

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
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### 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. 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, 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, the 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 to secure 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:

- Electricity duty shall be waived off for the manufacturing facilities for solar-based technologies for livelihood applications as well as consumers of livelihood applications for a period of 5 years.
- 100% exemption/reimbursement on stamp duty on the sale of livelihood products.
- Net SGST reimbursement to solar energy equipment manufacturers. This exemption is subject to approval/ recommendation from the GST council.
- 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 deploy 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.
- All C&I consumers shall be allowed to install rooftop solar systems up to their sanctioned load.
- All industrial and commercial establishments in urban areas with a connected load of 100 KW or contract demand of 120 kVA and above are mandated to fulfil at least 20% of their annual energy requirements through renewable energy sources, including solar energy. This shall be in line with the Energy Conservation Building Code, 2017 (Revision 2021).
- The policy encourages the deployment of behind-the-meter, off-grid, captive solar power plants. There shall be no capacity restriction for behind-the-meter captive rooftop solar systems (with or without storage) installed by C&I consumers.
- All behind-the-meter projects shall be subject to inspection by Chief Electrical Inspector (CEI) and to be registered with UREDA.
- The policy encourages all commercial and industrial establishments to install solar-based EV charging stations on their premises. In such cases, the consumer will be allowed to install excess solar capacity within the consumer premise, equivalent to sanctioned load of an EV charging station.

##### **Business models:**

For installations by commercial and industrial consumers, the traditional CAPEX and OPEX business models shall be available for adoption. In addition to these models, UREDA, in coordination with UPCL, may develop innovative business models (such as collaborative procurement model, and anchored procurement model, among others) for rooftop solar. Such innovative models, upon regulatory approval (if needed), shall be available for developers as an option to explore in the state.

### **Tariff**

- Injection from rooftop solar power plants during peak hours shall be considered towards banking as per the provisions specified in banking regulations.
- Excess energy fed into the grid during non-peak hours shall be considered towards green banking and shall be compensated at a rate specified by UERC from time to time as specified in section 7.5.
- Excess drawl by the consumer from the grid, if any, after giving set-off shall be charged by Discom at an applicable tariff of the respective category of the consumer as determined by UERC from time to time.

## **II. Open Access**

The policy encourages the deployment of captive and group-captive, and third-party solar power plants (grid-connected) through open access in the state.

### **Process**

- UREDA shall, within 90 days, formulate detailed guidelines for setting up the development of captive and group captive and third-party solar power plants.
- Group net-metering is allowed for all commercial and industrial consumers for rooftop solar installations.
- The developer shall be responsible for the registration of solar power plants with UREDA as per the provisions of Uttarakhand State Solar Policy, 2022.

### **Incentives**

All C&I consumers installing solar power plants as per the criteria specified in the earlier section shall be eligible for the following incentives:

- For intra-state Open access (captive, group-captive and third-party projects)
  - **Exemption from transmission and wheeling charges:** Grid-connected solar captive power projects (including storage systems) or projects set up for third-party sale, less than 25 MW, shall attract 100% exemption from transmission and wheeling charges for a period of 5 years from the date of commissioning of the project. The transmission and distribution losses, however, are fully applicable for both third-party projects as well as captive solar within the state.
  - **Exemption from cross-subsidy surcharge and additional surcharge:** The cross-subsidy surcharge and additional surcharge shall be exempted for the solar power plants set up for third-party sale within the state (less than 25 MW) and captive/group captive solar power plants through open access.
- All industrial consumers registered under the MSME act 2006, shall be eligible to avail of the following incentives in line with the state MSME policy 2015 and subsequent amendments:
  - Interest subsidy of up to 10%, subject to a maximum of Rs. 8 Lakhs, shall be provided to consumers investing in solar rooftop plants and captive solar power plants (including solar plus storage projects) as provided under the MSME policy of 2015 and its subsequent amendments thereof.,
  - Capital subsidy of up to 40% of capital cost, subject to a maximum of Rs. 40 Lacs, shall be provided to consumers investing in solar rooftop plants and captive solar power plants as provided under the MSME policy of 2015 and its subsequent amendments thereof

- 100% exemption from the payment of SGST on the sale of rooftop solar and captive solar power plants shall be provided for a period of 5 years from notification of this policy. This shall be subject to approval/ recommendation from the GST council.
- Electricity duty shall be exempted/reimbursed for 5 years from the commercial operation date for rooftop solar and captive solar power plants.
- All eligible manufacturing and service-based establishments shall continue to receive interest subsidies as applicable, as per the terms of the Heavy Industrial Investment and Employment promotion policy, 2018 for the installation of solar power plants.
- All eligible units installing solar power plants shall benefit from the Central Capital Investment Incentive for Access to Credit (CCIIAC) as per the term of the Industrial Development Scheme, 2017.

#### **8.2.4 Government/Institutional Consumers**

The policy aims for 350 MW of solar capacity deployment by the government and institutional consumers in the state.

- The state shall promote the deployment of rooftop solar power plants for captive/self-consumption on the roofs/premises of the government departments and state government-owned institutions as defined by the policy.
- All existing and upcoming government institutes and buildings are mandated to fulfil at least 20% of annual energy requirements through renewable energy sources, including solar energy. This shall be in line with the Energy Conservation Building Code, 2017 (Revision 2021), applicable for specified building types with a connected load of 100 KW or contract demand of 120 kVA and above.
- Rooftop solar power plants and ground-mounted solar power plants by government departments and institutions, within or outside the premises, can be installed under group and virtual net-metering provisions.
- UREDA shall aggregate demand and conduct bids for such institutional buildings. Bids shall be invited under CAPEX, renewable energy service company (RESCO), as well as other innovative business models.
- UREDA, in coordination with UPCL, 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.
- For all solar power plants on government establishments, UREDA may provide maintenance and upkeep services upon request from the government departments. This can be done by UREDA themselves or by hiring third-party annual maintenance contractual (AMC) service providers. UREDA can collect a pre-determined fee for facilitating the maintenance services.
- In all business models, the available premises shall first be utilised to set up solar power plants to meet/offset the government institute/building's energy demand. The Discoms can decide on utilising the additional space for installation based on integration studies for the region.
- For setting up solar-based EV charging stations in their premises, government institutes and buildings can install higher capacity beyond their sanctioned load, commensurate to contracted demand (in kW) for EV charging stations, to meet the charging requirement. The charging stations may be established by the State Public Sector Undertakings, private operators or under public-private partnership models.

#### **Business models:**

- **Energy Compacts**

- All government departments shall develop their Energy compacts - mandatory solar commitments to support the Sustainable Development Goal 7 “Ensure access to affordable, reliable, sustainable and modern energy for all”.
- The Energy Compacts should define the target for solar power systems, action plan, timelines, responsible personnel, envisioned outcomes and impact. UREDA shall develop the necessary template/platform for the Energy Compacts to serve as a reference point while also providing the government departments with technical support for developing the energy compacts.
- UREDA shall develop a dedicated website to showcase the Energy Compacts of various departments. The portal may be opened for other large electricity consumers in the state to submit their own Energy Compacts on a voluntary basis.
- Different departments are expected to formulate their Energy Compacts within one year of this policy and submit them to UREDA.
- Each department shall be required to provide continuous progress and updates against the target to UREDA, which shall also be displayed on the energy compacts website.
- UREDA shall serve as the monitoring and facilitation agency for the Energy Compacts and shall maintain the website and progress reports for the Compacts.
- UREDA will also facilitate rooftop solar installations if requested by the departments. The capacity aggregated under the Energy Compacts may be bid out by UPCL/UREDA through innovative business models.
- Under Energy Compacts, government departments shall be allowed to install solar power systems with capacity up to the sanctioned load of the buildings with net-metering provisions. Any additional roof space/land available with government departments shall be offered to UREDA for a solar data bank.

- **UREDA solar data bank**

- UREDA shall create a solar data bank capturing building details and rooftop solar potential for all government institutes and buildings in coordination with various government departments.
- Such additional roof space may also be utilised by Discoms to meet their RPO targets. Government buildings in rural and semi-urban areas can be leveraged for community installations.
- Third-party solar developers may utilise the additional roof space of government establishments for solar power plants under the green banking provisions. UREDA shall develop the model guidelines for such installations.

- **Group net-metering**

The provisions associated with group and virtual net-metering are extended to all consumers under the government/institutional consumer category.

**Tariff:**

- The accounting for solar generation shall be as per the net-metering, group net-metering and virtual net-metering 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.

**Incentives:**

- There shall be no cross-subsidy surcharge, additional surcharge, transmission and distribution losses, and transmission and wheeling charges for systems installed through group net-metering on government establishments and those installed for third-party sales
- Benefits such as banking facility and payment of surplus energy by Discoms under the net-metering scheme as applicable to domestic consumers shall also apply to government offices, schools, colleges, hospitals and any other government buildings notified by State Government.
- The electricity duty shall be exempted/reimbursed for five years from the commercial operation date for solar power plants set up within the state.
- 100% exemption from the payment of State Good Service Tax (SGST) on the sale of 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.

**8.2.5 Agriculture consumers**

This category shall include agrovoltaic power plants (including solarisation of agriculture feeders) and solarisation of agriculture pumps.

**I. Agricultural solar installations****General**

- The policy shall promote the deployment of solar power plants on uncultivable and cultivable agricultural land parcels to support rural electrification and boost rural economy.
- This category shall include agrovoltaic power plants and solar agriculture feeders. The projects may be integrated with different agricultural areas like “cropland”, “grassland”, and “greenhouses/polyhouses”.
- The policy shall target to install 50 MW (1.4 per cent of the overall potential for agrovoltaic systems in the state with an approximate land requirement of 105 hectares) of solar capacity in the state through agrovoltaics. The policy intends to demonstrate the potential of agrovoltaics and accruing benefits to the rural community.
- UREDA shall promote the development of different types of agrovoltaic systems in the state, including latitude mounted monofacial modules - standard design; latitude mounted monofacial modules - elevated design; solar trees; Latitude mounted bifacial modules - elevated design; vertically mounted bifacial modules - elevated design, among others, to gather more evidence on system performance and crop yield.
- The policy shall encourage the deployment of both grid and off-grid agrovoltaics systems in the state.
- The projects can be set up either for self-consumption or sale to UPCL or third party.
- In addition to agrovoltaics, feeder-level solar power plants may be installed to cater to the power requirement  $r$  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 solarisation.

- For installations by agricultural consumers, the traditional CAPEX and OPEX/RESCO business model shall be available for adoption. In case of a third-party sale, a bilateral agreement shall be executed between the land user (farmer or tenant) and the EPC contractor/developer (agrovoltaic installer), either based on a fixed land lease rental or at subsidised electricity tariff rate on mutually agreed terms.
- In addition, UREDA, in collaboration with the SRLM, agricultural, irrigation and rural development departments, may develop innovative implementation mechanisms for such agricultural solar installations. Such innovative models, upon regulatory approval (if needed), shall be available for developers as an option to explore in the state.

### **Process**

- Agrovoltaic power projects can be set up jointly by individual farmers/ group of farmers/ cooperatives/ panchayats/ Farmer Producer Organisations (FPO)/Water User associations (WUA), developers and UREDA on uncultivable or cultivable agricultural land.
- UREDA, in coordination with UPCL, shall notify sub-station-wise surplus capacity and shall invite applications from interested beneficiaries for setting up the solar agrovoltaic plants.
- UREDA shall conduct bids. Bids shall be invited under CAPEX, RESCO, and other innovative business models.
- For third-party sale, the developer and consumer shall enter into a lease agreement and/or power sale agreement on mutually agreed terms.
- UREDA shall work in coordination with SRLM, panchayati raj and rural development department to sensitise panchayat raj institutions about the projects and its potential benefits to create awareness at the local level.
- UREDA, along with panchayati raj and the rural development department, shall explore funding for agrovoltaics projects available for gram panchayats to resolve irrigation-related issues.

### **Tariff**

- Grid-connected agrovoltaic power plants, for self-consumption, shall be installed under net-metering.
- Excess generation from agrovoltaic systems and solar agricultural feeder projects shall be compensated at the pre-fixed feed-in tariff approved by UERC from time to time.

### **Incentives**

- The state government shall provide 30% capital subsidy on the benchmark cost or the discovered tender cost, whichever is lower. The state capital subsidy will be in addition to any incentives being provided by the central government.
- The electricity duty shall be exempted/reimbursed for 5 years from the commercial operation date for agrovoltaics power plants under net metering.
- 100% exemption from the payment of SGST on the sale of the agrovoltaic power plants under net metering and solar feeders shall be provided for a period of 5 years. This shall be subject to approval/ recommendation from the GST council.
- Grid-connected agrovoltaic power projects selling power within the state shall attract 100% exemption from transmission and wheeling charges for a period of 5

years from the date of commissioning of the project. The transmission and distribution losses shall be applicable for these projects

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

## **II. Solarisation of Agriculture Pumps**

### **i. Grid-connected agriculture pumps**

Individual farmers having grid-connected agriculture pumps shall be supported to solarise pumps. Solar PV capacity up to two times of pump capacity in kW is allowed under the scheme.

#### **Tariff:**

- The solar power generated by projects installed on used or unused agricultural land shall be purchased by Discoms at a pre-fixed levelised tariff.
- The tariff for grid connected agriculture pumps shall be as per the approved tariff as fixed by UERC from time to time.

#### **Incentives**

- The state Government shall provide a 30% capital subsidy on the benchmark cost or the discovered tender cost, whichever is lower. The state capital subsidy will be in addition to any incentives being provided by the central government.

### **ii. Off-grid agriculture pumps**

- The state shall promote the deployment of standalone solar pumps schemes or other state government's initiatives to support the irrigation needs of farmers.
- Individual farmers shall be supported to install standalone solar agriculture pumps on a subsidised basis through a demand aggregation model.
- UREDA, along with the help of district administration, may call for interested farmers willing to adopt solar water pumps for irrigation activities and based on that, it may issue suitable tenders for the installation of such solar water pumps or may go with the selected or identified bidders remarked by MNRE for the same.
- UREDA shall work in coordination with SRLM, panchayati raj and the rural development department to sensitise panchayat raj institutions about the projects and its potential benefits to create awareness at the local level.
- UREDA, along with panchayati raj and the rural development department shall explore funding for agrovoltatics projects available for gram panchayats to resolve irrigation-related issues.
- The state Government shall provide 30% capital subsidy on the benchmark cost or the discovered tender cost, whichever is lower. The state capital subsidy will be in addition to any incentives being provided by the central government.



## **9. Roles and responsibilities**

### **9.1 State Nodal Agency**

UREDA shall be the Nodal Agency for the State of Uttarakhand. UREDA and/or the designated offices under UREDA may be responsible for the below-mentioned activities.

#### **9.1.1 Registration, Allotment, Implementation, Progress Monitoring and Reporting**

- UREDA shall be responsible to respond to queries and problems of developers of solar power plants.
- UREDA shall accredit and recommend solar power plants for registration with the designated Central Agency under REC mechanism.
- UREDA shall be responsible for certifying the commissioning of solar power plants
- UREDA shall, from time to time, undertake the process for allotment of solar power capacities to the project developers. UREDA, in consultation with the related stakeholders, shall announce the process for allotment of solar power capacities.
- UREDA shall facilitate approval of power evacuation plans and allocation of bays and other related facilities.
- UREDA shall ensure necessary changes in the relevant policies within a period of 60 days from the date of the announcement of this policy.
- UREDA shall develop innovative implementation mechanisms for different project categories.
- UREDA shall monitor the implementation, registration and administration of PPA's with respective Discoms
- UREDA shall 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 the state from time to time as per the provisions in the policy.
- In the event of UERC deciding to discontinue publishing pre-fixed tariffs, UREDA 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 power plants, including investments, jobs, livelihoods, education, skilled workforces etc.

#### **9.1.2 Single window facility**

- All required approvals/clearances shall be disposed of within 30 days from the date of registration of the projects and 30 days from the date of finalisation of the 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.
- UREDA shall assist solar project developers in obtaining all necessary clearances and approvals from different government departments through a single window facility.

### **9.1.3 Facilitate in land allocation**

- UREDA may do demand aggregation for the procurement of power for government departments. UREDA shall coordinate with different departments to identify unused land parcels.
- UREDA shall conduct feasibility analyses for the identified sites to evaluate the potential and convert these lands into available land banks for the development of projects across different categories.
- UREDA shall share the details of the land bank on its website and notice board.
- UREDA may also be responsible for the collection of application fees, security amount etc., and then returning it to developers/ power producers as per terms of this policy and its amendments from time to time.
- UREDA shall be responsible for the 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 USPLAC.
- UREDA shall develop guidelines for the development of solar parks on private and government lands.
- UREDA shall call for EOIs and conclude subsequent formalities for arranging private land banks.

### **9.1.4 Facilitate deployment of Solar Villages**

- UREDA shall be responsible for the creation of VLC, identification of villages for solarisation, devising innovative business models, creating awareness and coordination with relevant departments to facilitate the implementation of the scheme.
- In addition, UREDA shall be responsible for creating a developmental fund for the proceeds from compensation by discom for excess generation. UREDA shall be responsible to manage the fund along with VLC for the development of these identified solar villages.
- UREDA shall work with discom to create an enabling framework with direct/indirect benefits for the replacement of conventional applications with solar-powered applications.

### **9.1.5 Solar Purchase Obligation (SPO)**

- UREDA, in consultation with UERC, 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.

### **9.1.6 Facilitate deployment of rooftop solar**

- UREDA shall also support the distribution licensee in developing the protocols and procedures for net metering and VNM, connectivity with the electricity system, and power purchase agreements etc., for the seamless adoption of rooftop solar photovoltaic power plants by the stakeholders.
- UREDA shall develop and maintain the data room in coordination with various government departments, and commercial as well as industrial consumers.
- UREDA shall facilitate the project developers in identifying the technically feasible sites/roofs under the jurisdiction of the State Government for the deployment of demand

aggregation models and other small-scale solar power plants. UREDA may charge a nominal fee for extending its services. UREDA may also encourage the deployment of solar power plants on sites/roofs under the jurisdiction of private institutions/buildings.

- UREDA, in coordination with UPCL, shall develop innovative implementation mechanisms for rooftop solar.
- UREDA shall approach UERC to announce a separate feed-in tariff applicable to solar rooftop power plants.

#### **9.1.7 Payment Security Mechanism (PSM)**

- UREDA, in consultation with the departments, shall also set up a payment security mechanism for the sale of electricity to government departments and
- UREDA shall also provide assistance to the developers by engaging with the government department and arranging for documents required for availing finance.
- UREDA shall facilitate the solar plant developer(s) to avail of the subsidy available from the Central and/or State Government.

#### **9.1.8 Budgetary Support and other financing support**

- UREDA shall undertake a detailed assessment of the support required for encouraging the implementation of targets identified under this policy. UREDA shall submit the fund requirements for consideration of the State Government for budgetary support.
- UREDA shall facilitate to seek financing support for solar for livelihood applications.
- The fund created by UERC for the collection of penalties from Obligated Entities under default as per UERC (Renewable Purchase Obligation & its Compliance) Regulations notified by the Commission from time to time. UREDA shall utilise these funds to support solar installation in rural areas.
- State shall promote creation of a robust investment climate that enables multiple financial models to develop solar power plants. UREDA shall facilitate with 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.

#### **9.1.9 Consumer Awareness and Capacity Building**

- UREDA shall be responsible for undertaking capacity building in the state in coordination with relevant departments.
- UREDA may also undertake consumer awareness activities along with Discoms among the citizens of the state with a target area not limited to the urban centers.
- UREDA 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.

#### **9.1.10 Research and Development (R&D)**

- UREDA shall collaborate with multilateral agencies at local/ National/ International levels to advance solar energy research and development in the state.
- UREDA shall work with relevant departments to support pilot demonstrations for carrying out agrovoltaics projects.

- UREDA shall carry out a potential assessment and may devise appropriate provisions for the development of Hybrid Renewable Power Projects.
- UREDA shall undertake research in the 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 resources to achieve the targeted solar capacity of the state.
  - To identify the 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.
  - Grid integration studies for regions with available areas for installation based on the solar data bank.
  - Undertake potential assessment exercises, load flow studies and impact assessments on consumers 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.
  - Evaluate the feasibility of solar plus storage projects in the state - identifying optimal feed-in-tariff rates.
  - UREDA, along with UERC, may conduct pilot studies/ feasibility studies for the operationalisation of P2P trading.

## **9.2 Uttarakhand Electricity Regulatory Commission**

- UERC shall, on a priority basis, notify appropriate regulatory framework for the promotion and deployment of grid-connected solar power plants in the state. The regulatory framework may include the enabling provisions for implementing the policy.
- UERC shall amend the UERC (Tariff and Other terms for supply of electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018 to incorporate the provisions regarding the cap on rooftop solar installation provided in the Uttarakhand State Solar policy 2022.
- UERC, as per Electricity Act 2003, shall notify the Rooftop Solar PV Grid Interactive Systems and Net /Gross Metering Regulations, including include VNM. UERC 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, UERC shall introduce a 'Green Tariff' for all consumers, including extra high voltage, high voltage, and low voltage categories. UERC shall also allow notify the provisions of green banking in line with the policy.
- In addition, UERC shall 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. UERC shall announce separate feed-in tariff for rooftop solar power plants for residential, agricultural and institutional consumers.
- UERC shall facilitate UREDA to utilise the fund created through the collection of penalties from Obligated Entities under default as per UERC (RPO & its Compliance) Regulations, to install solar power plants in the state.
- Electricity tariff applicable for all Public and Captive charging stations for commercial use (i.e. charging facilities used by fleet owners) shall be notified by UERC.

- Nothing in the Uttarakhand State Solar Policy shall be deemed to limit or otherwise affect the power of the Commission to make an order as may be necessary to meet the ends of justice.

### **9.3 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 UERC and the provisions contained in this policy.
- Discom may, at the request of UREDA from time to time, also provide to UREDA with information on the nearest evacuation point and substation capacities for the identified sites under project categories specified in section 11. Discom should update the status of solar capacity installation for distribution transformers on its website to make the process transparent.
- Discom will conduct bids for residential consumers under MNRE subsidy scheme. Bids will be invited under CAPEX, RESCO, and innovative business models by Discom.
- Discom shall do PPA as per the regulatory framework specified by UERC.
- Discom may provide NOC for the development of the solar park for the 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 shall develop/augment the necessary transmission/ distribution network within the specified timeframe.
- Discoms shall take appropriate technical measures for ensuring grid stability and safety.
- Discom shall promote online applications for net metering. Discom shall also display online the status of all net metering applications received, whether online or offline. Discom shall maintain a database of net metering application requests, approval status, installation and commissioning data, which will be submitted to UREDA on a quarterly basis.

### **9.4 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 the case of a 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 UREDA, including the captive solar power plants installed behind the meter. The registration shall be a prerequisite for final clearance from the Chief Electrical Inspector of Uttarakhand.

## **10. Governance**

### **10.1 State Level Screening and Empowered Committee**

For approvals of projects with a capacity of less than 25 MW at a single location, an SLSC will be constituted under the chairmanship of the Principal Secretary / Secretary, Department of Energy,

Govt. of Uttarakhand. 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: -

PA /Principal Secretary, Department of Energy	Chairperson
Director, UREDA	Member & Convener
Managing Director – UPCL or its Representative	Member
Managing Director–Power Transmission Corporation of Uttarakhand Ltd. (PTCUL) or its Representative	Member
Secretary, Department of Revenue or its Representative	Member
Secretary, Department of Finance 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 Agriculture or its Representative	Member

For the 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 the implementation of the policy. UREDA may submit the progress report to the SLEC committee bi-annually. The committee will have the following members: -

Chief Secretary – Government of Uttarakhand	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 or its Representative	Member
Secretary/ Principal Secretary, Department of Finance 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 Agriculture or its Representative	Member

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

Chief Secretary – Government of Uttarakhand	Chairperson
Secretary /Principal Secretary, Department of Energy	Member & Convener
Secretary/ Principal Secretary, Department of Revenue	Member
Secretary, Department of Water Resources	Member

## 10.2 Mid-term review

State Government may undertake a mid-term review of this policy after a period of two years or as and when the 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 to ensure investor confidence in the state and in the sector.

## 10.3 Relevant departments

All concerned departments and organisations 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
- Department of Commercial Taxes
- Department of Energy
- Department of Forest, Environment and Climate Change
- Department of Industries
- Department of Planning
- Department of Finance
- Department of Commercial Taxes
- Department of Revenue
- Department of Stamps and registration
- Department of Rural Development
- Development of Urban Development
- Department of Town and Country Planning
- Department of Employment and Training
- Department of Panchayati Raj
- Department of Irrigation
- Department of Tourism
- Department of Water Resources
- State Pollution Control Board
- State Rural Livelihood Mission
- Uttarakhand Electricity Regulatory Commission
- Uttarakhand Power Corporation Limited

## 10.4 Power to remove difficulties

If there is any ambiguity, dispute, difference, or issue in regard to the interpretation/ implementation of this policy, the SLEC may take the 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.

## 10.5 Power to Amend

The SLEC may, at any time add, vary, alter, modify or amend any provision of these regulations.