

**Energy Regulators Forum
Bangkok, Thailand
Smart Grid & Demand Response**

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March 23, 2011**



Smart Grid & Demand Response

- Why the White House is excited by Smart Grid:
 - Climate Change: helps to integrate renewable (but variable) generation.
 - Efficiency and Cost Reduction: allows utilities to use load management to delay or defer expensive investment
 - Reliability: if the entire electric grid is automated with new technology, then:
 - Reduced chance of outages
 - Faster recovery when there are outages

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- Conversation in the US substantially about residential consumers:
 - Smart meters
 - Pricing regimes that send signals to customers to reduce demand
 - Demand response programs to reduce peak demand or manage timing of new investment
 - Consumer goods that can respond to price signals
 - Tools to help consumers manage energy use

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- In the US, active coordination between federal government (White House) and states
- Differing jurisdictional responsibilities:
 - Federal government: overall policy; setting standards such as inter-operability
 - State regulators: ground level implementation through evaluation of utility smart grid investments.
- Some tension: how do we get it done but get it right?

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- View from the states:
 - Agree with White House about Smart Grid promise
 - But, state regulators have legal obligation to protect consumers
 - Many detailed issues for state regulators: privacy concerns, consumer education, benefits must outweigh costs, need for cyber-security
 - Technical difficulties of merging old and new technology
 - *State regulators will treat smart grid investments just like any other utility investment: critically.*

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- Smart grid is a significantly bigger issue than smart meters and demand response
- Smart grid is a multi-faceted technological conversion and substitution of old technology with new technology
- This conversion will be evolutionary, not revolutionary
- It will take time

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- Conclusions:
 - It may not be optimum to focus on small energy users right now
 - Focus instead on
 - automating the electric grid infrastructure
 - creating demand response programs for large energy users
 - Integrating renewable resources
 - Small energy users will eventually get involved

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Questions?