Introduction
The proposed Upper Trishuli-2 Hydroelectric project of 102 MW capacity is situated 127 km north of Kathmandu, the capital city of Nepal, on the Trishuli River about 950 m downstream of Chilime Powerhouse (22 MW) in the Rasuwa District of Bagmati zone in the Central Development Region of Nepal. Proposed project is a Run-of-River (RoR) scheme aimed at utilizing the design discharge of 110 m$^3$/s to generate average annual hydro-based electric energy of 593 GWh. The catchment area at the proposed intake site is 4064 km$^2$ and the rated head is 99.6 m.

The project components are gated weir with side intakes, 3.65 km long and 7.0 m diameter headrace tunnel for water conveyance and underground powerhouse measuring 80.5 m long, 18.6 m wide and 45.1 m high to house 2 units of Francis turbines of 51 MW capacity each. The power generated from the proposed project will be evacuated through a 22 km long 220 kV transmission line to proposed Upper Trishuli 3 B Hub Substation of Nepal Electricity Authority.

The project is being developed by Hydro China Corporation (HCC), China. The total estimated cost for the proposed project is 332.402 million US$ with the construction period of 56 months and estimated investment recovery period of 14.4 years.

Salient Features

**Hydrology**
- Total Catchment Area: 4064 km$^2$
- Design Discharge: 110 m$^3$/s
- Design Flood: 4140 m$^3$/s
- Installed Capacity: 102 MW

**Head**
- Rated Head: 99.6 m

**Energy Production**
- Average Annual Energy: 593 GWh
- Energy Yield in Dry Season (Jan-April): 110 GWh
- Energy Yield in Wet Season (May-Dec): 843GWh

**Wear**
- Type: Concrete
- Headrace: Tunnel
- Length: 3650m
- Diameter: 7m

**Penstock**
- Inclined Shaft: Tunnel
- Type: 200m
- Length: 4 m
- Diameter

**Powerhouse**
- Type: Underground
- Length: 80.5 m
- Width: 18.6 m
- Height: 45.1 m

**Turbine**
- Type: Francis
- Number: 2
- Rated Output: 51 MW

**Tailrace**
- Type: Tunnel
- Length: 400m

Note: Above mentioned dimensions of project components are subject to change.

References

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