June 28, 2024

Commissioner Katie Seiben
Chair, Minnesota Public Utilities Commission
121 7th Place East, #350
Saint Paul, MN 55101

In the Matter of an Investigation into Implementing Changes to the Renewable Energy Standard and the Newly Created Carbon Free Standard under Minn. Stat. § 216B.1691

PUC Docket Number: E-999/CI-23-151

Dear Commissioner Seiben,

CRS appreciates the opportunity to comment on the implementation of changes to Minnesota's Renewable Energy Standard and the newly created Carbon Free Standard under amendments to Minnesota Statute 216B.1691 adopted last year.

Introduction to CRS and Green-e®

Center for Resource Solutions (CRS) is a 501(c)(3) nonprofit organization that creates policy and market solutions to advance sustainable energy, and for over 25 years has provided policymakers and other stakeholders around the world with renewable energy and carbon policy analysis and technical assistance. CRS also administers the Green-e® Energy program, the leading independent certification for voluntary renewable electricity products, including renewable energy certificates (RECs), in North America. In 2022, Green-e® certified retail renewable energy sales in Minnesota totaling more than 2.8 million megawatt-hours (MWh), serving over three thousand retail purchasers, including almost 190 Minnesota businesses.

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CRS Comments

CRS's main concerns are associated with the provision under Subdivision 2d(ii) which permits Minnesota's utilities to comply partially with the Carbon-Free Electricity (CFE) standard by counting the percent of net sales from a regional transmission organization (RTO) that would qualify as carbon-free after applying the RTO's systemwide annual average fuel mix (or an applicable subregional fuel mix):

> **Subd. 2d. Commission order.**
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> . . .
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> (b) In the order under paragraph (a), the commission shall include criteria and standards that: (1) protect against undesirable impacts on the reliability of the utility's system and economic impacts on the utility's ratepayers and that consider technical feasibility; and (2) require the commission to allow for partial compliance with subdivision 2g from:
>
> (i) electricity generated from facilities that utilize carbon-free technologies for electricity generation, but only for the percentage that is carbon-free; and
>
> (ii) an electric utility's annual purchases from a regional transmission organization net of the electric utility's sales to the regional transmission organization, but only for the percentage of annual net purchases that is carbon-free, which percentage the commission must calculate based on the regional transmission organization's systemwide annual fuel mix or an applicable subregional fuel mix. (emphasis added)

Subdivision 2d(b)(ii) could be enforced in a manner that eliminates the purchase and retirement of RECs to verify compliance claims, invites double counting of carbon-free attributes already claimed by voluntary purchasers, mischaracterizes the carbon-free characteristics of electricity generated and consumed in Minnesota, and obscures to regulators and Minnesota's ratepayers which utilities are effectively complying with the standard, and which are not.

CRS proposes a more accurate method for determining the carbon-free characteristics of net electricity purchases by a utility, one which better achieves the intent of the legislature in adopting the new CFE standard—use of a residual mix calculation (See CRS Recommendations below).

Eliminating REC Procurement

CRS's primary objection to this provision is that it permits electric utilities to claim for partial compliance on behalf of their customers the low-carbon emissions rate (i.e., the generation attributes) of a percent of net purchases from the RTO without owning and retiring the legal market instruments required for such a claim—the RECs associated with the generation.

RECs are the fundamental instruments for allocating to consumers the non-power attributes of renewable generation, and retiring RECs is the primary method that U.S. markets use to track non-power attributes to load and establish their ownership. In the United States, they are the sole means to claim usage of grid-connected renewable electricity and the compliance instrument for consumption-based or delivery-based state renewable portfolio standards (RPS). No other instrument conveys exclusive ownership of these attributes, including the emissions (or zero emissions) associated with generation.[1]

Permitting Minnesota's utilities to claim environmental attributes—particularly regarding carbon emissions—associated with any volume of clean power without having to obtain the corresponding RECs allows for double counting or disaggregation of the emissions attributes of renewable energy and deviates from widely accepted market protocols as well as the best practices of well-respected national and international organizations.[2]

[1] See CRS, *The Legal Basis for Renewable Energy Certificates version 2.0*, April 2023. https://resource-solutions.org/wp-content/uploads/2015/07/The-Legal-Basis-for-RECs.pdf

[2] See World Resources Institute, *Greenhouse Gas Protocol Corporate Accounting and Reporting Standard revised edition*, March 2004. https://ghgprotocol.org/corporate-standard
and White House Council on Environmental Quality, *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*, 88 FR 1196, January 9, 2023. https://www.federalregister.gov/documents/2023/01/09/2023-00158/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions-and-climate

Deriving Carbon-Free Electricity from a Systemwide Fuel Mix

CRS is concerned as well about applying a systemwide annual average fuel mix to ascertain the portion of a utility's net purchases from the RTO which it may characterize as carbon-free for purposes of complying with the CFE standard.

First, applying a systemwide average fuel mix to derive purchases of carbon-free power divorces the critical carbon-free attributes from a particular volume of generated electricity and, as a result, either understates the amount of carbon-free electricity procured by utilities that meet the standard or vastly overstates the total volume of carbon-free electricity consumed by Minnesotans. Unlike a REC (which represents attributes associated with a standard 1 MWh of generated carbon-free electricity), the attributes derived through applying a systemwide annual fuel mix are calculated, not tracked, which can cause wide disparities between reported and actual volumes.

Imagine, for example, that there are six utilities delivering a total of 12 MWh of carbon-free electricity to Minnesotans. If three utilities deliver 0 MWh, two deliver 2 MWh each, and one delivers 8 MWh, the system average would be 2 MWh per utility. If every utility reported only the carbon-free electricity derived from the system average mix, the utility that actually delivered 8 MWh would only report one-third of its delivered carbon-free electricity.

More likely, however, the over-performing utility would report its actual delivery volumes. Doing so. however, would lead to reporting a total of 18 MWh of carbon-free electricity consumed in Minnesota, overstating actual consumption by up to 50%.

In either case, the information reported under the standard presents an inaccurate picture of Minnesota's consumption of carbon-free electricity. Instead of matching each MWh of generation to one standardized unit of attributes, the calculation assigns attributes to units of generation without regard to how the electricity actually was generated, resulting in reported data that does not comport with reality.

Second, permitting utilities to claim attributes without establishing exclusive ownership of corresponding RECs undermines efforts by the voluntary market to procure carbon-free electricity that is surplus to regulation. Without a provision requiring utilities to reduce their reported consumption of carbon-free power by the amount of carbon-free power they may claim from their net purchases from an RTO, utilities are free to sell RECs generated from the very power whose carbon-free attributes the utility has claimed for compliance purposes. Doing so undermines confidence in voluntary REC markets and nullifies any claim that voluntary renewable energy purchases are surplus to regulation.

Voluntary REC purchasers make procurements not to support utilities in meeting their compliance obligations, but to make additional contributions that go beyond regulation and make a real difference on the environment. Applying a systemwide annual average fuel mix to derive a utility's purchases of carbon-free electricity undermines the laudable objectives of voluntary purchasers.

Third, merely permitting utilities to derive carbon-free generation from the systemwide annual average fuel mix results in double-counting attributes because the average mix includes generation whose attributes have already been purchased by voluntary procurers. When the environmental attributes purchased in the voluntary market are reflected in the systemwide average fuel mix, using the mix to derive generation for compliance mischaracterizes the mix as cleaner than it actually is, reduces a utility's compliance obligation, and forces the voluntary procurer to unwittingly subsidize that compliance.

Fourth, permitting utilities to derive carbon-free attributes from the systemwide annual average mix of the RTO from which they procure the generation sends incorrect market signals and undermines balanced enforcement of Minnesota's clean power regulations. By permitting utilities to derive carbon-free generation from applying the systemwide annual average fuel mix, the statute allows utilities that may not have generated a single kWh of clean power to claim that they obtained a volume of carbon-free electricity and passed it along to distribution utilities or retail consumers.

Rather than assist the Commission in identifying which utilities are complying with the CFE standard, therefore, the provision could be used to obscure the utilities that are falling behind in meeting their CFE benchmarks by allowing them to claim carbon-free electricity that was generated and sold entirely by other utilities. Applying the systemwide annual average fuel mix permits every utility to characterize their purchases as matching the characteristics of every other utility, making it challenging for regulators and ratepayers to make distinctions between them.

CRS Recommendations

The amendments adopted last year include broad leeway for the Commission to enforce the law in ways that are consistent with its purpose while balancing competing interests.[3] There is a mechanism by which the Commission can act within the confines of the statute but address many of the concerns raised above—calculating residual mix, the attributes associated with power that is not otherwise claimed or allocated to a particular purchaser. CRS's Clean Energy Accounting Project (CEAP) recently released guidance on how to more accurately calculate residual mix.[4]

A residual mix calculation is preferable to deriving a volume of carbon-free electricity from a systemwide annual average fuel mix because the residual mix represents generation and emissions that remain after specified power purchases have been allocated. Residual mix calculations verified through retirement of RECs therefore eliminate double counting of carbon-free generation that has been allocated to other purchasers and avoid mischaracterizing a utility's net purchases from the RTO as more carbon-free than they actually are.

Under the CEAP guidance, the use case most applicable to deriving a more accurate estimate of the percent of a utility's net purchases from an RTO that may be characterized as carbon-free is unspecified purchases from within the

[3] Specifically, subdivision 2b permits the Commission to delay or modify the CFE standard if doing so would be in the public interest. Moreover, the subdivision specifies several broad areas the Commission must consider when making this determination, including the standard's impact on the economic and competitive pressure on the utility's customers, as well as technical advances and technical concerns. See 2023 Minnesota Statutes, Chapter 216B §1691, Subd, 2b.

[4] See CRS, *Guidance for Calculating Residual Mix*, March 6, 2024. https://resource-solutions.org/document/030624/

same market and null power under state greenhouse gas reporting by load-serving entities that participate in an organized wholesale market. Since Minnesota is not covered by an all-generation tracking system, emissions from all specified transactions should be subtracted from regional total emissions and that difference should be divided by the remaining unspecified MWh to obtain the residual annual emissions rate for the region.[5]

An accurate calculation of a utility's residual mix to characterize the percent of net purchases from the RTO that may be characterized as carbon-free requires an accounting of the RECs (or other environmental attribute certificates, or EACs) generated and retired on behalf of the utility's customers over a specified period.[6] Since no accurate calculation of a utility's residual mix can be made without verification of the purchase and retirement of RECs, requiring utilities to derive an estimate of the carbon-free generation from a residual mix calculation necessarily requires the purchase and retirement of RECs corresponding to the volume of carbon-free electricity the utility claims for complying with the CFE standard.

Utility-specific residual mix calculations are reasonably considered "applicable subregional fuel mixes" and are thus completely consistent with both the letter and spirit of the statute. CRS believes, therefore, that the Commission would be operating squarely within its authority to require utilities subject to the statute to derive the volume of net purchases from an RTO that may be

[5] *Ibid.,* pp.11-12. https://resource-solutions.org/document/030624/
[6] RECs that are banked for RPS compliance should be treated as transacted and used in the year of issuance.

characterized as carbon-free not from applying the systemwide average annual fuel mix, but through calculating a utility-specific residual mix.

Requiring a residual mix calculation, moreover, would reimpose an obligation to procure and retire RECs, as currently required under Minnesota's regulations and consistent with best practices worldwide. Enforcing the statute by requiring a residual mix calculation therefore better supports the legislature's intention in adopting the CFE standard, to reestablish Minnesota as a leading state for clean energy.[7]

CRS appreciates the opportunity to comment on Minnesota's CFE standard and stands ready to assist the Commission in seeing that the statute is enforced in a manner that advances the use of sustainable, carbon-free electricity and is in the best interest of Minnesotans.

Sincerely,

____/s/_____

Chris Cooper
Policy Director
Center for Resource Solutions (CRS)

[7] See MN legislators as quoted by Hunt, J. "Minnesota's Carbon-Free Electricity Bill Clears Initial Hurdle," *Environment + Energy Leader*, January 20, 2023. https://www.environmentenergyleader.com/2023/01/minnesotas-carbon-free-electricity-bill-clears-initial-hurdle/