Regional Seminar Series
Cleveland

Seeing Clearly in the New Reality

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Empowering Business in Real Time.

Value Now with OSIsoft

"There is nothing permanent except change"
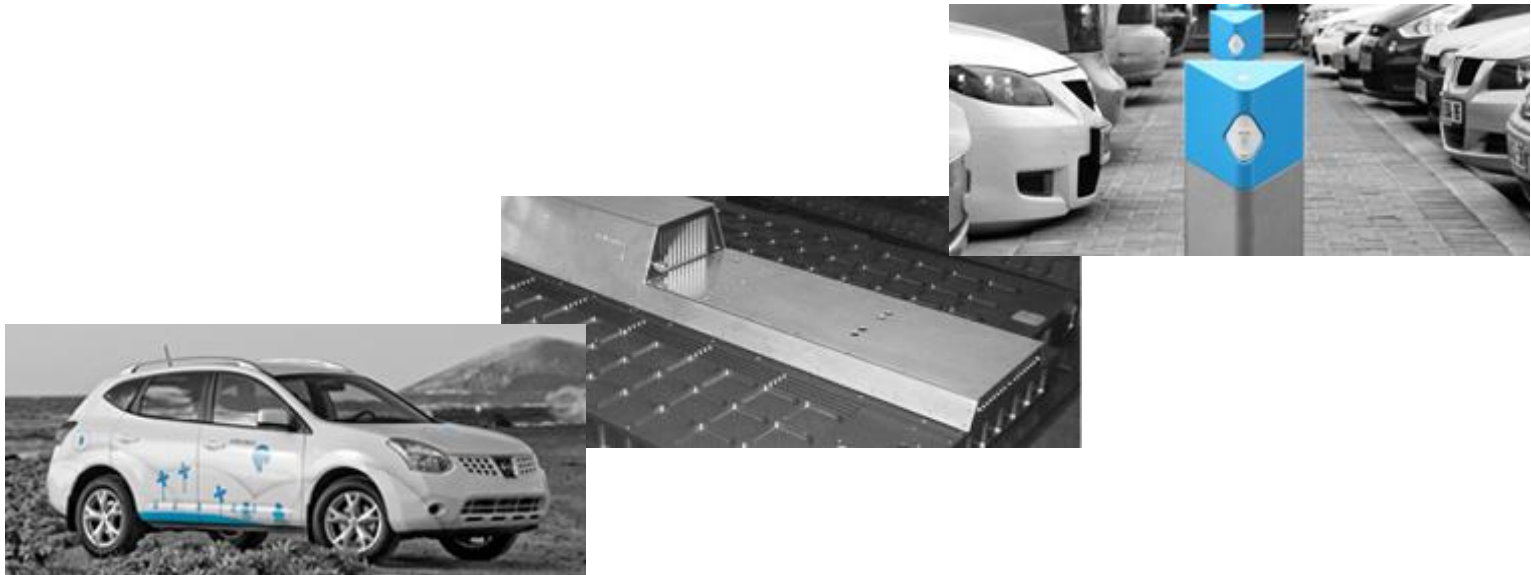**Heraclitus 6th Century BC.**

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Drivers

- We are BROKE, CA - $21B deficit (Model for the US and the Stimulus package)

- Healthcare 18% GMP Today, 40% by 2050

- Manufacturing Steep Decline

- Business w/Try, Fail, Succeed, not just small companies

- Increase Speed of Execution/Continuous Improvement

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New Business Models : Shai Agassi company "Better Place"

- Distributed manufacturing of vehicle

- New infrastructure for operation, infrastructure owns battery

- Environment driving force in new business model

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Something Old Something New: Minnesota Bridge

Bridge Performance - Sensors for bridge movements, expansion, contraction, corrosion, icing

Bridge Operation - sensors and cameras for traffic flow, speed, disruptions, accidents, stalls and other disruptions, security

Real Time Needed – Summary of Accidents not useful for Operation – like getting Summary of House Fires at end of Month

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Sensors Everywhere
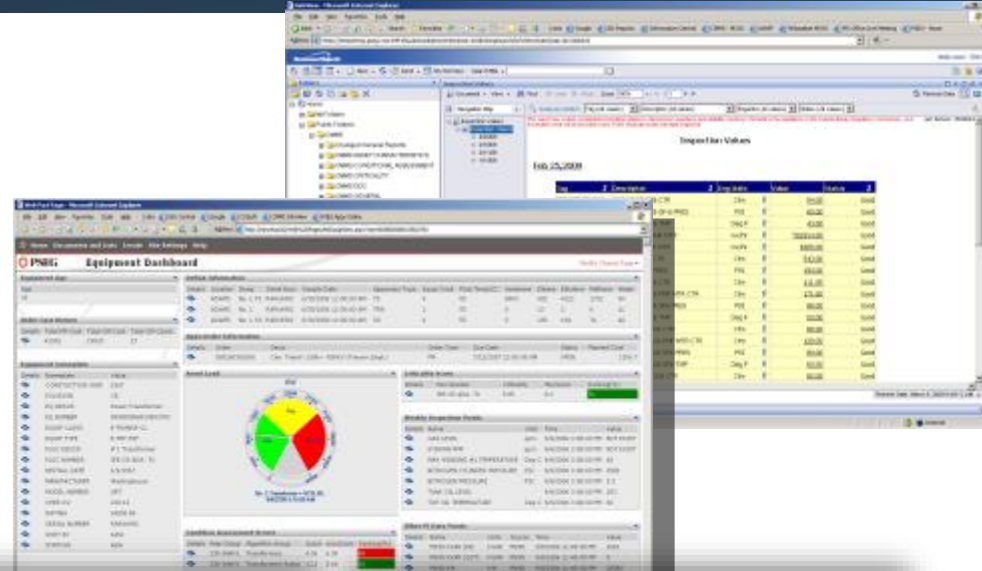
New Business – e.g. Data Center

- Consume more energy annually than Sweden

- New NC Facilities – Google for Search, Apple for iPhone Apps

- Expansion of Existing – Bing Search of Twitter, Messaging

- Cloud based Storage – Flikr, Data Storage

- Business – Amazon, E-Bay, Craig's List

- Web 2.0 Sites – Facebook

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PSE&G: Condition Based Maintenance

"We get a detailed breakdown on equipment costs and man/hours to service that gives us important business benefits. Without the use of the PI System, it would have taken us several months to gather and analyze the information."

Angela Rothweiler, Principal Engineer

PSEG
We make things work for you.

Customer Business Challenge	Solution	Customer Results / Benefits
• Providing the highest reliability Power Distribution is requirement • Minimize Maintenance Costs	• Implemented automatic data collection and notifications to SAP PM • Set up standard business rules for condition based maintenance using PI - Analytics • Provided focused view into equipment using Portal. • Provides Financial access to data by Business Objects query	• Holds Reliability award for Mid Atlantic States for last 7 years • Named most reliable Power Company in America • Focused maintenance expenditures on needed targets

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Surviving the new reality: Takes Brains not Brawn

- Innovation needs Information

- Virtual and Actual Collaboration

- Big Companies Hunker and Slash

- Small Companies Cannot

- Example – DaaS, Remote Support

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Role of the PI System:

- Data Capture and Storage

- Distribute to Virtual Collaborative environment

- Event, exception based alerts – work by exception

- Aggregation and Communication of Info to Business

- Goal Zero Maintenance, Rapid Deployment

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Manufacturing and the Smart Grid

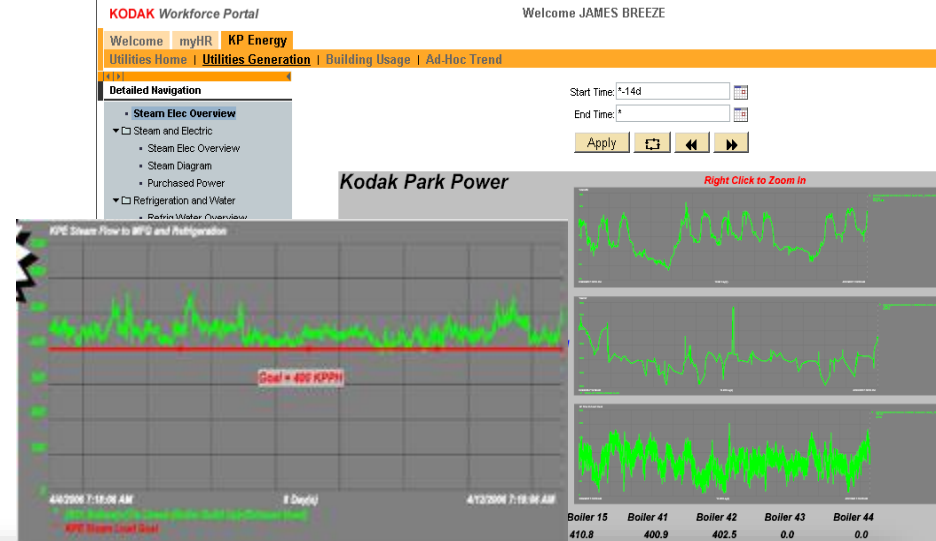## Evolving Shift from Industrial Age to Information Age

- Telcom industry change – cell phones, VOIP, SMS, Web 2.0, SaaS, DaaS

- Smart Grid is an Enabling Technology

- Rise of Microgrid – knowledge of applying power to manufacturing process - MaaS

- New Ideas

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Kodak: Collaboration enables optimized energy consumption

"There was no 'Big Bang.' Rather, there were 1,000 little bangs. Collectively these efforts have yielded savings into the millions of dollars and established a culture of continuous process improvement."

James Breeze| Energy Engineer / Project Leader Worldwide

Customer Business Challenge

- Conservation, optimization of resources, and cost control is imperative

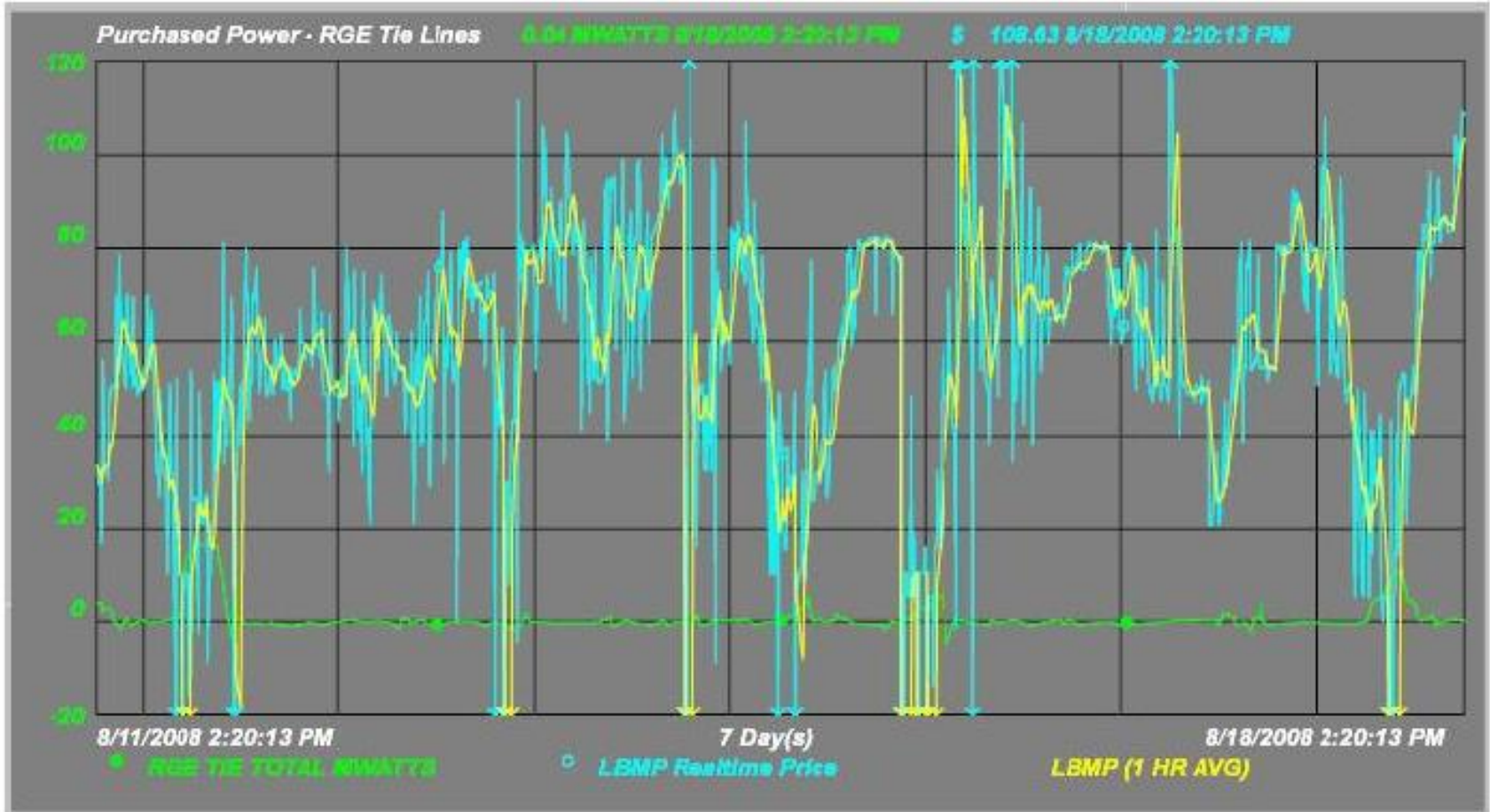- Merge real-time energy management data with business processes.

Solution

- Implemented a new Energy Information System without buying a new application
- Used OSIsoft Business Package for SAP Portal with the PI System
- View and manage their Enterprise energy demand across the enterprise with standard OSIsoft interfaces.

Customer Results / Benefits

- Increased ROI on improved demand side management and optimization of power generation assets, saving millions of Dollars, annually
- Opportunities in manufacturing to implement an energy conservation mode between product runs.
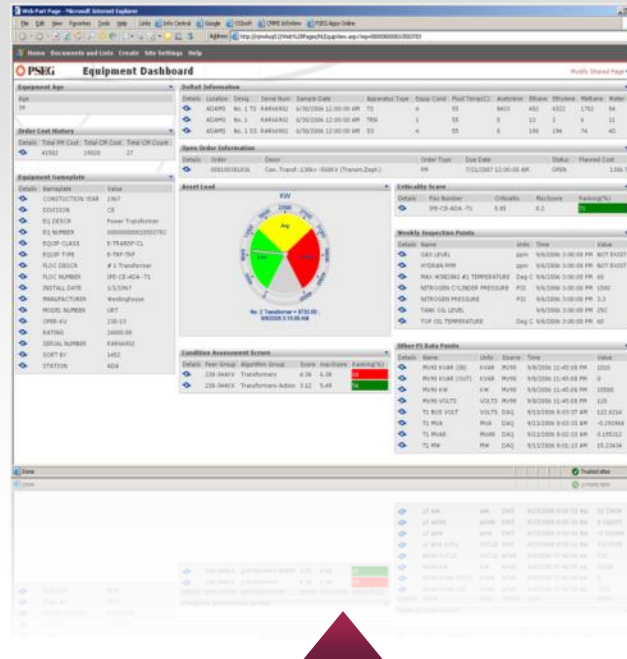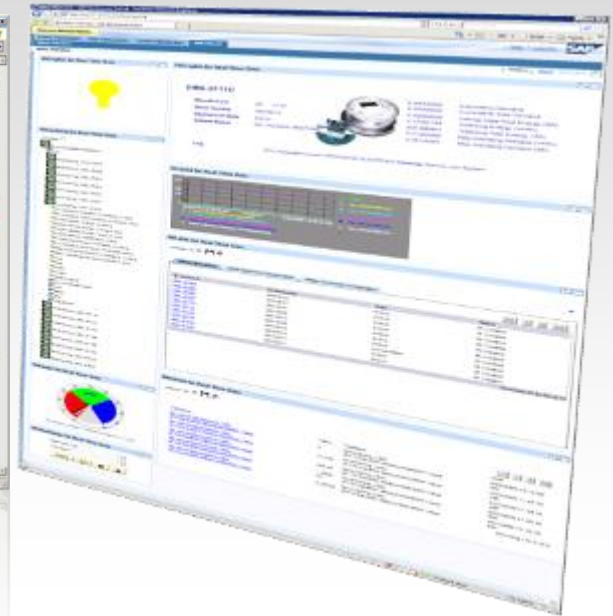
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Purchased Power RGE Tie Lines – Kodak Park

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Smart Grid

Power Generation Energy Management Support

Transmission & Distribution Dashboard

AMI

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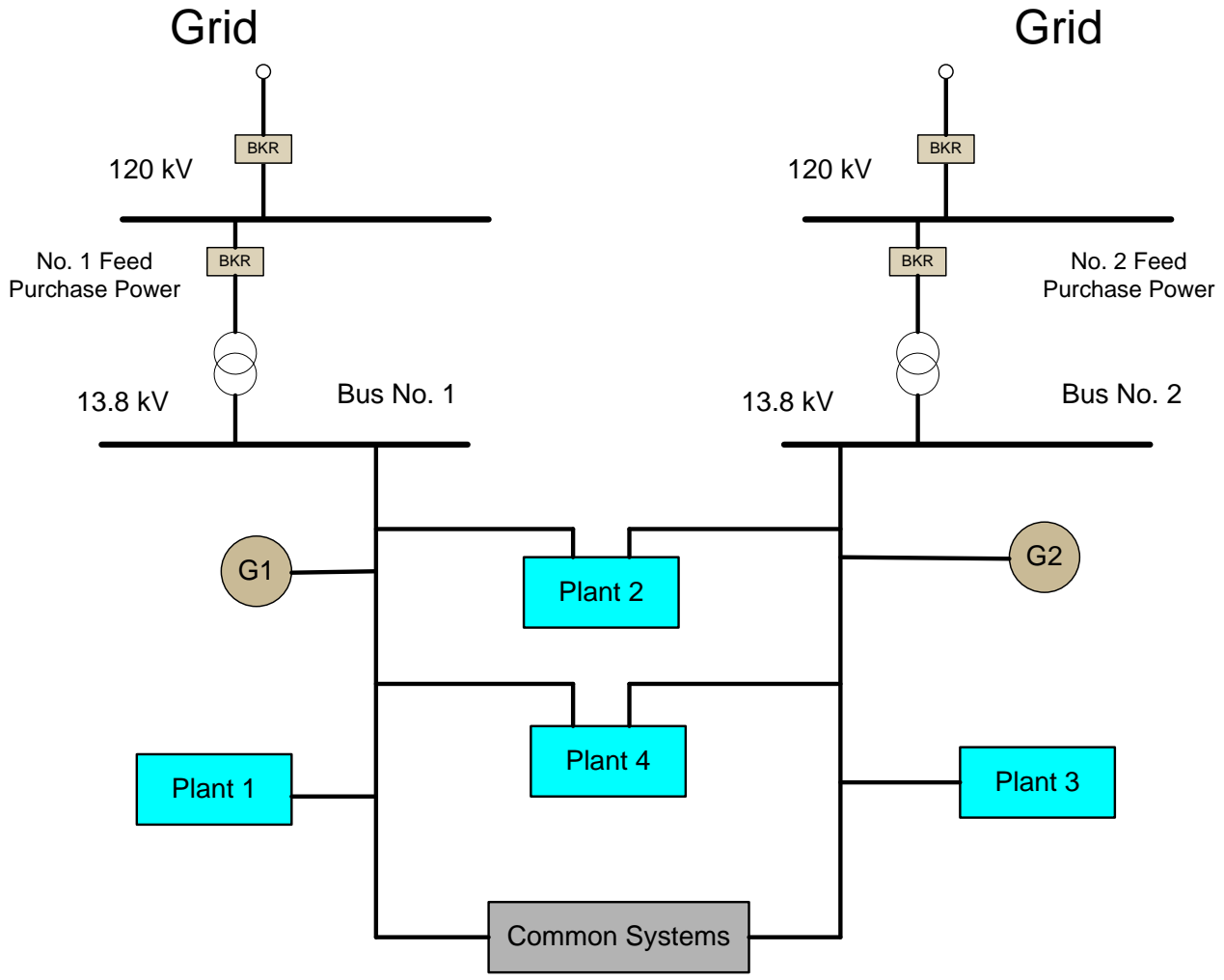
Smart Grid - Enabler

Largest Distributed Plant: Smart Grid

- Utility: Power Generation, Distribution and Transmission, Metering

- Technology: Smart Equipment, Storage of renewable energy, AMI (Demand response pricing), Energy improvements

- Issues: Security, Intermittant Resouces, 0 Entitlement Possible

- Techniques: Reliability, Energy Monitoring, Efficiency Studies

- Result - Microgrid

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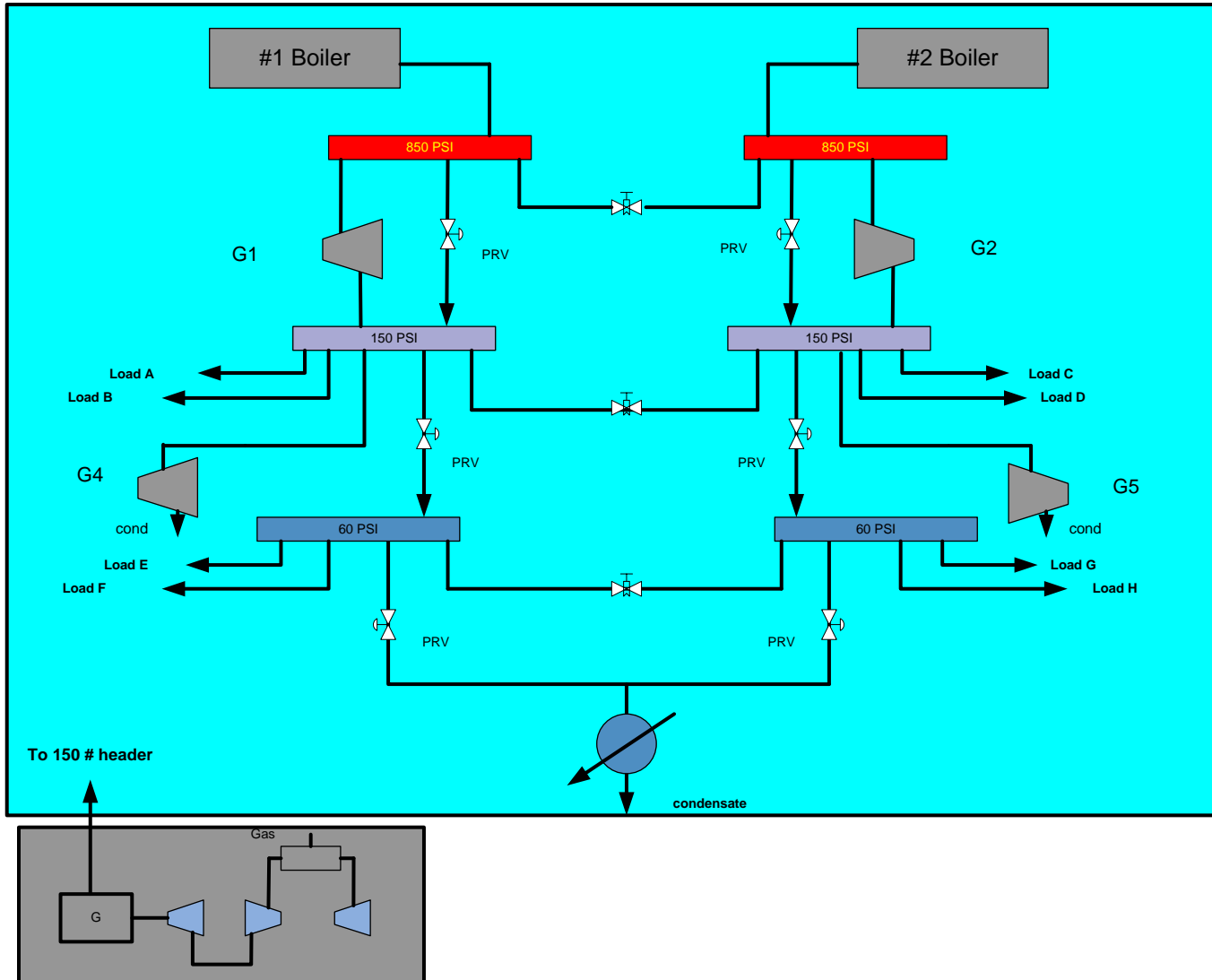
Microgrid – What Is it?

- Customer Driven
- Owner of the Heat Load
- Able to Island
- Manage Demand
- Provide Ancillary Services
- Manage Intermittent Power
- Access to Wholesale Prices
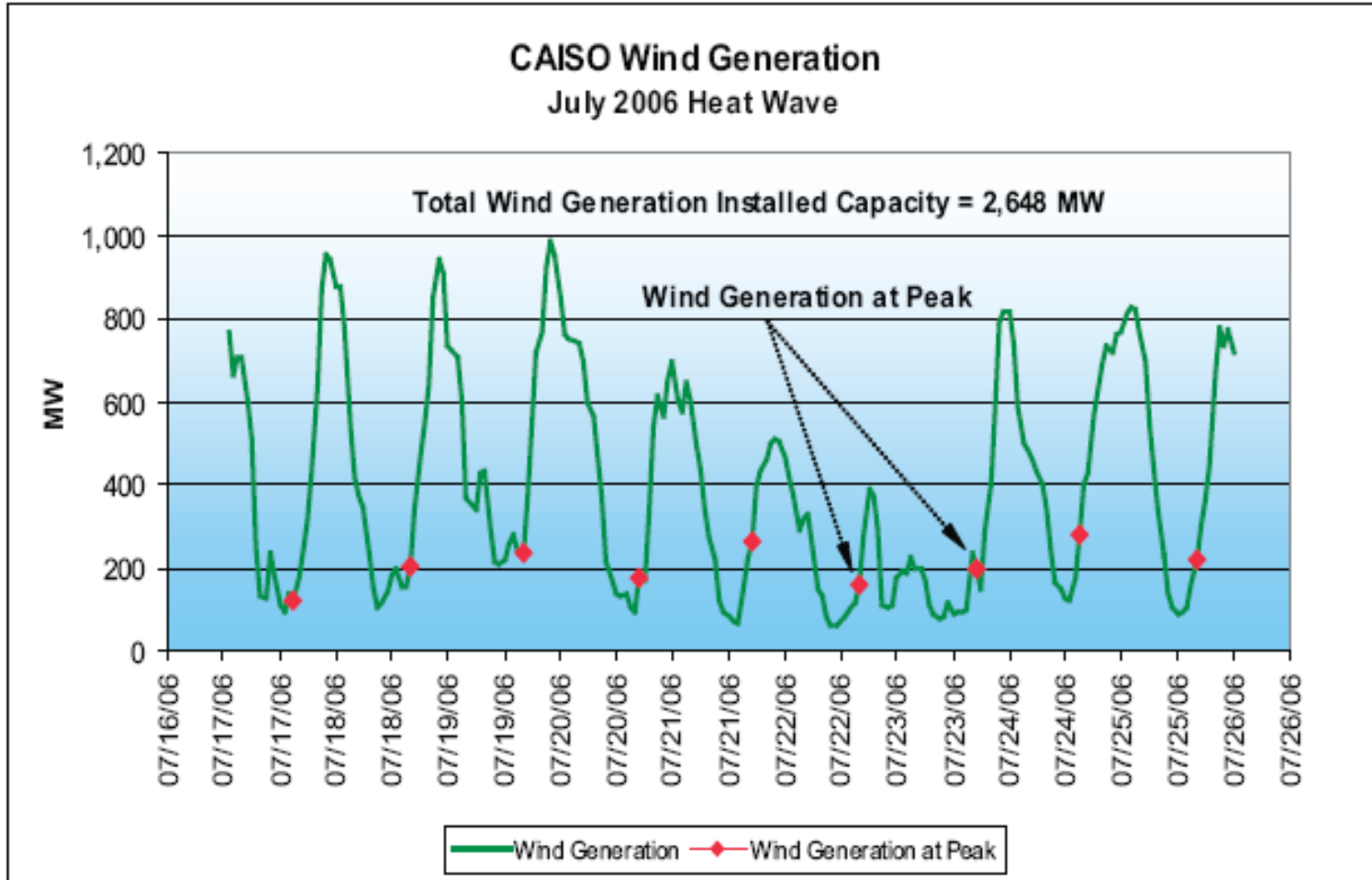- Potentially Highly Efficient/New Reliability Products
- Provide "Storage"

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Wind Generation during Heat Wave

CAISO Wind Generation
July 2006 Heat Wave

Total Wind Generation Installed Capacity = 2,648 MW

Wind Generation at Peak

Legend: Wind Generation — Wind Generation at Peak

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Value Now with OSIsoft

- Understand the Importance of the infrastructure

- Develop plan to build strategically but act tactically, measure results

- Understand the nature of pressure, take clear action to address, innovate and find new opportunities

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Value Now Across Industries

POWER & UTILITIES

- OSIsoft is ranked 1st in the power industry
- DTE Energy, PSE&G, Entergy, British Energy, Iberdrola

OIL & GAS

- 100% of the global Top 10 producers use the PI System
- BP, Shell, Chevron, ExxonMobil, Pemex, Total, Petrobras

CHEMICALS & PETROCHEMICALS

- 40 of top 50 Chemical Companies rely on the PI System
- Dow Corning, Eastman Kodak, Cytec, Rhodia

PHARMACEUTICALS, FOOD & LIFE SCIENCES

- Nine of the Top 10 pharmaceuticals use the PI System
- Amgen, Bayer, PDL, Allergen, Johnson & Johnson, Roche

MATERIALS, MINES, METALS & METALLURGY

- The PI System is installed in the world's largest mining companies.
- Cemex, Cargill, BHP Billiton Yabulu, Codelco

PULP & PAPER

- 400 sites from worldwide leaders use OSIsoft to manage their mills
- Abitibi, Cascades, Inc., International Paper, MeadWestvaco

CRITICAL FACILITIES, DATA CENTERS & IT

- Innovative use of PI System to monitor complex IT environments
- Microsoft, US Army, Cisco Systems

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Thank you