IDAHO POWER
An IDACORP Company

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December 18, 2015

Public Utility Commission of Oregon
Filing Center
201 High Street SE, Suite 100
P.O. Box 1088
Salem, Oregon 97301

RE: UM 1675 - Idaho Power Company's 2015 Smart Grid Report
Idaho Power's Reply Comments

Attention Filing Center:

Attached for filing is an electronic copy of Idaho Power Company's Reply Comments in the above-referenced matter. The Reply Comments have been served on the parties to this proceeding as indicated in the Certificate of Service.

Informal questions concerning this filing may be directed to me or Regulatory Affairs Analyst, Kristy Patteson, at 208-388-2982 or kpatteson@idahopower.com.

Sincerely,

Lisa D. Nordstrom

Lisa D. Nordstrom

LDN:kkt

Enclosure

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BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

UM 1675

In The Matter of IDAHO POWER COMPANY, 2015 Annual Smart Grid Report.	**IDAHO POWER COMPANY'S REPLY COMMENTS**

I. INTRODUCTION

Idaho Power Company ("Idaho Power" or "Company") respectfully submits these Reply Comments to the Public Utility Commission of Oregon ("Commission"). These Reply Comments respond to comments submitted by the Commission Staff ("Staff"), the Citizens' Utility Board of Oregon ("CUB"), and the Oregon Department of Energy ("ODOE") (collectively "Parties") on November 13, 2015.

Idaho Power requests that the Commission accept the Company's 2015 Smart Grid Report ("Report") as having met the requirements of Order No. 12-158 established in Docket No. UM 1640 and Order No. 15-053 established in Docket No. UM 1675. The Report satisfies the Commission's requirements and responds to the recommendations adopted by the Commission in the 2014 Smart Grid Report proceeding.[1]

II. DISCUSSION

The Company appreciates the comments submitted by the Parties. In these Reply Comments, the Company responds to recommendations made by Staff, CUB, and the ODOE. These Reply Comments also provide more detail and clarification in specific areas where the Parties indicated they would like more information.

[1] *Re Idaho Power Company's 2014 Smart Grid Report*, UM 1675, Order No. 15-053 (February 23, 2015)

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A. Time of Day ("TOD") Pricing Plan

Near the top of page 3 of Staff's Comments, Staff restates Recommendation No. 2 from Order No. 15-053: "Report on the progress of its evaluation and solutions to the obstacles to the implementation of the TOD pricing plans in the 2015 Smart Grid Report."

1. TOD Pricing Plan – Discussion

In its comments, Staff disagrees with the Company's belief that it is important to implement time-of-use ("TOU") rates through seasonal pricing for all residential customers as a foundation before a more sophisticated TOD pricing plan is introduced.[2] Idaho Power continues to believe that exposing customers to seasonal TOU rates is an important first step in the movement toward more complicated, temporal-based pricing.

Idaho Power appreciates Staff's support in its efforts to design fair and appropriate rate structures and agrees that one approach in doing so is providing options to customers in the form of pilots. Idaho Power is not opposed to offering customers multiple rate options. However, there must be an overall reason for those rate options. One of Idaho Power's primary goals for rate design is to try to reflect to customers the cost-of-service as much as possible. This creates fair rates because each customer pays based on the costs they impose on the electrical system.

As reported on page 56 of the *2015 Smart Grid Report*, Idaho Power's variable power supply cost structure indicates that the differential between on-peak time costs and off-peak time costs are smaller than the differentials currently used in the optional residential TOD pilot plan in Idaho. This means that any new TOD rate design would likely result in flatter energy rates and weaker price signals sent to customers to shift energy to off-peak times. In other words, Idaho Power does not currently see a strong cost-based need for a TOD rate offering to Oregon customers at this time. However, Idaho Power is open to working with Staff to investigate a TOD offering in Oregon.

[2] Staff's Comments, p. 3.

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2. TOD Pricing Plan – Deployment Obstacles

In its comments, Staff noted that it "would like to know the extent and full nature of the limitations posed by the existing CR&B system on a full deployment of a TOU program...."[3] The current limitations to offering a full deployment of a TOD program are due to differences between the way the metering and Customer Relationship and Billing ("CR&B") systems are designed and configured. These differences affect the existing integrations between the two systems and the way metering data is passed to CR&B including data aggregation, date/time stamp issues, and timing of meter reads. In addition, new validation and estimation processes would need to be identified and implemented if the Company were to deploy TOD billing on a large scale today, based upon existing integrations between the billing and metering systems. If TOD billing was to be implemented system-wide, a significant manual effort would be required on a daily basis. Lastly, there is a small percentage of the Company's meters where it is not cost effective to employ advanced metering infrastructure ("AMI"), and therefore, some meters do not have AMI capability.

B. <u>Quantification of Smart Grid Benefits</u>

In its response to Staff's Recommendation Nos. 1[4] and 3,[5] the Company compiled the summary tables in Appendices D and E of the *2015 Smart Grid Report*. Appendix D responds to Staff's Recommendation No. 1 and Appendix E responds to Staff's Recommendation No. 3. Appendix E presents categories of benefits expected from each smart grid project and when these benefits are expected to be realized by customers.

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[3] *Id.*

[4] Staff's Recommendation No. 1 adopted in Order No. 15-053 requested Idaho Power "provide a summarizing table of all research, development, and pilot projects, their respective descriptions, expected benefits and costs in future smart grid reports."

[5] Staff's Recommendation No. 3 adopted in Order No. 15-053 requested Idaho Power "quantify the benefits expected from all smart grid programs and identify when the benefits will flow to its customers."

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However, Staff, in its comments, indicated that it would like the Company to provide a "sufficient explanation for why Appendix E contains no quantitative data."[6] In preparation of Appendices D and E, the Company looked for the best possible way to report on all smart grid projects in a consistent manner. For many projects, quantifiable benefits were not available and the Company chose instead to report the kind of benefits expected. For future smart grid reports, the Company will evaluate the data available for each of the smart grid projects and include, if possible, quantifiable benefits. This quantification may be in the form of dollars, of metrics achieved, or some other values.

C. Transmission Situational Awareness

1. Methodology for Installing Phasor Measurement Units ("PMUs")

Staff expressed a desire for the Company to provide its methodology for "how, where, and when the Company determines additional PMUs are installed."[7] The initial plan for deploying PMUs is based on having visibility across Idaho Power's 230 kV and above system. The plan is to eventually have a PMU at each one of these transmission stations. Additionally, there is a parallel effort to install PMUs at all of Idaho Power's 20 MW and above power plants; this will provide disturbance data that Idaho Power can use to validate model parameters for plant/generator control equipment to both comply with North American Electric Reliability Council requirements and to improve the generator dynamic models used for Idaho Power's study work (i.e., when simulating system performance to potential disturbances). The priority at this point is to install the six PMUs identified in the following table for the Transmission Situational Awareness Oscillation Monitoring Pilot and generator model validation program.

[6] Staff's Comments, p. 4.

[7] *Id.*

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Table: Installation Sites Identified for Additional PMUs

Location	Installation Date	Justification
Boise Bench	By July 2016	Centrally located
Bennet Mountain	By May 2017	Power plant above 20 MW
Danskin	By May 2017	Power plant above 20 MW
North Powder	By May 2017	Power plant above 20 MW
CJ Strike	By May 2017	Power plant above 20 MW
American Falls	By May 2017	Power plant above 20 MW

The Company also participates in an ODOE project that is led by Idaho Power's regional coordinator that will deliver a new voltage stability tool and a linear state estimator ("LSE"). An observability study will be provided identifying existing measurement observability boundaries and desired PMU locations to provide improved observability to the LSE. One of the deliverables of this project will document the methodology used in performing the observability study. The Company expects to have this document complete in 2016.

2. Various Applications for Data Streaming and Archiving

Staff noted that it would like the Company to explain what is meant by "various applications" when the Company discusses data streaming and archiving.[8] The various applications for data streaming and archiving are applications related to the use of PMU data. These will include the following:

- Region of Stability Existence - the Company will acquire both an on-line and an off-line version.
- Linear State Estimator – This will help validate PMU data as well as provide a PMU based power flow solution of the system.
- Real-time voltage stability monitoring and control ("RT-VSMAC") – This is a new project currently under investigation with the Engineering Science and Innovation Center at Washington State University.

[8] *Id.*

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- Model parameter validation for generator (conventional and renewable) dynamic models.

3. Voltage Stability Monitoring Pilot

Regarding the Company's voltage stability monitoring system pilot, Staff expressed an interest in understanding "what additional PMUs are needed in order for the Company to revisit the project ...."[9] Because of the methodology utilized in the original voltage stability monitoring pilot project, it was determined that additional PMUs would be needed in order for the tool to operate correctly as designed. For example, the algorithm calls for remote and local PMU measurements on all of the lines connecting to a particular station (bus) when estimating a voltage stability margin at that bus. At this time, this requirement is not met in any of the Company's stations and its correct implementation will require the addition of a significant number of PMUs. For example, approximately 15 additional PMUs would be required for visibility and adequate implementation of the tool at five substations. Although this might be possible in future years as the PMU population grows, the Company believes that in the meantime, if the RT-VSMAC methodology proves effective, then Idaho Power should be able to make use of existing PMUs to monitor voltage stability at their associated buses.

4. Peak Reliability Application Integration

In its comments, CUB wanted to know how the Company is utilizing Transmission Situational Awareness Peak Reliability Coordinator Hosted Advanced Application.[10] The Peak Reliability Hosted Advanced Application ("HAA") is currently used for real-time operations to verify that switching operations do not result in unacceptable system performance and for Real Time Contingency Analysis. Operators also use HAA to test

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[9] *Id.*

[10] CUB's Comments, p. 4.

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(model) and verify that planned mitigation actions, for specific outage scenarios, are effective in resolving potential violations.

Idaho Power's System Planning department uses HAA for some of its next-day study work. If a future scenario not previously studied is planned for the next day or within the three-month operations horizon, then System Planning will determine, based on a state estimator case procured through the HAA, how secure the proposed state is and whether de-rates or other mitigation actions might be necessary. The Company expects to make use of HAA cases, for operational planning, on a more regular basis as new tools are developed and/or acquired.

In its comments, Staff expressed that it "would like to know any planned integration the Company has for the PR application with either conservation voltage reduction ("CVR") or a distribution management system."[11] At this time, the Company does not have any plans to integrate the HAA with CVR or the distribution management system. The HAA is being used on Idaho Power's transmission system, whereas CVR and the distribution management system are implemented on the distribution system.

D. Advanced Metering Infrastructure ("AMI")

The AMI system provides the foundation for Idaho Power's smart grid. Many of the current smart grid projects exist because the Company has been able to leverage the AMI system to provide additional benefits. Staff inquired about the Company's ability to obtain reliability data from its installed smart meters.[12] The Company is not able to obtain any reliability data from its AMI meters. The AMI meters are used to detect single-phase outages on three-phase circuits, scope reported outages, and verify restoration, but they do not provide reliability data. Staff also asked if the Company is evaluating upgrading to

[11]Staff's Comments, p. 4.

[12]Staff's Comments, p. 5.

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AMI with enhanced functionality.[13] While the Company continues to evaluate the potential of the current AMI system for providing additional services, it is not currently evaluating upgrading the existing AMI system.

The quantification of smart grid benefits has proved to be challenging given that the benefits of some smart grid projects are more qualitative in nature. There are quantifiable benefits that resulted from the AMI system itself, most of them being a reduction in operation and maintenance expenses. The implementation of automated connect/disconnect capability in Idaho is a specific example of a smart grid project that leveraged the AMI system and has quantifiable benefits. At the time that the *2015 Smart Grid Report* was written, it was too preliminary to report cost savings for the automated connect/disconnect project. The Company deployed 14,500 remote connect/disconnect meters on sites with high connect/disconnect activity eliminating the need to dispatch field personnel to perform the work; Idaho Power expects to receive quantifiable savings over the long-term of about $45 each time the devices are used to connect or disconnect service. The remote connect/disconnect functionality started in Idaho on September 15, 2015. This capability has not been activated in Oregon due to increased customer contact requirements when remotely disconnecting service. Idaho Power has not yet determined how it can implement remote connect/disconnect capabilities and still comply with OAR 860-021-0405(9)(b)(B) given the capability of its current systems.

E. Behavioral Demand Response

In its comments, Staff suggests that Idaho Power implement a small-scale behavioral demand response program.[14] Two of Idaho Power's three demand response programs have a behavioral component. Under the Flex Peak Program,[15] all load

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[13] *Id.*

[14] *Id.*

[15] Oregon tariff Schedule No.76.

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reduction is based on the participants' behavior, none of the load reduction is under direct load control. Under the Irrigation Peak Rewards Program,[16] load reduction under Option 3 is based on participant behavior by turning off the pumps that they choose with a goal of reducing their load by a nominated amount. Idaho Power is operating and promoting its demand response programs in compliance with the settlement agreement signed by Staff, Idaho Power, and other stakeholders in Docket UM 1653 and approved by the Commission in Order No. 13-482 and Oregon Tariff Schedules 23, 74, and 76. As stated by the Commission: "In short, the stipulation maintains current DR programs even in years when Idaho Power does not anticipate peak-hour capacity deficits, so that the program infrastructure will be ready when capacity deficits return."[17] Idaho Power does not plan to offer any behavioral demand response programs in addition to the programs the Company currently operates.

F. Direct Load Control

In its comments, Staff asked the Company to discuss what opportunities exist that could facilitate increased participation and performance in its three demand response programs.[18] Idaho Power is operating and promoting its demand response programs in compliance with the settlement agreement signed by Staff, Idaho Power, and other stakeholders in Docket No. UM 1653 and approved by the Commission in Order No. 13-482. Under this settlement agreement, the Company is attempting to maintain participation at 2012 level within the terms of the agreement.[19] The discussions with the Energy Efficiency Advisory Group ("EEAG") have been exploring ways in which participation levels may be maintained, not increased.

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[16]Oregon tariff Schedule No. 23.

[17]*In The Matter of Idaho Power Company, Staff Evaluation of the Demand Response Programs*, Case No. UM 1653, Order No. 13-482, p. 3. (December 19, 2013).

[18]Staff's Comments, p. 6.

[19]Order No. 13-482, Settlement Agreement, p. 5.

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Idaho Power assesses its need for demand response resources through the Integrated Resource Planning process. In the 2015 Integrated Resource Plan ("IRP"), the Peak-Hour Load and Resource Balance analysis does not show any significant resource deficit until 2026.[20] The Load and Resource Balance analysis is based on the assumption of extreme conditions, the coincidence of 95th percentile loads with 90th percentile water conditions. Therefore, Idaho Power is not currently attempting to increase participation in the Company's three demand response programs.

G. myAccount

Under the myAccount web features, Savings Center, Idaho Power offers savings opportunities based on a customer's individual home attributes and energy use. Staff inquired about the Company's myAccount web features and whether the Company could utilize myAccount to suggest possible behavioral modifications or energy efficiency upgrades.[21] Using the Savings Center feature, Idaho Power offers common ways to save energy along with an estimate of their costs. Some examples are weatherization, control air leakage, install efficient shower heads, use compact fluorescent or LED lamps in high use lamps or fixtures, lower thermostat settings, and seal leaks in ducts.

H. Customer Data

In its comments, Staff asked if the Company is providing customer usage data to third-parties so that they can perform analysis for the Company.[22] Idaho Power has contracted with a third-party to provide individual home energy usage information through myAccount Savings Center. The Savings Center provides a comparison between an individual's home energy usage and an average home in Idaho Power's service area. It also provides energy savings recommendations and estimated costs. Protecting customer

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[20] *Idaho Power Company's 2015 Integrated Resouce Plan, Appendix C*, p. 61 (Docket No. LC 63).

[21] Staff's Comments, p. 6.

[22] *Id.*

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information is always a high priority concern at Idaho Power. Idaho Power requires confidentiality and nondisclosure agreements with all vendors with whom it enters into discussions to perform services involving the disclosure of Idaho Power's customer information. When a vendor is selected, Idaho Power's contract with the vendor requires the vendor to maintain strict security protocols to ensure the confidentiality and security of data.

I. New Online Tool Shows Resources Used for Electrical Generation

The ODOE notes that Idaho Power is at the forefront in making information available about generation resources and requests that the Company consider providing hourly generation versus demand information at a customer level.[23] Idaho Power appreciates ODOE's comments. Idaho Power is currently making changes to the myAccount landing page that are scheduled to go into production in January of 2016. The new myAccount landing page will have a similar look and feel to Idaho Power's mobile offering, including global icon based navigation for the most popular functions customers are performing within myAccount. Based on customer research, Idaho Power believes the new icon based navigation will encourage more customers to become engaged, and educated, about their energy consumption. Idaho Power will take ODOE's suggestions into consideration for further enhancements to myAccount.

J. Meter Data Management System

On page 34 of the *2015 Smart Grid Report*, the Company stated that Idaho Power had upgraded its Meter Data Management System on June 17, 2015. In its comments, Staff indicated that it would like more information about the customer billing and pricing options that the Meter Data Management System upgrade will provide.[24] The upgrade will provide enhanced validation for net metering and improved automated data validation of

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[23] ODOE's Comments, p. 3.

[24] Staff's Comments, p. 6.

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hourly data that will support expansion of TOU rates based on hourly energy use data. There are currently approximately 1,500 active residential customers on Idaho Power's voluntary TOD pilot plan in Idaho and roughly 30,000 residential and irrigation customers on direct load control demand-side management ("DSM") through AMI.

K. Substation Fiber-Based Protection and Control Pilot

As described on pages 39-40 of it *2015 Smart Grid Report*, Idaho Power will use the substation fiber-based protection and control pilot as a method to evaluate this technology and gain experience utilizing these new techniques for power system protection and control. This pilot will operate in parallel with the more traditional "tried and true" protection system but will not actually be controlling protection devices. Any protective actions taken will be simulated, time stamped, and logged. This will allow Idaho Power to compare the fiber-based and traditional systems side by side and to develop comfort and confidence in this new technology.

In its comments, Staff asked if the Company "plans to retrofit existing substations if the fiber optic technology proves to be successful."[25] Idaho Power does not plan to retrofit existing stations based on a positive outcome at this time, but may consider using this technology in future stations. Retrofitting existing stations may be an option in the future, but Idaho Power would first need to more thoroughly review the costs and benefits to its customers of doing so.

Staff also asked if Idaho Power will have an opportunity to monetize its investments due to the Company's direct role in developing this new technology.[26] The technology that will be used for this pilot is based on portions of the International Electrotechnical Commission 61850 standard. No intellectual property is expected to come from this project. Consequently, there will most likely not be opportunities to monetize this

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[25] Staff's Comments, p. 7.

[26] *Id.*

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investment for Idaho Power. However, Idaho Power anticipates that the pilot project will further develop and prove this technology, paving the way for future deployments that could save money and offer additional protection, control features, and flexibility.

L. Automated Volt/VAr Management System ("VVMS") Pilot

In its comments, Staff stated that it "would like clarification to whether CVR and VVMS compatibility is still an option."[27] Idaho Power still considers that CVR could be part of a VVMS. Indeed, lessons being learned through the CVR Enhancements Project are directly applicable to Volt/VAr control and if done properly, they are one and the same.

A recently funded project for 2016 titled the InterTechnology Control Project will be used to help determine a strategy for coordinating the actions of distribution system voltage control elements (load tap changers, voltage regulators, and capacitor banks) as a lead-up to the VVMS pilot. The 2016 project will install controlled devices on a single feeder or set of feeders fed from one distribution transformer and different strategies will be applied that can be used for optimizing the Volt/VAr characteristics. An outcome of this one-year project will be a coordinated Volt/VAr management strategy that can be used as a basis for developing a system-wide Volt/VAr management strategy. Idaho Power is in the process of determining which feeder or feeders will be involved.

In the *2015 Smart Grid Report*, the Company stated on page 41 that the VVMS pilot had been deferred to at least 2016 to give Idaho Power the opportunity to determine a general Volt/VAr management strategy. The InterTechnology Control Pilot will serve to determine this strategy. Staff inquired about where the pilot would be implemented.[28] Because equipment will already be installed, it is likely that the feeder(s) chosen for the InterTechnology Control Project will serve as a location for the VVMS pilot now expected in 2017 or 2018.

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[27] *Id.*

[28] *Id.*

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The VVMS will replace Idaho Power's aging Automated Capacitor Control ("ACC") system. Because it is not fiscally feasible to replace the ACC system all at once, the VVMS will be staged in across the service area once the pilot is complete and a vendor supported system is in place. While Staff expressed curiosity about the criteria for deployment beyond a pilot,[29] the criteria for deployment will not be determined until the results from the VVMS pilot have been analyzed and deployment costs estimated.

M. Solar End-of-Feeder Project

The purpose of the solar end-of-feeder project is to mitigate low voltage near the end of the feeder. In its comments, Staff asked the Company to explain "the Company's criteria and methodology for determining both physical and economic feasibility."[30] The Company's criteria and methodology for determining feasibility are listed in the following table.

Table: Criteria and Methodology of Determining Feasibility

Criteria	Methodology
The feeder has experienced low voltage conditions outside of the 5 percent nominal range.	Research and collect data using the Company's AMI system.
The feeder must be summer peaking; the peak feeder load occurs during the summer months.	Analysis of the feeder's historical PI (load) data.
Low voltage can be mitigated using an appropriately sized photovoltaic ("PV") installation.	The maximum allowable PV installation is calculated on a case-by-case basis using the total budget allocated for the project. Software tools are used to model and validate the proposed solution. Model validation is performed using field measurements.
The feeder must have a suitable load profile.	The preferred load profile has a peak in the afternoon hours between noon and 4 pm. This is evaluated using historical load data.
Installation of the project must be cost effective.	The Company evaluates the project against alternative methods for solving low voltage such as regulators,

[29] *Id.*

[30] *Id.*

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Table: Criteria and Methodology of Determining Feasibility

Criteria	Methodology
	capacitors, and reconductoring. Costs for alternative methods are calculated using historical project data.
Preference is given to site locations that have System Control & Data Acquisition ("SCADA") available at the substation.	The availability of communications (SCADA) at the substation allow for cost effective data gathering and future analysis.
There must be a physical location where PV can be installed in the desired location.	Evaluated using the Company's Arc geographical information system tool.

As stated on page 45 of the *2015 Smart Grid Report*, if the project is determined to be physically and economically feasible, a pilot system will be constructed and monitored.

N. Customer Relationship Management

In its comments, CUB noted that the Customer Relationship Management ("CRM") project was not updated from the *2014 Smart Grid Report* nor was the Integrated Demand Response Resource Control project.[31] Both the CRM and Integrated Demand Response Resource Control interface are complex information technology ("IT") projects. The CRM project is a component of Idaho Power's CR&B system and in order to integrate the CRM module, an enhancement package must be installed in the CR&B system. The CR&B upgrade is scheduled for 2016 with the integration of the CRM tentatively scheduled for late 2016 to early 2017 contingent upon IT resource availability. The first phase of the Integrated Demand Response Resource Control interface should be available for the 2016 demand response season. Idaho Power envisions future functionality; ongoing design and structure will be an iterative process. No final completion date has been estimated.

CUB encouraged Idaho Power to provide updated information for all smart grid projects even if the Company is still researching areas of development for these projects.[32] Idaho Power appreciates CUB's comments and will provide an update for all future smart grid projects within the report, even if the update is brief.

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[31] CUB's Comments, pp. 4-5.

[32] CUB Comments, p. 5.

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The ODOE, in its comments, recommended that the Company use CRM to target potential demand response and voluntary TOU rate customers.[33] Idaho Power does not use the CRM system to identify potential demand response and voluntary TOU rate customers because the Company does not currently have a CRM system in place.

O. PV and Feeder Peak Demand Alignment Pilot

Staffs comments expressed a desire to know how the Company plans to utilize data from the PV and feeder peak demand alignment pilot.[34] An analyzed data set has already been implemented by Idaho Power in modeling software to perform generation interconnection studies of utility-scale PV systems. Other applications of the data include assisting with Company resource planning and collaborating with Sandia National Laboratories for their variability and Global Horizontal Irradiance and Plane of Array conversion studies.

Idaho Power has written a paper titled *A Method for Determining the Relationship between Solar Irradiance and Distribution Feeder Peak Loading* which has been accepted for the 2016 Institute of Electrical and Electronics Engineers Power Engineering Society Transmission & Distribution Conference & Exposition. The paper details the analysis results of the data set and will be presented in May 2016 at the conference in Dallas, Texas. This paper will be included in the *2016 Smart Grid Report.*

Staff also expressed a desire to know if the Company could work with future interested PV customers and/or third parties to guide installations.[35] Although there are not any formal plans in place at this time, the data could be used in recommending preferred PV orientations for fixed direction systems that would best support reducing the

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[33] ODOE Comments pp. 3-4.

[34] Staff Comments, p. 7.

[35] *Id.*

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effects of feeder peak loads. The data and findings could also be used in solar end-of-feeder pilot projects where fixed panel orientation is used.

P. Customer Satisfaction and Engagement

Idaho Power has conducted customer satisfaction quarterly surveys with Burke, Inc. since 1995. Staff commented that it would like to know what areas of improvement have been identified in the Company's assessment of the customer satisfaction and engagement survey results.[36] In assessing customer satisfaction improvement opportunities Idaho Power looks primarily for opportunities that can be implemented across multiple functional areas of the Company because that is the best way to impact overall customer satisfaction. In 2014, Idaho Power identified the opportunity of establishing itself as an energy advisor that customers can go to for energy-related issues and questions. Customer satisfaction results do not typically change rapidly so it takes a number of measurement periods for results to reflect improvements implemented by the Company. Idaho Power continues to focus on improvement opportunities until they no longer are identified as dissatisfiers. Additionally in 2014, Idaho Power identified the opportunity to inform and educate customers on the Company's efforts to consider all customers in planning for future energy needs. Both of these improvement opportunities identified in 2014 continue to be addressed by increased communications with customers through idahopower.com, presentations, in-person visits, newsletters, and informative advertising. Addressing these improvement opportunities is targeted slightly differently dependent on unique customer segments.

Each quarterly survey identifies areas of improvement for customer satisfaction by sector. Idaho Power assesses these recommendations and when appropriate, develops a plan of action to address these opportunities. Idaho Power also subscribes to two J.D. Power and Associates' customer satisfaction studies - the residential and the business

[36] *Id.*

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studies. These studies compare Idaho Power to other utilities based on size, geographic location, and ownership. Through these studies, Idaho Power and J.D. Power and Associates identify areas of opportunity for improvement. On an ongoing basis, Idaho Power's customer satisfaction has been very consistent with slight movements over time.

In its comments, Staff asked the Company to explain in what ways it is utilizing other utilities' outreach and education efforts in order to enhance customer participation in Company DSM programs.[37] Idaho Power has memberships in several national organizations to capture other utilities' outreach and education efforts in order to enhance customer participation in the Company's DSM programs. Idaho Power subscribes to Esource, J.D. Power and Associates, Chartwell, and are members of Consortium for Energy Efficiency, American Council for an Energy Efficient Economy, the Regional Technical Forum, Association of Energy Services Professionals and other smaller professional organizations. Through these organizations and by regularly attending conferences and meetings, Idaho Power monitors activities from other utilities throughout the country. Idaho Power also has regular meetings with the EEAG where discussions are held and ideas are shared about what other utilities are doing in the area of customer outreach and education efforts. In addition to these efforts, Idaho Power has developed several techniques and channels for customer outreach and education including the Residential Energy Efficiency Education Initiative, the Student Energy Efficiency Kit ("SEEK") Program, the Easy Savings Program, and the Commercial Education Initiative. The following is a brief overview of each:

- The Residential Energy Efficiency Education Initiative promotes energy efficiency to the residential sector. This is achieved by creating and delivering educational materials and programs that result in wise and informed choices regarding energy use and increase Idaho Power's energy efficiency program participation.

[37] *Id.*

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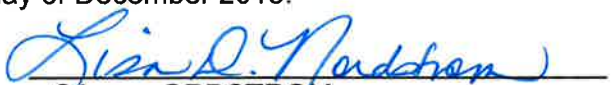
- The SEEK program provides fourth through sixth grade students in schools in Idaho Power's service area with quality, age-appropriate instruction regarding the wise use of electricity. Each student that participates receives an energy efficiency kit. The products in the kit are selected specifically to encourage energy savings at home and engage families in activities that support and reinforce the concepts taught at school. Idaho Power is working with Staff in a filing to offer SEEK to Oregon customers.
- The Easy Savings Program has three main desired outcomes. They are to educate recipients about saving energy in their homes by using energy wisely, allow hands-on experience while installing low-cost measures, and reduce the energy burden for energy assistance/Low Income Home Energy Assistance Program applicants.
- The Commercial Education Initiative informs and educates commercial customers regarding energy efficiency, increases awareness of and participation in existing commercial energy efficiency and demand response programs, and enhances customer satisfaction regarding the Company's energy efficiency initiatives.

Please refer to the *Demand-Side Management 2014 Annual Report*, pages 147-153, for more details on each of these programs.

III. CONCLUSION

The Company appreciates the opportunity to file these comments and respond to questions raised by Staff, CUB, and ODOE. The Company requests that the Commission accept its *2015 Smart Grid Report* as having met the requirements of Order Nos. 12-158 and 15-053 established in Docket No. UM 1675.

Respectfully submitted this 18th day of December 2015.



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Idaho Power Company
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Boise, ID 83702

CERTIFICATE OF SERVICE

UM 1675

I hereby certify that on December 18, 2015, I served a true and correct copy of IDAHO POWER COMPANY'S REPLY COMMENTS upon the following named parties by the method indicated below, and addressed to the following:

OPUC Dockets
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