



# **NRSE POLICY 2019**

**DEPARTMENT  
OF  
NEW AND RENEWABLE ENERGY  
GOVERNMENT OF PUNJAB**

**DEPARTMENT OF NEW & RENEWABLE ENERGY, GOVT. OF PUNJAB**

**Notification**

**The \_\_\_\_\_, 2019**

No. \_\_\_\_\_ The Governor of Punjab is pleased to formulate a 'New and Renewable Sources of Energy (NRSE) Policy – 2019', to develop and promote new and renewable sources of energy based technologies and energy conservation measures as well as providing financial & fiscal assistance, thereby addressing the problems arising from depletion of conventional sources of energy and environment pollution. This policy shall replace and supersede the previous policy notified vide No. 10/174/2012/STE (3)/4725 dt. 26<sup>th</sup> December, 2012, unless specifically stated otherwise in the Policy. The Policy would be effective from the date of its notification in the official gazette of Punjab Government and shall remain in operation till the Government notifies the new policy. For giving effect to this policy, necessary amendments in various policies, rules & regulations, wherever necessary, shall be expeditiously undertaken by the concerned departments.

Government of Punjab hereby designates PEDDA as the State Nodal and Implementing Agency for applicability/ implementation of the NRSE Policy 2019 in the State of Punjab. Thus, as per the NRSE Policy 2019, PEDDA shall be empowered to take all the decisions in this regard.

**Dated Chandigarh, the**

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**(Anirudh Tewari) IAS**

**Principal Secretary to Govt. of Punjab  
Department of New & Renewable Energy**

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## **Chapter 1- Introduction**

### **1.4. Punjab – a Progressive State**

The State of Punjab situated in North West India, is one of the most developed state with very high per capita income and development index including infrastructure such as highways, Rail, Power, Education, Telecommunication, etc. The State has excellent human capital & progressive and enterprising people, who can transform every potential opportunity into success. Punjabi diaspora is spread across the world and has carved out a niche for itself. The State Govt. is progressive & cognizant of the necessity and advantages of Renewable Energy.

### **1.5. Punjab – a Strong Agriculture base**

Punjab being agrarian state and has done exceedingly well in Agriculture and has earned the epithet of “Granary of India”. Punjab has highest per capita availability of milk which is almost four times higher than all India level. It is also the 2nd highest cotton and blended yarn producer in the country. Punjab has highest productivity of Kinnow, a citrus fruit in the country and highest production of honey in the country.

Agriculture produces huge quantities of agro residues like paddy straw and other biomass wastes like rice husk, sugarcane trash, cotton stalk, sunflower stalk etc. which can be profitably used to generate electricity and Bio-fuels like Bio-CNG, Bio-Ethanol, Bio-diesel etc. besides Bio-manure.

### **1.6. Punjab’s Industrial landscape – MSMEs, the backbone of Industry**

1.3.1. Agriculture, however, has limited potential to drive future economic growth of the State and it is mainly the industrial & service sector, which play an important role in future economic growth of the State and creation of jobs for its youth.

1.3.2. The key strength of Punjab is its thriving eco-system of well-established Micro, Small and Medium enterprises. To meet the demand of power of the industry and agriculture, renewable energy plays a major role as it is generated using local wastes, is pollution free and as located at the tail end of the grid. Punjab can also be a hub for NRSE equipment manufacturing facility.

### **1.4. Renewable Energy Policy 2019 – A new paradigm**

1.4.1 The present policy will act as a catalyst to set in motion the requisite initiatives to accelerate the setting-up of renewable energy projects in the state to generate power and bio-fuels, thereby improving the environment, value

addition to the agriculture waste and creation of jobs particularly in rural areas for sustainable industrial growth of the State.

1.4.2 The policy envisages substantial alignment and synergy with respective sectoral policies of the Central Government (Ministry of New & Renewable Energy and Ministry of Power) in Renewables and Energy Conservation.

## **1.5 Applicability of the NRSE Policy 2019**

1.5.1 The Policy would be effective from the date of its notification in the official gazette of Punjab Government and shall remain in operation till the Government notifies the new policy.

1.5.2 For giving effect to this policy, necessary amendments in various policies, rules & regulations, wherever necessary, shall be expeditiously undertaken by the concerned departments.

1.5.3 Punjab Energy Development Agency (PEDA) is the State Nodal and Implementing Agency for the NRSE Policy 2019 on behalf of the Govt. of Punjab. All project developers desiring to set-up NRSE projects in the State will be required to submit their project proposals to PEDA for approval and validation. PEDA may also invite proposals to set-up such projects in the State to meet the targets set by the State Govt./PSERC.

1.5.4 Government of Punjab, Department of New and Renewable Energy can amend/ relax/ make additions/ interpret provisions under this policy with due approval of the CMM.

## **Chapter 2- Vision, Objectives and Goals**

### **2.1 Vision**

To develop the state of Punjab as a leading state in the country in the field of Renewable Energy and Energy Efficiency.

### **2.2 Objectives**

- i. To facilitate setting-up of bio-methanation and biomass power projects, projects producing Biofuels (Bio-CNG, Bio-Ethanol, Bio-diesel etc.) using biomass (mainly rice straw) as feedstock and set-up dedicated Biomass Parks based on such projects.
- ii. To promote Hybrid power projects such as Solar-Biomass, renewable–renewable or renewable-conventional sources, for which renewable technologies are approved by MNRE, GOI.
- iii. To promote Non-fossil fuel based co-generation projects in the industry.
- iv. To promote Solar PV and Solar Thermal (including its integration with combined cycle).
- v. To harness the balance viable small hydro potential in the state.
- vi. To encourage Syn Gas power projects in distilleries and Black Liquor based projects in paper industry.
- vii. To facilitate new NRSE sources like fuel cells/Hydrogen/Biofuels of any capacity.
- viii. To support schemes for conservation of energy through Energy Efficiency in various user sectors under the aegis of BEE, MOP, GOI.
- ix. To facilitate any other new renewable energy technologies approved by MNRE.
- x. To formulate schemes for implementation of MNRE programmes in the state.
- xi. To encourage development of a Manufacturing Industry in Renewable Energy Sector.

### **2.3 Goals**

- i. The state aims to accomplish the goal of generation of 21% power requirement through renewable energy in the total energy mix by 2030.

- ii. To exploit the remaining small hydro potential by the year 2030.
- iii. To achieve solar power generation capacity (including IPP, canal-top, rooftop, floating, Hybrid) of 3000 MW capacity by 2030.
- iv. To achieve Non-solar power generation capacity of 1500 MW capacity by 2030 (including IPP Biomass, Biomass & Baggasse Co-generation and Small Hydro).
- v. To reduce dependency on fossil fuels for energy security and sustainability of the State.
- vi. To develop 500 MW equivalent bio-fuels (CBG, Bio-Ethanol, Bio-Coal, Bio-Pellets) projects based on biomass as main feedstock.
- vii. To develop energy storage technology based Renewable energy projects.
- viii. To set up pilot and demonstration projects in upcoming RE technology sectors.
- ix. To promote the development and Usage of Electric Vehicles and Solar Charging Stations in the State.



### **Chapter 3- Solar Power Generation**

- 3.1 Punjab is blessed with abundant solar energy potential, from which clean and green power can be generated on sustainable basis. The Solar energy would mitigate carbon dioxide emissions and combat climate change. The State has over 300 days of sunshine in a year with solar insolation level varying between 4-7 KW/sq.mtr. Policy for Roof top solar plants under Net Metering has already been notified which will continue. Other Solar PV applications like Ground Mounted, Canal Banks, Canal Top, Water Reservoir/ Lake/ Pond /Pool based Floating Solar, Solar Thermal, Hybrid Solar Biomass power projects will be promoted. Policies of MNRE, GOI for Solar PV applications like canal top, agriculture pump sets etc. will be implemented in the state. Solar Thermal based steam units for mass kitchens will be facilitated. Solar Power Generation capacity is targeted at 3000 MWp by 2030. It is envisaged that PSPCL/ LICENSEE would procure the targeted solar power capacity in a phased manner to fulfil the Renewable Purchase Obligation.
- 3.2 The State of Punjab has large agriculture consumption and solar power can help to shift the agriculture load and meet the power demand during the day time. Solar water pumping systems in particular are totally pollution-free and require very little maintenance as compared to the diesel operated pump sets. Solar power can also help to meet energy requirements for both grid-connected as well as off-grid applications such as solar powered agriculture pumpsets. The state aim to promote solarisation of agriculture pump sets as per MNRE, GOI schemes and will be implemented as below:-
- 3.2.1 Decentralized ground mounted grid connected solar power plants of capacity ranging from 500KW to 2 MW by individual farmers/ cooperatives/ Panchayats/ Farmer Producer Organisations (FPO). The surplus renewable power generated will be procured by PSPCL/ LICENSEE at a Feed-in-Tariff (Fit) determined by State Electricity Regulatory Commission.
- 3.2.2 Solarisation of grid-connected agriculture pumps sets by individual farmers. The farmer will be able to use the generated energy to meet his irrigation needs and sell the excess available energy to PSPCL/ LICENSEE.

- 3.3.3 Stand-alone off-grid agriculture Solar Water Pumpsets by individual farmers for replacement of existing diesel agriculture pumps in off grid areas.
- 3.4 Rooftop projects shall be promoted in all sectors including Govt. buildings in order to enhance the share of solar power in the state. PEDDA will implement MNRE, GOI scheme and will facilitate in providing the capital subsidy from Govt. of India where ever applicable. PEDDA will undertake solar rooftop programme in the state for the domestic, industrial and commercial sectors through Grid interconnectivity by deploying net metering / sale of power to PSPCL/LICENSEE.
- 3.5. Punjab State will also promote decentralized and off-grid solar applications, including hybrid system as per guidelines issued by MNRE to meet various electrical and thermal energy requirements. Some of the major applications of solar thermal technologies include solar water heaters, solar cooling systems, air drying, steam cooking, power generation, sterling engine. The off-grid photovoltaic applications include solar PV home lighting, police stations communication and lighting, small powered looms, solar inverters, powering computers in schools, small milk chilling plants, refrigeration for medicine in primary health centres and Hybrid systems for Powering telecom towers etc. The off-grid solar applications shall be promoted for replacement of diesel based generators sets. Guidelines and incentives issued by MNRE, GOI from time to time shall be followed in State for promotion of decentralized and off-grid solar applications.

## **Chapter 4- Non-Solar Power Generation**

### **4.1 Biomass/Agro residue/Bio-fuel Based Projects**

Punjab is predominantly rich in agriculture and contributes major share to the grain basket of India. Around 20 million tons of paddy straw is generated every year. Cotton stalk is waste of cotton crop in south west districts of Punjab. Bagasse, Wheat straw and Paddy husk is already being used profitably. Other agro / processing wastes like maize cobs, sugar cane trash, sunflower stalk, wooden saw dust and mandi reject of paddy are also available locally, seasonally and in small quantities. Instead of burning surplus agro wastes in the fields, these need to be used for generation of Power, Bio fuels and Bio CNG which will contribute to farmer's income and also reduce environmental pollution. It is proposed to achieve a target of 800 MW power generation in this sector by 2030.

### **4.2 Biomass IPP Projects:**

Biomass IPP projects will be awarded through Tariff based competitive bidding. The site for biomass power plant will be chosen by the Biomass Power Developer after ascertaining the availability of biomass and power evacuation facilities. Upcoming environment friendly versions of efficient boilers suitable for paddy straw having Air Cooled Condensers etc. will be promoted.

Any person/company desirous to set up biomass power plant for captive use without using the State Grid shall have to register their project with PEDA.

### **4.3 Bio-fuel based Projects (Bio-ethanol, Bio-diesel & Bio-CNG):**

Biomass can be transformed into liquid/gaseous fuels, called biofuels which can be used for industrial and transportation purposes. The most common types of bio-fuels in use today are bio-ethanol, bio-diesel and Bio-CNG.

Bio-ethanol is a renewable fuel that can be made from biomass such as sugar containing materials, like sugar cane, sugar beet, sweet sorghum etc., starch containing materials such as corn, cassava, algae etc. and cellulosic materials such as bagasse, wood waste, agricultural and forestry residues etc.

Bio-diesel is a methyl or ethyl ester fatty acids produced from renewable sources such as vegetable oils, both edible and non-edible, or animal fat of diesel quality. Bio-diesel non toxic and biodegradable liquid fuel and is a replacement for petroleum-based diesel fuel.

Bio-CNG is the purified form of Biogas where all the unwanted gases are removed to produce >95% pure methane gas. Bio CNG is exactly similar to the commercially available natural gas in its composition and energy potential. Bio CNG can directly replace every utility of LPG and CNG in India. It has the potential to be the future of renewable fuel because of the abundance of biomass.

As these liquid and gaseous fuels are generated from biomass resources such as wastes and residues from agriculture, forestry and related industries as well as biodegradable fraction of industrial and municipal wastes, these are considered renewable sources of energy and thus, attract all the incentives and commercial benefits applicable to other renewable sources of energy.

Promoting use of biomass for production of bio-ethanol, Bio-diesel and Bio-CNG will help in achieving energy security, reduce dependence on conventional sources of energy, foreign currency outgo and will also help to improve environment & soil health as well as create alternate stream of income to farmers and employment in rural areas. It is the endeavour of this Policy to facilitate production of Bio-fuels through utilization of locally available biomass feed stocks.

#### **4.4 Biogas**

Production of Biogas from fermentable organic wastes through anaerobic digestion of cattle dung and other loose & leafy organic matters/biomass wastes shall be promoted & facilitated as it is clean low carbon technology for efficient management and conversion of into clean, cheap & versatile fuel and bio/organic manure. The salient benefits of biogas technology are given below-

- (i) It provides clean gaseous fuel for cooking and lighting.
- (ii) Digested slurry from biogas plants is used as enriched bio-manure to supplement the use of chemical fertilizers.
- (iii) Biogas Plants help in reducing the causes of climate change.

##### **4.4.1 Compressed Biogas**

Biogas can be further compressed and transported for usage as an energy source for various applications namely, cooking, heating, space cooling/refrigeration, electricity generation and gaseous fuel etc.

PEDA will facilitate in setting-up of biogas power projects in the state.

#### **4.5 : Bagasse/ Biomass Co-generation Power Projects**

Surplus electricity can be generated in the state from the by products of sugar, paper, fertilizer, chemical, textile and other industry. The projects need to be promoted as farmers can also get additional benefit from such projects. The state is having an estimated combined potential of 500 MW, which is still to be realized. It is proposed to encourage the industry to set up co-gen plants and achieve capacity addition of 500 MW by 2030. These projects shall meet the qualifying criteria under topping cycle as per CERC regulations.

Cogeneration projects under bottoming cycle or based on back pressure turbines and tri-generation projects utilizing the waste heat for heating/cooling/chilling purposes shall also be encouraged.

#### **4.6 : Small/ Mini/ Micro Hydro Power Projects**

The promotion of small hydro power continues to be one of the thrust areas for generating grid quality power from renewable. By virtue of its topographic location and agriculture base, the State has an extensive irrigation canal network with estimated total potential of over 250 MW. The State Government is committed to exploit the untapped potential by the year 2030.

#### **4.7: Industrial Liquid / Solid Waste based Projects**

Management of Industrial Liquid/ Solid Waste has always been a challenge in the country. At present about 500 Metric Tons of Industrial solid waste is being produced every day in the urban areas of the State. Introducing scientific processing and treatment of this quantity of waste would add to power generation besides being environmentally benign. Such projects shall be supported on different waste streams in the State and will significantly contribute to Swachh Bharat Abhiyan of the Govt. of India.

#### **4.8 : Wind Power**

Wind power potential is low in the State as the necessary wind speed is not there. The state will support programmes to set up innovative technology based wind turbines.

## **Chapter 5- Upcoming NRSE/ Green technology based projects:**

5.1.1 Research is going on around the world for efficient and economic transformation of available renewable sources of energy for usage by the society. Fuel cells, Hydrogen energy, Storage based solar applications etc. have great potential of becoming commercial RE technologies. Pilot, demonstration & commercial projects in these upcoming NRSE technology sector shall be encouraged to be set up in the state by PEDDA.

5.1.2 PEDDA shall facilitate and promote the green technologies in the state for furthering the economic and industrial development. Technologies such as Electric Vehicles, Green battery technologies, energy efficient, carbon neutral building technologies shall be promoted.

## Chapter 6- NRSE Equipment Manufacturing:

6.1.1 NRSE equipment manufacturing has been identified as thrust sector in the Industrial and Business Development Policy 2017 notified by Govt. of Punjab. This covers manufacturing industry related to E-Vehicles, NRSE Equipments and Energy Storage Devices. In view of the huge potential for such equipment, PEDDA shall facilitate and promote NRSE manufacturing facilities that can help to develop the solar/ biomass/small hydro etc., energy eco-systems and support job creation in the State.

6.1.2 The entire ecosystem for solar manufacturing including wafer, cell and module making and Balance of System (BoS) component manufacturing shall be facilitated. Local manufacturing industry for solar equipments will result in substantial direct and indirect job creation and will bring in investment in the state.

6.1.3 The incentives available in the Industrial & Business Development Policy (IDBP)- 2017 of the Govt. of Punjab as amended time to time will be applicable to NRSE equipment manufacturer including the fiscal incentives as provided in the said policy for long term sustainable growth of NRSE manufacturing industry.

The incentives available as on date as per the Policy are as under:-

SN	Nature of Incentive	Extent of incentive for units in thrust sectors
1	Investment subsidy by way of reimbursement of net SGST on intra-state sales	100% of net SGST for 10 years with a cap of 125% of FCI.
2	Exemption from Electricity Duty	100% exemption for 10 years
3	Exemption/ reimbursement from Stamp Duty	100% exemption/ reimbursement from Stamp Duty on purchase or lease of land and building
4	Exemption from CLU/EDC	100% exemption from CLU/EDC
5	Exemption from Property Tax	100% exemption for 10 years

The other incentives provided to Micro, Small and Medium Enterprise (MSME) units in general as per IDBP-2017 and the benefits enshrined in this policy shall also be available.

## Chapter 7- Energy Efficiency

- 7.1 Conservation of energy in domestic, commercial, agriculture, transportation and industrial sectors can lead to major savings in terms of reduced energy consumption thereby leading to bridge the energy demand supply gap in the state. There is a potential of saving of energy upto 20-25% in different sectors of the economy in the state. Energy Conservation Measures shall be implemented and enforced in the state in accordance with the provisions contained in the Energy Conservation Act-2001 by PEDDA, in consultation with Bureau of Energy Efficiency, Ministry of Power, Govt. of India.
- 7.2 Energy audit will be enforced and extended in Phased manner for all major sectors/ consumers, including monitoring of implementation of energy audit recommendations.
- 7.3 Energy Conservation Building Code (ECBC) will be enforced for all prospective buildings coming up in the State.
- 7.4 Energy Efficiency considerations will be incorporated and followed in all new installations, designs, upgrades, additions, alterations and modernizations projects.
- 7.5 Energy efficiency of public and private enterprises will be enhanced by upgrading technologies, building up capacity at all levels and introducing efficient energy management systems. Industries and Micro, Small and Medium Enterprises and Establishments will be made energy efficient by modernization and skill development.
- 7.6 Perform, Achieve & Trade (PAT) Scheme of Bureau of Energy Efficiency will be implemented in the industrial units / establishments in the state.
- 7.7 Energy efficiency projects will be implemented through Revolving Investment Fund Scheme under the Punjab State Energy Conservation Fund Rules.
- 7.8 Energy Efficiency will be improved by promoting BEE Star labelling program under Standards & Labelling Scheme.
- 7.9 Public Awareness will be carried out through workshops / seminars / trainings of various stakeholders, debate / quiz / painting completion in the schools / colleges, relay of radio jingles, celebration of State level Energy Conservation Day.
- 7.10 Demand Side Management will be undertaken in four areas: Agriculture, Municipal, SMEs and DISCOM.



## **Chapter 8- Allotment of Projects**

The State of Punjab shall endeavor to procure power from Renewable Energy sources through competitive bidding. All NRSE Projects including Small Hydro Projects upto 25 MW capacity, Biomass IPP, MW scale Solar PV & Solar Thermal Projects, Hybrid Solar Biomass and MW scale roof top solar PV projects for sale of power to PSPCL shall be allocated through competitive bidding by PEDDA.

The Municipal Solid Waste (MSW) developers selected by Deptt. of Local Self Govt. for processing of MSW on cluster basis can set-up RDF based power plants and developers setting up plants on Waste to Energy (WtE) fuels shall sell power to PSPCL/ Licensee on the tariff determined by the PSERC based on PSERC RE Tariff Regulations as applicable.

Surplus Power from NRSE Co-generation Projects shall be procured by PSPCL on the tariff approved by PSERC.

Projects under REC mechanism may be set up by the eligible entities as per relevant regulations of CERC/PSERC with approval of PEDDA. For any project to be set up under REC mechanism based on APPC tariff, the sole discretion to purchase power will lie with PSPCL/LICENSEE. PEDDA will facilitate setting up NRSE projects under REC mechanism envisaging sale of power through open access.

In case of upcoming NRSE technology based demonstration projects, the MOU route may be considered.

Financial eligibility Criteria for NRSE projects shall be specified in the project bidding documents.

Self-identified projects in the field of Small Hydro, Waste to Energy based on Biomass/cattle dung/ vegetable waste / poultry waste / any other agro-residue waste shall be allocated on case to case basis by PEDDA.

All NRSE projects of capacity upto 1 MW (or equivalent capacity for biofuel projects) shall be allocated on the recommendation of PEDA, whereas all NRSE projects of capacity more than 1 MW (or equivalent capacity) shall be allocated on the recommendation of the Project Allotment Committee consisting of following members:-

1. Principal Secretary to Government of Punjab,  
Department of New & Renewable Energy - Chairman
2. Principal Secretary to Government of Punjab,  
Department of Power - Member
3. Principal Secretary to Government of Punjab,  
Department of Finance - Member
4. Chief Executive, Punjab Energy Development  
Agency. - Member
5. Chairman cum MD, Punjab State Power  
Corporation Ltd. - Member
6. General Manger, PEDA. - Member
7. Dy. General Manger, PEDA - Convener

The Committee shall examine/evaluate the techno-commercial conditions in the bidding documents for projects to be allocated through competitive bidding/detailed project report for project proposals under MOU route & shall grant approval to the offers/project proposal after considering the financial capability, technical capability, status of technical collaboration with proven technology suppliers, status of land identification and its availability etc.

## **Chapter 9- Tariff for sale of RE Power**

- 9.1 The NRSE projects shall be provided tariff for sale of power to PSPCL/ Licensee as per Punjab State Electricity Regulatory Commission (PSERC) RE tariff orders for the financial year but shall be revised as per tariff notified for the financial year in which the scheduled date of commissioning of the project falls.
- 9.2 The NRSE projects allocated through tariff based competitive bidding/ bidding with discount on generic tariff/ reverse bidding, the tariff arrived after bidding shall be applicable. The PSERC RE tariff shall be governed by Central Electricity Regulatory Commission (CERC) RE Regulations.
- 9.3 The developer in technologies/resources where tariff has not been notified by the PSERC shall be required to submit petition to the Commission for determination of project specific tariff.
- 9.4 The tariff for sale of power from the projects allocated under self identified scheme shall be determined by PSERC for which the developer shall file Petition in PSERC for determination of tariff.
- 9.5 As per Power Purchase Agreements signed with PSEB (now PSPCL) by IPP Biomass/ Biogas/ Co-gen power projects allocated by PEDDA & set-up during the period of NRSE Policy 2001, the tariff had become stagnant at Rs. 3.49 per unit since 2006. The generic tariff as per RE tariff Regulation 2012/ 2017 notified by CERC and adopted by PSERC for biomass power projects allows 5% annual rise in the fuel cost for the tariff period from the date of commissioning. Therefore to enable these projects to continue generation, the tariff for these projects will be re-determined by PSERC for the remaining period of PPA.

## **Chapter 10- DPR Approval and Signing of Implementation Agreement (I.A.)**

10.1 The project developers who are allocated projects through bidding by PEDDA shall be issued a detailed Letter of Award (LOA), while the developers for upcoming technology projects shall sign an MOU with PEDDA.

The Developers desirous of setting up NRSE projects under this policy as self identified projects or Captive/Co-gen Projects may sign MOU with Punjab Bureau of Investment Promotion (PBIP) for setting up of the projects. However, such developers may approach PEDDA directly also for signing of MOU. The proposals in both the cases will be processed thereafter by PEDDA.

10.2 All the developer(s) shall submit a comprehensive proposal including Detailed Project Report (DPR) of the Project to PEDDA for appraisal within two months of issue of LOA/signing of MOU. The DPR should contain the complete details of power generation technology, plant technical details and parameters, fuel, fuel collection and sourcing mechanism, water and land utilization and complete cost and financial analysis indicating proposed tariff for the life of the project. The developer shall be required to deposit the facilitation charges 0.5% of the project cost at the time of approval of DPR. PEDDA shall examine the DPR and give comments/approval within a period of 30 days and thereafter the developer shall submit a complete application for seeking applicable clearances.

10.3 After approval of the DPR by PEDDA, submission of facilitation charges and performance security in the shape of Bank Guarantee of Rs. 20 lacs per MW capacity or as stipulated in the bid document, the Developer shall enter into an Implementation Agreement with PEDDA within a period of 15 days. The performance security shall be forfeited by PEDDA for delays attributable to the developer in project implementation as given in the Letter of Award/ Implementation Agreement/ bid document.

10.4 The Implementation Agreement shall contain the major provisions for project allocation, location, conditions precedent, power evacuation, project completion schedule, tenure of the I.A., project life, tariff, tariff period, penalty provisions in case of delay, Force majeure and arbitration etc.

10.5 PSPCL/ LICENSEE shall sign a Power Purchase Agreement within 30 days from the date of order issued by Commission in case tariff approval is to be given by PSERC. In case of competitively arrived tariff/ preferential tariff and APPC, the PPA shall be signed within 30 days from the date of signing of Implementation agreement by PEDDA.

## **Chapter 11- Project Clearances**

- 11.1 All necessary and applicable clearances to be granted by State Govt. (viz. Change of land use, Pollution Control, Water, use of NRSE resources, factories/ labour clearances etc.) required for a project would be obtained by the developer in a time bound manner. The Developers shall also be eligible to obtain clearance through Punjab Bureau of Investment Promotion- Single Window Clearance body. PEDDA shall assist the developer in obtaining these clearances including providing guidance to the developer for filing of application on the PBIP portal.
- 11.2 The developers submitting proposals to PBIP will submit their detailed applications for obtaining all necessary applicable clearances (i.e. forests, pollution control, land, water, technical feasibility for evacuation of power etc.) along with the requisite applicable fees to PBIP.
- 11.3 All other developers shall proceed ahead for filing the complete applications on the required prescribed formats for obtaining all necessary applicable clearances along with the requisite applicable fees to the concerned departments.
- 11.4 Private developers shall be required to fulfill all statutory / legal requirements with regard to project reports/documents submission as per requirement of approval/clearance issuing bodies/organizations under the Govt. rules, Regulations & Acts. Project developer shall be required to arrange fuel and water linkages for the project.

## **Chapter 12- Implementation of Projects**

- 12.1. After obtaining all applicable statutory clearances and achieving financial closure, the developer will set-up the project in a time bound manner as per time schedule stipulated in the Implementation Agreements.
- 12.2 The developer will submit monthly progress report of the implementation of the project in line with the PERT Chart of the DPR to PEDDA alongwith actual photographs critical activities undertaken during the month. The monthly report shall be submitted by 7<sup>th</sup> day of the next month. The progress may be reviewed in a joint meeting of the developer and PEDDA on quarterly basis. However, PEDDA officers may visit the project site for physical verification of the project with 2 days notice to the company.
- 12.3 The developer shall ensure compliance of all the Acts, rules, codes, and instructions etc. of the relevant authorities and remain compliant of all the provisions. The Developer shall take appropriate insurance policy during construction and commissioning as per prudent practices.
- 12.4 The developer shall give 15 days advance notice to PEDDA for undertaking the commissioning activities for which due approval of the PSPCL/ Licensee shall be taken in advance by the developer. PEDDA may depute its officers to witness the commissioning of the project.
- 12.5 All project developers shall be required to submit monthly statement for verification of usage of fuel as detailed out in RE regulations and orders for determination of generic tariff issued by CERC. In addition, monthly information with regard to other parameters like energy generated, revenue earned, power factor and plant load factor achieved, reasons for non-achievement of full generation etc as directed by PEDDA shall also be submitted so as to maintain and update data bank on NRSE generation in the state and also for the purpose of monitoring generation under RPO regulations.

## **Chapter 13- Technical Assistance for NRSE Projects**

### **13.1 Grid Interfacing:**

- 13.1.1 Interfacing, including installation of transformers, panels, kiosks, protection and metering equipment on LT/ HT side of the generating station up to interconnection point and its subsequent maintenance shall be undertaken by the power producer/plant owner. Punjab State Power Corporation Limited (PSPCL/LICENSEE) shall provide jumpers at the interconnection point as defined in applicable regulations or tariff order for evacuation of power to PSTCL/PSPCL/LICENSEE's grid substation.
- 13.1.2 If the power is proposed to be sold to PSPCL/LICENSEE on Preferential tariff on long term basis, then the transmission line and associated bay at PSPCL/LICENSEE grid substation along with ABT compliant Check meters and associated equipment will be provided by PSPCL/LICENSEE. In all other cases, the private developer shall be required to lay its own transmission lines from the switchyard of its generation facility to the PSPCL/LICENSEE/PSTCL grid sub-station at its own cost in addition to all equipment required for evacuation of power in its own generating facility switchyard. All Associated equipment(s) at the PSPCL/LICENSEE grid substation for accepting energy from the project including up gradation required if any shall be provided by the PSPCL/LICENSEE including Check meters and associated CTs/PTs.
- 13.1.3 PSPCL/LICENSEE approved main ABT meter having two independent registering facilities, one for the export of power to the grid and another for import from the grid will be installed on the HT side of Generator transformer in the switch yard at interconnection point by the producer. The meters and metering boxes will be sealed by the PSPCL/LICENSEE/PSTCL. The energy meter(s) and associated CTs/PTs etc. shall comply with the requirements of State Grid Code and CEA guidelines.
- 13.1.4 Necessary current limiting devices will be installed in the generating equipment by the producer. Producer shall generate matching MVARs so that monthly average power factor does not exceed 0.90 or as specified from time to time.

13.1.5 The NRSE Generators selling power to PSPCL shall also establish and maintain communication link between Generating Plant and SLDC for transfer of generation data on real time basis on 24 Hrs x 365 days basis as per the applicable State Grid Code Regulations of PSERC /CEA Regulations on technical standards for connectivity.

### **13.2 Facilities by Punjab State Power/Transmission Corporation Limited:**

13.2.1 Open Access: The NRSE Project developer as per entitlement under the policy will also be allowed inter/intra state open access as per the open access regulations. This facility shall be available only after refusal of State Licensee to purchase the power on preferential tariff under long term PPA.

13.2.2 Power Wheeling: The PSPCL/LICENSEE/PSTCL will undertake to transmit/ wheel the surplus power through its grid, and make it available to the producer for captive use in the same company units located in the State at a uniform wheeling charge of 2% of the energy fed to the grid or as amended from time to time by PSERC, irrespective of the distance from the generating station. Such wheeling and/or transmission of power shall be governed by Open Access Regulations /procedures.

For biomass projects wheeling power through the State Transmission/ distribution system will be exempted from payment of cross subsidy & additional surcharge. They will also be exempted from payment of SLDC scheduling charges and application/NOC fee for Open Access.

NRSE developers setting-up NRSE projects in the State and wheeling power outside the State shall be exempted from payment of wheeling and transmission charges and T & D losses.

13.2.3 The captive power production and consumption by beneficiaries i.e. same group companies shall meet the requirements laid down in Electricity Rules 2005 as amended up to date. Captive power generators will be required to seek permission of PSPCL/PSERC for



laying of transmission line for taking power to destination of use in Punjab.

13.2.4 No parallel operation charges shall be levied on NRSE projects.

13.2.5 Scheduling & Deviation settlement: The NRSE projects operating in synchronization with State grid system and selling /wheeling power shall be required to adhere to various provisions of State Grid Code for scheduling and Deviation Settlement Mechanism Regulations etc. of the Appropriate Commission.

13.2.6 Banking: The banking facility for the renewable power generated shall be allowed by the PSPCL/LICENSEE. The energy banked shall be allowed to be drawn within 1 year of the banking. However, the energy banked during non-paddy season and non peak hours will not be allowed to be drawn during paddy season and peak hours respectively.

13.2.7 Injection of NRSE power: PSPCL/LICENSEE/PSTCL will accept the injection of energy in full even during sustained high frequency hours to ensure full utilization of non-conventional energy resources and merit order shall not be applicable.

13.2.8 Energy Payment: PSPCL/LICENSEE will clear dues within 60 days. However if the Developer requests for payment in 30 days or against Letter of Credit / payment in 7 days, rebate of 1% or 2% respectively, as the case may be, will be admissible to PSPCL/LICENSEE. Delay in payments will attract interest as per PSERC/CERC regulations.

13.2.9 Letter Of Credit: PSPCL/LICENSEE will provide facility of irrevocable and revolving, Letter of Credit issued by any nationalized bank. The amount of the Letter of Credit shall be equal to the bill amount of one month on the basis of average of last three months. All expenditures on Letter of Credit shall be borne by the power producers.

## **Chapter 14- Fiscal assistance by Govt. of Punjab**

14.1.1 For Small/ Mini Hydel Projects wherever Irrigation land on canal banks is available, Punjab Irrigation Department (PID) will transfer canal land to PEDDA on notional lease amount of Rs. 1.50 lac per annum per site. The leased canal land will be subsequently transferred to the power producers for development of Small Hydro Projects on Build, Operate and Own basis for 38 (three years shall be considered as construction period) years on the same terms and conditions set forth by PID subject to further renewal on mutually agreed terms and conditions. Ownership of such land will remain with PID. For setting up MHP on canals, wherever the Irrigation Department executes the Deposit work inside the canal on behalf of Private Developer, no Departmental Charges shall be paid to PID by the private developer however, supervision charges on actual basis shall be payable subject to maximum 5% of the deposit work executed by PID. In case the work is executed by the private developer on his own, these works shall be done after approval of the detailed design and drawings by PID under the Supervision of Punjab Irrigation Department and the Supervision Charges to be borne by the Private Developer shall be on actual basis subject to maximum 5% of the total work executed by the developer inside the canal. For canal and reservoir based solar projects special scheme shall be launched in consultation with Punjab Irrigation Department.

14.1.2 For Canal top/ Canal Bank/ Reservoir based Solar Projects, Punjab Irrigation Department (PID) will transfer land to PEDDA on notional lease amount of Rs. 1.50 lac per MW per annum. The leased land will be subsequently transferred to the power producers for development of Solar PV Projects on Build, Operate and Own basis for 28 (three years shall be considered as construction period) years on the same terms and conditions set forth by PID subject to further renewal on mutually agreed terms and conditions. Ownership of such land will remain with PID. For setting up solar PV projects on canals/reservoirs, wherever the Irrigation Department executes the Deposit work inside the canal/reservoir on behalf of Private Developer, no Departmental Charges shall be paid to PID by the private developer however,

supervision charges on actual basis shall be payable subject to maximum 5% of the deposit work executed by PID. In case the work is executed by the private developer on his own, these works shall be done after approval of the detailed design and drawings by PID under the Supervision of Punjab Irrigation Department and the Supervision Charges to be borne by the Private Developer shall be on actual basis subject to maximum 5% of the total work executed by the developer inside the canal/reservoir.

14.1.3 Wherever the required land belonging to local bodies / panchayats is available, the State would encourage the local bodies / panchayats to provide the land for NRSE projects on the terms and conditions specified by the Deptt. of Rural Development & Panchayats / Deptt. of Local Government.

14.1.4 For canal based hydel projects, pondage of water upto Full Supply Level in the upstream of canal shall be allowed for optimal utilization of water resources.

14.1.5 The NRSE Power Generation and consumption by generators themselves as a captive unit from NRSE projects complying with Electricity Rules 2005 shall be fully exempted from levy of Electricity Duty. 100% Electricity Duty for power consumed from state licensee during construction and testing of the project shall be waived.

14.1.6 The manufacturing & sale of NRSE devices/systems, and equipments / machinery required for NRSE Power Projects shall be required to pay Goods & Services Tax (GST) as applicable. GST is categorized into CGST, SGST or IGST depending on whether the transaction is Intra-State or Inter-State.

14.1.7 100% exemption from payment of fee and stamp duty for registration/lease deed charges for the land required for the project.

14.1.8 Agricultural land shall be allowed to be used for setting up of Renewable Energy Power Projects in the state and no CLU, EDC/or any other charges/fees for the same shall be payable.

14.1.9 Solar PV Power projects shall be exempt from obtaining any NOC/consent under Pollution control laws from the PPCB.

14.1.10 All projects developed under this policy will be treated as industry in terms of industrial policy of the state and all the incentives available to new industrial projects will be applicable to Renewable power projects set up under this policy as per industrial policy of the state, for which approval shall be taken from the Department of Industries and Commerce.

14.1.11 Any benefits under any relevant policy of State / Central Government can be availed by the project covered under this policy, subject to qualifications and approval of the concerned departments, if any, and subject to conditions as may be prescribed on case to case basis by the Concerned Administrative Department.

## **Chapter 15- Facilitation charges for setting-up Solar Power Projects on behalf of other Department(s)/ Organization(s)**

PEDA has acquired sufficient experience in development of rooftop and ground mounted solar PV power projects. It will undertake setting-up of such solar PV projects of the Department(s)/ Organization(s) of GOP/GOI on turnkey basis for which 5% facilitation charges will be payable by the concerned Department(s)/ Organization(s).