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 (42 USC 13385).

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

November 18, 2010

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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. Public reporting burden for this collection of information is estimated to average 60 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data, and completing and reviewing the collection of information.

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 CO_2 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 CO_2 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 activities

  Describe 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)
     - ☐ Holding/Parent Company
     - ☐ 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 subentities 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 Protection of Entity Information
Check box if applicable:
☐ Requesting limitations on releasing the information reported on this form.
(NOTE that if you request that your response be protected from public release, you must, in the space below, explain, on an element-by-element basis, the reasons why your reported information should be protected. To assist in this determination, respondents should demonstrate that their information contains trade secrets or explain how the release of your information is likely to cause substantial harm to your 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
				Base Period Emissions or Carbon Flux					Reporting Year Emissions or Carbon Flux	Weighted Rating
Item	Source	Gas	Units	Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average		
A	Direct Emissions									
A1	Carbon Dioxide	CO_2	mt							
A2	Methane	CH_4								
A3	Nitrous Oxide	N_2O								
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	mt							
B2	Methane	CH_4								
B3	Nitrous Oxide	N_2O								
C	Indirect Emissions From Purchased Energy (Reductions)	CO_2e	mt							
D	Carbon Flux	CO_2	mt							
E	Other Indirect Emissions									
E1	Carbon Dioxide	CO_2	mt							
E2	Methane	CH_4								
E3	Nitrous Oxide	N_2O								
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	mt							

1	2	3	4	5	6	7	8	9	10	11
				Base Period Emissions or Carbon Flux					Reporting Year Emissions or Carbon Flux	Weighted Rating
Item	Source	Gas	Units	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	mt							

mt = metric ton

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

1	2	3	4	5	6	7	8	9	10	11
				Base Period Emissions or Carbon Flux					Reporting Year Emissions or Carbon Flux	Weighted Rating
Item	Source	Gas	Units	Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average		
A	Direct Emissions									
A1	Carbon Dioxide	CO_2	mt							
A2	Methane	CH_4								
A3	Nitrous Oxide	N_2O								
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	mt							
B2	Methane	CH_4								
B3	Nitrous Oxide	N_2O								
C	Indirect Emissions From Purchased Energy (Reductions)	CO_2e	mt							
D	Carbon Flux	CO_2	mt							
E	Other Indirect Emissions									
E1	Carbon Dioxide	CO_2	mt							
E2	Methane	CH_4								
E3	Nitrous Oxide	N_2O								
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	mt							

1	2	3	4	5	6	7	8	9	10	11
				Base Period Emissions or Carbon Flux					**Reporting Year Emissions or Carbon Flux**	**Weighted Rating**
Item	**Source**	**Gas**	**Units**	**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	mt							

mt = metric ton

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 CO_2 captured from stationary combustion for geologic sequestration)*

1	1A	2	3	4	5	6	7	8	9	10	11	12
					Base Period Emissions							
Source Category	**Fuel Type**	**Specific Facility/Source Name (optional)**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Estimation Method**	**Rating**
Fossil Fuel Combustion			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Nonstandard Fuel Combustion			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Waste Fuels Combustion			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Biomass Combustion			CH_4	kg								
			N_2O	kg								
Nonfuel Use of Fossil Fuels			CO_2	mt								
Subtotal			CO_2e	mt								

mt = metric ton; kg = kilogram

b. Mobile Sources *(incorporate all emissions, including CO_2 captured from mobile sources for geologic sequestration)*

1	1A	2	3	4	5	6	7	8	9	10	11	12
					Base Period Emissions							
Source Category	**Fuel Type**	**Specific Vehicle Class/Fleet Name (optional)**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Esti-mation Method**	**Rating**
Highway Vehicles			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Off-Road Vehicles			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Water Borne Vessels			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Aircraft			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Mobile Refrigeration and Air-Conditioning			HFC-134a	kg								
Subtotal			CO_2e	mt								

mt = metric ton; kg = kilogram

c. Sector-Specific Industrial Process Emissions *(incorporate all emissions, including CO_2 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**					**Reporting Year Emissions**	**Estimation Method**	**Rating**
				Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**			
Industrial Processes											
Adipic Acid Production		N_2O									
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 – 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								

mt = metric ton; kg = kilogram

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**					**Reporting Year Emissions**	**Estimation Method**	**Rating**
				Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**			
Industrial Processes – Iron and Steel Production											
Iron and Steel Production – Electrode Consumption in Electric Arc Furnaces		CO_2	mt								
Iron and Steel Production – Secondary Steel Production in Electric Arc Furnaces		CO_2	mt								
Iron and Steel Production – Other		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 Production of Other Petrochemicals		CH_4									
Nitric Acid Production		N_2O									
Soda Ash Production		CO_2	mt								
Soda Ash Use		CO_2	mt								

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**					**Reporting Year Emissions**	**Esti-mation Method**	**Rating**
				Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**			
Energy											
Coal Mines		CH_4									
Oil and Natural Gas Industries		CH_4									
		CO_2	mt								
		N_2O									
Waste Handling											
Domestic and Industrial Wastewater Handling		CH_4									
		N_2O									
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									
		NF_3									
Other (for HFCs, PFCs, and CFCs specify gas)		CO_2	mt								
		CH_4									
		N_2O									
		SF_6									
		PFC: ___									
		HFC: ___									
		CFC: ___									
Subtotal		CO_2e	mt								

mt = metric ton; kg = kilogram

d. Agricultural Sources *(incorporate all emissions, including CO_2 captured from agricultural sources for geologic sequestration)*

1	2	3	4	5	6	7	8	9	10	11	12
				Base Period Emissions							
Source Category	**Specific Source Name (optional)**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Estimation Method**	**Rating**
Enteric Fermentation		CH_4									
Livestock Waste		CH_4									
		N_2O									
Residue Burning		N_2O									
		CH_4									
Rice Cultivation – 1st Harvest		CH_4									
Rice Cultivation – 2nd ("Ratoon") Harvest		CH_4									
Nitrous Oxide From Agricultural Soils – Nitrogen Application		N_2O									
Nitrous Oxide From Agricultural Soils – Organic Soils		N_2O									
Lime Application		CO_2	mt								
Cultivation of Organic Soils		CO_2	mt								
Other Agricultural Sources (specify source and gas): _____											
Subtotal		CO_2e	mt								

mt = metric ton; kg = kilogram

e. Fugitive Emissions Associated With Geologic Reservoirs

1	2	3	4	5	6	7	8	9	10	11	12
				Base Period Emissions							
Source Category	**Specific Source/ Reservoir Name (optional)**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year**	**Estimation Method**	**Rating**
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								
Subtotal		CO_2	mt								

mt = metric ton

f. Captured CO_2 Emissions from Anthropogenic Sources *(captured CO_2 emissions should also be included as emissions in Questions 1a through 1d above).*

1	2	3	4	5	6	7	8	9
			Base Period Average Quantity			Reporting Year Quantity		
Source	**Gas**	**Unit of Measure**	**Onsite**	**Offsite**	**Total**	**Onsite**	**Offsite**	**Total**
Stationary Combustion	CO_2	metric tons						
Sector-Specific Industrial Process Emissions	CO_2	metric tons						
Other (Mobile & Agricultural Sources)	CO_2	metric tons						
Subtotal	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
		Base Period Consumption						
Energy Type	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Consumption**	**System Type/Fuel Used for Generation**
Electricity	MWh							
Steam	MMBtu							
Hot Water	MMBtu							
Chilled Water	Ton-Hours Cooling							

b. Emissions From Purchased Energy for Emissions Inventory

1	2	3	4	5	6	7	8	9	10	11	12
				Base Period Emissions							
Source	**Specific Facility/ Region Name (optional)**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Estimation Method**	**Rating**
Electricity		CO_2	mt								
		CH_4	kg								
		N_2O	kg								
Steam		CO_2	mt								
		CH_4	kg								
		N_2O	kg								
Hot Water		CO_2	mt								
		CH_4	kg								
		N_2O	kg								
Chilled Water		CO_2	mt								
		CH_4	kg								
		N_2O	kg								
Total		CO_2e	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
			Base Period Emissions							
Source	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Estimation Method**	**Rating**
Electricity	CO_2e	mt								
Steam, Hot Water, and Chilled Water*	CO_2e	mt								
Total	CO_2e	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
			Base Period Emissions							
Source	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Estimation Method**	**Rating**
Employee Commuting										
Manufacture & Sale of Energy Efficient Products										
Consumption of Energy-intensive Products										
Nitrous Oxide Emissions from Fertilizer Application	N_2O									
Other:										
Subtotal	CO_2e	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
				Carbon Stocks					
Categories	**Specific Source/ Area Name (optional)**	**Gas**	**Units**	**Base Period**	**Estimated Carbon Stocks in Year Prior to Reporting Year**	**Reporting Year Carbon Stocks**	**Reporting Year Stock Change or Carbon Flux[1,2]**	**Estimation Method[3]**	**Rating**
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 Stock 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
					Carbon Stocks					
Name/Description Tract of Land	**Area (Acres)**	**Type of Disturbance**	**Year**	**Units**	**Base Period Average**	**Carbon Stocks in Year Before Disturbance**	**Reporting Year Carbon Stocks**	**Loss**	**Estimation Method**	**Rating**
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
				Carbon Stocks					
Categories	**Specific Source/ Area Name (optional)**	**Gas**	**Units**	**Base Period**	**Estimated Carbon Stocks in Year Prior to Reporting Year**	**Estimated Carbon Stocks in Reporting Year**	**Reporting Year Stock Change or Carbon Flux[1,2]**	**Estimation Method[3]**	**Rating**
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_2e	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

	1	2	3	4	5	6	7	8
			Base Period Emissions					Reporting Year Emissions or Carbon Flux
Item	Source	Gas/ Units	Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average	
A	Direct Emissions	$mtCO_2e$						
B	Indirect Emissions From Purchased Energy for Emissions Inventory	$mtCO_2e$						
C	Indirect Emissions From Purchased Energy for Calculation of Emission Reductions	$mtCO_2e$						
D	**Total Emissions (A + B)***	$mtCO_2e$						
E	Carbon Flux	$mtCO_2e$						
F	Captured CO_2 Sequestered in an Onsite Geologic Reservoir**	$mtCO_2e$						
G	**Total Inventory Emissions (D – E – F)**	$mtCO_2e$						
H	Other Indirect Emissions	$mtCO_2e$						
I	Captured CO_2 Transferred to Another Entity for Sequestration in a Geologic Reservoir**	$mtCO_2e$						

$mtCO_2e$ = 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 CO_2 extracted and captured from natural sources or CO_2 recycled during enhanced resource recovery operations.

2. Enter Total Foreign Emissions and Carbon Flux

	1	2	3	4	5	6	7	8
			Base Period Emissions					Reporting Year Emissions or Carbon Flux
Item	Source	Gas/ Units	Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average	
A	Direct Emissions	$mtCO_2e$						
B	Indirect Emissions From Purchased Energy for Emissions Inventory	$mtCO_2e$						
C	Indirect Emissions From Purchased Energy for Calculation of Emission Reductions	$mtCO_2e$						
D	**Total Emissions (A + B)***	$mtCO_2e$						
E	Carbon Flux	$mtCO_2e$						
F	Captured CO_2 Sequestered in an Onsite Geologic Reservoir**	$mtCO_2e$						
G	**Total Inventory Emissions (D - E - F)**	$mtCO_2e$						
H	Other Indirect Emissions	$mtCO_2e$						
I	Captured CO_2 Transferred to Another Entity for Sequestration in a Geologic Reservoir**	$mtCO_2e$						

$mtCO_2e$ = 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 CO_2 extracted and captured from natural sources or CO_2 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					
Totals[3]						
Weighted Average Rating[4]						
Foreign Sources						
A	4					
B	3					
C	2					
D	1					
Totals[3]						
Weighted Average Rating[4]						

[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					
Totals[3]						
Weighted Average Rating[4]						
Foreign Sources						
A	4					
B	3					
C	2					
D	1					
Totals[3]						
Weighted Average Rating[4]						

[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 CO_2e.

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** *(If Applicable)*	**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.

Part B. Offset Obtained by Agreement With a Non-reporter. Complete Part B if you have obtained emission offsets from a non-reporter to the 1605(b) Program. Also attach one copy of Addendum D and the form for the appropriate emission reduction method (Addendum B1-B16) completed by, or on behalf of, the non-reporter.

1. Enter Information in the Table Below for Offsets Obtained From Non-reporters

1	2	3	4	5	6	7
Name of Non-reporter	**Name of Non-reporter's Subentity** *(If Applicable)*	**Domestic or Foreign**	**Gas**	**Unit of Measure**	**Quantity**	**Non-reporter Has Met Requirements for Registration?* (Y/N)**

*If you are registering reductions, the non-reporters providing offsets must meet all the requirements for registering reductions.

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.

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. Likewise, if you choose to disaggregate foreign emissions by region or country, you must create a separate subentity for each region or country.*

* 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:
☐ 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

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 CO_2e)

	1	2	3	4
		Emission Reductions		
Item	Method/Source	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 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 CO_2e)

	1	2	3	4
		Emission Reductions		
Item	**Method/Source**	**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

	1	2	3	4
		Emission Reductions		
Item	Method/Source	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_2e)				
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	1 Method/Source	2 Emission Reductions Gross Reported Reductions	3 Reported Reductions Distributed to Other Reporters	4 Net Reported Reductions (Subtract Column 3 from Column 2)
Carbon Dioxide, Methane, Nitrous Oxide, Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride (metric tons CO_2e)				
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 gas.*				
V	Destruction of CFCs or Reductions of Other Gases. 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	1 Method/Source	2 Emission Reductions Gross Reported Reductions	3 Emission Reductions Reported Reductions Distributed to Other Reporters	4 Emission Reductions Net Reported Reductions (Subtract Column 3 from Column 2)
Carbon Dioxide, Methane, Nitrous Oxide, Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride (metric tons CO_2e)				
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	1 Method/Source	2 Emission Reductions Gross Reported Reductions	3 Emission Reductions Reported Reductions Distributed to Other Reporters	4 Emission Reductions Net Reported Reductions (Subtract Column 3 from Column 2)
Carbon Dioxide, Methane, Nitrous Oxide, Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride (metric tons CO_2e)				
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) *Attach additional copies of Part B if reporting reductions in foreign emissions of more than one gas.*				
V	Destruction of CFCs or Reductions of Other Gases. 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			☐ Yes ☐ No
				☐ Yes ☐ No
				☐ Yes ☐ 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 or support 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 *(Print Name)*	Lead Certifier of Verifying Firm *(Signature)*	Date
Corporate Officer of Verifying Firm *(Print Name)*	Corporate Officer of Verifying Firm *(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.

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:_____ 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, Subentity Emissions, or Offset Emissions

This emissions inventory is for:

- ☐ Entity-wide foreign operations
- ☐ A domestic or foreign subentity. Enter Name of Subentity: _____
- ☐ A domestic or foreign offset provider. Enter Name of Offset Provider: _____

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
				Base Period Emissions or Carbon Flux					Reporting Year Emissions or Carbon Flux	Weighted Rating*
Item	Source	Gas	Units	Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average		
A	Direct Emissions									
A1	Carbon Dioxide	CO_2	mt							
A2	Methane	CH_4								
A3	Nitrous Oxide	N_2O								
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	mt							
B2	Methane	CH_4								
B3	Nitrous Oxide	N_2O								
C	Indirect Emissions From Purchased Energy (Reductions)	CO_2e	mt							
D	Carbon Flux	CO_2	mt							
E	Other Indirect Emissions									
E1	Carbon Dioxide	CO_2	mt							

1	2	3	4	5	6	7	8	9	10	11
				Base Period Emissions or Carbon Flux					Reporting Year Emissions or Carbon Flux	Weighted Rating*
Item	**Source**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**		
E2	Methane	CH_4								
E3	Nitrous Oxide	N_2O								
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	mt							
G	Captured CO_2 Transferred to Another Entity for Sequestration in a Geologic Reservoir	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.

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

1. Enter Direct Emissions

a. Stationary Combustion *(incorporate all emissions, including CO_2 captured from stationary combustion for geologic sequestration)*

1	1A	2	3	4	5	6	7	8	9	10	11	12
					Base Period Emissions							
Source Category	**Fuel Type**	**Specific Facility/Source Name (optional)**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Estimation Method**	**Rating***
Fossil Fuel Combustion			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Nonstandard Fuel Combustion			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Waste Fuels Combustion			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Biomass Combustion			CH_4	kg								
			N_2O	kg								
Nonfuel Use of Fossil Fuels			CO_2	mt								
Subtotal			CO_2e	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 11 if this copy of Addendum A is being done for a domestic or foreign subentity.

b. Mobile Sources *(incorporate all emissions, including CO_2 captured from mobile sources for geologic sequestration)*

1	1A	2	3	4	5	6	7	8	9	10	11	12
					Base Period Emissions							
Source Category	**Fuel Type**	**Specific Vehicle Class/Fleet Name (optional)**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Esti-mation Method**	**Rating***
Highway Vehicles			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Off-Road Vehicles			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Water Borne Vessels			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Aircraft			CO_2	mt								
			CH_4	kg								
			N_2O	kg								
Mobile Refrigeration and Air-Conditioning			HFC-134a	kg								
Subtotal			CO_2e	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 CO_2 captured from industrial processes emissions for geologic sequestration)*

1	2	3	4	5	6	7	8	9	10	11	12
				Base Period Emissions							
Process/Fugitive Emissions	**Specific Facility/ Source Name (optional)**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Estimation Method**	**Rating***
Industrial Processes											
Adipic Acid Production		N_2O									
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 – 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								

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**					**Reporting Year Emissions**	**Estimation Method**	**Rating****
				Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**			
Industrial Processes – Iron and Steel Production											
Iron and Steel Production – Electrode Consumption in Electric Arc Furnaces		CO_2	mt								
Iron and Steel Production – Secondary Steel Production in Electric Arc Furnaces		CO_2	mt								
Iron and Steel Production – Other		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_2O									
Soda Ash Production		CO_2	mt								
Soda Ash Use		CO_2	mt								

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.

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**					**Reporting Year Emissions**	**Estimation Method**	**Rating***
				Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**			
Energy											
Coal Mines		CH_4									
Oil and Natural Gas Industries		CH_4									
		CO_2	mt								
		N_2O									
Waste Handling											
Domestic and Industrial Wastewater		CH_4									
		N_2O									
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									
		NF_3									
Other (for HFCs PFCs, and CFCs, specify gas)		CO_2	mt								
		CH_4									
		N_2O									
		SF_6									
		PFC:___									
		HFC:___									
		CFC:___									
Subtotal		CO_2e	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.

d. Agricultural Sources *(incorporate all emissions, including CO_2 captured from agricultural sources for geologic sequestration)*

1	2	3	4	5	6	7	8	9	10	11	12
				Base Period Emissions							
Source Category	**Specific Source Name (optional)**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Estimation Method**	**Rating***
Enteric Fermentation		CH_4									
Livestock Waste		CH_4									
		N_2O									
Residue Burning		N_2O									
		CH_4									
Rice Cultivation – 1st Harvest		CH_4									
Rice Cultivation – 2nd ("ratoon") harvest		CH_4									
Nitrous Oxide From Agricultural Soils – Nitrogen Application		N_2O									
Nitrous Oxide From Agricultural Soils – Organic Soils		N_2O									
Lime Application		CO_2	mt								
Cultivation of Organic Soils		CO_2	mt								
Other Agricultural Sources (specify source and gas): _____											
Subtotal		CO_2e	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
				Base Period Emissions							
Source Category	**Specific Source/ Reservoir Name (optional)**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year**	**Estimation Method**	**Rating***
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								
Subtotal		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 done for a domestic or foreign subentity.

f. Captured CO_2 Emissions From Anthropogenic Sources *(captured CO_2 emissions should also be included as emissions in Questions 1a through 1d above).*

1	2	3	4	5	6	7	8	9
			Base Period Average Quantity			Reporting Year Quantity		
Source	**Gas**	**Unit of Measure**	**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						
Subtotal	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
		Base Period Consumption						
Source	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Consumption**	**System Type/Fuel Used for Generation**
Electricity	MWh							
Steam	MMBtu							
Hot Water	MMBtu							
Chilled Water	Ton-Hours Cooling							

b. Emissions From Purchased Energy for Emissions Inventory

1	2	3	4	5	6	7	8	9	10	11	12
				Base Period Emissions							
Source	**Specific Facility/ Region Name (optional)**	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Estimation Method**	**Rating ***
Electricity		CO_2	mt								
		CH_4	kg								
		N_2O	kg								
Steam		CO_2	mt								
		CH_4	kg								
		N_2O	kg								
Hot Water		CO_2	mt								
		CH_4	kg								
		N_2O	kg								
Chilled Water		CO_2	mt								
		CH_4	kg								
		N_2O	kg								
Total		CO_2e	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 done for a domestic or foreign subentity.

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
			Base Period Emissions							
Source	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Estimation Method**	**Rating***
Electricity	CO_2e	mt								
Steam, Hot Water, and Chilled Water**	CO_2e	mt								
Total	CO_2e	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 domestic or foreign subentity.
**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
			Base Period Emissions							
Source	**Gas**	**Units**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Base Period Average**	**Reporting Year Emissions**	**Estimation Method**	**Rating****
Employee Commuting										
Manufacture & Sale of Energy Efficient Products										
Consumption of Energy-intensive Products										
Nitrous Oxide Emissions from Fertilizer Application	N_2O									
Other:										
Subtotal	CO_2e	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 domestic or foreign subentity.

4. Enter Terrestrial Carbon Fluxes and Stocks

a. Forestry Activities

1	2	3	4	5	6	7	8	9	10
				Carbon Stocks					
Categories	**Specific Source/ Area Name (optional)**	**Gas**	**Units**	**Base Period**	**Estimated Carbon Stocks in Year Prior to Reporting Year**	**Reporting Year Carbon Stocks**	**Reporting Year Stock Change or Carbon Flux[1,2]**	**Estimation Method[3]**	**Rating***
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, please 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.

*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 domestic or foreign subentity.

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 domestic or foreign subentity.

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 domestic or foreign subentity.

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 domestic or foreign subentity.

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
					Carbon Stocks					
Name/Description Tract of Land	**Area (Acres)**	**Type of Disturbance**	**Year**	**Units**	**Base Period Average**	**Carbon Stocks in Year Before Disturbance**	**Reporting Year Carbon Stocks**	**Loss**	**Estimation Method**	**Rating***
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 domestic or foreign subentity.

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
				Carbon Stocks					
Categories	**Specific Source/ Area Name (optional)**	**Gas**	**Units**	**Base Period Average**	**Estimated Carbon Stocks in Year Prior to Reporting Year**	**Estimated Carbon Stocks in Reporting Year**	**Reporting Year Stock Change or Carbon Flux[1,2]**	**Estimation Method[3]**	**Rating***
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 domestic or foreign subentity.

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 domestic or foreign subentity.

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_2e	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, Subentity, or Offset Emissions and Carbon Flux

1. Enter Total Emissions and Carbon Flux

	1	2	3	4	5	6	7	8
			Base Period Emissions					Reporting Year Emissions or Carbon Flux
Item	Source	Gas/ Units	Yr 1	Yr 2	Yr 3	Yr 4	Base Period Average	
A	Direct Emissions	$mtCO_2e$						
B	Indirect Emissions From Purchased Energy for Emissions Inventory	$mtCO_2e$						
C	Indirect Emissions From Purchased Energy for Calculation of Emission Reductions	$mtCO_2e$						
D	**Total Emissions (A + B)***	$mtCO_2e$						
E	Carbon Flux	$mtCO_2e$						
F	Captured CO_2 Sequestered in an Onsite Geologic Reservoir**	$mtCO_2e$						
G	**Total Inventory Emissions (D – E – F)**	$mtCO_2e$						
H	Other Indirect Emissions	$mtCO_2e$						
I	Captured CO_2 Transferred to Another Entity for Sequestration in a Geologic Reservoir**	$mtCO_2e$						

$mtCO_2e$ = 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 CO_2 extracted and captured from natural sources or CO_2 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

	1	2	3	4	5	6	7	8
			Base Period					
Item	Output Measure	Unit of Measure	Yr 1	Yr 2	Yr 3	Yr 4	Avg.	Reporting Year
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 CO_2e)

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

*Include CO_2 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 CO_2e per unit of output)

	1	2	3	4
Item	**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 CO_2e)

	1	2	3	4
		Source of Reductions		
Item	**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 and Describe the Types of Actions That Were the Likely Cause of the Reductions Achieved *[Enter codes from Appendix M]*

Enter Action Type Code	**Describe Action**

5. Identify Cause(s) of the Emission Reduction(s) (*check all that apply*):
   - ☐ Voluntary action
   - ☐ Plant closing
   - ☐ Government requirement
     - ☐ Federal requirement
     - ☐ State requirement
     - ☐ Local requirement

6. 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 CO_2e)

1	2	3	4	5
Name of Recipient	**Emissions Type***	**Gas**	**Units**	**Amount**
		CO_2e	metric tons	
		CO_2e	metric tons	
		CO_2e	metric tons	
		CO_2e	metric tons	
Total Direct Emission Reductions		CO_2e	metric tons	
Total Indirect Emission Reductions From Purchased Energy		CO_2e	metric tons	
Total Other Indirect Emission Reductions		CO_2e	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

	1	2	3	4	5	6	7	8
			Base Period					
Item	Output Measure	Unit of Measure	Yr 1	Yr 2	Yr 3	Yr 4	Avg.	Reporting Year
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 but not register 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 CO_2e)

	1	2	3	4
		Source of Emissions		
Item	Description	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 CO_2 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 and Describe the Types of Actions That Were the Likely Cause of the Reductions Achieved *[Enter codes from Appendix M]*

Enter Action Type Code	Describe Action

3. 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

4. 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 CO_2e)

1	2	3	4	5
Name of Recipient	**Emissions Type***	**Gas**	**Units**	**Amount**
		CO_2e	metric tons	
		CO_2e	metric tons	
		CO_2e	metric tons	
		CO_2e	metric tons	
Total Direct Emission Reductions		CO_2e	metric tons	
Total Indirect Emission Reductions From Purchased Energy		CO_2e	metric tons	
Total Other Indirect Emission Reductions		CO_2e	metric tons	

*Direct, Indirect from Purchased Energy, Other Indirect.

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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

	1	2	3
Item	**Categories**	**Units of Measure**	**Reporting Year Stock Change or Carbon Flux***
A	Forestry Activities	metric tons CO_2e	
B	Wood Products – Method 1	metric tons CO_2e	
C	Wood Products – Method 2	metric tons CO_2e	
D	Land Restoration and Forest Preservation	metric tons CO_2e	
E	Sustainably Managed Forests	metric tons CO_2e	
F	Incidental Lands	metric tons CO_2e	
G	Other Terrestrial Carbon Fluxes	metric tons CO_2e	
H	**Total Reporting Year Terrestrial Carbon Flux**	metric tons CO_2e	

*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 and Describe the Types of Actions That Were the Likely Cause of the Reductions Achieved *[Enter codes from Appendix M]*

Enter Action Type Code	Describe Action

3. 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

4. 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 CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	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. Activity Data, Emission Coefficients, Conversion Factors, and Emission Reductions

   a. Select Geographic Scope of the Avoided Emissions Benchmark(s) (based on the regions in Appendix F):
      - ☐ Single Domestic Region
      - ☐ Multiple Domestic Regions
      - ☐ Foreign Region(s)

   b. If Reporting Reductions for a Single Domestic Region, Enter the Number of the Region (1 through 15) from Appendix F: _____

   c. If Reporting Reductions for Multiple or Foreign Regions, Enter the Weighted Avoided Emissions Benchmark and Briefly Explain How It Was Calculated:

Benchmark Type	Avoided Emissions Benchmark	Explanation
Electricity (metric tons CO_2e/MWh)		
Thermal* (kilograms CO_2e/ton-hour)		

*Complete this row only if you are reporting avoided emissions from foreign chilled water generation. If you are producing chilled water from both electric and natural gas chillers, enter a weighted factor and explain above.

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

	1	2	3	4	5	6
Item	**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_2e)					
C	Reporting Year Energy Generated	MWh	MMBtu	MMBtu	ton hours	
D	Reporting Year Emissions Intensity (B / C)	metric tons CO_2e/MWh	metric tons CO_2e/MMBtu	metric tons CO_2e/MMBtu	metric tons CO_2e/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_2e/MWh	metric tons CO_2e/MMBtu	metric tons CO_2e/MMBtu	metric tons CO_2e/ton hour	
H	Emission Reduction [(G - D) * F] (metric tons CO_2e)					

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

Enter Action Type Code	**Describe Action**

3. Identify the Cause(s) of the Emission Reduction(s) *(check all that apply)*:
   - ☐ Voluntary
   - ☐ Plant closing
   - ☐ Government requirement
     - ☐ Federal requirement
     - ☐ State requirement
     - ☐ Local requirement

4. 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 CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	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. Select Geographic Scope of Avoided Emissions Benchmark(s) (based on the regions in Appendix F):
   - ☐ Single Domestic Region
   - ☐ Multiple Domestic Regions
   - ☐ Foreign Region(s)

3. If Reporting Reductions for a Single Domestic Region, Enter Number of the Region (1 through 15) from Appendix F: _____

4. If Reporting Reductions for Multiple or Foreign Regions, Enter the Weighted Avoided Emissions Benchmark and Briefly Explain How It Was Calculated:

Benchmark Type	Avoided Emissions Benchmark	Explanation
Electricity (metric tons CO_2e/MWh)		
Thermal* (kilograms CO_2e/ton-hour)		

*Complete this row only if you are reporting avoided emissions from foreign chilled water generation. If you are producing chilled water from both electric and natural gas chillers, enter a weighted factor and explain above.

5. Emissions, Energy Generation, and Emissions Intensity

	1	2	3	4	5
Item	**Description**	**Electricity**	**Steam**	**Hot Water**	**Chilled Water**
A	Base Period Emissions (metric tons CO_2e)				
B	Base Period Exported Energy	MWh	MMBtu	MMBtu	ton hours
C	Base Period Emissions Intensity (A / B)	metric tons CO_2e/ MWh	metric tons CO_2e/ MMBtu	metric tons CO_2e/ MMBtu	metric tons CO_2e/ ton hours
D	Reporting Year Emissions (metric tons CO_2e)				
E	Reporting Year Exported Energy	MWh	MMBtu	MMBtu	ton hours
F	Reporting Year Emissions Intensity (D / E)	metric tons CO_2e/ MWh	metric tons CO_2e/ MMBtu	metric tons CO_2e/ MMBtu	metric tons CO_2e/ ton hours
G	Reporting Year Incremental Exported Energy (E - B)	MWh	MMBtu	MMBtu	ton hours
H	Avoided Emissions Benchmark	metric tons CO_2e/ MWh	metric tons CO_2e/ MMBtu	metric tons CO_2e/ MMBtu	metric tons CO_2e/ ton hours

Part B. Emission Reductions

1. Calculate and Enter Emission Reductions

	1	2	3	4	5	6
Item	**Description**	**Electricity**	**Steam**	**Hot Water**	**Chilled Water**	**Total**
I	Emission Reductions From Improvements in Historical Emissions Intensity [(C - F) * B] (metric tons CO_2e)					
J	Emission Reductions From Incremental Exported Energy [(H - F) * G] (metric tons CO_2e)					
K	Total Emission Reductions From Energy Generation and Exports (I + J) (metric tons CO_2e)					

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

Enter Action Type Code	Describe Action

Enter Action Type Code	Describe Action

3. Identify the Cause(s) of the Emission Reduction(s) *(check all that apply)*:
   - ☐ Voluntary
   - ☐ Plant closing
   - ☐ Government requirement
     - ☐ Federal requirement
     - ☐ State requirement
     - ☐ Local requirement

4. 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 CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	metric tons	

Addendum B6. Coal Mine Methane Recovery

If Reporting Subentities, Enter Name of Subentity:_____

Part A. Action Identification

1. Enter Location of Coal Mine(s):

1	2	3	4
	Location		
Name	**City**	**State *(if domestic subentity)***	**Country *(if foreign subentity)***

2. Enter Date Methane Recovery Began: Month_____ Year_____

3. Describe Action: _____
_____
_____
_____

4. Was the Action Reported Last Year?
☐ Yes ☐ No

Part B. Action Quantification

1. Enter Action Characteristics

1	2	3	4
Coal Mine Name	**Seam Affected**	**Month Cut Through**	**Year Cut Through**

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

1	2	3	4	5	6	7
	Base Period					
Source and Disposition	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Base Period Average**	**Reporting Year**
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
	Base Period					
Source and Disposition	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Base Period Average**	**Reporting Year**
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
	Base Period					
Source and Disposition	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Base Period Average**	**Reporting Year**
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 CO_2e)

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

Part C. Emission Reductions

1. Calculate Changes in Methane Capture

	1	2	3
Item	**Description**	**Units of Measure**	**Quantity**
A	Average Annual Quantity of Methane Captured in Base Period	metric tons CO_2e	
B	Methane Captured in Reporting Year	metric tons CO_2e	
C	Change in Methane Captured (B – A)	metric tons CO_2e	

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

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

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

   a. Select Geographic Scope of Avoided Emissions Benchmark (based on the regions in Appendix F):
      - ☐ Single Domestic Region
      - ☐ Multiple Domestic Regions
      - ☐ Foreign Region(s)

   b. If Reporting Reductions for a Single Domestic Region, Enter Number of the Region (1 through 15) from Appendix F: _____

   c. If Reporting Reductions for Multiple or Foreign Regions, Enter the Weighted Avoided Emissions Benchmark and Briefly Explain How It Was Calculated:

Avoided Emissions Benchmark (metric tons CO_2e/MWh)	**Explanation**

   d. Calculate Carbon Dioxide Displaced From Electricity Used Onsite

	1	2	3
Item	**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_2e	
K	Reporting Year Emissions Intensity of Electricity Used Onsite (J / H)	metric tons CO_2e /MWh	
L	Avoided Emissions Benchmark	metric tons CO_2e /MWh	
M	Emission Reductions [(L - K) * I]	metric tons CO_2e	

*Include emissions from supplemental fossil fuel use only.

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

   a. Select Geographic Scope of Avoided Emissions Benchmark (based on the regions in Appendix F):
      - ☐ Single Domestic Region
      - ☐ Multiple Domestic Regions
      - ☐ Foreign Region(s)

   b. If Reporting Reductions for a Single Domestic Region, Enter Number of the Region (1 through 15) from Appendix F: _____

   c. If Reporting Reductions for Multiple or Foreign Regions, Enter the Weighted Avoided Emissions Benchmark and Briefly Explain How It Was Calculated:

Avoided Emissions Benchmark (metric tons CO_2e/MWh)	**Explanation**

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

Item	1 Description	2 Units of Measure	3 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_2e	
R	Reporting Year Emissions Intensity of Electricity Sold (Q / O)	metric tons CO_2e /MWh	
S	Avoided Emissions Benchmark	metric tons CO_2e /MWh	
T	Emission Reductions [(S – R) * P]	metric tons CO_2e	

5. Calculate Carbon Dioxide Emissions From Flaring

Item	1 Description	2 Units of Measure	3 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_2e	

6. Summarize Emission Reductions

Item	1 Description	2 Units of Measure	3 Emission Reductions Direct	4 Emission Reductions Avoided	5 Emission Reductions TOTAL
Y	Change in Methane Captured and Combusted	metric tons CO_2e			
Z	Carbon Dioxide Displaced From Electricity Used Onsite	metric tons CO_2e			
AA	Carbon Dioxide Displaced From Electricity Sales	metric tons CO_2e			
BB	Carbon Dioxide Emissions From Flaring	metric tons CO_2e			
CC	Net Change in Greenhouse Gas Emissions (Y + Z + AA – BB)	metric tons CO_2e			

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

Enter Action Type Code	Describe Action

8. Identify Cause(s) of the Emission Reduction(s) *(check all that apply)*:
   - ☐ Voluntary action
   - ☐ Plant closing
   - ☐ Government requirement
     - ☐ Federal requirement
     - ☐ State requirement
     - ☐ Local requirement

9. 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 CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	metric tons	

Addendum B7. Landfill Methane Recovery

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Action Identification

1. Enter Location of Landfill(s):

1	2	3	4
	Location		
Name	**City**	**State *(if domestic subentity)***	**Country *(if foreign subentity)***

2. Enter Date Methane Recovery Began: Month_____ Year_____

3. Describe Action: _____
_____
_____
_____

4. Was the Action Reported Last Year?
☐ Yes ☐ No

Part B. Action Quantification

1. Enter Action Characteristics

1	2	3	4	5
Name of Landfill Affected	**Year Opened**	**Year Closed**	**Year Gas Recovery Installed**	**Waste in Place (MMT)**

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

1	2	3	4	5	6	7
	Base Period					
Source and Disposition	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Base Period Average**	**Reporting Year**
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
	Base Period					
Source and Disposition	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Base Period Average**	**Reporting Year**
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
	Base Period					
Source and Disposition	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Base Period Average**	**Reporting Year**
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 CO_2e)

1	2	3	4	5	6	7
	Base Period					
Source and Disposition	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Base Period Average**	**Reporting Year**
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 Description	2 Units of Measure	3 Quantity
A	Average Annual Quantity of Methane Captured in Base Period	metric tons CO_2e	
B	Methane Captured in Reporting Year	metric tons CO_2e	
C	Change in Methane Captured (B - A)	metric tons CO_2e	

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

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

3. Calculate Carbon Dioxide Displaced From Electricity Used Onsite

   a. Select Geographic Scope of Avoided Emissions Benchmark (based on the regions in Appendix F):
      - ☐ Single Domestic Region
      - ☐ Multiple Domestic Regions
      - ☐ Foreign Region(s)

   b. If Reporting Reductions for a Single Domestic Region, Enter Number of the Region (1 through 15) from Appendix F: _____

   c. If Reporting Reductions for Multiple or Foreign Regions, Enter the Weighted Avoided Emissions Benchmark and Briefly Explain How It Was Calculated:

Avoided Emissions Benchmark (metric tons CO_2e/MWh)	Explanation

   d. 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_2e	
K	Reporting Year Emissions Intensity of Electricity Used Onsite (J / H)	metric tons CO_2e /MWh	
L	Avoided Emissions Benchmark	metric tons CO_2e /MWh	
M	Emission Reductions [(L - K) * I]	metric tons CO_2e	

*Include emissions from supplemental fossil fuel use only.

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

   a. Select Geographic Scope of Avoided Emissions Benchmark (based on the regions in Appendix F):
      - ☐ Single Domestic Region
      - ☐ Multiple Domestic Regions
      - ☐ Foreign Region(s)

   b. If Reporting Reductions for a Single Domestic Region, Enter Number of the Region (1 through 15) from Appendix F: _____

   c. If Reporting Reductions for Multiple or Foreign Regions, Enter the Weighted Avoided Emissions Benchmark and Briefly Explain How It Was Calculated:

Avoided Emissions Benchmark (metric tons CO_2e/MWh)	**Explanation**

   d. Calculate Carbon Dioxide Displaced From Electricity Sales

	1	2	3
Item	**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_2e	
R	Reporting Year Emissions Intensity of Electricity Sold (Q / O)	metric tons CO_2e /MWh	
S	Avoided Emissions Benchmark	metric tons CO_2e /MWh	
T	Emission Reductions [(S - R) * P]	metric tons CO_2e	

*Include emissions from supplemental fossil fuel use only

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

	1	2	3
Item	**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/MMBtu	
Y	Change in Carbon Dioxide Emissions From Methane Supplied to a Natural Gas Distribution Network (W * X)	metric tons CO_2	

6. Summarize Emission Reductions

Item	1 Description	2 Units of Measure	3 Emission Reductions Direct	4 Indirect	5 Avoided	6 TOTAL
Z	Change in Methane Captured and Combusted	metric tons CO_2e				
AA	Carbon Dioxide Displaced From Electricity Used Onsite	metric tons CO_2e				
BB	Carbon Dioxide Displaced From Electricity Sales	metric tons CO_2e				
CC	Carbon Dioxide Displaced by Methane Supplied to a Natural Gas Distribution Network	metric tons CO_2e				
DD	Net Change in Greenhouse Gas Emissions (Z + AA + BB + CC)	metric tons CO_2e				

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

Enter Action Type Code	Describe Action

8. 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

9. 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 CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	metric tons	

Addendum B8. Geologic Sequestration

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Action Identification

1. Enter Name and Location of CO_2 Injection Project:

1	2	3	4	5	6
	Location				
Name	**City**	**State or Country**	**Storage Onsite? (Y/N)**	**If Onsite, Agreement? (Y/N)**	**Wells Sealed or Plan to Seal Wells? (Y/N)**

2. Enter the Date CO_2 Injection Began: Month_____ Year_____

3. Describe the Action:
_____
_____
_____
_____
_____

4. Was the Action Reported Last Year?
☐ Yes ☐ No

5. Is the Reporting Entity Responsible for the Injection of CO_2 Into a Permanent Storage Reservoir?
☐ Yes ☐ No

6. If the Answer to Question 5 is No, Does the Reporter Have a Written Agreement With the Sequestering Party Allowing the Reporter To Claim the Reductions?
☐ Yes ☐ No ☐ Not-applicable, explain: _____
_____
_____
_____
_____

Part B. Action Quantification

1. Enter Source of Carbon Dioxide Sequestered in Current Reporting Year (metric tons CO_2e)

Item	1 Name of Source	2 Location of Source	3 CO_2 Extracted/ Captured	4 CO_2 Acquired Via Transfer or Purchase	5 Total CO_2 Captured or Acquired	6 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 CO_2e)

Item	1 Name of Storage Site	2 Location of Storage Site	3 Enhanced Resource Recovery?	4 CO_2 Injected in Current Reporting Year	5 Post-Injection Leakage/Seepage During Current Reporting Year		7 Net CO_2 Sequestered in Current Reporting Year
					Monitoring Method	6 Quantity	
CO_2 Sequestered by Reporting Entity							
C1			Yes/No				
C2			Yes/No				
C3			Yes/No				
CO_2 Sequestered by Third Party							
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 CO_2e)

Item	1 Name of Storage Site	2 Location of Storage Site	3 Enhanced Resource Recovery?	4 Average Annual CO_2 Injected in Base Period	5 Average Annual Post-Injection Leakage/Seepage in Base Period		7 Average Annual Net CO_2 Sequestered in Base Period
					Monitoring Method	6 Quantity	
CO_2 Sequestered by Reporting Entity							
F1			Yes/No				
F2			Yes/No				
F3			Yes/No				
CO_2 Sequestered by Third Party							
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 Description	2 Unit of Measure	3 Quantity
I	Emission Reductions (E7 - H7)	metric tons CO_2e	

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

Enter Action Type Code	Describe Action

3. 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

4. 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 CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	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

	1	2	3
Item	**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. Select Geographic Scope of Avoided Emissions Benchmark (based on the regions in Appendix F):
   - ☐ Single Domestic Region
   - ☐ Multiple Domestic Regions
   - ☐ Foreign Region(s)

2. If Reporting Reductions for a Single Domestic Region, Enter Number of the Region (1 through 15) from Appendix F: _____

3. If Reporting Reductions for Multiple or Foreign Regions, Enter the Weighted Avoided Emissions Benchmark and Briefly Explain How It Was Calculated:

Avoided Emissions Benchmark (metric tons CO_2e/MWh)	**Explanation**

4. Calculate Emission Reductions

	1	2	3
Item	**Description**	**Units of Measure**	**Quantity**
P	Avoided Emissions Benchmark for Electricity	metric tons CO_2e/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_2e	
S	Direct Emission Reductions {R * [I / (I + L)]}	metric tons CO_2e	
T	Avoided Emissions (from Avoided Electricity Imports) {R * [L / (I + L)]}	metric tons CO_2e	

†Use second equation if calculating losses in kVAh

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

Enter Action Type Code	**Describe Action**

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

1. Where Applicable, Enter Emission Reductions Distributed to Other 1605(b) Reporters (metric tons CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	metric tons	

Addendum B10. Anaerobic Digestion at Wastewater Treatment Facilities

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Action Identification

1. Enter Locations of Wastewater Treatment Facilities:

1	2	3	4
	Location		
Name	**City**	**State *(if domestic subentity)***	**Country *(if foreign subentity)***

2. Enter Date Anaerobic Digester Use Began: Month_____ Year_____

3. Describe Action: _____
_____
_____
_____
_____

4. Was the Action Reported Last Year?
   ☐ Yes ☐ No

Part B. Action Quantification

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

1	2	3	4	5	6	7
	Base Period					
Source and Disposition	Year 1	Year 2	Year 3	Year 4	Base Period Average	Reporting Year
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
	Base Period					
Source and Disposition	Year 1	Year 2	Year 3	Year 4	Base Period Average	Reporting Year
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
	Base Period					
Source and Disposition	Year 1	Year 2	Year 3	Year 4	Base Period Average	Reporting Year
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 CO_2e)

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

5. Enter Nitrous Oxide Emissions From Aerobic Conditions During the Base Period and Reporting Year (metric tons CO_2e)

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

Part C. Emission Reductions

1. Calculate Changes in Methane Captured and Utilized

	1	2	3
Item	**Description**	**Units of Measure**	**Quantity**
A	Base Period Average Annual Quantity of Methane Captured	metric tons CO_2e	
B	Reporting Year Methane Captured	metric tons CO_2e	
C	Change in Methane Captured (B - A)	metric tons CO_2e	

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

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

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

   a. Select Geographic Scope of Avoided Emissions Benchmark (based on the regions in Appendix F):
      - ☐ Single Domestic Region
      - ☐ Multiple Domestic Regions
      - ☐ Foreign Region(s)

   b. If Reporting Reductions for a Single Domestic Region, Enter Number of the Region (1 through 15) from Appendix F: _____

   c. If Reporting Reductions for Multiple or Foreign Regions, Enter the Weighted Avoided Emissions Benchmark and Briefly Explain How It Was Calculated:

Avoided Emissions Benchmark (metric tons CO_2e/MWh)	**Explanation**

d. Calculate Carbon Dioxide Displaced From Electricity Used Onsite

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_2e	
K	Reporting Year Emissions Intensity of Electricity Used Onsite (J / H)	metric tons CO_2e /MWh	
L	Avoided Emissions Benchmark	metric tons CO_2e /MWh	
M	Emission Reductions [(L - K) * I]	metric tons CO_2e	

*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. Carbon Dioxide Displaced From Electricity Sales (avoided emissions)

a. Select Geographic Scope of Avoided Emissions Benchmark (based on the regions in Appendix F):

☐ Single Domestic Region
☐ Multiple Domestic Regions
☐ Foreign Region(s)

b. If Reporting Reductions for a Single Domestic Region, Enter Number of the Region (1 through 15) from Appendix F: _____

c. If Reporting Reductions for Multiple or Foreign Regions, Enter the Weighted Avoided Emissions Benchmark and Briefly Explain How It Was Calculated:

Avoided Emissions Benchmark (metric tons CO_2e/MWh)	Explanation

d. Calculate Carbon Dioxide Displaced From Electricity Sales

Item	1 Description	2 Units of Measure	3 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_2e	
R	Reporting Year Emissions Intensity of Electricity Sold (Q / O)	metric tons CO_2e /MWh	
S	Avoided Emissions Benchmark	metric tons CO_2e /MWh	
T	Emission Reductions [(S - R) * P]	metric tons CO_2e	

*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 Description	2 Units of Measure	3 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/MMBtu	
Y	Change in Carbon Dioxide Emissions From Methane Supplied to a Natural Gas Distribution Network (W * X)	metric tons CO_2	

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

Item	1 Description	2 Units of Measure	3 Quantity
Z	Base Period Average Annual Nitrous Oxide Emissions	metric tons CO_2e	
AA	Reporting Year Quantity of Nitrous Oxide Emissions	metric tons CO_2e	
BB	Change in Nitrous Oxide Emissions (AA - Z)	metric tons CO_2e	

7. Summarize Emission Reductions

Item	1 Description	2 Units of Measure	3 Emission Reductions Direct	4 Emission Reductions Indirect	5 Emission Reductions Avoided	6 Emission Reductions TOTAL
CC	Increase in Methane Captured and Utilized	metric tons CO_2e				
DD	Carbon Dioxide Displaced From Electricity Used Onsite	metric tons CO_2e				
EE	Carbon Dioxide Displaced From Electricity Sales	metric tons CO_2e				
FF	Carbon Dioxide Displaced by Methane Supplied to a Natural Gas Distribution Network	metric tons CO_2e				
GG	Change in Nitrous Oxide Emissions	metric tons CO_2e				
HH	Net Change in Emissions (CC + DD + EE + FF – GG)	metric tons CO_2e				

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

Enter Action Type Code	Describe Action

Enter Action Type Code	Describe Action

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 CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	metric tons	

Addendum B11. Anaerobic Digestion of Animal Waste

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Action Identification

1. Enter Location of Livestock Management Facilities:

1	2	3	4
	Location		
Name	**City**	**State *(if domestic subentity)***	**Country *(if foreign subentity)***

2. Date Anaerobic Digester Use Began: Month_____ Year_____

3. Describe Action: _____
_____
_____
_____
_____

4. Was the Action Reported Last Year?
☐ Yes ☐ No

Part B. Action Quantification

1. Enter Action Characteristics

1	2	3
Name of Facility	**Species of Animals Producing Waste Handled by the Digester**	**No. of Animals of the Species**

Part C. Emission Reductions

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

Item	1 Description	2 Units of Measure	3 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_2e/MMBtu	
E	Change in Carbon Dioxide Emissions from Methane Supplied to a Natural Gas Distribution Network (C * D)	metric tons CO_2e	

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

Enter Action Type Code	Describe Action

3. 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

4. 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 CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	metric tons	

Addendum B12. Recycling of Fly Ash

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Action Identification

1. Enter Name and Location of Concrete Manufacturing Facilities Where Fly Ash Was Recycled:

1	2	3	4
	Location		
Name	**City**	**State *(if domestic subentity)***	**Country *(if foreign subentity)***

2. Enter Date Fly Ash Recycling Began: Month _____ Year _____

3. Describe Action: _____
_____
_____
_____
_____

4. Was the Action Reported Last Year?
☐ Yes ☐ No

Part B. Action Quantification

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

	1	2	3	4	5	6	7	8
			Base Period Quantity					Reporting Year Quantity
Item	Description	Unit of Measure	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

	1	2	3
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

	1	2	3
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_2e	--	3.667
H	Emissions Displaced in Base Period {A7 * [(E / C) - F] * G}	metric tons CO_2e	
I	Emissions Displaced in Reporting Year {A8 * [(E / C) – F] * G}	metric tons CO_2e	
J	Indirect Emission Reductions (I - H)	metric tons CO_2e	

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

Enter Action Type Code	Describe Action

3. 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

4. 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 CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	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. Describe the Program:_____
_____

3. Enter All of the Following Information for the Program Listed Above:

Item	1 Program Characteristics	2 Values
A.	Enter City of Program	
B.	Enter State of Program (if domestic)	
C.	Enter Country of Program (if foreign)	
D.	Enter Month Program Began	
E.	Enter Year Program Began	
F.	Describe Program Evaluation Method	
G.	Enter Name of 3rd Party Verifier	
H.	Describe Qualifications of 3rd Party Verifier	
I.	Enter Unit of Annual Energy Usage Reductions in RY (if applicable)	
J.	Enter Quantity of Annual Energy Usage Reductions in RY (if applicable)	
K.	Enter Greenhouse Gas Emission Reductions in RY (metric tons CO_2e)	
L.	Do the Reductions Qualify for Registration?*	☐ Yes ☐ No

*To register reductions, the DSM or other program must meet the criteria detailed on Page 103 of the Instructions for Form EIA-1605 and 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.

4. Indicate What the Program Provides to Very Small Emitters (entities that typically emit below 500 tons of CO_2e per year):

1 Information/ Other Technical Assistance	2 Financial Incentives	3 Direct Installation/ Investment	4 Other Non-Commercial Services
☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

5. Identify Sector(s) of Very Small Emitters Targeted:

1 Residential	2 Commercial	3 Small Industrial	4 If Other, Please Specify
☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes,_____

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_2e)**	
	Unit	**Amount**	**Unit**	**Amount**
Total Emission Reductions				

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

Enter Action Type Code	**Describe Action**

3. 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

4. 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 CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	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 Description	2 Units of Measure	3 Quantity
Base Period Average			
A	Total CHP Plant Fuel Use	MMBtu	
B	Total CHP Plant Emissions*	metric tons CO_2e	
Reporting Year			
C	Total CHP Plant Fuel Use	MMBtu	
D	Total CHP Plant Emissions*	metric tons CO_2e	

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

2. Activity Data

   a. Select Geographic Scope of the Avoided Emissions Benchmark(s) (based on the regions in Appendix F):
      - ☐ Single Domestic Region
      - ☐ Multiple Domestic Regions
      - ☐ Foreign Region(s)

   b. If Reporting Reductions for a Single Domestic Region, Enter Number of the Region (1 through 15) from Appendix F: _____

   c. Enter the Weighted Electricity Avoided Emissions Benchmark (if applicable*) and/or the Thermal Avoided Emissions Benchmark and Briefly Explain How It Was Calculated:

Benchmark Type	Avoided Emissions Benchmark	Explanation
Electricity (metric tons CO_2e/MWh)		
Thermal (kilograms CO_2e/ton-hour)		

* Only enter a weighted emissions benchmark if you are reporting multiple or foreign regions.

d. Enter Activity Data

Item	1 Description	2 Units of Measure	3 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_2e / MMBtu	
R	Electricity Avoided Emissions Benchmark	metric tons CO_2e / 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 Description	2 Emissions (Metric Tons CO_2e)
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 Description	2 Units of Measure	3 Emissions
Base Period			
W	Exported Thermal Generation Emissions [(G / E) * S]	metric tons CO_2e	
X	Exported Electrical Generation Emissions [(H / F) * T]	metric tons CO_2e	
Y	Onsite Thermal Generation Emissions (S - W)	metric tons CO_2e	
Z	Onsite Electrical Generation Emissions (T - X)	metric tons CO_2e	
Reporting Year			
AA	Exported Thermal Generation Emissions [(M / K) * U]	metric tons CO_2e	
BB	Exported Electrical Generation Emissions [(N / L) * V]	metric tons CO_2e	
CC	Onsite Thermal Generation Emissions (U - AA)	metric tons CO_2e	
DD	Onsite Electrical Generation Emissions (V - BB)	metric tons CO_2e	

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

	1	2	3
Item	**Description**	**Units of Measure**	**Direct Emissions**
EE	Emission Reductions From Thermal Generation Used Onsite [(S / E) - (U / K)] * (K - M)	metric tons CO_2e	
FF	Emission Reductions From Electrical Generation Used Onsite [(T / F) - (V / L)] * (L - N)	metric tons CO_2e	

   b. Calculate Absolute Changes in Emissions From Energy Used Onsite

	1	2	3
Item	**Description**	**Units of Measure**	**Direct Emissions**
GG	Emission Reductions From Thermal Generation Used Onsite (Y - CC)	metric tons CO_2e	
HH	Emission Reductions From Electrical Generation Used Onsite (Z - DD)	metric tons CO_2e	

2. Calculate Emission Reductions Associated With Energy Exports

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

	1	2	3
Item	**Description**	**Units of Measure**	**Emission Reductions**
II	Emission Reductions {[(S / E) - (U / K)] * G}	metric tons CO_2e	

   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_2e	

   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_2e	

   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_2e	

3. Summarize Emission Reductions

Item	1 Description	2 Units of Measure	3 Quantity
MM	Reductions Associated With Onsite Energy Use (EE + FF) or (GG + HH)	metric tons CO_2e	
NN	Total Emission Reductions From Energy Generation and Exports (II + JJ + KK + LL)	metric tons CO_2e	
OO	Total Emission Reductions (MM + NN)	metric tons CO_2e	

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

Enter Action Type Code	Describe Action

5. 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

6. 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 CO_2e)

1	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
	CO_2e	metric tons	
TOTAL	CO_2e	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 Description	2 Units of Measure	3 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	1 Description	2 Units of Measure	3 Source of Emissions Affected Direct Emissions	4 Source of Emissions Affected Indirect Emissions From Purchased Energy	5 Source of Emissions Affected Other Indirect Emissions
K	Base Period Emissions	metric tons CO_2e			
L	Reporting Year Emissions	metric tons CO_2e			
M	Registered Emission Reductions (K - L)	metric tons CO_2e			
N	Reported Emission Reductions (K - L)	metric tons CO_2e			

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

Enter Action Type Code	Describe Action

Enter Action Type Code	Describe Action

5. 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

6. 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 CO_2e)

1	2	3	4	5
Name of Recipient	**Emissions Type***	**Gas**	**Units**	**Amount**
		CO_2e	metric tons	
		CO_2e	metric tons	
		CO_2e	metric tons	
		CO_2e	metric tons	
Total Direct Emission Reductions		CO_2e	metric tons	
Total Indirect Emission Reductions From Purchased Energy		CO_2e	metric tons	
Total Other Indirect Emission Reductions		CO_2e	metric tons	

*Direct, Indirect from Purchased Energy, Other Indirect.

Addendum B16. Destruction of Chlorofluorocarbons

If Reporting Subentities, Enter Name of Subentity: _____

Part A. Action Identification

1. Enter Name and Location of Facility Where CFCs Were Destroyed:

1	2	3	4
	Location		
Name	**City**	**State** ***(if domestic subentity)***	**Country** ***(if foreign subentity)***

2. Enter Date CFC Destruction Began: Month_____ Year_____

3. Describe Action: _____
_____
_____
_____
_____

4. Was the Action Reported Last Year?
☐ Yes ☐ No

Part B. Emission Reductions

1. Enter Type and Quantity of CFCs Destroyed

1	2	3	4
CFC Gas Type	**Unit**	**Amount**	**Did you Transfer the Reduction to Another Reporting Entity? (Y/N)** *(if yes, complete Part C)*

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

Enter Action Type Code	Describe Action

3. 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

4. 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	2	3	4
Name of Recipient	**Gas**	**Units**	**Amount**
		kilograms	
		kilograms	
		kilograms	
		kilograms	
		kilograms	

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

1. Enter Information on Emission Factors Used to Estimate Emissions for Foreign Subentities

1	2	3	4	5	6	7
Emissions Type	**Emissions Source**	**Gas**	**Unit of Measure**	**Factor Value**	**Countries/ Regions**	**Factor Source**

2. Identify Publications and Other Sources for Factors Used to Estimate Foreign Emissions

Item	Source of Factors
A	
B	
C	
D	
E	
F	
G	
H	
I	
J	
K	
L	
M	
N	
O	
P	
Q	
R	
S	

3. Document Reporter-Defined Emission Factors.

Addendum D. Non-Reporter Offset Entity Information

(Only complete Addendum D if the offset provider is not a reporter to the program.)

SECTION 1. OFFSET ENTITY STATEMENT

1. Enter Offset Entity Identification:
   Entity Name: _____
   Address 1: _____
   Address 2: _____
   City:_____ State: _____ Zip: _____-____
   Entity URL : _____
   Entity Tax Payer Identification Number *(optional)*: _____

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

3. Entity Type *(check one)*:
   ☐ Large emitter (more than 10,000 metric tons carbon dioxide equivalent annually)
   ☐ Small emitter (less than or equal to 10,000 metric tons carbon dioxide equivalent annually)

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 type of change and detail below:
   - ☐ Data are being resubmitted for the base period:
   - ☐ New base period has been selected *(describe)*:_____
     _____
   - ☐ 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 activities

  Describe 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
   - ☐ Utility (Non-Investor Owned)
   - ☐ Government
   - ☐ Government Corporation or Authority
   - ☐ Non-Profit Organization
   - ☐ All other Non-Profit Organizations *(charities, fraternal orders, etc. Specify: _____)*
   - ☐ Individual or Household
   - ☐ Other, *specify*: _____

7. Describe the Entity Organization
   Is the entity a holding company: ☐ Yes ☐ No
   If the entity is a subsidiary, identify the 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 non-U.S. 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: _____

SECTION 2. OFFSET ENTITY EMISSIONS INVENTORY

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

If this report is independently verified, you may choose to aggregate offset emissions by gas by completing and attaching one copy of Part A from Addendum A.

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

If this report is not independently verified, you must detail offset emissions by gas and source by completing and attaching all applicable inventory grids from Part B from Addendum A.

SECTION 3. OFFSET ENTITY-LEVEL REDUCTION METHODS AND REDUCTIONS

1. Indicate the method used to estimate the offset emission reductions.

   - ☐ 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)

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.

* 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.