

## PROGRAMS TO SUPPORT UTILITIES AND IMPROVE PROJECT RETURNS



### **PROFITABLE COLLABORATION WITH THE UTILITY COMMUNITY**

PATHION is a renewable energy systems provider that delivers financed, turn-key systems to meet the energy needs of local communities, government, and utility districts. PATHION systems offer unparalleled grid interoperability. Our grid-ready design interacts with and supports local utility grid services, allowing seamless integration of renewable and distributed energy resources with the grid. As a single point of contact over the lifetime of each project, PATHION is the ideal partner to address the changing requirements of both the interconnected electrical utility and independent system operator. PATHION enables customers to participate in utility programs and offer services into the energy markets, significantly increasing product returns.

PATHION's DirectCore Platform™ is a complete energy solution that can be used in a wide range of applications for in-front or behind-the-meter installations. The DirectCore platform combines onsite power generation and battery storage with an intelligent energy management system, integrating the best in products, practices and services into systems that meet the electricity needs of our customers.

### **PATHION'S DIRECTCORE PLATFORM COMPETITIVE ADVANTAGES INCLUDE:**

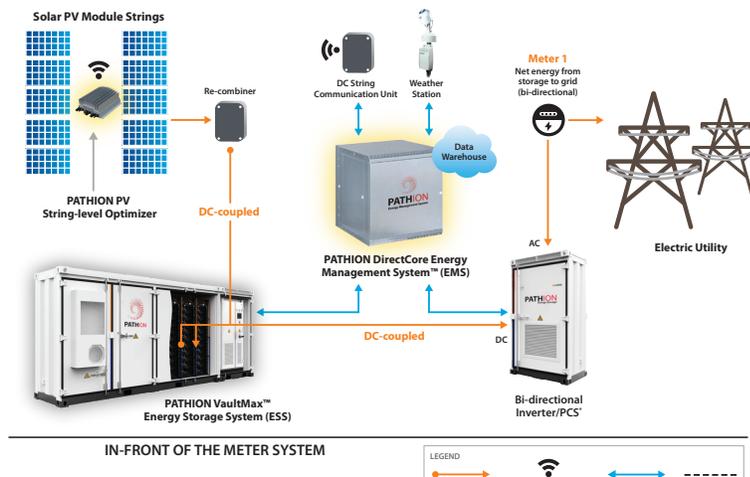
- Open architecture – ability to integrate any Distributed Energy Resources (DER) or microgrid using PV solar, wind, or fuel cells
- Modular design - eliminates obsolescence issues and allows for in service upgrades and maintenance.
- PATHION's Energy Storage System™ (ESS) charged by on-site renewable power
- State of the art DC-coupled design
- 8% more efficient power delivery than the best competitive offering
- High cycle efficiency that decreases overall lifetime cost

PATHION's preeminent Energy Management System (EMS) manages energy flow and power quality to and from the battery stack and the interconnected utility grid on a real-time basis to provide the best power quality with the highest on-site renewable energy capture. The EMS improves the safety, reliability, lifetime, and cost of ownership of an onsite energy solution by leveraging enhanced data with dynamic management capability. The EMS takes each program, asset and opportunity into account to execute real-time optimized dispatch of the system, delivering the best return possible from your energy investment.

### **PATHION'S SYSTEM ADVANTAGES INCLUDE:**

- Data from a vast sensor array incorporated into decision-making for efficacy and longevity
- Redundant power supply
- Triple redundancy for data exchange
- Cloud data storage
- Ability to update and upgrade the on-site control algorithms without downtime
- Open architecture with multiple stacking of applications
- Seamless grid interoperability

# PATHION DirectCore™ Energy Management Platform



## INSTALLED IN FRONT OF THE METER

PATHION's DirectCore Platform offers ideal interoperability with the utility grid. Emerging technologies in renewable power generation and storage can be a challenge – or even disruptive to safe and efficient utility scale grid operations. PATHION's DirectCore Platform was designed from the ground up to interact seamlessly with the utility grid. Our technology works in partnership with grid operations, allowing distributed energy or microgrid resources coupled with PATHION's ESS to appear to the grid as an interconnected power plant. The DirectCore Platform provides a range of power and energy services to the utility grid, including:

- Demand response
- Load matching
- Frequency regulation (Regulation, etc.)
- Voltage and VAR support
- Solar firming
- Reserve energy (standby, spin, etc.)
- Black start

## ONLY PATHION SOLUTIONS CAN DO THIS:

PATHION provides energy solutions that address today's critical problems. Our core management and technology design team members have years of industry experience, and understand the challenges that emerging technologies bring to safe and reliable grid transmission and distribution services. PATHION's interoperability with the local utility grid makes us the ideal energy systems provider, enabling communities, governments, commercial microgrids and municipal utility districts to work seamlessly in concert with local electrical utilities.

## INSTALLED BEHIND THE METER

PATHION's DirectCore Platform is an affordable, resilient, and sustainable solution that serves customer load. PATHION's intelligent EMS controls the entire system, drastically reducing energy costs for the customer and providing resiliency during grid brownouts, blackouts, or shutdowns.

- Maximize capture of onsite renewable power generation
- Reduce outside energy usage during periods of peak energy pricing
- Minimize peak demand
- Islanding to support critical loads during grid shutdowns
- Seamless reintegration with external grid when grid power returns
- Black start

## How can we help you?

PATHION works closely with our customers to define their critical problems and find the best solutions, including offering insight on operations and processes both before or as part of a critical water and/or energy system upgrade. We then continue to support our customers throughout the life of the facility. Visit <https://pathion.com/contact/> to schedule an evaluation.