

IS YOUR WATER UTILITY PREPARED FOR A WINTER WEATHER EVENT OR OTHER POWER OUTAGE?

In early January, weather forecasters warned of a crippling ice storm over a large area of Kansas, Missouri, and Oklahoma. Although southwest Kansas was impacted, the temperature was just a couple of degrees above freezing for most parts of Kansas and communities dodged the worst of this storm. Even though the winter of 2016 is nearly passed, I am asking the question: Is your city or water district is prepared should a disastrous storm strike?

In the days leading up to this impending storm, water operators began contacting the KRWA office and field staff, asking for help locating generators. First of all, beginning to prepare for a storm as big as this one could have been is far too late to begin to prepare.

A generating plan should already be in place as part of an emergency operating plan. It's not practical to assume that a

community can just “go out and get just a generator”. Cities and water districts should work with an electrician and generator dealer to help determine what size of generator is needed for the system. In some cases, cities have such capacity in-house.

Ideally, a generator dealer should make an on-site visit to the system to make the determinations of what equipment is needed. The dealer will need to make a listing of all of the plant's equipment that will need power during a potential outage. The most important thing to remember is that a lot of equipment, such as compressors, fans, pumps and heaters, will require much more electricity to start up as will be required to actually operate. Once the electrical load is calculated, it is best to purchase a generator that provides approximately twenty percent above expected needs. Not



Eric Boone, City Superintendent at Yates Center, Kan. checks the standby generator at the city's water plant. The controls show the disconnect and transfer switch arrangement.

The city has three standby generators. A 100kW 3-Phase portable unit provides power for lift stations. The pad-mount generator shown here is a 200kW, 3-Phase, diesel-powered unit located at the water plant. A similar unit is located at the city's wastewater treatment plant.

If the power is off for longer than two seconds, the automatic transfer switch turns on the generator and it operates for at least ten minutes to ensure power supply without fluctuations. After power is restored for ten minutes the generator shuts off the power supply and the engine runs an additional ten minutes to cool down.

During an ice storm several years ago, Yates Center loaned its portable generator to another system in northeast Kansas, nearly 100 miles distant.



only does this provide some extra capacity, but also will extend the life of the generator.

Over the last few years, many water and wastewater utilities have purchased stand-by generators. This type of generator sits on a platform near the treatment plant or pump house, and will automatically start up if power is lost. Most of these also automatically exercise themselves on a weekly basis, which ensures performance when needed. Although standby generators may be the best solution for systems to have, they represent a significant investment.

The city of Effingham recently purchased a 10kW generator from Federal Surplus at a cost of \$3,500. This generator has the ability to power the city's well pumps and also the city's lift stations. Effingham also purchased a trailer which provides the ability to move the generator from one location to another as needed. This type of generator, which is military-grade, will allow the city to provide electricity for many days or weeks, at less cost than a permanently-placed, standby generator.

I also recommend that systems put in a backup heating source, such as propane or natural gas, as these units do not pull as much electricity as an electric heater. Some do not require any electricity at all, such as a blue flame heater or

The time to prepare for emergency power to be available when needed is not something that should be delayed until weather forecasters make predictions of crippling ice storms or when the power goes off.

cabin heater. These are readily available at most local hardware stores and are reasonably priced. KRWA has assisted numerous systems where piping failed due to freezing inside of pump stations.

Providing continuous utility services generally requires the availability of electricity. The time to prepare for emergency power to be available when needed is not something that should be delayed until weather forecasters make predictions of crippling ice storms or when the power goes off.

KRWA provided several training classes in recent years concerning electrical generators. Reviewing those sessions shows attendance by more than 700 operators, representing 395 water utilities. KRWA will provide training on this topic later this year to help water and wastewater utilities be better prepared for the day when the power goes off.

Lonnie Boller is a Technical Assistant at KRWA. He has been employed by KRWA since 2001. Lonnie is a Class II certified operator; he previously was Water Plant Supervisor for the City of Horton. He has also attended and completed training at the University of Kansas Law Enforcement Training Center.



**AMERICAN FLOW CONTROL.
PART OF THE AMERICAN LANDSCAPE.**

Small towns, big cities and Main Street, USA, wherever you go, there we are. AMERICAN has been part of the landscape for over a century. While our past is one of innovation, the same is true of our future. New products are always in the pipeline. When it comes to someone you can trust with your valve and hydrant needs, look no further than AMERICAN. The company where strength, dependability and integrity just come with the territory.

 RW GATE VALVES  GIS  CAPTIVATER

INNOVATION. IT'S PART OF EVERYTHING WE DO.

 **AMERICAN**
FLOW CONTROL
THE RIGHT WAY

PO Box 2727, Birmingham, AL 35207 Phone: 1-800-326-8051 • Fax: 1-800-610-3569
EOE/Minority/Female/Veteran/Disability

www.american-usa.com/firehydrants

DUCTILE IRON PIPE FLOW CONTROL INTERNATIONAL SPIRALWELD PIPE STEEL PIPE