

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY

LOKSABHA
UNSTARRED QUESTION NO 1835
TO BE ANSWERED ON 28/11/2019

BIO-MASS BASED ELECTRICITY GENERATION

1835. DR. HEENA GAVIT
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Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

- (a) the details of funds sanctioned and utilized by various states for electricity generation through Bio-mass along with the outcome thereof, during each of the last three years and the current year;
- (b) whether the government has assessed potential capacity of bio – mass energy that can be produced in the country;
- (c) if so, the details thereof;
- (d) whether a large number of Bio-mass based electricity generation units are lying unused or functioning below their installed capacity due to low tariff, if so, the details thereof and reformative/ corrective steps being taken by the Government in this regard;
- (e) whether the government has national policy for developing energy from Bio-energy, if so , the details thereof and if not, the reasons therefor; and
- (f) the other steps taken by the Government to boost Bio-energy as one of the important sources of electricity in the rural areas in various states in the country?

ANSWER

THE MINISTER OF STATE (I/C) FOR NEW & RENEWABLE ENERGY, POWER and MoS for
SKILL DEVELOPMENT AND ENTREPRENEURSHIP
(SHRI R. K. SINGH)

(a) Details of funds sanctioned and utilized by various states for electricity generation through Biomass along with installed capacity during each of the last three years and the current year are placed at **Annexure - I**.

(b) & (c) Studies conducted by Indian Institute of Science, Bangalore in 2010-11 had estimated surplus biomass availability at about 120 -150 million metric tons per annum covering agricultural residues. This corresponds to a potential of about 18,000 MW power. Apart from this, 7000 – 8000 MW additional power can be generated through bagasse based cogeneration in the country's sugar mills.

(d) Few states like Madhya Pradesh & Karnataka have reported that some biomass based electricity generation units are lying idle due to ongoing tariff issues with the respective State Electricity Regulatory Commissions. The fixation of tariff in the states is done by the concerned State Electricity Regulatory Commission.

(e)&(f) A target of installing 175 GW of renewable energy capacity by the year 2022 has been set by the Government which includes 100 GW from solar, 60 GW from wind, 10 GW from bio-power and 5 GW from small hydro-power.

Out of 10 GW, 9.8 GW capacity of Biomass Power and Cogeneration Plants, 250 MW capacity of Waste to Energy Plants and 9 MW capacity of Biogas to Power Plants has been installed in the country.

The Ministry is implementing the following schemes to boost development and deployment of Bio-energy :

1. Biomass Scheme to support biomass based cogeneration in sugar mills and other industries (up to March 2020). Under the scheme, biomass cogeneration projects are being provided Central Financial Assistance (CFA) @ Rs 25 Lakhs / MW of surplus exportable capacity and Rs 50 Lakhs / MW of installed capacity depending on the type of fuel used.
2. Programme on Energy from Urban, Industrial and Agricultural Wastes/ Residues for recovery of energy in the form of Biogas or BioCNG or Power from Urban, Industrial and Agricultural Waste / Residues such as municipal solid wastes, vegetable and other market wastes, slaughterhouse waste, agricultural residues and industrial wastes & effluents for meeting certain niche energy demands of urban, industrial and commercial sectors in the country. Central Financial Assistance available under the Programme on Energy from Urban, Industrial and Agricultural Wastes/ Residues for setting up Waste to Energy plant is as follows:
 - a. Biogas generation : Rs 1.0 crore per 12000cum/day ;
 - b. BioCNG generation (including setting of Biogas plant) : Rs 4.0 Crore per 4800Kg/day;
 - c. Power generation based on Biogas (including setting of Biogas plant): Rs 3.0 Crore per MW.
 - d. Biomass Gasifier:
 - Rs. 2,500 per kW_e with dual fuel engines for electrical application
 - Rs. 15,000 per kW_e with 100% gas engines for electrical application
 - Rs. 2 lakh per 300 kW_{th} for thermal applications.

3. Biogas Power (Off-grid) Generation and Thermal Application Programme (BPGTP)

The Ministry is implementing biogas based schemes/ Programme for promoting biogas generation for decentralized applications viz. decentralized power generation in the capacity range 3 kW to 250 kW and also for thermal energy applications having biogas generation capacity in the matching size range of 30 m³ to 2500 m³ per day.

Central Financial Assistance (CFA) under BPGTP The CFA under the programme is being provided in the range of Rs.25,000/- per kW to Rs.40,000 per kW for power generation and Rs.12,500 /- per kW_e to Rs.20,000/- per kW_e for thermal applications respectively. The CFA rates vary depending upon the category of beneficiaries and location /region for the projects installed.

4. NEW NATIONAL BIOGAS AND ORGANIC MANURE PROGRAMME (NNBOMP)

The New National Biogas and Organic Manure Programme (NNBOMP) is being implemented with the objective to provide clean cooking fuel; meet lighting, thermal and small power needs of farmers/ dairy farmers/users including individual households; and to improve organic manure system based on

bio-slurry from biogas plants in rural and semi-urban areas by setting up of biogas plants. Under this scheme Biogas plants of size from 1 m³ to 25 m³ are installed.

Central Financial Assistance (CFA) under NNBOMP

Under the programme the CFA is being provided for setting up of biogas plants of size from 1 m³ to 25 m³. The CFA being provided is in the range of Rs.7,500/- per plant of 1 m³ to Rs.35,000/- per plant of 20-25 m³ depending upon the size of plants, location States or regions, category etc. Besides this, financial support is also provided for turnkey job fee for construction, supervision etc. It also provides support for skill development programme for Biogas Mitras and to Biogas Development & Training Centre (BDTCs) for conducting training courses.

Annexure I referred to in Reply to part (a) of the Lok Sabha Unstarred Question No.1835 for 28/11/2019 regarding Bio-mass based Electricity Generation:**Details of funds sanctioned:-****Grid Connected Biomass Power and Bagasse Cogeneration:-**

Year	State	Funds Sanctioned (In Rs Crores)
2016-17	Andhra Pradesh	0.552
	Gujarat	0.8794
	Karnataka	1.34
	Maharashtra	7.5265
2017-18	Karnataka	0.332
	Maharashtra	5.9607
	Chhattisgarh	1.50
2018-19	Maharashtra	6.83
2019-20	Nil	

Off-Grid Biomass (Non-Bagasse) Cogeneration :-

Year	State	Funds Sanctioned (in Rs. Crores)
2016-17	Andhra Pradesh	1.154
	West Bengal	0.94
	Punjab	0.44
	Uttar Pradesh	1.40
	Himachal Pradesh	0.36
	Telangana	0.146
	Karnataka	1.00
	Assam	0.40
2017-18	Odisha	0.12+
	Tamil Nadu	0.90 +
	Andhra Pradesh	1.00 + 0.60 +
2018-19	Nil	
2019-20	Nil	

Installed Capacity during last three years and current year up to 31.10.2019:-**Grid Connected Biomass Power and Bagasse Cogeneration:-**

Year	State	Installed Capacity (in MW)
2016-17	Bihar	9
	Karnataka	50
	Maharashtra	98
	Rajasthan	4.95
	Total	161.95
2017-18	Haryana	25
	Karnataka	301.60
	Maharashtra	105
	Punjab	15
	Tamil Nadu	48
	Uttar Pradesh	24.50
	Total	519.10
2018-19	Karnataka	30
	Maharashtra	329.70
	Tamil Nadu	43
	Total	402.70
2019-20	Karnataka	28

Off-Grid Biomass (Non-Bagasse) Cogeneration :-

Year	State	Installed Capacity (in MW)
2016-17	Haryana	1.20
	Punjab	1.00
	Total	2.20
2017-18	Punjab	5
	Tamil Nadu	4.50
	Total	9.50
2018-19	Gujarat	12
	Total	12
2019-20	Nil	