

April 30, 2024

Via Electronic Mail

The Honorable Michael S. Regan Administrator U.S. Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, NW Washington DC 20460

> RE: Supplemental Petition for Reconsideration Regarding Biogas Regulatory Reforms Finalized in Renewable Fuel Standard (RFS) Program: Standards for 2023–2025 and Other Changes, 88 Fed. Reg. 44,468 (July 12, 2023); Biogas Regulatory Reform Rule Criteria for Qualifying for an Alternative Measurement Protocol Guidance, EPA-420-B-24-014, Released March 1, 2024

Dear Administrator Regan:

On September 11, 2023, the Coalition for Renewable Natural Gas (RNG Coalition) submitted a Petition for Reconsideration Regarding Biogas Regulatory Reforms and request for administrative stay (Reconsideration Petition) of the Biogas Regulatory Reform Rule (Biogas Reforms).¹ On March 1, 2024, EPA released a guidance document entitled "Biogas Regulatory Reform Rule Criteria for Qualifying for an Alternative Measurement Protocol Guidance" (AMP Guidance), which appears to address an issue raised in the RNG Coalition's reconsideration petition.² The AMP Guidance raises new grounds for objection, and, as such, we are submitting this supplement to the Reconsideration Petition pursuant to 42 U.S.C. §7607(d)(7)(B). RNG Coalition, again, urges EPA to administratively stay the Biogas Reforms or promptly initiate a rulemaking to defer implementation of the Biogas Reforms. There are simply no grounds for the July 1, 2024 implementation date for new facilities, particularly where EPA has yet to provide sufficient guidance to these facilities and registrations must be submitted and approved prior to generation of Renewable Identification Numbers (RINs) under the Renewable Fuel Standard (RFS) program.

¹ The Reconsideration Petition is attached to this letter as Exhibit A.

² Notice of this guidance and the guidance are attached to this letter as Exhibit B.

I. RECONSIDERATION OF REQUIREMENTS RELATED TO CNG/LNG DISPENSING IS WARRANTED.

Among other issues, the Reconsideration Petition noted that EPA did not provide notice of any "continuous measurement" requirements for renewable compressed natural gas (CNG) or liquified natural gas (LNG). As explained in the Reconsideration Petition, the proposed rule did not include "continuous measurement" requirements with respect to renewable CNG/LNG. Ex. A at 26-27. Instead, the proposed "Sampling, testing, and measurement" regulation applied to "[a]ny party required to continuously measure the volume of biogas or RNG." 87 Fed. Reg. 80,582, 80,733 (Dec. 30, 2022) (proposed 40 C.F.R. §80.165(a)). This made sense because the proposed regulations require RINs be "assigned" to RNG, which would then be separated upon a showing that CNG/LNG was dispensed. The proposed rule also did not require "measurement" of CNG/LNG downstream,³ which is only intended to confirm that the purchased volume of RNG was used as a transportation fuel. This also made sense where there were no proposed requirements to provide information to EPA at registration regarding the "continuous measurements" for RNG RIN separators, and the reporting requirements only referred to "volumes" of CNG/LNG dispensed, indicating that EPA was not anticipating changes to current operations for documenting and reporting dispensed volumes.⁴ Nonetheless, the final rule included a reference to renewable CNG/LNG in 40 C.F.R. §80.155(a), which, as finalized, requires specific types of meters be used to conduct "continuous[] measurement[s]" of volumes of "biogas, RNG, or renewable CNG/LNG." As explained in the Reconsideration Petition, this change from the proposed rule violates the notice and comment requirements of the statute and was not explained in the final rule. There is nothing in the record to support the onerous, and overly prescriptive continuous measurement requirements with respect to renewable CNG/LNG.⁵ EPA's AMP Guidance, however, appears to indicate that the "continuous measurement" requirements apply to CNG/LNG dispensers. We believe this is incorrect, and EPA is impermissibly seeking to regulate without following proper notice and comment procedures. Moreover, such a requirement would be unnecessary and arbitrary and, as such, reconsideration is warranted.

1. EPA's AMP Guidance Impermissibly Goes Beyond the Regulatory Language.

Addressing alternative measurement protocols under 40 C.F.R. §80.155(a)(3) that EPA included in the final rule, EPA's AMP Guidance (at 3) references "[p]arties required to measure volumes of renewable CNG/LNG (i.e., biogas closed distribution (BCDS) RIN generators *and RNG RIN separators*)." (Emphasis added.) The AMP Guidance indicates that RNG RIN separators may rely on the guidance to "demonstrate an inability to use the meters specified at 40 CFR 80.155(a)(1) and (2) to continuously measure volumes of renewable CNG/LNG at dispensing stations." But, EPA provides no explanation why RNG RIN separators need to rely on alternative measurement protocols in the first instance, failing to cite any regulatory requirement that RNG RIN separators must continuously measure renewable CNG/LNG. EPA cannot amend its regulations through guidance. Rather, it must comply with the rulemaking procedures required

³ See, e.g., 87 Fed. Reg. at 80,720 (proposed \$80.105(f)); *id.* at 80,722-80,723 (proposed \$80.120(f)(1)); *id.* at 80,723 (proposed \$80.125(f)); *see also* 87 Fed. Reg. at 80,726 (proposed \$80.142 (makes no reference to continuous measurement requirements for RINs from a biogas closed distribution system).

⁴ Compare 87 Fed. Reg. at 80,727 (proposed §80.145(c)(4)(i)) with id. at 80,729 (proposed §80.145(g)); also, compare 87 Fed. Reg. at 80,729 (proposed §80.150(b)(5)) and id. at 80,730 (proposed §80.150(e)(i)) with id. at 80,730 (proposed §80.150(g)(3) and (5)).

⁵ Nor was there anything in the record to support these requirements for biogas, RNG, or natural gas.

by 42 U.S.C. §7607(d). *See Appalachian Power Co. v. EPA*, 208 F.3d 1015, 1028 (D.C. Cir. 2000) (citations omitted).

Neither the proposed nor final rule includes any regulations that expressly require continuous measurement of CNG/LNG with respect to RNG.⁶ Relevant regulatory language is provided in Appendix A. In particular, both the proposal and the final rule only require that RNG RIN separators continuously measure natural gas withdrawn from the pipeline (i.e., the "RNG"). 40 C.F.R. §§80.115(f)(2), 80.125(d)(2)(i); *cf.* 40 C.F.R. §80.110(f)(2)(iv).⁷ Indeed, RNG RIN separators need not be CNG/LNG distributors and can rely on documentation provided by CNG/LNG dispensers to confirm that the fuel was used as transportation fuel. 40 C.F.R. §80.125(d)(1), (2)(ii). This was confirmed by EPA at the April 12, 2024 webinar in response to a question during the question and answer session, noting that the RNG RIN separator need not be the party operating the CNG/LNG dispensing station.

At the April 12, 2024 webinar, EPA also indicated that it was trying to be consistent with existing provisions (referred to as "legacy" provisions), but existing practice would not require the specific meters listed in 40 C.F.R. §80.155(a). Indeed, utilities and CNG/LNG dispensing stations do not use the flow meters listed, and gas chromatographs are not used at customer locations. In the proposal, EPA claimed that these requirements would not impose additional burdens as the proposed requirements are in line with existing guidance. 87 Fed. Reg. at 80,675-80,676. But, the guidance being referenced says nothing about measurement of CNG/LNG, as it expressly limited RIN generation to the "BTU of the pipeline quality biogas after treatment and prior to any blending with non-renewable fuel or injection into a pipeline." EPA, *Guidance on Biogas Quality and RIN Generation when Biogas is Injected into a Commercial Pipeline for use in Producing Renewable CNG or LNG under the Renewable Fuel Standard Program*, at 3 (2016). Instead, RIN generators have submitted RIN generations. Thus, to date, CNG/LNG dispensers have not been subject to prescriptive measurement requirements, and it was incumbent on EPA to provide notice of such changes and its rationale therefor in the rulemaking.

At best, the regulations indicate that RNG RIN separators must report the "volume of renewable CNG/LNG, in Btu LHV, dispensed," but this does not equate to imposing any specific types of measurement for CNG/LNG volumes on the RNG RIN separator (or the CNG/LNG dispenser, if a different party). 40 C.F.R. §80.140(e). This can be compared to other regulations where EPA specifically references reporting volumes measured in compliance with §80.155. *See* 40 C.F.R. §80.140(b)(4), (c)(1)(i), (d)(2). Under the plain language of the regulations, existing methods for reporting CNG/LNG volumes should remain valid. EPA provides no rationale for why the overly prescriptive requirements for continuous measurement in §80.155(a) should be required for CNG/LNG dispensers. Indeed, EPA indicated at the April 12 webinar that the RIN verification process will now focus on RNG RIN generation, not separation, identifying no reason why continuous measurement of CNG/LNG is required to protect against fraud or double counting.

⁶ Although not in the proposal, the final rule does appear to reference continuous measurement of "biogas-derived renewable fuel" with respect to treated biogas, which is part of a closed distribution system. 40 C.F.R. \$80.110(f)(2)(iv). There is no similar requirement with respect to RNG RINs.

⁷ RNG Coalition also opposes the stringent requirements for continuous measurement of the natural gas being withdrawn and has urged for and sought guidance and alternative measurement protocols for alternative metering at the withdrawal points, including allowing reliance on third-party pipeline/utility metering.

There also is no mechanism for the parties to ensure they are in compliance with the continuous measurement requirements as it may relate to CNG/LNG dispensers. The AMP Guidance (at 3) acknowledges that "RNG RIN separators do not submit information for the measurement of renewable CNG/LNG to EPA as part of their registration requirements (see 40 CFR 80.135)." While this is additional evidence that EPA did not contemplate such requirements be imposed on CNG/LNG dispensers with respect to RNG, the AMP Guidance (at 3) nonetheless, further states that "RNG RIN separators need not indicate to EPA in their registration submissions that they are relying on this guidance for the measurement of renewable CNG/LNG." This ignores, however, that there are no actual regulatory requirements for such measurement protocol" will be acceptable to EPA. Based on our discussions with the industry, RNG RIN separators are now confused as to the actual regulatory requirements and what is required to establish those requirements are being met.⁸

In short, the AMP Guidance appears inconsistent with the regulations, and EPA must make clear that existing methods for determining volumes of CNG/LNG being dispensed remain in place.

2. Applying the Continuous Measurement Requirements in §80.155(a) to CNG/LNG Dispensers would be Arbitrary.

The "continuous measurement" requirement in 40 C.F.R. §80.155(a) is arbitrary. This is especially true with respect to CNG/LNG dispensers. EPA's claimed rationale for the continuous measurement requirements are simply inapplicable to CNG/LNG dispensers.

First, EPA's proposal claimed that the value of RINs create incentives to manipulate testing and measurement, 87 Fed. Reg. at 80,675, but the RNG producer now generators the RINs, and RINs separated are limited to the RNG RINs "assigned" and based on volumes *withdrawn* from the pipeline. The CNG/LNG volumes dispensed merely confirms use as transportation fuel.

In particular, in-line gas chromatographs should not be required. Utilities use volumetric meters to measure the gas utilized by their customers.⁹ EPA identifies no need for requiring in-line gas chromatographs at the dispensing stations to measure volumes dispensed. As EPA essentially acknowledges in the AMP Guidance, requiring in-line gas chromatographs at dispensing stations is simply impractical and unnecessary. Although there may be some pre-treatment to remove water and other contaminants, the CNG/LNG process essentially changes the form of the natural gas, which was withdrawn from the pipeline and is over 90% methane. The pipeline authority ensures that the gas entering its system is of sufficient quality. Utilities also monitor the natural gas entering their system. Moreover, the amount of "biomethane" is based on information from the RNG producer, represented by the total number of "assigned" RINs eligible to be separated. An in-line gas chromatograph at the CNG/LNG dispensing station provides no useful information to any party and is simply unnecessary for purposes of showing that the CNG/LNG is being used as

⁸ Under existing regulations, RIN separation was confirmed by the QAP provider, which verified the documentation. EPA has now indicated that the QAP process focuses on RIN generation, not separation.

⁹ These meters can be different types of meters and are not limited to those specified by EPA. Gas chromatographs may be used by utilities at the point where the pipeline connects into their distribution system. They would not be used at the customer's location.

transportation fuel. Information provided by the utilities or well-recognized values are more than sufficient to convert those volumes to compare to the RNG injected volumes.¹⁰

The flow meters used by the utilities and at dispensing stations also cannot be easily manipulated. In particular, utilities are third parties that are regulated, and such regulations include the types of meters used, their maintenance, and accuracy requirements. Since both utility sales and CNG/LNG sales involve financial transactions between different parties, both parties also have an interest in highly accurate and precise information. These other parties do not get the RIN value and, therefore, would not have any incentive to manipulate the data and potentially violate other state or federal requirements.

Second, EPA similarly cannot simply state that it is relying on the preference to use industry standards for similar reasons as explained in the Reconsideration Petition. *See* Ex. A at 27-35. EPA does not indicate that these standards included in §80.155(a) are applicable industry standards for CNG/LNG. As noted above, most do not use the flow meters specified by EPA and gas chromatographs are simply not used at CNG/LNG stations. Indeed, there is no rationale, at all, in the final rule for imposing these onerous requirements on renewable CNG/LNG dispensers.

Third, the AMP Guidance (at 3) essentially acknowledges that the continuous measurement requirements are impractical for dispensing stations, indicating that dispensers may show that they are unable to use the specified meters by demonstrating, among other things, that:

the existing infrastructure of their CNG/LNG dispensing stations is not physically compatible with the meters specified at 40 CFR 80.155(a)(1) and (2); that the dispensers at CNG/LNG dispensing stations would need to be rebuilt to install the specified methods; and/or that reconfiguring the station to accommodate the meters would require local, state, and federal permitting, and/or substantial time to design and build the new dispensers at the dispensing stations.

These are all relevant factors that EPA should have considered during the rulemaking process. Yet, the record is devoid of any such considerations until this March 1 Guidance, rendering such requirements arbitrary. *Motor Vehicle Mfrs. Ass'n of the U.S., Inc. v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983). Had the public been given an opportunity to address these issues in their comments, EPA would likely have adjusted the regulations, as it apparently is seeking to do (impermissibly) through guidance.

Thus, to the extent EPA seeks to impose continuous measurement requirements on CNG/LNG dispensers, it must grant RNG Coalition's request to reconsider such requirements and follow notice and comment procedures to do so.

¹⁰ Utilities may utilize gas chromatographs upstream to determine the heating value of the natural gas being taken off the pipeline into the utility's system. It would be impractical and unnecessary to have additional measurements for each customer.

II. ALTERNATIVELY, EPA MUST ISSUE GENERAL GUIDANCE APPLICABLE TO ALL CNG/LNG DISPENSERS AS TO APPROPRIATE MEANS OF MEASURING VOLUMES OF CNG/LNG.

Although we believe EPA must initiate reconsideration immediately and stay implementation of the Biogas Reforms until such reconsideration is completed, EPA, at a minimum, should clarify and provide guidance that existing methods of determining CNG/LNG volumes constitute "alternative measurement protocols" sufficient to for purposes of RIN separation and may be utilized without requiring EPA approval.

Under the current regulations, generally RIN generation and separation were based on utility statements. Natural gas withdrawal statements from utilities report volumes utilized by the relevant facility and typically provide heating content data. Downstream, these statements rely on third-party meters operated by utilities that are subject to state regulation. See, e.g., California Public Utilities Commission, General Order No. 58A (1992), available at https://docs.cpuc.ca.gov/published/Graphics/54827.PDF. Utilities utilize meters that provide continuous measurements, although typically report the totalized data on a monthly basis. At the April 12 webinar, EPA acknowledged that, while the definition of continuous measurement references recording data every minute, such data is not to be reported to EPA. This indicates that minute data is not needed to report these volumes.

Using the utility statements, volumes reported in the manner required by EPA can then be determined by using the heating content factor provided by the utility or a standard factors for average natural gas in the state or country (e.g., based on data from the U.S. Energy Information Administration¹¹). At the April 12, 2024 webinar, EPA indicated that it would be willing to consider pipeline statements as the source of volume measurements under the Biogas Reforms. Utility statements may not always be used and, as further discussed below, may be delayed. As such, dispenser data can be used as a back up to address potential data gaps or as an alternative to utility statements.

CNG dispensers may use flow meters at the point of sale. Many utilize Coriolis meters for their flow meters (not the meters listed in §80.155(a)), and RNG Coalition has previously submitted an alternative measurement protocol request for Coriolis meters to measure RNG and natural gas flows (attached as Ex. C), and such request would be applicable to CNG dispensing stations. Since dispensing represents financial transactions, like pipeline meters, these meters are more than sufficient to report volumes of CNG dispensed. In addition, dispensing facilities are subject to state weights and measures requirements, which should provide sufficient assurances that the meters are of comparable precision and accuracy as the meters specified by EPA. In addition to being used to fill any data gaps, we believe dispensing data could be used in lieu of utility statements, at the option of the RNG RIN separator.

Flow meters also may be used to measure LNG, also typically Coriolis meters. Coriolis meters also should be allowed to be used for LNG. In liquid form, volumes of LNG dispensed are also based on weigh tickets/bills of lading from the transport of the LNG by truck, as this can also

¹¹ See <u>https://www.eia.gov/dnav/ng/ng_cons_heat_a_EPG0_VGTH_btucf_a.htm.</u>

provide accurate measurements due to the cold temperatures at which the LNG is transported.¹² Heating values of LNG also may differ from that of the natural gas being withdrawn, and the industry has often used standard factors for BTU per pound of LNG from GREET. Weigh stations are typically government certified and are calibrated at a regular intervals. This provides more than adequate assurances of accuracy and precision. Accurate and reliable measurements are also necessary for LNG to ensure proper custody transfer and minimize risk of accidents and spills.

The CNG/LNG dispenser should be able to utilize the conversion factor that they have been relying on to date.¹³ This is appropriate because the RINs that may be separated are based on RNG RINs assigned in the first instance. As such, the lower volume should be used in any event.¹⁴ These methods are industry "standards," and EPA provides no justification for requiring unnecessary and expensive equipment to confirm use of CNG/LNG as a transportation fuel.

If necessary, we have attached specific requests for such alternative measurement protocols that could be used by many CNG/LNG dispensing stations and are consistent with existing operations that have proven to be of sufficient accuracy and precision to confirm transportation fuel for purposes of RIN separation. Appendix B provides information to support such an alternative protocol for CNG. Appendix C provides information to support such an alternative protocol for LNG. These submissions are being provided separately to the Fuels Support Line. We reserve the right to supplement these requests and ask EPA to provide the opportunity to submit additional information if it deems more information is needed.

III. EPA Must Clarify the Reporting Requirements for CNG/LNG Dispensed Volumes Under §80.140(e)(1) and §80.1452.

Although we appreciate indications by EPA that they may be willing to allow reliance on pipeline statements as an alternative measurement protocol and utility statements should similarly be allowed to be used, this still raises some questions regarding the timing of the reporting requirements. While EPA sought to clarify the difference between the quarterly (DC Fuels) reporting requirements and the monthly (EMTS) reporting requirements related to CNG/LNG dispensed volumes at the April 12 webinar, the timing of monthly reports for "each batch of biogas" under \$80.140(e)(2) also appears inconsistent with the requirement to also comply with \$80.1452, which requires reporting of RIN separations within five business days of the "reportable event."

At the April 12 webinar, EPA indicated that the monthly reports are due by the end of the subsequent month and appeared to indicate that these statements are provided on a monthly basis that provide sufficient time to submit monthly reports. While utility statements may be received on a monthly basis, this is not always the case, and there may not be sufficient time to submit

¹² See, e.g., Tore Mortensen and Henning KolbJornsen, *Field test for the comparison of LNG static and dynamic mass measurement methods*, 31st International North Sea Flow Measurement Workshop, Oct. 2013, *available at* <u>https://nfogm.no/wp-content/uploads/2019/02/2013-18-Field-test-for-the-comparison-of-LNG-static-and-dynamic-mass-Mortensen-Justervesenet.pdf</u>.

¹³ Although, again without explanation, EPA included a conversion factor for converting between Btu HHV and Btu LHV in 40 C.F.R. §80.155(f), we do not believe this standard, which is for methane, is applicable to converting the natural gas data reported by the utility to volumes of CNG/LNG being dispensed.

¹⁴ The volumes being reported are likely to be higher because they are not based on one "batch" of biogas. The dispensing station may receive gas from different sources.

monthly reports by the end of the subsequent month (e.g., if they are received April 30 for March). Moreover, the statements may be revised. Under current regulations, these volumes were "trued up" or adjusted as appropriate because the volumes were reported by quarter, not monthly. This is out of the hands of the RNG RIN separator, and RINs are properly adjusted (and verified) before entering the market. It is unclear, under the Biogas Reforms, how these adjustments can be made.

Section 80.1452 requires reporting of RIN separations within 5 days of a reportable event, which occurs "on the date of separation ... as described in §80.1429." 40 C.F.R. §80.1452(c). Section 80.1429 provides that separation of a RIN from a volume of RNG "means termination of the assignment of the RIN to a volume of ... RNG." *Id.* §80.1429(a)(1). RIN separation can only occur under listed conditions, including, for RNG RIN separators, when all applicable requirements in §80.125(d)(2) are met. *Id.* §80.1429(b)(5)(ii)(B). We understand §80.125(d)(2) to essentially require the necessary documentation regarding CNG/LNG use to separate the RIN. Thus, when the utility statements are used to confirm the volumes dispensed/withdrawn for separation purposes, that should be the "reportable event" for purposes of §80.1452. However, it is unclear how this relates to the monthly reporting requirements are based on the reportable events or on a calendar month's volume at any dispensing station. The latter would be impractical and difficult to do. Parties may be required to rely on dispensing data simply to report volumes on a monthly basis. In such cases, EPA should make clear that those can be adjusted, as necessary, based on utility statements in quarterly reports.

Timing concerns over the different reporting requirements may be more pronounced for LNG. Liquification facilities may be constantly removing natural gas from the commercial pipeline, liquifying it, and storing the LNG on-site. The LNG may then be designated for transportation fuel use some time after the natural gas was withdrawn from the pipeline and even after liquification. In such cases, there is likely to be a time lag, also raising questions as to when and how to report volumes of gas withdrawn as well as volumes of LNG dispensed.

EPA indicated that it will provide more guidance on reporting once the revisions to EMTS are finalized. These are fundamental questions, however, that need answers as soon as possible.

* * *

With the upcoming deadlines, RNG Coalition again urges EPA to extend the implementation dates of the Biogas Reforms. At a minimum, it should provide guidance expeditiously to ensure a smooth transition to the new requirements.

Respectfully submitted,

Geoffrey Dietz Director of Federal Government Affairs Coalition for Renewable Natural Gas geoffrey@rngcoalition.com

cc: Ben Hengst, EPA Robert Anderson, EPA <u>FuelsProgramSupport@epa.gov</u> (Appendix B and Appendix C only)

APPENDIX A	L
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	Proposed Rule	Final Rule (emphasis added)
Biogas	§80.105(f)(1)(i) A biogas producer	§80.105(f)(1) All sampling, testing, and
Producers	must continuously measure the volume	measurements must be done in
	of biogas, in Btu, prior to transferring	accordance with §80.155.
	biogas outside of the biogas outside of	(2)(i) A biogas producer must measure
	the biogas production facility.	the volume of biogas, in Btu HHV, prior
	(ii) A biogas producer must	to converting biogas to any of the
	continuously measure the volume of	following:
	biogas, in Btu, from each digester	(A) RNG.
	subject to §80.1426(f)(3)(vi) prior to	(B) Treated biogas.
	mixing with any other biogas.	(C) Biointermediate.
	(iii) A biogas producer with separate	(D) Biogas-derived renewable fuel.
	digesters at a biogas production facility	(E) Process heat or energy under
	that produces biogas qualified to be	§80.1426(f)(12) or (13).
	used to produce biogas-derived	(ii) Except for biogas produced from a
	renewable fuel eligible to generate	mixed digester, a biogas producer must
	RINs multiple D codes must	measure the volume of biogas, in Btu
	continuously measure the volume of	HHV, for each batch pathway prior to
	biogas, in Btu, at all of the following:	mixing with biogas produced under a
	(A) At the output of each digester.	different batch pathway or with non-
	(B) As each mixture of biogas from	qualifying gas.
	multiple digesters leaves the facility	(iii) For biogas produced from a mixed
	(iv) A biogas producer must measure	digester, a biogas producer must do all
	total solids and volatile solids for a	of the following for each mixed
	representative sample of each cellulosic	digester:
	feedstock for each digester subject to	(A) Measure the volume of biogas, in
	80.1426(f)(3)(vi) at least once per	Btu HHV, prior to mixing with any
	calendar month.	other gas.
	(2) All measurements must be done in	(B) Measure the daily mass of the
	accordance with §80.165.	cellulosic biogas feedstock, in pounds,
		added to the mixed digester.
		(C) Collect a daily representative
		sample of each cellulosic biogas
		feedstock and test for total solids and
		volatile solids as specified in
		§80.155(c).(D) Measure and calculate the
		digester operating conditions as
		specified in §80.155(d).
		(iv) A biogas producer must measure
		each volume of gas containing biogas,
		in Btu HHV, that leaves the facility.
		in Dea mit , that leaves the facility.
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	Proposed Rule	Final Rule (emphasis added)
	 §80.150(b) A biogas producer must submit monthly reports to EPA containing (5) The volume of each batch supplied to the downstream party, in Btu and scf, as measured under §80.165(a). 	 §80.140(b) A biogas producer must submit monthly reports to EPA containing (4) The <u>batch volume of biogas</u> supplied to the downstream party, in Btu HHV and scf, as measured under §80.155.
RNG producers, RNG importers, and biogas closed distribution system RIN generators	 §80.120(f)(1)(i) An RNG producer must continuously measure the volume of RNG, in Btu, prior to injection of RNG from the RNG production facility into a natural gas commercial pipeline system. (ii) An RNG producer that trucks RNG from the RNG production facility to a pipeline interconnect must continuously measure the volume of RNG, in Btu, upon loading and unloading of each truck. (iii) An RNG producer that injects RNG from an RNG production facility into a natural gas commercial pipeline system must sample and test a representative sample of all the following at least once per calendar year, as applicable: (A) Biogas used to produce RNG. (B) RNG before blending with non- renewable components. (C) RNG after blending with non- renewable components. (iv) A party that upgrades biogas but does not produce RNG must continuously measure the volume of biogas, in Btu, after such upgrading has been conducted. (2) All measurements must be done in accordance with §80.165. 	 §80.110(f) All sampling, testing, and measurements must be done in accordance with §80.155. (2)(i) An RNG producer must measure the volume of RNG, in Btu LHV, prior to injection of RNG from the RNG production facility into a natural gas commercial pipeline system. (ii) An RNG producer that trucks RNG from the RNG production facility to a pipeline interconnect must measure the volume of RNG, in Btu LHV, upon loading and unloading of each truck. (iii) An RNG producer that injects RNG from an RNG production facility into a natural gas commercial pipeline system must sample and test a representative sample of all the following at least once per calendar year, as applicable: (A) Biogas used to produce RNG. (B) RNG before blending with nonrenewable components. (iv) A party that upgrades biogas to treated biogas must separately measure all of the following, as applicable: (A) The volume of biogas, in Btu HHV, used to produce treated biogas, a biogas-derived renewable fuel, or as a biointermediate. (B) The volume of biointermediate or biogas-derived renewable fuel produced from the biogas or treated biogas. If the biogas-derived renewable fuel is

Proposed Rule	Final Rule (emphasis added)
	renewable CNG/LNG, then this volume must be measured in both Btu HHV and Btu LHV. (3) A biogas closed distribution RIN generator must measure renewable CNG/LNG in Btu LHV.
 §80.150(e)(1) An RNG producer must submit quarterly reports to EPA containing(i) the total volume of RNG, in Btu, produced and injected into the natural gas commercial pipeline system as measured under §80.165 (2)A non-RIN generating foreign RNG producer must submit monthly reports to EPA containing (iv) The volume of the batch, in Btu and scf, as measured under §80.165(a) 	§80.140(c)(1) An RNG producer must submit quarterly reports to EPA containing(i) the total volume of RNG, in Btu LHV and scf, produced and injected into the natural gas commercial pipeline system <u>as</u> <u>measured under §80.155</u> (2)A non-RIN generating foreign RNG producer must submit monthly reports to EPA containing [No similar provision]
 §80.150(f) A biogas closed distribution system RIN generator must submit quarterly reports to EPA containing (2) The total volume of biogas, in Btu, used to produce the biogas-derived renewable fuel as measured under §80.165 (4) The volume of biogas-derived renewable fuel, in Btu, used at each location where the biogas-derived renewable fuel is used or sold for use as transportation fuel 	 §80.140(d) A biogas closed distribution system RIN generator must submit monthly reports to EPA containing (2) Each of the following as applicable, as measured under §80.155: (i) The volume of biogas, in Btu HHV, used to produce the treated biogas that is used to produce the biogas-derived renewable fuel. (ii) The volume of biogas, in Btu HHV, used to produce the biogas-derived renewable fuel. (iii) The volume of treated biogas, in Btu HHV, used to produce the biogas-derived renewable fuel. (iii) The volume of treated biogas, in Btu HHV, used to produce the biogas-derived renewable fuel. (iii) The volume of treated biogas, in Btu HHV, used to produce the biogas-derived renewable fuel. (iii) for fuels that are gaseous at STP, the volume of biogas-derived renewable fuel is used or sold for use as transportation fuel. (ii) For all other fuels, the volume of biogas-derived renewable fuel, in gallons, used at each location where the biogas-derived renewable fuel, in gallons, used at each location where the biogas-derived renewable fuel, in gallons, used at each location fuel.

	Proposed Rule	Final Rule (emphasis added)
RNG RIN separators.	 §80.125(f)(1) An RNG RIN separator must continuously measure the volume of natural gas, in Btu, withdrawn from the natural gas commercial pipeline system. (2) All measurements must be done in accordance with §80.165. 	§80.115(f)(1) All measurements must be done in accordance with §80.155. (2) An RNG RIN separator must measure the volume of natural gas, in Btu LHV, withdrawn from the natural gas commercial pipeline system.
	§80.140(d)(1) A party must only separate a RIN from RNG if(iii) The party measured the volume of RNG used to produce the renewable CNG/LNG using the procedures specified in §80.165.	 §80.125(d)(2) An RNG RIN separator must only separate a RIN from RNG if (i) The <u>RNG</u> used to produce the renewable CNG/LNG was measured using the procedures specified in §80.155
	 §80.150(g) An RNG RIN separator must submit quarterly reports to EPA containing (2) Volume of RNG, in Btu, withdrawn from the natural gas commercial pipeline system during the reporting period by location. (3) Volume of renewable CNG/LNG, in Btu, produced during the reporting period. (4) The locations where renewable CNG/LNG was dispensed as transportation fuel. (5) The volume of renewable CNG/LNG, in Btu, dispensed as transportation fuel at each location. 	 §80.140(e)(1) An RNG RIN separator must submit <u>quarterly reports</u> to EPA containing all of the following information: (i) Name and location of each point where RNG was withdrawn from the natural gas commercial pipeline system. (ii) Volume of RNG, in Btu LHV, withdrawn from the natural gas commercial pipeline system during the reporting period by withdrawal location. (iii) Volume of renewable CNG/LNG, in Btu LHV, dispensed during the reporting period by withdrawal location. (2) An RNG RIN separator must submit <u>monthly reports</u> to EPA containing all of the following information <u>for each batch of biogas</u>: (i) The location where renewable CNG/LNG was dispensed as a transportation fuel. (ii) The volume of renewable CNG/LNG, in Btu LHV, dispensed as transportation fuel at the location.

	Proposed Rule	Final Rule (emphasis added)
Parties that produce biogas- derived renewable fuel from biogas used as a biointermediate or RNG used as a feedstock.	 §80.130(f)(1) A renewable fuel producer must continuously measure the volume of biogas or natural gas, in Btu, withdrawn from the natural gas commercial pipeline system, as applicable. (2) All measurements must be done in accordance with §80.165. 	 §80.120(f)(1) All measurements must be done in accordance with §80.155. (2) A renewable fuel producer must measure the volume of natural gas, in Btu LHV, withdrawn from the natural gas commercial pipeline system.
Sampling, testing, and measurement.	§80.165(a) Biogas and RNG continuous measurement. Any party required to measure the volume of biogas or RNG under this subpart must use all of the following:	§80.155(a) Biogas and RNG continuous measurement. Any party required to measure the volume of biogas, RNG, or <u>renewable CNG/LNG</u> under this subpart must continuously measure using meters that comply with the requirements in paragraphs (a)(1) and (2) of this section, or have an accepted alternative measurement protocol as specified in paragraph (a)(3) of this section.

Appendix B

ALTERNATIVE MEASUREMENT PROTOCOL SUBMISSION FOR: RENEWABLE COMPRESSED NATURAL GAS

The Coalition for Renewable Natural Gas ("RNG Coalition") is a non-profit association of companies and organizations dedicated to the advancement of renewable natural gas ("RNG") as a clean, green, alternative, and domestic energy and fuel resource. Our membership includes companies throughout the value chain of waste feedstock conversion to end uses, including biogas producers and owners and operators of RNG projects that currently or plan to generate Renewable Identification Numbers ("RINs") under the Renewable Fuel Standard program. These parties are in the supply chain for RNG that may be subject to new Subpart E of Title 40 of the Code of Federal Regulations, which was finalized in 88 Fed. Reg. 44,468 (July 12, 2023). RNG Coalition also represents parties that may be RNG RIN separators under Subpart E or dispense compressed natural gas. New 40 C.F.R. §80.155(a) establishes certain continuous measurement requirements for measuring biogas, renewable natural gas, and natural gas being withdrawn from a pipeline. Under 40 C.F.R. §80.155(a)(3), EPA provides that "EPA may accept an alternative measurement protocol" to those requirements. In guidance issued on March 1, 2024, EPA indicated that RNG RIN separators may also rely on that guidance "for the measurement of renewable CNG/LNG." While the information need not be submitted to EPA for RNG RIN separators, RNG Coalition is submitting this request that EPA make a determination that reliance on natural gas utility statements or data from dispensing stations, as necessary, should be sufficient to provide the volumes of CNG dispensed to be reported under the regulations and meet any accuracy and precision requirements for measurement of these volumes. Natural gas utilities install and operate measurement equipment at dispensing stations in compliance with applicable regulatory requirements. Additionally, dispensing stations typically also use flow meters at the point of sale to record the amount of CNG being dispensed, which typically are Coriolis meters.

In support of this request, we provide the following information, which addresses all of the requirements as defined in 40 C.F.R. \$80.135(d)(3)(iii). Although \$80.135(d) applies to RNG producers, these criteria are similar to those outlined for biogas producers in \$80.135(c)(3)(iii), and EPA's regulations do not outline different requirements for RNG RIN separators. As such, this submission uses the references for RNG producers in \$80.135(d). The first proposed protocol provides information related to use of utility statements, while the second addresses use of flow meters at dispensing stations.

1. Use of Utility Statements

General Details:

Protocol: Measurements based on utility statements using the heat content conversion factor specified by the natural gas utility statement adjusted using 0.9004 BTU (LHV)/BTU (HHV) to report volumes in the required units. If the utility statement/bill does not include a heat content conversion factor (e.g., reports only in MCF/CCF volumes), the standard heat content for natural gas for the state or U.S. from applicable average data from the U.S. Energy Information Administration (EIA) may be used (https://www.eia.gov/dnav/ng/ng cons heat a EPG0 VGTH btucf a.htm).

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	On behalf of Coalition for Renewable Natural Gas
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	Sacramento, CA 95814
	(916) 588-3033
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Gas Type Compressed Natural Gas Measured (*as defined under* § 80.2):

MeterIn-Line Gas Chromatograph and Flow Meter (in lieu of those listed under
\$80.155(a)(1) and (2))

<u>Information to Support Alternative Measurement Protocol (AMP)</u> (40 C.F.R. § 80.135(d)(3)(iii))

Reason for AMP Submission: (§ 80.135(d)(3)(iii)(A))	CNG dispensing confirms transportation fuel use and volumes injected will determine and limit RIN generation volumes. Natural gas utilities continuously measure volumes withdrawn at the dispensing station and monitor the average natural gas heat content on their system, which should provide sufficient precision and accuracy as the meters specified under $80.155(a)(1)$ and (2).
	EIA reports the average heat content of natural gas delivered to consumers based on data provided from the industry. The United States natural gas commercial pipeline system has consistently been 1,036-1,038 BTU (HHV) per SCF for the past 6 years, so the use of a standard factor of 1,036 BTU (HHV) per SCF and 0.9004 BTU (LHV)/BTU (HHV) would be reasonably applicable to all CNG dispensers in the covered area. However, if a dispenser chooses to use a state-specific average factor from the EIA data, it would be appropriate based on the state in which the dispensing station is located.
Description of How Measurement is Conducted: (§ 80.135(d)(3)(iii)(B))	Utilities measure gas utilized by their customers. These meters are operated by the utilities, which are subject to state regulation. BTU (HHV) withdrawn are determined based on the volumes measured by utility-grade meters and the average heat content of natural gas on the utility's system.

	EIA obtains reports (EIA-176 report, https://www.eia.gov/survey/form/eia_176/form.pdf) from various entities that make up the natural gas distribution system in the covered location. See explanation of background of the "Natural Gas Annual" data (https://www.eia.gov/naturalgas/annual/pdf/appendix_a.pdf).
Applicable Standards or Specifications: (§ 80.135(d)(3)(iii)(C))	States regulate utilities and measurement standards applicable to customer meters in the covered location. Each utility meter is subject to the applicable state regulations for standards of measurement.
Description of Routine Maintenance and Frequency of Such Maintenance: (§ 80.135(d)(3)(iii)(D))	State requirements regulate calibration of utility meters. For example, California Public Utilities Commission requires testing and reporting of meter equipment. (General Order No. 58A, at ¶¶8-16 (1992), <i>available at</i> <u>https://docs.cpuc.ca.gov/published/Graphics/54827.PDF</u>).
Measurement Frequency: (§ 80.135(d)(3)(iii)(E))	The meters utilized by utilities provide continuous measurements like those specified by EPA. Utility customer meters are totalized as flow occurs, and the totalized readings are taken by the utility and reported on bills. Typically, these readings occur once per month, but do not always occur on the 1 st of each month. If a bill is not aligned with a calendar month, the dispenser can apportion daily average usage from two statements to days within the applicable calendar month in order to file monthly dispensed volume reports with EPA.
Meter Accuracy, Precision and Reliability: (§ 80.135(d)(3)(iii)(F))	State requirements regulate meter accuracy for utilities. For example, California Public Utilities Commission requires meters have an error rate of 1-2% (General Order 58A, at ¶12 (1992), <i>available at</i> <u>https://docs.cpuc.ca.gov/published/Graphics/54827.PDF</u>)

2. Use of Flow Meters at Dispensing Stations

General Details:

Protocol: Measurements based on flow meters at dispensing stations delivering CNG into a vehicle. Flow meters include, but are not limited to, Coriolis meters. This AMP is for Coriolis meters (See previously submitted AMP for AGA Report No. 11) and the use of standard heat content for natural gas from applicable average data from the U.S. Energy Information Administration (https://www.eia.gov/dnav/ng/ng_cons_heat_a_EPG0_VGTH_btucf_a.htm).

The United States natural gas commercial pipeline system has consistently been 1,036-1,038 BTU (HHV) per SCF for the past 6 years, so the use of a standard factor of 1,036 BTU (HHV) per SCF and 0.9004 BTU (LHV)/BTU (HHV) would be reasonably applicable to all CNG dispensers in the covered area. However, if a dispenser chooses to use a state-specific average factor from the EIA data, it would be appropriate based on the state in which the dispensing station is located.

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Gas Type Compressed Natural Gas Measured (*as defined under* § 80.2):

MeterIn-Line Gas Chromatograph and Flow Meter (in lieu of those listed under
\$80.155(a)(1) and (2))

Information to Support Alternative Measurement Protocol (AMP) (40 C.F.R. § 80.135(d)(3)(iii))

Reason for AMP Submission: (§ 80.135(d)(3)(iii)(A))	CNG dispensing confirms transportation fuel use and volumes injected will determine and limit RIN generation volumes. CNG dispensers measure volumes dispensed, and EIA tracks average natural gas heating content in the covered location, which should provide sufficient precision and accuracy as the meters specified under 80.155(a)(1) and (2).
Description of How Measurement is Conducted: (§ 80.135(d)(3)(iii)(B))	Dispensers typically use Coriolis mass flow meters when measuring CNG loaded into vehicles to determine sales of CNG fuel. ¹

¹ See, e.g., Clean Vehicle Education Foundation, *Natural Gas Metering – Utility Metering vs. CNG Dispenser Metering*, Technology Committee Bulletin, Sept. 22, 2011, *available at* http://large.stanford.edu/courses/2016/ph240/kountz2/docs/TechBul7.pdf.

	EIA obtains reports (EIA-176 report, https://www.eia.gov/survey/form/eia_176/form.pdf) from various entities that make up the natural gas distribution system in the covered location. See explanation of background of the "Natural Gas Annual" data (https://www.eia.gov/naturalgas/annual/pdf/appendix_a.pdf).
Applicable Standards or Specifications: (§ 80.135(d)(3)(iii)(C))	We refer EPA to the December 2023 submission by the RNG Coalition for AGA Report No. 11 for Coriolis meters for further information.
Description of Routine Maintenance and Frequency of Such Maintenance: (§ 80.135(d)(3)(iii)(D))	We refer EPA to the December 2023 submission by the RNG Coalition for AGA Report No. 11 for Coriolis meters for further information.
Measurement Frequency: (§ 80.135(d)(3)(iii)(E))	We refer EPA to the December 2023 submission by the RNG Coalition for AGA Report No. 11 for Coriolis meters for further information.
Meter Accuracy, Precision and Reliability: (§ 80.135(d)(3)(iii)(F))	We refer EPA to the December 2023 submission by the RNG Coalition for AGA Report No. 11 for Coriolis meters for further information

Appendix C

ALTERNATIVE MEASUREMENT PROTOCOL SUBMISSION FOR: RENEWABLE LIQUIFIED NATURAL GAS

The Coalition for Renewable Natural Gas ("RNG Coalition") is a non-profit association of companies and organizations dedicated to the advancement of renewable natural gas ("RNG") as a clean, green, alternative, and domestic energy and fuel resource. Our membership includes companies throughout the value chain of waste feedstock conversion to end uses, including biogas producers and owners and operators of RNG projects that currently or plan to generate Renewable Identification Numbers ("RINs") under the Renewable Fuel Standard program. These parties are in the supply chain for RNG that may be subject to new Subpart E of Title 40 of the Code of Federal Regulations, which was finalized in 88 Fed. Reg. 44,468 (July 12, 2023). RNG Coalition also represents parties that may be RNG RIN separators under Subpart E or dispense compressed natural gas. New 40 C.F.R. §80.155(a) establishes certain continuous measurement requirements for measuring biogas, renewable natural gas, and natural gas being withdrawn from a pipeline. Under 40 C.F.R. §80.155(a)(3), EPA provides that "EPA may accept an alternative measurement protocol" to those requirements. In guidance issued on March 1, 2024, EPA indicated that RNG RIN separators may also rely on that guidance "for the measurement of renewable CNG/LNG." While the information need not be submitted to EPA for RNG RIN separators, RNG Coalition is submitting this request that EPA make a determination that reliance certified weigh scale tickets or bills of lading and the use of a standard LNG energy content should be sufficient to provide the volumes of LNG dispensed to be reported under the regulations and meet any accuracy and precision requirements for measurement of these volumes. Flow meters may also be used at dispensing stations to monitor gas flow and LNG, which typically are Coriolis meters, but not those meters specified by EPA. Flow meters should also be an available alternative measurement protocol for LNG for the same reasons as explained for CNG. This AMP focuses on use of weigh scales.

In support of this request, we provide the following information, which addresses all of the requirements as defined in 40 C.F.R. \$80.135(d)(3)(iii). Although \$80.135(d) applies to RNG producers, these criteria are similar to those outlined for biogas producers in \$80.135(c)(3)(iii), and EPA's regulations do not outline different requirements for RNG RIN separators. As such, this submission uses the references for RNG producers in \$80.135(d).

General Details:

Protocol:	Measurements based on LNG weigh tickets/bills of lading using a heat content conversion factor to report volumes in the required units.
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Gas	Type	Measured	(as	Liquified Natural Gas
defin	ed under	r § 80.2):		

Meter Category: In-Line Gas Chromatograph and Flow Meter (in lieu of those listed under §80.155(a)(1) and (2))

<u>Information to Support Alternative Measurement Protocol (AMP)</u> (40 C.F.R. § 80.135(d)(3)(iii))

Reason for AMP Submission: LNG dispensing confirms transportation fuel use. LNG is typically not designated as transportation fuel until it is sold (§ 80.135(d)(3)(iii)(A)) and shipped from the liquefaction facility for delivery to transportation fuel dispensing locations. LNG can also be sold by the liquefaction facilities for non-transportation fuel uses, so quantification of delivered/sold volumes is key for proper RNG accounting and RIN separation. The weight of each truckload of LNG shipped and sold for use as transportation fuel has historically been used as the point of RNG assignment/generation/separation for legacy facilities. The total volume of natural gas withdrawn, liquefied, and stored at the liquefaction plant includes volume destined for nontransportation fueling, so should not be the point of RNG RIN separation metering. The heating content is based on natural gas, which is over 90% methane, making in-line gas chromatographs to measure methane content unnecessary and overly burdensome since RIN generation is already limited by the heat content of the RNG produced. The heating value of natural gas withdrawn from a pipeline does not match or necessarily correspond to the heating value of the LNG produced at a liquefaction facility. A standard approach has been to use the standard GREET® factors for BTU per pound of LNG shipped and sold for use as transportation fuel. These factors are 23,734 BTU (HHV)/lb and 20,908 BTU (LHV)/lb. Use of these standard factors is a way to ensure consistency in the program across RNG RIN separators based on weight of product LNG sold for use as transportation fuel. Certified weigh scales used by LNG producers and dispensers measure mass delivered to each dispensing location, which should provide sufficient precision and accuracy as the meters specified under \$80.155(a)(1) and (2).

Description of How Measurement is Conducted: (§ 80.135(d)(3)(iii)(B))	LNG weights delivered to dispensing locations are measured using weigh scales, which are typically certified by the government. LNG weights, in pounds, are converted to BTU using GREET® standard factors of 23,734 BTU (HHV)/lb and 20,908 BTU (LHV)/lb.
Applicable Standards or Specifications: (§ 80.135(d)(3)(iii)(C))	Weigh scales are subject to state oversight and all 50 states have adopted NIST Handbook 44. A certified scale has been inspected and approved by an authorized body of the state it is used in and has an active NTEP Certificate of Conformance.
	Department of Energy's (DOE) Argonne National Laboratory (Argonne) developed the GREET® model. The model includes standard heat content factors for LNG of 23,734 BTU (HHV)/lb and 20,908 BTU (LHV)/lb.
Description of Routine Maintenance and Frequency of Such Maintenance: (§ 80.135(d)(3)(iii)(D))	A certified scale has been inspected and approved by an authorized body of the state it is used in and has an active NTEP Certificate of Conformance.
Measurement Frequency: (§ 80.135(d)(3)(iii)(E))	Each delivery of LNG to a dispensing location is measured.
Meter Accuracy, Precision and Reliability: (§ 80.135(d)(3)(iii)(F))	Accuracy, precision, and reliability are overseen by states according to the standard NIST Handbook 44, and a certified scale is subject to inspection and approval by an authorized body of the applicable state.