

# Greenhouse Gas Reporting Program (GHGRP) Update

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# 2008 Consolidated Appropriations Act

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- ▶ Congress directed EPA to establish a mandatory reporting system for greenhouse gas emissions
- ▶ EPA's Greenhouse Gas Reporting Rule requires reporting for:
  - ▶ direct greenhouse gas emitters,
  - ▶ fossil fuel suppliers,
  - ▶ industrial gas suppliers, and
  - ▶ facilities that inject CO<sub>2</sub> underground for sequestration.

# Presentation Overview

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- ▶ GHGRP Program Overview
  - ▶ 2013 Status & 2012 Summary Statistics
  - ▶ Public access to data
- ▶ Electrical Equipment Manufacture and Use Sectors
  - ▶ Summary Statistics
    - ▶ subpart DD
    - ▶ subpart SS

# GHGRP Overview

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*Goal of GHGRP:* *To collect accurate GHG emissions data to inform future policy decisions*

- ▶ Rule covers 41 source categories for reporting, accounting for 85-90% of U.S. GHG emissions
  - ▶ Emissions data not confidential per Clean Air Act
- ▶ Data reporting only, no control or use requirements

# 2013 Data: Verification On-Going

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- ▶ April 1<sup>st</sup>, 2014 was deadline for submitting 2013 reports to EPA
- ▶ EPA reviews reports for errors and sends messages via e-GGRT
  - ▶ Verification – data gaps, outliers, year-to-year trends
  - ▶ May 19<sup>th</sup> message to reporters with identified questions
- ▶ Reporters responsible for responding to and correcting any errors in their reports within 45 days
  - ▶ Resubmit data as needed through e-GGRT
  - ▶ Reporters can request an extension

# 2012 GHG Data Summary

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- ▶ Reports from 7,809 direct emitters
  - ▶ Reporting a total of 3,128 million metric tons CO<sub>2</sub>e
- ▶ Power plants are largest stationary source of direct emissions - 2,090 MMTCO<sub>2</sub>e
- ▶ Petroleum and Natural Gas Systems are second at 217 MMTCO<sub>2</sub>e
- ▶ 2012 data accounts for 85-90 percent of total U.S. emissions
  - ▶ This percentage reflects both upstream suppliers and direct emitters
  - ▶ Not covered are GHG emissions from smaller sources, and from agricultural and land-use activities

# GHGRP Reported Data in FLIGHT

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- ▶ EPA's Facility Level Information on Greenhouse Gases Tool (FLIGHT)
  - ▶ allows public to view key data elements by facility, industry, location, or gas, time series
  - ▶ <http://ghgdata.epa.gov/ghgp/main.do>

# FLIGHT



## 2012 Greenhouse Gas Emissions from Large Facilities

Other Data Sources | Download Complete Data Set | Help

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Data Year: 2012 | Data Type: Emitters | What's this? | Filter By: Greenhouse Gas | Emission Range | Data View: [Icons]

Search Options: Find a Facility or Location | Search | Browse to a State: Choose State

NEW! 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.



Sector	Power Plants	Petroleum and Natural Gas Systems	Refineries	Chemicals	Other	Waste	Metals	Minerals	Pulp and Paper
2012 GHG Emissions (Million Metric Tons CO <sub>2</sub> e)	2,090	217	173	170	123	100	107	107	42
# of Reporting Facilities	1,611	2,058	144	463	1,419	1,611	297	369	232

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 09/01/2013.



# FLIGHT

US EPA http://ghgdata.epa.gov/ghgp/main.do#/barSector/?q=Find a Facility or Location&st=&bs= US EPA Facility Level GHG Emi... x

Convert Select

**EPA flight** Facility Level Information on Greenhouse gases Tool Refresh View

2012 Greenhouse Gas Emissions from Large Facilities

Other Data Sources Download Complete Data Set Help

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Data Year: 2012 Data Type: Emitters Filter By: Greenhouse Gas Emission Range Data View

Search Options Find a Facility or Location Search Browse to a State Choose State

View by Sector Geography Selected Year Changes

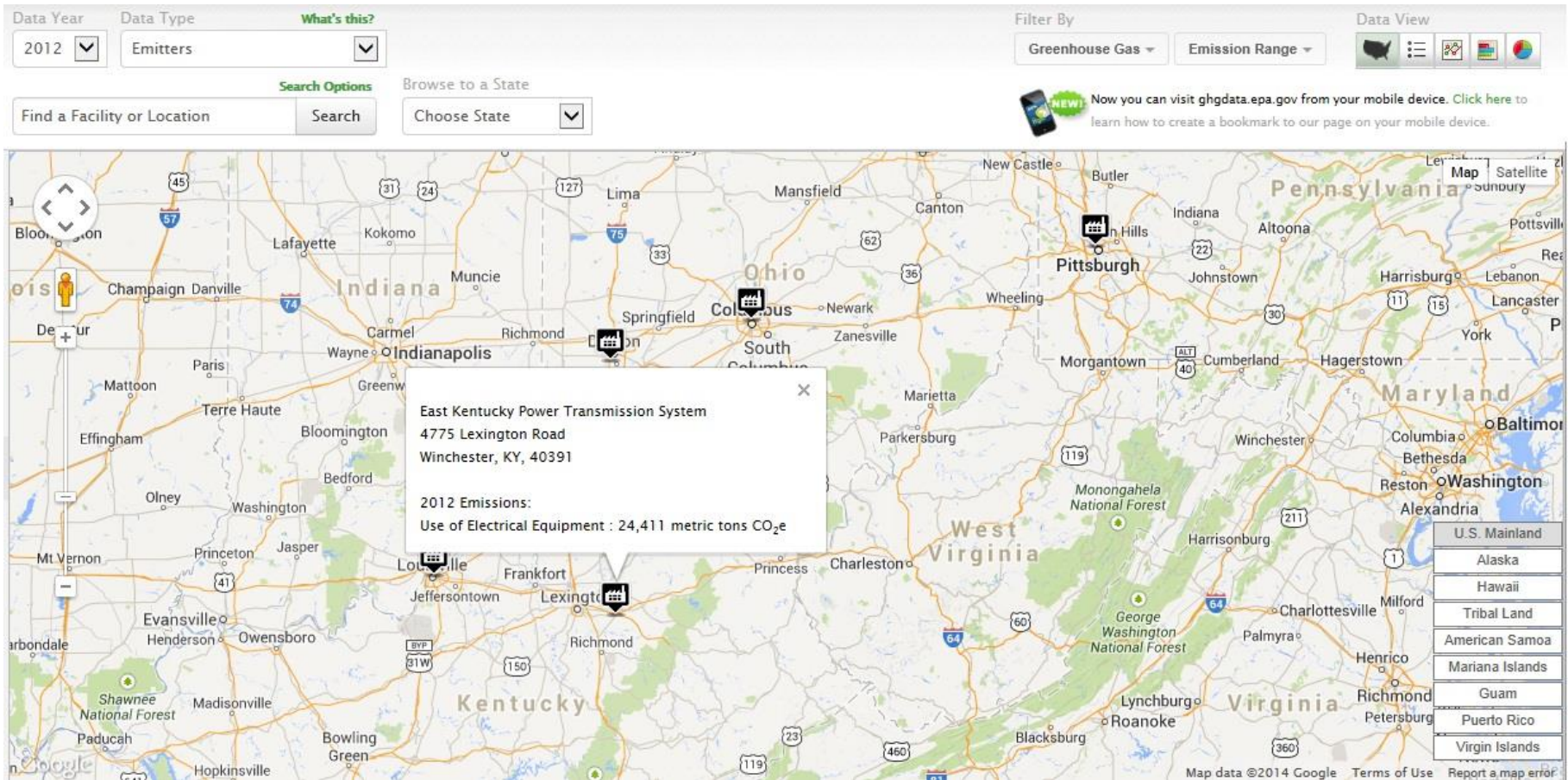
123 Total Emitters Displayed

Facility Name/Location	2012 Emissions (metric tons CO <sub>2</sub> e)
AEP Corporate SF6 Emissions Columbus, OH, 43215	93,112
ALLETE, Inc. Transmission and Distribution System Duluth, MN, 55802	8,109
Ameren Illinois Peoria, IL, 61602	95,703
Ameren Missouri St. Louis, MO, 63103	15,014
American Transmission Company Waukesha, WI, 53188	35,135
Anaheim Electric Distribution System Anaheim, CA, 92805	8,372
Apex Generating Station LAS VEGAS, NV, 89165	0
Arizona Public Service Page 1 of 2 Pages	4,393

U.S. - Other - Direct GHG Emissions of Selected Gases Reported by Sector/Subsector in Metric Tons of CO<sub>2</sub>e

Sector	Power Plants	Petroleum and Natural Gas Systems	Refineries	Chemicals	Other	Waste	Metals	Minerals	Pulp and Paper
2012 GHG Emissions (Million Metric Tons CO <sub>2</sub> e)	---	---	---	---	3.4	---	---	---	---
# of Reporting Facilities	---	---	---	---	123	---	---	---	---

# FLIGHT



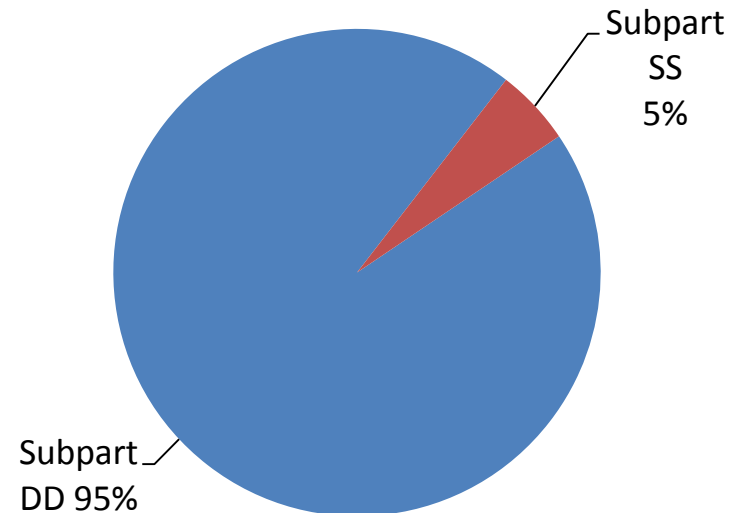
# Electrical Equipment Manufacture and Use Sector

# 2012 Highlights: Electrical Equipment Manufacture (DD) and Use (DD) Sectors

- ▶ 129 facilities reported emissions of 3.58 million metric tons CO<sub>2</sub>e

Subpart	Source Category	Emissions (MMTCO <sub>2</sub> e) (2012)	Number of Reporting Facilities (2012)
DD	Use of Electric T&D Equipment	3.39	123
SS	Manufacture of Electric T&D Equipment	0.19	6

**SF6 emissions by subpart - 2012**



# Electrical Equipment Manufacture and Use Sector - Emission Trends

- ▶ SF6 emissions decreased 20 percent between 2011 and 2012
  - ▶ Subpart SS decreased emissions by 49 percent
  - ▶ Subpart DD decreased emissions by 18 percent

Electrical Equipment Manufacture and Use Sector	Emissions (million metric tons CO <sub>2</sub> e)	
	2011	2012
Total Electrical Equipment Manufacture and Use Sector	4.47	3.57
Electrical Equipment Use (subpart DD)	4.12	3.39
Manufacture of Electric Transmission and Distribution Equipment (subpart SS)	0.37	0.19

# Subpart DD – Data Highlights

Subpart DD	GHGRP		Total Industry		Percent of Industry	
	2011	2012	2011	2012	2011	2012
<b>Number of Facilities</b>	<b>117</b>	<b>123</b>				
<b>Transmission Miles</b>	<b>466,557</b>	<b>479,786</b>	<b>744,387</b>	<b>760,784</b>	<b>63</b>	<b>63</b>
<b>Emissions (Million Metric Tons CO<sub>2</sub>e)</b>	<b>4.12</b>	<b>3.39</b>	<b>6.24</b>	<b>5.06</b>	<b>66</b>	<b>67</b>

# Subpart SS – Data Highlights

Subpart SS	GHGRP		Total Industry		Percent of Industry	
	2011	2012	2011	2012	2011	2012
<b>Number of Facilities</b>	6	6	11	11	55	55
<b>Emissions (Million Metric Tons CO<sub>2</sub>e)</b>	0.37	0.19	0.56	0.29	66	66

# Next steps

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## ▶ EPA

- ▶ No proposed or anticipated revisions to subpart DD or SS regulatory text
- ▶ Emphasize compliance not enforcement
  - Complete and accurate reports
  - All required reporters report

## ▶ Regulated community

- ▶ Issues, concerns, needs?



# Additional Resources

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- ▶ [www.epa.gov/climatechange/emissions/ghgrulemaking.html](http://www.epa.gov/climatechange/emissions/ghgrulemaking.html)
  - ▶ Preamble and rule
  - ▶ Technical background documents on source categories
  - ▶ Comment response documents
  - ▶ Link to rulemaking docket
  - ▶ Technical assistance materials
  
- ▶ Email: [GHGMRR@epa.gov](mailto:GHGMRR@epa.gov)

# Subpart DD: Users of Electrical Transmission and Distribution Equipment

# Subpart DD Overview

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## ▶ **GHGs That Must Be Reported**

- ▶ SF6 and PFCs emissions from:
  - Fugitive equipment leaks, installation, servicing, equipment decommissioning and disposal
  - Storage cylinders and other containers
- ▶ Emissions from equipment installation and recently purchased equipment must be reported under subpart DD once equipment user has the title to equipment

## ▶ **Reporting Threshold**

- ▶ Total nameplate capacity of SF6 and PFC insulated equipment located within the facility, when added to total nameplate capacity not located within the facility but under common ownership or control, exceeds 17,820 pounds (**excluding sealed-pressure**)
- ▶ Capacity-based equivalent to emissions-based threshold of 25,000 MTCO<sub>2e</sub>

# Subpart DD Source Category Definition

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- ▶ All electric transmission and distribution equipment and servicing inventory insulated with or containing SF6 or PFCs used within an electric power system.
  - ▶ Gas-insulated substations
  - ▶ Medium and High Voltage Circuit breakers and other switchgear, including both closed-pressure and hermetically sealed-pressure
  - ▶ Gas containers, such as pressurized cylinders
  - ▶ Gas carts
  - ▶ Electric power transformers

# Subpart DD Facility Definition

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- ▶ Due to the unique physical characteristics of electric power systems, subpart DD provides the following facility definition exclusively for the subpart:

**Facility (electric power system facility):** *all electric transmission and distribution equipment insulated with or containing SF6 or PFCs that is linked through electric power transmission or distribution lines and functions as an integrated unit, that is owned, serviced, or maintained by a single electric power transmission or distribution entity (or multiple entities with a common owner), and that is located between: (1) the point(s) at which electric energy is obtained from an electricity generating unit or a different electric power transmission or distribution entity that does not have a common owner, and (2) the point(s) at which any customer or another electric power transmission or distribution entity that does not have a common owner receives the electric energy. The facility also includes servicing inventory for such equipment that contains SF6 or PFCs.*

- ▶ Not Corporate-based, although may align with corporate boundaries
- ▶ Each distinct facility submits emissions report to EPA

# **Subpart DD Relationship to EPA Voluntary Partnership for Electric Power Systems**

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- ▶ Voluntary Partnership and GGRP are complementary programs
- ▶ Purpose of Partnership is to identify and support efforts to reduce emissions from electric power systems
- ▶ Voluntary Partnership will continue
- ▶ Facilities required to report under GHGRP report only once through e-GGRT system
- ▶ Facilities not covered under the GHGRP expected to continue reporting per voluntary agreement

# Subpart SS: Manufacturers of Electrical Transmission and Distribution Equipment

# Subpart SS Overview

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## ▶ **GHGs That Must Be Reported**

- ▶ SF<sub>6</sub> and PFCs at the facility level
- ▶ Emissions from equipment installation must be reported under subpart SS before the title to the equipment is transferred to the electric power transmission or distribution entity.
- ▶ CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> emissions from each stationary combustion unit.

## ▶ **Reporting Threshold**

- ▶ Total annual purchases of SF<sub>6</sub> and PFCs that exceed 23,000 pounds.
- ▶ Capacity-based equivalent to emissions-based threshold of 25,000 MTCO<sub>2e</sub>



# Subpart SS Source Category Definition

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- ▶ The electrical equipment manufacturing or refurbishment category consists of processes that manufacture or refurbish gas-insulated substations, circuit breakers, other switchgear, gas-insulated lines, or power transformers (including gas-containing components of such equipment) containing SF<sub>6</sub> or PFCs.
- ▶ The processes include:
  - ▶ Equipment testing
  - ▶ Installation
  - ▶ Manufacturing
  - ▶ Decommissioning and disposal
  - ▶ Refurbishing
  - ▶ Storage in gas cylinders and other containers

# Subpart DD and SS: Equipment Installation & Reporting Boundary

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- ▶ Emissions that occur during installation while filling the equipment offsite from the electrical equipment manufacturing facility must be calculated and reported by the electrical equipment manufacturer under Subpart SS *until the title of the equipment has transferred to the electric power T&D entity.*
- ▶ Once the title has transferred to the equipment user, the subpart DD facility is responsible for reporting emissions even if third-party conducts installation.
  - ▶ Emissions are captured in subpart DD mass-balance monitoring methods
- ▶ For subpart SS facilities, emissions associated with equipment installation off-site from the manufacturing facility are estimating using a specified mass-balance formula provided in subpart SS.

# EPA Compliance & Enforcement

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- ▶ EPA finds violations using information-gathering authorities that allow EPA to inspect facilities, to require monitoring or testing of emissions or to demand the production of documents
- ▶ EPA issues administrative compliance order, issue an administrative penalty order, or bring a civil or criminal enforcement action
- ▶ EPA is authorized to assess administrative penalties of up to \$37,500 per day of violation, up to a maximum amount of \$290,000, unless the Administrator and the Attorney General jointly agree to a larger amount.
- ▶ The Act provides up to \$37,500 per day of violation for civil judicial violations, and higher penalties and imprisonment for criminal violations. The penalty numbers are increased periodically for inflation