

RWE npower uses CCTV to monitor critical areas

Intelligent use of new technologies and existing infrastructure has allowed npower's B station at Didcot, Oxfordshire, to update its electronic security system and reduced maintenance costs. Additionally, essential monitoring of key areas within the buildings can now take place with greater efficiency.



RWE npower is a leading integrated UK energy company and is part of the RWE Group. Their site at Didcot is host to two power stations – the 2,000MW dual-fired A station and the 1,360MW combined cycle gas turbine B station. Together the two power stations are capable of producing enough electricity to meet the needs of over 3 million people – equivalent to the demand of three counties the size of Oxfordshire.

Facilities such as power stations can potentially pose a danger to unauthorised and untrained personnel trespassing on the grounds. In order to ensure the safety of the public, their staff and their equipment it's essential that effective security measures are implemented. Additionally, it is vital to monitor key areas, such as the turbine room, for unusual activity and warning signs such as smoke.

Management of this important job falls to Ben Cox, Control and Instrumentation Technician of RWE npower. The electronic security system in place at B station was becoming costly to maintain, and replacement parts were becoming difficult to source. "We aim to continuously improve the quality of all our systems, and security is no exception to this," says Mr Cox. "Technology has moved on to allow better picture quality and sharper images and we were keen to utilise these improvements to our advantage." Initially, they were just looking at CCTV for security purposes. "As

soon as our maintenance team saw the quality of the images, they started thinking about how useful it would be for monitoring the systems and we expanded the installation to cover the key areas,” says Mr Cox.

Installers Evolution Security won the tender on the basis of their experience and the solution they offered. They had been maintaining the system at both sites for a number of years and were very familiar with the environment and with the changing requirements for the power station. “We were very impressed with the Pelco solution they suggested and we have always had a good relationship with them,” says Mr Cox. “The quality of their work has always been excellent and, as an added advantage, they already have all the required training to be working safely on-site.”

Close monitoring of critical systems



There are two purposes for the CCTV system at B station. The most obvious is to monitor the perimeter for any activity. But cameras are also used by plant operators to keep a close watch on the turbine halls. Here, there is a very strong focus on health and safety, so it is imperative that they are able to see who is entering and

leaving the area, what the machinery is doing, and so on. Four dedicated monitors display the information which is also recorded in case review of footage is required.

John Wurst, Director of Evolution, decided on an all Pelco camera installation. “It’s so much easier using just one manufacturer for a job like this,” he explains. “Everything integrates seamlessly together and makes the job a lot quicker and simpler.” In fact, it went so well, he’s looking at following the same formula in the future.

“We sourced all the Pelco products from Norbain,” says Mr Wurst. “We’ve used them as a supplier for years, and with good reason. The ordering process is simple and flexible enough to meet our needs, while the guaranteed next day delivery can be a godsend at times.” Mr Cox also noticed the quality of service from Norbain. “Evolution have always provided us with an excellent level of service and, partnered with Norbain, we saw very impressive response times.”

The solution is clear

The Pelco cameras used for plant monitoring are Spectre IIISE day/night PTZ domes chosen for their superb performance and 23x optical zoom. “The zoom was very important for the installation as the client wanted to be able to capture very clear and detailed images and further expand coverage of the key areas,” Mr Wust explains.

Additionally, with temperatures in the turbine hall reaching 60°, any camera installed had to have excellence resistance to heat. “The domes work perfectly – the heat hasn’t been an issue for them at all,” says Mr Cox.



It was important for the site that coverage was not lost at any stage of the installation, so Evolution had to run with both the old and new systems in operation until the complete changeover was possible. Additionally, Mr Cox was able to view the progress of the installation with the aid of PelcoNet™. PelcoNet transmits or receives live video and data across existing Ethernet networks. This yields significant cost savings by using an existing computer network to monitor a remote site. If he was concerned about progress or coverage at any time, he could simply raise the matter with Evolution, who would immediately address any issues.

Good looking results

The quality of the images being received has amazed Mr Cox and the security team. “We now have full colour, 360 degree coverage at a resolution we didn’t believe possible,” he explains. “We can see fine details that really aids the operators in monitoring the turbine room, and helps identify any would-be trespassers on the site.”

So the system has certainly fulfilled its requirements to improve the quality of security on site. But what about the all-important costs? Mr Cox has already seen a reduction in maintenance outlay. "The system is more reliable and we don't have to worry about sourcing replacement parts. We're delighted with the whole system and the job Evolution did installing it."

About Evolution

Evolution installs and maintains high quality, technically advanced integrated security solutions for multi-national organisations using the latest IT communication technology. The name Evolution was chosen to reflect the commitment of the company to provide solutions that could grow with the client.

From the outset the cornerstone of the company philosophy was to develop relationships with clients, designing models to suit different requirements. These could be used as the basis for the development of their integrated access control, closed circuit television and alarm monitoring systems.