BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Consideration of Changes to Rocky Mountain Power's Schedule No. 135 – Net Metering Service	Docket No. 08-035-78

Comments of Utah Clean Energy and Western Resource Advocates
Submitted November 26, 2008

A. Background

During the 2008 Legislative Session, the Utah Legislature passed Senate Bill 84 Net Metering Programs (herein referred to as "S.B. 84") that made a number of changes to Utah's existing net metering policy and deferred a number of key decisions to the appropriate governing authority (the Public Service Commission for Investor-Owned Utilities (i.e. Rocky Mountain Power) and the Board of Directors for Rural Electric Cooperatives).

On September 25, 2008, The Public Service Commission (herein referred to as "the Commission") issued a Request for Comments and Notice of Technical Conference inviting public comment on the following issues relating to Utah's Net Metering Programs, pursuant to Utah Code §54-15-103(3): 1) establishing a higher amount of generating capacity from customer generation systems than 0.1 percent of Rocky Mountain Power's (herein referred to as "the Company") peak demand during 2007; and 2) the appropriate value of excess customer generated electricity credits pursuant to Utah Code §54-15-104(3)(a)(i).

Utah Clean Energy and Western Resource Advocates (WRA) jointly submit the following comments on Docket No. 08-035-78. Utah Clean Energy is a 501(c) (3) non-profit public interest organization working to advance energy efficiency and renewable energy in Utah. WRA is a non-profit environmental law and policy organization working on water, energy, and lands issues in the West. We appreciate the opportunity to provide input on this important matter.

B. Summary of Utah Clean Energy and Western Resource Advocates Recommendations

Utah Clean Energy and WRA submit the following recommendations on the aforementioned issues, with additional details included in our comments below:

1) Adopt no limit on total system generating capacity from net-metered customer generation systems;
2) Value excess generation from residential generation systems at the full retail rate of electricity (or a 1:1 kilowatt hour ratio for excess rollover); and
3) Consider the different nature of commercial customers with demand charges and energy charges and allow commercial customers the option to choose to value excess generation at either**:**
    a. the full retail rate under current rate schedule; or
    b. the avoided cost, as determined in Schedule 37; or
    c. another arrangement determined by the Commission that accurately reflects demand charges and energy charges in the value
4) Additional Recommendations on Net Metering are included at the end of these comments.

C. The Full Value of Net Metering

Utah ratepayers and the Company are currently facing a number of colliding factors that are increasing costs and risks, including: a rapidly growing population (Utah is ranked fifth in the nation in population growth and is expected to approach 3.5 million by 2030, representing a 56% growth rate over three decades[1]), rising electricity demand (2-3% annually) and growing peak demand, increasing risks and uncertainties related to traditional fossil-fuel generation, impending carbon regulation, volatile natural gas and fuel costs, the need for new generating capacity and transmission, and the need for distribution upgrades -- all of which will be borne by today's and tomorrow's ratepayers. These factors suggest that a "business-as-usual" approach to electricity in Utah may not be the most prudent approach and that distributed generation can play an increasing role in helping to address some of these issues.

[1] *Utah growth rate soaring: Population expected to rise 56% over 3 decades*. Deborah Bulkeley. Deseret Morning News. April 22, 2005. URL: http://deseretnews.com/article/1,5143,600128008,00.html

State Net Metering policies and rules, if done according to best practices, can provide a strong market-based incentive for on-site distributed generation, which can yield significant benefits to states, ratepayers, and utilities. While a complete cost-benefit analysis of net metering and distributed generation has not been conducted for Utah, a number of studies have been done for other states and utilities that provide meaningful data and evidence demonstrating the full value of distributed generation. A list of these studies is included in Appendix A attached to these comments. In summary, some of the benefits highlighted in these studies include, but are not limited to:[2]

1. Reduced demand-side consumption;
2. Reduced fuel consumption and reduced O&M costs associated with central station electricity generation;
3. Reduced transmission and distribution (T&D) line losses, providing an energy loss savings value;
4. Electricity produced at a stable price over the duration of the life of the system, providing a hedge against volatile fuel costs;
5. Offset or delayed need for new generation capacity;
6. Relief to congested T&D systems and reduced/delayed need for T&D upgrades;
7. Support to our strained power grid during on-peak hours; in the case of solar photovoltaic systems, proper orientation can provide electricity during both mid-afternoon and late afternoon/evening peak hours;
8. Environmental benefits, including no air or water pollutants and no greenhouse gas emissions, which provides a hedge against impending carbon regulation

Given the current and impending costs and risks to utilities and Utah ratepayers, Utah Clean Energy and WRA respectfully request that as the Commission makes their ruling on Docket No.

[2] The Value of Distributed Photovoltaics to Austin Energy and the City of Austin. Study to Determine Value of Solar Electric Generation to Austin Energy. T. Hoff, R. Perez, G. Braun, M. Kuhn, B. Norris, *Clean Power Research, L.L.C.* March 2006. URL: http://www.austinenergy.com/about%20us/newsroom/reports/PV-ValueReport.pdf, and *Potential Benefits of Distributed Generation and Rate-Related Issues that May Impede Their Expansion*. U.S. Department of Energy. February 2007. URL: www.ferc.gov/legal/fed-sta/exp-study.pdf

08-035-78, they consider the *full benefits* that on-site distributed generation provides to Utah's grid, the utilities, citizens, and businesses.

D. Generating Capacity from Customer Generation Systems

According to *Utah Code § 54-15-103(3)(a): the governing authority may establish a higher amount of generating capacity from customer generation systems than .1% of the electrical corporation's peak demand during 2007 before a net metering program may be discontinued under Subsection (2).*

According to the Division of Public Utilities' *Memorandum (Revised) on Net Metering (Ref: Docket No. 08-035-T04. Advice Filing 08-04 – Schedule No. 135 – Net Metering Service)* submitted June 10, 2008, 0.1% of peak demand during 2007 represents 4,615 kilowatts (kW), or approximately 4.6 Megawatts (MW).

As of October 31, 2008, there were 264 Utah customers net metering with Rocky Mountain Power and total net metering capacity was at 540 kW.[3]

While Utah is not yet close to achieving the 0.1% limit, changes made to S.B. 84 raising the commercial net metering cap to 2 MW increases the likelihood that Utah will reach this limit in the near future. If 2 new commercial customers each installed a 2 MW system, there would only be approximately 60 kW of remaining capacity (given current net metering participation) for residential and commercial customers seeking to establish a net metering agreement with the Company.

The trends in demand and interest in distributed renewable energy suggest that a total system capacity limit of 0.1% of 2007 peak demand is unreasonable and represents a significant barrier to prospective customers interested in net metering. As identified in the Interstate Renewable Energy Council Freeing the Grid Report (October 2008) "[total system] capacity limits artificially restrict the expansion of on-site renewable generation and curtail the market for new renewable energy systems. They are also incompatible with aggressive targets for renewable energy deployment."[4] At present, seventeen states have established no generating capacity for

[3] Telephone communication with Travis Tanner, Net Metering Manager & Regulatory Liaison for PacifiCorp (Pacific Power/Rocky Mountain Power). November 26, 2008.

[4] *Freeing the Grid: Best and Worst Practices in State Net Metering Policies and Interconnection Standards, 2008 Edition.* Interstate Renewable Energy Council. October 2008. Page 22. URL: http://www.newenergychoices.org/uploads/FreeingTheGrid2008_report.pdf

customer generation, in accordance with best practices identified by the Interstate Renewable Energy Council. [5]

The Company's expressed need for new generation capacity and transmission and distribution upgrades[6] suggests that on-site customer generation can play a role in helping address these needs in a cost-effective manner, by harnessing private investment in new generation resources utility customers want. However, if there is a total system capacity limit established for net metering, the amount of distributed generation the Company and ratepayers can adopt and benefit from is substantially limited.

Additionally, current Interconnection Standards under consideration by the Commission will adequately address any technical and physical limitations associated with net metered systems interconnecting with the grid; accordingly, there seems to be no technical need for a total system capacity limit.

For these reasons, Utah Clean Energy and WRA **recommend that the Commission place no cap on total system generating capacity for net metering**.

E. Value of Excess Generation for Residential Distributed Generation Systems

According to the *Utah Code § 54-15-104(3a)(i): If net metering results in excess customer-generated electricity during the monthly billing period: (a) (i) the electrical corporation shall credit the customer for the excess customer-generated electricity based on the meter reading for the billing period at a value that is at least avoided cost, or as determined by the governing authority.*

Distributed generation is notably distinct from central station electricity generation and offers distinct benefits to the grid and ratepayers, as outlined in Section C of these comments and in the studies in Appendix A. Given the significant differences and applications of distributed generation versus central station electricity generation, applying the *avoided cost rate* from central station power plants to on-site renewable energy generation appears to be an inadequate and

[5] Ibid.

[6] Rocky Mountain Power Press Release: Rocky Mountain Power announces changes in its Utah business. September 2, 2008. Utah Public Service Commission Website: http://www.psc.state.ut.us/utilities/electric/elecindx/documents/090208pr.pdf

inappropriate comparison. An appropriate value should be established for excess distributed generation to reflect these significant differences.

The current undervaluing of excess generation results in significant system under-sizing (well below customer demand in most cases – the average residential system size is 2 kW, and the average demand from a Utah residence is approximately 7 kW[7]) and limited overall investments in distributed generation. According to a U.S. Department of Energy study, "for the many benefits of [distributed generation] to be realized by electric system planners and operators, utilities will have to use more of it."[8] Establishing an appropriate value for excess generation that reflects the full benefits of distributed renewable generation can help remove a barrier to the adoption of distributed generation, encourage more investment and proper sizing of distributed generation systems, thereby yielding benefits to the Company and Utah ratepayers.

In the Interstate Renewable Energy Council Report, *Freeing the Grid*, the recommended best practice for residential customers is to value excess generation at the full retail rate of electricity, and approximately 30 states value excess generation in this fashion.[9] This allows customer-generators to fully offset retail energy purchases with the energy they generate on site, and encourages customers to size their systems according to their annual demand.

As such, **Utah Clean Energy and WRA recommend that excess generation from residential generation systems should be valued at the full retail rate of electricity**, allowing for a simple rollover of excess generation credits from one billing period to the next such that customers are able to displace future electricity consumption with any excess generation.

E. Value of Excess Generation for Commercial Distributed Generation Systems

Commercial customers in Rocky Mountain Power service territory have demand charges that inherently complicate the financial considerations of on-site renewable energy generation and may create a disincentive for a customer to invest in a distributed generation system that offsets all, or a sizable portion, of its load. Despite the fact that an on-site renewable energy system is likely to

[7] *Utah Net Metering Presentation*. Rocky Mountain Power. November 18, 2008.
[8] *Potential Benefits of Distributed Generation and Rate-Related Issues that May Impede Their Expansion*. U.S. Department of Energy. February 2007. URL: www.ferc.gov/legal/fed-sta/exp-study.pdf
[9] See Network for New Energy Choices, *Freeing the Grid* (October 2008), pp. 23, 94-95. Available at http://www.newenergychoices.org/uploads/FreeingTheGrid2008_report.pdf. (*Freeing the Grid*).

change the commercial customer's load-profile, the demand charges may distort actual value of energy savings from an on-site generation system. This makes it difficult for commercial customers to finance a system, creating an additional barrier to the adoption of net metered systems.

Growth in Utah electricity sales is driven, in part, by growth in the commercial and industrial sectors. An effective approach to reducing demand in these sectors is to continue to encourage investment in demand-side management *and* implementation of on-site renewable energy generation (considered by some to be a form of demand-side management). Reducing demand in these sectors will benefit all Utah customers and the Company, while providing energy savings to commercial and industrial customers.

Considering this significant difference between commercial and residential rate structures, **Utah Clean Energy and WRA recommend that commercial customers with on-site generation systems be given flexibility to accommodate their demand charge and energy charges in their net metering agreement. We recommend providing commercial customers (perhaps limited to those on certain defined rate schedules) the option to choose to have their excess generation valued at either: the full retail rate under the current rate schedule; or the avoided cost, as determined in Schedule 37; or another appropriate mechanism, as determined by the Commission.** Under this framework, customers can choose which option would afford them the best scenario to address both demand charges and energy charges. Utah Clean Energy and WRA interpret Utah Code §54-15-104(3)(i) to allow for this accommodation.

F. General Recommendations for Net Metering

Utah Clean Energy and WRA suggest the Commission consider the following additional issues relating to net metering not addressed in this specific docket.

1. Third-Party Ownership

On the issue of third-party ownership and the option for a customer to contract with a third party to lease a renewable energy system – a model that has been successfully implemented in numerous states across the country - it has been noted during net metering discussions hosted by the Commission that lease agreements might prohibit the third party contracting with a tax-exempt lessee (i.e. school, church, government facility, etc.) from taking advantage of available tax credits and other financial benefits. Arguably, these entities and taxpayers stand to benefit

significantly from on-site generation, and numerous non-taxable entities are exploring this option at present.

It has also been noted that under this model, the third-party owners might be considered regulated utilities under current interpretation of Utah Code. According to a recent ruling by the Public Utility Commission of Oregon, third-party ownership models were deemed allowable for net metering, without the owners being considered regulated utilities.[10]

As such, Utah Clean Energy and WRA recommend that the Commission address this issue to allow more Utah customers the opportunity to install distributed generation under a contract with a third-party financer and enter into a net metering agreement with the Company. A Commission determination that such third-party providers are not regulated public utilities is indispensible to allow for these types agreements and innovative financing mechanisms in Utah, while helping Utah stay competitive and attract new businesses and economic development.

2. No additional Fee or Charge

With regard to *Utah Code § 54-15- 105 No additional fee or charge without governing authority approval*, Utah Clean Energy and WRA recommend that net metering customers be exempt from any additional charges outside of the standard residential customer charge. Given that net metering customers are reducing the strain on the system by providing on-site demand reduction, among other benefits, these customers should be provided an exemption to additional charges or fees beyond the standard residential charge.

3. Renewable Energy Credits (RECs)

The issue of REC ownership was not addressed in S.B. 84, however, Utah Clean Energy and WRA encourage the Commission to address this issue to clarify how REC ownership will be handled in the future. Given that RECs are bought and sold as a commodity, RECs associated with customer generation systems are owned by the customer-generator. If a utility is interested in owning the RECs, they should purchase them from the customer at a fair market price. Net metering should not automatically transfer ownership of RECs to the utility. According to the

[10] Order Number 08-388. In the Matter of Honeywell International, Inc., and Honeywell Global Finance, LLC, and PacifiCorp, DBA Pacific Power, Application for Declaratory Ruling. Public Utility Commission of Oregon. Entered 07/31/08. url: http://apps.puc.state.or.us/orders/2008ords/08-388.pdf

Interstate Renewable Energy Council, ten states have adopted this best practice[11], and Utah Clean Energy and WRA recommend the Commission rule in a similar manner.

H. Conclusion

Utah Clean Energy and WRA submit these comments and appreciate the Commission's consideration of these matters. Any questions regarding these comments can be directed to Sarah Wright or Sara Baldwin of Utah Clean Energy or Steven Michel of Western Resource Advocates (contact information provided below).

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[11] *Freeing the Grid: Best and Worst Practices in State Net Metering Policies and Interconnection Standards, 2008 Edition.* Interstate Renewable Energy Council. October 2008. Page 25, 94-95. URL: http://www.newenergychoices.org/uploads/FreeingTheGrid2008_report.pdf.

Appendix A - Studies on Net Metering and Distributed Generation

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i. Freeing the Grid Report. Interstate Renewable Energy Council and Network for New Energy Choices. 2008. URL: http://www.newenergychoices.org/uploads/FreeingTheGrid2008_report.pdf

ii. Distributed Generation and Cogeneration Policy Roadmap for California. California Energy Commission. March 2007. URL: http://www.energy.ca.gov/2007publications/CEC-500-2007-021/CEC-500-2007-021.PDF

iii. Photovoltaic Capacity Valuations. T. Hoff, R. Perez, JP. Ross, M. Taylor. Solar Electric Power Association. May 2008. URL: http://www.solarelectricpower.org/docs/PV%20CAPACITY%20REPORT.pdf

iv. Photovoltaics Value Analysis. J.L. Contreras, L. Frantzis, S. Blazewicz, D. Pinault, and H. Sawyer, Navigant Consulting Inc. February 2008. Burlington, Massachusetts. URL: http://www.nrel.gov/docs/fy08osti/42303.pdf

v. The Potential Benefits of Distributed Generation and Rate-Related Issues that May Impede Their Expansion. Department of Energy. February 2007. URL: www.ferc.gov/legal/fed-sta/exp-study.pdf

vi. The Value of Distributed Photovoltaics to Austin Energy and the City of Austin. Study to Determine Value of Solar Electric Generation to Austin Energy. T. Hoff, R. Perez, G. Braun, M. Kuhn, B. Norris, *Clean Power Research, L.L.C.* March 2006. URL: http://www.austinenergy.com/about%20us/newsroom/reports/PV-ValueReport.pdf