Northwest Power and Conservation Council

"Next Steps" for Demand Response in the 5th Power Plan

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July 13, 2004

Spokane WA

DR Analysis, Recommendations

- Estimation of Potential Benefits
- Confirmation and Realization of Potential

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Potential Benefits -1

- Long-run avoided cost of peaking generator operating 10 – 100 hours/year
- Estimates from $677 to $11,442 per MWh
- Average retail rate around $60/MWh

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Potential Benefits – 2

- Net cost of new peaking generators modeled w/ AURORA©
- Estimates not perfectly comparable, but range from $519 to over $1,000/MWh

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Potential Benefits – 3a

- Portfolio analysis used for all components of 5th Power Plan
- Credits DR's planning flexibility in uncertain futures
- Assumed 2000 MW @ $150/MWh variable costs, $5,000/MW fixed costs first year, $1,000/MW after that

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Potential Benefits – 3b

- Presence of DR lowers expected cost, expected risk or both
- Least expected cost drops from $17,519 million to $17,490 million ($29 million)
- Least expected risk drops from $29,384 million to $28,820 million ($564 million)
- At a constant risk of $29,781 million, expected cost drops ~$319 million

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Demand Response Next Steps

- Preserve, Refine and Expand Current Options
- Reduce Transaction Costs of Buybacks
- Fully Incorporate DR into Utilities' IRPs
- Refine Estimates of Size of DR Resource
- Cost-Effectiveness Methodology
- Demand Response for Ancillary Services
- Resolve Regulatory Issues
- Make Price Mechanisms More Acceptable (?)

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