



# SERVING SHORT LINE OPERATIONS SINCE 1987

- ▶ **Locomotive Starting Success**
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- ▶ **Post-Disaster Quick Recovery Ideas for Comm and Power**
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**TPSC**

**Transportation Products**  
Sales Company

# Quick Recovery Post-Disaster

**Following a major event, restoration of communication and power is the critical first step to rapid recovery and business continuity. TPSC partners offer these and other proven solutions.**

**ARMS Comprehensive Genset Kits** are tailored for individual railroad requirements and for easy install on-site with all equipment, components, cable, tools, and instructions provided.

**ARMS Mobile Communication Trailers** have customized communication options that are ready to deploy quickly. Includes tilt-up tower, fully integrated components and power.

**Shawnee Power Systems dcCHARGERII** is a 2.7 kW propane generator designed purposely for rail prime power or backup of utility, solar, wind. Capable of charging two isolated battery strings (12V, 24V or 48V).

**Ameresco T-REX** is a Transportable Renewable Energy eXchange, available with solar and hybrid power options. T-REX can be towed or airlifted into place. Requires only one person and no tools to deploy.

**Global Power Supply Mobile Diesel Generators** from 20 kW to 2.5 MW are available as rentals for emergency and temporary use. Designed to work individually or in parallel.

**Global Power Supply carries a large inventory of refurbished and new generators for sale and rent.**



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# Locomotive Starting Success

The TPSC team and partners are proud to provide world class products designed to support your locomotive starting success and to maximize battery performance, life and health.

**GNB Unitized Starting Batteries** KDZ501 and KDZ651 maximize starting power through low internal resistance for excellent cranking capacity. Higher reservoir of electrolyte increases the amount of time between watering by 50% and lowers the annual cost of battery maintenance.

**Flow-Rite Single-Point Watering System (SPWS)** is specially designed to fit locomotive battery compartments and to work with batteries produced by various leading manufacturers. Ensures proper water level is delivered to each cell, which is essential for maximum cranking amps. Built to survive the extreme temperatures and vibration on locomotives. Available factory installed on GNB batteries.

**GNB EHI Charger** (64V-125AMP and 32V-125AMP) offers the ability to safely and properly charge your flooded and sealed locomotive batteries with pre-programmed charge profiles you can easily select. CEC compliant.

**RBS Select-a-Charge Plus** is a conveniently portable 20AMP charger (32 or 64 volt) that provides selectable pre-programmed precision charge profiles for each battery type. An integrated Canadus Battery Energizer breaks down sulfation crystals on the battery plates.

**Richardson LOCO-72 Jumpstarter** provides dependable starting power when and where it is needed, with ample machine uptime for repetitive starts before requiring a recharge. Transportable on mechanical response vehicles for in-shop or trackside use.



GNB locomotive batteries can be ordered with the Flow-Rite Single-Point Watering System factory installed.



Ask to see the 2021 Case Study to learn about a railroad's success using the LOCO-72 Jumpstarter.

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Contact TPSC to learn more or arrange a demo.

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# Transformative Technology

**TPSC partners are available to help railroads plan, deploy, and optimize highly effective technology to support communications and operations.**

**ARMS Ario-GX** is a rugged IoT Gateway that supports monitoring and connectivity to new and legacy equipment using digital and analog inputs, relay outputs, temperature sensing, and support of common rail protocols across ethernet, serial, and USB data connections.

**ARMS ArioSense** monitors equipment performance and health to report status of equipment at crossing, switch and interlocking sites. Provides proactive failure detection and automates mandated testing.

**ARMS ArioTrack** provides location tracking and condition monitoring of mobile rail assets such as containers, cargo, inventory, work tools, equipment, and more – anywhere across North America. Built-in sensors can help monitor temperature, humidity, proximity, and movement. Light sensors can be used to detect door open/closed to indicate presence of staff, or breach of container/railcar. Rugged, long-lasting, secure and affordable.

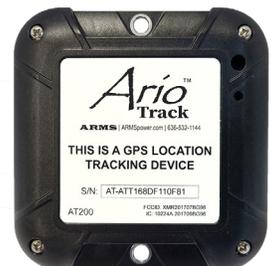
**ARMS** provides tailored solutions for rail applications using Ario devices and services along with the project design / management, system integration, and tactical kitting, making it possible to deploy systems broadly and quickly.



**ARMS ArioSense monitors equipment performance and health, automates mandated testing, and reports status.**



**ArioTrack provides affordable location tracking and monitoring of any type of rail asset.**



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**PCTEL Antennas** meet the need for highly advanced antenna technologies for on-board locomotive and mobile rail applications. As the leader in precision GPS antenna technology, PCTEL provides reliable wireless connectivity for remote monitoring, communications, and Positive Train Control (PTC).

**ARMS Antenna Kits** for wayside and base station applications are tailored to each installation and each railroad's specific requirements. ARMS kits typically include integrated parts with RF filters, surge protection, mounting hardware, cables, instructions, and even tools to support easy, fast, and consistent installations by railroad staff.

**ClearRF Cellular Signal Amplifier** enhances 4G, LTE (with 3G & 2G fallback) signal strength to a cellular router and then back to the tower, ensuring reliable end to end telemetry over cellular. This rugged in-line device supports M2M/IoT applications in areas with poor network signal strength.



**PolyPhaser and Transtector** offer advanced surge protection for RF, AC, DC, dataline and signal systems, protecting critical and sensitive equipment. Example shown here: SXRR surge arrestors are the fastest acting signal line surge protection available. Their solid-state non-degrading, reliable protection eliminates the need for equalizers. The red pop-up mechanical indicator provides evidence of protection.



**Velcorp / Gems Power Indicators** include the new LED LC2-BM that serves as an AC power indicator and DC battery monitor, displaying "ON" when power is lost or voltage has dropped below 11V. Other models are also available.



**CorrSolve Antenna Gaskets** - Corrosion can seriously degrade critical VHF, UHF, GPS, or CELL transmissions for rail operations, shorten the service life of antennas, and increase railroads' maintenance costs. CorrSolve gaskets are pre-cured polyurethane proven to provide long-term corrosion protection under extreme conditions. Available for all antenna brands and models, and with an aluminum carrier for electrical bonding.



**Ask to see the 2019 Case Study to learn how eliminating corrosion of antennas on locomotive rooftops saved a railroad \$\$\$**

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**Contact TPSC to learn more or arrange a demo.**



# Environmentally Protective Solutions

By adopting energy and resource-efficient technologies, railroads can endeavor to meet environmental criteria that socially conscious investors, customers and communities seek. TPSC supports railroad efforts with these.

**GNB Industrial Power**, a division of Stryten Energy, provides railroads with robust battery solutions for locomotive starting, signaling, and telecommunication equipment. The EPA estimates that 99 percent of lead batteries in the U.S. are recycled. Stryten offers a recycling program that can assist railroads with recycling their spent lead-acid batteries - including GNB and other manufacturers' brands. Contact TPSC to learn more.

**Ameresco Solar** provides over 25 years rail expertise for engineered solar and wind systems. Their stand-alone and hybrid systems provide backup or primary power at signal control points, intermediate signal locations, repeater sites and more.

**Plug Power Hydrogen Fuel Cells** provide ZERO-emission sustainable backup power that hardens critical sites against grid-interruption events, providing increased reliability and runtime. Plug Power solutions also serve reliably in off-grid power applications.

**Velcorp / Gems LED Lighting** is uniquely designed to provide highly efficient and long-lasting lighting for AC or DC powered rail applications. LED bulbs consume considerably less power per unit (lumen) of light emitted and generate far less heat during use.

**Trilogy 12V, 40A Battery Charger** has been designed to be extremely energy efficient - 87% more than traditional signal chargers. CEC compliant. Light weight and compact in size. Designed for lead acid and NiCad batteries.

The EPA estimates that 99 percent of lead batteries in the U.S. are recycled.



Over 85% more energy efficient than traditional signal chargers.



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