

APPENDIX N

GE FANUC Pricing and System Information

SUMMARY	INFI 90	ABB 800xA	Emerson	GE Fanuc PAC RX3i
SEWPCC Expansion Hardware Cost, 5 cabinets including I/O	NA	NA	\$218,000.00	\$73,435.00
SEWPCC Expansion Hardware Cost, 5 cabinets including Fieldbus I/O	NA	NA	\$283,000.00	\$147,250.00
CONTROL ROOM AND CONTROLLER UPGRADES				
SEWPCC				
SEWPCC - New Controllers to replace 8 remaining INFI 90s	NA	NA	\$193,600.00	\$49,744.00
SEWPCC Control Room Upgrade	NA	NA	\$146,200.00	\$107,616.00
TOTAL SEWPCC UPGRADE	NA	NA	\$622,800.00	\$304,610.00
NEWPCC				
NEWPCC - New Controllers to replace existing INFI 90s (12)	NA	NA	\$290,400.00	\$74,616.00
NEWPCC Control Room Upgrade	NA	NA	\$146,200.00	\$107,616.00
TOTAL NEWPCC UPGRADE	NA	NA	\$436,600.00	\$182,232.00
WEWPCC				
WEWPCC - New Controllers to replace existing INFI 90s (12)	NA	NA	\$169,400.00	\$37,308.00
WEWPCC Control Room Upgrade	NA	NA	\$146,200.00	\$107,616.00
TOTAL WEWPCC UPGRADE	NA	NA	\$315,600.00	\$144,924.00
TOTAL HMI AND CONTROLLER UPGRADE - THREE FACILITIES (PRICING FOR ALL THREE FACILITIES WAS NOT PROVIDED BY ABB)	NA	NA	\$1,375,000.00	\$631,766.00

Details

STANDARD I/O 5 NEW PROCESSORS

CPU	NA	NA	24000	6018	
Power Supply	NA	NA	500	372	
Racks (3)	NA	NA	500	337	
DI (8)	NA	NA	5600	2672	
DO (4)	NA	NA	6800	1692	
AI (2)	NA	NA	3400	2376	
AO (1)	NA	NA	2800	1220	
Sub Total		0	0	43600	14687
QTY 5 Total		0	0	218000	73435

FIELDBUS I/O 5 NEW PROCESSORS

CPU	NA	NA	24000	6018	
Power Supply	NA	NA	100	372	
Racks (2)	NA	NA	100	337	
FieldBus (4)	NA	NA	22400	5508	
DI (3)	NA	NA	2100	1002	
DO (2)	NA	NA	3400	846	
AI (1)	NA	NA	1700	1188	
AO (1)	NA	NA	2800	1220	
Sub Total		0	0	56600	16491
QTY 5 Total		0	0	283000	82455

SEWPCC - Integrate Eight Existing Controllers New Hardware

CPU (Redundant Pair)	NA	NA	24000	6018
Power Supply and Cabling	NA	NA	200	200
Sub Total	NA	NA	24200	6218
QTY (Eight)	NA	NA	193600	49744
QTY NEWPCC (12)	NA	NA	290400	74616
QTY WEWPCC (6)	NA	NA	169400	37308

CONTROL ROOM

Workstation Hardware (3)		7500	7500	7500	7500
Server Hardware - I/O, Redundant (2)		10000	10000	10000	10000
Server Hardware - Remote Access (1)		10000	10000	10000	10000
Server Hardware - Historian (1)		10000	10000	10000	10000
Operator License (8)	NA	NA	53600	17640	
Engineering License	NA	NA	6700	6930	
Historian License and Tools	NA	NA	35000	22656	
I/O Server License	NA	NA	6700	5040	
Remote Access License	NA	NA	6700	17850	
Control Room Upgrade		37500	37500	146200	107616

Product Line	Product Type	Part #	Description	List Price	Product Family
PACSystems RX3i	RX3i CPUs	IC695CPU310	300Mhz CPU with 10Meg of memory 2 SERIAL PORTS (occupies two slots on system base)	\$3,009.00	Controllers and I/O
PACSystems RX3i	RX3i Power S	IC694PWR330	Power Supply 120/240 Vac 125 Vdc High Capacity	\$372.00	Controllers and I/O
PACSystems RX3i	RX3i Racks	IC694CHS392	Base Expansion 10 Slots	\$337.00	Controllers and I/O
PACSystems RX3i	Analog Input I/	IC694ALG222	Input module, analog 16 point single ended/8 channel differential, voltage.	\$1,188.00	Controllers and I/O
PACSystems RX3i	Analog Output	IC694ALG392	Output module analog 8 points, voltage/current.	\$1,220.00	Controllers and I/O
PACSystems RX3i	Discrete Input	IC694MDL240	Input module 120 VAC, 16 points.	\$334.00	Controllers and I/O
PACSystems RX3i	Discrete Outpt.	IC694MDL340	Output module 120 VAC 0.5 amps 16 Points.	\$423.00	Controllers and I/O
PACSystems RX3i	RX3i Commun	IC695PBM300	RX3i PROFIBUS Master, Conformal Coated, Module (must be installed on RX3i PCI bus). The mod	\$1,377.00	Controllers and I/O
Proficy Historian	Historian - Ser	27012110000C	iHistorian Server 5000 Points (5 Users)	\$22,656.00	Software-Production Management
iFIX HMI/SCADA	iFIX - Develop	17002240001M	iFIX Standard HMI Pak Unlimited Developer Ver 4.0	\$6,930.00	Software-Proficy HMI/SCADA
iFIX HMI/SCADA	iFIX - Runtime	27007740001M	iFIX iClient Runtime Ver 4.0	\$2,205.00	Software-Proficy HMI/SCADA
iFIX HMI/SCADA	iFIX - Server	27003640001C	iFIX Plus SCADA Unlimited Server Ver 4.0	\$5,040.00	Software-Proficy HMI/SCADA
iFIX HMI/SCADA	iFIX - Runtime	47300025001C	iClientTS Concurrent User Terminal Server Support	\$5,250.00	Software-Proficy HMI/SCADA
iFIX HMI/SCADA	iFIX - Runtime	47300125001C	iClientTS Each Concurrent User	\$1,260.00	Software-Proficy HMI/SCADA

GE Fanuc Automation



Solutions for the Water & Wastewater Industry

Driving Operational Excellence and Lowest Total Cost of Ownership



Meeting the critical needs of modern Water Wastewater Treatment

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. 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.

Productivity Increases to Offset Constrained Resources

Driving the effectiveness of solutions through software includes complete Supervisory Control and Data Acquisition (SCADA) solutions allow for continuous monitoring and minimized manual data collection. GE Fanuc's Proficy HMI/SCADA software allows for the configuration of optimal data collection through native drivers. This allows the operators to drive early detection and on-line analysis of alarms. All of this results in rapid response to issues and minimum equipment downtime. SCADA solutions maximize the effectiveness of the plant operational manpower.

Integrated Security and Audit Trails

Standard HMI/SCADA applications include robust, highly configurable user security to provide multi-tiered access and limit critical functionality to select users. Both the HMI/SCADA and Proficy Historian software includes the ability to integrate complete audit trail and change management capability. Complete audit trails on user system changes, data integrity, and user set-points can be vital to compliance records as well as act as the basis of capability to help in the emerging needs of Homeland Security.

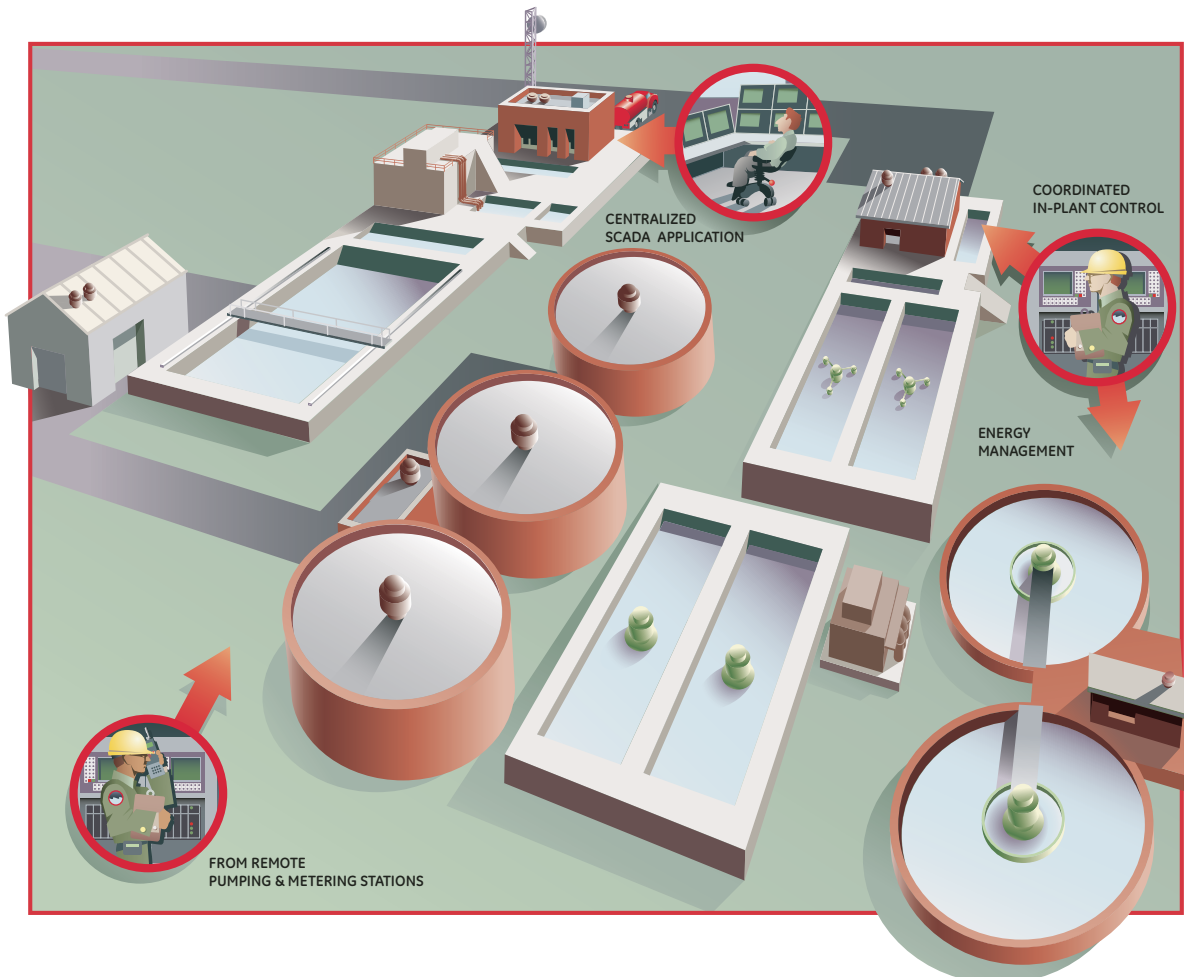
Management of System Configuration and Programs

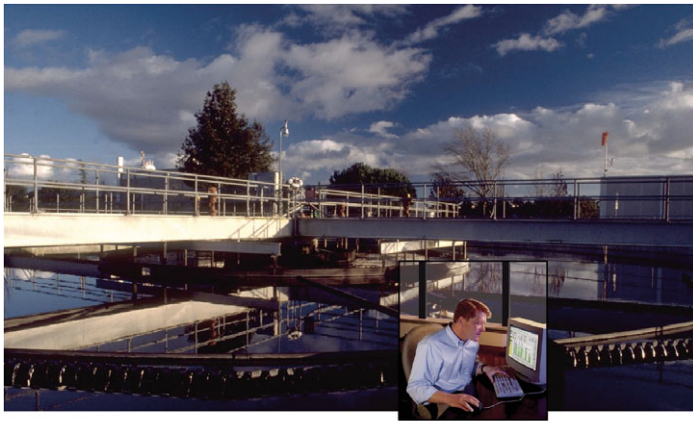
Proficy Change Management is a systemic level of software that monitors and records all changes to the system. Proficy Change Management can track system changes to ensure the use of the most current configurations and provide the fastest restoration of system parameters should there be a server failure. This capability is vital in developing accountability in terms of overall system management.

Proficy System Management can be used to track the changes and revisions in the HMI/SCADA application as well as track the changes for the programs downloaded and uploaded in a multi-vendor PLC implementation.

Truly Flexible and Open Device Connectivity

GE Fanuc software is designed to communicate to the both the control devices that you have already installed as well as the newest technology available. GE Fanuc's library of drivers includes all major PLC suppliers, dedicated drivers for RTU and specialty water industry devices and interfaces to DCS applications. Protocol support includes de facto standards such as Modbus RTU and industry standards such as DNP 3.0. This connectivity is supported by both an open interface via OPC driver technology as well as a host of native drivers that are optimized for specific devices and/or protocols. These native drivers provide unparalleled flexibility in terms of setting up varied poll/scan rates that reflects the varied importance and criticality of individual process variables and event flags. This is complemented with advanced alarming capability that allows for dead band and delayed alarm annunciation. All of this flexibility allows for optimized data collection and Report by Exception solutions. This results in engineered, predictable data collection scenarios.





Industry Tried, True, Tested and Accepted

The reliability of the software products and the ability to evolve to meet changing requirements is reflected in the 20+ years of serving the water wastewater industry. This installed base of 25,000+ operating seats in the water industry and over 100,000 seats overall in the HMI/SCADA market provides a terrific foundation for GE Fanuc and its customers to continue driving automated solutions that meet the challenges of some of the most demanding operating environments. GE Fanuc HMI/SCADA iFIX and CIMPLICITY systems have been deployed by virtually every Systems Integrator servicing the water market. These service providers have built a large set of intellectual property around the powerful software tools that allow for the most efficient implementation of new systems as well the most cost-effective maintenance of existing systems. This large pool of integrators drives a competitive market that benefits the end-user in terms of cost and alternatives.

Integrated Historian Capability is the Foundation to Effective Analysis and Continuous Improvement

Proficy Historian is an optimized data storage and retrieval technology that revolutionizes the ability of a water system to store, retain, and retrieve vital process data. The high-speed data compression performance of Historian allows for unprecedented volumes of data to be stored in a smaller footprint. This alleviates the need for complicated backup and off-loading of data to external devices or tapes. Ad-hoc queries comparing the flow totals from the last three days are not only possible but perform as if the request was for the last 3 hours.

This data accessibility eliminates barriers to doing the evaluations necessary to foster continuous improvement. Time-stamped process data can also be integrated with the event/alarm data to allow for critical connection and correlated analysis based on equipment conditions, overall system performance, and outside influences like weather events. Historian is uniquely designed to make your data accessible to deliver for your needs.

Web-Enabled Capability Offers Unique Capability to Aggregate Data from Disparate Systems

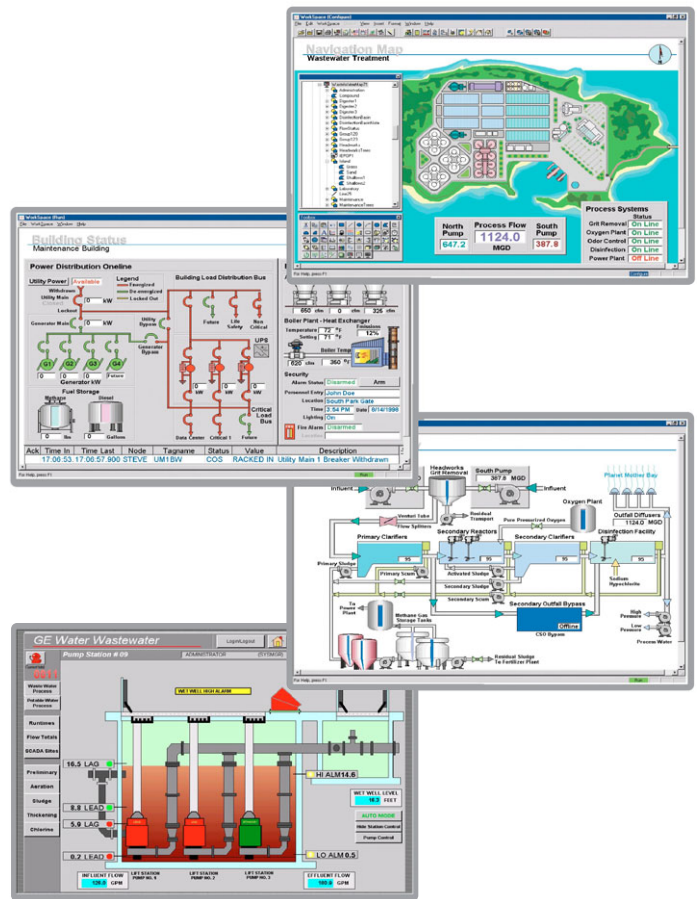
GE Fanuc HMI/SCADA systems offer the lowest deployed system costs through the utilization of web-based clients and viewers. Web-clients allow intermittent users access to the system using standard browser technology. This allows for remote access and minimizes software deployment and maintenance costs. In addition to web-clients to the SCADA systems, users can utilize Proficy Real Time Information Portal to integrate this vital run time data with other support systems. Proficy Real Time Information Portal can be used to simultaneously show data from the runtime SCADA, trend data from Historian, and even include important contextual data from related systems like LIMS. A single screen could show the plant quality manager the weekly flow totals, provide values for current flow, and show a trend of manually-collected water quality results on a single integrated screen. RTIP allows for the easy configuration of powerful analytic displays while extracting the supporting data from the native data structure of the individual systems. Information Technology costs are minimized through the avoidance of costly interface programs or problematic batch imports and exports between dissimilar systems.

Open Standards Development and Scripting Streamlines Implementation and Assures Maintainability

GE Fanuc HMI/SCADA products drive lowest total cost of ownership by providing the ultimate balance of off-the-shelf capabilities and system extensibilities. The vast majority of visualization, alarming, and data collection requirements can be done via standard point, click, and select configuration. This provides for the most robust capability in standard product that can be most easily maintained in a collaborative engineering environment. When additional functionality is required, programmers can take advantage of standard open systems programming environments. This avoids the maintenance problems and limited adaptability that often results from proprietary scripting environments.

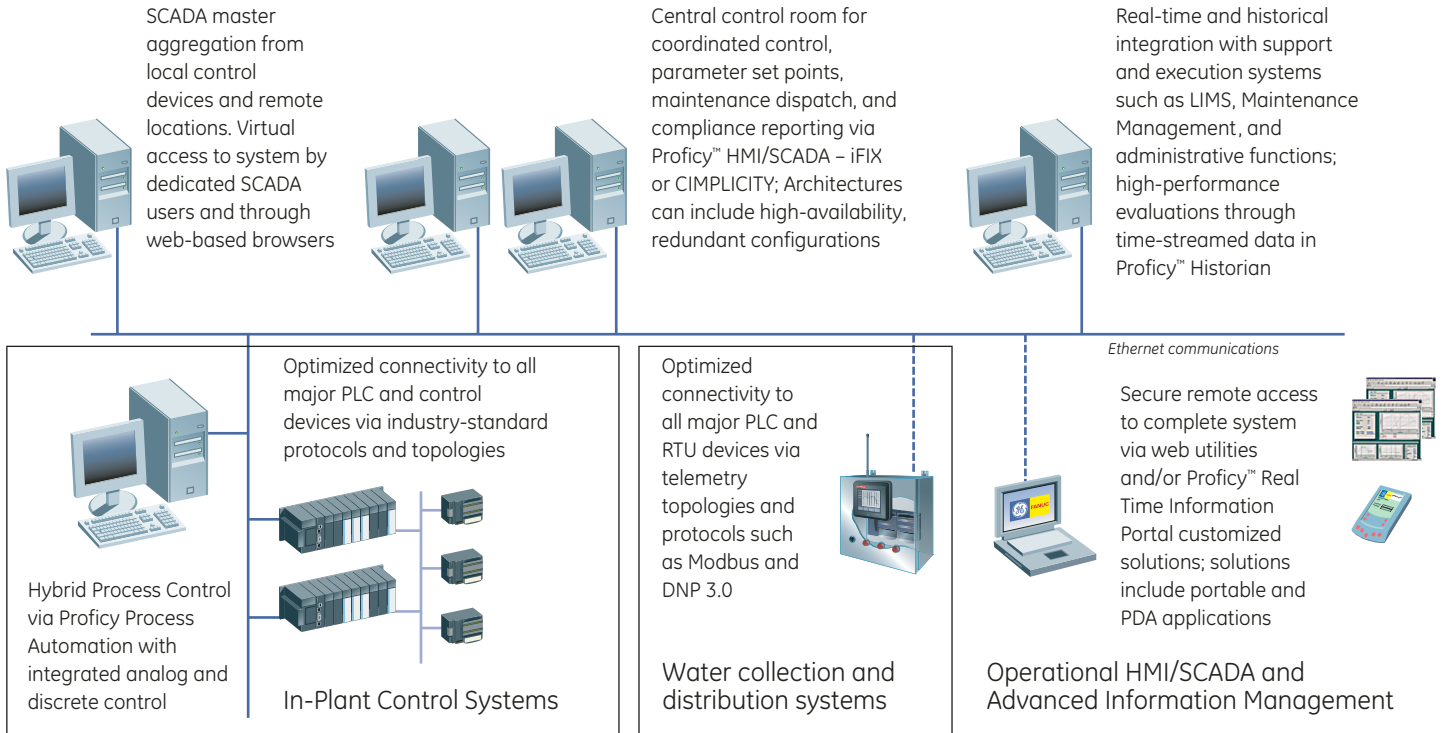
Ease of Use for Rapid Project Implementation

The ease in development of powerful visualization graphical displays allows for fastest system deployment. The rich screen toolkit is enhanced by the ability to develop and deploy powerful graphical Wizards. Users can further add to the capabilities by dropping in program-free Active-X controls. Finally system developers can leverage the best container for third-party applications available guaranteeing that solutions can be tailored to the exact needs of the application. All of this can be done utilizing the Secure Containment technology to drive reliability and provide the foundation for electronic signature and record audit capability.



Proficy HMI/SCADA iFIX & CIMPLICITY delivers advanced visualization and control capability to 25,000+ global users in the Water Wastewater industry.

Unprecedented Architectural Flexibility



GE Fanuc Software is Ideally Suited for Modern Water Wastewater Treatment

- Technology scales from a single server solution through documented systems with over 500,000 tags.
- High-availability solutions to support the needs of a 365/24 operations
- Secure, distributed architectures aligned with the operational demands of diverse applications



GE Fanuc Automation Information Centers

Americas:
1 800 GE FANUC or 434 978 5100

Asia Pacific:
86 21 3222 4555

Europe, Middle East and Africa:
800 1 GE FANUC or 800 1 4332682
or 1 780 401 7717

Europe, Middle East and Africa (CNC):
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Additional Resources

For more information, please visit the GE Fanuc web site at:

www.gefanuc.com

