

Allain Duhangan Hydropower Plant

BACKGROUND

Allain Duhangan Hydropower Project utilizes water from the Hamtal and Patori streams, the corresponding rivers being Allain and Duhangan in the Himalayan ranges of Kullu.

PLANT DEVELOPMENT

The Allain Duhangan plant is expected to contribute on an average approximately 800 GWh per year.

FACTS

THE PLANT

Allain Duhangan Hydropower Limited (ADHPL) is a Greenfield run-of-river project with no dam attached. The high head underground powerplant will utilise water flows from a combination of glacial snow melt and monsoon rains. ADHPL has 2 separate intakes, intermediate reservoir, 29 km access roads, 12.5 km of tunnels, 1700 m steel lined pressure shaft, an underground powerhouse, and a 170 km/220 kV transmission line.

LOCATION:	Kullu district, Himachal Pradesh, India
INSTALLED CAPACITY:	192 MW
TYPE:	Run-of-river
AVERAGE ANNUAL OUTPUT:	800 GWh
GROSS HEAD:	880 m
DESIGN FLOW:	30 m ³ /sec
EQUIPMENT:	Two 96 MW vertical 5-jet Pelton units (with 1750 m steel-lined pressure shaft)
CONSTRUCTION COMMENCED:	January 2005
COMMERCIAL OPERATION	Expected to be Merchant power plant, Expected (commercial operation): 2010
CAPITAL COST:	Expected to be finished at about 400 MUS\$
POWER PURCHASE:	Merchant power to be agreed for northern region clients
SN POWER OWNERSHIP:	49% (indirect) through Malana Power Company
OTHER EQUITY OWNERS:	Malana Power Company 88% and IFC 12%
PARTNER:	LNJ Bhilwara Group, India
FINANCING:	IFC and local Indian banks
GREENHOUSE GAS SAVING:	Est. 495 000 tonnes pa

The 192 MW hydropower project lies at the confluence of Allain and Duhangan rivers in the Kullu district of Himachal Pradesh, about 60 km from the Bhuntar airport along national highway 21, and about 500 km from Delhi by road. The plant will be a merchant power plant with short term Power Purchase Agreements, feeding electricity into the Northern Regional Grid of India.

OPERATION ADHPL

Allain Duhangan will be operated as a base load plant during the summer and rainy season (June-October), and as a peaking plant the rest of the year. During the peaking season, the plant is expected to operate about 4 hours daily. The project is expected to help meet power shortages in the Northern region, presently estimated at about 1500 MW.

CONSTRUCTION

Construction of Allain Duhangan Hydropower Plant was commenced in January 2005, and has

a target for commercial operation in June 2010 for Allain and December 2010 for Duhangan. The project has been granted credits under the Clean Development Mechanism (CDM) and is among the largest hydropower projects to be registered under the CDM, UN Framework Convention on Climate Change. Once the plant becomes operational, it is approved for generation of Certified Emissions Reductions (CERs). The project includes several Indian contracts for civil works, and one contract for major electro-mechanical works rests with BHEL of India.

SUSTAINABLE DEVELOPMENT

The project provides significant employment opportunities for local communities, and it also contributes to develop infrastructure in the Kullu district.

