

Service Date: October 14, 2011

DEPARTMENT OF ENVIRONMENTAL QUALITY
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

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IN THE MATTER of Montana-Dakota) UTILITY DIVISION
Utilities biennial filing of an electric integrated resource plan) DOCKET NO. N2011.8.70

- 1) The Department of Environmental Quality (DEQ) is required to comment on integrated least-cost plans submitted to the Public Service Commission. According to 69-3-1205 (2) (a) MCA, DEQ “shall review a plan and comment on the need for new resources, the alternatives evaluated to meet the need, the environmental implications of the resource choices, and other related issues that it considers important.”
- 2) On page v of Volume I of the 2011 IRP, in the third bullet on that page, does the mentioned 7.3 MWh of energy savings from DSM include energy conservation only, or does it also include interruptible demand and demand response? Please make clear all the components that number includes.
- 3) On page v of Volume I of the 2011 IRP, 7.3 MWh of DSM by 2015 seems like quite an aggressive goal based on your current performance. The goal for 2011 is 1.0 MWh, for example. In this same vein, can you explain the large jumps in predicted DSM performance in 2012 and 2013 as shown in Table 3-1 on page 16 of Volume I?
- 4) Referring to page 14 of Volume I, what does MDU plan to do about under-forecasting both the annual energy requirements and the summer peak demand? Please give an answer in this section or direct the reader to a section with the answer.
- 5) On page 1 of Volume II, Attachment A, the text reads, “Total annual energy for the Integrated System is projected to grow at an average rate of 3.2% per year for the next five years and at an

average rate of 2.1% per year through 2030. Integrated System peak demand is projected to grow at an average rate of 2.7% per year for the next five years and an average rate of 1.8% per year through 2030.” Doesn’t the oil boom in the Montana part of the Bakken field (in other words, the part of the oil boom that MDU serves) suggest that these growth numbers will actually be higher in later years rather than lower?

- 6) On page 1 of Volume II, Attachment A, the text reads, “Much of the higher rate of growth in the first five forecasted years can be attributed to the Keystone XL Pipeline load that is anticipated to come on-line in June 2012.” Keystone XL will not likely come on-line June 2012 due to delays in the permitting process and a Supplemental EIS. You might note this in this section.
- 7) On page 11 of Volume II, Attachment A, under section 1.3.3, your oil field electricity consumption forecasts are based on oil production past sales. Might it make sense to base these consumption forecasts instead on production forecasts in the area for future sales? The exceptional growth in oil production within MDU’s service territory may lead to even more robust growth in electricity demand than you forecast, resulting in a potential shortage of supply. Also, the proposed Bakken Marketlink on-ramp to the Keystone XL pipeline may have an even more profound effect on oil production growth rates in MDU’s service area and thus electricity demand in Montana.
- 8) On page 19 of Volume II, Attachment A, the text reads, “The annual energy losses percentage, defined as a fraction of the total annual energy requirements, has varied from year to year. Therefore, these loss percentages are averaged over a ten-year time period. The average value for the past ten years is 7.910%.” Has that average value varied a lot? If so, using an average of 7.910% for all future years may understate losses in some forecasted years.
- 9) On page 27 of Volume II, Attachment A, in the table on that page, average use per customer is rising through 2030. Wouldn’t energy efficiency improvements throughout our society cause average use per customer to level out and even decline by 2030, or is there something else offsetting that effect?

- 10) On page 31 of Volume II, the text reads: "Demand for each scenario was derived by applying the load factors calculated from the base forecast to the high-growth and low-growth scenario forecasted energy." Why is it that in the table entitled, "High-Growth and Low-Growth Scenarios, Total Annual Energy (GWh) and Summer Peak Demand (MW)" on page 32, that for the "Demand" sub-heading, the Low demand numbers are lower for years 2011-2029 than the 500.0 MW forecast for 2011. Why doesn't the low number start at 500 MW in 2011 and rise up from there?
- 11) Per the same table on page 32 of Volume II, the "Low" column on that page does not seem to be growing by 0.5% per year, but rather by less than 0.5%. Furthermore, why does the Low column actually decline in 2013? The "High" column seems to be increasing at slightly less than the stated 4.4% growth, although this may simply be a rounding error.
- 12) Throughout Volume III, please make clearer the difference between 'Demand response' and 'Conservation'. Then, explain more clearly how both of those make up total DSM. Perhaps stating the definitions of each up front on page 1 of Volume III and then being consistent with terminology would help to not confuse the reader.
- 13) On pages 14-16 of Volume III, in Tables B-4, B-5, and B-6, why did you include the new construction bundle option in the DSM program if it does not have a total resource cost over 1.0? Is that a current option that will be dropped?
- 14) On page 17 of Volume III, the text talks about Energy Star refrigerators and freezers purchased by Montanans, and Montanans receiving a \$10 rebate. A rebate of \$10 per refrigerator or freezer will probably not induce people to buy one.
- 15) On page 25 of Volume III, in Table B-8, why does North Dakota have fewer DSM programs listed than Montana for 2011-2013? Does this have to do with the benefit-cost tests? This result does not seem to jibe with the current DSM programs offered in tables B-4 through B-6 on pages 14-16.
- 16) On Page 36 of Volume III in Table B-9, the last column talks about Net New DSM. What is Net New DSM? Why does the Net New DSM kWh column in Table B-9 not match up trend-wise with the Net

New DSM MW column in Table B-10 on page 37? For example, the last column in B-10 stays at 8.7 MW for 2014 and on, while the last column in Table B-9 increases each year in amount.

- 17) Starting in the table on page A-4 of Volume III, and the tables in the following pages, please label the units used for the columns titled "Lifetime Energy Reduction" and "2013 Demand Reduction. Also, how was the column labeled "2013 demand reduction" calculated?
- 18) On Page 25 of Volume IV, this sentence appears wrong: "In contrast, in the 2015 least-cost resource plan, approximately 80 percent of Montana-Dakota's energy requirements would be served from the 53 percent coal-fired capacity and two percent renewable capacity sources." If it is not wrong, please clarify.
- 19) The next sentence on Page 25 states: "This creates a concern over the imbalance of Montana-Dakota's future generation mix as modeled in the least-cost resource plan, which leaves Montana-Dakota customers vulnerable to future gas and market pricing for 20 percent of their energy needs." Please clarify this sentence. What about the concern of having 52 percent of baseload as coal when future carbon legislation may be enacted?
- 20) On page 27 of Volume IV, the text reads, "Montana-Dakota is also monitoring the development of the mandatory Midwest ISO capacity auction as a potential source of securing future capacity resources." Please expand on this. It seems like MISO may be a great source for inexpensive power, and that this deserves much more attention than it is currently getting in the 2011 MDU IRP.
- 21) In Volume IV, Attachment C, Appendix A, it seems a bit much to include 100 plus pages of EGEAS data in Appendix C, although DEQ does not feel strongly about this if there is a good reason to include it.
- 22) DEQ concludes that the IRP is an opportunity for the utility to methodically review its needs, the full range of alternatives available to it, and the risks and costs of those alternatives. The IRP should convey the results of this review to regulators and public, so they have some understanding of the costs and risks that customers will face in the future. DEQ recommends that MDU continue the progress it has made in developing its demand side analysis and investment, focusing in particular

on measures that reduce system peak. DEQ also recommends a deeper look into MISO and its supply side market opportunities.

23) This concludes DEQ's comments.

STATE OF MONTANA

Department of Environmental Quality

by: _____

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