

Portable Power Station Application Note



As a foundation on which innumerable services and systems rely on, modern networks are widely regarded as essential infrastructure. No longer considered a luxury, reliable, uninterrupted connectivity has become a critical service, supporting connectivity across essential platforms.

One of the biggest threats to consistent connections is community-wide power outages. Historically, operators have fallen back on temporary generators as a solution to this long-standing pain point; but with their poor environmental profiles and intrusive noise levels, these fossil fuel-powered power backups are prompting network owners to explore other solutions.

Technetix Portable Power Stations

Recent developments in battery technology offer operators with attractive alternatives to traditional gasoline-powered generators. The Technetix portable power station range not only offers additional AC and DC backup energy, but greener, cleaner, safer and silent emergency network powering, even for extreme environments.

Other features include:

- An advanced battery management system offering 5120 Wh of stored energy
- Zero-to-full charge in three hours via optional AC rapid charger, or from an MPPT charge controller
- A parallel connection port to accommodate the simultaneous use of up to four portable power stations for a substantial 10.2kWh to 20.5kWh (depending on model number) of additional standby power energy storage
- Pelican™-style hard shell wheel case with one retractable and three fixed handles
- More than 90% depth-of-discharge of its capacity as usable energy

Scenario 1: The new build

An operator is ready to test the equipment in a recently installed network infrastructure plant. But due to delays during the installation process, the mains power supply is not yet live.

To avoid further delay to the plant's commission, the tests necessary to bring the equipment up to operational standards can be performed using Technetix' portable power station. Supporting in-situ testing, the unit's easy-to-deploy portability keeps plans on track and assures the operator that the plant will be successfully commissioned once the utility grid connection is available. The portable unit can then be charged and used again at a new site or in an unscheduled plant power outage.

Scenario 2: Unscheduled power outage

It's 3am, and the utility power supply to a cabinet servicing a rural village has gone down. The utility provider has responded but can't get an engineer to the area for at least four hours.

The cabinet's existing standby power supply batteries have kicked in, but they haven't been optimally maintained and managed. Their poor state only has reserves for two hours of power.

In the meantime, the options speak for themselves.

- 1) Deploy a mechanical generator. This go-to option for insufficient or failed backup batteries presents concerns around sustainability, running emissions are unappetizing and the noise generated is not ideal for the population of the village community.
- 2) 'Selective shutdown'. Reducing the equipment load in operation and apportioning the backup power conservatively would sustain the area's fundamental connection; but with impacted service.
- 3) Go completely dark. Turning everything off and suspending connection entirely until full power is restored is no longer viable. With end users increasingly reliant on smart tech, IoT devices, and home office working, uninterrupted service is fast becoming non-negotiable, and customer expectations of broadband provisions continue to rise.

Dense enough to supply the cabinet silently and with ultra-low emission output, the portable power station would offer an ideal emergency standby solution until the cause of the outage was handled and power restored.

Scenario 3: Technician vehicles

Petrol and diesel vehicle fleets are an important part of the technician 'kit bag'. In addition to their obvious use as transport, their engines are used to run equipment such as lights and tools at network issue sites.

But moves towards electric vehicles are fast replacing the internal combustion engine. While electric vehicles can power technician tools, availability and access to vehicle charging points - furthermore, charging time - cannot compete with the utility and flexibility of petrol and diesel. A depleted truck battery, deployed for overnight emergency works in a remote area? Less than ideal.

Compact, convenient, and durable, a portable power supply is a valuable part of the technician toolset. Delivering the same capacities as the fuel engine, it supports operator sustainability strategies without dependency on the vehicle itself: a win for the operator, the engineer, and the planet.

For more information about the contents of this application note, please visit:
[technetix.com](https://www.technetix.com)