STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of Establishing an Updated Estimate of the Costs of Future Carbon Dioxide Regulation on Electricity Generation under Minn. Stat. §216H.06

Docket No. E999/DI-19-406
Docket No. E999/CI-07-1199

COMMENTS OF GREAT RIVER ENERGY

Great River Energy (GRE) appreciates the opportunity to provide comments in this matter as requested by Minnesota Pollution Control Agency (MPCA) and the Minnesota Department of Commerce, Division of Energy Resources (DOC) in their Request for Comments letter dated July 9, 2019. GRE provides its comments on the range of cost estimates for the future cost of carbon dioxide (CO_2) regulation on electricity generation.

TOPICS FOR COMMENT

Should the Commission adopt the Agencies' recommended CO_2 regulatory cost range?

GRE does not oppose the Agencies' recommended CO_2 regulatory cost range of $5 to $25 per short ton effective 2025 and after.

Should the basis for likely CO2 costs contemplate a specific type of CO_2 regulation (e.g. a direct tax or cap and trade)? If the basis for CO_2 regulatory costs is a cap and trade program, should and/or how past CO_2 reductions (i.e. a baseline year) be taken into account?

Today the main basis from which representative cost data can be drawn is primarily from allowance trading schemes, such as the Regional Greenhouse Gas Initiative (RGGI) and the Western Climate Initiative (WCI). Although the Affordable Clean Energy (ACE) rule, that has effectively replaced the repealed Clean Power Plan (CPP), prohibitively rules out allowance trading as a compliance strategy, it is still reasonable to use existing allowance trading programs as guideposts for the formation of a future cost of carbon regulation for planning purposes.

The basis for CO_2 regulatory costs is, in this case similar to previous years where allowance trading pricing informed the range. GRE is unclear of the intent of the second question, as the future cost of CO_2 regulation would be assessed on all short tons of CO_2 emitted from the portfolio beginning in 2025. A baseline relative to a previous years' emissions may be understandable in a policy construct that contemplates a certain percentage reduction relative to a reference year. However, previous emissions levels may not be particularly relevant in the context of modeling future costs of CO_2 regulation in a forward-looking planning exercise. With that said, most CO_2 discussions to date have referenced a baseline year of 2005.

In constructing an allowance trading program, typically a target amount of emissions will be determined for various milestone years throughout the life of the program, and the cap reduced to meet that goal through increasingly scarce emissions allowances. In the case of allowance allocation instead of auction, baseline years would be impactful.

Within the context of this proceeding however, GRE finds the Agencies' recommendation to be acceptable.

Why is it reasonable to base the range of likely CO_2 costs on programs in which Minnesota does not participate?

CO_2 is a global emission, and the recommended range of values that are formatively drawn from other allowance markets that govern the emissions of CO_2 should provide a rational range for use by utilities planning in Minnesota. There is a potential issue with the regional availability of replacement resources that could be used to decarbonize portfolios, but drawing guidance from multiple markets and establishing a range reduces concerns in this regard.

The range that is determined and recommended in this filing encompasses a spread of values, within which it is expected that a likely future cost of regulation is included. Although Minnesota does not directly participate in programs like RGGI, that program and others like it can provide guidance on the direction and magnitude of costs that could be encountered should Minnesota participate in an allowance market in the future.

Policy design is an important part of a governance program, and decisions such as the allocation or auctioning of the allowances will play a large role in their value. As Minnesota does not yet have a policy or a multi-jurisdiction trading program in which it participates, it is rational to base the value of a future policy on established and existing policy tools.

Minn. Stat. § 216H.06 requires the Commission to estimate the costs "of future carbon dioxide regulation:"

Is the correct interpretation of the statute that the CO_2 values should reflect a net cost of complying with a particular regulation (i.e. the cost of reducing aggregate emissions to the target level of a hypothetical policy), or that the values should reflect the cost/price of an incremental unit of CO_2?

The statute indicates that a value should be estimated that represents a likely range of future carbon dioxide regulation on electricity generation. Current policies that provide cost guidance in the United States are representative of cap and trade programs like RGGI and the WCI.

The matter of whether the CO_2 values should approximate a hypothetical policy like a cap and trade program or the cost of an incremental unit of CO_2 is difficult. It is problematic to attempt to disentangle the two, as price signals for an incremental unit of CO_2 are intrinsically tied to a specific type of regulation.

GRE agrees with the Agencies' range as an acceptable future value of regulation, one that has drawn its values formatively from currently existing policies and feasible timelines of a promulgated CO_2 governance regime. Currently utilities additionally model the externality values of emissions, which includes the social cost of carbon. Between the Agencies' range of values, and the values that are delineated in the externalities docket, GRE believes there is a robust representation of the impact of future potential costs of CO_2.

In general, please discuss why an allowance price should correspond to the net cost of CO_2 regulation. For example, do allowance prices in RGGI reflect the net costs to states participating in that program?

Economic theory does not require that allowance pricing be predicated on the net cost to a state participating in that program. The concept of cap and trade programs, or allowance trading programs, is that a regulatory body sets an acceptable level of emissions at which point allowances are either auctioned or assigned. In the case of an auction, the price of an allowance simply corresponds to the demand of the allowance itself, which in turn is determined by the number of allowances in the market.

The cost of an allowance is simply a price signal that is meant to incentivize the reduction of emissions over time as the cap is ratcheted down, thus increasing the costs of procuring allowances to the point that it would be more economic to reduce emissions to zero instead of purchasing high-cost allowances in a low-cap market.

The process of letting the market set a price on carbon emissions through an allowance trading program creates a system in which the price of an allowance is a proxy for the willingness to pay to emit a ton of, in this case, CO_2. The price of the allowance does not need to correspond to a net cost of regulation, because the allowance itself is the regulation, and it delivers a price signal meant to reduce CO_2.

For the purposes that are served through the imposition of the future cost of carbon in planning energy portfolios, the current construct of using externality pricing and future cost of regulation are sufficient to deliver robust financial results.

For parties who perform capacity expansion modeling, please discuss how CO_2 regulatory costs are modeled differently, if at all, than environmental externalities. Please discuss how different methods of modeling CO_2 regulatory costs and environmental externalities might affect the ultimate selection of least-cost expansion plans.

If environmental externalities and CO_2 regulatory costs were all modeled as specific additional dispatch costs tied to emissions, then their modeling methodology would be the same. This method would take these additional costs into account when dispatching generation in the model. There could be differences in application of the costs depending on whether they only applied to certain units or groups of units.

Beyond expansion units, if existing units are offered for economic retirement selection, adding externality and CO_2 regulatory costs would increase the cost of generation for units that incur those costs. This could drive increased or earlier economic retirement selections in an expansion plan compared to the plan from a model without those additional costs. When externality and CO_2 regulatory costs are included in the model, the optimization will minimize those in the model. However, if externality and CO_2 regulatory costs were added as an external cost adder outside of the model, the model optimization would not have the opportunity to take those into account and minimize them in the least-cost expansion plan.

GRE would note that reference to 'least-cost' in the question is relative to modeling scenarios in which externality costs and future costs of carbon are imputed on the expansion plan. Externalities are not directly reflected in today's wholesale markets, so a least-cost plan that includes externalities within the model would not likely correspond to a least-cost plan in current market environments. GRE is responsible for providing an affordable and reliable power supply product to its members within prevailing markets and reliability requirements. However, GRE recognizes that the future cost of carbon regulation does represent a potential cost for which GRE is planning, so inclusion of the such costs is a prudent consideration in GRE's low-cost, low-risk planning models.

Are there other issues or actions the Commission should consider?

No. As stated previously, GRE does not oppose the current range and timing of the proposal from the Agencies and feels that the way a future cost of regulation is determined is sufficient and representative of a future regulatory cost borne by emitters of CO_2.

CONCLUSION

GRE's recommendations are as follow:

- Quantify and establish the range of regulatory costs of carbon dioxide emissions as $5 to $25 per short ton effective 2025 and after.

If you have any questions, please contact me at gpadden@grenergy.com or at 763-445-6114.

Sincerely,

/s/ Greg Padden

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Great River Energy
c: Service List