

A CASE STUDY: PA ONE CALL SYSTEM, INC. by Linda J. Morrow

PA One Call System, Inc. is a privately funded nonprofit corporation in Pennsylvania and part of the national 811 "Call Before You Dig" network. In Pennsylvania, anyone planning to dig as part of any excavation project, including private property, is required by law to investigate whether their excavation could potentially interfere with any utility or service lines, such as telephone, electric, natural gas, sewer, and cable, that are buried underground.

When 811 is dialed in the state of Pennsylvania, that phone call is taken by the call center at PA One Call System, Inc, located in southwestern Pennsylvania in the borough of West Mifflin. Excavators must place the call a minimum of three business days prior to the planned excavation date. PA One Call takes information regarding the location of the intended dig and contacts those utilities that may have underground lines in the vicinity of the referenced dig site. The affected utilities then promptly visit the site and mark the location of their lines beneath the ground's surface with paint or flags, providing the excavator visible clues to the existence of service lines lying below.



As time is of the essence for this chain of events to be completed prior to all excavations, Bill Kiger, President and CEO of PA One Call, recognized the need for the call center to always be operational and established redundant functionality by setting up two independent computer rooms and phone systems. Uptime is guaranteed by a 60 kVA Mitsubishi Electric 1100B uninterruptible power supply (UPS) backing up each room. The first Mitsubishi Electric 1100B was

installed in 2014, replacing a competitive unit. When asked why he decided to change brands, Mr. Kiger cited several reasons for his displeasure with the previous units. He felt that their technology was outdated, as well as lacking the ability to be upgraded. He was also not happy with the service he received on the units and experienced problems with the generator associated with them. When the time came to replace the older unit, he consulted with a local vendor, and Mitsubishi Electric UPSs were recommended along with a Kohler generator.

Perfect for server rooms, network closets, and control rooms, Mitsubishi Electric's 1100 Series UPS possessed some characteristics that Mr. Kiger was particularly interested in. Each power module is hot swappable, meaning that individual modules can be removed and worked on without taking the UPS offline. The trays are front facing, allowing for maximum convenience and reduced maintenance costs. The 1100 Series UPSs also have fully digital display screens, greatly facilitating both monitoring and servicing. Expandability is another desirable feature inherent in the 1100 Series. Its modular design enables supplemental modules to be added over time as warranted by increasing capacity needs, making expansion faster, easier and more economical. Finally, the 1100 Series UPS also features N+1 redundancy constructed of modular power electronics in parallel. If one of the modules were to fail, the 1100's internal controls would isolate the module while continuing to provide power to the critical load.

Four years later when it was time to replace the second UPS, Mr. Kiger pulled the trigger on another Mitsubishi Electric 1100B without any hesitation. "Reliability is the most important factor when purchasing equipment to protect against power outages and I haven't experienced a single problem with the first 1100," stated Mr. Kiger. For Mr. Kiger and PA One Call, the 1100B UPS from Mitsubishi Electric truly is an *uninterruptible* power supply.