



**Central Connecticut
State University (CCSU)
Energy Center**

CCSU Energy Center

Project Specifics

- State University campus
- New facility designed to meet current and future utility demands
- 20,000 sq. ft. building
- Two 1,500 ton Trane chillers
- Three 65,000 PPH Nebraska boilers
- Two 1.25 MW Cummins gas engine generators with Russelectric switchgear

Challenges

- Plant in operation 24/7/365
- Communication interfaces to chillers, boilers, and switchgear
- Distributed I/O system architecture



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Project Requirements

- Engineer the control strategy
- Design & program the Human Machine Interface
- Program the process control PLCs
- Control panel design assembly & factory acceptance testing in TVC's UL508A shop
- Design the communications networks
- Design & program the HMI to collect critical process data & produce various reports
- Installation supervision
- System start-up & system acceptance testing
- Instrument and final control element specification, calibration and testing
- Operator training
- Remote access for design, monitoring & control
- Operations and maintenance manuals
- Preventive maintenance & ongoing 24/7/365 support (as required)



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Solutions

- Designed, fabricated and delivered by TVC Systems
- Intellution iFix SCADA and View
- Allen Bradley ControlLogix controller platform and distributed Flex I/O using ControlNet communication network
- Modbus serial communication interface module for Flex I/O platform
- Sytech XLReporter reporting software
- Historical & real time trending plant data

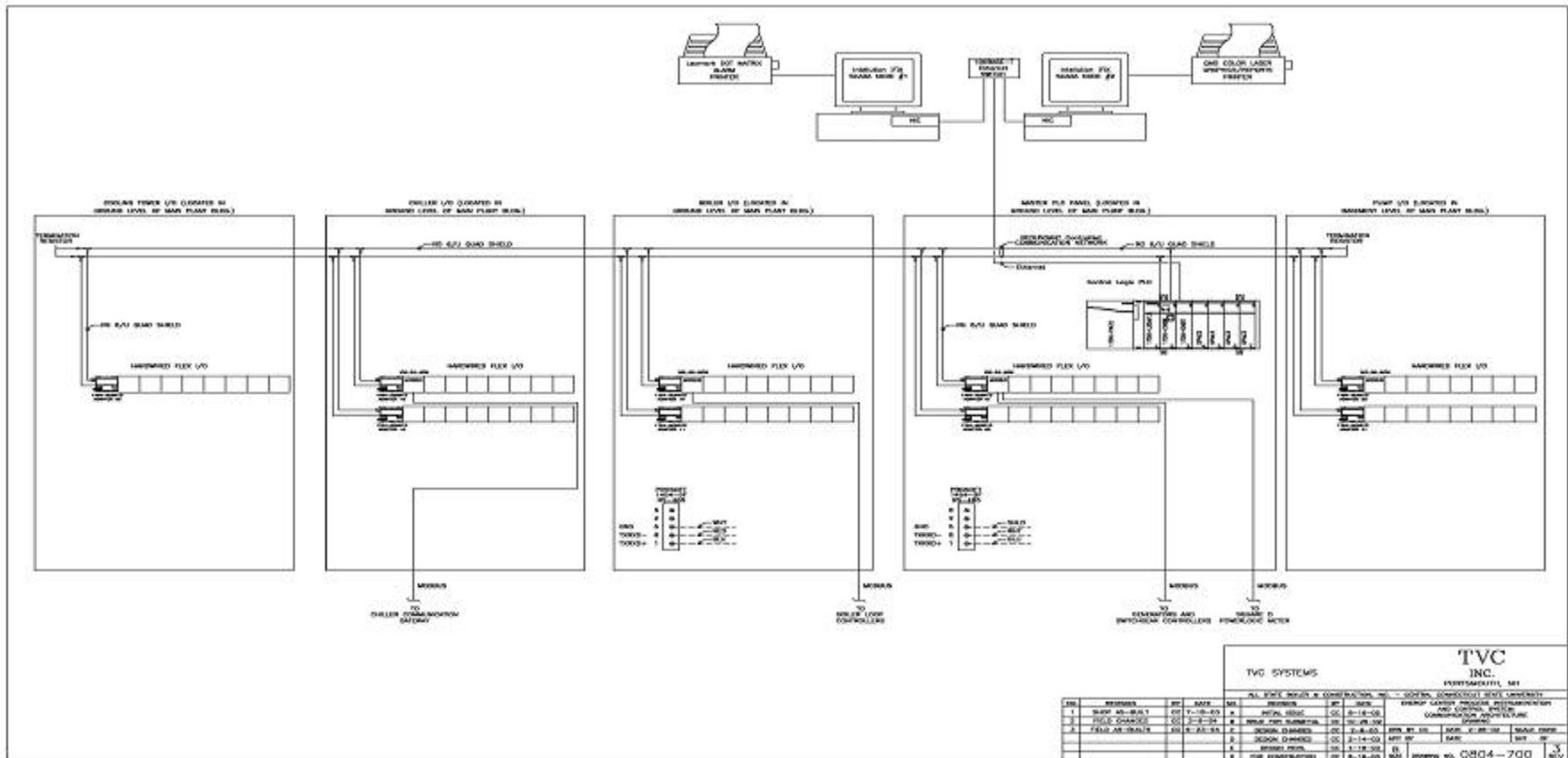
Results

- Provision of a single intuitive and centralized control system interface
- Process automation decreases manual operations to be performed by plant personnel resulting in single operator per shift operation
- Excellent overall energy center efficiency
- Automated data collection & reporting
- Monitoring and reporting of energy usage for full facility
- Remote access allows plant monitoring and control from any location



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System Architecture



TVC Systems

