

March 19th, 2025

To: Commissioner Katie Sieben  
The Minnesota Public Utilities Commission  
121 7th Place East  
Suite 350  
Saint Paul, Minnesota, 55101

From: Carbon Solutions Group, LLC

Subject: CSG Reply Comments to the January 29th, 2025, Comment Period.

*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 (Docket no. E-999/CI-23-151)*

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### **REPLY COMMENTS BY CARBON SOLUTIONS GROUP**

Pursuant to the “Notice of Extended Reply Comment Period” document issued by the Minnesota Public Utilities Commission (“PUC”) on February 4th, 2025, Carbon Solutions Group (“CSG”) respectfully offers the following reply comments and recommendations related to the proceeding *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* (Docket No. E-999/CI-23-151).

By way of background, CSG develops digital infrastructure to support governmental energy programs; aggregates distributed energy resources; and provides technical expertise to legislators and regulators. CSG believes that properly structuring energy and environmental markets will lead to tangible advancements for U.S. infrastructure, economy, and climate. Specifically, CSG believes that clean energy markets can only function as intended when credible greenhouse gas emissions (“GHG”) accounting methodologies are upheld.

CSG reiterates its support of the Carbon-Free Standard (“CFS”) and stresses the importance of establishing a credible accounting framework for the program. CSG strongly agrees with the Minnesota Department of Commerce that: “At face value, the measurement and achievement of the CFS concern the modification of a reporting template, however the ramifications of decisions in the current proceeding may, in some regards, be more consequential than those regarding resource eligibility.”<sup>1</sup>

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<sup>1</sup> Minnesota Department of Commerce. “RE: Comments of the Minnesota Department of Commerce Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 1. Document ID: 20251-214567-01.

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## **I. CSG'S REPLY COMMENTS IN BRIEF**

CSG's last round of comments<sup>2</sup> laid out an explanation as to why a serialized accounting instrument—namely renewable energy credits ("RECs") or equivalent environmental attribute certificates ("EACs")—should be required to prove CFS compliance for an obligated entity's *entire* obligated load, otherwise known as "total retail electric sales."<sup>3</sup> This document addresses the arguments of various commenters on the issue, as well as related topics. CSG's recommendations are presented in brief in this present section (Part I):

1. As noted previously, CFS compliance should be substantiated by eligible REC/EAC retirements matched with *all* obligated electricity (i.e. "total retail electric sales"), including net market purchases. This is the most credible accounting methodology, as it minimizes double counting and double claiming risks, as well as upholds Minnesota statute, such as Minn. Stat. § 216B.1691 Subd. 2g and Subd. 9.
2. Specifically, CFS compliance should be substantiated by CFS-eligible REC/EAC retirements made by obligated entities *in Minnesota*. This is the only way to ensure that Minnesota's emissions factor is being adjusted according to the emissions claims of CFS-obligated utilities. For this same reason, M-RETS should serve as the sole tracking system for CFS compliance.
3. CFS-eligible resources should be limited to generation located within Minnesota or, at most, within the MISO North subregion. This proposed siting requirement upholds Minn. Stat. § 216B.1691 Subd. 9 by maximizing net benefits for Minnesotan jobs and Minnesota air quality, while also ensuring that Minnesotans can fully participate in the clean energy economy, to the greatest extent possible.
4. Hourly REC/EAC matching should ultimately be required for CFS compliance, in order to ensure the most credible means of emissions accounting. However, it is critical to note the exact technical challenges that presently impede implementation of this requirement.
5. CFS compliance reporting should occur in tandem with biennial integrated resource plan ("IRP") filings or annual Renewable Energy Standard ("RES") filings, as per Minn. Stat. § 216B.1691 Subd. 3. These biennial or annual CFS filings should meet interim CFS compliance targets in order to ensure program efficacy and reduce volatility impacts on ratepayers, thereby upholding Minn. Stat. § 216B.1691 Subd. 9. In order to set such interim targets, CSG recommends that the Commission define the term "progress," as noted in Minn. Stat. § 216B.1691 Subd. 3, by a ratable metric.

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<sup>2</sup> Carbon Solutions Group. [Comments.] *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*. Docket No. E-999/CI-23-151. January 29th, 2025. Document ID: 20251-214606-01.

<sup>3</sup> Minn. Stat. § 216B.1691 Subd. 1(f).

6. CSG further recommends that each obligated utility propose its own interim targets to be approved by the Commission, based on the Commission's definition of ratable progress. CSG recommends that reporting itself should be instituted for 2026 and onward, and interim targets should be set for 2028 and onward.

7. Should the Commission find interim CFS compliance targets to be unworkable, CSG proposes that CFS-eligible REC/EAC banking be limited to 1 year after the date on which a CFS-eligible REC/EAC was generated. While far less granular, and thus credible, than hourly matching, 1-year banking ensures that the cycle of carbon-free generation and procurement is occurring anew year-over-year, rather than on a 5-year lag. In turn, compliance reporting in 2030 would better reflect the reality of 2030 carbon-free generation and procurement in Minnesota.

Parts II-VI of this document will examine the same issues in greater detail.

## **II. DOUBLE COUNTING, DOUBLE CLAIMING, & MARKET PURCHASES**

### **A. RECs should be used to account for the entirety of an obligated utility's total retail electric sales.**

CSG previously argued that a utility-level fuel mix would need to be calculated in order to credibly account for CFS compliance. The most straightforward and accurate utility-level mix would utilize the most widely accepted serialized accounting instrument: RECs, or other EACs for non-REC-generating resources.<sup>4</sup> As per the eligibility concerns of the Clean Energy Organizations, it should be explicitly acknowledged that the usage of RECs (or equivalent EACs) must be limited to those instruments ultimately deemed CFS-eligible by the Commission.<sup>5</sup>

A REC-based (or equivalent EAC-based) compliance approach can credibly account for exclusive emissions claims associated with carbon-free electricity generation, whereas methods that do not use serialized accounting instruments cannot account for compliance in an exclusive manner.

When emissions claims are not exclusive but, rather, are made by multiple parties for the same emissions, it is known as "double counting" or "double claiming." While these two phrases are often used interchangeably, CSG uses these phrases accordingly in this document:

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<sup>4</sup> For example, CSG also supports the usage of "alternative energy credits" ("AECs") in M-RETS for non-REC-generating resources such as nuclear. CSG's support of AECs is premised on the fact that AECs still account for electricity generation on a per-MWh basis.

<sup>5</sup> The Clean Energy Organizations. "Initial Comments of the Clean Energy Organizations." *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*. Docket No. E-999/CI-23-151. Jan. 29th, 2025. pp. 16-17. Document ID: 20251-214613-01.

1. *Double counting* is when two separate entities use the same REC to make separate energy-based emissions claims. The U.S. Environmental Protection Agency (“EPA”) provides an example of double counting: “A utility counts the same renewable megawatt-hours (MWh) or RECs toward meeting its renewable portfolio standards (RPS) requirements and as a sale in its voluntary green pricing program.”<sup>6</sup>

2. *Double claiming* is when a) one entity makes a MWh-based emissions claim substantiated by an unbundled REC retirement, and b) another entity makes an emissions claim based on the same MWh but substantiated by generation or sales data for the underlying electricity. In this case, two different datasets, reflecting the same single MWh claim, are being utilized to substantiate two separate MWh-based claims.

Both double counting and double claiming can represent more renewable/carbon-free energy than actually exists. As a result, double counting and double claiming lead to serious market distortions by creating duplicative energy accounting that can mislead policymakers and ratepayers, as well as potentially undermine Minnesota law, such as Minn. Stat. § 216B.1691 Subd. 9(a)(4). To that end, CSG strongly agrees with the following January 29th statement by the Center for Resource Solutions (“CRS”):

“CRS is concerned that any compliance reporting and verification method that permits utilities to claim on behalf of their customers the emissions attributes of purchased power without owning and retiring the corresponding Renewable Energy Credits (RECs) risks double counting attributes that have already been sold and undermining the voluntary market for carbon-free renewable electricity. [...] Procuring and retiring RECs creates an indelible chain of custody establishing the purchaser’s exclusive ownership of the generation attributes of the power from which the REC derived. No other method can verify exclusive ownership of these attributes. [...] As with their renewable energy obligations under the RES, utilities should demonstrate compliance with the CFS by procuring and retiring RECs corresponding to their obligated volumes of carbon-free generation.”<sup>7</sup>

Xcel Energy (“Xcel”) also pointed out that RECs are a proven means to achieve compliance through existing Minnesota frameworks:

“The Commission and utilities have over 15 years of experience tracking compliance with the [Eligible Energy Technology Standard] EETS using a system in which unique, serialized RECs are issued, with one REC issued per MWh of eligible generation. RECs are registered on a Commission-approved credit tracking system — the Midwest Renewable Energy Tracking System (M-RETS) — and retired to demonstrate compliance with the EETS.”<sup>8</sup>

<sup>6</sup> U.S. Environmental Protection Agency. “Double Counting.” Last updated on December 26th, 2024. Accessed on March 14th, 2025. <<https://www.epa.gov/green-power-markets/double-counting>>

<sup>7</sup> Center for Resource Solutions. [Comments.] *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*. Docket No. E-999/CI-23-151. January 29th, 2025. pp. 2-4. Document ID: 20251-214651-01.

<sup>8</sup> Xcel Energy. “RE: Comments Implementing Changes to the RES and the Newly Created CFS Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 4. Document ID: 20251-214582-01.



M-RETS likewise supported the usage of RECs (or equivalent EACs) for CFS compliance.<sup>9</sup> Furthermore, CSG, M-RETS, and CRS all cited various federal and private sector authorities that point to prudent REC-based rulemaking that prohibits the double counting or double claiming of environmental attributes. These authorities include the EPA, the RE100 Group, the World Resource Institute’s Greenhouse Gas Protocol (GHGP),<sup>10</sup> the White House Council on Environmental Quality (CEQ),<sup>11</sup> and the Federal Trade Commission (“FTC”).<sup>12</sup>

As discussed by CSG, the key to a REC-based accounting methodology is the principle that credible emissions claims are not effectuated by gross generation or net procurement, but rather upon REC *retirements* in a public tracking system such as M-RETS.<sup>13</sup> Only REC retirements can ensure the exclusivity of carbon-free claims.

Thus, in order to avoid the market distortions, liabilities, and potential infringements on Minnesota statute associated with double counting and double claiming, CSG contends that obligated utilities should retire RECs (or equivalent EACs) for the entirety of the utility’s obligated load and across all carbon-free transaction methods.<sup>14</sup> That is, the retirement of RECs (or equivalent EACs) should be required to substantiate carbon-free energy generated or procured; partially complying generation or procurement; unspecified market procurement, as well as any compliance shortfall in those categories. To restate, in such an approach, every MWh claim of compliance is accounted for through unique REC (or equivalent EAC) retirements. There is no other method by which double counting and double claiming can be avoided with certainty. Furthermore, CFS compliance claims should be premised on the retirement of eligible RECs (or EACs) *on a single tracking system*, namely M-RETS. CSG agrees with Missouri River Energy Services (“MRES”) that: “Continuing to use M-RETS will reduce the risk of double counting of RECs and save cost and administrative time.”<sup>15</sup>

<sup>9</sup> M-RETS. “RE: 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 MPUC Docket No. E999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 4. Document ID: 20251-214590-01.

<sup>10</sup> Carbon Solutions Group. [Comments.] *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 4 (citation 2). Document ID: 20251-214606-01.

<sup>11</sup> Center for Resource Solutions. [Comments.] *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 4. Document ID: 20251-214651-01.

<sup>12</sup> M-RETS. “RE: 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 MPUC Docket No. E999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 3 (citation 4). Document ID: 20251-214590-01.

<sup>13</sup> Carbon Solutions Group. [Comments.] *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 4. Document ID: 20251-214606-01.

<sup>14</sup> Namely: i) generated electricity, ii) *unspecified* market purchases, iii) *specified* market purchases, and iv) bilateral contracts, including unbundled RECs.

<sup>15</sup> Missouri River Energy Services. “RE: Initial Comments 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 Docket No. E-999/CI-23-151.” *In the Matter of an Investigation into Implementing Changes to the*

*B. CSG supports the dual use of RECs for RES/EETS and CFS Program compliance.*

As stated in CSG’s previous comments, CSG does not consider Minnesota statute to be in conflict with double counting or double claiming risks as far as the statute allows for the dual use of an eligible REC for both a RES/EETS compliance claim and a CFS Program compliance claim, as per Minn. Stat. § 216B.1691 Subd. 4(a).<sup>16</sup> CSG agrees with many of the utilities on this issue. For example, Connexus Energy stated that it interprets the statute “to allow for an eligible REC to be applied 1) solely to RES requirements, 2) solely to CFS requirements, or 3) dually to RES and CFS requirements, for a given compliance year, so long as the REC is active (i.e., has not aged beyond its 4-year shelf life).”<sup>17</sup> CSG concurs, broadly speaking, so long as only one utility is retiring the one REC for the RES/CFS claims. CSG also addresses certain banking concerns in Part V of this document.

*C. RECs are required to ensure credible carbon-free claims based upon net market purchases.*

The record bears out broad support for RECs as the primary means of accounting for CFS compliance. Yet, many of the same commenters that generally supported REC usage also advocated for a non-REC-based approach to accounting for net market purchases. For example, despite advocating that “[o]ne REC and/or AEC must then be retired for each MWh [of annual retail sales],”<sup>18</sup> Xcel has separately stated “that the percentage of market purchases considered CF should be based upon the MISO North annual energy fuel mix data for the given compliance demonstration year.”<sup>19</sup> Likewise, the Otter Tail Power Company (“Otter Tail”) has both pointed to RECs as means of compliance<sup>20</sup> but also advocated for a non-residual subregional fuel mix approach to unspecified market purchases, which would be premised on “annual data that shows average fuel mix by generation source.”<sup>21</sup> Other proponents of a gross fuel mix calculation for

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*Renewable Energy Standard and the Newly Created Carbon-Free Standard under Minn. Stat. § 216B.1691.* Docket No. E-999/CI-23-151. January 29th, 2025. p. 4. Document ID: 20251-214594-01.

<sup>16</sup> Carbon Solutions Group. [Comments.] at p. 13: “CSG supports this particular provision, so long as the MWh claimed by an obligated entity for CFS and EETS compliance is not claimed by any other entity within or outside Minnesota’s borders.”

<sup>17</sup> Connexus Energy. “RE: 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: E999/CI-23-151.” *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.* Docket No. E-999/CI-23-151. January 29th, 2025. p. [2]. Document ID: 20251-214626-01.

<sup>18</sup> Xcel Energy. “RE: Comments Implementing Changes to the RES and the Newly Created CFS Docket No. E-999/CI-23-151.” *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.* Docket No. E-999/CI-23-151. January 29th, 2025. p. 7. Document ID: 20251-214582-01.

<sup>19</sup> *Id.* at p. 8.

<sup>20</sup> Otter Tail Power Company. “RE: 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 Docket No. E999/CI-23-151 Initial Comments.” *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.* Docket No. E-999/CI-23-151. January 29th, 2025. p. 4. Document ID: 20251-214629-01.

<sup>21</sup> *Id.* at p. 5.

market purchases include Minnesota Power,<sup>22</sup> MRES,<sup>23</sup> Connexus Energy,<sup>24</sup> and Great River Energy (“GRE”).<sup>25</sup>

Accounting for market purchases is a critical issue to resolve due to the double claiming risks inherent in unspecified market purchases.<sup>26</sup> The double claiming risk herein lies in the fact that neither RECs—nor any specified emissions accounting instruments—accompany an unspecified wholesale market purchase, which is one reason why the purchase is *unspecified*. However, as was noted in CSG’s previous comments, the unspecified nature of a market purchase does not mean that RECs were not previously generated to account for the electricity traded in that unspecified wholesale market purchase.<sup>27</sup> For example, a Manitoba-sited hydroelectric facility could sell surplus carbon-free electricity onto the grid at certain hours, but the facility could retain the RECs associated with that surplus electricity. While this market-based electricity was at one time carbon-free, it has been unbundled from the contractual right to make an emissions claim associated with that electricity. Thus, that market-based electricity can only be classified as *null power*. Null power assumes the emissions factor of the system in question. Gross generation data cannot account for the unbundling of RECs.

In this regard, another fundamental principle to keep in mind is that emissions factors are responsive to REC retirements in both directions. Unlike avoidance-based carbon offsets, RECs reduce the emissions of the retiree *but also* increase the potential emissions for the seller. Thus,

<sup>22</sup> See Minnesota Power at p. 5: “The utility should be allowed to apply the excess RECs generated by its owned assets or purchased toward the non-carbon free portion of its market purchases or generation.” Minnesota Power. “Re: Matter of Investigation into Implementing Changes to the Renewable Energy Standard and the Newly Created Carbon Free Standard Docket No. E999/M-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 5. Document ID: 20251-214570-01.

<sup>23</sup> MRES cites the Commission’s provisional guidance: “a. Calculate the percentage of carbon-free market purchases on an applicable regional transmission organization subregion—using annual energy fuel mix data—as practicable. b. Calculate the percentage of carbon-free energy, when a utility purchases energy from a specified resource such as in the context of a bilateral contract or power purchase agreement, based on the percentage of carbon-free energy generated by the resource.” Missouri River Energy Services. “RE: Initial Comments 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 Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 4. Document ID: 20251-214594-01.

<sup>24</sup> Connexus Energy. “RE: 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: E999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. [3]. Document ID: 20251-214626-01.

<sup>25</sup> See Great River Energy at p. [3]: “The percentage of net MISO market interaction, purchases and sales, should be allocated based on an annual historic assessment from MISO for yearly compliance demonstration.” Great River Energy. [Comments.] *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. [3]. Document ID: 20251-214623-01.

<sup>26</sup> As referenced in Minn. Stat. § 216B.1691 Subd. 2d(b)(2)(ii).

<sup>27</sup> Carbon Solutions Group. [Comments.] *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 22. Document ID: 20251-214606-01.



any credible accounting of emissions claims must track the REC *retirements* and not merely the underlying electricity.

This all means that it is highly likely that the carbon-free emissions factor of a system's gross fuel mix has already been claimed by another entity or entities, potentially buyers in the voluntary market or out-of-state entities. Using the aforementioned Manitoba hydroelectric example, the emissions claims associated with that surplus market energy were retained by the Manitoba facility. Thus, if a Minnesota utility also claimed the emissions with that same market energy, the utility would be double claiming. Hence, CSG agrees with CRS' observation that:

“[P]ermitting utilities to derive carbon-free generation from the systemwide annual average fuel mix results in double counting attributes and mischaracterizes Minnesota's fuel mix as cleaner than it is. The system-wide average mix necessarily includes generation whose attributes have already been purchased by voluntary procurers who hold the exclusive right to claim the attributes.”<sup>28</sup>

Furthermore, because out-of-state and voluntary buyers are not obligated under CFS, the double claiming of those MWh would not be readily apparent to the Commission during a CFS compliance audit.

For these reasons, CSG previously provided extensive analysis as to why a system-wide, MISO North,<sup>29</sup> or LRZ-level<sup>30</sup> fuel mix calculation (without corresponding RECs retired for each market purchase) would lead to a lack of credible carbon-free emissions claims associated with unspecified market purchases, likely leading to double claiming and thus undermining Minnesota statute.

To reiterate, if a REC-based residual mix were undertaken to fully account for all emissions claims in a fuel mix, the remaining fuel mix (after accounting for REC retirements) could be effectively 0% carbon-free. In such a case, every carbon-free emissions claim would have been associated with a specific entity and no unclaimed attributes would thereafter remain on a generic fuel mix. Therefore, the residual energy in that fuel mix would be only carbon-based and/or null power that has assumed the emissions of the remaining carbon-based electricity.

Thus, CSG believes that Xcel's initial statement that “[o]ne REC and/or AEC must then be retired for each MWh”<sup>31</sup> should apply to all purchases (including net market purchases) obligated under the definition of “total retail electric sales.” Doing so is the only verifiable means to ensure that double claiming will not occur among electricity procured via market purchases. The Minnesota Department of Commerce stated this issue clearly in its January 29th, 2025, filing:

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<sup>28</sup> Center for Resource Solutions. [Comments.] *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 7. Document ID: 20251-214651-01.

<sup>29</sup> Carbon Solutions Group. [Comments.] *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*. Docket No. E-999/CI-23-151. January 29th, 2025. pp. 24-25. Document ID: 20251-214606-01.

<sup>30</sup> *Id.* at pp. 25-30.

<sup>31</sup> Xcel Energy. “RE: Comments Implementing Changes to the RES and the Newly Created CFS Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 7. Document ID: 20251-214582-01.

“The entire implementation of Minn. Stat. § 216B.1691 relies on the retirement of CFS credits and not physical power purchases to establish CFS compliance. The Commission should not abandon this foundational principle of the statute to implement a second requirement that contains a conflict. [...] If an electric utility does require net market purchases to demonstrate its CFS compliance, regardless of whether implemented as hourly or annually, the electric utility must purchase EACs equivalent to the carbon-free share of its net market purchases in order to claim the credit. [...] In any event, just purchasing physical energy via MISO’s energy market does not necessarily mean the utility has also purchased the renewable or environmental attributes.”<sup>32</sup>

M-RETS likewise supported the usage of RECs (or equivalent EACs) for net market purchases.<sup>33</sup>

D. PPA accounting supports universal REC-based accounting.

Similar in part to the issues described in the previous section, the Central Municipal Power Agency/Services (“CMPAS”) noted:

*“There are power purchase agreements (PPAs) that are not covered by the language for provisional reporting requirements; namely long-term contracts that provide both fixed amounts of MISO Market energy (from non-specific resources) and RECs (from specific resources). The way the above provisional reporting requirements are written, it is not clear whether these contracts would receive full credit in any provisional reporting. For example, if these contracts are considered carbon-free market purchases, it appears they would use an ‘annual energy fuel mix’ instead of the actual RECs delivered in the contract. [...] CMPAS also has contracts with large, central renewable resources. CMPAS members use these contracts to serve their own needs and do not own resources that also make excess sales into in [sic] the market.”*<sup>34</sup>

In this statement, CMPAS highlights another area of concern regarding the usage of non-residual fuel mixes instead of REC-based accounting methods. That is, should the Commission require the usage of a less accurate fuel mix calculation (such as a gross MISO or MISO North fuel mix) for market purchases, that requirement could undermine specified market purchases where bundled RECs are already available for accounting purposes. To this end, CMPAS argued that, if a market purchase is accompanied by RECs, then those RECs should be prioritized for a compliance claim over the fuel mix calculation:

<sup>32</sup> Minnesota Department of Commerce. “RE: Comments of the Minnesota Department of Commerce Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. pp. 23-24. Document ID: 20251-214567-01.

<sup>33</sup> M-RETS. “RE: 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 MPUC Docket No. E999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 4. Document ID: 20251-214590-01.

<sup>34</sup> Central Municipal Power Agency/Services. “Initial Comments 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. Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. pp. 3, 5. Document ID: 20251-214554-01.

*“CMPAS would ask that if it already receives RECs from power supply contracts, particularly the type of contract identified in row 3 of Table 1 [unspecified and REC-associated market purchases], that these RECs are used for demonstrating compliance with CFS instead of the partial compliance calculation for net market purchases.”<sup>35</sup>*

However, despite this sensitivity, CMPAS still advocated for some non-REC-based accounting, such as that involving i) specific generation owned or contracted by the utility, and ii) unspecified MISO market energy.<sup>36</sup> As discussed at length in the last comment round, a gross fuel mix of MISO market energy would apply an averaged emissions factor to each utility. Therefore, if, as CMPAS advocates, only certain purchases would be accounted for with RECs and others with a gross system fuel mix that would not account for those RECs, double claiming would almost certainly occur. The REC would be claimed once by the retiree and then that same MWh would be claimed again by other utilities benefitting from the REC’s contribution to the gross emissions factor of the fuel mix.

This type of scenario would likely contribute to what CRS termed the “free-rider problem,” wherein some utilities over-comply while other “free-riders” under-comply.<sup>37</sup> Over time, according to CRS, “that could discourage utilities from exceeding their CFS benchmarks and can create wide disparities between reported volumes of carbon-free generation and the actual amount of carbon-free power consumed.”<sup>38</sup> As noted by CRS in regards to systemwide fuel mix calculations:

“Allowing utilities to report carbon-free electricity that was procured and sold entirely by others does not assist the Commission in identifying which utilities are complying with the standard but may actually obscure which utilities are falling behind in meeting their CFS benchmarks. Rather it characterizes any utility’s net purchases as matching those of every other utility in the system, making it challenging for regulators and ratepayers to make distinctions between them.”<sup>39</sup>

Overall, CSG considers CMPAS endorsement of a gross system fuel mix calculation to be self-defeating, as the most credible and efficient way to ensure that CMPAS’ REC-based renewable PPAs can count towards CFS compliance would be to require REC/EAC retirements to substantiate all CFS compliance claims.

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<sup>35</sup> *Id.* at p. 7.

<sup>36</sup> *Id.* at pp. 4, 6.

<sup>37</sup> Center for Resource Solutions. [Comments.] *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 5. Document ID: 20251-214651-01.

<sup>38</sup> *Id.* at p. 5.

<sup>39</sup> *Id.* at p. 7.

### **III. GEOGRAPHICAL CONSIDERATIONS**

CMPAS also cited a PPA for Wisconsin-sited nuclear energy (i.e. NextEra Energy’s Point Beach Nuclear Plant) as an example of energy that should not require EAC-based accounting. CSG disagrees with CMPAS on this issue for multiple reasons.

For one, CSG argues that—in order to assure that any nuclear generation is credibly accounted towards carbon-free energy benefitting Minnesota—the Commission should require the usage of a serialized accounting instrument, namely an AEC on M-RETS. Yet, CMPAS’ comments on the Point Beach Nuclear Plant raise another important issue for the Commission to consider. Not only should nuclear facilities generate AECs for credible CFS accounting but those AECs would need to be retired by a CFS-obligated entity in Minnesota for those AECs to count towards CFS compliance. Without AEC retirements in Minnesota, there is no way to ensure that nuclear generation-based emissions claims are not also accounted for by some other non-obligated party, potentially in another state. This issue of retirement geography is another critical aspect of CFS program design.

Put plainly, an important question for CFS rulemaking concerns *who* receives, or takes ownership of, the benefits of the exclusive carbon-free emissions claims. This question ties into siting considerations for carbon-free generation as well as questions of “deliverability.” On this latter topic, the Commission, during its initial Renewable Energy Standard (“RES”) rulemaking in 2007, stated:

“Once renewable energy has been generated, and a renewable energy credit issued, ‘deliverability’ refers to whether there should be a further showing that the energy has been delivered or is deliverable to a specific location for use, in concept, by a specific body of customers.”<sup>40</sup>

During the same 2007 RES rulemaking, the Commission declined to institute a deliverability requirement. The Minnesota Department of Commerce, however, had argued (citing Minn. Stat. § 216B.1691 Subd. 9) that “the renewable energy associated with a renewable energy credit be delivered into the Midwest Independent System Operator’s (MISO) footprint and that there be a verification of deliverability.”<sup>41</sup> Following the enshrinement of the Carbon-Free Standard in Minn. Stat. § 216B.1691 Subd. 2g, the issue of deliverability was reintroduced.

#### **A. Minnesota statute requires the delivery of carbon-free emissions claims to Minnesotans.**

The Clean Energy Organizations<sup>42</sup> dedicated significant space to geographical considerations in its January 29th, 2025, comments. The group highlighted that Subd. 2g denotes that the CFS

<sup>40</sup> Minnesota Public Utilities Commission. “Order Establishing Initial Protocols for Trading Renewable Energy Credits.” *In the Matter of a Commission Investigation into a Multi-State Tracking and Trading System for Renewable Energy Credits*. Docket no. E-999/CI-04-1616. / *In the Matter of Detailing Criteria and Standards for Measuring an Electric Utility’s Good Faith Efforts in Meeting the Renewable Energy Objectives Under Minn. Stat. § 216B.1691*. Docket no. E-999/CI-03-869. December 18th, 2007. p. 9. Document ID: 4872138.

<sup>41</sup> *Id.* at p. 9.

<sup>42</sup> Specifically, the Minnesota Center for Environmental Advocacy, the Sierra Club, and Fresh Energy.

compliance obligation is premised on “total retail electric sales” to customers specific to Minnesota.<sup>43</sup> Referencing Subd. 2g, the Clean Energy Organizations stated:

“One issue the Commission must decide in measuring a utility’s compliance with the CFS is what share of a utility’s carbon-free generation (or procurement) can reasonably be attributed to Minnesota for purposes of demonstrating compliance with the CFS. It is important that utilities that serve multiple states or that have significant net market sales do not inappropriately inflate their CFS compliance by attributing to Minnesota carbon-free power that has not been generated to serve Minnesota retail customers. [...] If the numerator<sup>44</sup> is inflated in this way, a utility will be able to claim compliance with the CFS even if it is far from providing to *Minnesota* customers the required percentage of carbon-free generation.”<sup>45</sup>

Thus, the Clean Energy Organizations highlight an important delivery risk associated with net market purchases. Under a non-REC-based fuel mix calculation for market purchases, double claiming risks do not only increase, but the tracking of statutorily required Minnesota carbon-free end-claims becomes obfuscated. The Clean Energy Organizations noted:

“Moreover, allowing utilities to attribute to Minnesota the carbon-free generation they sell to MISO gives utilities an inappropriate incentive to maximize their net market sales, since the more carbon-free generation a utility can attribute to Minnesota — even if that generation does not serve Minnesota — the higher the utility’s calculated CFS-compliance percentage. This then reduces the utility’s incentive to build new carbon-free generation that actually serves Minnesota as well as reducing the downward pressure that the CFS is intended to put on carbon-emitting generation.”<sup>46</sup>

Like double counting or double claiming emissions, non-delivery of carbon-free electricity to Minnesotans could undermine Minn. Stat. § 216B.1691 Subd. 9(a)(4). The Clean Energy Organizations added:

“Wrongly attributing to Minnesota more carbon-free generation than is actually generated for Minnesota retail customers allows the utility to claim more CFS compliance than it has actually achieved, thereby diluting the law’s impact. [...] That is, the carbon-free generation sold to MISO should not be attributed to Minnesota, any more than the carbon-free generation sold to Xcel’s retail customers in other states. In short, the value for the CFS numerator — ‘electricity generated from a carbon-free energy technology to provide the utility’s retail customers in Minnesota’ —

<sup>43</sup> See Minn. Stat. § 216B.1691 Subd. 2g: “[...] each electric utility must generate or procure sufficient electricity generated from a carbon-free energy technology to provide the electric utility’s retail customers in Minnesota, or the retail customers of a distribution utility to which the electric utility provides wholesale electric service, so that the electric utility generates or procures an amount of electricity from carbon-free energy technologies that is equivalent to at least the following standard percentages of the electric utility’s total retail electric sales to retail customers in Minnesota by the end of the year indicated[.]” (emphasis added.)

<sup>44</sup> As per the Clean Energy Organizations (at pp. 3,8) the numerator is “electricity generated from a carbon-free energy technology to provide the electric utility’s retail customers in Minnesota[.]”

<sup>45</sup> The Clean Energy Organizations. “Initial Comments of the Clean Energy Organizations.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. pp. 2-3. Document ID: 20251-214613-01.

<sup>46</sup> *Id.* at p. 4.



should exclude *both* the share of total carbon-free energy attributable to other, non-Minnesota customers and the share attributable to net sales to MISO.”<sup>47</sup>

Like the Clean Energy Organizations, CSG believes that out-of-state sales represent a significant CFS Program accounting risk. However, CSG disagrees with the accounting approach proposed by the Clean Energy Organizations in response to this risk. To account for out-of-state sales, the Clean Energy Organizations argued that carbon-free energy claimed for CFS compliance that is “reasonably attributed to the utility’s customers in other states or to net market sales” should be matched with RECs.<sup>48</sup> Yet, for in-state market purchases, it appears that the Clean Energy Organizations advocate for a non-residual, non-REC-based MISO North fuel mix calculation.<sup>49</sup>

First, it is unclear to CSG whether attributable out-of-state sales should count towards the CFS obligated load at all—regardless of whether those sales are matched with RECs retired in Minnesota. Should attributable out-of-state sales be deemed to count towards the CFS obligation, then CSG does agree with the Clean Energy Organizations that *in-state* REC retirements would be required to account for carbon-free emissions claims associated with those out-of-state sales. This would, in turn, disqualify the out-of-state consumers of that interstate electricity from claiming the carbon-free emissions associated with that generation. Unlike the Clean Energy Organizations, however, CSG asserts that *all* obligated market purchases should be matched with RECs—including in-state market sales. As noted, this is because CFS compliance cannot be credibly based upon generation or sales, but rather only upon the retirement of RECs (or equivalent EACs). To restate: RECs represent the exclusive contractual right to make an emissions claim associated with a MWh.<sup>50</sup> Without a REC-based method of accounting for all unspecified market transactions, there is no credible way to ensure that double claiming is not occurring—thus, there is no way to ensure Minnesotans are receiving the carbon-free attributes assigned to them under law.

CSG has argued that a utility-level residual fuel mix, based on REC retirements made by the specific utility for all obligated electricity, is the best way to ensure that carbon-free emissions claims are associated with delivery to Minnesotans.<sup>51</sup> To restate, these retirements should be made exclusively on M-RETS by entities in Minnesota.

In total, CSG appreciates the attention the Clean Energy Organizations have brought to retirement considerations (ensuring claims impact Minnesota’s fuel mix). However, CSG reiterates the need that Minnesota-based REC retirements must account for every MWh claimed for CFS compliance, including whatever portion of net market sales or purchases make up the “total retail electric sales” calculation.

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<sup>47</sup> *Id.* at pp. 5-6.

<sup>48</sup> *Id.* at p. 7.

<sup>49</sup> *Id.* at pp. 19, 22.

<sup>50</sup> The same applies for an AEC or another EAC that represents a carbon-free MWh.

<sup>51</sup> Carbon Solutions Group. [Comments.] *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*. Docket No. E-999/CI-23-151. January 29th, 2025. pp. 6-8, 28-29. Document ID: 20251-214606-01.

*B. Minnesota's Carbon-Free Standard requires Minnesota-sited generation.*

While ensuring that carbon-free claims can be credibly attributed to Minnesotan retail customers represents one aspect of Minn. Stat. § 216B.1691 Subd. 2g, CSG argues that Minnesota-sited generation is as important an issue. The need for Minnesota-sited generation is implicit in the establishment of the Carbon-Free Standard and is ultimately required as per Minn. Stat. § 216B.1691 Subd. 9. Viewed from another direction, this is a question of deliverability—that is, what geographical sources of electricity can be bundled or re-bundled with RECs to achieve CFS compliance?

The issue is somewhat complicated by statutory language in Subd. 4 that is both vague and wide-ranging. Citing Subd. 4, and 4(c) in particular, the Minnesota Department of Commerce stated:

“The statute clearly states that the Commission must allow for both the purchase of EACs and the trading of EACs between states, but imposes no geographic boundary upon the purchase and trading of EACs. Therefore, electric utilities could purchase annual or hourly EACs in California, Texas, Maine, or any other state or region outside of a balancing authority for which Minnesota operates within or for which MISO regularly trades with.”<sup>52</sup>

However, the Department also correctly noted: “The electric transmission system is complex and interconnected throughout the country, but real transmission constraints have a material effect on power flows.”<sup>53</sup> This physical reality of transmission infrastructure is one reason why deliverability requirements are crucial to consider for a credible CFS Program. For example, California-sited generation cannot be said to have a measurable impact on actual electricity delivered to Minnesotans. The Department also stated:

“The absence of such a [deliverability] requirement would enable Minnesota electric utilities to source clean power from anywhere in the country, regardless of whether the power has any chance of physically meeting state energy needs, similar to how the Low Carbon Fuel Standard (LCFS) operates.”<sup>54</sup>

CSG agrees with the Department's statements on this issue. In short, deliverability is a crucial issue when designing a REC-based program, because REC eligibility criteria will determine the targets of capital allocation. While RECs are primarily an accounting instrument for renewable/carbon-free energy, those instruments also act as a price signal for investment in new renewable/carbon-free facilities. Rewarding a price signal for out-of-state carbon-free energy would undermine the entire purpose of the CFS Program, which is to support the development of Minnesota's carbon-free resources. In other words, if California-sited RECs do not result in a

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<sup>52</sup> Minnesota Department of Commerce. “RE: Comments of the Minnesota Department of Commerce Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 13. Document ID: 20251-214567-01.

<sup>53</sup> *Id.*

<sup>54</sup> *Id.* at p. 14.

measurable impact for Minnesota, those RECs should not be eligible for a program aiming to effectuate a measurable impact in Minnesota.

It must be noted that the development of in-state resources results in legitimate local benefits such as improved air quality and environmental integrity—in particular for environmental justice communities adversely impacted by industrial development—in addition to supporting the CFS Program’s attendant revenue and job creation. To reiterate, a CFS Program that supports the financing of non-Minnesota-based carbon-free electricity, jobs, and economic development is not a success for Minnesota. These concerns are not just a policy issue for the legislature. Minn. Stat. § 216B.1691 Subd. 9(a) directs the Commission to “take all reasonable actions within the commission’s statutory authority to ensure this section is implemented in a manner that maximizes net benefits to all Minnesota citizens.” This same statutory subdivision identifies the “benefits that must be maximized” to include high-quality jobs, an opportunity for Minnesotans to “participate fully in the clean energy economy,” and “ensuring that statewide air emissions are reduced.” Sourcing Texas-sited RECs cannot reasonably achieve the requirements of this statute.

With this in mind, CSG would also directionally support (although not entirely) the recommendation of the Minnesota Department of Commerce, which proposed that a regional transmission area should serve as the CFS Program’s borders. The Department cited federal rulemaking for 45V as justification that regional transmission constraints should inform siting eligibility for Minnesota’s CFS Program. To this end, the Department has recommended: “that all EACs retired to demonstrate CFS compliance be generated within the Midwest Region, as defined by 26 CFR Ch. I, Sch. A, § 1.45V-4 Paragraph (d)(2)(ix), or meet the 45V requirements for interregional delivery, as defined by 26 CFR Ch. I, Sch. A, § 1.45V-4 Paragraph (d)(3)(iii)(B).”<sup>55</sup>

The Midwest Region, as defined by 45V rulemaking, would appear to encompass ten U.S. states plus Manitoba, Canada.<sup>56</sup> CSG believes this border is too broad to support exclusively credible emissions claims and should instead be limited to CFS-eligible generation sited solely in MISO North.

By rewarding a price signal that will not result in the construction of new Minnesota-sited carbon-free facilities, the CFS Program risks undermining its very purpose.

#### **IV. TIME-MATCHING CONSIDERATIONS**

Historically, RECs have been registered, tracked, retired, and thus accounted for, in annual or monthly batches. Initially, this approach was undertaken for logistical reasons, being based upon the technological limits of the moment. Yet, this approach is insufficient to granularly account for the hourly load balancing inherent to intermittent resources. Hourly CFS-eligible REC/EAC matching is ultimately required if the CFS Program wishes to base its successes on the most credible emissions claims possible.

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<sup>55</sup> *Id.* at pp. 14, 26.

<sup>56</sup> Balancing authorities include Associated Electric Coop Inc.; Electric Energy Inc.; Gridliance Heartland; Midcontinent ISO (Balancing Authority); North and Central. See <<https://www.ecfr.gov/current/title-26/chapter-I/subchapter-A/part-1/subject-group-ECFR427f958a26c8f4/section-1.45V-4>>

The Minnesota Department of Commerce, as well as the Clean Energy Organizations, appear to have advocated for CFS compliance to be based upon time-matched, hourly-tracked REC retirements. The Clean Energy Organizations argued:

“The Commission should require utilities to report the information that the Commission and the public need to determine how accurately a utility’s RECs actually match the hourly needs of its customers. Understanding the extent of any temporal mismatch between RECs and demand will become increasingly important as the state, region, and nation move toward a decarbonized electricity system and toward net-zero greenhouse gas emissions (GHGs) by 2050.”<sup>57</sup>

The Minnesota Department of Commerce also stated:

“If annual EAC matching is required, then electric utilities would only need to true-up EAC generation to load once per year by the purchase or potential sale of EACs. This information would provide little indication of an electric utility’s reliance on CFS-ineligible generation for grid reliability needs, because gaps and surpluses in CFS-eligible generation will cancel each other out. If hourly EAC matching is required, then electric utilities would need to true-up generation each hour, which may require sales of EACs when generation exceeds load, and purchases of EACs when EAC generation is insufficient to match load. Electric utilities would need to use demand-side data such as advanced metering infrastructure (AMI) to determine if the Minnesota share of their electric load was sufficiently matched by EACs.”<sup>58</sup>

CSG strongly supports a requirement for hourly REC/EAC matching for CFS compliance in the coming years. That said, while there is a keen interest in hourly RECs, the technical feasibility of hourly REC trading is not yet logistically ready for deployment. The Clean Energy Organizations stated: “M-RETS provided the platform for Google’s first hourly retirement claim in 2021, [...] in 2025 it will have the product that allows for trading of hourly certificates. PJM has been offering time-matched RECs since August of 2024.”<sup>59</sup> While perhaps technically correct, these statements are misleading in the sense that these examples are not scaled and automated solutions that could support a robust, tradable hourly credit market. For instance, M-RETS does claim to offer 24/7 tracking on its website,<sup>60</sup> but the platform’s current 24/7 tracking capabilities could not support hourly CFS compliance as of the date of this filing. Thus, as the CFS Program plans for hourly

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<sup>57</sup> The Clean Energy Organizations. “Initial Comments of the Clean Energy Organizations.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 10. Document ID: 20251-214613-01.

<sup>58</sup> Minnesota Department of Commerce. “RE: Comments of the Minnesota Department of Commerce Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 7. Document ID: 20251-214567-01.

<sup>59</sup> The Clean Energy Organizations. “Initial Comments of the Clean Energy Organizations.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. pp. 11-12. Document ID: 20251-214613-01.

<sup>60</sup> M-RETS. “24/7 Hourly Tracking.” Accessed on March 14th, 2025. <<https://www.mrets.org/solutions/hourly-tracking>>

REC implementation, it is critical to identify what is possible today and what will only be possible in the next year or few.

Hourly REC data does (and has) existed, as time of generation data accompanies REC minting. What is more difficult to accomplish at scale is a usable interface on REC tracking systems, such as M-RETS or the PJM-EIS Generation Attribute Tracking System (“GATS”), that would allow for the searching, sorting, and trading of hourly RECs on an ongoing basis at scale. “Trading” in this sense does not refer to the price negotiation or financial settlement between counterparties, but rather the technical change of ownership of the REC itself on the tracking system. This change of ownership requires the separation and assignation of a new ID for the sold REC, as distinct from the initial REC batch as uploaded by the previous owner. It is this very re-batching that constitutes the major technical challenge facing hourly REC implementation, so far as CSG understands.

For example, it is currently possible to upload a .csv file—containing a year or month’s worth of batched generation data broken out in 15-minute increments—onto a tracking system such as M-RETS or GATS. It is also possible for the party that owns that data to view and retire its own hourly RECs on the tracking system by selecting certain hours from that batched data in the uploaded .csv. CSG’s understanding is that Google’s hourly retirements are based on this type of self-retirement.

On the other hand, what is not presently possible is for an entity to efficiently search for, and procure, only a portion of batched hourly data uploaded by a counterparty. This would require breaking up the initial batch of hourly data (which has a batch ID) into multiple batches (all of which create new IDs, some of which could be redundant with the original ID). Fragmenting uploaded REC batches into infinite permutations in order to efficiently facilitate hourly REC sales to third-parties is not yet logistically possible in M-RETS or GATS, so far as CSG is aware. This means that neither M-RETS nor GATS can support scaled hourly trading or an hourly search functionality.

It is also important to explicitly note that 24/7 hourly REC matching does not necessarily equate to a utility having to literally procure a new batch of RECs every hour, on the hour, of every day of every year. In other words, it is unlikely a utility would be procuring 100% of its hourly RECs in real-time on a currently non-existent 24/7 REC spot market. Rather, the utility would likely continue to engage either bilaterally with generators, through third-party over-the-counter (“OTC”) REC brokerages, or to a lesser extent via marketer-to-marketer transactions on existing exchanges, in order to secure forward contracts for RECs at certain hours. A forward contract for hourly RECs would not only reduce administrative strain for utility buyers but the approach should also de-risk hourly REC procurement by stabilizing against price volatility.<sup>61</sup> Generally speaking, forward contracts would likely buttress Minnesota ratepayers from price spikes in a wholly new hourly REC market. These forward contracts, to the Department’s prior point, would still need to be premised on accurate hourly load projections, which could be determined by assessing AMI data and other analytical toolsets as part of the IRP process, as per the recommendation of the Department.<sup>62</sup> That said, mis-projections or other compliance shortfalls in forward contract

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<sup>61</sup> CSG’s analysis is that IRS tax credit 45V’s hourly time-matching requirement would also be largely achieved through forward contracts.

<sup>62</sup> Minnesota Department of Commerce. “RE: Comments of the Minnesota Department of Commerce Docket No. E-999/CI-23-151.” *In the Matter of an Investigation into Implementing Changes to the Renewable Energy Standard*



procurement would necessitate spot purchases for the difference—those spot purchases would still be likely procured bilaterally or through an OTC broker for the near future, rather than on a novel, real-time hourly exchange.

As such, a brand-new centralized REC exchange for hourly trading is not necessary for CFS-compliant hourly trading to occur. However, hourly transactions do need to be premised on effective trading functionality on tracking systems such as M-RETS. Therefore, CSG respectfully disagrees with the Department’s statement: “The Department recognizes that while tracking mechanisms exist for hourly EACs, a market trading solution currently does not yet appear to exist.”<sup>63</sup> Rather, it appears that the opposite is true. The key challenge is creating an effective hourly search function and an efficient re-batching process for hourly REC allocations within the tracking system itself.

This all said, CSG reiterates its support of the Department’s proposal for the hourly tracking of RECs. Furthermore, CSG does believe that the present logistical challenges facing hourly trading will be overcome and that hourly REC accounting will be widely available in the coming years. But, as per the Clean Energy Organizations, CSG does also believe that the CFS rulemaking process needs to acknowledge “the barriers and opportunities of shifting toward time-matched RECs.”<sup>64</sup> It should also be noted that CSG supports the Department of Commerce’s recommendation that hourly matching be blended into compliance in a staggered manner.<sup>65</sup>

## **V. INTERIM TARGETS FOR THE CFS PROGRAM**

The cadence and substance of CFS compliance reporting remains among the open questions facing program design. Namely, while Minn. Stat. § 216B.1691 Subd. 2g clearly notes that the CFS benchmark years are 2030 (80%), 2035 (90%), and 2040 (100%)—it remains unclear what type of reporting cadence obligated entities must pursue from 2025 onward, in order to successfully make ongoing CFS claims. Two prompt questions from the Commission’s “Notice of Comment Period and Updated Timeline,” issued on October 31st, 2024, directly highlighted these issues:

- “1. When and how should utilities report preparedness for meeting upcoming CFS requirements?
2. By which criteria and standards should the Commission measure an electric utility’s compliance with the CFS?”<sup>66</sup>

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*and the Newly Created Carbon-Free Standard under Minn. Stat. § 216B.1691.* Docket No. E-999/CI-23-151. January 29th, 2025. p. 12. Document ID: 20251-214567-01.

<sup>63</sup> *Id.*

<sup>64</sup> The Clean Energy Organizations. “Initial Comments of the Clean Energy Organizations.” *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.* Docket No. E-999/CI-23-151. January 29th, 2025. p. 13. Document ID: 20251-214613-01.

<sup>65</sup> Minnesota Department of Commerce. “RE: Comments of the Minnesota Department of Commerce Docket No. E-999/CI-23-151.” *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.* Docket No. E-999/CI-23-151. January 29th, 2025. p. 17. Document ID: 20251-214567-01.

<sup>66</sup> Minnesota Public Utilities Commission. “Notice of Comment Period and Updated Timeline.” *In the Matter of an Investigation into Implementing Changes to the Renewable Energy Standard and the Newly Created Carbon-Free*

A. CFS reporting should occur biennially or annually, and begin in 2026.

Minn. Stat. § 216B.1691 Subd. 3 provides direction on the matter. Subd. 3 indicates that, at minimum, obligated entities must report on “plans, activities, and progress”<sup>67</sup> every two years:

“Each electric utility shall report on its plans, activities, and progress with regard to the standard obligations under this section in its filings under section 216B.2422 or in a separate report submitted to the commission every two years, whichever is more frequent, demonstrating to the commission the utility’s effort to comply with this section.”

Xcel has advocated that the requirements of Subd. 3 could be met by obligated entities during an IRP filing, noting that the above referenced Minn. Stat. § 216B.2422 is the code section governing IRPs.<sup>68</sup> Otter Tail likewise appears to recommend this resource planning approach, noting that it would allow the Commission to make assessments on a “regular cycle in a comprehensive context.”<sup>69</sup> This same approach is also generally supported by GRE,<sup>70</sup> MRES,<sup>71</sup> Minnesota Power,<sup>72</sup> Minnkota Power Cooperative,<sup>73</sup> and Connexus Energy.<sup>74</sup> GRE added: “By integrating

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*Standard under Minn. Stat. § 216B.1691.* Docket No. E-999/CI-23-151. October 31st, 2024. p. [1]. Document ID: 202410-211486-01.

<sup>67</sup> Emphasis added.

<sup>68</sup> Xcel Energy. “RE: Comments Implementing Changes to the RES and the Newly Created CFS Docket No. E-999/CI-23-151.” *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.* Docket No. E-999/CI-23-151. January 29th, 2025. pp. 1-2. Document ID: 20251-214582-01.

<sup>69</sup> Otter Tail Power Company. “RE: 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 Docket No. E999/CI-23-151 Initial Comments.” *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.* Docket No. E-999/CI-23-151. January 29th, 2025. p. 2. Document ID: 20251-214629-01.

<sup>70</sup> Great River Energy. [Comments.] *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.* Docket No. E-999/CI-23-151. January 29th, 2025. pp. [1-2]. Document ID: 20251-214623-01.

<sup>71</sup> Missouri River Energy Services. “RE: Initial Comments 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 Docket No. E-999/CI-23-151.” *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.* Docket No. E-999/CI-23-151. January 29th, 2025. pp. 1-2. Document ID: 20251-214594-01.

<sup>72</sup> Minnesota Power. “Re: Matter of Investigation into Implementing Changes to the Renewable Energy Standard and the Newly Created Carbon-Free Standard Docket No. E999/M-23-151.” *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.* Docket No. E-999/CI-23-151. January 29th, 2025. p. 2. Document ID: 20251-214570-01.

<sup>73</sup> Minnkota Power Cooperative. “Re: 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.” *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.* Docket No. E-999/CI-23-151. January 29th, 2025. p. 1. Document ID: 20251-214627-01.

<sup>74</sup> Connexus Energy. “RE: 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: E999/CI-23-151.” *In the Matter of an Investigation into Implementing Changes to the Renewable Energy Standard*

carbon-free preparedness into the IRP process, utilities subject to the standards can illustrate alignment between long-term energy planning and state energy policy goals.”<sup>75</sup>

CSG could support the recommendations of the aforementioned utilities in regards to tethering CFS Program reporting to a biennial IRP schedule—so long as that IRP filing occurs biennially or annually. As per Minn. Stat. § 216B.1691 Subd. 3(a):

“Each electric utility shall report on its plans, activities, and progress with regard to the standard obligations under this section in its filings under section 216B.2422 or in a separate report submitted to the commission *every two years, whichever is more frequent*.”<sup>76</sup>

That said, CSG believes that an annual CFS reporting schedule tied to the annual RES compliance schedule would make the most sense, as both reports would materially involve the submission of REC retirement data—and likely, in many cases, the same RECs would be submitted to satisfy both programs. CSG agrees with this specific statement put forth by Minnesota Power:

“The Commission should measure compliance with the CFS in an annual compliance filing on the same schedule as that for the Renewable Energy Standard (‘RES’). Utilities should report compliance in a spreadsheet detailing the amount of carbon-free energy (or, ‘MWh’) generated by (or purchased from) eligible carbon-free technologies compared to the annual energy sales to its customers. A Renewable Energy Credit (‘REC’) used to meet the RES in a compliance year may also be applied to the CFS provided it meets CFS eligibility requirements.”<sup>77</sup>

CSG strongly recommends that the CFS reporting schedule begin in 2026, ahead of the 2030 statutory benchmark, so that obligated utilities may effectively prepare to meet that 2030 benchmark as well as satisfy the statutory obligations under Minn. Stat. § 216B.1691 Subd. 3. An 80% CFS claim (or even 60%) in 2030 will likely be difficult to reach for some utilities. Program success needs to be based on a graduated and consistent approach. For these reasons, CSG also agrees with this statement by the Minnesota Department of Commerce:

“While the manner and timing of CFS preparedness reporting are stipulated by statute, there is a need to prepare for CFS compliance ahead of the statutory requirement to ensure utilities report correctly. Utilities will need to begin tracking and reporting on a larger share of their generation mix, and will have multiple competing requirements that may all fall under the umbrella CFS

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*and the Newly Created Carbon-Free Standard under Minn. Stat. § 216B.1691.* Docket No. E-999/CI-23-151. January 29th, 2025. p. [2]. Document ID: 20251-214626-01.

<sup>75</sup> Great River Energy. [Comments.] *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.* Docket No. E-999/CI-23-151. January 29th, 2025. p. [2]. Document ID: 20251-214623-01.

<sup>76</sup> Emphasis added.

<sup>77</sup> Minnesota Power. “Re: Matter of Investigation into Implementing Changes to the Renewable Energy Standard and the Newly Created Carbon-Free Standard Docket No. E999/M-23-151.” *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.* Docket No. E-999/CI-23-151. January 29th, 2025. p. 2. Document ID: 20251-214570-01.

accounting system. The Commission should not assume that every electric utility that files its first compliance report will get every aspect of the report correct.”<sup>78</sup>

*B. Reporting should document “progress” not “preparedness.”*

Xcel,<sup>79</sup> Otter Tail,<sup>80</sup> Minnesota Power,<sup>81</sup> and other commenters appear to argue that IRP filings are an opportunity to merely illustrate CFS Program “preparedness,” but not CFS Program compliance itself. This distinction between “preparedness” and “compliance,” appears premised on the Commission’s prompt, Question #1, in the October 31st “Notice of Comment Period and Updated Timeline,” which used the word “preparedness.” Xcel argued in its January 2025 comments:

“‘Preparedness’ does not mean compliance, which we address in Section II. It merely means a utility has demonstrated in its IRP sufficient forecasted CF generation and/or long-term power purchases to meet the required CF percentages as compared to its forecasted retail sales in the year indicated. Compliance, in contrast, is a backward-looking demonstration.”<sup>82</sup>

While the Commission did use the term “preparedness” in Question #1, CSG contends that Minn. Stat. § 216B.1691 Subd. 3(a), 3(a)(1), 3(a)(2), and 3(a)(9) require more than mere “preparedness” during the one- or two-year reporting intervals. Instead, these requirements include a utility proving the following:

- “(1) the status of the utility’s renewable energy mix relative to the standard obligations;
- (2) efforts taken to meet the standard obligations; [...]

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<sup>78</sup> Minnesota Department of Commerce. “RE: Comments of the Minnesota Department of Commerce Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 4. Document ID: 20251-214567-01.

<sup>79</sup> Xcel Energy. “RE: Comments Implementing Changes to the RES and the Newly Created CFS Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 2. Document ID: 20251-214582-01.

<sup>80</sup> Otter Tail Power Company. “RE: 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 Docket No. E999/CI-23-151 Initial Comments.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 3. Document ID: 20251-214629-01.

<sup>81</sup> Minnesota Power. “Re: Matter of Investigation into Implementing Changes to the Renewable Energy Standard and the Newly Created Carbon-Free Standard Docket No. E999/M-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 2. Document ID: 20251-214570-01.

<sup>82</sup> Xcel Energy. “RE: Comments Implementing Changes to the RES and the Newly Created CFS Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 2. Document ID: 20251-214582-01.

(9) for an electric utility utilizing renewable energy credits to satisfy any portion of the electric utility's obligations under this section, the following information:

- (i) the name and location of energy facilities that generated the energy associated with the credits;
- (ii) the dates when the energy associated with the credits was generated;
- (iii) the type of fuel that generated the energy associated with the credits; and
- (iv) whether the energy associated with the credits was purchased by the utility purchasing the credits.”<sup>83</sup>

Subd. 3(a)(1) requires an assessment of a *utility-level fuel mix* relative to the benchmark years 2030, 2035, and 2040. While no carbon-free compliance threshold has been legislatively instituted for the reporting periods, the Commission would be assessing relative compliance based on a utility-level fuel mix at each one- or two-year interval. If a utility was only *preparing* for compliance period-over-period, its fuel mix would not necessarily change. This would indicate that the obligated entity was not taking efforts to “meet the standard obligations” as per Minn. Stat. § 216B.1691 Subd. 3(a)(2).

More fundamentally, however, Subd. 3(a) requires obligated entities to report on “progress.” Under the CFS framework, “progress” would require an obligated entity to demonstrate an increasing volume of exclusive carbon-free generation and/or procurement during the interim periods. If no progress has been made interim period-over-interim period, then the reporting associated with Subd. 3(a)(1)-(2) and 3(a)(9) would remain static. Furthermore, Minn. Stat. § 216B.1691 Subd. 3(b) directs:

“(b) The commissioner shall compile the information provided to the commission under paragraph [Subd. 3](a), and report to the chairs of the house of representatives and senate committees with jurisdiction over energy and environment policy issues as to the progress of utilities in the state, including the progress of each individual electric utility, in increasing the amount of renewable energy provided to retail customers, with any recommendations for regulatory or legislative action, by January 15 of each odd-numbered year.”

That said, the exact CFS definition of the term “progress” appears to remain unclarified at this time. Therefore, CSG respectfully urges the Commission to define the term “progress” specific to Minn. Stat. § 216B.1691 Subd. 3.

To reiterate, from CSG's perspective, “progress” connotes ever-increasing volumes of carbon-free energy generation and procurement year-over-year. Indeed, widely accepted definitions of “progress” point to the term invoking a kinetic rather than static quality. For example, Merriam-Webster cites “advancement,” “gradual betterment,” and “forward or onward movement” as part of its definition.<sup>84</sup> The Oxford English Dictionary describes “progress” as

<sup>83</sup> Minn. Stat. §§ 216B.1691 Subd. 3(a)(1)-(2), 3(a)(9).

<sup>84</sup> “Progress (noun).” Merriam-Webster Dictionary. Accessed on March 12th, 2025. <<https://www.merriam-webster.com/dictionary/progress>>



“progression or advancement through a process, a sequence of events, a period of time, etc.; movement towards an outcome or conclusion” or “advancement to a further or higher stage, or to further or higher stages successively; growth; development, usually to a better state or condition[.]”<sup>85</sup>

In a statutory context such as this, however, “progress” must be quantitatively ratable and based on a metric if that progress is to be enforceable. As such, actual data would be needed to substantiate CFS progress. The most appropriate data to substantiate progress would be CFS-eligible REC (or equivalent EAC) retirement data for an obligated entity’s entire “total retail electric sales” during these interim periods. This activity would be impacted by the annual or biennial reporting directive, specifically under Subd. 3(a)(9). This statutory language notes that REC-based compliance claims need to be accompanied by a submission of much of the information that incorporates the REC’s dataset. Looking at it from another point of view, submitting REC compliance data under Subd. 3(a)(9) implies that progress is being demonstrated annually or biennially, and that this progress would extend far beyond mere preparedness.

### C. Interim targets ensure CFS Program success and hedge against unintended consequences.

Should five-year REC banking be allowed for CFS Program compliance as it has for the RES/EETS,<sup>86</sup> then it is quite possible that no real “progress” would occur between now and 2030. This means that the 2030 CFS benchmark could be little more than an extension of today’s *status quo*.

Based on the Commission’s CFS definition of “progress,” CSG recommends that the Commission also institute mandatory interim CFS compliance targets for obligated utilities, to be met through REC retirements at each annual or biennial reporting period. Interim targets would not only ensure “timely progress”<sup>87</sup> (as advocated by the Clean Energy Organizations) and program efficacy as of 2030, but also buffer against any unintended ratepayer impacts from a non-gradual compliance approach. In turn, interim targets would help uphold the directive in Minn. Stat. § 216B.1691 9(a)(6), that the Commission work to maximize “affordable electric service to Minnesotans.” A non-graduated approach to compliance increases the potential for price volatility in energy and attribute markets.

<sup>85</sup> “Progress (noun).” Oxford English Dictionary. Accessed on March 12th, 2025.

<[https://www.oed.com/dictionary/progress\\_n?tab=meaning\\_and\\_use#28129511](https://www.oed.com/dictionary/progress_n?tab=meaning_and_use#28129511)>

<sup>86</sup> See Minnesota Public Utilities Commission at p. 7: “the Commission herein adopts a four-year shelf life for all renewable energy credits that are to be used for compliance with the Minnesota renewable energy objectives and/or standards. A four-year shelf life means the renewable energy credit will be eligible for use in the year of generation, and for four years following the year of generation, *i.e.* renewable energy generated as of June, 2008, would be available for use in Minnesota until December 31, 2012.” Minnesota Public Utilities Commission. “Order Establishing Initial Protocols for Trading Renewable Energy Credits.” *In the Matter of a Commission Investigation into a Multi-State Tracking and Trading System for Renewable Energy Credits*. Docket no. E-999/CI-04-1616. / *In the Matter of Detailing Criteria and Standards for Measuring an Electric Utility’s Good Faith Efforts in Meeting the Renewable Energy Objectives Under Minn. Stat. § 216B.1691*. Docket no. E-999/CI-03-869. December 18th, 2007. Document ID: 4872138.

<sup>87</sup> The Clean Energy Organizations. “Initial Comments of the Clean Energy Organizations.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 9. Document ID: 20251-214613-01.

CSG does agree with Xcel’s contention that, ultimately, “[c]ompliance [...] is a backward-looking demonstration.”<sup>88</sup> To that extent, the first CFS Program reporting period, which could occur in 2026, would likely be setting a baseline and not be illustrative of substantive “progress” towards CFS compliance. More so, CSG acknowledges that obligated utilities each arrive at CFS compliance from within a specific and non-transferrable context. Xcel’s compliance pathway is different from GRE and, as is known, some utilities have become statutorily obligated for the first time as of 2023. Therefore, CSG recommends that during the first interim reporting period (i.e. 2026), the utilities should propose their own reasonable and ratable interim targets based upon the Commission’s definition of “progress.” These self-proposed interim targets would be approved by the Commission and met by the utility for each reporting period between 2026 and 2030, 2030 and 2035, 2035 and 2040, and thereafter at the discretion of the Commission. Self-proposed interim targets—resting on a Commission definition of progress—would result in a dependable and graduated approach to CFS compliance that balances specific utility needs while maintaining a high potential for CFS Program efficacy.

*D. A one-year banking restriction is a viable alternative to interim CFS targets.*

As noted in Part IV of this document, CSG strongly supports the Minnesota Department of Commerce’s proposal for the hourly matching of CFS compliance claims. However, until hourly matching becomes logistically feasible, CFS rulemaking will have to contend with the topic of banking CFS-eligible RECs (or equivalent EACs).

To restate, CSG’s proposed interim CFS targets are partially premised on the assumption that the five-year banking rules for RES-eligible RECs would be enforced for the CFS Program. To further reiterate, if 2026-vintage RECs could be carried over into 2030 CFS compliance, there would be little demonstrable progress in terms of new carbon-free generation or procurement. Therefore, should the Commission find interim target-setting to be unworkable, CSG recommends that CFS banking restrictions be limited to 1 year after the date on which a CFS-eligible REC/EAC was generated. This would result in true annual matching rather than the quinquennial matching allowed by a 5-year banking rule.

While far less granular, and thus credible, than hourly matching, 1-year banking ensures that the cycle of carbon-free generation and procurement is occurring anew year-over-year. This means that carbon-free claims in 2030 will be closer to the reality of 2030 carbon-free generation and procurement, rather than 2030 CFS compliance reports potentially representing a 5-year-lag in carbon-free investment, development, generation, and delivery to Minnesotans.

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<sup>88</sup> Xcel Energy. “RE: Comments Implementing Changes to the RES and the Newly Created CFS Docket No. E-999/CI-23-151.” *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*. Docket No. E-999/CI-23-151. January 29th, 2025. p. 2. Document ID: 20251-214582-01.

## **VI. CLOSING REMARKS**

CSG reasserts its recommendation that CFS compliance be accounted for with REC (or equivalent EAC) retirements matched for every MWh of “total retail electric sales,” including any market transactions. These retirements should be made by CFS-obligated Minnesota utilities on M-RETS. Likewise, CFS-eligible generation should be limited to Minnesota-sited resources, or resources located within the boundaries of the MISO North subregion. While REC retirements occur annually or monthly today, CSG also supports a future requirement for hourly tracking.

CSG supports a compliance reporting cadence in tandem with RES filings or IRP filings, so long as the filings occur every two years or sooner. These CFS filings should meet interim CFS compliance targets with REC (or equivalent EAC) retirements, as proposed by the utilities and approved by the Commission. Interim targets will help ensure program efficacy in 2030 and protect against undesirable and sudden price impacts on ratepayers. CSG recommends that interim targets should be instituted for 2028 and onward. It is CSG’s belief that these recommendations best meet the credibility threshold for carbon-free emissions claims and the specific statutory requirements detailed in Minn. Stat. § 216B.1691.

These recommendations are offered with the greatest respect for the Commission. CSG once again thanks the Commission for its leadership on this issue and appreciates the opportunity to comment before a diligent group of experts.

Respectfully submitted,

/s/ Michael Daley

Director of Policy & Regulatory Affairs  
Carbon Solutions Group  
[mdaley@carbonsolutionsgroup.com](mailto:mdaley@carbonsolutionsgroup.com)