

## Laxiwa



Bird's view of Laxiwa Hydropower Project

Laxiwa Hydropower Project is situated on the main reach of the Yellow River. It is the second cascade hydropower project to the Longyangxia Hydropower Project on the upper stream of Yellow River. The distance from Laxiwa Hydropower Project to the Longyangxia upstream is 32.8 km and 73 km to the Liji Xia downstream.

Laxiwa Hydropower Project has the characteristics of the biggest installed capacity, largest power generation installation, the lowest unique cost per kW and favorable economic benefit in the Yellow River Basin. The main purpose of the project is the power generation. When it is to be finished, it mainly takes on hump regulation and emergency response to the Northwest electricity network, which can support 750kV to the Northwest Power Network. It is also the skeleton of north passage of “West-East Electricity Transfer”, the strategic project realizing “hydropower and thermal power” bundled be transferred to North China Power Network.

The key structures of Laxiwa Hydropower Project are composed of concrete double-curvature arch dam, surface spillways, deep outlets, bottom outlets, large plunge pool, and underground powerhouse on the left bank. The maximum height of dam is 250 m, the crest length is 459.64m. The water level of normal storage is 2452m, dead water level is 2440m, the total reservoir capacity is 1.079 billion m<sup>3</sup>, active reservoir capacity is 0.15 billion m<sup>3</sup>. The total installed capacity is 4200MW, guaranteed output is 990MW, mean annual electricity generation is 10.223 TWh. The main construction of Laxiwa Hydropower Project includes earth-rock excavation 5.6836×10<sup>6</sup>m<sup>3</sup>, rock excavation 2273.5×10<sup>3</sup>m<sup>3</sup>, concrete casting 3681.8×10<sup>3</sup>m<sup>3</sup>, metal structures 11584 t. The static investment of the Project is 12.33 billion RMB and dynamic investment 14.781 billion RMB.

Laxiwa Hydropower Project is constructed and managed by Upper Yellow River Hydropower Development Company, Ltd. As on-the-spot guidance management organization, Laxiwa Construction Sub-company exerts construction and management function under the authorization of Upper Yellow River Hydropower Development Company, Ltd. River bed cutoff has been implemented at the beginning of 2004, and the excavation of dam abutment began on Sep. 2004, excavation elevation is 2240m on Oct. 2005. The concrete cast of arch dam was stated on Apr. 2006. The elevation of dam is to be cast to 2390m on Oct.2008, the water

level reached initial stage of electricity generation is 2370m, the first unit can be put into operation at the end of 2008.

