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April 2, 2009

MEMORANDUM

TO: Council Power Committee

FROM: Michael Schilmoeller, Power Systems Analyst

SUBJECT: Chapter 8 of the Sixth Power Plan: Developing a Resource Strategy

This presentation will outline the content of Chapter 8, *Developing a Resource Strategy*, and solicit comments from the Committee. This presentation does not call for any Power Committee decision.

The intent of this chapter is to introduce the reader to the principal tools the Council uses to explore the economic cost and risks of power generation resources and requirements taken as an integrated portfolio. The content of sections is as follows:

- Introduction
 - o The role of risk assessment and management in prior and current Council planning
- Minimizing Cost and Risk
 - o Definitions and descriptions of key concepts (feasibility space, risk, and so forth)
 - o Identification of risk-constrained, least-cost plans
 - o Constraints on the model imposed by non-economic considerations, such as power plant emissions, requirements of the Act, and so forth.
 - O Considerations in selecting a plan from the efficient frontier, such as power cost impacts.
- Sources of Uncertainty
 - o The sources captured by our models that give rise to economic risk
 - o Assumptions behind the range and character of futures
 - Situations that may give rise to such futures. (This may be developed in a separate section, *Alternative Scenarios*, here or in an appendix.)
- Beyond economic cost and risk
 - Recognition of non-economic cost and risk
 - o Considerations in integrating non-economic factors into the selection of a resource plan.

As new study results emerge, this chapter may be extended or the results may be more appropriate for Chapter 9, *A Resource Strategy for the Region*. Staff is currently evaluating the effectiveness and cost of state RPS requirements as a carbon emission control strategy. We will contrast the RPS approach with others, such as carbon taxes or cap and trade schemes, new generation emission limits, and direct emission limits on, or retirement of, coal-fired generation. We are also examining the opportunities that electric vehicles may afford and the consequences of changes to hydrogeneration capability. These studies are underway and results may be available at the time of the web conference or the Council meeting.

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Chapter 8, Sixth Power Plan: Developing a Resource Strategy

Michael Schilmoeller Power Committee Tuesday, April 14, 2009





Developing a Resource Strategy

- A conversation
- Contrast with Chapter 9: A Resource Plan for the Region
 - Introduction
 - Minimizing Cost and Risk
 - Sources of Uncertainty
 - Beyond economic cost and risk







Chapter 9

- Conservation and demand response
- Generation
 - Mix of generating resources
 - Renewables and meeting climate change targets
 - Other generating resources
- Transmission needs
- How the plan relates to RPS and climate change goals
- Expected cost of the plan
- Implementing the resource strategy
- > R&D requirements
- Interpreting the strategy as a resource plan
- Act's requirements





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