Potential Draft Questions
Net Metering Questionnaire

In an effort to move forward on the analysis requested in Senate Joint Resolution No. 12, Study Net Metering, the Energy and Telecommunications Interim Committee may wish to review the questions proposed below at its June 5 meeting. The ETIC may wish to discuss the list and determine whether or not the questionnaire should be sent to the entities noted below. If the request for analysis is approved by the ETIC, responses would be requested by Sept. 1, 2015.

NorthWestern Energy

1. Generally describe the specific costs your utility incurs to implement and administer Montana's current net metering policy. Identify issues and concerns, if any, associated with implementing and administering the current net metering policy and how those issues and concerns could be addressed.

2. What is your utility's current total annual cost of service and what amount is fixed and unresponsive to changes in your customers' electricity use in the near term?

3. What is your utility's total current annual revenue from fixed charges that are unresponsive to changes in your customers' electricity use in the near term and what amount is from variable charges?

4. What is the distribution of residential and commercial (by rate class) customers' annual energy use, average annual noncoincident peak demand, and average annual coincident peak demand? Where, within these distributions, do residential and commercial (by rate class) net metering customers fall, on average?

5. For 2014, what was the impact on your utility's revenue of the reductions in residential and commercial electricity use and demand identified in questions 9-14? Describe how the revenue impact affects the bills of other residential and commercial customers, including the magnitude of any bill impacts.

6. Is all or part of the utility revenue impact or customer bill impact a subsidy? If so, describe the basis for determining that the impact is a subsidy.

7. In your opinion, are the utility revenue and customer bill impacts from net metering distinguishable from the impacts from other activities that change customer electricity use and demand, such as upgrades to building structures and equipment and, if so, why.

8. Provide a distribution of net metering systems by installed capacity, by customer class on NWE's system.

9. Based on residential net metering systems in your utility service area, for each month of the year, what is the average electricity use (kWh) per net metered customer before and after netting out electricity produced by the customers' generators? Separate this information for solar, wind, and other generators. If net metering does not provide this, provide information based on modeling (including an explanation of assumptions) and outline steps the utility is

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taking to acquire actual usage information.

10. How does average use per residential net metered customer before and after netting out electricity produced by customers' generators compare to average electricity use by residential customers that do not net meter?

11. Based on the commercial net metering systems in your utility service area, for each month of the year, what is the average electricity use per net metered customer before and after netting out electricity produced by the customers' generators? Separate this information for solar, wind, and other generators, and by specific commercial customer rate classes.

12. How does average use per commercial net metered customer before and after netting out electricity produced by customers' generators compare to average electricity use by commercial customers in the same rate class that do not net meter?

13. Based on the commercial net metering systems in your utility service area, for each month of the year, what is the average electricity demand (KW) per net metered customer before and after netting out electricity produced by the customers' generators? Separate this information for solar, wind, and other generators, and by specific commercial customer rate classes.

14. How does average demand per net metered commercial customer before and after netting out electricity produced by customers' generators compare to average electricity demand by commercial customers in the same rate class that do not net meter?

15. Describe how increasing the current 50 kilowatt (KW) net metering cap to 100 KW, 1,000 KW, and 5,000 KW would likely impact residential net metering trends in your utility service area and associated utility revenue and customer bill impacts.

16. Describe how increasing the current 50 KW net metering cap to 100 KW, 1,000 KW, and 5,000 KW would likely impact commercial net metering in your utility service area, by customer class, and associated utility revenue and customer bill impacts.

17. Identify issues and concerns, if any, associated with increasing the current 50 KW net metering cap to 100 KW, 1,000 KW, and 5,000 KW and how those issues and concerns could be addressed.

18. Identify potential operational issues associated with expanding net metering and provide suggestions for how the utility could address those issues.

19. Identify one or more methods for quantifying the benefits of net metering. In your opinion, what are the advantages and disadvantages of each method?

20. Identify the benefits of net metering that are shared between net metering customers and customers that do not net meter. Identify:

- The avoided cost for supply-related energy and capacity, accounting for the timing of energy and capacity produced by net metered generators;
- The avoided cost for transmission and distribution line losses;
- The avoided cost for transmission and distribution capacity and operation and maintenance;
- The avoided cost for load following, regulation, and frequency response;

- The avoided pollution control costs.

21. Describe the methods used to determine each of the avoided cost categories in question 20.

22. Describe how increasing the current 50 KW net metering cap to 100 KW, 1,000 KW, and 5,000 KW would likely impact each of the avoided cost categories in question 20.

23. What are the pros and cons of extending Montana's net metering policy to apply to rural electric cooperatives and all regulated utilities? Is it appropriate to treat rural electric cooperatives and certain regulated utilities differently in relation to net metering requirements under specific circumstances in Montana, if yes, explain.

Montana-Dakota Utilities

1. Generally describe the specific costs your utility incurs to implement and administer net metering in accordance with the current Public Service Commission tariff. Identify issues and concerns, if any, associated with implementing and administering the tariff and how those issues and concerns could be addressed.

2. What is your utility's current total annual cost of service and what amount is fixed and unresponsive to changes in your customers' electricity use in the near term?

3. What is your utility's total current annual revenue from fixed charges that are unresponsive to changes in your customers' electricity use in the near term and what amount is from variable charges?

4. What is the distribution of residential and commercial (by rate class) customers' annual energy use, average annual noncoincident peak demand, and average annual coincident peak demand? Where, within these distributions, do residential and commercial (by rate class) net metering customers fall, on average?

5. For 2014, what was the impact on your utility's revenue of the reductions in residential and commercial electricity use and demand identified in questions 10-15? Describe how the revenue impact affects the bills of other residential and commercial customers, including the magnitude of any bill impacts.

6. Is all or part of the utility revenue impact or customer bill impact a subsidy? If so, describe the basis for determining that the impact is a subsidy.

7. In your opinion, are the utility revenue and customer bill impacts from net metering distinguishable from the impacts from other activities that change customer electricity use and demand, such as upgrades to building structures and equipment and, if so, why.

8. What are the pros and cons of extending Montana's net metering policy to apply to MDU? Is it appropriate to treat MDU differently than other regulated utilities in terms of net metering requirements, if so, why?

9. Provide a distribution of net metering systems by installed capacity, by customer class on MDU's system.

10. Based on residential net metering systems in your utility service area, for each month of the year, what is the average electricity use (kWh) per net metered customer before and after netting out electricity produced by the customers' generators? Separate this information for solar, wind, and other generators. If net metering does not provide this, provide information based on modeling (including an explanation of assumptions) and outline steps the utility is taking to acquire actual usage information.

11. How does average use per residential net metered customer before and after netting out electricity produced by customers' generators compare to average electricity use by residential customers that do not net meter?

12. Based on the commercial net metering systems in your utility service area, for each month of the year, what is the average electricity use per net metered customer before and after netting out electricity produced by the customers' generators? Separate this information for solar, wind, and other generators, and by specific commercial customer rate classes.

13. How does average use per commercial net metered customer before and after netting out electricity produced by customers' generators compare to average electricity use by commercial customers in the same rate class that do not net meter?

14. Based on the commercial net metering systems in your utility service area, for each month of the year, what is the average electricity demand (KW) per net metered customer before and after netting out electricity produced by the customers' generators? Separate this information for solar, wind, and other generators, and by specific commercial customer rate classes.

15. How does average demand per net metered commercial customer before and after netting out electricity produced by customers' generators compare to average electricity demand by commercial customers in the same rate class that do not net meter?

16. Describe how increasing the current 50 kilowatt (KW) net metering cap to 100 KW, 1,000 KW, and 5,000 KW would likely impact residential net metering trends in your utility service area and associated utility revenue and customer bill impacts.

17. Describe how increasing the current 50 KW net metering cap to 100 KW, 1,000 KW, and 5,000 KW would likely impact commercial net metering in your utility service area, by customer class, and associated utility revenue and customer bill impacts.

18. Identify issues and concerns, if any, associated with increasing the current 50 KW net metering cap to 100 KW, 1,000 KW, and 5,000 KW and how those issues and concerns could be addressed.

19. Identify potential operational issues associated with expanding net metering and provide suggestions for how the utility could address those issues.

20. Identify one or more methods for quantifying the benefits of net metering. In your opinion, what are the advantages and disadvantages of each method?

21. Identify the benefits of net metering that are shared between net metering customers and customers that do not net meter. Identify:

- The avoided cost for supply-related energy and capacity, accounting for the timing of energy and capacity produced by net metered generators;
- The avoided cost for transmission and distribution line losses;
- The avoided cost for transmission and distribution capacity and operation and maintenance;
- The avoided cost for load following, regulation, and frequency response;
- The avoided pollution control costs.

22. Describe the methods used to determine each of the avoided cost categories in question 21

23. Describe how increasing the current 50 KW net metering cap to 100 KW, 1,000 KW, and 5,000 KW would likely impact each of the avoided cost categories in question 21.

Rural Electric Cooperatives

1. Generally describe the specific costs rural electric cooperatives incur when implementing and administering net metering policy. Identify issues and concerns, if any, associated with implementing and administering the current level of net metering and how those issues and concerns could be addressed.

2. What is your cooperative's current total annual cost of service and what amount is fixed and unresponsive to changes in your customers' electricity use in the near term?

3. What is your cooperative's total current annual revenue from fixed charges that are unresponsive to changes in your customers' electricity use in the near term and what amount is from variable charges?

4. What is the distribution of residential and commercial (by rate class) customers' annual energy use, average annual noncoincident peak demand, and average annual coincident peak demand? Where, within these distributions, do residential and commercial (by rate class) net metering customers fall, on average?

5. For 2014, what was the impact on cooperative revenue of the reductions in residential and commercial electricity use and demand identified in parts 10-15? Describe how the revenue impact affects the bills of other residential and commercial customers, including the magnitude of any bill impacts.

6. Is all or part of a cooperative's revenue impact or customer bill impact a subsidy? If so, describe the basis for determining that the impact is a subsidy.

7. In your opinion, are cooperative revenue and customer bill impacts from net metering distinguishable from the impacts from other activities that change customer electricity use and demand, such as upgrades to building structures and equipment and, if so, why.

8. What are the pros and cons of extending Montana's net metering policy to apply to rural electric cooperatives? If it is appropriate to treat rural electric cooperatives differently than regulated utilities, is it appropriate to treat all rural electric cooperatives the same in terms of net metering requirements?

9. Provide a distribution of net metering systems by installed capacity, by customer class on cooperatives' systems.

10. Based on residential net metering systems in a rural electric cooperative's service area, for each month of the year, what is the average electricity use (kWh) per net metered customer before and after netting out electricity produced by the customers' generators? Separate this information for solar, wind, and other generators. If net metering does not provide this, provide information based on modeling (including an explanation of assumptions) and outline steps cooperatives are taking to acquire actual usage information.

11. How does average use per residential net metered customer before and after netting out electricity produced by customers' generators compare to average electricity use by residential customers that do not net meter?

12. Based on the commercial net metering systems in a cooperative's service area, for each month of the year, what is the average electricity use per net metered customer before and after netting out electricity produced by the customers' generators? Separate this information for solar, wind, and other generators, and by specific commercial customer rate classes.

13. How does average use per commercial net metered customer before and after netting out electricity produced by customers' generators compare to average electricity use by commercial customers in the same rate class that do not net meter?

14. Based on the commercial net metering systems in a cooperative's service area, for each month of the year, what is the average electricity demand (KW) per net metered customer before and after netting out electricity produced by the customers' generators? Separate this information for solar, wind, and other generators, and by specific commercial customer rate classes.

15. How does average demand per net metered commercial customer before and after netting out electricity produced by customers' generators compare to average electricity demand by commercial customers in the same rate class that do not net meter?

16. Describe how increasing a net metering cap to 100 KW, 1,000 KW, and 5,000 KW would likely impact residential net metering trends in a cooperative's service area and associated cooperative revenue and customer bill impacts.

17. Describe how increasing a net metering cap to 100 KW, 1,000 KW, and 5,000 KW would likely impact commercial net metering in a cooperatives service area, by customer class, and associated cooperative revenue and customer bill impacts.

18. Identify issues and concerns, if any, associated with increasing a net metering cap to 100 KW, 1,000 KW, and 5,000 KW and how those issues and concerns could be addressed.

19. Identify potential operational issues associated with expanding net metering and provide suggestions for how cooperatives could address those issues.

20. Identify one or more methods for quantifying the benefits of net metering. In your opinion, what are the advantages and disadvantages of each method?

21. Identify the benefits of net metering that are shared between net metering customers and customers that do not net meter. Identify:

- The avoided cost for supply-related energy and capacity, accounting for the timing of energy and capacity produced by net metered generators;
- The avoided cost for transmission and distribution line losses;
- The avoided cost for transmission and distribution capacity and operation and maintenance;
- The avoided cost for load following, regulation, and frequency response;
- The avoided pollution control costs.

22. Describe the methods used to determine each of the avoided cost categories in question 21.

23. Describe how increasing a net metering cap to 100 KW, 1,000 KW, and 5,000 KW would likely impact each of the avoided cost categories in question 21.

Renewable Energy Industry

1. Currently, what are the installed costs for typical net metered solar PV systems of 5 KW, 10 KW, 50 KW, 100 KW, 500 KW, 1,000 KW, and 5,000 KW?

2. If the net metered systems in question 1 were required to have separate production meters, what would be the incremental installed cost for each project size?

3. Nationally, what percentage of total net metered systems fall into the size ranges in question 1 (e.g., 0-5 KW, 5-10 KW, 10-50 KW, etc.)?

4. Is there a reasonable generator size threshold above which production meters should be required and payments made based on utility avoided costs? If so, identify a reasonable size threshold and describe the basis for determining it.

5. Is there a reasonable threshold or saturation point for requiring the use of smart inverters?

6. Is there a reasonable generator size threshold above which distributed generators should be subject to the same resource planning and procurement processes a regulated utility uses to procure other resources? If so, identify a reasonable size threshold and describe the basis for determining it.

7. Identify the benefits of net metering that are shared between net metering customers and customers that do not net meter.

8. Identify additional net metering benefits (employment, taxes, societal, environmental, etc.) and explain, in the industry's opinion, how best to account for those benefits.

9. Identify one or more methods for quantifying the benefits of net metering. In your opinion, what are the advantages and disadvantages of each method?

10. What are the pros and cons of extending Montana's net metering policy to apply to rural electric cooperatives and all regulated utilities? Is it appropriate to treat rural electric cooperatives and certain regulated utilities differently in relation to net metering requirements under specific circumstances in Montana, if yes, explain.