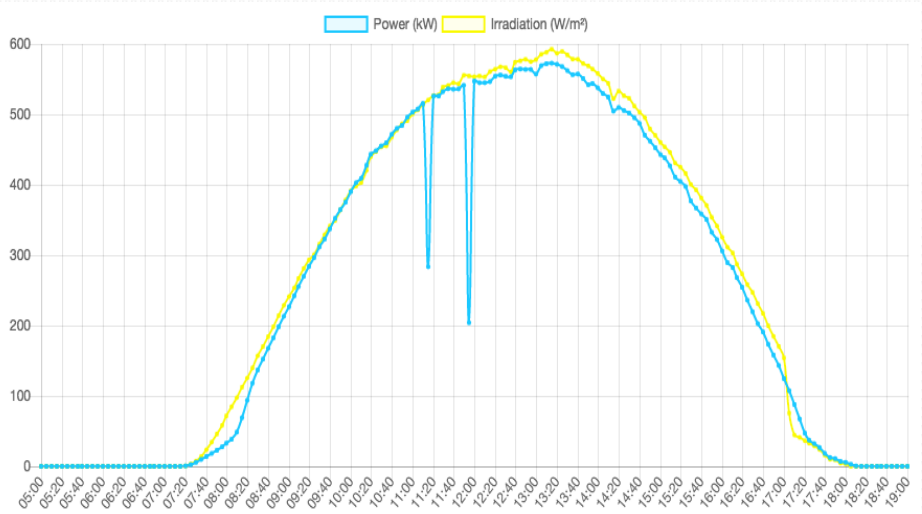
Why go Solar

BRINGING THE CHANGE

At present, the India has **289 GW** of power generation capacity, and power plants operate at less than full capacity to cater to a power demand of 140-150 GW. Ongoing efforts to electrify all villages and provide uninterrupted electricity for all by 2019, along with the expected electrification of more railway lines, we would need an additional 175 GW of power generation capacity by 2022



Most of the electricity that we use today comes from Thermal Power plants where Coal is burned up to produce electricity. This process is considerably adverse to environment and approximately 0.8 KG of CO_2 is released for generation of 1 Unit of electricity. This carbon-di-oxide is an air pollutant and a green house gas, that accelerates the process of Global Warming. The main reason for each and every one of us to switch to solar is to provide our environment chance to recover itself.

According to facts, 1 KW Solar Power System saves an emission of 1.168 Tons of Carbon in one year. In the long run, installation of 1 KW of Solar Power system on your roof is equivalent to adding Carbon absorption capability of 40 Trees. So when more and more of this required 175 GW or 175,000,000 KW is produced through Solar , we can estimate the amount of carbon emissions that we can save.

Other than Environment, Solar Energy also has the power to make everyone of us Energy Independent. While we cannot afford to have our own thermal power plant or hydro power plant every household that has a roof with unrestricted sunshine, can afford to have its own Solar power plant which allows it to switch from being electricity consumer to being electricity producer.

Advantages of having your own Solar Power Plant

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- Increase saving by reducing electricity bills: Electricity bills will drop as substantial energy consumption will be met by the solar power system. Also the surplus generation can be exported back to grid in the grid connected system.
- Renewable Energy Source – Apart from being a zero pollution source of power it adds to corporate identity as a green energy user.
- Modular: Capacity can be added based on demand.
- Provides energy security.
- Decrease the carbon footprint.
- Low maintenance costs
- Reduce your impact on the environment
- The electricity you generate is more valuable
- . It helps your green credentials and CSR
- Solar energy helps the wider economy
- Life SPAN of roof increased by 25-30%

Solar CAPEX Solutions_ LMIPL

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LMIPL functions as one stop solution for solar power projects and also provides Institutional, Commercial and Industrial consumers with an option of switching to solar with their own investment (referred as Capex Mode).

Basic Features of CAPEX Model

The basic tenant of CAPEX Model is that the client incurs all the project cost upfront.

❖**Higher Savings:** While in RESCO Model client pays solar tariff, in Capex Mode, the client does not have to pay any tariff and hence, there is considerably higher electricity cost savings.

❖**Short Payback Period:** Investment on Solar Power Plants (particularly rooftop) has attractive payback period of 5-7 years.

❖**Accelerated Depreciation:** Investment on Solar power plants is also subjected to accelerated depreciation which is an added incentive.

❖**Overheads:** As the project is owned by the client, so while there is no need for tariff payment, there is an annual expenditure for Operations & Maintenance of the solar power plant.

➢**Types of Capex Mode Solar Projects:**

The Capex model Solar Projects can be of two types depending on the location of Solar Plants.

On-Site: Solar Plant are located on the rooftop(or on land within the premises) of Consumer and electricity produced from the solar plants gets used by the client directly.

Off- Site: This facility is only available for Open-Access customers. Here, we setup plant at a distant location. The electricity produced from the plants gets transported through the distribution network to client location. In this type, apart from the initial Investment, operation & maintenance costs, the consumer all has to pay open-access charges & duties.

LMIPL_ Advantage:

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➢**Project Life Cycle Support:** Yellow Haze functions not just as supplier but as project partner guiding the consumer through the various stages during the project cycle. Apart from Engineering, Procurement & Commissioning (EPC), we also support on right sizing the project, financing, O&M support post the contract period.

➢**Optimization of EPC cost:** Individually each project size is small but as we have a large number of projects, it allows us to strategic partnerships and leverage in procurement which translates to lowering of EPC costs, resulting in better quality & optimized costs.

➢**Economy of scale in operation and maintenance costs:** Power production, even through solar requires certain specific operations and maintenance processes, which incur costs. At times, these costs are unaffordable for smaller projects but because of our portfolio, our per over-head costs are optimized. This translates to better services, lower maintenance costs.

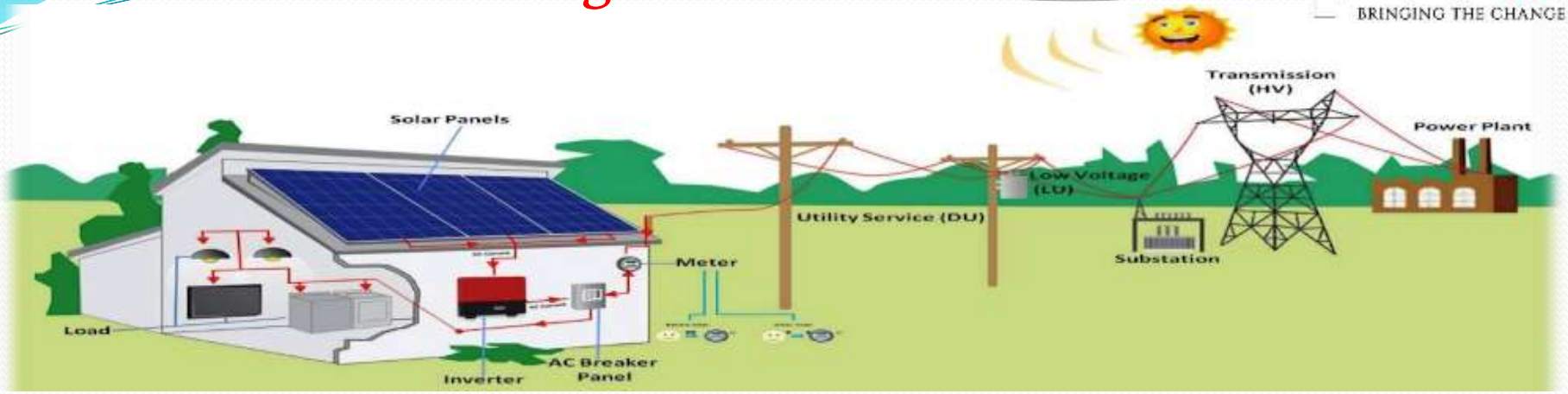
➢**Advantages of specialization:** Our dedication to power production through solar has brought in specialization of these processes, as a result, your plant is always maintained at optimum performance and prime condition.

➢**Smart Add-ons:** We offer smart add-ons on the project based on client requirement, including:

❖24*7 Real Time Remote Monitoring (On Desktop & Mobile)
❖Flexible O & M Support contracts.
❖Performance Guarantee in terms of unit production.

LIGHTMARKS INFRA PVT. LTD. PATNA

What is Net-Metering in Solar:



A lot of excitement has been developing w.r.t Net Metering policy of Solar Power.

➢Net Metering in simple terms is a mechanism that allows for accounting of units exchanged with grid (Imported as well as exported) by a solar powered consumer. Net-Metering is facilitated by a bi-directional meter that records both imported and exported units through a electricity-line.

➢**Background**

▪While Solar power has advantages of being green and cost-saving for a consumer, it suffers from problem of variability. The rate of solar unit production increases with day-time, peaks at around noon and starts falling thereafter. However, the load of a consumer has marginal variation only.

▪To compensate for this mis-match a balancing power source is required that can supply units in case of shortage of power and take-up units in case of excess production.

How is Net-Metering done ?

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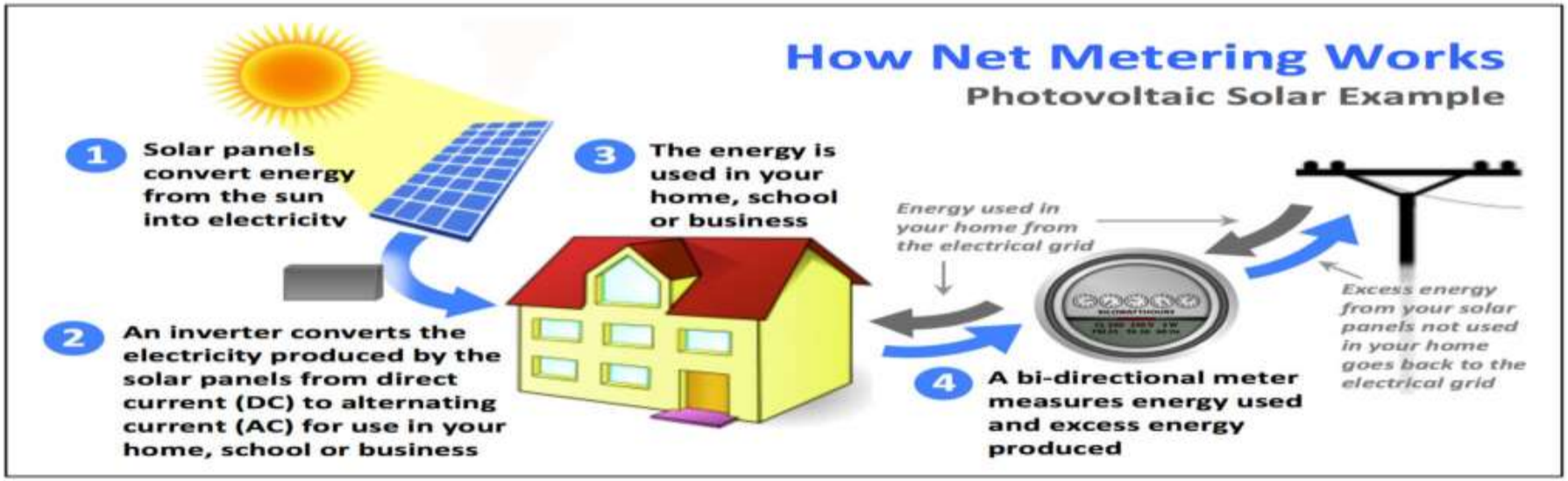
Hence, solar power systems are classified as three types:
On-Grid Systems: Where this exchange is supported by grid.
Off-Grid Systems: Where this exchange is supported by Batteries.



Net-metering facilitates accounting of the electricity units exchanged with grids. For enabling net-metering, the conventional electricity meter (that measures only electricity units supplied to consumer) is replaced by appropriate bi-directional meter (that measures both supplied and exported units). This meter is called as Net-Meter and such accounting method as Net-metering.

Process of Net-Metering

The two-parties, electricity consumer and distribution company, enter into an agreement, called as Net-Metering agreement, which defines the broad terms, conditions and governing norms for such facility.

An Overview- Solar Power Plant in India

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- India has abundant source of Solar irradiance due to its location in the solar belt and has vast solar potential of about 749 GW (as per data furnished by MNRE) for power generation.
- In most parts of India, clear sunny weather is experienced 250 to 300 days a year. The annual radiation varies from 1600 to 2200 kWh/m2, which is comparable with radiation received in the tropical and sub-tropical regions. The equivalent energy potential is about 6,000 million GWh of energy per year.
- Solar energy, therefore, has great potential as future energy source and also has the advantage of permitting the decentralized distribution of energy, thereby empowering people at the grassroots level.
- With the objective to establish India as a global leader in solar energy, by creating the policy conditions for its diffusion across the country as quickly as possible Government of India launched National Solar Mission.
- CERC and SERCs have issued various regulations including solar RPOs, REC framework, tariff, grid connectivity, forecasting etc. for promoting solar energy.
- **Under National Solar Mission India has to achieve a cumulative installed capacity of 40,000 MW from Grid Connected Rooftop Solar (RTS) projects.**
- **Period of existing Phase-II scheme: Till 31.03.2026**

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National Solar Mission

❖National Solar Mission National Solar Mission (NSM) was launched on 11th January, 2010.

❖The Mission's objective is to establish India as a global leader in solar energy by creating the policy conditions for solar technology diffusion across the country as quickly as possible

❖The Mission targets installing 100 GW grid-connected solar power plants by the year 2022.

❖India's Intended Nationally Determined Contributions(INDCs) target to achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel based energy resources and to reduce the emission intensity of its GDP by 33 to 35 percent from 2005 level by 2030.

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Salient Features_ National Solar Mission(JNNSM)_CFA

- **Implementation of Phase – II of Grid Connected Rooftop Solar Programme** for achieving **40 GW capacity from Rooftop Solar** is being done.
- Central Financial Assistance (CFA)/Subsidy is provided to the residential electricity consumers under Component-A and incentives are provided to DISCOMs under Component-B of this programme.
- **Component A: Setting up of 4000 MW** of grid connected rooftop solar projects in residential sector with Central Financial Assistance (CFA).
- **Component B: Incentives to Electricity Distribution Companies (DISCOMs)** based on achievement towards initial **18000 MW** of grid connected rooftop solar plants.
- To avail CFA a residential consumer has to apply for installation of Grid Connected Roof Top Solar (GCRTS) through any of following two mechanisms:

  1. Applicable through National Portal for Roof top Solar: Applicable CFA will be transferred directly to the consumers account after successful installation (by empanelled vendors) and verification by State DISCOMs.

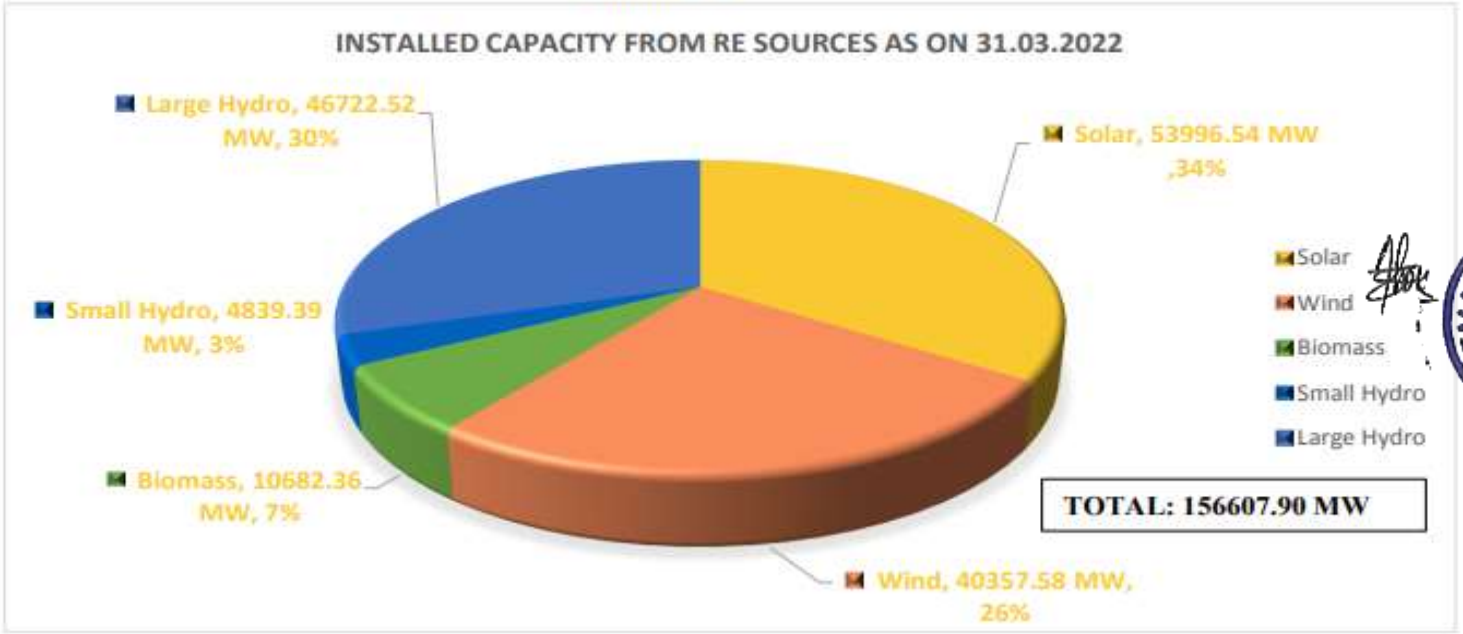
  2. Applicable through State DISCOMs portal: The consumer has to pay only the balance amount after deducting the subsidy/CFA to the bank account of an empanelled vendor after successful installation and verification by the State DISCOMs.
- **Other than residential sector: CFA will not be available for other categories i.e. institutional, educational, social, government, commercial and industrial sectors as the beneficiaries in these sectors are high tariff paying consumers and adoption of solar would be economically beneficial for them even without CFA**.
- **The power generated through RTS plant would result in significant reduction of the electricity bill paid by them to the DISCOMs, hence making it an economically viable solution**. Although CFA is not admissible for non-residential sectors, the DISCOMs will be incentivized for addition of RTS capacity in these sectors too.

Installed capacity of Renewable energy sources as on 31-03-2022

(Figures in MW)

Source	Capacity
Large Hydro (including PSP)	46722.52
Solar	53996.54
Wind	40357.58
Biomass & Waste to Energy	10682.36
Small Hydro	4848.9
Total	**156607.90**

Exhibit 2.5



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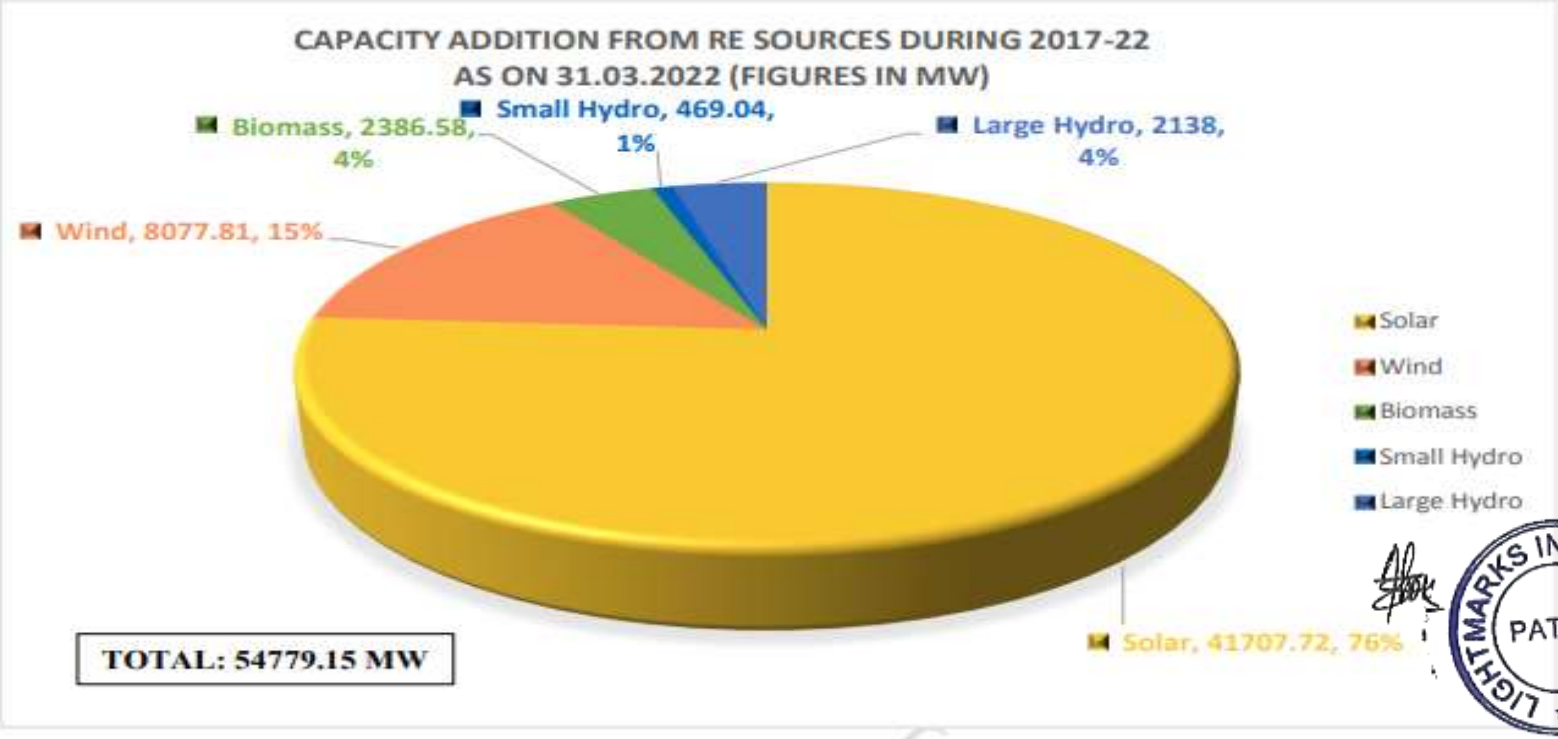
Capacity addition from Renewable Energy Sources during 2017-22
As on 31.03.2022

(Figures in MW)

Source	Capacity
Large Hydro (including PSP)	2138
Solar	41707.72
Wind	8077.81
Biomass & Waste to Energy	2386.58
Small Hydro	469.04
Total	**54779.15**



Region-wise Installed capacity as on 31.03.2022

(All Figures in MW)

Resource	Northern	Western	Southern	Eastern	N-Eastern	All India	Percentage of Total IC
Hydro#	19576	5552	9734	5088	2027	41977	10.5%
PSP	0	1840	2006	900	0	4746	1.2%
Small Hydro	1680	646	1899	337	286	4848	1.2%
Solar PV	17791	13113	21990	931	171	53996	13.5%
Wind	4327	16742	19289	0	0	40358	10.1%
Biomass	3273	3148	3733	512	16	10682	2.7%
Nuclear	1620	1840	3320	0	0	6780	1.7%
Coal+ Lignite	45879	85586	42598	35887	750	210700	52.8%
Gas	5781	10806	6492	100	1720	24899	6.2%
Region-wise Installed Capacity	99927	139273	111061	43755	4970	**398,986**	

#Excluding 2136 MW of Hydro imports from neighboring countries and 510 MW Diesel based capacity.

Status of Grid Connected Solar_ INDIA

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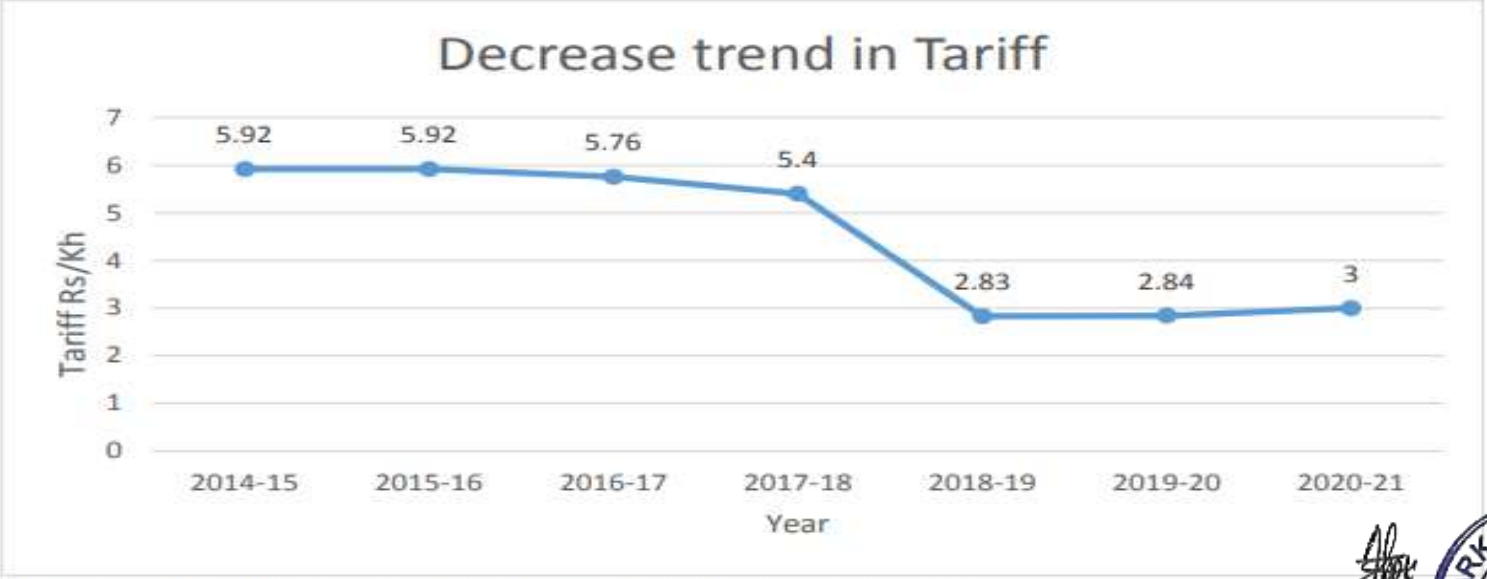
Year-wise Grid Connected Solar power in the Country

S.NO	YEAR	CAPACITY ADDED DURING F.Y (MW)	CUMULATIVE CAPACITY (MW)
1	2017-18	9362.63	21651.48
2	2018-19	6529.20	28180.68
3	2019-20	6447.14	34627.82
4	2020-21	5757.55	40085.37
5	2021-22	13911.17	53996.54



(Source: Ministry of New and Renewable Energy, India)

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STATE-WISE ESTIMATED SOLAR POWER POTENTIAL IN THE COUNTRY

SL. NO.	STATE/UT	SOLAR POTENTIAL (GWP) #
1	ANDHRA PRADESH	38.44
2	ARUNACHAL PRADESH	8.65
3	ASSAM	13.76
4	BIHAR	11.20
5	CHHATTISGARH	18.27
6	DELHI	2.05
7	GOA	0.88
8	GUJARAT	35.77
9	HARYANA	4.56
10	HIMACHAL PRADESH	33.84
11	JAMMU & KASHMIR	111.05
12	JHARKHAND	18. 18
13	KARNATAKA	24.70
14	KERALA	6.11
15	MADHYA PRADESH	61.66
16	MAHARASHTRA	64.32
17	MANIPUR	10.63
18	MEGHALAYA	5.86
19	MIZORAM	9.09
20	NAGALAND	7.29
21	ODISHA	25.78
22	PUNJAB	2.81
23	RAJASTHAN	142.31
24	SIKKIM	4.94
25	TAMIL NADU	17.67
26	TELENGANA	20.41
27	TRIPURA	2.08
28	UTTAR PRADESH	22.83
29	UTTRAKHAND	16.80
30	WEST BENGAL	6.26
31	UTS	0.79
	TOTAL	**748.98**

(Source: Ministry of New and Renewable Energy, India)
Assessed by National Institute of Solar Energy

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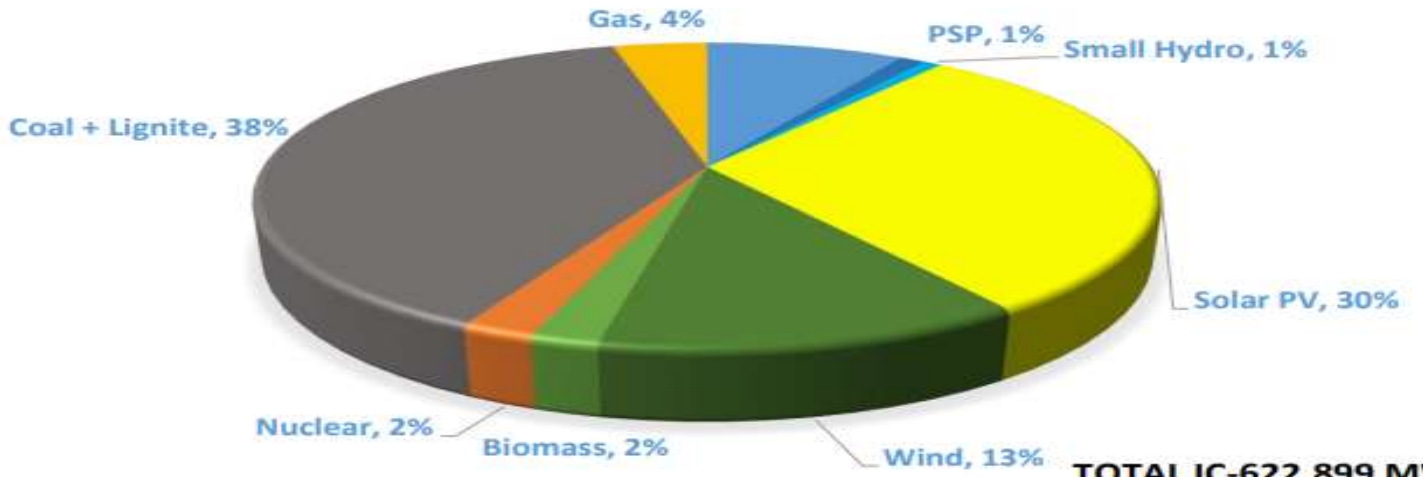
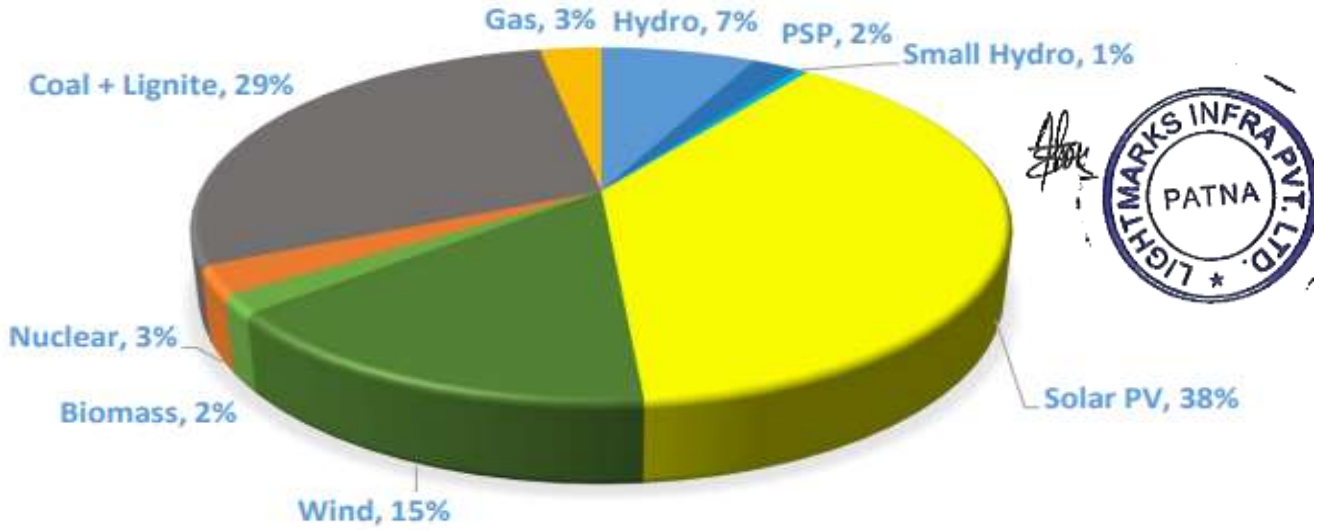
PROJECTED INSTALLED CAPACITY 2026-27



TOTAL IC-622,899 MW

PROJECTED INSTALLED CAPACITY 2031-32



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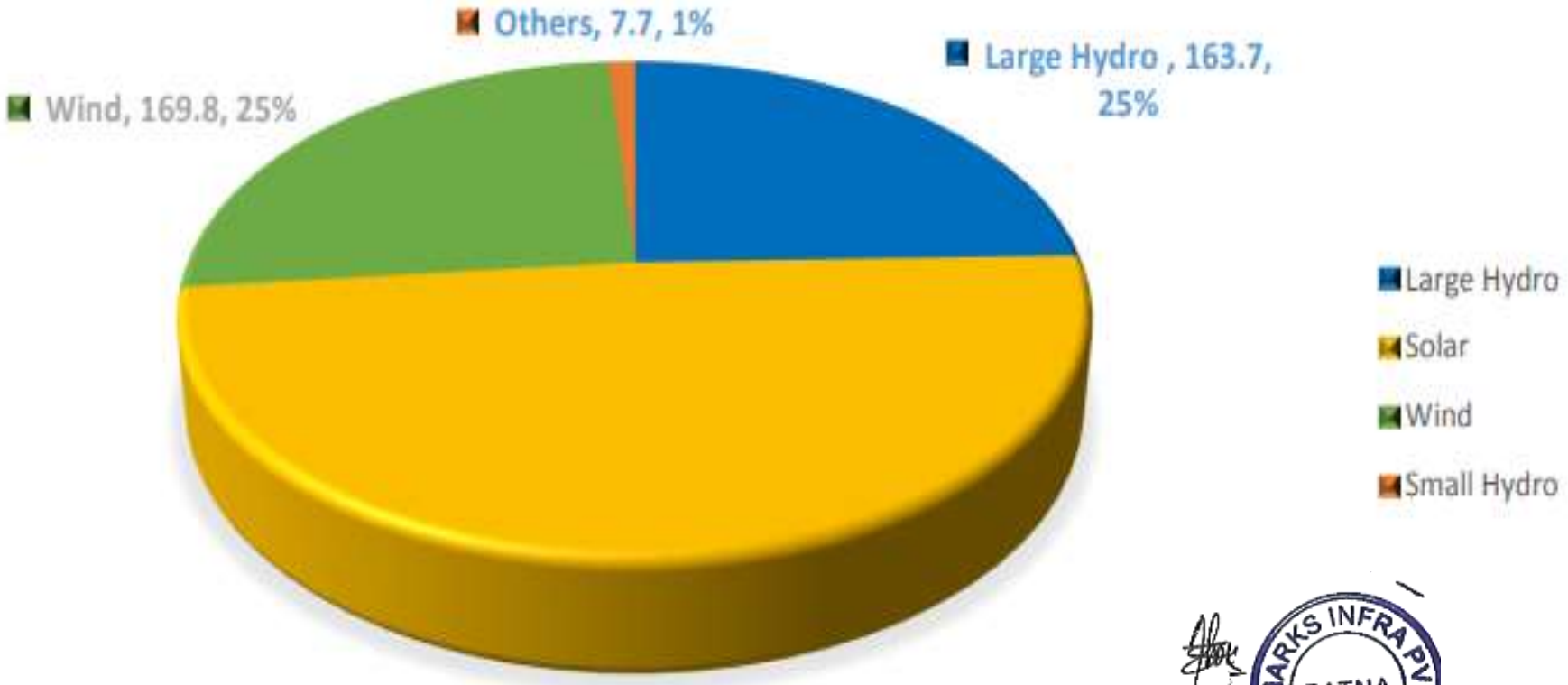
PROJECTED ELECTRICITY GENERATION FROM RES BY 2026-27(IN BU)



TOTAL: 667.2 BU

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Bihar Solar Policy and it's Solar Highlights

Bihar is one of the fastest growing states in India. The rapid economic growth and infra structural development in the state needs to be supported by a proportionate growth in electricity generation. The current installed power capacity in Bihar stands at 2984.79 MW (Mar 2016), with coal contributing to almost 92% of the installed power capacity. With its large population and rapidly growing economy, Bihar needs access to clean, cheap and reliable sources of energy. Giving the due cognizance to the issue at hand, state government has targeted to provide 24 hours electricity connections to all rural and urban households by 2018-19. Attaining such an ambitious target will require a complete transformation of power sector scenario in Bihar including the tapping of a huge renewable energy potential.

❖Bihar is the third most populated state in India and is located in the eastern part of the country. While the state has made significant progress towards development, it still is considered to be lagging behind some of the other more glamorous states in the country when it comes to socio-economic development.

❖**Bihar has a total commissioned solar power of about 95.91 MW, with 90.81MW being added just in the last one yea**r. This clearly reiterates the commitment towards going solar for the state.

❖Given the dense population of the state, and lack of available land, **rooftop solar** is the perfect solution for the state of Bihar. In the past, *Bihar Renewable Energy Development Agency or BREDA* has run several subsidy lead programs to ensure that people are encouraged to **go solar**, the falling prices of solar ensure that by 2017, **even without subsidy, going rooftop solar makes a lot of financial as well as environmental sense.**

Bihar Solar Policy and it's Solar Highlights

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Grid connected Rooftop solar PV

The Government of Bihar promotes deployment of rooftop solar PV projects, keeping into consideration the potential benefits of deployment of rooftop solar PV projects, optimal utilization of spaces on rooftops, savings on investment in transmission and distribution infrastructure, savings on reducing the network losses, reduced cost for managing the scheduling of electricity etc. Of the targeted capacity of 2969 MW solar in Bihar, the policy targets 1000 MW from grid connected solar rooftop PV projects by 2022.

Solar rooftop on net metering mode: The state shall promote eligible consumers to install the rooftop solar system under net metering arrangement wherein the project shall be located in the consumer premises and shall interconnect and operate safely in parallel with the distribution licensee network. The targeted consumers include individual households, industries, commercial establishments, institutions, residential complexes, etc. shall be eligible with project capacity ranging from minimum 1 kWp to 1 MWp with or without battery back-up support, or as per the net-metering regulations which is (Rooftop Solar Grid Interactive systems based on Net-Metering) Regulations, 2015. Processes such as metering arrangement, energy accounting, settlement, project capacity etc. shall be governed by regulations issued by Bihar Electricity Regulatory Commission (BERC) as well as the guidelines issued by state DISCOMs.

SBPDCL_ Guidelines of Rooftop Solar Grid Interactive Systems Based on Net- metering

BRINGING THE CHANGE

Introduction:

In order to promote development of roof top and solar photovoltaic systems in the state, Hon'ble BERC has framed Regulation called Bihar Electricity Regulatory Commission (Rooftop Solar Grid Interactive Systems based on Net and Gross Metering) Regulations, 2018 and notified in Bihar Gazette vide Notification No. 301 dated 03.04.2018. These Regulations permit consumers or third party to install roof top solar photovoltaic systems in consumers' premises with the provision of net metering or gross metering arrangement.

In light of repealing of BERC (Roof Top Solar Grid Interactive system based net metering) Regulation 2015, earlier issued guideline by the DISCOMs for implementation of net metering system is also repealed.

The rooftop solar system under net or gross metering arrangement, whether self-owned or third party owned installed on eligible consumer premises, shall be exempted from banking and wheeling charges and cross subsidy surcharge. Eligible consumer cannot avail banking facility.

In case of any inconsistency between these Guidelines and Bihar Electricity Regulatory Commission (Rooftop Solar Grid Interactive Systems based on Net and Gross Metering) Regulations, 2018 the provisions and meanings contained in the BERC Regulation shall prevail.

SBPDCL_ Guidelines of Rooftop Solar Grid Interactive Systems Based on Net- metering

3.1. The eligible consumers of electricity in the area of the distribution licensee can avail the facility of RTSPV under net metering or gross metering arrangement in pursuant to the Regulation.

3.2. The eligibility criteria for Grid interactive RTSPV system under net or Gross metering arrangement has been prescribed in the Regulation which *inter alias* includes;

a. The capacity of Solar interactive system should not be less than 1 KWp (Kilo Watt Peak)

b. The capacity of solar interactive system shall not exceed the sanctioned / contracted load of the eligible consumer.

c. The provision of net or gross metering arrangement shall be available to the eligible consumer including third party owners, who intends to install grid connected RTSPV system, in its area of supply on non-discriminatory and first come first serve basis.

d. The eligible consumers availing net metering facility under the Regulation *shall not be allowed* to avail gross metering facility. Further the eligible consumers availing either net metering or gross metering facility under the Regulation shall not be allowed to avail banking facility.

The cumulative capacity to be allowed at a particular distribution transformer shall not exceed 80% of the capacity of the distribution transformer

SBPDCL_ Guidelines of Rooftop Solar Grid Interactive Systems Based on Net- metering

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3.3. The maximum permissible installed capacity of PCU/ inverter defined in kVA in Solar interactive system should not exceed the Contract Demand in kW i.e Consumer having contract demand of 1 kW should not be allowed to install PCU/ inverter having capacity exceeding 1kVA.

3.4. The installation of Net metered rooftop solar systems on consumer premises will utilize the same service line and installation (which is currently being used by the consumer for drawl of power from the distribution licensee) for injection of power into the grid.

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SBPDCL_ Guidelines of Rooftop Solar Grid Interactive Systems Based on Net- metering

For 11 kV Consumers

4.16. Feasibility study for the connection of rooftop solar system shall be done by AEE Supply within fifteen (15) working days from the receipt of complete application.

4.17. After carrying out technical *feasibility* study, the concerned AEE will *seek technical details* of the equipment / components proposed to be used in RTSPV system from applicant.

4.18. The applicant will have liberty to select a reputed system, installer, to gather technical information of Rooftop Solar System and furnish the technical details of PV modules, Inverters and other equipments of the Rooftop Solar System, proposed to be installed by applicant within 15 days from the date of receipt of completed application to the Distribution Licensee for technical scrutiny.

4.19. In case of any discrepancies between the information submitted in the application form and inspection of premises the AEE will inform the applicant in writing within next 7 working days.

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SBPDCL_ Guidelines of Rooftop Solar Grid Interactive Systems Based on Net- metering

4.20. In case the connection feasibility report is found satisfactory and no further documents are required then concerned AEE-Supply will forward all the documents to concern EEE, ESD who will sanction the applied RTSPV capacity within 7 working days. The sanction order shall contain maximum permissible capacity of the rooftop solar system and shall be valid for a period of six (6) months from the date of approval.

4.21. The sanction order shall contain Sanction load, supervision charge, security deposit amount , meter installation charge, etc. to be deposited by the eligible consumer as per BERC prevalent rates. The applicant will deposit the charges within seven (7) working days of issuance of the sanction order.

4.22. The applicant will execute an inter connection agreement with the concerned EEE, Supply post receiving a declaration regarding completion of installation of Rooftop Solar Power Plant with document of solar modules having ISI mark.

SBPDCL_ Guidelines of Rooftop Solar Grid Interactive Systems Based on Net- metering

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4.23. After receipt of the declaration towards work completion from applicant and NOC from Electrical Inspector, testing, commissioning and synchronization of Rooftop Solar System; metering arrangement will be supervised by concerned EEE, MRT of the concerned MRT Division within next 7 working days. During the period of synchronization of RTSPV System with the electrical network of Distribution Licensee, the concerned EEE, ESD and EEE, MRT Division, shall inspect, calibrate and seal all the meters as per requirement.

4.24. The Eligible Consumer or third party as per applicability shall enter into an agreement with concerned Distribution Licensee in the prescribed format. The concerned EEE, of the Electric Supply Division will send service connection report to the billing office within 7 days.

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SBPDCL_ Guidelines of Rooftop Solar Grid Interactive Systems Based on Net- metering

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6. Metering Arrangement:

6.1. The metering system shall be as per the provisions of CEA (Installation & operation of meters) Regulations, 2006, CEA (Measures relating to Safety and electricity supply) Regulations, 2010 and CEA (Technical Standards for Connectivity of the distributed generation resources), Regulations, 2013, Bihar Electricity Supply Code, 2007 as amended from time to time and in conformity with the norms fixed by BERC / approved Technical Specification / Metering arrangements of the Discoms from time to time.

6.2. In case of Net Metering arrangement the interface meter (net meter) should be bi-directional energy meter capable of recording both import and export of electricity that can measure net energy import or the net energy export to the interconnected grid in particular ToD.

6.3. For the existing consumers, the consumer meter (if any) shall be replaced with the bi-directional/net meter. However the consumers having ABT compliant meters (capable of performing the functions of the Net Meter) shall not be required to install additional net meter.

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SBPDCL_ Guidelines of Rooftop Solar Grid Interactive Systems Based on Net- metering

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6.4. The net meter should be a smart meter with the following characteristics:

a. The meters shall be of standard make that is certified by BIS/IEC/CBIP or any other superior specification as specified in Central Electricity Authority Regulations on installation and operation of NET and Gross meters.

b. Separate registers for Export and Import with MRI downloading facility.

c. All measuring registers for billing in accordance with prevailing Tariff Order and BESC 2007 with latest amendments.

d. The meter should be communicable with at least two dedicated communication ports and compatible for AMI standards.

e. The accuracy class of meters for EHT/HT/LT(whole current meters)/LT(CT operated) consumers , shall be as laid down in CEA Regulations.

f. Meter shall be installed at point(s) of supply as per BESC, 2007.

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SBPDCL_ Guidelines of Rooftop Solar Grid Interactive Systems Based on Net- metering

BRINGING THE CHANGE

7. Energy Accounting, Settlement and invoicing:

7.2. For Net Metering Arrangement:

a. For each billing period, the licensee shall show the quantum of injected electricity by eligible consumer in the billing period, supplied electricity by distribution licensee in the billing period, net billed electricity for payment by the eligible consumer for that billing period and net carried over electricity to the next billing period separately;

b. In the event the electricity injected exceeds the electricity supplied during the billing period, such excess injected electricity shall be carried forward to next billing period as electricity credit and may be utilized to net electricity injected or consumed in future billing periods(Restricted to current financial year);

c. In the event the electricity supplied by the distribution licensee during any billing period exceeds the electricity generated by the eligible consumer's rooftop solar system, the distribution licensee shall raise invoice for the net electricity consumption after taking into account any electricity credit balance remaining from previous billing periods; The net energy supplied to the eligible consumer has to be billed by the distribution licensee as per tariff in force applicable to that category of eligible consumers.

LIGHTMARKS INFRA PVT. LTD. PATNA

SBPDCL_ Guidelines of Rooftop Solar Grid Interactive Systems Based on Net- metering

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d. In case, the eligible consumer is under the ambit of Time of Day tariff (TOD), as determined by the Commission from time to time, the electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity generation in the same time block. Any cumulated excess generation over consumption in any other time block in a billing cycle shall be accounted as if the excess generation occurred during the off-peak time block.

e. The excess electricity measured in kilo-watt hour or kilo-volt-ampere hour, as the case may be, shall be utilized to offset the consumption measured in kilo-watt hour or kilo-volt-ampere hour and shall not be utilized to compensate any other fee and charges imposed by the distribution licensee as per the instructions of Bihar Electricity Regulatory Commission.

f. The distribution licensee in addition to consumer tariff shall be eligible to raise invoice for any other charges as allowed by the Bihar Electricity Regulatory Commission to the eligible consumers.

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SBPDCL_ Guidelines of Rooftop Solar Grid Interactive Systems Based on Net- metering

7.4. In case net meter/ gross meter becomes defective,

a. In case of conspicuous failures like burning of main meter and erratic display of metered parameters the reading of check meter shall be used for billing purposes. However if both main and check meter becomes defective at once then billing shall be done as per BESC 2007 and prevalent BERC tariff order.

b. The consumer should ensure replacement of the defective meter within seven days.

7.5. In case of any dispute in billing, the consumer/ developer should file written representation mentioning the details of dispute to the concerned Electrical Executive Engineer/E.S.D. (for supply at LT level) or GM (Revenue) of the licensee in case of others. On receipt of the written representation, the authority (EEE/or GM) will ensure redressal of the dispute preferably within 30 days of receipt of such representation. In case the consumer/developer is dissatisfied by the disposal of his representation, he may file his grievance before CGRF.

BIHAR ELECTRICITY REGULATORY COMMISSION

Existing, Proposed and Approved Retail Tariff (Without Govt Subsidy) for NBPDCL and SBPDCL Area for FY2022-23

SCHEDULE OF TARIFF RATES

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Category/Sub category Of Consumers	Existing Tariff			Proposed Tariff			Approved Tariff		
	Fixed charge	Energy Charge	Unit slabs	Fixed charge	Energy Charge	Unit slabs	Fixed charge	Energy Charge	Unit slabs
HIGH TENSION – General									
HTS-I	Rs.300/kVA/Month	Rs.6.55/kVAh	All Units	Rs. 330/kVA/Month	Rs.7.20/kVAh	All Units	Rs.300/kVA/Month	Rs.6.55/kVAh	All Units
HTS-II	Rs.300/kVA/Month	Rs.6.50/kVAh	All Units	Rs. 330/kVA/Month	Rs.7.14/kVAh	All Units	Rs.300/kVA/Month	Rs.6.50/kVAh	All Units
HTS-III	Rs.300/kVA/Month	Rs.6.45/kVAh	All Units	Rs. 330/kVA/Month	Rs.7.09/kVAh	All Units	Rs.300/kVA/Month	Rs.6.45/kVAh	All Units
HTS-IV	Rs.300/kVA/Month	Rs.6.40/kVAh	All Units	Rs. 330/kVA/Month	Rs.7.03/kVAh	All Units	Rs.300/kVA/Month	Rs.6.40/kVAh	All Units

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DPA MODEL:Deferred CAPEX Model
Financing Model

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Payment Terms:

Option 1_ CAPEX:

Pay 10% advance, 80% before dispatch of material at site and 10% on I&C

Option 2*_ Deffered CAPEX:

A. Pay 0% advance and the balance 100% over easy installments over upto 7 Yrs.
B. Financial Assistance for the Project Cost will be given through our financial partner **Smart Power India** from any nationalised Bank on 12% interest rates
C. 1% of Project Cost will be charged as a Processing Fee.
D. Financed Amount (100% of project cost) will be credited directly to **LMIPL's Bank account**.

* T&C apply

SCOPE OF WORK

Scope of Work

Scope of work for design, procurement, installation and commissioning of this Solar PV Project involves both the customer and LMI.

Expected timeline for completion from the date of material delivery at site is 4-6weeks.

Project Phase	Description	Responsibilities
Initialization Phase	Kick of Meeting	LMIPL/Client
	Scope of Work-Sign Off	LMIPL /Client
	Statutory Clearance-Document submission & Liaison for NOC	Client
	Supply of Power & Water during installation	Client
	Access to all sheds/location of installation areas via Stairs / road/ ladder etc.	Client
Installation Phase	Dispatch of Equipment to client location	LMIPL
	Safe Storage of Material and Equipment at site	Client
	Net metering	LMIPL
	Test Run	LMIPL
	Handover/Takeover	LMIPL /Client
Final Handover	Training	LMIPL
	Maintenance	Client
	Warranty (5year) - (On PV & Inverter)	LMIPL

Net-metering is included

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TERMS & CONDITIONS

Terms and Conditions

1. Price: Price is CIF–Site, inclusive of freight, transit insurance, applicable taxes, Installation & Commissioning, and warrantee support for 5 years. Solar Modules & Inverter shall carry back-to-back warranty from the manufacturer.

2. Payment Term: 10% of the project cost as mobilization advance against submission of Performa Invoice. 80% against intimation of readiness of materials before dispatch. Balance 10% within seven days of completion of Installation and Commissioning.

3. Delivery: Equipment shall be delivered within 4-5 weeks from the date of receipt of technically and commercially clear purchase order and subject to compliance of payment term.

4. Installation & Commissioning: Within 4-6 weeks from the date of delivery of materials at site and handing over of clear site free from any encumbrance.

5. Training & Testing: LMIPL will arrange for user training for smooth functioning of the system.

6. Offer Validity: The offer is valid for a period of 15 days from the date of issuance of the offer and there after subject to our reconfirmation.

7. Force Majeure: This offer is subject to standard force majeure clause.

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CLIENTS WE WORKED WITH

COMPLETED PROJECTS

1. Ordinance FActory, Ambajhari, Nagpur - **980 KWP**
2. Dainik Bhaskar, Muzaffarpur, Bihar - **25 KWP**

ONGOING PROJECTS

1. Various Govt. Buildings in Bihar - **450 KWP**

UPCOMING PROJECTS

1. Various Govt. Buildings in Bihar - **4 MWP**
   Client - Soyo Systems - **10 MWP**
   Agency - BREDA
2. Jharkhand - **10 MWP**
3. Gensol Ayurved Hospital, Patna, Bihar - **40 KWP**
   Client - BREDA
4. Solar Floating Power Plant, Supaul O&M - **525 KWP**
   Client - Gensol

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Some of Our Projects in Pictures:

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CLIENTS, PARTNERS & INVESTORS

THANK YOU

LIGHTMARKS INFRA PVT. LTD.

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