M-RETS
60 S. 6th Street, Suite 2800, Minneapolis, MN 55402

February 26, 2024

The Honorable Lily Batchelder
Assistant Secretary for Tax Policy
Department of the Treasury
1500 Pennsylvania Avenue, NW Washington, DC 20220

Mr. Brett York
Deputy Tax Legislative Counsel
Department of the Treasury
1500 Pennsylvania Ave, NW Washington, DC 20020

Mr. William Paul
Principal Deputy Chief Counsel
Internal Revenue Service
1111 Constitution Avenue, NW Washington, DC 20224

**RE: Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election To Treat Clean Hydrogen Production Facilities as Energy Property**

Dear Ms. Batchelder, Mr. Paul, and Mr. York:

## I. Introduction

M-RETS is a non-profit, mission-driven organization whose environmental attribute tracking platform facilitates economy-wide decarbonization. M-RETS passion does not stop simply at providing scalable and replicable digital solutions to help solve environmental problems at local, regional, and national levels, it also involves providing thought leadership and support to growing environmental attribute markets. On the data side, M-RETS accomplishes this mission with innovative, dynamic digital infrastructure and a team of passionate energy and technical experts.

The M-RETS Renewable Energy Certificate ("REC") and Renewable Thermal Certificate ("RTC") registries provide key data that serve new and existing voluntary and compliance markets across North America. M-RETS facilitates REC markets by issuing a unique, traceable digital certificate (i.e., one REC) for every megawatt hour ("MWh") of verified renewable energy recorded on the platform. M-RETS facilitates RTC markets by issuing a unique, traceable digital certificate (i.e., one RTC) for every dekatherm ("dth") of verified renewable energy recorded on the platform. The M-RETS platform provides more than just the ability to track volumes of biomethane. M-RETS provides for—but does not require—the ability to track carbon pathways and carbon intensity (CI) values with comprehensive documentation as part of each certificate.

Once issued, M-RETS users can choose to transfer (buy/sell), retire, import, or export RECs or RTCs.

M-RETS users can retire certificates either to comply with state mandates and/or to fulfill their voluntary commitments, while preventing the risk of double counting across the markets M-RETS serves. M-RETS registers projects in all U.S. states and Canadian provinces and will support imports and exports with any registry in North America that meets our specific security and operational requirements specific to the risk of double counting.

M-RETS verifies all data in its system. M-RETS does not determine eligibility for specific state, federal, or voluntary programs. M-RETS develops and implements software code to support regulators of voluntary and compliance programs to ensure all retirements meet their specific needs. M-RETS is policy neutral; however, it often acts as a resource to policy makers, state utility commissions, and other energy regulators given its expertise in assisting these bodies in overseeing voluntary and compliance renewable energy programs. M-RETS routinely provides advice on how to set up programs to meet the specific demands of individual state, federal, or voluntary programs in the most cost-effective way possible.

The M-RETS board, leadership, and development team continually stress that at its core, M-RETS is a data provider. This core function and the M-RETS mission to serve as a centralized gateway to environmental markets is at the heart of everything M-RETS does. As a non-profit, M-RETS can provide unbiased feedback to regulators about the most efficient way to achieve their policy goals. By working with M-RETS in the initial stages of program design, regulators are often able to save significant dollars by better understanding the platform's technical capabilities.

Embedded in the DNA of M-RETS is a commitment to providing stakeholders innovative and dynamic digital infrastructure. M-RETS facilitated the first ever hourly REC issuance and retirement in collaboration with Google. This work was the focus of a Google Cloud Blog titled *T-EACS Offer a New Approach to Certifying Clean Energy*.[1] On September 18, 2021, the Center for Resource Solutions awarded M-RETS a 2021 Green Power Leadership Award for Market Development in recognition of the work M-RETS completed with Google. [2] On April 4, 2022 WREGIS announced an agreement to join the M-RETS platform to track across the WECC footprint. And in April 2023 M-RETS announced a first of its kind generator eligibility flag noting that a state agency certified the facility as pollinator friendly.[3]

[1] Maud Texier, *T-EACS Offer a New Approach to Certifying Clean Energy*, March 1, 2021, https://cloud.google.com/blog/topics/sustainability/t-eacs-offer-new-approach-to-certifying-clean-energy.
[2] *CRS 2021 Green Power Leadership Awards*, Center for Resource Solutions, https://resource-solutions.org/programs/gpla/winners/2021-winners/ [Accessed 9 February 2024].
[3] *M-RETS Begins Tracking Pollinator Friendly Solar RECs*, M-RETS, April, 19, 2023, https://www.mrets.org/m-rets-begins-tracking-pollinator-friendly-solar-renewable-energy-credits/.

M-RETS demonstrates the same level of leadership and innovation in our RTC platform which launched January 1, 2020, and shortly thereafter issued the first certificates. This first of its kind system saw the first ever public sale and claim by a Fortune 50 corporate client not too long after.[4] The Oregon Public Utilities Commission adopted the M-RETS RTC platform as a compliance tool under Senate Bill 98.[5] Quickly following, California adopted M-RETS as the recognized compliance tool for implementing Senate Bill 1440.[6] In 2022 both Oregon and Washington adopted the use of M-RETS to track RNG under their respective state clean fuel programs.[7] Lastly, December 2022, M-RETS announced the first green hydrogen RTC issuance under a tariff approved by the Minnesota public Utilities Commission.[8]

M-RETS is a value-based system, providing incredible value while also keeping costs low and investing back into our technology platform. M-RETS provides users:

- a clean, modern interface backed by state-of-the art technology, and
- free API access, and
- industry leading security rigorously reviewed by outside entities.

M-RETS remains honored that Treasury designated M-RETS as one of the "qualified EAC registry or accounting systems" under proposed § 1.45V–4(d)(2)(v). M-RETS remains committed to serving the United States government and all existing stakeholders through our REC and RTC platform, both well tested, accepted, and broadly available across all of North America.

## II. Recommendation Summary

M-RETS provides the following recommendation summary:

[4] *U.S. Gain First to Provide RNG Through New M-RETS RTC Platform*, CSRWire, January 30, 2020, https://www.csrwire.com/press_releases/43478-u-s-gain-first-to-provide-rng-through-new-m-rets-rtc-platform, *ACT Commodities and Bluesource complete first renewable thermal transaction using state-of-the-art tracking tool*, M-RETS, February 8, 2021, https://www.mrets.org/act-commodities-and-bluesource-complete-first-renewable-thermal-transaction-using-state-of-the-art-tracking-tool/.

[5] *In re* Rulemaking Regarding the 2019 Senate Bill 98 Renewable Natural Gas Programs (2020) OR. P.U.C. Dec. No. 20-095. (*see* Appendix A pg. 8 of 31).

[6] Cal. P.U.C. Dec. No. 22-02-025 (*see* pg. 50 of the decision).

[7] Wash. Admin. Code § 173-424-420(e) (2024),OAR 340-253-0640(1)(A) (stating If the biomethane-based volumes are being reported using a book-and-claim methodology, the registered party must submit records showing the retirement of RTCs representing the biomethane environmental attributes from that facility in M-RETS Renewable Thermal system or another approved and recognized tracking system with the quarterly report.), *see also* Renewable Natural Gas Reporting Using a Book and Claim Accounting Methodology and M-RETS, https://www.oregon.gov/deq/ghgp/Documents/cfpRenewNGrep.pdf [Accessed 12 February 2024].

[8] *CenterPoint Energy's Green Hydrogen Facility is First Ever to Register and Issue Certificates on M-RETS Renewable Thermal Tracking Platform*, M-RETS Press Release, December 1, 2022, https://www.mrets.org/press-release-center-point-energy-registers-green-hydrogen-facility-in-the-m-rets-rtc-system/, *see also CenterPoint Energy Launched Green Hydrogen Project in Minnesota*, CenterPoint Energy, June 3, 2022, https://investors.centerpointenergy.com/news-releases/news-release-details/centerpoint-energy-launches-green-hydrogen-project-minnesota.

1. Maintain the 2028 phase in for hourly matching. 2028 provides a generous runway for existing registries to integrate and scale hourly EACs. Treasury should clarify that once one registry has hourly EAC capability, it should be able to cover any regions that do not yet have capability.

2. Require a standard for the EAC registries to follow, specifically the widely accepted Energy Tag Standard. This would help prevent fraud, enhance auditability, and facilitate registry interoperability.

3. Allow a provisional pathway to hourly matching that uses hourly meter data and annual or monthly EACs to demonstrate hourly matching where hourly EACs are not available (e.g., Energy Tag Standard Registry Configuration 2). This form of hourly matching is possible and widespread globally today and, in the unlikely case that hourly EACs are not ready by 2028, is a viable pathway for ensuring compliance with hourly matching.

4. Find that electronic RNG certificate tracking systems are broadly available, robust and that Treasury should require the use M-RETS or any other qualifying electronic RNG certificates in order to claim the section 45V credit.

5. Find that electronic RNG certificate tracking systems are universally available, robust, and trusted. Specifically, Treasury should require the use of the M-RETS RTC platform, an electronic book-and-claim registry that covers all of North America, to track and verify the use of RNG to produce clean hydrogen under Section 45V. Existing voluntary and state compliance programs already utilize the M-RETS RTC platform to verify compliance with RNG requirements in book-and-claim programs. Furthermore, the system already meets or exceeds the data requirements under Section 45V.

6. Approve and require the use of the M-RETS RTC tracking system to issue and retire clean hydrogen certificates prior to receiving the 45V credit.

## III. The Treasury 45V Guidelines are Feasible and Implementable as Proposed.

There should be no concern regarding the ability of registries to integrate hourly tracking by January 1, 2028. As a matter of principle, M-RETS highlights the following three statements:

1. M-RETS first phase of hourly issuance, transactions, and retirement could satisfy the rule now, including the ability to administer the functionality via an Application Programing Interface (“API”), and

2. 2028 is a reasonable timeline to allow for other registries to build and implement the hourly functionality as prescribed under this rule. This is especially true if the Federal Government provides resources to other non-profit registries, and

3. M-RETS or other registries or tools can satisfy the rule on or before January 1, 2028, if registries refuse or are unable to implement required functionality.

## 1. Registry Hourly Implementation[9]

M-RETS began ingesting hourly data into our system in 2019 so that the development team could understand how hourly data would interact with the existing monthly generation data.[10] This happened less than 15-months after launching a new system owned and maintained by M-RETS.[11] Less than six months into this process, M-RETS began building a basic hourly retirement process while connecting with regulators and market participants.[12] M-RETS strongly believes existing registries can integrate the tools necessary to support hourly tracking, especially given the generous runway Treasury provided in the guidance documents.[13]

M-RETS is in the process of updating our hourly retirement process to support the granularity necessary to implement issuance, transaction, and retirement down to the watt level by hour. Given the legwork done by M-RETS and other U.S. and international registries, M-RETS maintains the utmost confidence that existing tracking systems should be able to, at the very least, integrate hourly tracking by January 1, 2028, if not much before then. As the Center For Resource Solutions pointed out in their June 15th, 2023, report, the majority of existing registries could integrate the necessary hourly features in 12-24 months.[14] M-RETS believes that it is logical to provide Federal funding to support the tracking systems operated as a not-for-profit either by an independent entity (e.g., M-RETS or WREGIS) or a state agency (e.g., NC-RETS or MIRECS). The reason to restrict funding to not-for-profits, is that they are not able to raise private capital like for-profit registries.

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[9] Prop. Treas. Reg. § 1.45V–4(d)(3)(ii)(A), *see also* Notice of Proposed Rulemaking Under § 45V, 88 FR 89220, 89223 (December 26, 2023) available at https://www.federalregister.gov/d/2023-28359/p-141.

[10] *See* Benjamin L. Gerber, *A Path to Supporting Data-Driven Renewable Energy Markets*, M-RETS, March 2021, 2021, https://www.mrets.org/wp-content/uploads/2021/02/A-Path-to-Supporting-Data-Driven-Renewable-Energy-Markets-March-2021.pdf.

[11] *See id.*

[12] RECs as a Decarbonization Instrument, Presentation to the Minnesota Public Utilities Commission ("MNPUC"), October 20, 2020, https://mn.gov/puc-stat/documents/pdf_files/Minnesota%20PUC%20-%20RECs%20as%20a%20decarbonization%20insturment%20-%2010-20-2020.pdf (this presentation included a discussion and presentation on hourly REC with a regulatory body months before the first retirement with Google) [Accessed February 19, 2024].

[13] *See* Notice of Proposed Rulemaking Under § 45V at 89232, available at https://www.federalregister.gov/d/2023-28359/p-139 (providing a phase-in period for hourly that allows annual matching until January 1, 2028).

[14] Rachel Terada, *Readiness for Hourly: U.S. Renewable Energy Tracking Systems*, Center for Resource Solutions, June 15, 2023, available at: https://resource-solutions.org/wp-content/uploads/2023/06/Readiness-for-Hourly-U.S.-Renewable-Energy-Tracking-Systems.pdf.

For-profit registries should be able to raise private capital to develop the necessary tools to support 45V requirements.

If certain registries are unwilling or unable to meet the deadline, then they can easily provide generation data to a system that is willing to upgrade their infrastructure to meet the demands of hourly tracking. M-RETS will work with registries unwilling or unable to accommodate the tracking demands under the final Section 45V rules. Under the existing Energy Tag Granular Certificate Standard Configuration 2, a Granular Certificate (GC) tracking system like M-RETS can issue Granular Certificates for canceled monthly, quarterly, or annual EACs.[15] Configuration 2 requires effective coordination through the maintenance of a centralized underlying chain of custody between the originating EAC and GC registries.[16]

M-RETS strongly emphasizes the important of Treasury requiring registries to adhere to an hourly EACs standard.[17] This is a critical suggestion, as this is the one chance that Treasury has to set a standard for all registries to implement the required functionality. At this time, the Energy Tag Granular Certificate Standard is the only published standard, created with intensive stakeholder input.[18] Adherence to an hourly EAC standard will result in a more expedient rollout of hourly functionality, provide administrative efficiency for market participants including regulatory agencies, makes the validation process for Treasury efficient, and ensures that all parties receive equal treatment across North America.

If each registry must adhere to a standard hourly framework, it will expedite the development and implementation. Energy Tag spent the last three years working at a micro and macro level to understand the needs of both the registry community, consumers, and regulators.[19] It removes the need for registries to have time consuming and expensive stakeholder groups and instead can immediately begin implementation. Furthermore, M-RETS and other registries experienced in hourly deployment can step in to provide technical assistance.

Adherence to standards will help remedy problems that continues to plague the energy industry, poor data-collection, management, and sharing practices.[20] Poor data access and management

[15] *See Granular Certificate Scheme Standard Version 1*, Energy Tag, March 31, 2022, available at https://energytag.org/wp-content/uploads/2022/03/20220331-EnergyTag-GC-Scheme-Standard-v1-FINAL.pdf, *see also* Figure 1.
[16] *See id.*
[17] The legal requirements for determining lifecycle greenhouse gas emissions rates resulting from incremental hydrogen production to receive the tax credit may differ, however, from Scope 2 market-based inventory accounting standards related to all generation (new and existing) used to serve consumption.
[18] *Energy Tag Standard Version 1*, Energy Tag Initiative Ltd., March 31, 2022, available at https://energytag.org/wp-content/uploads/2022/03/20220331-EnergyTag-GC-Scheme-Standard-v1-FINAL.pdf.
[19] *See id.*
[20] Behrsin et al., *Renewable Portfolio Standards are propelling the US to a clean-energy future. But Data Practices are Lagging*, Utility Dive, December 10, 2020, https://www.utilitydive.com/news/renewable-portfolio-standards-are-propelling-the-us-to-a-clean-energy-futur/591965/.

practices—especially lack of standards—make it difficult for market participants to understand and utilize data.[21] For example, lack of API access to registries and failure to adhere to common data process and access standards make it difficult for regulators, researchers, and market participants to understand the state of the market.[22] Furthermore, as a registry that acquires production data from multiple RTO's, M-RETS must adhere to different API frameworks that drastically increase costs to access data. Treasury has this unique opportunity to remedy the failure of the energy industry to adopt standardized practices.[23]

Failure to require registries to adhere to an hourly EAC standard could result in registries making their processes more appealing to registrants who could then cherry pick the registry that gives them the best outcome under Section 45V. This situation could undermine and/or frustrate the purpose of Section 45V. Moreover, a standard approach including both data and process standards will ease the administrative costs on regulators and verifiers because they can apply the same verification procedures and use the same API framework across registries.

While originally intended to support state policy, existing registries should be able to manage the complexity between any state and federal regulations as long as they adhere to modern software development and maintenance practices.[24] While adherence to a global standard may be unusual for a federal tax credit, this will also make it easier for U.S. based producers to conform to European Union regulations, including the Carbon Border Adjustment Mechanism.[25]

## 2. Concerns Regarding Hourly Matching.

### A. Hourly Matching Already Occurs in More Complex Forms in Existing Utility Tariffs.

As a leader in the advancement towards hourly RECs, M-RETS has first-hand knowledge of the complications surrounding hourly at various levels of operation. There are already utility tariffs in place that act similar to how an hourly matching process works. On October 13, 2020, Madison

[21] *See id.*
[22] *See id.*, *see also* Benjamin L. Gerber, *Decarbonization Requires More Access to and consensus Around Energy Data*, Utility Dive, March 30, 2021, https://www.utilitydive.com/news/decarbonization-requires-more-access-to-and-consensus-around-energy-data/597445/.
[23] Benjamin L. Gerber, *Decarbonization Requires More Access to and consensus Around Energy Data*, Utility Dive, March 30, 2021, https://www.utilitydive.com/news/decarbonization-requires-more-access-to-and-consensus-around-energy-data/597445/.
[24] *Renewable Energy Tracking Systems*, Environmental Protection Agency, https://www.epa.gov/green-power-markets/renewable-energy-tracking-systems [Accessed February 25, 2024].
[25] *See* European Union Carbon Border Adjustment Mechanism, European Commission, https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en#cbam [Accessed February 19, 2024].

Gas and Electric ("MGE") received approval for their Renewable Energy Rider Tariff that contains a process similar to hourly matching as proposed under this NOPR.[26]

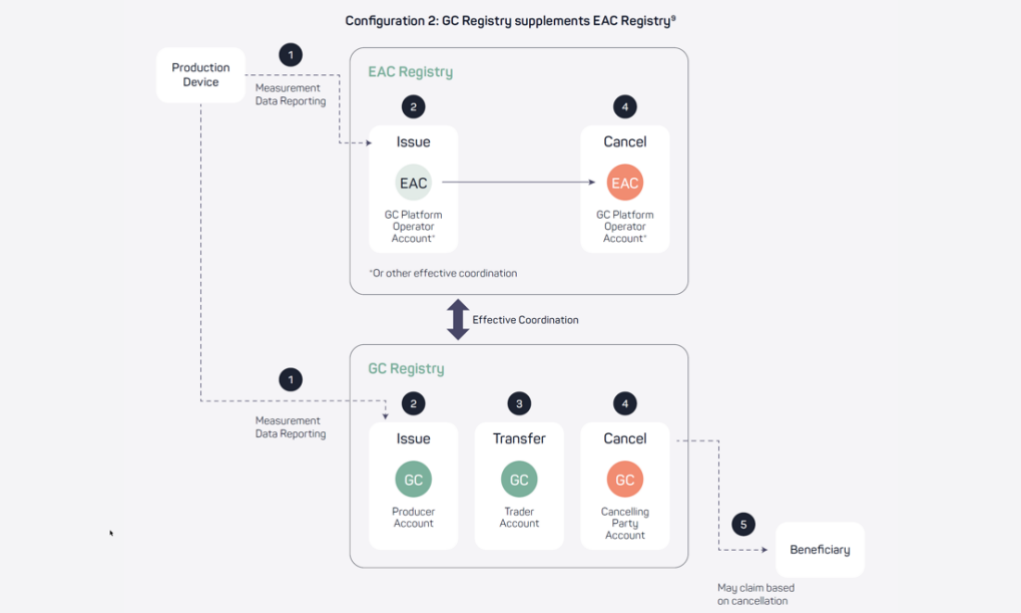
> Billing under the contracts is monthly, but also more complex than other commercial tariffs. In any 15-minute interval, the output of the customer's share of the array will replace an equal amount of energy consumed by the customer's various accounts. The customer will then pay the RER energy price for that energy. If there are intervals in which the customer's share of the array produces more power than the customer is consuming across all accounts, the customer will receive a credit for that excess energy at the buyback rate specified in MGE's parallel generation tariff (Sheet E-55).[27]

This tariff is already in place between a variety of customers, and while not necessarily exactly the same as hourly matching between a clean generator and hydrogen producer, this tariff approved in 2020 demonstrates that infrastructure to support similar processes exists and is easily administrable.

M-RETS also heard concerns from stakeholders that an inability to demonstrate hourly matching up front could hurt final investment decisions ("FID") unless it is available to demonstrate to financing partners. M-RETS suggests that Treasury could provide approval to use Configuration 2 proposed under the Energy Tag Standard.[28] Under Configuration 2, Energy Tag authorizes a granular certificate registry ("GC") to supplement a traditional EAC registry as long as there is effective coordination. The standard includes requirements that both the GC and EAC registries must adhere to, including "to such public rules and contractual arrangements as are required by the EAC Issuing Body to ensure effective coordination and prevent double counting."

[26] *In re* Application of Madison Gas and Electric Company for a Certificate of Authority to Construct the O'Brien Solar Electric Generating Facility in the City of Fitchburg, Dane County, Wisconsin, for Approval of Renewable Energy Rider Services Agreements, and for Approval to Allow Participation in its Renewable Energy Rider (Schedule RER-1) to Increase from 25 to 50 Megawatts, Final Decision (October 13, 2020) (PSC Reference #398329) https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=398239.
[27] *See id.*
[28] *Energy Tag Standard Version 1*, Energy Tag Initiative Ltd., March 31, 2022, available at https://energytag.org/wp-content/uploads/2022/03/20220331-EnergyTag-GC-Scheme-Standard-v1-FINAL.pdf.

**Figure 1: Energy Tag Configuration 2**




### B. Hourly Tracking Opponents that Question the Registries Abilities to Integrate Hourly Fail to Understand Software Development.

M-RETS fully expects that critics of hourly tracking will question the feasibility of incorporating hourly functionality, citing challenges encountered during the integration of WREGIS into the M-RETS platform. WREGIS, a system with over 14 years of development and data, presented unique challenges that are distinctly different than building new functionality that does not require integrating significant historical data from a different system. Attempts to draw parallels between the development of hourly in an existing system and what M-RETS did to integrate WREGIS onto the M-RETS platform is nothing more than a red herring.

At the core of this argument, and the reason it is nothing more than a red herring, is a failure to understand the difference between brownfield and greenfield software development. Brownfield development—which is the best way to describe the variety of in-flight hourly implementations across North America—involves the "addition of new capabilities on an existing product or product platform using existing technology and by further developing competence in known areas" which sustains a product and still provides for innovative solutions.[29] On the other hand, greenfield software development, which is the best way to describe the work M-RETS and WREGIS completed, "is in its distinct form when a new product is created from scratch – a new product or

[29] Axehill et al., From Brownfield to Greenfield Development–Understanding and Managing the Transition, INCOSE, July 2021 (Vol. 31, No. 1, pp. 832-847) available at https://www.researchgate.net/publication/352292737_From_Brownfield_to_Greenfield_Development_-_Understanding_and_Managing_the_Transition.

product platform, based on new technology, using new methodology and implemented by people who are new to it all."[30] Treasury should dismiss attempts to sow uncertainty around the ability of registries to integrate a Section 45V compliant hourly process by confusing past greenfield experiences with brownfield projects such as hourly.[31]

Not only are hourly tracking solutions already available within the United States in registries like M-RETS and PJM, but there are also solutions evolving globally. For example, the following are active solutions in United Kingdom and Europe are providing pilot and actual solutions.

**A.** Nord Pool and start-up Granular announced plans to kick off an auction system for hourly Guarantee of Origins ("GoO") as part of a UK based pilot.[32]

**B.** Dutch energy supplier Eneco and Spanish service provider FlexiDAO will work with a Microsoft Amsterdam based datacenter to match hourly consumption with production from a Dutch offshore wind facility.[33]

**C.** Mercedes-Benz and Statkraft have a third-party certified Power Purchase Agreement ("PPA") that allows Mercedes-Benz to match 100% of their own production and office sites in Germany with 24/7 renewables. "This front-running concept called "Pure Statkraft PPA" has been certified by an independent authority (TÜV) for its additionality components and the simultaneousness of generation and supply."[34]

**D.** Danish Transmission System Operator ("TSO") Energinet, Belgian and German TSO Elia Group, and Estonian TSO Elering founded Energy Track and Trace, "an ambitious, international collaboration working towards cross border solution to tracking the origin of energy as near to real-time as possible."[35] In 2020-2021 they tested a prototype of their EnergyOrigin system with more than 50 external partners and continue development today.[36]

Claiming that registries or specific functionalities need to be established prior to regulatory mandates is unfounded. Adhering to this viewpoint would erect considerable regulatory obstacles in deploying programs that necessitate systems for evaluation, measurement, and verification, such

[30] *See id.*
[31] *See id.*
[32] *Nord Pool pilots hourly GOO market in the UK*, Argus Media, January 27, 2022, https://www.argusmedia.com/en/news/2296076-nord-pool-pilots-hourly-goo-market-in-uk.
[33] *24/7 CPPA in NL*, Eurlectric, https://247.eurelectric.org/24-7-cppa-in-nl/ [last accessed February 19, 2024].
[34] *Mercedes-Benz producing cars with 100% renewable energy 100% of the time*, Eurlectric, https://247.eurelectric.org/mercedes-benz-producing-cars-with-100-renewable-energy-100-of-the-time/ [last accessed February 19, 2024].
[35] *See Energy Origin*, Energinet, https://en.energinet.dk/energy-data/datahub/energy-origin/ [last accessed February 20, 2024].
[36] *See id.*

as Renewable Energy Certificates (RECs). In fact, legislative or regulatory demands for the creation of new, or utilization of existing, tracking systems drove the development of all EAC tracking systems.[37]

## IV. Definitions Related to Use of Energy Attribute Certificates

M-RETS asks Treasury to clarify whether Test Energy qualifies for facilities that meet all other Section 45V requirements but occurs before the Commercial Operation Data ("COD") as specified.[38] At least two Section 45V qualified registries, M-RETS and WREGIS, issue certificates for test energy as long as it meets their specific requirements.[39] However, it is difficult to locate how each RTO or control area operator define test energy. For example, CAISO Tariff Appendix infers that all test energy under that tariff occurs before COD.[40] M-RETS asks Treasury to clarify whether hourly EACs for test energy that that meets all other qualified registry and Section 45V requirements but occurs before COD qualifies under Section 45V.[41]

## V. Incrementality[42]

M-RETS provides these comments related to Treasury's request for comments related to, "what information would be needed to allow for qualifying EACs representing existing fossil fuel-powered electricity from facilities that have added [carbon capture and sequestration ("CCS")]."[43]

M-RETS suggests that Treasury provide guidance to qualified EAC registries that in situations where a fossil fuel-powered facility utilizing CCS meet other requirements under Section 45V, that facility register with a qualified registry as a multi-fuel Alternative Energy Certificate ("AEC").[44] AECs exist in M-RETS for this very purpose, to track sources of non-renewable

[37] *See* California Senate Bill 1078 Establishing the California RPS; https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/rps/rps-program-overview, *see also* MN PUC Docket NO. E.999/CI-04-1616, Order Establishing Initial Protocols for Trading Renewable Energy Credits, https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=4872137 [last accessed February 21st, 2024]
[38] Notice of Proposed Rulemaking Under § 45V at 89228 https://www.federalregister.gov/d/2023-28359/p-93.
[39] WREGIS Operating Procedures § 5.3.9, available at https://www.wecc.org/Administrative/WREGIS%20Operating%20Rules%20October%202022%20Final.pdf, *see also* M-RETS REC Operating Procedures §4.3, available at https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf.
[40] CAISO Tariff, Appendix EE, Article 6.1, September 1, 2022, available at http://www.caiso.com/Documents/AppendixEE-LGIA-for-GeneratorInterconnectionandDeliverabilityAllocationProcedures-Sep1-2022.pdf#search=%22Test%20energy%22.
[41] *See* Prop. Treas. Reg. § 1.45V-4(d)(2)(i).
[42] *See* Prop. Treas. Reg. § 1.45V-4(d)(3)(i)(A), *see also* Notice of Proposed Rulemaking Under § 45V at 8892, available at https://www.federalregister.gov/d/2023-28359/p-108.
[43] *See id.*
[44] *See* M-RETS Operating Procedures § 4.3.4, available at https://www.mrets.org/wp-content/uploads/2024/02/MRETS-Operating-Procedure-2024.1.pdf.

electric generation that still provide an environmental benefit.[45] Using the multi-fuel generator process will allow the generator to report all generation into the registry while still providing for a process to only issue certificates for generation covered by CCS. Treasury may want to require these certificates receive additional attributes, for example a Section 45V Emission Free Energy Certificate Flag ("EFEC") to designate compliance eligibility.

Registries already facilitate fuel splits for multi-fuel generators without significant issue, making this an ideal process to utilize. "For purposes of creating M-RETS Certificates reflecting the fuel source mix of multi-fuel Generating Units, the proportion of Certificates attributable to each fuel source shall be determined consistent with the following rule. For renewable fuels co-fired with fossil fuels or using fossil fuels for startup or supplemental firing: In each month, the Certificates for each fuel in such multi-fuel Generating Units will be created in proportion to the ratio of the net heat content of each fuel consumed to the net heat content of all fuel consumed in that month, adjusted to reflect differential heat rates for different fuels, if applicable."[46]

How to apply the eligibility under the two competing (hourly or monthly/annual) 45 Scenarios:

1. **45V Hourly Requirement –** The ideal scenario is that Treasury require generators with CCS technology also maintain hourly metering of the $CO_2$ going into storage or a covered beneficial use under a Measurement, Reporting and Verification plan ("MRV plan") under 40 CFR 98.448.[47] Treasury would then require the generator to report hourly production data and hourly fuel split allocations in coordination with their EPA approved MRV plan.

   M-RETS suggests that the most efficient way to manage this process is to issue AECs based on a formula approved by the EPA and Treasury that determine the percentage of MWh that are carbon free based on the hourly meter measuring the sequestered carbon. Below is an example of a simple formula that Treasury could use for implementation:

   **Example Formula**

$$\text{Hourly Emission Free MWh} = \text{Hourly MWh Fossil Generation} - \frac{Total\ Carbon\ Sequestered}{Carbon\ Intensity}$$

   **Total Fossil Fuel Generation** – The total MWh of electricity generated from the specific fossil fuel generator with carbon capture equipment produced in a specific hour.

   **Carbon Sequestered** – The total grams of $CO_2e$ captured and sequestered during the specific hour of Fossil Generation.

[45] *See id*. at pg. 90 defining Alternative Energy Certificate.
[46] *See id*.
[47] 40 C.F.R 98.448.

**Carbon Intensity** – The specific carbon intensity of the Fossil Fuel Generator at that hour measured in grams of $CO_2e$ per Megawatt-hour ($gCO_2e/MWh$).

This is a simple formula that calculates the specific MWh considered carbon free on an hourly basis by using the carbon capture efficiency rate, the gross fossil fuel generation in a given hour, and the carbon intensity of the electricity from the generator.

Treasury may want to require that a Qualified Reporting Entity input this data on behalf of the generator to increase the veracity of the data. Once reported, M-RETS would issue AECs on an hourly basis for the MWh considered carbon free, using the above validation method or another validation process required by Treasury. If Treasury decides against requiring a QRE, M-RETS suggests requiring a third-party audit to provide independent verification that the meter data and submitted fuel splits match on a monthly, quarterly, or annual basis.

M-RETS provides the above calculations to demonstrate one efficient path for implementation. M-RETS will happily implement a different or more complex formula. The above matches functionality that already exists or is similar to existing functional software that would only require minor changes.[48]

2. **45V Monthly or Annual Matching Requirement –** Under this scenario, Treasury should require generators with CCS technology also maintain metering of the $CO_2$ going into storage or a covered beneficial use under a Measurement, Reporting and Verification plan ("MRV plan") under 40 CFR 98.448 with at least the capability to measure this on a monthly basis.[49] Treasury would then require the generator to report monthly production data and hourly fuel split allocations in coordination with their EPA approved MRV plan.

   M-RETS suggests that the most efficient way to manage this process is to issue AECs based on a formula approved by the EPA and Treasury that determine the percentage of MWh that are carbon free based on the monthly meter measuring the sequestered carbon. Below is an example of a simple formula that Treasury could use:

**Example Formula**

$$\text{Monthly Emission Free MWH} = \text{Total Monthly MWh Fossil Generation} - \frac{Total\ Carbon\ Sequestered}{Carbon\ Intensity}$$

[48] *See* M-RETS REC Operating Procedures § 4.3.4.1 available at https://www.mrets.org/wp-content/uploads/2024/02/MRETS-Operating-Procedure-2024.1.pdf.
[49] 40 C.F.R 98.448.

**Total Monthly Fossil Fuel Generation** – The total MWh of electricity generated from the specific fossil fuel generator with carbon capture equipment produced over a month.

**Carbon Sequestered** – The total grams of $CO_2e$ captured and sequestered over the month from the Fossil Generation.

**Carbon Intensity** – The specific carbon intensity of the Fossil Fuel Generator at over the month measured in grams of $CO_2e$ per Megawatt-hour ($gCO_2e/MWh$).

This is a simple formula that calculates the specific MWh considered carbon free on a monthly basis by using the carbon capture efficiency rate, the gross fossil fuel generation in a given hour, and the carbon intensity of the electricity from the generator.

Treasury may want to require that a Qualified Reporting Entity input this data on behalf of the generator to increase the veracity of the data. Once reported, M-RETS would issue AECs on a monthly basis for the MWh considered carbon free in the fuel split process, using the above validation method or another validation process required by Treasury. If Treasury decides against requiring a QRE, M-RETS suggests requiring a third-party audit to provide independent verification that the meter data and submitted fuel splits match on a monthly, quarterly, or annual basis.

M-RETS provides the above calculations to demonstrate one efficient path for implementation. M-RETS will happily implement a different or more complex formula. The above matches functionality that already exists or is similar to existing functional software that would only require minor changes.[50]

## VI. Formulaic Approaches To Addressing Incrementality From Existing Clean Generators

### A. (ix) The circumstances and capability of EACs and tracking systems to track and verify energy attributes from such sources.[51]

Currently M-RETS does not have functionality that could automatically apply an eligibility flag to generation from generators that do not already meet Section 45V criteria in the circumstances identified, e.g., curtailment or zero or negative pricing. This is something M-RETS could build, either through matching hourly generation to data provided via API or a manual process from the

[50] *See* M-RETS REC Operating Procedures § 4.3.4.1, available at https://www.mrets.org/wp-content/uploads/2024/02/MRETS-Operating-Procedure-2024.1.pdf.
[51] *See* Notice of Proposed Rulemaking Under § 45V at 89231, available at https://www.federalregister.gov/d/2023-28359/p-121.

RTO or control area operator.[52] M-RETS could automatically apply an eligibility flag if the locational marginal price to specific types of generators either approved directly by Treasury or by class (e.g., hydro, solar, wind). However, the more complex the rules around this, the more difficult and costly it is to implement and validate.

**B. (i) How a five-percent allowance should be tracked, allocated, and administered and how feasible it is for EAC tracking systems to incorporate data on such an allowance.[53]**

M-RETS makes no comment on the specific policy reasons behind a 5% requirement and restricts these comments to the feasibility of the requirement. M-RETS could easily satisfy this requirement. M-RETS already manages similar situations. For example, Iowa maintains a capacity based renewable portfolio standard ("RPS") that predates the more common electricity based RPS policies.[54] The Iowa Utilities Board ordered rate regulated utilities to retire certificates from identified facilities that match the capacity-based requirements.[55]

The following is an example of how to accommodate a 5% allowance. M-RETS could apply a 45V eligibility flag for the output of every generator that reports according to the requirements of 45V. Below is an example of how this would work:

A. **45V Hourly Requirement –** M-RETS would introduce code that adds a 45V eligibility flag to 5% of the output of every hour, even in circumstances where the generators would not otherwise qualify due to not meeting the additionality requirement. M-RETS could introduce rules that do this automatically or Treasury could provide for certain rules around when existing generators can opt into receiving the eligibility flag.

B. **45V Monthly or Annual Matching Requirement –** M-RETS would introduce code that would add the eligibility to 5% of every issuance even in circumstances where the generators would not otherwise qualify due to not meeting the additionality requirement. M-RETS could introduce rules that do this automatically or Treasury could provide for certain rules around when existing generators can opt into receiving the eligibility flag.

[52] *See* MISO Market User Interface (MUI 2.0) API User Guide, January 18, 2024, Revision 1.22 at 11, available at https://cdn.misoenergy.org/MUI%202.0%20API%20User%20Guide629008.pdf (detailing information available via API including Locational Marginal Price).
[53] *See* Notice of Proposed Rulemaking Under § 45V at 89232, available at https://www.federalregister.gov/d/2023-28359/p-135.
[54] *See* Iowa Code §§ 476.41-476.45 (2024) (explaining the Iowa capacity based RPS that requires Iowa investor-owned utilities to contract for 105 MW of renewable capacity). *See also in re* Interstate Power and Light Company and MidAmerican Energy Company, Docket No. AEP-07-1, pg. 10, November 21, 2007, available at https://iub.iowa.gov/sites/default/files/documents/2021/02/1121_aep071.pdf.
[55] *See id.*

Allowing generator owners to decide which hours they want to claim as long as they do not exceed 5% of their total monthly issuance would be difficult to develop, maintain, and validate. While possible to administer via API, generators without the ability to use an API would need to manually select the hours, and M-RETS would need to validate the selection to ensure no more than 5% of the issuance receives the eligibility.[56] M-RETS issues RECs no earlier than one day after the last day of vintage the month. This lag gives market participants valuable month end data to cherry-pick the most valuable hours (i.e., the hours with the lowest clean generation that meets the other requirements) rather than apply a 5% eligibility across every hour with reported generation.

While this is a policy decision best left for Treasury, M-RETS emphasizes that an ex-post hourly selection process to apply a 5% curtailment allotment to otherwise non-eligible generators requires development of a complicated user interface, adds an additional step to the hourly issuance process that requires manual or API or user interface touches, and creates the potential for significant price disruptions. However, should Treasury decide to require such a feature M-RETS will certainly comply and built the features necessary to support the rule.

## VII. Renewable Natural Gas and Fugitive Sources of Methane.

### A. (3) How broadly available and reliable are existing electronic tracking systems for RNG certificates in book and claim systems? What developments may be required, if any, before such systems are appropriate for use with RNG certificates used to claim the section 45V credit?[57]

M-RETS is a robust, trusted, and broadly available electronic book and claim system for RNG certificates across North America. Multiple state compliance and voluntary programs already trust M-RETS to track RNG. Furthermore, M-RETS unique status as a not-for-profit makes the case for Treasury to require the use of M-RETS for biomethane book and claim even more compelling.

Another added benefit is that biomethane retired in M-RETS to support the creation of green hydrogen could also create green hydrogen RTC certificates.[58] This creates regulatory efficiency if Treasury also requires those producing green hydrogen to create green hydrogen certificates in

[56] While the specific validation is not overly complex and difficult to build and maintain, how this would apply to correcting errors in the issuance process makes this a much more complex process.
[57] *See* Notice of Proposed Rulemaking Under § 45V at 89239, available at https://www.federalregister.gov/d/2023-28359/p-201.
[58] *CenterPoint Energy's Green Hydrogen Facility is First Ever to Register and Issue Certificates on M-RETS Renewable Thermal Tracking Platform*, M-RETS, December 1, 2022, available at https://www.mrets.org/press-release-center-point-energy-registers-green-hydrogen-facility-in-the-m-rets-rtc-system/, *see also* Paul Ciampoli, *Minnesota Green Hydrogen Facility Registers Certificates on Renewable Thermal Tracking Platform*, American Public Power Association, January 26, 2023, available at https://www.publicpower.org/periodical/article/minnesota-green-hydrogen-facility-registers-certificates-renewable-thermal-tracking-platform.

M-RETS because all the data supporting the retirement and subsequent creation of green hydrogen volumes will exist in one system.

While there is only one system that tracks RNG and other clean fuels across North America, that should not give the impression that these systems are not widely available.[59] It is easy to assume that because there is only one system in operation, these systems are not widespread or robust. However, this market evolved in a different manner than book-and-claim REC registries in both time and purpose.

REC tracking systems evolved in the early 2000s, when technology applications were significantly less flexible. Thus, theoretically supporting fifty different state programs on one registry would have been difficult to impossible.[60] Thus, multiple systems evolved to support regional needs. However, modern technology renders the need for multiple regional systems unnecessary. Moreover, multiple systems make it more difficult to implement data and process standards.

The quick evolution of clean fuels markets across states and the federal government favors a modern approach to book-and-claim tracking in one North American system.[61] Furthermore, the physical differences in North American clean fuels infrastructure when compared to the same electric infrastructure favor one system. One North America wide system—or at the very least the United States—provides regulatory efficiency, cost savings, and mitigates the risk of double counting in clean fuels markets rather than multiple state and/or regional systems.

### B. The Data Available on M-RETS RTC Certificates Meet or Exceed the Data Required for REC Tracking Systems Outlined in Qualified EAC Registry Under Proposed § 1.45V–4(d)(2)(v).

The M-RETS REC registry, which shares the same platform as the M-RETS RTC registry, already meets the definition of a Qualified EAC registry under Proposed § 1.45V–4(d)(2)(v). Just like the M-RETS REC Registry, the M-RETS RTC registry:

> (A) Assigns a unique identification number to each EAC tracked by such system;[62]
> (B) Enables verification that only one EAC is associated with each unit of biomethane;[63]

[59] M-RETS uses the term clean fuels to represent low, zero, or negative carbon gas and liquid fuels.
[60] Modern software architecture and data structures make accommodating the demands of local, state, and federal voluntary and compliance markets easier on one system. In fact, it is not only easier but much more cost effective as it requires only one user interface to update, consolidates hosting and storage costs (a significant cost driver), and allows the software development staff to become experts in on application stack.
[61] M-RETS supports one system for Canada and the United States due to the interconnected nature of the continental gas system. It is possible to also include Mexico.
[62] *See* M-RETS Operating Procedures § 1.1 available at https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf (stating that each RTC is a unique serialized representation of the environmental attributes associated with the production and use of one Dekatherm (dth)).
[63] *See id.*

(C) Verifies that each EAC is claimed and retired only once; [64]
(D) Identifies the owner of each EAC;[65] and
(E) Provides a publicly accessible view (for example, through an application programming interface) of all currently registered generators in the tracking system to prevent the duplicative registration of generators.[66]

M-RETS Operating Procedures Section 4.5.2 and Figure 2 display certificate data.

**Figure 2: Anatomy of an RTC**


Adding additional data points to the certificate table is possible. Data points like commercial operation data already maintain relationships to the certificate data due to a relationship with the M-RETS Project ID.

The M-RETS RTC system currently tracks a variety of Thermal Resources and associated Feedstocks. M-RETS also supports the ability to track the output from multi-feedstock generators, but only if they can quantify the relative quantities of biomethane produced from each feedstock.[67]

[64] *See* M-RETS Operating Procedures § 4.2.7 available at https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf (explaining the purpose and use of Retirement Accounts which are the final resting place for certificates and serve as electronic proof of the final use of biomethane to prevent double counting. Retired certificates must include a reason, which further inhibit the risk that certificates may be subject to a double claim. M-RETS can add uses at the request of voluntary or compliance program managers. M-RETS could add an additional retirement type for Treasury specific to 45V if the rules require it.).
[65] *See* M-RETS RTC Operating Procedures § 4.2 available at https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf (explaining that all certificates must reside in either an active, retirement, or reserve account. Each account has a unique identification number connected to the registered M-RETS Organization responsible for the account.).
[66] *See* M-RETS RTC Operating Procedures § 6 available at https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf (M-RETS is currently reworking the public reports page, however, M-RETS can still provide an update of the active and inactive generators. The live reports should be available soon).
[67] *See* M-RETS RTC Operating Procedures § 4.3.4 available at https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf.

M-RETS does not currently include fugitive methane as a Resource Type with associated feedstocks (e.g., coalmine methane). However, M-RETS can easily update the Thermal Resources and Feedstocks at Treasury's request and fugitive methane presents no obvious difficulties.

M-RETS also supports the ability to track the output from multi-feedstock generators, but only if they can quantify the relative quantities of biomethane produced from each feedstock.[68] The M-RETS RTC system currently tracks a variety of Thermal Resources and associated feedstocks. M-RETS does not currently include fugitive methane as a Resource Type with associated feedstocks (e.g., coalmine methane). However, M-RETS has experience adding Thermal Resources and associated Feedstocks at the request of regulators and does not foresee any obvious difficulties with adding similar requests to support Section 45V requests.

### C. M-RETS Program Feature Could Assist Regulators with Eligibility Criteria.

Treasury may find it helpful to use M-RETS for a variety of reasons, including a feature unique to M-RETS called the "Program" that allow regulators to set up eligibility criteria specific to their unique needs. Regulators can then invite the organizations they regulate to their Program(s). Upon accepting the invitation and attaching a specific retirement account to the Program, the system validates that all certificates retired to an account associated with a Program meet all set compliance requirements. This automated process—unique to M-RETS—prevents unnecessary rework for regulators due to an accidental retirement outside the scope of a set list of data verified before the system completes a retirement. It also saves valuable time for compliance entities by rejecting any retirements that do not fit the unique Program requirements.

Treasury may utilize this feature in a variety of ways. One suggestion is for Treasury to require preapproval of a biomethane producer before or after M-RETS registration. Upon notification, M-RETS can add an eligibility flag that indicates the biomethane producer meets the requirements of 45V regarding the static data (e.g., location, commercial operation date). Upon retirement through a retirement account associated with a Program, the system will then validate that the biomethane certificates subject to the retirement meet all Program requirements. M-RETS can always add new validations to the Program feature at the request of regulators.

The existing RTC system provides for robust procedures to verify the veracity of generation information prior to certificate issuance. Treasury could require that RNG certificates retired for 45V purposes go through the M-RETS Independent Reporting Entity ("IRE").[69] M-RETS would happily consider any adjustments to the existing IRE process or the creation of a 45V specific process. While M-RETS allows self-uploaded generation not reported through an IRE, those certificates still must provide a pipeline injection statement or other similar documentation which

[68] *See* M-RETS RTC Operating Procedures § 4.3.4 available at https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf.
[69] *See* M-RETS RTC Operating Procedures § 4.4.5 available at https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf.

the System Admin manually reviews prior to approving and issuing the certificates.[70] Both the IRE and self-generation process require a certification that the generator owner or pipeline either did not blend any non-renewable fuels or gases prior to injection or if they did blend, the quantities blended.[71] That data lives on the generation data table, however, non-renewable fuels or gases do not create certificates.[72]

### D. Carbon Intensity Tracking.

M-RETS offers—but does not require—carbon intensity ("CI") tracking. M-RETS expresses CI values in grams of carbon dioxide equivalent per megajoule of energy ($gCO_2e/MJ$) as well as ($gCO_2e/Dth$). A licensed Professional Engineer must sign off on all CI scores prior to registry approval. Given the nascent phase of the market, M-RETS provides the opportunity to track both full and partial carbon intensity ("CI") pathways.[73] Full Lifecycle CI pathways are from well to gate, while partial CI scores are from well-to-pipeline injection.[74] Generator owners may redact information on the CI documentation that lives on the certificate, however, unredacted copies are available to those accessing M-RETS as a System Administrator or Regulator.

Users can select the appropriate CI upon retirement when available, this integrates the CI into the retirement data, including the retirement receipt. The ability to utilize partial CI scores is important to those looking to sell and buy gas on the spot market, as they have access to CI data up to the point where they take ownership over the attributes. M-RETS could add a feature upon request that allows data uploads upon retirement to provide supplemental CI modeling and documentation. This supplemental data would complement the partial lifecycle data already in the system, thereby providing a full lifecycle CI. However, even today users could integrate such documentation by reference in the retirement notes and/or provide it directly to Treasury until such a feature exists.

### E. History Supporting State Voluntary and Compliance Programs.

The state of Oregon was the first program that required the use of M-RETS and succinctly laid out the importance of a tracking system like M-RETS.[75]

> The draft rules specify use of M-RETS for several reasons. Electronic tracking of RTCs by a third party, and a requirement for natural gas utilities to retire RTCs in the platform once an associated quantity of gas has been delivered to customers, reduces the potential for double claims of a quantity

[70] *See id.*
[71] *See id.*
[72] *See id.*
[73] *See* M-RETS RTC Operating Procedures § 4.4.7, https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf.
[74] *See id.* (M-RETS defines pipeline injection in this case as into the distribution or interstate or intrastate pipeline system).
[75] *In re.* Rulemaking Regarding the 2019 Senate Bill 98 Renewable Natural Gas Programs (2020), OR. P.U.C. Dec. No. 20-095. (*see* Appendix A pg. 8 of 31).

> of RNG or its environmental attributes. RNG producers would be able to upload the carbon intensity calculator and value for each RTC they generate, as well as attestation language regarding claims for the RNG and its attributes. This process makes it feasible for the natural gas utilities to establish chain of custody for the RNG's attributes and for the Commission and DEQ to verify that no one has improperly claimed the same attributes in both agency's programs. Further, staff believe that an electronic tracking system is more efficient and less burdensome than any paper tracking system. At present, M-RETS is the only operational third-party electronic tracking platform available for RTCs.
>
> Additionally, Staff believe it is highly beneficial, if not imperative, that all natural gas utilities in Oregon use the same tracking system for the environmental attributes of RNG. The benefits of a single, third-party platform that is used and easily accessible by all parties outweighs more tailored, individual-company solutions. Furthermore, although Oregon will be the first state with a program of this nature in place, it is possible that other agencies and other jurisdictions would allow participants in their own RNG programs to utilize M-RETS, and some might also specify use of the platform.[76]

Oregon is not the only state that requires the use of M-RETS for tracking biomethane. The California Public Utilities Commission requires, "biomethane producers to track injections into the pipelines through the M-RETS platform" as part of Senate Bill 1440 compliance. [77]

The applications for the M-RETS RTC registry continue to grow. The Washington Department of Ecology Clean Fuel Standard now require the use of M-RETS "if the biomethane-based volumes are being reported using a book-and-claim methodology, the registered party must submit records showing the retirement of renewable thermal certificates representing the biomethane environmental attributes from that facility in M-RETS renewable thermal system or another approved and recognized tracking system with the quarterly report. The retirement records must show enough renewable thermal certificates were retired to cover the volume of biomethane claimed as a fuel in the CFP and those certificates must be from the same biomethane production facility to which the fuel pathway code is assigned."[78]

M-RETS works hard to support the needs of regulators. For example, M-RETS maintains trainings that are program specific. For example, M-RETS maintains a part of its website to support the Washington Department of Ecology Clean Fuel Standard and a separate training for the Oregon Department of Environmental Quality Clean Fuels Program.[79] M-RETS would happily support similar documentation in coordination with Treasury and/or the IRS.

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[76] *See id.*
[77] Order Instituting Rulemaking to Adopt Biomethane Standards and Requirements, Pipeline Open Access Rules, and Related Enforcement Provisions, Decision Implementing Senate Bill 1440 Biomethane Procurement Program (2022), Cal. P.U.C. Dec. No. 22-02-025 (*see* pg. 50 of the decision).
[78] Wash. Admin. Code § 173-424-420(e) (2024).
[79] *See* M-RETS RTC Registration Guide for the Washington Department of Ecology Clean Fuel Standard, available at https://www.mrets.org/wp-content/uploads/2023/08/M-RETS-WA-CFS-Registration-Guide.pdf [Accessed February 25, 2024], *see* M-RETS RTC Registration Guide for the Oregon Department of Environmental Quality

**F. (9) Are geographic or temporal deliverability requirements needed to reflect and reduce the risk of indirect emissions effects from biogas and RNG or fugitive methane use in the hydrogen production process? If so, what should these requirements be and are electronic tracking systems able to capture these details?[80]**

M-RETS RTC registry currently issues certificates in monthly batches. Each RTC includes the unique M-RETS Generator ID number and the state or province where the gas is injected. While the certificate data tables do not list the geocoordinates of the facility or the injection site, that data is connected to the certificate data table as both data points are collected and verified prior to M-RETS approval.[81]

M-RETS is in the process of speaking with stakeholders about how the RTC registry can incorporate storage into the system. Just like in questions surrounding how to apply storage principles in the electrolytic process under 45V, there are several ways to provide a storage solution in the RTC context. However, should Treasury decide against temporal restrictions then it is not necessary for Treasury to provide for a specific storage solution under 45V guidelines.

The simplest situation occurs when a facility generating biomethane reports gas into M-RETS upon its release from storage. Below is an example of the simplest approach using a book and claim methodology utilizing the following steps:

1. A revenue quality meter injection of the biomethane into an interconnected gas distribution or transportation network.

2. A revenue quality meter movement of the gas into a storage medium

    a. Treasury may desire requiring a showing of theoretical delivery in the accompanying generation documents either through engineering or attestation documentation.

    b. M-RETS does not currently include a feature with temporal restrictions between injection of the gas into an interconnected network and a storage medium. However, should Treasury require something like this, M-RETS provides an example below of a process Treasury could require and M-RETS could easily accommodate through the creation of a new RTC storage feature.

Clean Fuels Program, available at https://www.mrets.org/wp-content/uploads/2023/05/M-RETS-DEQ-CFP-Registration-Guide.pdf [Accessed February 25, 2024].

[80] *See* Notice of Proposed Rulemaking Under § 45V at 89239, available at https://www.federalregister.gov/d/2023-28359/p-207 .

[81] *See* Figure 2, Anatomy of an RTC.

i. In this case, M-RETS suggests Treasury require a process similar to the following:

1. When reporting data into the system, M-RETS would provide for a process within the qualified generation that allows the generator owner to select storage and input a specific amount of gas to enter a new status once validated called "deferred issuance" or "storage."

2. Treasury could require that as part of the data upload, the generator owner provide a contract or other documentation of the storage relationship between the generator owner and the facility storing the gas (M-RETS mentions relationship and not just a contract because the contract could be between the gas purchaser (an intermediary or end user) and not the generator owner).

3. Upon injection of the gas into the distribution or transportation system, M-RETS would attach a storage label to the gas (e.g., "deferred issuance" or "storage").

a. The question Treasury must answer is whether the gas:

i. maintains the vintage associated with the original injection and provide for a secondary injection date associated with the label, or,

ii. Change the vintage date on the serial to the injection data.

1. M-RETS strongly advises against the suggestion directly above in (ii) because it can create issues embedded in the system to prevent double counting as it would create the appearance of duplicate issuances.

c. M-RETS maintains no position on the temporal restrictions should Treasury require this due to the unique policy nature of the question.

i. M-RETS does not currently include a feature with temporal restrictions between injection of the gas into an interconnected network and a storage medium. However, should Treasury require something like this, M-RETS provides two examples below of a process that Treasury could require, and M-

RETS could easily accommodate through the creation of a new RTC storage feature.

1. Treasury asks qualified EAC systems to create a distinct storage process where pipeline injected gas is put into a storage account where the certificates are held until release. The release would be in the month the owner of the gas injects it back to the grid (with proper documentation such as a pipeline injection statement or utilizing an independent reporting entity) and the system would include a new datapoint on the certificate that recorded the date of "reinjection" back into the pipeline.

    a. While preferrable in theory, M-RETS does not yet know the cost and timeline of developing such a process.

    b. This process could allow any market participant authorized to hold certificates to store gas and reinject it at a later time, as long as they meet any requirements Treasury place on documentation.

2. Another option that exists for storage is when reporting data into the system, M-RETS would provide for a process within the qualified generation that allows the generator owner to select storage and input a specific amount of gas to enter a new status once validated called "deferred issuance" or "storage."

    a. Treasury could require that as part of the data upload or generator approval process, the generator owner provides M-RETS or a regulatory signs off on the documentation of the storage relationship between the generator owner and the facility storing the gas (M-RETS mentions relationship and not just a contract because the contract could be between the gas purchaser (an intermediary or end user) and not the generator owner). Upon injection of the gas into the distribution or transportation system, M-RETS would attach a storage label to the gas (e.g., "deferred issuance" or "storage").

        i. The preferred option maintains the vintage associated with the original injection and provides for a secondary injection date associated with the storage label upon reinjection.

1. This process could allow organizations that did not actually own the generator to utilize storage and presents less issues with system validations that run to prevent double counting. It would be possible to allow for the transfer of certificates that have a deferred issuance or storage designation. This would allow a subsequent owner of the EAC to discharge the gas and either transfer or retire the certificates when ready.

ii. The other option requires changing the vintage date on the serial number from the original injection date to the data released from storage. M-RETS strongly advises against this solution because it can create issues with system audits embedded in the system to detect and prevent any occurrences of double counting. Furthermore, changing data, even though the events would exist in the data, creates potential risk for user error.

3. Subsequent discharge records upon injection through a revenue quality meter of the biomethane back into an interconnected gas distribution or transportation network.

4. M-RETS would create the RTCs with a vintage upon injection of the biomethane into the interconnected gas distribution or transportation network, with a requirement that the generator owner provide accompanying documentation of events 1-3 above.

The above steps are available in the system right now unless noted otherwise.

### G. Procedures for Verification of Qualified Clean Hydrogen Production and Sale or Use, Including Verification Reports.[82]

Treasury should consider requiring the tracking of clean hydrogen verified under 45V in the M-RETS RTC registry. Just like the requirement that the environmental attributes of the feedstocks for clean hydrogen such as biomethane or clean electricity require a showing of retired EACs, a requirement to create a green hydrogen RTC significantly reduces the likelihood of accidental or

[82] *See* Notice of Proposed Rulemaking Under § 45V at 89233, available at https://www.federalregister.gov/d/2023-28359/p-149.

intentional double counting situations, including the situations addressed in this section of the Notice of Proposed Rulemaking.[83]

The M-RETS RTC System already tracks green hydrogen under one specific state regulatory scheme in Minnesota. Tracking of the clean hydrogen serves as an additional safeguard that qualifying hydrogen under Proposed § 1.45V–5(d)(1) meets the sale and/or use requirements. Beyond the verifications that M-RETS provides before approving the creation of RTCs, requiring the creation of 45V compliant green hydrogen RTCs will provide transparency into the marketplace for the regulatory authorities like the Internal Revenue Service and Department of the Treasury. Treasury may want to require the use of an EAC Registry to significantly reduce the likelihood of double claims regarding hydrogen verified under §45V.

Requiring the use of an electronic registry, where documentation like attestations are electronically attached to qualifying 45V clean hydrogen claims streamline the process for all market participants involved, especially regulators.[84] M-RETS could adapt the RTC system to include the requisite forms and documentation that can serve as a one stop shop for regulators. Moreover, in situations where states may also have incentives, the information can exist in one system.

M-RETS is already evaluating how to evolve our platform so that all of the data within the clean hydrogen ecosystem could exist in one place. For example, M-RETS could adapt our existing system to embed the clean electricity EAC retirement data on an hourly basis or biomethane EACs retirement data into the issuance of a clean hydrogen 45V compliant RTC. Once retired for an approved use, all the data supporting the full lifecycle of the 45V compliant clean hydrogen would exist in one system. This would save millions of dollars in market participant time and forgo the need for the federal government to build and maintain databases storing all this data, which may end up being duplicative of what exists in a registry like M-RETS.

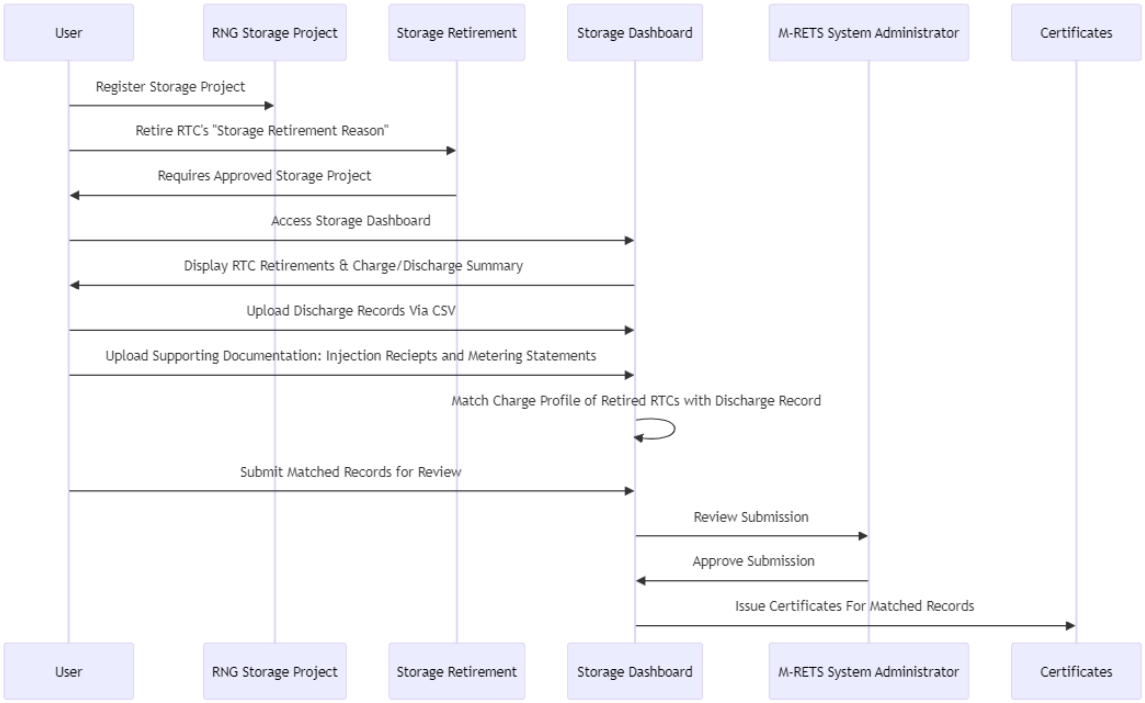
M-RETS proposes that the existing REC and RTC system could provide for a more efficient validation process for regulators over a sale or use attestation as proposed under § 1.45V-5(d)(1). M-RETS proposes that Treasury could leverage the existing Program feature in M-RETS to provide dashboards that would make the data easier to validate. Upon retirement of the hourly REC data supporting the creation of electrolytic hydrogen or biomethane used to create hydrogen in a process such as steam methane reformation would create a clean hydrogen certificate with all of the supporting data embedded into the new clean hydrogen certificate.

On the electrolytic side, an example that Treasury may require is all hours retired, data about the generator(s) that produced the certificate (e.g., commercial operation date), and whatever data Treasury may find relevant. With RNG, the dashboards may be simpler as the process would result in the retirement of a biomethane RTC for the purpose of clean hydrogen production. Treasury

[83] *See id.*
[84] M-RETS asserts that a green hydrogen RTC retirement receipt or evidence of a retirement could serve the same purpose as a sale or use attestation with the added benefits of existing in an electronic registry.

may require similar data but also information such as the Independent Reporting Entity, carbon intensity data, whether the biomethane supply was grid connected or behind the meter/direct pipeline.

**Figure 3: Potential Hourly Matching REC and RTC Green Hydrogen Issuance Process Sequence Diagram**




With the creation and ultimate consumption of the 45V compliant clean hydrogen, Treasury could require the qualified verifier to include all the relevant documentation in the retirement. M-RETS could send that data via API to Treasury for further verification and/or Treasury could use the M-RETS system to verify that the information meets their requirements with all the relevant data in one place.

Respectfully submitted,

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