



TVA/ EnerNOC Demand Response Program

PLMA Fall Conference

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EnerNOC Overview

EnerNOC Overview

Market Leader in C&I Demand Response and Industrial Energy Efficiency

- More than 6,650 MW of C&I DR under management across 10,700 customer sites
- More than 450,000 MWh of Industrial EE achieved to date; avg TRC of 2.53
- 100+ utility and grid operator partners
- Recently acquired industry leaders Global Energy Partners and M2M Communications

Financially Stable Company

- Publicly traded on NASDAQ (ticker: ENOC)
- Profitable with 2010 revenues of \$280 million
- 500+ full-time employees

Demand Response

- C&I DR Implementation
 - Emergency
 - Peak Shaving
 - Ancillary Services
 - Wind Balancing
- AutoDR Expertise
- Agricultural DR Expertise

Energy Efficiency

- Industrial EE Program Implementation
- Energy Services (RCx, audits, project assessment)
- Persistent Commissioning (PCx)
- EfficiencySMART Insight
- Continuous Energy Improvement (CEI)

Consulting Services

- Load and Market Analysis
- Strategic Planning
- Program Design & Development
- Program Evaluation
- Regulatory Support & Expert Testimony
- Engineering Support Services

TVA/ EnerNOC C&I Demand Response Program

TVA/ EnerNOC C&I DR Program: Overview

Over the last few years, this program has grown to deliver 200 MW of demand response to the TVA system.

	2007 Pilot	2011 Program
MW of Load Reduction	3.7 MW	200 MW
Participating Power Distributors	3 Distributors	111 Distributors
Number of Sites	38 Sites	~770 Sites
Program Hours	30 hrs in July & August	40 hrs year-round
Number of Events	6 events	20 events since 2009
Average Performance	102%	102%

Benefits of Demand Response

Customers

- Provides customer choices – documented satisfaction via surveys
- Financial benefits help customer remain competitive
- Load reduction compatible with operations, with no out-of-pocket expenses or penalties
- Web-based, real-time usage data

Power Distributors

- Customer satisfaction
- Promotion of economic development through long-term customer competitiveness
- Cost-effective system resource
- Participation of own facilities

TVA

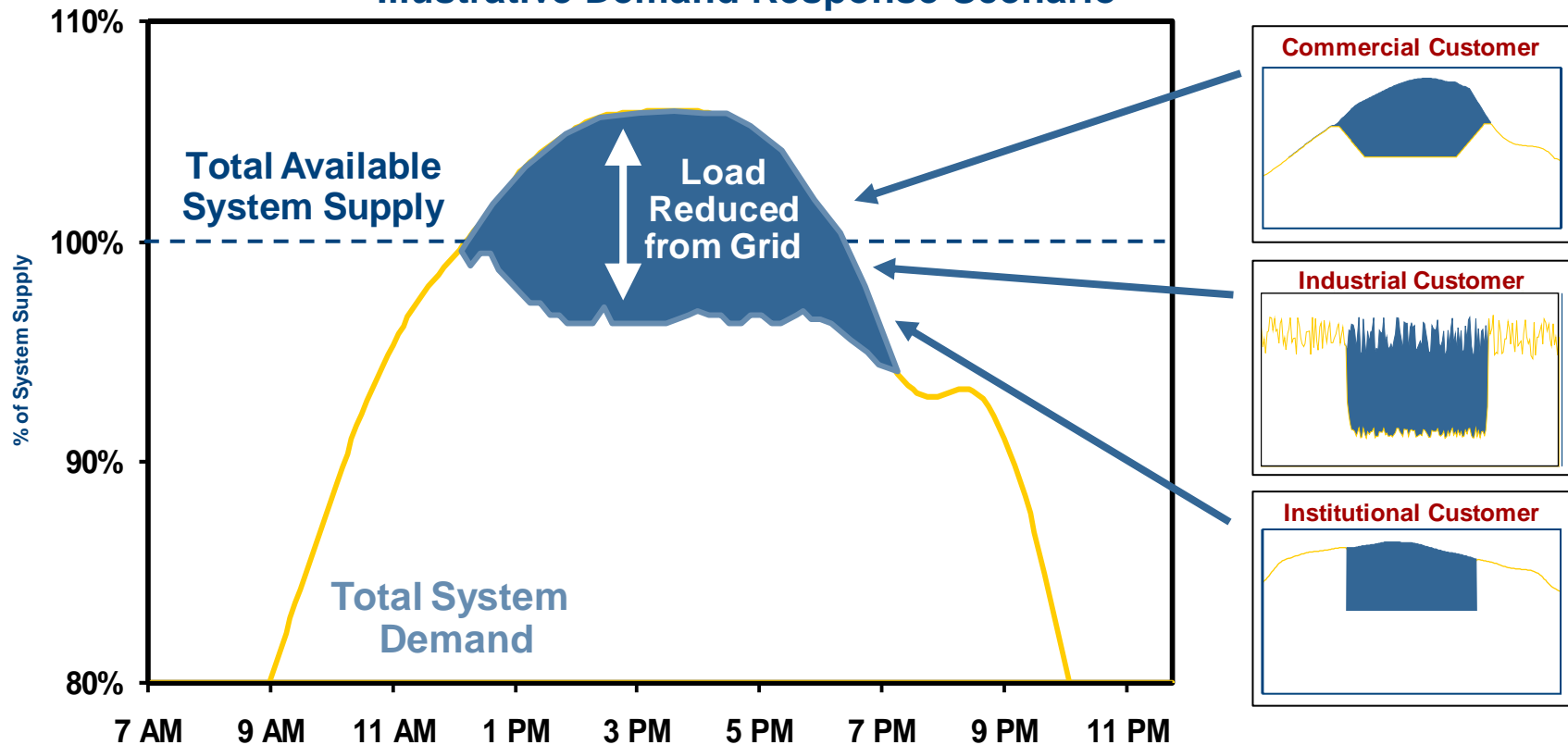
- Reliable, cost-effective resource

How This Program Works

How This DR Program Works

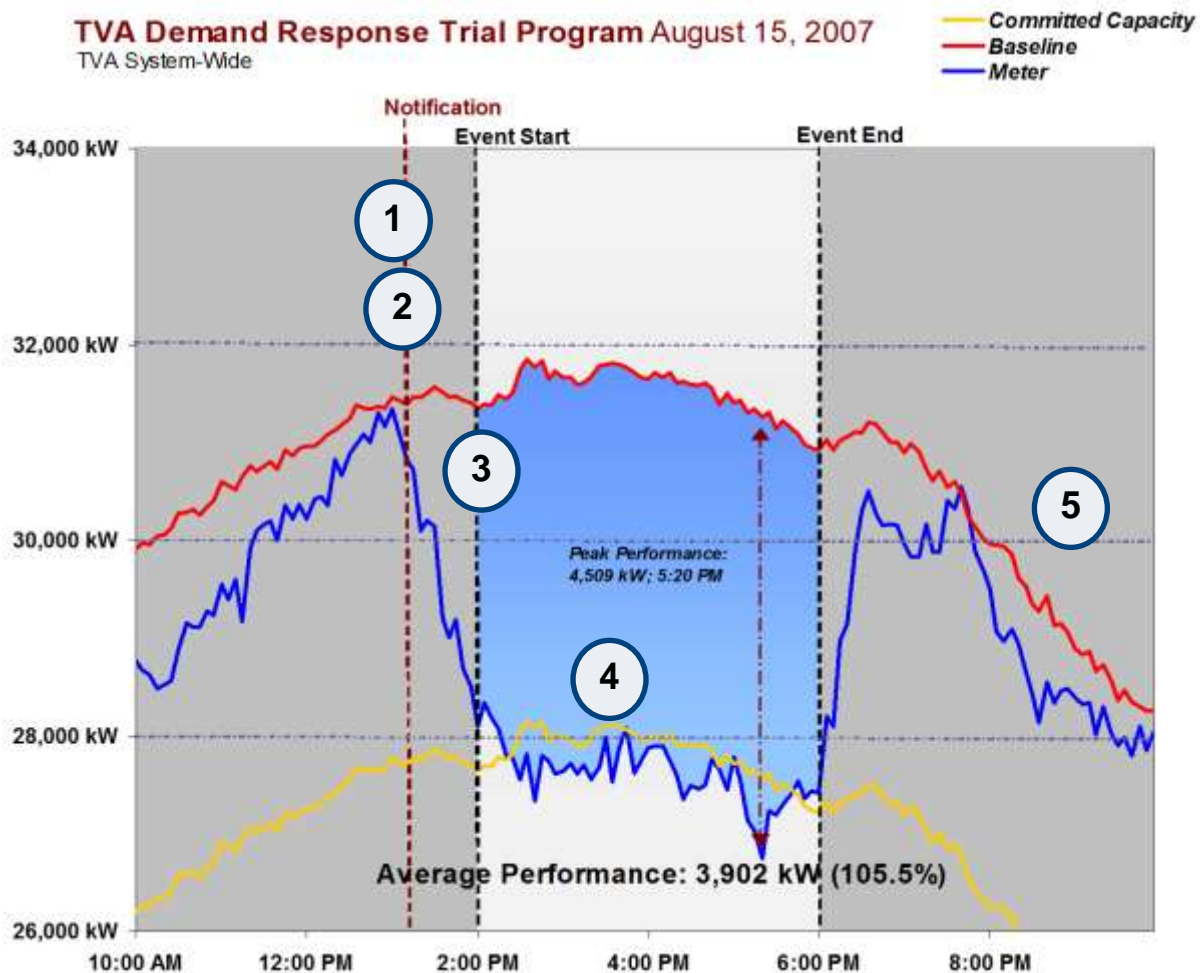
TVA currently has over 200 MW of C&I customer load in this program, which it can curtail at times of system need. Working with Power Distributors, EnerNOC aggregates these load reductions for the TVA system.

Illustrative Demand Response Scenario



Delivering Measurable Results

When the load reduction is needed, TVA alerts EnerNOC, who notifies customers. Customers then have 30 minutes to curtail.



- 1 **TVA** dispatches event
- 2 **Distributors and EnerNOC** receive notification; EnerNOC notifies customers
- 3 **Customers** curtail at event start time
- 4 **EnerNOC** coaches customers through event
- 5 **Distributors and TVA** receive event report

Applying a Robust Technology Platform

EnerNOC has built a highly-scalable technology platform, based on two-way communication of real-time data, providing a foundation for consistent and reliable resource performance.



EnerNOC Site Server (ESS)

- To communicate with sites
- Provides near-real time energy consumption data
- Allows remote curtailment



Network Ops Center (NOC)

- Staffed 24x7x365, two NOCs with advanced technology, specialized staff
- Ensures quick, efficient, consistent load reductions

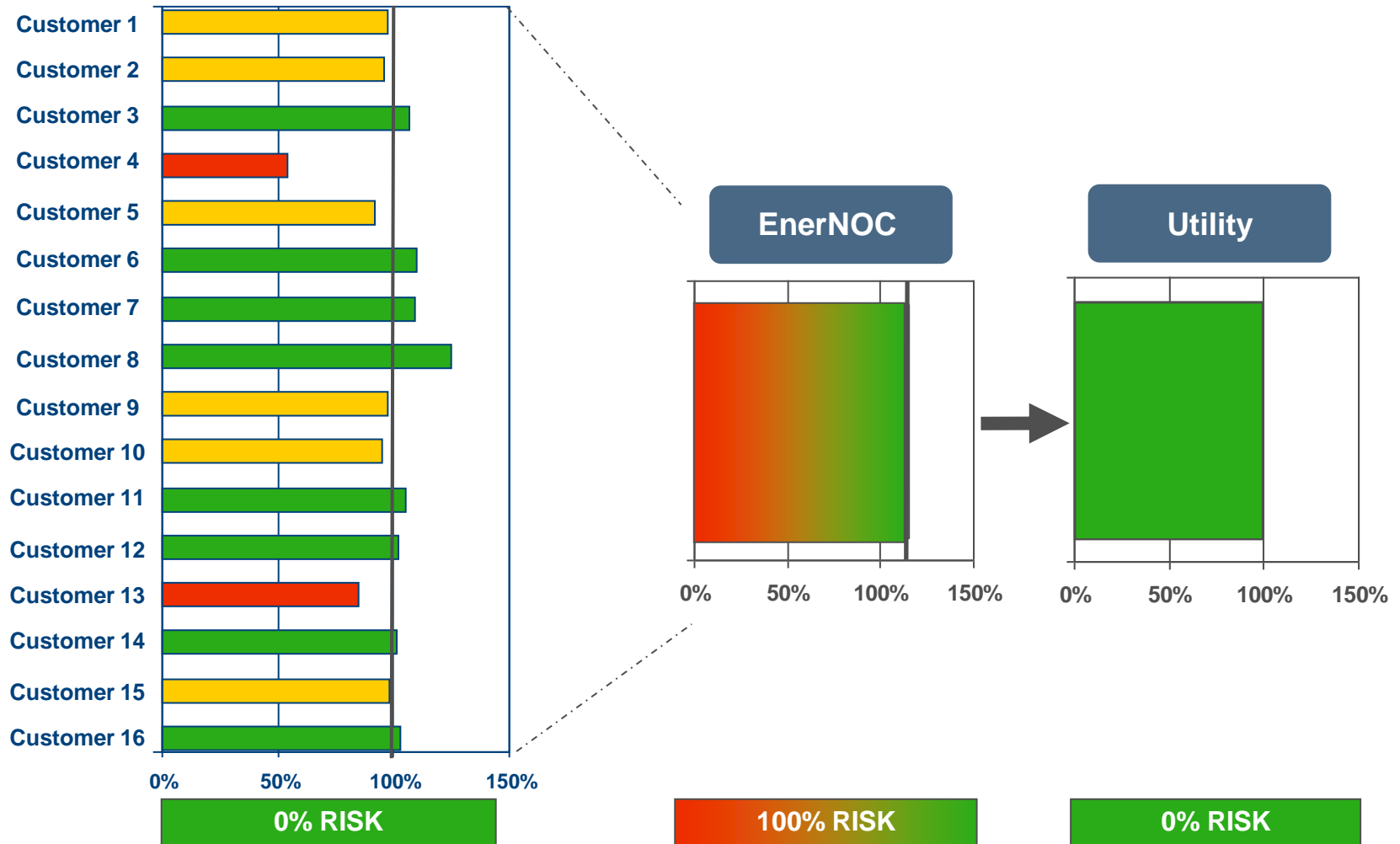


DemandSMART

- EnerNOC's web-based energy management platform
- Monitors energy consumption; enables load control
- By web portal, customers & utilities can view reductions

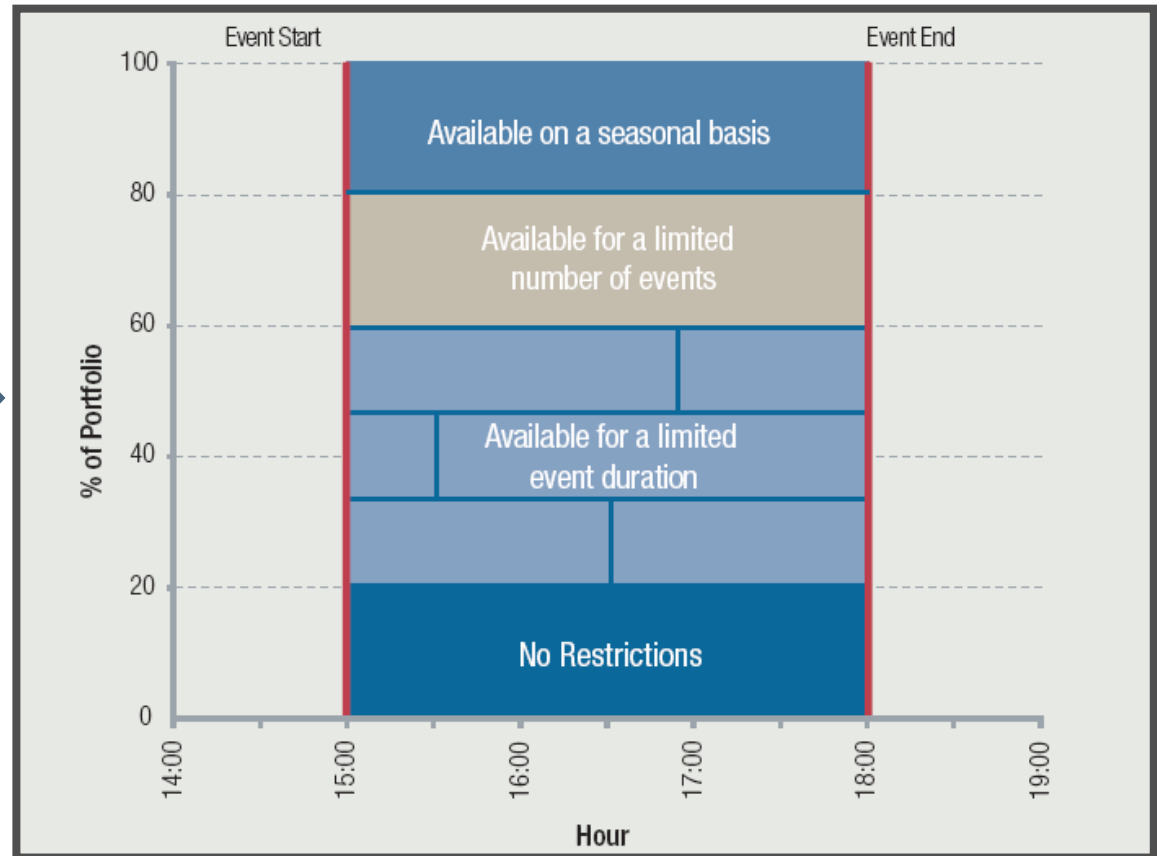
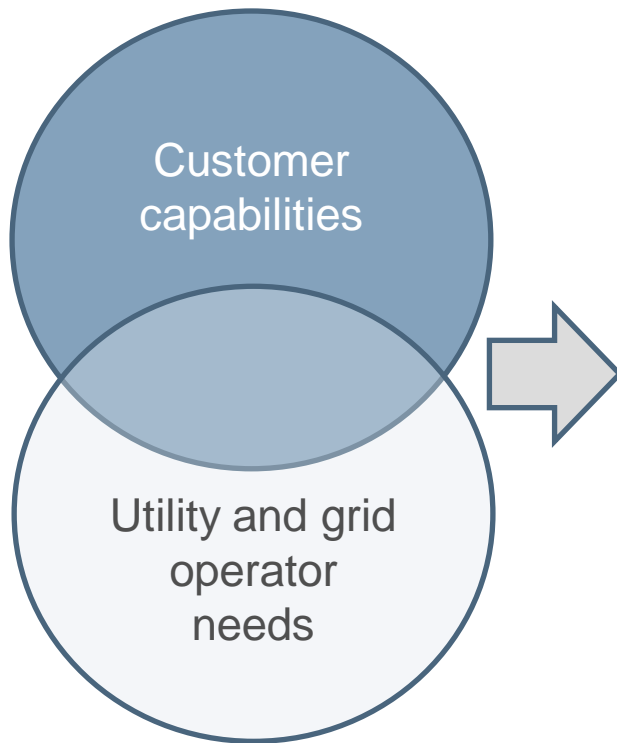
Event Performance through Portfolio Management

Through aggregation, EnerNOC manages 100% of the risk associated with delivering contracted capacity. The utility and customers are protected from non-performance.



The Power of Aggregation: Customer-Centric DR

By assembling a portfolio of diverse customers, EnerNOC can provide a firm resource to its utility customers.



Customer Experiences

Associated Wholesale Grocers

A retailer-owned co-op serving member stores with grocery, fresh meat and produce, and general merchandise

Nashville distribution center: 804,659 sq. ft. of storage; 900 kW peak

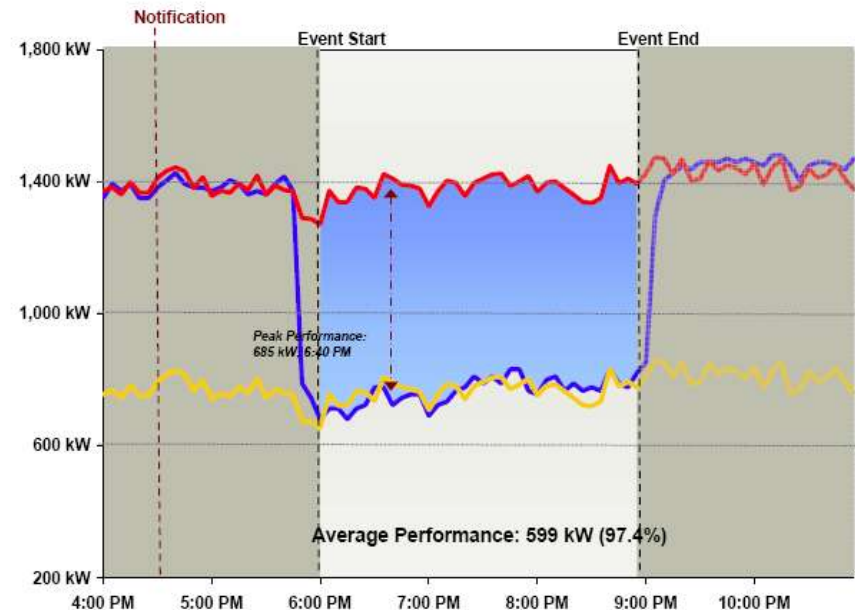
~600 kW of manual load curtailment: raise temperature set points in cold storage; reduce lighting

Initial concerns about food spoilage (dairy, fresh meat, produce including bananas – sensitive to 3° temperature differences)

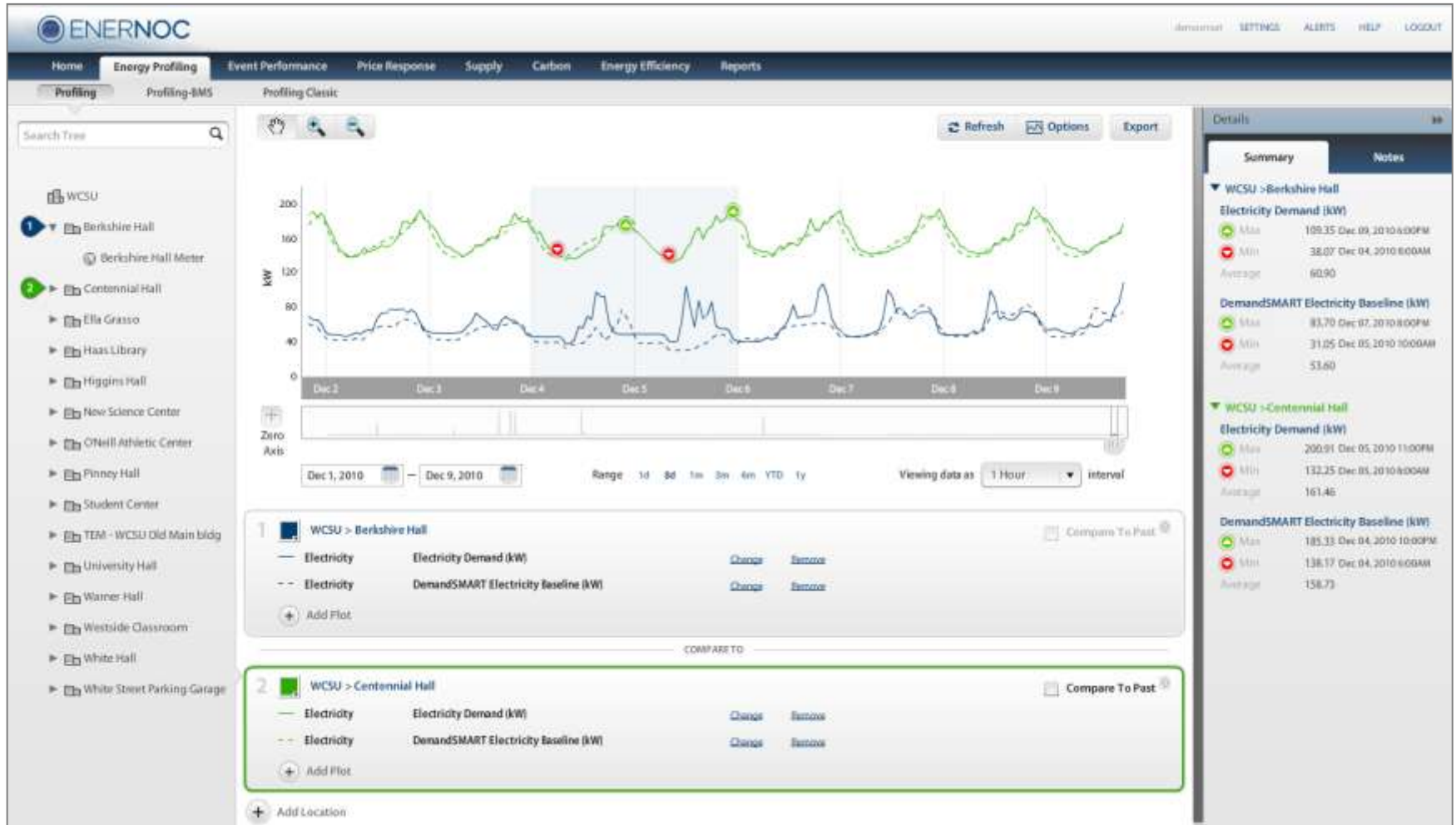
“NES has given us a great opportunity by making DR available.”



AWG Event Performance Aug. 16, 2007



Giving Customers Access to 24/7 Real-Time Visibility



Customer Management of Peak Demand

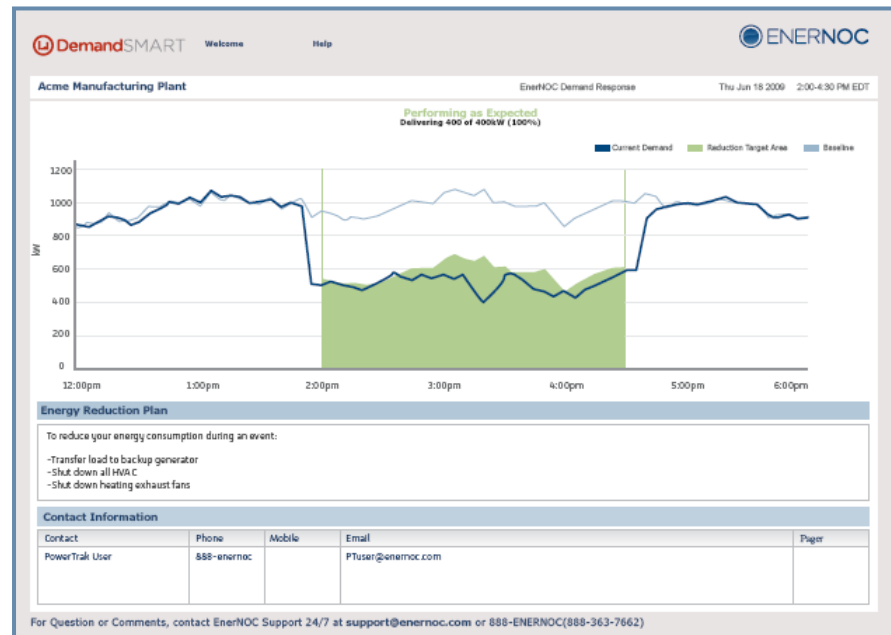
MGM Industries: Window Manufacturing

Location	Hendersonville, TN
Curtailment strategy	Shutting down one manufacturing area
DR	300 kW
Peak load management	<ul style="list-style-type: none"> Weekly production managers' meeting energy use Time the use of equipment without hurting throughput Reduce average demand from 598 kW each month to below 400 kW



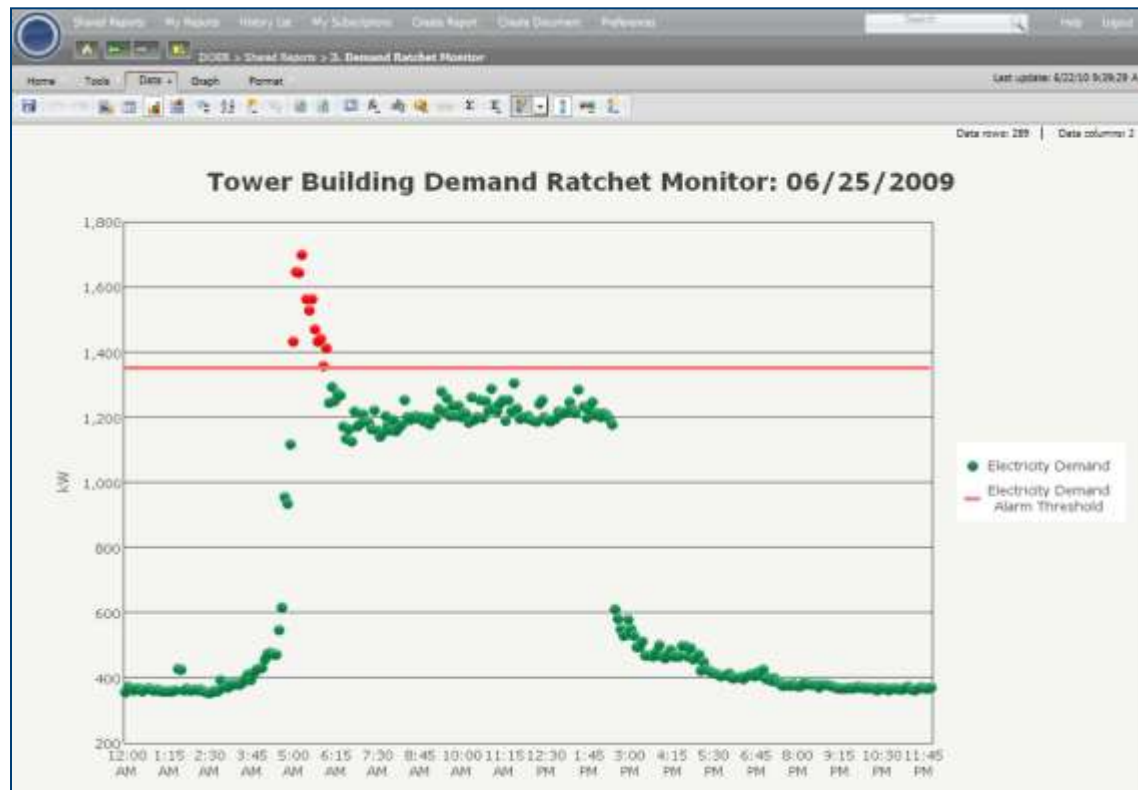
Managing MGM's Peak Demand

“By having visibility into our energy usage, we ended up saving about three times the amount of our DR payments. We know a lot more about how we use energy, such as how many amps each piece of equipment draws. This knowledge helps us time our production schedule better and use the right equipment at the right time.”



EfficiencySMART Insight Demand Monitoring

Real-time alerts enable managers and engineers to not only mitigate the spike but also to improve the scheduling of equipment that created the surge in the first place.



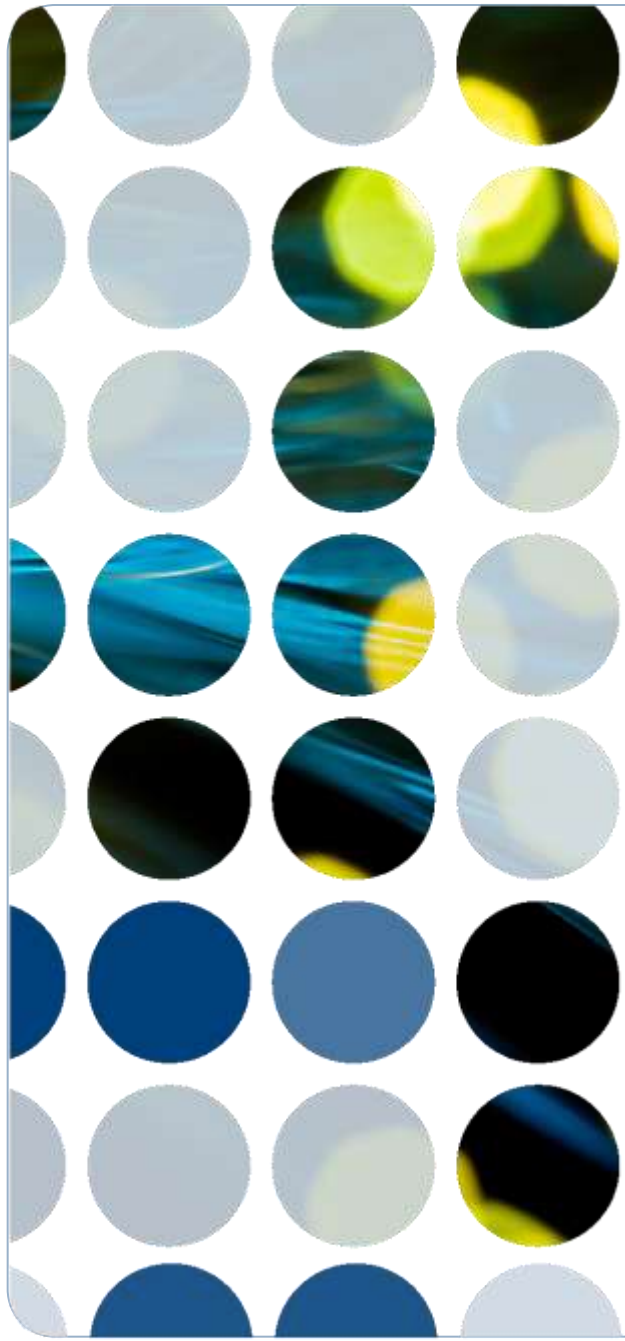
EfficiencySMART Insight **monitors demand** across the customer's portfolio of facilities 24x7, and **highlights runaway energy spikes**.

Moving Forward

Effective partnerships can build a significant DR resource on a timely basis.

Power Distributors and TVA are at the forefront of helping meet the unique needs of C&I customers.

Providing customers real-time access to energy data unlocks autonomous energy management.



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