



## Regional Seminar Series Southern California



## Seeing Clearly in the New Reality

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January 21, 2010

Empowering Business in Real Time.

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## Value Now with OSIsoft



“There is nothing permanent except change”  
Heraclitus 6th Century BC.

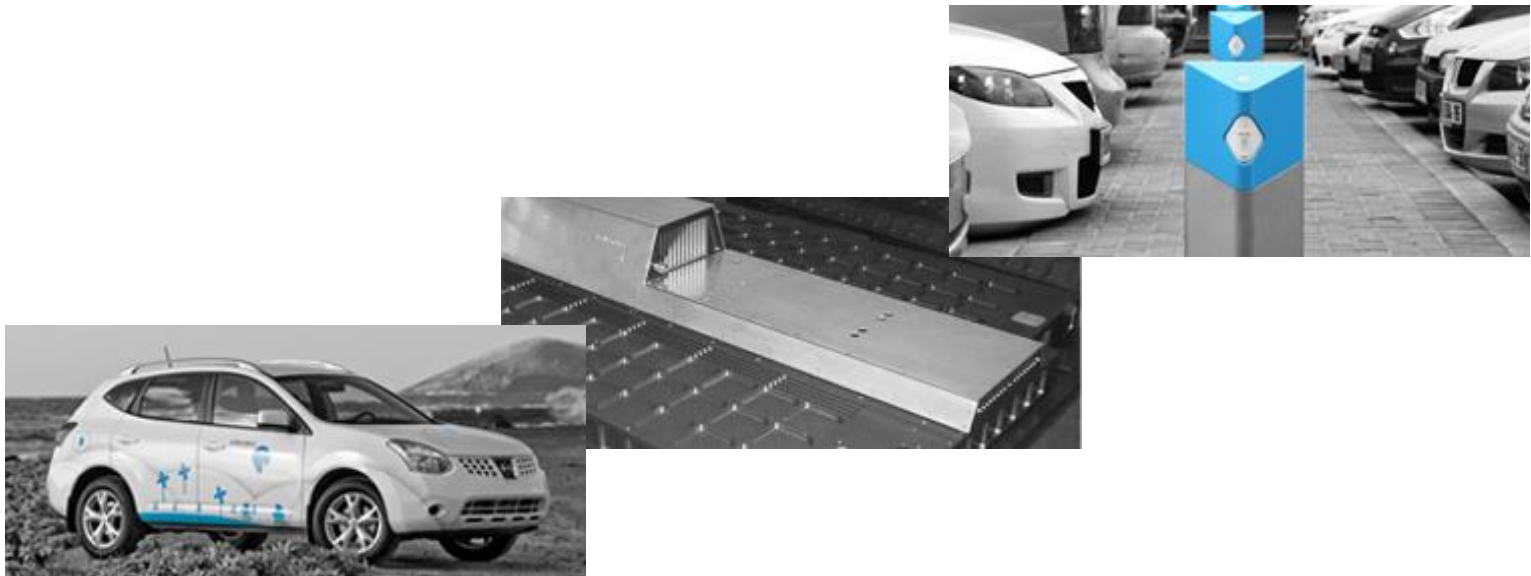
## Drivers



- 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

## 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



## 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



## New Business - e.g. Data Center

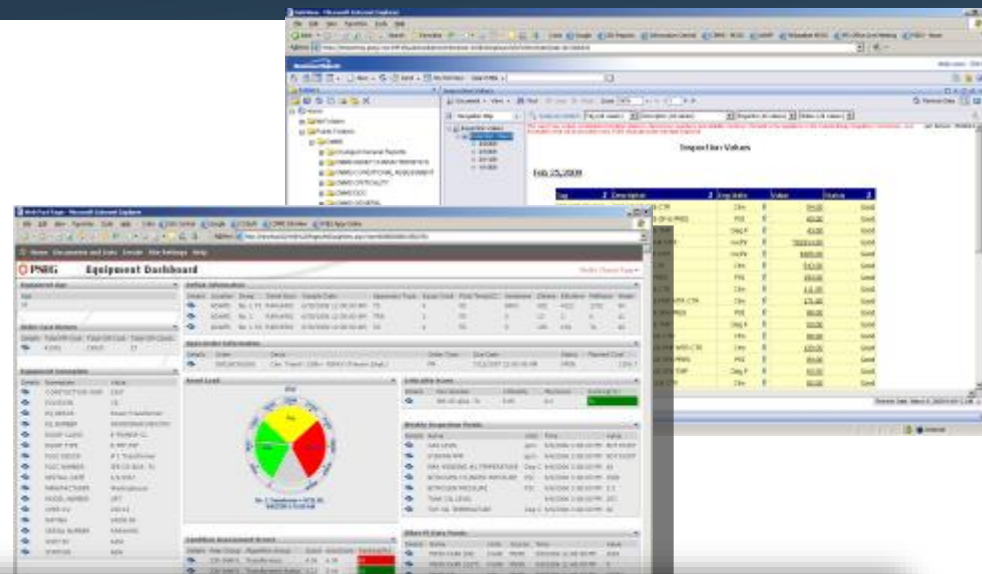
- Consume more energy annually than Sweden
- New NC Facilities - Google for Search, Apple for iPhone Apps
- Expansion of Existing - Bing Search of Twitter, Messaging
- Cloud based Storage - Flickr, Data Storage
- Business - Amazon, E-Bay, Craig's List
- Web 2.0 Sites - Facebook



## 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



### Customer Business Challenge

- Providing the highest reliability Power Distribution is requirement
- Minimize Maintenance Costs

### Solution

- 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

### Customer Results / Benefits

- Holds Reliability award for Mid Atlantic States for last 7 years
- Named most reliable Power Company in America
- Focused maintenance expenditures on needed targets

## 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



## 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

## Evolving Shift from Industrial Age to Information Age

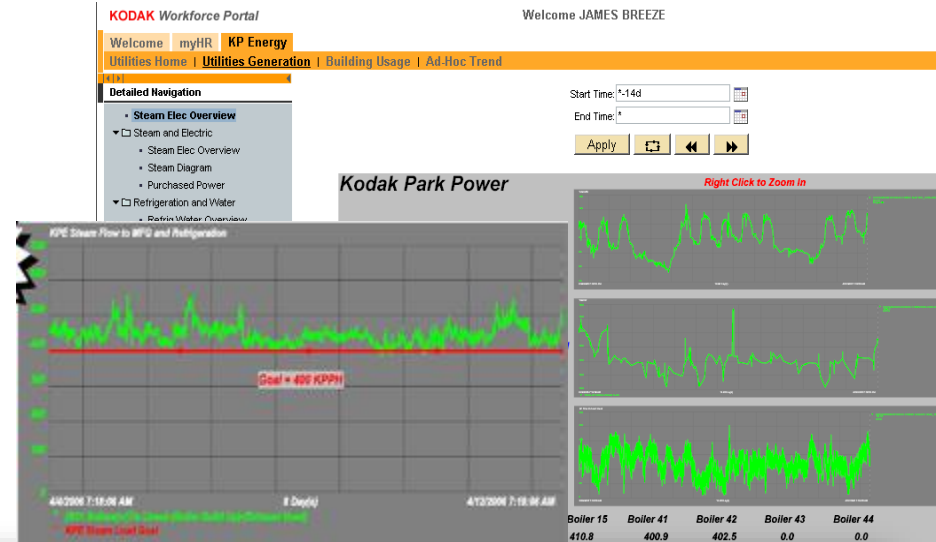
- Telcom industry change - cell phones, VOIP, SMS, Web 2.0, SaaS, DaaS
- Smart Grid is an Enabling Technology
- Rise of Microgrid - knowledge of applying power to manufacturing process - MaaS
- New Ideas



## 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.

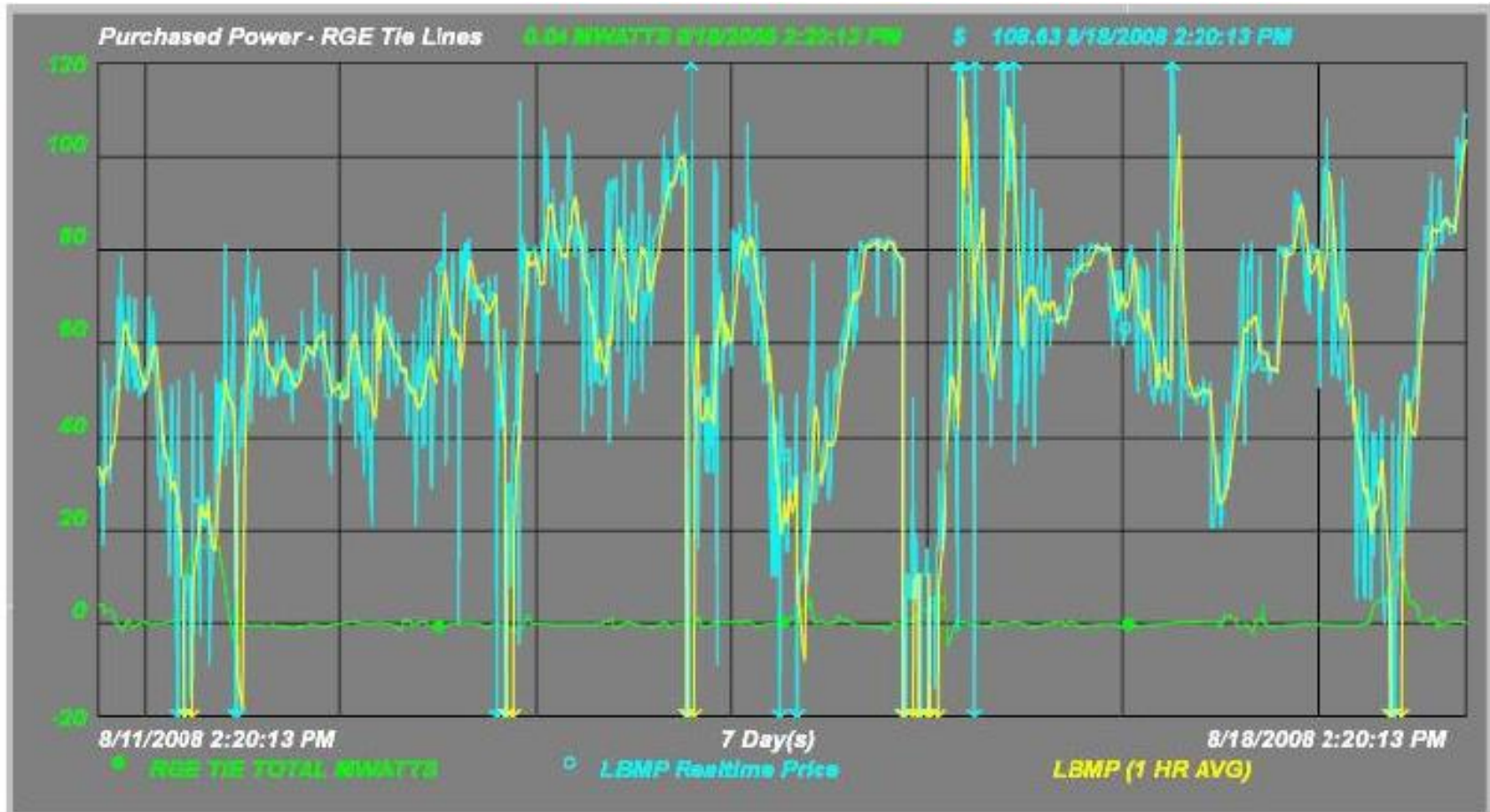
### Solution

- 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.

# Purchased Power RGE Tie Lines - Kodak Park

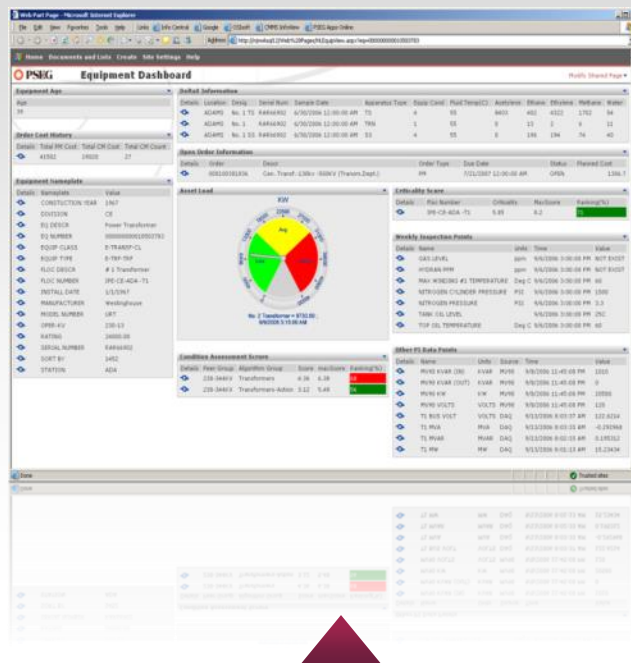




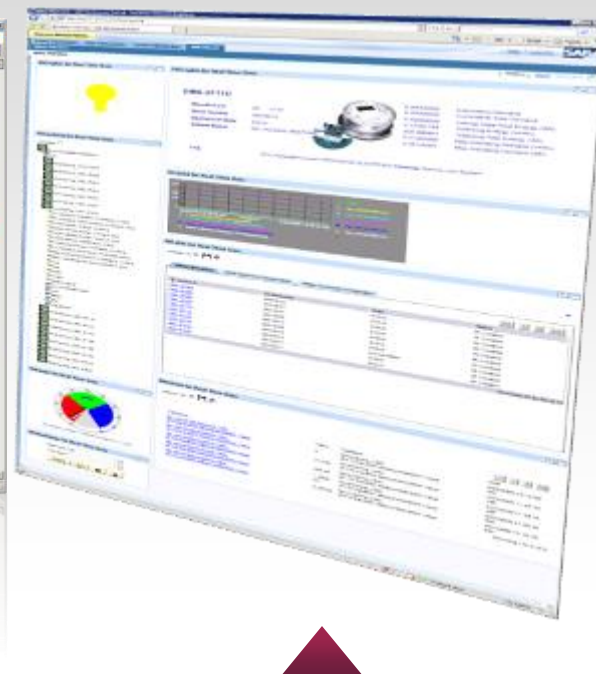
# Smart Grid



Power Generation Energy  
Management Support



Transmission & Distribution  
Dashboard



AMI

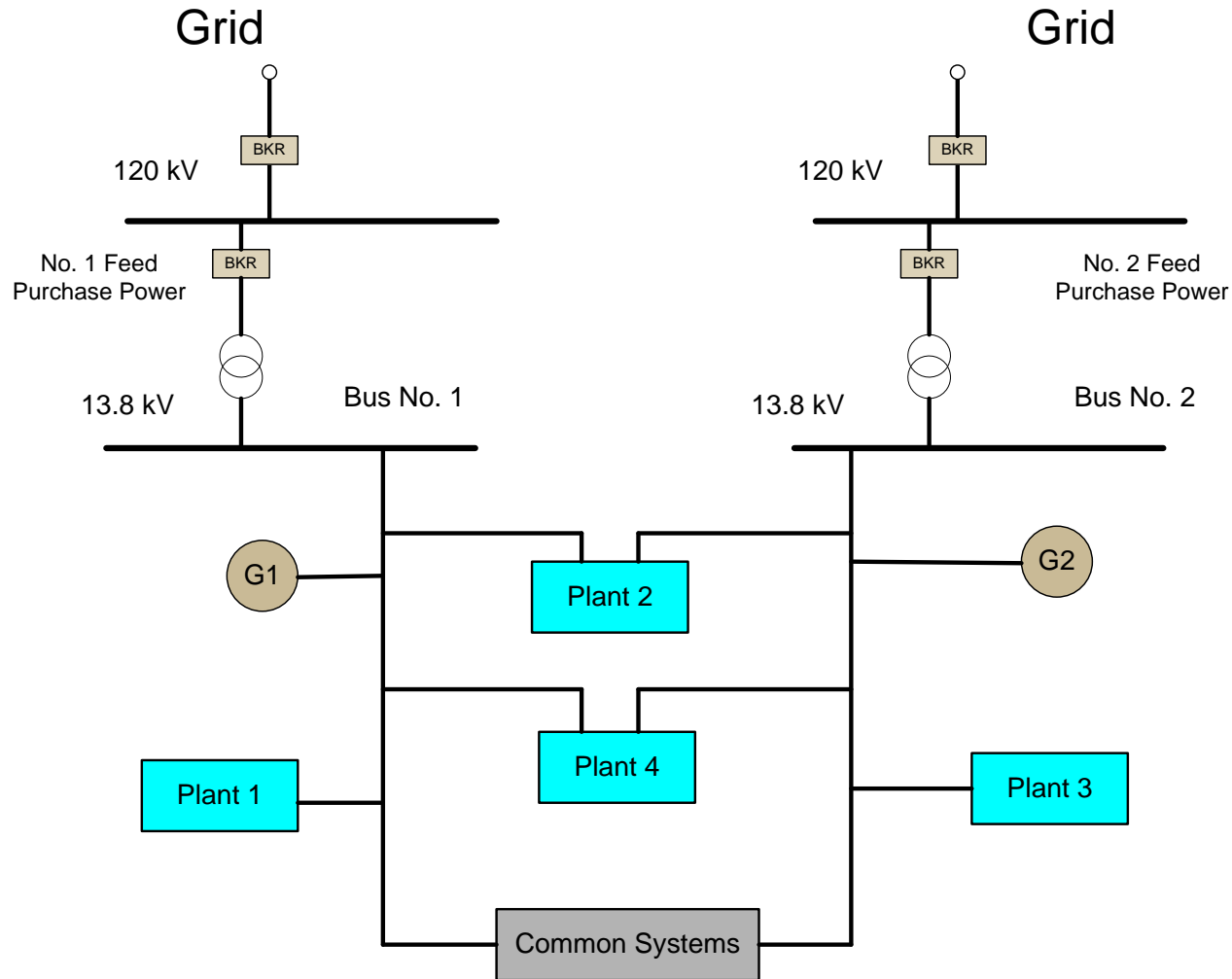
## Largest Distributed Plant: Smart Grid

- Utility: Power Generation, Distribution and Transmission, Metering
- Technology: Smart Equipment, Storage of renewable energy, AMI (Demand response pricing), Energy improvements
- Issues: Security, Intermittant Resources, 0 Entitlement Possible
- Techniques: Reliability, Energy Monitoring, Efficiency Studies
- Result - Microgrid



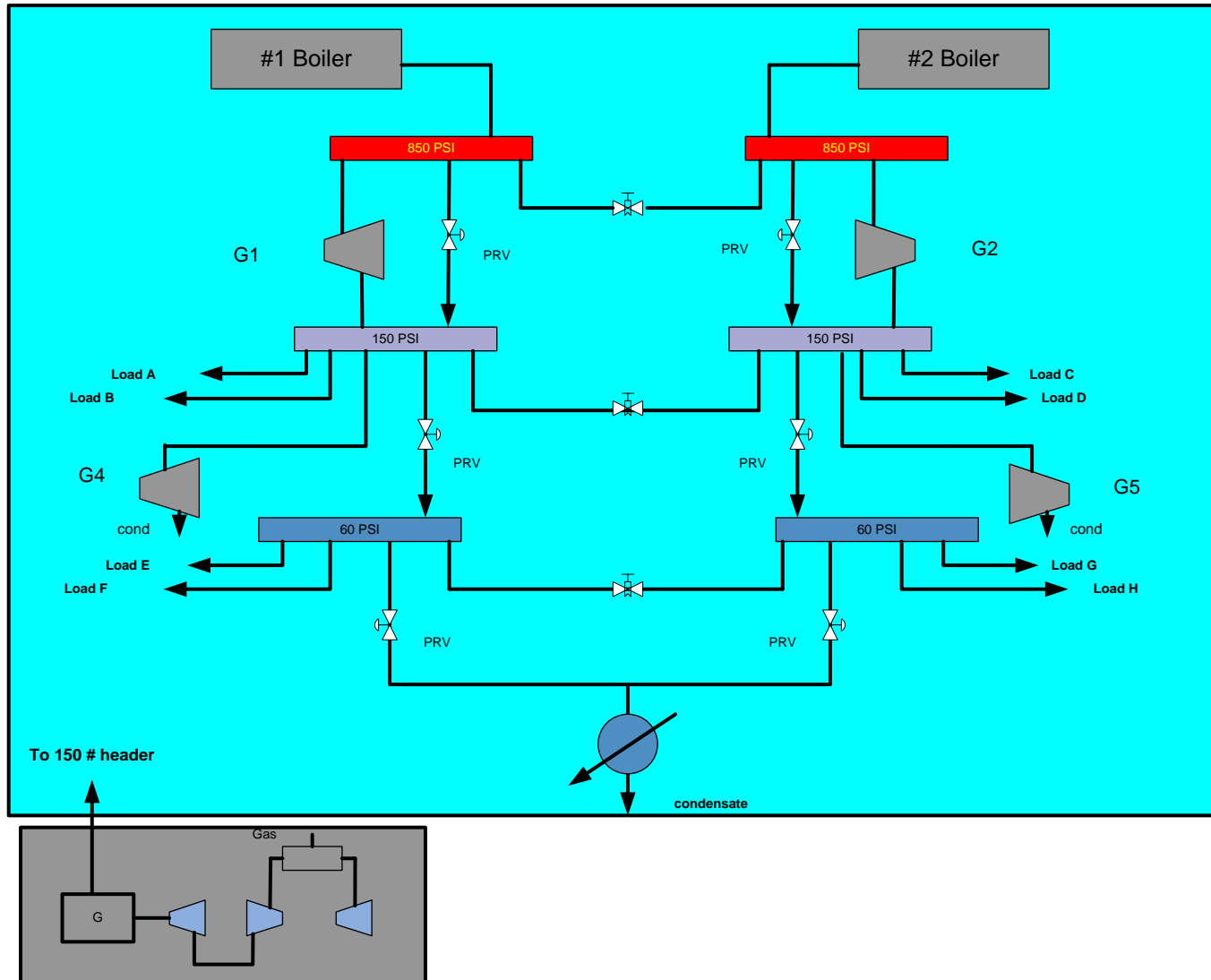
- Customer Driven
- Owner of the Heat Load
- Able to Island
- Manage Demand
- Provide Ancillary Services
- Manage Intermittent Power
- Access to Wholesale Prices
- Potentially Highly Efficient/New Reliability Products
- Provide “Storage”

# Typical Industrial Microgrid

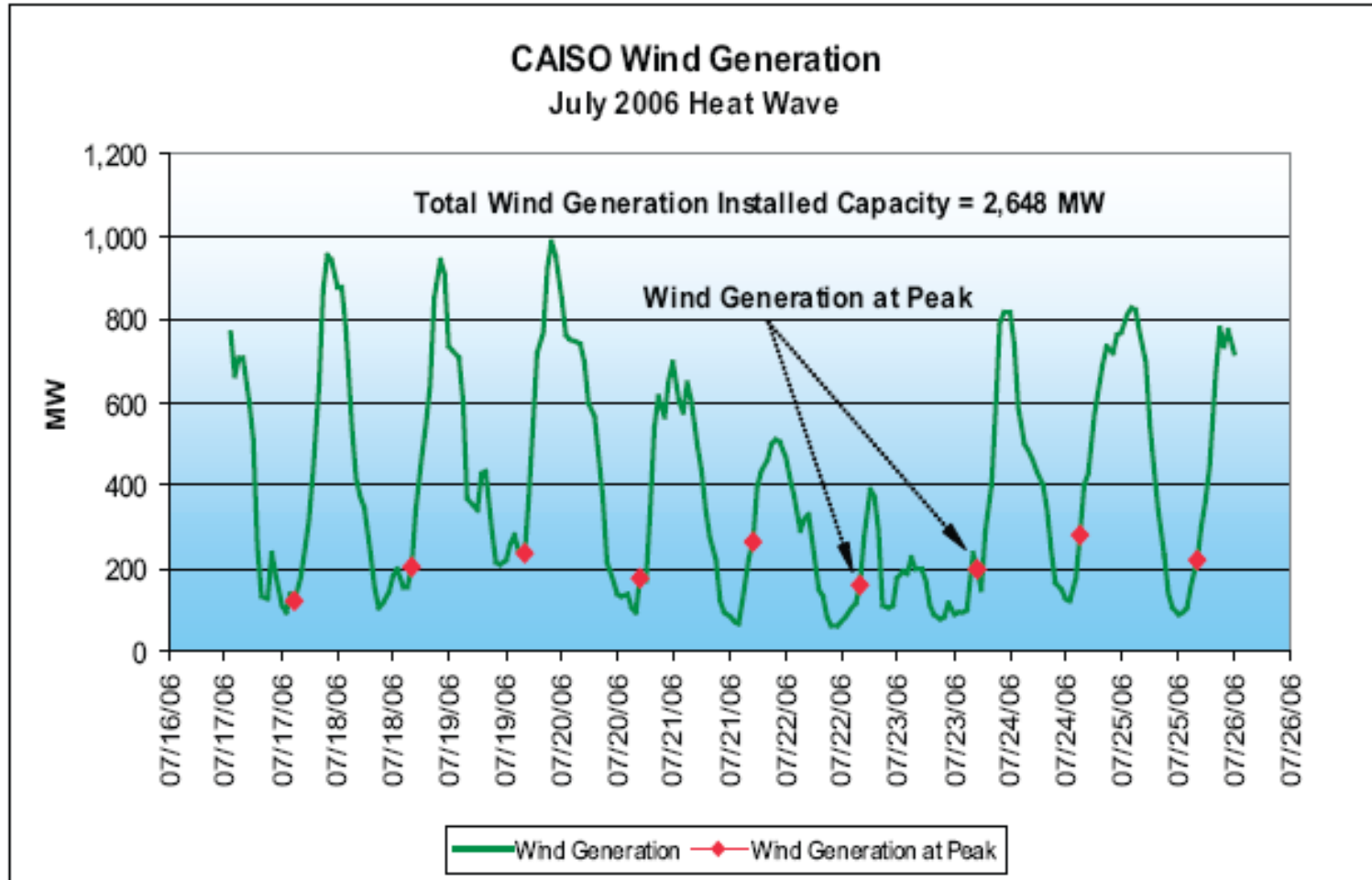




# Industrial Steam System



# Wind Generation during Heat Wave



## 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

# 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, Allergan, 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





# Thank you

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