



THDC India Ltd.

International Conference on
**HYDROPOWER AND DAMS DEVELOPMENT FOR WATER AND
ENERGY SECURITY – UNDER CHANGING CLIMATE**



New Delhi
Central Board of
Irrigation & Power



Indian National Committee
on Large Dams

Policy interventions initiated by Government of India for development of Hydro Power Sector in India

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Abstract of presentation

- Requirement of Hydropower
- Hydro Share
- GoI initiatives for accelerated development of Hydro Power
 - Declaring Large Hydro Power Projects (LHPs, i.e., >25 MW) as Renewable Energy Source
 - Hydro Purchase Obligation (HPO) as a separate entity within non-solar Renewable Purchase
 - The Budgetary Support for Flood Moderation component and Enabling Infrastructure i.e. roads/ bridges
 - Policy measures for promoting Development of hydropower sector including Pumped Storage Projects
 - Revival of stalled Hydropower projects
- Policy Initiatives in Pipeline



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Requirement of Hydro Power

India, being one of the world's fastest growing economies, plays a significant role in the future of global energy markets.

Electricity is one of the key enablers for achieving socio-economic development of the country. The economic growth leads to growth in demand of power. Generation capacity augmentation is the most vital component for meeting the ever-increasing demand of power to achieve the targeted growth rate.



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Requirement of Hydro Power..

- In the COP26 Climate Conference held in 2021, the Hon'ble Prime Minister of India has raised the nationally determined contribution (NDC) target of non-fossil energy capacity of India to 500 GW by 2030 and mentioned that India will achieve Net Zero Carbon emissions by 2070.



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Requirement of Hydro Power..

- Hydro Power is clean, Green, non-polluting, environmentally friendly Renewable source of energy.
- Provides ancillary services which are must need for Grid stability, like:
 - Spinning reserves
 - Reactive support
 - Black start
 - Peaking support
 - Ramping support
 - Fast start-up and shut down
- Hydro projects have long useful life extending over 100 years with R&M.
- Socio-economic development
- Infrastructure, Flood control, irrigation, water supply, eco-tourism development.



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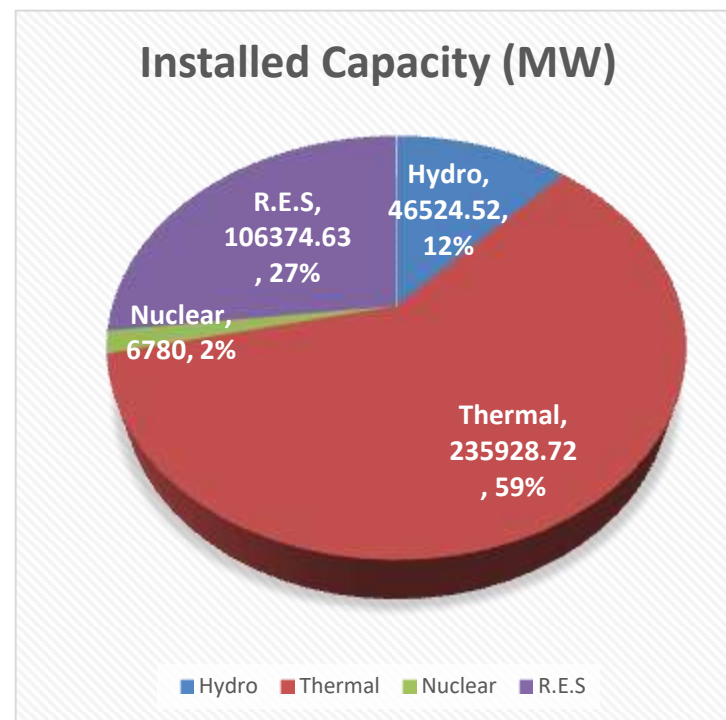
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Hydro Share

- As on 31.03.2022, the total installed capacity in the country is 3,95,607 MW and hydro share accounts for 46,524 MW (11.76%).

Type of source	IC (MW)
Hydro	46,524
Thermal	2,35,928
Nuclear	6,780
R.E.S	1,06,374
Total	3,95,607





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Policy interventions to Promote Hydro Power Sector

- Realizing the huge potential of hydropower in India and considering the impediments to its development, the Government of India has undertaken a number of interventions in the recent past, supported by various policy-level changes to promote hydropower development and facilitate investment in the sector.
- Some of the key policy-level interventions introduced in recent years on the hydropower sector are indicated here.



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Policy interventions to Promote Hydro Power Sector..

- Ministry of Power vide OM dated 08.03.2019 issued various policy related measures to promote hydro power sector in India.

Salient features of the policy

- Declaring Large Hydro Power Projects (LHPs, i.e., >25 MW) as Renewable Energy Source.
- Hydro Purchase Obligation (HPO) as a separate entity within non-solar Renewable Purchase.



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Policy interventions to Promote Hydro Power Sector..

- Tariff rationalization measures to bring down hydropower tariff
- Budgetary Support for Flood Moderation/Storage Hydro projects.
- Budgetary Support to cost of Enabling Infrastructure i.e. roads/ bridges.

The limit of budgetary support for enabling infrastructure is

- ₹ 1.5 crore/MW for projects up to 200 MW.
- ₹ 1.0 crore/MW for projects above 200 MW.



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Policy interventions to Promote Hydro Power Sector..

- Ministry of Power vide OMs dated 28.09.2021 have issued guideline for examination and release of budgetary support towards cost of Flood Moderation/enabling infrastructure.
- SOP was issued in this regard by CEA on 10.02.2021.
- The grant is in form of reimbursement, after completion of work.
- Luhri St-I HEP of SJVNL is the first project to get the grant for enabling Infrastructure.



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Policy interventions to Promote Hydro Power Sector..

Hydro Purchase Obligations:

- Ministry of Power on 29.01.2021 notified a long-term trajectory for Hydro Purchase Obligations (HPO) considering the Large Hydro Projects commissioned after 8th March 2019.
- The HPO trajectory varies from 0.18% in 2021-22 to 2.82% in 2030.
- HPO benefits are to be met from power generated from LHPs of 70% of the total generated capacity for a period of 12 years from the date of commissioning.



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Policy interventions to Promote Hydro Power Sector..

Revival of stalled Hydropower Projects:

- Ministry of Power vide order dated 22.12.2021 has identified 29 HEPs (32,415 MW) of IPPs stalled in Arunachal Pradesh for implementation by CPSUs.

Basin/ (CPSU)	Nos.	IC (MW)
Kameng, Subansiri, Tawang, Siang tributaries (NEEPCO)	19	8788
Siang Main Stem (JV of NHPC & NEEPCO)	2	12700
Dibang HEP (NHPC)	1	2880
Dibang basin except Dibang HEP (SJVN)	5	5097
Lohit (THDC)	2	2950
Total	29	32415



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Policy interventions to Promote Hydro Power Sector..

Revival of stalled Hydropower Projects..

- Further, Ministry of Power vide Order dated 04.01.2022 has constituted a Committee, comprises various members from Central Ministries/ Departments/ State Governments/ nominated members/ CMDs of CPSUs, to ensure appropriate valuation of these stalled HEPs (physical progress upto 25% only) for smooth transfer to CPSUs.
- The Committee issued SOP in this regard vide letter dated 09.02.2022.
- First proposal received from SJVNL to take over Etalin and Attunli HEPs



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Policy initiatives in Pipeline

- **Inclusion of ATS** upto nearest pooling point under the ambit of “enabling infrastructure”.
- **Waiver of Inter State Transmission System (ISTS) charges** in respect of power transmission from hydro projects of NER.



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Policy Initiatives in Pipeline..

Committee to suggest policy measures:

- A committee under Member (Hydro), CEA having representation from various stakeholders is working to suggest policy measures to promote Development of hydropower sector including PSPs in the country.
- The committee has suggested:
 - Increasing involvement of CPSUs in Hydro and PSPs Development
 - Monetization of Positive Externalities of Hydro Projects
 - Stricter enforcement of RPO/ HPO Regime
 - Rationalization of Tariff
 - Allocating risk and responsibility with States
 - Equity participation by State, etc



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Policy Initiatives in Pipeline..

Committee to suggest measures to make Hydro Projects viable:

- A committee under JS (Hydro) having representation from various stakeholders is working to suggest measures to make Hydro Projects viable.
- The Committee is also working on how to monetize positive externalities of Hydro Projects.



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Policy Initiatives in Pipeline..

- **Equity infusion scheme** to provide Central Financial Assistance as grant (upto 24%) towards equity portion of the State Governments in JVs (between CPSUs and State Govt. Agency).
- **Separate Guidelines** for approval of Off Stream PSPs are being prepared.
- **EC & FC process for hydro projects** are also being streamlined through revamping PARIVESH portal.
- MoEF&CC is also in process of relaxing conditions for Environment and Forest Clearance for Hydro Projects including Off Stream Pumped Storage Projects (PSPs).



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Thank you