



The Climate Registry

June 9, 2009

U. S. Environmental Protection Agency
EPA Docket Center
Air and Radiation Docket
Mail Code 6102T
1200 Pennsylvania Avenue, NW
Washington, D.C. 20450

Re: Docket ID No. EPA-HQ-OAR-2008-0508

Dear Administrator Jackson:

On behalf of The Climate Registry (The Registry), we thank you for the opportunity to comment on the proposed rule, "Mandatory Reporting of Greenhouse Gases," as published in the Federal Register on April 10, 2009 (74 Federal Register 16448). The Climate Registry is a not-for-profit organization governed by 41 U.S. states, the District of Columbia, 12 Canadian provinces and territories, 6 Mexican states and 4 Native Sovereign Nations and is dedicated to consistent, transparent and public reporting of high quality greenhouse gas emissions data in one unified North American registry.

The Registry commends EPA for the release of a comprehensive and detailed draft MRR and our comments are offered in the spirit of strengthening and improving the draft MRR.

States and state-based programs like The Registry have been leaders in establishing voluntary and mandatory GHG reporting programs. Many states have designed and implemented GHG reporting rules, several states are now implementing the nation's first regional cap-and-trade program for carbon emissions, and many other states are actively working to design and implement regional economy-wide cap-and-trade programs. The Registry currently has more than 330 members reporting their entity-wide emissions to its highly-regarded voluntary GHG reporting program. States and The Registry have collectively acquired a great deal of valuable experience and knowledge on GHG emissions accounting and reporting that are reflected in our comments on the draft Mandatory Reporting Rule (MRR).

First, The Registry views the MRR as a tremendous opportunity for EPA to demonstrate U.S. leadership on the global issue of climate change. Given the global nature of GHG emissions and the major climate challenge facing the world, we believe that EPA has the opportunity and the imperative to think beyond traditional program approaches in the design of a federal GHG reporting rule and adopt a rule which addresses GHGs more holistically and supports an international approach. The Registry urges EPA to recognize the MRR as the critical first step to establishing a strong foundation for the U.S. to begin to address global climate change and as an opportunity to work with other nations to develop the basis for an international GHG reporting and accounting framework

Second, The Registry encourages EPA to recognize that state mandatory GHG reporting programs and The Registry's entity-wide voluntary reporting program are important complements to EPA's proposed MRR. These programs provide useful information to both governmental and private sector managers on GHG emissions from a wide range of sources—both large and small—and help support the development of innovative solutions to managing carbon. If we are to achieve President Obama's stated goal of reducing GHG emissions by 83 percent by 2050, it will take a cooperative effort among all levels of government, as well as direct involvement from all sectors of the economy, to quantify, manage and reduce their respective emissions. Therefore, it is critical that EPA embrace state and voluntary programs and work in concert with these initiatives.

Third, The Registry strongly encourages EPA to partner with states, tribes and The Registry to develop reporting solutions that will support the following goals:

- Collect comprehensive high-quality GHG emissions data
- Reduce the burden on reporters and streamline reporting to multiple programs
- Provide a basis to ensure consistency with flexibility in reporting across North America and internationally
- Leverage existing credible programs, like The Registry, through public-private collaborations
- Strengthen partnerships between federal, state and tribal governments
- Encourage voluntary carbon footprint (i.e., entity wide) reporting

The Registry's attached comments include several different potential ways we believe we can work together to develop a reporting system that meets EPA's objectives to collect timely and comprehensive GHG data as well as meeting the goals outlined above. The Registry believes it is essential for EPA to work more closely with states and tribes and The Registry on the implementation of the MRR. Specifically, The Registry urges EPA to give states and tribes the option of collecting GHG data required by the MRR on behalf of EPA. Many states feel strongly that this is essential for them to track and understand GHG emissions in their states and better inform their decision-making about state-level programs to address GHGs. This approach would also assist all stakeholders in optimizing the complementary benefits of federal, state, and tribal programs.

Fourth, The Registry urges EPA to ensure that the data verification methodologies included in the final MRR are consistent with internationally-accepted standards for GHG emissions data verification. The Registry's primary focus with regard to verification of GHG data is ensuring that the data collected under the MRR are high quality, reliable, meet established standards for assuring accuracy, and provide consistent data across all reporters. The Registry is concerned that the draft MRR, which proposes using self-certification with EPA review, is not sufficient to meet this standard. One of the most important aspects of The Registry's voluntary reporting program is its third-party verification program. The Registry's program may provide useful information for EPA to consider as EPA finalizes the MRR and we have outlined our processes and our experience in more detail in our attached comments. We also encourage EPA to consider other potential ways to strengthen the verification provisions of the MRR and better ensure that the MRR produces high quality and reliable data.

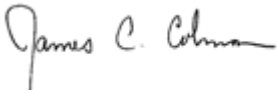
In conclusion, The Registry commends EPA for the release of the draft MRR and encourages EPA to utilize this opportunity to demonstrate global leadership and collaboration on climate

change and establish a strong foundation upon which to build meaningful GHG reduction strategies. We further urge EPA to use this important opportunity to forge strong partnerships with states, tribes and the international community as it embarks on its first significant effort to address GHGs on an economy-wide scale. The Registry looks forward to working with EPA to accomplish these goals and we appreciate the opportunity to comment on the MRR.

Sincerely,



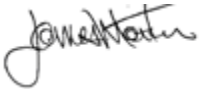
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Attachment – The Climate Registry's Technical Comments



The Climate Registry

ATTACHMENT
The Climate Registry's Technical Comments on
U.S. EPA's Proposed Mandatory GHG Reporting Rule
EPA-HQ-OAR-2008-0508

I. Introduction:

The Climate Registry (The Registry) is pleased to provide comments on the United States Environmental Protection Agency's (EPA) proposed mandatory greenhouse gas (GHG) emissions reporting rule (MRR). The Registry commends EPA for the release of the draft MRR as an important first step to begin to address GHG emissions at the federal level. The Registry respectfully offers our comments to strengthen the proposed rule and assist EPA in achieving its objective to collect meaningful GHG emissions data.

In short, as EPA works to finalize the MRR, The Registry encourages EPA to incorporate changes that will achieve the following broad goals:

- Demonstrate U.S. leadership on global climate change and establish a strong foundation upon which to build meaningful GHG reduction strategies.
- Forge strong partnerships with states, tribes and the international community as EPA embarks on its first significant effort to address GHGs on an economy-wide scale.
- Establish public-private partnerships which leverage the considerable expertise within existing credible programs, such as The Registry's, to assist EPA in fulfilling its broad program objectives.

II. Background:

The Registry is a nonprofit organization governed by 41 US states, the District of Columbia, 12 Canadian provinces and territories, 6 Mexican states and 4 Native Sovereign Nations. The Registry was created by states, provinces, territories and Native Sovereign Nations to set consistent and transparent standards for

organizations to calculate, verify, and publicly report GHG emissions into a single unified North American registry.

The Registry supports both voluntary and mandatory GHG reporting programs, provides comprehensive high quality meaningful information to assist organizations to reduce GHG emissions, ensures consistency with international standards, and embodies the highest levels of environmental integrity.

The Registry's Voluntary GHG Reporting Program is widely viewed as the premier GHG registry in North America. It requires organizations to annually report their entity-wide emissions of the six internationally recognized GHGs at the facility level throughout North America. In addition, The Registry requires annual third-party verification. The program's North American scope, relationship with states, provinces, territories and Native Sovereign Nations, as well as its emphasis on comprehensive, transparent, accurate and verified data, sets it apart from other voluntary reporting initiatives.

III. State/Tribal and Voluntary Complementary Measures

As EPA acknowledges in the draft MRR, states and state-based programs like The Registry have been leaders in establishing voluntary and mandatory GHG reporting programs to date.

The Registry's voluntary program, which currently includes approximately 330 members, ranging from large Fortune 500 companies to small businesses to local government agencies, has helped companies and organizations develop corporate-wide GHG inventories for their operations across North America. These organizations have demonstrated environmental leadership by acting in advance of regulatory requirements to report and reduce their emissions, and they have utilized their GHG inventories to proactively manage, reduce and publicly report their carbon footprint, manage risk, and reduce waste and inefficiency. Through The Registry's voluntary program this important information can be shared with shareholders, investors, customers, employees and the general public. Finally, The Registry's voluntary reporting program has also been instrumental in helping companies prepare for mandatory GHG programs.

Many states have implemented (or are planning to implement) state mandatory GHG reporting requirements that go beyond the scope of EPA's proposed mandatory reporting rule (i.e., thresholds lower than 25,000 mtCO₂e, all Title V facilities, etc.) These programs provide essential information to policy-makers interested in understanding GHG emission trends and the sources of GHG emissions in their states.

State-based and other GHG initiatives provide an important complement to EPA's proposed facility-based mandatory reporting program—providing useful and comprehensive information to address climate changing emissions from a wide range of sources (both large and small) and supporting innovative solutions to manage carbon. Given that EPA's MRR will establish the foundation for future federal GHG initiatives, and given the continuing needs of states and companies for comprehensive high quality GHG data to inform their decision-making, The Registry believes it is critical that EPA's mandatory GHG program work in concert with existing state GHG programs as well as The Registry's voluntary program to continue to acknowledge, encourage and reinforce the activities of states and organizations which complement and enhance the federal mandatory reporting program.

At a minimum, The Registry urges EPA to:

- Encourage companies, local governments, institutions and other organizations to go beyond minimum federal mandatory reporting requirements and encourage regulated parties to also participate in The Registry's voluntary program to capture their total corporate GHG footprints.
- Support state and tribal initiatives to adopt GHG reporting requirements that exceed federal requirements and provide states with information to craft innovative programs to address GHG emissions in their states.
- Give states and tribes the option to collect the federal mandatory GHG data on behalf of EPA, if desired.
- Support reporting and data collection options that allow organizations to easily participate in valuable voluntary reporting programs, as well as comply with state and federal mandatory reporting requirements.

IV. State and Federal Partnership Opportunities

To help EPA accomplish the objectives outlined above, The Registry seeks to partner with EPA to develop information technology solutions that will ensure consistency in GHG accounting and reporting across jurisdictions and ease the burden on companies facing different reporting requirements at the state, provincial, regional, and federal levels.

The Registry was specifically created and designed to serve as a central repository of GHG data for companies operating in North America. By developing one comprehensive high-quality corporate-wide GHG inventory through The Registry, our goal is for corporations and organizations to be able to use that inventory to satisfy all of their mandatory GHG reporting requirements

throughout North America, as well as support their own efforts to manage, reduce and publicly disclose their GHG emissions.

The Registry developed a web-based database application to support voluntary GHG reporting. This application is known as the Climate Registry Information System (CRIS). The Registry is now working with states and provinces to develop additional functionality to leverage CRIS to support state mandatory GHG reporting programs. By supporting voluntary and mandatory GHG reporting programs together in this manner, The Registry creates a “one-stop shop” reporting approach. This helps avoid duplication of reporting effort and emphasizes reporter convenience while still supporting comprehensive GHG reporting.

The Registry is interested in working closely with EPA to link its mandatory GHG reporting program to our centralized GHG data collection system. We would like to explore partnership opportunities to: collect and share GHG data in an efficient manner; align reporting requirements; and consider other joint efforts that will help meet the needs of reporters, EPA, the states and tribes, and The Registry.

In the MRR, EPA acknowledges and commends states for their leadership in tackling climate change and indicates that it will “continue to work closely with states and state-based groups to ensure that the data management approach in this proposal would lead to efficient submission of data to multiple programs.” The Registry stands ready to assist EPA in this endeavor.

Specifically, we encourage EPA to work with The Registry to enable interoperability between EPA’s data collection system, state/tribal data collection systems and CRIS to reduce the burden for regulated parties interested in reporting GHG emissions to more than one program. The Registry is committed to harmonizing GHG reporting requirements to promote consistency so that data can be easily exchanged between programs using common data formats such as the CERS.

Toward this end, The Registry has prepared five potential data collection scenarios to describe how we might work with EPA and states/tribes to accomplish this goal. The scenarios are based on criteria that are essential to a successful collaboration across GHG reporting programs. These criteria are designed to highlight the needs of all MRR stakeholders (EPA, the regulated parties, existing programs, states/tribes, and the public).

GHG Data Collection System Criteria

- **Program Needs:**

- A GHG data collection system must collect and manage comprehensive high-quality GHG emission data that meets EPA's MRR program needs
- **Reporting Burden:**
 - The Registry urges EPA to minimize the reporting burden on regulated parties by streamlining reporting to multiple programs
- **Government Partnerships:**
 - The Registry encourages EPA to strengthen partnerships between federal, state, and tribal governments
- **Footprint Reporting:**
 - The Registry recommends that EPA encourage voluntary GHG emission footprint reporting (i.e., entity-wide reporting)
- **Level of Effort (Development):**
 - When possible, The Registry encourages EPA to leverage existing credible data collection systems, like The CRIS and the Common Framework, through public-private collaborations. The Registry encourages EPA to avoid "reinventing the wheel" and investing resources to re-develop tools that already exist.
- **Interoperability:**
 - The Registry urges EPA to collect GHG data in a manner that encourages widespread use of the data (i.e. that will be applicable and relevant to GHG reporting initiatives across North America and internationally)

Designing a data collection system that meets these criteria is essential for EPA to position itself as a global leader in climate policy. Conversely, if EPA develops a data collection system that does not meet all of the above data collection criteria, it will forgo this unique leadership opportunity and likely worsen the balkanized nature of GHG reporting in North America.

In addition to US stakeholders, other nations are closely watching how EPA chooses to implement its GHG reporting program. Therefore, The Registry believes it is important for EPA to seize this opportunity to develop a true partnership with states/tribes and work with regulated parties to efficiently and aggressively address GHG emissions in the US in a way that supports international efforts.

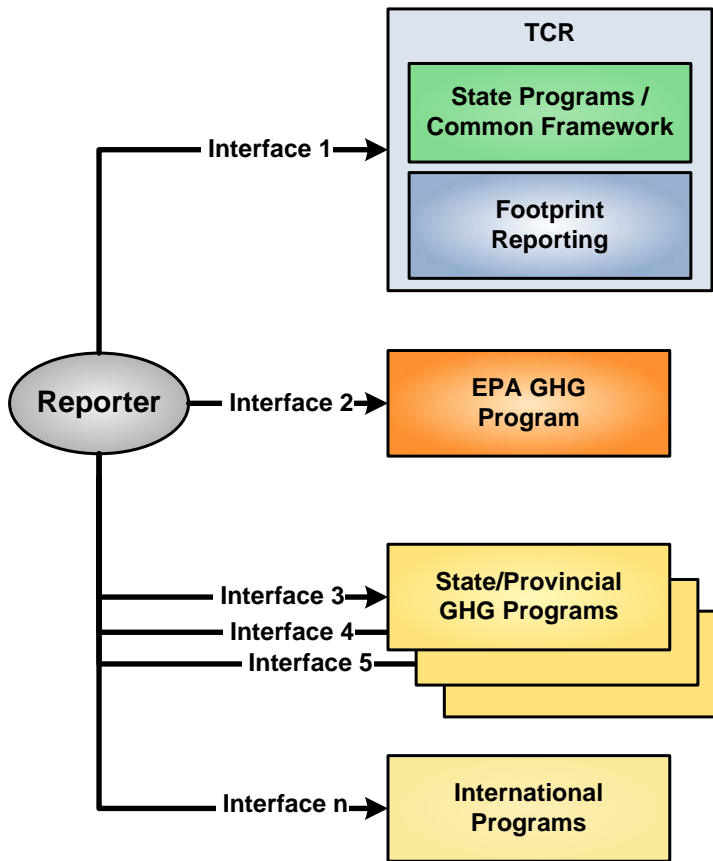
The Registry has given considerable thought to how EPA might achieve these data collection goals. Given our experience collecting GHG data through The Registry's CRIS system, we developed the following five data collection

scenarios. While we appreciate that it will not be easy to achieve the data collection goals, it is clear that some scenarios address more stakeholders' needs than others.

These scenarios are not intended to be an exhaustive list of options, but rather they are meant to serve as a conceptual basis for additional discussion and exploration. Further, since EPA has stated its intent to share its GHG data with stakeholders, the following scenarios only depict data *input* scenarios, not the subsequent data exchange scenarios.

The Registry looks forward to the opportunity to meet with EPA staff to further brainstorm data collection scenarios that will meet the needs of the MRR's many stakeholders.

Figure 1. Scenario 1: EPA Collects GHG Data Directly; Other GHG Programs Exist Independently



Scenario 1 describes the GHG data collection situation that will result from EPA’s current proposal in the MRR. In the MRR, EPA’s primary concern is collecting data for its MRR program. It does not consider how its decision to collect data directly will impact other GHG initiatives. Specifically, EPA requires regulated parties to report their GHG emissions directly to EPA via a new data collection tool that EPA will build.

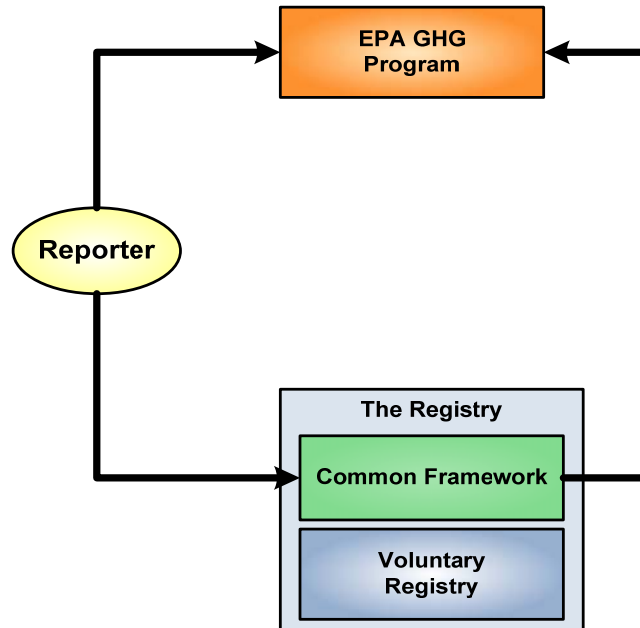
While Scenario 1 does not preempt states, tribes, or others from having their own GHG reporting programs, it treats all such programs as independent programs. As such, each program will likely develop its own data collection tool and require reporters to report through a unique interface. This will result in a burdensome reporting process for organizations who are required, or choose, to report to more than one GHG program.

While this scenario meets EPA’s internal needs for data collection, it misses the unique opportunity for EPA to work collaboratively with regulated parties and existing programs to cultivate a coordinated effort to address climate change in the U.S.

Assessment of GHG Data Collection Criteria for Scenario 1:

- **Program Needs:** Meets EPA's needs.
- **Reporting Burden:** Extremely high. Reporters must report to multiple programs.
- **Government Partnership:** Low. Scenario 1 does not preempt state/tribal programs, but does not support or partner with them either.
- **Footprint Reporting:** Low. Scenario 1 does not directly discourage footprint reporting, however, given the increased reporting burden, reporters are less likely to participate in a footprint reporting program.
- **Level of Effort (Development):** High. EPA has expressed a desire to develop its entire data collection system from scratch.
- **Interoperability:** Low. Each program operates independently.

Figure 2. Scenario 2: States/Tribes Have the Option to Collect EPA Data Directly (through the Common Framework)



In Scenario 2, EPA permits states and tribes to collect GHG data for EPA's program directly, if they choose. In this scenario, states/tribes interested in collecting the EPA data directly would do so by creating a state/tribal module within The Registry's "Common Framework." These states/tribes (using the Common Framework) would then transfer the appropriate EPA data to EPA by a date specified via the Exchange Network, likely using the Consolidated Emissions Reporting Schema (CERS).

Regulated facilities in states/tribes that choose NOT to collect the EPA data themselves would report to EPA directly (through EPA's new database tool).

Common Framework

The Registry developed its CRIS application to enable organizations to calculate and/or report their GHG data to The Registry's voluntary GHG program. While CRIS was developed to support The Registry's Voluntary GHG Registry, states, provinces, territories, and Native Sovereign Nations expressed interest in using the core technical functionality of CRIS to collect GHG data for their own mandatory GHG programs.

As a result, The Registry created a version of CRIS that contains additional functionality necessary to support most mandatory GHG programs. The Registry calls this new version the "Common Framework". The Common Framework serves as a GHG data collection template that

jurisdictions may further customize to incorporate their own mandatory GHG reporting requirements. As such, it is a relatively simple, cost effective, turn-key solution for jurisdictions to use to implement their mandatory GHG reporting programs.

Since the Common Framework is located on the same technical platform as CRIS, reporters may use one common interface to report their GHG emissions to The Registry's voluntary program as well as to multiple mandatory GHG programs. The beauty of this concept is that it meets both the reporters' and the regulatory agencies' needs -- reporters can submit all of their GHG data through one interface, while regulators can see and manage only the data that has been reported to their own Common Framework Module.

Since the Common Framework is built on one database platform, the design, development, hosting, and maintenance costs will be shared between the participating jurisdictions. This helps to keep the costs of implementing a GHG data collection system low.

The Common Framework also encourages footprint reporting of GHG emissions. Since the Common Framework and The Registry's Voluntary Program share the same technical platform and are accessed through the same interface, reporters who submit data to a mandatory program may use the same data to compile their organization's voluntary emissions footprint.

Both CRIS and the Common Framework utilize The Registry's Exchange Network node to exchange GHG data with other Exchange Network nodes (in this case EPA's node).

Scenario 2 greatly reduces the reporting burden by requiring data submissions to happen through one of two interfaces (EPA's or the Common Framework). This scenario provides states/tribes with the option to directly collect EPA data if they choose, thereby recognizing the states/tribes leadership, and interest in, climate policy.

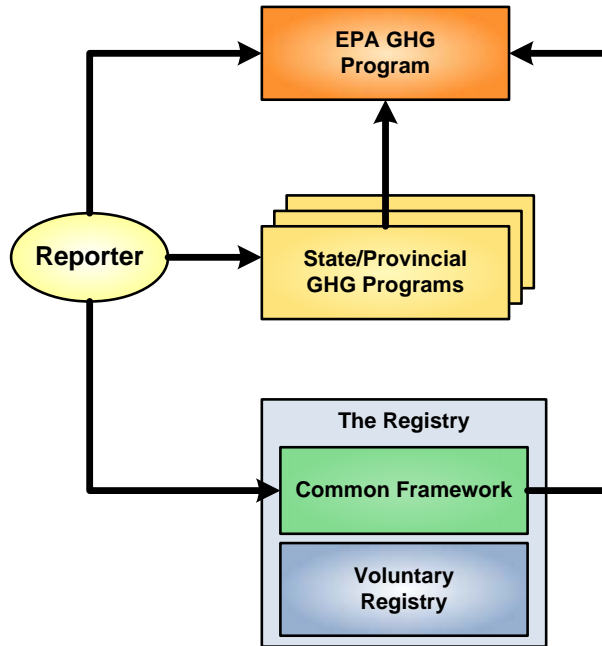
This option also utilizes existing systems (Common Framework), so states/tribes do not have to create their own distinct GHG collection systems from scratch. However, this option does prevent states/tribes from using data collection systems outside of the Common Framework. This assumption benefits reporters, but may limit states/tribes.

Overall, the scenario emphasizes the desire to have fewer distinct data collection systems and is a step toward a centralized GHG data collection system.

Assessment of GHG Data Collection Criteria for Scenario 2:

- **Program Needs:** Meets EPA's needs.
- **Reporting Burden:** Medium. Reporters will still likely need to report to two different interfaces.
- **Government Partnership:** High. Creates a partnership with states for data collection (permits states to directly collect EPA data). Also proactively works to lower regulated parties' reporting burdens.
- **Footprint Reporting:** Medium. By offering the Common Framework as an option for state/tribe data collection, regulated parties are more likely to report their organization's emission footprint, as much of the necessary data can be easily identified for use in The Registry's Voluntary Reporting Program.
- **Level of Effort (Development):** High. In Scenario 2, EPA will develop its own GHG data collection tool from scratch.
- **Interoperability:** Medium. This scenario recognizes relationships and data exchange between programs, but still requires possible data entry in two systems.

Figure 3. Scenario 3: States/Tribes Have the Option to Collect EPA Data Directly



Scenario 3 is the same as Scenario 2, except that in Scenario 3 EPA would allow regulated parties to report GHG data to EPA in three (rather than two) ways. In this scenario, EPA gives states/tribes the option to collect EPA's data directly, but does not specify that states/tribes must use the Common Framework.

Therefore, EPA would receive data three ways:

- From reporters directly; for those state/tribes who do not want to collect data themselves
- From states/tribes directly; for those states/tribes who collect EPA data through their own GHG database systems
- From the states/tribes via The Registry's Common Framework and the Exchange Network; for those states/tribes who choose to use the Common Framework as their GHG data collection system

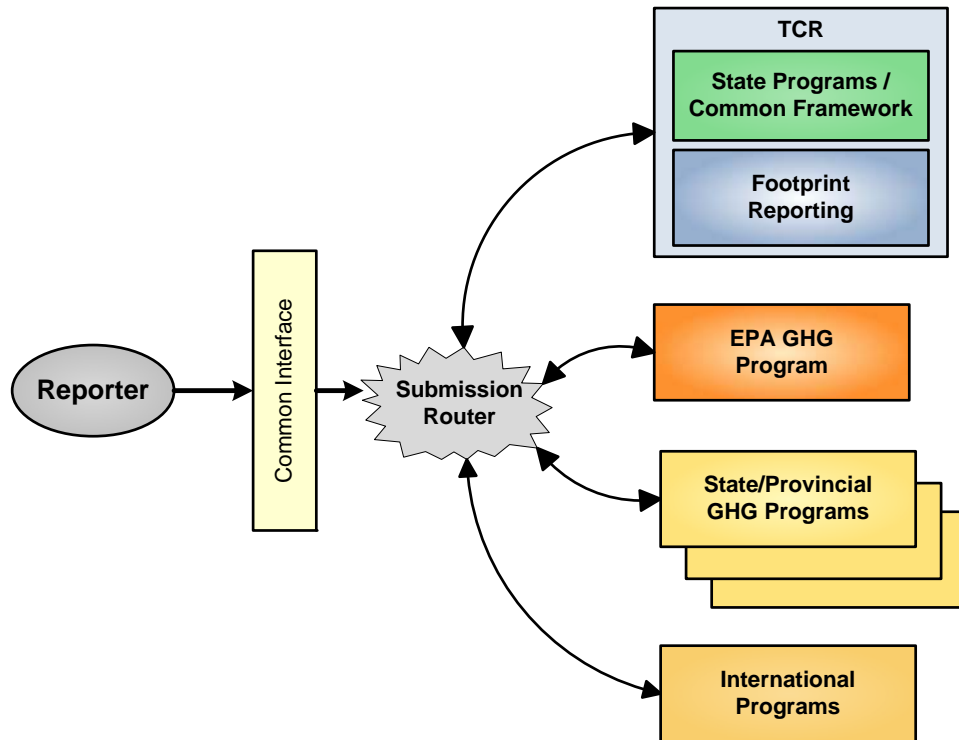
Like Scenario 2, Scenario 3 recognizes the states'/tribes' interest and leadership in climate change issues by permitting them to collect GHG data on behalf of EPA. States/tribes would then share the GHG data with EPA via the Exchange Network. Scenario 3, however, increases the reporting burden for regulated parties, as it increases the number of different data collection interfaces they may be required to use. However, the reporting burden is lower under this scenario than it is under Scenario 1, especially in the case where states/tribes are

collecting data on behalf of EPA as well as collecting additional state required GHG emission data.

Assessment of GHG Data Collection Criteria for Scenario 3:

- **Program Needs:** Meets EPA's needs.
- **Reporting Burden:** High. Reporters will need to report to multiple interfaces, depending upon how many states/tribes wish to create their own data collection systems.
- **Government Partnership:** High. Creates a partnership with states for data collection (permits states to directly collect EPA data).
- **Footprint Reporting:** Medium. By offering the Common Framework as an option for state/tribe data collection, regulated parties are more likely to choose to report their organization's emission footprint, as much of the necessary data will already be contained in CRIS (via the Common Framework). However, if states/tribes do not utilize the Common Framework, regulated parties will likely be less interested in footprint reporting as the reporting burden will increase as a result of many different reporting interfaces.
- **Level of Effort (Development):** High. In Scenario 3, EPA will develop its own GHG data collection tool from scratch.
- **Interoperability:** Medium. This scenario recognizes relationships and data exchange between programs, but requires possible data entry into multiple systems.

Figure 4. Scenario 4: Establish Common Interface for Data Collection



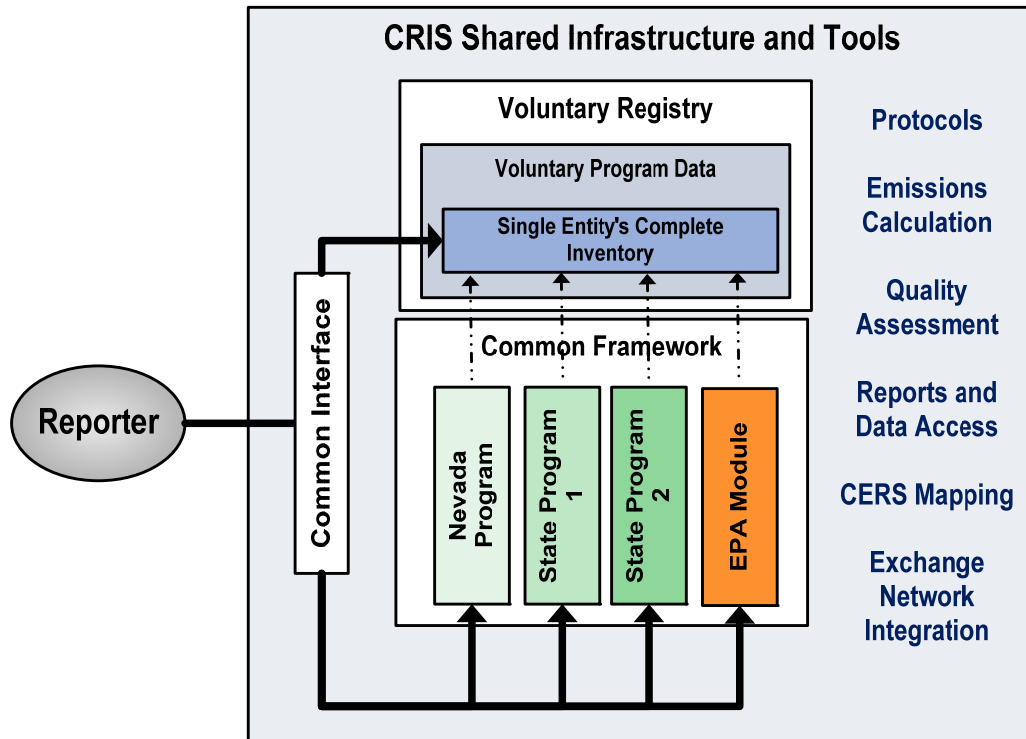
In Scenario 4, EPA would work collaboratively with The Registry, states, tribes and others to design and develop a user friendly web-based reporting interface that would serve as a centralized GHG reporting portal. The technical back end of the common interface would be a comprehensive data schema that would allow consistent data collection of required reporting fields for all GHG programs. This schema might be rooted in the CERS, or some enhanced version thereof. Once prompted by a reporter, a “submission router” would transmit the appropriate data fields to a specified GHG program. The reporter could transmit GHG data to a variety of related programs (one or many). The data would be sent simultaneously to help ensure that all programs received the same data.

Scenario 4 would require a great deal of collaboration and dedication by EPA, states, tribes, The Registry, and others, but would result in a significantly reduced reporting burden for regulated parties. This Scenario would likely benefit reporters who choose to report their pre-calculated data electronically, as opposed to those who would like to use an online calculation wizard tool to help them calculate their emissions automatically.

Assessment of GHG Data Collection Criteria for Scenario 4:

- **Program Needs:** Meets EPA's needs.
- **Reporting Burden:** Low. Reporters could use one common interface to transmit their data simultaneously to multiple programs.
- **Government Partnership:** High. Requires significant collaboration between all GHG programs to develop a comprehensive common interface.
- **Footprint Reporting:** Medium. Footprint reporting would be included in the development of the common interface, but may not be explicitly encouraged by EPA.
- **Level of Effort (Development):** Extremely High. In Scenario 4, EPA would develop its own GHG data collection tool from scratch. In addition, EPA and all other GHG programs must collaborate to create a common reporting interface.
- **Interoperability:** High. All GHG data is submitted via one centralized location.

Figure 5. Scenario 5: Establish a Unified North American Registry--EPA Utilizes The Registry's Common Framework Application to meet its GHG Database Collection & Management Needs



Scenario 5 represents the concept of a North American GHG registry, supporting federal mandatory reporting, state/provincial mandatory reporting and voluntary reporting throughout North America. In Scenario 5, EPA would contract with The Registry to develop an “EPA Module” within the Common Framework. In this case, the common reporting interface is The Registry’s CRIS/Common Framework platform, rather than an external interface as suggested in Scenario 4. This Scenario allows reporters to enter GHG data in one location, but use it in multiple GHG programs, including EPA’s MRR program. In addition, Scenario 5 would support a common set of online GHG calculation tools though a web interface, in addition to options that support the upload of pre-calculated GHG emissions.

The significant difference in Scenario 5 is that EPA would NOT develop a separate GHG data collection system, but rather would leverage The Registry’s investment in the Common Framework to create an “EPA Module.” The EPA Module would include all of the reporting requirements necessary to meet EPA’s MRR program requirements. Regulated parties would report their GHG data to the EPA Module via the Common Framework interface. EPA staff would have administrative access to the EPA Module data just as they would if they

developed their own distinct data collection system. EPA staff could run reports, conduct analyses, determine compliance, etc. within the EPA Module.

Additionally, if EPA did not preempt other states/tribes from requiring regulated parties from reporting additional jurisdiction-specific data, regulated parties could report all required (EPA and state/tribe) data in one location. It would then be easy for EPA to share its GHG data with states/tribes. EPA could either share certain data fields with states/tribes that have Common Framework modules, or EPA could transfer GHG data to states/tribes via the Exchange Network.

This scenario significantly decreases the reporting burden for regulated parties. Additionally, it reduces the level of effort that EPA (and states/tribes) must expend to develop federal GHG data collection systems. If EPA utilized the Common Framework, states/tribes would not have to duplicate the development effort to create data collection tools to collect EPA data as they would in Scenario 2 and 3, rather, the EPA data would be made available to them via the Common Framework.

Finally, Scenario 5 is likely also the most cost effective solution for EPA, as EPA would not need to develop a data collection system from scratch.

Assessment of GHG Data Collection Criteria for Scenario 5:

- **Program Needs:** Would be designed to meet EPA's needs.
- **Reporting Burden:** Low. Reporters report to all GHG programs, including EPA's MRR and The Registry's Voluntary GHG Program through one common interface.
- **Government Partnership:** High. Creates a partnership with states for data collection. In addition, this Scenario demonstrates a departure from a strict regulatory mindset that only prioritizes one program's needs at a time. This Scenario shows that EPA is willing to think outside the box, reduce duplication of effort, and therefore minimize taxpayer expense while still meeting its regulatory needs.
- **Footprint Reporting:** High. By collection EPA's GHG data through the Common Framework, regulated parties are more likely to report their organization's emission footprint, since much of the necessary data will already be contained in CRIS (via the Common Framework).
- **Level of Effort (Development):** Medium. In Scenario 5, EPA would leverage The Registry's existing GHG data collection platform to meet its program needs. While the Common Framework will need to be customized to incorporate EPA's reporting requirements, it would save EPA from re-creating core data collection functionality.
- **Interoperability:** High. This scenario assumes that the EPA MRR program and other distinct state/tribal GHG data collection systems are centralized within one database platform. The interoperability and sharing

of data would be readily available, and all data could be communicated or exchanged with other programs outside of the platform using the CERS.

Summary of Data Collection Recommendations:

As outlined above, The Registry has identified key criteria for EPA's data collection system as well as five potential scenarios for the collection of GHG data. Scenario 1 reflects The Registry's understanding of EPA's current proposal for data collection under the MRR. Although this option achieves EPA's goals for collecting comprehensive GHG data, it does not achieve the balance of the goals identified by The Registry's member states, provinces and tribes. The remaining scenarios 2-5 each, to varying degrees, highlight additional opportunities for EPA to improve stakeholder responses to EPA's ultimate data collection system.

While these scenarios do not represent an exhaustive menu of options, they are a high-level summary of possible alternatives and are designed to foster additional thought and discussion as EPA designs a system for collection data required under the MRR. We look forward to constructive dialogue with EPA to discuss The Registry's goals and the options we have identified to achieve them.

V. Verification and Accreditation

The Climate Registry has organized its comments on verification into the following topics:

1. Importance of High Quality Data
2. Complexity of Reporting GHG Emissions
3. International Standards for Verification and Accreditation
4. The Climate Registry's Verification and Accreditation Programs
5. Verification Costs
6. Options for Strengthening EPA's Approach to Verification

1. Importance of High Quality Data

The Registry's primary intent in providing comments on the EPA's proposed approach to verification is to ensure that the data collected by EPA is high quality, reliable, meets established standards for assuring accuracy and provides consistent data across all reporters. The Registry is concerned that the draft MRR, which proposed using self-certification with EPA review, is not sufficient to meet this standard.

Given that the data collected under EPA's MRR will create a foundation for future GHG programs, The Registry urges EPA to adopt an approach which emphasizes the accuracy of GHG emissions data and will support EPA's needs now and in the long-term.

Although EPA has indicated that the proposed mandatory reporting rule is not specifically intended to support a cap-and-trade program, The Registry believes it is critical for EPA to recognize that the data collected by the MRR will likely serve as the underpinning for future GHG regulatory programs and the reporting system should be designed accordingly.

EPA recognizes in the MRR that third-party verification would be necessary to provide assurance in a market system. Under a cap-and-trade program, EPA will need high quality emissions data to reconcile reported emissions with allowances and to determine compliance. The Registry therefore encourages EPA to adopt an approach for verifying GHG emissions which will support future program uses, including a potential a cap-and-trade program.

It is also important to note that as programs emerge which assign a financial value to GHG emissions, third-party verification can help satisfy the needs and interest of multiple stakeholders, including financial and environmental regulatory interests.

2. Complexity of Reporting GHG Emissions

The nature of GHG emissions quantification is different than that of the Acid Rain Program and other criteria air pollutants. There is greater potential for error and inconsistency and thus greater need for a robust verification process.

GHG emissions are ubiquitous in nature and therefore are unlike traditional criteria air pollutants. While EPA is proposing that some GHG data will be captured directly at the "stack," other GHG emissions are obtained from fuel use and from other data that is not directly measured. Some of the methods proposed by EPA for calculating GHG emissions are complex and potentially subject to reporting errors.

Experience with both voluntary and mandatory GHG reporting programs shows that errors are common in the development of GHG inventories and that third-party verification can cost-effectively ensure accurate and consistent data that is compliant with established protocols and methodologies.

The California Climate Action Registry (CCAR) is a voluntary GHG registry that was formed in 2001 and served as the basis for the development of The Climate Registry's program in 2007. Even though the members of CCAR's voluntary program made honest efforts to submit accurate emissions reports, third-party

verification has identified misstatements in 99 percent of the nearly 600 verifications performed for the CCAR program.

3. International Standards for Verification and Accreditation

Nationally and internationally, third-party verification is a critical component of GHG reporting programs. The United Nations Framework Convention on Climate Change (UNFCCC) Clean Development Mechanism (CDM), The European Union's Emissions Trading System (EU ETS), the United Kingdom's GHG Emissions Trading System, Alberta's Specified Gas Emitters Program and the California Air Resources Board (AB 32) all utilize third-party verification to ensure data accuracy in their programs.

In response to the needs of GHG reporting programs that evolved over the past decade, the International Organization for Standardization (ISO), a network of the national standards institutes of 161 countries, developed the following international standards pertaining to GHG reporting and verification.

- ISO 14064-1:2006, Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- ISO 14064-2:2006, Greenhouse gases — Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements
- ISO 14064-3:2006, Greenhouse gases — Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions
- ISO 14065-2007, Greenhouse gas - Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition

Supplementing the ISO standard on requirements for GHG Verification Bodies is the IAF Mandatory Document for the Application of ISO 14065:2007.

ISO is also in the process of developing ISO 14066, Greenhouse gases — Competence requirements for greenhouse gas validation and verification teams with guidance for evaluation.

The ISO 14064 and ISO 14065 standards are flexible, regime-neutral tools that promote best practice, support the integrity of GHG assertions, and support the development of GHG programs and markets.

Third-party verification assesses whether an entity's emissions inventory complies with the reporting principles of relevance, completeness, consistency, transparency, and accuracy, as well as the GHG program's reporting criteria (e.g., materiality threshold, geographic requirements, etc.). Verification activities apply not only to the calculation of GHG emissions, but also to the context and meaning of the reported data.

In addition to assessing the aforementioned GHG reporting principles, ISO requires Verification Bodies to adhere to the verification principles, defined in ISO 14064-3, of independence, ethical conduct, fair presentation, and due professional care.

ISO 14064-3 directs Verification Bodies to focus their verification activities on those data systems, processes, emissions sources, and calculations that pose the greatest risk of generating a material discrepancy in an effort to locate reporting errors.

ISO 14065 is the standard against which Accreditation Bodies assess Verification Bodies to ensure that they have the skills and competencies to perform verification activities. As part of the accreditation process, the Accreditation Body assesses a Verification Body's internal systems, processes, quality controls, impartiality and independence to successfully complete emissions verifications.

ISO 14065 details a series of requirements that Verification Bodies must meet to become accredited to the standard. The standard includes requirements for demonstrating impartiality, competency, deployment and management of personnel, communications and records retention, verification processes, appeals and complaint processes, and management system requirements.

The Registry strongly encourages EPA to adopt verification policies and programs that are consistent with the ISO's internationally-accepted standards. This is essential to ensuring high-quality meaningful GHG data and consistency in GHG emissions data across jurisdictions and national borders. We also encourage EPA to recognize the significant investments made to date by companies and other organizations and institutions to comply with these standards.

4. The Climate Registry's Verification and Accreditation Programs

The Registry's Verification Program

One of the most important aspects of The Registry's voluntary reporting program is its requirement of annual third-party verification of GHG data. Third-party verification is the systematic, independent, and documented process for the

evaluation of a GHG emission report against agreed upon verification criteria. This process is similar to an audit of financial statements—it is an external attestation to the quality and accuracy of the reported emissions.

The Registry's General Verification Protocol (GVP) contains the verification criteria, policies and procedures that Verification Bodies must comply with when conducting verification activities for Registry Members. (Please visit our website to view the GVP: <http://www.theclimateregistry.org/downloads/GVP.pdf>.)

The Registry's verification program is based on the international standard for GHG verification ISO 14064-3 and incorporates the key principles of independence, ethical conduct, fair presentation, and due professional care.

Verification Bodies must demonstrate and embody the above criteria to successfully review and assess GHG emission reports. A Verification Body is a firm that consists of technically competent and independent personnel (Verifiers) who are knowledgeable about GHG emissions inventories, management systems, and data and information auditing.

Four major concepts play a key role in shaping The Registry's verification program:

- Risk-Based Approach to Verification: Given the impossibility of assessing and confirming the accuracy of every piece of GHG information in an emissions report, The Registry adopted ISO 14064-3's risk based approach to verification. This approach directs Verification Bodies to focus their attention on those data systems, processes, emissions sources and calculations that pose the greatest risk of generating a material misstatement.
- Materiality: Verification Bodies use the concept of materiality to determine if omitted or misstated GHG emissions will lead to significant misrepresentation of a Member's emissions, thereby influencing conclusions or decisions made on the basis of those emissions.
- Level of Assurance: The level of assurance a Verification Body attaches to its verification findings dictates the relative degree of confidence the Verification Body has in its assessment of the reported data. The Registry requires its Verification Bodies to provide a reasonable level of assurance that an emission report is materially correct. A reasonable level of assurance is considered to be the highest possible level of confidence.
- Inherent Uncertainty: The Registry defines inherent uncertainty as the uncertainty associated with the inexact nature of calculating GHG emissions (metering equipment, emission factors, etc.). Inherent

uncertainty also applies to the inexact nature of the calculations associated with The Registry's permitted use of simplified estimation methods (for up to five percent of a Member's emissions).

In order to attest to the accuracy of an emissions report, a Verification Body must complete the following five core verification activities:

- Assess conformance with The Registry's reporting requirements
- Assess the completeness of the emission report
- Perform a risk assessment based on a review of information systems and controls
- Develop a sampling plan (identify records to be reviewed and facilities to be visited)
- Evaluate the GHG emissions, information systems and controls against The Registry's verification criteria (e.g. five percent materiality threshold)

The Registry requires Members to verify their emissions reports annually. To help keep verification costs as manageable as possible, The Registry permits a five-year verification cycle, wherein the same Verification Body and Member may contract together for a total of five calendar years.

Verification Bodies must complete a comprehensive verification in the first year of the five year verification cycle. To do so, a Verification Body must confirm the identification of emission sources, review management systems, and sample calculated emissions for accuracy. In the remaining years of the five year cycle, if no significant changes (either to the organization's structure, management systems, or emissions) occur, the Verification Body may elect to conduct a streamlined verification process wherein they verify emissions estimates, but do not review management systems and emission sources (as these have not changed).

At the end of the verification process, a Verification Body must produce two documents: 1) a Verification Report that summarizes their verification activities and findings, and 2) a Verification Statement that attests to the Member's compliance with The Registry's reporting and verification requirements.

The Registry's Accreditation Program

To ensure the competence of the Verification Bodies in The Registry's program, The Registry adopted the international standard for accrediting GHG Verification Bodies (ISO 14065) and further defined specific Registry requirements additional to this standard. Through this process, Verification Bodies must demonstrate that they are independent, impartial, and competent to conduct GHG verifications.

The Registry's Guidance on Accreditation (GoA) describes the details of The Registry's accreditation requirements. It is located on The Registry's website: <http://www.theclimateregistry.org/downloads/GoA.pdf>.

Since ISO programs are implemented by national Accreditation Bodies, The Registry plans to partner with each of the three national Accreditation Bodies in North America to carry out its accreditation program. The American National Standards Institute (ANSI), the national Accreditation Body in the U.S., is the first Accreditation Body to partner with The Registry.

The Registry is in the process of developing relationships with the Standards Council of Canada (SCC) in Canada, and Entidad Mexicana de Acreditación (EMA) in Mexico.

ANSI manages a rigorous review of all interested Verification Bodies in an effort to assess each firm's independence, impartiality and competence. This process includes a review of a Verification Body's internal management systems, an assessment of the competency of their staff, and an onsite assessment of a Verification Body's ability to successfully complete the verification activities required by The Registry.

In addition to the requirements of ISO 14065, Verification Bodies interested in conducting verifications for Members of The Registry must also demonstrate their ability to meet twelve additional accreditation criteria set forth by The Registry. The Registry participates in ANSI's review process and additionally "recognizes" the ANSI-accredited Verification Bodies deemed competent to conduct verification activities for The Registry.

Only ANSI-accredited, Registry-recognized Verification Bodies are permitted to provide verification services to Registry Members.

5. Verification Costs

As EPA points out in the draft MRR, there is a cost to third-party verification. However, there is also a significant cost and level of effort that must be expended for EPA to independently implement a high quality verification program which ensures a reasonable level of assurance and meets widely-accepted standards for accuracy. The Registry encourages EPA to conduct a more comprehensive and detailed analysis of the costs of third-party verification versus EPA's preferred option of self-certification and EPA-performed verification.

EPA indicates in the draft MRR that the majority of industry stakeholders are opposed to third-party verification primarily due to the additional cost. EPA indicates that reporters would incur costs to assemble and provide verifiers with detailed supporting data for the emission estimates. However, for EPA to ensure a high quality review of data, regulated parties will need to maintain this data

regardless, even if the approach were self-certification with EPA review. Second, regardless of the approach selected (e.g. taxpayer dollars fund EPA to hire staff and develop a verification program or regulated facilities pay third-party verifiers), there is a cost associated with providing quality assurance of emissions data.

EPA is assuming that the level of effort required to verify GHG emissions data will be comparable to the level of effort invested in other existing EPA programs which have a narrower scope and less complicated data sets. EPA reports costs of EPA review and verification of each quarterly report requires an average of 2 hours time and a labor cost of \$54.64 per hour. EPA also estimates that it requires approximately 30 hours to conduct each site visit. The 2-hour average includes time for EPA to conduct site visits and perform detailed audits of approximately 10 facilities per year. Based on EPA's indication that the Acid Rain Program receives emissions reports from 3,537 facilities per year, EPA is conducting a detailed audit of only 0.3 percent of the facilities reporting under its program. This auditing ratio is not nearly sufficient to provide reasonable assurance of reported GHG emissions. Instead of conducting a straight comparison between the anticipated costs of third-party verification, which would provide reasonable assurance on every emissions report submitted to EPA, versus the cost of EPA review, which includes a detailed audit of only 0.3 percent of the facilities reporting under its program, The Registry believes it would be more meaningful for EPA to consider what EPA's costs would be to provide the same level of assurance that would be provided by third-party verification.

In order to ensure high quality GHG emissions data, EPA will need to conduct a thorough verification of each emissions report and regularly conduct facility visits, which translates into a need for EPA to significantly increase the resources that it devotes to its verification programs. Also, if EPA intends to conduct a proper annual verification of every emissions report, it is not clear what economies of scale, as proposed by EPA, would result.

The Registry strongly encourages EPA to thoroughly evaluate the costs associated with the following components that would need to be addressed in order for the EPA to provide a level of quality assurance necessary to meet established standards:

- Hiring and training a significant number of staff for an EPA verification program
- Development of a standard process for conducting verifications
- Implementation of a verification program, including conducting annual facility visits and reviewing supporting documentation.

Based on information obtained from the California Climate Action Registry (CCAR), costs of third-party verification for companies emitting 25,000 metric tons of CO₂ equivalent or higher ranged from \$5,000-\$20,000 per year for an entity-level verification (which may include multiple facilities). Under CCAR's

voluntary entity-level reporting program, the cost of third-party verification is generally less than 1 cent per metric ton of CO₂-equivalent emissions, which is minimal compared to the current cost range of \$3 to \$40 to purchase a ton of CO₂ in either a voluntary or compliance market. The actual cost of verification services for a particular facility will depend of a variety of factors such as the complexity of the facility's operations, the types of data monitoring systems, the quality and transparency of the data management system, etc. Costs typically decrease over time due to improvements that a company makes to its data acquisition and management systems based on the issues identified by the verification process.

6. Options for Strengthening EPA's Proposed Approach to Verification

The Registry encourages the EPA to consider additional potential options for strengthening its verification program. Although EPA briefly considered third party verification in its draft proposal, The Registry encourages EPA to consider additional alternatives to utilizing third-party verifiers beyond those options discussed in the draft proposal.

Specifically, The Registry urges EPA to consider utilizing international standards for third-party verification and accreditation (ISO 14064-3 and ISO 14065, respectively) and partners such as ANSI to ensure consistent high quality verification activities throughout the US. EPA recently utilized ANSI's accreditation services to implement certification requirements for its Water Sense program, and EPA may wish to consider such a model for GHG verification as well. The Registry has had success using international verification and accreditation standards and encourages EPA to give them their full consideration in establishing credible verification and accreditation programs.

If EPA were to leverage established and credible programs, such as The Climate Registry and ANSI, EPA could reduce its workload by simply specifying any additional requirements or exceptions to these existing programs.

Further, EPA may wish to examine alternatives to annual third-party verification, such as biennial or triennial verification, verification of specific source categories or facilities, or verification of specific threshold levels of emissions.

The Registry welcomes the opportunity to share with EPA more information and details about The Registry's experience with designing and implementing a GHG verification and accreditation program.

VI. Quantification Methodologies

The Registry commends EPA for its thorough and thoughtful presentation and explanation of quantification methodologies in the MRR, however, we encourage EPA's consideration of alternative approaches in three areas:

Mass Balance v. CEMs

The Registry recommends EPA consider allowing mass balance calculations in addition to direct measurement as appropriate quantification methods. EPA asserts that Continuous Emissions Monitoring Devices (CEMS) are the most accurate method for quantifying emissions (direct measurement). Others argue that mass balance methods can be more accurate when the carbon content of the fuel is measured through testing.

The Registry has grappled with the debate over the accuracy of emissions from measurement devices or calculation methods and has found convincing arguments for both. For example, industry often argues that CEMS either under- or over- estimates emissions based on the assumptions built into the device (shape of stack etc.), or that CEMS devices may not be consistently calibrated or maintained, and therefore may produce erroneous results. Finally, since CEMS were not specifically designed to measure GHG emissions, EPA may wish to carefully consider their usage on various sources and emissions to determine their appropriateness.

Stationary Combustion

The Registry recommends requiring the use of emissions factors based on combustion technology to quantify CH₄ and N₂O emissions from stationary combustion. EPA currently prescribes the use of default emission factors for CH₄ and N₂O based on fuel type. The Registry has worked with a variety of stakeholders on this issue and based on those discussions believes it is more accurate to quantify these emissions using emission factors based on combustion technology.

Oil & Gas

The Registry recommends defining reporting requirements for oil and gas exploration and production activities based on operational control at the field level. EPA acknowledges that onshore petroleum and natural gas production is responsible for the largest share of fugitive CH₄ and CO₂ emissions from the petroleum and natural gas industry (p. 16531). However, EPA did not include these operations in the draft MRR due to the unique difficulty in defining a "facility", thereby making it difficult to determine who would be responsible for reporting.

The Registry is participating in the Western Regional Air Partnership (WRAP) initiative to develop GHG emission reporting recommendations for the oil and gas exploration and production sector. Through this process, which includes representatives from the largest oil and gas companies in the country, the group has reached general consensus that emissions from small point sources unique

to this sector, such as wellheads, should be reported according to operational control at the field level, while traditional “facilities,” such as natural gas processing plants, should be reported separately as distinct facilities by the operating entity.

The Registry supports this approach and encourages EPA to incorporate this recommendation into the final rule if it chooses to regulate emissions from the exploration and production sectors.

In general, The Registry recommends that EPA consider the results of the WRAP initiative as it works to finalize the rule. WRAP and The Registry plan to release a draft voluntary reporting protocol for oil and gas exploration and production in late summer/early fall. In addition, The Registry also plans to release a draft reporting protocol for the natural gas transmission and distribution sector this fall, and we encourage EPA to consider the recommendations within this protocol as well.

VII. Conclusion

The Registry commends EPA for the release of its draft MRR. We look forward to working with EPA to ensure that companies, organizations, states and tribes that have led the efforts to collect high quality GHG emissions data continue to have a meaningful role in the federal program. The Registry also looks forward to forging partnerships with EPA to provide programs that complement EPA’s MRR as well as opportunities to streamline the collection and sharing of GHG data required under the draft rule. The Registry appreciates the opportunity to provide our input on the draft MRR.