

State Inventory Tool

User Guide for Estimating Indirect Carbon Dioxide, Methane and Nitrous Oxide Emissions from Electricity Consumption

SEPTEMBER 2026

ACKNOWLEDGEMENTS

The SIT was originally developed in conjunction with EPA's state and local programs to automate the steps states would need to take in developing their own emission estimates in a manner that was consistent with prevailing national and state guidelines. The result was a user-friendly set of eleven modules that help users estimate greenhouse gas emissions and removals at the state level. CGS is supporting updates to the tool to facilitate continuity in state inventory development and improvement work at the state level.

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This section of the User Guide provides instruction on using the Indirect CO₂, CH₄ and N₂O Emissions from Electricity Consumption (Electricity Consumption) module of the State Inventory Tool (SIT), and describes the methodology used for estimating greenhouse gas emissions from electricity consumption at the state level.

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1.1 MODULE OVERVIEW

This User Guide accompanies and explains the Electricity Consumption module of the SIT.

Because most state inventories developed today rely heavily on the SIT, User Guides have been developed for each of the SIT modules. These modules contain largely updated methodologies that are, for the most part, consistent with the Inventory of U.S. Greenhouse Gas Emissions and Sinks (EPA 2025a) and related disaggregated data by state. Users can refer to the chapters and annexes of the U.S. Inventory and the Center for Global Sustainability (CGS) FAQ page to obtain additional information not found in the SIT or in the companion User's Guides. Future updates will be consistent with the Center for Global Sustainability at University of Maryland's Greenhouse Gas Inventory and Analysis for the United States (GHGIA) (Desai et al. 2026).

In recent years, EPA also published an annual Inventory of U.S. Greenhouse Gas Emissions and Sinks by State (EPA 2024a) to make available consistent state-level GHG data for all states for use by states, researchers, and the general public. There will be differences between the latest EPA developed state-level estimates and inventory estimates developed by states using the SIT or other tools. Inventories compiled by states may differ for several reasons, and differences do not necessarily mean that one set of estimates is more accurate, or "correct". The CGS plans to continue EPA's initiative to publish an updated annual crosswalk guide to facilitate understanding methodological differences between methods in the current GHGIA, its disaggregation by state and SIT source categories, methods, and data.

The Electricity Consumption module calculates CO₂, CH₄ and N₂O emissions from the electricity consumption by the end-use equipment types shown in Table 1, by end-use sector. While the module provides default data for electricity consumption by end-use types (depending on availability), users are encouraged to use state-specific data, where available. If using outside data sources, or for a more thorough understanding of the tool, please refer to the following discussion for data requirements and methodology.

1.1.1 Data Requirements

To calculate CO₂, CH₄ and N₂O emissions from electricity consumption, the following data are required:

- Electricity consumption by sector;
- Percent electricity consumption by end-use equipment;
- Electricity emission factors; and
- Transmission loss factors.

Electricity consumption statistics should be collected on a kilowatt-hour¹ (kWh) basis. Statistics providing energy consumption data in other units, e.g., British Thermal Units (Btu), may be used, but

¹ A measure of electricity defined as a unit of work or energy, measured as 1 kilowatt (1,000 watts) of power expended for 1 hour. One kWh is equivalent to 3,412 Btu.

require conversion to kWh. One kWh is equivalent to 3,412 Btu. Please note that even data given in Btu may be preceded by a prefix indicating order of magnitude (i.e. thousand, million, billion). For a better understanding of the quantity prefixes used with Btu, refer to Box 1.

The Electricity Consumption module calculates CO₂, CH₄ and N₂O emissions from the electricity consumption by the end-use equipment types, by end-use sector shown in Table 1. The following sections provide a discussion of the available data for each sector.

Table 1. End-Use Equipment by Sector

Box 1: Energy Units

A British thermal unit (Btu) is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at or near 39.2° Fahrenheit.

Btu	British thermal unit	1 Btu
MBtu	Thousand Btu	1x10 ³ Btu
MMBtu	Million Btu	1x10 ⁶ Btu
BBtu	Billion Btu	1x10 ⁹ Btu
TBtu	Trillion Btu	1x10 ¹² Btu
QBtu	Quadrillion Btu	1x10 ¹⁵ Btu
Wh	Watt-hour	1 Wh
kWh	Kilowatt-hour	1x10 ³ Wh
MWh	Megawatt-hour	1x10 ⁶ Wh

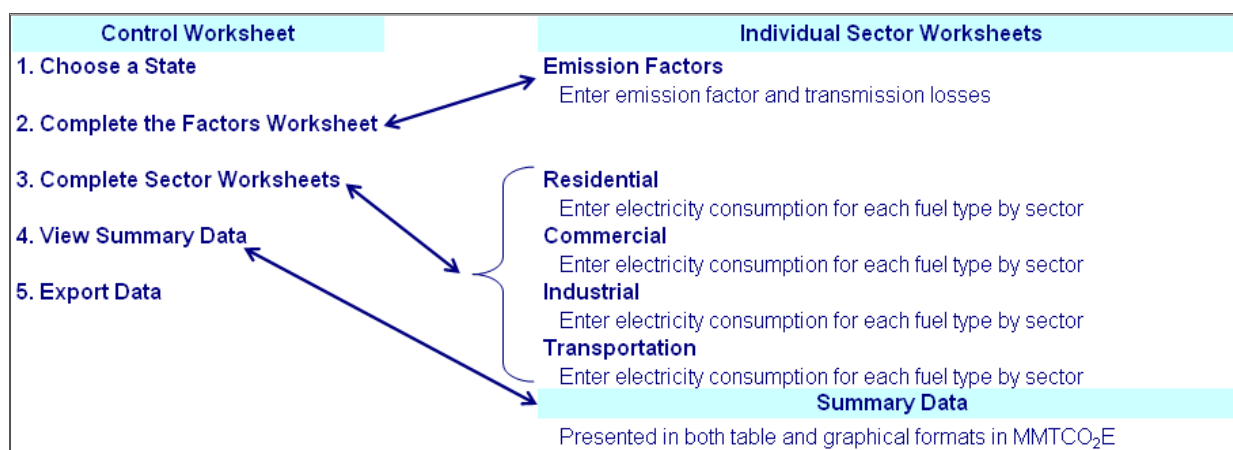
Residential ¹	Commercial ²	Industrial ³	Transportation ⁴
Space Heating	Space Heating	Indirect Uses- Boiler Fuel	Automated
Air-conditioning	Cooling	Conventional Boiler Use	Guideway
Water Heating	Ventilation	CHP and/or Cogeneration	Bus (charged batteries)
Refrigeration	Water Heating	Process	Cable Car
Other	Lighting	Direct Uses- Total Process	Commuter Rail
Appliances and Lighting	Cooking	Process Heating	Heavy Rail
	Refrigeration	Process Cooling and Refrigeration	Inclined Plane
	Office Equipment	Machine Drive	Light Rail
	Computers	Electro-Chemical Processes	Trolleybus
	Other	Other Process Use	Other
		Direct Uses- Total Nonprocess	
		Facility HVAC	
		Facility Lighting	
		Other Facility Support	
		Onsite Transportation	
		Other Nonprocess Use	

Source: See Box 4 below.

1.1.2 Tool Layout

Because there are multiple steps to complete within the Electricity Consumption module, it is important to understand the module's overall design. The layout of the Electricity Consumption module and the purpose of its worksheets are presented in Figure 3.

Figure 1. Flow of Information in the Electricity Consumption Module*



* These worksheets are the primary worksheets used in the Electricity Consumption module; subsequent worksheets are used to populate the default data and are provided for informational purposes only.

1.2 METHODOLOGY

This section provides a guide to using the Electricity Consumption module of the SIT to estimate indirect CO₂, CH₄ and N₂O emissions from sectors and end-use equipment that consume electricity. Within the Electricity Consumption module, these sectors are residential, commercial, transportation, and industrial. Because the methodology is similar in all sectors, a general methodology is discussed and specific examples for each sector are provided.

Box 2: State Energy Data Sources

In-state sources, such as state energy commissions or public utility commissions, should be consulted first. Otherwise, default data provided by the Electricity Consumption module may be used. Electricity consumption statistics should be provided on a kWh basis.

The Electricity Consumption module automatically calculates emissions after you enter factors on the emission factor worksheet, electricity consumption data, and the percent consumption by end-use sector equipment. The tool provides default electricity consumption data by sector, which comes from

the EIA's State Energy Consumption, Price, and Expenditure Estimates (SEDS) EIA (2025).² The tool also provides default data on percent consumption by end use equipment (based on data sources listed in footnotes to Table 1). However, other more state-specific data may be used if available (see Box 2 for suggestions on where to find data).

This User's Guide provides an overview of the estimation methodology used in the Electricity Consumption module by walking through the following steps: (1) select a state; (2) complete the emission factor worksheet; (3) complete the residential sector worksheet; (4) complete the commercial sector worksheet; (5) complete the transportation sector worksheet (6) complete the industrial sector worksheet; and (7) review summary information.

The general equation used to calculate indirect CO₂, CH₄ and N₂O emissions from electricity consumption is shown in Equation 1, which is summed across equipment types and GHGs.

Equation 1. General Emission Equation

$$\text{Emissions (MMTCO}_2\text{E)} = \{[(\text{Total State Consumption (kWh)} \times \text{End-Use Equipment Consumption (\%)}) \div (1 - \text{Transmission Loss Factor (\%)})] \times \text{Emission Factor (lbs CO}_2\text{E/kWh)} \times 0.0005 \text{ short ton/lbs} \times 0.90718 \text{ (Ratio of Short Tons to Metric Tons)} \div 1,000,000$$

Step (1) Select a State

To begin, select the state you are interested in evaluating. By selecting a state, the rest of the tool will automatically reset to reflect the appropriate state default data and assumptions for use in subsequent steps of the tool.

Step (2) Complete the Factors Worksheet

Step 2 requires users to select appropriate factors for several key variables necessary for estimating indirect CO₂, CH₄ and N₂O emissions from electricity consumption. On the Factors worksheet, default electricity emission factors and transmission loss factors are provided and will be used to estimate emissions throughout the tool. To select all of the default data, select the "Check All Boxes" button on the Factors worksheet or check the default box directly above the yellow input cells for each year in the time series. Note that users may select a default factor and later override the factor if better data becomes available. An example of the Factors worksheet is provided in Figure 4 below.

Default emission factors for electricity consumption (lbs CO₂E/kWh) are provided in the Factors worksheet. The emission factors are calculated as the sum of CO₂, CH₄ and N₂O emissions weighted by their GWP. Emissions of the individual gases are shown on the eGRID Factors worksheet. Values are derived from Year 2005, 2007, 2009, 2010, 2012, 2014, 2016, 2018, 2019, 2020, 2021, 2022, and 2023 Emissions & Generation Resource Integrated Database (eGRID) subregion values, weighted by the

² These data are available at <https://www.eia.gov/state/seds/>.

number of households based on distribution utilities within in each eGRID subregion in each state (U.S. EPA 2007, U.S. EPA 2010, U.S. EPA 2012, U.S. EPA 2014, U.S. EPA 2015, U.S. EPA 2017, U.S. EPA 2018, U.S. EPA 2020, U.S. EPA 2021, U.S. EPA 2022b, U.S. EPA 2023, U.S. EPA 2024b, U.S. EPA 2025b). This weighted emission factor is intended to better reflect emissions related to electricity consumption within a state and consider the flow of electricity across state boundaries. Because these emission factors do not account for any transmission and distribution losses between the points of generation and the points of consumption, a transmission loss factor must be applied. The transmission loss factor considers electric energy lost due to the transmission and distribution of electricity. Additional information on eGRID emission factors is provided in Box 3.

Note that default emission factors are estimated throughout alternate years in the time series. While these emission and transmission loss factors were developed for 2005, 2007, 2009, 2010, 2012, 2014, and 2016, emission factors and household data were not available for the remaining years in the time series. To facilitate emission calculations for other years, the tool utilizes the 2005, 2007, 2009, 2010, 2012, 2014, 2016, and 2018 through 2023 emission factors to linearly interpolate intermediate years and proxy the beginning and end of the time series. 2005 emission factors are used from 1990 through 2005. Emission factors are linearly interpolated for 2006 (using 2005 and 2007 eGRID factors), 2008 (using 2007 and 2009 eGRID factors), 2011 (using 2010 and 2012 eGRID factors), 2013 (using 2012 and 2014 eGRID factors), and 2015 (using 2014 and 2016 eGRID factors), and 2017 (using 2016 and 2018 eGRID factors). 2023 eGRID emission factors are used to proxy 2024 and 2025. Emission factors within the module will be updated as soon as new data becomes available.

Box 3: eGRID Emission Factors

The Emissions & Generation Resource Integrated Database (eGRID) is a comprehensive inventory of environmental attributes of electric power systems. The preeminent source of air emissions data for the electric power sector, eGRID is based on available plant-specific data for all U.S. electricity generating plants that provide power to the electric grid and report data to the U.S. government. eGRID integrates many different federal data sources on power plants and power companies, from three different federal agencies: EPA, the Energy Information Administration (EIA), and the Federal Energy Regulatory Commission (FERC). eGRID also provides aggregated data by state, U.S. total, company, and by three different sets of electric grid boundaries.

Plant level emissions in eGRID are built by summing its component parts – which could simply be unit level boilers and/or turbines or a combination of boilers and prime movers representing an aggregation of like generating units. In general, eGRID plant level emissions reflect a combination of monitored and estimated data. Emissions and emission rates in eGRID represent emissions and rates at the point(s) of generation. They do account for losses within the generating plants (net generation).

Figure 2. Factors Worksheet for the Electricity Consumption Module

2. Electricity Emission Factors and Transmission Loss Factors in Colorado

Default emission factors for electricity consumption (lbs CO₂/E/Wh) are provided below. Values are derived from Year 2005 and 2007 Emissions & Generation Resource Integrated Database (eGRID) subregion values, weighted by the number of households in each eGRID subregion in each state. This weighted emission factor is intended to better reflect emissions related to electricity consumption within a state, and take into account the flow of electricity across state boundaries. Since these emission factors do not account for any transmission and distribution losses between the points of generation and the points of consumption, a transmission loss factor must be applied. The transmission loss factor takes into account electric energy lost due to the transmission and distribution of electricity. Additional information on the emission factors is provided in the Electricity Consumption Users Guide.

Note that default emission factors are identical throughout the time series from 1990 through 2006 (using 2005 eGRID factors), and from 2007 through 2020 (using 2007 eGRID factors). While these emission and transmission loss factors were developed for 2005 and 2007, emission factors and household data were not available for the remaining years in the time series. To facilitate emission calculations for other years, the tool utilizes the 2005 and 2007 emission factors and household data for the remaining years in the time series. Emission factors and household data will be updated as soon as new data become available. For further detail on this method, refer to the Electricity Consumption Users Guide.

Emission and Transmission Loss Factors 1990 ☒ Default Factors?

Electricity Emission Factor (lbs CO₂/E/Wh) 1.88

Transmission Loss Factor (%) 6.33%

Emission and Transmission Loss Factors 1991 ☒ Default Factors?

Electricity Emission Factor (lbs CO₂/E/Wh) 1.88

Transmission Loss Factor (%) 6.33%

Emission and Transmission Loss Factors 1992 ☒ Default Factors?

Electricity Emission Factor (lbs CO₂/E/Wh) 1.88

Transmission Loss Factor (%) 6.33%

Emission and Transmission Loss Factors 1993 ☒ Default Factors?

Electricity Emission Factor (lbs CO₂/E/Wh) 1.88

Transmission Loss Factor (%) 6.33%

Control EF Selection Residential C Commercial C Transportation C Industrial C Summary-MMTCO₂E Data Sources Transport Breakout NTD Pivot CBECs

Step (3) through Step (6) Complete Individual Sector Worksheets

The worksheets for each sector have the same basic set-up, with variations in the color of the data input cells, and the end-use equipment for each end-use sector. On the residential sector worksheet, presented as an example in Figure 5, the orange cells indicate where the required energy activity data are entered either manually or automatically from default data. This activity data are converted into CO₂, CH₄ and N₂O emissions (as CO₂E) using the factors entered on the Factors worksheet and the formula presented in Equation 1.

There are two types of activity data required to populate the orange cells in the residential sector worksheet. First, annual electricity consumption by *sector* (e.g., residential, commercial, transportation, and industrial) is needed. Default annual electricity consumption is from EIA's State Energy Data System (EIA 2025).

The second piece of activity data required to estimate emissions is the percent end-use equipment for each sector across the state. A list of end-use equipment that consumes electricity in each sector is provided in Table 1 and is included in the Electricity Consumption module. End-use consumption data used in the module is derived from a variety of publications, discussed further in Box 4.

The Electricity Consumption module calculates emissions for each sector by multiplying total electricity consumption by the percent consumption by end-use equipment and the emission and transmission loss factor to obtain the total carbon emitted. Then, the total amount of carbon emitted are converted into MMTCO₂E, by multiplying by the ratio of metric tons per short ton (0.9072) to obtain metric tons and dividing by 10⁶ and multiplying by 44/12 to express emissions in MMTCO₂E (Equation 1).

Figure 3. Example of the Required Electricity Data in the Residential Worksheet

3. Residential Electricity Consumption in Alabama

Click here for information on data sources

Indirect CO₂ emissions from electricity consumption in the residential sector are calculated by multiplying state energy consumption (total kWh consumed in the residential sector) by the percentage of state consumption by residential end-use. The resulting sub-sector consumption values (kWh) are then multiplied by a state-specific emission factor (lbs CO₂/kWh) and transmission line losses. The resulting emissions values, in pounds of carbon, are converted to short tons of carbon, million metric tons of carbon equivalent (MMTCE), then to million metric tons of carbon dioxide equivalent (MMTCO₂E), and summed. Note default data for residential electricity consumption includes the electricity associated with residential charging of electric vehicles under the "Other Appliances and Lighting" category.

Go to the Control Sheet

Go to the MMTCO₂E Summary Sheet

Check All Boxes

Clear All Data

Residential 1990 ☒ Default Consumption Data ☒ Default Percent Data

Sub-sector	Total State Consumption (kWh)	% End Use of Sector Consumption (%)	Sub-sector Consumption (kWh)	End-Use Equipment Data Factor (%)	Emission Factor (lbs CO ₂ /kWh)	Emissions (lbs carbon)	Emissions (short tons carbon)	Emissions (MMTCO ₂ E)
Space Heating		10.8%	2,244,022,936	0.0%	-	-	-	0.00
Air-conditioning		22.4%	4,637,847,401	0.0%	-	-	-	0.00
Water Heating		10.8%	2,244,022,936	0.0%	-	-	-	0.00
Refrigeration		12.3%	2,543,225,994	0.0%	-	-	-	0.00
Other Appliances and Lighting		43.7%	9,050,892,508	0.0%	-	-	-	0.00
TOTAL	20,719,811,775	100.0%	20,719,811,775	0.0%	-	-	-	0.00

Residential 1991 ☒ Default Consumption Data ☒ Default Percent Data

Sub-sector	Total State Consumption (kWh)	% End Use of Sector Consumption (%)	Sub-sector Consumption (kWh)	Transmission Loss Factor (%)	Emission Factor (lbs CO ₂ /kWh)	Emissions (lbs carbon)	Emissions (short tons carbon)	Emissions (MMTCO ₂ E)
Space Heating		10.8%	2,306,272,257	0.0%	-	-	-	0.00
Air-conditioning		22.4%	4,766,295,997	0.0%	-	-	-	0.00
Water Heating		10.8%	2,306,272,257	0.0%	-	-	-	0.00
Refrigeration		12.3%	2,613,775,224	0.0%	-	-	-	0.00
Other Appliances and Lighting		43.7%	9,301,964,768	0.0%	-	-	-	0.00
TOTAL	21,294,580,502	100.0%	21,294,580,502	0.0%	-	-	-	0.00

Required Electricity Consumption Data

Box 4: Percent Consumption by End-Use Equipment Data Sources

Residential: Residential end-use equipment activity is from the Residential Energy Consumption Survey (RECS) (EIA 2024). The Residential Energy Consumption Survey (RECS) provides information on the use of energy in residential housing units in the United States. This information includes: the physical characteristics of the housing units; the appliances utilized including space heating and cooling equipment; demographic characteristics of the household; the types of fuels used; and other information that relates to energy use. The RECS also provides energy consumption and expenditures data for: natural gas, electricity, fuel oil, liquefied petroleum gas (LPG), and kerosene. The RECS is published in 4-year intervals. As a result, the Electricity Consumption Module uses 2001, 2005, 2009, 2015, and 2020 RECS data, and interpolates to estimate intervening years. Activity data beyond 2020 is proxied to the 2020 values. The Electricity Consumption Module utilizes regional-level data available from the RECS.

RECS data are available online at: <https://www.eia.gov/consumption/residential/>.

Commercial: Commercial end-use equipment activity is from the Commercial Building Energy Consumption Survey (CBECS) (EIA 2022). The Commercial Buildings Energy Consumption Survey (CBECS) is a national sample survey that collects information on the stock of U.S. commercial buildings, their energy-related building characteristics, and their energy consumption and expenditures. Commercial buildings include all buildings in which at least half of the floorspace is used for a purpose that is not residential, industrial, or agricultural, so they include building types that might not traditionally be considered "commercial," such as schools, correctional institutions, and buildings used for religious worship. The CBECS has been published for 2003, 2012, and 2018. As a result, the Electricity Consumption Module uses 2003, 2012, and 2018, and interpolates to estimate intervening years. Activity data beyond 2018 is proxied to the 2018 values. The Electricity Consumption Module utilizes regional-level data available from the CBECS.

CBECS data are available online at: <https://www.eia.gov/consumption/commercial/>.

Transportation: Transportation end-use equipment activity is from the National Transit Database (NTD) (FTA 2024). The NTD was established by Congress to be the Nation's primary source for information and statistics on the transit systems of the United States. The data contained in the 2024 National Transit Database (NTD) is one of three publications comprising the National Transit Database Program's Annual Report. It provides detailed summaries of financial and operating data submitted to the Federal Transit Administration (FTA) by the nation's mass transit agencies for the report year ending on or between January 1 and December 31, 2024. The Electricity Consumption Module uses 2007 through 2024 data from the NTD, and proxies 1990 through 2007. The Electricity Consumption Module utilizes state-level data available from the NTD.

NTD data are available online at: <https://www.transit.dot.gov/ntd/data-product/2021-fuel-and-energy>.

Industrial: Industrial end-use equipment activity is from the Manufacturing Energy Consumption Survey (MECS) (EIA 2026). The Manufacturing Energy Consumption Survey (MECS) is the Federal Government's comprehensive source of information on energy use by U.S. manufacturers. The survey collects data on energy consumption and expenditures, fuel-switching capability, onsite generation of electricity, byproduct energy use, and other energy related topics. The Electricity Consumption Module uses 2002, 2006, 2010, 2014, 2018, and 2022 data from the MECS. Data for 1990 through 2001 data are proxied to 2002. Data between 2002 and 2006, 2006 and 2010, 2010 and 2014, and 2014, 2018, and 2022 are linearly interpolated. Data for 2023 through 2025 are proxied to 2022. The Electricity Consumption Module utilizes regional-level data available from the MECS.

MECS data are available online at: <https://www.eia.gov/consumption/manufacturing/>.

Step (7) Review Summary Information

The steps above provide estimates of total CO₂, CH₄ and N₂O emissions (by CO₂E) from electricity consumption. The information for each sector is collected on the summary worksheet, displaying results in MMTCO₂E. Figure 6 shows the summary worksheet that sums the emissions from all sectors in the Electricity Consumption module. In addition, the results are displayed in graphical format at the bottom of the summary worksheets. Toggle buttons to the left of each sector either expand (“+”) or collapse (“-”) rows to show end-use equipment data.

Figure 4. Example of the Emissions Summary Worksheet in the Electricity Consumption Module

7. Alabama Emissions Summary (MMTCO ₂ E)																
Emissions were not calculated for the following sector: Transportation.																
Emissions (MMTCO ₂ E)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Residential	13.53	13.91	13.80	14.73	15.12	15.88	16.74	16.26	17.85	17.66	18.73	18.16	19.61	19.21	19.66	20.45
Commercial	7.57	7.80	7.55	7.73	8.16	8.39	9.11	11.13	11.95	12.29	12.89	12.80	13.34	13.33	13.82	14.11
Industrial	18.04	18.28	19.25	19.93	20.54	21.45	21.89	21.30	21.90	22.55	22.88	20.86	21.30	22.21	23.24	23.69
Transportation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	39.15	39.98	40.60	42.48	44.15	45.72	47.74	48.69	51.70	52.80	54.54	51.82	54.28	54.78	56.73	58.25
Carbon Dioxide	13.53	13.91	13.80	14.73	15.12	15.88	16.74	16.26	17.85	17.66	18.73	18.16	19.61	19.21	19.66	20.45
Commercial	7.57	7.80	7.55	7.73	8.16	8.39	9.11	11.13	11.95	12.29	12.89	12.80	13.34	13.33	13.82	14.11
Industrial	18.04	18.28	19.25	19.93	20.54	21.45	21.89	21.30	21.90	22.55	22.88	20.86	21.30	22.21	23.24	23.69
Transportation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	39.15	39.98	40.60	42.48	44.15	45.72	47.74	48.69	51.70	52.80	54.54	51.82	54.28	54.78	56.73	58.25
Emissions by Gas (MMTCO ₂ E)																
Carbon Dioxide	30.94	31.70	32.39	32.27	32.91	33.49	34.50	34.44	35.44	35.24	36.27	35.96	36.97	36.48	37.44	37.96
Residential	13.46	13.83	13.73	14.70	15.05	15.80	16.66	16.17	17.76	17.57	18.68	18.06	19.51	19.11	19.56	20.35
Commercial	7.53	7.76	7.51	7.74	8.12	8.35	9.06	11.07	11.89	12.23	12.82	12.74	13.27	13.26	13.75	14.04
Industrial	17.94	18.10	19.15	19.53	20.74	21.34	21.78	21.19	21.79	22.44	22.75	20.76	21.19	22.13	23.13	23.57
Transportation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Residential	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Commercial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Industrial	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Transportation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrous Oxide	0.16	0.16	0.18	0.19	0.20	0.21	0.22	0.22	0.23	0.24	0.25	0.24	0.25	0.25	0.26	0.26
Residential	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.07	0.08	0.09	0.09	0.08	0.09	0.09	0.09	0.09
Commercial	0.03	0.04	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Industrial	0.06	0.06	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11
Transportation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	39.15	39.98	40.60	42.48	44.15	45.72	47.74	48.69	51.70	52.80	54.54	51.82	54.28	54.78	56.73	58.25

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