

Form EIA-1605

Voluntary Reporting of Greenhouse Gases

Revised Pursuant to 10 CFR Part 300 Guidelines for Voluntary Greenhouse Gas Reporting

This report is voluntary under Public Law 102-486. For the provisions concerning the confidentiality of information submitted on this form, see page 19 of the Instructions. Public reporting burden for this collection of information is estimated to be 60 hours per response, including the time of reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Energy Information Administration, Statistics and Methods Group, EI-70, 1000 Independence Ave. S.W., Washington, DC 20585; or to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

**Energy Information Administration
U.S. Department of Energy**

November 18, 2009

TABLE OF CONTENTS

SCHEDULE I. ENTITY INFORMATION.....	1
Section 1. Entity Statement	1
Section 2. Entity Emissions Inventory	7
Part A. Aggregated Emissions by Gas (for independently verified reports only)	7
1. Aggregated Domestic Emissions by Gas	7
2. Aggregated Foreign Emissions by Gas	8
Part B. Inventory of Domestic Emissions and Carbon Flux	10
1. Direct Emissions	10
2. Indirect Emissions From Purchased Energy	17
3. Other Indirect Emissions	18
4. Terrestrial Carbon Fluxes and Stocks.....	19
5. De Minimis Emissions Sources	23
Part C. Inventory of Foreign Emissions and Carbon Flux	24
Part D. Total Emissions and Carbon Flux	25
1. Total Domestic Emissions and Carbon Flux	25
2. Total Foreign Emissions and Carbon Flux	26
Part E. Emissions Inventory Rating Summary.....	27
Section 3. Emissions Offsets	29
Part A. Offsets Obtained by Agreement With Another Reporter	29
Part B. Offsets Obtained by Agreement With a Non-reporter	30
Section 4. Entity-Level Emission Reductions	31
SCHEDULE II. SUBENTITY INFORMATION.....	32
Section 1. Subentity Statement.....	32
Section 2. Subentity Emissions Inventory	34
Section 3. Summary of Emission Reductions From Subentities	35
SCHEDULE III. EMISSION REDUCTIONS SUMMARY	36
Section 1. Registered Emission Reductions.....	36
Part A. Domestic Net Entity-Level Reductions and Carbon Storage	36
Part B. Foreign Net Entity-Level Reductions and Carbon Storage.....	37
Section 2. Reported Emission Reductions	38
Part A. Domestic Net Entity-Level Reductions and Carbon Storage	38
Part B. Foreign Net Entity-Level Reductions and Carbon Storage.....	40
SCHEDULE IV. VERIFICATION AND CERTIFICATION.....	42
Section 1. Independent Verification	42
Section 2. Reporter Self Certification	45
Addendum A. Inventory of Foreign or Subentity Emissions.....	A1
Part A. Aggregated Emissions by Gas (for independently verified reports only)	A1
Part B. Inventory of Emissions and Carbon Flux	A3
1. Direct Emissions	A3
2. Indirect Emissions From Purchased Energy	A10
3. Other Indirect Emissions	A11
4. Terrestrial Carbon Fluxes and Stocks.....	A12
5. De Minimis Emissions Sources.....	A16
Part C. Total Foreign or Subentity Emissions and Carbon Flux	A17
Addendum B. Emission Reduction Methods	B1
B1. Changes in Emissions Intensity	B1
B2. Changes in Absolute Emissions	B4
B3. Changes in Carbon Storage	B7

B4. Changes in Avoided Emissions	B9
B5. Energy Generation and Distribution.....	B11
B6. Coal Mine Methane Recovery	B13
B7. Landfill Methane Recovery	B18
B8. Geologic Sequestration.....	B23
B9. Electricity Transmission and Distribution Improvements.....	B26
B10. Anaerobic Digestion at Wastewater Treatment Facilities.....	B29
B11. Anaerobic Digestion of Animal Waste.....	B34
B12. Recycling of Fly Ash.....	B37
B13. Demand-Side Management and Other Reduction Programs.....	B40
B14. Combined Heat and Power.....	B43
B15. Other Action-Specific Methods	B47
B16. Destruction of Chlorofluorocarbons.....	B50

Addendum C. Country-Specific Factors Used to Estimate Emissions From Foreign SourcesC1

NOTE: 18 U.S.C. §1001 makes it a criminal offense for any person knowingly and willfully to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its jurisdiction.

REPORTING YEAR _____

(Reporting Year is the calendar year for which you are reporting emissions. If this is a Start Year report, enter the Start Year, which is the last calendar year of the initial Base Period.)

SCHEDULE I. ENTITY INFORMATION

SECTION 1. ENTITY STATEMENT

1. Enter Entity Identification:

Entity Name: _____
Address 1: _____
Address 2: _____
City: _____ State: _____ Zip: _____ - _____
Entity URL : _____
Entity Tax Payer Identification Number (optional): _____

2. Enter Contact Information:

Contact Name: _____
Title: _____
 Contact address is the same as entity address above
Entity Name: _____
Address 1: _____
Address 2: _____
City: _____ State: _____ Zip: _____ - _____
Tel: (____) _____ - _____ ext.: _____
Fax: (____) _____ - _____
E-Mail: _____

3. Enter Report Characteristics

a. Report Type (check one):

- Start Year Report
- Reporting Year Report

b. Entity Type (check one):

- Large emitter (more than 10,000 metric tons carbon dioxide equivalent annually) intending to register emission reductions
- Small emitter (less than or equal to 10,000 metric tons carbon dioxide equivalent annually) intending to register emission reductions

If this is a Start Year Report, enter the total annual average entity-wide Base Period emissions for the entity:

_____ metric tons CO₂ equivalent

If this is a Reporting Year report, enter the total entity-wide Reporting Year emissions for the entity, if required, and check the box indicating the reason emissions were estimated:

_____ metric tons CO₂ equivalent

- Five years have elapsed since last estimate of entity-wide emissions were reported
- Emissions have changed significantly since previous report
- Emitter intending to report but not register emissions and/or emission reductions
 - Emitter intending to report but not register emission reductions
 - Emitter intending to report emissions only

c. Scope of Inventory:

- Entity-wide
 Partial. Indicate the selected elements of the entity, selected gases, or selected sources included and/or excluded below:

d. Subentities:

This report includes subentity reports (*check one*) Yes No

If yes, identify the subentities included below. Give each subentity a unique name to distinguish it clearly from the other subentities.

No.	Subentity Name
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

e. Independent Verification:

This report has been verified by an independent third party: Yes No

If yes, indicate the level of detail provided in the report's emissions inventory:

- This report includes aggregated emissions data by gas; or
 This report includes detailed emissions data by gas and source.

4. Indicate Any Significant Changes to Previous Entity Statement (*not applicable for Start Year reports*)

- The entity has not undergone significant changes since the last Voluntary Reporting of Greenhouse Gases report
- The entity has undergone significant changes since the last Voluntary Reporting of Greenhouse Gases report was filed. Check the appropriate box below:
- Data are being resubmitted for the base period:
 For the entire entity
 For one or more subentities
- New base period has been selected:
 For the entire entity (*describe*): _____

 For one or more subentities (*describe in relevant subentity statement in Schedule II*)
- Changes have been made in the entity's scope or organizational boundaries, of the following nature:
 Acquisition or divestiture of discrete business units, subsidiaries, facilities or plants
 Describe: _____
 Closure or opening of significant facilities
 Describe: _____

- Transfer of economic activity to or from specific operations covered by a previous report
Describe: _____
- Significant changes in land holdings
Describe: _____
- Higher level of aggregation than in the previous year.
Describe (List subsidiary entities now included, including a listing of any non-U.S. operations added and the specific countries in which the foreign operations are located): _____
- Changes in activity or operations, specify:
 - Change in output
 - Change in contractual arrangements
 - Change in equipment and processes
 - Change in outsourcing or insourcing of significant activitiesDescribe the change and explain its influence on reported emissions or sequestration: _____
- Emission reduction calculation method changed
- Other change, not listed above, describe: _____

5. Identify the Entity's Primary Economic Activities
Identify the primary (*and secondary, if applicable*) 3-digit North American Industrial Classification System (NAICS) code for the entity (*a list of NAICS codes is offered in Appendix A*):
Primary NAICS: ___ __ __
Secondary NAICS: ___ __ __

6. Enter the Entity Category
Select the category below that describes the entity:

- Corporation
Corporation Type (check one)
 - Corporation (i.e., C Corporation; most corporations)
 - S Corporation
 - Limited Liability Corporation (LLC)
 - Limited Liability Partnership (LLP)
 - Partnership
 - Sole Proprietorship
 - Other, *specify*: _____
- Public or Private Status (check one)*
 - Publicly Traded (*Stock ticker symbol*: _____)
 - Privately Held
- Ownership Status (check one)*
 - Wholly Owned Subsidiary
 - Joint Venture (*partners*: _____)
 - Other Subsidiary
- Utility (Non-Investor Owned) (*check one*)
 - Cooperative
 - Municipal Utility
 - Municipal Cooperative
 - Other, *specify*: _____
- Government (*check one*)
 - Federal

- State
- Regional (e.g., multi-state)
- Local (e.g., city, county, or other sub-state level government)
- Native American Tribal Government
- Other, specify: _____
- Government Corporation or Authority (check one)
 - Federal
 - State
 - Regional (e.g., multi-state)
 - Local (e.g., city, county, or other sub-state level government)
 - Other, specify: _____
- Non-Profit Organization
 - Cooperative (e.g., non-profit electric cooperative)
 - Trade Association (specify type): _____
 - Reporting on behalf of its members, specified in attached list
 - Reporting on its own achievements
- All other Non-Profit Organizations (charities, fraternal orders, etc. Specify: _____)
- Individual or Household
- Other, specify: _____

7. Describe the Entity Organization
 Is your entity a holding company: Yes No
 If your entity is a subsidiary, identify your entity's Parent or Holding Company: _____

8. Describe the Entity's Organizational Boundaries
- a. Method for Determining Organizational Boundaries
- Financial control
 - Operational control. Explain how the use of this other approach results in organizational boundaries that differ from results of the financial control approach:

 - Equity share. Explain how the use of this other approach results in organizational boundaries that differ from results of the financial control approach:

 - Other. Describe method and explain how the use of this other approach results in organizational boundaries that differ from results of the financial control approach:

b. List All Large Wholly Owned Subsidiaries Included in This Report:

Subsidiary Name	Primary NAICS

c. List Any Large Partially Owned Subsidiary, Joint Venture, and Leased or Operated Emissions Source Included in This Report:

1	2	3	4	5	6
Name or Description of Emissions Source	Relationship to Reporting Entity	Partners	% Interest Held By Reporting Entity	Method for Determining Inclusion in Report	% of Emissions Included in This Report

d. Additional Description of Organizational Boundaries (describe, including criteria used for excluding any emissions sources, if applicable):

9. Describe the Geographic Scope of Activities (check one)

- This report covers U.S. activities only
 - Nationwide (if operating in all 10 U.S. Census Regions)
 - Multiple States (if not nationwide, enter states using 2-letter abbreviations from Appendix B: _____)
 - Single State (enter 2-letter abbreviation for state from Appendix B: _____)
- This report covers U.S. and non-U.S. activities
 - U.S. Activities:
 - Nationwide (if operating in all 10 U.S. Census Regions)
 - Multiple States (if not nationwide, enter states using 2-letter abbreviations from Appendix B: _____)
 - Single State (enter 2-letter abbreviation for state from Appendix B: _____)

Foreign Activities: List all foreign countries in which reported activities occurred using the 3-digit codes found in Appendix C, and the NAICS code that best corresponds to the primary activity in that country from Appendix A:

Country	Primary NAICS code
_____	_____
_____	_____
_____	_____
_____	_____

10. Describe the Scope of the Emissions Inventory

- Check the types of emission sources or sinks that are covered in the emissions inventory:
- Stationary source combustion
 - Mobile source combustion
 - Industrial processes
 - Agricultural sources
 - Fugitive emissions from geologic reservoirs
 - Indirect emissions from purchased energy
 - Other indirect emissions
 - Terrestrial carbon fluxes and stocks

11. Describe the Entity Base Period

Indicate number of years in the Base Period: 1 2 3 4
 Enter last year in Base Period: _____

Check here if you are reporting subsidiaries that use a different base period from the entity

12. Describe Any Entity Program Affiliation(s)

Domestic Voluntary Initiatives

List the voluntary GHG-reduction initiative(s) with which the entity has an affiliation
(see list of codes in Appendix D):

_____ Other, specify: _____

Domestic Registries and Exchanges

List the U.S. GHG registry(ies) and/or exchange(s) with which the entity has an affiliation
(see list of codes in Appendix D):

_____ Other, specify: _____

International Registries and Exchanges

List the non-U.S. GHG registry(ies) and/or exchange(s) with which the entity has an affiliation
(see list of codes in Appendix D):

_____ Other, specify: _____

13. Request Confidentiality of Entity Information

Check box if applicable:

- Requesting confidential treatment for the information reported on this form.
(NOTE that if you request confidentiality, you must, in the space below, explain, on an element-by-element basis, the reasons why your reported information should be kept confidential. To assist in this determination, respondents should demonstrate that their information contains trade secrets or commercial or financial information whose release would be likely to cause substantial harm to their company's competitive position.)

14. Enter Supplementary Information for Entity

Use this space (and attach additional sheets if necessary) to supply any supporting information you feel helps explain your entity or report that is not accommodated directly in this reporting form.

SECTION 2. ENTITY EMISSIONS INVENTORY

Check box if all methods used to estimate emissions and sequestration have a B rating or higher. If checked, do not complete "Weighted Rating" column of Parts A, B, C, and D, and skip Part E completely.

Part A. Aggregated Emissions by Gas (for independently verified reports only)

1. Enter Aggregated Domestic Emissions by Gas (for independently verified reports only)

1	2	3	4	5	6	7	8	9	10	11
Item	Source	Gas	Units	Base Period Emissions or Carbon Flux					Reporting Year Emissions or Carbon Flux	Weighted Rating
				Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average		
A	Direct Emissions									
A1	Carbon Dioxide	CO ₂								
A2	Methane	CH ₄								
A3	Nitrous Oxide	N ₂ O								
A4	Sulfur Hexafluoride	SF ₆								
A5	HFC (Specify)									
A6	PFC (Specify)									
A7	CFC (Specify)									
B	Indirect Emissions From Purchased Energy (Inventory)									
B1	Carbon Dioxide	CO ₂								
B2	Methane	CH ₄								
B3	Nitrous Oxide	N ₂ O								
C	Indirect Emissions From Purchased Energy (Reductions)	CO ₂ e								
D	Carbon Flux	CO ₂								
E	Other Indirect Emissions									
E1	Carbon Dioxide	CO ₂								
E2	Methane	CH ₄								
E3	Nitrous Oxide	N ₂ O								
E4	Sulfur Hexafluoride	SF ₆								
E5	HFC (Specify)									
E6	PFC (Specify)									
E7	CFC (Specify)									
F	Captured CO ₂ Sequestered in an onsite Geologic Reservoir	CO ₂								

1	2	3	4	5	6	7	8	9	10	11
Item	Source	Gas	Units	Base Period Emissions or Carbon Flux					Reporting Year Emissions or Carbon Flux	Weighted Rating
				Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average		
G	Captured CO ₂ Transferred to Another Entity for Sequestration in a Geologic Reservoir	CO ₂								

2. Enter Aggregated Foreign Emissions by Gas (for independently verified reports only)

1	2	3	4	5	6	7	8	9	10	11
Item	Source	Gas	Units	Base Period Emissions or Carbon Flux					Reporting Year Emissions or Carbon Flux	Weighted Rating
				Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average		
A	Direct Emissions									
A1	Carbon Dioxide	CO ₂								
A2	Methane	CH ₄								
A3	Nitrous Oxide	N ₂ O								
A4	Sulfur Hexafluoride	SF ₆								
A5	HFC (Specify)									
A6	PFC (Specify)									
A7	CFC (Specify)									
B	Indirect Emissions From Purchased Energy (Inventory)									
B1	Carbon Dioxide	CO ₂								
B2	Methane	CH ₄								
B3	Nitrous Oxide	N ₂ O								
C	Indirect Emissions From Purchased Energy (Reductions)	CO ₂ e								
D	Carbon Flux	CO ₂								
E	Other Indirect Emissions									
E1	Carbon Dioxide	CO ₂								
E2	Methane	CH ₄								
E3	Nitrous Oxide	N ₂ O								
E4	Sulfur Hexafluoride	SF ₆								
E5	HFC (Specify)									
E6	PFC (Specify)									
E7	CFC (Specify)									
F	Captured CO ₂ Sequestered in an Onsite Geologic Reservoir	CO ₂								

1	2	3	4	5	6	7	8	9	10	11
Item	Source	Gas	Units	Base Period Emissions or Carbon Flux				Base Period Average	Reporting Year Emissions or Carbon Flux	Weighted Rating
				Yr 1	Yr 2	Yr 3	Yr 4			
G	Captured CO ₂ Transferred to Another Entity for Sequestration in a Geologic Reservoir	CO ₂								

Part B. Inventory of Domestic Emissions and Carbon Flux (optional for independently verified reports)

1. Enter Direct Emissions

a. Stationary Combustion *(incorporate all emissions, including CO₂ captured from stationary combustion for geologic sequestration)*

1	1A	2	3	4	5	6	7	8	9	10	11	12	
Source Category	Fuel Type	Specific Facility/Source Name (optional)	Gas	Units	Base Period Emissions				Reporting Year Emissions	Estimation Method	Rating		
					Yr 1	Yr 2	Yr 3	Yr 4					
Fossil Fuel Combustion			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
				CO ₂	mt								
				CH ₄	kg								
				N ₂ O	kg								
				CO ₂	mt								
				CH ₄	kg								
				N ₂ O	kg								
				CO ₂	mt								
				CH ₄	kg								
				N ₂ O	kg								
Nonstandard Fuel Combustion			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
Waste Fuels Combustion			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
Biomass Combustion			CH ₄	kg									
			N ₂ O	kg									
Nonfuel Use of Fossil Fuels			CO ₂	mt									
Subtotal			CO ₂ e	mt									

mt = metric ton; kg = kilogram

b. Mobile Sources (incorporate all emissions, including CO₂ captured from mobile sources for geologic sequestration)

1	1A	2	3	4	5	6	7	8	9	10	11	12	
Source Category	Fuel Type	Specific Vehicle Class/Fleet Name (optional)	Gas	Units	Base Period Emissions					Reporting Year Emissions	Estimation Method	Rating	
					Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average				
Highway Vehicles			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
				CO ₂	mt								
				CH ₄	kg								
				N ₂ O	kg								
Off-Road Vehicles			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
				CO ₂	mt								
				CH ₄	kg								
				N ₂ O	kg								
Water Borne Vessels			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
				CO ₂	mt								
				CH ₄	kg								
				N ₂ O	kg								
Aircraft			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
				CO ₂	mt								
				CH ₄	kg								
				N ₂ O	kg								
Mobile Refrigeration and Air-Conditioning			HFC-134a	kg									
Subtotal			CO ₂ e	mt									

mt = metric ton; kg = kilogram

c. Sector-Specific Industrial Process Emissions (incorporate all emissions, including CO₂ captured from industrial process emissions for geologic sequestration)

1	2	3	4	5	6	7	8	9	10	11	12
Process/Fugitive Emissions	Specific Facility/ Source Name (optional)	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating
				Yr 1	Yr 2	Yr 3	Yr 4				
Industrial Processes											
Adipic Acid Production		N ₂ O									
Aluminum Production (CO ₂ only)		CO ₂	mt								
Ammonia Production		CO ₂	mt								
Cement Production – Clinker Production		CO ₂	mt								
Cement Production – Cement Kiln Dust		CO ₂	mt								
Hydrogen Production		CO ₂	mt								
Lime Production		CO ₂	mt								
Limestone and Dolomite Use		CO ₂	mt								
Methanol Production		CO ₂	mt								
		CH ₄									
Methane Emissions From Production of Other Petrochemicals		CH ₄									
Nitric Acid Production		N ₂ O									
Soda Ash Production		CO ₂	mt								
Soda Ash Use		CO ₂	mt								

mt = metric ton; kg = kilogram

c. Sector-Specific Industrial Process Emissions (continued)

1 Process/Fugitive Emissions	2 Specific Facility/Source Name (optional)	3 Gas	4 Units	5-8 Base Period Emissions				9 Base Period Average	10 Reporting Year Emissions	11 Estimation Method	12 Rating
				5 Yr 1	6 Yr 2	7 Yr 3	8 Yr 4				
				Industrial Processes – Iron and Steel Production							
Iron and Steel Production – All Processes*		CO ₂	mt								
Iron and Steel Production – Reducing Agents		CO ₂	mt								
Iron and Steel Production – Furnace Additives		CO ₂	mt								
Iron and Steel Production – Crude Iron Production		CO ₂	mt								
Iron and Steel Production – Conversion of Iron to Steel		CO ₂	mt								
Iron and Steel Production – Electrode Consumption in Electric Arc Furnaces		CO ₂	mt								
Secondary Steel Production in Electric Arc Furnaces		CO ₂	mt								
Other Iron and Steel		CO ₂	mt								
		CH ₄									

mt = metric ton; kg = kilogram

¹ Use this line only if specific data on reducing agent, additive, iron ore and/or crude iron consumption are not available.

c. Sector-Specific Industrial Process Emissions (continued)

1	2	3	4	5	6	7	8	9	10	11	12
Process/Fugitive Emissions	Specific Facility/Source Name (optional)	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating
				Yr 1	Yr 2	Yr 3	Yr 4				
Energy											
Coal Mines		CH ₄									
Oil and Natural Gas Industries		CH ₄									
		CO ₂	mt								
		N ₂ O									
Waste Handling											
Domestic and Industrial Wastewater Handling		CH ₄									
		N ₂ O									
Landfills		CH ₄									
High GWP Gases											
Aluminum Production (for PFC, specify gas)		PFC: ____									
		SF ₆									
HCFC-22 Production		HFC-23									
SF ₆ Emissions From Electrical Equipment		SF ₆									
Industrial Use and Production of HFCs, PFCs, and SF ₆ (for HFCs and PFCs, specify gas)		HFC: ____									
		PFC: ____									
		SF ₆									
Magnesium Production		SF ₆									
Semiconductor Manufacture (for HFCs and PFCs, specify gas)		HFC: ____									
		PFC: ____									
		SF ₆									
Other (for HFCs and PFCs, specify gas)		CO ₂	mt								
		CH ₄									
		N ₂ O									
		SF ₆									
		PFC: ____									
		HFC: ____									
Subtotal		CO ₂ e	mt								

mt = metric ton; kg = kilogram

d. Agricultural Sources (incorporate all emissions, including CO₂ captured from agricultural sources for geologic sequestration)

1 Source Category	2 Specific Source Name (optional)	3 Gas	4 Units	5-9 Base Period Emissions					10 Reporting Year Emissions	11 Estimation Method	12 Rating
				5 Yr 1	6 Yr 2	7 Yr 3	8 Yr 4	9 Base Period Average			
				Enteric Fermentation	CH ₄						
Livestock Waste	CH ₄										
	N ₂ O										
Residue Burning	N ₂ O										
	CH ₄										
Rice Cultivation – 1 st Harvest	CH ₄										
Rice Cultivation – 2 nd (“Ratoon”) Harvest	CH ₄										
Nitrous Oxide From Agricultural Soils – Nitrogen Application	N ₂ O										
Nitrous Oxide From Agricultural Soils – Organic Soils	N ₂ O										
Lime Application	CO ₂	mt									
Cultivation of Organic Soils	CO ₂	mt									
Other Agricultural Sources (specify source and gas): _____											
Subtotal		CO ₂ e	mt								

mt = metric ton; kg = kilogram

e. Fugitive Emissions Associated With Geologic Reservoirs

1 Source Category	2 Specific Source/ Reservoir Name (optional)	3 Gas	4 Units	5 Base Period Emissions				9 Base Period Average	10 Reporting Year	11 Estimation Method	12 Rating
				6 Yr 1	7 Yr 2	8 Yr 3	8 Yr 4				
Fugitive Emissions From the Extraction of Naturally Occurring CO ₂		CO ₂	mt								
Fugitive Emissions During Extraction of CO ₂ From Anthropogenic Sources		CO ₂	mt								
Fugitive Emissions During Transport and Processing		CO ₂	mt								
Fugitive Emissions of CO ₂ During Injection and Extraction for Enhanced Resource Recovery		CO ₂	mt								
Post-Injection Seepage of Carbon Dioxide to the Atmosphere		CO ₂	mt								

mt = metric ton

f. Captured CO₂ Emissions from Anthropogenic Sources (*captured CO₂ emissions should also be included as emissions in Questions 1a through 1d above*).

1 Source	2 Gas	3 Unit of Measure	4 Base Period Average Quantity			5 Reporting Year Quantity		
			6 Onsite	7 Offsite	8 Total	6 Onsite	7 Offsite	8 Total
Stationary Combustion	CO ₂	metric tons						
Sector-Specific Industrial Process Emissions	CO ₂	metric tons						
Other (Mobile & Agricultural Sources)	CO ₂	metric tons						
Subtotals	CO ₂	metric tons						

2. Enter Indirect Emissions From Purchased Energy

a. Physical Quantities of Energy Purchased

1	2	3	4	5	6	7	8	9
Energy Type	Units	Base Period Consumption					Reporting Year Consumption	System Type/Fuel Used for Generation
		Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average		
Electricity								
Steam								
Hot Water								
Chilled Water								

b. Emissions From Purchased Energy for Emissions Inventory

1	2	3	4	5	6	7	8	9	10	11	12
Source	Specific Facility/Region Name (optional)	Gas	Units	Base Period Emissions					Reporting Year Emissions	Estimation Method	Rating
				Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average			
Electricity		CO ₂	mt								
		CH ₄	kg								
		N ₂ O	kg								
Steam		CO ₂	mt								
		CH ₄	kg								
		N ₂ O	kg								
Hot Water		CO ₂	mt								
		CH ₄	kg								
		N ₂ O	kg								
Chilled Water		CO ₂	mt								
		CH ₄	kg								
		N ₂ O	kg								
Total		CO ₂ e	mt								

mt = metric ton; kg = kilogram

c. Emissions From Purchased Energy for Emission Reductions *(Not included in emissions inventory. Complete only if calculating reductions at the entity-level using Addendum B1 or B2.)*

1	2	3	4	5	6	7	8	9	10	11
Source	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating
			Yr 1	Yr 2	Yr 3	Yr 4				
Electricity	CO ₂ e	mt								
Steam, Hot Water, and Chilled Water*	CO ₂ e	mt								
Total	CO ₂ e	mt								

mt = metric ton

*Sum emissions reported for these sources in Question 2b above.

3. Enter Other Indirect Emissions*

1	2	3	4	5	6	7	8	9	10	11
Source	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating
			Yr 1	Yr 2	Yr 3	Yr 4				
Employee Commuting										
Manufacture & Sale of Energy Efficient Products										
Consumption of Energy-intensive Products										
Nitrous Oxide Emissions from Fertilizer Application	N ₂ O									
Other:										
Subtotal	CO ₂ e	mt								

mt = metric ton

*Do not include in emission inventory.

4. Enter Terrestrial Carbon Fluxes and Stocks

a. Forestry Activities

1	2	3	4	5	6	7	8	9	10
Categories	Specific Source/ Area Name (optional)	Gas	Units	Carbon Stocks		Reporting Year Carbon Stocks	Reporting Year Stock Change or Carbon Flux ^{1,2}	Estimation Method ³	Rating
				Base Period	Estimated Carbon Stocks in Year Prior to Reporting Year				
Afforestation, Mine Land Reclamation, and Forest Restoration		CO ₂	mt						
Agroforestry		CO ₂	mt						
Forest Management ⁴		CO ₂	mt						
Short-Rotation Biomass Energy Plantations		CO ₂	mt						
Urban Forestry		CO ₂	mt						
Timber Harvesting ⁵		CO ₂	mt						
Other ⁶		CO ₂	mt						
Total		CO ₂	mt						

mt = metric ton

¹ Carbon flux can be positive or negative; positive values indicate a net increase in terrestrial carbon stocks; negative values indicate a net loss of carbon to the atmosphere, i.e., emissions. Carbon flux may be calculated directly using flux based approaches or as the change in carbon stocks between the reporting year and the previous year.

² Reporters using methods that estimate carbon flux only should enter a carbon flux value in the column "Reporting Year Stock Change or Carbon Flux" and leave columns blank for Carbon Stock data.

³ Methods include lookup tables, models, measurement, or a combination of these methods. If using a model, indicate the name.

⁴ Forest management includes management decisions taken at any stage of forest rotation. Forest preservation is a special case and is reported separately in Question 4c below.

⁵ Activities such as thinning should be included under Forest Management.

⁶ "Other" includes activities not covered in the previous categories practiced by landowners that may result in changes in carbon fluxes or stocks.

b. Wood Products:

i Method 1: Track and report emissions in year they occur.

1	2	3	4	5	6	7	8
Category	Gas	Units	Estimated Carbon Stocks in Harvested Wood Products in Year Prior to Reporting Year	Estimated Carbon Stocks in Harvested Wood Products in Reporting Year	Reporting Year Change	Estimation Method	Rating
Wood Products	CO ₂	mt					

mt = metric ton

ii Method 2: Estimate and report residual carbon after 100 years in reporting year.

1	2	3	4	5	6	7
Category	Gas	Units	Stock of Carbon in Harvested Wood	100 year Residual Carbon Stock	Estimation Method	Rating
Wood products	CO ₂	mt				

mt = metric ton

c. Land Restoration and Forest Preservation

Entity certifies that it has restored native habitat on land and placed administrative restrictions on the land to ensure that human-caused releases of carbon from the lands do not occur in the future.

1	2	3	4	5	6	7	8
Name/Description of Tract of Land	Type of Restriction (e.g., Easement, Deed Restrictions, etc.)	Year Protected	Area (Acres)	Units	50% of Carbon Stock Accumulated in 50 Years from Inception of Preservation Activity	Estimation Method	Rating
1.							
2.							
3.							
4.							
Total							

d. Forest Land That Experiences Carbon Losses From Natural Disturbances

This table documents carbon stock changes on each tract of disturbed lands and should be completed for each year after the disturbance until carbon stocks reach pre-disturbance levels.

1	2	3	4	5	6	7	8	9	10	11
Name/Description Tract of Land	Area (Acres)	Type of Disturbance	Year	Units	Carbon Stocks			Loss	Estimation Method	Rating
					Base Period Average	Carbon Stocks in Year Before Disturbance	Reporting Year Carbon Stocks			
1.										
2.										
3.										
4.										
Total										

e. Sustainably Managed Forests

1	2	3	4
Name/Description of Tract of Land	Area (Acres)	Has Sustainability Been Verified by Third Party Certifier (Y/N)	Identify System Used to Determine Sustainability
1.			
2.			
3.			
4.			
Total			

f. Incidental Lands Excluded From Terrestrial Carbon Fluxes and Stocks in Question 4a

1	2	3
Name/Description of Tract of Land	Type of Land	Area (Acres)
1.		
2.		
3.		
4.		
Total		

g. Other Terrestrial Carbon Fluxes

1	2	3	4	5	6	7	8	9	10
Categories	Specific Source/ Area Name (optional)	Gas	Units	Carbon Stocks			Reporting Year Stock Change or Carbon Flux ^{1,2}	Estimation Method ³	Rating
				Base Period	Estimated Carbon Stocks in Year Prior to Reporting Year	Estimated Carbon Stocks in Reporting Year			
Crops on Mineral Soils		CO ₂	mt						
Pasture/Grazing		CO ₂	mt						
Land-Use Change		CO ₂	mt						
Other: _____		CO ₂	mt						
Total		CO ₂	mt						

mt = metric ton

¹ Carbon flux can be positive or negative; positive values indicate a net increase in terrestrial carbon stocks; negative values indicate a net loss of carbon to the atmosphere, i.e., emissions. Carbon flux may be calculated directly using flux based approaches or as the change in carbon stocks between the reporting year and the previous year.

² Reporters using methods that estimate carbon flux only should enter a carbon flux value in the column "Reporting Year Stock Change or Carbon Flux" and leave columns blank for Carbon Stock data.

³ Methods include lookup tables, models, measurement, or a combination of these methods. If using a model, indicate the name.

h. Terrestrial Carbon Flux Summary

1	2	3	4	5
Categories	Gas	Units	Reporting Year Stock Change or Carbon Flux	Rating
Forestry Activities	CO ₂	mt		
Wood Products Method 1	CO ₂	mt		
Wood Products Method 2	CO ₂	mt		
Land Restoration and Forest Preservation	CO ₂	mt		
Sustainably Managed Forests	CO ₂			
Incidental Lands	CO ₂			
Other Terrestrial Carbon Fluxes	CO ₂	mt		
Total Reporting Year Terrestrial Carbon Flux	CO ₂	mt		

mt = metric ton

5. Identify and Estimate De Minimis Emissions Sources

1	2	3	4	5	6	7
De Minimis Emissions Type	De Minimis Emissions Source	Gas	Unit of Measure	Base Period Average De Minimis Emissions	Reporting Year De Minimis Emissions*	Year Last Estimated*
Total		CO ₂ e	metric tons			

*De minimis emissions must be re-estimated after any significant increase in such emissions, or every five years, whichever occurs first.

Part C. Inventory of Foreign Emissions and Carbon Flux (optional for independently verified reports)

Complete and attach one copy of Addendum A, Inventory of Foreign or Subentity Emissions (*if applicable*). Also complete and attach one copy of Addendum C, Country-Specific Factors from Foreign Sources.

Part D. Total Emissions and Carbon Flux

1. Enter Total Domestic Emissions and Carbon Flux

Item	1 Source	2 Gas/ Units	3 Base Period Emissions				7 Base Period Average	8 Reporting Year Emissions or Carbon Flux
			4 Yr 1	5 Yr 2	6 Yr 3	6 Yr 4		
			A	Direct Emissions	mtCO ₂ e			
B	Indirect Emissions From Purchased Energy for Emissions Inventory	mtCO ₂ e						
C	Indirect Emissions From Purchased Energy for Calculation of Emission Reductions	mtCO ₂ e						
D	Total Emissions (A + B)*	mtCO ₂ e						
E	Carbon Flux	mtCO ₂ e						
F	Captured CO ₂ Sequestered in an Onsite Geologic Reservoir**	mtCO ₂ e						
G	Total Inventory Emissions (D – E – F)	mtCO ₂ e						
H	Other Indirect Emissions	mtCO ₂ e						
I	Captured CO ₂ Transferred to Another Entity for Sequestration in a Geologic Reservoir**	mtCO ₂ e						

mtCO₂e = metric tons carbon dioxide equivalent

*Do not include Indirect Emissions from Purchased Energy for Calculation of Emission Reductions (Item C) in Total Emissions.

**Do not include CO₂ extracted and captured from natural sources or CO₂ recycled during enhanced resource recovery operations.

2. Enter Total Foreign Emissions and Carbon Flux

Item	Source	Gas/ Units	Base Period Emissions				Reporting Year Emissions or Carbon Flux
			Yr 1	Yr 2	Yr 3	Yr 4	
			Base Period Average				
A	Direct Emissions	mtCO ₂ e					
B	Indirect Emissions From Purchased Energy for Emissions Inventory	mtCO ₂ e					
C	Indirect Emissions From Purchased Energy for Calculation of Emission Reductions	mtCO ₂ e					
D	Total Emissions (A + B)*	mtCO ₂ e					
E	Carbon Flux	mtCO ₂ e					
F	Captured CO ₂ Sequestered in an Onsite Geologic Reservoir**	mtCO ₂ e					
G	Total Inventory Emissions (D - E - F)	mtCO ₂ e					
H	Other Indirect Emissions	mtCO ₂ e					
I	Captured CO ₂ Transferred to Another Entity for Sequestration in a Geologic Reservoir**	mtCO ₂ e					

mtCO₂e = metric tons carbon dioxide equivalent

*Do not include Indirect Emissions from Purchased Energy for Calculation of Emission Reductions (Item C) in Total Emissions.

**Do not include CO₂ extracted and captured from natural sources or CO₂ recycled during enhanced resource recovery operations.

Part E. Emissions Inventory Rating Summary

Do not complete Part E if all the methods used to estimate emissions were rated B or higher.

If this is a Start Year Report, complete Question 1 only. If this is a Reporting Year Report, complete Question 2 for reporting year data; complete Question 1 only if you have submitted revised Base Period emissions data.

1. Enter Base Period Data (enter domestic and foreign sources separately)

1	2	3	4	5	6	7
Rating Category	Weighting Factor	Direct Emissions	Indirect Emissions From Purchased Energy	Carbon Flux	Total Emissions ¹	Weighted Total Emissions ²
Domestic Sources						
A	4					
B	3					
C	2					
D	1					
Totals³						
Weighted Average Rating⁴						
Foreign Sources						
A	4					
B	3					
C	2					
D	1					
Totals³						
Weighted Average Rating⁴						

¹ Sum Columns 3, 4 and 5 and enter result in Column 6 to get Total Emissions by Rating Category. Note: Enter carbon flux as a positive value, regardless of whether it was positive or negative carbon flux.

² Calculate Weighted Emissions by Rating Category by multiplying Column 2 by Column 6.

³ Sum values for Total Emissions (Column 6) and Weighted Total Emissions (Column 7) and enter in the Totals row.

⁴ Calculate Inventory Weighted Average Rating by dividing Weighted Total Emissions (Column 7) in the Totals row by Total Emissions (Column 6) in the Totals row.

2. Enter Reporting Year Data (*enter domestic and foreign sources separately*)

1	2	3	4	5	6	7
Rating Category	Weighting Factor	Direct Emissions	Indirect Emissions From Purchased Energy	Carbon Flux	Total Emissions and Carbon Flux ¹	Weighted Total Emissions and Carbon Flux ²
Domestic Sources						
A	4					
B	3					
C	2					
D	1					
Totals³						
Weighted Average Rating⁴						
Foreign Sources						
A	4					
B	3					
C	2					
D	1					
Totals³						
Weighted Average Rating⁴						

¹ Sum Columns 3, 4 and 5 and enter result in Column 6 to get Total Emissions by Rating Category. Note: Enter carbon flux as a positive value, regardless of whether it was positive or negative carbon flux.

² Calculate Weighted Emissions and Carbon Flux by Rating Category by multiplying Column 2 by Column 6.

³ Sum values for Total Emissions (Column 6) and Weighted Total Emissions and Carbon Flux (Column 7) and enter in the Totals row.

⁴ Calculate Inventory Weighted Average Rating by dividing Weighted Total Emissions (Column 7) in the Totals row by Total Emissions (Column 6) in the Totals row.

SECTION 3. EMISSION OFFSETS

Complete Section 3 only if this is a Reporting Year report.

This Report Includes Offsets Obtained by Agreement With *(check all that apply)*:

- Other reporters to the Voluntary Reporting of Greenhouse Gases Program *(complete Part A)*
- Non-reporters *(complete Part B)*

Part A. Offsets Obtained by Agreement With Other Reporters. *(Offsets may only be registered, or reported but not registered, in this part if the reporter has an agreement with the other reporting entity to register or report the reduction.)* Identify the entities from which you have obtained offsets and enter the quantity or quantities of emission reductions obtained in metric tons CO₂e.

1. Enter Information in the Table Below for Offsets Obtained From Other Reporters

1	2	3	4	5	6	7
Name of Other Reporter	Name of Other Reporter's Subentity <i>(If Applicable)</i>	Domestic or Foreign	Gas	Unit of Measure	Quantity	Registered by Other Reporter?*(Y/N)

*If you are registering reductions, the offsets obtained from another reporter must have been registered by that other reporter.

SECTION 4. ENTITY-LEVEL EMISSION REDUCTIONS

If this is a Reporting Year report and you are estimating reductions for the entire entity or for just one portion of your entity, complete and attach the requested copies of the appropriate addendum (Addendum B1-B16) for the method used to estimate the reduction. If you are estimating reductions for two or more subentities, proceed to Schedule II. Only complete Question 4 if you are reporting non-U.S. emissions and emission reductions at the entity level.

1. Indicate the method used (or, in the case of a Start Year report, the method that will be used) to estimate entity-wide emission reductions for the entity. In the event that emission reductions are not being reported for this entity, check last box below:
 - Changes in Emissions Intensity (Addendum B1)
 - Changes in Absolute Emissions (Addendum B2)
 - Changes in Carbon Storage (Addendum B3)
 - Changes in Avoided Emissions (Addendum B4)
 - Energy Generation and Distribution (Addendum B5)
 - Coal Mine Methane Recovery (Addendum B6)
 - Landfill Methane Recovery (Addendum B7)
 - Geologic Sequestration (Addendum B8)
 - Electricity Transmission and Distribution Improvements (Addendum B9)
 - Capture of Methane from Anaerobic Digestion at Wastewater Treatment Facilities (Addendum B10)
 - Anaerobic Digestion of Animal Waste (Addendum B11)
 - Recycling of Fly Ash (Addendum B12)
 - Demand-Side Management and Other Emission Reduction Programs (Addendum B13)
 - Combined Heat and Power Generators (Addendum B14)
 - Other Action-Specific Methods (Addendum B15)
 - Destruction of Chlorofluorocarbons (Addendum B16)
 - Emission reductions are not being reported for this entity
2. If registering reductions on Addendum B1 or B5 for this entity, are you also reporting but not registering reductions using the Changes in Absolute Emissions method (Addendum B2)?*
 - Yes
 - No
3. Complete and attach one copy of the appropriate emission reduction addendum (Addendum B1-B16) for the method used to estimate entity-level reductions of domestic emissions
4. If you are reporting non-U.S. emissions within one entity-level report, attach one copy of the appropriate emission reduction addendum for your foreign emission reductions. *If you choose to use a different emission reduction estimation method or Base Period for foreign emissions, you must create a separate subentity.*

* You may choose to supplement your report of registered reductions using an intensity-based method with a report of reductions in absolute emissions even if the output of the entity is declining. The absolute emission reductions included in this supplemental report are not eligible for registration.

SCHEDULE II. SUBENTITY INFORMATION

SECTION 1. SUBENTITY STATEMENT

1. Enter the Subentity Identification:

Subentity Name: _____

Description: _____

Relationship to Entity (describe): _____

2. Enter the Reason for Delineation of the Subentity (*check all that apply and explain below*):

- Distinct estimation method; indicate method employed (check only one)
 - Changes in Emissions Intensity
 - Changes in Absolute Emissions
 - Changes in Carbon Storage
 - Changes in Avoided Emissions
 - Action-Specific Emission Reductions
 - Emission Reductions from Energy Generation and Distribution
- Distinct output metric (for intensity calculation), indicate metric used: _____
- Foreign country operations, specify country(ies): _____
- Distinct Base Period from other subentities (for new or acquired operations)
- Emission reduction calculation method changed
- Small emitter registering emission reductions associated with more than one specific activity
- Reporting but not registering emission reductions associated with more than one specific activity
- Distinct organizational unit or other component of entity (e.g., discrete business line, facility, plant, vehicle fleet, or energy using system).
- Not practicable to assess change in net emissions for the following reasons:

3. Enter Any Significant Changes to Previous the Subentity Statement (*if applicable*):

- The subentity has not undergone significant change since the last Voluntary Reporting of Greenhouse Gases report.
- The subentity was not included in the previous report
 - The subentity's primary activity is new
 - The subentity's primary activity existed prior to this report
 - The subentity was not included in any other entity's previous reports
 - The subentity was included in another entity's previous reports, explain:

- The subentity was included in the previous report, but has undergone significant changes, as follows:
 - Data are being resubmitted for the Base Period
 - A new Base Period (using a different year or years) has been established.
Briefly describe the significant changes since the most recent Voluntary Reporting of Greenhouse Gases Program report filed:

4. Describe the Subentity's Primary Economic Activities (NAICS Code):

Enter the primary (*and secondary, if applicable*) 3-digit North American Industrial Classification System (NAICS) code for the subentity (*A list of NAICS codes is provided in Appendix A*):

Primary NAICS: ___ ___ ___

Secondary NAICS: ___ ___ ___

5. Describe the Organizational Boundaries of the Subentity:

6. Describe the Scope of the Emissions Inventory for the Subentity

Check the types of emission sources or sinks that are covered in the emissions inventory:

- | | |
|---|--|
| <input type="checkbox"/> Stationary source combustion | <input type="checkbox"/> Fugitive emissions from geologic reservoirs |
| <input type="checkbox"/> Mobile source combustion | <input type="checkbox"/> Indirect emissions from purchased energy |
| <input type="checkbox"/> Industrial processes | <input type="checkbox"/> Other indirect emissions |
| <input type="checkbox"/> Agricultural sources | <input type="checkbox"/> Terrestrial carbon fluxes and stocks |

7. Describe the Geographic Scope of Activities of the Subentity (*check the applicable box*)

- This report covers U.S. activities only
- Nationwide (if operating in all 10 U.S. Census Regions)
 - Multiple States (*if not nationwide, select state codes from Appendix B:*
_____)
 - Single State (*select state code from Appendix B:* _____)
- This subentity covers only non-U.S. activities
(*Required, if applicable*) List the foreign country(ies) in which reported activities occurred, using the 3-digit codes found in Appendix C: _____

8. Indicate the Inclusion of Emission Reductions

Are emission reductions included in this year's subentity report?

- Yes
- No, explain: _____
-

9. Define the Subentity Base Period

Indicate number of years in the Base Period: 1 2 3 4

Enter last year in Base Period: _____

10. Enter Any Supplementary Information for the Subentity

Use this space (and attach additional sheets if necessary) to supply any supporting information you feel helps explain your entity or report that isn't accommodated directly in this reporting form.

SECTION 2. SUBENTITY EMISSIONS INVENTORY

Complete and attach Addendum A, Inventory of Foreign or Subentity Emissions.

SECTION 3. SUBENTITY EMISSION REDUCTIONS

If this is a Reporting Year report, complete and attach the appropriate form from Addendum B1-B16 for this subentity.

1. Indicate the method used (or, in the case of a Start Year report, the method that will be used) to estimate emission reductions for this subentity. In the event that emission reductions are not being reported for this subentity, check the last box below:
 - Changes in Emissions Intensity (Addendum B1)
 - Changes in Absolute Emissions (Addendum B2)
 - Changes in Carbon Storage (Addendum B3)
 - Changes in Avoided Emissions (Addendum B4)
 - Energy Generation and Distribution (Addendum B5)
 - Coal Mine Methane Recovery (Addendum B6)
 - Landfill Methane Recovery (Addendum B7)
 - Geologic Sequestration (Addendum B8)
 - Electricity Transmission and Distribution Improvements (Addendum B9)
 - Capture of Methane from Anaerobic Digestion at Wastewater Treatment Facilities (Addendum B10)
 - Anaerobic Digestion of Animal Waste (Addendum B11)
 - Recycling of Fly Ash (Addendum B12)
 - Demand-Side Management and Other Emission Reduction Programs (Addendum B13)
 - Combined Heat and Power Generators (Addendum B14)
 - Other Action-Specific Methods (Addendum B15)
 - Destruction of Chlorofluorocarbons (Addendum B16)
 - Emission reductions are not being reported for this subentity

2. If registering reductions on Addendum B1 or B5 for this entity, are you also reporting but not registering reductions using the Changes in Absolute Emissions method (Addendum B2)?
 - Yes
 - No

* You may choose to supplement your report of registered reductions using an intensity-based method with a report of reductions in absolute emissions even if the output of the subentity is declining. The absolute emission reductions included in this supplemental report are not eligible for registration.

SCHEDULE III. EMISSION REDUCTIONS

SECTION 1. REGISTERED EMISSION REDUCTIONS

Part A. Enter Domestic Net Entity-Level Registered Reductions and Carbon Storage (metric tons CO₂e)

Item	1 Method/Source	2 Gross Registered Reductions	3 Emission Reductions		4 Net Registered Reductions (Subtract Column 3 from Column 2)
			Registered Reductions Distributed to Other Reporters		
A	Changes in Emissions Intensity				
A1	Direct				
A2	Indirect From Purchased Energy				
B	Changes in Absolute Emissions				
B1	Direct				
B2	Indirect From Purchased Energy				
C	Changes in Carbon Storage				
D	Changes in Avoided Emissions				
E	Energy Generation and Distribution				
F	Coal Mine Methane Recovery				
G	Landfill Methane Recovery				
H	Geologic Sequestration				
I	Electricity Transmission and Distribution Improvements				
J	Anaerobic Digestion at Wastewater Treatment Facilities				
K	Anaerobic Digestion of Animal Waste				
L	Recycling of Fly Ash				
M	Demand-Side Management or Other Emission Reduction Programs				
N	Combined Heat and Power				
O	Other Action-Specific Methods				
O1	Direct				
O2	Indirect From Purchased Energy				
P	Subtotal (Sum rows A1 through O)				
Q	Offsets				
Q1	Offsets Obtained From Other Reporters				
Q2	Offsets Obtained From Non-reporters				
R	Subtotal (Sum rows P through Q2)				
S	Reduction Deficits Carried Over From Last Year's Report (From Schedule III, Section 1, Part A, Item T in Last Year's Report. If negative, enter value. If zero or positive, enter zero.)				
T	TOTAL (Add row R to row S)				

Part B. Enter Foreign Net Entity-Level Registered Reductions and Carbon Storage (metric tons CO₂e)

Item	Method/Source	1	2	3	4
		Emission Reductions			
		Gross Registered Reductions	Registered Reductions Distributed to Other Reporters	Net Registered Reductions (Subtract Column 3 from Column 2)	
A	Changes in Emissions Intensity				
A1	Direct				
A2	Indirect From Purchased Energy				
B	Changes in Absolute Emissions				
B1	Direct				
B2	Indirect From Purchased Energy				
C	Changes in Carbon Storage				
D	Changes in Avoided Emissions				
E	Energy Generation and Distribution				
F	Coal Mine Methane Recovery				
G	Landfill Methane Recovery				
H	Geologic Sequestration				
I	Electricity Transmission and Distribution Improvements				
J	Anaerobic Digestion at Wastewater Treatment Facilities				
K	Anaerobic Digestion of Animal Waste				
L	Recycling of Fly Ash				
M	Demand-Side Management or Other Emission Reduction Programs				
N	Combined Heat and Power				
O	Other Action-Specific Methods				
O1	Direct				
O2	Indirect From Purchased Energy				
P	Subtotal (Sum rows A1 through O)				
Q	Offsets				
Q1	Offsets Obtained From Other Reporters				
Q2	Offsets Obtained From Non-reporters				
R	Subtotal (Sum rows P through Q2)				
S	Reduction Deficits Carried Over From Last Year's Report (From Schedule III, Section 1, Part B, Item T in Last Year's Report. If negative, enter value. If zero or positive, enter zero.)				
T	TOTAL (Add row R to row S)				

SECTION 2. REPORTED BUT NOT REGISTERED EMISSION REDUCTIONS

Part A. Enter Domestic Net Entity-Level Reported but not Registered Reductions and Carbon Storage

Item	Method/Source	Emission Reductions		
		Gross Reported Reductions	Reported Reductions Distributed to Other Reporters	Net Reported Reductions (Subtract Column 3 from Column 2)
Carbon Dioxide, Methane, Nitrous Oxide, Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride (metric tons CO₂e)				
A	Changes in Emissions Intensity			
A1	Direct			
A2	Indirect From Purchased Energy			
A3	Other Indirect			
B	Changes in Absolute Emissions			
B1	Direct			
B2	Indirect From Purchased Energy			
B3	Other Indirect			
C	Changes in Carbon Storage			
D	Changes in Avoided Emissions			
E	Energy Generation and Distribution			
F	Coal Mine Methane Recovery			
G	Landfill Methane Recovery			
H	Geologic Sequestration			
I	Electricity Transmission and Distribution Improvements			
J	Anaerobic Digestion at Wastewater Treatment Facilities			
K	Anaerobic Digestion of Animal Waste			
L	Recycling of Fly Ash			
M	Demand-Side Management or Other Emission Reduction Programs			
N	Combined Heat and Power			
O	Other Action-Specific Methods			
O1	Direct			
O2	Indirect From Purchased Energy			
O3	Other Indirect			
P	Subtotal (Sum rows A1 through O)			
Q	Offsets			

Item	Method/Source	Emission Reductions		
		Gross Reported Reductions	Reported Reductions Distributed to Other Reporters	Net Reported Reductions (Subtract Column 3 from Column 2)
Carbon Dioxide, Methane, Nitrous Oxide, Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride (metric tons CO₂e)				
Q1	Offsets Obtained From Other Reporters			
Q2	Offsets Obtained From Non-reporters			
R	Subtotal (Sum rows P through Q2)			
S	Reduction Deficits Carried Over From Last Year's Report (From Schedule III, Section 2, Part A, Item T in last year's report. If negative, enter value. If zero or positive, enter zero.)			
T	TOTAL (Add row R to row S)			
U	Emission Reductions Also Registered as Emission Intensity Reductions			
Chlorofluorocarbons (CFCs) and Other Gases (Kilograms of native gas) Attach additional copies of Part A if reporting reductions in domestic emissions of more than one CFC.				
V	Destruction of CFCs. Specify gas: _____			
W	Reduction Deficit for this CFC or Other Gas Carried Over From Last Year's Report (From Schedule III, Section 2, Part A, Item X in last year's report. If negative, enter value. If zero or positive, enter zero.)			
X	TOTAL (Add row V to row W)			

Part B. Enter Foreign Net Entity-Level Reported but not Registered Reductions and Carbon Storage

Item	Method/Source	1	2	3	4
		Emission Reductions			
		Gross Reported Reductions	Reported Reductions Distributed to Other Reporters	Net Reported Reductions (Subtract Column 3 from Column 2)	
Carbon Dioxide, Methane, Nitrous Oxide, Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride (metric tons CO₂e)					
A	Changes in Emissions Intensity				
A1	Direct				
A2	Indirect From Purchased Energy				
A3	Other Indirect				
B	Changes in Absolute Emissions				
B1	Direct				
B2	Indirect From Purchased Energy				
B3	Other Indirect				
C	Changes in Carbon Storage				
D	Changes in Avoided Emissions				
E	Energy Generation and Distribution				
F	Coal Mine Methane Recovery				
G	Landfill Methane Recovery				
H	Geologic Sequestration				
I	Electricity Transmission and Distribution Improvements				
J	Anaerobic Digestion at Wastewater Treatment Facilities				
K	Anaerobic Digestion of Animal Waste				
L	Recycling of Fly Ash				
M	Demand-Side Management or Other Emission Reduction Programs				
N	Combined Heat and Power				
O	Other Action-Specific Methods				
O1	Direct				
O2	Indirect From Purchased Energy				
O3	Other Indirect				
P	Subtotal (Sum rows A1 through O)				
Q	Offsets				
Q1	Offsets Obtained From Other Reporters				

Item	Method/Source	Emission Reductions		
		Gross Reported Reductions	Reported Reductions Distributed to Other Reporters	Net Reported Reductions (Subtract Column 3 from Column 2)
Carbon Dioxide, Methane, Nitrous Oxide, Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride (metric tons CO ₂ e)				
Q2	Offsets Obtained From Non-reporters			
R	Subtotal (Sum rows P through Q2)			
S	Reduction Deficits Carried Over From Last Year's Report (From Schedule III, Section 2, Part B, Item T in Last Year's Report. If negative, enter value. If zero or positive, enter zero.)			
T	TOTAL (Add row R to row S)			
U	Emission Reductions Also Registered as Emission Intensity Reductions			
Chlorofluorocarbons (CFCs) or Other Gases (Kilograms of native gas) <i>Attach additional copies of Part B if reporting reductions in foreign emissions of more than one CFC.</i>				
V	Destruction of CFCs. Specify gas: _____			
W	Reduction Deficit for this CFC or Other Gas Carried Over From Last Year's Report (From Schedule III, Section 2, Part B, Item X in last year's report. If negative, enter value. If zero or positive, enter zero.)			
X	TOTAL (Add row V to row W)			

SCHEDULE IV. VERIFICATION AND CERTIFICATION

SECTION 1. INDEPENDENT VERIFICATION *(To be completed by independent verifier)*

If your report has been independently verified by a qualified verifier in accord with Section 300.11 of 10 CFR Part 300, Guidelines for Voluntary Greenhouse Gas Reporting, that verifier must complete Schedule IV, Section 1. Otherwise, skip to Section 2 of Schedule IV, Reporter Self Certification.

1. Enter the Name of the Entity Whose Report Has Been Independently Verified

Name of Entity: _____

2. Describe the Identity of the Independent Verifier

Name of Verifying Company or Individual: _____

Street: _____ P.O. Box: _____

City: _____ State: _____ Zip: _____

Contact Name: _____

Contact Title: _____

Telephone: (____) ____ - _____ Fax: (____) ____ - _____

E-Mail Address: _____

3. Define the Independent Verifier's Qualifications

- a. Corporate Accreditation(s) *(check all that apply)*:

- California Climate Action Registry
- American National Standards Institute and Registrar Accreditation Board (ANSI-RAB)
- CDM Executive Board
- United Kingdom Accreditation Scheme
- International Standards Organization (ISO)
- Other, *specify*: _____

- b. Independent Verifier Personnel Accreditation(s):

Name	Title	Relevant Degree	Accreditation	Meets Requirements of §300.11(b) of 10 CFR Part 300
	Lead Verifier			<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No

- c. Independent Verification Approach *(check all that apply)*

The independent verification of data on this form included the following activities:

- Strategic Review and Assessment
 - Assurance that all sources have been included
 - Review of greenhouse gas data management systems
 - Review of greenhouse gas inventory training procedures
 - Review of data collection quality assurance/quality control procedures
 - Confirmation of required records maintenance
- Desk Audit
 - Review for accuracy, completeness, and consistency with DOE guidelines of entity statements
 - Assessment of any significant changes in entity boundaries
 - Review for arithmetic accuracy, internal consistency and plausibility
 - Independent review of activity data for a sample of sources
 - Independent review of activity data for all sources

- Field Audit
 - Independent measurements at a sample of sources
 - Independent measurement for all sources

4. Certification of Independent Verification

We are an independent *verifier* of _____ *[entity]* _____'s emissions report. We do not hold any financial interest in the outcome of this audit. We are not owned in whole or in part by _____ *[entity]* _____ nor do we provide any ongoing operational, support, or consulting services to _____ *[entity]* _____ except services consistent with independent financial accounting or independent certification of compliance with government or private standards.

This is to certify that _____ *[entity]* _____ has had its greenhouse gas emissions report covering the period _____ to _____ verified according to the Voluntary Reporting of Greenhouse Gases Guidelines found in 10 CFR Part 300.11(d). We have found that the report meets the requirements of 10 CFR 300.11(e), including the following:

- The information reported on this form is accurate and complete;
- The information reported on this form has been compiled in accordance with the Voluntary Reporting of Greenhouse Gases Guidelines found in 10 CFR Part 300;
- The information reported on this form is consistent with information submitted in prior years, if any, or any inconsistencies with prior year information are documented and explained in Schedule I, Entity Statement;
- The reporting entity has taken due diligence to ensure that emissions, emission reductions, or sequestration reported in this EIA-1605(b) report are not double counted in this report, or reported by any other entity;
- For any emissions, emission reductions, or sequestration included in this report that were achieved by a third-party entity, there exists a written agreement with each third party indicating that it has agreed that the reporting entity should be recognized as the entity entitled to report these emissions, emission reductions, or sequestration;
- None of the emissions, emission reductions, or sequestration reported was produced by shifting emissions to other entities or to non-reporting parts of the entity;
- None of any reported changes in avoided emissions associated with the sale of electricity, steam, hot or chilled water generated from non-emitting or low-emitting sources are attributable to the acquisition of a generating facility that has been previously operated, unless the base year generation values are derived from records of the facility's operation prior to its acquisition; and
- The reporting entity will maintain sufficient records to document the analysis and calculations underpinning this verification for a period of no less than three years.

_____ Lead Certifier of Verifying Firm <i>(Print Name)</i>	_____ Lead Certifier of Verifying Firm <i>(Signature)</i>	_____ Date
_____ Corporate Officer of Verifying Firm <i>(Print Name)</i>	_____ Corporate Officer of Verifying Firm <i>(Signature)</i>	_____ Date

NOTE: 18 U.S.C. §1001 makes it a criminal offense for any person knowingly and willfully to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its jurisdiction.

SECTION 2. REPORTER SELF CERTIFICATION

1. Certification

I certify to the best of my knowledge and belief that:

- This form meets the following three requirements for reporting reductions.
- The information reported on this form is accurate and complete;
 - The information reported on this form has been compiled in accordance with the Voluntary Reporting of Greenhouse Gases Guidelines found in 10 CFR Part 300; and
 - The information reported on this form is consistent with information submitted in prior years, if any, or any inconsistencies with prior year information are documented and explained in Schedule I, Entity Statement.
- This form meets the above three requirements for reporting reductions and the five additional requirements for registering reductions listed below.
- Reasonable steps have been taken to ensure that direct emissions, emission reductions, and/or sequestration reported are neither double counted nor reported by any other entity;
 - Any emission reductions reported or registered by the entity that were achieved by another entity (other than a very small emitter that participated in a demand-side management program) are included in this report only if: the other entity does not intend to report or register these reductions directly; there exists a written agreement with each other entity providing that the reporting entity is the entity entitled to report or register these emission reductions; and the information reported on the other entity would meet the requirements of this part if the entity were reporting directly to DOE/EIA.
 - None of the emissions, emission reductions, or sequestration were produced by shifting emissions to other entities or to non-reporting parts of the entity;
 - None of any reported changes in avoided emissions associated with the sale of electricity, steam, hot or chilled water generated from non-emitting or low-emitting sources are attributable to the acquisition of a generating facility that has been previously operated, unless the entity's base period includes generation values from the acquiring facility's operation prior to its acquisition; and
 - The entity maintains records documenting the analysis and calculations underpinning the data reported on this form and records documenting the analysis and calculations underpinning the base values used in calculating annual reductions are maintained in accordance with 10 CFR 300.9(d).

Certifying Official's Name: _____

Title: _____

Mailing Address:

Street or P.O. Box _____

City: _____ State: _____ Zip Code: _____

Telephone: (_____) _____ - _____

E-Mail: _____

Signature: _____

Date: _____

NOTE: 18 U.S.C. §1001 makes it a criminal offense for any person knowingly and willfully to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its jurisdiction.

Addendum A. Inventory of Foreign or Subentity Emissions

This emissions inventory is for:

- Entity-wide foreign operations
- A domestic or foreign subentity. Enter Name of Subentity: _____

Complete Part A if an independent third party has verified this report and you wish to report aggregated emissions by gas rather than source category. Otherwise, complete Part B.

Part A. Aggregated Emissions by Gas (for independently verified reports only)

1. Enter Aggregated Emissions by Gas (for independently verified reports only)

1	2	3	4	5	6	7	8	9	10	11
Item	Source	Gas	Units	Base Period Emissions or Carbon Flux				Base Period Average	Reporting Year Emissions or Carbon Flux	Weighted Rating*
				Yr 1	Yr 2	Yr 3	Yr 4			
A	Direct Emissions									
A1	Carbon Dioxide	CO ₂								
A2	Methane	CH ₄								
A3	Nitrous Oxide	N ₂ O								
A4	Sulfur Hexafluoride	SF ₆								
A5	HFC (Specify)									
A6	PFC (Specify)									
A7	CFC (Specify)									
B	Indirect Emissions From Purchased Energy (Inventory)									
B1	Carbon Dioxide	CO ₂								
B2	Methane	CH ₄								
B3	Nitrous Oxide	N ₂ O								
C	Indirect Emissions From Purchased Energy (Reductions)	CO ₂ e								
D	Carbon Flux	CO ₂								
E	Other Indirect Emissions									
E1	Carbon Dioxide	CO ₂								
E2	Methane	CH ₄								
E3	Nitrous Oxide	N ₂ O								

1	2	3	4	5	6	7	8	9	10	11
Item	Source	Gas	Units	Base Period Emissions or Carbon Flux				Base Period Average	Reporting Year Emissions or Carbon Flux	Weighted Rating*
				Yr 1	Yr 2	Yr 3	Yr 4			
E4	Sulfur Hexafluoride	SF ₆								
E5	HFC (Specify)									
E6	PFC (Specify)									
E7	CFC (Specify)									
F	Captured CO ₂ Sequestered in an Onsite Geologic Reservoir	CO ₂								
G	Captured CO ₂ Transferred to Another Entity for Sequestration in a Geologic Reservoir	CO ₂								

*Complete column 11, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 11 if this copy of Addendum A is being done for a subentity, domestic or foreign.

Part B. Inventory of Emissions and Carbon Flux (optional for independently verified reports)

1. Enter Direct Emissions

a. Stationary Combustion *(incorporate all emissions, including CO₂ captured from stationary combustion for geologic sequestration)*

1	1A	2	3	4	5	6	7	8	9	10	11	12	
Source Category	Fuel Type	Specific Facility/Source Name (optional)	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating*	
					Yr 1	Yr 2	Yr 3	Yr 4					
Fossil Fuel Combustion			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
				CO ₂	mt								
				CH ₄	kg								
				N ₂ O	kg								
				CO ₂	mt								
				CH ₄	kg								
				N ₂ O	kg								
				CO ₂	mt								
				CH ₄	kg								
				N ₂ O	kg								
Nonstandard Fuel Combustion			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
Waste Fuels Combustion			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
			CO ₂	mt									
			CH ₄	kg									
			N ₂ O	kg									
Biomass Combustion			CH ₄	kg									
			N ₂ O	kg									
Nonfuel Use of			CO ₂	mt									
Subtotal			CO ₂ e	mt									

mt = metric ton; kg = kilogram

*Complete column 11, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 11 if this copy of Addendum A is being done for a subentity, domestic or foreign.

b. Mobile Sources (incorporate all emissions, including CO₂ captured from mobile sources for geologic sequestration)

1	1A	2	3	4	5	6	7	8	9	10	11	12
Source Category	Fuel Type	Specific Vehicle Class/Fleet Name (optional)	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating*
					Yr 1	Yr 2	Yr 3	Yr 4				
Highway Vehicles			CO ₂	mt								
			CH ₄	kg								
			N ₂ O	kg								
Off-Road Vehicles			CO ₂	mt								
			CH ₄	kg								
			N ₂ O	kg								
Water Borne Vessels			CO ₂	mt								
			CH ₄	kg								
			N ₂ O	kg								
Aircraft			CO ₂	mt								
			CH ₄	kg								
			N ₂ O	kg								
Mobile Refrigeration and Air-Conditioning			HFC-134a	kg								
Subtotal			CO ₂ e	mt								

mt = metric ton; kg = kilogram

*Complete column 12, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 12 if this copy of Addendum A is being completed for a domestic or foreign subentity

c. Sector-Specific Industrial Process Emissions (incorporate all emissions, including CO₂ captured from industrial processes emissions for geologic sequestration)

1	2	3	4	5	6	7	8	9	10	11	12
Process/Fugitive Emissions	Specific Facility/ Source Name (optional)	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating*
				Yr 1	Yr 2	Yr 3	Yr 4				
Industrial Processes											
Adipic Acid Production		N ₂ O									
Aluminum Production (CO ₂ only)		CO ₂	mt								
Ammonia Production		CO ₂	mt								
Cement Production – Clinker Production		CO ₂	mt								
Cement Production – Cement Kiln Dust		CO ₂	mt								
Hydrogen Production		CO ₂	mt								
Iron and Steel Production		CO ₂	mt								
		CH ₄									
Lime Production		CO ₂	mt								
Limestone and Dolomite Use		CO ₂	mt								
Methanol Production		CO ₂	mt								
		CH ₄									
Methane Emissions From the Production of Other Petrochemicals		CH ₄									
Nitric Acid Production		N ₂ O									
Soda Ash Production		CO ₂	mt								
Soda Ash Use		CO ₂	mt								

mt = metric ton

*Complete column 12, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 12 if this copy of Addendum A is being completed for a domestic or foreign subentity.

c. Sector-Specific Industrial Process Emissions (continued)

1	2	3	4	5	6	7	8	9	10	11	12
Process/Fugitive Emissions	Specific Facility/ Source Name (optional)	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating**
				Yr 1	Yr 2	Yr 3	Yr 4				
Industrial Processes – Iron and Steel Production											
Iron and Steel Production – All Processes*		CO ₂	mt								
Iron and Steel Production – Reducing Agents		CO ₂	mt								
Iron and Steel Production – Furnace Additives		CO ₂	mt								
Iron and Steel Production – Crude Iron Production		CO ₂	mt								
Iron and Steel Production – Conversion of Iron to Steel		CO ₂	mt								
Iron and Steel Production – Electrode Consumption in Electric Arc Furnaces		CO ₂	mt								
Secondary Steel Production in Electric Arc Furnaces		CO ₂	mt								
Other Iron and Steel		CO ₂	mt								
		CH ₄									

mt = metric ton

* Use this line only if specific data on reducing agent, additive, iron ore and/or crude iron consumption are not available.

** Complete column 12, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 12 if this copy of Addendum A is being completed for a domestic or foreign subentity.

1	2	3	4	5	6	7	8	9	10	11	12
Process/Fugitive Emissions	Specific Facility/Source Name (optional)	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating*
				Yr 1	Yr 2	Yr 3	Yr 4				
Energy											
Coal Mines		CH ₄									
Oil and Natural Gas Industries		CH ₄									
		CO ₂	mt								
		N ₂ O									
Waste Handling											
Domestic and Industrial Wastewater		CH ₄									
		N ₂ O									
Landfills		CH ₄									
High GWP Gases											
Aluminum Production (specify gas)		PFCs									
		SF ₆									
HCFC-22 Production		HFC-23									
SF ₆ Emissions From		SF ₆									
Industrial Use and Production of HFCs, PFCs, and SF ₆ (for HFCs and PFCs,		HFCs									
		PFCs									
		SF ₆									
Magnesium		SF ₆									
Semiconductor Manufacture (for HFCs and PFCs, specify gas)		PFCs									
		HFCs									
		SF ₆									
Other (for HFCs and PFCs, specify gas)		CO ₂	mt								
		CH ₄									
		N ₂ O									
		SF ₆									
		PFC: _____									
		HFC: _____									
Subtotal		CO ₂ e	mt								

mt = metric ton

*Complete column 12, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 11 if this copy of Addendum A is being completed for a subentity, domestic or foreign.

d. Agricultural Sources (incorporate all emissions, including CO₂ captured from agricultural sources for geologic sequestration)

1 Source Category	2 Specific Source Name (optional)	3 Gas	4 Units	5-9 Base Period Emissions					10 Reporting Year Emissions	11 Estimation Method	12 Rating*
				5 Yr 1	6 Yr 2	7 Yr 3	8 Yr 4	9 Base Period Average			
				Enteric Fermentation	CH ₄						
Livestock Waste	CH ₄										
	N ₂ O										
Residue Burning	N ₂ O										
	CH ₄										
Rice Cultivation – 1 st Harvest	CH ₄										
Rice Cultivation – 2 nd ("ratoon") harvest	CH ₄										
Nitrous Oxide From Agricultural Soils – Nitrogen Application	N ₂ O										
Nitrous Oxide From Agricultural Soils – Organic Soils	N ₂ O										
Lime Application	CO ₂	mt									
Cultivation of Organic Soils	CO ₂	mt									
Other Agricultural Sources (specify source and gas):											
Subtotal		CO ₂ e	mt								

mt = metric ton

*Complete column 12, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 12 if this copy of Addendum A is being completed for a domestic or foreign subentity.

e. Fugitive Emissions Associated With Geologic Reservoirs

1	2	3	4	5	6	7	8	9	10	11	12
Source Category	Specific Source/ Reservoir Name (optional)	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year	Estimation Method	Rating*
				Yr 1	Yr 2	Yr 3	Yr 4				
Fugitive Emissions From the Extraction of Naturally Occurring CO ₂		CO ₂	mt								
Fugitive Emissions During Extraction of CO ₂ From Anthropogenic Sources		CO ₂	mt								
Fugitive Emissions During Transport and Processing		CO ₂									
Fugitive Emissions of CO ₂ During Injection and Extraction for Enhanced Resource Recovery		CO ₂	mt								
Post-Injection Seepage of Carbon Dioxide to the Atmosphere		CO ₂	mt								

mt = metric ton

*Complete column 11, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 11 if this copy of Addendum A is being done for a subentity, domestic or foreign.

f. Captured CO₂ Emissions From Anthropogenic Sources (*captured CO₂ emissions should also be included as emissions in Questions 1a through 1d above*).

1	2	3	4	5	6	7	8	9
Source	Gas	Unit of Measure	Base Period Average Quantity			Reporting Year Quantity		
			Onsite	Offsite	Total	Onsite	Offsite	Total
Stationary Combustion	CO ₂	metric tons						
Sector-Specific Industrial Process Emissions	CO ₂	metric tons						
Other (Mobile and Agricultural Sources)	CO ₂	metric tons						
Subtotals	CO ₂	metric tons						

2. Enter Indirect Emissions From Purchased Energy*

a. Physical Quantities of Energy Purchased

1	2	3	4	5	6	7	8	9
Source	Units	Base Period Consumption				Base Period Average	Reporting Year Consumption	System Type/Fuel Used for Generation
		Yr 1	Yr 2	Yr 3	Yr 4			
Electricity								
Steam								
Hot Water								
Chilled Water								

b. Emissions From Purchased Energy for Emissions Inventory

1	2	3	4	5	6	7	8	9	10	11	12
Source	Specific Facility/Region Name (optional)	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating *
				Yr 1	Yr 2	Yr 3	Yr 4				
Electricity		CO ₂	mt								
		CH ₄	kg								
		N ₂ O	kg								
Steam		CO ₂	mt								
		CH ₄	kg								
		N ₂ O	kg								
Hot Water		CO ₂	mt								
		CH ₄	kg								
		N ₂ O	kg								
Chilled Water		CO ₂	mt								
		CH ₄	kg								
		N ₂ O	kg								
Total		CO ₂ e	mt								

mt = metric ton; kg = kilogram

*Complete column 11, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 11 if this copy of Addendum A is being done for a subentity, domestic or foreign.

c. Emissions From Purchased Energy for Calculating Emissions Reductions in Addendum B (Not included in emissions inventory. Complete only if calculating reductions for this subentity using Addendum B1 or B2.)

1	2	3	4	5	6	7	8	9	10	11
Source	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating*
			Yr 1	Yr 2	Yr 3	Yr 4				
Electricity	CO ₂ e	mt								
Steam, Hot Water, and Chilled Water**	CO ₂ e	mt								
Total	CO ₂ e	mt								

mt = metric ton

*Complete column 11, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 11 if this copy of Addendum A is being done for a subentity, domestic or foreign.

**Sum emissions reported for these sources in Question 2b above.

3. Enter Other Indirect Emissions*

1	2	3	4	5	6	7	8	9	10	11
Source	Gas	Units	Base Period Emissions				Base Period Average	Reporting Year Emissions	Estimation Method	Rating**
			Yr 1	Yr 2	Yr 3	Yr 4				
Employee Commuting										
Manufacture & Sale of Energy Efficient Products										
Consumption of Energy-intensive Products										
Nitrous Oxide Emissions from Fertilizer Application	N ₂ O									
Other:										
Subtotal	CO ₂ e	mt								

mt = metric ton

*Do not include in emission inventory.

**Complete column 11, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 11 if this copy of Addendum A is being done for a subentity, domestic or foreign.

4. Enter Terrestrial Carbon Fluxes and Stocks

a. Forestry Activities

1	2	3	4	5	6	7	8	9	10
Categories	Specific Source/ Area Name (optional)	Gas	Units	Carbon Stocks			Reporting Year Stock Change or Carbon Flux ^{1,2}	Estimation Method ³	Rating*
				Base Period	Estimated Carbon Stocks in Year Prior to Reporting Year	Reporting Year Carbon Stocks			
Afforestation, Mine Land Reclamation, and Forest Restoration		CO ₂	mt						
Agroforestry		CO ₂	mt						
Forest Management ⁴		CO ₂	mt						
Short-Rotation Biomass Energy Plantations		CO ₂	mt						
Urban Forestry		CO ₂	mt						
Timber Harvesting ⁵		CO ₂	mt						
Other ⁶		CO ₂	mt						
Total		CO ₂	mt						

mt = metric ton

¹Carbon flux can be positive or negative; positive values indicate a net increase in terrestrial carbon stocks; negative values indicate a net loss of carbon to the atmosphere, i.e., emissions. Carbon flux may be calculated directly using flux based approaches or as the change in carbon stocks between the reporting year and the previous year.

²Reporters using methods that estimate carbon flux only should enter a carbon flux value in the column "Reporting Year Stock Change or Carbon Flux" and leave columns blank for Carbon Stock data.

³Methods include lookup tables, models, measurement, or a combination of these methods. If using a model, please indicate the name.

⁴Forest management includes management decisions taken at any stage of forest rotation. Forest preservation is a special case and is reported separately in Question 4c below.

⁵Activities such as thinning should be included under Forest Management.

⁶"Other" includes activities not covered in the previous categories practiced by landowners that may result in changes in carbon fluxes or stocks.

*Complete column 9, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 9 if this copy of Addendum A is being done for a subentity, domestic or foreign.

b. Wood Products:

i. Method 1: Track and report emissions in year they occur.

1	2	3	4	5	6	7	8
Category	Gas	Units	Estimated Carbon Stocks in Harvested Wood Products in Year Prior to Reporting Year	Estimated Carbon Stocks in Harvested Wood Products in Reporting Year	Reporting Year Stock Change	Estimation Method	Rating*
Wood Products	CO ₂	mt					

mt = metric ton

*Complete column 8, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 8 if this copy of Addendum A is being done for a subentity, domestic or foreign.

ii. Method 2: Estimate and report residual carbon after 100 years in reporting year.

1	2	3	4	5	6	7
Category	Gas	Units	Stock of Carbon in Harvested Wood	100 year Residual Carbon Stock	Estimation Method	Rating*
Wood products	CO ₂	mt				

mt = metric ton

*Complete column 7, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 7 if this copy of Addendum A is being done for a subentity, domestic or foreign.

c. Land Restoration and Forest Preservation

Entity certifies that it has restored native habitat on land and placed administrative restrictions on the land to ensure that human-caused releases of carbon from the lands do not occur in the future.

1	2	3	4	5	6	7	8
Name/Description of Tract of Land	Type of Restriction (e.g., Easement, Deed Restrictions, etc.)	Year Protected	Area (Acres)	Units	50% of Carbon Stock Accumulated in 50 Years from Inception of Preservation Activity	Estimation Method	Rating*
1.							
2.							
3.							
4.							
Total							

*Complete column 8, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 8 if this copy of Addendum A is being done for a subentity, domestic or foreign.

d. Forest Land That Experiences Carbon Losses From Natural Disturbances

This table documents carbon stock changes on each tract of disturbed lands and should be completed for each year after the disturbance until carbon stocks reach pre-disturbance levels.

1	2	3	4	5	6	7	8	9	10	11
Name/Description Tract of Land	Area (Acres)	Type of Disturbance	Year	Units	Carbon Stocks			Loss	Estimation Method	Rating*
					Base Period Average	Carbon Stocks in Year Before Disturbance	Reporting Year Carbon Stocks			
1.										
2.										
3.										
4.										
Total										

*Complete column 11, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 11 if this copy of Addendum A is being done for a subentity, domestic or foreign.

e. Sustainably Managed Forests

1	2	3	4
Name/Description of Tract of Land	Area (Acres)	Has Sustainability Been Verified by Third Party Certifier (Y/N)	Identify System Used To Determine Sustainability
1.			
2.			
3.			
4.			
Total			

f. Incidental Lands Excluded From Terrestrial Carbon Fluxes and Stocks in Question 4a

1	2	3
Name/Description of Tract of Land	Type of Land	Area (Acres)
1.		
2.		
3.		
4.		
Total		

g. Other Terrestrial Carbon Fluxes

1	2	3	4	5	6	7	8	9	10
Categories	Specific Source/ Area Name (optional)	Gas	Units	Carbon Stocks			Reporting Year Stock Change or Carbon Flux ^{1,2}	Estimation Method ³	Rating*
				Base Period Average	Estimated Carbon Stocks in Year Prior to Reporting Year	Estimated Carbon Stocks in Reporting Year			
Crops on Mineral Soils		CO ₂	mt						
Pasture/Grazing		CO ₂	mt						
Land-Use Change		CO ₂	mt						
Other: _____		CO ₂	mt						
Total		CO ₂	mt						

mt = metric ton

¹ Carbon flux can be positive or negative; positive values indicate a net increase in terrestrial carbon stocks; negative values indicate a net loss of carbon to the atmosphere, i.e., emissions. Carbon flux may be calculated directly using flux based approaches or as the change in carbon stocks between the reporting year and the previous year.

² Reporters using methods that estimate carbon flux only should enter a carbon flux value in the column "Reporting Year Stock Change or Carbon Flux" and leave columns blank for Carbon Stock data.

³ Methods include lookup tables, models, measurement, or a combination of these methods. If using a model, please indicate the name.

*Complete column 9, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 9 if this copy of Addendum A is being done for a subentity, domestic or foreign.

h. Terrestrial Carbon Flux Summary

1	2	3	4	5
Categories	Gas	Units	Reporting Year Stock Change or Carbon Flux	Rating*
Forestry Activities	CO ₂	mt		
Wood Products Method 1	CO ₂	mt		
Wood Products Method 2	CO ₂	mt		
Land Restoration and Forest Preservation	CO ₂	mt		
Sustainably Managed Forests	CO ₂			
Incidental Lands	CO ₂			
Other Terrestrial Carbon Fluxes	CO ₂	mt		
Total Reporting Year Terrestrial Carbon Flux	CO ₂	mt		

mt = metric ton

*Complete column 5, weighted rating, if this copy of Addendum A is being completed for entity-wide foreign operations. Do not complete column 5 if this copy of Addendum A is being done for a subentity, domestic or foreign.

5. Identify and Estimate De Minimis Emissions Sources

1	2	3	4	5	6	7
De Minimis Emissions Type	De Minimis Emissions Source	Gas	Unit of Measure	Base Period Average De Minimis Emissions	Reporting Year De Minimis Emissions*	Year Last Estimated*
TOTAL		CO ₂ e	metric tons			

*De minimis emissions must be re-estimated after any significant increase in such emissions, or every five years, whichever occurs first.

Part C. Total Foreign or Subentity Emissions and Carbon Flux

1. Enter Total Emissions and Carbon Flux

Item	1 Source	2 Gas/ Units	3	4	5	6	7	8 Reporting Year Emissions or Carbon Flux	
			Base Period Emissions						Base Period Average
			Yr 1	Yr 2	Yr 3	Yr 4			
A	Direct Emissions	mtCO ₂ e							
B	Indirect Emissions From Purchased Energy for Emissions Inventory	mtCO ₂ e							
C	Indirect Emissions From Purchased Energy for Calculation of Emission Reductions	mtCO ₂ e							
D	Total Emissions (A + B)*	mtCO ₂ e							
E	Carbon Flux	mtCO ₂ e							
F	Captured CO ₂ Sequestered in an Onsite Geologic Reservoir**	mtCO ₂ e							
G	Total Inventory Emissions (D – E – F)	mtCO ₂ e							
H	Other Indirect Emissions	mtCO ₂ e							
I	Captured CO ₂ Transferred to Another Entity for Sequestration in a Geologic Reservoir**	mtCO ₂ e							

mtCO₂e = metric tons carbon dioxide equivalent

*Do not include Indirect Emissions from Purchased Energy for Calculation of Emission Reductions (Item C) in Total Emissions.

**Do not include CO₂ extracted and captured from natural sources or CO₂ recycled during enhanced resource recovery operations.

Addendum B1. Changes in Emissions Intensity

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Output

1. Enter Physical, Economic, or Indexed Output Measures for the Base Period and Reporting Year

Item	1	2	3	4	5	6	7	8
	Output Measure	Unit of Measure	Base Period					Reporting Year
			Yr 1	Yr 2	Yr 3	Yr 4	Avg.	
Physical Measure								
A								
Economic Measure								
B		Current \$						
C		Constant Year (\$2000)						
Indexed Measure								
D		[Physical or Economic]						

2. If Providing an Output Measure Not Described in the Technical Guidelines (see Table 2.2), Indicate Reason Why Alternative Measure Was Selected (check all that apply):

- Industry/trade group standard Reported to state/federal government agencies
 Used in annual reports Other

3. Define and Describe the Output Measure Used and Provide a Rationale for Why the Measure Was Selected:

Part B. Emissions, Emissions Intensity, and Emission Reductions

1. Enter Base Period and Reporting Year Emissions (metric tons CO₂e)

Item	1	2	3	4
	Description	Direct Emissions*	Indirect Emissions From Purchased Energy**	Other Indirect Emissions
E	Base Period Emissions			
F	Reporting Year Emissions			

*Include CO₂ captured and sequestered in geologic reservoirs.

**Calculate indirect emissions from purchased electricity using electricity end use factors for emission reductions from Appendix F.

2. Calculate and Enter Base Period and Reporting Year Intensity (metric tons CO₂e per unit of output)

Item	1	2	3	4
	Description	Direct Emissions	Indirect Emissions From Purchased Energy	Other Indirect Emissions
G	Base Period Intensity [E / (A7, C7, or D7)]			
H	Reporting Year Intensity [F / (A8, C8, or D8)]			

3. Calculate and Enter Emission Reductions (metric tons CO₂e)

Item	1	2		
		Source of Reductions		
Description	Direct Emissions	Indirect Emissions From Purchased Energy	Other Indirect Emissions*	
I	Emission Reductions [(G – H) * A8, C8, or D8]			

*Reductions of Other Indirect Emissions may not be registered.

4. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

--	--	--	--	--	--	--	--	--	--

5. Describe Actions That Were the Likely Causes of the Reductions Achieved:

6. Identify Cause(s) of the Emission Reduction(s) (*check all that apply*):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

7. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part C. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1	2	3	4	5
Name of Recipient	Emissions Type*	Gas	Units	Amount
		CO ₂ e	metric tons	
		CO ₂ e	metric tons	
		CO ₂ e	metric tons	
		CO ₂ e	metric tons	
Total Direct Emission Reductions		CO ₂ e	metric tons	
Total Indirect Emission Reductions From Purchased Energy		CO ₂ e	metric tons	
Total Other Indirect Emission Reductions		CO ₂ e	metric tons	

*Direct, Indirect from Purchased Energy, Other Indirect.

Addendum B2. Changes in Absolute Emissions

If Reporting Subentities, Enter Name of Subentity: _____

Requirement for Using Method To Register Reductions: Reporting Year output must be equal to or greater than the Base Period output.

Part A. Output

1. Enter Physical, Economic, or Indexed Output Measures for Base Period and Reporting Year

Item	1	2	3	4	5	6	7	8
	Output Measure	Unit of Measure	Base Period					Reporting Year
			Yr 1	Yr 2	Yr 3	Yr 4	Avg.	
Physical Measure								
A								
Economic Measure								
B		Current \$						
C		Constant Year (\$2000)						
Indexed Measure								
D		[Physical or Economic]						

2. Is the Reporting Year Output Equal To or Greater Than the Base Period Average Output?
 Yes
 No (If No, you may only report reductions on this addendum.)
3. If Providing an Output Measure Not Described in the Technical Guidelines (see Table 2.2), Indicate the Reason Why Alternative Measure Was Selected (check all that apply):
 Industry/trade group standard Reported to state/federal government agencies
 Used in annual reports Other
4. Define and Describe the Output Measure Used and Provide a Rationale for Why the Measure Was Selected:

Part B. Emissions and Emission Reductions

1. Enter Emissions and Calculate Emission Reductions (metric tons CO₂e)

Item	Description	1	2	3	4
		Source of Emissions			
		Direct Emissions*	Indirect Emissions From Purchased Energy**	Other Indirect Emissions	
E	Base Period				
F	Reporting Year				
G	Registered Emission Reductions (E - F)				
H	Reported Emission Reductions (E - F)				

*Include CO₂ captured and sequestered in geologic reservoirs (onsite and offsite).

**Calculate indirect emissions from purchased electricity using electricity end use factors for emission reductions from Appendix F.

2. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

--	--	--	--	--	--	--	--	--	--

3. Describe Actions That Were the Likely Causes of the Reductions Achieved:

4. Identify the Cause(s) of the Emission Reduction(s) (check all that apply):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

5. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (Optional):

Part C. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1	2	3	4	5
Name of Recipient	Emissions Type*	Gas	Units	Amount
		CO ₂ e	metric tons	
		CO ₂ e	metric tons	
		CO ₂ e	metric tons	
		CO ₂ e	metric tons	
Total Direct Emission Reductions		CO ₂ e	metric tons	
Total Indirect Emission Reductions From Purchased Energy		CO ₂ e	metric tons	
Total Other Indirect Emission Reductions		CO ₂ e	metric tons	

*Direct, Indirect from Purchased Energy, Other Indirect.

Addendum B3. Changes in Carbon Storage

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Terrestrial Carbon Flux

1. Enter Reporting Year Inventory of Terrestrial Carbon Flux

Item	1	2	3
	Categories	Units of Measure	Reporting Year Stock Change or Carbon Flux*
A	Forestry Activities	metric tons CO ₂ e	
B	Wood Products – Method 1	metric tons CO ₂ e	
C	Wood Products – Method 2	metric tons CO ₂ e	
D	Land Restoration and Forest Preservation	metric tons CO ₂ e	
E	Sustainably Managed Forests	metric tons CO ₂ e	
F	Incidental Lands	metric tons CO ₂ e	
G	Other Terrestrial Carbon Fluxes	metric tons CO ₂ e	
H	Total Reporting Year Terrestrial Carbon Flux	metric tons CO ₂ e	

*From Schedule I, Section 2, Part B, Question 4, if reporting for entity only. From Addendum A, Part B, Question 4, if reporting for a subentity.

2. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

--	--	--	--	--	--	--	--	--	--

3. Describe Actions That Were the Likely Causes of the Reductions Achieved:

4. Identify the Cause(s) of the Emission Reduction(s) (check all that apply):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

5. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part B. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1	2	3	4
Name of Recipient	Gas	Units	Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

Addendum B4. Changes in Avoided Emissions

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Generated Energy Source and Characteristics

1. Did the Entity or Subentity Emit Greenhouse Gases in the Base Period (including any capacity acquired since the Base Period)?
 - Yes (If Yes, you must estimate reductions using Addendum B5, Emission Reductions from Energy Generation and Distribution)
 - No

2. Has the Entity or Subentity Acquired or Divested Generation Capacity Since the Base Period?
 - Yes (Go to Question 3)
 - No (Go to Question 4)

3. Was the Acquired or Divested Capacity Operational During the Base Period for the Entity or Subentity?
 - Yes (If Yes, you must adjust Base Period generation to reflect any capacity that was acquired or divested)
 - No

4. Identify Energy Product Type Sold (*check all that apply*)
 - Electricity
 - Steam
 - Hot water
 - Chilled water

Part B. Energy Generation, Emissions, and Emission Reductions

1. Enter Activity Data, Emission Coefficients, Conversion Factors, and Emission Reductions

Item	1	2	3	4	5	6
	Description	Electricity	Steam	Hot Water	Chilled Water	Total
A	Base Period Energy Sold	MWh	MMBtu	MMBtu	ton hours	
B	Reporting Year Total Emissions (metric tons CO ₂ e)					
C	Reporting Year Energy Generated	MWh	MMBtu	MMBtu	ton hours	
D	Reporting Year Emissions Intensity (B / C)	metric tons CO ₂ e/MWh	metric tons CO ₂ e/MMBtu	metric tons CO ₂ e/MMBtu	metric tons CO ₂ e/ton hour	
E	Reporting Year Energy Sold	MWh	MMBtu	MMBtu	ton hours	
F	Reporting Year Incremental Energy Sold (E - A)	MWh	MMBtu	MMBtu	ton hours	
G	Avoided Emissions Intensity Benchmark	metric tons CO ₂ e/MWh	metric tons CO ₂ e/MMBtu	metric tons CO ₂ e/MMBtu	metric tons CO ₂ e/ton hour	
H	Emission Reduction [(G - D) * F] (metric tons CO ₂ e)					

2. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

--	--	--	--	--	--	--	--	--	--

3. Describe Actions That Were the Likely Causes of the Reductions Achieved:

4. Identify the Cause(s) of the Emission Reduction(s) (check all that apply):

- Voluntary
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

5. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part C. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1	2	3	4
Name of Recipient	Gas	Units	Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

Addendum B5. Energy Generation and Distribution

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Energy Generation and Emissions

1. Energy Product Type Exported (*check all that apply*)

- Electricity
- Steam
- Hot water
- Chilled water

2. Emissions, Energy Generation, and Emissions Intensity

Item	1	2	3	4	5
	Description	Electricity	Steam	Hot Water	Chilled Water
A	Base Period Emissions (metric tons CO ₂ e)				
B	Base Period Exported Energy	MWh	MMBtu	MMBtu	ton hours
C	Base Period Emissions Intensity (A / B)	metric tons CO ₂ e/ MWh	metric tons CO ₂ e/ MMBtu	metric tons CO ₂ e/ MMBtu	metric tons CO ₂ e/ ton hours
D	Reporting Year Emissions (metric tons CO ₂ e)				
E	Reporting Year Exported Energy	MWh	MMBtu	MMBtu	ton hours
F	Reporting Year Emissions Intensity (D / E)	metric tons CO ₂ e/ MWh	metric tons CO ₂ e/ MMBtu	metric tons CO ₂ e/ MMBtu	metric tons CO ₂ e/ ton hours
G	Reporting Year Incremental Exported Energy (E - B)	MWh	MMBtu	MMBtu	ton hours
H	Avoided Emissions Benchmark	metric tons CO ₂ e/ MWh	metric tons CO ₂ e/ MMBtu	metric tons CO ₂ e/ MMBtu	metric tons CO ₂ e/ ton hours

Part B. Emission Reductions

1. Calculate and Enter Emission Reductions

Item	1	2	3	4	5	6
	Description	Electricity	Steam	Hot Water	Chilled Water	Total
I	Emission Reductions From Improvements in Historical Emissions Intensity [(C - F) * B] (metric tons CO ₂ e)					
J	Emission Reductions From Incremental Exported Energy [(H - F) * G] (metric tons CO ₂ e)					
K	Total Emission Reductions From Energy Generation and Exports (I + J) (metric tons CO ₂ e)					

2. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

--	--	--	--	--	--	--	--	--	--

3. Describe Actions That Were the Likely Causes of the Reductions Achieved:

4. Identify the Cause(s) of the Emission Reduction(s) (check all that apply):

- Voluntary
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

5. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part C. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1 Name of Recipient	2 Gas	3 Units	4 Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

2. Enter Volume of Gas Captured by Source and Disposition (Mscf)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
DEGASIFICATION DURING MINING						
Ventilation Systems						
Flared						
Electricity Used Onsite						
Electricity Sold to Grid						
Injected Into Pipeline						
Direct Use Onsite						
Total Ventilation Systems						
Other Degasification Methods						
Flared						
Electricity Used Onsite						
Electricity Sold to Grid						
Injected Into Pipeline						
Direct Use Onsite						
Total Other Degasification						
PRE-MINING DEGASIFICATION						
Flared						
Electricity Used Onsite						
Electricity Sold to Grid						
Injected Into Pipeline						
Direct Use Onsite						
Total Pre-Mining Degasification						
Total All Methods						

3. Enter Average Heat Content of Gas Captured (Btu/scf)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
DEGASIFICATION DURING MINING						
Ventilation Systems						
Flared						
Electricity Used Onsite						
Electricity Sold to Grid						
Injected Into Pipeline						
Direct Use Onsite						
Other Degasification Methods						
Flared						
Electricity Used Onsite						
Electricity Sold to Grid						
Injected Into Pipeline						
Direct Use Onsite						
PRE-MINING DEGASIFICATION						
Flared						
Electricity Used Onsite						
Electricity Sold to Grid						
Injected Into Pipeline						
Direct Use Onsite						

4. Enter Total Energy Content of Gas Captured and Combusted (MMBtu)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
DEGASIFICATION DURING MINING						
Ventilation Systems						
Flared						
Electricity Used Onsite						
Electricity Sold to Grid						
Injected Into Pipeline						
Direct Use Onsite						
Other Degasification Methods						
Flared						
Electricity Used Onsite						
Electricity Sold to Grid						
Injected Into Pipeline						
Direct Use Onsite						
PRE-MINING DEGASIFICATION						
Flared						
Electricity Used Onsite						
Electricity Sold to Grid						
Injected Into Pipeline						
Direct Use Onsite						
Total						

5. Enter Mass of Methane Captured (metric tons CO₂e)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
Total Methane Captured						

Part C. Emission Reductions

1. Calculate Changes in Methane Capture

Item	1	2	3
	Description	Units of Measure	Quantity
A	Average Annual Quantity of Methane Captured in Base Period	metric tons CO ₂ e	
B	Methane Captured in Reporting Year	metric tons CO ₂ e	
C	Change in Methane Captured (B – A)	metric tons CO ₂ e	

2. Calculate Changes in Disposition of Electricity Generation From Captured Methane (MWh)

Item	1	2	3	4	5	6	7
Disposition	Base Period					Reporting Year	
	Year 1	Year 2	Year 3	Year 4	Base Period Average		
D	Electricity Used Onsite						
E	Electricity Sales						
F	Total Generation						

3. Calculate Carbon Dioxide Displaced From Electricity Used Onsite (avoided emissions)

Item	1	2	3
	Description	Units of Measure	Quantity
G	Base Period Average Electricity Used Onsite	MWh	
H	Reporting Year Electricity Used Onsite	MWh	
I	Reporting Year Incremental Electricity Used Onsite (H – G)	MWh	
J	Reporting Year Total Emissions From Electricity Used Onsite*	metric tons CO ₂ e	
K	Reporting Year Emissions Intensity of Electricity Used Onsite (J / H)	metric tons CO ₂ e /MWh	
L	Avoided Emissions Benchmark	metric tons CO ₂ e /MWh	
M	Emission Reductions [(L - K) * I]	metric tons CO ₂ e	

*Include emissions from supplemental fossil fuel use only.

4. Calculate Carbon Dioxide Displaced From Electricity Sales (avoided emissions)

Item	1	2	3
	Description	Units of Measure	Quantity
N	Base Period Average Electricity Sold	MWh	
O	Reporting Year Electricity Sold	MWh	
P	Reporting Year Incremental Electricity Sold (O – N)	MWh	
Q	Reporting Year Total Emissions From Electricity Sold	metric tons CO ₂ e	
R	Reporting Year Emissions Intensity of Electricity Sold (Q / O)	metric tons CO ₂ e /MWh	
S	Avoided Emissions Benchmark	metric tons CO ₂ e /MWh	
T	Emission Reductions [(S – R) * P]	metric tons CO ₂ e	

5. Calculate Carbon Dioxide Emissions From Flaring

Item	1	2	3
	Description	Units of Measure	Quantity
U	Base Period Average Methane Flared	MMBtu	
V	Reporting Year Methane Flared	MMBtu	
W	Incremental Methane Flared (V – U)	MMBtu	
X	Change in Carbon Dioxide Emissions From Flaring	metric tons CO ₂ e	

6. Summarize Emission Reductions

Item	Description	Units of Measure	Emission Reductions		
			3	4	5
			Direct	Avoided	TOTAL
Y	Change in Methane Captured and Combusted	metric tons CO ₂ e			
Z	Carbon Dioxide Displaced From Electricity Used Onsite	metric tons CO ₂ e			
AA	Carbon Dioxide Displaced From Electricity Sales	metric tons CO ₂ e			
BB	Carbon Dioxide Emissions From Flaring	metric tons CO ₂ e			
CC	Net Change in Greenhouse Gas Emissions (Y + Z + AA – BB)	metric tons CO ₂ e			

7. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

--	--	--	--	--	--	--	--	--	--

8. Describe Actions That Were the Likely Causes of the Reductions Achieved:

9. Identify Cause(s) of the Emission Reduction(s) (check all that apply):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

10. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part D. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1 Name of Recipient	2 Gas	3 Units	4 Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

2. Enter Volume of Landfill Gas Captured by Disposition (Mscf)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
Flared						
Electricity Used Onsite						
Electricity Sold Offsite						
Injected Into Pipeline						
Direct Use Onsite						
Direct Use Offsite						
Total						

3. Enter Average Heat Content of Gas Captured (Btu/scf)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
Flared						
Electricity Used Onsite						
Electricity Sold Offsite						
Injected Into Pipeline						
Direct Use Onsite						
Direct Use Offsite						

4. Enter Total Energy Content of Gas Captured and Combusted (MMBtu)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
Flared						
Electricity Used Onsite						
Electricity Sold Offsite						
Injected Into Pipeline						
Direct Use Onsite						
Direct Use Offsite						
Total						

5. Enter Mass of Methane Captured (metric tons CO₂e)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
Flared						
Electricity Used Onsite						
Electricity Sold Offsite						
Injected Into Pipeline						
Direct Use Onsite						
Direct Use Offsite						
Total						

Part C. Emission Reductions

1. Calculate Changes in Methane Capture

Item	1	2	3
	Description	Units of Measure	Quantity
A	Average Annual Quantity of Methane Captured in Base Period	metric tons CO ₂ e	
B	Methane Captured in Reporting Year	metric tons CO ₂ e	
C	Change in Methane Captured (B - A)	metric tons CO ₂ e	

2. Calculate Changes in Disposition of Electricity Generation From Captured Methane (MWh)

Item	Source and Disposition	1	2	3	4	5	6	Reporting Year
		Base Period						
		Year 1	Year 2	Year 3	Year 4	Base Period Average		
D	Electricity Used Onsite							
E	Electricity Sales							
F	Total Generation							

3. Calculate Carbon Dioxide Displaced From Electricity Used Onsite (avoided emissions)

Item	1	2	3
	Description	Units of Measure	Quantity
G	Base Period Average Electricity Used Onsite	MWh	
H	Reporting Year Electricity Used Onsite	MWh	
I	Reporting Year Incremental Electricity Used Onsite (H - G)	MWh	
J	Reporting Year Total Emissions From Electricity Used Onsite*	metric tons CO ₂ e	
K	Reporting Year Emissions Intensity of Electricity Used Onsite (J / H)	metric tons CO ₂ e /MWh	
L	Avoided Emissions Benchmark	metric tons CO ₂ e /MWh	
M	Emission Reductions [(L - K) * I]	metric tons CO ₂ e	

*Include emissions from supplemental fossil fuel use only.

4. Calculate Carbon Dioxide Displaced From Electricity Sales (avoided emissions)

Item	1	2	3
	Description	Units of Measure	Quantity
N	Base Period Average Electricity Sold	MWh	
O	Reporting Year Electricity Sold	MWh	
P	Reporting Year Incremental Electricity Sold (O - N)	MWh	
Q	Reporting Year Total Emissions From Electricity Sold*	metric tons CO ₂ e	
R	Reporting Year Emissions Intensity of Electricity Sold (Q / O)	metric tons CO ₂ e /MWh	
S	Avoided Emissions Benchmark	metric tons CO ₂ e /MWh	
T	Emission Reductions [(S - R) * P]	metric tons CO ₂ e	

*Include emissions from supplemental fossil fuel use only.

5. Calculate Carbon Dioxide Displaced by Methane Supplied to a Natural Gas Distribution Network

Item	1	2	3
	Description	Units of Measure	Quantity
U	Base Period Average Methane Supplied to a Natural Gas Distribution Network	MMBtu	
V	Reporting Year Methane Supplied to a Natural Gas Distribution Network	MMBtu	
W	Incremental Methane Supplied to a Natural Gas Distribution Network (V - U)	MMBtu	
X	Natural Gas Emissions Factor	metric tons CO ₂ e/MMBtu	
Y	Change in Carbon Dioxide Emissions From Methane Supplied to a Natural Gas Distribution Network (W * X)	metric tons CO ₂ e	

6. Summarize Emission Reductions

Item	Description	Units of Measure	Emission Reductions			
			3	4	5	6
			Direct	Indirect	Avoided	TOTAL
Z	Change in Methane Captured and Combusted	metric tons CO ₂ e				
AA	Carbon Dioxide Displaced From Electricity Used Onsite	metric tons CO ₂ e				
BB	Carbon Dioxide Displaced From Electricity Sales	metric tons CO ₂ e				
CC	Carbon Dioxide Displaced by Methane Supplied to a Natural Gas Distribution Network	metric tons CO ₂ e				
DD	Net Change in Greenhouse Gas Emissions (Z + AA + BB + CC)	metric tons CO ₂ e				

7. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

--	--	--	--	--	--	--	--	--	--

8. Describe Actions That Were the Likely Causes of the Reductions Achieved:

9. Identify the Cause(s) of the Emission Reduction(s) (check all that apply):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

10. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part D. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1	2	3	4
Name of Recipient	Gas	Units	Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

Part B. Action Quantification

1. Enter Source of Carbon Dioxide Sequestered in Current Reporting Year (metric tons CO₂e)

Item	1	2	3	4	5	6
	Name of Source	Location of Source	CO ₂ Extracted/ Captured	CO ₂ Acquired Via Transfer or Purchase	Total CO ₂ Captured or Acquired	Name of Storage Site
A1						
A2						
A3						
A4						
A5						
B	Totals (sum of items A1-A5)					

2. Enter Amount Sequestered in Current Reporting Year (metric tons CO₂e)

Item	1	2	3	4	5		6	7	
	Name of Storage Site	Location of Storage Site	Enhanced Resource Recovery?	CO ₂ Injected in Current Reporting Year	Post-Injection Leakage/Seepage During Current Reporting Year		Net CO ₂ Sequestered in Current Reporting Year		
					Monitoring Method	Quantity			
<i>CO₂ Sequestered by Reporting Entity</i>									
C1			Yes/No						
C2			Yes/No						
C3			Yes/No						
<i>CO₂ Sequestered by Third Party</i>									
D1			Yes/No						
D2			Yes/No						
D3			Yes/No						
E	Totals (sum of items C1-D3)								

3. Enter Average Amount Sequestered in Base Period (metric tons CO₂e)

Item	1	2	3	4	5		6	7	
	Name of Storage Site	Location of Storage Site	Enhanced Resource Recovery?	Average Annual CO ₂ Injected in Base Period	Average Annual Post-Injection Leakage/Seepage in Base Period		Average Annual Net CO ₂ Sequestered in Base Period		
					Monitoring Method	Quantity			
<i>CO₂ Sequestered by Reporting Entity</i>									
F1			Yes/No						
F2			Yes/No						
F3			Yes/No						
<i>CO₂ Sequestered by Third Party</i>									
G1			Yes/No						
G2			Yes/No						
G3			Yes/No						
H	Totals (sum of items F1-G3)								

Part C. Emission Reductions

1. Calculate Emission Reductions

Item	1	2	3
	Description	Unit of Measure	Quantity
I	Emission Reductions (E7 - H7)	metric tons CO ₂ e	

2. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------

3. Describe Actions That Were the Likely Causes of the Reductions Achieved:

4. Identify the Cause(s) of the Emission Reduction(s) (*check all that apply*):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

5. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part D. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1	2	3	4
Name of Recipient	Gas	Units	Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

Addendum B9. Electricity Transmission and Distribution Improvements

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Action Identification

1. Date Action Was Initiated: Month _____ Year _____
2. Did You Report Transmission and Distribution Improvements Last Year?
 Yes No
3. Are You Reporting as a Control Area or as a Member of a Control Area?
 Yes No

Part B. Activity Data

1. Enter Activity Data

Item	1	2	3
	Description	Units of Measure (kWh or kVAh)	Quantity
Base Period			
A	Electricity Entering T&D System From Own Generation		
B	Electricity Delivered Through T&D System to End Users (NOTE: Should Equal Total Wholesale and Retail Sales)		
C	Electricity Imported Into T&D System		
D	Electricity Exported From T&D System		
E	Net Imports of Electricity (C - D)		
F	Actual Net Interchange (ANI) If Reporting on Control Area Basis		
G	Loss Ratio $(A + E - B) / (A + E)$ or $[A - (B + F)] / (A - F)$ †		
Reporting Year			
H	Electricity Entering T&D System From Own Generation		
I	Electricity Delivered Through T&D System to End Users (NOTE: Should Equal Total Wholesale and Retail Sales)		
J	Electricity Imported Into T&D System		
K	Electricity Exported From T&D System		
L	Net Imports of Electricity (J - K)		
M	Actual Net Interchange (ANI) If Reporting on Control Area Basis		
N	Loss Ratio $(H + L - I) / (H + L)$ or $[H - (I + M)] / (H - M)$ †		
O	Change In Loss Intensity $(G - N) * (H + L)$ or $(G - N) * (H - M)$ †	kWh or kVAh	

†Use second equation if reporting on a control area basis

Part C. Emission Reductions

1. Calculate Emission Reductions

Item	1	2	3
	Description	Units of Measure	Quantity
P	Avoided Emissions Benchmark for Electricity	metric tons CO ₂ e/MWh	
Q	System Power Factor (If Loss Intensity Calculated In kVAh)		
R	Total Emission Reductions $[(O * P) / 1000]$ or $\{[O * (P * Q)] / 1000\}$ †	metric tons CO ₂ e	
S	Direct Emission Reductions $\{R * [I / (I + L)]\}$	metric tons CO ₂ e	
T	Avoided Emissions (from Avoided Electricity Imports) $\{R * [L / (I + L)]\}$	metric tons CO ₂ e	

†Use second equation if calculating losses in kVAh

2. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------

3. Describe Actions That Were the Likely Causes of the Reductions Achieved:

4. Identify the Cause(s) of the Emission Reduction(s) (check all that apply):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

5. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part D. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1	2	3	4
Name of Recipient	Gas	Units	Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

Part B. Action Quantification

1. Enter Volume of Gas Captured and Disposition (Mscf)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
Flared						
Electricity Generation						
Injected Into Pipeline/Sale to Supply Network						
Direct Use Onsite						
Direct Use Offsite						
Total						

2. Enter Average Heat Content of Gas Captured and Utilized (Btu/scf)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
Flared						
Electricity Generation						
Injected Into Pipeline/Sale to Supply Network						
Direct Use Onsite						
Direct Use Offsite						

3. Enter Total Energy Content of Gas Captured and Utilized (MMBtu)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
Flared						
Electricity Generation						
Injected Into Pipeline/Sale to Supply Network						
Direct Use Onsite						
Direct Use Offsite						
Total						

4. Enter Mass of Methane Captured and Utilized (metric tons CO₂e)

1	2	3	4	5	6	7
Source and Disposition	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	
Total Methane Captured						

5. Enter Nitrous Oxide Emissions From Aerobic Conditions During the Base Period and Reporting Year (metric tons CO₂e)

1	2	3	4	5	6	7
Unit of Measure	Base Period					Reporting Year
	Year 1	Year 2	Year 3	Year 4	Base Period Average	

Part C. Emission Reductions

1. Calculate Changes in Methane Captured and Utilized

Item	1 Description	2 Units of Measure	3 Quantity
A	Base Period Average Annual Quantity of Methane Captured	metric tons CO ₂ e	
B	Reporting Year Methane Captured	metric tons CO ₂ e	
C	Change in Methane Captured (B - A)	metric tons CO ₂ e	

2. Calculate Changes in Disposition of Electricity Generation From Captured Methane (MWh)

Item	1 Source and Disposition	2 Base Period					7 Reporting Year
		3 Year 1	4 Year 2	5 Year 3	6 Year 4	6 Base Period Average	
D	Electricity Used Onsite						
E	Electricity Sold						
F	Total Generation						

3. Calculate Carbon Dioxide Displaced From Electricity Used Onsite (avoided emissions)

Item	1 Description	2 Units of Measure	3 Quantity
G	Base Period Average Electricity Used Onsite	MWh	
H	Reporting Year Electricity Used Onsite	MWh	
I	Reporting Year Incremental Electricity Used Onsite (H - G)	MWh	
J	Reporting Year Total Emissions From Electricity Used Onsite*	metric tons CO ₂ e	
K	Reporting Year Emissions Intensity of Electricity Used Onsite (J / H)	metric tons CO ₂ e /MWh	
L	Avoided Emissions Benchmark	metric tons CO ₂ e /MWh	
M	Emission Reductions [(L - K) * I]	metric tons CO ₂ e	

*Include emissions from supplemental fossil fuel use only. If biogas was co-combusted with fossil fuels in Base Period, use Addendum B5 (Emission Reductions from Energy Generation and Distribution) to report/register reduction associated with exported electricity.

4. Calculate Carbon Dioxide Displaced From Electricity Sales (avoided emissions)

Item	1	2	3
	Description	Units of Measure	Quantity
N	Base Period Average Electricity Sold	MWh	
O	Reporting Year Electricity Sold	MWh	
P	Reporting Year Incremental Electricity Sold (O - N)	MWh	
Q	Reporting Year Total Emissions From Electricity Sold*	metric tons CO ₂ e	
R	Reporting Year Emissions Intensity of Electricity Sold (Q / O)	metric tons CO ₂ e /MWh	
S	Avoided Emissions Benchmark	metric tons CO ₂ e /MWh	
T	Emission Reductions [(S - R) * P]	metric tons CO ₂ e	

*Include emissions from supplemental fossil fuel use only. If biogas was co-combusted with fossil fuels in Base Period, use Addendum B5 (Emission Reductions from Energy Generation and Distribution) to report/register reduction associated with exported electricity.

5. Calculate Carbon Dioxide Displaced by Methane Supplied to a Natural Gas Distribution Network

Item	1	2	3
	Description	Units of Measure	Quantity
U	Base Period Average Methane Supplied to a Natural Gas Distribution Network	MMBtu	
V	Reporting Year Methane Supplied to a Natural Gas Distribution Network	MMBtu	
W	Incremental Methane Supplied to a Natural Gas Distribution Network (V - U)	MMBtu	
X	Natural Gas Emissions Factor	metric tons CO ₂ e/MMBtu	
Y	Change in Carbon Dioxide Emissions From Methane Supplied to a Natural Gas Distribution Network (W * X)	metric tons CO ₂ e	

6. Calculate Changes in Nitrous Oxide Emissions From Use of Anaerobic Digester

Item	1	2	3
	Description	Units of Measure	Quantity
Z	Base Period Average Annual Nitrous Oxide Emissions	metric tons CO ₂ e	
AA	Reporting Year Quantity of Nitrous Oxide Emissions	metric tons CO ₂ e	
BB	Change in Nitrous Oxide Emissions (AA - Z)	metric tons CO ₂ e	

7. Summarize Emission Reductions

Item	Description	Units of Measure	Emission Reductions			
			3	4	5	6
			Direct	Indirect	Avoided	TOTAL
CC	Increase in Methane Captured and Utilized	metric tons CO ₂ e				
DD	Carbon Dioxide Displaced From Electricity Used Onsite	metric tons CO ₂ e				
EE	Carbon Dioxide Displaced From Electricity Sales	metric tons CO ₂ e				
FF	Carbon Dioxide Displaced by Methane Supplied to a Natural Gas Distribution Network	metric tons CO ₂ e				
GG	Change in Nitrous Oxide Emissions	metric tons CO ₂ e				
HH	Net Change in Emissions (CC + DD + EE + FF - GG)	metric tons CO ₂ e				

8. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved *[Enter codes from Appendix M]*

--	--	--	--	--	--	--	--	--	--

9. Describe the Actions That Were the Likely Causes of the Reductions Achieved:

10. Identify the Cause(s) of the Emission Reduction(s) *(check all that apply)*:

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

11. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part D. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1 Name of Recipient	2 Gas	3 Units	4 Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

Part C. Emission Reductions

1. Calculate Carbon Dioxide Displaced by Methane Supplied to a Natural Gas Distribution Network

Item	1	2	3
	Description	Units of Measure	Quantity
A	Base Period Average Methane Supplied to a Natural Gas Distribution Network	MMBtu	
B	Reporting Year Methane Supplied to a Natural Gas Distribution Network	MMBtu	
C	Incremental Methane Supplied to a Natural Gas Distribution Network (B - A)	MMBtu	
D	Natural Gas Emissions Factor	metric tons CO ₂ e/MMBtu	
E	Change in Carbon Dioxide Emissions from Methane Supplied to a Natural Gas Distribution Network (C * D)	metric tons CO ₂ e	

2. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

--	--	--	--	--	--	--	--	--	--

3. Describe Actions That Were the Likely Causes of the Reductions Achieved:

4. Identify the Cause(s) of the Emission Reduction(s) (check all that apply):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

5. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part D. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1	2	3	4
Name of Recipient	Gas	Units	Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

Part B. Action Quantification

1. Enter Total Quantity of Fly Ash Used and Portland Cement Displaced in Base Period and Reporting Year

Item	Description	Unit of Measure	Base Period Quantity					Reporting Year Quantity
			Yr 1	Yr 2	Yr 3	Yr 4	Avg.	
			A	Fly Ash Used in Place of Portland Cement	metric tons			
B	Portland Cement Displaced	metric tons						

2. Calculate Substitution Ratio of Fly Ash for Portland Cement for Base Period and Reporting Year

Item	Description	Unit of Measure	Quantity
C	Substitution Ratio for Base Period (B7 / A7)	--	
D	Substitution Ratio for Reporting Year (B8 / A8)	--	

Part C. Emission Reductions

1. Calculate Reduction in Indirect Emissions

Item	Description	Unit of Measure	Quantity
E	Net Emissions Factor for Virgin Cement	metric tons C equivalent/ton	0.2396
F	Net Emissions Factor for Fly Ash	metric tons C equivalent/ton	0.0021
G	Conversion Factor for Carbon Equivalent to CO ₂ e	--	3.667
H	Emissions Displaced in Base Period {A7 * [(E / C) - F] * G}	metric tons CO ₂ e	
I	Emissions Displaced in Reporting Year {A8 * [(E / C) - F] * G}	metric tons CO ₂ e	
J	Indirect Emission Reductions (I - H)	metric tons CO ₂ e	

2. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved (Enter codes from Appendix M)

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------

3. Describe Actions That Were the Likely Causes of the Reductions Achieved:

4. Identify the Cause(s) of the Emission Reduction(s) (*check all that apply*):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

5. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emission (optional):

Part D. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1	2	3	4
Name of Recipient	Gas	Units	Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

Addendum B13. Demand-Side Management and Other Reduction Programs

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Action Identification

If you are reporting more than one program, copy Part A and complete for each program.

1. Enter Name of Program: _____
2. Enter Location of Program City: _____ State (if domestic subentity): _____ Country (if foreign subentity): _____
3. Enter Date Program Began: Month _____ Year _____
4. Provide Summary Description of Program: _____ _____ _____ _____ _____
5. Check the Applicable Box(es) To Indicate What the Program Provides to Very Small Emitters (entities that typically emit below 500 tons of CO ₂ e per year): <input type="checkbox"/> Information or other technical assistance <input type="checkbox"/> Financial incentives <input type="checkbox"/> Direct installation or investment <input type="checkbox"/> Other non-commercial services
6. Identify Sector(s) of Very Small Emitters Targeted (please check all that apply): <input type="checkbox"/> Residential <input type="checkbox"/> Small industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Other, specify: _____
7. Describe Program Evaluation Method: _____
8. Enter Name and Describe Qualifications of 3 rd Party Verifier: Name: _____ Qualifications: _____ _____
9. Enter Annual Energy Usage Reductions in Reporting Year (if not applicable, go to Question 10): Unit _____ Quantity _____
10. Enter Greenhouse Gas Emission Reductions in Reporting Year (metric tons CO ₂ e): _____
11. Do the Reductions Qualify for Registration? <input type="checkbox"/> Yes <input type="checkbox"/> No To register reductions, the DSM or other program must meet all of the following criteria: <ul style="list-style-type: none">• The DSM or other program must be funded by the reporting entity.• The estimated effects reported must first occur after the entity's start year and must cause a reduction of the total emissions of residential or other very small emitters.• The qualifying program must provide information or other technical assistance, financial incentives, direct installation or investment, or other non-commercial services to very small emitters to assist them achieving emission reductions recognized by these guidelines.• Program evaluations must be performed and/or certified by an independent and qualified third party verifier. The third party must certify that the estimated annual energy usage or emission reductions were estimated in accordance with these guidelines.

Part B. Emission Reductions

1. Summarize Energy Savings and Greenhouse Gas Emission Reductions by Program:

1	2	3	4	5
Program Name	Total Energy Savings		Total Emission Reductions (CO ₂ e)	
	Unit	Amount	Unit	Amount
Total Emission Reductions				

2. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

--	--	--	--	--	--	--	--	--	--

3. Describe Actions That Were the Likely Causes of the Reductions Achieved:

4. Identify the Cause(s) of the Emission Reduction(s) (check all that apply):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

5. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part C. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1	2	3	4
Name of Recipient	Gas	Units	Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

Addendum B14. Combined Heat and Power

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Action Quantification

1. Enter Plant Emissions Data

Item	1	2	3
	Description	Units of Measure	Quantity
Base Period Average			
A	Total CHP Plant Fuel Use	MMBtu	
B	Total CHP Plant Emissions*	metric tons CO ₂ e	
Reporting Year			
C	Total CHP Plant Fuel Use	MMBtu	
D	Total CHP Plant Emissions*	metric tons CO ₂ e	

*Derive from fuel use (values A and C) using the methods in Chapter 1, Part C of the Technical Guidelines (Stationary Combustion).

2. Enter Activity Data

Item	1	2	3
	Description	Units of Measure	Quantity
Base Period Average			
E	Total Thermal Generation	MMBtu	
F	Total Electrical Generation	MMBtu*	
G	Thermal Exports	MMBtu	
H	Electricity Exports	MMBtu*	
I	Thermal Generating Efficiency**	%	
J	Electrical Generating Efficiency***	%	
Reporting Year			
K	Total Thermal Generation	MMBtu	
L	Total Electrical Generation	MMBtu*	
M	Thermal Exports	MMBtu	
N	Electricity Exports	MMBtu*	
O	Thermal Generating Efficiency**	%	
P	Electrical Generating Efficiency***	%	
Q	Thermal Avoided Emissions Benchmark	metric tons CO ₂ e / MMBtu	
R	Electricity Avoided Emissions Benchmark	metric tons CO ₂ e / MWh	

*To convert electrical output to MMBtu, multiply electrical output in MWh by 3.412

**If the efficiency of the thermal energy generation (Efficiency_{Thermal}) is unknown, reporters may use a default value of 80 percent.

***If the efficiency of the electrical energy generation (Efficiency_{Thermal}) is unknown, reporters may use a default value of 35 percent.

3. Calculate Emissions for Each Generating Stream

Item	1	2
	Description	Emissions (Metric Tons CO ₂ e)
Base Period		
S	Total Thermal Generation Emissions {B * (E / I) / [(E / I) + (F / J)]}	
T	Total Electricity Generation Emissions (B - S)	
Reporting Year		
U	Total Thermal Generation Emissions {D * (K / O) / [(K / O) + (L / P)]}	
V	Total Electricity Generation Emissions (D - U)	

*If the efficiency of the thermal energy generation (Efficiency_{Thermal}) is unknown, reporters may use a default value of 0.8.

4. Calculate Emissions Associated With Thermal and Electrical Energy Exported and Used Onsite

Item	1	2	3
	Description	Units of Measure	Emissions
Base Period			
W	Exported Thermal Generation Emissions $[(G / E) * S]$	metric tons CO ₂ e	
X	Exported Electrical Generation Emissions $[(H / F) * T]$	metric tons CO ₂ e	
Y	Onsite Thermal Generation Emissions (S - W)	metric tons CO ₂ e	
Z	Onsite Electrical Generation Emissions (T - X)	metric tons CO ₂ e	
Reporting Year			
AA	Exported Thermal Generation Emissions $[(M / K) * U]$	metric tons CO ₂ e	
BB	Exported Electrical Generation Emissions $[(N / L) * V]$	metric tons CO ₂ e	
CC	Onsite Thermal Generation Emissions (U - AA)	metric tons CO ₂ e	
DD	Onsite Electrical Generation Emissions (V - BB)	metric tons CO ₂ e	

Part B. Emission Reductions

1. Calculate Direct Emission Reductions From Onsite Energy Use (*Note: Reductions can be calculated using either the Changes in Emissions Intensity method or the Changes in Absolute Emissions method. Reporters should select one method, and use the appropriate formulas provided*)

a. Calculate Changes in Emissions Intensity From Energy Used Onsite

Item	1	2	3
	Description	Units of Measure	Direct Emissions
EE	Emission Reductions From Thermal Generation Used Onsite $[(S / E) - (U / K)] * (K - M)$	metric tons CO ₂ e	
FF	Emission Reductions From Electrical Generation Used Onsite $[(T / F) - (V / L)] * (L - N)$	metric tons CO ₂ e	

b. Calculate Absolute Changes in Emissions From Energy Used Onsite

Item	1	2	3
	Description	Units of Measure	Direct Emissions
GG	Emission Reductions From Thermal Generation Used Onsite (Y - CC)	metric tons CO ₂ e	
HH	Emission Reductions From Electrical Generation Used Onsite (Z - DD)	metric tons CO ₂ e	

2. Calculate Emission Reductions Associated With Energy Exports

a. Calculate Thermal Energy Emission Reductions Due to Improvements in Historical Emissions Intensity

Item	1	2	3
	Description	Units of Measure	Emission Reductions
II	Emission Reductions $\{[(S / E) - (U / K)] * G\}$	metric tons CO ₂ e	

b. Calculate Thermal Energy Emission Reductions Due to Incremental Changes in Thermal Exports

	1	2	3
Item	Description	Units of Measure	Emission Reductions
JJ	Emission Reductions $\{[Q - (U / K)] * (M - G)\}$	metric tons CO ₂ e	

c. Calculate Electricity Emission Reductions Due to Improvements in Historical Emissions Intensity

	1	2	3
Item	Description	Units of Measure	Emission Reductions
KK	Emission Reductions $\{(T / F) - (V / L) * H\}$	metric tons CO ₂ e	

d. Calculate Electricity Emission Reductions Due to Incremental Changes in Electricity Exports

	1	2	3
Item	Description	Units of Measure	Emission Reductions
LL	Emission Reductions $\{[R - (V / L)] * (N - H)\}$	metric tons CO ₂ e	

3. Summarize Emission Reductions

	1	2	3
Item	Description	Units of Measure	Quantity
MM	Reductions Associated With Onsite Energy Use (EE + FF) or (GG + HH)	metric tons CO ₂ e	
NN	Total Emission Reductions From Energy Generation and Exports (II + JJ + KK + LL)	metric tons CO ₂ e	
OO	Total Emission Reductions (MM + NN)	metric tons CO ₂ e	

4. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

--	--	--	--	--	--	--	--	--	--

5. Describe Actions That Were the Likely Causes of the Reductions Achieved:

6. Identify the Cause(s) of the Emission Reduction(s) (check all that apply):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

7. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part C. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1	2	3	4
Name of Recipient	Gas	Units	Amount
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
	CO ₂ e	metric tons	
TOTAL	CO ₂ e	metric tons	

Addendum B15. Other Action-Specific Reductions

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Action Identification

1. Explain Why It Is Not Possible To Use Any of The Methods in Addendum B1-B14

2. Enter Date Action Was Initiated: Month_____ Year_____

3. Was the Action Reported Last Year?

Yes No

4. Identify Activities Affected by the Action:

5. Identify Equipment Affected by the Action:

6. Identify the Emission Sources Affected by the Action:

Part B. Emission Reductions Computation

1. Enter Activity Data, Emission Coefficients, and Conversion Factors

Item	1	2	3
	Description	Units of Measure	Quantity
A			
B			
C			
D			
E			
F			
G			
H			
I			
J			

2. Enter Equation(s) Used To Calculate Emissions and Emission Reductions in Question 3:

3. Calculate Emission Reductions

Item	Description	Units of Measure	Source of Emissions Affected		
			3	4	5
			Direct Emissions	Indirect Emissions From Purchased Energy	Other Indirect Emissions
K	Base Period Emissions	metric tons CO ₂ e			
L	Reporting Year Emissions	metric tons CO ₂ e			
M	Registered Emission Reductions (K - L)	metric tons CO ₂ e			
N	Reported Emission Reductions (K - L)	metric tons CO ₂ e			

4. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved [Enter codes from Appendix M]

5. Describe the Actions That Were the Likely Causes of the Reductions Achieved:

6. Identify the Cause(s) of the Emission Reduction(s) (check all that apply):

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

7. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part C. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO₂e)

1 Name of Recipient	2 Emissions Type*	3 Gas	4 Units	5 Amount
		CO ₂ e	metric tons	
		CO ₂ e	metric tons	
		CO ₂ e	metric tons	
		CO ₂ e	metric tons	
Total Direct Emission Reductions		CO ₂ e	metric tons	
Total Indirect Emission Reductions From Purchased Energy		CO ₂ e	metric tons	
Total Other Indirect Emission Reductions		CO ₂ e	metric tons	

*Direct, Indirect from Purchased Energy, Other Indirect.

2. Identify Types of Actions That Were the Likely Cause of the Reductions Achieved *[Enter codes from Appendix M]*

--	--	--	--	--	--	--	--	--	--

3. Describe Actions That Were the Likely Causes of the Reductions Achieved:

4. Identify the Cause(s) of the Emission Reduction(s) *(check all that apply)*:

- Voluntary action
- Plant closing
- Government requirement
 - Federal requirement
 - State requirement
 - Local requirement

5. Summarize Benefits and Costs of the Actions Taken To Reduce Greenhouse Gas Emissions (optional):

Part C. Distribution of Emission Reductions to Other 1605(b) Reporters

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (kilograms)

1 Name of Recipient	2 Gas	3 Units	4 Amount
		kilograms	
		kilograms	
		kilograms	
		kilograms	
		kilograms	

3. Document Reporter-Defined Emission Factors.

