

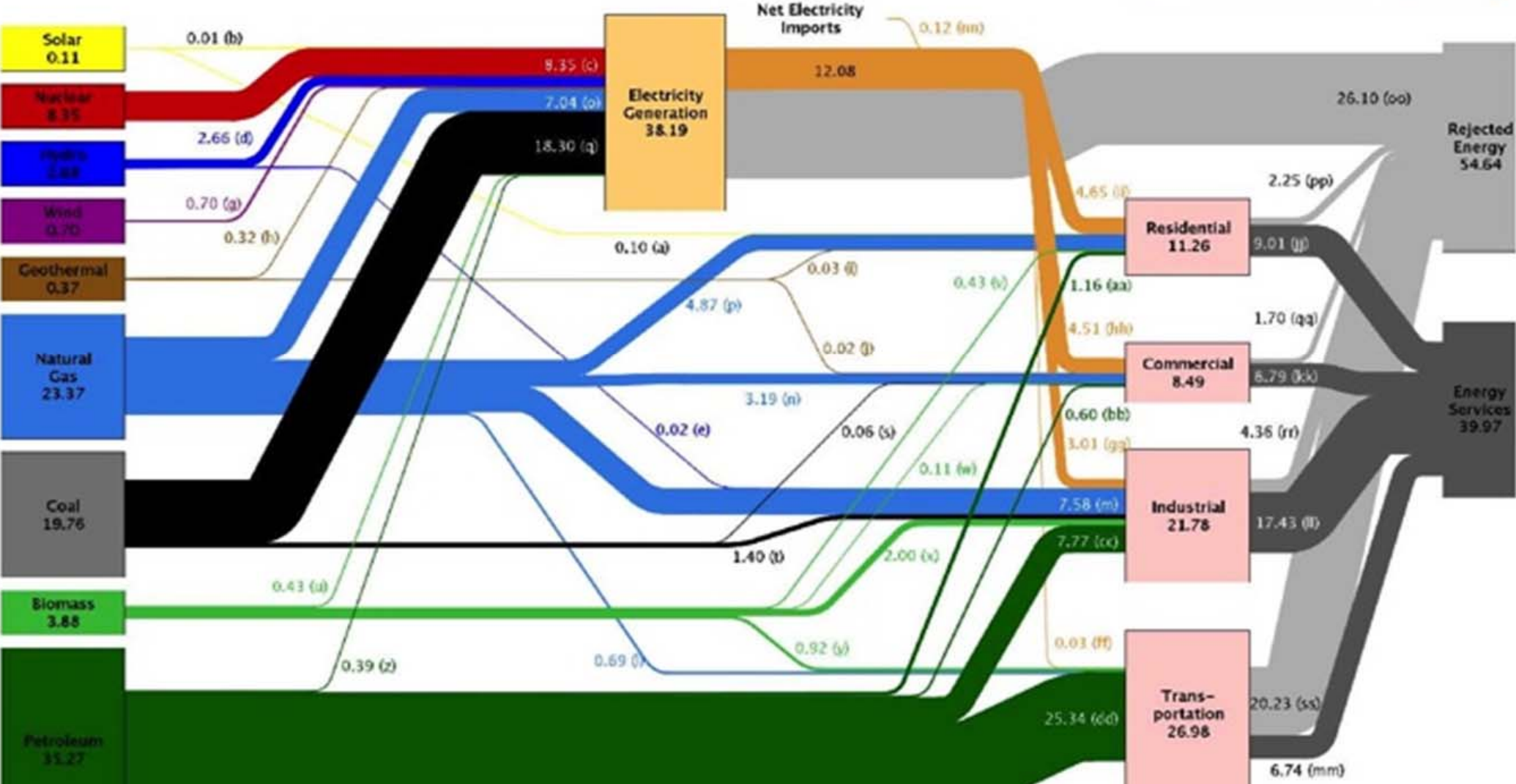


**GridWise
Global Forum
Washington, D.C.
September 21, 2010**

**Jon
Wellenghoff
Chairman
Federal Energy
Regulatory
Commission**

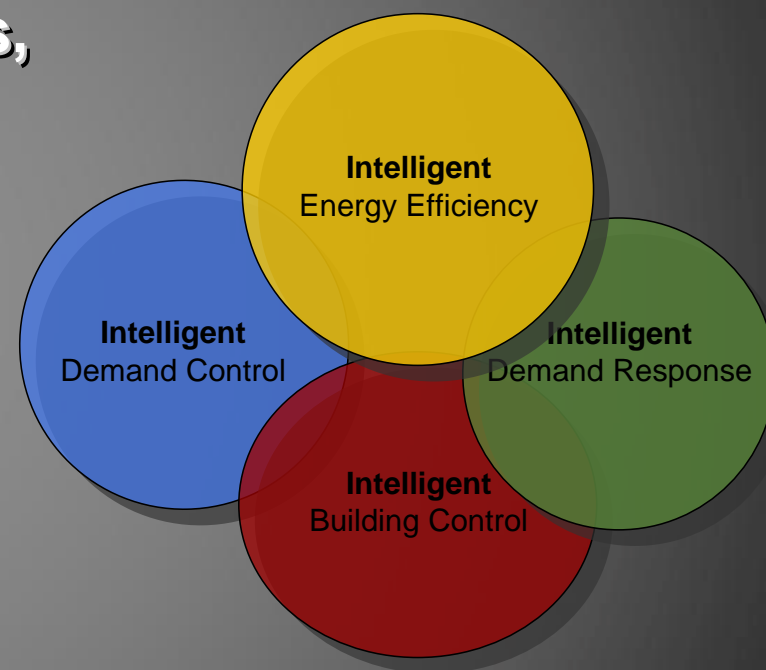
Current U.S. Energy Flows Is This Sustainable?

Estimated U.S. Energy Use in 2009: ~94.6 Quads



Smart Response Solutions

- Consumers have many cost effective opportunities to reduce total energy costs: Reduce peak demand charges, improve power factor, provide VAR support, consume less kWh, supply ancillary services, shift peak-time usage, harvest demand response programs, substitute traditional base load, etc...
- Smart Response, with end use loads at the user site enabled with two way communication, will allow these strategies to be implemented with little effort, risk, or discomfort. Wide scale adoption can be achieved.



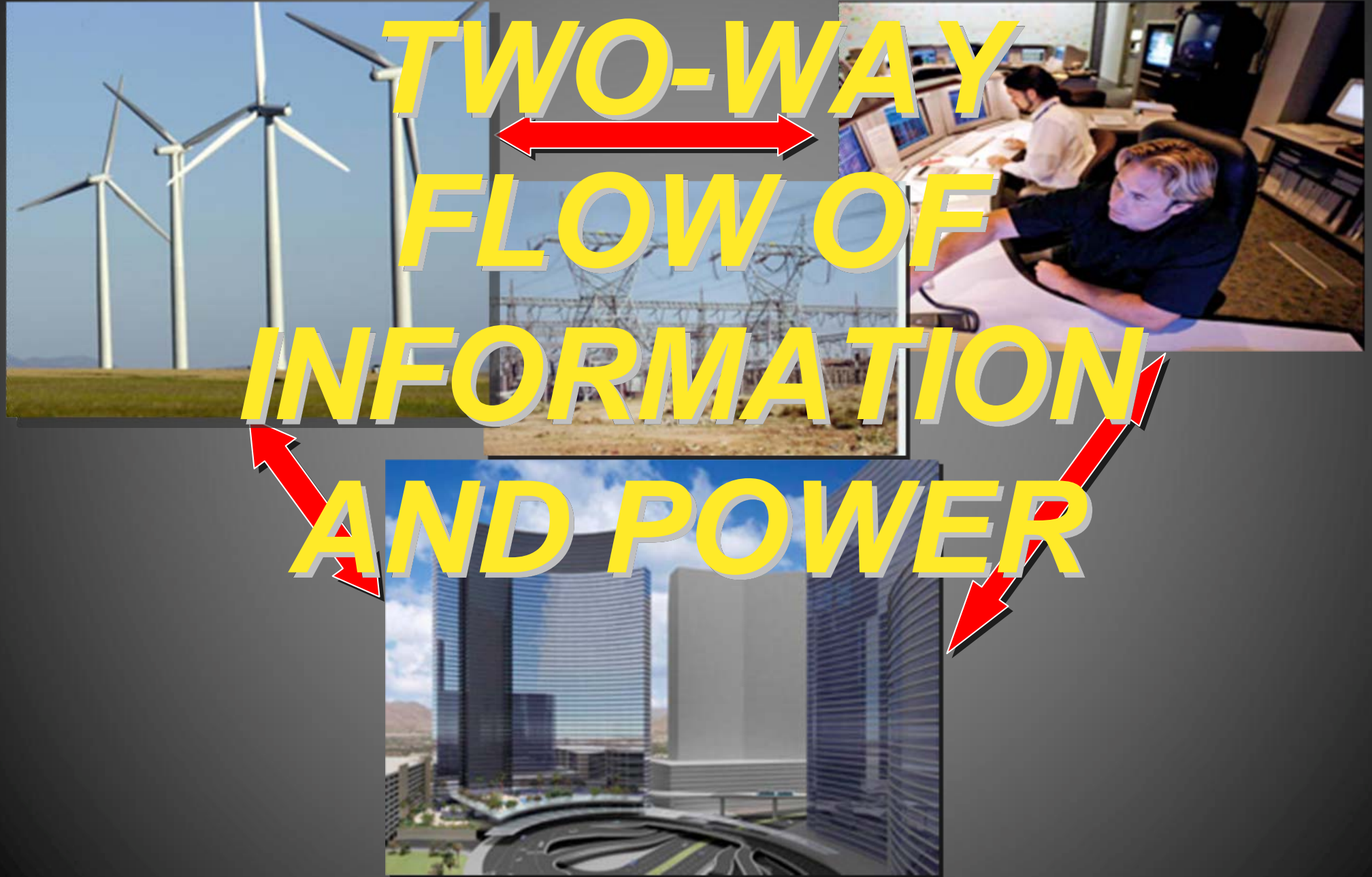
Smart Response Challenges

- **Full Economic Compensation to Customers for Adoption of Smart Response**
Implementation at the Customer's site is the Biggest Hurdle to Full Scale Participation
- **Smart Response Must Also Improve Risk Management and Be Integral Rather Than Disruptive to Customer Business/Lifestyle**
- **Provision of Implementation Tools and Demonstration of Benefits Will Bring Customers and Capital to the Table**



Smart Response Electric Grid

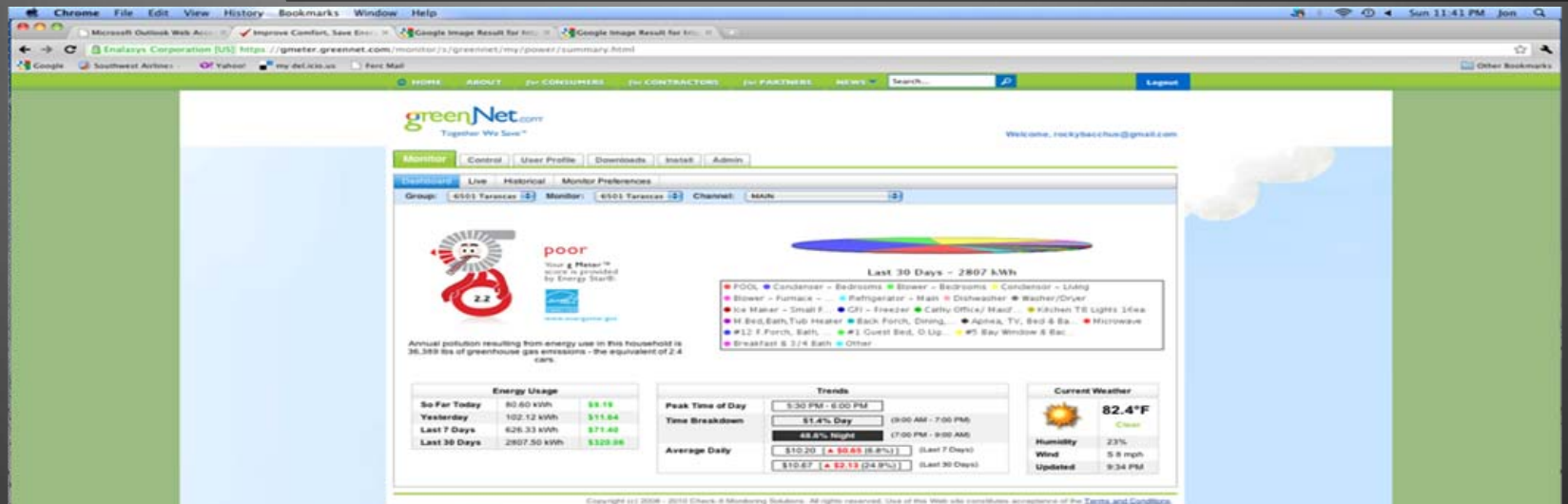
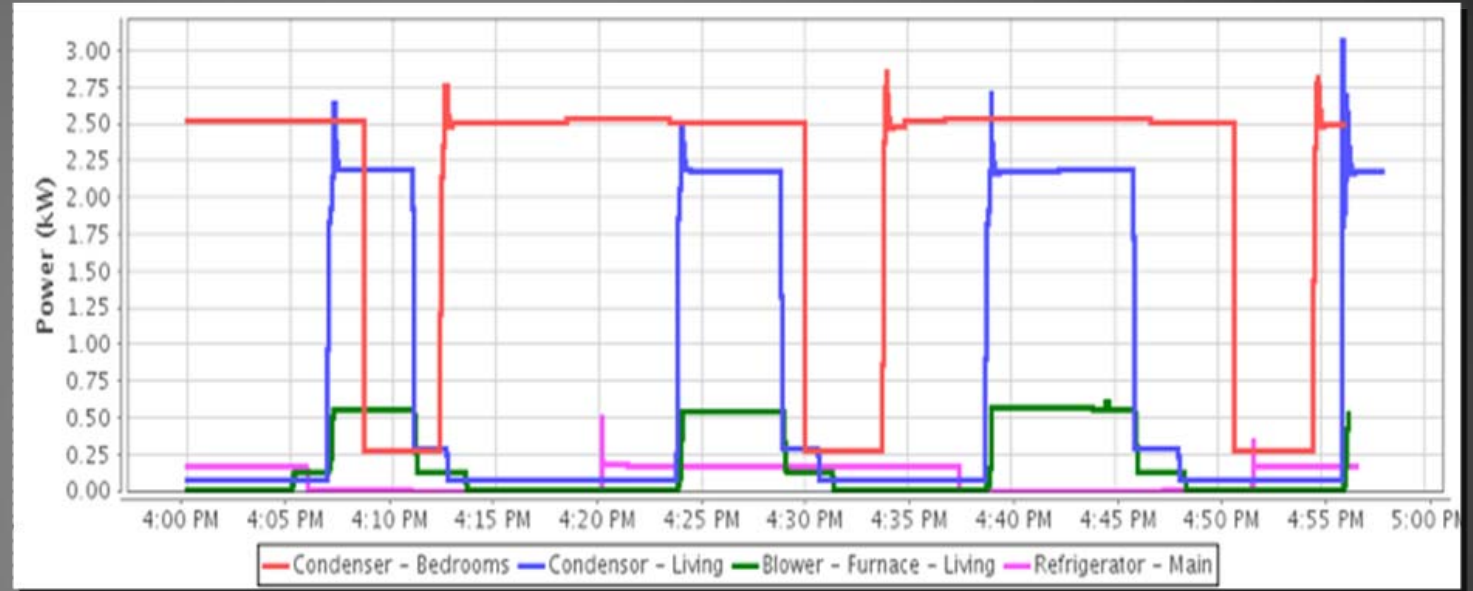
Dynamic Systems Control



The Smart Response for the Smart Store



Home Management Systems



Smart Consumer Appliances



Grid Benefits of Demand Response

Reduce Prices

- Lower Demand/Lower Price
- Flatten Load Profile Reducing Costly Generation
- Reduces Generator Market Power
- Distributed Renewables

Additional Benefits

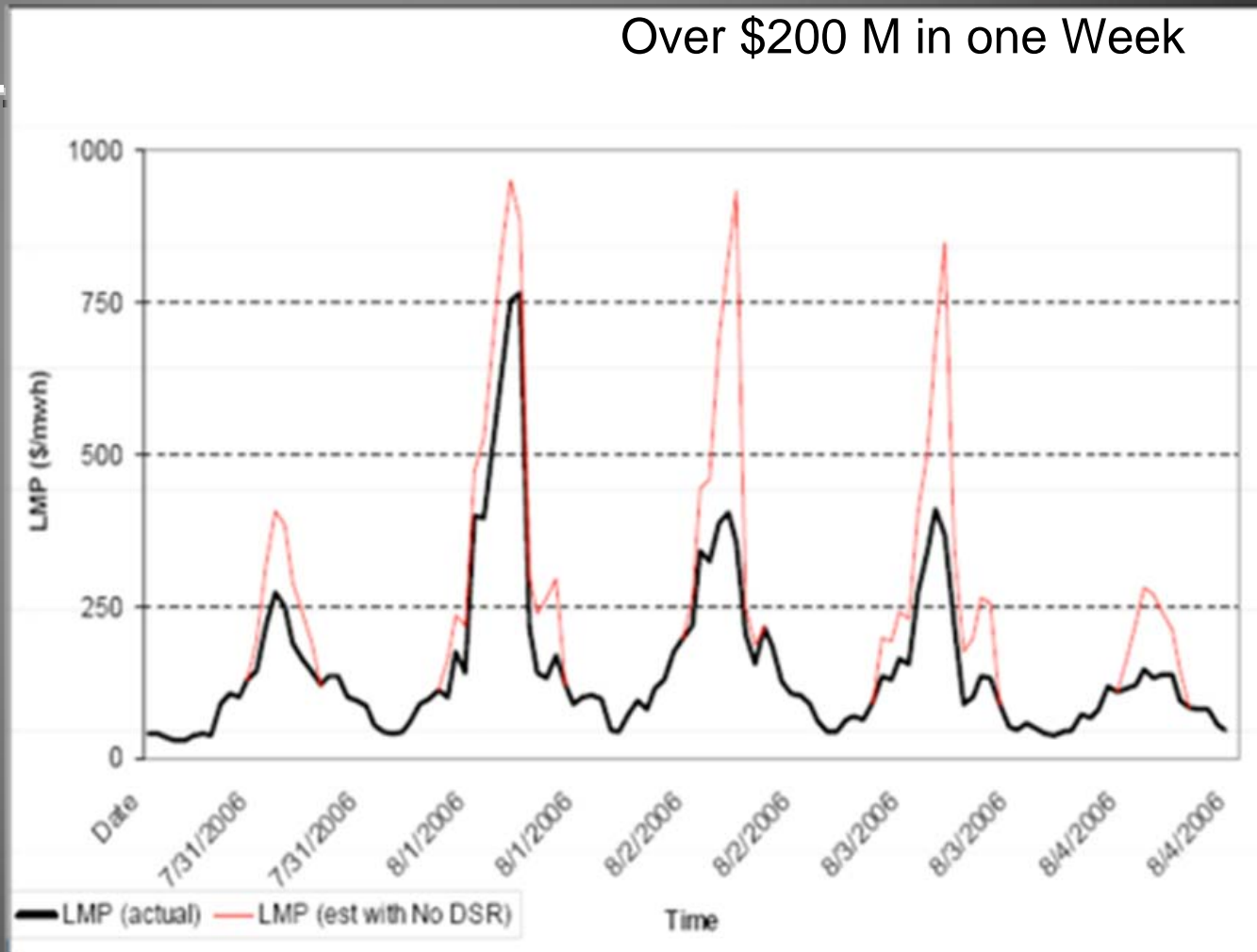
- Enhances Reliability
- Supports Renewable Power
- Promotes Distributed Generation and Advanced Meters
- Defers G/T/D Investments

Grid Benefits of Demand Response

- PJM Study Shows That a 3% Reduction in Demand of Top 20 Five-hour Blocks in 5 Mid-Atlantic States Could Save \$280 Million per Year

- The Brattle Group Estimates that a 5% Reduction in Grid Peak Load Can Result in \$3 Billion Savings Annually, for PV Over 20 Years of \$31 Billion

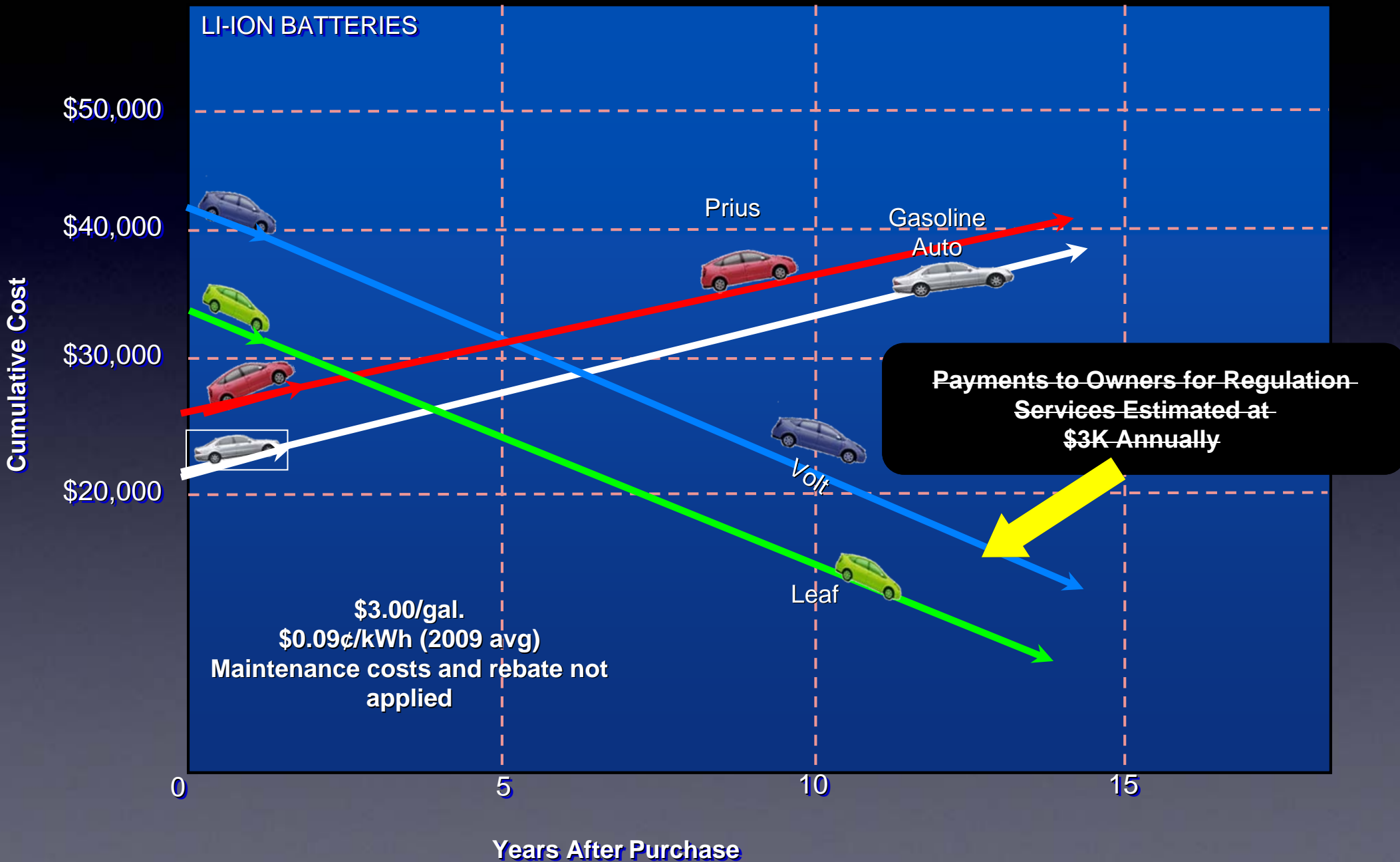
Over \$200 M in one Week



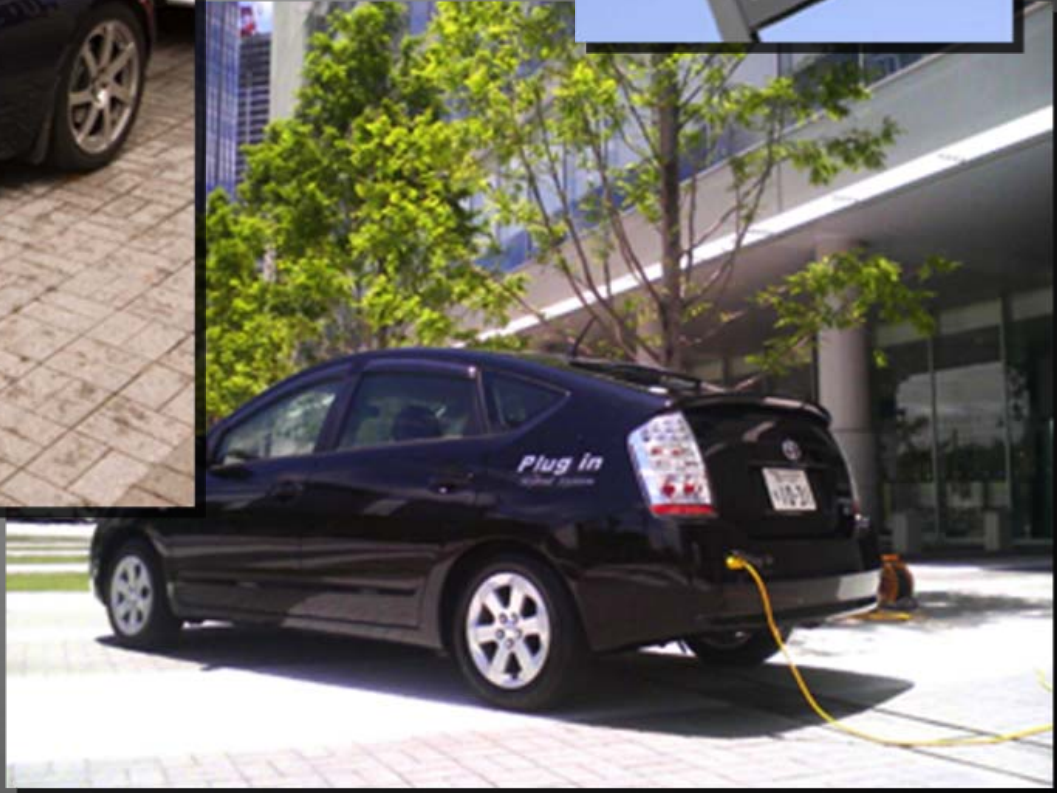
Economic Opportunities

- Demand Response
- Energy & Capacity
- Peak and Non-Peak
- Ancillary Services
- Regulation
- Spinning Reserve
- Var Support/Reactive Power

Regulation Services and the Cashback Car



Electric Transportation





The New Chinese Filling Station

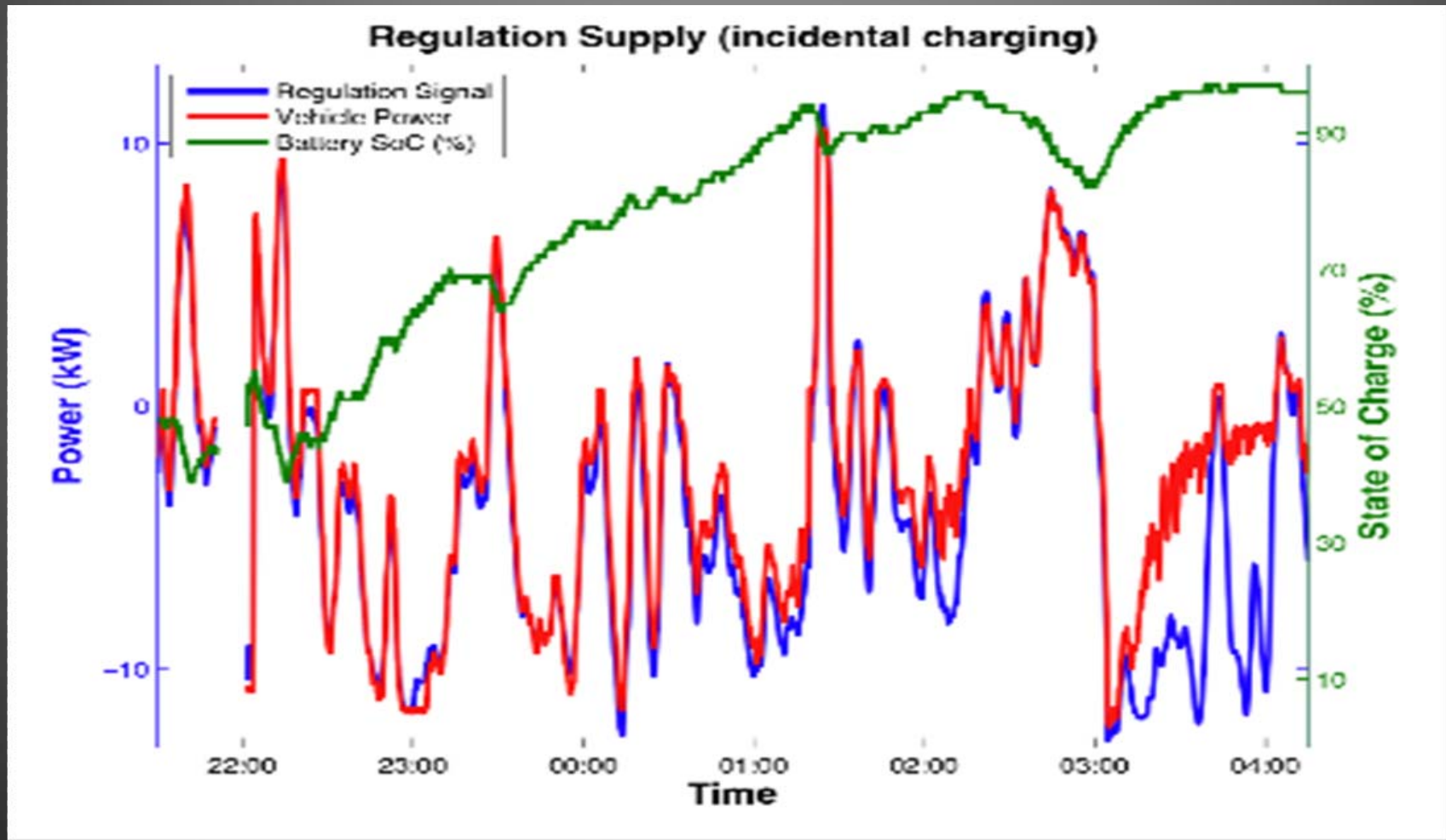
The BYD E6



Demonstration of Regulation Services



Regulation Services While Charging





**Thank
You!**