

Dynamic or Time Sensitive Pricing

- The Holy Grail for economists
- Communicate with customers about real system costs
 - Real time, near real time, approximation
- Enable customers to save money
- A range of options
 - Seasonal rates
 - Time of Use rates
 - Critical Peak Pricing (for example...)
 - 1% of hours
 - 5-8 X average price
 - Called the day before
 - Limited number of calls per year
 - Real Time Pricing
 - Chicago pilot – 1500 customers, data recording meters
 - Customers get alerts on high price days
 - Customers more efficient all the time
 - 10+% demand reduction for participants
 - 20+% if AC cycling is added
 - Many lessons learned

Pricing connection to HDD

- Some correlation between high wholesale prices and high emissions
 - Correlation affected by amount of surplus capacity
 - New pricing regime will affect future surplus
- Politics and courage and leadership are pivotal
 - High cost days are scary
 - There are winners and losers
- NY ahead on RTP
- DC doing an advanced metering program, enabling innovative pricing

Accelerate Clean Distributed Generation

- **Attributes**
 - Avoid line losses and the need to make that electricity
 - Improved fuel conversion efficiency (CHP at 80+% vs. central station)
 - Competitiveness of customers, on-site reliability
 - Multiplier effect in local economy
 - Improve energy security, esp non-fossil)
 - Improve reliability, congestion if targeted in load pockets
 - Cleaner if controls are in place
- **Barriers**
 - Standard practice of architects, builders (programs can stimulate new practices)
 - Higher natural gas prices
 - High cost of some technologies
 - Perceived complication from customer perspective
 - Flat rates, absence of advanced meters
 - Need for a new benefit/cost system to factor in all benefits
 - Benefits diffused over many parties
 - Hard to model based on current practices
 - Regulatory barriers: interconnection, stand-by rates
- **Scale: wide estimates of potential**
- **Incentives can target deployment in high value places**

Accelerate Demand Response

- Current progress (very rough numbers)
 - Classic PJM: 2000 MW out of 65,000
 - NY: 700 out of 31,000
 - NE: 750 out of 28,000
- Consider adding 3% across the region
 - PJM is studying the effect on market clearing prices in key congested areas
- Very controllable, connected to electric system peak
- Trigger can be adapted to include air quality
- Two types of programs
 - Reliability/mandatory response – a capacity payment buys availability
 - Price/optional response

Accelerate Energy Efficiency

- Reason for consumer funded EE:
 - Barriers to individual investments
 - Inadequate codes and standards
 - Flat rates
 - Value to all consumers plus societal value
- Data for 2004
 - \$492 million for energy efficiency in OTC region (exclude NoVA) (\$1448 M national)
 - \$57 billion cost of electricity in OTC region (exclude NoVa)
 - 0.9% of net revenues (US average: 0.5%)
- States in OTC could double, triple or more total EE spending and production of savings
 - Reduce load growth by half or more
 - Great potential increase in southern OTC
 - Some states do not do any EE
- Resource could be targeted at peak, and geographically or reliability and air quality

Planning is too simplistic

- Improved planning can factor in all these solutions more effectively than current practice
- Leadership needed to create a vision and tie the elements together