

# What Goes On When the Lights Go Off

The first signal to the Solomon Gulch plant operator that the power is out might be flashing lights, deafening alarms and telephones ringing nonstop.

During an outage, every Copper Valley Electric Association (CVEA) employee has the same priority: to immediately shift focus to diagnosing the problem and getting the necessary resources moving to restore service as quickly and safely as possible.

Outage recovery can involve many people, including operators at multiple plants, line crews 200 miles apart, and engineering and operations personnel.

CVEA has 12 plant operators who run and maintain two diesel plants, the CVEA cogeneration plant next to the Petro Star refinery and the Four Dam Pool's Solomon Gulch hydroelectric project.

The average tenure of a plant operator at CVEA is 10 years, with Jay Johnson leading the pack at 29 years. Other operators with lengthy stays are Dan Dempsey, 18 years; Terry DeLay, 15 years; Pinky Becker, 13 years; and Keith Hogarth, 12 years.

Some would be surprised to know plant operators do not automatically know when the power is out unless the outage is system wide and they find themselves in the dark. Outages come in all shapes and sizes and for reasons you can only imagine.

If it is a single customer outage or an outage affecting a single feeder—a feeder is a segment of the distribution line that supports a specific consumer area—the operator may not know the lights are out until a customer calls to report the outage.

The Solomon Gulch Hydro Plant is the dispatch center for personnel and major electrical equipment on CVEA's system. Solomon Gulch is the only facility manned 24/7, 365 days a year in the CVEA system.

Keeping the lights on in the

*Outages come in all shapes and sizes and for reasons you can only imagine*



*Above, Glennallen Line Foreman Mike Leeper shows the cause of a 2006 outage near Squirrel Creek. The beaver was not hurt in the incident. **Opposite page,** Terry Delay keeps a watchful eye on the power grid using the SCADA system.*

Copper Valley system can be a delicate balancing act. Multiple power plants, 106 miles of high-voltage transmission line and long radial distribution lines spread across a service area as large as CVEA's is not common in most systems with 3,600 customers.

To control costs and maximize efficiencies in the operation of the system, we employ technology we call SCADA, which stands for supervisory control and data acquisition. SCADA enables the operator on duty at Solomon Gulch to remotely control and monitor generators at the three power plants to meet system requirements.

In addition, SCADA enables the

operator to control major devices in the four transmission substations to ensure safe and efficient operation of the transmission system.

Not every outage can be managed from Solomon Gulch. For example, if the transmission line is out of service, the Glennallen Diesel Plant must be operating to restore service to Copper Basin customers.

Power outages put a lot of pressure on Solomon Gulch operators. Operators are faced with numerous questions and issues, including whether or not to dispatch the line crews to inspect the distribution system, whether to dispatch operators to other plants, the need to maintain system stability, assessing whether emergency response is required and, above all, to ensure the safety of the public and personnel.

According to one operator, the most important thing is to stay focused. There is a lot to coordinate and timing is critical. What keeps them going is pure adrenaline.

Once the lights are back on there is still plenty to do with mop up, debriefing the event and restoring the system to the desired operating plan.

In the last decade, CVEA has made huge investments to improve facilities and promote safer, more efficient operations. These improvements—combined with well-trained employees—have resulted in greater system reliability.

"Today, the CVEA system is quite complex, with better controls and relay coordination, which makes the system more stable and has better fault isolation and location during system problems," says Manager of Production John Hunter, who has been with CVEA for three decades.

The next time your lights go out, when you find your flashlight and begin to reach for the phone, remember what is going on at the other end of that line. When you dial (866) 835-2832 and get the voice-mail at the Solomon Gulch Hydro Plant and begin to wonder if anyone



knows the power is out, remember the most likely answer to that question is “yes.”

If the plant operator does not answer the phone, he is probably aware there is an outage and already is working as quickly and safely as possible to restore your power.

If your call is answered by voice-mail, please leave a message. Hydro operators log every call received and make an effort to return calls requiring follow-up.

We encourage members to call in to report outages, service problems and potential electrical hazards. We appreciate your patience, and regret the disruption of electrical service.

If the outage is not associated with an extreme storm and seems to last a long time, please call again. There is

a chance power was restored to your neighbors and you are still without power.

Below are some tips for dealing with a power outage. More information can be found at [www.cvea.org](http://www.cvea.org).

- Before you call CVEA to report the outage, make sure you have not blown a fuse or tripped a circuit breaker.

- During normal business hours, call CVEA at 822-3211 or 835-4301, or after hours call (866) 835-2832, so we can determine the location and possible cause of the outage. If you heard any noise before the power went out, or you can see a tree in the line or damaged equipment, please be sure to report it.

- Make sure you have at least one good flashlight with fresh bat-

teries available. Better yet, make sure a flashlight is on every floor of your house, with one for each family member. If you do not have sufficient flashlights or batteries, add them to your shopping list.

- A battery-operated radio with good batteries is also a good idea. If a lengthy outage or an outage associated with an emergency occurs, CVEA will report to the local radio stations for broadcast to keep you informed of the situation.

- Remember, cordless phones and some phones with answering machines rely on electricity to operate.

- Keep the refrigerator door closed. Food will keep for several hours or days in a closed refrigerator and up to a week in the freezer, depending on the outside temperature, provided the door stays shut. ■