

7.14 Deemed Industry Status

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

7.15 Must Run Status

State Load Dispatch Centre may ensure the 'Must Run' Status of the state's solar power plants as per the 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.

7.16 Capacity Building

- UREDA, along with the department of employment and training, shall facilitate skill development for strengthening the service infrastructure at the local levels. The skill development may be through existing state and Central government training and skilling programmes. Such programmes include those 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.
- UREDA shall facilitate training/orientation staff from all relevant departments, including UREDA district officials, to ensure smooth implementation of processes defined under the policy, including single window portal, land banks, among others.

7.17 Land Banks

UREDA shall facilitate the setting up of a land bank, including 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 shall liaise with the Department of Revenue in setting up a land bank.
- 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 in collaboration with research and technical institutions in the state.

- o The District Collector and government departments shall transfer the advance possession of identified land parcels, including land for right-of-way (ROW), to the Department of Revenue.
 - o 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.
 - o Such conversion to a land bank will be done upon approval from the USPLAC.
 - o 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.
 - o Department of Revenue may collect the lease rentals may collect lease rentals, from the SPPD or the project developer, for a 30 years or project lifetime (whichever is less) as determined by UREDA.
 - o If the government land is found to be used by SPPD for purposes other than the solar project, the lease permission will be cancelled immediately. The construction carried out by the developer and equipment on such land will be seized and vested in the state.
 - o 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.
 - o Preference for allotment of government land may be given to UREDA/state/ Central PSUs.
- **Private Land**
 - o UREDA shall float an 'Expression of Interest (EOI)' for private landowners who wish to offer their lands for sale or lease for solar power plants.
 - o Upon receiving such interests under the EOI rounds, UREDA will conduct a feasibility analysis of the sites in collaboration with research and technical institutions 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.
 - o 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.
 - o After the project's useful life, the land shall be cleared and transferred by the SPPD to the site's owner in its original form
 - o Developers who wish to install solar plants are free to identify lands on their own. The developers will either have to purchase the land or lease land on a long-term basis.

- **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 unless, in exceptional situations, a higher quantum of land is required on an unavoidable basis.

- **Additional provisions**

- No land restriction, hectare per MW, shall be applicable for private land.
- Before acquiring land from a private title holder, the land shall be verified by the revenue officer of the concerned district.
- The provisions of the Land Acquisition Act shall be followed to acquire land.
- UREDA may provide information on 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 two years from the date of allotment of land, provided that UREDA 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 or extended time period, it shall revert to the Department of Revenue, free from all encumbrances.
- The land shall be allotted for 30 years and up to a maximum 35 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 required for the setting and evacuation of the energy generated.
- The lease rent payable on the land allotted for the setting up of solar power plants shall be paid annually. The detailed guidelines for lease rent determination 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 leaseholder shall remove all structures and installations from the land at his own cost. 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 50% exemption/reimbursement of stamp duty on the lease deed of land or purchase of land and any further sub-lease(s) for the land required to establish 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 a 100% waiver on land use conversion charges/fees.
 - **Other Charges:** Exemption from court fee for the registration of documents relating to the land lease 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.

7.18 Direct benefits to local communities

To promote local employment generation, at least 50% employment of the total employment potential during the construction and operational stages of 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. In the initial two years of the policy, any shortages of trained local manpower may be met through non-bonafide residents. The Government of Uttarakhand shall include these provisions/requirements in the standard bidding documents issued from time to time. In addition, UREDA shall also ensure that requisite manpower is also trained in the state to undertake such jobs through skill development initiatives, as highlighted in section 7.17.

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 or District Tourism Development Committee (DTDC) for community development works, to be decided by the rural development department.

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

7.19 Manufacturing

The Government intends to promote solar manufacturing facilities to support economic growth and job creation. The following incentives shall be applicable for new manufacturing facilities and equipment and ancillaries related to solar power projects set up within the state.

- Priority allotment of Government land in solar parks on a long-term lease basis.

- Waiver of electricity duty for the new manufacturing facilities and ancillaries of the Solar Power Projects for a period of 5 years.
- 50% exemption/ reimbursement on stamp duty.
- 50% 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 the Department of Industries.

8. Project categories and processes

8.1 Utility Scale Solar

The cumulative target for utility-scale projects is 1100 MW. These projects are further divided into the following categories:

Type I	Projects selected as per the competitive bidding process for selling power to Discom for meeting its 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 projects setup on government land under REC Mode.
Type IV	Projects set up outside the state for selling power to Discom for meeting its RPO Obligation as specified by UERC from time to time.
Type V	Projects set up on private land for selling power to Discom for meeting its RPO Obligation as specified by UERC from time to time

Under Types I, II, III and IV, solar power plants with a capacity greater than 200kW are classified as utility-scale solar power plants. Under Type V, small size grid-connected solar power plants of capacity above 50 kW and upto 200kW shall be allowed.

Process

- **Type I and Type 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, facilitated by Discom, shall invite proposals from time to time for the selection of solar power plants through a 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, solar power plants to be installed in the state of Uttarakhand shall be eligible for incentives, including the benefits provided to MSME industries from time to time. 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 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, including the benefits provided to MSME industries from time to time.

- **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 with support from UJVNL. 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, including the benefits provided to MSME industries from time to time.
- **Type V Projects:** Under this type, any prospective developer can establish solar power plants on private land (including barren and cultivable agricultural land). Prospective developers shall submit their proposals with all the required information/documents as per the application form issued by UREDA. The deployments carried out under the Chief Minister Solar Self Employment Generation scheme are considered under this category. Under this type, solar power plants to be installed in the state of Uttarakhand shall be eligible for incentives, including the benefits provided to MSME industries from time to time.

Tariffs:

- **Type I and IV Projects:** Under this category, the discom shall be the sole procurer of the power generated, the solar projects will be setup through competitive bidding process. Power Purchase Agreement will be executed between Discom and successful bidders at 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.
- **Type V Projects:** Under this category, the power generated shall be purchased by Discom at pre-fixed tariff determined by UERC from time to time.

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

8.2 Distributed Solar

UREDA shall be the nodal and implementing agency for the deployment of distributed solar projects in the state.

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 power plants 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 premises, can be located on the rooftop or on the ground.
- All residential consumers with sanctioned loads higher than 10 kW are encouraged to meet a minimum of 30% of their annual electricity consumption over the next five years through RE sources.
- Under this policy, all residential consumers 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, as amended from time to time.
- Solar power plants can also be set up by a 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 300 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 livelihoods 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 the State Rural Livelihood Mission (SRLM), shall support skill development for strengthening the service infrastructure at the local levels through existing state government-run training and skilling programmes and 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 the 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, the Department of Panchayati Raj and the Department of Rural Development.
- 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, the Department of Panchayati Raj and the Department of Rural Development 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 installations 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 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 and Trekking Traction Centres

- Under the policy, home-stays registered as per Deendayal Upadhyay Home-Stay Development Scheme Rules, 2018 and Trekking Traction Centres as per Trekking Traction Centre Homestay Yojana, 2020 shall be considered, which fall under the category of domestic consumers as per UERC regulations.
- The Deendayal Upadhyay Home-Stay Development Scheme 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 of installing solar power plants.
- 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 power plant installation with storage solutions shall be targeted.
- In addition, behind-the-meter rooftop solar power plant installation with energy storage of capacity less than 1 kW shall also be promoted.

- UREDA, along with SRLM and the Department of Employment and Training, shall support 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, the Department of Panchayati Raj and the Department of Rural Development.
- 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 the 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 models shall be available for adoption. In addition to these models, UREDA, in coordination with Discom, 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:

- 50% reimbursement 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.
- No transmission and wheeling charges or losses shall be applicable for solar power plants installed under this category.
- 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, a payment receipt shall be issued to the donor by the tourism department.

Capital Subsidy:

- The state government shall provide subsidy over and above the subsidy from the Central Government.

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	
Behind-the-meter (with energy storage)	<1 kW	23000 (without storage) 28000 (with storage)	Focus on off-grid households located in remote areas or prone to grid disruptions

8.2.2 Solar for livelihood

- The policy would support the deployment of state-of-the-art use of solar energy for livelihood activities in rural areas.
- The policy encourages innovation and research and development (R&D) to develop efficient and cost-effective tailor-made solutions per the local population's needs.
- UREDA shall draw inferences from the MNRE Policy framework for developing and promoting decentralised renewable energy (DRE) livelihood applications to frame a specific scheme for Uttarakhand.
- UREDA would also facilitate their scale-up through dedicated schemes with subsidies and innovative business models drawing from both national and international experiences. This would support pilot and field demonstrations of new applications and technology innovations on the ground.
- Low-cost finance offered under Chief Minister Self Employment Generation Scheme and Chief Minister Self-employment Scheme (Nano) shall be extended for solar livelihood applications notified by UREDA on their website.

- UREDA, along with SRLM and the Department of Employment and Training, shall facilitate in developing and implementing skills and training programs for DRE livelihood applications and agrovoltaic projects with SRLM, SCGJ, National Institute for Rural Development and other relevant central/state government departments.

Process:

- UREDA together with SRLM, with inputs from village-level representatives, shall assess the potential for diverse solar-based applications and livelihood opportunities that can be supported through the incentives and framework under this policy.
- Post finalisation of the product, a catalogue of DRE powered livelihood applications shall be available on UREDA's website, which shall be used by stakeholders for awareness creation.
- UREDA, along with SRLM and VLC, shall carry out awareness drives in the identified villages about solutions, installation, usage and best practices through innovative methods such as awareness drives, demo vans, establishment of Livelihood Application Park displaying products, etc.
- UREDA, in coordination with SRLM, shall create demonstration centres for the identified livelihood applications to sensitise consumers in different districts.
- UREDA, with assistance from SRLM, shall facilitate secural of low-cost end-user finance for these applications and pilots through schemes involving National Bank for Agriculture and Rural Development (NABARD), rural and regional banks, MFIs, and multilateral, bilateral, and philanthropic organisations.

Incentive:

- 50% exemption/ reimbursement on stamp duty on the sale of livelihood products.
- 50% Net SGST reimbursement to solar energy equipment manufacturers.
- 100% reimbursement of custom duty on input required for manufacturing the livelihood applications for a period of 5 years.
- Low-cost finance provided under different self-employment generation schemes notified by the State Government shall be extended towards these projects.

8.2.3 Commercial and Industrial (C&I) Consumers

The policy aims to achieve deployment of 750 MW of solar capacity by commercial and industrial consumers through rooftop solar (including ground mount systems within the consumer premise), captive power plants (on-site and off-site) and open access projects. All commercial and industrial consumers, as notified by UERC in their Grid Tariff Orders, shall be eligible to install solar as per the following provisions.

I. Rooftop Solar

Process

- The state shall promote the development of captive/group captive rooftop solar power plants by C&I consumers on rooftops as well as ground-mounted systems within consumer premises.