

ITEM NO. CA1

PUBLIC UTILITY COMMISSION OF OREGON  
STAFF REPORT  
PUBLIC MEETING DATE: April 28, 2015

REGULAR \_\_\_\_\_ CONSENT X EFFECTIVE DATE May 1, 2015

DATE: April 14, 2015

TO: Public Utility Commission

FROM: Michael Breish *MB*

THROUGH: *J* Jason Eisdorfer and *aa* Aster Adams

SUBJECT: IDAHO POWER COMPANY: (Docket No. ADV7/Advice No. 15-03)  
Requests to create Schedule 76 – Flex Peak Program .

**STAFF RECOMMENDATION:**

Staff recommends the Commission allow Idaho Power Company's ("Company" or "Idaho Power") Advice No. 15-03 to go into effect May 1, 2015. Staff also recommends the Commission accept the recommendations described below.

**DISCUSSION:**

Introduction and summary

On March 10, 2015, Idaho Power filed Advice No. 15-03 seeking to create a Company-managed voluntary demand response program for commercial and industrial customers willing to reduce their energy loads during summer peak days (hereinafter the "Flex Peak Program" or "Program"). The Flex Peak Program is very similar to an Idaho Power commercial and industrial demand response program offered to Oregon customers and managed by a third-party, EnerNOC Inc., ("EnerNOC"), from 2011 to 2014.

Staff analyzed Idaho Power's proposed Program to determine whether it (1) complies with the 2013 Commission order regarding Idaho Power's demand response programs in Oregon, 2) is cost-effective, (3) is reasonably designed to achieve its purpose, and 4) does not adversely affect ratepayers.

Staff concludes that the filing satisfies the criteria listed above, but has some concern that the Program does not have sufficient interaction with customers to enable their successful participation. For this reason, Staff recommends that the Commission impose some reporting requirements so that Staff and stakeholders can evaluate the Program's effectiveness and recommend modifications, if appropriate.

Applicable Commission Orders re: review criteria

*Criteria 1, compliance with Stipulation:* In 2013, the Commission issued Order No. 13-482 approving a stipulation executed by Staff, the Citizen's Utility Board of Oregon, EnerNOC, and the Oregon Irrigation Pumpers Association regarding Idaho Power's demand response portfolio in Oregon (the "Stipulation"). Under the Stipulation and Order No. 13-482, Idaho Power is required to offer demand response programs to its three customer classes (residential, commercial and industrial, and irrigation), even in years when Idaho Power does not anticipate peak-hour capacity deficits.<sup>1</sup> The Stipulation and Order specify some design requirements for the programs and a methodology for determining the programs' annual value.

*Criteria 2, cost-effectiveness:* In 2013, in connection with its analysis of Portland General Electric Company's ("PGE") request to amortize costs of a demand response program offered to industrial customers, Staff reviewed the cost effectiveness of the program by comparing the annual cost of the program per kW to the levelized cost of a deferred least-cost supply resource.<sup>2</sup> Staff concluded the program was cost-effective and the Commission approved Staff's recommendation to allow PGE to amortize costs of the program into rates.

Staff conducted similar analyses in 2009 and 2010 regarding requests by Idaho Power and PGE to implement demand response programs. In both cases, the Staff concluded the programs were cost effective and the Commission authorized the companies to implement the programs.<sup>3</sup>

*Criteria 3 and 4, designed to achieve intended purpose and adverse effect on ratepayers.*

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<sup>1</sup> Order No. 13-482.

<sup>2</sup> *In re Portland General Electric Company*, Order No. 13-172.

<sup>3</sup> *In re Idaho Power Company*, Order No. 10-206; *In re Portland General Electric Company*, Order No. 09-254.

In Order No. 12-159, the Commission adopted a set of factors that the Commission would use to examine utility requests to implement time-varying rates. The Commission did not intend the factors to be rigidly applied.<sup>4</sup> Instead, the importance of individual factors in any particular case is dependent on the circumstances of the proposal under consideration.<sup>5</sup> And, although the Commission stated that it did not explicitly adopt the factors for evaluation of demand response programs, it noted parties could use them to analyze such programs.<sup>6</sup>

Staff did not apply several of the factors in Order No. 12-159 given that the Company is required to offer a demand response program to residential customers under Order No. 13-482. However, Staff did evaluate Factors 2, 3, and 6, which are “the extent to which an optional rate or alternative program can achieve these demand-side resource and system benefits;” “the impacts on customers of the proposed rate and the ability of customers to respond to these impacts;” and “the ability to explain and communicate the rate to customers.”<sup>7</sup>

### History

In 2010, Idaho Power obtained Commission authority to offer a third-party-operated, incentive-based, peak demand reduction program to its Oregon commercial and industrial (“C&I”) customers.<sup>8</sup> This demand response program was offered and managed by EnerNOC.

The contract Idaho Power entered with EnerNOC was for five years. Implemented to only be available to C&I customers, the EnerNOC Program’s objective was “to reduce the demand on Idaho Power’s system during peak times through customers’ voluntary electrical use reduction.”<sup>9</sup> Idaho Power made capacity payments to EnerNOC in order to secure load reductions on a firm basis during summer peak months. When actual events were called, Idaho Power paid EnerNOC an energy payment in addition to the capacity payment. During the operational season, EnerNOC submitted a weekly demand-reduction commitment to the Company. When a demand response event arose, Idaho Power would notify EnerNOC.

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<sup>4</sup> *In the Matter of the Public Utility Commission of Oregon Staff Investigation into Cost Methods for Use in Developing Electric Rate Spreads*, Order No. 12-159 at 3-4.

<sup>5</sup> Order No. 12-159 at 3-4.

<sup>6</sup> Order No. 12-159 at 3 n 3.

<sup>7</sup> Order No. 12-159, Appendix A, p 1.

<sup>8</sup> Order No. 10-206, UM 1473, June 4, 2010.

<sup>9</sup> FlexPeak Management 2009 Preliminary Report, UM 1473, 3.

EnerNOC was “responsible for developing and implementing all marketing plans, securing all participants, installing and maintaining all equipment downstream of the meter used to reduce demand, tracking participation, and reporting results to Idaho Power.”<sup>10</sup>

In 2013, the Commission opened a docket to consider Idaho Power’s request to modify its three demand response programs in Oregon to reflect the Company’s projection that there would be no peak-hour capacity deficits until 2016.<sup>11</sup> As noted above, several parties stipulated that Idaho Power should maintain its current demand response programs even in years when Idaho Power does not anticipate peak-hour capacity deficits and agreed upon some of the design requirements of the programs.

The stipulating parties also agreed that the annual value of demand response is equal to the levelized annual cost of the minimum-size deferred resource, measured over 20 years, plus the corresponding deferred energy savings for 60 program hours.<sup>12</sup> Under Order No. 13-482, Idaho Power’s demand response portfolio in Oregon has an annual value of \$16.7 million, even in years when Idaho Power’s IRP shows no peak-hour capacity deficit.<sup>13</sup> This methodology comports with two of the “overarching demand response concepts” stipulated by parties:

- A. v. In order to have viable demand response programs in the long term, the programs must continue in the short term.
- A. vi. Calculate the avoided cost used for demand response by using the avoided capacity cost of a 170 MW single cycle combustion turbine (“SCCT”) multiplied by the effective load carrying capacity (“ELCC”), measured over 20 years, plus the corresponding deferred energy savings for 60 program hours.<sup>14</sup>

#### Internalization of demand response program

Idaho Power issued an RFP in 2014 for bids from third-party C&I demand response providers that would ultimately be compared to an internally provided and operated program alternative. To explore the feasibility of an internally run C&I demand response

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<sup>10</sup> Initial filing, UM 1473.  
<sup>11</sup> Order No. 13-482 at 1.  
<sup>12</sup> Order No. 13-172, Appendix A, p. 4.  
<sup>13</sup> Order No. 13-172, Appendix A, pp. 4-5.  
<sup>14</sup> Order No. 13-172, Appendix A, pp. 3-4.

program, Idaho Power sought input from customers who participated in the EnerNOC Program by means of a survey. Three questions, related to real-time data monitoring, event coaching and continued participation without monitoring or coaching, were asked of 25 participants. All survey respondents but one indicated that they would continue to participate without event coaching or monitoring, though around half stated they utilized real-time monitoring during their participation in the EnerNOC Program in some capacity, be it provided by EnerNOC, Idaho Power, or another third-party.<sup>15</sup>

Idaho Power also sought input from the Energy Efficiency Advisory Group (“EEAG”), a stakeholder entity that participates in the Company’s demand-side management implementation and evaluation. Industrial customers of EEAG who participated in the EnerNOC Program expressed their frustrations of the opaque nature of EnerNOC’s operations as well as the delay in receiving payment. EEAG members were asked to express their opinion on the Company creating an internalized version of the EnerNOC Program. The majority of members expressed support, while one abstained and another supported retaining EnerNOC’s services.

Comparison of the bids the Company received led Idaho Power to determine that substantial cost savings were obtainable by internalizing the C&I demand response program. With general support from the two separate stakeholder input solicitation efforts, Idaho Power decided to proceed with the creation of a Company-managed program, the Flex Peak Program.

#### Flex Peak Program

The proposed demand response program—the Flex Peak Program—is nearly the same as the EnerNOC Program. Identical features include:

1. Program season runs June 15 through August 15;
2. Event hours span 2 PM to 8 PM, Monday through Friday (except July 4);
3. Event notification occurs two hours prior to event;
4. Event duration lasts two to four hours;
5. Maximum 60 hours per season for the program;
6. Participants will receive a capacity payment commensurate with their nominated load; and
7. Participants will receive an energy payment commensurate with their actual dropped load.

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<sup>15</sup> Idaho Power Company Data Response to Staff Data Request 5, UM 1710.

The capacity payment is currently \$3.25/kW per week (\$26 per kW for the Program season). The energy payment is \$0.16/kWh. Idaho Power is currently seeking to obtain a maximum nominated load of 35 MW - they may have to subscribe more MW from customers in order to meet that.

Idaho Power states that the EnerNOC Program cost approximately \$2.0 million on average to operate annually. The Flex Peak Program's cost would range from \$1.1 million, where no variable payments are made, to \$1.4 million if the maximum capacity is obtained and is dispatched for the maximum number of hours.

Idaho Power will call a minimum of three events per operational season to keep participating customers both engaged and familiar with the mechanisms of the Program; this practice was also conducted in the EnerNOC Program, albeit during the last two years of operation because of the stipulation produced in UM 1653. Customers will also only receive energy payments for events called after the third event.

If customers are unable to meet their nominated load drop, Idaho Power will impose a customer fee that is determined by a set rate of \$2.00 per kW multiplied by the delta between the nominated load drop and the actual load drop for every hour not met. The fee will never exceed the customer's total incentive amount for the entire Program season.

## **ANALYSIS**

The Flex Peak Program includes the design elements required under the Stipulation and is therefore consistent with Order No. 13-482.

The Flex Peak Program is also cost-effective, based on the stipulated value of the three demand response programs found in Order No. 13-482. The internally-operated Program will cost less than the program offered by EnerNOC, and thus, will prove to be even more cost effective than the previous EnerNOC Program if successful.

However, Staff is concerned about the ability of the Program to achieve the intended results. First, customers who successfully initiated a contract with the previous program provider EnerNOC also received real-time usage monitoring equipment as well as software that enabled customers to view their respective loads as part of their contract. As the survey results indicated, for nearly half of customers questioned, the real-time usage data was to some degree important in their participation in the EnerNOC

Program. This suggests that such equipment and access to data was integral for some customers' successful performance.

New customers who sign up with Idaho Power's Flex Peak Program will not automatically receive customary monitoring equipment and software. The lack of ubiquitous monitoring services may lead to customers not meeting their nominated load drop due to the inability to monitor their real-time load during events, thus curtailing the effectiveness and reliability of the Flex Peak Program. Idaho Power did indicate that they could provide real time monitoring capabilities to customers through a pulse output data or a new installed meter, but the Company also states "the use of real-time energy monitoring is not necessary for participation in demand reduction events..."<sup>16</sup> This is contradictory to customers' preferences provided in the survey.

Additionally, in response to Staff's data request regarding the lack of Program-wide real-time monitoring equipment, Idaho Power stated that, because existing customers can achieve their drop load without the use of real-time data, "the Company believes other participants are capable of doing the same."<sup>17</sup> This belief is predicated on results from the EnerNOC Program and on a new customer group that is untested.

Second, customers in the EnerNOC Program received coaching prior to signing up with EnerNOC and then during the operational season. Idaho Power's Program will not duplicate these exact efforts that were key features of the overall success of the EnerNOC Program. Customers' knowledge of what actions were required to meet their respective load drops was no doubt crucial to recruiting customers and meeting nominated reductions. Whenever customers were not meeting their nominated loads during an event, EnerNOC would reach out to them while the event was ongoing in an attempt to achieve the full load drop. New customers will not have access to either forms of highly tailored, specialized coaching. This condition may jeopardize the reliability of the program at critical peak load moments when it is needed the most.

In response to a data request from Staff, Idaho Power stated that they would contact Program participants if their actual load reduction was "substantially" lower than what was nominated.<sup>18</sup> If customers produce insubstantial differentials in load reductions, aggregated amounts of such insufficient load drops over multiple events can contribute to an ineffectual program that ultimately harms Idaho Power customers.

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<sup>17</sup> Idaho Power Company Data Response to Staff Data Request 6, UM 1710.

<sup>18</sup> Idaho Power data response 7.

To ensure Idaho Power customers are receiving a service that will reasonably lead to the desired load reduction, Staff recommends that the Commission require Idaho Power to submit a program-specific report to Staff that covers a number of program metrics. A report that provides a transparent view of the Flex Peak Program will enable Staff to assess whether Idaho Power successfully has internalized the Program or if the Company should return to a third-party managed C&I demand response program.

Staff believes that an annual report issued 90 days after the conclusion of the Program's operational season describing the Program's performance including established metrics can ensure that Program performance issues can be identified and rectified if they arise.

Program-specific metrics that Staff would like to see in an annual report are:

1. Participating Customers;
2. Total number of sites;
3. Number of events called;
4. Total load dropped for each event;
5. Event duration;
6. Total capacity payments made;
7. Total energy payments made;
8. Number of customers who failed to meet their load;
9. Number of program applications denied due to Program subscription limit;
10. Benefits identified with each dispatch of the resource;
11. An assessment of whether the trigger or dispatch price is properly set to utilize the asset most often;
12. Any participant attrition;
13. Any issues the utility has identified meeting requests to participate in the program;
14. Any changes in baseline methodology taken or anticipated; and
15. What improvements Idaho Power and the program might benefit from.

Staff also concludes that there is limited likelihood of adverse rate impacts on participating customers. For participating customers, the maximum penalty for failing to produce their nominated load reduction cannot exceed their capacity incentive payment for the Program season. In other words, a customer charged with the maximum penalty will end with a net-zero change to their bill as the incentive payment and penalty charge cancel out.



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Notwithstanding the concerns Staff has regarding the Company's proposed Flex Peak Program, Staff believes the Program will provide sufficient benefits to participating and non-participating customers of Idaho Power. Further, Staff expects that the data which will be obtained from the Program will allow future adjustments to this and other similar programs.

**PROPOSED COMMISSION MOTION:**

Idaho Power's Advice No. 15-03 be allowed to go into effect on May 1, 2015 and that an annual Flex Peak Program report with specific Program metrics be submitted no later than 90 days after the conclusion of the Program season.

CA1 – IPC Flex Peak Program