

Hanwha Techwin's Wisenet video surveillance solution secures safety of staff and machinery in nuclear power station



"Keeping colleagues safe will always be our top priority, but there is no doubt that the new Wisenet IP network cameras are making a significant contribution by helping us to more efficiently monitor and maintain Heysham 2's generator and its supporting plant and machinery"

- Nigel Buer, Telecoms Specialist, EDF Energy

Challenge

Founded in 2002, EDF Energy is Britain's integrated energy company in charge of nearly a fifth of the UK's electricity with eight nuclear power stations. Located in North West England, Heysham 2 nuclear power station has the potential to generate 1,230 megawatts and provide low carbon energy for 2.3 million homes. As, Heysham 2 takes responsibility for the energy usage in numerous families, it is essential that the nuclear power station is able to operate 24/7 without any disruption.

Located in North West England, Heysham 2 held the world record for the longest continuous operation of a nuclear generator without a shutdown. To ensure the generator retains this enviable reputation for reliability, its operator EDF has recently invested approximately £30 million in plant improvements which has included a phased upgrade of the site's video surveillance system. "Our existing analogue CCTV had limited functionality

and was not fit for purpose in respect of our wish to more closely monitor the plant and machinery in operation throughout Heysham 2,” said Nigel Buer Telecoms Specialist at EDF Energy. “We decided to take a close look at what we might be able to achieve by replacing the analogue system with an IP network based video surveillance solution.”

Solution

Before Hanwha Techwin, in Heysham 2 covering a very large area, its staffs needed to walk long distances just to verify an instrument reading, especially for time critical issues related to factory and machinery operations. Thus, Nigel looked for cameras that would best help his colleagues to keep a close eye on the generator’s instrument panels and quickly respond to any technical issues. After evaluation process on various manufacturers’ offerings, it concluded Wisenet video surveillance solution from Hanwha Techwin Europe would more than meet their requirements

Phase one has seen the deployment of 45 cameras, 15 of which are 2 megapixel Wisenet X series 12x PTZ dome cameras ([XNP-6120H](#)). These are equipped with Wide Dynamic Range (WDR) which performs at up to 150dB to accurately produce images in scenes that simultaneously contain very bright and very dark areas.

In addition, 13 Wisenet T series network Positioning cameras ([TNU-6320](#)) have been deployed. These 2 megapixel cameras can be programmed to endlessly pan 360° in order to monitor a wide area and they also offer operators the flexibility to select from up to 255 pre-set positions which can be scheduled. Designed to capture high definition images in challenging environmental conditions, the Wisenet TNU-6320s with a robust aluminium die cast exterior, are able to work effectively even, when the ambient temperature is as high as 55°C, or as low as -40°C.

EDF Energy’s control room operators are able to view live and recorded images captured by the cameras with the help of Wisenet WAVE Video Management Software (VMS). This features an intuitive ‘drag & drop’ tool which makes it extremely easy for operators to set up a display of live and recorded images on a single screen or video wall, with customisable layouts and sizes.

Result

The resolution of a recent health & safety issue, where an electrical item failed and sparked close to a technician, has underscored the importance of Heysham 2 being equipped with the latest video surveillance technology. The quality of the images captured by the cameras monitoring the faulty electrical item enabled Nigel and his colleagues to quickly establish, among several possibilities, what had caused the sparking.

“Keeping colleagues safe will always be our top priority, but there is no doubt that the new Wisenet IP network cameras are making a significant contribution by helping us to more efficiently monitor and maintain Heysham 2’s generator and its supporting plant and machinery,” said Nigel Buer.

Following on from the success of phase one, Nigel Buer is now looking at how additional Wisenet cameras might meet the specific requirements of colleagues who deal with specialised aspects of operating a nuclear power station.