

Data! Data! Data!

Energenecs recently provided an updated SCADA system, two well house panels, two elevated tower panels and six new lift station control panels (one stormwater, four wastewater and one more on the way) for the [Village of Monee, Illinois](#). According to Brian Akason "it's elegant, it's unbelievable. This well house has more information in it than any well house I've ever dealt with!" We asked Brian a few questions about this data-focused project.



Can you give a description of the community?



The project was for Monee, a village in Will County located about 26 miles south of Chicago. The Public Works Department's Water and Sewer Division is responsible for maintaining the potable water supply to Monee's residents and businesses, as well as maintaining the wastewater collection system including:

- Three groundwater wells capable of providing nearly 3.5 mgd
- Three elevated storage tanks with a total capacity of 1,050,000 gallons
- A water distribution network comprised of nearly 37 miles of water main
- 519 fire hydrants
- 2,000 service connections, serving 5,200 residents and businesses
- 23 miles of sewer main
- Six wastewater lift stations

What did the new project entail?

A new 500,000 gallon elevated tank, well, well house, and Supervisory Control and Data Acquisition (SCADA) system to improve safety and reliability of Monee's water distribution system. These new water system improvements will significantly increase water storage for high water demand periods during the summer months and improve water supply for major firefighting events. The new system upgrades will also serve as a backup water supply source, when other wells are out of operation for routine maintenance, as well as provide more control and accurate monitoring of the Village's elevated tanks, wells, pump stations and metering stations.

How did Energenecs get involved?

Robinson Engineering performed the engineering design and construction engineering services. Jim Czarnik, manager of Robinson Engineering's Water and Wastewater



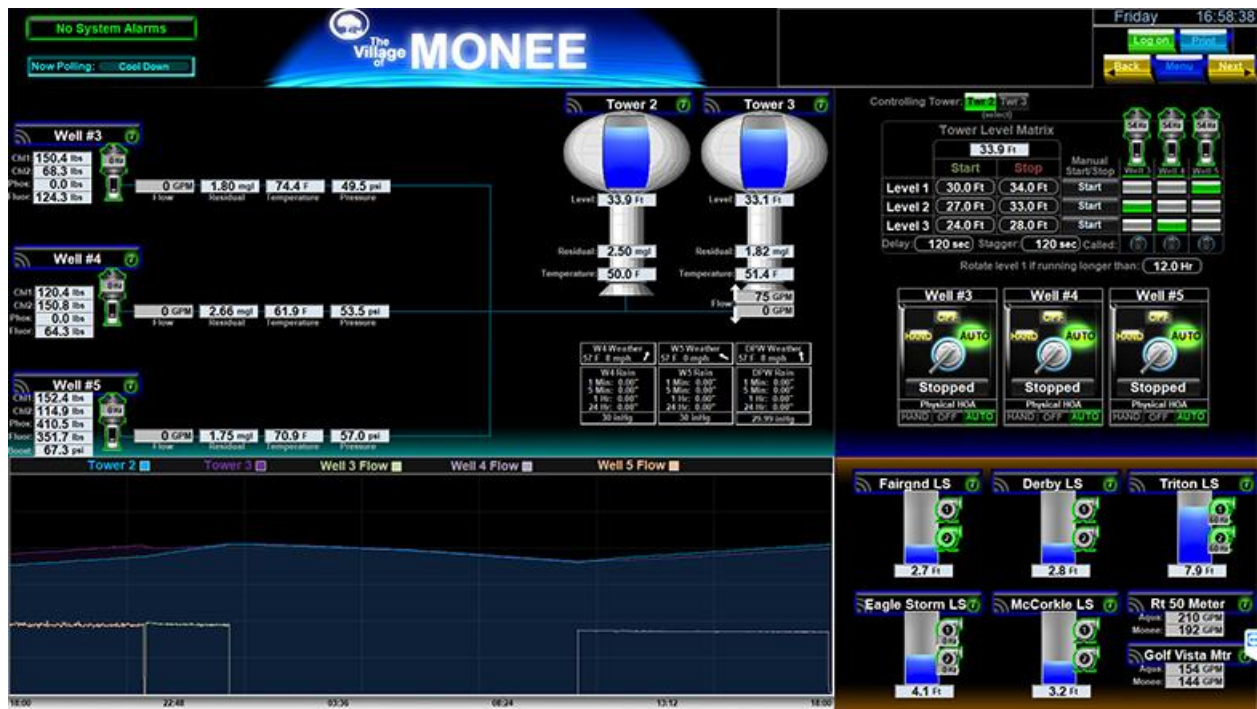
Department, called me one day and said he was looking to team with a control system integrator who could provide a top-notch SCADA system design. In 2017, we met in Monee and we walked through the existing site locations to get a feel for what they wanted to do. It became obvious over the following 1-2 years when Robinson designed new Well #5 and new elevated tank # 3, that the SCADA upgrade would be part of the well project.

DJ Kruzal, Monee Superintendent of Public Works, and Ed Johnson, Public Works Deputy Superintendent already had an old SCADA system, so they had the inherent knowledge to know what they wanted when upgrading their system.

It became very clear in the beginning that they wanted data; They wanted information at all times on as much of their systems as possible. On their phones and on their laptops. Nate Wolfe, an Energenecs SCADA programmer, gave a control system presentation to DJ, Ed and Jim. Nate hit it out of the park, he did a beautiful job, and answered all of their technical questions.

What did the final control system consist of?

This was a \$500,000 control system consisting of 3 wells, 2 elevated towers, 6 wastewater pump stations, and 2 flow meters that monitor wastewater flow from Monee to the metro district. It also included the master control and computer center in their public works office. Energenecs also provided 3 weather stations, which measures temperature, wind direction, wind speed, rainfall. Monee wanted to see data, data, data!



“This SCADA system proves its worth day after day.”

Ed Johnson, Deputy Superintendent at Village of Monee Department of Public Works



The general contractor for the Well #5 and the SCADA project was Gaskill Walton Construction Co., from South Chicago Heights. They built Well #5 and CB&I built the tower. The electrical contractor was Sweney Electric Co. out of Merrillville, Indiana. Energenecs coordinated with Sweney to install and wire the various site upgrades. Energenecs team consisted of Nick Leonard, as the Project Manager, Nate Wolfe did the programming, and Bill O'Neal provided radio antenna installations and control panel interface wiring coordination.

The Triton wastewater pump station was identified in our site visit as critical. We built a new large duplex control panel featuring Allen Bradley CompactLogix controller, backup float controls, and PowerFlex 755 drives with an air conditioner mounted to the enclosure.



More Points of Measurement!

This new well house is unique, it is cool. It's impressive. This well house is very instrumented with information. Robinson and the Village should be quite proud of this facility. In addition to our control panel controlling the well pump, this well monitors well flow, distribution pressure, residual chlorine, water temperature, room temperature, and the weather station as well. The gas chlorination room has chlorine gas weigh scales. We alarm if there is a chlorine gas leak, and this would also signal the gas scrubber to do its thing. We monitor the chemical degradation of the gas scrubber unit mounted outside the building. This is a quick rundown of a very solid sophisticated well house. It's a testament to Robinson Engineering, they did a beautiful job designing a very well thought out, instrumented well project.



How has this solution helped since implementation?

Monee is enjoying tremendous information and data on their SCADA workstations, smart phones or browser. Nate did a great job designing impressive graphical interface screens, as well as creating custom reports for the Village. The system also monitors a tremendous number of signals using WIN-911 Alarm Notification software.



"This SCADA system proves its worth day after day. We have been able to stay informed, while not being inundated with nuisance alarms at all hours. The user-friendly screens are easily navigated by even our least "tech-friendly" staff members, and the data collection has been well beyond what we expected. We have been pleased with the product itself, as well as the experience of working with the staff at Energenecs."

– Ed Johnson, Deputy Superintendent at Village of Monee Department of Public Works

For more information about this project and SCADA systems, contact Brian Akason at brian.akason@energenecs.com or Nick Crevcoure at nick.crevcoure@energenecs.com.