

Technology At Work

Seeing What Good Looks Like

EPRI Videos Help Power Plant Workers Make Best Practices Second Nature

By Robert Ito

At the H.F. Lee Energy Complex in North Carolina, an engineer radios to a technician to switch to “Pump Alpha” in the power plant’s steam turbine generator. Because of the plant’s deafening whine, the technician hears “Pump Bravo” and repeats that to the engineer. “No sir, that’s not correct,” the engineer replies. After another exchange, the technician correctly repeats “Pump Alpha.” Such word-for-word repetition of instructions, known in the power industry as three-way communication, avoids a potential crisis from deploying the wrong pump.

This scene was captured on video by a team of filmmakers led by EPRI’s [Operations Management and Technology Program](#). It is typical of daily interactions at power plants across the country, and it is now part of a video series: *What Does _____ Look Like*. EPRI is producing the videos to illustrate best practices in power plants. Ranging from 3 to 5 minutes long, they are shot at EPRI member sites to supplement and distill knowledge from thousands of pages of EPRI technical manuals.

Learning by Seeing

Neva Espinoza, EPRI’s Director for Power Plant Components and Processes, saw the need for the videos during a two-week power plant assessment, when she and her team were discussing best practices with plant personnel. “I realized that many early-career workers just starting out in power plants have only a rough sense of what certain practices are supposed to look like and could benefit from visual examples of these practices performed well,” she said. Veteran workers are retiring, she noted, and new workers—more accustomed to learning from tablets or other digital devices—have to get up to speed quickly.

Espinoza’s team chose the video topics based on EPRI member interest, with each video strictly adhering to power plant best practices described in EPRI’s written guidelines. Power plant operations and maintenance personnel created the scripts, ensuring that the scenes and dialogue were technically accurate, understandable, and applicable to plant operations nationwide.

“Seeing what something looks like is very different from reading a hundred-page technical report on what it looks like,” said Espinoza. “New workers often lack the experience needed to absorb all the information in reports, and they rarely have the opportunity to travel to sites where they can observe best practices in use. After they watch the videos, these practices can become second nature. It’s a very effective way to transfer our R&D to our members.”

The videos cover topics such as having a questioning attitude and conducting a pre-job brief (see box at end of article). In one video, the narrator explains the STAR method (stop, think, act, review) for self-checks. After the narration, a worker demonstrates the procedure, saying each step out loud as he does it. When a coworker interrupts him, he restarts the procedure as best practices dictate.

“I was an operator before coming to EPRI, and I know that sometimes you feel silly doing these procedures,” said Espinoza. “But they have a huge impact on successful power plant operations if you implement them well.”

Some plant managers have incorporated the videos into their initial and requalification training sessions, while others have posted them online so that their staff can learn from them at their own pace.

Upcoming Video Projects

In 2015 at South Carolina Electric & Gas facilities, EPRI filmed a video series focusing on “lockout/tagout” safety procedures to ensure that potentially hazardous machines and power sources are properly turned off. The films are in production, including Spanish-subtitled versions. Discussions are underway for a third film series in 2016. “As long as EPRI members are getting value out of these videos, we’ll continue to build this video library,” said Espinoza.

Key EPRI Technical Experts

Neva Espinoza