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November 16, 2010

Via Electronic Filing and U.S. Mail

Oregon Public Utility Commission
Attention: Filing Center
550 Capitol Street NE, #215
PO Box 2148
Salem OR 97308-2148

**Re: UM 1460 – DEVELOPMENT OF SMART GRID OBJECTIVES AND
ACTION ITEMS FOR 2010-2014**

Attention Filing Center:

Enclosed for filing in UM 1460 are an original and five copies of:

Opening Comments of Portland General Electric Company

This document is being filed by electronic mail with the Filing Center. An extra copy of the cover letter is enclosed. Please date stamp the extra copy and return to me in the envelope provided.

This document is being served upon the UM 1460 service list.

Thank you in advance for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Dahlgren", written in a cursive style.

Randall J. Dahlgren
Director, Regulatory Policy & Affairs

RJD:smc
Enclosures
cc: Service List-UM 1460

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON
UM 1460**

In the Matter of

PUBLIC UTILITY COMMISSION OF
OREGON

Development of Smart Grid Objectives and
Action Items for 2010-2014.

**Opening Comments of Portland General
Electric Company**

PGE appreciates the OPUC Staff and Commission's initiative to expand the awareness of and the consequent enhanced development of smart grid objectives for the near and longer term. We would agree that a public plan that is a collaborative effort among the various stakeholders can be an effective way for the utility to receive clarification and guidance in developing goals for smart grid endeavors. Our understanding is that the initial smart grid report and subsequent workshops should not be a significant burden upon the utility because the report will essentially present work and research that the utility is either already doing or intends to do.

Naturally, the smart grid process will detail the specific projects or initiatives described in an action plan. However, the details of smart grid are not well understood and its meaning continues to evolve. Thus, we believe that a significant part of the smart grid process should focus on education and on clearly defining objectives. The main purpose of our comments in this docket is to create expectations about the detail and scope that will be included in the first Smart Grid Process report, which utilities would file in the second half of 2011.

The remainder of our comments is divided into three sections: The first section draws comparisons between the telecommunications smart grid and the electric smart grid, recognizing similarities between the two and introducing possible issues that occurred in the changing of the telecommunications industry that may similarly affect the electric industry as a result of smart grid initiatives. The second section comments on specific sections of Staff's straw proposal. Finally, the last section summarizes PGE's comments regarding smart grid and the UM 1460 smart grid initiative.

We note that part of the challenge of smart grid is defining it in such a way that stakeholders can agree upon its meaning. It means different things to different people. Our working definition for smart grid is the leveraging of technology and communication to automate generation, transmission, and distribution systems with one or more of the following goals:

- Improving system reliability,
- Improving system asset utilization,
- Lowering operating costs, and/or
- Providing consumers with alternatives to reduce their carbon footprint.

Although we mention the generation and transmission systems, PGE's smart grid development focuses on the distribution system because automation has been a standard part of the bulk power system for decades. This has not been true in the distribution system, where the costs of adding communication easily offset the benefit of an improvement process. Recent advances in communication technology, however, have significantly lowered some recurring costs. Technological improvement opens the door to reexamine automation of distribution work processes.

I. Comparisons to the Smart Telecommunications Grid

Smart grid is essentially replacing slow and manual business processes and operations in generation, transmission, and distribution systems with relatively fast and automated business processes and operational transactions. The changes and challenges utilities face with smart grid have occurred in other industries; the most relevant example is the telecommunications industry.

Creation of the smart *telecommunication* grid began approximately 60 years ago and consisted of three phases. The first phase, from 1938 to 1978, replaced switch board operators with mechanical relay switches. The second phase, from 1947 to 1965, began by replacing manual switches with digital ones.

The third phase of the telecom grid transformation was the offering of customer-interactive services, such as call waiting. This type of interactive service did not become commercially viable until 1984; and it is only within the last decade or so that telecom customers have truly been able to fully utilize the interactive capabilities of the smart telecom grid.

Why did it take AT&T approximately 60 years to implement a smart telecom grid? There are three reasons for this: cost effectiveness, reliability, and, most importantly, the need for new business processes to support the new technology. Much in the same way, the electric smart grid is about changing processes much more than it is about implementing technology. Automating business processes that affect PGE's 800,000 customers is complicated and should not be rushed or errors and cost overruns will occur. Replacing a manual process with an automated process is difficult and requires large time

commitments from subject matter experts who would otherwise be fully occupied with their regular job duties.

Another similarity with telecom, that current stakeholders would like to avoid, is the risk of obsolescence. An example of this is MCI's entrance into the telecommunication competitive market. MCI introduced new microwave and satellite technology that allowed their customers to completely bypass AT&T's network. This is a good example of innovation creating an obsolescence risk and contributing to billions of dollars of write-offs for telecoms. PGE believes that the frequent updating of the SGP, taking into account obsolescence, will help minimize the potential for this type of risk.

II. Comments Regarding Staff's Straw Proposal

General Comments

At the November 3, 2010 workshop, participants discussed their expectations for the utilities' first SGP filings. Our understanding is that the first filing would set forth the utility's current state of smart grid development, describing the current set of programs and their status, as well as current plans for smart grid development. Participants encouraged the utilities to engage them early on in the process, if not before the SGP filings. PGE agrees that participation by interested parties, much like the IRP process, can be beneficial. However, as more process is required, more resources are likely to also be required. Should the Commission decisions or policies require the utility to expend more resources and time on additional smart grid projects, then the utility may have to seek recovery in order to comply.

Straw Proposal Section I (B)

PGE believes all of the individual issues identified in this section would benefit from public workshops with all stakeholders. Workshops would provide more discussion and, thus, better understanding and evaluation of utility-specific smart grid proposals. These workshops could be held early next year, well in advance of plan implementation, and would further the educational and information process.

Access, Control, and Use of Customer Information (#1, Page 2)

There are many kinds of “data” generated from customer activities related to PGE’s services. For example, PGE collects and stores customer-specific data when the customer opens an account with PGE and establishes a relationship with us. These data include the customer’s name, address, phone number, place of employment, heat source, and other relevant information. PGE also creates and stores usage data (e.g., kilowatt hours of electricity used in a particular time period, demand levels, etc.) over time as the customer remains on the system. PGE also collects and stores financial data (e.g., bank account numbers if paying by autopay, payment history, credit information, etc.) over time. Finally, PGE collects and stores data related to choices of programs or services (e.g., weatherization, participation in ETO programs, etc.). These types of customer data are kept by PGE for one main reason – it helps PGE provide, and receive payment for, its services. However, although PGE captures the data, in effect data is really shared – both parties have an interest in it and play a part in its creation and/or usage.

PGE attempts to secure customer data through a variety of means, including physical barriers, IT security, training of its personnel, and other means. There currently are some

legal requirements in place on both the state and federal level that relate to security of data and what happens when there is a breach of security, but these requirements are lacking in detail of exactly how this security needs to be achieved. Utilities should be permitted to work within reasonable budget and labor constraints to develop appropriate security measures that are in compliance with current and/or anticipated law. At the same time, the Commission should acknowledge that it is both reasonable and prudent for the utilities to incur costs in these areas. It is likely that these expenditures will need to be rolled out over time, so a reasonable plan for putting various measures in place that sets both time goals and priorities would likely be the best approach.

In addition to security measures to protect the data, the Commission should consider policies and procedures that would frame expectations for how different types of data are used, for what purpose, and with whom customer data might be shared, both from the customer side and the utility side. PGE believes that these issues, however, are more properly discussed and resolved through a rulemaking process, rather than as part of a Smart Grid Plan. While the Commission is well situated to address these types of issues, and probably has the authority to do so under current law, the policies and procedures are best resolved in a separate docket.

Treatment of Obsolescence Risk (#3, Page 2)

Obsolescence risk is an area of significant concern for utilities because we invest today in many kinds of distribution equipment that have very long lives. Because competitive forces and technological advances in the smart grid sector may have future impacts on a utility's ability to recover its fixed costs, PGE agrees that obsolescence can

become a significant risk and the SGP should include a discussion regarding how to handle this risk when caused by the introduction of new technology. As with PGE's AMI deployment, accelerated depreciation of assets may be necessary. PGE suggests that obsolescence due to smart grid may be a topic for a utility's depreciation study.

PGE also suggests that this section be broadened beyond obsolescence risk to other types of risk. As an example, if smart grid initiatives are required by state or federal standards, all utility customers, both public and private, should bear that risk equally. In previous statewide initiatives (such as renewable portfolio standards), customers of public utility districts and municipalities have not been required to implement initiatives on a relatively equal scale as those of the investor owned utilities (IOUs). This increases the costs to customers of IOUs and puts business customers at a competitive disadvantage.

Utility Energy Management in Customer's Home or Business (#4, Page 3)

PGE does not agree with the straw proposal that it would not permit utilities to recover in rates expenses related to participation in the market for energy use management hardware or software. While markets for such hardware or software, as well as for services related to energy use management, are still developing, the Division 38 Code of Conduct rules already provide reasonable guidelines for a utility's participation in such markets.¹ Customers would benefit from the provision of such services by the utility because it would increase the more efficient use of energy that is

¹ Division 38, Direct Access Regulation sets out a number of consumer protections related to the utility's potential market power and competitive advantage.

likely to result from customers' use of this kind of hardware or software, and also would increase understanding of what these tools can and cannot do.

In addition to the issues related to competition in these sorts of services, there is an issue related to third party access to data that arises after utility customers provide their passwords and account numbers to a third party for energy management purposes. The Commission should be aware that with competitive markets in this area, customers may have an expectation that utilities are able to block and/or limit certain parts of the data although the utilities may not possess that capability. There are costs associated with the development of this capability that should be born by those who would benefit. In addition, there are risks inherent in third-party access to data within the utility's system, such as the risk of identity theft and cyberstalking that should also be addressed, if the development of a robust market for these services is desired.

Section II.

These subsections are constructive as a guide to the content to be included in the SGP. However, the workshop discussions about an SGP being less onerous than an IRP and the actual words used in the straw proposal are not aligned. In general, PGE will attempt to fulfill the intent of the straw proposal, but the details of our SGP will fall short of the current wording. For example, PGE intends to support the introduction of smart appliances (when they become available to customers) in the next 5 years using rebates at a level that is lower than the cost PGE would spend to capture peak load with a peaking power plant identified in the IRP. However, we do not know if these early smart appliances will only be available in the high end models, what their incremental cost will

be, etc. We will probably not have enough information to include all relevant details in our first SGP as suggested by the straw proposal.

Timeframes for the SGP (section B., pages 3-4)

PGE agrees that a 20-year planning horizon can be helpful by providing a broad overview and forecast of what may occur in the smart grid sector. However, years 6 through 20 of the SGP will at the initial stage contain only a reflection of the utility's broad *intentions* regarding smart grid development, with few details. These intentions, based on assumptions that are made today, cannot effectively predict future changes in standards, technology or public policy. Consequently, the Commission must be careful to ensure that a long planning horizon is used to inform and educate utility planners, customers and regulators about the potential options and benefits of emerging technologies. Also, the Commission should take care to assure that the planning horizon will not thwart innovation by over-specifying standards, requirements, and conditions for prudence or risk before facts and evidence are actually known.

SGP Estimated Benefits and Costs (section C., page 4)

The straw proposal expects deliverables such as "detailed information about potential benefits and costs of actions." However, this detailed information may not exist for development-level projects, especially those that are further out in time. For those projects that are nearer in time and thus more complete in scope, PGE will be able to provide more detailed information. In short, for longer-term projects, PGE can only provide a rough cost estimate to implement a project and state the objectives to be

achieved, as well as estimate the long-term benefits. We can also propose the cost point of new technology that is needed in order to create a positive business case.

Systems Reliability (section D., pages 4-6)

PGE suggests that the issue of standards adoption on page 5 be moved to its own separate section or simply be moved in its entirety to the IT section. In addition, some projects in our SGP action plan may cross functional lines and we would so note.

Communications and IT Infrastructure (section G., pages 7-8)

PGE understands that this section applies only to new SGP projects. Nevertheless, providing such information can be burdensome and we would suggest that a separate workshop be held to help utilities and stakeholders understand the type of information expected in the SGP.

Cyber and Physical Security (section H., page 8)

See section G., above.

Additional Items:

Utility energy management/demand response should be added under Section II, and should precede or follow item J. – SG-Enabled Pricing Options, since they are closely aligned.

Summary

PGE supports the OPUC's smart grid initiative and believes that an SGP encourages stakeholder input and is a way to help inform and enhance our smart grid development efforts.

There are many promising potential smart grid initiatives, and developing these is of great interest to PGE in the next five years. However, due to the limited availability of qualified personnel and funding, we do not anticipate smart grid implementation on a large scale, except perhaps for demand response programs, unless stakeholders agree there is value for customers based on early program outcomes.

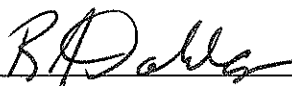
With so much unknown and so much to learn about the costs and benefits of smart grid development, much work is required to determine what technology and implementation processes are most compatible with our present and future utility system, and what is most beneficial for our customers. There are many ideas regarding how to do this, but it is easier to talk about the benefits than it is to quantify them. Even less certain are the method of, and the costs to, capture these benefits. We look forward to working together in this joint initiative to help determine and provide clarity and resolution on the many challenges of smart grid.

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CERTIFICATE OF SERVICE

I hereby certify that I have this day caused **Opening Comments of Portland General Electric Company** to be served by electronic mail to those parties whose email addresses appear on the attached service list, and by First Class US Mail, postage prepaid and properly addressed, to those parties on the attached service list who have not waived paper service from OPUC Docket No. UM 1460.

Dated at Portland, Oregon, this 16th day of November, 2010.



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