

7.10 Height of the Module Structure

The height of the module structure (maximum 3 meters) 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 the concerned Municipal Corporation or Department of Urban Development & Housing for putting up solar power plants, including any additional system for monitoring the performance of solar power plants in existing or new buildings, except in case of AAI approval (if applicable).

7.11 Payment Security Mechanism (PSM)

UREDA, in consultation with the government departments, shall set up a payment security mechanism for the sale of electricity to government departments and Discoms. UREDA may explore the option of creating the PSM by means of creating ESCROW accounts for the department and the developer. The first right of way remains with the developer for collection of undisputed dues, which the department may have failed to pay in time. UREDA may also create the PSM with Post-dated cheques (PDC) or Bank Guarantees from government departments.

7.12 Prepare model PPAs and request for proposals (RFPs)

UREDA shall issue model PPAs and RFPs subsequent to the issuance of a policy to facilitate the rollout of innovative business models such as community solar, collaborative solar procurement model, and setting up of agrovoltaic projects, among others.

7.13 Timely Completion

If the utility scale 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 developer's control, such as delay in signing PPA or up-gradation of power evacuation infrastructure, electricity duty shall be exempted for such projects on a case-to-case basis.

7.14 Peer-to-peer trading

The state shall promote peer-to-peer trading using blockchain technologies, allowing prosumers to sell power to other grid consumers. UERC shall issue detailed regulations to facilitate peer-to-peer trading in the state. Prosumers shall be able to sell excess energy to interested consumers at a mutually agreed price/dynamically realised price (over the trading platform).

7.15 Deemed Industry Status

All solar power plants shall be treated as 'industry' under the schemes administered by the prevailing industrial policies of Uttarakhand, and incentives available to industrial units shall also be available to the solar power plant developers.

7.16 Must Run Status

State Load Dispatch Centre may ensure the 'Must Run' Status of solar power plants in the state in accordance with the applicable State Grid Code. State Load Dispatch Center (SLDC) must also regularly maintain the data on the quantum and reasoning behind the curtailment of solar power, if any, in a transparent manner. Solar power plants shall forecast and schedule their generation as per

the eligibility criteria and requirements stated in the UERC Regulations, as amended from time to time.

7.17 Capacity Building

- UREDA, along with the department of employment and training, shall facilitate 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 the 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.
- UREDA, in collaboration with NISE or other recognised and credible training institutes, shall focus on targeted capacity building of vulnerable communities. UREDA must also collaborate with NISE to train more Suryamitras and facilitate their absorption in the solar workforces within the state.
- In addition, UREDA shall ensure that these trainings shall be gender inclusive to promote women's participation and are carried out in different districts to ensure equal access to such opportunities.
- UREDA, in coordination with Krishi Vigyan Kendra Network, shall train agricultural farmers in different districts to sensitise them about solar power plants and potential benefits and demonstrate pilot projects.

7.18 Land Banks

UREDA shall set up a land bank to facilitate the identification, aggregation, development and allocation of land for solar power plants. The process of land allotment shall be governed by the Uttarakhand Solar Power Land Allotment Committee (USPLAC)

● Government Land

- UREDA in accordance with the existing land revenue rules/law of Uttarakhand (which may be amended from time to time), shall identify suitable government land, owned by various departments, for solar deployments.
- The District Collector and government departments shall transfer the advance possession of identified land parcels, including land for right-of-way (ROW), to UREDA.
- All identified land parcels will be converted into a land bank for solar deployment. The permission for utilisation of Government land (if available) will be done as per the provision of Uttarakhand Land Revenue Rules/Laws.
- Such conversion to a land bank will be done upon approval from the USPLAC.
- The Government land (if available) shall be provided to the project developer on a long-term lease for 30 years as per the applicable land revenue rules/law of Uttarakhand for the installation of the Solar Power Project.
- UREDA may collect the lease rentals, from the SPPD or the project developer, for a 30 years period or project lifetime (whichever is less) as determined by UREDA.
- In case the government land is found to be used by SPPD for purposes other than related to the solar project, the lease permission will be cancelled with immediate effect. The construction carried out by the developer and equipment's on such land will be seized and vested in the state.

- After completion of the lease period, the land shall be cleared and transferred back to the concerned department/UREDA in the original form by SPPD.

- **Private Land**

- UREDA shall float an 'Expression of Interest (EOI)' for private land owners who wish to offer their lands for sale or on a lease basis for solar power plants.
- Upon receiving such interests under the EOI rounds, UREDA will conduct a feasibility analysis of the sites to evaluate the potential capacity. UREDA 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 UREDA's website, in consultation with the USPLAC, from time to time.
- UREDA 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 UREDA.
- UREDA may utilise the collected lease amount for payment to the revenue authorities towards the land cost and for activities required to streamline identification, record keeping, transactions and inter-departmental coordination.
- After the useful life of the project, land shall be cleared and transferred by the SPPD to the owner of the site in original form.

- **Restrictions on land area allocations for government land**

The approximate land requirement for solar PV technology is 2 Hectares per MW. In the hilly terrains, due to topographical considerations, the maximum limit of land per MW capacity shall be 2.5 Hectares or 31 bighas or 62 Kanals, unless, in exceptional situations, a higher quantum of land is required on an unavoidable basis.

- **Additional provisions**

- There is no land restriction, hectare per MW, that shall be applicable for private land.
- Before acquiring land from a private title holder, the land shall be verified by the revenue official of the concerned district.
- The provisions of the Land Acquisition Act shall be followed to acquire land, and the information shall be updated on Register II by the user agency after acquisition.
- UREDA may provide information of the land banks on its website.
- Upon selection, the SPPD will be required to complete all processes, as notified by UREDA, 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 UREDA and amended from time to time.
- The SPPD must set up the solar power 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 solar power plant for valid reasons on the application made by a lessee to UREDA.
- If the land is not used within the stipulated period or time extended by the State Government, the land shall revert back to UREDA, 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 respective department from the lessee on the expiry of the lease period.
- The allotted land shall be used strictly for the purposes of setting up solar power plants. The SPPD 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 is required for the setting and evacuation of the energy generated thereof.

- The lease rent payable on the land allotted for the setting up of solar power plants shall be paid annually. The detailed guidelines for the determination of lease rentals will be notified by UREDA on their website from time to time in consultation with USPLAC.
 - The SPPD may be allowed to sublease a part or the entire land with prior consent from the SLSC/State Level Empowered Committee (SLEC). The subleased land shall only be allowed for the setting up of solar energy projects, and sub-lessees shall be governed by terms and conditions applicable to the lessee, which may be specified by the State Government from time to time.
 - The SPPD 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 the lessee or sub-lessee, the lease shall come to an end, and the land shall be returned to UREDA.
 - At the time of the return of the land to UREDA, the lease holder shall remove all structures and installations from the land at his own cost, and upon his failure to do so, SLEC shall have the power to dispose of the same and recover the expenses from the solar power producer.
 - The detailed guidelines on the land allotment and requisite form templates, such as application form, lease deed etc., may be uploaded by UREDA within 90 days from the commencement of the policy.
- **Exemptions**
 - **Stamp Duty:** There shall be a 100% exemption of stamp duty on the lease deed of land or purchase of land and any further sub-lease(s) for the land required for the establishment of a solar power plant within the state.
 - **Conversion Charges:** Land for solar power plants 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.
 - **Other Charges:** Exemption from court fee for the registration of documents relating to the lease of land shall be granted to entities. In addition, exemption from land use approval, external development charges, scrutiny fees and infrastructure development charges shall be provided.
 - **Additional incentive for solar-based EV Charging Stations:** Solar installations for EV charging on government land shall also be eligible for an additional 50% concession on land lease payment. The scheme would also be available to the chain of EV charging stations owned by a single service provider.

7.19 Direct benefits to local communities

To promote local employment generation, at the construction and operations stages, 70% employment of the total employment potential in the project will be provided to bonafide residents of Uttarakhand, with preference to displaced communities or communities at risk where Government land is leased out for projects. UREDA shall ensure these provisions are specified in the tendering guidelines and also ensuring that requisite manpower is also trained in the state to undertake such assignments through skill development initiatives as highlighted in section 7.15.

Wherever Government land, where the right holders have community rights, is leased out for project development, 1% of the total cost of the project shall be paid to the Local Area Development Fund or Gram Panchayat Fund for community development works, to be decided by the community of the Right holders.

Where private land is used, no such contribution is mandatory, but the developer may contribute to local development voluntarily.

7.20 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 policies of Department of Industries.

8. Project categories and processes

8.1 Utility Scale Solar

Solar power plants with a capacity greater than or equal to 20 MW are classified as utility-scale solar power plants in plain areas and 5 MW in hilly areas. The cumulative target for utility-scale projects is 600 MW. These projects are further divided into the following categories:

Type I	Projects selected as per the competitive bidding process for selling power to Uttarakhand Discom for meeting their RPO Obligation as specified by UERC from time to time.
Type II	Projects set up on private land for captive use or sale of power to third party within or outside the state or project setup on private land under REC Mode.
Type III	Projects set up on Government land for captive use or sale of power to third party within or outside the state or project setup on government land under REC Mode.
Type IV	Projects set up outside the state for selling power to Uttarakhand Discom for meeting their RPO Obligation as specified by UERC from time to time.

Process

- **Type I and IV Projects:** The total capacity of the project under this category will be as per the RPO target specified by UERC from time to time. UREDA shall invite proposals from time to

time for the selection of solar power plants through tariff-based competitive bidding process separately for hilly and plain terrains. There shall be a set of qualification criteria fixed by UREDA for the prospective Developers of solar power plants. Under type I, only project capacities to be installed in the state of Uttarakhand shall be eligible for incentives under this policy. Type IV projects are not eligible for any incentives provided in the policy.

- **Type II Projects:** Under this type, any prospective developer can establish solar power plants (Solar PV/Solar Thermal) on Private land. Prospective developers shall submit their proposals with all the required information/documents as per the application form issued by UREDA. Under this type, solar power plants to be installed in the state of Uttarakhand shall be eligible for incentives.
- **Type III Projects:** Under this type, UREDA shall facilitate the allocation of land through land banks to prospective developers who want to set up solar power plants on Government land (if available) in the state of Uttarakhand. The detailed guidelines shall be issued by UREDA. Under this type, solar power plants to be installed in the state of Uttarakhand shall be eligible for incentives.

Tariffs:

- **Type I and IV Projects:** For the projects allotted under tariff based competitive bidding route for the sale of power to Discom of Uttarakhand, the Power Purchase Agreement will be executed between Discom of Uttarakhand and successful bidders as per the tariff arrived by the process of tariff-based bidding. However, the rates shall not be more than the ceiling rates specified by the UERC from time to time.
- **Type II and III Projects:** In case of third-party sale within or outside the state or for captive use, the Power Purchase Agreement will be executed between the Power Producer and the Procurer at mutually agreed rates.

A separate Agreement will be executed for banking of power with Discom of Uttarakhand for such banking. The wheeling agreement with Power Transmission Corporation of Uttarakhand Ltd (PTCUL)/ Discom of Uttarakhand / or with other grid or networks as appropriate will be executed separately.

8.2 Distributed Solar

8.2.1 Residential Consumers

The policy will support the deployment of 250 MW of solar capacity in the residential sector. The consumers falling in the category of 'residential consumer' as per the UERC definition shall be eligible to install solar for meeting their own consumption or sale as per the following classification.

I. Rooftop Solar

- The state shall promote the development of rooftop solar power plants among residential consumers.
- Solar power plants, within the consumer premise, can be located on rooftops or on the ground.
- All residential consumers with sanctioned loads of more than 5 kW are mandated to install a rooftop solar system on their premises to meet a minimum of 30% of their annual electricity consumption.

- Residential plots with a sanctioned load of less than 5 kW are encouraged to install rooftop solar systems on their premises.
- All residential consumers are allowed to install solar power plants on their rooftops/premises irrespective of the sanctioned load as specified in the UERC (Tariff and other terms for supply of electricity from renewable energy sources and non-fossil fuel-based Co-generating stations) regulations, 2018.
- Solar power plants can also be set up by the developer on the rooftop/premises of a residential consumer for the generation and sale of power to the consumer on the same premises (third-party sale), for which the developer and consumer shall enter into a power sale agreement. If a third party intends to sell the net energy to Discom, a tripartite agreement needs to be signed between the third party, the eligible consumer and Discom.
- All upcoming large residential complexes, such as housing societies or residential townships, with sanctioned loads of more than 100 kW are mandated to fulfil 100% of common area energy requirements (parks, elevators, gyms, stairs, etc.) with rooftop solar power plants. Constructed buildings and societies shall also be encouraged to meet their energy requirements through solar power.
- UREDA shall provide any additional incentive envisioned in the policy to the residential consumers.

Tariff:

- The accounting for solar generation shall be as per the net-metering (or VNM) regulations notified by the UERC.
- The excess generation shall be compensated based on the feed-in-tariff rates notified by UERC from time to time.

II. Solar Villages

- Under the policy, UREDA shall facilitate the complete solarisation of 1000 villages. These solar villages are targeted to improve the reliability and quality of power supply, boost rural income, strengthen education and health services, and provide employment opportunities by integrating solar into the rural economy. These villages shall serve as model villages not only at the state level but also at the national level.
- The solar villages shall target intervention in four areas - powering villages through community solar installations, powering and strengthening institutional facilities, powering livelihood through decentralised productive appliances, and powering agriculture and agro-based MSMEs.
- The policy also promotes solar plus storage solutions to encourage self-consumption in the identified solar villages.
- UREDA, along with State Rural Livelihood Mission (SRLM), shall 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 related schemes.
- UREDA shall enable a market-oriented framework to attract the private sector for the development and deployment of local servicing of solar-based systems and related livelihood applications in these villages.

- UREDA shall also encourage the deployment carried out under Chief Minister Solar Self Employment generation scheme to be targeted in the identified villages. The scheme shall be expanded to include provisions for solar project installation.

Process:

- UREDA shall identify a priority list of villages to be transformed into solar villages in coordination with Discom, SRLM, panchayati raj and rural development department
- UREDA shall publish the list of potential sites/villages (where grid extension/provision of grid electricity is expensive for Discom) for the deployment of RE-based mini/microgrids. The solar villages shall be selected both from hilly and plain areas.
- UREDA shall work in coordination with SRLM, panchayati raj and the rural development department to formulate a village-level committee comprising Gram Panchayat members and other active members of the village, such as women self-help groups, youth groups and any other groups working for the development of the village. The committee shall also include women representatives.
- UREDA shall identify and map land parcels in the villages consisting of government as well as private lands suitable for solar deployments (refer to the EOI process indicated for aggregating private lands).
- UREDA, along with SRLM, shall assess the energy demand and possibilities or potential of deploying solar applications across economic livelihood sectors in these villages. The demand assessment activities will help in mapping the needs of beneficiaries with appropriate fit to livelihood applications.
- Community installation owned and operated by Gram Panchayat shall be encouraged due to limited daytime load, especially in hilly areas. Excess generation during the daytime shall be fed into the grid and compensated by Discom at the notified feed-in-tariff rates issued by UERC from time to time.
- The proceeds from excess generation shall be channelised towards a developmental fund managed by UREDA. The fund shall be used both by UREDA and Gram Panchayat to carry out solar-based developmental activities in these villages.
- UREDA, with assistance from SRLM, shall facilitate securing low-cost finance for the consumers in identified villages by coordinating with financial institutions.
- Village level committee (VLC) shall carry out awareness drives in the identified villages with assistance from UREDA and SRLM. In addition, the committee shall also be responsible for the operation and maintenance of the community solar installations in the village.

Tariff:

- The accounting for solar generation shall be as per the net-metering (or VNM) regulations notified by the UERC.
- The excess generation shall be compensated based on the feed-in-tariff rates notified by UERC from time to time.

III. Solarising homestays

- Under the policy, home-stays registered as per Deendayal Upadhyay Home-Stay Development Scheme Rules, 2018 shall be considered, which fall under the category of domestic consumers as per UERC regulations.

- The Deendayal Upadhyay Home-Stay Development Policy shall be expanded to support the installation of solar power plants by Homestays.
- Homestays installing solar power plants shall be eligible for incentives as per the Deendayal Upadhyay Home-Stay Development Scheme Rules, 2018 or subsequent amendments by the State government from time to time.
- UREDA, along with the Tourism department, shall carry out awareness drives for these homestays and sensitise them about the potential benefits and processes.
- Homestays installing solar power plants shall also be eligible to claim incentives under the Veer Chandra Singh Garhwali tourism self-employment scheme or subsequent amendments by the State government from time to time.

Tariff:

- The accounting for solar generation shall be as per the net-metering (or VNM) regulations notified by the UERC.
- The excess generation shall be compensated based on the feed-in-tariff rates notified by UERC from time to time.

IV. Solar with storage and mini/microgrids for providing resilience to the power system

- The focus shall be on providing affordable, reliable and clean energy to the rural communities living in hilly and snow-bound areas which are not connected to the grid or prone to grid disruptions / natural disasters. They must be empowered to improve their quality of life through distributed solar energy solutions.
- To solarise these areas, community solar installation with storage solutions shall be targeted.
- In addition, behind-the-meter rooftop solar installation with energy storage shall also be promoted of capacity less than 1 kW.
- UREDA, along with SRLM and the department of employment and training, supports skill development for strengthening the service infrastructure at the local levels through existing central and state training and skilling programmes.

Process:

- UREDA shall identify priority areas for the installation of solar plus storage projects in coordination with Discom, SRLM, panchayati raj and the rural development department.
- UREDA shall issue an expression of interest for private landowners who wish to offer their land on a lease basis or for sale for installing community solar plus storage plants. The land owners can submit their interests to UREDA, in the prescribed formats, within 30/45 days of such notification. Such EOI shall be floated once every year.
- Upon receiving such interests under the EOI rounds, UREDA will conduct a feasibility analysis of the sites to evaluate the potential capacity. UREDA 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.
- UREDA shall formulate a village-level committee as specified in section 8.2.1.
- The system shall be set up by a solar developer/EPC company selected through a tendering process by UREDA. The operation and maintenance of the system shall be carried out by the VLC with assistance from UREDA.

Tariff:

- The accounting for solar generation shall be as per the net-metering (or VNM) regulations notified by the UERC.
- The excess generation shall be compensated based on the feed-in-tariff rates notified by UERC from time to time.

Business models:

For installations by residential consumers, the traditional capital expenditure (CAPEX) and operating expense (OPEX) business model shall be available for adoption. In addition to these models, UREDA, in coordination with Uttarakhand Power Corporation Limited (UPCL), may develop innovative business models for rooftop solar. Such innovative models, upon regulatory approval (if needed), shall be available for developers as an option to explore in the state.

Incentive:

- The electricity duty shall be exempted/reimbursed for five years from the commercial operation date for rooftop solar power plants set up within the state.
- 100% exemption from the payment of State Good Service Tax (SGST) on the sale of rooftop solar power plants 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.
- No transmission and wheeling charges or losses shall be applicable for solar power plants installed under this category.
- No banking charges shall be applicable on solar power banked by residential consumers.
- Cross subsidy and additional surcharge shall be exempted for the solar power plants set up under the VNM framework.
- Consumers staying in the homestay shall be encouraged to make eco-donation to contribute towards solar project installation by the homestay. Against these donations, an investment tax certificate shall be issued to the donor by the tourism department.
- **Capital Subsidy:**

Project Categories	Capacity (kW)	State Subsidy (INR/kW)	Remarks
Rooftop Solar	0-1	23000	Flat subsidy inversely proportional to system capacity
	1-3	17000	
Community Solar	5-500	8000	Support community loads in high-rise societies and rooftop solar systems with shared ownership and residential consumers as end beneficiary
Solar Villages	50-200	15000	