

(To be published in Part IV (Extraordinary) of Delhi Gazette)

**DEPARTMENT OF POWER
GOVERNMENT OF NCT OF DELHI
Delhi Secretariat, IP Estate, New Delhi-110002**

NOTIFICATION

Delhi Solar Policy, 2016

The Government of NCT of Delhi (GNCTD) considers solar power to be the most viable form of green energy in Delhi. It has the potential of lowering the state's expenditure on energy, strengthening its energy security, and reducing its reliance on unsustainable fossil fuels. To attain this potential, rapid capacity addition in solar power is needed. Hence, it is deemed necessary to have a Delhi Solar Energy Policy for the promotion of solar power plants.

The following Delhi Solar Energy Policy is for the period 2016-2020. It will be monitored annually based on actual performance, market conditions, and consumer experience.

1. Preamble

An urgent increase in Renewable Energy is required in India to combat climate change, reduce air pollution and enhance energy security. The Government of the National Capital Territory of Delhi (GNCTD) intends to rapidly develop decentralised renewable energy sources, especially solar and reduce its current dependence on unsustainable and centralised fossil fuel energy.

Given Delhi's land-locked position, the high cost and paucity of barren land within its borders, and low potential for wind or hydro power, Delhi must focus on rooftop solar as its primary source of renewable energy. Delhi is blessed with almost 300 sunny days and the rooftop space available for solar panels is estimated to be 31 sq. km, giving Delhi a solar energy potential of 2500 MWp (annual Generation approx. 3,500 million kWh). Of this potential, 26% is in the government/public sector, 25% in commercial/ industrial sector, and 49% in domestic sector.

In 2014, the peak power demand in Delhi was almost 6000 MW and the total annual consumption in 2014-15 was 27,266 million kWh. Power demand can vary considerably across a 24-hour window, especially in summers owing to the increasing use of air conditioning. In general,

energy utilities (DISCOMS) pay more to meet short-term demand surges, raising the average cost of power. Delhi's daily day time peak demand curve broadly matches the generation curve of solar system, which can therefore help to reduce peak demands. Moreover, energy produced by rooftop solar systems is mostly consumed at, or near, the point of generation, minimizing transmission and distribution losses. Self-consumption of rooftop solar energy also reduces the need for, and the challenge of, provisioning new distribution infrastructure, such as transformers, in congested localities.

In short, rooftop solar systems offer sustainable energy, environmental benefits, low gestation period, low transmission and distribution losses, reduced need for distribution infrastructure, and peak load offset that reduces costs for the DISCOMs and ultimately for the consumers as well.

Market conditions are also more favourable for solar power than before. While solar energy tariffs have, on average, fallen 6-8% per year since 1998 (solar panel prices have dropped 75% in the last six years, conventional energy tariffs in Delhi have risen @ 6.9% per year on average since 2007. After years of innovation and declining prices, solar energy tariffs in Delhi have become cheaper than conventional energy tariffs for the government, commercial-industrial, and top end of domestic segment, and are expected to achieve parity in the low-medium domestic segment. Therefore input subsidies from the State of Delhi are not deemed necessary. However, a Generation-Based Incentive for a limited period seems prudent to promote adoption in the domestic segment.

The Government of India (GoI) has set a target of, 100 GW (100000 MW) of solar energy generation in India by the year 2022, of which 40 GW (40000 MW) is from rooftops. Delhi is well positioned to lead India's rooftop solar revolution and has consequently established solar generation targets of 1GW (1000 MW) by 2020 (4.2% of energy consumed) and 2.0 GW (2000 MW) by 2025 (6.6% of energy consumed). To help achieve these targets, this document seeks to outline a robust and pragmatic Solar Energy Policy for Delhi. Alongside, GNCTD will raise consumer awareness of solar energy, promote capacity building, and generate healthy competition among solar developers, so that solar power is adopted on a mass scale and Delhi becomes the premier solar city in India.

2. Title of the Policy

The Policy shall be known as the "Delhi Solar Energy Policy, 2016". This Policy will be applicable for any solar energy generating system with a capacity of 1 KWp or more.

3. Abbreviations

CAPEX	Capital Expenditure
CEA	Central Electricity Authority
DERC	Delhi Electricity Regulatory Commission
DISCOM	Distribution Company
DSM charges	Deviation Settlement Mechanism charges
EE&REM Centre	Energy Efficiency & Renewable Energy Management Centre
EPC	Engineering, Procurement, and Construction
FY	Financial Year
GNCTD	Government of National Capital Territory of Delhi
GoI	Government of India
IPGCL	Indraprastha Power Generation Co. Ltd
MNRE	Ministry of New and Renewable Energy, GOI
MW	Mega Watt
PPA	Power Purchase Agreement
PV	Photo Voltaic
REC	Renewable Energy Certificate
RESCO	Renewable Energy Service Company
RPO	Renewable Purchase Obligation
RTS	Rooftop Solar
SNA	State Nodal Agency
WBA	Wheeling and Banking Agreement
UNFCCC	United Nations Framework Convention on Climate Change

4. Objectives

The Delhi Solar Energy Policy, 2016 has the following ten broad objectives:

- i. Reduce Delhi's reliance on conventional energy while increasing its energy security and lowering average energy prices in the long term. Promote rapid growth of rooftop solar power via a combination of generation targets, regulations, mandates and incentives.
- ii. Encourage market-based approaches and public-private partnerships to drive demand and adoption, with minimal use of State Government subsidies. Develop initiatives to raise public awareness of solar energy in Delhi.
- iii. Ensure fairness for all stakeholders in the solar ecosystem, including roof top owners, DISCOMS, investors, consumers of non-solar power, technology and services providers.
- iv. Use regulatory mechanisms to drive demand and adoption, such as mandating solar plant deployments on government rooftops,

requiring in-state solar RPO targets for DISCOMS, modifying building bylaws to facilitate solar plant deployment, specifying responsibilities for the inspection/certification of solar plants, aggregating demand for solar projects, and more.

- v. Promote net metering / gross metering and grid connectivity for all solar plants by simplifying and streamlining processes and methods.
- vi. Generate employment in the solar energy sector through skill development especially for youth. Establish core technical competence of professionals in the NCT of Delhi to initiate and sustain effective management of solar projects and infrastructure.
- vii. Provide Generation-Based Incentives for the domestic segment where solar power costs are yet to achieve parity for most users, as well as tax exemptions and waivers for all consumers.
- viii. Promote a robust investment climate that enables multiple financial models, from self-owned (CAPEX) to third-party owned (RESCO) models. Also facilitate access to loans at preferential interest rates through various schemes that may be introduced from time to time, whether through public or private channels.
- ix. Establish policy implementation, monitoring and compliance framework to make sure that efficient execution and periodic review of the policy takes place.
- x. Develop solar energy as part of an overall strategy of providing affordable, reliable, 24X7 Power to all citizens, incorporating demand side management, energy conservation, energy efficiency initiatives, quality assurance and longevity of projects, distributed renewable energy generation, and smart grid development.

5. Legislative framework for Policy

1. The Electricity Act, 2003 mandates that the Electricity Regulatory Commissions and the Governments take necessary steps to promote Renewable Energy. The preamble to the Electricity Act, 2003 recognizes the significance and importance of promotion of efficient and environmentally benign policies.
2. Section 61(h) of the Electricity Act, 2003 provides that while specifying the terms and conditions of determination of tariff, Regulatory Commission shall be guided, inter alia, by the promotion of cogeneration and generation of electricity from renewable sources of energy.
3. The National Electricity Policy (NEP) & Tariff Policy notified by the Central Government under the provisions of section 3(1) of the Act has also addressed the issues of untapped potential of energy from non-conventional and renewable energy sources.

4. Section 86(1)(e) of the Act specifies that one of the functions of the State Electricity Regulatory Commissions is to promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with grid and to promote sale of such power to any person. The Regulatory Commission is also required to stipulate that a certain percentage of the total consumption of electricity in the area of a DISCOM shall be obtained from renewable energy source (Renewable Purchase Obligation, or RPO).
5. To help achieve the solar capacity targets outlined in Section 9 of this Policy, the Delhi Electricity Regulatory Commission (DERC) shall determine annual Solar Renewable Purchase Obligation (RPO) targets for the DISCOMS, separate from the non-Solar RPO targets. The DISCOMS shall give priority and preference to sourcing at least 75% of their RPO targets within the state of Delhi. All solar energy generated at a net metered connection site in a DISCOM's territory shall count towards that DISCOM's RPO target.
6. In case a DISCOM fails to comply with the above RPO mandates, penalties specified by DERC for such non-compliance shall be strictly enforced.
7. DERC under Section 86(1)(e) of the Electricity Act 2003 has also notified "Net Metering Regulations and Guidelines, 2014" for enabling Delhi consumers to generate Solar Energy and to connect the system with DISCOM's Distribution Grid for exporting surplus energy from renewable sources.
8. DERC has also notified the "DERC(Terms and Conditions for Determination of Tariff for Procurement of Power for Grid-Connected Solar Photo Voltaic Project) Regulation, 2013" for determination of tariff for Grid Connected Solar PV projects of capacity equal to or more than 25KWp.

6. Operative Period

The Policy shall come into effect on the date of its notification and shall remain valid for the next five years ("Operative Period"), unless superseded or modified by another Policy. The Government will monitor this Policy every year to evaluate the actual results against Policy objectives and capacity addition targets.

7. Eligible Entities

This policy applies to all electricity consumers under all electricity tariff in Delhi and to all entities that setup and operate power plants in Delhi.

8. State Nodal Agency

Energy Efficiency and Renewable Energy Management Centre (EE&REM) is a sub-division of the Department of Power, GNCTD, which shall act as the State Nodal Agency (SNA) for the purposes mentioned in this Policy and shall be responsible for the effective implementation of this Policy in consultation with the State Government, eligible consumers, the Central Government, other States and other stakeholders.

9. Target Capacity

By August 2015, Delhi had 7 MW of installed rooftop solar capacity. To achieve its solar power generation targets, this Policy mandates solar installations—to be completed within 5 years—on all government-owned rooftops. Since pricing parity hasn't been achieved as yet in the domestic segment, except at the high end, solar adoption will be encouraged via a limited time generation-based incentive (see details in Section 12).

This Policy has set aggressive, yet achievable, targets over the next ten years, outlined below which shall be reviewed periodically. The State shall strive to achieve the objectives of the Policy and aim at implementing minimum targets, elaborated below, within the Operative Period.

Fiscal Year	New Solar Energy (MW)	Cumulative Solar Energy (MW)	Annual Growth (%)	Percentage of peak grid load*1	Percentage of total electricity consumption*2
FY 16	30	35	700%	1%	0.15%
FY 17	84	119	240%	2%	0.56%
FY 18	193	312	162%	5%	1.43%
FY 19	294	606	94%	9%	2.66%
FY 20	385	991	63%	14%	4.16%
FY 21	285	1275	29%	17%	5.10%
FY 22	228	1503	18%	19%	5.73%
FY 23	187	1690	12%	20%	6.14%
FY 24	161	1850	10%	21%	6.40%
FY 25	145	1995	8%	21%	6.57%

*1 Based on 6 GW peak load in 2015 and a growth assumption of 5% per annum.

*2 Based on actual energy units consumed in Delhi (27,266 MU) in 2014-15 and a growth assumption of 5% per annum.

10. Implementation plan for solar power systems and plants

GNCTD will promote the installation of solar power plants under all consumers' segments and categories to realize the aforesaid minimum targets.

10.1 Grid connected rooftop solar power plants

The State shall promote the development of grid-connected solar plants on rooftops for meeting own electricity needs and injecting surplus electricity into the distribution grid. Grid-connectivity must comply with "Delhi Electricity Regulatory Commission (Net Metering for Renewable Energy) Regulations, 2014" and DERC's "Terms and Conditions for Determination of Tariff for Procurement of Power for Grid-connected Solar Photovoltaic Power Projects", 2013.

Group Net Metering

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

The State Government shall work with DERC to develop group net metering framework, pending finalization of the framework, consumers of all categories who wish to avail Group Net Metering facility shall make a written request to DERC, which shall review the requests in a timely manner and grant approval on a case-by-case basis. Within 30 days of notification of this policy, DERC shall make available on its website a simple document form to handle such written requests.

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

Virtual Net Metering

To give access to the Solar Net Metering facility for consumers who do not have a suitable roof for installing a solar system (e.g. residential consumers who live in apartments, consumers with shaded rooftops) there will be the facility of *Virtual Net Metering*. In *Virtual Net Metering*

consumers can be beneficial owners of a part of a collectively owned solar system. All energy produced by a collectively owned solar system will be fed into the grid through an energy meter and the exported energy as recorded by that meter will be pro-rata credited in the electricity bill of each participating consumer on the basis of beneficial ownership.

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

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

10.2 Solar power plants under schemes announced by Govt. of India

The State shall assist solar project developers participating in schemes announced by MNRE or its identified agencies to promote solar plants. The SNA shall arrange and submit to MNRE or its identified agencies the recommendations necessary to finalize such schemes in consultations with all stakeholders, including DISCOMS, in a timely manner. DERC may also announce a suitable framework for the implementation of such schemes, as required, in a timely manner.

10.3 Solar power plants under Renewable Energy Certificate mechanism

The State shall promote the development of solar power plants under the Renewable Energy Certificate (REC) mechanism specified by the Central Electricity Regulatory Commission (CERC). The SNA shall extend its support for the accreditation of the solar power plant and for recommending its registration with the Central Agency in a timely manner. In carrying out this role, the SNA shall be guided by any directions given to it by DERC for the implementation of the framework from time to time.

11. Promotional policy for grid connected rooftop solar system

The State shall encourage implementation of grid connected solar plants as outlined below. All grid connected solar plants shall comply with applicable CEA (Grid Standards) Regulations, 2013 and other applicable rules, regulations, and guidelines as amended from time to time.

11.1 Government / Public Institutions

The State mandates the deployment of solar plants with net metering on all existing, upcoming, or proposed buildings of government organizations, government owned or aided hospitals, schools and other educational/technical/research institutes, hostels and training institutes such as Industrial Training Institutes (ITI), Fire Stations, Prisons, Delhi Jal Board, Hospitals/Dispensaries and Delhi Development Authority building rooftops, stadiums, bridges, public toilets, bus depots and bus stops, railway stations, sheds, parking lots, and other Central and State Government buildings. The State shall also explore the feasibility of floating solar power plants on top of some of the perennial water bodies, canal-top and canal-bank in Delhi as well as on the rooftop of moving buses and e-Rickshaws.

It will be mandatory for all such government buildings with rooftop area of 500 m² or above to install a solar PV plant as far as possible with a minimum capacity (kWp) computed as follows: *Capacity in kWp = (Total shadow free rooftop area x 75%) / 12*. Area provisions may be calculated on roof top @ 12 sq meters per 1 Kw, as suggested by Ministry of Urban Development referring the Ministry of New and Renewable Energy. The SNA shall be authorized to survey and finalize the capacity of the solar system to be installed on a government rooftop. Further Govt. agency maintaining the building in addition to State Nodal Agency (SNA) shall also be authorized to survey and finalize the capacity of the solar system to be installed on govt. building rooftop, the decision of the govt. agency maintaining the building shall be final.

Deployment of solar plants on all State Government properties shall be carried out at a steady pace and in a phased manner, and shall be completed within the Operative Period of this Policy. The SNA shall be authorized to nominate buildings for solar projects and determine the implementation timeframe. Government departments that fail to comply shall be required to submit a written explanation from the department's head to the office of the Chief Minister.

The department, whose rooftop size is less than 500 sq meters, shall also endeavour to install solar PV plants as far as possible.

The State Government shall also promote deployment of solar plants with Net Metering on the rooftops of Central Government Organizations and other public bodies through suitable advisory and consultative means to facilitate the solar energy targets of Delhi.

11.2 Commercial and Industrial Establishments

The State shall encourage the deployment of solar plants with Net Metering on all Commercial and Industrial buildings with available rooftop areas. These include but aren't limited to schools, hospitals, nursing homes, malls, hotels, offices, banquet halls, clubs, restaurants, industries, warehouses, companies, parking lots, and commercial or tourism complexes.

11.3 Residential Consumers

The State shall encourage the installation of solar plants with Net Metering on all residential buildings, colonies, townships, housing societies, private bungalows, farm houses, etc. All urban development and housing agencies (private and public, including DDA and PWD), the Municipal Corporations of Delhi, banks and RWAs shall facilitate the deployment of solar project installations.

12. Generation Based Incentives (GBI)

The State shall offer a limited-time GBI for existing and future Net Metered connections in the domestic/residential segment only.

This GBI will reduce payback time and increase adoption. A GBI of INR 2.00 per unit (kWh) of gross solar energy generated is being offered for 3 years only, starting from the date of taking effect of the Policy. Towards the end of this period, the State shall consider extending the GBI for an additional two years depending on the economics of solar energy, grid tariffs, and solar energy adoption rates in the domestic segment.

GBI will be paid on a first-come-first-served basis until the funds earmarked for GBI run out. The minimum eligibility criteria for GBI will be 1,100 solar energy units (kWh) generated per annum per kWp. For solar plants that generate less than 1,100 units (kWh) per kWp a year, the GBI facility will not apply. The annual solar energy generation that is eligible for GBI shall be capped at 1,500 kWh per kWp, irrespective of the readings of the solar generation meter.

The funds for the disbursement of GBI shall come from a Green Fund established by the State of Delhi for promoting solar energy. The SNA will be responsible for managing this Green Fund. The Green Fund shall utilize the funds already accrued in the Air Ambience Fund raised through a cess on diesel by the Department of Environment, GNCTD, to promote clean technologies.

Consumers who wish to avail of the GBI facility shall install a solar energy generation meter as provided for in article 18 of this Policy. The GBI will be based on solar meter readings taken by the DISCOM, and DISCOMS will adjust the amount of GBI against electricity bills of the eligible consumer as is being done in case of transfer of electricity subsidy. DISCOMS will claim the amount (along with proof of payment to consumers) from SNA annually and SNA will disburse the amount to DISCOMS.

13. Other exemptions, benefits, and incentives

The exemptions, benefits, and incentives below shall be available to solar plants implemented by the eligible entities, as applicable, during the Operative Period of the Policy.

13.1 Exemption from the payment of Electricity Tax and Cess

In order to promote clean and green energy and reduce the pollution burden on the capital, all Municipal Corporations of Delhi shall work towards and notify the exemption of Electricity Tax (currently 5%) for solar energy units generated, whether for self-consumption or supplied to the grid. In other words, Electricity Tax will be applicable only on Net Consumption Charges billed by the DISCOM at the applicable rate.

13.2 Exemption on Open Access Charges

The state government in consultation with DERC shall *prepare a suitable framework for Open Access for solar electricity generated or consumed* within the state. Such framework will be finalized and approved no later than 1 July, 2016. DERC, the State Power Department and SNA will form a joint committee to achieve this policy objective.

13.3 Exemption on conversion charges

Residential consumers opting to implement solar plants to sell power to the grid shall be exempted from the conversion charges requirement of house tax to commercial tax.

13.4 Exemption on wheeling, banking, and transmission charges

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

13.5 "Must Run" status

All solar power systems shall be treated as 'Must Run' power plants and shall not be subjected to Merit Order Rating (MOR) / Merit Order Dispatch (MOD) principles.

13.6 Cross subsidy charges

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

13.7 Benefits under CDM (Clean Development Mechanism) or under UNFCCC

All risks, costs, and efforts associated with the availing of carbon credits shall be borne by the solar energy generating entity. Further, the generating entity shall retain the entire proceeds of carbon credit, if any, from an approved CDM project or any other mechanism under UNFCCC.

13.8 Building bylaws amendment for rooftop solar installations

- a) The height of the module structure carrying solar panels shall not be counted towards the total height of the building as permitted by building bylaws, except near airports where building regulations issued by the Airports Authority of India take precedence.
- b) No approval will be required from concerned Municipal Corporation or other Urban Development Bodies like the DDA for putting up solar plants including any additional system for monitoring the performance of solar plant in existing or new buildings.
- c) The support structure on which rooftop solar panels are installed shall be a temporary structure built in accordance with local building codes.

14. Role of the State Nodal Agency (EE&REM)

The State Nodal Agency (SNA) shall facilitate the Eligible Entities in implementing the solar plant to provide single-window services to all Eligible Entities and undertake following activities:

i. Announcement of solar policy, amendments, and related schemes

The SNA shall take the lead in launching this Solar Energy Policy to the public through the use of media, PR, billboards, advertisements, websites,

and more. It will also communicate amendments to the Policy to major stakeholders via its website and/or other means.

ii. Allotment of the solar power capacities

The SNA shall, from time to time, undertake the process for allotment of solar power capacities on a first-come-first-served basis under various schemes of State and Central Government and its identified agencies in a transparent manner to the DISCOMS and other project developers.

iii. Facilitation in development of solar projects

The SNA shall assist solar project developers in obtaining all necessary clearances and approvals from different Government Departments.

iv. Support in establishing protocols/procedures for easy adoption of solar power

The SNA shall also support the DISCOMS in developing the protocols and procedures for easy adoption of solar plants by consumers. The DISCOMS shall be responsible for managing all transactions and accounting processes relating to net metering, group net metering and virtual net metering.

v. Maintain a website for consumers interested in Rooftop Solar

The SNA shall develop and maintain a website with educational material and other necessary resources for potential consumers in Delhi. The website shall have information such as an up-to-date list of contacts to get started, current incentive schemes, resources for finding financial loans, solar integrators and service providers, and other information to promote education and awareness among consumers.

vi. Identification of Sites for Deployment of Rooftop Solar Power Plants

The SNA shall assist project developers in identifying the technically feasible sites/roofs under jurisdiction of the State Government for deployment of solar plants. The SNA shall also encourage deployment of solar plants on sites under the jurisdiction of private institutions/buildings that are not mandated as per this Policy.

SNA along with other stake holders shall strive to utilise maximum ground/roof area and install solar PV modules of maximum indigenously available conversion efficiency so as to obtain maximum use of solar power generation.

The SNA will play a key role in the aggregation of potential rooftop projects and provide guidelines to nominated State Agency doing technical and commercial assessment of competitive bids by private entities. The SNA may also appoint an external commercial party to fulfill the role of the aggregator.

vii. Management of the Green Fund and Disbursement of the GBI

The SNA will manage the Green Fund and disburse the GBI as provided for in this Policy.

viii. Support in availing Subsidies

The SNA will pass on any subsidies available through the Central Government (MNRE) or State Government to consumers, integrators, and other solar developers in the State, as applicable.

ix. Capacity Building, Awareness Creation, Green Fund Management

The SNA in association with Central Agencies shall oversee the creation and utilization of a Solar Green Fund in Delhi, which may utilize the Air Ambience Fund established by the State of Delhi. Solar Green Fund can also include contribution from any other sources. The fund so created shall be utilized for GBI incentive payments, organizing capacity building and training programs, creating public awareness and other activities deemed necessary for the promotion and faster implementation of solar plants in the State. SNA will hold workshops in association with RWAs to increase the solar penetration.

x. Budgetary Support

To help achieve the targets in this Policy, the SNA, working with DISCOMS and/or other entities, shall undertake assessment of solar potential and project costs for public buildings and submit them to the State Government for budgetary support, as necessary.

15. Role of DISCOMS

1. The State Electricity Distribution Licensees (DISCOMS) shall extend their support in installing solar power plants, their connectivity with their grid network, and metering. They shall comply with the regulatory framework specified by the DERC and provisions contained in this Policy.
2. In case of third-party PPA signed directly with the consumer (RESCO model), the consumer will be responsible for providing appropriate technical details of the solar installations on the consumer's rooftop to DISCOMS.
3. For each billing period, DISCOM shall show separately:
 - a. The quantum of units of electricity exported by the Consumer;
 - b. The quantum of units of electricity imported by the Consumer;
 - c. The quantum of units of electricity generated by the Consumer's solar plant (this will be the basis for the DISCOM's RPO computation and will also facilitate GBI payments to eligible consumers who have opted for GBI);

- d. The GBI will be based on solar meter readings taken by the DISCOM, and DISCOMS will adjust the amount of GBI against electricity bill of the eligible consumer as is being done in case of transfer of electricity subsidy. DISCOMS will claim (along with proof of payment to consumers) the amount from SNA annually and SNA will disburse the amount to DISCOMS.
- e. The Net units of electricity billed for payment to the Consumer and the Net units of electricity carried over to the next billing period.

The DISCOM shall also make available online all the billing data above for each consumer, along with a sample bill explaining the various billing components above.

- 4. DISCOM will promote online applications for Net Metering. DISCOM will also display online the status of all Net Metering applications received, whether online or offline. DISCOM will maintain a database of Net Metering application requests, approval status, installation and commissioning data, which will be submitted to the SNA on a quarterly basis. DISCOM shall, at the request of the SNA from time to time, also provide to the SNA the load status of distribution transformers on its network. DISCOM should update the status of solar capacity installation with respect to distribution transformers on their website to make the process transparent.
- 5. DISCOM shall replace the consumer's existing service connection meter with a Bidirectional Vector Summation Meter in accordance with the guidelines provided by DERC. In case the existing meter is a static meter, the DISCOM may collect a nominal fee as prescribed by DERC from the consumer to cover the reprogramming cost to make such meters bidirectional. Additionally, starting 1 April 2016, all new service connections in Delhi shall have energy meters programmed for bidirectional energy recording and display and shall be time-of-day metering compliant.
- 6. At the time of commissioning of Net Metering of a solar system, the DISCOM shall verify that when the service connection is disconnected (e.g.by removing the meter cut-out fuses), the solar plant stops feeding power to the consumer side of the service connection meter or cut-out fuse. This is to ensure that the solar grid inverter stops feeding power into the grid during grid outage.
- 7. For distribution network related activities, DISCOM shall be allowed to take necessary measures related to the safety of people and property. The Consumer shall comply with all necessary steps for this purpose as advised by the DISCOM including but not limited to temporary shutdown of the solar plants, if necessary.
- 8. For solar plants with capacity above 200 kWp, inspection by an Electrical Inspector, appointed by the Delhi Government shall be

required to ensure quality, safety, and compliance before commissioning. Up to a solar plant capacity of 200 kWp, the consumer shall be responsible for the inspection and verification before commissioning. Respective DISCOMS will conduct the inspection and verification of measures related to safety parameters before installation of Net Meters. Consumers will be facilitating the DISCOMS for such verification.

16. Role of IPGCL

In collaboration with the State Nodal Agency, the Indraprastha Power Generation Co. Ltd. (a Govt. of NCT of Delhi Undertaking) will:

- a) Aggregate capacity on Government rooftops / rooftop other than of Government buildings having capacity above 50KW under MNRE / state scheme / ground mounted capacities under MNRE / state schemes, float tender and manage the entire bidding process under both RESCO & CAPEX model. Inspect and assess solar potential of rooftops as input for the tender and it will be suitably compensated for the same either by SNA, Department of Power or will charge for services from bidders/ solar power developers".
- b) Perform technical and commercial evaluation of the bid, select the most suitable bidder, and ensure their compliance with technical standards.
- c) Facilitate the signing of the PPA between the consumer and the winning bidder.
- d) Monitor and supervise the timely completion of the entire rooftop solar project.
- e) Will comply with the directions issued by Delhi Government and SNA from time to time.
- f) Delhi Government reserves the right to assign all or some of the above activities to any other agency as deemed fit.

17. Role of Consumer and Solar Plant Developer

Any consumer who installs solar plants on his rooftop and signs a PPA, such as with a Renewable Energy Service Company (RESCO), shall provide convenient and periodic rooftop access to the RESCO as needed, to install and perform maintenance services on the solar plant for the entire term of the PPA. Consumer shall also retain full physical ownership of the rooftop and ensure reasonable security to visiting service staff.

Before commissioning a power plant of capacity up to 200 KWp, the consumer/installer/developer shall submit a Release Form to the DISCOM certifying that the installer performed routine safety checks and

verifications. The SNA shall also be authorized to perform onsite checks on solar installations, as necessary. Above 200 KWp system installations, consumer shall obtain a Safety Certificate from an Electrical Inspector of the Delhi Government.

Renewable Energy Service Company (RESCO) shall indemnify the roof owner/consumer against all damages to the structure and waterproofing of roof in case of roof top solar plants suitably if it fails to repair the same.

RESCO shall also strive to minimize insertion of voltage fluctuations & harmonics to the grid. When grid will be fed from so many small power sources electrical disturbances are likely which can be reduced only by suitable corrective mechanisms associated with inverter & synchronizing operational.

18. Metering and Billing Arrangements

Service connections of consumers with Solar Net Metering shall be equipped with Bidirectional Vector Summation Service Connection Energy Meters that record and display the imported and exported active and reactive energy in separate registers.

The Bidirectional Service Connection Meter shall have the same (or better) accuracy, capacity and functionalities as the existing service connection meter.

The metering and billing arrangement should comply with DERC Net Metering Regulations and Guidelines, Central Electricity Authority (Installation and Operation of Meters) Regulations and its amendments, as applicable.

19. Evacuation facility and connectivity to the electricity system

Directives issued by DERC shall govern the voltage of evacuation of the electricity from solar plants. Evacuation infrastructure shall be developed and augmented, wherever necessary, by the State Transmission Licensee and/or the DISCOM, as the case may be. Any infrastructure associated cost for the purpose of installation of the Solar PV plant, including but not limited to network augmentation shall be borne by the owner of the solar project.

The connectivity of solar plants with the electrical grid at voltage level 33kV and above shall be governed by DERC Net Metering Regulations and Guidelines, Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 and amendment thereof whereas the connectivity of the solar plants with the grid at voltage level below 33kV shall be governed by the Central Electricity Authority (Technical Standards for Connectivity of Distributed Generation Resources) Regulations, 2013, as amended from time to time.

20. Monitoring of Parameters

Developers of all solar plants above 1 MW capacity shall need to install necessary equipment to monitor solar irradiance, wind speed, ambient air temperature, and electricity generated and injected into the electricity system or self-consumed from the solar plant. The generation data should be made available in public domain. The monitoring report shall be submitted to the SNA on regular time period for the useful life of the plant. The SNA in association with DISCOMS shall develop necessary online infrastructure to record and disseminate such parameters.

21. Empowered Committee

To oversee, monitor and resolve various issues arising out of this Policy, an Empowered Committee will be constituted under the chairmanship of the Chief Secretary of the GNCTD.

The Committee will have the following constitution: –

Chief Secretary, GNCTD	Chairman
VC, DDA or his representative	Member
Secretary (Urban Development), GNCTD	Member
Secretary (Power), GNCTD	Member
Secretary (PWD), GNCTD	Member
Secretary (Environment), GNCTD	Member
Secretary (Finance), GNCTD	Member
Chairman, NDMC	Member
Commissioner, North DMC	Member
Commissioner, South DMC	Member
Commissioner, East DMC	Member
Spl. Secretary (Power), GNCTD	Member
Secretary (DERC)	Member
Managing Director, IPGCL	Member
CEO & MD, TPDDL	Member
CEO, BRPL	Member
CEO, BYPL	Member
Executive Officer (EE & REM)	Member Secretary

The Chairman of the Committee is empowered to co-opt subject matter experts and other officers as required. The Committee shall be authorized to deliberate and decide on all aspects including the aspects related to implementation of this Policy either on its own motion or on the written/mailed representations by the Stakeholder and to review and revise the Policy.