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Patricia Van Gerpen
Executive Director
South Dakota Public Utilities Commission
Capitol Building, 1st Floor
500 East Capitol Avenue
Pierre, SD 57501-5070

Commissioner Kristi Fiegen (Chair)
Commissioner Gary Hanson
Commissioner Chris Nelson

Re: Recent Minnesota PUC Decision in Environmental Costs Docket

Dear Commissioners,

As you may know, the Minnesota Public Utilities Commission (MPUC) recently reached a decision in its proceeding to update the environmental cost values used in resource planning and other proceedings before the MPUC.¹ This letter is to summarize that decision and its immediate implications, explain how Xcel Energy participated in these dockets so as to influence the outcome in our customer's best interests, and to offer our assistance if you would like further information on this matter. Note that the MPUC has not yet issued its official Order, so this summary is based on our understanding of their decisions as indicated in deliberations on July 27, 2017.

Background

Since the 1990's, Minnesota statute (Minn. Stat. §216B.2422, subd. 3) has required consideration of environmental costs in resource planning. The statute requires the MPUC:

“to the extent practicable, to quantify and establish a range of environmental costs associated with each method of electricity generation. A utility shall use the values established by the commission in conjunction with other external factors, including socioeconomic costs, when evaluating and selecting resource options in all proceedings before the commission, including resource plan and certificate of need proceedings.”

¹ *In the Matter of the Further Investigation into Environmental and Socioeconomic Costs under Minn. Stat. §216B.2422, subd. 3.* Docket No. E999/CI-14-643.

Environmental cost values were first assigned in 1997 and have not changed except for annual inflation adjustments.

The MPUC's recent decision was the conclusion of a proceeding that began almost four years ago. In October 2013 a coalition of environmental groups referred to as the "Clean Energy Organizations" petitioned the MPUC to update the environmental cost values assigned to carbon dioxide (CO₂) and three criteria pollutants – oxides of nitrogen (NO_x), sulfur dioxide (SO₂), and fine particulate matter (PM_{2.5}) – arguing that the values established in 1997 needed to be updated. The MPUC decided in February 2014 to reopen the environmental costs docket to update the values.

The contested case ran through mid-2016. In 2017 the MPUC held hearings on CO₂ (July 21) and criteria pollutants (July 25), and reached its decision on July 27, 2017.

Environmental Cost of Carbon

The Minnesota state agencies (Department of Commerce and Pollution Control Agency) as well as the Clean Energy Organizations advocated adoption of the Federal "Social Cost of Carbon" (FSCC) estimates developed by an Interagency Working Group and published in a series of technical reports from 2010 through 2016. These values range from \$12 to \$126 per ton of CO₂ emitted in 2020, with higher values in later years. They are an estimate of the net present value of monetized damages from an incremental ton of CO₂, modeled to the year 2300.

In its October 15, 2014 Order setting a contested case for this proceeding, the Commission stated that "The purpose of the proceedings shall be to determine whether the Federal Social Cost of Carbon is reasonable and the best available measure to determine the environmental cost of CO₂ and, if not, what measure is better supported by the evidence."²

Xcel Energy opposed adoption of the FSCC. We argued it was designed for a different purpose (cost/benefit analysis of federal regulations), fundamentally uncertain, and reflected too broad a range – from very low to very high values – to be practicable for resource planning. However, understanding the history and purpose of this docket as reflected in the MPUC's October 15, 2014 Order, we designed a method to derive a prudent range - balancing risk tolerance and practicability – that would better meet the "reasonable and best available" requirement when applied to resource planning and acquisition. We proposed a range for 2020 from \$12 to \$42 per ton, and pointed out that neither value merits greater weight than the other. We believed this was a credible, evidence-based range that would not result in extreme inputs into resource selection decision-making. We proposed that both ends of this range be used as sensitivities in resource planning models.³ In any case, environmental cost values in this range would not

² MPUC's October 15, 2014 Order *In the Matter of the Investigation into Environmental and Socioeconomic Costs Under Minn. Stat. § 216B.2422, Subd. 3*. Docket No. E-999/CI-14-643. Order point 2:

³ Recent resource plan modeling used a range of \$9 to \$34 per ton for the regulatory cost of carbon, a proxy for the cost of complying with future carbon regulations.

be determinative of any decision, since they would be balanced with considerations of energy affordability, reliability, fuel diversity, etc.

The MPUC ultimately adopted its own approach to setting the range, which modified some of the framing assumptions used in calculating the FSCC. The MPUC adopted a 2020 range from \$9.05 to \$43.06 per ton, which will escalate in later years.

We believe this range is practicable for resource planning, and it avoids some of the highest values (\$63 and \$126 per ton) that were strongly advocated for by some parties in this proceeding.

Environmental Costs of Criteria Pollutants

In updating the environmental cost values for NO_x, SO₂, and PM_{2.5}, the MPUC's intent was to incorporate advancements in the science around health and environmental impacts of these pollutants based on how they disperse from emission sources and the populations they affect. Some parties proposed creating values based on potential sources in every Minnesota county; Xcel Energy proposed retaining the three representative source locations (urban, metropolitan fringe, and rural). Some proposed considering damages nationwide; Xcel Energy proposed quantifying damages only in Minnesota and within 100 miles of the border, in part due to the limitations of the air quality models. The Minnesota state agencies and Clean Energy Organizations used simplified air quality models, whereas Xcel Energy used a state-of-the-art photochemical grid model.

The MPUC ultimately adopted Xcel Energy's proposed ranges without modification. While the new ranges are higher than the MPUC's prior values⁴, they reflect improved understanding and modeling of the impacts of criteria pollutants. We believe the adopted ranges are reasonable and will not result in undue impacts to customers.

Application of Cost Values

The updated values will be used, as they have been since the 1990s, as inputs to our resource planning models to determine a "Present Value of Societal Cost" (PVSC) for each resource plan alternative or resource acquisition decision. Generation resources that emit CO₂ and/or criteria pollutants will have a higher PVSC than those that do not. However, it is important to keep in mind that:

- The environmental cost values and the PVSC ranking developed using them are not the sole considerations used in resource decisions. The MPUC also considers Present Value of Revenue Requirements (PVRR) reflecting actual costs borne by customers in rates, as well as reliability, fuel diversity, and other factors.

⁴ The MPUC adopted these range values for the metropolitan fringe source location: NO_x: \$2,467 – \$7,336, SO₂: \$4,543 – \$11,317, and PM_{2.5} \$6,450 – \$16,078 per ton. The MPUC's prior ranges were \$206 - \$397 for NO_x, \$0 for SO₂, and \$2,968 - \$4,311 for particulates.

- The MPUC decided not to adopt the highest FSCC values – \$63 and \$126. Although the MPUC did not adopt Xcel Energy’s proposed methodology and resultant range, the range it ultimately approved was very comparable to the Company’s proposal.
- The environmental cost values will be run as sensitivities, not base assumptions, in resource planning. And, the MPUC decided to continue requiring a \$0 per ton sensitivity to provide information about the impacts of the environmental cost values. As a result, sensitivities for CO₂ environmental costs will now be run at \$0, \$9.05, and \$43.06 per ton.
- Our base assumption will remain \$21.50 per ton, the midpoint of the regulatory cost range. Because we already run sensitivities at the regulatory low and high of \$9 and \$34 per ton, we do not expect the impact of the environmental cost sensitivities to be transformative.
- As you know, none of the environmental cost values are charged to our customers in rates. They are only one component considered in any resource decision.

If you have any questions, please do not hesitate to contact me at (612) 330-5723. In addition Nicholas Martin, Manager of Environmental Policy, is available for any further discussions you wish.

Sincerely,

A handwritten signature in cursive script that reads "Laura McCarten".

Laura McCarten
Regional Vice President
NSPM State Affairs