



## GHG EMISSIONS REGISTRIES

By mid-2008, the U.S. Environmental Protection Agency must develop a national greenhouse gas (GHG) registry. This is not part of ongoing climate policy discussions, it is already law. This fact sheet answers the questions many are asking about GHG registries and the role of a mandatory GHG reporting program in the United States.

### WHAT IS A GREENHOUSE GAS (GHG) EMISSIONS REGISTRY?

A GHG registry is a database for collecting, verifying, and tracking emissions data from emitters, such as facilities or companies. Registries of different types can serve a variety of objectives and inform a variety of decision makers.

### WHAT IS THE DIFFERENCE BETWEEN A REGISTRY AND A NATIONAL/STATE/MUNICIPAL INVENTORY?

A registry is a database that collects bottom-up data from individual emitters, such as facilities or companies. A national or state GHG inventory is a top-down comprehensive summary of the total emissions of a state or country. A national GHG inventory, such as the U.S. Environmental Protection Agency's *Inventory of U.S. Greenhouse Gas Emissions and Sinks* is critical for identifying aggregate and sectoral trends in emissions, but does not attribute those emissions to individual parties. In contrast, a registry collects facility or corporate-level data.

### ARE REGISTRIES MANDATORY OR VOLUNTARY?

Depending on their intended purpose, registries can be voluntary or mandatory. Voluntary registries collect data from businesses and organizations seeking to demonstrate emissions reduction efforts, typically at the corporate or organization-wide level. Mandatory registries primarily serve a regulatory purpose, such as tracking progress and ensuring compliance with regulatory programs, typically at the facility level.



Figure 1. As of February 2008, 39 states have signed on to the Climate Registry.

### ARE THERE ANY REGISTRIES CURRENTLY COLLECTING GHG DATA IN THE UNITED STATES?

Currently, there are voluntary registries in the United States that collect company GHG data. Some examples include the Climate Registry (Figure 1), the California Climate Action Registry, and the Department of Energy's 1605(b) Voluntary Reporting Program.

There is a patchwork of mandatory GHG data collection systems throughout the United States, rather than a single, comprehensive repository for emissions data. These existing data collection programs include:

- The U.S. Environmental Protection Agency's Acid Rain Program, which requires that electric generating units regulated under the sulfur dioxide (SO<sub>2</sub>) cap-and-trade program also measure and report carbon dioxide (CO<sub>2</sub>) emissions data
- State-level, mandatory reporting for large facilities in Maine, New Jersey, and Connecticut (and developing in California, New Mexico, Nevada, Oregon, and other states)

The majority of GHG emissions in the United States, such as emissions from industry, are not tracked at the individual emitter level.

### WHAT PURPOSE WOULD A REGISTRY SERVE IN A CAP-AND-TRADE PROGRAM?

A cap-and-trade program would require an emissions registry to which affected facilities under the program could regularly submit emissions data. This would be a critical component of a cap-and-trade program as it would:

- Ensure compliance, such that each facility does not emit in excess of its allowances
- Ensure the emissions market functions effectively and efficiently by providing accurate and transparent data to market participants and the public
- Allow policymakers to make appropriate allocation decisions
- Verify facilities' claims that they achieved early action reductions that may qualify for early action credit in the program
- Build public confidence in the emissions reduction program

### **WHEN WILL A MANDATORY GHG REGISTRY AND REPORTING PROGRAM TAKE EFFECT?**

In December 2007, Congress passed an appropriations bill that included \$3.5 million in funding for the U.S. Environmental Protection Agency to establish a mandatory GHG reporting program in the United States. The legislation requires the U.S. Environmental Protection Agency to establish a draft rule for this registry within nine months and a final rule within 18 months.

### **WHAT DATA ARE COLLECTED BY A GHG REGISTRY?**

Data collection depends on the policy need that the data will serve. To support a cap-and-trade program, a GHG emissions registry may collect emissions data from stationary combustion of fossil fuels from large facilities, such as power plants and large industrial sources. Depending on the purpose of the registry, additional emissions data from each reporting entity can be collected. Such data could include emissions from industrial processes, fugitive emissions from intentional or unintentional releases, or emissions from motor vehicles. GHGs that are tracked and reported may include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). A registry may also include additional data such as fuel production or electricity use. In addition, registries supporting cap-and-trade programs will need to collect and track information on emissions allowances and offset projects in addition to emissions.

Although the mandatory registry established in Congress' 2008 appropriations package calls for emissions reporting for all sectors of the economy, the legislation does not specify which facilities, or which emissions, will be subject to reporting.

### **HOW ARE EMISSIONS DATA COLLECTED AND QUANTIFIED?**

Rigorous monitoring guidelines form the foundation of the registry. Reported data should be accurate, complete, transparent, consistent, and verified. All sources and gases must be quantified either through direct measurement, such as continuous emissions monitoring systems (CEMS), or through calculations using emission factors and activity data such as fuel use or production data.

To ensure that a cap-and-trade market functions properly, monitoring guidelines must ensure consistent measurement of emissions such that "a ton is a ton" throughout the program, whether it is emitted in Alaska or Florida and whether it is from a power plant, a manufacturing facility, or in the transportation sector. Consistency depends on uniform and rigorous monitoring procedures.

### **HOW ARE EMISSIONS REPORTED TO A REGISTRY VERIFIED?**

Reported emissions data must also be verified to ensure that emissions data is accurate and complete. The EU Emission Trading Scheme and California's mandatory reporting program both require independent third-party verification of emissions. Alternatively, the regulatory agency may itself verify that reported data is accurate and complete. Under the Acid Rain Program, for example, the U.S. Environmental Protection Agency conducts extensive quality assurance checks on submitted data and performs periodic on-site audits of facilities.

### **WILL INFORMATION SUBMITTED TO A REGISTRY BE PUBLICLY DISCLOSED?**

To be most useful, emissions data submitted to the registry must be made publicly available in a transparent and timely fashion. Public disclosure is necessary to:

- Ensure an efficient and well-functioning market in which all market participants have access to transparent, up-to-date information
- Build public confidence in the program by transparently documenting emissions trends and compliance
- Provide public accountability, such that public perception becomes an additional driver for companies and facilities to reduce emissions

### **WILL VOLUNTARY REGISTRIES STILL SERVE A FUNCTION AFTER THERE IS MANDATORY GHG REPORTING?**

Voluntary corporate-wide registries, such as the Climate Registry, are still expected to be useful after there is mandatory reporting to support regulatory programs. While mandatory reporting is likely to collect emissions data for individual facilities, voluntary registries typically collect data at the corporate level. To serve the needs of investors, consumers, and public advocates interested in corporate financial risk and corporate responsibility, there will remain a need for disclosure channels that shed light on corporate-level environmental performance.

### **ADDITIONAL REFERENCES**

- The Climate Registry: <http://www.theclimateregistry.org/>
- WRI Issue Brief *Designing a GHG Emissions Registry*: <http://www.wri.org/publication/designing-a-greenhouse-gas-emissions-registry#>
- WRI's US Climate Policy Resources: <http://www.wri.org/climate/usclimate>