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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** **TESTIMONY OF MICAH STANLEY IN SUPPORT OF UTAH SOLAR ENERGY ASSOCIATION'S OBJECTION TO ROCKY MOUNTAIN POWER'S COMPLIANCE FILING**

Q. Please state your name, business address, and education and professional experience that is relevant to your testimony in this case.

A. My name is Micah Stanley and my business address is 1396 W. Frances Rd., Mt. Morris, MI. 48458. I hold a Bachelor of Science degree in Electrical Engineering with a Management Minor from Kettering University as well as an MBA Degree focused in management and finance.

My core expertise in relation to the subject at hand comes from a number of interdisciplinary areas from approximately nine years in the energy industry: Currently, I develop and finance renewable energy and infrastructure projects throughout North America coordinating contract negotiations, evaluating rate analysis for financial viability and forecasting, while performing technical due diligence on projects including design/build oversight and construction management. I have been personally involved with the collaboration with the public and private sectors leading to the contribution of 20 MW of solar to our nation's domestic energy portfolio, where I have been the technical expert evaluating and demonstrating the impacts to the individual electrical utility.

My experience previously includes working as a reliability testing engineer for First Solar where I researched and developed the installation of First Solar's outdoor test facilities which assess the impacts of electrical designs on distributed downstream componentry. The facilities are designed to monitor modules and electrical equipment within 0.5% accuracy, incorporating technology which allows the integration and validation of ongoing research for decades to come. In 2011, First Solar was ranked first on Forbes's list of America's 25 fastest-growing technology companies and was also listed as No. 1 in Solar Power World magazine's 2012 and 2013 rankings of solar contractors.

Beyond this immediate understanding of the value and impacts of solar energy to a distributed network, I closely monitored the manufacturing of solar modules for two years where I tracked the invested resource value per kilowatt-hour generated and reliability that solar modules generate years after they are commissioned. As a field operations engineer, I performed analysis on active electrical systems and created solutions to issues that occurred in the field. My team was responsible for developing repair procedures as well as technical troubleshooting of inverters, data acquisition systems, and electronic equipment controllers to log precise and unbiased issues and solutions.

In addition to this solar-specific expertise, I have extensive experience in automotive electronics areas. At General Motors I assisted with designing of programmable logic controllers, human machine interfaces, and the programming electrical infrastructure and wiring.

Purpose of Testimony

Q. Please describe the purpose of your testimony in this proceeding?

A. I submit this testimony in support Utah Solar Energy Association's opposition to the relief sought by Rocky Mountain Power (the "Company") in the above-captioned proceeding. Specifically, the following testimony identifies errors and material omissions in the testimonies and arguments that the Company submitted in its attempt to meet its burden under Utah's Net Metering Statute.

Q. Please summarize your testimony.

Contrary to the Company position, Utah's net metering program produces a net benefit to Utah's grid and environment.

As discussed in more detail below, the Company ignores or discounts the benefits of net energy metering ("NEM"), overestimates the costs of NEM, and misinterprets data to justify

segregation of NEM customers into a separate class of rate payers. Moreover, the Company relies on faulty assumptions to manufacture an "emergency" that purportedly warrants the Commission to expedite this process.

Q. Did you review the Company's filings in preparation of your testimony?

Yes, I reviewed the direct testimonies and related documents that the Company submitted in support of its Compliance Filing in the above-captioned case, including the direct testimonies of Gary W. Hoogeveen, Joelle R. Steward, Robert M. Meredith, Douglas L. Marx and Michael G. Wilding. I also reviewed the actual and counterfactual cost of services studies ("ACOS" and "CFCOS") and the NEM Breakout COS that the Company filed (collectively, the "Studies"), and multiple documents that the Company produced during discovery.

Opposition Testimony

Q. Based on your review and experience, did the Company employ reliable principles or methods in conducting the Studies?

No. The principles and methods that the Company applied in conducting the Studies were deficient in at least two material ways.

First, the Studies rely on a one-year test period – the 2015 calendar year – which is not a sufficient amount of time to gather reliable data reflecting the costs and benefits of a NEM program. In any newly prospering industry, a single year analysis does not give enough information to make predictions and does not generally capture all of the necessary information about the industry's operation and impacts. Any given one year period could represent an outlier that inadequately represents the industry. This test period does not yield reliable data because the benefits of solar grow over a long period of time as more NEM customers invest in upgrades to equipment that increases the efficiency of the distribution system. In the long term, this benefits

the grid by offsetting the amount of generation that peaker and large power plants need to supply. A more appropriate test period would factor in a period of 2 to 4 years of proper scientific methodology to compare NEM vs. non-NEM customers. Such longer test period would be more reliable because it would provide enough data to account for technology changes in the grid and the establishment of a trend showing reduced costs in administration of the grid from equipment upgrades and the movement of NEM solar production to coverage of greater segments of peak demand. It would additionally allow for an accurate estimate of solar adoption through the coming years. For example, 2015 and 2016 saw the greatest reduction in solar system pricing, as well as the potential removal of the investment tax credit that drove many individuals to move forward with the installation of solar. Consequently, these years were highly likely outliers.

Second, the Company's methodology is materially flawed because it relies on data gathered from a small sample of single meters while excluding significant benefits of the NEM program. It also appears that the Company did not take a sample group as a control for the analysis of the NEM vs. non-NEM customers. The Company should have installed advanced metering at both NEM and non-NEM customers in the same locations to properly evaluate the impacts of NEM customers. I have not been able to find evidence of a typical testing methodology for scientific means approach for any portion of the data presented at this time. All of the data is vague, leaving the Commission without the ability to ascertain exact values for costs associated with the administration, engineering and other key information needed for a proper accurate analysis.

Q. Are the Studies' conclusions regarding the benefits of the NEM program based on sufficient facts or data?

No, the Studies categorically exclude several quantifiable benefits that the NEM program nets to non-NEM customers, including the following:

a) *Omission of System Upgrades*: The Studies do not account for the benefits contributed by NEM customers in the form of upgrades to the overall system. This includes, for example, the benefits derived by all customers when NEM customers purchase new transformers or other equipment. In fact, the solar industry and NEM customers have invested upwards of $10 Million in upgrades to the overall grid. The Company does not adequately account for these investments, attributed only insignificant value to them.

b) *Omission of Benefits from Local Energy Production*: By producing energy locally at the point of consumption, the NEM program benefits non-NEM customers in multiple ways. First, the NEM program results in energy production at the least expensive delivery point. The NEM program reduces the overall supply of energy needed to meet demand at different times by between five and ten percent because it produces energy on the secondary voltage side (120, 240V). The Company's own Schedule 32 supports this conclusion. It shows that the value of energy delivered from traditional sources is roughly 91.4729% of the initial generation by the time it arrives to a residential or small commercial customer. By contrast, energy produced locally is not subject to such losses because it is redistributed to the nearest consumption point. Put differently, every 100 kWh's that the NEM program generates at the residential level is equivalent to 109.32 kWh's of energy generated through traditional means. The Studies fail to account for the value of the 9.32kWh's saved by all customers in that example.

Second, the Studies fail to account for the benefits to non-NEM customers from the Company's avoidance of costs related to (i) the use of "peaker plants," or (ii) the purchase of energy at peak rates to meet peak demand. These benefits are particularly acute during the

summer months when energy demand and solar production are highest. To illustrate, air conditioner units run and draw the most power during summer, thereby forcing the company to activate peaker plants or purchase energy from third-parties at premium rates. The NEM program reduces the amount of energy that the Company needs to produce or purchase to meet the increased demand because it generates the most energy at precisely this time of year due to longer days and higher irradiance. The Studies fail to account for these savings, which the Company presumably passes on to all customers, including non-NEM customers.

Third, the NEM program also helps reduce the amount of energy flowing through the transmission lines and transformer. This reduces the impact on these devices and can even help reduce transformer core saturation which leads to further losses and failure of the transformer or other equipment. The Studies fail to account for this benefit.

c) *Omission of Benefits from Upgrades to Smart Meters*: The Studies do not account properly for the benefits to non-NEM customer from smart meter upgrades associated with the NEM program. When NEM customers upgrade to new smart meters, they contribute a benefit to non-NEM customer because the new meters reduce the Company's operation costs, including costs associated with remote billing, troubleshooting, and data gathering. For example, smart meters reduce the meter readers' work load because they do not have to inspect each individual meter. Presumably, the Company passes on the associated savings to all customers, including non-NEM customers.

Q. Are the Studies' conclusions regarding the costs of the NEM program the result of a reliable methodology or based on sufficient facts and data?

No. The Company's costs analyses are materially deficient in several ways, including:

a) *Improper Distribution of Administrative Costs*: The Company inexplicably ascribes to NEM customers only administrative costs occasioned by all customers, including non-NEM customers. *See e.g.*, Meredith Testimony at pg. 16. For example, the Company posits that it incurred $422,000 in administrative costs related to service applications in 2015, of which $198,000 was attributable to inquiries and administrative times answering questions around NEM Programs. This amount actually covers expenses related to any customer's inquiries regarding NEM and other such programs not just NEM Customers, who bare these costs in the Company's financial analysis. This is no different than if a customer called about energy efficiency upgrades or other programs that the Company offers. It should not be attributable as a cost of the NEM program simply because the customer may end up electing to join the NEM program.

b) *Insufficient Data Regarding Administrative Costs*: The Studies lack sufficient data or facts to support the engineering costs allegedly incurred in relation to NEM applications. The Company never details or accounts for how the hours allegedly incurred were allocated and who performed the actual work, e.g., if it was an engineer or a staff. Most initial applications are reviewed by administrative personnel who do not require an engineer's salary. The Company has not shown that the costs were necessary.

d) *Distribution Costs Lacks Evidentiary Support*: The Studies do not include sufficient data justifying the Company's new $9/kW demand charge and 0.03183/kWh energy charge. And the data that the Company relies on is unreasonably skewed to the detriment of the NEM program. For example, the Company relies on data collected during spring and fall, when the NEM program contributes the least to peak demand. But the Company's document show that the NEM program contributes the most precisely when the Company (and all of its customers) need the contribution the most: between June and August.

Similarly, the Company does not account for the NEM program's energy production at different times of the day. *See* RMP's Exhibit RMP___(JRS-3); *see also*, Meredith's Testimony at 22: 453-456. The Company should analyze the costs using the same methodology it used to analyze demand charges, i.e., actual time of use charges not a blended $0.03183/kWh rate that includes nighttime and non-peak costs. Moreover, the Company should analyze demand charges on a monthly basis not just in select scenarios.

Lastly, the Company's costs analysis appears to rely on the assumption that the total of NEM customer would continue to grow "exponentially" by 30,000 billing units in 2017 for a total of approximately 50,000 billing units. But as shown below, these predictions are significantly inaccurate. In fact, during the first quarter of 2017, the NEM program added only 4,300 new customers.

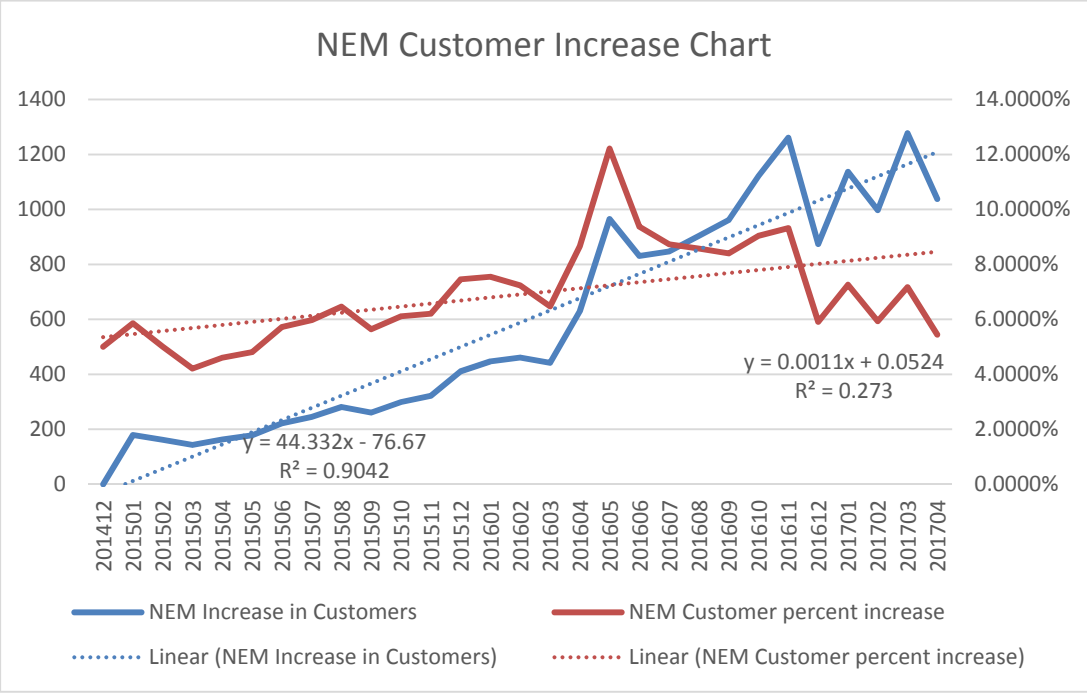
Q. Is the Company's justification for an interim and rushed process based on sufficient facts and data?

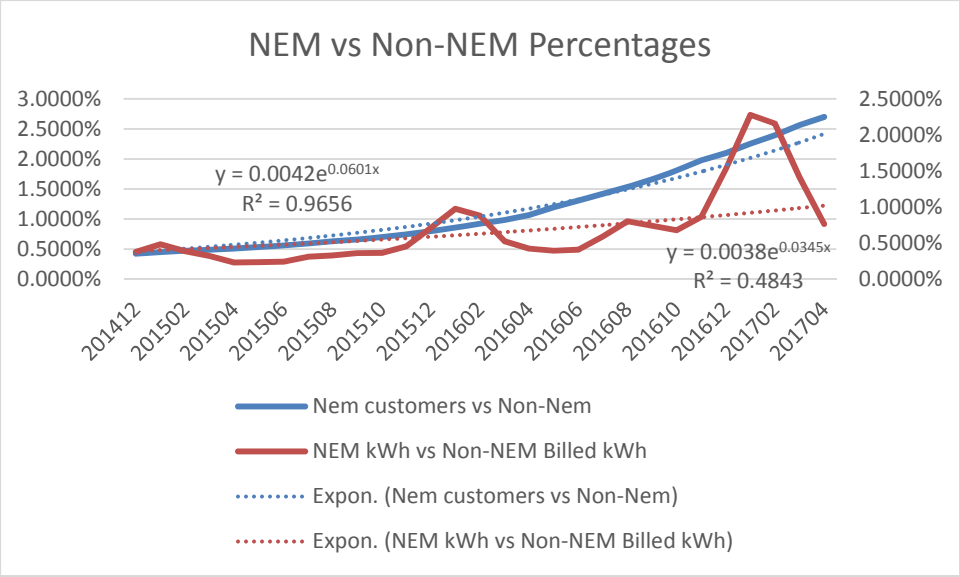
No. The Company's witnesses repeatedly claim that the Company needs to adopt the new rates and segregate NEM customers into a separate class because of the existing and anticipated "exponential" growth of the NEM program. But this position is based on several faulty assumptions.

First, as the Company's experts acknowledge, government incentives have played a significant role in driving the growth of the NEM program. Those incentives, however, are phasing out over the next four years. The studies assume that the incentives will remain the same or increase, when the opposite is the reality. The Studies are not reliable because they do not articulate the effect of the incentives' reduction on the Company's cost-benefit analysis.

Moreover, because the growth is likely to decrease dramatically along with the phase-out of the incentives, there is no urgency justifying a rush to adopt the Company's proposals.

Second, the actual data that the Studies cite does not support the conclusion that the NEM program is growing "dramatically" or "exponentially." For example, as shown in the following charts drawn from data provided by the Company, the number of NEM applications decreased from the fourth quarter of 2016 to the first quarter of 2017.





Third, the historical data do not support its projections of the NEM program's growth. Per the Company's documents, as of April 2017, NEM customers account only for 2.6993% of residential customers. Additionally, NEM customers only make up 0.7644% of the billed kWh by the Company. Moreover, as shown above, the Company's data indicates that the NEM program's rate of growth is now trending downward. In fact, in the year from April 2016 to April 2017, NEM "billed kWh" increased at a relatively low rate of .3412 percent. At that rate, it is highly unlikely that the NEM program will reach any time soon the 20% cap imposed by the Commission.

Q. Do the Studies provide any other basis justifying the Company's segregation of NEM customers into their own class for rate setting purposes?

No. In addition to the projected growth of the NEM program, the Company's experts assert that NEM customers' profile is inherently different from the profile of non-NEM customers because they feed the grid and consume less than non-NEM customers. But neither distinctions justifies segregating the NEM customers into their own class. First, the NEM customers' generation of power does not result in an "additional" use of the Company's resources. For

example, NEM customers would require use of the Company's powerlines even if they were not part of the NEM program. Second, a NEM customer's use profile, independently of the NEM program, is not functionally different from the profile of a non-NEM customer who takes advantage of the Company's growing list of efficiency programs. Just like "efficiency" customers, the NEM customer's lower usage, particularly during peak times, is a benefit, not a "cost" to the Company. Consequently, the Company does not articulate a basis for segregating NEM customers.

[signature on the following page]

Certification:

Pursuant to Utah Code Ann. § 78B-5-705, I declare under criminal penalty of the State of Utah that the foregoing is true and correct to the best of my knowledge.

Executed on June 8, 2017

By: 

Micah Stanley

CERTIFICATE OF SERVICE
Docket No. 14-035-0114

I hereby certify that a true and correct copy of the foregoing **TESTIMONY OF MICAH STANLEY** was served by email on this 8th day of June 2017, on the following:

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