

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1117
ANSWERED ON 26.07.2022

POTENTIAL FOR HYDRO POWER GENERATION

1117 SHRI SANJAY RAUT:

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

- (a) whether Government has assessed the potential of States which are capable of generating hydro power;
- (b) if so, the details thereof along with the reasons for failure of Government to harness the potential;
- (c) whether various hydro power projects allotted to the private sector in various States are yet to take off, and if so, the details thereof along with the reasons for delay, project-wise; and
- (d) the other steps taken by Government for the completion of hydro power projects in a time bound manner in the country?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) & (b) : Central Electricity Authority (CEA), a technical body, under Ministry of Power, Government of India has carried out study for assessment of potential of hydro power development in the country during the period 1978-1987. As per the study, the power potential of large hydro-electric projects (above 25 MW capacity) in the country is 145320 MW. The state-wise details of hydro power potential in India is enclosed at **Annexure-I**.

The total installed capacity of hydro-electric projects (above 25 MW) is 46850.15 MW as on 30.06.2022. In addition, 36 hydro-electric projects (above 25 MW), with capacity of 14103.5 MW are under construction. A summary of the projects is enclosed at **Annexure-II**.

The main challenges involved in harnessing the potential of hydro power in country are as under:-

- I. Land Acquisition Issues
- II. Environment and Forest issues
- III. Rehabilitation & Resettlement Issues
- IV. Inadequate Infrastructural facilities
- V. Law & Order / Local issues
- VI. Geological Surprises
- VII. Natural Calamities
- VIII. Inter-state Issues

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(c) : As on 30.06.2022, 10 Nos. of Hydro Projects concurred by CEA, which have been allotted to private sector are yet to be taken up for construction for various reasons. Details are enclosed at **Annexure-III**.

(d) : For the completion of hydro power projects in a time bound manner, Ministry of Power has issued comprehensive guidelines to reduce time and cost overruns in Hydro Power Projects on 08.11.2019. Ministry of Power has also notified a “Dispute Avoidance Mechanism” through ‘Independent Engineer (IE)’ on 29.09.2021 and “Dispute Resolution Mechanism” through “Conciliation Committee of Independent Experts (CCIE)” on 29.12.2021 to expeditiously and effectively address contractual disputes, which have been identified as one of the major reasons impacting timely completion of Hydro Power Projects. Stalled hydro projects in Arunachal Pradesh, have also been indicated against various Hydro CPSEs of Ministry of Power vide letter dated 22.12.2021 for timely completion.

Further, CEA monitors the progress of under construction projects through site visits and interaction with the developers and other stakeholders. Regular reviews are also undertaken in the Ministry of Power to identify constraints and facilitate faster resolution of inter-ministerial and other outstanding issues which are critical for commissioning of the project.

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 1117 ANSWERED IN THE RAJYA SABHA ON 26.07.2022

STATE-WISE POTENTIAL FOR LARGE HYDRO POWER IN THE COUNTRY

| Region/ State | Identified Capacity above 25 MW as per Reassessment Study (1978-87) |
|-----------------------------------|--|
| NORTHERN REGION (NR) | |
| Jammu & Kashmir | 11567 |
| Ladakh | 2046 |
| Himachal Pradesh | 18470 |
| Punjab | 971 |
| Haryana | 64 |
| Rajasthan | 483 |
| Uttarakhand | 17998 |
| Uttar Pradesh | 664 |
| Sub Total (NR) | 52263 |
| WESTERN REGION (WR) | |
| Madhya Pradesh | 1970 |
| Chhattisgarh | 2202 |
| Gujarat | 590 |
| Maharashtra | 3314 |
| Goa | 55 |
| Sub total (WR) | 8131 |
| SOUTHERN REGION (SR) | |
| Andhra Pradesh | 3261 |
| Telangana | 1099 |
| Karnataka | 6459 |
| Kerala | 3378 |
| Tamil Nadu | 1693 |
| Sub Total (SR) | 15890 |
| EASTERN REGION (ER) | |
| Jharkhand | 582 |
| Bihar | 40 |
| Odisha | 2981 |
| West Bengal | 2829 |
| Sikkim | 4248 |
| Sub Total (ER) | 10680 |
| NORTH EASTERN REGION (NER) | |
| Meghalaya | 2298 |
| Tripura | 0 |
| Manipur | 1761 |
| Assam | 650 |
| Nagaland | 1452 |
| Arunachal Pradesh | 50064 |
| Mizoram | 2131 |
| Sub Total (NER) | 58356 |
| ALL INDIA | 145320 |

ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 1117 ANSWERED IN THE RAJYA SABHA ON 26.07.2022

| Sector-wise Installed Capacity of H.E. Stations (>25 MW) in the country | | |
|---|------------------------|--------------------------------|
| Sector | No. of Stations | Installed Capacity (MW) |
| Central | 42 | 15664.70 |
| State | 147 | 27254.45 |
| Private | 22 | 3931.00 |
| Total | 211 | 46850.15 |

| Summary of Under Construction HEPs(above 25 MW) -Sector-wise) in the country | | |
|--|-------------------|----------------------|
| Sector | No. of HEP | Capacity (MW) |
| Central | 16 | 9025 |
| State | 11 | 2601.5 |
| Private | 9 | 2477 |
| Total | 36 | 14103.5 |

**ANNEXURE REFERRED TO IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 1117 ANSWERED
IN THE RAJYA SABHA ON 26.07.2022**

**Hydro Electric Schemes in Private Sector Concurred by CEA and
yet to be taken up for construction for various reasons**

| Sl. No | Scheme | Agency | Installed Capacity (MW) | Date of CEA Concurrence | Remarks |
|-------------------|--------------|-----------|-------------------------|-------------------------|--|
| Arunachal Pradesh | | | | | |
| 1. | Talong Londa | GLHPL | 225 | 16.08.2013 | <ul style="list-style-type: none">• EC accorded on 07.08.2015.• FC-I & FC-II yet to be obtained. |
| 2. | Etalin | EHEPCL | 3097 | 12.07.2013 | <ul style="list-style-type: none">• EC recommended by EAC on 31.01.2017. Letter will be issued after FC-I.• FC-I & FC-II yet to be obtained. |
| 3. | Attunli | AHEPCL | 680 | 02.07.2018 | <ul style="list-style-type: none">• Both EC and FC are yet to be obtained. |
| 4. | Lower Siang | JAPL | 2700 | 16.02.2010 | <ul style="list-style-type: none">• Both EC & FC are yet to be obtained. |
| 5. | Demwe Lower | ADPL | 1750 | 20.11.2009 | <ul style="list-style-type: none">• EC accorded on 12.02.2010.• FC accorded on 03.05.2013.• Project is under NCLT since 2017. |
| 6. | Kalai-II | Kalai PPL | 1200 | 27.3.2015 | <ul style="list-style-type: none">• EC accorded 20.05.2015. Final order will be issued after obtaining FC-I.• FC-I and FC-II yet to be obtained. |
| 7. | Heo | HHPPL | 240 | 28.07.2015 | <ul style="list-style-type: none">• EC accorded on 10.11.2015.• FC-I accorded on 27.10.2015.• FC-II yet to be obtained. |
| 8. | Tato-I | SHPPL | 186 | 28.10.2015 | <ul style="list-style-type: none">• EC accorded on 10.11.2015.• FC-I accorded on 27.10.2015.• FC-II yet to be obtained. |
| Sub- Total (MW) | | | 10078 | | |
| Nagaland | | | | | |
| 9. | Dikhu | NMPPL | 186 | 31.03.2014 | <ul style="list-style-type: none">• EC yet to be obtained by developer.• FC not applicable as forest land is not involved. |
| Sub-Total (MW) | | | 186 | | |
| Uttarakhand | | | | | |
| 10. | Alaknanda | GMRL | 300 | 08.08.2008 | <ul style="list-style-type: none">• EC accorded on 12.3.2008.• FC-I accorded on 08.11.2011.• FC-II accorded on 09.11.2012.• The project is included in the list of 24 projects under review by Hon’ble Supreme Court. |
| Sub-Total (MW) | | | 300 | | |
| Grand Total (MW) | | | 10564 | | |

Note: EC: Environment Clearance **FC-I:** Stage-I of forest clearance

FC-II: Stage-II of forest clearance
