



**Powerit Solutions™**



# Intelligent Energy Management For Industrial and Commercial Facilities

# Leveraging Technology & Programs

**“Smart Grid Systems for controlling facility power usage and allowing users to manage costs without negatively impacting operations. “**



# Some of Our Clients

E.&J. Gallo

4 sites



4 sites



2 sites



4 sites



8 sites



Constellation

2 sites



2 sites

The Buck Company



2 sites



The Miami Herald

# Intelligent Energy Efficiency

Using advanced technology and smart program management to lower kWh spending while balancing the needs of production, safety, and comfort.



## Benefits:

- **Quick Payback:** typically 2 to 24 months
- **Savings:** 2-15% reduction in overall electrical bill
- **Innovation:** Providing application-specific measures and control techniques that go beyond simple load cycling.

# Intelligent Demand Control

Using dedicated automation systems to predict and mitigate peak demand charges while maintaining strict control over operations .

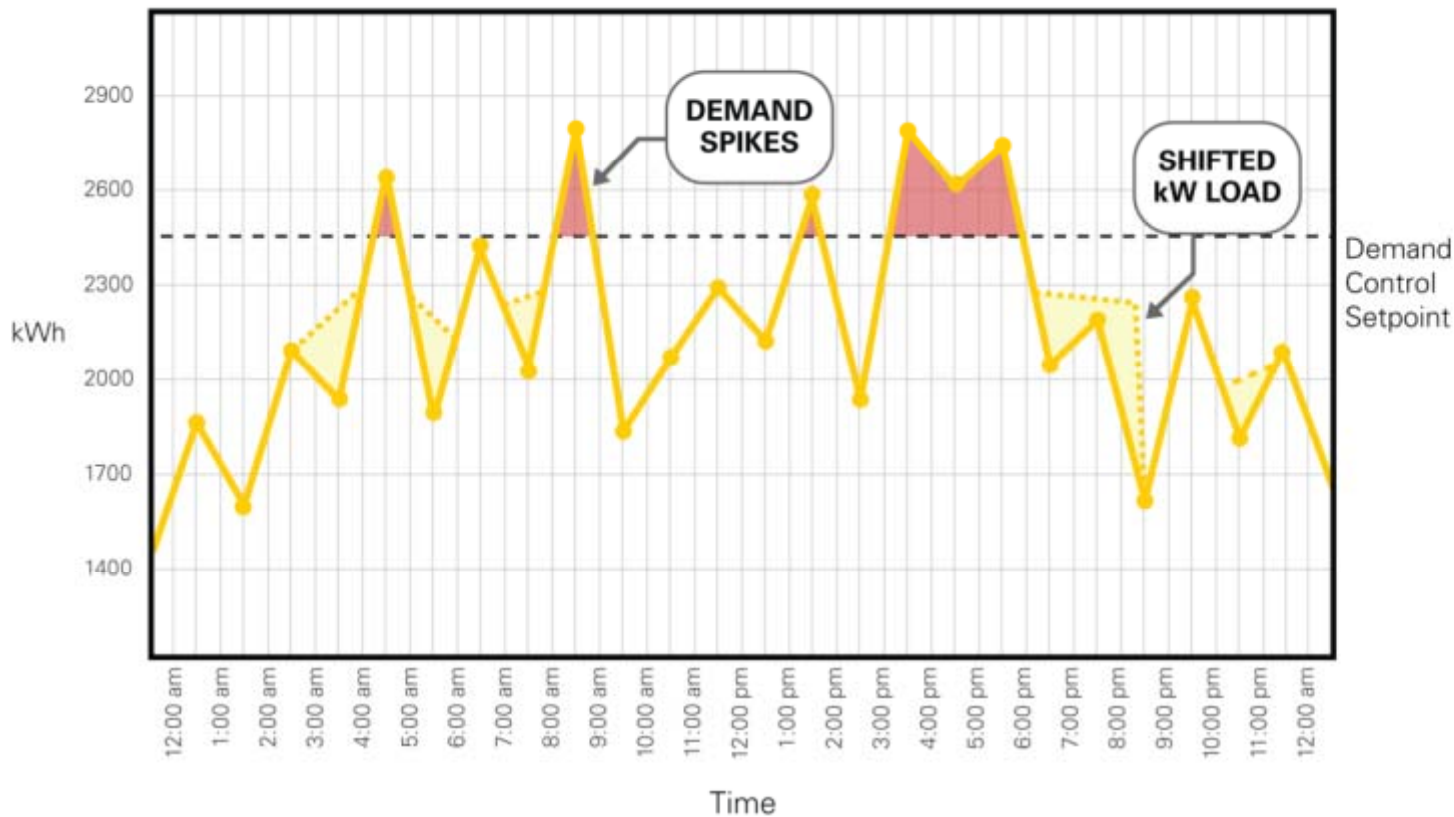


## Benefits:

- **Quick Payback:** 2 to 18 months
- **Savings:** 10 – 40% reduction in overall peak demand
- **Innovation:** Well tuned predictive algorithm produces precisely-timed load curtailments while embedded rules logic protects run-time requirements.

# Savings via Intelligent Demand Control

## Automated Action Controls Monthly Peaks



- Random coincidental spikes in kW result in high peak-demand based charges from utility
- Many times the kW use is simply shifted or slightly delayed, lowering peak kW while not affecting site productivity based on total kWh

# Intelligent Demand Response

When a smart system implements sophisticated control schemes designed to tightly coordinate externally triggered curtailment events.

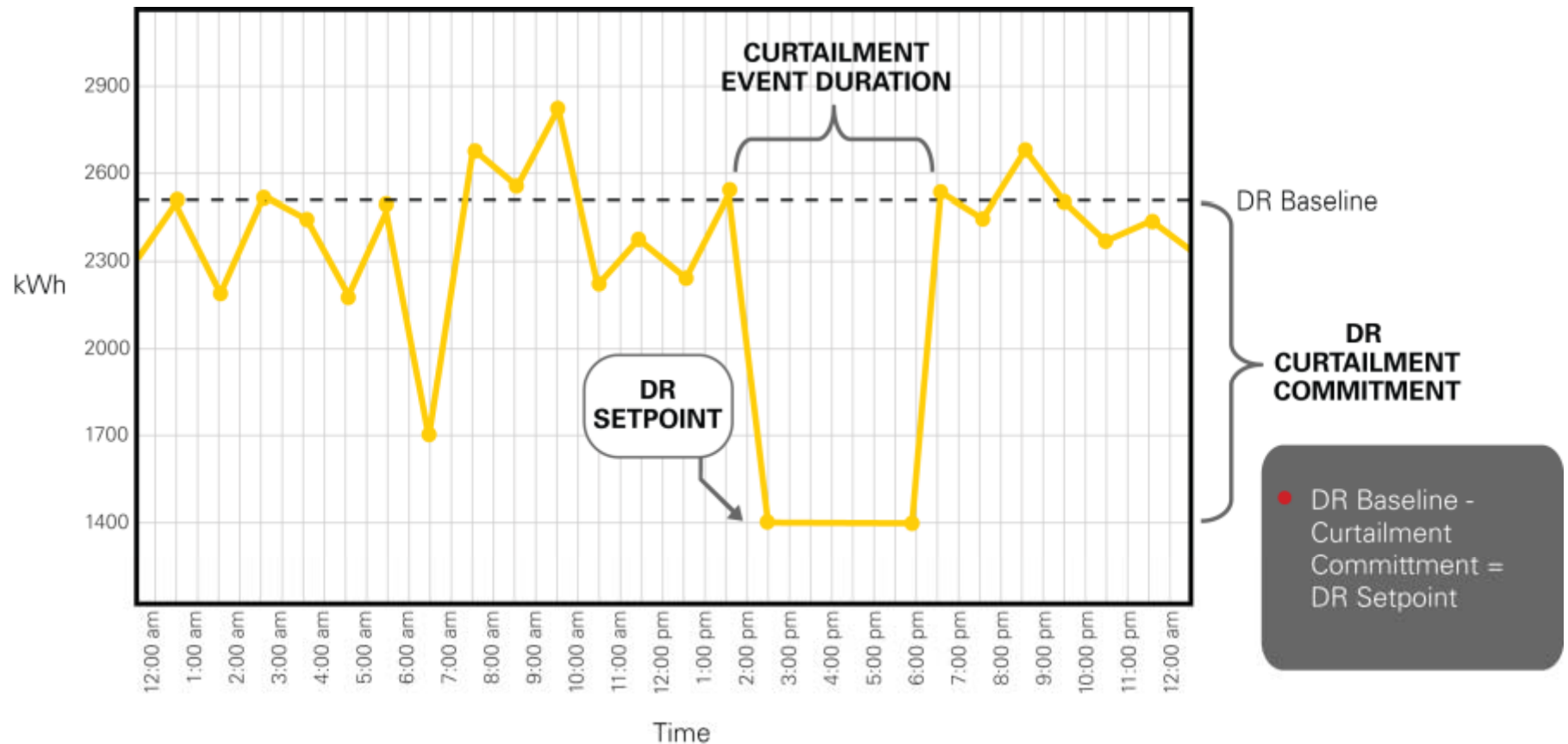


## Benefits:

- **Quick Payback:** 0-6 months
- **Savings:** Achieved through revenue generation as well as potential reduction in electricity costs
- **Innovation:** Complete automation to manage entire site curtailment event from end-to-end without any human interaction and associated risk

# Savings via *Intelligent* Demand Response

## Accurate & Reliable Demand Response



# Intelligent Pricing Response

Automatically adjusting power usage based on real-time utility prices. Pre-defined curtailment strategies are implemented in response to changing price thresholds.

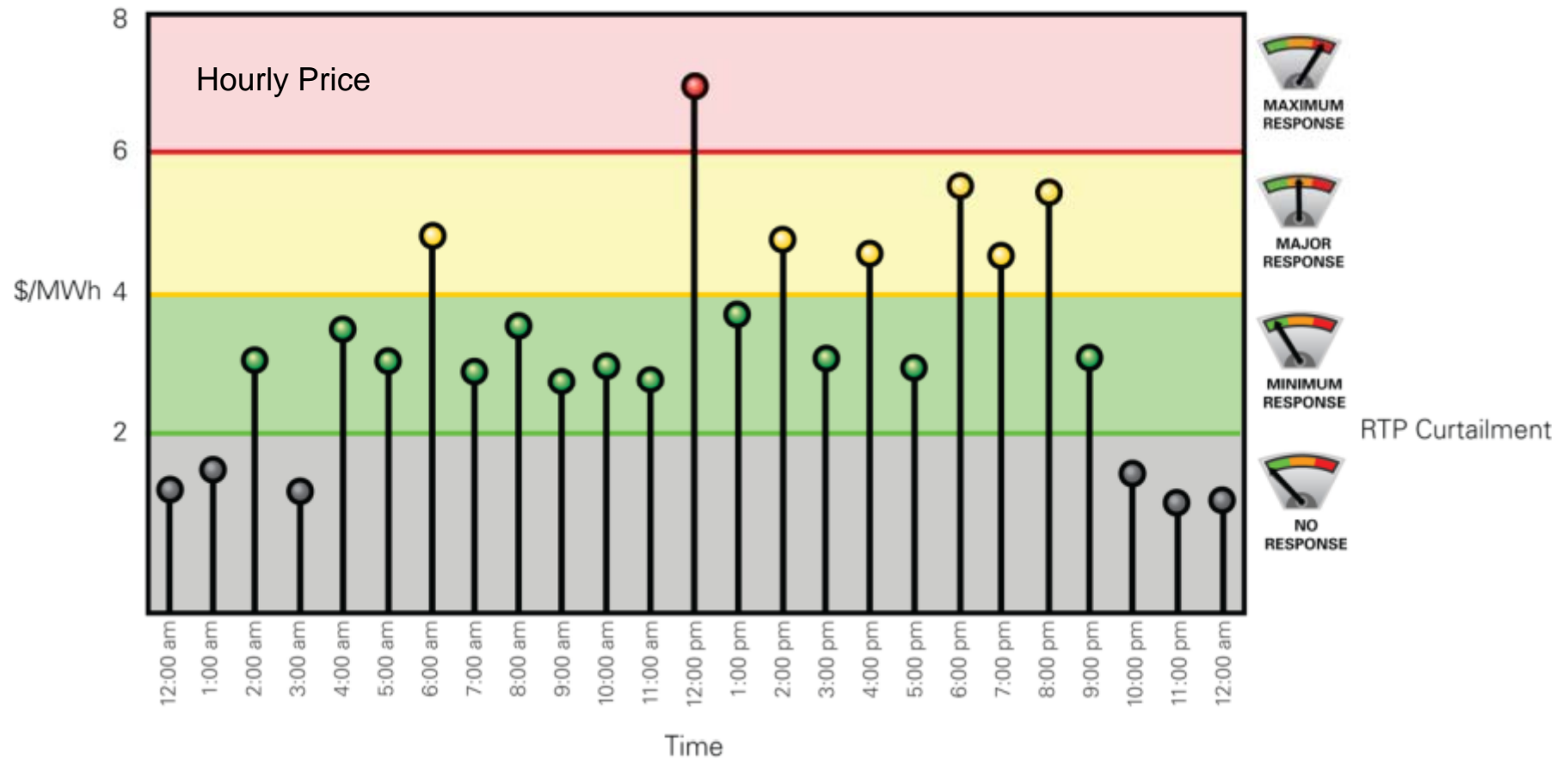


## Benefits:

- **Quick Payback:** 6-24 months
- **Savings:** Reduction of average KWh rate by managing run-time during high price periods
- **Innovation:** System reads real-time electricity prices and implements pre-set load management strategies, logging savings and protecting key processes

# Savings via *Intelligent* Pricing Response

## *Automated Response to Active Price Changes*



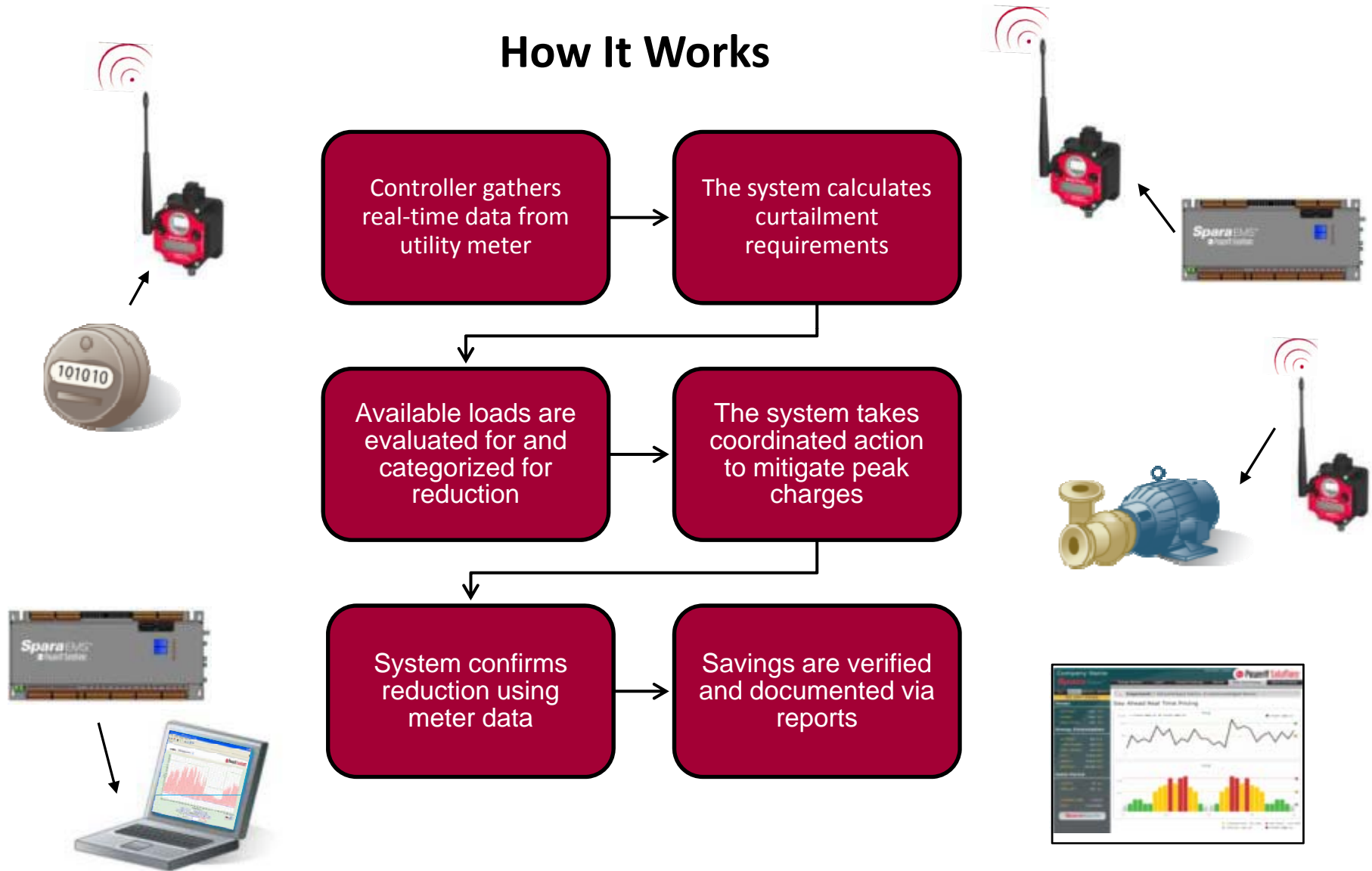
# Curtailment Challenges

Any Solution Must Address These Concerns:

- ✓ Load shedding is risky  
Dynamic, rules-based intelligence to protect production/minimize risk
- ✓ Can't save/earn enough to justify investment  
Save and earn multiple ways including DR, DC, EE and RTP
- ✓ Need to protect investment in existing controls  
Integrates with and even extends legacy systems
- ✓ Not enough automation infrastructure to be successful  
Spara provides automation to successfully manage energy usage
- ✓ Unable to determine exact curtailment needs ; lack of real-time data  
Org-wide access to real-time data & reports for better decision-making

# How System Works

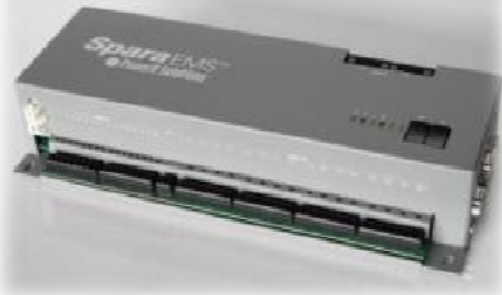
## How It Works



# Spara™ Family of Products

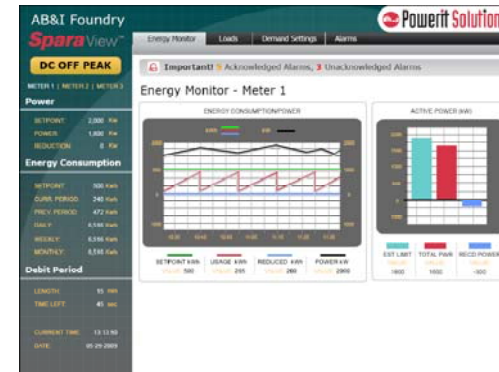
**Spara**EMS™

Controller



**Spara**View™

System Software



**Spara**Konnekt™

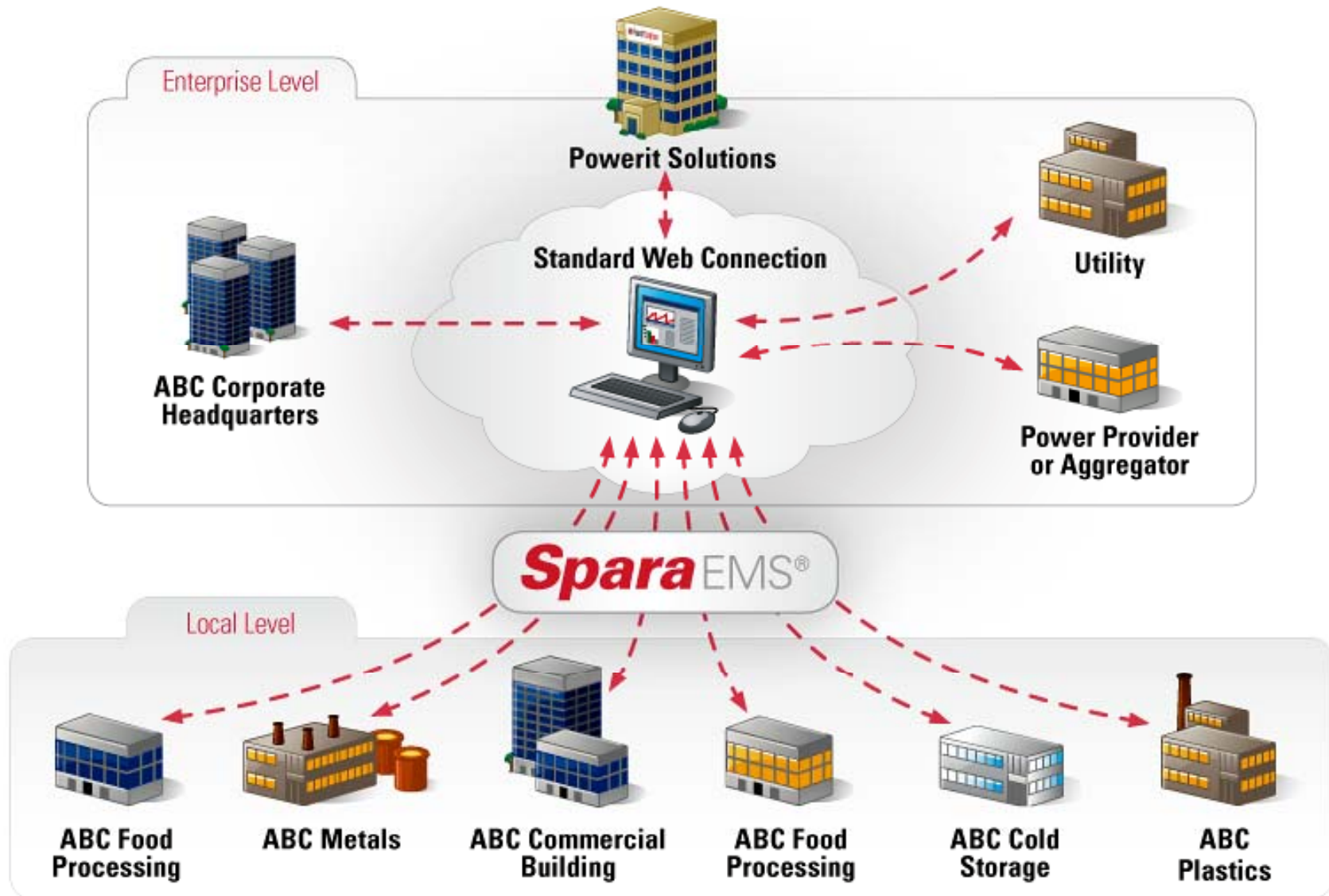
Wireless I/O Radios



**Spara**Professional Services™



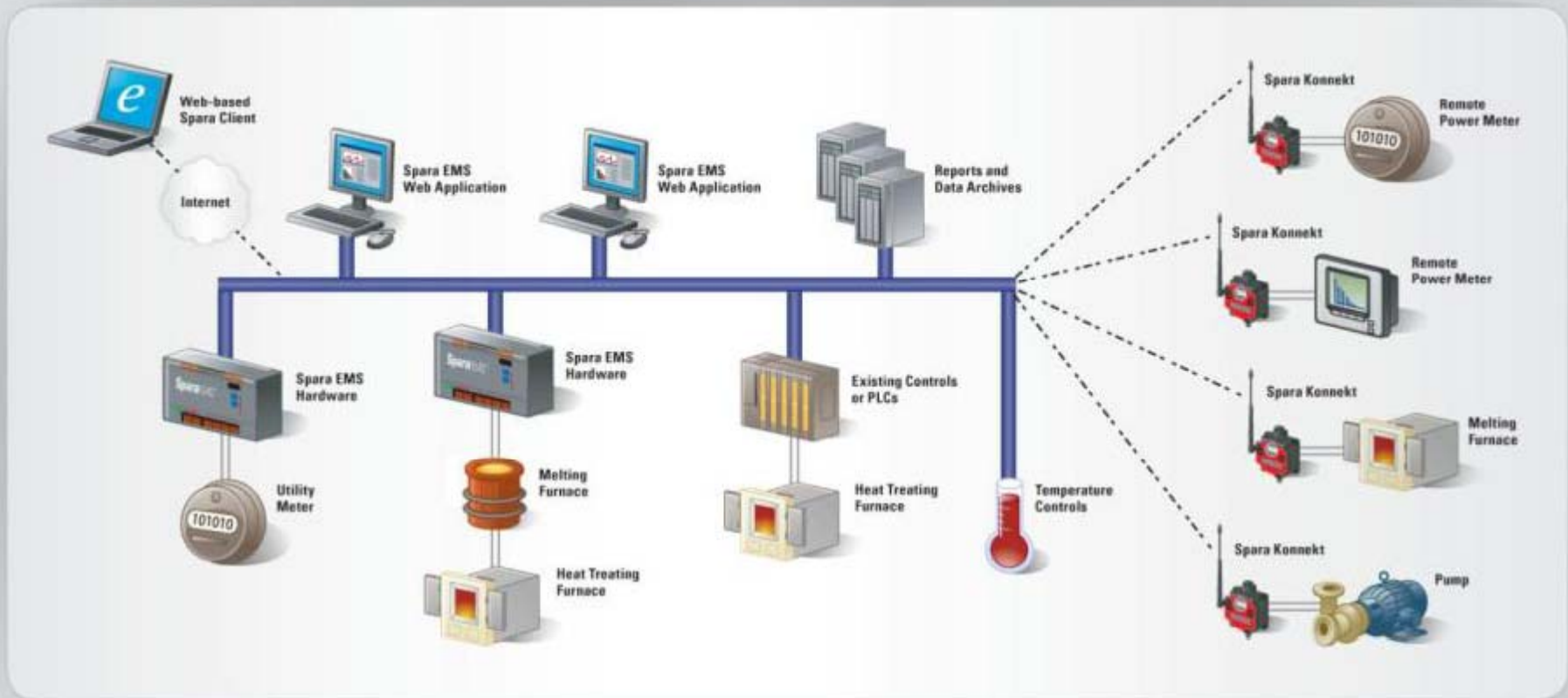
# Comprehensive Solutions



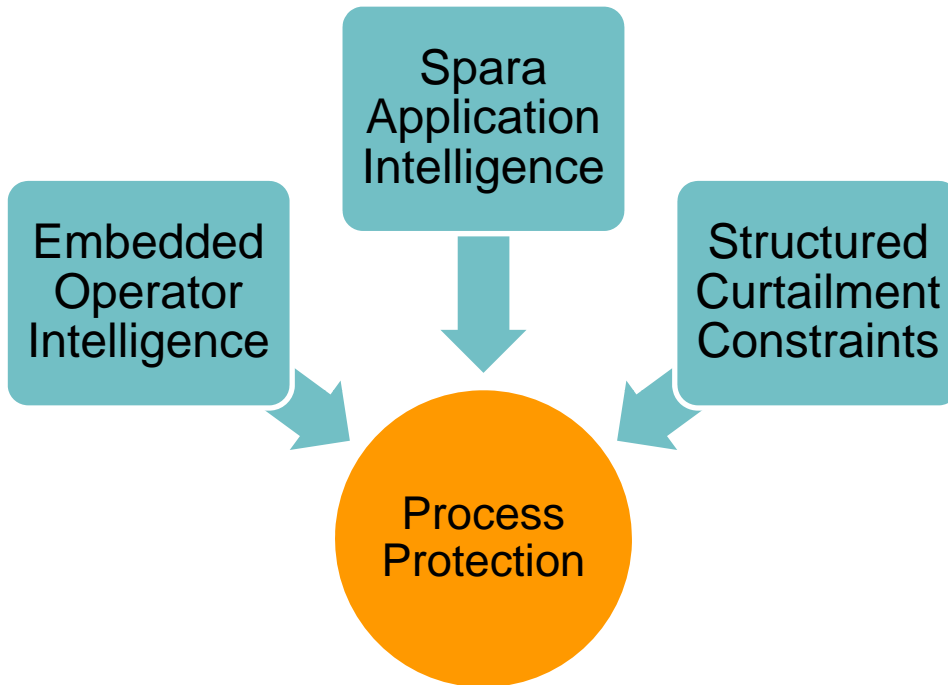
# Comprehensive Solutions

Local Level

Foundry Facility



# Protecting Your Process



*Tight definition & control of load shedding ensures protection of key processes.*



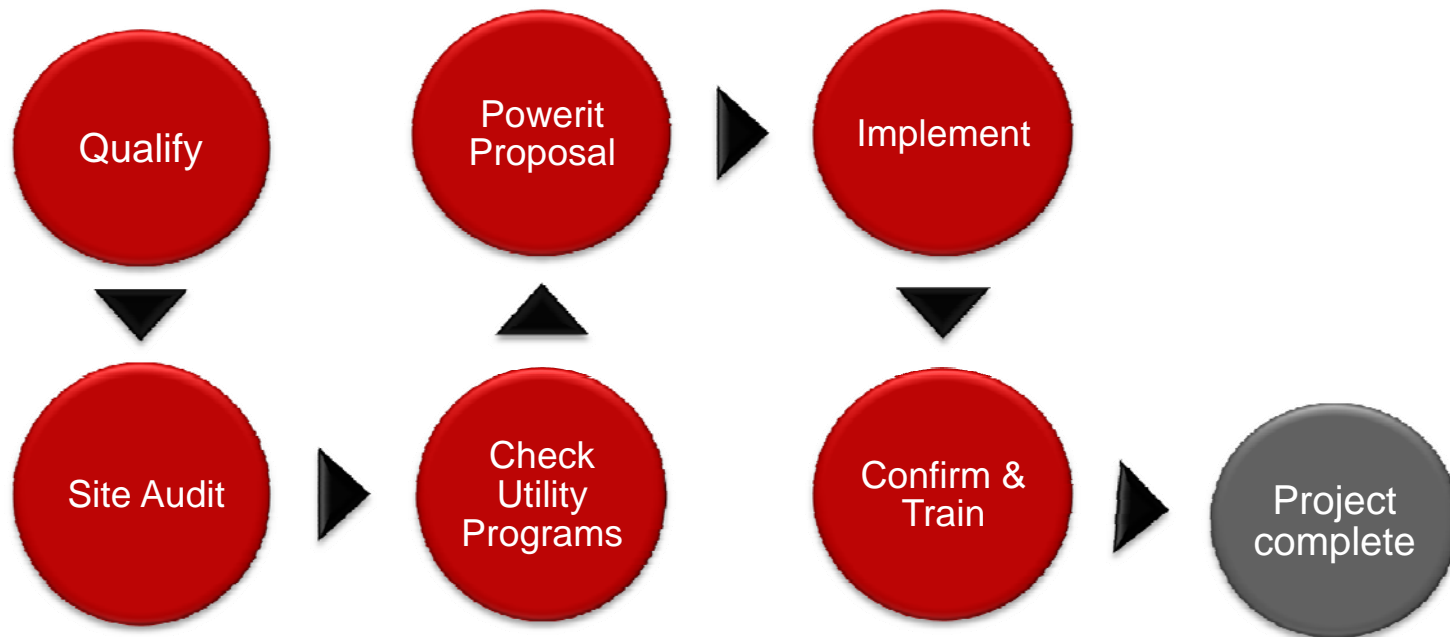
**System lets you configure the rules and settings that protect your facilities processes...**



**And combines them with the intelligence of predictive and adaptive software.**

# How The Process Works

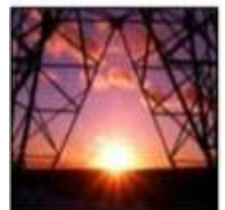
## Process of Developing Projects



# The Opportunity

## Take Advantage of *Intelligent* Energy Management

- Intelligent system enables significant cost reductions
- Maintain control over all load actions; protect operations
- Plans that fit your process & meet utility requirements
- Leverage Powerit's experience to increase your success
- Benefits even the most rigidly constrained facilities



# Thank You



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