

- (b) Clean transportation including mass/public transportation, etc.
- (c) Sustainable water management including clean and/or drinking water, water recycling, etc.
- (d) Climate change adaptation
- (e) Energy efficiency including efficient and green buildings, etc.
- (f) Sustainable waste management including recycling, waste to energy, efficient disposal of wastage, etc.
- (g) Sustainable land use including sustainable forestry and agriculture, afforestation, etc.
- (h) Biodiversity conservation.

Pursuant to the issuance of afore-stated circular by SEBI, there have been 4 issuances of such green bonds in India as on January 27, 2020, amounting to ₹ 1,712 crores.

(b) and (c) SEBI (Issue and Listing of Debt Securities) Regulations, 2008 govern public issue of debt securities (including green bonds) and listing of debt securities issued through public issue or on private placement basis, on a recognised stock exchange.

Schemes to promote new and renewable energy production

†286. MS. SAROJ PANDEY: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) the details of the schemes implemented by Government to increase the production of Renewable Energy in view of environmental ill-effects of Non Renewable Energy; and

(b) the quantum of increase in production of Renewable Energy after the implementation of these schemes and the target set for the annual production in Megawatts by 2022?

†Original notice of the question was received in Hindi.

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI RAJ KUMAR SINGH): (a) The details of the schemes being implemented in the country to increase the production of renewable energy are given in the Statement (*See below*).

(b) The Government has set a target for installing 175 GW of Renewable Energy capacity by the year 2022 which includes 100 GW from solar, 60 GW from wind, 10 GW from Biomass and 5 GW from Small Hydro. A cumulative renewable energy capacity of 85.90 GW has been installed in the country up to December, 2019 which includes 33.73 GW from solar, 37.50GW from wind, 10 GW from Biomass and 4.67 GW from Small Hydro Power. Further, an additional capacity of 34.16 GW is under various stages of implementation.

Statement

Details of the Renewable Energy Schemes/Programmes

1. Grid Interactive Power:
 - **Wind Power:** Grid Interactive Wind Power projects.
 - **Bio-power:** Biomass power/Cogeneration and waste to energy programme.
 - **Small Hydro Power:** Small hydro power plants up to 25 MW capacity.
 - **Solar Power:** Grid-interactive -Solar power generation plants, Solar Roof Top programme, CPSU scheme Ph II.
 - **Green Energy Corridors:** transmission Infrastructure for evacuation of Power from Renewable Energy Sources.
2. Off-Grid/Distributed and Decentralized Renewable Power:
 - **Solar Power** -To promote the solar devices such as Solar Lighting Systems, Solar Power Packs and Concentrated Solar Technology systems, PM- KUSUM which encourage farmers to generate solar power, Atal Jyoti Yojna (AJAY).
 - **Biogas Programme:** setting up of Family Type biogas plants for cooking/lighting/manure/small scale power generation.
 - **Solar Thermal Systems:** deployment of decentralized solar thermal systems/devices (mainly solar cookers/driers for cooking, drying farm produce) under National Solar Mission.

3. Other programmes:

- Supporting research and development projects at premier institutions and industries on different aspects of new and renewable energy technologies.
 - Solar
 - Hydrogen and fuel cell
 - Biogas
 - SHP
- Human Resource Development and Training Programme
- Information and Publicity

**Problems of investors in renewable
energy sector**

287. SHRI T.G. VENKATESH: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether Government's attention is drawn to the proposal of development of Renewable Energy sources in the country to achieve a target of 4.50 lakhs Megawatts production by 2022;

(b) whether Government has taken note that New and Renewable investors are facing innumerable problems in promotion of Renewable sources in the country; and

(c) the steps being taken by Government to redress their problems and promote renewable sources in a big way in the country by adopting suitable methods, increase the investments and protect the PPAs?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI RAJ KUMAR SINGH): (a) As part of Intended Nationally Determined Contributions as per the Paris Accord on Climate Change, India has made a pledge that by 2030, 40% of its installed power generation capacity shall be from non-fossil fuel sources and will reduce its carbon emission intensity of GDP by 33-35 % considering 2005 level. Government have set a target to install 175 GW of renewable energy capacity in the country by the year 2022. This includes 100 GW from solar, 60 GW from wind, 10 GW from biomass and 5 GW from small hydro power.