



Demand Response – The Pacific Northwest

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Background

- ~3 ½ States
- ~35,000 MW peak
- >50% hydro
- Mostly unstructured
- No ISO
- ~2,500 MW of conservation 1982-2002, plan for ~2,800 MW in next 20 years

What's going on?

- AC, water heat cycling
- Irrigation scheduling
- Buyback bidding
- Interruptible contracts
- Dispatchable backup generation
- Advanced metering adoption

Firm vs. Non-firm

- “Firm” direct control favored
 - AC
 - Irrigation
 - Dispatchable backup generation
- “Non-firm” programs (e.g. bidding, prices)
 - Not treated as alternative to generation in planning
 - Experience could help but hard to get in current market

PNW Demand Response Project

- USDOE funds, Regulatory Assistance Project facilitation
- “Clients” - 4 utility commissions, Bonneville Power Administration
- Focused
 - Define cost effectiveness
 - Evaluate price mechanisms
 - Include transmission and distribution
- Initial meeting in May, target product in October

Analysis underway at NWPCC

- Resource adequacy
 - Hydro-dominated system becoming less so
 - Winter peaking region w/ strong TX links to summer peaking region
 - Increasing intermittent energy (wind) needing shaping
- Value of DR in this environment
 - Reduced cost and risk

July 24th, 2006

- 3-5 day heat event (1 year in 78 event)
- Coincident with 1 year in 50 event in CA, SW
- PNW is winter peaking but several utilities were close to missing reserve margins
- 150-250 MW of DR exercised on short notice