

# POWERING THE AGILE GRID™



## WHO WE ARE

Gridco Systems® is a leader in agile grid infrastructure solutions, enabling electric power distribution utilities to more effectively integrate renewable and distributed generation, increase energy efficiency, manage peak capacity, and improve system reliability. The Gridco Systems emPower™ Solution combines modular power electronics, advanced controls, distributed networking, and power system analytics to deliver the industry's only end-to-end hardware and software platform purpose built to solve utilities' current and emerging distribution challenges.

*Distributed, Dynamic Power Control is the Key*

## SOLVING A FUNDAMENTAL NEED

Today's electric utilities are operating in a shifting landscape — one that poses a wide variety of challenges, but also presents opportunities for innovation. A number of trends are beginning to stress the reliability, capacity, and efficiency of the distribution grid originally designed for one way power flow from centralized generating plants:

- Adoption of increasingly cost-effective, customer-owned solar PV
- Increasing transmission and base-load generation capacity constraints
- Increasing severity of outages due to severe storms
- Emerging load types, including electric vehicles and data centers
- Increasing diversification of customer demand
- Higher frequency of cyber-attacks targeted at the energy industry

These trends are challenging the core of the utility mission to deliver safe, reliable, and affordable power. A new class of distribution infrastructure is required, one that ensures high quality and reliable power delivery, improves systemic efficiencies, and is more economical than alternatives. The Gridco Systems emPower Solution is the industry's only utility-scale solution purpose-built to meet this need, and consists of three product families: **Power Regulation** including In-line Power Regulators™ (IPRs), Power Regulating Transformers™ (PRTs) and Static VAR Compensators™ (SVCs), **Intelligent Control** including Distributed Grid Controllers™ (DGCs), and **Advanced Software** including the Grid Management and Analytics Platform™ (GMAP).

*Take Control of Your Distribution Grid Future Today*

## COMPANY SNAPSHOT

FOUNDED	2010
HEADQUARTERS	Woburn, MA, USA
FUNDING RAISED	\$55 million USD
INVESTORS	General Catalyst Lux Capital Maschinenfabrik Reinhausen North Bridge Rockport Capital
EMAIL	<a href="mailto:info@gridcosystems.com">info@gridcosystems.com</a>
WEB	<a href="http://www.gridcosystems.com">www.gridcosystems.com</a>
LINKEDIN	<a href="http://www.linkedin.com/company/gridco-systems">www.linkedin.com/ company/gridco-systems</a>
TWITTER	<a href="https://twitter.com/gridcosystems">https://twitter.com/ gridcosystems</a>

## APPLICATIONS & BENEFITS

- **RENEWABLES INTEGRATION** - Manage voltage fluctuations, power factor variations, and harmonics caused by Distributed Energy Resources (DER), thereby increasing local feeder hosting capacity while ensuring compliance with voltage standards
- **ENERGY EFFICIENCY** - Complement existing CVR/VVO schemes to unlock stranded efficiency and conservation benefits by decoupling low voltage points along a feeder
- **PEAK DEMAND MANAGEMENT** - Dynamically adjust voltage levels to reduce demand during peak periods without reliance on customer behavioral change
- **ENHANCED POWER QUALITY** - Rapidly compensate for sags, swells and harmonics to protect sensitive equipment, minimize the impact of nonlinear loads, and offer new levels of service
- **OUTAGE AND FAULT DETECTION, ISOLATION & RESTORATION** - Improve system reliability by identifying outages and faults support to feeder reconfiguration events and provide service restoration notifications at the distribution transformer level
- **ASSET MANAGEMENT** - Monitor distribution assets at fine granularity in support of condition-based maintenance, reducing unplanned outages and premature equipment failure

## CAPABILITIES THAT CREATE VALUE

- Laser-like focus on solving the challenges of today's distribution grid and ensuring that utilities are prepared for the emerging complexities of tomorrow
- Decades of business experience provides the know-how to build cost-effective, efficient, and reliable solutions at scale for utility applications
- Multi-disciplinary expertise spanning power electronics, power systems, control algorithms, distributed networking, and advanced analytics is ideally suited for the convergence and evolution of information and operational technologies for the modern grid
- Solutions that enable multiple sources of CAPEX and OPEX savings, including avoiding costly alternatives, increasing power utilization, increasing system capacity, extending the life of existing assets, increasing operational efficiencies, and deferring large capital investments
- Utility-scale power electronics that are purpose-built for the distribution grid — dynamic and continuous operation, no maintenance, and long lifetime in harsh utility environments
- Use of open and interoperable industry standards ensuring seamless integration of our solutions into existing operational systems
- Cyber-security technology best practices that ensure system safety and compliance with relevant NERC CIP and NIST cyber-security standards
- Best-in-class product quality and reliability supported by a flexible, diverse, and green supply chain with global manufacturing partners
- State-of-the-art facilities equipped with MV and LV labs for extensive product qualification testing against a wide array of simulated grid conditions
- A responsive team dedicated to the success and satisfaction of utility customers

## POWER REGULATION



Low Voltage  
Pole-mounted  
Single-Phase In-Line  
Power Regulator (IPR)



Low Voltage  
Pad-mounted  
Single-Phase In-Line  
Power Regulator (IPR)



Distribution  
Pad-mounted  
Single-Phase Power  
Regulating  
Transformer (PRT)



Low Voltage  
Pad-mounted  
Three-Phase In-Line  
Power Regulator (IPR)



Low Voltage  
Pole-mounted  
Single-Phase Static  
VAR Compensator  
(SVC)

## INTELLIGENT CONTROL



External or Integrated  
Distributed Grid  
Controller (DGC)

## ADVANCED SOFTWARE



Grid Management  
and Analytics  
Platform™ (GMAP)



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