



The Case for Battery Backup: Wastewater Pumping Stations

Wastewater pumping stations are critical to managing sanitation in population centers. While short power outages are common, extended outages occur every few years. Most stations rely on backup generators to ensure public health, but these generators are expensive to maintain, despite their infrequent use. Monthly testing, fuel treatments, and other upkeep drive high operational costs, making fail-safe battery backup systems an ideal alternative.

CHALLENGE: High Costs and Inefficiencies

A generator powering a single pump can cost \$5,000–\$10,000 annually in maintenance, fuel, labor, and management expenses. Additionally, generators are inherently inefficient for wastewater pumps for two reasons:

- 1. Inrush Current:** Starting a pump requires a high surge of power, but once operational, the power demand drops significantly. Generators must be oversized to handle these peaks, leading to inefficient fuel consumption.
- 2. Frequent Cycling:** Pumps often run four times per hour for less than two minutes each cycle. This start-stop pattern causes wear on both the pump and the generator.

Discover the full story— contact us now.

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INDUSTRY

Utilities & Wastewater

LOCATION

New York

IMPLEMENTATION

- **Install BESS:** Deploy 150 kWh RPSLink system for 32–90 hours of backup power.
- **Add Monitoring:** Enable remote oversight with real-time alerts.
- **Scale County-Wide:** Implement across 100 pumping stations to cut costs and emissions.

OPPORTUNITY FOR CHANGE

One pump station in Western New York serves 200 homes, and the county has nearly 100 similar stations. A **150 kWh RPSLink system** (BESS) could operate the pump for 32–90 hours, depending on demand, reducing costs and diesel consumption while advancing decarbonization goals.

With real-time monitoring and alarms, the Viridi BESS also minimizes truck rolls, ensures operational reliability, and enables immediate problem detection across all stations. Battery backup systems deliver efficiency and sustainability, offering a smart solution for wastewater management.

