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 IDAHO PUBLIC  
 UTILITIES COMMISSION

Attorney for the Idaho Conservation League

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE	)	
APPLICATION OF IDAHO POWER	)	CASE NO. IPC-E-15-06
COMPANY FOR A DETERMINATION	)	
OF 2014 DEMAND-SIDE	)	IDAHO CONSERVATION LEAGUE
MANAGEMENT (“DSM”) EXPENSES	)	
AS PRUDENTLY INCURRED.	)	COMMENTS

The Idaho Conservation League (ICL) submits the following comments on Idaho Power’s 2014 Demand Side Management (DSM) investments. Overall, Idaho Power preformed well in 2014. Below ICL discusses four issues all of which are directly relevant to the 2014 programs: which of the four primary tests to focus on when considering utility investments in energy efficiency, the assumptions used in these tests, the calculation of avoided costs, and the programs with Total Resource Costs Test below 1.0. In sum, ICL recommends the Commission deem prudent the 2014 DSM investment.

I. Testing for Cost-Effective Energy Efficiency

There are four<sup>1</sup> commonly accepted tests of whether a utility sponsored efficiency program is cost-effective, which to the basis for determining prudence in this case. These tests complement each other as each one measures the costs and benefits from a unique perspective. The total resource cost test (TRC) “reflects the total benefits and costs to all customers (participants and non-participants) in the [utility] service territory.”<sup>2</sup> The utility cost test (UCT) “calculates the costs and benefits of the program from the perspective of . . . the utility implementing the program.”<sup>3</sup> The participant cost test (PCT) “assesses the costs and benefits

<sup>1</sup> Some commentators describe a fifth, the Societal Cost Test, but this test is really an expanded version of the Total Resource Cost Test.

<sup>2</sup> National Action Plan for Energy Efficiency, *Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers* at 3-7 (November 2008).

<sup>3</sup> *Id.*, at 3-6 (NAPEE calls this test the Program Administrator Cost test in recognition that some DSM programs are run by third parties, not just utilities.).

from the perspective of the customer installing the measure.”<sup>4</sup> And the ratepayer impact measure (RIM) test “examines the potential impact of the energy efficiency program has on rates overall.”<sup>5</sup> A cost/benefit ratio greater than 1.0 under each of these tests means the program is prudent for the utility and ratepayers, whether participants or not.

Idaho has chosen to focus on the first three of these tests. The Staff and Idaho’s investor owned utilities entered into the *Memorandum of Understanding for Prudency Determination of DSM Expenditures*.<sup>6</sup> The Staff, in Attachment 1 of the MOU, expects “that all programs and individual measures should have the goal of cost-effectiveness from the total resource, utility, and participant perspective.”<sup>7</sup> Nothing in the MOU commits Idaho Power or Staff to identify a primary test, although in practice the TRC is the focal point. While cost-effectiveness from every perspective is a laudable goal, when determining the prudence of utility decisions ICL recommends the Commission primarily focus on the Utility Cost Test.

When considering the prudence of a utility investment the Commission should focus on whether, from the utility perspective, the benefits outweigh the costs. The UCT test factors in the costs (incentives and administration) and benefits (avoided energy and capacity) controlled by the utility. Since these are the costs and benefits the utility can accurately measure, and that remain constant regardless of the individual participant, this is the correct perspective on which to judge the utility’s decision to invest in the program. This is particularly important in Idaho because current methodologies only consider some non-energy benefits that accrue to participants in some efficiency programs. According to Synapse Energy Economics, a leading expert in the field,

If regulators choose to not account for [non-energy benefits], the [UCT] test is the best test to use in screening energy efficiency programs. This test is relatively transparent, is limited to the impacts on revenue requirements, and ensures that utility customers on average will experience lower utility costs as a result of the efficiency programs. If the [UCT] test is used, regulators must recognize that important benefits are being ignored, particularly low-income benefits and other fuel savings.<sup>8</sup>

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<sup>4</sup> *Id.*, at 3-5.

<sup>5</sup> NAPEE at 3-6.

<sup>6</sup> *Memorandum of Understanding for Prudency Determination of DSM Expenditures*, Order No. 31039, IPC-E-09-09 (April 14, 2010).

<sup>7</sup> MOU at 9.

<sup>8</sup> Synapse Energy Economics, *Best Practices in Energy Efficiency Program Screening* at 7, (July 23, 2012)(available at: <http://www.raonline.org/document/download/id/6149>). The bracketed terms are due to Synapse’s use of “other program impacts” to describe non-energy benefits and calling the Utility Cost Test the Program Administrator Cost test.

Often policymakers focus on the Total Resource Cost test. But this test layers on top of the UCT the incremental costs and benefits to the program participant--something the utility has little control over and that have unique values to each participant. For example, consider a hypothetical program offering a \$200 incentive for purchasing an efficient refrigerator. The participant must pay the incremental cost beyond \$200. Some participants pay cash; others need financing. For those financing, the interest rate and repayment term create a unique incremental participant cost. The benefits side is even more unique, as the TRC should include non-utility incentives and non-energy benefits. Individuals may receive unique incentives from the product seller or through tax laws. Also, individual participants may greatly value, or not, the non-energy benefits. A utility has no accurate way to measure these unique costs and benefits that drive individual decisions to participate. More importantly, this case does not consider whether a customer made a prudent decision to participate in the program; rather whether Idaho Power prudently invested in efficiency programs.

Because it uses the most accurate benefits and costs, and measures from the perspective of the utility whether those benefits outweigh the costs, ICL recommends the Commission determine prudence based primarily on the Utility Cost Test results for each program. The results of the other cost-effectiveness tests help inform whether Idaho Power prudently designed and administered the efficiency program.<sup>9</sup>

## II. Changes to Assumptions Used in the Cost Effectiveness Tests

In the 2014 DSM Report Idaho Power identifies four changes to the assumptions used in the cost effectiveness tests. ICL supports each of these changes as described below.

### *Freezing assumptions on savings at time of budget setting*

Many efficiency programs use assumptions about the energy savings attributable to each measure or program. These types of assumptions are important to determine whether to offer a measure and help establish the appropriate incentive levels. Sometimes these energy saving assumptions change during the course of a program year due to ongoing research or changes to codes and other standards. This continual refinement is important to ensure accurate savings measurement. But changing assumptions in the middle of a program year can result in a measure or program that was cost effective at the start of the year appearing to be less so at the end of the

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<sup>9</sup> For example, a program with a high utility cost test ratio and low total resource cost ratio means the utility could offer a higher incentive for customers while maintaining a cost-effective program.

year. This prospect of shifting the rug from under their feet can cause utilities to have uncertainty in whether to offer efficiency programs and the prospects for cost recovery. Further, prudence should be determined by reviewing the decision based on the facts the utility knew or should have known at the time the decision was made.

Based on previous process evaluations, in 2014 Idaho Power elected to “freeze savings assumptions when the budgets and goals are set for the next calendar year unless code and standard changes or program updates necessitate an immediate need to use updated savings.”<sup>10</sup> As long as the savings assumptions Idaho Power uses are reasonable at the freeze point, it is reasonable to determine prudence based on those assumptions. It is also reasonable to establish program budgets and activities on an annual basis. To require a change to budgets or practices mid-year due to a change in the assumption could be disruptive and burdensome with little counterbalancing benefit to customers. However, if the facts change drastically, this could, on a case-by-case basis, mean the utility should change course mid-year. ICL supports the basic position of freezing assumptions at budget setting with the caveat that drastic mid-year changes will be reviewed on a case-by-case basis. The Energy Efficiency Advisory Group is a good forum to address these mid-year issues.

#### *Line loss factors reduced*

In 2014, Idaho Power reviewed and updated the line loss coefficients last determined in 2012.<sup>11</sup> While the DSM Report does not provide the underlying data or the details of this calculation, ICL in general supports this change because the numbers seem to align with other utilities and data available from the Energy Information Administration. This change is important for two reasons. First, accurately measuring line losses is important to translate savings behind the customer meter to reductions in energy generation and thus determine accurate avoided costs. ICL supports regular reviews of the factors to ensure accuracy. Second, to the extent line losses are actually lower, this is a good thing since losing less electricity is a good thing for everyone’s pocketbooks and air quality.

#### *Conservation Adder*

Based on prior Commission Orders in both Idaho and Oregon, as well as the practices of other utilities in the region, in 2014 Idaho Power applied the Northwest Power Act Conservation

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<sup>10</sup> Idaho Power 2015 DSM Report at 15 – 16.

<sup>11</sup> Idaho Power 2015 DSM Report Supplement 1 at 4-5.

Adder to all efficiency programs.<sup>12</sup> ICL is pleased Idaho Power joined the rest of the region and now includes the conservation adder. This policy decision to apply an adder to capture some of the unquantifiable benefits of energy efficiency has been on the books for decades. ICL recommends the Commission explicitly endorse this practice.

#### *Using 100% Net to Gross factors for all programs*

Previously Idaho Power attempted to determine a net to gross factor for each measure that is intended to capture the energy savings attributable to utility efficiency programs. For 2014, Idaho Power adopted a 100% factor for all programs.<sup>13</sup> ICL supports this change for the same reason Idaho Power proposes – attempting to determine what customers would have done in the without the existence of the efficiency programs is difficult and highly uncertain. Further, the Regional Technical Forum (RTF) savings incorporate much of the same issues addressed by net-to-gross factors issue when calculating the deemed savings. So, for programs using deemed savings, applying a net to gross ratio would be doubling counting, or double discounting to be more accurate. To provide a level of certainty that the assumption of a 100% factor will not cause Idaho power to offer non-cost effective programs, ICL also supports including a sensitivity analysis for each program that shows the minimum ratio needed to remain or become cost-effective. This data enables the Commission and stakeholders to determine if the net to gross assumption alone tips a program either way. The results in the 2014 DSM report shows the net to gross assumption is not a critical turning point for program cost-effectiveness. ICL supports the practice of assuming 100% net to gross and including a sensitivity analysis for each program.

### **III. The Avoided Cost Methodology Undercounts the Benefits of Energy Efficiency**

ICL's comments on Idaho Power's 2013 DSM programs addressed, among other issues, the methodology to calculate avoided costs. In Order 33161, the Commission concluded, "the issues raised by Staff and other parties are significant and warrant a more in-depth review. We direct the parties to do so in the context of the Company's next Integrated Resource Plan."

Since this Order, the Company and stakeholders have addressed some of the issues raised by Staff and other parties in the 2013 DSM prudency review. Specifically, the Energy Efficiency Advisory Group has discussed, and Idaho Power has implemented, some new DSM programs and improvements to the Company's marketing strategy and efforts. This effort appears to be

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<sup>12</sup> Idaho Power 2015 DSM Report Supplement 1 at 5.

<sup>13</sup> Idaho Power 2015 DSM Report Supplement 1 at 5.

ongoing and ICL continues to work through the EEAG to address new and improved program offerings and marketing efforts. However, other issues remain unresolved, including the avoided cost methodology. In the context of the 2015 IRP, Idaho Power held two working groups on DSM issues, which included some preliminary and high-level discussions. But neither these working groups nor the IRP reached a conclusion on these issues—a result ICL is not criticizing here.

ICL submits the IRP not the appropriate forum to resolve these issues. The IRP is the correct forum to gather the data that could be inputs to a more robust and accurate avoided cost calculation. But just as the IRP does not determine the methodology for PURPA avoided costs, this process does not determine the methodology for DSM avoided costs. One reason is that the IRP is a general planning document to determine the preferred portfolio of resources to meet future needs, an issue much broader than avoided costs for DSM. The second reason is that the Commission review of the IRP results in merely an acknowledgment of the “ongoing planning process, not the conclusions or results reached through that process.”<sup>14</sup> The IRP is a process, but determining a robust and accurate methodology to calculate avoided costs is a conclusion.

Accordingly, ICL recommends the Commission encourage Idaho Power, Staff, and stakeholders to address the methodology to calculate avoided costs in a new and separate proceeding. ICL is prepared to offer suggestions to improve the methodology, however we need a commitment by other stakeholders to address and resolve this issue before expending the considerable time and resources required to develop these suggestions. Below ICL provides some examples of the types and scale of changes to the avoided cost methodology that are necessary to create a robust and accurate measurement.

ICL submits the avoided costs for energy efficiency are artificially low because the methodology does not include all relevant avoided costs. The method does account for avoided capacity and energy, as well as some non-energy benefits for a few programs. For capacity costs, Idaho Power uses the levelized fixed cost of a new simple cycle combustion turbine decremented by the Effective Load Carrying Capacity.<sup>15</sup> For energy, Idaho Power uses the AURORA model and the Company’s preferred mix of IRP resources to forecast the “forward marginal electricity price” in five categories.<sup>16</sup>

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<sup>14</sup> Order No. 32980 at 16.

<sup>15</sup> Idaho Power 2013 IRP Appendix C at 75. (ICL refers to the 2013 IRP because the 2015 IRP has yet to be acknowledged.)

<sup>16</sup> *Id.*

This method may or may not result in accurate avoided capacity and energy costs. The point is the Commission and other stakeholders have never formally vetted this methodology nor approved the resulting avoided costs. One simple issue is whether the Summer On-Peak time should extend from the current 8:00 pm to 9:00 pm. In 2011 Idaho Power sought and received approval to apply these changes to the Irrigation Peak Rewards program so that “Idaho Power will be able to reduce loads across the entire peak period.”<sup>17</sup> ICL submits the definition of peak hours should remain consistent across all DSM programs.

Moreover, the current avoided cost methodology excludes other commonly accepted and measurable energy benefits.<sup>18</sup> Below ICL points to two categories as examples:

Reducing customer energy demands can avoid transmission and distribution costs.<sup>19</sup> The Regulatory Assistance Project (RAP) reports these values can range from \$30/kw-yr to \$100/kw-yr for transmission and from \$50/kw-year to \$100/kw-year for distribution costs.<sup>20</sup> ICL acknowledges that each utility, and even specific locations within each utility, will have a unique value for avoided T&D. For example, PacifiCorp calculates a system wide avoided transmission and distribution benefit of \$54/kw-year attributed to energy efficiency measures.<sup>21</sup> ICL submits this number is at least in the ballpark because PacifiCorp is in the same region as Idaho Power and offers a similar suite of efficiency measures. For 2014, ICL recommends the Commission not adopt a specific dollar amount, but rather just recognize the avoided costs, and thus benefits of energy efficiency, are higher than currently calculated. Going forward, ICL recommends the Commission order Idaho Power to work with the EEAG and use the 2015 IRP data to develop T&D avoided cost numbers. While this effort did begin with the 2015 IRP, it is not complete. Recognizing the location dependency of these values, ICL recommends the Commission encourage a method that calculates unique values for the five load centers Idaho Power uses in local area transmission planning.<sup>22</sup>

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<sup>17</sup> Order No 322200 at 9-10, IPC-E-10-46

<sup>18</sup> Synapse Energy Economics, *Best Practices in Energy Efficiency Program Screening* at 4-5, 22-32. Regulatory Assistance Project, *Recognizing the Full Value of Energy Efficiency* (September 2013). Energy and Environmental Economics, *Methodology and Forecast of Long Term Avoided Costs for the Evaluation of California Energy Efficiency Programs*, at 23 – 24 (October 2004)(providing an overview of California PUC inclusion of avoided energy, capacity, transmission, distribution, and environmental compliance cost in overall avoided cost methodology) (available at: [https://ethree.com/CPUC/E3\\_Avoided\\_Costs\\_Final.pdf](https://ethree.com/CPUC/E3_Avoided_Costs_Final.pdf))

<sup>19</sup> Synapse, *Best Practices* at 24 – 26.

<sup>20</sup> RAP, *Recognizing the Full Value of Energy Efficiency* at 39.

<sup>21</sup> PacifiCorp 2015 IRP at 124

<sup>22</sup> Idaho Power 2015 IRP at 62; 2013 IRP at 72.

Reducing energy demand can reduce reliance on volatile gas and wholesale markets, and additionally, suppress prices in the markets by reducing demand.<sup>23</sup> PacifiCorp calculates a value of \$4.02/mwh to reflect part of this risk reduction benefit by comparing the production cost model results of resource portfolios with and without energy efficiency.<sup>24</sup> For 2014 ICL recommends the Commission not adopt a specific value, rather recognize the current avoided costs are higher than currently calculated. Going forward, ICL recommends the Commission encourage Idaho Power to use PacifiCorp's methodology and work with the EEAG to calculate a risk reduction value in the same manner.

#### IV. Programs With Total Resource Cost Results Below 1.0

Idaho Power reports that five programs had Total Resource Cost results less than 1.0.<sup>25</sup> Each program is part of the Residential Portfolio that overall is cost effective with a TRC ratio of 1.51 and a UTC ratio of 1.88. As a member of the EEAG, ICL has been engaged in discussions about these programs over the past year including efforts and ideas to reduce costs and increase benefits. Based on these discussions and other details in the DSM Report, ICL recommends the Commission find prudent Idaho Power's investments in these programs.

##### *Weatherization for Qualified and Eligible Customers*

The DSM report shows these programs were not cost effective in 2014. This is no surprise as these programs traditionally have higher costs than others and participants are not expected to contribute due to their dire financial means. However, these programs are likely the most important in the residential portfolio. As a portion of income, utility bills are a large percentage of the household budget for eligible participants. Reducing utility bills means participants are more likely to be able to actually pay the bills and thereby reduce arrearages, uncollected amounts, and disconnection costs. Utility funding for these programs also program providers to leverage additional federal and state funding there by increasing economic activity in Idaho. Idaho Power continues to work with the Community Partnership Associations to reduce costs and improve savings in these programs. Because of their importance, the continual effort to improve, and the residential portfolio as a whole is cost effective, ICL urges to Commission to deem this invest as prudent.

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<sup>23</sup> RAP at 41-42 (part of a discussion of a larger set of risks avoided by DSM); Synapse at 29 (market price suppression).

<sup>24</sup> PacifiCorp 2015 IRP at 124

<sup>25</sup> Idaho Power 2015 DSM Report at 16 – 17.

### *Ductless Heat Pump Pilot*

The program is cost effective from the perspective of the utility and the participant. While the program did not pass the TRC, this is due to several reasons that Idaho Power continues to work with their partners in the Northwest Ductless Heat Pump Pilot program to address these issues. The Regional Technical Forum is developing additional Non-energy benefits that will improve the TRC results. Because the TRC includes the incremental cost to the participant, reducing the cost to install a ductless heat pump is critical to improving this program. Continuing to offer the program and work with contractors and others to reduce this installation costs is important to further develop this pilot. Ductless Heat Pumps are a potential solution to one of the most inefficient uses of electricity – resistance heating. Because the program is cost effective for the utility and a participant, Idaho Power is continuing to work to improve the program, and the potential for the measure to deliver large savings ICL recommends the Commission deem prudent this investment.

### *Energy Star NW Homes*

This program is cost effective from the utility and participant perspective and only one measure is not cost effective from under the TRC.<sup>26</sup> Because this measure, multifamily homes was the bulk of the projects completed in 2015, the overall program had a TRC less than 1.0. While not completely clear from the DSM report, it appears that NEEA, who administers the program, is making changes for 2015.<sup>27</sup> Because it is cost effective from at least two perspectives, ICL recommends the Commission deem this investment prudent for 2014.

### *See Ya Later Refrigerator*

This program is not cost effective due to the avoided costs resulting from the 2013 IRP.<sup>28</sup> As explained above, the current method undercounts the avoided costs. Further, ICL has participated in the EEAG discussions to revise the program to address cost effectiveness going forward by removing the \$30 incentive for 2015.<sup>29</sup> This is a responsible way to deal with the program because hauling away a refrigerator is a benefit to participants. The DSM report shows steady levels of participation indicating there are plenty of old refrigerators still to remove.<sup>30</sup>

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<sup>26</sup> Idaho Power 2015 DSM Report Supplement 1 at 27 - 28.

<sup>27</sup> Idaho Power 2015 DSM Report at 58.

<sup>28</sup> Idaho Power 2015 DSM Report at 83.

<sup>29</sup> Idaho Power 2015 DSM Report at 84.

<sup>30</sup> Idaho Power 2015 DSM Report at 82.

Importantly, having the program remove and recycle the unit is superior to having someone else remove the unit and possibly resell it so that it continues waste energy on the grid. Because the avoided costs are undervalued, Idaho Power is continually working to improve the program, and the importance of the measure, ICL recommends the Commission deem prudent this investment.

#### V. Conclusion

Idaho Power made substantial improvements to their DSM programs in 2014. The savings levels are on the rebound. Despite reduced avoided costs most programs remain cost effective. Idaho Power is working better with the EEAG to address program issues, consider new offerings, and improve marketing practices. While work remains in all these areas ICL is pleased with the 2014 program year. ICL recommends:

- Focus on the Utility Cost Test results to determine prudence
- Endorse the changed assumptions used in the cost effectiveness tests
- Order Idaho Power to work with stakeholders to improve the avoided cost methodology
- Deem prudent the 2014 DSM spending

Respectfully submitted this 15<sup>th</sup> day of July 2015,



Benjamin J. Otto  
Idaho Conservation League

**CERTIFICATE OF SERVICE**

I hereby certify that on this 15th day of July 2015, I delivered true and correct copies of the foregoing COMMENTS to the following persons via the method of service noted:

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