

GOVERNMENT OF INDIA  
MINISTRY OF NEW AND RENEWABLE ENERGY  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 1105**  
ANSWERED ON 12/12/2023

**WIND SOLAR HYBRID POLICY**

1105. DR. SIKANDER KUMAR  
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Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

- (a) the aims of wind solar hybrid policy and the key features of this policy; and
- (b) whether any projects are being implemented as a part of the scheme, if so, the details thereof?

**ANSWER**

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

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

(a) Government issued National Wind-Solar Hybrid Policy on 14th May, 2018. The main objective of the policy is to provide 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. The policy also aims to encourage new technologies, methods and way-outs involving combined operation of wind and solar PV plants.

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

- a. 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.
  - b. 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.
  - c. 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.
  - d. 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
- (b) The Renewable Energy Implementing Agencies (REIAs), viz. Solar Energy Corporation of India Ltd. (SECI), NTPC Ltd., SJVN Ltd. and NHPC Ltd. have brought out tenders, viz. Solar-Wind Hybrid Projects, Solar-Wind Hybrid Projects with assured supply during peak hours and Round the Clock (RTC) renewable Power. As on 30.11.2022, around 1.44 GW of hybrid projects are commissioned and another 7.77 GW of hybrid projects are under implementation.

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