

Public Service

Advocacy

Education

Technology

Membership

“It Seems to Us”

Power

“In our special emergency communications and public service issue last month, on this page we said what has been said often before: to communicate, all a skilled radio amateur needs is a radio, a battery and a piece of wire.”

With those simple tools and the knowledge and experience gained from using them, radio amateurs can communicate with one another with no infrastructure whatsoever. By harnessing the natural phenomenon of ionospheric radio propagation we can span vast distances. We understand that this property of the ionosphere is both priceless and irreplaceable, which is why we are zealous in combating pollution of the radio spectrum — so often the topic discussed on this page.

Yes, we can communicate — but for how long? Batteries do not last forever. Without a way to recharge or replace them, our equipment soon becomes useless.

IARU Region 1 Emergency Communications Coordinator Greg Mossup, GØDUB highlighted the issue in a tabletop exercise at the 2011 Global Amateur Radio Emergency Communications (GAREC) Conference held in August in South Africa. His scenario assumed a major disruption of the electric power grid, with normal power distribution not being restored for days or weeks afterwards. Such scenarios are not merely hypothetical; in recent memory and in various parts of the world they have resulted from a number of causes ranging from cataclysmic natural disasters to human error. Time and again, those who thought “it can’t happen here” have been proved wrong.

Brief power outages are disruptive enough. Loss of power for a few hours gives us a taste of what life was like in the 19th century, except that we’re not as well prepared as our ancestors whose lives were not illuminated by the inventions of Edison and Tesla. We take for granted conveniences that they never could have experienced and are frustrated when we lose them.

If called upon to do so, most of us could get on the air for a few hours without commercial power. To do that a car battery is all we need. When a major disaster occurs, normal communications are likely to be severely disrupted or overloaded. In such an event, during the first few hours Amateur Radio’s capabilities can save lives.

But that’s the exception. While you may think it blasphemous to say so, in most cases our communities will not need us to provide communications just because the power goes out. While we may be able to provide a useful supplement here and there and should always be prepared to do so, not every emergency is a communications emergency. Unless badly damaged, public safety communications facilities will continue to operate. Unless there is unusual damage to the wired telephone system (you have

at least one telephone in the house that isn’t cordless, don’t you?) it will probably be available for the duration of a typical blackout. Cell sites generally have backup power; they may be overloaded and it may be difficult to make a phone call, but text messages are likely to get through.

But what if the blackout continues for days or weeks? It can happen. It has happened. Inconvenience can rapidly escalate to something much more serious. If you have a generator, eventually it will need to be refueled — but if the gas pumps aren’t working in your area then you’re out of luck. The same goes for that car battery we spoke of earlier; if your car’s out of gas you can’t keep it charged. We may find ourselves incapable of communicating at the same time our served agencies lose the communications systems we’re supposed to back up.

Greg Mossup’s tabletop exercise scenario underscored the fact that without a source of electrical power, a radio is of no use. We must be prepared not only to operate our radios but also to keep the juice flowing to them. A battery with enough capacity to provide communications for a public service event or other brief operation will not be enough to sustain us through a lengthy power outage. If there is any chance of a sustained outage we should conserve the energy we have, disciplining ourselves to use only what we absolutely need. This applies not only to our radio equipment but also to peripherals such as computers. Even a light bulb can consume energy that we may later wish we’d saved.

Speaking of wishes, if you’ve been thinking of solar power but haven’t gotten around to it there may come a time when you wish you had. As Jim Talens, N3JT, noted in his May *QST* article, solar power is not yet an economic way to reduce your utility bill. On the other hand, when the utility isn’t delivering electricity to you the value of a watt-hour suddenly becomes a lot more than you’d normally be willing to pay.

Whether by using renewable energy sources or by careful preparation, the longer we are able to power our radios after a disruption the more likely it is that we will be able to serve our communities. That’s a small price to pay for the access we enjoy to a priceless asset: the radio spectrum.



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