

# Containerized Supercharging Station



RPS EV Chargers eliminate system upgrade costs.

The Resilient Power 15kV Supercharging Station is a pre-fabricated charging station that can recharge up to 20 EVs simultaneously with up to 3MW total. Each self-contained unit can connect directly to a 15kV medium voltage power line and be installed in as short as 1 day. Any prospective charging site with space, grid, or time constraints will benefit from our 90% reduction in size, permitting, and installation labor. The system can also use any available DC solar+storage resources to maintain ideal power quality and cost at both the grid and EV load. Each unit can be configured to receive multiple AC or DC inputs such as solar strings, batteries, or generators. The Resilient Power Station increases efficiency and lowers cost by eliminating multiple DC to AC conversions, step up transformers, and reducing copper wiring losses. Optimal power control is accomplished with local feedback and/or remote SCADA and OCPP. Ancillary Services functionally may include a VAR compensator, fast frequency regulator, voltage regulator (CVR/VVO), and line harmonic filter may provide additional sources of revenue.

Redundancy means 25% of modules can fail without requiring service.

## UTILITY GRADE

Installation	Outdoor container
Dimensions	1.5m x 1.63m x 2.4m
Diagnostics	Integrated power-on self-test finds faults prior to energization or damage
System Voltage Range	15kV nominal line to line
System Voltage Withstand	17kV phase to ground (1 minute)
Bidirectional Power Rating	Up to 3.2MVA
Temperature	-40C to 40C
Current Harmonics	< 3%
Low voltage ports	100V-1000Vdc typical from 125-750A each
Design Standards	UL, CE, TÜV
Basic Insulation Level	Up to 125kV impulse without arresters

Current Overload  
duty cycle = 10%  
2x for 5 cycles  
1.75x for 1 minute  
1.5x for 1 hour

\*Parallel units for higher ratings

## ADVANTAGES

- Facilitates synchronization & improves power quality
- Integrated energy storage ports for reducing peaks and increasing solar
- Solid-state switch interrupts any external fault without the need for a breaker
- Protects from voltage sag/swell and current transients
- Fast Response and avoids transformer related resonant frequencies
- NERC-CIP certified SEL RTAC local controller with optional HMI
- Local and SCADA control with DNP3, Modbus or IEC-61850
- Field configurability, advanced diagnostics, hot swappable repairs
- Designed to operate beside mechanically switched reactors or capacitors
- Long lasting and low maintenance

## FEATURES

### Reduces Costs

Supports CCS and CHADEMO up to 500kW

Eliminates most on-site labor, AC inverters, trans-formers and switchgear

Eliminates harmonic filters and power factor correction capacitors/reactors

Reduced copper wiring losses and installation engineering with turn-key outdoor containers

Liquid cooled cables

### Improves and Facilitates Renewable Generation

Higher solar production and less curtailment

Improved efficiency with fewer conversions and higher voltage

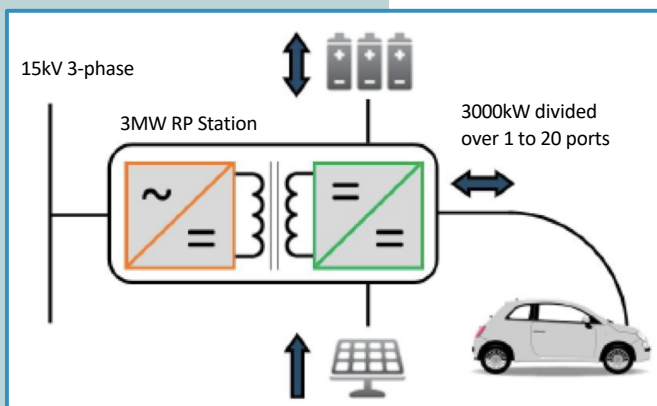
Additional revenue streams for frequency, VAR, and Voltage regulation

Power quality improvement for voltage sag and swell

Reduced maintenance by eliminating mechanical components

Short lead times with fewer vendors help projects stay on schedule

Resilient Power Systems offers a utility grade extreme fast charger that routes AC/DC power directly between the medium voltage grid and other energy sources or loads without a transformer. The RP system optimizes and prioritizes power flow for better efficiency, line stability, power quality, flexibility and service reliability in islanded microgrids. Through optional solar and battery ports it also simplifies interconnection approval by reducing line harmonics and surges, while regulating voltage and feeder power factor. The Resilient Power Station has zero inrush current, which allows a grid interface through simple fuse and disconnect switch. Safety is improved by the rapid shut-down system and arc flash limiter.



## POWER DENSITY

Source	Normalized Area	m <sup>2</sup> /MW
Resilient Power	1X	1.28
Proterra	15X	19.2
Delta Electronics	14.2X	18.18
Typical SVC	120X	1.25



[resilientpower.com](http://resilientpower.com)

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