Driving Operational Excellence in Water Wastewater

The ever-increasing demands on today’s Water and Wastewater facilities require an increasing level of capability from the supporting automation and information technology. Dynamic changes in processing requirements, increased levels of compliance reporting, Homeland Security requirements, and the pressure to optimize operating budgets through controlled energy and manpower costs are but a few of the challenges. GE Fanuc Automation is a global supplier which is delivering on these needs in driving operational excellence for the water industry. Water systems solutions can be architected from the most advanced hardware and software products to deliver in the most challenging of environments. These solutions deliver the lowest True Cost of Ownership by protecting existing investment of infrastructure and providing the seamless integration with new and evolving technology standards.

Meeting the Critical Needs of Modern Water Wastewater Treatment

**Productivity**
- Continuous monitoring/data collection to minimize manual data collection
- Alarming allows for fastest response to problems with current staffing
- Automated control of remote locations to redeploy manpower to preventive maintenance
- Integrated sensing/testing allows for better utilization of chemicals
- Coordinated control can drive lower energy consumption

**Accountability**
- Elimination of clipboards and manual data entry to reduce variability
- On-line systems and store/forward scenarios to eliminate gaps in data
- High performance historian capability to allow for large data volume storage and retrieval
- Off-the-shelf data security/encryption to guarantee compliance
- Open standards software to allow for simpler report generation and accommodate changing requirements

**High-Availability**
- Hardware and software redundancy scenarios to assure continuous operation
- Support of on-line changes to facilitate continuous improvement
- On-line alarming integration with web or pager systems
- Remote system access to foster fastest on-call response
- Secure SCADA and IT implementations to eliminate downtime or system corruption from unauthorized access

**Maintainability**
- Off-the-shelf, industry-proven capability with full manufacturer support – less custom scripting and large pool of services
- Open connectivity to installed technology
- Strategic technology platform for incorporating future capabilities
- Scalable components to avoid ceilings and limitations
- Plan for changing requirements by choosing products/vendor with longer term visions
Flexible and Proven Capability in Advanced Water Applications:

GE Fanuc HMI and PLC/controller products continue to meet the challenges of water distribution and collection. Automation equipment local to pump stations and lift stations provides for reliable and autonomous performance. Remote stations can be designed with advanced operator interface capability including the ability to seamlessly access other stations on the same network. These remote stations can be flexibly networked back to a centralized SCADA system using phone line, radio, satellite, and mesh network topology. GE Fanuc HMI solutions support the communication to all new and legacy RTU hardware solutions providing a single stream-lined SCADA solution.

Flexible in-plant processing allows for the support of the most demanding of treatment applications. Coordinated control can be architected from PLC’s, composite/visual controllers, PACSystems™ and PC control platforms. OpenProcess™ hybrid control allows for DCS capability with the open framework of PLC and HMI technology. Redundant and hot standby architectures provide the support for water treatment and filtration around the clock to insure continuous processing. Scalable solutions range from single-node filter back wash systems through the complex coordinated control of 300+ MGD facilities.

GE Fanuc delivers advanced HMI capability with 20,000+ installed seats in the water industry.

**Flexible and Proven Capability in Advanced Water Applications:**

**Flexible Architectures for the Complete Water Wastewater System**

**SCADA – System Monitoring, Alarming, and Reporting**

- SCADA master capability allowing for remote data acquisition via telemetry such as radio, telephone, or satellite
- Central control room for coordinated control, parameter set points, maintenance dispatch, and compliance reporting via iFix or CIMPLICITY HMI
- Architectures can include high-availability, redundant configurations

**Advanced Information Management**

- Real-time and historical integration with support and execution systems such as LIMS, Maintenance Management, and administrative functions
- High-performance evaluations through time-streamed data in iHistorian

**Effluent Processing / Delivery**

- Secure remote access to complete system via infoAgent web utilities for customized solutions; solutions include portable and PDA applications

**Remote Water Collection and Distribution Systems**

- *Blind* PLC-based controller with VersaMax-® or Series 80-30
- QuickPanel™ Control with integrated view and logic with distributed VersaMax I/O
- QuickPanel View with VersaMax PLC
- Communications via remote telemetry

**Biological / Chemical Treatment**

- Hybrid Process Control via OpenProcess™ with integrated analog and discrete control
- High-performance processors with redundant configurations via PACSystems™ and Series 90 PLC’s

**Effluent Processing / Delivery**

- Networked controller solutions for in-plant pumping and filtering applications

**GE Fanuc Automation Information Centers**

**USA and the Americas:** 1-800-GE FANUC or (434) 978-5100

**Europe, Middle East and Africa:** (352) 727979-1

**Asia Pacific:** 86-21-3222-4555

**Additional Resources**

For detailed technical specifications and product ordering information, please visit the GE Fanuc website at: [www.gefanuc.com/water](http://www.gefanuc.com/water)