



JHARKHAND STATE SOLAR POLICY 2022



- Promote solar for development of rural economy and powering livelihoods
- Provide financial and non-financial incentives
- Adopt innovative processes, business models, bidding mechanisms and collaborations
- Support establishment of domestic solar equipment manufacturing

Utility Scale Solar 3000 MW

- 700 MW – Solar Park
- 1000 MW – Non-Solar Park
- 900 MW – Floating Solar
- 400 MW – Canal Top Solar

Distributed Solar 720 MW

- 250 MW – Rooftop Solar
- 220 MW – Captive Solar
- 250 MW – Solar Agriculture

Off-Grid Solar 280 MW

- 110 MW – Mini/Micro Grids
- 50 MW – Solar for Livelihood
- 120 MW – Solar Pumps

4000 MW Cumulative Target by 2027





GOVERNMENT OF JHARKHAND
DEPARTMENT OF ENERGY

RESOLUTION NO. 02/ज्रेडा/ऊर्जा-03/2021(खण्ड1) 409

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JHARKHAND STATE SOLAR POLICY 2022

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Abbreviations

CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CAPEX	Capital Expenditure
CDM	Clean Development Mechanism
DRE	Distributed Renewable Energy
EHV	Extra High Voltage
FiT	Feed-in-Tariff
FY	Financial Year
GNM	Group Net Metering
GoJ	Government of Jharkhand
JBVNL	Jharkhand Bijli Vitran Nigam Limited
JREDA	Jharkhand Renewable Energy Development Agency
JRPLAC	Jharkhand Renewable Power Land Allotment Committee
JSERC	Jharkhand State Electricity Regulatory Commission
JUSNL	Jharkhand Urja Sancharan Nigam Limited
JV	Joint Venture
kW	Kilo Watt
L1 Bidder	Lowest Bidder
MNRE	Ministry of New and Renewable Energy
MW	Mega Watt
NABARD	National Bank for Agriculture and Rural Development
NGO	Non-government Organisation
PCCF	Principal Chief Conservator of Forests
PDC	Post Dated Cheque
PFC	Power Financial Corporation
PM KUSUM	Pradhan Mantri Kisan Urja Suraksha Evam UtthaanMahabhiyan
PPA	Power Purchase Agreement
PPP	Public Private Partnership
PSM	Payment Security Mechanism
PSU	Public Sector Utilities
REC	Renewable Energy Certificate
RESCO	Renewable Energy Service Company
RPO	Renewable Purchase Obligation
SGST	State Goods and Services Tax
SLDC	State Load Dispatch Center
SLEC	State Level Empowered Committee
SLSC	State Level Screening Committee
SPPD	Solar Power Park Developer
ToD	Time of Day
UNFCCC	United Nations Framework Convention on Climate Change
VNM	Virtual Net Metering

Glossary

1. “Act” means Electricity Act 2003, including amendments thereto.
2. “Central Agency” means National Load Dispatch Centre (NLDC) as designated by the Central Electricity Regulatory Commission vide order dated 29.01.2010 for the purposes of the REC Regulations.
3. “DISCOM” means a distribution licensee of Jharkhand.
4. “Effective Date” means the date on which the PPA agreement will come into effect.
5. “Government” and “State” means the Government of Jharkhand and the State of Jharkhand respectively.
6. “Green Tariff” is the regulated tariff at which willing consumers can accept procurement of power from renewable energy resources.
“Licensee” includes a person deemed to be a licensee under Section 14 of the Act.
7. “MNRE” means Ministry of New and Renewable Energy, nodal Ministry of the Government of India for all matters relating to new and renewable energy.
8. “Nodal Agency” means State Nodal Agency, JREDA.
9. “Policy” means Jharkhand State Solar Policy 2022.
10. “Renewable Energy Certificate” or “REC” means the Renewable Energy Certificate issued by the Central Agency in accordance with the procedure prescribed by it and under the provision specified in the Central Electricity Regulatory Commission (Terms and Conditions for Renewable energy Certificates for Renewable Energy Generation) Regulations, 2022.
11. “Revenue Land” means a land parcel or area under the ownership of any Government Department which in the context of this policy is a government owned land or area which is not used for any commercial activity.
12. “Renewable Energy Projects” means a project generating grid quality electricity from Renewable Energy Sources excluding conventional power plants.
13. “RE Park Developer” means a person or an entity that develops land and other common infrastructure for installation of Renewable Energy based Projects. The RE Park Developer can also install generation plants on the land developed, as per the provisions of the applicable policy.
14. “REC Regulations” or “CERC REC Regulations” mean Central Electricity Regulatory Commission (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022, notified vide gazette notification dated 24.05.2022 and amended from time to time
15. “Renewable Energy Sources” (RES) means
 - a. solar radiation, wind, small/mini hydro, biomass, biofuels, biogas, landfill gas, sewage gas, geothermal energy, ocean energy, and combinations thereof;
 - b. any other sources of energy as may be notified by the Central Government from time to time;
 - c. any combination, as may be notified by the Central Government, of the sources specified in sub-clauses (a) or (b) with other sources of energy.
16. “Solar Power Producer” means an entity, which owns facilities to generate electric power for sale to DISCOM of Jharkhand/Licensees/to third party/captive use.
17. “Tariff” means the schedule of charges for generation, transmission, wheeling and supply of electricity together with terms and conditions for application thereof.
18. “Virtual Net Metering” means an arrangement whereby the entire energy generated/injected from a renewable energy system or battery energy storage system (BESS) charged through renewable energy is exported to the grid from renewable energy meter/ gross meter. The exported energy is adjusted in more than one electricity service connection(s) of participating consumers located within the same distribution licensee’s area of supply.
19. “Waste Land” or “unused land” means the land which is presently not in use for any productive activities, nor there is any planning (either approved or in process of approval) of productive use for the upcoming 25 years.

1. Preamble

Jharkhand ('State') is bestowed with significant reserves of fossil fuels, which supported India's economic growth and development for several years now. The State contributes ~19 per cent of annual coal production in India. However, continued dependency on fossil fuels has brought adverse effects on the environment such as air pollution, land degradation, impact on local ecosystem, among others. India, eyeing to be the fastest-growing economy, has shown serious commitments towards adopting low-carbon and sustainable development pathways. The State is committed to supporting India's concerted action against climate change by reducing its reliance on fossil fuels and diversifying the energy mix with various renewable energy sources, which would also improve the State's energy security and provide sustainable livelihood opportunities to its people.

The Government of Jharkhand recognizes the significant potential of solar energy due to its topography. The State has around 300 days of clear sun with high solar insolation in the range of 4.5 to 5.5 kWh/m²/day. Supported by technological developments and national mandate, solar energy has steadily grown with parity to conventional fuels. The State aims to take a systematic, transparent and streamlined approach to scaling the share of solar in its energy mix and reap the various socio-economic, health and environmental benefits it offers.

2. Vision

The State, through this policy, intends to become a leader in solar energy adoption and contribute to India's clean energy ambitions by bringing energy transition closer to communities, businesses and industries, enabling 'ease of doing' business, promoting efficient technologies, creating enabling infrastructure, advancing innovation and locally relevant business models, and equipping its implementing agencies and technical institutions to become best in class. It strives to meet various sustainable development goals like empowering rural population by enhancing their livelihoods, providing access to clean and affordable energy, creating sustainable cities and villages, and promoting inclusive and sustainable economic growth, creating full and productive employment and decent work for all.

3. Regulatory Framework

The policy would be called **Jharkhand State Solar Policy 2022**.

Several provisions under the Electricity Act, 2003 (Act) mandates the Jharkhand State Electricity Regulatory Commission (JSERC) and the Government to take necessary steps for promotion of renewable energy. The Section 108 of the Act mandates the State Government to give directions to the State Electricity Commissions in the matter of policy involving public interest. Accordingly, the State Government in exercise of its powers formulates this policy. This policy supersedes the Jharkhand State Solar Power Policy 2015.

4. Objectives

This policy outlines the following objectives to meet the State's vision:

- Increase the share of solar electricity in DISCOM's energy purchase to 12.5% by 2023-24, subsequently increasing in line with the State Commission's notified RPO trajectory.
- Deploy a cumulative capacity of 4000 MW in the state by 2027 through a diversified project portfolio across scales, locations and applications.
- Provide a deployment roadmap across various categories and applications with dedicated programmes on utility-scale solar via park and non-park solar installations, distributed grid connected and, rooftop solar systems, and off-grid systems.
- Provide avenues for private players and all electricity consumers to collaborate with the Government and invest in projects across various categories and applications.
- Support creation of solar villages, cities and/or districts through community solar and off-grid projects.
- Scale energy storage in the state by identifying viable use cases, providing financing options, and promoting research and development activities.
- Support domestic manufacturing of solar PV technologies, its components such as energy storage and related ancillaries.
- Support new deployment mechanisms including processes, incentives and business models.
- Support innovative non-electricity applications of solar energy with financing options and business models to create new solar based livelihood activities, employment opportunities and foster an entrepreneurial ecosystem in the state.
- Provide trainings for skill development across geographies to create employment opportunities through solar project deployment.
- Provide last-mile connectivity to rural consumers in remote areas, who are off-grid.
- Ensure gender inclusiveness in skilling and promoting livelihood applications.
- Create more investment and employment opportunities in the state to bring in the overall development of the state and its people.

5. Operative period

The policy would come into operation from the notification date and remain valid for five years unless superseded by any other policy.

6. Applicability of the policy

The policy would promote a diversified project portfolio spanning across regions and applications. There are three broad project categories: utility-scale solar, distributed solar and off-grid solar. Each of these is further divided based on the deployment location and/or mechanism as indicated below:

Project categories	Cumulative target	FY23	FY24	FY25	FY26	FY27
Cumulative Target	4000 MW	443	697	1105	990	765
1. Utility-scale solar	3000 MW	330	530	870	750	520
1.1. Solar parks	700 MW	80	100	220	200	100
1.2. Non-park solar	1000 MW	100	150	300	250	200
1.3. Floating solar	900 MW	100	200	250	200	150
1.4. Canal top solar	400 MW	50	80	100	100	70
2. Distributed solar	720 MW	80	120	175	175	170
2.1 Rooftop Solar	250 MW	30	50	60	60	50
2.2 Captive Solar	220 MW	30	40	50	50	50
2.3 Solar Agriculture	250 MW	20	30	65	65	70
3. Off-grid solar projects	280 MW	33	47	60	65	75
3.1 Mini and microgrids (solar villages)	110 MW	10	20	25	25	30
3.2 Solar for livelihood (non-electric applications of solar)	50 MW	3	7	10	15	15
3.3 Solar pumps	120 MW	20	20	25	25	30

7. Strategies for meeting the policy objectives

The State shall achieve the policy objectives and targets through:

- **Land allocation and identification of suitable sites** - Identifying and enabling the development and allocation of suitable land (State or private-owned) for ground-mounted utility-scale, decentralized and off-grid solar projects and applications. Further, identification and aggregation of suitable rooftops, dams, canal sites, and water reservoirs shall be undertaken.
- **Innovative processes such as business models, bidding mechanisms and technological collaborations** for accelerating deployment.
- **Providing financial and non-financial incentives** and creating an enabling environment for developers and investors.
- **Adopting viable power purchase agreement structures** for increased investor confidence.
- **Instituting robust governance mechanisms** to ensure continuous progress.
- **Supporting establishment of domestic solar equipment manufacturing** industry to make Jharkhand a key destination for investments.
- **Promoting solar for the development of rural economy and powering livelihoods:**
 - Develop 1000 model solar villages to ensure complete solarization of various consumptive and productive loads.
 - Deploy distributed mini and micro grid installations for hamlets/villages where extension of conventional distribution grid is not possible.

- Stand-alone Solar Home Systems (SHS) and solar lighting in rural areas.
- Promote solar-powered electricity and non-electricity-based livelihood applications such as solar dryer for farm produce, solar-powered cold storage, solar desalination, solar charkha etc.
- Supporting adoption with financial assistance (capital subsidy) and innovative business models like community solar subscription, Pay-as-you-go, revenue-linked EMI schemes etc. to target rural demand for residential and farming needs.

8. Key provisions to achieve policy targets

To support the policy vision and objective and to achieve the targets, the State notifies provisions in three critical areas - (i) Land allocation (ii) incentives across project categories and (iii) power purchase by state utilities, as detailed below:

8.1 Land identification, aggregation, development and allocation

The Policy envisions solar plants to be installed on government land, private land and on water bodies including dams and canals. For this, the Jharkhand state shall take necessary steps in identifying State and Private land to convert them as land banks for deployment of solar energy plants. The nodal agency, JREDA, will therefore engage in the identification and aggregation of State lands, private lands, and canal tops as per the provisions of this Policy.

8.1.1 Government Land

- All government departments shall share information on waste or unused land with JREDA and they shall carry out pre-feasibility study of these sites.
- For allocation of Government lands, JREDA may work in coordination with the District Collector or the concerned department as deemed necessary to identify land parcels suitable for solar deployments. The District Collector and government departments shall transfer the advance possession of identified land banks, including land for right-of-way (ROW), to JREDA.
- All identified land parcels will be converted into a land bank for solar deployment.
- Such a conversion to land bank will be done upon approval from the Jharkhand Renewable Power Land Allotment Committee (JRPLAC).
- JREDA may collect the lease rentals, from the SPPD or the project developer, for a 30-year period or project lifetime (whichever is less) as determined by JREDA.

8.1.2 Private Land

- JREDA will float an 'Expression of Interest (EoI)' for private landowners who wish to offer their lands for sale or on lease basis for installing solar power plants. However, it will be verified that these lands are not covered under section 46, 48 of CNT Act and 20 of SPT Act.
- Establishment of solar power plant will be treated as industrial activity. Land transfer under section 49 and section 241 of CNT Act and section 53 of SPT Act has been allowed for industrial and mining activities. Promoter/ Developer will have to obtain necessary permission.

- Land can be acquired under section 02 of the Right to fair compensation and transparency in land acquisition, rehabilitation and resettlement Act, 2013 for solar power plant.
- Upon receiving such interests under the EOI rounds, JREDA will conduct a feasibility analysis of the sites to evaluate the potential capacity. JREDA will coordinate with relevant departments to conclude the procurement formalities with owners of sites found suitable for solar plant deployment and convert these lands into available land banks.
- The minimum lease amount for private land will be decided on market value. Such rates will be notified on JREDA's website, in consultation with the Jharkhand Renewable Power Land Allotment Committee (JRPLAC) from time to time.
- JREDA may collect the lease rentals, from the SPPD or the project developer, for a 30 year period or project lifetime (whichever is less) as determined by JREDA.
- JREDA may utilise the collected lease amount for payment to the revenue authorities towards land cost and for activities required to streamline identification, record keeping, transactions and inter-departmental coordination.

8.1.3 Floating Solar or Canal Top

- JREDA will coordinate with the Water Resource department, Agriculture department, and any other allied departments to identify suitable sites for deployment of floating solar or canal top projects. However, water bodies which are notified as P.F. or R.F. or included in protected areas, shall require statutory clearance under Forest (Conservation) Act, 1980 or Wildlife (Protection) Act, 1972.
- JREDA will conduct a feasibility study to assess the suitability of the sites.
- The JRPLAC Committee will allocate the suitable sites to solar developers identified through bidding.

8.1.4 Restrictions on land area allocations

The maximum land area which can be allotted to the solar power producer or solar park developer for setting up of projects based on different technologies will be as under:

a	SPV on Crystalline Technology	2.0 Hectare/MW
b	SPV on Crystalline Technology with tracker	3.0 Hectare/MW
c	SPV on Thin Film/Amorphous Technology with or without tracker	3.5 Hectare/MW
d	Solar Thermal (CSP): Parabolic Trough /Tower/Other Technology with or without storage	a) Up to PLF of 21%: 3.5 Hectare/MW b) For every 1% increase in PLF, 0.15 Hectare/MW additional land will be allotted

Land requirement for new technology shall be determined by JREDA from time to time.

8.1.5 Additional provisions

- Before acquiring land from a private titleholder, the land shall be verified by the revenue official of the concerned district or through the information available in the 'Jharbhoomi' portal.

- The provisions of Land Acquisition Act shall be followed to acquire land, and the information shall be updated on the Register II by the user agency after acquisition.
- JREDA may provide information of the land banks on its website.
- Upon selection, the solar power producers will be required to complete all the processes as notified by JREDA, from time to time, towards allotment of land from the land bank.
- The solar power producer shall abide by all the terms and conditions of allotment and directions issued by the State Government and JREDA, which may be amended from time to time.
- The solar power producer must set up the Solar Plant within a period of two years from the date of allotment of land, provided further that the State Level Screening Committee (SLSC) may extend the period of setting up of Power Plant for valid reasons on the application made by lessee to JREDA.
- If the land is not used within the stipulated period or the time extended by the State Government, the land shall revert back to JREDA, free from all encumbrances.
- The land shall be allotted for a period of 30 years and up to a maximum period of 40 years upon extension. The allotted land shall be transferred back to the Energy department from the lessee on the expiry of the lease period.
- The allotted land shall be used strictly for the purposes of setting-up of Solar Power Plants. The Solar Power Producer shall neither use, nor allow the land to be used for any other purpose and shall not make any constructions on the said land other than that which are required for the setting, and evacuation of the energy generated thereof.
- The lease rent payable on the land allotted for setting up of solar power projects shall be paid annually. The detailed guidelines for determination of lease rentals will be notified by JREDA on their website from time to time in consultation with JRPLAC.
- The solar power producers may be allowed to sublease a part or the entire land with prior consent from the SLSC/SLEC. The subleased land shall only be allowed for setting up of solar energy projects and sub-lessees shall be governed by terms and conditions applicable to lessee, which may be specified by the State Government, from time to time.
- The solar power producer shall initiate activities on the allotted land only after the execution of the lease deed. The allotment of land shall be liable to be cancelled if the power plant does not start commercial operation within the time as per bidding terms and conditions.
- In case of default by lessee or sub-lessee, the lease shall come to an end and the land shall be returned to JREDA.
- At the time of return of the land to JREDA, the lease holder shall remove all structures and installations from the land at their own cost and upon their failure to do so, SLEC shall have power to dispose of the same and recover the expenses from the solar power producer.
- The detailed guidelines on land allotment and requisite form templates such as application form, lease deed etc. may be uploaded by JREDA within 1 month from commencement of the policy.

Project category	Available physical resource (land/water/rooftop)
1. Utility-scale solar	
1.1. Solar parks	Government (revenue) land and private land
1.2. Non - Park solar	Government (revenue) land and private land
1.3. Floating solar	Water bodies including dams
1.4. Canal top solar	Canals
2. Distributed solar	
2.1 Rooftop Solar	Building rooftops Government, private or community lands
2.2 Captive Solar (Behind the meter)	Rooftop/onsite ground-mounted systems
2.3 Solar Agriculture	Government land, agriculture land (used or unused)
3. Off-grid solar projects	
3.1 Mini and micro grids (solar villages)	Government and private lands

8.1.6 Exemptions

A. Stamp Duty

There shall be 100% exemption of stamp duty on lease deed of land or purchase of land and any further sub-lease(s) for the land required for the establishment of Solar Project within the state.

B. Conversion Charges

Land for solar power projects shall be deemed to be converted to Non-agricultural land status. However, land conversion shall not be required to develop solar parks on private agricultural land. There shall be 100% waiver on land use conversion charges/fees.

C. Other Charges

Exemption from court fee for registration of documents relating to lease of land shall be granted to entities. In addition, exemption from land use approval, external development charges, scrutiny fee and infrastructure development charges shall be provided.

D. Additional incentive for EV Charging Stations

Solar installations for EV charging on government land will also be eligible for an additional 50% concession on land lease payment. The concession will be available under the non-park solar category for the first 50 MW of installations during the policy period. The scheme would also be available to the chain of EV charging stations owned by a single service provider.

8.2 Incentive Mechanisms

The following incentives shall be available to the solar power plants which are commissioned or have signed PPA during the Operative Period of the policy:

8.2.1 Applicability

Solar Power plants commissioned or PPA signed in the operative period of policy shall be eligible for incentives declared under this policy, for a period of 25 years from the date of scheduled commissioning.

8.2.2 Entry tax

Entry Tax has already been incorporated in GST Act 2017. Therefore, Entry tax is not applicable.

8.2.3 Electricity Duty

The electricity duty shall be exempted/reimbursed for 5 years from the commercial operation date for rooftop solar plants under net metering, captive solar projects, solar pumps, and EV charging stations setup within the state in line with the Jharkhand Industrial and Investment Promotion Policy 2021.

8.2.4 State Goods and Service Tax (SGST)

100% exemption from the payment of SGST for all the inputs required for rooftop solar plants under net metering, captive solar projects, solar pumps, off-grid solar projects, or EV charging stations shall be provided by the Commercial Tax department for a period of 5 years. This exemption is subject to approval/recommendation from the GST council.

8.2.5 Open Access

For intra-state, open access clearance for the whole tenure of the project or 25 years, whichever is earlier, shall be granted. In the absence of any response or intimation from the Jharkhand DISCOMs to the generator within 21 days, such application shall be considered to be deemed open access.

A. Exemption from transmission and wheeling charges

Grid-connected solar power projects with storage systems selling power within the state shall attract 100% exemption from transmission and wheeling charges for a period of 10 years from the date of commissioning of the project. The details of the exemption shall be specified in the bidding document. The transmission and distribution losses however are fully applicable for both third parties as well as captive solar within the state.

B. Exemption from Cross-subsidy and additional charge

The cross-subsidy surcharge and additional surcharge shall be exempted for the solar power projects set up for third party sale within the state (less than 25 MW) and captive solar projects through open access.

8.2.6 Banking Charges

Banking of 100% of energy shall be permitted during all 12 months of the year, based on the feasibility and prior approval of Jharkhand Transco/DISCOMs. Banking charges shall be exempted for grid-connected rooftop solar projects and shall be adjusted in kind @ 5% of the energy delivered at the point of drawl. The banking year shall be from April to March.

Drawls from banked energy shall not be permitted during the five (5) month period from 1st April to 30th June and 1st February to 31st March of each financial year. In addition, drawls of banked energy during the Time of the Day (ToD) applicable during the peak hours, as specified in the respective Retail Supply Tariff Order, shall also not be permitted throughout the year. The unutilized banked energy shall be considered as deemed purchase by DISCOMs at 50% of the Average Pooled Power Purchase Cost as determined by the JSERC for the applicable year. Energy settlement shall be done on a monthly basis. The payment for the deemed purchase of un-utilized banked energy shall be capped to 10% of the total banked energy during the applicable year.

8.2.7 Grid Connectivity and Evacuation

For all the identified solar parks based on Government lands, the state transmission/distribution utilities or Special Purpose Vehicle/Joint Venture, as the case may be, shall construct/augment the necessary grid infrastructure for connectivity and evacuation of solar power from generating point through the nearest substations. The State Government shall bear all costs of building/augmenting transmission in this case. Bidding shall be conducted only once the necessary pre-development activities at the designated park sites are completed or nearing completion. Projects deployed in such parks shall be first utilised to meet the RPO of the state utilities before sale to any other entity within or outside the state. JREDA will be the SNA for project implementation and will prepare bidding mechanism.

For parks on private lands or non-park solar projects, transmission/distribution utilities shall bear the cost of Extra High Voltage (EHV)/ High Voltage (HV) transmission line up to a distance of 10 km. If the distance between the inter-connection point and point of grid connectivity is more than 10 km, then the cost of transmission line for the distance beyond 10 km shall be borne equally between the developer and the licensee. In this case too, projects deployed shall be first utilised to meet the RPO of the state utilities before sale to any other entity within or outside the state. State government shall bear the cost incurred by the concerned Transco/DISCOM.

Any upstream system strengthening requirement may be borne by Transco/DISCOM(s) of Jharkhand on a priority basis. Supervision charges levied by the Jharkhand Transco/DISCOM(s) may be exempted for all solar power projects except utility scale solar projects. Jharkhand Transco/DISCOM(s) may process and close the proposals for technical feasibility within thirty (30) days of receipt of application from the solar power project developer.

8.2.8 Tariff Mechanism

A. Solarization of Agriculture Feeder

DISCOMs are encouraged to determine the appropriate ceiling tariff that adequately captures the smaller project sizes and higher transaction costs and may consider revision if required to implement the PM KUSUM scheme. In addition, distribution substation wise solar evacuation capacity shall be published in a transparent manner by DISCOMs especially for agriculture dominated districts.

B. Green Tariff

To promote consumers to opt for green energy, JSERC may introduce 'Green Tariff' for all consumers, including extra high voltage, high voltage, and low voltage categories. Green tariff rate shall be either lower than or equivalent to the average pooled power purchase cost of non-conventional sources of energy of DISCOM to encourage early movers.

In addition, if the consumer is not an obligated entity under RPO Regulations, the procurement of energy shall be considered towards RPO fulfillment of Jharkhand DISCOM.

C. Feed-in-tariff

JSERC may introduce time-of-the-use solar energy feed-in tariffs to encourage solar energy producers and storage operators to feed-in energy into the grid when demand is high. JSERC may announce separate FiT for rooftop solar projects as mentioned in the Jharkhand State Solar Rooftop Policy 2018.

D. Virtual Net Metering

To promote and facilitate the eligible consumers, especially located in the urban centers of Jharkhand and having constraints like access to adequate rooftop area/inaccessible rooftops, etc. and various entities having multiple electricity connections, virtual Net Metering (VNM), including Group Virtual Net Metering may be promoted as mentioned in the Jharkhand State Solar Rooftop Policy 2018. JSERC may introduce suitable regulations to facilitate this.

8.2.9 Subsidy

The state subsidy shall be available over and above the central subsidy. The subsidy shall be provided to residential rooftop solar projects, off-grid solar projects, and grid-connected solar pumps installed under the PM KUSUM scheme component C. The details of the subsidy provided in the table below:

Project categories	State Subsidy* (% of benchmark cost)	Remarks
Distributed solar		
Rooftop solar	60% (up to 3kW if annual income less than INR 3 lakh) 80% (3kW to 10 kW if annual income less than INR 3 lakh)	Available only for residential segment
Solar agriculture	30%	Grid connected pumps under component C of PM KUSUM scheme
Off-grid solar projects		
Mini and micro grids (solar villages)	NA	These schemes are implemented by JREDA through 100% State Budget.
Solar home systems	NA	
Solar for livelihood (non-electric applications of solar)	60% (up to 3kW) 40% (3kW to 10 kW)	Higher subsidy as systems as central subsidy will not be applicable for off-grid projects
Solar pumps	66-67%	

**Over and above central subsidy*

8.2.10 Single Window Facility

A dedicated Solar Policy Cell may be created under the JREDA. All the statutory clearances and approvals shall be provided to the solar power project developers through this single window facility, in a time bound manner within a period of 60 days. For forest clearances, single window facility will facilitate approval through Parivesh Portal. A transaction charge of INR 10,000/MW shall be applicable for processing applications for single window clearance with a maximum of INR two lakhs per project for utility scale and captive/group captive projects. This facility shall be extended to the projects under the PM KUSUM scheme to reduce the challenges of inter-department coordination.

The modalities of the single window clearance mechanism shall be notified within 30 days from the date of issue of this policy.

8.2.11 Height of the Module Structure

The height of the module structure (maximum 3 meter) carrying solar panels shall not be counted towards the total height of the building as permitted by building bylaws. No approval shall be required from concerned Municipal Corporation or department of Urban Development & Housing for the putting up solar plants, including any additional

system for monitoring the performance of solar plants in existing or new buildings except in case of AAI approval (if applicable).

8.2.12 Carbon Credit/Carbon Pricing

The generating entity shall retain the entire proceeds of carbon credit, if any, from an approved Clean Development Mechanism (CDM) project or any other mechanism under United Nations Framework Convention on Climate Change (UNFCCC).

8.2.13 Exemption from Environmental clearances

Solar Power Projects using PV or solar thermal technology shall be exempted from environment clearance including clearance from Department of Forest, Environment and Climate Change and Department of Mines & Geology for implementation on retired mine lands. Floating solar projects or projects on canal tops shall be exempted from clearances from the irrigation department. However, disposal of PV Cell attracts the provision of the Hazardous and other waste (Management and Trans-Boundary Movement) Rules, 2016. Additionally, the development of Solar Parks shall attract the provision of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981.

8.2.14 Timely Completion

If the project is completed and commissioned within the scheduled period, then such project developers will be exempted from paying electricity duty and banking charges for 10 years. In case of delay beyond 30 days due to reasons other than those in the developers control, such as delay in signing PPA or up-gradation of power evacuation infrastructure, electricity duty shall be exempted for such projects on case-to-case basis.

8.2.15 Deemed Industry Status

All solar power plants shall be treated as 'industry' under the schemes administered by the prevailing Jharkhand Industrial and Investment Promotion Policy 2021 of Department of Industries and incentives available to industrial units shall be available to the solar power plants developers.

8.2.16 Must Run Status

State Load Dispatch Centre may ensure 'Must Run' Status of Solar Plants in the State in accordance with applicable JSERC Regulations and maintain the data of Solar Power curtailment in a transparent manner. All Solar Power Projects shall forecast and schedule their generation as per JSERC (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2021 as amended from time to time.

8.2.17 Manufacturing

The Government intends to promote solar manufacturing facilities to support economic growth and creation of jobs in the state. The following incentives shall be applicable for new manufacturing facilities and equipment, ancillaries related to solar power projects only.

- Priority allotment of Government land in solar parks on a long-term lease basis.
- Electricity duty shall be waived for the new manufacturing facilities and ancillaries of the Solar Power Projects for a period of 5 years.
- 100% exemption/reimbursement on stamp duty.

- Net SGST reimbursement to solar energy equipment manufacturers.
- 100% reimbursement of custom duty on input required for manufacturing the solar modules and battery storage for a period of 5 years.
- Any other incentives provided in the prevailing Jharkhand Industrial and Investment Promotion Policy 2016 of Department of Industries.

8.2.18 Miscellaneous

If the Solar Power Producer uses the robotic method for cleaning the solar modules and uses low water technology, some incentives/subsidies may be provided by the Government. The incentives/subsidy shall be decided based on the technology used and to be decided on a case-to-case basis.

Rooftop consumers shall be provided subsidies/incentives as per the guidelines of Ministry of New and Renewable Energy (MNRE) and Jharkhand State Solar Rooftop Policy 2018.

8.3 Power Purchase

The State shall follow the competitive bidding guidelines for procurement of power from renewable sources of energy, as approved by the Government of India, from time to time.

JREDA, in consultation with distribution utilities and other relevant departments, may develop and upload the model Power Purchase Agreements (PPA) for developers and departments to adopt upon conducting the competitive bidding processes or FiT-based procurement. The PPA shall contain conditions including but not limited to the following:

- The PPA shall have the plant capacity and the tariff at which the electricity is supplied to the third-party consumer of the government departments.
- The project shall be installed under metering guidelines of the state regulatory commission and as per the PPA terms for a period as defined in the PPA.
- The model PPA can be used for third party sales at terms mutually discussed between the generator (seller) and the consumer (buyer).
- The following terms of PPA Agreement shall not be changed
 - Tariff discovered
 - PPA Term
 - Capacity
 - Any other condition specified in the bidding document
- Payment Security Mechanism - The power purchase agreement shall have a payment security mechanism structured in the PPA to ensure payment to the developers. The buyer shall provide the generator with an unconditional, revolving and irrevocable letter of credit, opened and maintained by the buyer which may be drawn by the generator in case the buyer fails to make a payment towards the electricity bill.
- Right of Way - The developer shall have the right of way for installing the system and carrying out the operation and maintenance activities.
- For any dispute the parties can resolve as per the Arbitration rules defined in the model PPA document.
- There shall be no requirement to demonstrate ownership and possession of land for the period defined in the bidding document.

- Indexation at the rate of 1% for a period of 25 years may be indicated as part of the bidding documents for cases when the discovered tariffs are higher than the procuring DISCOM's average power procurement cost in the given year. This shall ease out the financial pressure on DISCOM.
- Performance Bank Guarantee (PBG) furnished to the implementing agency shall be returned on successful commissioning.
- Generator will be free to install the DC solar field as per its design of required output, including its requirement of auxiliary consumption and to reconfigure and repower the Project from time to time during the term of the PPA.
- Generators can sell any excess generation to a third party subject to the right of first refusal by the buyer. PPA shall specify the rate/percentage of PPA tariff at which buyer will purchase generation in excess of the accepted schedule.
- Compensation will be provided to generator for constrained off take if due to:
 - Transmission constraint
 - Grid Unavailability
 - Back Down
- Buyer to discharge payment obligations in terms of the PPA and supply of solar power to the extent of the contracted capacity shall not be on a back-to-back basis.
- Change in controlling shareholding within the same of group companies shall be permitted after a certain period of time as defined in the PPA document.
- Well defined obligations for the buyer and the seller.
- Both parties shall be required to keep complete and accurate records and all other data required by each of them for the purpose of administration of this Agreement and the operation of the power plant.
- Auxiliary Power Consumption by the generator - The generator shall be entitled to draw the power for its auxiliary consumption from the grid. The buyer shall adjust auxiliary power from energy billing through net off scheme from the delivered energy.
- The generator will be required to maintain at its own cost and expense, throughout the term of the PPA, insurances against such risks to keep the project in good condition and shall take industrial all risk insurance policy covering risks against any loss or damage.
- The model PPA must include provisions of late payment surcharge and rebate for timely payment.

9. Project categories and processes

9.1 Utility-scale solar projects

Solar power projects with capacity greater than or equal to 2 MW are classified as utility-scale solar power projects. Solar parks are being created for different capacities – large as well as mini/micro solar parks). The utility-scale solar power plants are further divided into the following categories.

9.1.1 Solar parks

The cumulative target for solar parks is 700 MW. These solar parks are further divided into the following categories.

A. Solar park development by the private sector

Private sector players shall be invited to set up solar parks in the State under the plug-and-play model, to be connected to the STU network. The minimum capacity of these parks would be 20 MW.

Process:

- JREDA may devise guidelines for the development of solar parks on private and Government lands and facilitate providing applicable incentives in line with the policy.
- JREDA, in coordination with DISCOMs, may solicit interest from potential solar power buyers/ obligated entities within the State.
- The sale of electricity by solar power park developers (SPPDs) to interested entities shall be considered as third-party sale.
- Installation of solar projects by SPPD for third party sale shall be allowed without any capacity restriction up to the capacity for which interest is collected by JREDA.
- The state shall invite applications from interested SPPDs from time to time. JREDA, may notify the opening of the window for submission of interest. The window shall remain open as per guidelines shared by JREDA but this timeline shall not be less than 90 days. The interested SPPD can submit their proposals (separately for each park) for setting up solar power parks, in the online format on the JREDA portal.
- The selection of the developer will be on a first come first serve basis. Applications received as per the provisions shall be examined and accorded approval, if found acceptable by the Government of Jharkhand (GoJ) within a period of 30 days from the date of registration of the projects.
- Upon approval, the SPPD shall be obliged to create common infrastructure facilities for development of solar parks such as creation of power evacuation systems and development of roads, lights, water supply systems and other administrative support systems. The Private Sector SPPDs shall be responsible for registration of solar power projects within their park with JREDA as per the provisions of Jharkhand State Solar Policy, 2022.

Role of various departments:

- The SPPD will be allowed to acquire or procure agricultural land on lease basis from title holders for developing solar parks.
- JREDA in consultation with the Revenue Department/concerned department/ district administration as deemed necessary will facilitate the procurement or getting clearance for procurement of land through relevant government departments.
- Land conversion shall not be required for the development of solar parks on private agricultural land.

Business models

- JREDA may develop innovative implementation mechanisms for solar parks. Such innovative models upon regulatory approval (if needed) will be available for developers as an option to explore in the state.

Tariff

- In case of a third-party sale or captive solar projects, the PPA will be executed between the SPPD and the procurer on mutually discussed and agreed rates.
- For sale of electricity to State DISCOM, the tariff will be discovered through a competitive bidding process or pre-fixed FiT as notified by the state electricity regulatory commission.

B. Solar parks development by the joint venture

The State would support the development of solar parks by entering into a joint venture (JV) with the private developers. The minimum capacity for this category is 20 MW.

Process:

- JREDA may develop guidelines for the development of solar parks through JV with private developers or with Central or State Level public sector utilities (PSUs) on private and Government lands.
- The selection of JV shall take place in a transparent manner for development of solar park.
- JREDA may notify and receive interests from developers within 90 days of such notification for participation in Joint Ventures with the state.
- Upon examining the proposal, JREDA will submit the proposal to the State Level Screening Committee (SLSC) within 30 days which will also examine the application. The SLSC will forward the application to the State Level Empowered Committee (SLEC) within 15 days if the proposal is in order and as per the requirements published by the state. The State Level Empowered Committee (SLEC) after examining the proposal will submit it to the State within 15 days for final approval.

Role of various departments:

- JREDA may establish a Special Purpose Vehicle (SPV) to develop the infrastructure in the solar park and to manage the solar park. The SPV shall formulate the policy and rules for the solar park in respect of land allotment, development cost, etc.
- The state shall invest up to 50% equity or any other percentage of equity participation as decided by the state. The cost of the land allotted would be part of its equity participation in the JV company.
- JREDA in consultation with the Revenue department/ concerned department/ district administration, as deemed necessary, will identify unused government lands as well as, agriculture lands, barren lands, retired mining lands etc., available for the development of solar parks.
- The Revenue department/ concerned department/ district administration, in coordination with JREDA, may prepare a database of the unused government lands and identify sites suitable for development of such power plants within 6 months of

the notification of this policy. However, the state government shall provide such land free of cost.

- The Revenue department shall assess the cost of the land. Such land assessment will also be shared with JREDA within 6 months of the notification of this policy.
- JREDA will assess the solar power capacity that can be set up on the identified land banks.
- DISCOM shall provide NOC for development of the solar park for sale of electricity to third party consumers under open access.

Tariff

- In case of a third-party sale or captive solar projects, the PPA will be executed between the SPPD and the procurer on mutually discussed and agreed rates.
- For sale of electricity to State DISCOM, the tariff will be discovered through a competitive bidding process or pre-fixed FiT as notified by the state electricity regulatory commission.

C. Solar park development by State Government

The State departments can invite bid for development of solar park for procurement of electricity. The minimum capacity for this category is 20 MW.

Process:

- The state department can develop guidelines for the development of solar parks for which they may seek assistance from JREDA.
- The state departments shall identify the available lands for the purpose. If the land is not suitable for the development of solar park, the vendors shall be allowed to use suitable private lands for the purpose of development of solar park.
- The state department shall carry out a feasibility check of the available sites.
- The selection of developers shall take place through a transparent bidding process.

Role of various departments:

- The state department shall be responsible for the bid management. It may take assistance from JREDA in development of the bidding document and selection of the developer.

Tariff

- For sale of electricity to State DISCOM or to any other government department, the tariff will be pre-fixed FiT as notified by the state electricity regulatory commission.

9.1.2 Non- Park solar

Projects under this category shall be meant for obligated entities (including DISCOMs) and third-parties (within or outside the State) mandated to meet their RPO targets. Under this category, any obligated entity or generator can set up solar power projects in the State. The cumulative target for this category is 1000 MW. The minimum capacity for projects under this category would be 2 MW.

Process:

- JREDA may devise guidelines for developing solar power plants on government and private lands and facilitate providing applicable incentives in line with the policy.
- The state shall invite applications from developers for setting up solar power plants from time to time depending on the demand aggregated by JREDA.
- JREDA will float an 'Expression of Interest (EOI)' for private landowners who wish to offer their lands for sale or on lease basis for the purpose of installation of solar power plants. The land owners can submit their interests to JREDA, in the prescribed formats, within 90 days of such notification. Such EOI may be floated once every year.
- Upon receiving such interests under the EOI rounds, JREDA will conduct a feasibility analysis of the sites to evaluate the potential capacity. JREDA will coordinate with relevant departments to conclude the procurement formalities with owners of sites found suitable for solar plant deployment and convert these lands into available land banks.
- JREDA in consultation with the DISCOM will also collect the information on available substations, grid network and feeder capacities closest to the site.
- JREDA may inform the DISCOM of the feasible sites post which the DISCOM may conduct load flow analyses required to assess maximum capacities that can be integrated with or without network augmentation.
- DISCOM, in consultation with JREDA, may notify the tender for discovery of tariff for procurement of solar electricity. Interested Developers can participate in the tender floated by DISCOM.
- JREDA may conduct solar bids for procurement of solar electricity for interested government departments, excluding DISCOMs.
- The selection of the bidder will be based on the lowest tariff discovered through a competitive tendering process.
- DISCOM may consider procuring electricity at the pre-fixed feed-in tariff (FiT) approved by the regulator. Alternatively, it may adopt the competitive bidding route keeping the regulated tariff as the ceiling tariff.
- DISCOM may consider the bucket filling method or any other legitimate and advanced bid designs for procurement of capacity.

Role of various departments:

- JREDA may do a demand aggregation for procurement of power by various government departments. JREDA may coordinate with the Revenue department/any concerned department/district administration as deemed necessary to identify unused land parcels, wastelands, and barren lands.
- The Revenue department/the concerned department/the respective district administration shall provide information on the available barren lands or unused government lands for creation of land banks within 6 months of the notification of the policy.
- Developers who wish to install solar plants are free to identify lands on their own as well. The developers will either have to purchase the lands or shall have to lease the lands on a long-term basis.

- Under the lease agreement, the developers shall be required to sign an agreement with the owner of the land and pay a mutually agreed fee to the land owner.
- Any lease agreement signed between the parties shall require approval from the Revenue department. JREDA may act as a single window facility for faster approval of the lease agreement.
- The DISCOM shall publish the information on the list of available substations and feeders near the identified lands by the developers, and also conduct load flow studies.

Tariffs:

- In case of a third-party sale, the PPA shall be signed on mutually discussed terms and on agreed tariff between the developers and the consumers.
- For sale of electricity to the DISCOM, the rates would either be the pre-fixed Feed-in-Tariff notified by the regulatory commission or discovered through a competitive bidding process. The DISCOM shall sign the PPA within 30 days of adopting the tariff discovered under the bidding process conducted by the DISCOM or any other bidding agency on its behalf. Such bidding process shall be in compliance with the terms and conditions pre-approved by the regulatory commission.

Business models:

- JREDA in coordination with JBVNL, may develop advanced implementation mechanisms for deployment of power plants under this category.
- Solar power plant under this category may also be through JV or any private party or directly by government same as described under Solar Park Category.

9.1.3 Floating solar projects

Jharkhand has 31 reservoirs with a cumulative surface area of 354 km², indicating a conservative potential of 1160 MW. Furthermore, the reservoirs of the thermal power plants are also an attractive site for deploying these systems. The policy would promote construction of floating solar power to tap this potential. The cumulative target for floating solar technology is 900 MW. The minimum capacity of the projects in this category would be 2 MW.

Process:

- JREDA may devise guidelines for the development of floating solar power plants and facilitate providing applicable incentives in line with the policy.
- The State shall promote development of floating solar by developers on identified dams, water bodies and water reservoirs of thermal power plants.
- The DISCOM, Agriculture department and the thermal generation companies shall be the procurers of power from the floating solar power plants.
- The Water Resource department along with the Generation company and the DISCOM shall evaluate the feasibility of installing the solar systems on water bodies and, water reservoirs of thermal power plants and dams. The list of identified sites shall be shared with JREDA within 6 months of the notification of the policy.
- JREDA may carry out a feasibility analysis and estimate the potential capacity that can be installed on the dams, water bodies or water reservoirs of thermal power plants.

- DISCOM or the generation companies may provide JREDA with information on the nearest evacuation point and substation capacities for the identified sites.
- The implementing agency JREDA (or DISCOM and/or generating company) may invite bids from interested developers for development of floating solar power plants.
- The developer shall be responsible for creation of evacuation infrastructure to the nearest evacuation point suggested by the DISCOM or the generation company.

Role of various departments:

- The Water Resource department along with the generation companies shall provide access to the water bodies or the dams to the developer towards development of floating solar plants.
- JREDA may serve as the single window facility for the developer to get necessary clearances that may be required for development of floating solar plants.
- DISCOM to assess and publish information on nearest substation/evacuation infrastructure and augmentation required, if any.

Tariff:

- The tariff shall be based on a competitive bidding process conducted by JREDA. In cases where DISCOM is the procurer, the DISCOM may conduct the bidding, or designate JREDA as its bidding agency, or hire another agency to conduct the bidding process.
- For DISCOM procurement, bidding shall be conducted according to terms and conditions pre-approved by the regulatory commission. The PPA between the DISCOM and the developer shall take place within 30 days of the adoption of the discovered tariff by the regulatory commission.
- Alternatively, the DISCOM may sign the PPA at the pre-fixed FiT notified by the regulatory commission.
- JREDA may consider Bucket Filling method or any other legitimate and advanced bid designs for procurement of the capacity.

9.1.4 Canal top solar

Solar installations on canal tops offer dual advantage of water conservation and efficiency. It also navigates the issue of land scarcity. The policy aims to deploy 400 MW of solar installations on canal tops. Notwithstanding the minimum capacity criteria, the canal top solar power projects with capacity lower than 2 MW are also eligible under this category.

Process:

- JREDA, in consultation with the Agriculture department and any other relevant departments, may devise guidelines for the development of solar power plants on canal tops and facilitate providing applicable incentives in line with the policy.
- JREDA may also explore the opportunity of development of canal top projects in the PPP model with option of revenue sharing with the Government.
- The projects on canal tops shall be deployed for sale of electricity to Agriculture departments through open access or virtual net-metering arrangement, sale of

electricity to nearby villages or by private players for third party sales of electricity to consumers anywhere in the state.

- The Agriculture department along with the Water Resource department shall evaluate the feasibility of installing the solar system on canal tops in the state. The list of identified canal tops shall be shared with JREDA within **6 months** of the notification of this policy.
- JREDA may conduct a feasibility analysis and estimate the potential capacity that can be installed on the canal tops.
- DISCOM may provide JREDA with the information on the nearest evacuation points.
- The implementing agency JREDA may invite bids from interested developers for development of solar power plant canal tops.
- The developer shall be responsible for creation of evacuation infrastructure to the nearest evacuation point as suggested by the DISCOM.

Role of various departments:

- The Agriculture department and the Water Resource department will provide the access to the canal tops to the developer for the canal top solar plant development.
- JREDA may serve as the single window clearance facilitator for the developer to obtain the necessary clearances for installation of these canal top solar plants.
- DISCOMs may assess and publish information on nearest substation / evacuation infrastructure and augmentation required, if any.

Tariff:

- The tariff will be based on a competitive bidding process conducted by JREDA. In cases where DISCOM is the procurer, the DISCOM may conduct the bidding, or designate JREDA as its bidding agency, or hire another agency to conduct the bidding process.
- Alternatively, the DISCOM may sign the PPA at the pre-fixed FiT notified by the regulatory commission.
- JREDA may consider Bucket Filling method, L1 matching method or any other legitimate and advanced bid designs for procurement of the capacity.

9.2 Distributed solar projects

The policy aims to achieve 720 MW of cumulative distributed solar PV capacity in the state during the operative period. All solar projects, ground mount and rooftop solar, with capacities less than 2 MW would be considered as distributed solar projects. Projects under PM KUSUM scheme component A and C will also be eligible under this category.

9.2.1 Rooftop solar projects

The policy aims to deploy 250 MW of rooftop solar systems in the State.

- The state will promote the development of rooftop solar power plants in residential, government, institutional, commercial and industrial consumer categories.
- All residential plots with a total plot area more than 500 square yards are mandated to install a rooftop solar system in their premises to meet minimum 10% of their annual consumption.

- JREDA may devise guidelines for the development of solar power plants for these consumer categories and provide applicable incentives in line with the policy.
- DISCOM will conduct bids for residential consumers under MNRE subsidy scheme. Bids will be invited under capital expenditure (CAPEX), renewable energy service company (RESCO) as well as innovative business models by DISCOM.
- JREDA will provide any additional incentive envisioned in the policy to the residential consumers as mentioned in the section 8 of this policy.
- JREDA will aggregate demand from different government departments and conduct bids under various innovative business models to facilitate rooftop solar deployment. Different departments are expected to formulate their solar plans on an annual basis.
- JREDA will create a rooftop solar data bank capturing building details and rooftop solar potential in coordination with various government departments, for commercial and industrial consumers.
- JSERC will develop supporting billing and metering mechanisms such as virtual net-metering, group net-metering etc. to facilitate innovative business models.

Business models:

- JREDA in coordination with JBVNL, may develop innovative implementation mechanisms for rooftop solar. Such innovative models upon regulatory approval (if needed) will be available for developers as an option to explore in the state.
- The implementing agency may explore '**Anchored Procurement Model**' where the implementing agency acts as an aggregator and collects interests from consumers for procurement of solar energy through rooftop solar. The implementing agency then bids out the aggregated capacity to discover the lowest rate. The PPA is signed between the developers and interested consumers.
- The implementing agency can also explore other business models like **Community Solar models for low-paying consumers** in rural and semi-urban localities as well as **residential societies** in urban areas. The developer shall be able to install systems under CAPEX and OPEX modes. DISCOM would facilitate the metering and billing for such installations as per the regulatory provisions by JSERC.
- The third proposed model, Solar Partners, allows residential consumers to subscribe to solar power at a predetermined tariff. The roof owner gets a rent for utilisation of their rooftop.

Tariff:

- The installation of rooftop solar plants shall be on CAPEX, RESCO or other innovative business models.
- The tariff rate will be discovered through a competitive bidding process or at the pre-fixed FiT approved by the regulator.

9.2.2 Captive and group-captive solar projects

The policy encourages the deployment of captive (behind the meter) and group-captive solar projects (grid connected) in the State. The minimum capacity requirement is 100 kW.

Process:

- JREDA may devise guidelines for the development of captive solar power plants.
- The plant can be installed at the consumer premise or at a different location under virtual and group net-metering guidelines.
- JSERC will come up with a regulation on solar power plants for captive and group-captive arrangements within 6 months of the notification of the policy.
- Installation of solar projects by a developer can be under CAPEX model or at a tariff mutually agreed between the developer and the consumer.
- The state shall invite applications from private sector consumers interested in solar plants for captive consumption.
- The approval of projects shall be on first come first serve basis.
- Applications received as per the provisions shall be examined and accorded approval, if found acceptable by the government within a period of 30 days from the date of submission of application.
- Upon approval the developer shall be obliged to proceed with the installation of the plant.
- The developer shall be responsible for registration of solar power projects as per the provisions of Jharkhand State Solar Policy, 2022.

Tariff:

- In case of captive solar projects under the RESCO model, the PPA will be executed between the developer and the procurer on mutually discussed terms and agreed rates.
- For sale of electricity to the DISCOM, the rates will be as per the tariff regulations specified by the state electricity regulatory commission.

9.2.3 Solar Agriculture

The policy would promote the deployment of ground/ stilt mounted solar or other renewable energy source-based power projects along with agriculture feeder level solarisation under the state government's initiatives to support the irrigation needs of farmers. The policy will target to achieve 250 MW of solar capacity in the state. The surplus power from these systems would be procured by the DISCOMs as per the tariff approved by the regulatory commission.

A. Installation of Solar Power Plant on used or unused agriculture land

Under this component, solar or other renewable energy-based power plants (REPP) of capacity 500 kW to 2 MW will be set up by individual farmers/ group of farmers/ cooperatives/ panchayats/ Farmer Producer Organizations (FPO)/Water User associations (WUA). Floor Cap of plant capacity may be lowered to 100 kW as per requirement. The DISCOMs will notify sub-station wise surplus capacity which can be fed from such RE power plants to the Grid and shall invite applications from interested beneficiaries for setting up the renewable energy plants.

B. Solarization of Agriculture Pumps

i. Feeder Level Solarization of Agriculture Pumps:

Feeder level solar power plant may be installed to cater to the requirement of power for a single feeder or for multiple agriculture feeders emanating from a distribution

sub-station (DSS) to feed power at 11 kV or at the higher voltage level side of the DSS depending upon on factors like availability of land, technical feasibility, etc., there is no cap on the capacity of solar power plant for feeder level solarization. The DISCOMs may identify land near DSS, get ownership of land or its lease rights, provide connectivity at DSS and lay sub-transmission lines between DSS and solar power plants.

ii. Solarization of Grid Connected Agriculture Pumps:

Under this, individual farmers having grid connected agriculture pumps will be supported to solarize pumps. Solar PV capacity up to two times of pump capacity in kW is allowed under the scheme.

Tariff:

The renewable power generated under installation of Solar Power Plant on used or unused Agriculture Land will be purchased by DISCOMs at a pre-fixed levelised tariff. In case, the aggregate capacity offered by Applicants is more than notified capacity for a particular sub-station, bidding route will be followed by DISCOMs to select Renewable Power generator and in such cases the prefixed levelised tariff shall be the ceiling tariff for bidding. Selection of bidders shall be based on the lowest tariff offered in the ascending order as quoted by the bidders in the closed bid or e-reverse auction as the case may be.

The tariff for Grid connected Agriculture Pumps will be as per the approved tariff as fixed JSERC.

9.3 Promoting off-grid solar for development of rural economy and powering livelihoods

The cumulative target for off-grid solar projects is 280 MW. The off-grid solar projects are further divided into two main categories.

9.3.1 Model Solar Villages

The State is committed to working towards providing affordable, reliable and clean energy to all its people. At the core of its focus are the rural and tribal communities, who must be empowered to improve their quality of life through decentralized solar energy solutions. The State already showcases inspirational and successful stories of citizen-led RE-powered initiatives for income generation activities, women empowerment and COVID-19 response infrastructure. Through scaling-up existing initiatives and supporting incubation of new and state-of-the-art solar applications in villages, the State will facilitate complete solarization of 1000 villages, and creation of new jobs within the operative period of this policy. These villages shall serve as model villages not only at the state-level but also at the national level.

Process:

- JREDA, in coordination with the Jharkhand State Livelihood Promotion Society (JSLPS), DISCOM and the Department of Scheduled Tribe, Scheduled Caste, Minority and Backward Class Welfare (Department of Welfare), will develop a plan of action. The plan shall contain the information on constitution and possible compositions of village-level committees (VLC) comprising Gram Panchayat members and other active groups in villages such as women self-help groups, youth groups, and any other groups working for development of the village. The VLC shall, under the leadership of Gram Sarpanch, share information with JREDA about:

- Key economic activities in the village.
 - Demographics.
 - Current power situation and expenditure on energy related services.
 - Common infrastructure in the village, e.g. panchayat office, lights, police chowki, schools, PHC, any sports facility, community halls, clinics, shops etc.
 - Electricity and energy need of the people and existing small enterprises.
 - New businesses/enterprises that people, including women, of the village may like to engage in to increase their incomes.
- JREDA, in the process of developing the above plan of action, may process these village-level inputs to assess the solar potential across applications and livelihood opportunities that can be supported through the incentives and framework under this policy.
 - Identify a priority list of villages to be transformed into solar villages.
 - Publish the list of potential sites/villages (where grid extension/provision of grid electricity is expensive for DISCOM) for deployment of RE-based mini/micro grids.
 - Assess the possibilities or potential of deploying of solar applications across economic-livelihood sectors in these villages. This demand assessment activity will help in mapping needs of beneficiaries with appropriate fit to livelihood applications.
 - Identify and map land banks in the villages consisting of Government as well as private lands suitable for solar deployments (refer to the EOI process indicted for aggregating private lands).
 - Enable a market-oriented framework to attract private sector for development and deployment for local servicing of solar-based systems and related livelihood applications in these villages
 - Support pilot and field demonstrations of new applications and technology innovations on ground. Pilots and targets can be taken across agriculture, textile, animal husbandry, cottage industry, food industry, other relevant sectors and for solarizing of infrastructure to provide basic amenities (street lights, PHCs, sports facilities, schools, institutes, panchayat buildings, community halls etc.).
 - Facilitate easy access to end-user finance for these applications and pilots through schemes involving NABARD, rural regional banks, MFIs, multi-lateral, bilateral, philanthropic organizations. A part of the Green Fund may be dedicated for credit extension to identify projects and village-level enterprises.
 - Introduce standards for stringent monitoring and evaluation frameworks.
 - Support skill development for strengthening the service infrastructure at the local levels through existing state training and skilling programmes, other relevant Central Government programmes and efforts run by Ministry of New and Renewable Energy (MNRE), Ministry of Rural Development (MoRD), National Institute of Rural Development (NIRD), National Skill Development Corporation (NSDC), National Institute of Solar Energy (NISE), Skill Council for Green Jobs (SCGJ) and related schema.
 - Encourage innovation and R&D to develop efficient and cost-effective tailor-made solutions per the local population's needs.

A. Mini and micro grids

The policy directs the deployment of mini grids in villages with intermittent or absent electricity supply. The cumulative target for this category is 110 MW. Further, a special focus would be on solarizing different sectors such as healthcare, education, agriculture and promoting productive use of solar electricity through livelihood applications.

Other specifications would be as per the Jharkhand State Policy for the Promotion of Mini & Micro Grid 2021.

B. Stand Alone Solar Home Systems (SHS)

The policy would support the economically weaker sections (EWS) of the society holding a valid State Government Security Card such as Ration card, Below Poverty Line (BPL) beneficiaries etc. with a standalone solar home lighting system with a provision to provide solar panels for access to energy to households having demand less than 1 kWp/ 1 kVA. JREDA may develop a separate scheme for providing energy access to households that are yet to be electrified or are unfeasible to be electrified via conventional means or through Mini and Micro Grids.

C. Solar for livelihood

The policy would support the deployment of state-of-the-art use of solar energy for livelihood activities in rural areas. JREDA would undertake demand estimation studies to assess the market potential for these products. JREDA would also facilitate their scale-up through dedicated schemes with subsidies and business models.

D. Solar pumps

The policy would promote the deployment of standalone solar pumps schemes or other state government's initiatives to support the irrigation needs of farmers. Individual farmers will be supported to install standalone solar agriculture pumps on a subsidized basis through Demand Aggregation Model. JREDA along with the help of district administration may call for interested farmers willing to adopt solar water pump for irrigation activities and based on that, it may issue suitable tenders for installation of such Solar water pumps or may go with the selected or identified bidders remarked by MNRE for the same.

9.3.2 Other off-grid non-electric applications of solar

The policy would support the deployment of state-of-the-art electric and non-electrical applications of solar energy. Some of these are solar water heater, solar desalination, solar food dryer, solar thermal for industry processes and solar space heating. JREDA would undertake demand estimation studies to assess the market potential for these products across various application sectors. JREDA would also facilitate their scale-up through dedicated schemes with subsidies and business models.

9.4 Integrated Solar

9.4.1 Solar based Electric Vehicle (EV) Charging Stations

The solar policy envisions to further reduce the carbon footprint of Electric Vehicles (EV) by providing access to cheap and clean solar electricity for EV charging. The state proposes the following towards supporting EV charging with solar based power;

- JREDA, in consultation with JSERC and DISCOMs, will propose appropriate mechanisms to avail solar power for EV charging under non-park solar, rooftop solar, captive solar and off-grid categories.
- The EV charging stations may be established by the State/Central Public Sector Undertakings, private operators or under public private partnership models.
- The charging infrastructure will be developed as per the guidelines and standards issued by the Ministry of Power/ Central Electricity Authority/ State.
- Solar installations for EV charging on government land will also be eligible for an additional 50% concession on land lease payment. The concession will be available under the non-park solar category for the first 50 MW of installations during the policy period.
- The scheme would also be available to the chain of EV charging stations owned by a single service provider.
- Electricity tariffs applicable for all Public and Captive charging stations for commercial use (i.e. charging facilities used by fleet owners) may be notified by JSERC.
- State may issue a separate State EV Policy for the promotion of EVs and use of renewable energy for charging of EVs beyond solar.

9.4.2 Hybrid Renewable Power Projects

The state recognizes the complementary nature of various RE based technologies and would encourage the development of hybrid renewable power projects. Such hybrid projects combining solar with biomass, small hydro, wind etc. could be installed in any of the three categories proposed in this policy document – utility solar, distributed solar and off-grid solar. These power plants, grid connected or off-grid, can be used either for self-consumption or third-party off take. JREDA may carry out potential assessment and devise appropriate provisions for the development of Hybrid Renewable Power Projects.

10 Roles and Responsibilities

10.1 State Nodal Agency

JREDA may be the Nodal Agency for the State of Jharkhand. JREDA and/or the designated offices under JREDA may be responsible for the below mentioned activities.

10.1.1 Registration, Allotment, Implementation, Progress Monitoring and Reporting

- JREDA may be responsible to respond to queries and problems of Developers of Solar Power Projects.
- JREDA may accredit and recommend Solar Power Projects for registration with the designated Central Agency under renewable energy certificate (REC) mechanism.
- JREDA may be responsible for certifying the commissioning of Solar Projects.
- JREDA may, from time to time, undertake the process for allotment of solar power capacities to the project developers. JREDA in consultation with the related stakeholders shall announce the process for allotment of solar power capacities.
- JREDA may facilitate water allocation for cleaning of solar panels and for water requirements during other construction and operations phases.

- JREDA may facilitate approval of power evacuation plans and allocation of bays and other related facilities.
- JREDA may ensure necessary changes in the relevant policies within a period of 60 days from the date of announcement of this policy.
- JREDA may develop innovative implementation mechanisms for different project categories. Such innovative models upon regulatory approval (if needed) will be available for developers as an option to explore in the state.
- JREDA may monitor the implementation, registration and administration of PPA's with respective DISCOMs.
- JREDA may invite proposals on specific orders from the state for conducting tariff based competitive bidding process for the selection of solar project developers in accordance with the guidelines issued by state from time to time as per the provisions in the policy.
- In the event of JSERC deciding to discontinue publishing pre-fixed tariffs, JREDA may have the flexibility to call the bids on a competitive tariff basis.
- Prepare progress monitoring frameworks, and report challenges/ impediments to SLEC from time to time, and prepare and publish action taken reports.
- Report progress across categories to the State Energy department and the Central Ministry.
- Continuous measurement of socio-economic benefits of solar projects, including investments, jobs, livelihoods, education, skilled workforces etc.

10.1.2 Single window facility

- All required approvals/clearances shall be disposed within 30 days from the date of registration of the projects and 30 days from the date of finalization of bidding process for projects developed as per clauses. All necessary amendments in the concerned Acts of the State shall be notified within 60 days from the date of announcement of this policy.
- JREDA may work with the relevant department to set up the Solar Policy cell which will act as a single window facility for all clearances and approvals. In addition, JREDA may facilitate to notify the modalities of the single window clearance mechanism within 30 days from the date of issue of this policy.
- JREDA may assist solar project developers in obtaining all necessary clearances and approvals from different government departments through single window facility as specified in the clauses 8.2.

10.1.3 Facilitate in land allocation

- JREDA may do demand aggregation for procurement of power for government departments. JREDA may coordinate with different departments to identify unused land parcels.
- JREDA may share the details of the land bank on its website and notice board.
- JREDA may also be responsible for collection of application fee, security amount etc. and then returning it to Developers/ Power producers as per terms of this policy and its amendments from time to time.

- JREDA may be responsible for allocation and maintenance of land, and re-allotment of the land back to the respective departments upon expiry of the lease agreement and as per instruction of the JRPLAC.
- JREDA may develop guidelines for the development of solar parks through JV with private developers or with Central or State Level public sector utilities (PSUs) on private and Government lands.
- JREDA may establish a Special Purpose Vehicle (SPV) to develop the infrastructure in the solar park and to manage the solar park.
- JREDA may call for EOIs and conclude subsequent formalities for arranging private land banks.
- For Solar Villages, JREDA may identify and map land banks in the villages consisting of Government as well as private lands suitable for solar deployments (refer to the EOI process indicted for aggregating private lands).
- JREDA may conduct feasibility analyses for the identified sites to evaluate the potential and convert these lands into available land banks for development of projects across different categories.

10.1.4 Facilitate deployment of Solar Villages

- JREDA in coordination with all the concerned departments may notify the constitution and possible compositions of VLC comprising of Gram Panchayat members and other active groups in villages such as women self-help groups, youth groups, etc.
- JREDA may identify a priority list of villages to be transformed into solar villages and publish the list of potential sites/villages (where grid extension/provision of grid electricity is costly for DISCOM) for deployment of RE-based mini/micro grids.
- To implement the mini grid projects, villages or hamlets with a minimum number of 40 households shall be preferred for implementation of the project.
- JREDA along with the help of district administration may call in for the interested farmers willing to adopt solar water pump for irrigation activities and accordingly may issue a tender for installation of such Solar water pumps or may go with the selected or identified bidders remarked by MNRE for the same.
- JREDA may be responsible to identify schemes/ programmes to support livelihoods in the State that can be supported through renewable energy technologies.
- JREDA may be responsible to identify focus areas for introduction of DRE livelihood applications in the State.
- JREDA may work with DISCOM to create an enabling framework with direct/indirect benefits for replacement of conventional applications with solar powered applications.
- JREDA may develop innovative business models to deploy off-grid – mini/micro grid projects and solar water pumps and encourage innovation and R&D to create efficient and cost-effective tailor-made solutions as per the needs of the local population.
- Facilitate easy access to end-user finance for these applications and pilots through schemes involving NABARD, Regional Rural Banks (RRB's), SIDBI, MFIs, multi-laterals, bilaterals, philanthropic organizations. A part of the Green Fund may be dedicated to extending credit to identified projects and village-level enterprises.

10.1.5 Solar Purchase Obligation (SPO)

- JREDA, in consultation with JSERC, would strive to lower the minimum eligibility requirement to designate an obligated entity and define SPO targets periodically. This would contribute in creating the demand for solar in the state.
- The obligated entities can meet their SPO targets either through the installation of rooftop solar systems (grid-connected, captive or group captive) or through various market mechanisms proposed in the policy such as open-access, subscription to green tariff etc.

10.1.6 Facilitate deployment of Canal Top Projects

- JREDA may also explore the opportunity of development of canal top projects in the PPP model with option of revenue sharing with the Government.
- JREDA may carry out a feasibility analysis to estimate the potential capacity that can be installed on the canal tops.

10.1.7 Facilitate deployment of Floating Solar Projects

- JREDA may devise guidelines for the development of floating solar power plants and facilitate providing applicable incentives in line with the policy.
- JREDA in coordination with relevant departments may identify potential sites on dams, reservoirs, coal plant reservoirs for installing floating solar projects.
- JREDA may share the list of identified sites with the Department of Water Resources and the developer for the installation of floating solar power projects.

10.1.8 Facilitate deployment of rooftop solar

- JREDA may also support the distribution licensee in developing the protocols and procedures for net metering and virtual net metering, connectivity with the electricity system, and power purchase agreements etc. for seamless adoption of rooftop solar photovoltaic power plants by the stakeholders.
- JREDA may create a rooftop solar data bank capturing building details and rooftop solar potential in coordination with various government departments, commercial as well as industrial consumers.
- JREDA may facilitate the project developers in identifying the technically feasible sites/roofs under jurisdiction of the State Government for deployment of demand aggregation models and other small-scale solar power projects. JREDA may charge a nominal fee for extending its services. JREDA may also encourage deployment of solar power projects on sites/roofs under jurisdiction of private institutions/buildings.
- JREDA in coordination with DISCOM, may develop innovative implementation mechanisms for rooftop solar. Such innovative models upon regulatory approval (if needed) shall be available for developers as an option to explore in the state.
- JREDA may approach JSERC to announce a separate feed-in tariff applicable to solar rooftop power plants, after considering the State specific parameters as mentioned in the Jharkhand State Solar Rooftop Policy 2018.

10.1.9 Payment Security Mechanism (PSM)

- JREDA in consultation with the departments may also set up a payment security mechanism for sale of electricity to government departments and DISCOMs.

- JREDA may explore option of creating the PSM by means of creating ESCROW accounts of the department and the developer and the first right of way with the developer for collection of undisputed dues which the department may have failed to pay in time.
- JREDA may also create the PSM with Post-dated cheques (PDC) or Bank Guarantees from government department.
- JREDA may also provide assistance to the developers by engaging with the government department and arranging for documents required for availing finance.
- JREDA may facilitate the solar plant developer(s) to avail the subsidy available from Central and/or State Government.

10.1.10 Budgetary Support and other financing support

- JREDA may undertake a detailed assessment of the support required for encouraging implementation of targets identified under this policy. JREDA will submit the fund requirements for consideration of the State Government for budgetary support or to the department managing the Green Fund.
- The fund created by JSERC for the collection of penalties from Obligated Entities under default as per JSERC (Renewable Purchase Obligation & its Compliance) Regulations notified by the Commission from time to time. JREDA shall utilise these funds to install Solar Power Plants in the State.
- State shall promote in the creation of a robust investment climate that enables multiple financial models to develop solar projects. JREDA may facilitate with National Bank for Agriculture and Rural Development (NABARD)/Power Finance Corporation (PFC)/REC/Banks in line with priority sector lending or any other financial mechanisms for facilitation in the development of solar energy projects.
- The State Government shall create a Green Fund through imposition of suitable cess in line with Jharkhand Green Energy Cess Act 2021. The fund shall be placed under the Department of Planning Cum Finance. The fund so created shall be utilised for organising capacity building and training programmes, creating awareness, offsetting the upfront capital cost for new and promising technologies, interest subvention through Banks and any other aspect deemed necessary for the easy adoption of solar plants in the State.
- The fund could also be utilised to support the installation under different project categories depending on the State priorities.
- Green Fund can also include contributions from any other sources such as funding by bi-lateral or multilateral organisations, exploring existing funds such as District Mineral Fund, Compensatory Afforestation Fund Management and Planning (CAMPA) fund, among others aimed to support the solar target of the state and energy access in the rural areas.
- JREDA could request an equivalent amount from the Central government if mobilised funds through State budgets to support the solar targets of the state.

10.1.11 Consumer Awareness and Capacity Building

- JREDA may create dedicated training facilities in coordination with National Skill Development Corporation/ National Institute of Solar Energy/Skill Council on Green Jobs or any other local agency to rehabilitate and reskill the resources including the mining labour from retired mines. JREDA may explore the finance through

District Mineral Fund, Suryamitra Programme or any other State/Central scheme as introduced from time to time.

- JREDA may organize capacity building & training sessions for participation by the segment stakeholders in coordination with Jharkhand Skill Development Mission Society/National Skill Development Corporation/ National Institute of Solar Energy/ Skill Council on Green Jobs or any other local agency.
- JREDA may also undertake consumer awareness activities along with DISCOMs among the citizens of the state with target area not limited to the urban centers.
- JREDA may develop and maintain a website with educational material and other necessary resources for potential consumers. 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 related information to promote educational awareness among consumers.

10.1.12 Research and Development (R&D)

- JREDA may collaborate with multilateral Agencies at local/ National/ International levels to advance solar energy research and development in the State.
- JREDA may work with relevant departments to support pilot demonstration for carrying out end-of-life waste management.
- Facilitate R&D of storage technologies including generation of hydrogen for use in hydrogen fuel cells, by renewable energy.
- JREDA may carry out potential assessment and may devise appropriate provisions for the development of Hybrid Renewable Power Projects.
- JREDA may undertake research in following focus areas for further Policy Interventions :
 - Identification of actual requirement of storage capacity and suitable technologies considering the demand curve and generation profile of the State.
 - Identifying requirements for training/workshops for capacity building of human resource to achieve the targeted solar capacity of the state.
 - To identify optimal generation capacity mix of renewable and conventional energy sources, considering possible technology options, to match the future demand curve and energy requirement with the generation profile of the State
 - Undertake potential assessment exercises, load flow studies and impact assessment on consumer and utilities for various distributed solar technologies.
 - Conduct landscape assessment of potential DRE livelihood applications in the rural areas of the state and suitable business models.

10.1.13 Energy compacts

- Energy Compacts are voluntary commitments by state and non-state actors to support the Sustainable Development Goal 7 “Ensure access to affordable, reliable, sustainable and modern energy for all”. JREDA may develop a dedicated website/webpage on JREDA website to showcase its Energy Compact and invite businesses and industrial establishments in the State to submit their Energy Compacts.

- Each state department shall be required to announce their energy compacts consisting of their target, actions, timelines, envisioned outcome and impact. The Energy Compact template developed by MNRE shall serve as a reference point. The energy compacts will be displayed on the website with continuous progress updates against the targets and plans. Participation from non-state actors such as companies, non-government organizations (NGOs), among others shall be encouraged.

10.2 Jharkhand State Electricity Regulatory Commission

- JSERC may, on priority basis, notify appropriate regulatory framework for the promotion and deployment of grid-connected solar power projects in the State. The regulatory framework may include the enabling provisions for implementing the policy.
- In addition, JSERC may notify regulations for solar power plants for captive and group-captive arrangements within 6 months of the notification of the policy.
- JSERC as per Electricity Act 2003 may amend the Rooftop Solar PV Grid Interactive Systems and Net /Gross Metering Regulations, 2019 to include Virtual Net Metering. This will promote and facilitate the eligible consumers, especially those located in the urban centers of Jharkhand having constraints like access to adequate rooftop area/ inaccessible rooftops, etc. JSERC may specify a suitable framework for implementing net/gross energy metering regulations for developing solar power plants.
- To promote consumers to opt for green energy, JSERC may introduce 'Green Tariff' for all consumers, including extra high voltage, high voltage, and low voltage categories.
- In addition, JSERC may introduce time-of-the-day solar energy feed-in tariffs to encourage solar energy producers and storage operators to feed-in energy into the grid when demand is high. JSERC may announce separate FiT for rooftop solar projects as mentioned in the Jharkhand State Solar Rooftop Policy 2018.
- JSERC may facilitate JREDA to utilize the fund created through collection of penalties from Obligated Entities under default as per JSERC (RPO & its Compliance) Regulations, to install solar power plants in the State.
- JSERC may introduce regulation on solar power plants for captive consumption under 'behind the meter' arrangement within six months of the notification of the policy.
- Electricity tariff applicable for all Public and Captive charging stations for commercial use (i.e. charging facilities used by fleet owners) may be notified by JSERC.

10.3 Transmission and Distribution Licensee

- The State Electricity Transmission Utility and DISCOM may extend their support and guidance to the eligible entities in installing solar power plants and their connectivity with their electricity system. They may suitably comply with the regulatory framework specified by the JSERC and provisions contained in this Policy.
- DISCOM may, at the request of JREDA from time to time, also provide to JREDA information on the nearest evacuation point and substation capacities for the identified sites under project categories specified in the section 11. DISCOM should update the status of solar capacity installation for distribution transformers on their website to make the process transparent.

- DISCOM will conduct bids for residential consumers under MNRE subsidy scheme. Bids will be invited under capital expenditure (CAPEX), renewable energy service company (RESCO), and innovative business models by DISCOM.
- DISCOM shall do PPA as per the regulatory framework specified by JSERC.
- DISCOM may provide NOC for development of the solar park for sale of electricity to third party consumers under open access.
- For augmentation of transmission/distribution systems to evacuate the power from the receiving substation, Transco/DISCOM may develop/augment the necessary transmission/ distribution network within the specified timeframe.
- DISCOMs may take appropriate technical measures for ensuring grid stability and safety.
- 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 JREDA on a quarterly basis.

10.4 Developers

- Developers may have to comply with waste management rules mentioned in the bidding document. The relevant agency shall make compliance mandatory while designing the bidding document.
- 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.
- Developers shall have to register their projects with JREDA including the captive solar projects installed behind the meter. The registration shall be a prerequisite for final clearance from Chief Electrical Inspector of Jharkhand.

11. Governance

11.1 State Level Screening and Empowered Committee

For approvals of projects with capacity less than 25 MW at a single location, a SLSC will be constituted under the chairmanship of Principal Secretary / Secretary, Department of Energy, Govt. of Jharkhand. The SLSC committee shall meet at least once every quarter to track the progress and take decisions on project approvals. The committee will have the following members: -

Principal Secretary, Department of Energy	Chairperson
Director, JREDA	Member & Convener
Managing Director – JBVNL or its Representative	Member
Managing Director–Jharkhand Urja Sancharan Nigam Limited (JUSNL) or its Representative	Member
Secretary, Department of Revenue, Registration and Land Reforms or its Representative	Member
Secretary, Department of Industries, or its Representative	Member
Principal Chief Conservator of Forests (PCCF), Department of Forest, Environment and Climate Change or its Representative	Member
Secretary, Department of Water Resource or its Representative	Member

For approval of projects above 25 MW at a single location or to undertake any strategic decision other than approval related to solar targets of the state, a SLEC shall be constituted under the chairmanship of the Chief Secretary of the State. The SLEC committee shall meet bi-annually to monitor the progress and take decisions in case of any ambiguity, dispute, difference, or issue in implementation of the policy. JREDA may submit the progress report to the SLEC committee bi-annually. The committee will have the following members: -

Chief Secretary – Government of Jharkhand	Chairperson
Secretary/Principal Secretary, Department of Energy	Member & Convener
Secretary/Principal Secretary, Department of Finance	Member
Secretary/Principal Secretary, Department of Planning cum Finance	Member
Secretary/Principal Secretary, Department of Revenue, Registration and Land Reforms or its Representative	Member
Secretary/Principal Secretary, Department of Forest, Environment and Climate Change or its Representative	Member
Secretary/Principal Secretary, Department of Industries, or its Representative	Member
Secretary, Department of Water Resource or its Representative	Member

For allotment of land, the Jharkhand Renewable Power Land Allotment Committee (JRPLAC) shall make all decisions related to land allotment. The committee shall also be responsible for returning back land to the respective department after expiry of the lease agreement. The committee will have the following members:

Chief Secretary – Government of Jharkhand	Chairperson
Secretary/Principal Secretary, Department of Energy	Member & Convener
Secretary/Principal Secretary, Department of Revenue, Registration and Land Reforms	Member
Secretary, Department of Water Resources	Member
Secretary, Department of Agriculture, Animal Husbandry & Co-Operative	Member

11.2 Mid-term review

State Government may undertake a mid-term review of this policy after a period of two years or as and when need arises in view of any technological breakthrough or to remove any inconsistency with Electricity Act 2003, rules and regulations made there under or under any Government of India policy. Retrospective amendments to the incentives available under this policy shall be avoided for ensuring investor confidence in the State and in the sector.

11.3 Relevant Departments

All concerned departments and organizations would issue necessary follow-up notifications within two months to give effect to the provisions of this policy. The concerned departments are listed below:

- Department of Agriculture, Animal Husbandry & Co-operative
- Department of Commercial Taxes
- Department of Energy
- Department of Forest, Environment and Climate Change
- Department of Industries

- Department of Mines and Geology
- Department of Planning Cum Finance
- Department of Revenue, Registration and Land Reforms
- Department of Rural Development
- Development of Urban Development & Housing
- Department of Water Resources
- State Pollution Control Board

11.4 Power to Remove Difficulties

If there is any ambiguity, dispute, difference, or issue in regard to interpretation/ implementation of this Policy, State Level Empowered Committee may take decision in such matters, not inconsistent with the provisions of the Policy, as may appear to be necessary and expedient for removing the difficulties either on its own or after hearing those parties who have represented for change in any provision.





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