Shuibuya Hydropower Project

LOCATION:
Badong County, Hubei Province, China

SUBMITTING FIRM:
Changjiang Institute of Survey, Planning, Design and Research

FIDIC MEMBER:
China National Association of Engineering Consultants (CNAEC)
**Shuibuya Hydropower Project**

**Site:** Badong County, Hubei Province, China.

**Purpose:** Electricity generation, flood control and navigating condition improvement.

**Electricity generation:** It’s a major Load-Frequency control power supplier for the Central China Grid, and undertakes about 10% of Load-controlling of the Grid, jointly with downstream hydropower stations.

**Flood control:** Through integrated operation with downstream reservoirs, Shuibuya reservoir can improve the flood safety level at the Jingjiang area, which used to be a heavily flooded area in the middle stream of Changjiang river basin, and reduce property losses of millions of people.

**Navigation:** The 200 km long deep-water channel of Shuibuya reservoir has improved the condition of navigation.

**Economic:** Boost shipping industry, local tourism industry and economic development.

**Provide employment:** Provide 6600 direct employment opportunities, 4000 indirect job opportunities.

**Emission reduction:** Every year, the clean hydro energy supplied by the station reduces 0.49 million tons of standard coal consumption, 1.12 million tons of CO₂ emission.
Shuibuya concrete face rock-fill dam (CFRD) is the highest one in the world that has been built with a maximum height of 233 m.

In the year of 2009, Shuibuya Dam received award from ICOLD as the “International Rockfill Dam Milestone project”.

In the year of 2010, “The Key Technologies and Its Application of the Construction of Shuibuya Super-high CFRD” was granted the Second prize of Chinese National Award for Science and Technology Progress.
Spillway of Shuibuya HPP

The spillway water head difference is 171m with maximum discharge of 183,200m³/s and flood discharge power of 31,000MW.

The slit type flip buckets with stepped outlet and zoned steep chutes for energy dissipation and the bank-side-protected-and-bottom-unprotected style works with anti-undermining walls for anti-scouring were successfully applied.
Shuibuya project is environmentally conscious, emphasizes the project in harmony with natural and cultural environment and has achieved the harmonious relationship between human and water. The reservoir has become a major attraction in Qingjiang Gallery - one of the most famous Chinese natural landscape zones. The reservoir micro-environment has become one of the Chinese most attractive areas for living.

The beautiful and most livable areas
Promote shipping and Traveling development
Promote economy development