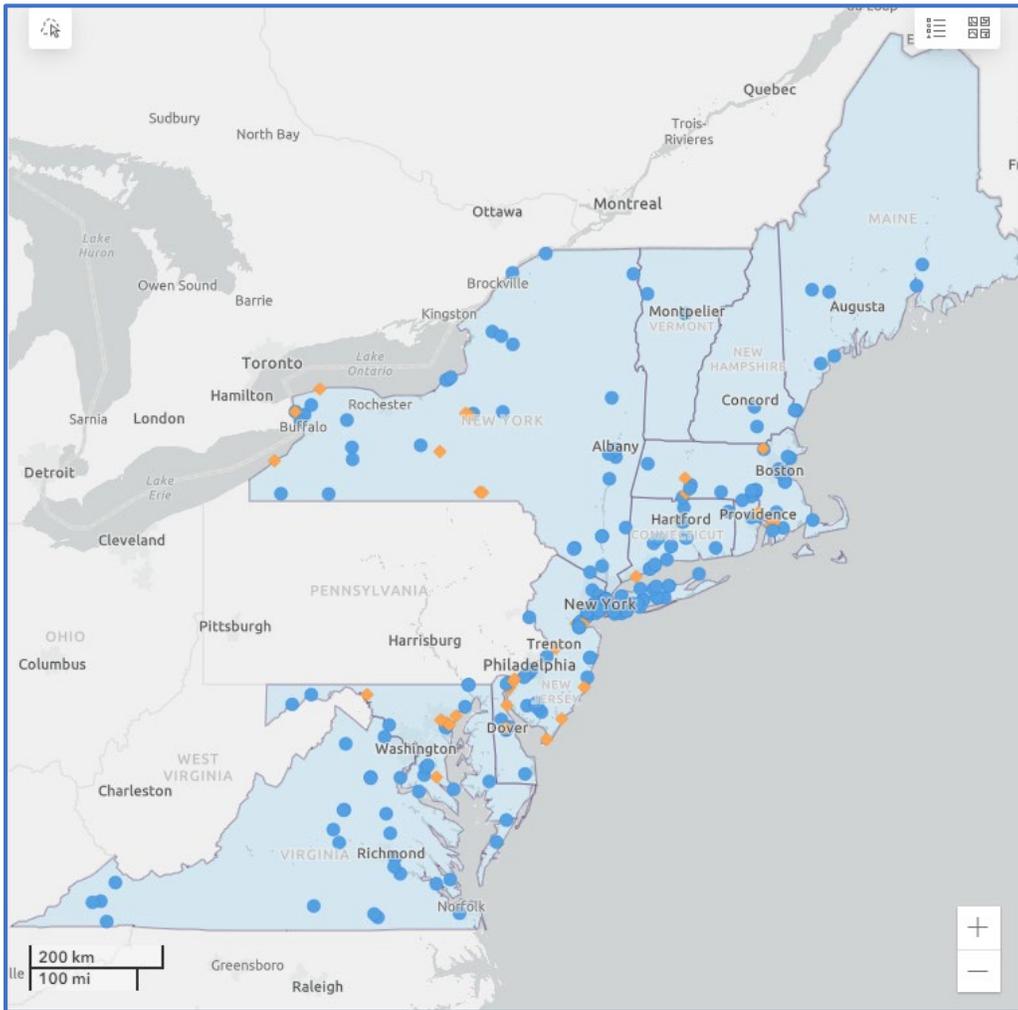


The Regional Greenhouse Gas Initiative

an initiative of Eastern States of the US

RGGI Regional Emissions Dashboard: User Guide



Contents

1. Introduction	2
2. Navigating the Dashboard	2
3. Using the Menu.....	3
4. Using the Map.....	3
5. Interpreting the Data	5
6. Appendix	5

The Regional Greenhouse Gas Initiative

an initiative of Eastern States of the US

1. Introduction

The Regional Greenhouse Gas Initiative (RGGI) [Regional Emissions Dashboard](#) is a publicly available tool which displays carbon dioxide (CO₂) emissions and other data for facilities covered by RGGI across the participating RGGI states. (For general information on RGGI, visit the [RGGI website](#) or refer to the [RGGI 101 Factsheet](#)).

Data for this dashboard was sourced in 2023 from the U.S. Environmental Protection Agency Clean Air Markets Program Data (CAMPD)¹ for facilities covered by the Regional Greenhouse Gas Initiative. Data represents direct CO₂ emissions from fossil-fuel-fired electric power generators with a capacity of 25 megawatts² or greater.

Data is included for the years 2009 through 2021. Nine states, referred to as RGGI 9, participated in RGGI during this entire period, including Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. From 2009 to 2011, and in 2020, RGGI included the RGGI-9 states and New Jersey, referred to collectively as RGGI-10. Starting in 2021, RGGI participation includes the RGGI-10 states and Virginia, referred to collectively as RGGI-11. The dashboard includes data for each of the participating states during the years that each state participated in RGGI.

This User Guide provides an overview of the RGGI Emissions Dashboard and how to use it.

2. Navigating the Dashboard

The left side of the Emissions Dashboard displays a map of the operating and retired power-generating facilities covered by RGGI across the participating states. The right side of the dashboard includes a series of charts which display emissions data and other information about the selected facilities. The top of the dashboard includes a menu that can be used to filter which facilities appear on the map and are included in the charts.

Users can select facilities on the map or filter using the menu options to view facility details, emissions data, and other information for the selected facilities. The remainder of this User Guide describes how to navigate and use the tools included in the dashboard.

¹ United States Environmental Protection Agency (EPA). "Clean Air Markets Program Data." Washington, DC: Office of Atmospheric Protection, Clean Air Markets Division. Available from EPA's Air Markets Program Data web site: <https://campd.epa.gov/>.

² New York data represents facilities with a capacity of 15 MW or greater.

The Regional Greenhouse Gas Initiative

an initiative of Eastern States of the US

3. Using the Menu

State All States	Operating Status Operating & Retired	Unit Type All	Primary Fuel Type All	Facility Name All	Year 2009 to 2021
---------------------	---	------------------	--------------------------	----------------------	----------------------

The menu at the top of the dashboard can be used to filter the facilities shown on the map and the results shown in the charts on the right of the dashboard. Users can select from the following options to filter results. Each option includes a Reset button to return that option to its default settings.

- **State:** Filter results for one or more of the RGGI states. Data is included for the states participating in RGGI in 2021 (CT, DE, MA, MD, ME, NH, NY, RI, VA, VT). By default, the dashboard will display results for All States. Select one or more states from the menu to view results for only those states.
- **Operating Status:** Filter results for facilities that are currently operating, retired as of 2021, or both. By default, the dashboard will display results for all facilities, Operating & Retired.
- **Unit Type:** Filter results according to the type of generator used at a facility. By default, the dashboard will display results for All unit types. For information on the different unit types, see the Appendix.
- **Primary Fuel Type:** Filter results based on the fuel type used at each facility in the dashboard. By default, the dashboard will display results for All fuel types. Select from the fuel type options to view only a specific fuel type. For more information on fuel types, visit the EPA website, [here](#).
- **Facility Name:** Filter results by Facility Name to view results for a single facility. By default, the dashboard will display results for All facilities.
- **Year:** Filter by Year to view results for one or more years since the beginning of RGGI in 2009 through 2021. By default results are shown for all years from 2009 through 2021. Use the Year menu to select one or more years during RGGI operations.

Menu options can be used in conjunction with one another. For example, users can view results for operating natural gas facilities by using the Operating Status and Primary Fuel Type menu options to filter results.



Use the Reset button in the bottom right of the dashboard to return all menu options to their default settings. Each menu option also includes its own Reset button which you can use to reset only that option.

4. Using the Map

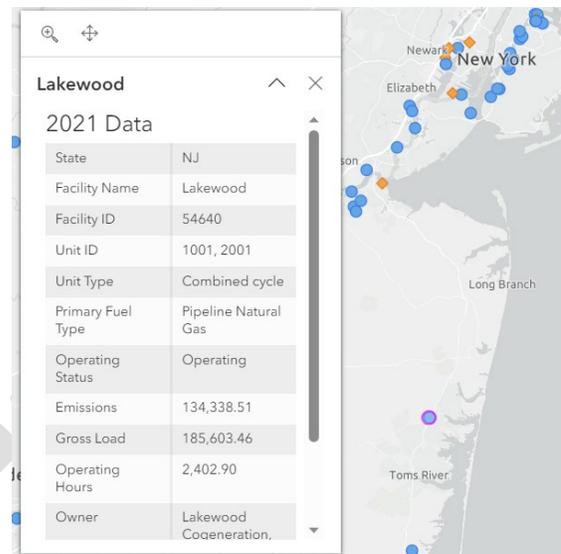
Select a Facility

The Regional Greenhouse Gas Initiative

an initiative of Eastern States of the US

The map on the left of the dashboard displays the power facilities covered by RGGI across the participating RGGI states. The facilities that appear on the map can be changed using the menu options at the top of the dashboard, as described in the previous section of this guide.

Select a facility on the map by clicking on it. A purple ring will appear around the selected facility. Selecting a facility will open a table that includes detailed information about the facility and will update the results on the right of the dashboard to show only data for the selected facility.

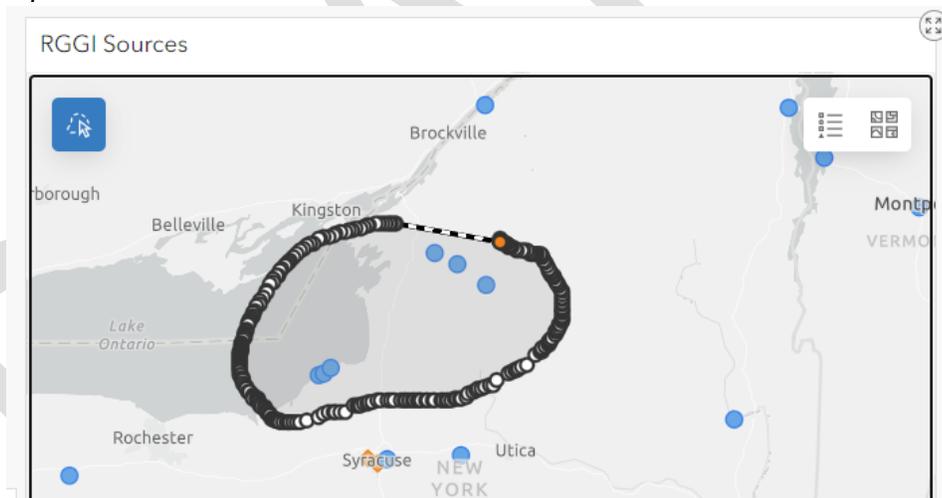


The screenshot shows a map on the left with several blue dots representing power facilities. One facility, Lakewood, is highlighted with a purple ring. To the right of the map is a data table for the selected facility.

2021 Data	
State	NJ
Facility Name	Lakewood
Facility ID	54640
Unit ID	1001, 2001
Unit Type	Combined cycle
Primary Fuel Type	Pipeline Natural Gas
Operating Status	Operating
Emissions	134,338.51
Gross Load	185,603.46
Operating Hours	2,402.90
Owner	Lakewood Co-generation,

Clicking an empty space on the map will de-select any selected facilities.

Lasso Multiple Facilities



The lasso tool can be used to select multiple facilities on the map. To use the lasso, select the Lasso button in the top left corner of the map. Then, click and track with your cursor on the map to create a lasso enclosing the facilities you want to select. After releasing the cursor, the facilities inside the lasso will be selected and the charts on the right of the dashboard will update with the selected facilities' data.

Navigating the Map and Other Controls

Click and drag on the map with your cursor to move the map within the dashboard window.

The Regional Greenhouse Gas Initiative

an initiative of Eastern States of the US

Zoom in and out of the map using the Zoom buttons in the bottom right corner of the map, or by using the scroll function on your mouse or trackpad.



The top right corner includes the Legend and Basemap buttons. Select these to view the map legend, or to change the basemap layer shown on the map, respectively.

5. Interpreting the Data

The right side of the dashboard includes a series of charts which display data for the selected facilities. The bottom left corner of each chart includes a Download button, which can be used to download a spreadsheet of the data included in the chart. Facilities can be selected using the Menu and Map as described in sections 3 and 4 of this guide.

The four charts on the right side of the dashboard are:

1. **CO₂ Emissions:** This chart displays the annual carbon dioxide (CO₂) emissions in tons from the selected facilities over the selected years. The tabs at the bottom of this chart can be used to toggle between units of short tons and metric tons.
2. **Gross Load:** This chart displays the gross load, or total energy produced, in megawatt-hours (MWh) for the selected facilities over the selected years. The tabs at the bottom of this chart can be used to toggle the chart to instead display total operating time of the selected facilities.
3. **Unit Type and Nameplate Capacity:** This chart displays the total nameplate capacity for the generator types included among the selected facilities over the selected years. Nameplate capacity is the maximum power output that a generator can produce and is shown in units of megawatt electric (MWe). More information on the different Unit Types can be found in the Appendix.
4. **Fuel Type and Nameplate Capacity:** This chart displays the total nameplate capacity for the fuel types included among the selected facilities over the selected years. Nameplate capacity is the maximum power output that a generator can produce and is shown in units of megawatt electric (MWe). For more information on fuel types, visit the EPA website, [here](#)

6. Appendix

Unit Types

Circulating fluidized bed boiler¹: A type of Fluidized bed combustion that utilizes a recirculating loop for even greater efficiency of combustion.

The Regional Greenhouse Gas Initiative

an initiative of Eastern States of the US

Combined cycle²: A combined-cycle power plant uses both a gas and a steam turbine together to produce up to 50% more electricity from the same fuel than a traditional simple-cycle plant. The waste heat from the gas turbine is routed to the nearby steam turbine, which generates extra power.

Combustion turbine³: A gas turbine, also called a combustion turbine, is an internal combustion engine that operates with rotary rather than reciprocating motion. Gas turbines are essentially composed of three major components: compressor, combustor, and power turbine

Cyclone boilers⁴: A boiler with one or more water-cooled horizontal cylindrical chambers in which coal combustion takes place.

Dry bottom turbo-fired boiler⁴: A pulverized coal, wall-fired boiler with burners arranged on walls so that the individual flames extend down toward the furnace bottom and then turn back up through the center of the furnace.

Dry bottom vertically fired boiler⁴: A dry bottom boiler with circular burners, or coal and air pipes, oriented downward and mounted on waterwalls that are horizontal or at an angle.

Dry bottom wall-fired boiler⁴: A boiler that has pulverized coal burners arranged on the walls of the furnace. The burners have discrete, individual flames that extend perpendicularly into the furnace area.

Tangentially-fired⁴: A boiler that has coal and air nozzles mounted in each corner of the furnace where the vertical furnace walls meet. Both pulverized coal and air are directed from the furnace corners along a line tangential to a circle lying in a horizontal plane of the furnace.

Wet bottom²: A boiler with a furnace bottom temperature above the ash melting point and the bottom ash is removed as liquid.

¹ <https://www.powerengineeringint.com/coal-fired/why-fuel-flexible-cfbs-are-the-future/>

² <https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s01.pdf>

³ <https://www.ge.com/gas-power/resources/education/combined-cycle-power-plants>

⁴ <https://www.govinfo.gov/content/pkg/FR-1995-04-13/pdf/95-8742.pdf>

Fuel Types

Natural Gas – Includes natural gas and pipeline natural gas

Oil – Includes, diesel oil, residual oil, and other

For more information on fuel types, visit the EPA website, [here](#).