

Customer Motivation:

Trial of new technology to determine if it meets their needs for extended run backup power.

Systems Overview:

Ultra-USSI's P250i Solid Oxide Fuel Cell provides extended, zero maintenance backup power to an intermediate signal along a stretch of double-track railroad in Michigan. In this application, the 250W fuel cell is housed inside a rugged power enclosure with its fuel supply (2 propane tanks), lifetime fuel filter, fuel connection hardware and automation/communication equipment to remotely monitor the status of the unit.

How It Works:

The P250i works alongside existing power infrastructure by sitting in standby mode monitoring battery voltage. Once batteries dip below a pre-determined threshold voltage, the P250i automatically starts and after a 25-30 minute startup period begins charging the batteries and powering the load. In like fashion, once the batteries are recharged to a pre-determined voltage, the fuel cell will automatically begin to cool-down and return to standby mode for its next event.

Cold Weather Performance

Utilizing a ceramic electrolyte the P250i isn't susceptible to freezing and thawing cycles compared to PEM fuel cells, making it suitable for varying temperatures/seasons experienced at this location in Michigan.

Standby Mode

Can sit in standby mode for **months to years** at a time monitoring battery voltage and automatically start and run **only** as needed.

Telematics Monitoring NEW

Real-time operational visibility via cellular/satellite service provides alerts and reports to reduce site trips and prevent problems before they occur.



Powered by PROPANE

Readily available and low cost



Fuel Efficient

Consumes ¼ lb LP/hour and can provide 130-160 hours of runtime on two (2) standard BBQ propane tanks.



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