the Department of Energy, Government of Odisha, GRIDCO Ltd, OPTCL, DISCOMs & other important stakeholders and place the same in the Commission's website as well as DISCOMs' website for information of all concerned.

24. Accordingly, the case is disposed of.

Sd/-
(S. K. Ray Mohapatra)
Member

Sd/-
(G. Mohapatra)
Officiating Chairperson

**Standard Operating Procedure (SoP)
For
Implementation of Net Metering (NM),
Gross Metering (GM), Virtual Net
Metering (VNM) and Group Net Metering
(GNM) Mechanism**

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I. Definitions:

- a) “Net-metering” means a mechanism whereby solar energy exported to the Grid from Grid Interactive Solar Photovoltaic system of a Prosumer is deducted from energy imported from the Grid in units (kWh) to arrive at the net imported or exported energy and the net energy import or export is billed or credited or carried-over by the distribution licensee by using a single bidirectional energy meter for net-metering at the point of supply.
- b) “Gross-Metering” means a mechanism whereby the total solar energy generated from Grid Interactive Solar Photovoltaic system of a Prosumer and the total energy consumed by the Prosumer are accounted separately through appropriate metering arrangements and for the billing purpose, the total energy consumed by the Prosumer is accounted at the applicable retail tariff and total solar power generated is accounted for at a tariff determined by the Commission.
- c) “Group Net Metering” means a mechanism whereby surplus energy generated/ injected from a Renewable Energy System or Battery Energy Storage System (BESS) charged through Renewable Energy System is exported to the grid through Net Meter and the exported energy is adjusted in more than one electricity service connection(s) of the same consumer located within the same distribution licensee’s area of supply.
- d) “Virtual Net Metering” means a mechanism whereby entire energy generated/ injected from a Renewable Energy System or Battery Energy Storage System (BESS) charged through Renewable Energy System is exported to the grid from renewable energy meter/gross meter and the energy exported is adjusted in more than one electricity service connection(s) of participating consumers located within the same distribution licensee’s area of supply.
- e) “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 own electricity requirements.
- f) “Prosumer” 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 System installed at the Consumer’s premises, to offset part or all of the Consumer’s electricity requirements and can also inject electricity into the Grid using same point of supply.

II. Objectives of preparing a unified SoP:

Objectives of preparing a unified SoP across the State are:

- (a) To encourage the consumers to generate solar energy with the prime objective of meeting their own consumption only and not to generate excess power with the objective of selling. The Commission has addressed this issue by limiting the plant size to 500 kW or upto the sanctioned load whichever is less, as long as it is within the limit of 75% of the associated transformer capacity of the distribution system and limiting the energy generation upto 90% of total consumption.
- (b) The excess energy, if any, when injected into the network of distribution system, in all likelihood will be consumed in the immediate neighbourhood within the distribution network thereby achieving T&D loss reduction for the State. For this to happen, the connectivity must be allowed at LT/HT level only and not at EHT level.
- (c) To streamline the process & procedure for hassle free implementation of solar Net Metering (NM)/ Gross Metering (GM)/ Virtual Net Metering (VNM)/ Group Net Metering (GNM) for grid connected Rooftop Solar (RTS) installations in a time bound manner at consumer’s premises through the nodal agency to promote integration of RE so that solar prosumer(s)/consumer(s) do not suffer.
- (d) To address concern regarding irregularity in raising bills by DISCOMs to solar prosumer(s)/consumer(s), who have installed/will install RTS system with net metering.
- (e) Ensure submission of the document(s) along with the application by the consumer/prosumer as per check list.
- (f) Development of a step-by-step on-line process by nodal agency

- For submission of application by consumer(s) of grid connected RTS installation with least human intervention and issuance of permission.
- Facility to know status of consumer application [Pending/Approved/contact concerned officer in case of deficiency in the application.

(g) Training of DISCOM staff/officers relating to proper meter reading & billing, etc.

(h) Upgradation of software by DISCOMs for timely & flawless billing to consumer/prosumer.

(i) Preparation of database of such net metered (NM/GM/VNM/GNM) consumers/prosumer.

III. Maximum capacity of Renewable Energy system and Consumer Registration/ Applications:

- a) The capacity of the renewable energy system under Net Metering (NM)/ Group Net Metering (GNM) or Virtual Net Metering (VNM) framework to be installed by any consumer / applicant shall be allowed upto five Hundred kilowatt (500 kW) or upto the sanctioned load, whichever is less, as long as it is within the limit of the 75% of the associated transformer capacity of the Distribution system. The capacity of the Renewable Energy System under GNM or VNM frame work shall not be less than 5 kW and more than 500 kW. Virtual Net Metering framework shall be applicable for consumers under “Domestic” and “Specified Public Purpose” category as per OERC Distribution (Condition of Supply) Code, 2019 as amended from time to time, and also for the offices of Government/Local authorities.
- b) For renewable energy system under Gross Metering (GM) framework, the capacity of the system should not be less than 5kW and shall be primarily for its own consumption and limited to 75% of the associated transformation capacity of the distribution system.
- c) If a consumer intends to install a Solar PV System of a capacity that exceeds the Contracted Load, the consumer shall submit an application for Contracted Load enhancement (limited to 500 kW) along with the Solar Net Metering application. The Contracted Load enhancement application will be processed by the Distribution Licensee as per standard procedure for such applications.
- d) A third party developer/installer cannot avail Group Net Metering facility. In case of Virtual Net Metering arrangement, a third party developer/installer of the Renewable Energy System can also generate electricity and inject such power to the grid for offsetting the consumption of the participating consumers. The energy injected to the grid by such arrangement should be net off considering the auxiliary consumption of the third party developer/installer. However, the third party developer/installer of such system under VNM should have agreement with the participating consumers.
- e) Since both Net Metering and Virtual Net Metering (VNM) are two different mechanisms and require different metering arrangements at consumer premises, a consumer cannot opt for both Net Metering and Virtual Net Metering arrangements at the same point of supply. A Net Metering consumer would be allowed to apply for Group Net Metering (GNM) and the adjustment of energy consumption of the consumer shall be done for all the locations (within same Distribution licensee’s area of supply) having service connections where energy is consumed. However, the Net Metering consumer shall cease to exist as a Net Metering consumer, once it is recognized as a Group Net Metering consumer. In case a consumer opts for Group Net Metering, settlement shall be done considering the consumption at all locations having different service connections of the same consumers. In case a consumer opts for Virtual Net Metering, settlement shall be done considering the consumption of all the participating consumers. In both VNM & GNM arrangements, excess energy generation (above 90%) at the end of the financial year would be considered as free energy and shall not be offset against consumption.
- f) The Eligible consumer(s)/applicant(s) shall make an application to Distribution Licensee for Net Metering (or) Gross Metering (or) Virtual Net Metering (or) Group Net Metering in the prescribed format (*Annexure-I, IV, VII*) along with non-refundable fee of Rs. 500 (Five Hundred Rupees) inclusive of all applicable taxes, which includes applicable taxes, as registration and feasibility analysis fee for the proposed installed capacity. All the necessary forms and formats are enclosed with the document.

IV. Technical Feasibility Analysis:

- a) The Nodal Agency/Distribution Licensee / Empaneled Vendor (as applicable) shall carry out the physical

survey to access the RTS capacity and technical feasibility analysis based on the information furnished by the eligible consumers with his application and discuss the technical & financial matters with the applicant on first come first serve basis.

- b) **This technical feasibility analysis shall be completed within the timeline as mentioned in Annexure-X from the date of submission of application** and status of approval shall be conveyed to consumer accordingly and shall also be available in the website of Nodal agency and Distribution licensee. The Rooftop Solar (RTS) plant shall satisfy the technical standard issued by MNRE, especially with respect to inverter specification, safety aspect like anti-islanding and other protection devices.
- c) The maximum installed capacity at the LT/HT level of distribution network shall be limited to 75% of the associated Distribution Transformer (DT) capacity.
- d) The important technical parameters, relevant National & International Standards and interconnection requirements shall be as provided below:

Parameter	Reference	Requirement
Overall conditions of service	OERC Distribution (Conditions of Supply) Code, 2019 and Amendments thereto as amended from time to time	Reference to regulations
Overall Grid Standards	CEA (Grid Standard) Regulations, 2010 as amended from time to time	Reference to regulations
Equipment	BIS/IEC/IEEE	Reference to standards
Meters	CEA (Installation & operation of meters) Regulation, 2006 as amended from time to time	Reference to regulations and additional conditions issued By OERC
Safety and supply	CEA (Measures relating to Safety and Electricity Supply) Regulations, 2010 as amended from time to time	Reference to regulations
Harmonic Current	CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time	Harmonic current injections from a generating station shall not exceed the limits specified
Synchronization		Photovoltaic system must be equipped with a grid frequency synchronization device. Every time the generating station is synchronized to the electricity system it shall not cause voltage fluctuation greater than +/-5% at point of connection.
Voltage		The voltage-operating window should minimize nuisance tripping and should be under operating range of 80% to 110% of the nominal connected voltage. Beyond a clearing time of 2 second, the photo voltaic system must isolate itself from the grid.
Flicker		Operation of Photo voltaic system should not cause voltage flicker in excess of the limits stated in IEC 61000 standards or other equivalent Indian standards, if any.

Parameter	Reference	Requirement
Frequency		When the Distribution system frequency deviates outside the specified conditions (50.5 Hz on upper side and 47.5 Hz on lower side), There should be over and under frequency trip functions with a clearing time of 0.2 seconds.
DC injection		Photo voltaic system should not inject DC power more than 0.5% of full rated output at the interconnection point or 1% of rated inverter output current into distribution system under any operating conditions.
Power Factor		Whether output of the inverter is greater than 50%, a lagging power factor of greater than 0.9 should operate.
Islanding and Disconnection		The photo voltaic system in the event of fault, voltage or frequency variations must island/ disconnect itself within IEC standard on stipulated period.
Overload and Overheat		The inverter should have the facility automatically switch off in case of overload or overheating and should restart when normal conditions are restored.
Paralleling Device		Paralleling device of photovoltaic system shall be capable of withstanding 220% of the normal voltage at the Interconnection point.
*The technical and interconnection requirement shall undergo change as and when the above Regulation/ Standards get amended.		

V. Connection Agreement:

- a) The eligible consumer(s) and the Distribution licensee shall enter into an agreement that specifies the requisite technical information, commercial arrangement and the roles and responsibilities of all the concerned stakeholders as specified in **Annexure-II, III, V, and VIII within the timeline as mentioned in Annexure-X from the date of issue of technical feasibility analysis.**
- b) If Agreement is not executed by the Eligible consumer within the timeline as mentioned in Annexure-X, application is deemed to be cancelled.
- c) The grid connected RTS plant shall be installed within the timeline as mentioned in Annexure-X from the date of signing of agreement for Net-metering/Gross-metering/VNM/GNM.
- d) In case of any delay beyond the timeline as mentioned in Annexure-X, DISCOM may provide the time extension on case-to-case basis, after which the agreement shall be deemed terminated without assigning any reason, which is at the sole discretion of DISCOM.
- e) The arrears or any other pending dues shall be cleared before seeking for RTS installation with NM/GM/VNM/GNM arrangement.

VI. Metering and Synchronization:

- a) Installation of meter(s) for recording solar generation shall be mandatory for all RTS systems.
- b) The location and installation of meter(s) associated with the RTS system shall be in accordance with CEA (Installation and Operation of Meters), Regulations, 2006 as amended from time to time.

- c) The appropriate meter(s) at the premises of the consumer shall be procured, installed and maintained by the Distribution Licensee at the cost of the Eligible consumer. However, if the eligible consumer wishes to procure the appropriate Meter(s), they may procure such meter(s) and present the same to the Distribution Licensee for testing (**if not pre-tested**) and installation. The fees for the same shall be borne by the consumer.
- d) The meter(s) installed shall be jointly inspected and sealed on behalf of both the parties and the meter reading taken by the Distribution Licensee shall form the basis of commercial settlement.
- e) The RTS installation shall be synchronized/ commissioned **within the timeline as mentioned in Annexure-X after completion of installation** of plant. Upon synchronization of the RTS system with the Grid, the DISCOM personnel shall inspect the meter(s) and ensure that all safety features/precautions of the installation are as per CEA's safety Regulations 2010 as amended from time to time. A commissioning certificate in respect of the solar project would be issued by the DISCOM subject to the test results which should conform the regulatory Requirements/ Standards
- f) Interconnection framework for net-metering shall address all parameters including voltage level of connection to grid, minimum technical standards for interconnection etc. as per MNRE guidelines, National/International standards and relevant regulations including OERC Distribution (Condition of Supply) Code, 2019 as amended from time to time and as per CEA (technical standards for Connectivity of Distributed Generation Resources) Regulations, 2013 as amended from time.
- g) Meter reading shall be as per standard practice of respective DISCOM.
- h) In case of defective net-metering/bi-directional metering/GN/VNM/GNM the followings shall apply:
 - If the solar net-metering facility has been in service for more than 12 months:
The active energy import, active energy export and active energy net import readings of the corresponding period of the previous year will be taken for billing purpose by the DISCOMs.
 - If the solar net-metering facility has been in service for less than 12 months:
The net active energy to be billed by DISCOM per month = (Average energy consumption (imported active energy) during the last three billing cycles prior to the installation of the bi-directional/ net meter) - kWp of Solar PV generator x 124

VII. Energy Accounting and Settlement:

Any energy injected prior to commissioning of the Rooftop solar installation shall be deemed as inadvertent power. The consumer/prosumer of Solar PV plant is not eligible to receive any monetary compensation/adjustment of energy generated from RTS system for such inadvertent power.

Meter readings shall be taken as per the applicable billing cycle as provided in the OERC Distribution (Condition of Supply) Code, 2019 and subsequent amendments thereof;

The details of Energy Accounting and Settlement that shall be followed is given below:

(a) For Net Metering:

- i. Electricity generated from a Solar PV project shall be capped cumulatively at 90% of the electricity consumption by the eligible consumer at the end of a settlement period which ends with the financial year to allow for seasonal variation in generation. In case Commercial Operation Date (COD) occurs in between the financial year, the 90% capping shall be on the energy consumed by the consumer from the date of COD to the end of the financial year.
- ii. The carry forward of excess energy generation will be allowed from one billing cycle to the next billing cycle till the end of the same financial year. Any excess generation (above 90 per cent) at the end of the financial year would be considered as free energy and shall not be offset against the consumer's consumption. There shall not be any carry forward of energy to the next financial year.
- iii. The consumer/prosumer shall be eligible for normal ToD benefit for imported quantum of energy as per the order of the Commission prevailing at that time.

(b) For Gross Metering:

- i. The case of rooftop solar PV system under gross metering arrangement, the Licensee shall undertake energy accounting and settlement with the eligible consumer only who is the signatory of the interconnection agreement with the Licensee.
- ii. The energy accounting and settlement procedure for eligible consumers installing and operating rooftop solar PV system under gross metering arrangement shall be as per the following procedure:
 - For each billing period, the Licensee shall show the quantum of electricity (in kWh) injected by the rooftop solar PV system installed at the premises of the eligible consumer in the billing period.
 - The Distribution Licensee shall reimburse the eligible consumer for the quantum of injected electricity by the rooftop solar PV system during the billing period by way of 'Solar Injection Compensation'.

The energy drawl and energy injected by such eligible consumer/ prosumer under gross metering arrangement shall be considered as two separate transaction and the payables for energy drawn by the prosumer shall not be offset against the receivable for export of power to the distribution licensee.

Further, for each unit (kWh) of energy generated and injected into the grid by eligible consumer/ prosumer shall be paid by the DISCOMs at the rate as decided by the Commission.

- iii. The Distribution Licensee shall be responsible for billing of the electricity injected by the rooftop solar PV system into the distribution system. The bills prepared by the distribution license shall necessarily include the following:
 - Quantum of electricity injected into the distribution system by the rooftop solar PV system.
 - Quantum of Solar Power Injection Compensation payable by the Licensee.

The billing period for solar power injection and the energy drawn by the prosumer shall remain unchanged for the eligible consumer in whose premises the solar system has been installed.

The licensee shall reimburse the eligible consumer of the solar rooftop system, within the due date of the electricity bill of the consumer in whose premises the rooftop solar PV system has been installed.

- (c) **For VNM:** The energy generated from Renewable Energy System shall be credited in the monthly electricity bill of each participating connection(s) as per the ratio indicated in the application to DISCOM (**Annexure-IV**)

For GNM: The energy generated from Renewable Energy System shall be credited in the monthly electricity bill of different service connections of the same consumer as per the ratio indicated in the application form (**Annexure-VII**)

- (d) **For VNM:** The consumer(s) shall have the option to change the share of credit of electricity from Renewable Energy System, subject to the ratio of procurement from Renewable Energy system indicated under the agreement / MoU entered by the consumer, once in a financial year with 3 Months' notice in advance.

For GNM: The priority list for adjustment of the balance surplus energy against other electricity connection(s) may be revised by the consumer once in a financial year with 3 months' notice in advance.

- (e) Where the service connection of any participating consumer(s) (in case of VNM)/ connection(s) (in case of GNM) is disconnected due to any reason under any law for the time being in force, the unadjusted units/ remaining credits of that consumer(s)/ connection(s) shall be paid/ compensated by the distribution licensee at the end of the financial year.

(f) **For VNM:** The electricity consumption shall be first compensated with the electricity generation in the same billing cycle of the participating consumer(s). Any surplus generation over and above the consumption shall be treated in the manner as applicable under the Orders on Net metering and its subsequent amendments.

For GNM: The electricity consumption shall be first compensated with electricity generation in the same billing cycle of the consumer where the Renewable Energy System is located and any surplus units injected shall be adjusted against the energy consumed in the monthly bill of service connection(s) in a sequence indicated in the priority list provided by the consumer. Any surplus generation over and above the consumption of any service connection(s) shall be treated in the manner as applicable under Net metering under the Orders on Net metering and its subsequent amendments.

(g) **For VNM:** Where the units credited during any billing period of any participating consumer exceeds the import of units by that consumer, such surplus credited units shall be carried forward in the next billing period as energy credits for adjustment against the energy consumed in subsequent billing periods within the settlement period of each participating consumer(s).

For GNM: Where the exported units during any billing periods exceeds the imported units at the service connection, such surplus units injected into the grid shall be adjusted against the energy consumed in the monthly bill of service connection(s) in a sequence indicated in the priority list provided by the consumer. The sequence of priority for adjustment shall be deemed to begin with the service connection where the Renewable Energy System is located.

(h) At the end of each settlement / financial period any electricity credits as a result of excess generation (above 90%) shall be considered as free energy and shall not be offset against the consumer's consumption in the coming settlement/ financial period. The unadjusted excess electricity from solar system shall be reset to zero at the beginning of each settlement period.

(i) Auxiliary consumption of Solar Photo Voltaic (SPV) power plant shall be settled as

- i. For Bi-Directional metering/ Net metering connection, auxiliary consumption shall be netted by the installed Bi-Directional meter.
- ii. For Gross metering connection, auxiliary consumption shall be billed according to the General Purpose (GP) tariff decided by the Commission.

VIII. Inspection:

DISCOM officials reserve the right to inspect the Rooftop solar Plant at any time during the term of the Agreement. As part of the inspection, DISCOM officials must ensure the following aspects:

- (a) All protective equipment of the SPV system is functioning as per specifications.
- (b) The SPV system including panels, inverters, etc. continue to meet the requirements of Indian & IEC standards post installation

For inspection of project above 50 KVA, consumer needs to get clearance certificate from Chief Electrical Inspector to Government of Odisha (CEIG) and submit the same to respective DISCOMs for necessary action. Necessary fees for the same will be borne by the respective consumer.

IX. Commissioning and Joint Commissioning Report (JCR):

- (a) After successful inspection & meter testing (if meter is purchased by the consumer **without pre-test certificate**), DISCOM shall inspect and seal the meter(s) immediately after commissioning. The plant shall be treated as commissioned from the date of installation of meter(s) for NM/ GM/ VNM/ GNM.
- (b) A Joint Commissioning Report (JCR) shall be signed by consumer, plant supplier/ EPC contractor/ empaneled vendor & DISCOM officer. The signing authority of DISCOM to sign the JCR on the same date as installation of meter(s).

X. Billing and Payment:

(a) For each billing period, in case of Net metering/ Bi-Directional metering the licensee shall show

separately (i) quantum of electricity/ energy injected by Eligible Consumer from Solar PV System into the grid, (ii) electricity/ energy supplied by the Distribution Licensee, (iii) net energy due for payment to DISCOM by the consumer and (iv) net exported energy after adjustment against the consumption, if any.

- (b) In case of net import of electricity by the consumer from Distribution system, the distribution licensee shall raise invoice for imported quantum after taking into account any carry forward of energy from previous billing month of the ongoing settlement period/the FY. The net energy imported has to be billed by the Distribution Licensee as per the tariff applicable to that category of consumers.
- (c) In case of export of electricity/ energy by the consumer in a billing cycle, the exported quantum of energy shall be carried forward to the next billing cycle for adjustment against next month's import of electricity, if any. No payment will be done on this carry forward energy amount.
- (d) In case of Gross metering, separate accounting is to be done for the prosumers: one for the energy/ electricity consumed by the prosumer, which shall be paid to DISCOM at applicable RST and the other for energy/ electricity injected into the Distribution System at a rate as decided by the Commission.

(e) Applicability of Other Charges:

The energy injected into the grid from the rooftop solar system commissioned/ installed in the premises of consumer(s) shall be exempted from all wheeling charges, cross subsidy charges till the time such charges are made applicable by the Commission. However, statutory duties/ cess, if applicable shall be payable.

XI. Roles and responsibility of personnel:

Sl. No.	Designation	Responsibility	Reporting Authority
1	Junior Engineer (JE)/ Section Manager/ Designated Officer of DISCOM	Net Meter/Gross meter Connection	Assistant Engineer (AE)/ Designated Officer of DISCOM
2	Assistant Engineer (AE)/AM/ SDO/ Designated Officer of DISCOM	Verification of RTS Project from 1-5 KW & commissioning of Net Meter	Assistant Executive Engineer (AEE)/ Designated Officer of DISCOM
3	Assistant Executive Engineer (AEE)/ SDO/ Dy. Mgr./ Designated Officer of DISCOM	Verification of RTS Project from 5-50 KW & commissioning of Net Meter	Executive Engineer (EE)/ AGM/ DGM/ Designated Officer of DISCOM
4	Executive Engineer (EE)/ Manager/ Designated Officer of DISCOM	Verification of RTS Project from 50-100 KW & commissioning of Net Meter	AGM/ DGM Superintending Engineer/ Designated Officer of DISCOM
5	Superintendent Engineer -II (SE-II)/ DGM/ GM/ Designated Officer of DISCOM	Verification of RTS Project from 100-500 KW& commissioning of Net Meter	GM/ Sr. GM/ CGM/Head Quarter/ Designated Officer of DISCOM
6	Superintendent Engineer -I (SE-I)/ DGM/ GM/ Designated Officer of DISCOM		

XII. Online platform and standardization of process:

End-to-end (from submission of application to completion of installation) on-line system is to be

compulsory and the process & workflow are to be standardized across all DISCOMs in the State for ease & convenience of all consumer(s)/ Prosumer (s), vendor(s) & other stakeholder(s) of the State.

XIII. Applicability of Cross-Subsidy Surcharge (CSS), wheeling charges & Distribution loss for use of Distribution network:

CSS, wheeling charges and Distribution losses shall not be applicable to LT & HT consumers with NM/VNM/ GNM arrangement until further order by OERC.

XIV. Meter testing:

Expertise and facility for testing of meter for NM/GM/VNM/GNM arrangement, if not available with the DISCOMs, meters tested at Standard Testing Lab (STL)/ National Laboratories with NABL Accreditation will also be acceptable in addition to the meters tested by Distribution Licensees.

XV. Awareness Programme:

One of the most important reasons for lukewarm response to NM/GM/GNM/VNM is lack of awareness. The consumer awareness program shall be taken up by Distribution licensees through advertisement, placing hoardings, media coverage, earmarking special manpower, taking services of external agencies to spread the benefit of net metering arrangement.

XVI. Replacement/Repairing of parts of the existing Solar Rooftop Projects:

In case of existing Rooftop Solar installation, if any Solar PV modules/inverters or any part is damaged or not functioning properly, the owner of RTS system may repair/replace such component. The owner of RTS system shall intimate immediately to the Distribution licensee about the repair/replacement of Solar PV modules or any parts for information and records of the Distribution licensee. The Distribution licensee shall verify such repair/ replacement within 30 days from the receipt of such application from the owner of the RTS system failing which it will be treated as deemed approved by the licensee.

XVII. Penalty or Compensation:

Any enhancement in capacity of RTS system by the consumer/prosumer of the Plant shall be taken up with prior permission of the distribution licensee, failing which such 'Un-authorized Capacity Addition' shall be treated as illegal and Distribution Licensee shall immediately disconnect power supply and initiate appropriate action as per the provision of the prevailing Rules/ Regulations.

Annexure-I

Application form - Net Metering/Bi-directional/Gross Metering Connection

To,

The Section Officer/ Designated Officer

(Distribution Licensee)

(Name of Office)

Date:

I/we intend to connect Renewable Energy System through net-metering/ bi-directional/ Gross metering arrangement in compliance to order dated 19.08.2016 or OERC on Net Metering/bi-directional metering and their connectivity with respect to Solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time. The details are given below:

1.	Name of the Registered applicant/consumer	
2.	Address of the Registered applicant/consumer	
3.	Consumer No.	
4.	Telephone number(s) of Consumer/Applicant (Mobile No.)	
5.	Email ID of Consumer/Applicant	
6.	Type of RE (Solar/Wind) & Capacity of RE system (Watts)	
7.	Sanction load as per latest electricity bill (kW)	
8.	Meter procurement by (Please Tick)	Beneficiary <input type="checkbox"/> DISCOM <input type="checkbox"/>
9.	Location of proposed RE system (RTS system/Ground mounted system)	
10.	Solar PV Project inverter make and type	
11.	Solar PV Project inverter has automatic isolation protection (Y/N)?	
12.	Whether a Solar Generation Meter has been installed? (Y/N)	
13.	Expected date of commissioning of solar PV Project.	
14.	Concerned safety requirement fulfilled (Y/N)	
15.	Category of consumer (Domestic/ Industrial/ Commercial/ Govt. establishment etc.)	
16.	Supply voltage level of RE system proposed to be connected [230 V (1-phase)/ 415 V (3-phase/11 kV & above (3-phase)]	

DECLARATION

I hereby request you to provide grid connectivity to the solar Rooftop PV system installed or planning to install at premises owned/occupied by me. I do hereby declare that the information furnished above for NM/BD/GM have been checked & verified to the best of my knowledge and belief.

Signature with Name of the applicant /consumer:

Address:

Annexure II

Connection Agreement form – Between Consumer and Distribution licensee for Net-metering/Bi-directional metering of Solar PV Project

This Agreement is made and entered into at (location) on this (date) _____ day of (month) between The Eligible Consumer, residing at (address) as first party AND _____ Distribution Licensee (hereinafter called as Distribution Licensee) and having its registered office at (address) as second party of the agreement.

And whereas, the Distribution Licensee agrees to benefit the eligible consumer for the electricity generated from his Solar PV Project of capacity _____ watts and as per conditions of this agreement and net-metering/ bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time.

Both the party hereby agrees to following:

1. Eligibility:

- 1.1. The Eligible Consumer do hereby confirm that he/she is aware, in advance, of the standards and conditions the Photovoltaic System has to meet for being integrated into grid/distribution system.
- 1.2. The Eligible Consumer agree that connection of the Photovoltaic System to distribution system of the licensee shall conform to the requirements specified in OERC Distribution (Condition of Supply) Code 2019 as amended from time to time and Order dated 19.08.2016 of OERC on Net Metering/Bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time.

2. Technical and Interconnection Requirements

- 2.1 The Eligible Consumer agrees that he/she has installed/will install, prior to connection of Photovoltaic System with distribution system of the licensee, an isolation device (both automatic & inbuilt within inverter and external manual relays) and agree for the DISCOM to have access to and operation of this, if required, for repair and maintenance of the distribution system.
- 2.2 The Eligible Consumer agrees that in case of a power outage in the Distribution system, the photovoltaic system will shut down, unless special transfer and isolating facility have been installed on the photovoltaic system.
- 2.3 Technical specification of net meter/bi-directional meter and renewable energy meter shall conform to CEA (Installation and Operation of Meters) Regulations 2006 as amended from time to time.
- 2.4 All the equipment connected to distribution system shall comply with relevant International (IEEE/EC) or Indian Standards (BIS) and installations of electrical equipment must comply with CEA (Measures relating to Safety and Electric Supply) Regulations, 2010 as amended from time to time and Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time.
- 2.5 The Eligible Consumer agrees that DISCOM will specify the interface/interconnection point and metering point.
- 2.6 The Eligible Consumer agrees to adhere to the power quality measures as per International or Indian Standards and/or other such measures as directed by Commission/DISCOM.
- 2.7 The Eligible Consumer agrees to furnish all data such as voltage, frequency and location of breaker & isolator in his/her system, as and when required by the DISCOM. The Eligible Consumer shall also provide facilities for online transfer of the real time operational data.
- 2.8 The Eligible Consumer shall obtain requisite approvals, in accordance with the provisions of

the Central Electricity Authority (Technical Standards for Connectivity of Distributed Generation Resources) Regulations, 2013 as amended from time to time for commissioning of the Renewable Energy System and submit copies of the same to the Distribution Licensee.

- 2.9 The Eligible Consumer do hereby agrees that DISCOM & Nodal Agency may keep the entire information regarding application and registration of the Renewable Energy System on its website or web portal for transparency and convenience.

3. Safety:

- 3.1 Eligible Consumer shall comply with the Central Electricity Authority (Measures Relating to Safety and Electricity Supply) Regulations 2010 as amended from time to time.
- 3.2 The Eligible Consumer agrees that the design, installation and operation & maintenance of the photovoltaic system shall be carried out in such a manner that the safety and reliability of the photovoltaic system as well as the distribution system is maintained.
- 3.3 Since the obligation of the Distribution licensee is to maintain a safe and reliable distribution system, the Eligible Consumer agrees that if its photovoltaic system has any adverse effect on the distribution systems, the Eligible Consumer will have to disconnect photovoltaic system immediately from the distribution system as per direction of the respective DISCOM and rectify the defect at its own expense before reconnection for which permission of Distribution licensee has to be obtained.
- 3.4 The Eligible Consumer agrees that any change/ alteration/ modification/ addition of new capacity in the photovoltaic system (post Net Metering) shall be carried out only with prior permission of DISCOM.

4. Clearances and Approvals:

The Eligible Consumer agrees to obtain all the necessary approvals and clearances (environmental and grid connected related) before connecting the photovoltaic system to the distribution system.

5. Access and Disconnection:

- 5.1 DISCOM shall have access to metering equipment and disconnecting means of photovoltaic system, both automatic and manual, at all times.
- 5.2 In case of emergency and where there is no access to disconnecting devices such as Switch/Breaker, DISCOM is authorized to disconnect service to the premise of the eligible consumer and no compensation will be paid to the consumer for such disconnection provided such action was required for safety & reliability of the distribution system.

6. Liabilities:

- 6.1 Eligible Consumer and DISCOM will indemnify each other for damages or adverse effects from other party's negligence or intentional misconduct in the connection and operation of photovoltaic system or distribution system of the licensee.
- 6.2 DISCOM and Eligible Consumer will not be liable to each other for any loss of profits of 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 eligible consumer for any fiscal or other incentives provided by the Central & State Government.

7. Commercial Settlement:

All the commercial settlement under this agreement shall follow the relevant Orders/Regulations issued by OERC in this regard.

8. Conditions for System Connectivity & Standards of Performance:

The party shall abide by the Regulations framed by Central Electricity Authority (CEA) &

Odisha Electricity Regulatory Commission (OERC) in respect of procedure of grant of connectivity. The consumer shall submit the following documents for grant of the connectivity.

- Synchronization Circuit Details
- Safety Report
- Protection Circuit Details
- Test Certificates of System
- Schematic diagram of Renewable Energy system

9. Connection Costs:

- 9.1 The Eligible Consumer shall bear all costs related to setting up of the photovoltaic system including metering and interconnection costs as per estimate by DISCOM. The Eligible Consumer agrees to pay the actual cost of modifications and upgradation of the distribution facilities, if required, to connect the photovoltaic system.
- 9.2 Cost for interconnection equipment including the isolators, meters, etc. are also to be borne by the Eligible consumer.

10. Termination:

- 10.1 The term of this Agreement shall be for the useful life of a typical solar photovoltaic power plant, which is 25 years or till the validity of the agreement with DISCOM, whichever is earlier, unless this Agreement is otherwise terminated.
 - 10.2 The Eligible Consumer or DISCOM can terminate this Agreement at any time by providing 90 days prior notice to the other party in the agreement.
 - 10.3 The Eligible Consumer agrees that upon termination of this Agreement, he/she must disconnect the photovoltaic system from distribution system of licensee in timely manner and to the satisfaction of the DISCOM.
- 11.** Upon setting up and during the period of installation of solar photovoltaic power plant, the Consumers shall jointly and severally keep DISCOM/its employees/directors/officers/associates indemnified from all cost consequences, liabilities, penalties, claim of damages/ compensation, etc. from any person/agency/land owning agency/court or any other judicial-quasi-judicial authority citing the establishment and/or operation & maintenance of solar photovoltaic power plant.

12. Governing Law and Jurisdiction:

This agreement shall be governed by the Order dt.19.08.2016 of OERC on Net Metering/Bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time and any other order/directions relating to establishment/operation & maintenance of solar photovoltaic power plant. Further in case of any changes in the above order, the Eligible Consumer shall be liable to comply with the same.

In the witness, whereof Mr./Ms. _____ for and on the behalf of the Eligible Consumer and Mr./Ms. _____ and on the behalf of Distribution Licensee sign this agreement

In the witness, whereof of Mr. _____ for and on behalf of _____

(Eligible consumer) and Mr. _____ for and on behalf of _____

(Distribution Licensee) sign this agreement in two originals.

Eligible Consumer Name

Distribution Licensee Name

Address

Designation

Service Connection Number

Office Address

Witness to the execution

Witness to the execution

On behalf of eligible consumers

on behalf of Distribution Licensee

1. Name:

1.Name:

Address:

Address:

2. Name:

2.Name:

Address:

Address:

* The Licensee may impose any other condition(s) depending upon the requirement of connectivity of a specific project. The additional condition(s), if any, should conform OERC Distribution (Condition of Supply) Code, 2019 as amended from time to time.

Annexure III

Connection Agreement Form – Between Consumer and Distribution Licensee for Gross-metering of Solar PV Project

This Agreement is made and entered into at (location) on this (date) _____ day of (month) between The Eligible Consumer, residing at (address) as first party AND _____ Distribution Licensee (hereinafter called as Distribution Licensee) and having its registered office at (address) as second party of the agreement.

And whereas, the Distribution Licensee agrees to benefit the eligible consumer for the electricity generated from his Solar PV Project of capacity _____ watts and as per conditions of this agreement and Order dated 19.08.2016 of OERC on Net Metering/bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time.

Both the party hereby agrees to following:

1. Eligibility:

- 1.1. The Eligible Consumer do hereby confirm that he/she is aware, in advance, of the standards and conditions the Photovoltaic System has to meet for being integrated into grid/distribution system.
- 1.2. The Eligible Consumer agree that connection of the Photovoltaic System to distribution system of the licensee shall conform to the requirements specified in OERC Distribution (Condition of Supply) Code 2019 as amended from time to time and order dated 19.08.2016 of OERC on Net Metering/Bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time.

2. Technical and Interconnection Requirements

- 2.1. The Eligible Consumer agrees that he/she has installed/will install, prior to connection of Photovoltaic System with distribution system of the licensee, an isolation device (both automatic & inbuilt within inverter and external manual relays) and agree for the DISCOM to have access to and operation of this, if required, for repair and maintenance of the distribution system.
- 2.2. The Eligible Consumer agrees that in case of a power outage in the Distribution system, the photovoltaic system will shut down, unless special transfer and isolating facility have been installed on the photovoltaic system.
- 2.3. Technical specification of Gross meter and renewable energy meter shall conform to CEA (Installation and Operation of Meters) Regulations, 2006 as amended from time to time.
- 2.4. All the equipment connected to distribution system shall comply with relevant International (IEEE/EC) or Indian Standards (BIS) and installations of electrical equipment must comply with CEA (Measures relating to Safety and Electric Supply) Regulations, 2010 as amended from time to time and Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time.
- 2.5. The Eligible Consumer agrees that DISCOM will specify the interface/interconnection point and metering point.
- 2.6. The Eligible Consumer agrees to adhere to the power quality measures as per International or Indian Standards and/or other such measures as directed by Commission/DISCOM.
- 2.7. The Eligible Consumer agrees to furnish all data such as voltage, frequency and location of breaker &

isolator in his/her system, as and when required by the DISCOM. The Eligible Consumer shall also provide facilities for online transfer of the real time operational data.

2.8. The Eligible Consumer shall obtain requisite approvals, in accordance with the provisions of the Central Electricity Authority (Technical Standards for Connectivity of Distributed Generation Resources) Regulations, 2013 as amended from time to time for commissioning of the Renewable Energy System and submit copies of the same to the Distribution Licensee.

2.9. The Eligible Consumer do hereby agrees that DISCOM & Nodal Agency may keep the entire information regarding application and registration of the Renewable Energy System on its website or web portal for transparency and convenience.

3. Safety:

3.1. Eligible Consumer shall comply with the Central Electricity Authority (Measures Relating to Safety and Electricity Supply) Regulations 2010 as amended from time to time.

3.2. The Eligible Consumer agrees that the design, installation and operation & maintenance of the photovoltaic system shall be carried out in such a manner that the safety and reliability of the photovoltaic system as well as the distribution system is maintained.

3.3. Since the obligation of the Distribution licensee is to maintain a safe and reliable distribution system, the Eligible Consumer agrees that if its photovoltaic system has any adverse effect on the distribution systems, the Eligible Consumer will have to disconnect photovoltaic system immediately from the distribution system as per direction of the respective DISCOM and rectify the defect at its own expense before reconnection for which permission of Distribution licensee has to be obtained.

3.4. The Eligible Consumer agrees that any change/ alteration/ modification/ addition of new capacity in the photovoltaic system (post Gross Metering) shall be carried out only with prior permission of DISCOM.

4. Clearances and Approvals:

The Eligible Consumer agrees to obtain all the necessary approvals and clearances (environmental and grid connected related) before connecting the photovoltaic system to the distribution system.

5. Access and Disconnection:

5.1. DISCOM shall have access to metering equipment and disconnecting means of photovoltaic system, both automatic and manual, at all times.

5.2. In case of emergency and where there is no access to disconnecting devices such as Switch/Breaker, DISCOM is authorized to disconnect service to the premise of the eligible consumer and no compensation will be paid to the consumer for such disconnection provided such action was required for safety & reliability of the distribution system.

6. Liabilities:

6.1. Eligible Consumer and DISCOM will indemnify each other for damages or adverse effects from other party's negligence or intentional misconduct in the connection and operation of photovoltaic system or distribution system of the licensee.

6.2. DISCOM and Eligible Consumer will not be liable to each other for any loss of profits of 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 eligible consumer for any fiscal or other incentives provided by the Central & State Government.

7. Commercial and Settlement:

All the commercial settlement under this agreement shall follow the relevant orders/Regulations issued by OERC in this regard.

8. Conditions for System Connectivity & Standards of Performance:

The parties shall abide by the Regulations framed by Central Electricity Authority (CEA) & Odisha Electricity Regulatory Commission (OERC) in respect of procedure of grant of connectivity. The consumer shall submit the following documents for grant of the connectivity.

- Synchronization Circuit Details
- Safety Report
- Protection Circuit Details
- Test Certificates of System
- Schematic diagram of Renewable Energy system

9. Connection Costs:

9.1. The Eligible Consumer shall bear all costs related to setting up of the photovoltaic system including metering and interconnection costs as per estimate by DISCOM. The Eligible Consumer agrees to pay the actual cost of modifications and upgradation of the distribution facilities, if required, to connect the photovoltaic system.

9.2. Cost for interconnection equipment including the isolators, meters, etc. are also to be borne by the Eligible consumer

10. Termination:

10.1. The term of this Agreement shall be for the useful life of a typical solar photovoltaic power plant, which is 25 years or till the validity of the agreement with DISCOM, whichever is earlier, unless this Agreement is otherwise terminated.

10.2. The Eligible Consumer or DISCOM can terminate this Agreement at any time by providing 90 days prior notice to the other party in the agreement.

10.3. The Eligible Consumers agrees that upon termination of this Agreement, he/she must disconnect the photovoltaic system from distribution system of licensee in timely manner and to the satisfaction of the DISCOM.

11. Upon setting up and during the period of installation of solar photovoltaic power plant, the Consumers shall jointly and severally keep DISCOM/its employees/directors/ officers/associates indemnified from all cost consequences, liabilities, penalties, claim of damages/ compensation, etc. from any person/agency/land owning agency/court or any other judicial-quasi-judicial authority citing the establishment and/or operation & maintenance of solar photovoltaic power plant.

12. Governing Law and Jurisdiction:

This agreement shall be governed by the Order dt.19.08.2016 of OERC on Net Metering/Bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time and any other order/directions relating to establishment/operation & maintenance of solar photovoltaic power plant. Further in case of any changes in the above order, the Eligible Consumer shall be liable to comply with the same.

In the witness, whereof Mr./Ms. _____ for and on the behalf of the Eligible Consumer and Mr./Ms. _____ for and on the behalf of Distribution licensee sign this agreement.

In the witness, whereof of Mr. _____ for and on behalf of _____

(Eligible consumer) and Mr. _____ for and on behalf of _____

(Distribution Licensee) sign this agreement in two originals.

Eligible Consumer Name

Distribution Licensee Name

Address

Designation

Service Connection Number

Office Address

Witness to the execution

Witness to the execution

On behalf of eligible consumer
Licensee

on behalf of Distribution

1. Name:

1. Name:

Address:

Address:

2. Name:

2. Name:

Address:

Address:

* The Licensee may impose any other condition(s) depending upon the requirement of connectivity of a specific project. The additional condition(s), if any, should conform OERC Distribution (Condition of Supply) Code, 2019 as amended from time to time.

Annexure-IV
Application form – Virtual Net Metering (VNM)

To,

The Section Officer/ Designated Officer
(Distribution Licensee)
(Name of Office)

Subject-Application from for Virtual Net Metering Mechanism

I/We intend to connect the Renewable Energy system through Virtual Net Metering (VNM) arrangement in compliance to Order dated 19.08.2016 of OERC on Net Metering/Bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time. The details are given below:

1.	Name of the Lead consumer on behalf of Participating Consumers	
2.	Address of lead consumer	
3.	Consumer No.	
4.	Email ID of lead consumer	
5.	Telephone No. of lead consumer (Mob. No.)	
6.	Email ID of installer	
7.	Telephone No. of installer (Mob. No.)	
8.	Category (Domestic/specified public purpose and also the category applicable for offices of government and local authorities)	
9.	Supply Voltage Level (230 V/ 415 V/ 11 kV & above)	
10.	Sanction load as per latest electricity bill (kW)	
11.	Type of Renewable Energy System proposed (Solar/Wind etc.)	
12.	Capacity of Renewable Energy System proposed to be connected (in kW)	
13.	Supply voltage of Renewable Energy System Proposed to be connected [230 V (1-phase)/ 415 V (3-phase/11 kV & above (3-phase)]	
14.	Meter procurement by (Please Tick)	Beneficiary <input type="checkbox"/> Discom <input type="checkbox"/>
15.	Location of proposed Renewable Energy System (RTS system/ Ground mounted system)	
16.	Location Address of Renewable System	
17.	Latitude(N) of site	
18.	Longitude (E) of site	
19.	Area (sq-mtr)	

I/We here by request you to provide grid connectivity to the solar PV system installed or planning to install at premises owned/occupied by me/ us. Details supported by necessary evidence are furnished hereunder.

I/We declare that the information submitted for Virtual Net Metering (VNM) are checked and verified to the best of myknowledge and belief.

Place:

Signature of lead consumer

Date:

Enclosure: Documents as per “*Annexure-IV.A*”

Details of the participating consumers

Sl. No	Consumer No	Sharing Ratio (In %)	Address of each participating Consumer	Email and ID Detail of participating Consumers	Signature of Consumer
1					
2					
3					
4					
5					

Note: The List of service connections are indicative, with possibility to extend upto the requirement of the project

FOR OFFICE USE ONLY

Application form Number:	
Date of Application	

Annexure-IV.A

Sl. No	Required Documents	Attached (Yes/ No)
1.	Connection Agreement to Renewable Energy System describing details of participating consumers	
2.	Letter (Preferably on Letter Head) describing the sharing ratio and participating list of consumer Nos.	
3.	Self-Attested Copy of ID Proof (PAN/ AADHAR/ EPIC, etc.)	
4.	Proof of ownership of premises/land where Renewable System will be installed	

Annexure-V

Connection Agreement Form – Between Consumers and Distribution Licensee for VNM of Solar PV system

(On Rs.100/- non judicial stamp paper, duly attested by Notary) Virtual Net Metering

Model Connection Agreement for Renewable Energy

This Agreement is made and entered into at <Insert the name of City> Odisha on date <Insert the Date of Agreement Signing> between the lead Consumer on behalf of participating consumers whose name and Consumer numbers are provided in the list below ("List of Consumers") as first party (hereinafter called as "Lead Consumer" and Distribution Licensee of the Odisha (i.e. <Insert the Name of DISCOM>), having its registered office at <insert the address of DISCOM> as second party to this Agreement.

DETAILS OF PARTICIPATING CONSUMERS

Sl. No.	Consumer No.	Name of Consumer	Sharing ratio (in %)	Address of each participating consumer	e-mail & ID details of participating consumers
1					
2					
3					
4					
5					

Note : The List of consumers are indicative, with possibility to extend upto the requirement of the project

A solar photovoltaic plant of <Insert the capacity of SPV Power Plant in kWp> ("Photovoltaic System") is located at the site of the consumer at the address mentioned in the list below:

Name of lead consumer with consumer number/ name of installer	Location/ Address of the PV Plant	Address of the lead consumer/ installer	ID details of the lead consumer/ installer

1. Eligibility:

- 1.1 The Eligible Consumers do hereby confirm that they are aware, in advance, of the standards and conditions the Photovoltaic System must meet for being integrated into the grid/distribution system.
- 1.2 The Eligible Consumers agree that connection of the Photovoltaic System to distribution system of the licensee shall comply with requirement of the state Distribution Code and/or DISCOM's conditions of supply & service and to Order dated 19.08.2016 of OERC on Net Metering/Bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time. The grid shall continue to perform with specified reliability, security, and quality as per the Central Electricity Authority (Grid Standard) Regulations 2010 as amended from time to time.

- 1.3 The Eligible Consumers, after understanding the benefits of Virtual Net-metering scheme, have agreed and jointly requested with <Insert the name of DISCOM> to install solar meter at the premises situated at <Insert the complete Address> wherein the Solar Photovoltaic System has already been installed by the Eligible Consumers, and the Eligible Consumers have agreed for quantum of their respective share from the Solar installation, the details of which have also been specified in this Agreement.

2. Technical and Inter connection Requirements

- 2.1 The Eligible Consumers agree that they have installed/will install, prior to connection of Photovoltaic System with the distribution system of the licensee, an isolation device (both automatic & inbuilt within inverter and external manual relays) and agree for the DISCOM to have access to and operation of this device, if required, for repair and maintenance of the distribution system.
- 2.2 The Eligible Consumers agree that in case of a power outage in the Distribution system, the Photovoltaic System will shut down, unless special transfer and isolating facility have been installed on photovoltaic system.
- 2.3 Technical specification of net meter and renewable energy meter shall confirm to CEA (Installation & operation of Meters) Regulations, 2006 as amended from time to time.
- 2.4 All the equipment connected to distribution system shall comply with relevant International (IEEE/EC) or Indian Standards (BIS) and installations of electrical equipment must comply with CEA (Measures relating to Safety and Electric Supply) Regulations, 2010 as amended from time to time and Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time.
- 2.5 The Eligible Consumers agree that DISCOM will specify the interface/inter-connection point and metering point.
- 2.6 The Eligible Consumers agree to adhere to power quality measures as per International or Indian Standards and/or other such measures as directed by Commission/DISCOM.
- 2.7 The Eligible Consumers agree to furnish all data such as voltage, frequency, and location of breaker & isolator position in his system, as and when required by the DISCOM. The Eligible Consumers shall also provide facilities for online transfer of the real time operational data.
- 2.8 The Eligible Consumers shall obtain requisite approvals, in accordance with the provisions of the Central Electricity Authority (Technical Standards for Connectivity of Distributed Generation Resources) Regulations, 2013 as amended from time to time for commissioning of the Renewable Energy System and submit copies of the same to the Distribution Licensee.
- 2.9 The Eligible Consumers do hereby agree that DISCOM & Nodal Agency may keep the entire information regarding application and registration of the Renewable Energy System on its website or web portal for transparency and convenience.

3. Safety:

- 3.1 Eligible Consumers shall comply with the Central Electricity Authority (Measures Relating to Safety and Electricity Supply) Regulations 2010 as amended from time to time.
- 3.2 The Eligible Consumers agree that the design, installation and operation & maintenance of the Photovoltaic System shall be carried out in such a manner that the safety & reliability of the Photovoltaic System as well as distribution system is maintained.
- 3.3 Since the obligation of Distribution licensee is to maintain a safe and reliable distribution system, the Eligible Consumers agree that if its Photovoltaic System has any adverse effects on distribution systems, the Eligible Consumers will have to disconnect photo voltaic system immediately from the distribution system as per direction of the respective DISCOM and rectify the defect at its own expense before reconnection for which permission of Distribution licensee has to be obtained.
- 3.4 The Eligible Consumers agree that any change/alteration/modification/addition of capacity in the existing Photovoltaic System (post Net metering) shall be carried out with prior permission of respective DISCOM.

4. Clearances and Approvals:

The Eligible Consumers agree to obtain all the necessary approvals and clearances (environmental and grid connectivity requirement as applicable) before connecting the Photovoltaic System to the distribution system.

5. Access and Disconnection:

- 5.1 DISCOM shall have access to metering equipment and for disconnecting Photovoltaic System, automatically and manually, at all times.
- 5.2 In case of emergency and where there is no access to disconnecting devices such as Switch/Breaker, DISCOM is authorized to disconnect service to the premise of the eligible consumer and no compensation will be paid to the consumer for such disconnection provided such action was required for safety & reliability of the distribution system.

6. Liabilities:

- 6.1 Eligible Consumer and DISCOM will indemnify each other for damages or adverse effects from other party's negligence or intentional misconduct in the connection and operation of photovoltaic system or distribution system of the licensee.
- 6.2 DISCOM and Eligible Consumer will not be liable to each other for any loss of profits of 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 eligible consumer for any fiscal or other incentives provided by the central & state government.

7. Commercial and Settlement:

All the commercial settlement under this agreement shall follow the relevant orders/Regulations issued by OERC in this regard.

8. Conditions for System Connectivity & Standards of Performance:

The parties shall abide by the Regulations framed by Central Electricity Authority(CEA) & Odisha Electricity Regulatory Commission(OERC) in respect of procedure of grant of connectivity. The consumer shall submit the following documents for grant of connectivity.

- Synchronization Circuit Details
- Safety Report
- Protection Circuit Details
- Test Certificates of System
- Schematic diagram of Renewable Energy system

9. Connection Costs:

- 9.1 The Eligible Consumer shall bear all costs related to setting up of the photovoltaic system including metering and interconnection costs as per estimate by DISCOM. The Eligible Consumer agrees to pay the actual cost of modifications and upgradation of the distribution facilities, if required, to connect the photovoltaic system.
- 9.2 Cost for interconnection equipment including the isolators, meters, etc. are also to be borne by the Eligible consumer

10. Termination (VNM):

- 10.1 The term of this Agreement shall be for the useful life of a typical solar photovoltaic power plant,

which is 25 years or till the validity of the agreement with DISCOM, whichever is earlier, unless this Agreement is otherwise terminated.

- 10.2 The Eligible Consumer(s) (Jointly) or DISCOM can terminate this Agreement at any time by providing 90 days prior notice to the other party to the agreement. Whereas it is clarified that in case of termination notice to be issued by DISCOM, the same shall be issued to lead generator appointed by eligible Consumers.
- 10.3 The Eligible Consumers agrees that upon termination of this Agreement, they must disconnect the photovoltaic system from DISCOM's distribution system in a timely manner and to the satisfaction of the DISCOM.

11. Change of Sharing Ratios: (VNM)

- 11.1 The Eligible Consumers shall have the right to change the Sharing Ratio provided in the List of consumers once every financial year by sending notice at least 2 months in advance to the DISCOM and submitting a revised list of consumers.
- 11.2 The Eligible Consumers shall submit VNM application form as applicable at the time of such proposed change in the Sharing Ratio and amend the List of consumers.
- 11.3 The Eligible Consumers hereby irrevocably give the right to Lead Consumer to apply on their behalf for such change of Sharing Ratio and introduction of a New Eligible Consumer to this Agreement and submission of the List of Consumers. Lead Consumer may sign on behalf of all eligible consumers any or all documents required by DISCOM in this regard.
- 11.4 The consumers for setting up/installation of solar photovoltaic power plant and during the tenure of the installation of the same, shall be liable to take all permissions/permits/approvals as required under the provisions of relevant laws.
- 11.5 Upon setting up and during the period of installation of solar photovoltaic power plant, the Consumers shall jointly and severally, keep DISCOM/its employees/directors/ officers/associates indemnified from all cost consequences, liabilities, penalties, claim of damages/ compensation, etc. from any person/agency/land owning agency/court or any other judicial-quasi-judicial authority citing the establishment and/or operation & maintenance of solar photovoltaic power plant.

12. Lead Consumer: (VNM)

That at the time of execution of this agreement, the Eligible Consumers shall appoint/nominate one of the eligible consumers as lead consumer. DISCOM shall communicate with Lead consumer only and not with every consumer. It shall be the responsibility of lead consumer to communicate with other eligible consumers and communication of DISCOM with lead consumer shall be termed as communication to all eligible consumer in all respect.

13. Governing Law and Jurisdiction:

This agreement shall be governed by the Order dt.19.08.2016 of OERC on Net Metering/Bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time and any other order/directions relating to establishment/operation & maintenance of solar photovoltaic power plant. Further in case of any changes in the above order, the Eligible Consumer shall be liable to comply with the same.

In the witness, whereof Mr./Ms. _____ for and on the behalf of the Eligible Participating Consumers and Mr./Ms. _____ for and on the behalf of DISCOM agree to this agreement.

Date:

Place:

List of Eligible Consumers

Sl.No.	Name of eligible consumers	Signature of eligible consumer
1		
2		
3		

Note: The List of consumers are indicative, with possibility to extend upto the requirement of the project.

NAME AND SIGNATURE OF THE WITNESS

NAME AND SIGNATURE OF THE LEAD CONSUMER (VNM APPLICANT)

NAME AND SIGNATURE OF THE NODAL OFFICER (ALONG WITH STAMP)

Annexure-VI

Virtual Net Metering (VNM) Consumers' Agreement for Implementing Rooftop Solar Projects

(On Rs.100/- non judicial stamp paper, duly attested by Notary)

This Agreement is made and entered into at <Insert the name of City> Odisha on date <Insert the Date of Agreement Signing> amongst the signatories whose name and their corresponding Consumer numbers are provided in the list below:

DETAILS OF LEAD AND PARTICIPATING CONSUMERS

Sl. No.	Consumer No.	Name of Signatory	Sharing Ratio %	Address of the lead & participating consumers	Email & ID Details of Signatories
1					
2					
3					
4					
5					

The consumers included in the above list here by agree to the following clauses:

1. Invest, procure, install, commission, operate and maintain a solar photovoltaic plant of <Insert the capacity of SPV Power Plant in kWp> (“**Photovoltaic System**”) located at the site <insert location > of the consumer based on Renewable Energy Service Company(RESCO)or CAPEX Model
2. Apply with <Name of the DISCOM> for Virtual Net Metering Connection (hereinafter called “VNM”)
3. Comply with all the requirements for securing VNM connection from <Name of the DISCOM> as per the Order dated 19.08.2016 of OERC on Net Metering/Bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time.

4. Execute the net metering interconnection agreement with <Name of the DISCOM>
5. Execute the agreement with <Name of the Renewable Energy Service Company> (if RESCO Model) OR <Name of the Vendor> (if CAPEX Model)
6. Secure all the necessary approvals and clearances (environmental and grid connectivity requirement as applicable) before connecting the Solar Photovoltaic System to the distribution system
7. Accept all the risks associated with this Virtual Net Metering scheme and the selected business model
8. That financial risk is limited to the individual financial contribution made towards the capital cost, in case of CAPEX model
9. The signatories in this agreement will not claim compensation related to financial or other damages from other signatories
10. All the signatories are equally responsible for seeking, receiving, and sharing all the communication received related to the implementation of this rooftop solar project under the Virtual Net Metering scheme
11. Elect Mr. XXXXXXXX as the Lead Consumer for a duration of XX years as required by the <Name of the DISCOM> and for executing agreement with the RESCO or CAPEX vendor and for signing any other declaration or documents related to implementation of this rooftop solar project under the Virtual Net Metering scheme.
12. Implement a process of election of the Lead Consumer, if required and agree to the terms of engagement of the Lead Consumers including the tenure and other responsibilities
13. If any signatory breaches any clause in this agreement and agreements / documentation signed by the Lead Consumer, the concerned person is liable for the corresponding liability and outcomes of any nature thereof
14. Signatories shall bear all costs related to setting up of the Rooftop Solar Photovoltaic System including metering and interconnection costs as per estimate provided by <Name of the DISCOM>
15. Pay the actual cost of modifications and upgradation of the distribution facilities required to connect the Solar Photovoltaic System, if required by <Name of the DISCOM>
16. Pay the cost for interconnection equipment including the isolators, meters etc. in case it is required/ asked for by <Name of the DISCOM>.
17. Pool the money for sharing of expenses towards overall implementation of the rooftop solar project including monitoring the progress of the rooftop solar project during its lifetime/useful life of 25 years
18. Open a Bank Account in the name of the Lead Consumer for handling the expenses mentioned in Clause 17above
19. Engage an auditor and prepare and finalize expense statement on an annual basis at the end of financial year (i.e. 31st March)

20. Share the bank account with <Name of the DISCOM> for receiving amounts related to sale of surplus power from rooftop solar project, if any, at the end of the financial year, as per Regulations/direction of OERC.
21. If signatories are not able to take decision(s) on any key issue(s) related to the implementation of this agreement and the Rooftop Solar Project during the period of 25 years, unanimously, then such decision(s) shall be taken through voting by the signatories to this agreement and such decision(s) shall be taken on majority basis.
22. Maintain written records of all decisions related to implementation of this agreement and the rooftop solar project signed by the Lead Consumer.
23. Authorize the Lead Consumer to convene “All Consumers Meeting (ACM)” every six months or early if required, to present overall progress & Financial statements etc. to interact with CAPEX vendor/ RESCO and to report & discuss on other relevant activities.
24. Signatories indemnify each other for damages or adverse effects due to negligence in the operation of Solar Photovoltaic System and in the evacuation, distribution of power and adjustments & settlement by <Name of the DISCOM> under the Virtual Net Metering Scheme.
25. Upon setting up and during the period of installation of solar photovoltaic power plant, the consumer/s shall jointly and severally, keep DISCOM/its employees/directors/officers/associates indemnified from all cost consequences, liabilities, penalties, claim of damages/compensation etc., from any person/agency/land owning agency/court or any other judicial- quasi-judicial authority citing the establishment and/or operation and maintenance of rooftop solar photovoltaic power plant.
26. The term of this Agreement shall be valid for the useful life of a typical solar photovoltaic power plant, which is 25 years or till the validity of agreement with DISCOM, whichever is earlier, unless this Agreement is otherwise terminated as per the provisions of such clause
27. In the event of termination of the agreement caused as per the terms and conditions of <Name of the DISCOM> in the interconnection agreement, all the signatories shall comply with the modalities and implement all the activities in unison
28. In the event of a termination of this agreement earlier than the period mentioned in Clause 26 above, all the signatories shall comply with the modalities and implement all the activities in unison
29. In the event of termination of this agreement caused by any reason(s) other than mentioned in Clause 26, 27 and 28, all the signatories shall comply with the modalities and implement all the activities in unison
30. Signatories shall have the right to change the Sharing Ratio provided in the List of Consumers once in a financial year by sending notice at least 2 months in advance to the <Name of the DISCOM> and by submitting a revised List of Consumers and/or sharing ratio.
31. Signatories shall submit a duly filled in Virtual Net Metering application form as applicable at the time of such proposed change in the Sharing Ratio and amendment of the List of Consumers.
32. Signatories hereby irrevocably give the right to Lead Consumer to apply on their behalf for such change of Sharing Ratio or introduction of a new Eligible Consumer to/omission of existing eligible consumer

from this Agreement and submission of the List of Consumers. Lead Consumer may sign on behalf of all eligible consumers any or all documents required by DISCOM in this regard.

33. The signatory or signatories who are (i) changing the power sharing ratio or (ii) exiting/leaving the Virtual Net Metering scheme and this agreement shall agree and abide to the decision(s) taken by the Lead Consumer and all the signatories including decisions taken as per Clause 21 as regards to (a) revised sharing ratio, (b) replacement of signatory/signatories, (c) financial compensation for the investment made (for CAPEX model), (d) settlement of outstanding amounts (if any), (e) liabilities towards debt or other expenses (if any), and (f) other decisions related to ensuring the completion of the applicable formalities towards the exit of the signatory /signatories
34. Upon termination of this Agreement, signatories must disconnect the rooftop solar photovoltaic system from <Name of the DISCOM>'s distribution system in a timely manner and to the satisfaction of <Name of the DISCOM>
35. The Roles and Responsibilities of the Lead Consumer appointed by all signatories shall be as follows:
 - a. to share all communications issued by <Name of the DISCOM> (as <Name of the DISCOM> shall be free to communicate with lead consumer and not to every signatory.) with every signatory.
 - b. communicate with other signatories on a regular basis by making best efforts to communicate within 48 hours of receipt of any information/ any communication relating to the implementation of the rooftop solar project and the Virtual net Metering Scheme from DISCOM, RESCO OR CAPEX Vendor and other stakeholders
 - c. engage with the auditor for preparation and upkeep of expenses including half yearly and annual financial statements
 - d. open a bank account to keep track of the expenses as mentioned in Clause 17 & 18.
 - e. comply with the formalities, as applicable, with DISCOM during the period of the interconnection agreement
 - f. on behalf of all signatories, comply with the formalities, as applicable, with RESCO or CAPEX Vendor and other stakeholders during the period of the interconnection agreement
 - g. maintain documentary records for all decisions, actions, expenses etc., made on this rooftop solar project under the Virtual Net Metering Scheme
 - h. transfer all documentation, progress reports and responsibilities to the incoming Lead Consumer in the event of change of Lead Consumer by the signatories
 - i. coordinate with State and Central Government Departments / Agencies for securing the eligible financial assistance / subsidy for implementing this rooftop solar project under the Virtual Net Metering Scheme
 - j. comply with all the formalities, protocols, terms and conditions related to this rooftop solar project under the Virtual Net Metering Scheme for a smooth and successful conduct of all the associated activities

36. Dispute Resolution:

- a) This agreement has been entered into at _____ . Hence, any dispute or disagreement arising out of this Agreement, or its interpretation thereof shall be first resolved amicably among the signatories within 30 (Thirty) days of Notice relating to such dispute or disagreement. However, if such a dispute of difference cannot be resolved amicably between the

signatories, the same shall be referred to Arbitration Proceedings and governed by the provisions of the Arbitration and Conciliation Act, 1996 including all amendments from time to time (hereinafter called the Act).

- b) The signatories herein consent to be governed by the domestic Arbitration rules as per the Act including the pre-emptive appointment of a Sole Arbitrator. The seat of arbitration is agreed to be the office of the Sole Arbitrator or any other place as per the discretion of the said Sole Arbitrator.
 - c) The subject matter of dispute, if any, arising from this Agreement shall be solely decided by Arbitration alone without invoking jurisdiction of Court
37. This Agreement shall be governed by the laws of India, and courts in the State of Odisha shall have exclusive jurisdiction to rule on any matters or disputes arising from or relating to anything contained within this Agreement.
38. In the witness, where all signatories below agree to this agreement.

Date:
Place:

List of Signatories:

Sl. No.	Name of Signatories of VNM	Signatures

__END__

Annexure-VII
Application form – Group Net Metering (GNM)

To,

The Section Officer/ Designated Officer
(Distribution Licensee)
(Address of Office)

Subject – Application form for Group Net Metering Mechanism

I/We intend **to connect** Renewable Energy System through Group Net Metering (GNM) arrangement, in compliance to Order dated 19.08.2016 of OERC on Net Metering/Bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time. The details are given below:

1.	Name of the registered Parent consumer (Parent connection where RE system is to be installed)	
2.	Address of registered Parent consumer	
3.	Consumer No.	
4.	Email ID of the Parent Consumer	
5.	Telephone No. of Parent Consumer (Mobile No.)	
6.	Email ID of installer	
7.	Telephone No. of Installer	
8.	Consumer Category	
9.	Supply Voltage Level (230 V/ 415 V/ 11 kV and above)	
10.	Sanction load as per latest electricity bill (kW)	
11.	Type of Renewable Energy System proposed (Solar/Wind etc.)	
12.	Capacity of Renewable Energy System proposed to be connected (in kW)	
13	Meter procurement by (Please Tick)	Beneficiary <input type="checkbox"/> Discom <input type="checkbox"/>

14	Supply voltage of Renewable Energy System Proposed to be connected [230 V (1-phase)/ 415 V (3-phase/11 kV & above (3-phase)]	
15	Location of proposed Renewable Energy System (Rooftop Solar System/Ground mounted solar system)	
16	Latitude(N) of site	
17	Longitude(E) of site	
18	Area(sq-mtr)	

I hereby request you to provide grid connectivity to the solar Rooftop PV system installed or planning to install at premises owned/occupied by me. Details supported by necessary evidence are furnished hereunder. I declare that the information submitted for Group Net Metering have been checked and verified to the best of my knowledge and belief.

Signature of Registered Consumer

Place:

Date:

Enclosure: Documents as per “*Annexure-VII.A*”

DETAILS OF SERVICE CONNECTIONS OF PARENT CONSUMER

Sl. No	Consumer No.	Applicability Priority	Sharing ratio (in %)	Address of each service connections	ID Detail of Parent Consumer	Signature of Parent Consumer with Stamp (if any)
1						
2						
3						
4						
5						

Note: The List of service connections are indicative, with possibility to extend upto the requirement of the project

FOR OFFICE USE ONLY

Application form Number:	
Date of Application	

Annexure-VII.A

Sl. No	Required Documents	Attached (Yes/ No)
1.	Connection Agreement of Renewable Energy System describing details of service connections	
2.	Undertaking for incorporating the service connection Nos. in the priority list settlement under Group Net Metering	
3.	Letter (Preferably on Letter Head) describing the ownership details with priority list of Consumers' service Nos.	
4.	Self-Attested Copy of ID Proof (PAN/ AADHAR/ EPIC, etc.)	

Annexure- VIII
Connection Agreement Form – Between Parent Consumer & Distribution
Licensee for GNM of Solar PV system
(On Rs.100/- non-judicial stamp paper, duly attested by Notary)

This Agreement is made and entered into at <Insert the name of the City >Odisha on between the registered consumer name _____ with Consumer Number _____ residing at _____ as first party (hereinafter called as “Eligible Parent Consumer” and Distribution Licensee of the Odisha (i.e. <Insert the name of DISCOM>), having its’ registered office at < Insert the complete Address of DISCOM > as second party to this Agreement.

A solar photovoltaic plant of <Insert the capacity of the Power Plant in kWp> (“Photovoltaic System”) is installed at the premises of registered Consumer (here to call “Parent Consumer”) bearing address <Insert the complete Address>.

1. Eligibility:

- 1.1. The Eligible Parent Consumer do hereby confirm that he/she is aware, in advance, of the standards and conditions the Photovoltaic System has to meet for being integrated into grid/distribution system.
- 1.2. The Eligible Parent Consumer agree that connection of the Photovoltaic System to DISCOM’s distribution system shall be bound by requirements of the state Distribution Code and/or DISCOM’s conditions of service and order dated 19.08.2016 of OERC on Net Metering/Bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time. The grid shall continue to perform with specified reliability, security and quality as per the Central Electricity Authority (Grid Standard) Regulations, 2010 as amended from time to time.
- 1.3. The Consumer numbers of eligible child Consumers for GNM must be different from Parent consumer and the location must be within the same Distribution Licensee’s area of supply for setting off of the consumption in the billing under Group Net-metering. The signed undertaking is annexed as Annexure–IX to this Agreement.
- 1.4. The Eligible Parent Consumer do hereby confirm that it has applied connection under Group Net Metering arrangement. The eligible consumer in furtherance of GNM arrangement has requested _____(concerned department) to install net meter equipment at the premises situated at _____ wherein the eligible Parent consumer has already installed the requisite solar panels. That the consumer has also given the list of GNM service connection numbers along with their sequence for setting off the solar generation units.

2. Technical and Interconnection Requirements

- 2.1. The Eligible Parent Consumer agrees that he/she has installed/will install, prior to connection of Photovoltaic System with distribution system of the licensee, an isolation device (both automatic & inbuilt within inverter and external manual relays) and agree for the DISCOM to have access to and operation of this, if required, for repair and maintenance of the distribution system.
- 2.2. The Eligible Parent Consumer agrees that in case of a power outage in the Distribution system, the photovoltaic system will shut down, unless special transfer and isolating facility have been installed on the photovoltaic system.
- 2.3. Technical specification of net meter and renewable energy meter shall conform to CEA

(Installation and Operation of Meters) Regulations, 2006 as amended from time to time.

- 2.4. All the equipment connected to distribution system shall comply with relevant International (IEEE/EC) or Indian Standards (BIS) and installations of electrical equipment must comply with CEA (Measures relating to Safety and Electric Supply) Regulations, 2010 as amended from time to time and Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time.
 - 2.5. The Eligible Parent Consumer agrees that DISCOM will specify the interface/interconnection point and metering point.
 - 2.6. The Eligible Parent Consumer agrees to adhere to the power quality measures as per International or Indian Standards and/or other such measures as directed by Commission/DISCOM.
 - 2.7. The Eligible Parent Consumer agrees to furnish all data such as voltage, frequency and location of breaker & isolator in his/her system, as and when required by the DISCOM. The Eligible Parent Consumer shall also provide facilities for online transfer of the real time operational data.
 - 2.8. The Eligible Parent Consumer shall obtain requisite approvals, in accordance with the provisions of the Central Electricity Authority (Technical Standards for Connectivity of Distributed Generation Resources) Regulations, 2013 as amended from time to time for commissioning of the Renewable Energy System and submit copies of the same to the Distribution Licensee.
 - 2.9. The Eligible Parent Consumer do hereby agrees that, DISCOM & Nodal agency may keep the entire information regarding application and registration of the Renewable Energy System on its website or web portal for transparency and convenience.
3. **Safety:**
- 3.1. Eligible Parent Consumer shall comply with the Central Electricity Authority (Measures Relating to Safety and Electricity Supply) Regulations 2010 as amended from time to time.
 - 3.2. The Eligible Parent Consumer agrees that the design, installation and operation & maintenance of the photovoltaic system shall be carried out in such a manner that the safety and reliability of the photovoltaic system as well as the distribution system is maintained.
 - 3.3. Since the obligation of the Distribution licensee is to maintain a safe and reliable distribution system, the Eligible Parent Consumer agrees that if its photovoltaic system has any adverse effect on the distribution systems, the Eligible Consumer will have to disconnect photovoltaic system immediately from the distribution system as per direction of the respective DISCOM and rectify the defect at its own expense before reconnection for which with permission of Distribution licensee has to be obtained.
 - 3.4. The Eligible Parent Consumer agrees that any change/ alteration/ modification/ addition of new capacity in the photovoltaic system (post Net metering) shall be carried out only with prior permission from DISCOM.
4. **Clearances and Approvals:**
- The Eligible Parent Consumer agrees to attain all the necessary approvals and clearances (environmental and grid connected related) before connecting the photovoltaic system to the distribution system.
5. **Access and Disconnection:**
- 5.1. DISCOM shall have access to metering equipment and disconnecting means of photovoltaic

system, both automatic and manual, at all times.

- 5.2. In case of emergency and where there is no access to any disconnecting devices such as a switch or breaker, DISCOM may disconnect service to the premise of the Eligible Parent Consumer and no compensation will be paid to the consumer for such disconnection provided such action was required for safety & reliability of the distribution system.

6. Liabilities:

- 6.1. Eligible Consumer and DISCOM will indemnify each other for damages or adverse effects from other party's negligence or intentional misconduct in the connection and operation of photovoltaic system or distribution system of the licensee.
- 6.2. DISCOM and Eligible Consumer will not be liable to each other for any loss of profits of 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 eligible consumer for any fiscal or other incentives provided by the central & state government.

7. Commercial and Settlement:

All the commercial settlement under this agreement shall follow the relevant orders/Regulations issued by OERC in this regard.

8. Conditions for System Connectivity & Standards of Performance:

The parties shall abide by the Regulations framed by Central Electricity Authority (CEA) & Odisha Electricity Regulatory Commission (OERC) in respect of procedure of grant of connectivity. The consumer shall submit the following documents for grant of connectivity.

- Synchronization Circuit Details
- Safety Report
- Protection Circuit Details
- Test Certificates of System
- Schematic diagram of Renewable Energy system

9. Connection Costs:

- 9.1. The Eligible Parent Consumer shall bear all costs related to setting up of the photovoltaic system including metering and interconnection costs as per estimate by DISCOM. The Eligible Consumer agrees to pay the actual cost of modifications and upgradation of the distribution facilities, if required, to connect the photovoltaic system.
- 9.2. Cost for interconnection equipment including the isolators, meters, etc. are also to be borne by the Eligible consumer

10. Termination:

- 10.1. The term of this Agreement shall be for the useful life of a typical solar photovoltaic power plant, which is 25 years or till the validity of the agreement with the DISCOM, whichever is earlier, unless this Agreement is otherwise terminated.
- 10.2. The Eligible Parent Consumer(s) (Jointly) or DISCOM can terminate this Agreement at any time by providing 90 days prior notice to the other party in the agreement. In case termination notice is issued by DISCOM, the same shall be issued to Parent consumer.
- 10.3. The Eligible Parent Consumer agrees that upon termination of this Agreement, he must disconnect the photovoltaic system from distribution system of licensee in timely manner and to the satisfaction of the DISCOM.

11. Change of Sharing Ratios: (GNM)

- 11.1. The Eligible Parent Consumer shall have the right to change the Sharing Ratio provided in the List of Service connections once in a financial year by sending notice at least 2 months in advance to the DISCOM and submitting a revised list of service connections.
- 11.2. The Eligible Parent Consumer shall submit a Group Net Metering application form as applicable at the time of such proposed change in the Sharing Ratio and amend the List of service connections/sharing ratio.
- 11.3. That the Eligible Parent Consumer, for setting up/ installation of/ during installation of solar photovoltaic power plant shall take all permissions/ permits/approvals as required under the relevant Regulations/laws.
- 11.4. Upon setting up and during the period of installation of solar photovoltaic power plant, the Eligible Parent Consumer shall jointly and severally, keep DISCOM/its employees/directors/ officers/associates indemnified from all cost consequences, liabilities, penalties, claim of damages/ compensation, etc. from any person/agency/land owning agency/court or any other judicial-quasi-judicial authority citing the establishment and/or operation & maintenance of solar photovoltaic power plant.

12. Parent and Child Consumer: (GNM)

That at the time of execution of this agreement, the Eligible Consumer shall be termed as Parent consumer and other CA Nos. of Parent Consumer shall be termed as Child consumers with respective Applicability Priority and DISCOM shall communicate with Parent consumer only.

13. Governing Law and Jurisdiction:

This agreement shall be governed by the Order dt.19.08.2016 of OERC on Net Metering/Bi-directional metering and their connectivity with respect to solar PV projects as amended on 05.05.2022 and subsequent amendments from time to time and any other order/directions relating to establishment/operation & maintenance of solar photovoltaic power plant. Further in case of any changes in the above order, the Eligible Consumer shall be liable to comply with the same.

In the witness, whereof Mr./Ms. _____ for and on the behalf of the Eligible Parent Consumer and Mr./Ms. _____ and on the behalf of DISCOM agree to this agreement

Date:

Place:

Name & Signature of witness

Name & Signature of Registered Parent Consumer (GNM Applicant)

Name & Signature of Nodal Officer (along with Stamp)

Annexure-IX

Undertaking for incorporating the CA nos. in the priority list of settlement under Group Net-metering (GNM)

I, _____ Son/Daughter of Resident of _____ (hereinafter referred to as “GNM Beneficiary”, which term shall mean and include executors, administrators, heirs, successors and assigns), do hereby swear and declare as under

- i. That the GNM Beneficiary is aware that a Group Net Metering connection has been applied by _____ “GNM applicant” at the premises situated at _____
- ii. That GNM Beneficiary is aware that name/CA Nos. of GNM Beneficiary have been given by the GNM Applicant for availing of benefits under GNM Scheme
- iii. That GNM Beneficiary would like to avail the benefits associated with the GNM Connection issued to GNM Applicant as such submitting this instant undertaking confirming the terms herein.
- iv. That GNM Beneficiary confirms and understands that this present undertaking shall form part of the GNM Application Form submitted by the GNM Applicant and shall be construed in addition to the declarations and undertakings provided therein

That the GNM Beneficiary hereby agree and undertake:

- a. That GNM Beneficiary is the Registered Consumer (RC) for the CA No. _____ installed at the premises _____ whereas the GNM Applicant is the owner of the premises.
- b. That GNM Beneficiary has no objection if the CA No. _____ is being added to the benefits of GNM Connection issued to GNM Applicant in a manner as requested/agreed by GNM Applicant in the GNM Application.
- c. That GNM Beneficiary do hereby agree and undertake that it shall have no objection for the benefit credited, calculation of billing units under GNM Scheme as notified by Government/Competent Authority from time to time.
- d. That GNM Beneficiary do hereby agree and undertake for calculation of units or the issues associated with the same billing units may be revised by DISCOM in consideration of GNM Guidelines or any other issues and the same shall not give rise to any claim from GNM Beneficiary against _____ (concerned department).
- e. That GNM Beneficiary has given its consent to GNM Applicant for inclusion of GNM Beneficiary for the benefits of Group Net Metering and understand that the nomination of GNM Beneficiary is at the discretion of GNM Applicant and the GNM applicant, at all times, shall be free to change the sequence of GNM Beneficiary and/or drop GNM Beneficiary from the benefits without any prior intimation and the same shall not give rise to any claim from GNM Beneficiary against DISCOM.
- f. That GNM Beneficiary shall at all time keep DISCOM indemnified from all law suits/claims/action/liabilities associated with the inclusion dropping of GNM Beneficiary from the benefits of Group Net Metering.
- g. That GNM Beneficiary undertakes to deposit the necessary document and permissions with DISCOM as and when demanded by DISCOM.
- h. That GNM Beneficiary shall take necessary permissions from the concerned authorities and shall submit the same with DISCOM, as notified by DISCOM from time to time.

- i. The GNM Beneficiary confirms and agrees that in case of violation of the terms as stated in this undertaking and other terms as agreed by him/her, DISCOM shall be having full right to drop GNM Beneficiary from the benefits of Group Net Metering.

SIGNATURE OF GNM BENEFICIARY

VERIFICATION

Verified at <insert the name of the City>, Odisha that at the contents of the above self-declaration are true and correct to the best of my knowledge and belief. This is to declare that No word and/or any statement has been amended/alterd/reframed in connection agreement as provided by DISCOM for the needful process of Group Net Metering (GNM) Application

SIGNATURE OF GNM BENEFICIARY

Annexure-X

Timeline & responsibility for installation and Metering Connection of Grid Connected Solar Rooftop PV Systems by DISCOMS.

Activity	Responsibility	Timeline (Max Working Days)	
		Net metering/ Gross metering	VNM & GNM
Submission of Application	Consumer	Zero Days	Zero Days
Acknowledgment of application by DISCOM	DISCOM	2 Days	2 Days
Site Verification / Technical Feasibility & issuance of Letter of Approval (LOA)/ Communication of deficiency if any to provide opportunity for Resolution/ Termination	DISCOM	10 Days	10 Days
Execution of Metering Agreement	DISCOM and Consumer	7 Days	7 Days
Installation of Rooftop Solar System	DISCOM, Empaneled Vendor & Consumer	60 Days	180 Days
Submit Work Completion Report/ Certificate	Empaneled Vendor & Consumer	Within 7 days of installation	Within 7 days of installation
Inspection by CEIG (wherever applicable)/ DISCOM/ Joint inspection	CEIG/ DISCOM	10 Days	10 Days
Installation of Meter/ Commissioning of the system	DISCOM	7 Days	7 Days
Billing Process	DISCOM	30 Days after commissioning and synchronization with Grid (may be aligned with the billing cycle of the Consumer)	30 Days after commissioning and synchronization with Grid (may be aligned with the billing cycle of the Consumer)