FERC Demand Response Technical Session

Use of Distributed Resources

Tim Roughan
Director of Distributed Resources
National Grid
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National Grid

- The Company serves approximately 4 million electric and gas customers in Massachusetts, New York, Rhode Island, New Hampshire, and Vermont
  - Extensive transmission and distribution holdings in the north-eastern US
  - US operation combined the former New England Electric System, Niagara Mohawk Power Corporation, and Eastern Utilities Associates

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Summary of Comments

- Continue award winning DSM programs for long term benefits
- Continue and expand use of RTP programs to send proper price signal to customers
- Continue and expand use of ISO demand response products
- Continue and expand use of TDR projects
  - Look for more active control of customer-side assets to provide load relief on system
- Determine best ways to utilize customer-side resources in infrastructure planning

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National Grid's historic use of distributed (customer-side) resources

- Developed and continue to operate large scale demand-side-management (DSM) programs
  - In NE, the DSM programs recently passed $1B in customer incentives over the past 20 years
    - Energy reduction has saved customers $1.9B over the 20 years, and eliminated the need for 450 MWs of new generation in this time-frame
  - In NY, work with NYSERDA has reduced peak loads over 150 MWs since 1998
- Long-term demand reduction strategy
  - With accompanying environmental/economic benefits

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National Grid's historic use of distributed resources

- Marketing of ISO-NE demand response programs
  - Over 300 National Grid customers enrolled in price response program
    - Goal is 1,000 enrollees
  - Enrolled 12 MWs in winter emergency program, at least another 20 MWs enrolled by third party demand response providers from National Grid customers
    - When LICAP is in place, we anticipate much larger numbers
- Been involved in marketing programs since formation of ISO-NE
  - Regulatory mandate to offer programs to customers

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National Grid's historic use of distributed resources

- Niagara Mohawk's RTP program since 1999
  - 290 customers on default pricing
  - Another 800 customers with demands > 500 kWs to be placed on RTP in near future
- Expansion of RTP will allow the market to provide customers with the proper price signals to manage their loads
  - This can be accomplished with both DSM as well as demand response

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National Grid's historic use of distributed resources

- Implementation of Targeted Demand Response (TDR) projects
  - Used to reduce load in specific areas on distribution and/or transmission system
  - Possible deferral, but typically used to allow enough time for permitting, construction, etc.
  - Currently 3 projects proposed for summer 2006
  - Working with MA Renewable Trust to integrate renewable energy DG with DR and DSM at customer facilities
  - May need to move from a voluntary to mandatory program with control over customer asset to be effective

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Common Elements of Success

- Regulatory support
- Economic metering solutions in terms of direct and indirect benefits for all customers
- Exposure to market prices or credits
- Appropriate outreach and education for customers
  - Demand response audits to break down customer's peak loads and determine costs to shift/shed load versus payment to do so
  - Real-time load information – customers can make decisions in real-time to participate

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