

GOVERNMENT OF INDIA  
MINISTRY OF NEW AND RENEWABLE ENERGY  
**LOK SABHA**  
**UNSTARRED QUESTION NO. 2070**  
ANSWERED ON 14/12/2023

**WIND SOLAR HYBRID POLICY**

2070. SHRI MOHANBHAI KALYANJI KUNDARIYA  
SHRI DIPSINH SHANKARSINH RATHOD

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

- (a) the manner in which the Wind Solar Hybrid policy contribute to the overall renewable energy goals of the region or country;
- (b) the details of the incentives or support mechanisms provided to encourage the implementation of projects under the said policy;
- (c) whether there has been any evaluation or assessment of the policy's impact on promoting sustainable energy practices and if so, the details thereof;
- (d) the details of specific guidelines or criteria for the selection of projects under the said policy; and
- (e) the manner in which the Government addresses potential challenges or barriers faced by stakeholders in the implementation of projects under the said policy?

**ANSWER**

**THE MINISTER OF NEW & RENEWABLE ENERGY AND POWER**

**(SHRI R.K. SINGH)**

- (a) Studies have revealed that in India solar and wind resources are complementary to each other and hybridization of these two technologies would help in minimizing the variability apart from optimally utilizing the infrastructure including land and transmission system. The National Wind-Solar Hybrid Policy provides a framework for promotion of large grid connected wind-solar PV hybrid system for optimal and efficient utilization of wind and solar resources, transmission infrastructure and land.
- (b) Government has taken several steps to promote renewable energy, including wind solar hybrid energy, in the country. These, inter alia, include;
  - 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 2030,
  - setting up of Ultra Mega Renewable Energy Parks to provide land and transmission to RE developers on a plug and play basis,
  - laying of new transmission lines and creating new sub-station capacity for evacuation of renewable power,

- 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, Wind and wind-solar hybrid Projects,
- Notification of Promoting Renewable Energy through Green Energy Open Access Rules 2022,
- Notification of Late Payment Surcharge and related matters Rules 2022.

(c) Specific evaluation or assessment of the National Wind-Solar Hybrid Policy's impact on promoting sustainable energy practices have not been carried out so far.

(d) The key features of National Wind-Solar Hybrid Policy inter alia include the following;

1. In case of fixed speed wind turbines connected to grid using an induction generator, the integration can be on the HT side at the AC output bus. However, in case of variable speed wind turbines deploying inverters for connecting the generator to the grid, the wind and the Solar PV system can be connected to the intermediate DC bus of the AC-DC-AC converter.
2. The sizing of the wind-solar hybrid plants would depend on the resource characteristics. However, a wind-solar plant will be recognized as hybrid plant if the rated power capacity of one resource is at least 25% of the rated power capacity of other resource.
3. Existing wind or solar power projects, willing to install solar PV plant or WTGs respectively to avail benefit of hybrid project are conditionally allowed to do so under the policy.
4. Battery storage may be added to the hybrid project (i) to reduce the variability of output power from wind solar hybrid plant; (ii) providing higher energy output for a given capacity (bid/ sanctioned capacity) at delivery point, by installing additional capacity of wind and solar power in a wind solar hybrid plant; and (iii) ensuring availability of firm power for a particular period.

(e) In order to address potential challenges or barriers faced by stakeholders in the implementation of renewable energy projects, including wind solar hybrid projects, the Ministry holds a regular interaction with industry stakeholders and concerned departments/ authorities/ agencies.

\*\*\*\*\*