BEFORE THE
PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Investigation of the Costs and Benefits of Pacificorp's Net Metering Program	))))	**Docket No. 14-035-114**

DIRECT TESTIMONY OF PAMELA MORGAN

On the Topic of

The Joint Proposal for a Benefit-Cost Framework for
Net Energy Metering

On Behalf of Utah Clean Energy, The Alliance for Solar Choice and Sierra Club

July 30, 2015

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, ADRESS AND PRESENT OCCUPATION.

A. My name is Pamela Morgan. I am President of Graceful Systems LLC, a consulting practice I founded in 2009. Graceful Systems helps stakeholders in the energy utility system engage in collaborative processes to explore, understand, and develop generative strategy in response to complex challenges and opportunities.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of The Alliance for Solar Choice, Sierra Club, and Utah Clean Energy (hereinafter "Joint Parties"). Building upon the collaborative work of the informal workshops hosted at the Commission, these parties provide the Commission a joint proposal for a net metering analytical framework, as described in the testimony of witnesses Tim Woolf and Ben Norris. My testimony provides a general introduction to the Joint Parties' proposal for an analytical framework.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I am a graduate of Washington State University and the University of Washington School of Law. I first entered the energy utility field in 1984, representing industrial customers of electric and natural gas utilities in the Pacific Northwest. In 1986, I joined Portland General Electric Company (PGE) as Associate General Counsel. I held a variety of positions at PGE concerned with regulation, becoming Vice President of Regulatory Affairs in 1996. I briefly left PGE in 1997 to work for a software and services company called ConneXt. I re-joined PGE in 1999 as Vice President of Regulatory Affairs, responsible for state and federal economic regulation, among other things, including strategy as of 2004. During my years in Regulatory Affairs, I worked

on many matters, including:

- All cost recovery and rate-related matters, including revenue requirement, rate spread, and rate design;
- Regulatory accounting;
- Cost of capital, including the issue of imputed debt from long-term contractual commitments;
- The preparation and review of Integrated Resource Plans, including renewable resources;
- Design and approval of energy efficiency programs;
- All aspects of cost recovery related to energy efficiency, including the collaborative development of a decoupling mechanism that was in place for PGE during 1995 and 1996;
- The development of regulatory guidelines on competitive bidding and subsequent Requests for Proposal done by PGE under those guidelines; and
- The development and filing of avoided costs.

Attached hereto as *Exhibit 1.1* is my curriculum vitae, which describes my qualifications in more detail.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to introduce the joint proposed analytical framework for evaluating the net energy metering ("NEM") program put forward by witnesses Tim Woolf and Benjamin Norris. The framework consists of two approaches, which witness Woolf describes: a cost-impact analysis and a rate-impact analysis. Both use the same inputs but the output of the cost-impact analysis is in terms of utility revenue requirement. The output of the rate-impact analysis is in terms of rates and can be designed to provide several different perspectives on how net metering is affecting Rocky Mountain Power's (hereinafter "the Company") customer base. Witness Woolf's cost-impact analysis uses widely accepted categories of inputs that directly relate to incurring or avoiding current and future utility operating and capital costs. Witness

Norris describes methods of calculating each of the benefit inputs in the cost-impact approach, detailing necessary data and any criteria for that data as well as calculations. These methods are consistent with best practices in quantifying distributed solar generation resources.

I explain the Joint Parties' understanding of context for this proceeding as well as the purpose of the analytical framework the Commission has requested parties to develop.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. I recommend that the Commission:

- Adopt the joint proposed framework – the cost impact analysis and rate impact analysis – as the standard method of evaluating the net metering program in future proceedings that fall within the scope of Section 54-15-105.1. The outputs of this proposed framework—as the Commission relies upon it over time to make decisions implicated by Section 54-15-105.1—will ably support the Commission's decision-making as the circumstances around distributed energy resources, their effects on utility revenue requirement and, ultimately, retail electricity rates, change over time.
- Set baseline expectations for outputs from the framework.
- Establish minimum filing requirements for applications of the analytical framework, including the data that the Company must have available and file if proposals in its rate cases specifically impact the credits, charges or rate structures of net metering customers.

II. BACKGROUND ON THE NEED FOR AN ANALYTICAL FRAMEWORK

Q. WHAT IS THE JOINT PARTIES' UNDERSTANDING OF THE CONTEXT FOR THIS DOCKET NO. 14-035-114?

A. Our understanding is based on the August 29, 2014 Order in Docket No. 13-035-184, in which the Commission opened a proceeding "in which the costs and benefits of PacifiCorp's net metering program will be examined."[1] In that order, the Commission rejected the Company's proposed net metering facilities charge based on the Commission's interpretation that SB 208 required it to determine the costs and benefits of the net metering program before setting new rates for net metering customers, and that the record before it lacked the "substantial evidence necessary to make the determination required under Utah Code Ann. § 54-15-105.1(1)."[2] The framework should include all of the direction necessary to ensure that proceedings involving a determination required by Section 54-15-105.1(1) will include the substantial evidence necessary to support the Commission's decision-making.

Q. WHAT IS THE JOINT PARTIES' UNDERSTANDING OF WHY THE COMMISSION HAS REQUESTED AN "ANALYTICAL FRAMEWORK" FOR NET METERING AND WHAT THAT FRAMEWORK MUST INCLUDE?

A. The Commission is likely to face numerous occasions in which it must make determinations that implicate Section 54-15-105.1(1). The framework will provide an efficient means of identifying the data required for this determination and ensuring consistency in the use of that data, even as conditions around distributed energy generation change over time, which is something that is certain to happen. Outputs of the

[1] *Report and Order,* Docket No. 13-035-184 at p.69 (August 29, 2014).
[2] *Id.* at p. 59.

framework, based on the most current data inputs, will support the Commission's decision-making on rate proposals affecting net metering going into the future.

The Commission has requested an analytical framework that includes detail on "the types of analyses that must be performed, the components of costs and benefits to be included in the analyses, and the sources and time period of data inputs."[3] Witnesses Woolf and Norris address those components and inputs in the cost-impact analysis. Witness Woolf also provides a rate-impact analysis by which the Commission can gain perspective on how distributed energy generation under net metering is affecting – positively or negatively – overall rate levels. It is efficient for the framework to include this, given that the Commission must ultimately decide upon rate proposals affecting net metering.

The analytical framework will provide the Commission, the Company, and parties to future proceedings in which its use is required, a commonly understood language for discussing, and a standardized approach for quantifying, the impact of net metering on costs and rates.

Q. WHAT ARE THE STATUTORY REQUIREMENTS FOR THE ANALYTICAL FRAMEWORK?

A. Utah Ann. Code Section 54-15-105.1(1) provides that the Commission must "determine … whether the costs that the electrical corporation or other customers will incur from a net metering program will exceed the benefits of the net metering program, or whether the benefits of the net metering program will exceed the costs…." [4]

[3] *Order re: Conclusions of Law on Statutory Interpretation and Order Denying Motion to Strike,* Docket No. 14-035-114 (July 1, 2015) ("July 1 Order") at p.1.
[4] *Id.* at p. 4.

Q. HAS THE COMMISSION PROVIDED ANY ADDITIONAL GUIDANCE SINCE OPENING THIS PROCEEDING AS TO WHAT SHOULD BE INCLUDED OR EXCLUDED FROM THE "ANALYTICAL FRAMEWORK"?

A. In a July 1, 2015 Order, the Commission explained that it is interpreting the statute to require comparing the costs of the net metering program to the Company and other customers to the benefits of net metering to the Company and to other customers.[5] Inputs to the analytical framework will include all data that is relevant to the utility's cost of serving its ratepayers.[6]

Q. WHAT IS THE JOINT PARTIES' UNDERSTANDING OF THE RELATIONSHIP BETWEEN THE FRAMEWORK AND THE COMMISSION'S RATEMAKING DECISIONS?

A. The July 1, 2015 Order makes clear that the output of the framework is to inform but not determine the Commission's decisions regarding a just and reasonable charge, credit, or ratemaking structure, including new or existing tariffs, in light of the costs and benefits. While Section 54-15-105.1 addresses specifically net metering programs, Commissions make ratemaking decisions in the context of all of a utility's customers, amidst often conflicting principles of rate design. The Commission's July 1 Order, appropriately, does not in any way limit the Commission's discretion to give appropriate weight to evidence relevant to these principles and objectives in ratemaking decisions, regardless of whether the evidence is included within this limited analytical framework.

Q. HOW WAS THE JOINT ANALYTICAL FRAMEWORK PROPOSAL DEVELOPED?

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[5] *Order re: Conclusions of Law on Statutory Interpretation and Order Denying Motion to Strike,* Docket No. 14-035-114 (July 1, 2015) ("July 1 Order") at pp. 12-13.
[6] *Id.* at p. 13.

A. The joint proposal is the result of a collaborative effort of multiple parties and discussions at the series of technical workshops held at the Commission from April to July of 2015. Several parties, including TASC, Sierra Club, the Interstate Renewable Energy Council and UCE, hired consultants to participate in and present materials at these workshops. Witness Woolf presented his vision for the framework at the June 25, 2015 workshop, where he discussed the need for a cost impact analysis and a rate impact analysis. The technical workshops provided for by the Commission's March 9, 2015 scheduling ruling were fruitful in fostering some degree of collaboration and were an important part of the consensus-building among the multiple parties sponsoring this joint proposal.

Q. WHAT BASELINE EXPECTATIONS DO YOU RECOMMEND THE COMMISSION ESTABLISH FOR INPUTS TO AND OUTPUTS FROM THE FRAMEWORK?

A. There are five baseline expectations I recommend the Commission establish for inputs to and outputs from the framework.

First, I recommend that the Commission require framework outputs to reflect the breadth of the various inputs. For example, according to witness Norris, energy avoided costs require data on the output of solar installations that reflects diversity in geographical location and in design orientation (range of azimuth angles and tilt angles, etc.). If resulting production values fall across a fairly wide range, using a simple average may be inadequate to express avoided energy costs. Greater understanding may be possible if outputs from the cost-impact analysis show the effects of the range of values for energy avoided costs resulting from the range of data for solar installation production. I recommend that the Commission require that

documentation for an application of the framework show the range of values for each major input and explain how the resulting output range reflects those input ranges.

Second, I recommend that the Commission set an expectation that parties preparing an application of the framework document their efforts to include the effect of technology or behavior change in the inputs. Some of the inputs to the analytical framework will change over time as technology and/or behaviors change. Therefore, it will be important to reflect those changes over time. This is particularly critical if forecasts of a given input are based on historical data.

Third, I recommend that the Commission set an expectation that the Company establishes processes or other means of acquiring data it does not presently have, along with updating and improving data that it does have. Some inputs will require data that the Company does not presently collect or that does not presently exist. For example, the Company may not document maintenance on the distribution system in such a way that allows identifying maintenance avoided or caused by the presence of distributed generation on that part of the distribution system. Or, new environmental compliance obligations may arise that distributed generation lessens, such as costs associated with the Environmental Protection Agency's Clean Power Plan and any associated cost or value of carbon credits. If a type of cost within an input – such as environmental compliance costs – does not have a value at this point in time (whether because the data has yet to be gathered or will not exist until a future time), that type of cost should appear with a zero value in an application of the framework to indicate the expectation that a value will exist.

Fourth, the Commission should set its expectations for how applications of the framework will identify any significant uncertainty associated with one or more inputs and quantify or qualify that uncertainty with respect to the outputs. For example, for the forecasted values of some inputs – such as net metering penetration or future costs of natural gas – high, medium and low case scenarios may be informative to the Commission.

Fifth and last, the Commission should establish, as part of its order adopting an analytical framework, minimum filing requirements for the Company in any case in which it proposes any charge, credit or rate structure for net metering customers or as otherwise directed by the Commission. Information asymmetry exists in regard to much of the information that is required to populate the framework. The Company possesses most, if not all, of the information required to produce meaningful results, whether on incurred or avoided operating costs or capital investments. Minimum filing requirements will address this information imbalance.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.