

2006 IRP Technical Workshop Demand Side Management

Friday, February 10, 2006
9:00 am – 12:00 pm (Pacific)

Meeting Summary

Idaho	Terri Carlock (IDPUC), Lynn Anderson (IDPUC)
Oregon	Maury Galbraith (OPUC), Lisa Schwartz (OPUC), Laura Rooke (PGE)
Utah	Thomas Brill (DPU), Mary Cleveland(DPU), Andrea Coon (DPU), Kelly Francone (Energy Strategies), Sam Liu (DPU), Jim Logan (PSC), Cheryl Murray (CCS), Charles Peterson (DPU), Glade Sowards (UDAQ), Becky Wilson (PSC), Phil Powlick (UTDNR), Roger Weir (UAE), John Harvey (PSC), Nancy Kelly (CCS)
Washington	Elizabeth Klump (CTED), Joelle Steward (WUTC)
Wyoming	
Regional	Ken Corum (NWPCC), Massoud Jourabch (NWPCC), Charles Grist (NWPCC), Michael Schilmoeller (NWPCC), Eric Guidry (WRA)
PacifiCorp	<u>In Portland:</u> Michael Liljenwall, Betty Reed, Mark Klein, Pete Warnken, Dan Swan, Stan Williams, Ken Dragoon, Jeff Bumgarner, Mark Tallman, Dina Thompson, Don Jones Jr. <u>In Utah:</u> Greg Duvall, Bill Marek, Dan Peterson

PacifiCorp's objective for this technical workshop was to (1) present its Demand Side Management (DSM) modeling plan, (2) solicit comments on the overall approach and specific elements of the proposed plan, and (3) discuss challenges and issues associated with DSM modeling and program implementation. PacifiCorp developed the DSM modeling plan in light of IRP stakeholder feedback on the 2004 IRP and new Oregon Public Utility Commission (OPUC) DSM analytical requirements included in its 2004 IRP acknowledgement order.

2004 IRP DSM MODELING REVIEW

PacifiCorp started the workshop by explaining how the Company categorizes DSM programs. Programs are classified into four types (Class 1 to Class 4) to capture differing attributes such as utility dispatchability and reliability for long term planning purposes. Class 1 DSM consists of fully dispatchable or scheduled firm resources. Class 2 DSM consists of energy efficiency programs. Class 3 DSM includes price-responsive programs. Class 4 DSM represents customer education programs. PacifiCorp noted that in the 2004 IRP and 2004 IRP Updates, only Class 1

and Class 2 were considered as long term resources and therefore incorporated as IRP resources and modeled as such.

PacifiCorp then reviewed the 2004 DSM modeling methodologies to provide context for discussions on the proposed 2006 IRP modeling strategy. A participant noted that for the Decrement Analysis approach applied for Class 2 DSM, risk reduction benefits are not captured by the valuation metric (Present Value of Revenue Requirements).

MODELING PLAN FOR THE 2006 IRP

PacifiCorp presented the 2006 IRP modeling plan and how the Company intends to evaluate each of the four DSM program classes. PacifiCorp is seeking input on how the 2006 IRP should evaluate DSM and if there are particular methods, models, or studies the company should include in the analysis. A participant questioned the Company's assumptions concerning the persistence of program savings over the life of the program. A brief discussion followed where the Company explained that the savings identified for programs had already been discounted for persistence experience and that post-installation program evaluations were used to ensure that realization rates reported were accurate.

Planning Drivers and Objectives

PacifiCorp outlined the primary drivers impacting the 2006 IRP planning for DSM resource evaluation. A summary of the main stakeholder concerns expressed for the 2004 IRP was provided. These concerns centered on directly evaluating DSM against supply-side options and adequately capturing price and CO₂ regulatory risk reduction benefits. PacifiCorp then described the new DSM analysis requirements outlined in the Oregon Public Utility Commission's 2004 IRP Acknowledgement Order. The four requirements are as follows:

- Requirement 1: Conduct an economic analysis of achievable Class 1 and Class 2 DSM measures in PacifiCorp's service area over the IRP study period, and assess how the Company's base and planned programs compare with the cost-effective amounts determined in the study.
- Requirement 2: Determine the expected load reductions from Class 3 DSM programs such as new interruptible contracts and the Energy Exchange at various prices, and model these programs as portfolio options that compete with supply side options.
- Requirement 3: Evaluate loss of load probability, expected unserved energy and worst-case unserved energy, as well as Class 3 DSM alternatives for meeting unserved energy.
- Requirement 4: Develop supply curves for various types of Class 1 DSM resources, model them as portfolio options that compete with supply-side options, and analyze cost and risk reduction benefits. Evaluate this approach for Class 2 DSM resources and recommend whether this approach is preferable to the current decrement approach.

PacifiCorp described its primary DSM analytical objective, which is to evaluate DSM programs as competitors to supply alternatives, where practical, using its portfolio optimization tool, the Capacity Expansion Model (CEM). The Company then explained how time constraints factor into how it will meet this analytical objective and address the OPUC's new evaluation

requirements. The results of a comprehensive DSM economic analysis will not be available in time for this IRP. Therefore, PacifiCorp proposed an alternate method—the development of interim proxies for Class 1 and Class 3 supply curves—to help meet Oregon Commission requirements until the Company has completed the broader and more comprehensive DSM potential study.¹ PacifiCorp stated that it is conducting research to evaluate CEM behavior with DSM resources to determine how resource selection is influenced by DSM resource characteristics. This is part of PacifiCorp’s overall CEM validation process. PacifiCorp also emphasized that achieving resource comparability in a modeling context is a challenge, and that it is seeking recommendations from workshop participants on how to address comparability issues.

Finally, PacifiCorp indicated that it would analyze DSM data and developments at other utilities as part of a benchmarking effort. The Company stated that there is no standard method among utilities for evaluating DSM in the context of long term resource planning.

Modeling Approach Overview

PacifiCorp then described how it intends to model each of the DSM categories. The Company will develop Class 1 and Class 3 proxy supply curves, adjusting costs as necessary to account for benefits not accounted for in the IRP models (i.e., transmission and distribution line losses, lower operating and planning reserve requirements, capital deferral of plant and/or transmission, etc.) Class 1 and 3 programs will be included in the CEM as resources that compete with supply-side alternatives for incorporation into candidate portfolios. Candidate portfolios will then be subjected to detailed analysis using PacifiCorp’s Planning and Risk (PaR) production cost simulation model. PacifiCorp intends to use the decrement approach for Class 2 resources and investigate the value of using a supply curve approach for future IRPs.

Questions were asked on how PacifiCorp’s modeling captures near term costs/benefits of DSM versus long term. The technical workshop planned for May on portfolio scenario analysis will cover the modeling of near term resources, resources within 10 years and resources beyond 10 years. DSM will be included in this discussion.

In response to a question on DSM program applicability to Wyoming, the Company mentioned that it has a rate case commitment to determine what current Company programs are prudent and cost-effective to adopt there.

Program Assumptions for 2006 IRP

This part of the workshop covered the three classes of DSM that will be modeled for the next IRP. (PacifiCorp noted that Class 4 will not be modeled.)

Class 1

PacifiCorp proposed to break down class 1 resource into four categories and form proxy supply curves for each with data from various readily available resources. The category pricing and

¹ Completion of such a study is one of the MidAmerican Energy Holding Company’s commitments for state approval of MEHC’s acquisition of PacifiCorp.

megawatts to be modeled will be refined after further analysis of available program data and development of these proxy supply curves. No assumptions were made at this point as to whether, at these or similar prices, the CEM would select Class 1 resources over other available supply-side resource options.

Class 2

PacifiCorp will continue to use the decrement approach for this class and will update assumptions with current information. Participants suggested using PaR Stochastics runs to evaluate the decrements used for Class 2. The Company agreed that this would be a reasonable enhancement to the current decrement process, and thereby address program valuation concerns associated with capturing risk reduction benefits. The Company also agreed to double-check the load shapes to be modeled to make sure they fairly represent the greatest resource potentials in the Northwest, as identified by the Northwest Power and Conservation Council's 5th Power and Conservation Plan.

Class 3

Like Class 1, Class 3 will present a challenge to the modeling group. Specifically, the IRP team is looking for help in identifying program characteristics and/or program types that if modeled and selected, would be achievable at the size and price modeled. There was some group discussion whereby three resource types were identified as possibly being the most opportunistic resource types to model: (1) an "Energy Exchange"-type program, (2) interruptible tariffs, and (3) Critical Peak Pricing programs.

The Company will further investigate possible Class 3 programs and/or program characteristics beyond the three noted above for possible substitution or addition should PacifiCorp find through the proxy supply curve development work that other products are more worthy of modeling.

PacifiCorp indicated that it was looking for more clarification and definition on "Interruptible" and Interruptible contracts from the Oregon PUC ("Interruptible" can be defined in different ways; i.e. Forward Dispatchable or Immediate Dispatchable). A participant suggested looking into the load potential for DSM programs and how this may provide opportunities for what the Company DSM programs are missing.

In summary, PacifiCorp did not receive any objections to the DSM modeling plan. Participants provided useful suggestions for improving the Class 2 & 3 DSM product characterizations and modeling approaches.

2005 DSM RFP SUMMARY AND CHALLENGES

PacifiCorp provided an update on the recent DSM RFP and the status of the evaluation process. PacifiCorp provided an assessment of the number of bids in each category and outlined some of the challenges. The Company is currently in detailed and confidential discussions with many of the vendors but emphasized that there are a few possible "Jewels", provided they prove to be cost-effective.

SUMMATION AND NEXT STEPS

PacifiCorp asked the participants for their feedback on how the workshops are progressing and potential improvements to the process. A list of dates for the upcoming public meetings was shown, which has been updated since this presentation.

Current 2006 Schedule as of February 24, 2006:

<u>Date</u>	<u>Type</u>	<u>Topics</u>
March 31	Workshop (Full Day)	Integrated Gasification Combine Cycle and CO ₂
April 20	General (Full Day)	Planning Assumptions & Methodologies
May 10	Workshop (Full Day)	Transmission and Portfolio Scenario Development
July 19	General (Full Day)	Modeling Results Update
October 17	General (Full Day)	TBD - Document Review