

- Solar water heating systems: for domestic, institutional, commercial/ industrial applications under National Solar Mission.
  - Solar air heating/steam generation systems : for community cooking/ other applications in institutions and industry under National Solar Mission.
  - Green Buildings : incorporating active renewable energy systems and passive designs.
  - Solar Cities : Planning for reducing their conventional energy consumption through energy conservation and use of renewable energy devices/systems.
4. Research, Design and Development:
- Supporting research and development projects at premier institutions and industries on different aspects of new and renewable energy technologies.

#### **Subsidy regime of renewable energy**

2415. SHRI A. K. SELVARAJ: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether it is a fact that the renewable energy may seem expensive, but in the long run, it scores over conventional energy;

(b) whether it is also a fact that the subsidy regime need to be more robust, targeted and sustainable;

(c) whether Government stands committed to lead the revolution in the renewable energy sector; and

(d) if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI PIYUSH GOYAL): (a) The cost of power generation from wind, biomass and small hydro is almost comparable with that for the conventional sources. However, it is cost competitive in regions having dominant diesel grid and in remote areas where extension of grid is uneconomical.

(b) The Ministry of New and Renewable Energy (MNRE) has made some changes in the policy with regard to subsidy/incentives under various renewable energy programmes during the Twelfth Five Year Plan. The details of subsidies presently being provided under various programmes is given in Statement (*See below*). Further, to make subsidy regime robust, targeted and sustainable, several technical requirements

and administrative procedures are followed for release of subsidy which varies from scheme to scheme.

(c) MNRE has set a target of capacity addition of 29,800 MW from various renewable sources during the Twelfth Five Year Plan Period. The target comprises of 15,000 MW from wind, 10,000 from solar, 2,100 MW from small hydro and 2,700 from bio-power.

Further, to increase the use of renewable energy in the country MNRE is providing various fiscal and financial incentives, such as capital/interest subsidy, generation based incentives, accelerated depreciation, concessional excise and customs duties. The other steps to promote renewable energy include: setting up of demonstration projects, preferential tariff for purchase of power generated from renewable sources, resource assessment, development of power evacuation and testing facilities, introduction of Renewable Energy Certificates and Renewable Purchase Obligation, etc. Wide publicity and awareness raising on the benefits of renewable energy systems have also been taken up in Hindi, English and regional languages using print, electronic and outdoor media.

#### *Statement*

#### *Subsidy being provided under various renewable energy programmes*

#### **A. Grid-Interactive Renewable Power Programmes:**

##### 1. Wind Power Projects :

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Generation Based Incentive (GBI)	₹0.50 per unit subject to max of ₹1.00 crore/MW
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##### DEMONSTRATION PROJECTS IN:

Special Category States (NE Region, Sikkim, J & K, HP and Uttarakhand)	₹3.00 crore X $C^{0.646}$
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- Other States ₹2.50 crore X  $C^{0.646}$
  - C Capacity of the project in MW;  $^{\wedge}$ : raised to the power
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##### 2. Solar Power Projects :

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Solar PV Power projects under Jawaharlal Nehru National Solar Mission (JNNSM) Phase-II, Batch-I of total 750 MW with Viability Gap Funding (VGF) support from National Clean Energy Fund (NCEF).	Minimum Project Capacity 10MW Maximum Project Capacity 50MW	VGF support upto 30% of Project Cost limited to ₹2.50 Cr/MW based on reverse bidding process.
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## 3. Small Hydro Power Projects :

Support to new SHP projects in State sector :

Category	Above 100 KW and up to 1000 KW	Above 1 MW – 25 MW
Special category and NE States	75,000 per KW	7.5 Crores / MW limited to ₹20 crore per project
Other States	35,000 per KW	3.5 Crores / MW limited to ₹20 crore per project

Support to new SHP project in private/co-operative/joint sector:

Areas	Upto 25 MW
N E Region, J & K, H.P. and Uttarakhand (Special Category States)	1.5 crore/ MW limited to ₹5.00 crore per project
Other States	1.0 crore/ MW limited to ₹5.00 crore per project

## 4. Biomass Power and Bagasse Cogeneration Projects :

Private/Joint/Cooperative/Public Sector Sugar Mills:

	Special Category and NE States	Other States
Biomass Power projects	₹25 lakh per MW*	₹20 lakh per MW*
Bagasse Co-generation	₹18 lakh per MW*	₹15 lakh per MW*
Co-generation projects by cooperative/public sector sugar mills	₹40 lakh ₹50 lakh ₹60 lakh	₹40 lakh ₹50 lakh ₹60 lakh
40 bar and above	Per MW of surplus power	Per MW of surplus power
60 bar and above	(maximum support ₹6.0 cr/project)	(maximum support of ₹6.0 crore per project)
80 bar and above		

\*Maximum support of ₹1.50 crore per project.

## 5. Waste to Energy Projects :

Type of Waste	Central Financial Assistance
Municipal Solid Waste	₹2.00 cr./MW, Max. Support 10 cr. /project.
Urban Waste	₹2.00 cr./MW, Max. Support 5 cr./project.
Industrial waste	₹0.20 cr to ₹1.00cr/MW, Max. Support ₹5.00 cr/project.

**B. Off-Grid/Decentralized Renewable Energy Programmes :**

Sl.No.	Programme	Subsidy
6.	Family Type Biogas Plants NE Region States including Sikkim (except plain areas of Assam) Plain areas of Assam J & K, Himachal Pradesh, Uttarakhand (excluding Terai region), Nilgiris of Tamil Nadu, Sadar, Kurseong and Kalimpong sub-divisions of Darjeeling, Sunderbans, Andaman and Nicobar Islands and SC and ST (not included in above areas) All Others	₹15,000 to ₹17,000 per plant ₹10,000 to ₹11,000 per plant ₹7,000 to ₹11,000 per plant ₹5,500 to ₹9,000 per plant
7.	Solar Photovoltaic Systems	<ul style="list-style-type: none"> <li>• Subsidy of 30% of project cost</li> <li>• For solar light through NABARD, Regional Rural Banks (RRB) and other commercial bank 40% subsidy is available.</li> </ul>
8.	Solar Water Heater	60% and 30% of the benchmark cost in special category States and other States respectively. Benchmark cost in the range of ₹11,000/sq.m. and 8,000/sq.m for different configuration of systems.
9.	Concentrating Solar Thermal Technology	30% of the project cost.
10.	Small Aero-Generators and Hybrid Systems	₹1.00 lakh per KW
11.	Micro-hydel plants/Water mills	<ul style="list-style-type: none"> <li>• ₹ 1.25 lakh/kw for Micro-hydel upto 100 kW</li> <li>• ₹ 0.50 lakh per watermill for mechanical application</li> <li>• ₹ 1.50 lakh per watermill for electrical application</li> </ul>

Sl.No.	Programme	Subsidy
12.	Biomass Gasifier	<ul style="list-style-type: none"> <li>• ₹ 15,000 / kW (with 100% producer gas engine)</li> <li>• ₹ 2,500/kW for duel fuel engine</li> <li>• ₹ 2.0 lakh per 300 kW for Thermal Applications</li> <li>• 20% higher CFA for special category states</li> </ul>
13.	Improved Cookstoves Family sized/domestic cook-stoves/ earthen cookstoves	50% of cost of cook-stoves with maximum ceiling of ₹ 400 for natural draft (including earthen chulhas with metal combustion chambers) and ₹ 800 for forced draft - average support taken at ₹ 600/- per cookstove.
	Community Cook-stoves for MDM Kitchens, Anganwadis, Tribal/SC/Backward hostels, Government and forest rest houses etc.	50% of cost of cook-stoves with maximum ceiling of ₹2500 for natural draft and ₹5000 for forced draft type cook-stoves-average support taken at ₹3750 per cook-stove

#### JNNSM in West Bengal

2416. DR. KANWAR DEEP SINGH: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether Government is implementing the Jawaharlal Nehru National Solar Mission (JNNSM) in the country;

(b) if so, the details thereof; and

(c) the status of implementation of JNNSM in West Bengal?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI PIYUSH GOYAL): (a) and (b) Yes, Sir. Government of India has launched Jawaharlal Nehru National Solar Mission (JNNSM) on 11th January, 2010. The Mission targets deployment of 20,000 MW of grid connected solar power by 2022 in three phases. The achievements till date *vis-à-vis* targets is as under: