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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** **REPLY COMMENTS RESPONDING TO COMMISSION REQUEST RELATED TO APPROPRIATE COST AND BENEFIT TEST EQUATIONS AND METRICS TO EVALUATE NET METERING PROGRAM**

Pursuant to the Notices of Comment Period and Scheduling Conference ("Notice"), issued by the Public Service Commission of Utah ("Commission") November 21, 2014 in Docket No. 14-035-114, Utah Physicians for a Healthy Environment hereby files its reply comments in response to the Commission's request on the question of whether cost and benefit test equations and metrics that have been traditionally used to evaluate utility-sponsored demand side management ("DSM") programs should be used to examine the costs and benefits of Rocky Mountain Power's (RMP's) net metering program.

BACKGROUND

In response to issues raised by parties and reiterated in the Commission's order on netmetering ("NEM") in the RMP 2014 general rate case, Docket No. 13-035-184, the Commission opened Docket No. 14-035-114 to examine the costs and benefits of

the Company's NEM program. As part of this docket, the Commission requested comments and reply comments from interested parties regarding the Company's load research study. In response, several parties filed comments on December 5, 2014, and reply comments on December 19, 2014. The Commission next invited comments by interested parties on the following specific questions:

- Whether the traditional cost and benefit test equations (e.g., the utility cost test, the total resource cost test, the ratepayer impact measure test, and the participant test) and metrics (e.g., benefit to cost ratio) used to evaluate utility-sponsored demand side management programs can and should be applied to examining the costs and benefits of PacifiCorp's net metering (NEM) program.

- What is the applicability of some or all of these tests, or description of any other type of analysis, for examining the costs and benefits of PacifiCorp's net metering program? (The Commission requested that parties consider the consistency of any proposed analysis with the statutory definition or requirements of the net metering program.)

- Whether the types of analyses to be used will vary depending on whether the analysis examines residential or non-residential net metered customers.

In its comments filed February 6, 2015, RMP argued that these traditional tests for evaluating the cost and benefits of its Demand Side Management (DSM) programs were not appropriate for evaluating its NEM program. It insists that to evaluate NEM consistent with Utah's NEM statute, the test methodology's estimate of the benefits of distributed solar generation must be confined to avoided costs as the Commission has defined them with respect to other classes of customers who supply their own solar

generation to the grid (QFs). This definition of avoided costs, it notes, is the price for solar power at which the utility is indifferent as to whether that power is provided by itself or the customer.[1]

Such a narrow definition of the "benefit" of solar power appeals to RMP, and RMP would like the Commission to extend it to NEM customers, because it excludes any external benefits that reliance on solar power might impart to the community as a whole that RMP serves. Because it is an investor-owned utility guided only by the profit motive, RMP can safely be presumed to be "indifferent" to the external benefits (improved human and environmental health) of substituting carbon-free power for the carbon-intensive power in which it has invested so heavily.

Even though it concedes that external benefits are part of the traditional formulae for evaluating its DSM programs, RMP seeks to disassociate such benefits from NEM solar. To support its argument, RMP cites the new NEM statute, Utah Code Ann. § 54-15-105.1, which states:

> Determination of costs and benefits -- Determination of justand reasonable charge, credit, or ratemaking structure.
>
> The governing authority shall: (1) determine, after appropriate notice and opportunity for public comment, whether 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; and (2) determine a just and reasonable charge, credit, or ratemaking structure, including new or existing tariffs, in light of the costs and benefits.

[1] RMP cites the Commission's order in Docket No. 09-035-27 ("2009 Order") where it accepted RMP's recommendation to evaluate "small-scale renewable resources, such as solar photovoltaic ("PV") projects, on a similar basis as energy efficiency and load management" except to the extent "other economic tests are available."

RMP contrasts the new NEM provision with the one that it replaced. Utah Code Ann. § 54-15-105 (2013) stated:

> (1) An electrical corporation administering a net metering program *may not charge* a customer participating in the program an additional standby, capacity, interconnection, or other fee or charge unless the governing authority after appropriate notice and opportunity for public comment:
>
> (a) determines that:
>
> (i) the electrical corporation will incur direct costs from the interconnection or from administering the net metering program that exceed benefits, as determined by the governing authority resulting from the program, and
>
> (ii) public policy is best served by imposing a reasonable fee or charge on the customer participating in the net metering program rather than by allocating the fee or charge among the electrical corporation's entire customer base ….

(emphasis added by RMP).

RMP notes that the previous NEM provision incorporated a presumption against the Commission approving a NEM surcharge, and emphasizes that the new NEM provision does not.

The common sense interpretation of the new NEM provision is that it replaces a presumption against the Commission imposing NEM surcharges unless **both** economic analysis **and** public policy considerations impel the Commission to do otherwise, with a neutral instruction to the Commission to consider whether either NEM surcharges or

credits are appropriate, based on the Commission's own determination of what costs and benefits are appropriate to consider.[2]

RMP, however, asserts that the new NEM provision goes further, and restricts the benefits that the Commission may consider in evaluating NEM surcharges or credits to those that directly impact RMP and its customers. This may be what RMP wished the legislation had said, but it is not what the legislation ended up saying. Since the narrowing language cannot be found in the new NEM provision itself, RMP resorts to legislative history to support for its narrow interpretation—not an authoritative conference report accompanying the new provision, but a single senator's remark that his motive for supporting the legislation is to see that residential solar customers pay their "fair share" of system fixed costs.

It should be noted that the even this weak legislative "authority" doesn't say what RMP implies that it says. Even though the senator envisioned that the Commission would consider fixed system costs in making its cost/benefit determination and properly allocate them, he did not say that it should do so to the exclusion of other costs, or to the exclusion of the benefits of the NEM program, in particular, the program's external benefits. The Commission is free to consider the full range of costs and benefits that

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[2] Ii should be born in mind that current NEM provisions themselves set the utility's avoided cost as the floor, not the ceiling, for what providers of distributed renewable power should earn for the power they provide to the grid.

See Utah Code Ann. §54-15-104. Charges or credits for net electricity.

* * *

(3) Subject to Subsection (4), 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* (emphasis supplied)

can reasonably be associated with the NEM incentive to increase the portion of electricity in the RMP service area that is carbon-free.

Any competent economist will agree with the proposition that for prices to promote economic efficiency, they have to reflect both the direct and indirect costs that went into the production of the product or service, and electricity prices are no different. Where the indirect (or “external”) costs of production are a large proportion of total costs, it is highly inefficient not to include them in the price charged (or the incentive granted).

This is true of electricity generated by fossil fuels. As Utah Physicians for a Healthy Environment intend to show at an appropriate time in this proceeding, the economic harm of burning fossil fuels to generate electric power in terms of impairment to human and environmental health is from two to three times the direct cost of the fossil-fuel-based power itself. Any cost/benefit analysis of incentives to substitute carbon-free for carbon-intensive electric power that ignores these external costs that are avoided would seriously impair economic efficiency and should not be countenanced by the Commission.

The foregoing remarks concern what should not be excluded from a cost/benefit analysis of NEM. A few remarks about what should be included are in order. In prior dockets, RMP has calculated the costs of integrating variable wind-generated power into its grid, based on sophisticated software that predicts the shape of the wind-generated power profile over time, and the load-balancing capabilities of Corp’s regional grid. It concluded that for every 100 Megawatts of wind power, additional reserve

capacity of 8.3 Megawatts is required to successfully accommodate the intermittency of wind. The extra cost is about 0.2 cents per kW/h. See Rocky Mountain Power Docket No. 13-035-184, Direct Testimony of Witness Gregory N. Duvall, p. 25-26. Using the cost of integrating wind-generated power as a proxy for the cost of integrating fixed-solar-generated power, RMP estimated the cost of integrating solar at 0.283 cents per kilowatt, in the absence of a direct study of the solar-generated power profile. Id. at 27.

Rather than apply any of the cost/benefit formulae that the Commission has used in the past for estimating the costs and benefits of DSM programs, the Commission should, in this docket, update the cost of integrating fixed solar and use it as the starting point for comparing the value of NEM solar-generated power with the value of the non-NEM retail electric power that RMP supplies.

The analysis should combine residential NEM customers with non-residential NEM customers because the demand that residential customers impose on the system peaks later and the demand imposed by non-residential customers peaks earlier in the day. It is the combined impact of these two groups on system load profiles that should be analyzed because that is what drives the cost avoided by the utility. Any additional cost of individually metering the relatively large number of PV customers per kW/h generated should be part of the analysis as well.

Estimating an overall cost of supplying power to residential and non-residential NEM customers should be done by starting with the cost of supplying non-NEM retail customers. This cost should be adjusted by adding solar integration costs and any additional metering and associated costs. Once this is done, direct and external

benefits should be calculated to arrive at a net amount. This is preferable to attempting a bottom-up analysis of the cost of supplying residential solar customers in isolation. That process is unlikely to employ direct cost measurement, but, instead, is likely to require a large set of assumptions regarding fixed-cost responsibility that are likely to be subjective and prone to manipulation.

Finally, it is disconcerting to read RMP's comments that it is considering backing away from time-of-day pricing for non-retail customers in favor of cost of service pricing. If RMP is to successfully deal with the trend toward distributed generation it will have to move in the opposite direction. It will have to adapt its network to better accommodate distributed generation through greater regional integration, load balancing, smart metering programs at the individual customer level, networked-monitored appliances, and rate incentives for voluntary peak shaving programs. Modernizing and adapting PacificCorp's network to accommodate distributed renewable power would reduce the cost of integrating distributed generation, provide the data and the means for aligning rates with costs, and lower the high external costs of supplying Utah with the power that it needs.