

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 2238
ANSWERED ON 08/08/2023

GREEN ENERGY GENERATION

2238. SMT. VANDANA CHAVANE

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

- (a) whether India has set an ambitious target to produce 500GW of green energy by 2030 and whether steps are being taken to reduce dependence on conventional energy;
- (b) if so, the specific measures Government is taking to increase the production of solar and wind energy and to enhance the production of Green Hydrogen;
- (c) whether Government, in its Budget, announced the Pumped Storage Projects (PSP) and whether steps are being taken to establish PSP units in the country; and
- (d) if so, the details of PSPs sanctioned in each State and the amount allocated for same?

ANSWER

THE MINISTER OF NEW & RENEWABLE ENERGY AND POWER
(SHRI R.K. SINGH)

(a)&(b) As per the updated Nationally Determined Contribution (NDC) submitted to the United Nations Framework Convention for Climate Change (UNFCCC), India has committed inter alia to achieve about 50 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030. Further, in line with Hon'ble Prime Minister's announcement at COP26, Ministry of New and Renewable Energy is working towards achieving 500 GW of installed electricity capacity from non-fossil sources by 2030. As on 30.06.2023, a total of 176.49 GW renewable energy capacity has been installed in the country out of the total installed electricity capacity of 421.9 GW. In addition, 88.81 GW of renewable energy capacity is under implementation and 51.43 GW of capacity is under tendering.

The Government has taken several measures to promote renewable energy (including solar and wind energy) in the country. These include, inter-alia, the following:

- Permitting Foreign Direct Investment (FDI) up to 100 percent under the automatic route,
- Waiver of Inter State Transmission System (ISTS) charges for inter-state sale of solar and wind power for projects to be commissioned by 30th June 2025,
- Declaration of trajectory for Renewable Purchase Obligation (RPO) up to the year 2029-30,
- Setting up of Ultra Mega Renewable Energy Parks to provide land and transmission to RE developers for installation of RE projects at large scale,
- Schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), Solar Rooftop Phase II, 12000 MW CPSU Scheme Phase II, etc,
- Laying of new transmission lines and creating new sub-station capacity under the Green Energy Corridor Scheme for evacuation of renewable power,
- Notification of standards for deployment of solar photovoltaic system/devices,
- Setting up of Project Development Cell for attracting and facilitating investments,
- Standard Bidding Guidelines for tariff based competitive bidding process for procurement of Power from Grid Connected Solar PV and Wind Projects.
- Government has issued orders that power shall be dispatched against Letter of Credit (LC) or advance payment to ensure timely payment by distribution licensees to RE generators.
- Notification of Promoting Renewable Energy through Green Energy Open Access Rules 2022.
- Notification of "The Electricity (Late Payment Surcharge and related matters) Rules (LPS rules).

- Launch of Green Term Ahead Market (GTAM) to facilitate sale of Renewable Energy Power through exchanges.

Further, On 4th January 2023, the Union Cabinet approved the National Green Hydrogen Mission with an outlay of Rs 19,744 crore. Various financial and non-financial measures have been announced under the Mission, including inter-alia, the following:-

- Facilitating demand creation through exports and domestic utilization;
- Strategic Interventions for Green Hydrogen Transition (SIGHT) programme, which includes incentives for manufacturing of electrolyzers and production of green hydrogen;
- Pilot Projects for steel, mobility, shipping, etc.;
- Development of Green Hydrogen Hubs;
- Support for infrastructure development;
- Establishing a robust framework of regulations and standards;
- Research & Development programme;
- Skill development programme; and
- Public awareness and outreach programme.

(c) In the budget speech 2022-23, the Finance Minister had announced that a detailed framework for Pumped Storage Projects will be formulated. Government of India has undertaken various measures to promote the development Pumped Storage Projects (PSPs). These include:

- Ministry of Power has notified Guidelines to promote development of Pumped Storage Projects in the country on 10th April, 2023.
- Waiver of ISTS charges has been inter-alia extended to Pumped Storage Projects commissioned up to 30.06.2025, subject to certain conditions. Subsequently, part waiver of ISTS charges, in steps of 25% from 01.07.2025 to 01.07.2028, have been extended for PSPs to be commissioned up to 30.06.2028.
- Government of India has, vide its order dated 22.07.2022, notified the trajectory of Energy Storage Obligation for the distribution companies to ensure the capacities regarding storage as a grid element. This would create demand for storage.

(d) The pumped storage projects are allocated by the State Governments.

As per Section 8 (1) of the Electricity Act, 2003, any generating company intending to set up a hydro generating station shall prepare and submit to the Authority for its concurrence, a scheme estimated to involve a capital expenditure exceeding such sum, as may be fixed by the Central Government, from time to time, by notification (presently, ₹1000 crores).

The list of Pumped Storage Projects which have been allotted by the State Governments and for which Detailed Project Reports (DPRs) have been concurred by Central Electricity Authority is at **Annexure**. Government of India has not allocated any funds for these projects.

Annexure referred to in reply to part (d) of Rajya Sabha Unstarred Question No. 2238 for 08/08/2023 regarding 'Green energy generation'

List of Pumped Storage Projects which have been allotted by the State Governments and for which Detailed Project Reports (DPRs) have been concurred by Central Electricity Authority

PSP projects under implementation

Sl. No.	Name of the Project (Executing Agency)	State / UT	Capacity (No. X MW.)
1	Tehri PSS	Uttarakhand	4x250
2	Pinnapuram	Andhra Pradesh	4x240+2x120
3	Kundah Pumped Storage Phase-I,II&III)	Tamil Nadu	4x125
4	Koyna Left Bank	Maharashtra	2x40
	Total:		2780.00

PSP projects concurred by CEA, but construction yet to commence

S. No	Name of Project	State	Capacity (MW)
1.	Upper Sileru Pumped Storage Project	Andhra Pradesh	1350
2.	Turga Pumped Storage Project	West Bengal	1000
	Total:		2350