

GOVERNMENT OF INDIA  
MINISTRY OF POWER  
RAJYA SABHA  
UNSTARRED QUESTION NO.2393  
ANSWERED ON 21.03.2023

**UTILISATION OF HYDRO POWER POTENTIAL**

**2393 SHRI PRABHAKAR REDDY VEMIREDDY:**

Will the Minister of **POWER**  
be pleased to state:

- (a) hydro power potential in the country, State-wise;
- (b) whether it is a fact that the country is utilizing only 15 per cent of country's hydro potential to generate power;
- (c) whether it is a fact that United States of America is utilizing 90 per cent and European Union is using 98 per cent of hydro potential for generating power;
- (d) if so, the reasons as to why India is lagging behind; and
- (e) the efforts being made by the Ministry to push in hydro power generation in the country, with particular reference to Andhra Pradesh?

**A N S W E R**

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

**(a) & (b):** As per the Reassessment Study carried out by the Central Electricity Authority (CEA) during 1978-1987, the assessed hydro power potential in the country is about 145320 MW (for projects with capacity above 25 MW). Presently, 42104.6 MW (29%) out of 145320 MW has been developed and 15023.5 MW (10.3%) is under construction. The state wise hydro power potential and its status of development are attached at **Annexure**.

**(c) :** As per reports of International Hydropower Association (IHA), USA has developed more than 80% of its hydro power potential and EU has developed more than 70% of its hydro power potential.

**(d) :** The main challenges in development of hydroelectric potential in the country are remote location, unpredictable geology, natural calamities, environment and forest issues, Rehabilitation and Resettlement (R&R) issues, law & order issues and inter-state issues

(e) : The Government has undertaken a number of policy initiatives to enhance the hydro power generation in the country, including in Andhra Pradesh, which are, inter alia, as under:

- (i) Declaring Large Hydro Power (> 25 MW projects) as Renewable Energy source.
- (ii) Provision of Hydro Purchase Obligation (HPO) as a separate entity within Renewable Purchase Obligation (RPO).
- (iii) Notification of tariff rationalization measures to bring down hydro power tariff.
- (iv) Provision of budgetary support for cost of Enabling Infrastructure, i.e. roads/bridges and Flood Moderation.
- (v) Notification of a “Dispute Avoidance Mechanism” through 'Independent Engineer' and “Dispute Resolution Mechanism” through “Conciliation Committee of Independent Experts (CCIE)” to expeditiously and effectively address contractual disputes.
- (vi) Notification of guidelines to reduce the incidence of time and cost over-run in Hydro Power Projects
- (vii) Waiver of Inter State Transmission System (ISTS) charges on transmission of electricity generated from new Hydro Electric Projects

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## ANNEXURE REFERRED TO IN REPLY TO PARTS (a) &amp; (b) OF UNSTARRED QUESTION NO. 2393 ANSWERED IN THE RAJYA SABHA ON 21.03.2023

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## Status of Hydro Electric Power Potential and Development (above 25 MW, as on 28.02.23)

Region/ State	Identified Capacity (reassessment study)	Capacity in operation		Capacity under construction	
	(MW)	(MW)	%	(MW)	(%)
<b>NORTHERN</b>					
Jammu & Kashmir	11567	3360.0	29.0	3099.5	26.8
Ladakh	2046	89.0	4.3	0.0	0.0
Himachal Pradesh	18470	10263.0	55.6	2490.0	13.5
Punjab	971	1096.3	100.0	206.0	21.2
Haryana	64	0.0	0.0	0.0	0.0
Rajasthan	483	411.0	85.1	0.0	0.0
Uttarakhand	17998	3975.4	22.1	1571.0	8.7
Uttar Pradesh	664	501.6	75.5	0.0	0.0
<b>Sub Total (NR)</b>	<b>52263</b>	<b>19696.3</b>	<b>37.7</b>	<b>7366.5</b>	<b>14.1</b>
<b>WESTERN</b>					
Madhya Pradesh	1970	2235.0	100.0	400.0	20.3
Chhattisgarh	2202	120.0	5.4	0.0	0.0
Gujarat	590	550.0	100.0	0.0	0.0
Maharashtra	3314	2647.0	79.9	0.0	0.0
Goa	55	0.0	0.0	0.0	0.0
<b>Sub total (WR)</b>	<b>8131</b>	<b>5552.0</b>	<b>68.3</b>	<b>400.0</b>	<b>4.9</b>
<b>SOUTHERN</b>					
Andhra Pradesh	3261	1610.0	49.4	960.0	29.4
Telangana	1099	800.0	72.8	0.0	0.0
Karnataka	6459	3689.2	57.1	0.0	0.0
Kerala	3378	1864.2	55.2	140.0	4.1
Tamil Nadu	1693	1778.2	100.0	0.0	0.0
<b>Sub Total (SR)</b>	<b>15890</b>	<b>9741.6</b>	<b>61.3</b>	<b>1100.0</b>	<b>6.9</b>
<b>EASTERN</b>					
Jharkhand	582	210.0	36.1	0.0	0.0
Bihar	40	0.0	0.0	0.0	0.0
Odisha	2981	2154.6	72.3	0.0	0.0
West Bengal	2829	441.2	15.6	120.0	4.2
Sikkim	4248	2282.0	53.7	1037.0	24.4
<b>Sub Total (ER)</b>	<b>10680</b>	<b>5087.8</b>	<b>47.6</b>	<b>1157.0</b>	<b>10.8</b>
<b>NORTH EASTERN</b>					
Meghalaya	2298	322.0	14.0	0.0	0.0
Tripura	0	0.0	0.0	0.0	0.0
Manipur	1761	105.0	6.0	0.0	0.0
Assam	650	350.0	53.8	120.0	18.5
Nagaland	1452	75.0	5.2	0.0	0.0
Arunachal Pradesh	50064	1115.0	2.2	4880.0	9.7
Mizoram	2131	60.0	2.8	0.0	0.0
<b>Sub Total (NER)</b>	<b>58356</b>	<b>2027.0</b>	<b>3.5</b>	<b>5000.0</b>	<b>8.6</b>
<b>ALL INDIA</b>	<b>145320</b>	<b>42104.6</b>	<b>29.0</b>	<b>15023.5</b>	<b>10.3</b>

Note: In addition to above 8 Pumped Storage Projects (PSPs) having a capacity of 4745.6 MW are under operation and 4 PSPs having a capacity of 2780 MW are under construction.

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