



## CUSTOMER CASE STUDY

Pioneering Fail-Safe Distributed Energy Storage Systems

# Large Scale Fail-Safe Energy Storage: Enabling Next-Gen EV Charging Technologies.

**Purdue University's** engineering program is one of the nation's best, and this case study is a clear testament as to why. Purdue is developing electric charging pads built into roadways that will allow wireless power delivery to electric vehicles—while driving! Working on the principle that powers your cell phone's wireless charging dock, this technology promises to deliver much more power across a wider air gap, and into a moving vehicle. Electrification of fleet trucking may revolutionize the transport industry, but the added weight of large battery packs required for long distance travel can reduce load weight and delivery capacity. Charging built into roadways will allow vehicles with smaller batteries to travel farther and carry more cargo.

### CHALLENGE:

Whether or not your charger has wires, the fundamental problem of electric vehicle charging remains—where will the electricity come from? The US electric grid is already staring down massive infrastructure upgrades to deliver power demanded by the electrification revolution, and in many locations the delivery of large EV charging loads is impractical. Purdue's initial solution was a large diesel generator that came with the usual hassles of expensive fuel delivery, recurring maintenance, noisy operations, and diesel exhaust & Co2 emissions.

### Discover the full story—contact us now.

1001 East Delavan Ave. | Buffalo, NY 14215 | (716) 968-8658  
sales@viridiparente.com | [www.viridiparente.com](http://www.viridiparente.com)

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*"The Viridi system has been a big win for us—quiet, fume-free, and far more responsive to load changes than our old generator, keeping DC voltage much more stable."* —Rob Swanson, Staff Research Engineer

### INDUSTRY

Institutional Education, Engineering Research & Development

### LOCATION

West Lafayette, Indiana

### IMPLEMENTATION

- One **RPS1200 BESS**
- **Control:** dispatchable battery power delivery to wireless roadway EV chargers
- **Monitoring:** **ViSTA** Monitoring and Control Dashboard enables remote oversight with real-time alerts

### RESULT:

Purdue turned to Viridi's **RPS1200** for its proven safety, reliability, and ability to reduce generator runtime. Deployed in July 2025, the 1.2MWh system features Anti-Propagation architecture to contain thermal runaway and utility-grade IoT for real-time insights and control. Battery discharge powers roadway charging infrastructure, while the system's auto-start function recharges via generator during off-hours—dramatically cutting fuel use, maintenance needs, and emissions. System performance is managed and monitored through Viridi's **ViSTA™** software platform.

