

Montana Department of Environmental Quality Comments to the Energy and Telecommunications  
Interim Committee regarding SJ 12

TO: Energy and Telecommunications Interim Committee  
FROM: Energy Bureau, Montana Department of Environmental Quality  
SUBJECT: Response to Review of Survey Responses for ETIC regarding SJ12  
DATE: November 30, 2015

Background

During the 2015 Legislative Session, the Legislature passed SJ12. SJ12 tasked the Energy and Telecommunications Interim Committee (ETIC) with reviewing Montana's net metering policies to determine their general impacts and whether they foster cost shifts between different classes of electricity customers. In response to SJ 12, ETIC generated a set of survey questions at its June 2015 meeting to be answered by electricity sector stakeholders including electric utilities, cooperatives, and renewable energy advocates. At its September 2015 meeting, ETIC requested the Montana Public Service Commission (PSC), Montana Consumer Council (MCC), and the Montana Department of Environmental Quality (DEQ) review the responses to ETIC's survey and provide comment on the data provided.

The PSC provided comments to DEQ and MCC prior to the submittal deadline for responses to ETIC. DEQ seeks to minimize the number of duplicative observations by building on the comments provided by the PSC.

Overview of DEQ Comments to ETIC Survey Responses

1. Under SJ12, ETIC was empowered to review two related, but ultimately separate, questions regarding the costs and benefits of distributed generation (DG) and net metering. The first question is whether there is a cost shift for electricity customers in Montana as a result of the billing mechanisms used for net metered DG systems in Montana. The second question is in regards to the social costs and benefits of increasing the use of DG in Montana. Making a distinction between these two questions is important because the sets of information used to answer these two questions are different. Both questions require in depth analysis to answer adequately.
2. DEQ is in agreement with the PSC's comments regarding the overall inadequacy of the data provided by the survey respondents. The intention of the data that was sought through the survey was to determine whether a cost shift exists for electricity customers as a result of net metering, and if so, how large it might be, and whether it might be exacerbated by increasing the maximum size of a net metered system (as was considered during the 2015 Legislative

session). Additional information is necessary in order to determine if net metering results in a significant cost shift for any electricity customers in Montana. Some of this information may not be available at this time simply because it has not yet been measured or collected. For more information on what types of information are needed to determine the potential cost shift associated with net metered billing for DG we defer to the PSC's comments.

3. At low rates of market penetration, as is currently the case in Montana, both the benefits and costs of DG to the larger grid are relatively small as individual DG systems typically don't significantly impact the infrastructure decisions made by the owner of the electrical distribution system or the provider of the electricity. The relative size of the impacts and the number of benefits and costs created by DG grow with increased market penetration as clusters of DG systems in aggregate begin to affect the investment and operational decisions of electricity suppliers and transmission and distribution owners. Without data showing the relative density of DG systems on different sections of the Montana electrical grid and forecasts for how DG is likely to grow on various sections of the grid, it's not possible to determine at what point sections of the Montana grid might start seeing more significant impacts from DG.
4. As a result of the federal government's Clean Power Plan to regulate the carbon dioxide emissions of the electricity sector, the cost of emitting carbon dioxide and the benefits associated with avoided carbon dioxide emissions should be considered in any assessment of either the future customer cost shifts associated with net metered generation or the social costs and benefits of DG.
5. DG has a number of benefits that have led legislators from Montana and states across the country to implement policies to promote the use of DG technologies. These known benefits can include:
  - Reduced demand for electricity from the grid
  - Air pollution-free electricity generation
  - Greater resource diversity for meeting electricity needs
  - Increased price stability for electricity customers with DG
  - Greater customer and public awareness of electricity issues
  - Increased value of residential and commercial properties where DG is located
  - Decreased grid vulnerability from potential physical and cyber attacks

#### Relevancy of Supplied Data

- In determining whether net metering creates a significant cost shift for utility and cooperative electricity customers, it is critical to understand the value of the electricity generated by a DG system. In order to estimate the potential value of DG resources, knowing when and how much electricity is generated by net metered systems is crucial in order to estimate the value of electricity purchases avoided by electricity providers. No survey respondents provided this level of data, making a detailed assessment of the value of DG difficult to determine. Using the annual average wholesale price of power is not a suitable analog for this time of generation data

because renewable energy systems have predictable electricity generation patterns. As the share of electricity generated by net metered systems increases, where the electricity is generated will also be of increased importance in order to determine whether sections of the electricity grid are receiving additional benefits or costs as a result of the DG.

- In NorthWestern Energy's (NWE) answer to question 20, it contended that net metered DG does not necessarily reduce transmission and distribution (T&D) losses and noted that one of the two necessary conditions for reducing T&D losses is that a utility must know how much net metered generation is occurring in real time so that it can adjust its power supplies accordingly. To adequately answer this question, ETIC may wish to request additional information from NWE regarding how the utility came to these conclusions. Transmission and distribution losses are the result of many factors, but as a general rule, one of the driving variables is the amount of electricity flowing across the transmission and distribution lines. If overall electricity demand is reduced by net metering generation, than a proportional amount of electricity losses should also be expected under normal operational circumstances.<sup>1</sup> Likewise, it's unclear to DEQ how the generation from net metered systems alters the basic mechanism by which electricity providers determine how much power is necessary to meet their customers' electricity demand in real time. Whether a customer is demanding less electricity through energy efficiency, conservation behavior, or net metered electricity generation, the mechanism for determining in real time how much electricity an electricity provider needs to supply is the same.

### Conclusions

DEQ is in general agreement with the detailed comments submitted by the PSC. DEQ notes that when focused strictly on the potential cost shifts among ratepayers, significantly more and specific data is needed in order to conduct a comprehensive study and reach a reliable conclusion relative to the intent of SJ12.

---

<sup>1</sup> <https://www.ferc.gov/legal/fed-sta/exp-study.pdf>, pp. A-8.