

- BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH -

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In the Matter of the Review of the Report )  
Prepared for PacifiCorp entitled "Assessment ) DOCKET NO. 08-035-56  
of Long-Term System-Wide Potential for )  
Demand-Side and Other Supplemental ) REPORT AND ORDER  
Resources." )  
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ISSUED: April 1, 2009

By The Commission:

**PROCEDURAL HISTORY**

On April 21, 2008, the Commission issued an Order (“April Order”) requesting comments on the report entitled “Assessment of Long-Term System-Wide Potential for Demand-Side and Other Supplemental Resources" ("DSM Potential Report" or “Report”) prepared for PacifiCorp ("Company") by Quantec, LLC., a consulting group. This Report was first released on July 11, 2007, by MidAmerican Energy Holding Company (“MEHC”) and PacifiCorp to comply with Transaction Commitment No. 44(a), Energy Efficiency and DSM Management (“Transaction Commitment”), approved in Docket No.05-035-54.<sup>1</sup> The April Order set June 27, 2008, as the deadline for interested parties to file comments.

On June 19, 2008, the Utah Division of Public Utilities (“Division”) filed a memorandum with the Commission requesting an extension of time to file comments, a multiple round process of revising the existing report, a requirement that PacifiCorp formally file the revised report, and a final regulatory review of the revised report. On June 27, 2008, the Commission issued an Order (“June Order”) granting the Division’s requests. On July 22, 2008,

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<sup>1</sup> In the Matter of the Application of MidAmerican Energy Holdings Company And PacifiCorp dba Utah Power & Light Company for an Order Authorizing Proposed Transaction.

the Commission issued a Revised Scheduling Order changing the technical conference date originally scheduled in the June Order to August 13, 2008.

A technical conference in this proceeding was held on August 13, 2008. On August 20, 2008, PacifiCorp requested additional time to prepare and file its DSM Potential Report in order to address matters raised at the August technical conference and to respond to comments and questions submitted by interested parties. PacifiCorp requested a change to its filing date from August 29, 2008, to September 15, 2008. On August 28, 2008, the Commission issued an Order granting PacifiCorp's request. On September 15, 2008, the Company filed the DSM Potential Report with revisions and provided additional analysis as agreed upon at the August technical conference. Additionally, the Company filed its responses to questions received from parties prior to the August technical conference and requested the Commission acknowledge by letter that the Company has satisfied Transaction Commitment No. 44(a). On September 25, 2008, the Commission issued an Amended Scheduling Order setting November 6, 2008, as the date for comments on the filed DSM Potential Report.

On November 6, 2008, comments on PacifiCorp's DSM Potential Report were filed by the Division and jointly by Utah Clean Energy ("UCE") and Western Resource Advocates ("WRA").

## **BACKGROUND**

PacifiCorp conducted the DSM Potential Report to further improve the analysis and delivery of demand-side management resources and to identify achievable market potential of additional demand-side management and energy efficiency opportunities over the next 20

years. PacifiCorp explains the study is designed to assist with the planning and modeling efforts of the Company's Integrated Resource Plan ("IRP").

As noted earlier, the Report is also designed to fulfill Transaction Commitment No. 44(a) which requires MEHC and PacifiCorp to conduct a Company-defined, third-party, market potential study of additional DSM and energy efficiency opportunities within PacifiCorp's service areas. The commitment includes the following objectives: Identify additional DSM opportunities; recommend programs/actions to pursue cost-effective DSM opportunities; consult with DSM advisory groups, Commission staff, and other interested stakeholders to define the scope of the study; report study findings back to DSM advisory groups, Commission staff and other interested stakeholders; and, the use of the study to direct ongoing DSM efforts.

As stated in the executive summary of the DSM Potential Report, "The study's principle goal is to develop reliable estimates of the magnitude, timing and costs of alternative DSM resources, comprised of capacity-focused program options (defined throughout the report as Class 1 and Class 3 DSM resources), energy efficiency products and services (defined as Class 2 DSM resources), and other "supplemental" resources such as solar, combined heat and power, and dispatchable standby generation." Class 1 is further defined as "firm" and Class 3 as "non-firm" capacity-focused DSM program options.

PacifiCorp hired Quantec to undertake the field work and data analysis, and to report its results to PacifiCorp. Through surveys, on-site work, and use of existing studies and expert knowledge, Quantec identifies the DSM and supplemental resource opportunities that are technically feasible (technical potential), cost-effective (economic potential), and realistically

achievable (achievable potential) through utility programs within PacifiCorp's service territory during the 20-year planning horizon.

For the PacifiCorp system at the time of peak demand in 2027, the DSM Potential Report identifies 13,198 megawatts of technical potential, 6,312 megawatts of economic potential and 1,601 megawatts of achievable potential for Classes 1, 2, and 3 DSM and supplemental resources.<sup>2</sup> In its Rocky Mountain Power service territory, which includes Utah, this equates to 10,063 megawatts of technical potential, 5,574 megawatts of economic potential, and 1,398 megawatts of achievable potential in 2027. The Report results indicate 601 average megawatts of Class 2 DSM in Utah in 2027 is cost-effective at an average levelized per-unit cost of \$40 per megawatt hour. The Report includes detail regarding resource options and costs by customer sector and state, and provides resource potential under alternative scenarios.

PacifiCorp states the magnitude of DSM potential in the Report should be viewed as preliminary because the amounts shown to be "cost-effective" are based on proxy avoided costs and the amounts shown to be "achievable" are based on vendor assumptions. PacifiCorp states it is working with Quantec to develop supply-curves based on the technical potential screened only by what PacifiCorp assumes is likely to be achievable. PacifiCorp plans to use these supply curves in its IRP models to identify cost-effective DSM amounts. Cost-effective DSM will then be incorporated in PacifiCorp's resource plan. PacifiCorp argues the DSM resources selected through the IRP process are expected to be firm and deliverable and, therefore, may be viewed as conservative from the perspective of some stakeholders advocating

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<sup>2</sup> Since the Energy Trust of Oregon is responsible for the planning and delivery of energy efficiency, the potential for Class 2 DSM in Oregon is excluded from the study.

greater reliance on DSM. PacifiCorp commits to reassess resource potential and achievable assumptions over time, as warranted.

### **PARTIES' COMMENTS**

The Commission requested comments on the DSM Potential Report including comments on its use for DSM evaluation at the planning and program approval stages of DSM analysis and how well the Report fulfills the required Transaction Commitment criteria. The Division, UCE, and WRA all agree the study meets the Transaction Commitment criteria.

The Division supports the Company's plan to use the Report's technical potential (adjusted for the Company's assumptions around achievable levels) as the formulated supply curves for IRP capacity expansion modeling, and for identification of cost-effective DSM programs. Further, the Division concurs with the Company's use of the total resource cost test in the IRP and use of each state's specific cost-effectiveness criteria for program approvals.

UCE and WRA support use of the DSM Potential Report's technical potential of DSM in the Company's current IRP, as long as the 2027 time frame is not used as a constraint for achieving the total DSM potential and the total DSM potential is considered as a floor amount rather than a maximum achievable level. For current IRP analysis, UCE and WRA do not support PacifiCorp's plan to adjust the technical potential by the Company's assumptions regarding achievable levels prior to determining cost-effective amounts of DSM. Rather, UCE and WRA recommend PacifiCorp first identify the full cost-effective amount of DSM and then make provision in its path analysis or contingency analysis for the possibility that the amount of DSM selected by the IRP model may not be achieved in the time-frame modeled.

UCE and WRA do not support use of the Report for identifying DSM potential beyond the current IRP for two major reasons. First, the Report systematically underestimates the amount of DSM available (at every level of cost). Second, the Report's estimation of the costs associated with solar are too high. Specifically, UCE and WRA argue the DSM Potential Report takes a conservative approach at each step in the estimation process which results in a very high probability of underestimating the real DSM potential. UCE and WRA argue that reliance on data which significantly underestimates DSM potential carries risk of not obtaining the greatest amount of cost-effective DSM to the benefit of ratepayers. UCE and WRA support PacifiCorp's intention, as stated in the August technical conference, that it will likely update the study every three to four years.

While the DSM Potential Report provides valuable guidance, UCE and WRA argue it is an inappropriate tool for DSM program approval. This is because the Report uses the total resource cost test as the standard for comparing cost-effective DSM with supply-side resources. UCE and WRA argue the use of the utility cost test would provide a more fair comparison of DSM to supply-side resources because it symmetrically evaluates the utility investment for both demand-side and supply-side resources. UCE and WRA argue that, just as subsidies to supply-side resources are not included in IRP supply-side costs, neither should the participant's cost be included in the cost of DSM. Further, the inclusion of a participant's cost is inappropriate since the participant and societal benefits are excluded from the total resource cost

analysis. UCE and WRA plan to provide further input on this issue in the Commission's process to evaluate the use of cost-tests for DSM program approval directed in Docket No. 07-035-T04.<sup>3</sup>

UCE and WRA also maintain the DSM Potential Report overestimates the cost of solar resources. UCE and WRA provide data and examples showing the overestimation occurs at all levels of the analysis from capital costs and maintenance to ongoing administration costs.

### **DISCUSSION AND CONCLUSIONS**

We agree with the Division, UCE and WRA, the DSM Potential Report satisfies Transaction Commitment No. 44(a) and acknowledge that the Company has fulfilled this commitment. We also conclude the technical potential estimated in the DSM Potential Report provides a reasonable starting point for developing inputs into the IRP and DSM resource evaluation processes. We expect analysis of technical potential will need to be updated through time and find the Company's commitment to update the analysis as needed reasonable.

We are concerned with the issues raised regarding how much of the Report's technical potential is cost-effective and achievable through utility programs. The Report shows a substantial reduction in the amount of DSM and supplemental resource opportunities targeted for utility programs due to arguably subjective vendor assumptions regarding customer acceptance. At \$40 per megawatt hour, DSM appears to be very cost-effective in comparison to recent cost estimates for conventional supply-side resources and we are concerned about removing such resources from consideration without more extensive evaluation.

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<sup>3</sup> In the Matter of Advice Filing 07-04 of PacifiCorp d/b/a Rocky Mountain Power for Formal Approval – Schedule No. 113 – 2007 Cool Cash Incentive Program.

Parties generally support the Company's proposal to use the technical potential as the basis for supply curves in the IRP, and to have the IRP modeling determine the amount that is cost-effective. However, parties differ on whether the Company should adjust the technical potential for what is likely to be achieved due to customer acceptance before using them in the IRP model to determine the amount of DSM that is cost-effective.

The Company proposes to adjust the technical potential using its assumptions regarding achievable levels of DSM to serve as the supply curves in its IRP. It would then use these adjusted supply curves in IRP to determine cost-effective amounts of DSM. UCE and WRA disagree and propose the Company use the unadjusted technical potential to form the supply curves in IRP to determine the full cost-effective level of DSM and then make provision in its path or contingency analysis for the possibility that the cost-effective amount of DSM may not be achieved in the time-frame modeled.

While we are inclined to agree with UCE and WRA, we conclude additional evaluation and discussion are needed before one approach to the formation of an IRP DSM supply curve is selected. Specifically, we would like to better understand the differences in the two approaches regarding the amounts of DSM that could be pursued through utility programs and any subsequent impacts on system reliability and cost. Therefore, we direct the Company to evaluate the two approaches in its next IRP or IRP update. We encourage the Company to solicit input from interested parties on methods for evaluating the two approaches. We will request parties' comments on the Company's evaluation of the two approaches in an appropriate IRP or IRP update docket.

With respect to estimating the cost of solar resources, UCE and WRA provide considerably different cost estimates than PacifiCorp. The differences are large enough that we would expect significant differences to appear in the Company's IRP action plan depending on the assumptions used in the IRP process. We direct the Company to perform sensitivity analysis with respect to the assumed cost of solar resources in its next IRP or IRP update.

Further, though it has been a long-standing practice to rely on total resource cost in the IRP, we are persuaded by UCE and WRA, and recent state and federal public policy, that this issue needs to be reviewed. We find the DSM Potential Report represents a starting point only for further work with respect to analyzing the cost-effectiveness of solar resources in the PacifiCorp system. Going forward, the Company shall provide information on both the total cost of solar resources in comparison to other resources, and also the cost to the utility of a utility-sponsored program to encourage customer adoption of this resource. The Company could begin such analysis with preliminary data from the solar incentive pilot program. We direct PacifiCorp to work with interested parties regarding how to evaluate solar resources in the ongoing IRP process and we will consider comments on this effort in an appropriate IRP proceeding.

We concur with all parties that the evaluation of DSM and supplemental resources at the program approval stage should not be limited to one primary perspective regarding whether a resource or program is cost-effective. We will give further consideration to this issue in response to parties' recommendations made pursuant to our direction in Docket No. 07-035-T04.

DOCKET NO. 08-035-56

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NOW, THEREFORE, IT IS HEREBY ORDERED that:

1. The DSM Potential Report filed September 15, 2008, fulfills PacifiCorp's Transaction Commitment No. 44(a), Energy Efficiency and DSM Management, approved in Docket No.05-035-54.
2. The technical potential included in the Report is a reasonable basis for developing supply curves for the IRP process.
3. PacifiCorp shall evaluate cost-effective DSM and supplemental resources in its next IRP or IRP update using the two approaches for DSM supply curves discussed herein.
4. PacifiCorp shall provide sensitivity analysis regarding the cost of solar resources and evaluate the amount of cost-effective solar resource potential using both the total cost and utility program cost perspectives in its next IRP or IRP update.

DATED at Salt Lake City, Utah, this 1<sup>st</sup> day of April, 2009.

/s/ Ted Boyer, Chairman

/s/ Ric Campbell, Commissioner

/s/ Ron Allen, Commissioner

Attest:

/s/ Julie Orchard  
Commission Secretary  
G#61413