CASE STUDY

Central Iowa Power Cooperative

Solar/wireless site cameras monitor substations and renewable power plants

CHALLENGE:

Simple camera installation supports fast-moving projects

Central Iowa Power Cooperative (CIPCO) is Iowa's largest cooperative energy provider serving nearly 300,000 residents and 12,000 commercial and industrial customers. CIPCO takes pride in providing efficient and sustainable sources of energy and linking them to their members in a way that reduces carbon footprint and minimizes impact to the environment. Delivering on this vision requires continuous maintenance of the existing grid as well as development of new renewable generation assets.

CIPCO turned to Sensera for a flexible camera solution that would meet the site security needs of the solar power plant project and the substation.

In March of 2016, CIPCO launched Iowa's largest utility based solar project on five sites across the service delivery territory. The multi-site solar installation is the first phase in CIPCO's long-term plan to incorporate solar as an additional emissions-free resource within its generation assets. This initial phase will provide up to 5.5MWs of electricity for members served by CIPCO.

CIPCO also has ongoing projects to build electrical substations to continue to expand and make more reliable their delivery service. It is important to record construction of the substations for training and project management presentations. Site security at the substation projects is also a key concern for CIPCO.

TURNKEY SOLUTION

- **Complete end-to-end solution –** Camera hardware, cellular data connection, cloud-hosted servers, and ease of use software are all provided in one complete package.
- **Solar powered, $LiFePo_4$ Batteries–** No on-site power required. System is energized by the sun and powered at night by a lithium iron phosphate battery pack. Camera can run on battery power for up to 5 days.
- **Real-time, remote monitoring –** Leverage robust remote surveillance and monitoring to ensure safety and productivity when you can't be onsite.

"The time-lapse capability allows us to document and share progress on both the substation and solar power plant projects. And the built-in DVR functionality allows us to use the cameras for site security as well."

Terry Fett, PE. Manager of Engineering, CIPCO

ABOUT SENSERA SYSTEMS: Based in Golden, Colorado, Sensera Systems designs, manufactures, and markets products and solutions for integrated remote sensing and security in construction, security, industrial automation, oil & gas, agriculture, and law enforcement. Sensera Systems' patented MultiSense™ Platform and solar powered, wireless camera products are significantly simpler to use and more affordable than existing systems and have been recognized by the industry with multiple awards for innovation and impact. Sensera Systems' products achieve extreme ease of use, high functionality, and low cost by combining solar powered and wireless operation, and tightly integrated hardware and cloud-based monitoring.

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CIPCO CASE STUDY

SOLUTION:

Portable, solar/wireless cameras simplify installation and adapt to fast-moving projects

Utility-scale solar power plant construction. Iowa's largest utility based solar project will initially provide 5.5 MW of electricity to CIPCO's members.

CIPCO turned to Sensera Systems for a camera solution that would meet the needs of both the substation and the solar power plant projects.

For both the substation construction projects, and the new utility scale solar sites, CIPCO wanted to have cameras to document and monitor the progress. Since the solar projects are also a first of their kind, they wanted to have a way to engage their members in the process and progress of these important new developments.

"I was looking for a camera system that was flexible enough to meet our needs for both these types of projects. I selected the Sensera Systems solution for a variety of reasons. The fact that it is solar/battery powered meant simpler installation and relocation of the cameras from project to project. I wanted good image quality, and the Sensera cameras provided up to 8MP and 720p HD video." said Terry Fett, PE, CIPCO's Manager of Engineering. "The ability to remotely view the cameras and share with the public was very important for our solar power plant projects, to keep the public engaged and informed. The time-lapse capability allows us to document and share progress on both the substation and solar power plant projects. And the built-in DVR functionality allows us to use the cameras for site security as well."

CIPCO
Central Iowa Power Cooperative
A Touchstone Energy® Cooperative

CIPCO has deployed Sensera Systems' MC-68 Model solar/wireless site camera — featuring 100% solar operation 24/7, time-lapse, live video streaming, built-in DVR, and LiveView — on the electrical substation project.

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