6. Sawalkote Hydroelectric Project

The Ministry of Environment, Forest and Climate Change has accorded environmental clearance to the Sawalkote Hydroelectric Project on the Chenab River in Ramban district, Jammu and Kashmir. This clearance marks the first major hydropower project on the Indus River system to be approved following India's suspension of the Indus Waters Treaty (IWT) on April 23, 2025.

Sawalkote Hydroelectric Project

Overview

Type - Run-of-the-river hydroelectric project
Location - Ramban district, Jammu and Kashmir
Implementing Agency - National Hydro Power Corporation (NHPC), commissioned in 2021
Installed Capacity - 1,856 MW
Annual Electricity Generation - Approximately 8,000 million units (MU)
Estimated Cost - Increased from ₹22,000 crore (2017) to ₹31,380 crore (2025) due to inflation, material costs, and technical challenges

Significance of the Project

Strategic Importance

Indus Waters Utilisation - Sawalkote is critical for harnessing the eastern Indus basin rivers under India's control following the suspension of the Indus Waters Treaty (IWT) cooperation mechanisms).
Reinforcing India's Presence -

1. Being one of the largest hydropower projects on the Chenab River, it strengthens India's control over water resources in Jammu and Kashmir.
2. Helps secure long-term water and energy rights amidst geopolitical sensitivities with Pakistan.

Economic and Energy Impact

Energy Security - Adds substantial renewable energy capacity to India's grid, contributing to the National Clean Energy Transition and reducing dependency on fossil fuels. Supports Jammu and Kashmir's power needs, enabling industrial growth and domestic electricity reliability.
Employment and Investment - Generates direct and indirect employment, particularly in construction, operation, and ancillary services. Attracts private sector investment in line with J&K's new hydropower policy, which incentivizes sustainable energy development.
Revenue and Development - Hydropower projects like Sawalkote enhance state revenues through energy sales, water resource management, and regional development initiatives.

Chenab River - Geographic and Cultural Profile

Geography

Origin - Tandi, Himachal Pradesh, at the confluence of Chandra and Bhaga rivers
Course - Flows northwest through Himachal Pradesh and Jammu & Kashmir before entering Pakistan
Tributaries - Major tributaries include -

1. **Marusudar River** (largest tributary)
2. **Jhelum River**
3. **Sohan River**

Confluence - Eventually merges with the Sutlej River in Pakistan, which later joins the Indus River, making it part of the Indus basin

Significance of the Chenab River

Agricultural Importance - The Chenab Valley depends heavily on the river for irrigation, supporting crops such as wheat, maize, rice, and vegetables. Maintains soil fertility and water table levels in the valley.
Hydropower Potential - Supports multiple hydropower projects, including Sawalkote, Baglihar, and Dulhasti. Provides renewable energy, contributing to regional and national energy security.
Ecological and Environmental Value - Sustains aquatic life, including indigenous fish species and

migratory patterns. Maintains wetlands and riparian ecosystems, supporting biodiversity.

Cultural and Historical Importance - The river features prominently in local myths, folklore, and religious narratives. Flows past historic temples, forts, and settlements, symbolizing the region's rich cultural heritage.

Strategic Context of Hydropower Projects on Chenab

India–Pakistan Water Dynamics - As the Chenab enters Pakistan, hydropower development upstream is strategically sensitive under the Indus Waters Treaty (IWT) framework.

National Development Goals - Projects like Sawalkote contribute to India's renewable energy targets under the National Electricity Plan and climate action commitments.

Regional Connectivity and Growth - Hydropower projects enable rural electrification, industrial development, and tourism opportunities along the Chenab corridor.

Challenges and Considerations

Geological and Seismic Risks - Ramban district is in a seismically sensitive zone, requiring robust design to withstand earthquakes.

Environmental Concerns - Run-of-the-river projects must manage riverine ecology, fish migration, and local biodiversity impacts.

Cost Overruns and Delays - Escalating project cost from ₹22,000 crore to ₹31,380 crore reflects inflation, technical challenges, and land acquisition issues.

Cross-Border Implications - Downstream flow regulation may affect water availability in Pakistan, requiring careful management under international treaties and diplomatic protocols.

Conclusion

The Sawalkote Hydroelectric Project is a strategically and economically significant project in India's renewable energy landscape. By tapping the hydropower potential of the Chenab River, India strengthens energy security, regional development, and geopolitical leverage in the Indus basin. The Chenab remains a lifeline for agriculture, ecology, and culture, highlighting the need for sustainable and inclusive management of water and energy resources.

Source - https - //economictimes.indiatimes.com/industry/renewables/environment-ministry-set-to-clear-31380-cr-sawalkot-hydropower-project-on-chenab/articleshow/124446398.cms?from=mdr