

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1460

In the matter of)
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)
PUBLIC UTILITY COMMISSION OF)
OREGON)
) **MOTION TO ACCEPT LATE FILED**
) **CLOSING COMMENTS OF**
) **SMART GRID OREGON**
Staff recommendation to open a docket and)
use Oregon Electricity Regulators Assistance)
Project funds from the American Recovery)
and Reinvestment Act of 2009 to develop)
Commission smart grid objectives and action)
items for the 2010-2014 time period.)
_____)

NOW COMES Smart Grid Oregon (“SGO”), by and through its attorney, Barry T. Woods, and respectfully moves the Commission in the above-referenced proceedings pursuant to OAR 860-13-0031 or such other statutory procedural authority as may be appropriate, to accept the late filing of these closing comments for the following reasons:

- A. SGO is a Domestic Non-Profit Corporation comprised of a growing number of entrepreneurs, service providers and business leaders, as well as non-profit organizations and educators dedicated to the growth and promotion of Oregon’s smart grid industry. SGO’s mission is “[t]o enable, promote and grow the smart grid industry and infrastructure in the State of Oregon.”
- B. SGO’s members have volunteered extensive time and effort in taking an active role in the development of this docket through written comment and direct participation in workshops.
- C. SGO’s ability to complete its final draft of its closing comments was hampered as a result of a number of extenuating circumstances of members involved in completing the written comments that arose during the final week of preparing these comments, including vacations, illness and unforeseeable family obligations.
- D. When it became apparent that additional time was needed to adequately complete SGO’s closing comments, the undersigned counsel spoke with Commission Staff to alert them to SGO’s need for an extension and were advised to complete the comments expeditiously over the weekend.

E. SGO's delay in submission of its closing comments will not unreasonably broaden the issues, burden the record or unreasonably delay the proceedings. In fact, by receiving additional time, SGO believes that its closing comments are more complete and will be of increased value to the Commission and its staff as the guidelines for Smart Grid Plans become formalized.

WHEREFORE, SGO respectfully requests that the Commission grant its motion to accept late filing of its comments.

Dated: December 20, 2010.

Respectfully submitted,

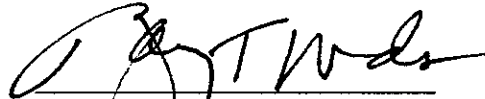
A handwritten signature in black ink, appearing to read "Barry T. Woods". The signature is written in a cursive style with a large initial "B" and "T".

Barry T. Woods, OSB # 951332
Attorney/Representative for SGO

CERTIFICATE OF SERVICE

I hereby certify that on this day, December 20, 2010, I served a true and correct copy of the foregoing document in Docket No. UM 1460 upon each party listed in the attached UM 1460 OPUC Service List by email and, where paper service is not waived, by U.S. Mail, postage pre-paid.

Dated at Portland, Oregon, this 20th day of December, 2010.



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Summary Report**UM 1460 DEVELOPMENT OF SMART GRID OBJECTIVES AND ACTION ITEMS FOR
2010-2014****Category:** Miscellaneous

In the Matter of

PUBLIC UTILITY COMMISSION OF OREGON

Staff recommendation to open a docket and use Oregon Electricity Regulators Assistance Project funds from the American Recovery and Reinvestment Act of 2009 to develop Commission smart grid...

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Summary Report

UM 1460 DEVELOPMENT OF SMART GRID OBJECTIVES AND ACTION ITEMS FOR 2010-2014

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Summary Report

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

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**BEFORE THE PUBLIC UTILITY COMMISSION
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Staff recommendation to open a docket and use Oregon Electricity Regulators Assistance Project funds from the American Recovery and Reinvestment Act of 2009 to develop Commission smart grid objectives and action items for the 2010-2014 time period.)	
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Closing Comments of Smart Grid Oregon

Introduction

Smart Grid Oregon (“SGO”) commends the staff (and the other participants) on their assiduous development of this docket and staff’s ongoing efforts to achieve a fair and equitable process whereby all the stakeholders have sufficient opportunity to weigh in on the proposed guidelines for Oregon Investor Owned Utilities’ Smart Grid planning. SGO believes that this docket represents a historic opportunity for Oregon utilities to not only evaluate and adopt SG technologies that best fit within their individual profiles, but also to assist Oregon in becoming a national leader in the SG arena. To achieve these ends, SGO believes that the planning process must carefully tread the line between instituting guidelines that require tangible action while preserving in that process and those guidelines the flexibility inherently required for an emerging set of technologies to mature and achieve economic success. SGO also fully supports a policy that provides a combination of regulatory and market-based incentives allowing broad based development of technologies. We believe this will create the fertile investment environment needed to most rapidly identify successful SG applications and technologies.

As in our last set of comments, we will endeavor to track with the structure of the staff’s straw proposal, recognizing some modification of that proposal based on staff’s later opening comments. Where we feel it necessary, SGO will provide feedback on other stakeholder comments, discuss changes in SGO’s previous positions, and generally amplify its earlier remarks. These closing comments should be read in concert with and as supplementing SGO’s opening remarks, unless otherwise stated. In addition, as a preface to its comments, SGO will summarize issues and policies it considers to be of great importance in the Staff’s consideration

of the final proposal to be sent before the Commission. Lastly, SGO will provide a separate set of additional content areas, along with justification for why it believes they deserve a place within the SGP.

SGO Concerns Regarding the Smart Grid Planning Process and Content

SGO's position on several big picture issues deserves clarification. SGO recognizes that utilities have a bona fide concern over some SG-related technologies as unproven, expensive, and high risk. Given the expenses involved in testing, analyzing and implementing SG technologies, SGO fully supports the staff's allowing IOUs to seek rate recovery for certain SG activities as in the public interest; these activities could include SGP planning itself, consumer research and education activities, technology research to assess viability of potential SG technologies and products and pilot deployments of SG technology. As the flip side of a policy that considers rate recovery appropriate, SGO believes that staff should also expect the SGP to not only be a reporting vehicle for the IOU's progress in certain content areas, but also a policy driver that creates an expectation of innovation. This is particularly true as the SGP process matures and cost/benefit analysis more clearly shows where SG can provide long-term savings such as within demand response, distributed generation, load management, and customer based energy management, to name a few. In other words, the SGP should not be a vehicle to justify the status quo and non-action; it should be a vital planning process that rewards research and development, reasonable risk and sound innovation. As a counterweight to allowing IOU involvement in these areas, staff should be particularly rigorous in requiring interoperability standards that allow third party access to hard- and software infrastructure. While the SGP is not intended to be constructed with the rigor of the IRP, it should not be an academic exercise. Careful thought should be put into how the SGP fits within the existing planning structure. SGO recommends that, as SG technologies or actions mature and prove themselves, they be adopted in the utility's IRP. The SGP should be an ongoing process, perhaps maintained well beyond three five year plans if, as an incubator, it continues to prove its worth.

Specific Comments Directed to Section I- Goals & Guidelines for All Smart Grid Plans

I.A. Goal and Sub-Goals for this Docket.

As part of establishing a set of guidelines and expectations for SG, SGO believes that it is vital to provide a definition of SG, even if it changes over time, to provide some boundaries. PGE has suggested a definition which SGO generally supports but there are others, including the NIST VI "Framework and Roadmap." PGE defines SG as leveraging of technology and communication to automate generation, transmission and distribution systems with one or more of the following goals- improving system reliability, improving asset utilization, lowering operating costs and/or providing consumers with alternatives to reduce carbon footprint. SGO believes the definition must be kept necessarily broad and anticipates that it will be continually tested through proposed SGP actions and rate recovery requests. Nonetheless, definitional boundaries are necessary to

assist in the SG planning process or it risks failing to provide the focus and guidance which appear to be at its core.

SGO agrees with staff's proposal that the first SGP should include a report of all SG related activities and be a tool to assist IOUs in thinking comprehensively about overall SG strategy. The initial SGPs will be more exploratory for some utilities than others. However, this should not mean that the SGPs should be an empty vessel, and not be rigorously developed. There are many instances of strategies and technology that have already been commercially implemented, and there are still more pilot projects underway in the U.S. and elsewhere. Utilities should draw on these activities in their first SGPs, state which of these are the most appropriate for their circumstances, and say how they will either follow or test those that are applicable for their service territories. The plans ought to have a schedule for how utilities will proceed in evaluating those technologies and strategies.

For example, SGO believes it important to use the UM 1460 Docket to start cataloging opportunities enabled by Smart Grid technologies that the Commission would like to see addressed. The Staff has effectively catalogued a number of key opportunities in its Opening Comments and Attachment. Indeed, the very structure of the SGP implicitly addresses a number of opportunities. What we believe is missing is an explicit catalog of Smart Grid opportunities applicable to the state of Oregon. These would include the implicit opportunities in the Staff documents such as:

- There will be a wealth of customer information available to utilities that has never before existed – e.g., usage patterns on an hourly and sub-hourly basis for individual households, neighborhoods, commercial and industrial properties (large commercial and industrial /use patterns are better understood and measured but opportunities will exist to gain even more granularity of data) and whole cities. This creates opportunities for much better modeling of demand as well as demand management programs and applications not even considered before.
- The same technology creates opportunities for much greater choice on the part of consumers. One of the most basic decisions is the possibility of participating or not in a particular SG program and the consequent utility need to better understand customers and what motivates their behavior with respect to energy usage.
- While the issue of obsolescence of long-term capital investments is treated as a challenge, it could also be viewed as an opportunity in at least two innovative ways: first, developing new policy and accounting mechanisms to recognize obsolescence risk while incenting both risk mitigation and investment in new beneficial technology that outweighs the obsolescence costs. Secondly, the very real issue of possibly stranded, obsolete investments can drive business innovation that overcomes these issues. For instance, instead of investing in a traditional proprietary network technology to achieve effective two-way communications with meters and customers, the risk of obsolescence

could dictate use of existing standards-based IP, cable or cellular networks at much lower investment costs and risks.

- Demand-response programs in commercial and residential facilities are undoubtedly one of the most important opportunities enabled by SG technologies.

- Automated energy management within a commercial or residential structure for the benefit of the owners/users of the structures is also a major new opportunity potentially enabled by SG technologies. This opportunity opens the possibility of numerous innovative applications around energy usage and management and has generated a whole set of new businesses hoping to create and market such applications.

- SG technology, combined with distributed energy sources such as solar, wind, biomass, etc., creates new opportunities for managing both the supply and demand side of the electricity business. Related utility-scale and distributed ancillary services are also enabled for storage, voltage regulation, etc.

- Emerging standards and the products that implement them create whole new economic opportunities that didn't exist before. For instance, the costs of monitoring a building or a distribution station can be radically reduced using standardized, competitive technology, increasing the granularity of the monitoring and control process at smaller and smaller intervals and with smaller facilities.

- SG electricity usage monitoring and feedback to consumers can enable innovative new methods for public policy delivery for low-income customers.

- Another major opportunity enabled by SG technologies is to understand more accurately and frequently the actual cost of power, including peak power and ancillary services, and designing more dynamic rate structures to influence the demand curve in real-time.

The list of opportunities can get quite long and we have only scratched the surface by looking at implicit opportunities in the Staff Opening Comments and Attachment. We recommend that part of the final order require each utility to explicitly list the opportunity matrix they see within its service territory and constraints. This exercise will both stimulate broader thinking on the part of the utilities and assist the Commission in evolving its own catalog of opportunities for consideration at some future time.

SGO particularly agrees with CUB's comment that staff should remain sensitive to promoting premature policy decisions which would have the impact of preventing utilities from having a

role in the development of SG-oriented projects, particularly demand response and consumer energy management systems. SGO recommends that rate treatment may be appropriate so long as the utilities do not put up barriers to the effective participation of third-party providers. NWEC's comments are also well conceived in that they identify the utilities unique capacity to assist the larger market in determining the economic value of opportunities such as SG's potential role in dynamic load response and better understanding existing consumer behavior.

I.B.1 Access, Control & Use of Customer Information

SGO agrees that customer information privacy concerns present large-scale issues, many beyond the scope of this docket. While a separate docket inquiry might be an appropriate means of handling some of these questions, SGO has concerns that if a separate inquiry, such as the rulemaking suggested by PGE, were to occur, it not be allowed to derail or otherwise delay the utilities development of their SGPs. In the context of the SGP process, utilities might be reasonably asked to undertake the following actions:

- A. Identify which federal, state, or regional standards, or other privacy standards it has adopted;
- B. Indicate where it plans to manage access, control and use of customer information if it plans to use an approach other than any of the available standards;
- C. Explain how it plans to maintain the security of its consumer data from non-authorized access by third parties;
- D. Explain what it is doing, or will do, to employ privacy safeguards consistent with Department of Homeland Security's Fair Information Practice Principles; and
- E. Identify, if it can, where its recommended approaches have been adopted and successfully implemented by other utilities.

In addition to the privacy issues surrounding customer information, there are security issues that must be discussed and treated relative to the adoption of SG actions. In the SGP, utilities should discuss *security issues that are incremental to the SG*. Further, working through additional security measures raised in a utility's SGP should not delay implementation of those SG items that do not affect security. If it doesn't delay implementation of SG, SGO agrees it may be prudent to handle incremental security issues in a separate docket.

I.B.2 Opt In/Opt Out or Mandatory Program Participation

SGO believes that Opt in or Opt out decisions should be made when SG applications are to be implemented. That is, as SG applications become ripe and are moved into a utility's IRP, the utility is necessarily involved in considering the scale of the rollout and its implications to its cost/benefit analysis and potential rate recovery.

SGO suggests that as part of the SGP and before SG applications are implemented, the utility should:

1. Identify when it intends to require customer participation and provide the reasons for such a requirement(s);

2. Identify when it is proposing to use opt in or opt out customer participation choices;
3. Identify whether the utility plans to ultimately seek to make a program mandatory; and
4. Identify the cost of any equipment needing installation on the customer's side of the meter to implement an action in the SGP.

For example, in the context of a utility making decisions about AMI installation, the utility's SGP should provide supporting evidence which explains the rationale for mandating customer participation in digital meters and an AMI network, suitable alternatives to mandatory participation, a cost/benefit analysis behind consumers' decisions to Opt in or Opt out and an understanding of opt in/opt out positions taken by other utilities who have wrestled with these questions.

I.B.3. Treatment of Obsolescence Risk.

SGO thinks that staff should carefully consider the difference between obsolescence of existing infrastructure driven by SG applications, and obsolescence of SG infrastructure driven by improved SG infrastructure. PGE's comments go in part to the former, while other comments have been focusing on the latter, because of the potentially shorter economic life of SG applications. SGO believes that the OPUC can adopt policies to handle both of these situations. We also think that it will require a different mindset to deal with obsolescence of shorter economic life investments than has been used in the past when making policy relative to large, long-lived resources. SGO supports PGE's comments that OPUC should use its available tools, including accelerated depreciation, as a means of assisting utilities in bearing stranded costs caused by both regulatory mandates and SG technology development that eclipses itself.

I.B.4. Utility Energy Management in Customer's Home or Business.

SGO reasserts its belief, like staff's, that a broad policy precluding recovery is unwarranted but that this is tempered by concerns over the potential for IOUs to impede creation of competitive markets for energy management within customer's premises. SGO agrees with staff's modified position on this issue, both as to the procedural standards governing cost-recovery for some actions in its SGP and that IOUs must use devices and software that allow interoperability with third party hardware and software. CUB's suggestion that the interoperability requirements should be applied when appropriate, rather than as a mandatory condition, are well taken, provided "appropriateness" is subject to public hearing and Commission review as needed. SGO believes the burden should be on utilities to show when the interoperability standard should not be applied. The default position should be that the interoperability standard is in place. To the extent practicable, standards should be adopted that are consistent with NIST standards or other prevalent standards adopted by utilities throughout the country. In other words, when it comes to issues of interoperability, the fundamental value at stake, competitiveness, and interoperable operation of vendor offerings, should be broadly construed and supported and not narrowly tailored in a manner which defeats the purpose. SGO also agrees with PGE's concern that providing third parties with customer data necessarily incurs costs which in turn should be equitably borne by ratepayers. The SGP may be an appropriate forum to discuss such rate payer issues, albeit not to decide them.

Specific Comments Directed to Section II- SGP Structure & Content

II. SGP Content-Overview

Minimum Content of SGP. At a minimum SGO would expect that any utility that submits a plan should show that it is well versed in those smart grid strategies and technologies that have been tested and implemented commercially by other utilities in the US and perhaps the world, and that great weight has been given to moving forward on those that are potentially valuable for the specific service territory and characteristics of the utility and its customers. We do not support Idaho Power's comments that the SGP should only include "...technology, programs, and protocols that utilities are (currently) investigating...." Beyond showing an understanding of what has been done and what is expected to be potentially valuable, the SGP should also include a list of those technologies that appear to be suitable for the given utility and a schedule for investigating them and proving them in the specific environment of the submitting utility. Importantly, these schedules should include how and when the utilities will reach out to their customers to engage them in using smart grid concepts to help control their energy uses for their own and the public good. SGP must provide some degree of assessment of consumer interest and behavior and contemplate actions that might be undertaken to affect it through education and outreach. Among other things, we would also like to see at least a general discussion in the first plan of communications and IT systems, including:

- a. The reliability of smart grid communications systems at the distribution and transmission level under normal and extreme conditions;
- b. Smart grid communications systems future capacity;
- c. How easily smart grid communications systems could be upgraded;
- d. Their scalability; and
- e. The importance of adhering to NIST standards and interoperability.

In addition, Oregon's unique circumstances suggest additional opportunities that we recommend the Commission ask to be addressed by utilities. These include:

- Use of the WECC SynchroPhaser project that should provide significantly higher wide-area transmission network monitoring than the current technology. How will the utility take advantage of this major advance?
- Participation in the transactive control system being developed by Battelle and BPA with funding by the Department of Energy. This technology will create the potential for much more dynamic and accurate assessment of actual electric costs at any point in the state at any time with a 24 hour look ahead at the values. Is the utility participating today in this project and how will it take advantage of the opportunities presented? If not, how will it assess doing so in the future?

- BPA sponsored Smart Grid research outside of the PNW Regional Smart Grid Demonstration Project.

Reconciling the IRP with a SGP. We have been concerned with how to reconcile two separate utility plans, but if the SGP simply informs the IRP we are comfortable with that approach. As pieces of the SGP mature to commercialization they should be moved into a utility's IRP. Having said that, there are several strategies and technologies that should be included in IRPs now. Some of these are:

- Demand response programs to reduce infrastructure needs and lower the utility's peak period costs, which also facilitate pricing strategies and Web based T-Stat control to enable consumers to respond to pricing signals while minimally affecting amenity levels;
- Storage strategies (batteries, hot water heater storage, etc.) that will help to accommodate intermittent renewable resources, reduce infrastructure needs, reduce salmon redd losses tied to ramping the hydroelectric resources up and down to serve peak load, etc.;
- Plans to include voltage and VAR regulation;
- Technologies and strategies to accommodate electric vehicles with minimal system costs; and
- Technologies and strategies to accommodate more distributed generation, including renewable resources, and the impact of these resources on T&D investments and operation, intermittent resources, peak power needs from the grid, net metering, and CO2 reductions.

While SGO understands PGE's concerns about the potential onerousness of the staff's version of the SGP, it does not believe that the staff intends it to be as complex as the IRP. This is certainly true insofar as the SGP involves consideration of non-commercially available SG applications. Futuristic applications do not warrant more than prosaic recognition. However, as an SG application becomes commercially viable, utilities should be expected to exercise diligence in supporting their decisions to adopt or not to adopt. The list of areas SGO has referenced show that the menu of viable choices of SG technology is increasing and many deserve inclusion in the IRPs themselves.

II. A. SGP Estimated Benefits & Costs.

Staff proposes that SGP contain a discussion and examination of the CO2 risk mitigation benefits that may occur through adoption of SG applications and endorses EPRI's framework, as it avoids benefit double-counting and the distinction between benefits and intermediate outcomes. SGO believes this is an acceptable means of measuring non-economic costs/benefit, at least in the beginning of SGP.

Many SG activities will be saving costs that are buried within the total cost of delivering energy. They include, but are not limited to, line losses that vary by season of the year and time of day, congestion costs, costs of regulation, and other ancillary services. Many of these costs have not been specifically calculated by utilities. The NWECA in its opening comments points out that we need to know the economic value of those costs that can be avoided through application of Smart Grid elements before we can assess the cost/benefits of many Smart Grid strategies. SGO concurs. The SGPs ought to include a requirement and a schedule for utilities to calculate and publish these costs to the best of their abilities. Further, to the extent that SGPs inform IRPs, such as those SG actions we believe are commercially viable now or soon to be viable, a cost/benefit analysis will need to be done anyway before the action is included in the IRP. Inasmuch as detailed cost benefit analyses cannot be done without knowing the present components of costs to deliver power, these analyses should be started now in order to do a complete benefit/costs analysis later.

SGO understands Pacific Power's concern that cost/benefit analyses of new technology may be commercially sensitive and should be treated as confidential with access restrictions. However, cost/benefit analyses have to be done before including a SG application into an IRP. The OPUC has to require these analyses be done, or the SGP can never be useful. Concern about proprietary information can be accommodated during the review of the IRP.

II.B. Systems Reliability.

SGO strongly disagrees with Idaho Powers statement that the SGP should not have to "...provide commission with sufficient detail to allow the commission to conclude that an action will be reasonably likely to improve system utilization and reliability." SGO makes additional comments on Systems Reliability in Section IV of these comments.

II.C Treatment of Customer Related Data

SGO believes that a separate docket may be appropriate, if it does not unnecessarily delay implementation of those SG applications that should go forward now. In light of CUB's comments, SGO believes that the ETO, as the acquisition arm of utilities with respect to conservation and some small renewable resources, is an exception. The ETO operates under the same policies as utilities do with respect to releasing customer data. Ultimately they are the customers' data, and customers can share them with anyone they like. However, this could become an issue when consideration is given to who might use the data for their own good vs. the customers' good. The challenge will be to find a way to allow customers to pass data along to selected third party providers, and to guard against third party providers getting more data than they absolutely need to serve customers.

II.D. Education & Information- Customer Energy Use Management

The consumer education area does not include discussion of customer research but focuses more on how to “educate” customers. The first part of any marketing or education campaign is research to understand the customers’ needs and interests. This can be direct research but it can also leverage efforts being conducted by numerous utilities to better understand consumer behavior and interests relative to greater participation in the management of electricity usage. SGO thinks that any effort to educate customers as to the benefits of SG should also involve grass root movements. These movements were very successful in the 1980s Hood River Project, and more recently in the “solarize neighborhoods” projects. Using a top down and bottoms up approach proved to be very effective in these two efforts.

II.E. Communications and IT Infrastructure.

This seems to be a live concern, walking between proprietary information about the IOUs infrastructure and the need to share it with the OPUC as well as to 3d parties as part of interoperability. However, we need to guard against it being a barrier to moving forward. Maybe it does need a separate set of workshops, but we ought to be thinking about how we can work around this issue and start doing those things that are appropriate to do now.

II.F. Cyber and Physical Security

More than one utility pointed out that security against hackers and terrorists might hold them back in the development of SGPs. If so, the state needs to understand the risks and develop solutions to them to allow us to achieve the full promise of smart grid implementation. The Staff filings address issues of physical and cyber security adequately in our view.

II.G Distribution of SGP Benefits & Costs

SGO believes that we should be aware of the distribution of costs and benefits, and make the necessary adjustment to make the losers whole, as long as the benefits compared to costs are globally sound. SGO agrees with CUB ‘s equity concerns regarding impact on vulnerable populations as a result of SG technology and that such concerns should be part of SGP and considered as part of the acknowledgement process. SGO believes that utilities should and will pay attention to the threats of stranded cost in their existing systems. If utilities are resisting SG applications, SGP should explain the reasons why and, with a proper discussion of risks, stakeholders may come up with a solution. In this regard we agree with PGE’s comments, and we disagree with Pacific Power’s comment to delete the staff’s sentence that the “utility stay alert to, advise the Commission of, potential or actual threats to any of its businesses that currently contribute revenue for cost recovery” as overly broad and vague. This is precisely why SGP should be implemented, to forecast risks and anticipate solutions.

II. H. SG-Enabled Pricing Options.

The Staff filings address issues of SG-enabled pricing options adequately in our view.

II.I. Risk and its Mitigation

The Staff filings address issues of risk mitigation adequately in our view.

Specific Comments Directed to Section III, SGP Submission Review and Use in Future Proceedings.

III. A. Timeframes for the SGP

SGO agrees with the staff's proposal that SGP contemplate a twenty year horizon. Given the speculative nature of such a long planning period, this element of the SGP should not be considered as critical as the short-term planning requirements. A twenty year projection can provide utilities with an opportunity to consider the appropriate rate for switching over some its larger, obsolete infrastructure, such as might be found in its generation and transmission systems, and the impact of scaling certain SG advances. SGO agrees with PGE that twenty year projections need not be detailed or be onerous on utility planners. The SGP's most significant impact and practical effect will come from having the utilities undertake thoughtful five year action plans and provide annual updates. Accordingly, these short-term planning efforts should be commensurately more detailed and thorough.

III. B. SGP Submission Schedule and Submission

CUB's comments, based upon its extensive experience with staggered submission schedules, deserve great weight. SGO expects variation in the breadth and depth of the utilities' first SGP filings, given their comments in this proceeding. If a staggered approach were to be adopted and the initial SGP review drawn out, SGO recognizes the staff's concerns over the impact of ARRA funding ending before OPUC's review process is completed. SGO believes that it is in Oregon's interest to perpetuate the SGP process, and developing regulatory sophistication is its necessary corollary. To that end, SGO urges all stakeholders to consider means by which OPUC might continue funding for these positions. Recognizing the potential importance of the SGP's role in the ongoing transition of Oregon's electric utilities, SGO believes that it is critical that the OPUC continue to develop staff expertise in this area. Rather than contemplating the sunseting of these staff resources, the parties should be anticipating how specific SGP-related actions might be integrated into IRPs and put to long-term use and how the OPUC's internal staffing might be strengthened to enhance SG's continued evolution.

III. C. SGP and Annual Update Review

SGO agrees with staff's proposal that annual updates undergo public review and pre-hearing process as might be necessary for their evaluation. The timeframes and processes recommended would appear to provide expeditious resolution of any issues, although CUB's concern that the commission's final decision not be mandated to occur within the 180 day period is legitimate.

Section IV Omitted Areas Warranting Additional Development in the Straw Proposal.

Interoperability Standards.

Interoperability standards are addressed at some length in the Staff Straw Proposal and Opening Comments, but is relegated to a minor role in the Attachment requirements. We believe it should be enhanced with additional requirements suggested in the prior staff documents and the SGO Comments on the Straw Proposal. As we noted in the SGO Opening Comments:

SGO recommends that interoperability standards be separated into its own section with additional considerations, such as a plan for verifying claims of interoperability and conformance to standards; plans for internal R&D to reduce integration time and costs of new systems, etc. A major consideration should be forward/backwards compatibility with newer and legacy systems. The new GWAC Decision-Maker's Checklist at <http://www.gridwiseac.org/about/publications.aspx> may provide guidance.

Systems Reliability

There are two issues that relate to systems reliability that we note have not been adequately addressed in the SGP Straw Proposal and subsequent filings: the quality and reliability of SG software and the methods to be employed in validating the quality and reliability of SG systems. SG technologies are enabled to a great extent by advances in software and embedded firmware technologies that have occurred in the past 40-50 years but have been slow to enter the utility business.

As software is used to automate the monitoring and control of the system in the differing domains (premise energy management, distribution, transmission, generation, utility enterprise systems, etc) the risks of software failure increase almost geometrically. Unfortunately, the IT world is replete with instances of system failures as well as cost overruns and schedule delays. The last thing we need is for an AMI system to "crash", thereby causing all of the dependent applications (energy management, demand-response, DER integration, ancillary services, etc) to operate incorrectly or crash totally.

We recommend that the SGP address the two specific areas noted above under the Systems Reliability section:

- How will the utility ensure both the quality and reliability of the design of the software systems it expects to deploy? This is a process issue and not specific to a given system. It usually means looking at the actual design of the embedded or application code as well as the development processes used by the vendors. It may require a level of technical investigation into proposed SG systems that utilities have not had to do before and may not be equipped to do. Nevertheless, it should be addressed in some form.
- How will the utility ensure that specific proposed solutions meet quality and reliability requirements? This requires first that such requirements exist and secondly that the utility has the processes and skills available to conduct its own quality assessment (or participates in industry-wide programs that do so in a satisfactory way).

A third issue referenced above is the challenge of implementing systems on time and within budget. To the extent that rate cases are based on estimated costs and benefits, significant overruns in time and budget can cause major problems for all stakeholders. We recommend that utilities discuss in the SGP the processes and experience they have or plan to develop to manage budget and schedule for new SG implementations.

Criteria for Evaluating SGP Submissions

An area not addressed in any of the Comments so far is the question of how to evaluate the SGPs that the utilities submit to the Commission. While there are a number of implied and explicit statements in Staff's Comments, there is not a specific discussion of evaluation criteria. SGO would like to suggest a methodology to develop the criteria. This would provide utilities with valuable information on how the SGP submissions will be judged, as well as providing the Commission with a method for evaluating the submissions.

The Attachments in staff's Initial Comments to UM 1460 provide an excellent starting point to develop evaluation criteria for the SGPs. The following suggests the types of evaluation criteria that can be tied to the requirements laid out by Staff. The following criteria focus on just the first two staff requirements but are intended to illustrate our view of how such criteria can be developed.

1. Access, Control, and Use of Customer Information

- F. The utility must identify which federal, state, or regional standards, or other privacy standards it has adopted.
- G. The utility must indicate where it plans to manage access, control and use of customer information, if it plans to use an approach other than any of the available standards.
- H. The utility must explain how it plans to maintain the security of its consumer data from non-authorized access by third parties.
- I. The utility must explain what it is doing, or will do, to employ privacy safeguards consistent with Department of Homeland Security's Fair Information Practice Principles.

Suggested evaluation criteria for access, control and use of customer information

- Has the utility researched and adopted specific privacy standards?
- Are the standards understood by and accepted by commission staff?
- Can the utility point to successful adoption and implementation of these standards by other utilities?
- For other than standard access, control and use approaches, can the utility demonstrate that the approaches have been adopted and successfully implemented by other utilities?
- Has the utility articulated a plan for security of customer data based on proven approaches and technology?
- Can the utility point to other successful deployments of its specific approach to securing customer data?
- Does the utility in fact explain how its safeguards are or will be consistent with DHS Fair Information Practice Principles?

2. Opt in, Opt out, or Mandatory Program Participation

- J. The utility must identify when it intends to require customer participation and provide the reasons for such a requirements.

- K. The utility must identify when it is proposing to use opt in or opt out customer participation choices,
- L. The utility must identify whether the utility plans to ultimately seek to make a program mandatory.
- M. The utility must identify the cost of any equipment needing installation on the customer's side of the meter to implement an action in the SGP.

Suggested evaluation criteria for Opt In/Opt Out include:

- What specific programs could be potentially opt in or opt out on the part of customers?
- What is the basis for identification of such programs and what research has the utility done to determine which programs lend themselves to opt in/opt out?
- What is the rationale for mandating customer participation in digital meters and an AMI network?
- Has the utility considered alternatives to mandatory participation? What alternatives?
- Can the utility articulate specific customer benefits and costs to opting in to proposed Smart Grid programs?
- Can the utility make a strong cost/benefit case to consumers for opting in? Has it experimented with such cost/benefit presentations to customers? Does the utility plan to experiment with such cases?
- Has the utility evaluated approaches to opt in/opt out taken by other utilities to understand the characteristics of successful programs?

Docket and Rule-Making Process for Smart Grid

Lastly, with two workshops, a staff "straw proposal," and two rounds of comments since the opening of this docket, at no point in this proceeding has there been an actual staff proposal put forward. At this stage, it is possible only to be able to guess from the record what the staff might propose to the Commission for adoption.

In other agencies, matters of this nature would be taken up in a rule-making proceeding, where the precise language proposed for adoption would be placed before stakeholders and the public for comment. We can understand that the PUC staff preferred a more informal process with more interaction among interested parties than a formal rule-making might afford.

SGO believes that it would be good process for the staff to put the proposed order, or at least a formal staff proposal, out for one more round of comment. That way, the Commission will have a record of the views of the parties on the exact language proposed for adoption, and the parties will have an opportunity to provide their views on the staff's precise views of what should be in SGPs.

Conclusions

Smart Grid Oregon is pleased to be able to provide input on UM 1460, and we look forward to continued dialogue with the Commission as Oregon's Smart Grid roadmap is developed.

To summarize key comments in our Final Comments:

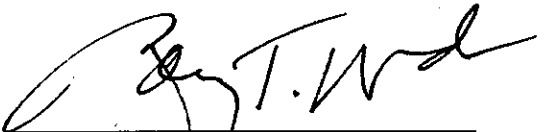
1. SGO is supportive of Staff's Comments.
2. SGO agrees that costs of developing SGPs should be recoverable by the utilities.
3. SGO recommends development and adoption of a definition of Smart Grid.
4. SGO agrees with staff's proposal that the first SGP should include a report of all SG related activities and be a tool to assist IOUs in thinking comprehensively about overall SG strategy.
5. We believe missing from the UM 1460 SGP process is an explicit catalog of Smart Grid opportunities applicable to the state of Oregon. We suggest examples of such opportunities and suggest that the SGP should ask utilities to develop their own catalog of opportunities as part of the SGP.
6. SGO agrees that customer information privacy concerns present large-scale issues, many beyond the scope of this docket. While a separate docket inquiry might be an appropriate means of handling some of these questions, SGO has concerns that if a separate inquiry, such as the rulemaking suggested by PGE, were to occur, it not be allowed to derail or otherwise delay the utilities' development of their SGPs.
7. SGO believes that Opt in or Opt out decisions should be made when SG applications are to be implemented.
8. SGO reasserts its belief, like staff's, that a broad policy precluding recovery is unwarranted but that this is tempered by concerns over the potential for IOUs to impede creation of competitive markets for energy management within customer's premises.
9. SGO would expect that any utility that submits a plan should show that it is well versed in those smart grid strategies and technologies that have been tested and implemented commercially by other utilities in the US and perhaps the world, and that great weight has been given to moving forward on those that are potentially valuable for the specific service territory and characteristics.
10. Oregon's unique circumstances suggest additional opportunities that we recommend the Commission ask to be addressed by utilities. We included three specific ones in our comments.
11. We have been concerned with how to reconcile two separate utility plans, but if the SGP simply informs the IRP we are comfortable with that approach. As pieces of the SGP mature to commercialization, they should be moved into a utility's IRP. We have

included specific listing of SG opportunities that we recommend be included in the initial SGP and IRP.

12. Staff proposes that SGP contain a discussion and examination of the CO2 risk mitigation benefits that may occur through adoption of SG applications and endorses EPRI's framework as it avoids benefit double-counting and the distinction between benefits and intermediate outcomes. SGO believes this is an acceptable means of measuring non-economic costs/benefit, at least in the beginning of SGP.
13. SGO is open to more frequent SGP filing periods provided the technology shifts justify the added expense and effort. Part of this question may be resolved based upon the substantive and qualitative value the Commission and the utilities find in the annual updates themselves.
14. SGO adds comments on four specific areas it feels are omitted from the Comments so far or are not adequately addressed. These are interoperability standards, quality and reliability of SG software systems, a suggested methodology for developing criteria for evaluating the SGP submissions and a recommendation for another round of comments once a formal proposed order has been drafted.

DATED December 20, 2010

On behalf of Smart Grid Oregon,

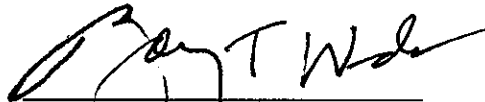


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CERTIFICATE OF SERVICE

I hereby certify that on this day, December 20, 2010, I served a true and correct copy of the foregoing document in Docket No. UM 1460 upon each party listed in the attached UM 1460 OPUC Service List by email and, where paper service is not waived, by U.S. Mail, postage pre-paid.

Dated at Portland, Oregon, this 20th day of December, 2010.



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Summary Report**UM 1460 DEVELOPMENT OF SMART GRID OBJECTIVES AND ACTION ITEMS FOR
2010-2014****Category:** Miscellaneous

In the Matter of

PUBLIC UTILITY COMMISSION OF OREGON

Staff recommendation to open a docket and use Oregon Electricity Regulators Assistance Project funds from the American Recovery and Reinvestment Act of 2009 to develop Commission smart grid...

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Summary Report

**UM 1460 DEVELOPMENT OF SMART GRID OBJECTIVES AND ACTION ITEMS FOR
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Summary Report

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

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