



Hydroelectric Controls

WHY HPI?

Our team has extensive experience with over 70 turbine models from more than 23 manufacturers in multiple markets: Power (Peak and Prime), Oil & Gas Processing and Transmission, Power Plant EPC. We provide open control systems based on commercially available, off-the-shelf technology, reducing life-cycle costs.

ABOUT HPI

HPI remains a technological leader in providing full service turbine solutions. HPI's range of products and services include turbine and plant control packages, mechanical inspection/overhaul services, as well as full turnkey Engineering, Procurement, and Construction (EPC) of power plants. HPI provides custom solutions to meet each specific project requirement by utilizing in-house talent experienced in project management, engineering, and design which improves overall plant reliability and safety.

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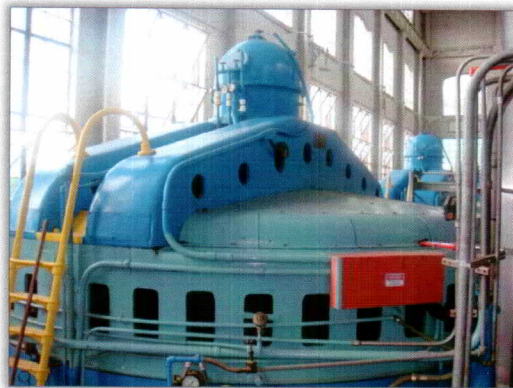
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HPI Solutions for Hydroelectric Controls

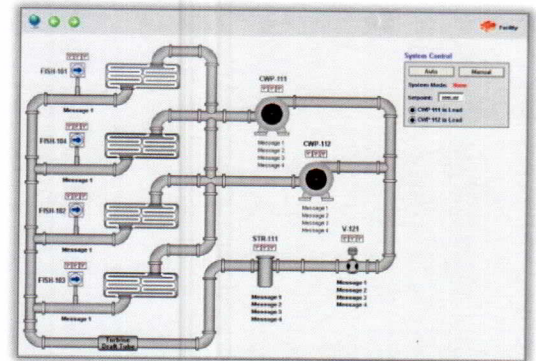
HPI delivers highly reliable control systems which have proven record of operational efficiency and longevity. HPI has designed systems for hydroelectric plants and are capable of meeting the most demanding requirements of energy customers worldwide.

HPI Offers a range of services, from initial FEED studies, through turn-key engineering, procurement, and plant construction.



Our HMI Design includes:

- Higher flexibility, use of a wide range of proven HMI packages
- Equipment designed for easy maintenance, troubleshooting, and modification.
- Customized to client requirements using modern, ergonomic principles.
- Secure, remote monitoring and system diagnostics
- User friendly screens
- Multilanguage capable
- Secure, remote monitoring and system diagnostics



Hydroelectric Turbine Solutions include:

- Hydroelectric Turbine control, including
 - Reaction Turbines and Impulse Turbines
 - Instrumentation Systems
 - Balance of Plant
- Hydroelectric Turbine generator control system - designed to optimize the maximum power output by monitoring generator output power while modulating the wicket gate angle and the runner blade pitch independently
- Innovative Speed Governing System, including:
 - Control of the turbine start-up and shutdown sequences
 - Synchronization of the turbine with the grid
 - Control of the active power supplied by the generator to an interconnected network
 - Control of network frequency on an isolated electrical network
 - Protection of the unit against over-speed in case of load rejection
 - Control of advanced sequences
- Hydro process application software
- SCADA and DCS System Tie In
- Integrated solutions
- Automatic control of a one-unit 2000-kW (minimum) hydroelectric power plant
- Turn-key projects