

U.S. EPA Greenhouse Gas Reporting Program RY 2023 Data Release

U.S. Environmental Protection Agency
Greenhouse Gas Reporting Program

Webinar

October 23, 2024

1:00pm EST

Three Audio Options:

- 1) Listen on Computer
- (2) Use the WebEx “call-me” feature
- (3) Dial 1-855-797-9485 or
Event number: 2430 459 7510



Webinar Panels

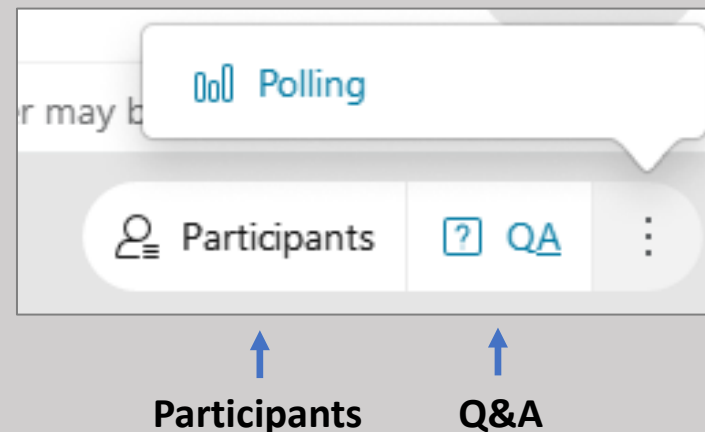
We will use two panels

- Participants, and Question & Answer (Q&A)
- Use the arrow to expand or collapse the panels



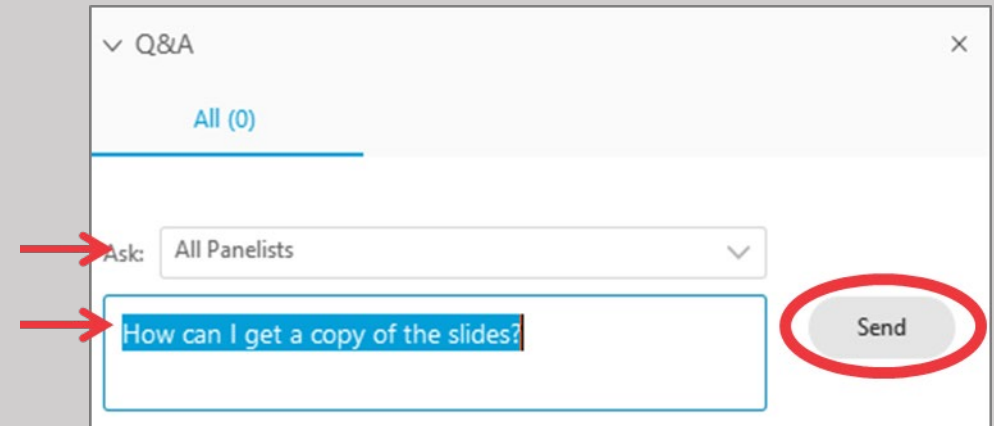
Adding Panels

- If some panels don't appear, select the desired panels in the lower right
- Select More Options (...) for additional panels



Q&A

- Participants are muted
- Questions will be moderated at the end
- To ask a question:
 1. Select “All Panelists” from the drop-down menu
 2. Enter your question in the Q&A box
 3. Hit “Send”
- EPA will post webinar materials to the web in the coming weeks:
www.epa.gov/ghgreporting



The screenshot shows a Q&A interface with a title bar 'Q&A' and a close button. Below the title bar, it says 'All (0)'. There is a dropdown menu labeled 'Ask:' with 'All Panelists' selected. Below the dropdown is a text input field containing the question 'How can I get a copy of the slides?'. To the right of the input field is a 'Send' button, which is circled in red. Two red arrows point to the dropdown menu and the text input field.

Outline

- Options for viewing GreenHouse Gas Reporting Program (GHGRP) data
- Note on state-level data aggregation for some sectors
- Note on GHGRP Scope
- Introducing StoryMaps
- Facility Level Information on GreenHouse gases Tool (FLIGHT) overview and demo
- GHGRP data highlights and resources
 - Data sets
 - Sector profiles
- EPA Envirofacts
 - Greenhouse gas (GHG) search
 - GHG customized search (new customized query builder)
 - Downloadable files (too big for Envirofacts search)
- Interactive State/Tribal Fact Sheet
- Demographic Data features
- Help Resources

EPA's GHGRP Data Highlights

Best for: Data at a glance



FLIGHT

Best for: Exploring data



EPA's Envirofacts

Best for: Querying and downloading data



Data Highlights Link:

www.epa.gov/ghgreporting/ghgrp-reported-data



FLIGHT Link:

<https://ghgdata.epa.gov/ghgp/main.do>



Envirofacts GHG Link:

www3.epa.gov/enviro/facts/ghg/search.html



FIND and USE GHGRP DATA

Best for: Finding Our Data

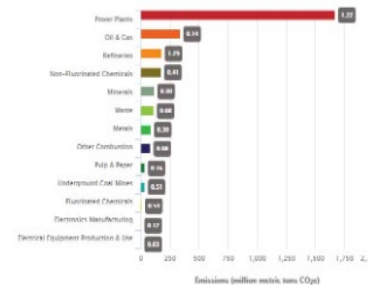
Find GHGRP data products using the options below.

Alternatively, use the left menu to browse webpages on various topics.

I want to view:

- 2023 national data summaries (most recent reporting year)
- Sector summaries
- State and tribal summaries
- Data downloads
- Maps
- View all GHGRP data products

National Data Highlights (2023)



Click an sector below to customize sectors displayed in the chart:

- Power Plants
- Oil & Gas
- Refineries
- Non-Fluorinated Chemicals
- Metals
- Stone
- Underground Coal Mines
- Fluorinated Chemicals
- Electronics Manufacturing
- Metals
- Minerals
- Waste
- Other Combustion
- Pulp & Paper
- Fluorinated Chemicals
- Electronics Manufacturing

WEBPAGE REPORT

GHGRP Yearly Overview Profile (2023)

Table 1: GHGRP Sector Classifications

Power Plants	Refineries	Chemicals	Fluorinated Chemicals	Waste
Electricity Generation	Petroleum Refineries	Adipic Acid Production Ammonia Manufacturing Hydrogen Production Nitric Acid Production Phosphoric Acid Production Petroleum Production Silicon Carbide Production Titanium Dioxide Production Other Chemicals Production	Fluorinated Gas Production HFC-22 Production HFC-23 Destruction	Municipal Landfills Industrial Waste Landfills Industrial Wastewater Treatment Solid Waste Combustion
Metals	Minerals	Pulp & Paper	Petroleum & Natural Gas Systems - Direct Emissions	
Aluminum Production Formaldehyde Production Iron & Steel Production Lead Production Zinc Production Magnesium Production Other Metals Production	Cement Production Glass Production Lime Manufacturing Soda Ash Manufacturing Other Minerals Production	Chemical Pulp & Paper Manufacturing Other Paper Products	Onshore Production Offshore Production Natural Gas Processing Natural Gas Trans. Comp. Natural Gas Trans. Pipelines Natural Gas Distribution Underground Natural Gas Storage Liquefied Natural Gas Storage Liquefied Natural Gas Imp./Exp. Other Petroleum and Natural Gas Systems	

PDF REPORT

Annual report of data collected by GHGRP. Contains

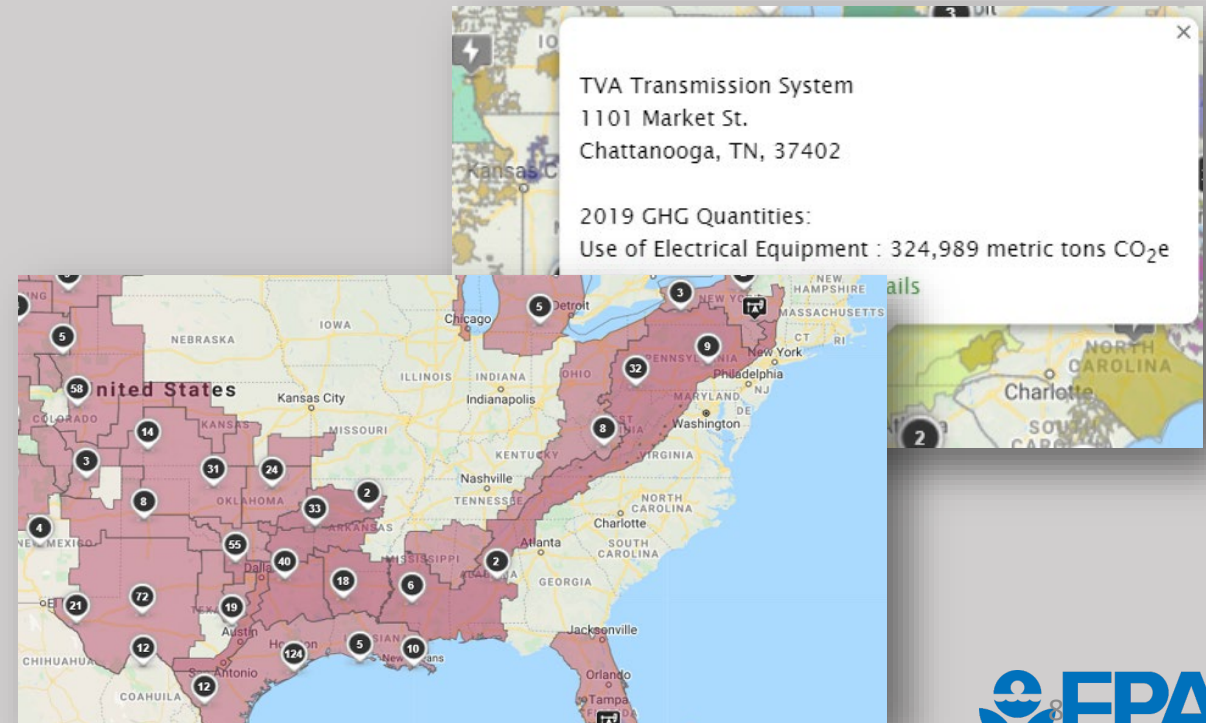
Find and Use Data Link:

www.epa.gov/ghgreporting/find-and-use-ghgrp-data



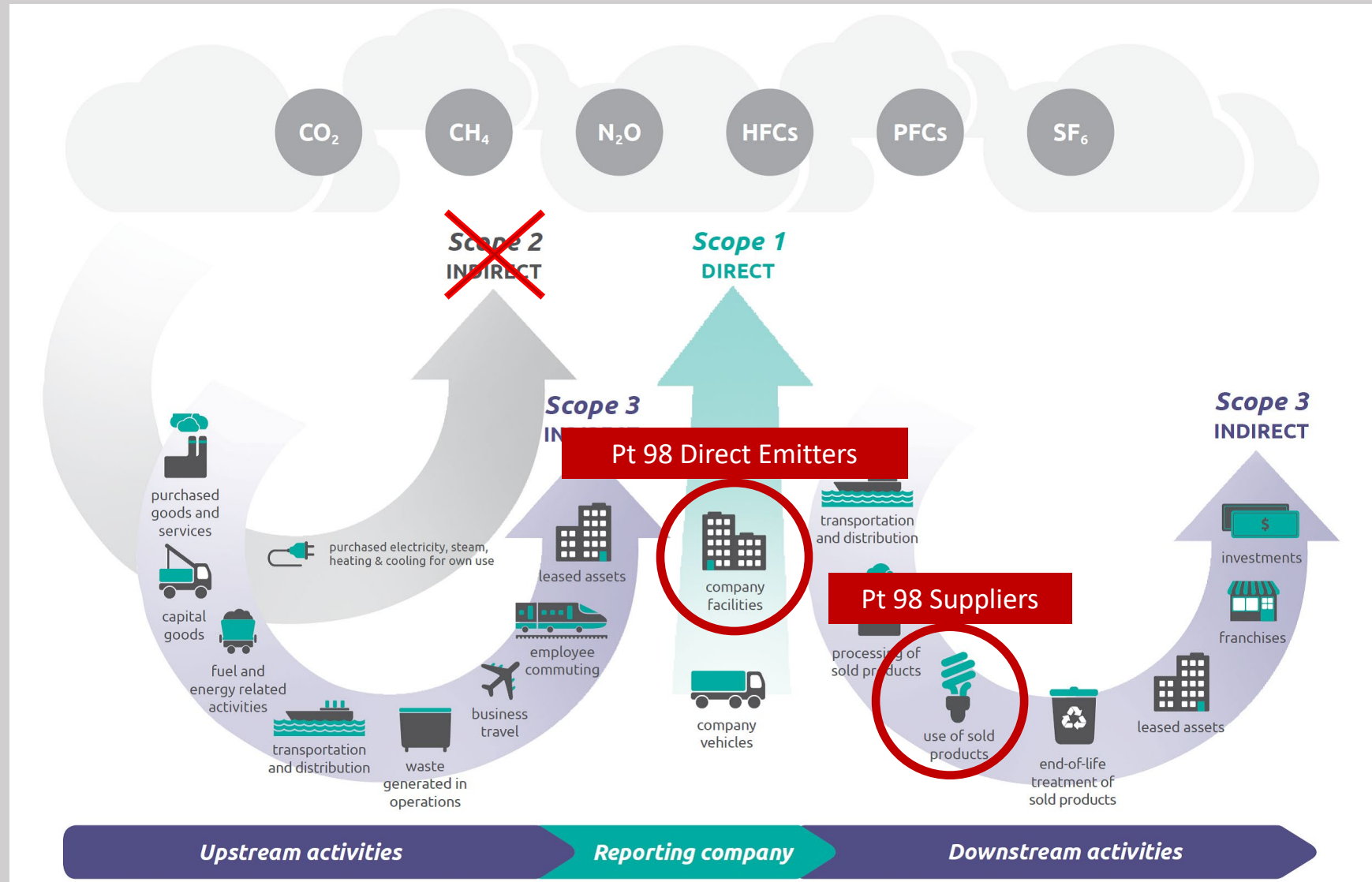
Note on Non-Geolocated Data

- The following direct emitter sources report data that cannot be disaggregated to individual locations or states. Their data uses a corporate or other address that may not match where the emissions come from:
 - Onshore oil and gas production
 - Onshore gathering and boosting
 - Use of electrical equipment
- This Effects
 - State Aggregations in FLIGHT
 - State & Tribal Fact Sheets
 - Demographic Data Highlights



Scope of Published GHGRP Data

- <https://www.wri.org/initiatives/greenhouse-gas-protocol>



Scope of GHGRP in data products

- FLIGHT <https://ghgdata.epa.gov/ghgp/main.do>

The screenshot shows the EPA FLIGHT website interface for the year 2023. The 'Facility Type' dropdown menu is open, displaying the following options:

- All Direct Emitters (highlighted with a red circle and a red box labeled 'Pt 98 Direct Emitters')
- Point Sources
- Onshore Oil & Gas Production
- Onshore Oil & Gas Gathering & Boosting
- Local Distribution Companies
- Onshore Gas Transmission Pipelines
- SF6 from Elect. Dist. Systems
- Suppliers
- CO₂ Capture, Supply and Underground Injection
- Geologic Sequestration of CO₂ (RR)

Sector	2023 GHG Emissions (Million Metric Tons CO ₂ e)	# of Reporting Facilities
2023 GHG Emissions (Million Metric Tons CO ₂ e)	1,471	322
# of Reporting Facilities	1,320	2,298

Scope of GHGRP in data products



- Data Summary Download <https://www.epa.gov/ghgreporting/data-sets>

3 All emissions data is presented in units of metric tons of carbon dioxide equivalent using GWP's from IPCC's AR4 (see FAQs tab)

Facility Id	FRS Id	Facility Name	City	State	Zip Code	Address	County	Latitude	Longitude	Primary NAICS Code
4										
5	1002685	110071162081	AC 857 A	Offshore	TX	00000		26.30	-94.90	211120
6	1004377	110043803578	121 REGIONAL DISPOSAL FACILITY	MELISSA	TX	75454	3820 SAM RAYBURN HIGHWAY	33.30	-96.54	562212
7	1010040	110071159872	15-18565/15-18662	Hazard	KY	40701	1021 Tori Drive	37.27	-83.24	
8	1000112	110071159492	23rd and 3rd	BROOKLYN	NY	11232	730 3rd Avenue	40.66	-74.00	221112
9	1003742	110038508335	31st Street Landfill	WESTCHESTER	IL	60154	11700 W 31ST ST	41.83	-87.92	562212
10	1003188	110000599273	3M BROWNWOOD	BROWNWOOD	TX	76801	4501 HIGHWAY 377 SOUTH	31.67	-99.00	326113
11	1005043	110071160392	3M CO	MAPLEWOOD	MN	55144		44.95	-93.00	541715
12	1003739	110000589159	3M CO - GUIN	GUIN	AL	35563	6675 US HIGHWAY 43	33.97	-87.90	326113
13	1007698	110000421776	3M CO - WAUSAU DOWNTOWN	WAUSAU	WI	54401	144 ROSECRANS ST	44.95	-89.64	212313
14	1004206	110000367567	3M COMPANY	DECATUR	AL	35609	1400 STATE DOCKS RD.	34.64	-87.03	325211
15	1006665	110013886875	3M CORDOVA	CORDOVA	IL	61242	22614 ROUTE 84 NORTH	41.76	-90.28	325998
16	1004836	110000423667	3M Cottage Grove Center - Site	Cottage Grove	MN	55016	10746 Innovation Rd	44.79	-92.91	325998
17	1003408	110071161417	3M INDUSTRIAL MINERAL PRODUCTS DIVISION	LITTLE ROCK	AR	72206	3110 WALTERS DRIVE	34.71	-92.25	327999
18	1004914	110000425059	3M MAGNETIC TAPE MANUFACTURING DIVISION	HUTCHINSON	MN	55350	905-915 ADAMS STREET SOUTHEAST	44.88	-94.36	326199
19	1004804	110000443805	3M NEVADA PLANT	NEVADA	MO	64772	2120 E. AUSTIN	37.83	-94.33	326113
20	1013282		3M Pittsboro	Moncure	NC	27559	4191 Hwy 87 South	35.66	-79.18	327999
21	1001106	110040862527	48th Street Peaking Station	HOLLAND	MI	49423	491 E 48TH ST	42.76	-86.09	221112
22	1004680	110013945062	58TH ST LF (MAIN COUNTY LF)	MIAMI	FL	33178	8831 NW 58TH ST	25.83	-80.35	562212
23	1000766	110064649901	59th Street			10019	850 12TH AVE	40.77	-73.99	221330
24	1000767	110070834991	74th Street	NEW YORK	NY	10021	506 E 75TH ST	40.77	-73.95	221330
25	1001032	110070116732	A.P. Brown Generating Station	MC INT VERNON	IN	47620	8511 WELBORN ROAD	37.91	-87.73	221112

Pt 98 Direct Emitters

Direct Emitters | Offshore Oil & Gas Prod. | Gathering & Boosting | Transmission Pipelines | EDC - Direct Emissions | SO2 from Elec. Equip. | Suppliers | CO2 Injection | Geologic Sequestration of CO2

Introducing GHGRP StoryMaps



- <https://www.epa.gov/ghgreporting/ghgrp-storymaps>

The screenshot displays the EPA GHGRP StoryMaps interface. At the top, the EPA logo and the text "An Interactive Exploration of the GHGRP" are visible. Below the header, three navigation tabs are present: "Onshore Wells and GHGRP", "Onshore Wells and Neighboring Communities", and "Natural Gas Transmission Pipelines and GHGRP".

The left panel, titled "Onshore Wells and GHGRP", features a map of the western United States with city labels (Vancouver, Portland, San Francisco, Fresno, Los Angeles, San Diego, Phoenix, Tucson, Hermosillo) and a text box titled "What is a Basin?". The text explains that a "Basin" refers to the geologic province published by the American Association of Petroleum Geologists (AAPG), with over 100 basins in the United States. It includes a link to learn more about basins.

The middle panel, titled "Onshore Wells and Neighboring Communities", shows a map of the United States with a dense network of blue lines representing onshore wells and their connections.

The right panel, titled "Natural Gas Transmission Pipelines and GHGRP", features a text box titled "What is a Natural Gas Transmission Pipeline?". The text describes transmission pipelines as large lines that transport natural gas throughout the country at high pressures, often passing through compressor stations. It also notes that the map represents major natural gas transmission pipelines in the U.S., including interstate, intrastate, and gathering pipelines.

Live Demonstration of GHGRP Data Tools and Resources

FLIGHT



2021 Greenhouse Gas Emissions from Large Facilities

Share | View U.S. GHG Inventory | View Other GHGRP Data Products | Help

Now you can visit ghgdata.epa.gov from your mobile device. [Click here to learn how to create a bookmark to our page on your mobile device.](#)

Data Year: 2021 | Facility Type: All Emitters | Find a Facility or Location:

Browse to a State: Choose State | Emissions by Fuel Type: Choose Fuel Type | Filter By: Greenhouse Gas | Emission Range | Filter By Status: All Facilities

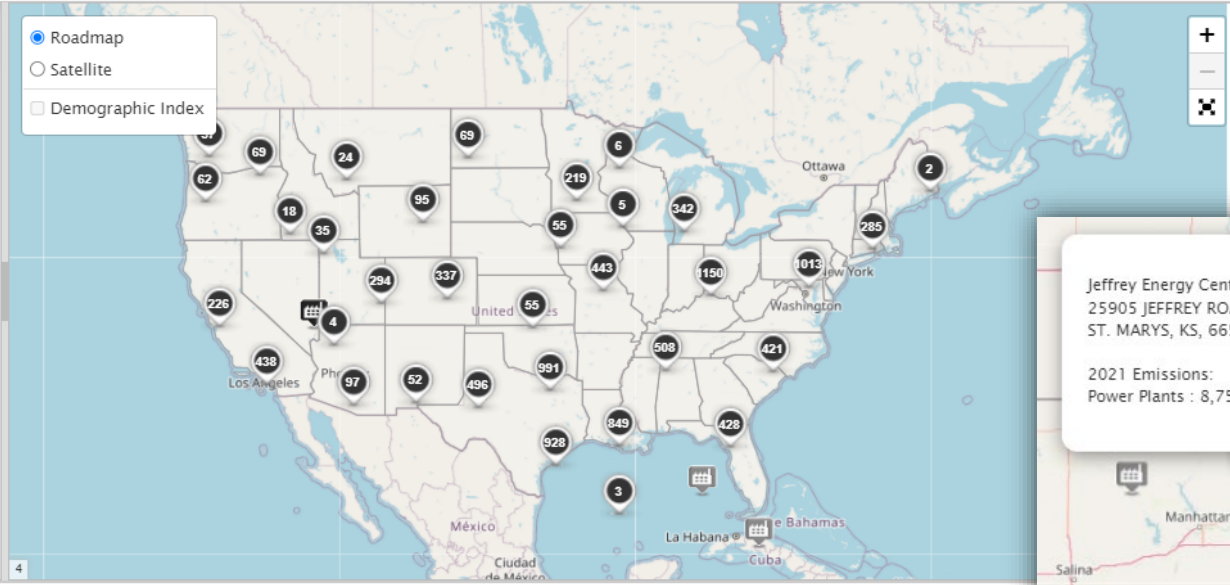
Data View: Map | List | Trends | Bar Chart | Pie Chart

APPLY SEARCH | Clear Filter | Export Data

Sector	Power Plants	Petroleum and Natural Gas Systems	Refineries	Chemicals	Other	Minerals	Waste	Metals	Pulp and Paper	Total Reported Emissions
2021 GHG Emissions (Million Metric Tons CO ₂ e)	1,589	312	165	186	121	114	103	82	35	2,708
# of Reporting Facilities	1,326	2,379	137	459	1,304	373	1,460	299	214	7,608

Legend | Layer Options

- All Emitters
 - All Emitters and Point Sources
 - Onshore Petroleum Natural Gas Production and Gathering & Boosting
 - Local Distribution Companies and Onshore Gas Transmission Pipelines
 - SP6 from Electrical Transmission and Distribution
 - Equipment Use
 - Suppliers
 - CO₂ Injection (IU)
 - Geologic Sequestration of CO₂ (RR)
 - Multiple Facilities
- Demographic Index
- National Map Federal Lands



Data Year: 2021

Jeffrey Energy Center

25905 JEFFREY ROAD
ST. MARYS, KS, 66536

Latitude: 39° 16.95' N
Longitude: 96° 06.92' W

GHGRP Id: 1000581
FRS Id: 110006011680
NAICS Code: 221112
Clean Air Markets Division Business Database Id: 805

View reported data | Download reported data (XML)

Facility Information | Facility Emissions by Year

Total Facility Emissions in metric tons CO₂ equivalent (mt CO₂e) (AR4 GWPs, excluding Biogenic CO₂): 8,759,787

Emissions by Gas in mt CO₂e (AR4 GWPs)

Carbon Dioxide (CO ₂)	8,714,010
Methane (CH ₄)	2,330
Nitrous Oxide (N ₂ O)	43,447

Emissions by Source/Process in mt CO₂e (AR4 GWPs, excluding Biogenic CO₂)

Stationary Combustion	857
Electricity Generation	8,758,931

Information on Stationary Combustion

Types of Fuels Used	Distillate Fuel Oil No. 2
Measurement Methods Used	Mass Balance
Number of equipment groupings	5

Information on Electricity Generation

Types of Fuels Used	Distillate Fuel Oil No. 2, Subbituminous Coal
Measurement Methods Used	Direct Emissions Monitoring
Number of equipment groupings	3

This data set does not reflect total U.S. GHG emissions. Learn more about related EPA GHG data sources. Data reported to EPA as of 08/12/2022.



- All Emitters**
- Point Sources
 - Onshore Oil & Gas Production
 - Onshore Oil & Gas Gathering & Boosting
 - Local Distribution Companies
 - Onshore Gas Transmission Pipelines
 - SF6 from Elect. Dist. Systems
 - Suppliers
 - CO₂ Capture, Supply and Underground Injection
 - Geologic Sequestration of CO₂ (RR)

You can search by Facility name, Facility City, Facility County, Facility State, Facility Zip Code, Reporting Program ID, NAICS code and Parent Company name.

Restrict your search to:

- Facility Name
- Facility City
- Facility County
- Facility State
- ZIP Code
- Facility ID
- NAICS Code
- Parent Company

Facilities are color coded to designate their verification and reporting status as of 08/12/2022 for reporting year 2021.

Orange indicates Verification of a facility's report was still in progress as of 08/12/2022. Click here to learn more about verification. Note (for RY21 and forward) that if a facility certified their report after the annual reporting deadline and verification was still in progress as of 08/12/2022, the facility's icon will display as orange.

Red indicates a facility has discontinued reporting without a valid reason as of 08/12/2022 or (for RY21 and forward) the facility certified their report after the reporting deadline.

Grey indicates a facility has discontinued reporting with a valid reason.

Black indicates a facility has submitted a 2021 report and has met EPA's verification requirements.

Data Year: 2021 | Facility Type: All Emitters | Search Options: Find a Facility or Location

Browse to a State: Choose State | Emissions by Fuel Type: Choose Fuel Type | Filter By: Greenhouse Gas | Emission Range | Filter By Status: All Facilities

Data View: Map | List | Trends | Bar Chart | Pie Chart

APPLY SEARCH | Clear Filter | Export Data

Sector	Power Plants	Petroleum and Natural Gas Systems	Refineries	Chemicals	Other	Minerals	Waste	Metals	Pulp and Paper	Total Reported Emissions
2021 GHG Emissions (Million Metric Tons CO ₂ e)	4	103	82	35	2,708					
# of Reporting Facilities	13	1,460	299	214	7,608					

- SECTORS
- SELECT ALL | DESELECT ALL
- Power Plants
 - Offshore Petroleum & Natural Gas Production
 - Onshore Petroleum & Natural Gas Production
 - Onshore Petroleum & Natural Gas Gathering & Boosting
 - Natural Gas Processing
 - Natural Gas Transmission/Compression
 - Onshore Natural Gas Transmission Pipelines
 - Natural Gas Local Distribution Companies
 - Petroleum and Natural Gas Systems
 - Adipic Acid Production
 - Ammonia Manufacturing
 - Fluorinated GHG Production
 - HCFC-22 Prod./HFC-23 Dest.
 - Hydrogen Production
 - Nitric Acid Production
 - Petrochemical Production
 - Phosphoric Acid Production
 - Silicon Carbide Production
 - Titanium Dioxide Production
 - Other Chemicals
 - Refineries
 - Underground Coal Mines
 - Food Processing
 - Ethanol Production
 - Universities
 - Manufacturing
 - Military
 - Use of Electrical Equipment
 - Electronics Manufacturing
 - Electrical Equipment Manufacturers
 - Other
 - Minerals
 - Cement Production
 - Other
 - Municipal Landfills
 - Industrial Landfills
 - Wastewater Treatment
 - Solid Waste Combustion
 - Waste
 - Metals
 - Aluminum Production
 - Ferroalloy Production
 - Iron & Steel Production
 - Lead Production
 - Magnesium
 - Zinc Production
 - Other Metals



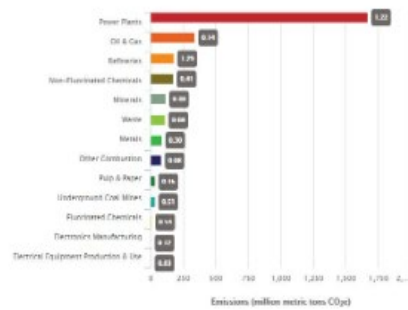
Data Highlights

Find GHGRP data products using the options below.

Alternatively, use the left menu to browse webpages on various topics.

- I want to view:**
- 2021 national data summaries (most recent reporting year)
 - Sector summaries
 - State and tribal summaries
 - Data downloads
 - View all GHGRP data products

National Data Highlights (2021)



Click on sectors below to customize sectors displayed in the chart

GHGRP Yearly Overview Profile (2021)

Table 1: GHGRP Sector Classifications

Power Plants	Refineries	Chemicals	Fluorinated Chemicals	Waste
<ul style="list-style-type: none"> Electricity Generation 	<ul style="list-style-type: none"> Petroleum Refineries 	<ul style="list-style-type: none"> Adipic Acid Production Aromatic Manufacturing Hydrogen Production Nitric Acid Production Phosphoric Acid Production Petrochemical Production Silicon Carbide Production Sulfuric Acid Production Other Chemicals Production 	<ul style="list-style-type: none"> Fluorinated Gas Production Hydrofluorocarbon (HFC) Production Perfluorocarbon (PFC) Production Sulfur Hexafluoride (SF₆) Production Other Fluorinated Chemicals Production 	<ul style="list-style-type: none"> Municipal Landfills Industrial Waste Landfills Industrial Wastewater Treatment Solid Waste Combustion
Metals	Minerals	Pulp & Paper	Petroleum & Natural Gas Systems - Direct Emissions	
<ul style="list-style-type: none"> Aluminum Production Ferrous Production Iron & Steel Production Lead Production Zinc Production Nickel Production Other Metals Production 	<ul style="list-style-type: none"> Cement Production Glass Production Lime Production Soda Ash Production Other Minerals Production 	<ul style="list-style-type: none"> Classical Pulp & Paper Manufacturing Other Paper Products 	<ul style="list-style-type: none"> Onshore Production Offshore Production Gathering and Boosting Natural Gas Processing Natural Gas Transmission Natural Gas Distribution Underground Natural Gas Storage Liquefied Natural Gas Storage Liquefied Natural Gas Ship, Exp. Other Petroleum and Natural Gas Systems 	

GHGRP Reported Data

For reporting year (RY) 2021, over 8,000 facilities and suppliers reported to the Greenhouse Gas Reporting Program (GHGRP). Among these reporters,

- 7,608 facilities in nine industry sectors reported direct emissions;
- Reported direct emissions totaled 2.71 billion metric tons carbon dioxide equivalent (CO₂e);
- 966 suppliers of fossil fuels and industrial gases reported; and
- 87 facilities reported injecting CO₂ underground (Subpart UU).

Figure 1: Direct GHG Emissions Reported by Sector (2021)

- By Emissions
- By Number of Facilities

2021 Direct GHG Emissions Reported by Sector

Average emissions per reporter shown in gray box

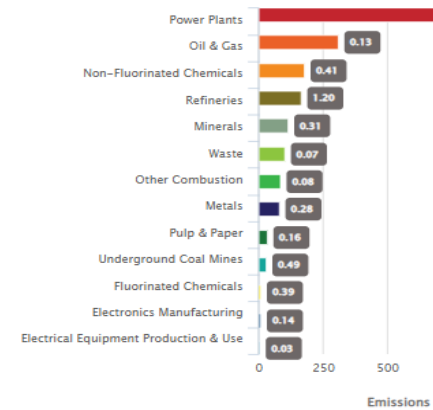
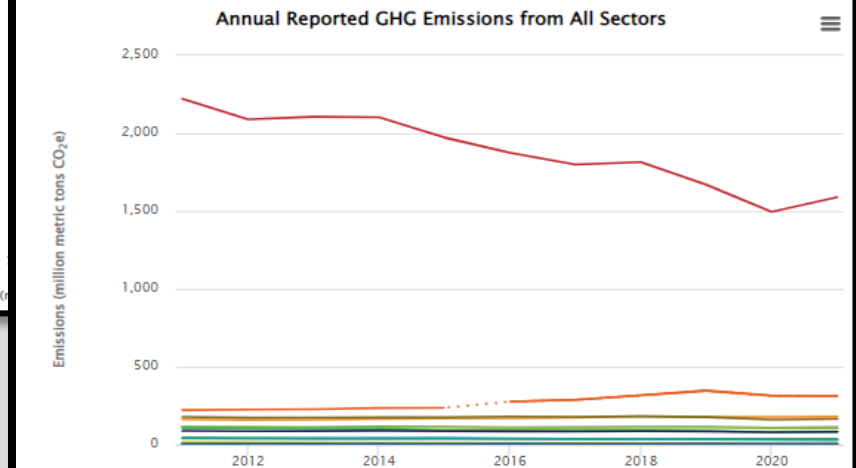


Figure 1: Trends in Direct GHG Emissions (2011-2021)^{1,2,3}



Envirofacts custom: <https://enviro.epa.gov/query-builder/ghg>

GHG Query Builder



[Home](#) | [Multisystem Search](#) | [Topic Searches](#) | [System Data Searches](#) | [About the Data](#) | [Data Downloads](#) | [Widgets](#) | [Services](#) | [Mobile](#) | [Other Datasets](#)

Retrieve data in 4 steps:

- 1 Choose a Subject Area
- 2 Choose a Table
- 3 Select Field(s)
- 4 View Data

Choose a Subject Area

Select a Subject Area below

Search title/description

Summary Subjects

Facility Information

Address and other location information about the facility.

5 tables

Gas Information

Contains information on greenhouse gas emissions, detailing the specific types of gas reported by facilities.

2 tables

Sector Information

Greenhouse gas information displayed by reporting sectors.

2 tables

Subpart Information

Greenhouse gas information displayed by the subpart a facility reports under.

Detailed Subpart Subjects

Aluminum Production

Identifying a collection of data elements containing the total annual emissions of each greenhouse gas (GHG) listed in Table A-1 of 40 CFR 98 Mandatory Reporting of Greenhouse Gases reported under this subpart, expressed in metric tons.

3 tables

Ammonia Manufacturing

Identifying a collection of data elements containing the total annual emissions of each greenhouse gas (GHG) listed in Table A-1 of 40 CFR 98 Mandatory Reporting of Greenhouse Gases reported under this subpart, expressed in metric tons.

5 tables

Cement Production

Identifying a collection of data elements containing the total annual emissions of each greenhouse gas (GHG) listed in Table A-1 of the Mandatory Reporting of GHGs, part 98, reported under this subpart, expressed in metric tons.

6 tables

Electricity Generation

Identifying data containing the total annual emissions of each greenhouse gas (GHG) listed in Table A-1 of 40 CFR 98 Mandatory Reporting of Greenhouse Gases reported under this Subpart, expressed in metric tons.

3 tables

Electronics Manufacture

Identifying a collection of data elements containing Electronics Manufacture details.

17 tables

Ferroalloy Production

Identifying a collection of data elements containing the total annual emissions of each greenhouse gas (GHG) listed in Table A-1 of the Mandatory Reporting of GHG, Part 98 reported under this subpart, expressed in metric tons.

5 tables

General Stationary Fuel Combustion Sources

Identifying the annual greenhouse gas emissions information for a specific fuel type. Reporters are required to specify the name of the GHG (CO₂, CH₄, N₂O) other gas names and gas quantity information (as applicable) for each fuel type.

12 tables

Glass Production

Identifying a collection of data elements containing total number of continuous glass melting furnaces.

5 tables

Hydrogen Production

Identifying a collection of data elements containing the total annual emissions of each greenhouse gas (GHG) listed in Table A-1 of 40 CFR 98 Mandatory Reporting of Greenhouse Gases reported under this Subpart, expressed in metric tons.

4 tables

New: GraphQL Services

- Service endpoint: <https://data.epa.gov/dmapservice/query/graphql>
- GraphQL Resources
 - <https://graphql.org/learn/queries/>
 - <https://ropensci.org/blog/2020/12/08/accessing-graphql-in-r/>
- EF Query Builder will show GraphQL syntax, e.g.:

```
query batchQuery($offset: Integer, $limit: Integer , $orderBy: OrderBy! )  
{ghg__rlps_ghg_emitter_subpart(offset: $offset, limit: $limit,where: {and: {year: {  
equalsSensitive: 2023 }}}}, orderBy: $orderBy, ){ address1 address2 city co2e_emission county  
facility_name county_fips gas_code gas_name facility_id ghg_quantity latitude longitude year  
state state_name subpart_category subpart_name subpart_type zip }}
```

Envirofacts RESTful Service V2 syntax



More info: <https://www.epa.gov/enviro/envirofacts-data-service-api>

```
https://data.epa.gov/efservice/[table]/[column][operator][value]/[join]/[first]:  
[last]/[sort]/[format]
```

- (1) **Table Name** – At least one table name is required. Up to three table names can be entered.
- (2) **Column Name** – This is an optional entry. Enter a column name and value to limit the results.
- (3) **Operator** – This is an optional entry. This parameter allows users to pass in an operator with the query. Default output is "=" and does not require an operator, but users can enter "<", ">", "=", "equals", "notEquals", "beginsWith", "endsWith", "contains", "excludes", "like", "notLike", operators as well via the URL. The "beginsWith" operator will return rows where the start of a column value is equal to the search value. While the "contains" will return rows where the search value is contained within the column value. Additional details on operators is available in the
- (4) **Column Value** – This is an optional entry. The column value is queried against the database, using the operator, without modification. Use the data Model to double check the case for the value.
- (5) **Joins**- ' <join_type> / <table> ' ; join types: "join", "cross", "full_outer", "left", "right"
- (6) **First/Last ROWS** – This is an optional entry. Specify the rows to display by entering ' / <first_row> : <last_row> ' Results numbering starts at 0. So to get the first five hundred rows enter rows/0:499 If "rows" is not specified, the default is the first 10000 rows.
- (7) **Sort**- '/sort/[column]:[direction]/ ' direction is optional and can be "asc" or "desc"
- (8) **Output Format** – This is an optional entry. The default output is in XML; however, output options of JSON, CSV or Excel can be requested in the URL. The output format is not case sensitive.

Envirofacts RESTful V1 Service Examples

- Retrieve Facility Information of emitters and suppliers to Greenhouse Gas (first 101 records):

https://data.epa.gov/efservice/PUB_DIM_FACILITY/ROWS/0:100

Here we just retrieve information from the PUB_DIM_FACILITY table. This is a summary table containing facility details for both emitters and suppliers.

The results can be returned in four formats: XML (default), **Excel**, **CSV**, or **JSON**. To specify Excel, CSV or JSON, just add “/EXCEL”, “/CSV” or “/JSON” to the URL.

https://data.epa.gov/efservice/PUB_DIM_FACILITY/ROWS/0:100/JSON

https://data.epa.gov/efservice/PUB_DIM_FACILITY/ROWS/0:100/EXCEL

https://data.epa.gov/efservice/PUB_DIM_FACILITY/ROWS/0:100/CSV

- Retrieve Facility Information and Gas details for direct emitters (first 101 records in XML)

https://data.epa.gov/efservice/PUB_DIM_FACILITY/FACILITY_TYPES/Direct%20Emitter/PUB_FACTS_SUBP_GHG_EMISSION/PUB_DIM_GHG/ROWS/0:100

Here we are utilizing three tables: PUB_DIM_FACILITY (facility info), PUB_FACTS_SUBP_GHG_EMISSION (Gas details and amounts), and PUB_DIM_GHG (additional Gas details). We also are adding the column “FACILITY_TYPES” within our URL, so that we only retrieve “Direct Emitter” information.

- If you wanted to get the same information as above for all Colorado facilities, you would add “/STATE/=/CO” to the URL.

https://data.epa.gov/efservice/PUB_DIM_FACILITY/STATE/=/CO/PUB_FACTS_SUBP_GHG_EMISSION/PUB_DIM_GHG

State and Tribal Fact Sheet

GHGRP State and Tribal Fact Sheet

About this tool:

- This page provides an interactive fact sheet summarizing GHGRP emissions for the current year.
- Choose a state, EPA Region, or tribal lands to view maps, charts, and tables summarizing emissions.
- Data download options are available at the bottom of the page.

See more GHGRP data pro
 Visit GHGRP's website to [find and use more GHGRP data](#)

EPA GHGRP 2021 Summary Fact Sheet - Colorado

Number of Facilities

123

This page provides a summary of GHGRP emissions data reported by facilities in Colorado based on 2021 data (as of 8/7/2021).

Sectors: Electrical Equipment, Electronics Manufacturing, Metals, Minerals, Miscellaneous Combustion, Natural Gas & Natural Gas Liquids, Non-Fluorinated Chemicals, Petroleum Products, Natural Gas Systems, Power Plants, Refineries, Underground Coal Mines, Waste

Greenhouse Gases: Carbon Dioxide, HFCs, HFEs, Methane, Nitrogen Trifluoride, Nitrous Oxide, Other Fully Fluorinated GHGs, PFCs, Sulfur Hexafluoride

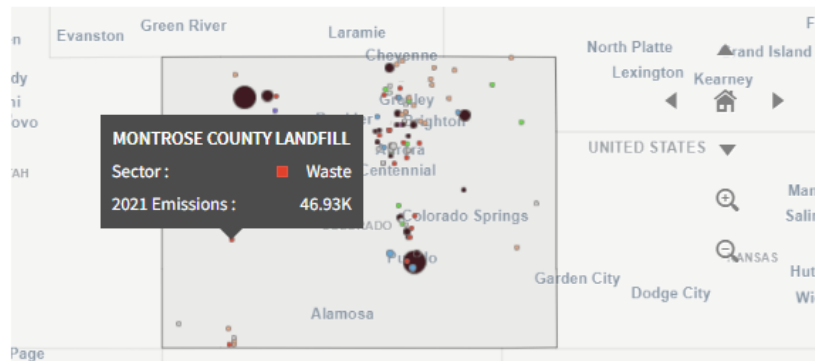
Note: State emissions totals do not include emissions from the Petroleum and Natural Gas Systems Onshore Production and Gathering and Boosting segments, as these emissions are reported at the basin level, which may cross state boundaries. State emission totals also do not include emissions from electric distribution systems, which are reported at the corporate level, and cannot be attributed to individual states.

2021 Emissions (metric tons CO₂e)

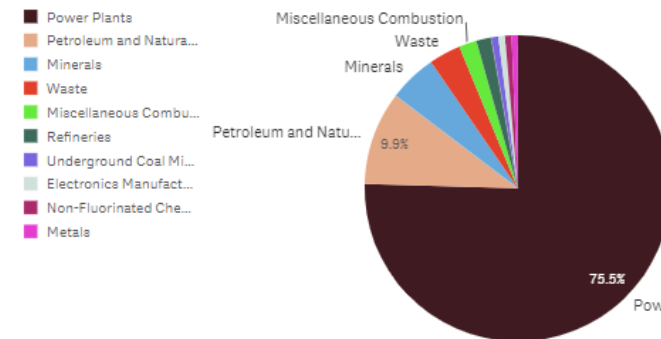
41,899,750

Summary of Emissions in 2021

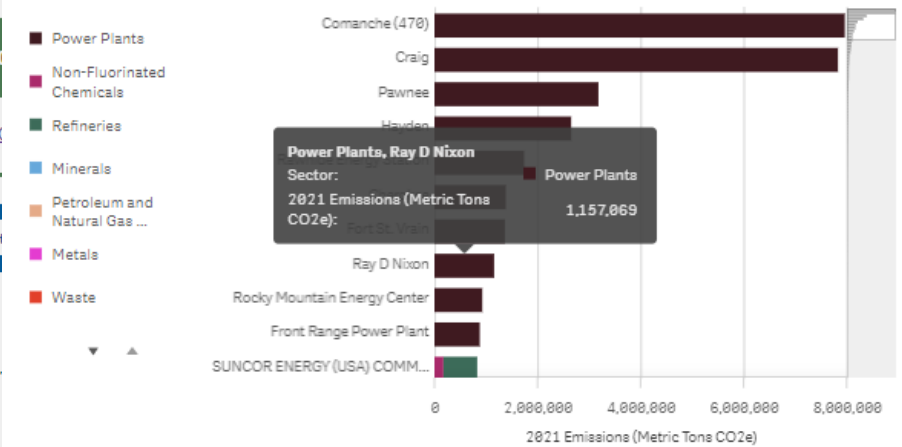
Map of GHGRP Facilities Reporting Emissions in 2021



Direct GHG Emissions Reported by Sector in 2021

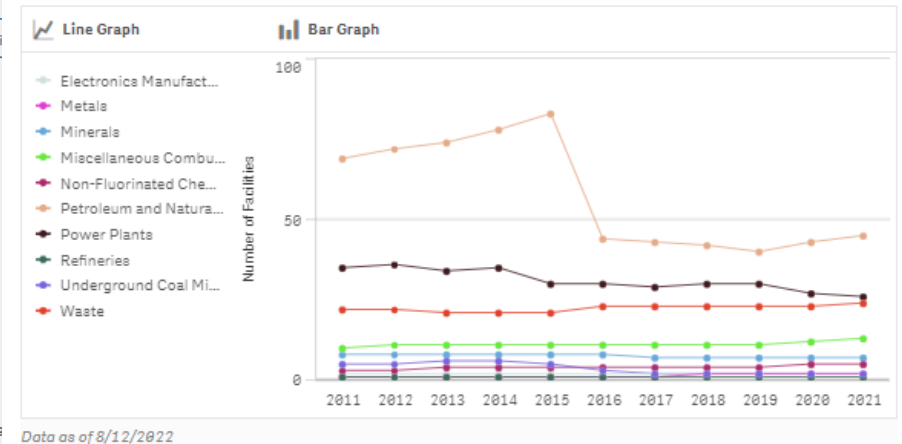


Direct GHG Emissions by Facility and Industry Sector in 2021



Trends in Emissions

Trends in Number of Facilities by Sector



Demographic Data Highlights

Select a Sector

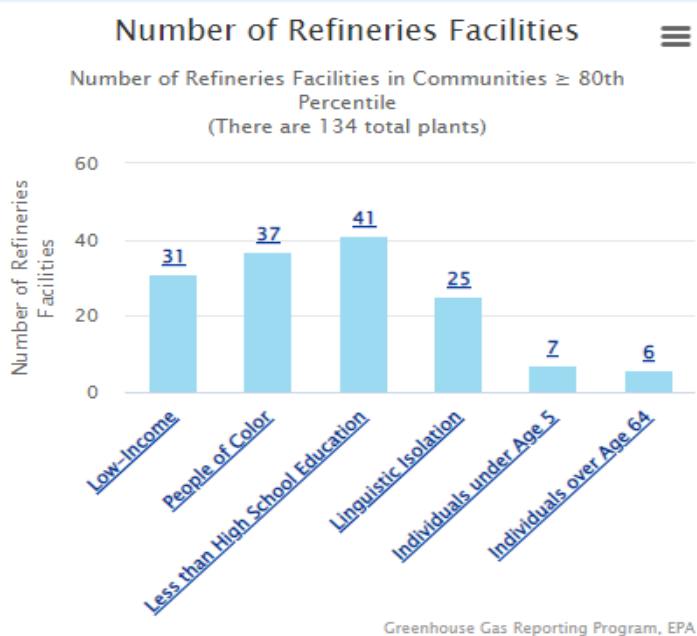
Indicator definitions

FAQs

This graph displays the number of facilities located in or near communities which meet or exceed the 80th percentile nationally for each key demographic indicator. You can explore the distribution of all facilities for a particular demographic indicator by selecting the label or bar for the indicator.

Select a sector

Refineries



This graph compares the key demographics of communities near facilities in your selected sector to the national average. The national average for each demographic based on all Census block groups is shown in parentheses.

Compare by:



Demographic Indicator



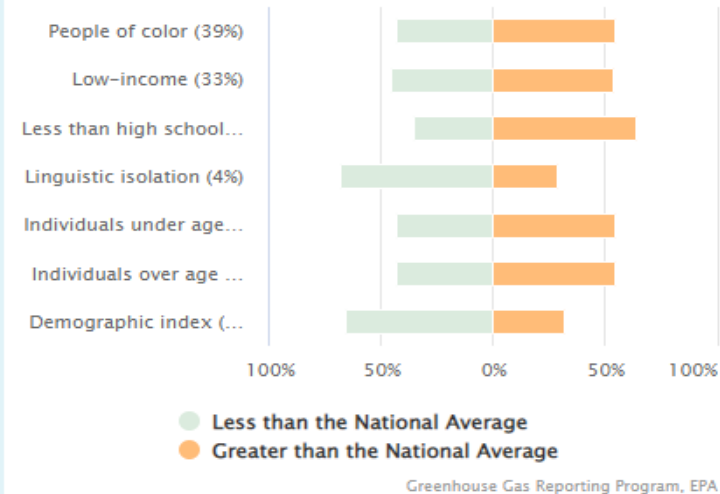
Sector

Select a sector

Refineries

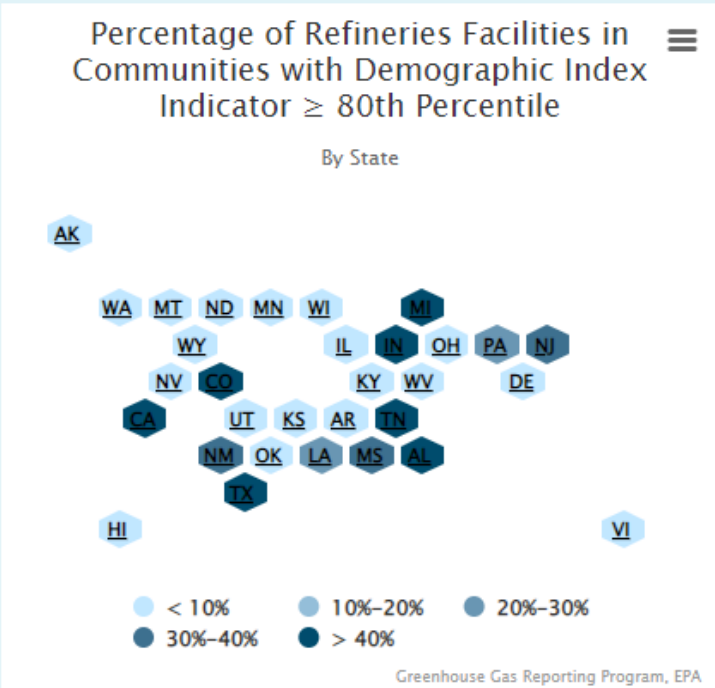
Demographics of Communities Near Refineries Facilities

(National averages in parenthesis)



Demographic Data Highlights

The map below displays the percentage of facilities in the selected sector within each state that are in communities which are at or exceed the 80th percentile nationally for the selected demographic indicator. Click on a state to explore state-level data.



Select a sector

Refinerie

Select an indicator

Demographi

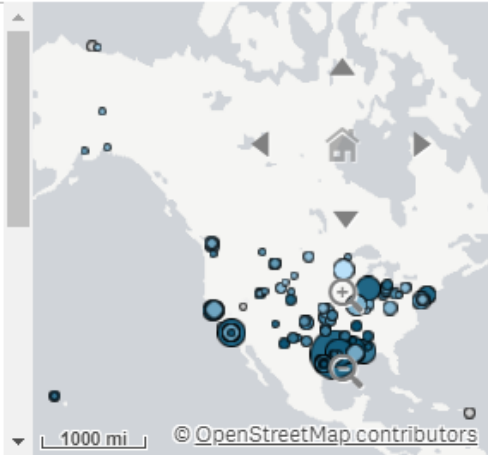
The following map shows the locations of facilities in the selected sector, with the color gradient indicating the percentile value for each facility for the selected demographic indicator.

Refinerie in 2021 by Demographic Index

134 facilities

Facilities in 2021
Point layer

Demographic Index ...
100



Note: there are 137 facilities in total, but 3 do not have location and/or demographic data available.

Select a sector

Refinerie

Select an indicator

Demographi

Show Tribal Lands

For Help

- GHGRP FLIGHT Help

<https://ccdsupport.com/confluence/display/ghgp/Home>



- Contact us:

Email to ghgreporting@epa.gov or use web-form:

<https://www.epa.gov/ghgreporting/forms/contact-us-about-ghg-reporting-0>

Links

- Find and Use GHGRP Data:
www.epa.gov/ghgreporting/find-and-use-ghgrp-data
- FLIGHT
<https://ghgdata.epa.gov/ghgp/main.do>
- GHGRP Data Highlights
www.epa.gov/ghgreporting/ghgrp-reported-data
- GHGRP Data Sets
www.epa.gov/ghgreporting/ghg-reporting-program-data-sets
- Envirofacts (EF) Database
<https://enviro.epa.gov/envirofacts/ghg/search>
- EF Greenhouse Gas Customized Search
<https://enviro.epa.gov/query-builder/ghg>
- EF Greenhouse Gas Model
www.epa.gov/enviro/greenhouse-gas-model
- EF Greenhouse Gas RESTful Data Service
<https://www.epa.gov/enviro/greenhouse-gas-restful-data-service>
- GHGRP Help
<https://ccdsupport.com/confluence/>
- GHGRP State Fact Sheet
www.epa.gov/ghgreporting/ghgrp-state-fact-sheet
- Demographic Data Highlights:
<https://edap.epa.gov/public/extensions/GHGRP-Demographic-Data-Highlights/GHGRP-Demographic-Data-Highlights.html>