BASIN ELECTRIC POWER COOPERATIVE

STANTON, NORTH DAKOTA

In the summer of 2016, Basin Electric Power Cooperative needed to close off an air compressor room in one of its first power plants, known as Leland Olds Station, and it looked to longtime partner PS Access Solutions™ to get the job done. PS Access Solutions has manufactured products for the Leland Olds Station for several years, providing industrial swing doors, sliding doors and access hatches throughout the plant. For this particular project, the plant needed to close off three openings in an air compressor room in order to transform it into an airlocked environment. This was a straightforward undertaking for two of the openings, but the third would require the experts at PS Access Solutions to address two separate, but related, challenges.

The first challenge was that while they needed to close off the entryway, they still needed to provide personnel the ability to cross through the air compressor room for maintenance purposes.

"At the time, personnel would have to go around the area, which involved pushing heavy carts up a ramp to a door, down another ramp to another doorway, then a long ways around to where they needed to go," says Matthew Knutson, maintenance planner/scheduler at Basin Electric Power Cooperative. "It posed a number of safety concerns for our crew."

The second challenge was that the entryway's opening also needed to be large enough to provide ventilation when opened. In the summer months, the room often reached temperatures of 115 degrees Fahrenheit, which can harm equipment. In the winter months, the opening needed to be closed off in order to keep heat in.

Knutson partnered with the team at PS Access Solutions to overcome the dilemma, and the team came up with a special purpose door customized for the plant. This door was composed of a smaller pedestrian sliding door housed within a larger 10-foot-by-10-foot sliding door. It allowed maintenance personnel to pass through the pedestrian door as needed while the larger door remained closed, keeping the airlocked environment intact. When ventilation was necessary, the larger door could be slid open. Despite being a custom door, the product was delivered in just a few months. "I knew that PS Access Solutions would come through," says Knutson. "When it comes to industrial doors, they have a lot better ideas than we do."

Once the door was installed, PS Access Solutions' job was not done. Basin Electric Power Cooperative encountered a new challenge. Due to high drafts from fans within the room, the differentiating pressure of the plant made the larger door extremely hard to slide open. Weighing almost 1,100 pounds, this door took almost 88 pounds of force to move. Plus, Knutson learned that his team found it necessary to open the door more frequently than expected. Knutson went back to the experts at PS Access Solutions for their advice. After exploring several options, including power operation and a hand chain opener, they developed a new system that eliminated the rubber-coated roller system and utilized custom wheels and bearings instead. "It removed about 75 percent of the force needed to open the door," says Knutson. "It opens smoothly now, and we are really happy with it."

To learn more about PS Access Solutions products, visit psaccesssolutions.com or contact Mark Haaland at 877-446-1519.

About Basin Electric Power Cooperative

Basin Electric Power Cooperative is a nonprofit generation and transmission cooperative that serves 3 million electric consumers in a 540,000-square-mile service territory covering nine states. Its core business is generating and transmitting wholesale bulk power, primarily to rural electric systems.

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