Table of Contents for this Workbook	Content Notes
Cost Summary	Summary of Initial, Subsequent Year, and Capital/O&M
2.1 Updates to GWPs	Links to spreadsheets containing burden for updates t
2.2 New Subparts	Links to spreadsheets containing burden for new subp
2.3 Other Applicability	Links to spreadsheets containing burden for subparts
2.4 Monitoring and Calculations	Links to spreadsheets containing burden for subparts
2.5 Recordkeeping and Reporting	Links to spreadsheets containing burden for subparts

M Costs for All Changes, by Subpart
o GWPs, by Subpart, as discussed in Section 2.1 of the impacts assessment
arts, by Subpart, as discussed in Section 2.2 of the impacts assessment
with other applicability changes, by Subpart, as discussed in Section 2.3 of the impacts assessment
with changes to monitoring and calculations, by Subpart, as discussed in Section 2.4 of the impacts assessme
with changes to recordkeeping or reporting requirements, including total and by Subpart, as discussed in Se

ent
ction 2.5 of the impacts assessment

Table 4-1. Incremental Implementation Costs by Subpart (2021$)

Subpart
A – General Provisions
B – Energy Consumption
C – General Stationary Fuel Combustion Sources
F – Aluminum Production
G – Ammonia Manufacturing
I – Electronics Manufacturing
N – Glass Production
P – Hydrogen Production
V – Nitric Acid Production
W – Petroleum and Natural Gas Systems
Y – Petroleum Refineries
AA – Pulp and Paper Manufacturing
DD – Electrical Transmission
HH – Municipal Solid Waste Landfills
II – Industrial Wastewater Treatment
OO – Suppliers of Industrial Greenhouse Gases
PP – Suppliers of Carbon Dioxide
QQ – Importers and Exporters of Fluorinated Greenhouse Gases Contained in Pre-Charged Equipment or Closed-Cell Foams
RR – Geologic Sequestration of Carbon Dioxide
TT – Industrial Waste Landfills
UU – Injection of Carbon Dioxide
VV – Geologic Sequestration of Carbon Dioxide with Enhanced Oil Recovery Using ISO 27916
WW – Coke Calciners
XX – Calcium Carbide Production
YY – Caprolactam, Glyoxyl, and Glyoxylic Acid Production
ZZ – Ceramics Production
Total

Number of Affected Facilities	Labor Costs		Capital and O&M	Total Initial Year Costs (Labor + Non Labor)	Total Subsequent Year Costs (Labor + Non-Labor)
	Initial Year	Subsequent Years			
7,840	$ 64,133	$64,133	$ -	$ 64,133	$ 64,133
7,840	$ 8,771,243	$ 4,700,877	$ 489,050	$ 9,260,294	$ 5,189,927
346	$ 9,906	$9,906		$ 9,906	$ 9,906
7	$ 57	$ 57		$ 57	$ 57
29	$ 119	$ 119		$ 119	$ 119
46	$ -	$ -	$ -	$ -	$ -
100	$ 1,227	$ 1,227		$ 1,227	$ 1,227
116	$ 7,179	$ 7,179	$ 4,481	$ 11,660	$ 11,660
1	$ (2,680)	$ (2,680)	$ (11,085)	$ (13,765)	$ (13,765)
188	$ 2,620,418	$ 2,620,418	$ 2,717,864	$ 5,338,282	$ 5,338,282
6	$ (6,881)	$ (6,881)	$ (3,930)	$ (10,810)	$ (10,810)
1	$ 104	$ 104		$ 104	$ 104
2	$ 6,200	$ 6,200	$ 3,119	$ 9,319	$ 9,319
1,126	$ 130,188	$ 127,330	$ 374	$ 130,563	$ 127,704
2	$ 5,288	$ 4,713	$ 3,077	$ 8,364	$ 7,789
104	$ 6,680	$ 6,680	$ 62	$ 6,742	$ 6,742
11	$ 135	$ 135		$ 135	$ 135
33	$ 384	$ 384		$ 384	$ 384
9	$ -	$ -	$ -	$ -	$ -
1	$ 4,853	$ 3,934	$ 62	$ 4,915	$ 3,996
2	$ -	$ -	$ -	$ -	$ -
15	$ 37,847	$ 34,525	$ 19,649	$ 57,497	$ 54,175
1	$ 2,849	$ 2,627	$ 62	$ 2,911	$ 2,690
6	$ 12,285	$ 11,089	$ 374	$ 12,660	$ 11,464
34	$ 77,083	$ 72,062	$ 2,121	$ 79,203	$ 74,183
7,990	**$ 11,748,619**	**$ 7,664,140**	**$ 3,225,282**	**$ 14,973,900**	**$ 10,889,422**

Burden for Subparts in Section 2.1 of Impacts Assessment

Subpart V (Applicability)
Subpart W (Applicability)
Subpart DD (Applicability)
Subpart HH (Applicability)
Subpart II (Applicability)
Subpart OO (Applicability)
Subpart TT (Applicability)

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Total Costs Section 2.1

	Initial Year	Subsequent Years
Total Labor costs:	$2,671,132	$2,666,780
Total Non-Labor costs:	$2,713,473	$2,713,473
Total Section 2.1:	$5,384,605	$5,380,253

Quantitative Burden and Costs for Revisions to Applicability (implemented during RY2025) (Applicability is affected by changes to the globabl warming potential values.

Table V-1. Labor Costs – Subpart V (hours from Appendix H to the 2019 ICR)

Activity	Labor Rates (per hour)						
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrat
	$ 114.80		$91.33		$73.83		$34
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours
Planning	1	1	8	2	16	19.5	0
QA/QC	0	0	0	0	0	0	0
Recordkeeping	0	0	0	0.5	0	2	0
Sampling and Analysis (Calculations)	0	0	38	0.3	50	3.3	0
Reporting	0	0	12	1	12	4	12
Total	**1**	**1**	**58**	**3.8**	**78**	**28.8**	**12**

Total labor, 1 facility:	**1**	**1**	**58**	**3.8**	**78**	**28.8**	**12**

Table V-2. Capital and O&M Costs – Subpart V – All facilities (from Appendix H to the 2019

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	$ -		$ -	$ -	$ -	$ -	
Performance testing	$ -		$ -	$ 11,022	$ -	$ 11,022	*Costs of per
Recordkeeping	$ -		$ -	$ 62	$ -	$ 62	*covers cost
Travel	$ -		$ -	$ -	$ -	$ -	
Sampling and Analysis Costs	$ -		$ -	$ -	$ -	$ -	
Total	$ -	$ -	$ -	$ 11,085	$ -	$ 11,085	

Total Capital and O&M, 1 facility:					**$0**	**$11,085**

Total Costs of Proposed Revisions, 1 facility:					**$11,579**	**$13,765**

Calculation Methodology: Total costs for 1 facility = Labor Cost per facility + Capital and O&M Costs.

Labor Costs of Proposed Revisions		
# of Facilities	**Initial Year**	**Subseq. Years**
-1	($2,680)	($2,680)

O&M Cost Per Year	
Initial Year	**Subseq. Years**
($11,085)	($11,085)

Calculation Methodology: Labor Costs of Proposed Revisions = Number of Facilities x Total Labor Cost per Year per Facility

Assumes one

Assumed the

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Section 2.1)

Assumes the cost impacts would be for a facility using the annual performance t

Hours for first year are from Table 4-26 of the 2009 Final Impacts Analsysis

	Total Labor Cost per Year per Facility (2021$)	
tive Support		
.09		
Subseq. Year Hours	Initial Year	Subseq. Year
1	$2,027	$1,771
0	$0	$0
0.5	$0	$210
0.2	$7,162	$278
1	$2,391	$421
2.7	**$11,579**	**$2,680**

2.7	**$11,579**	**$2,680**

Assumptions:

*planning is related to the required annual performance test: preparing for equip

*QA/QC activities include review of calculations, testing, and reports; QA/QC l

*Recordkeeping burden accounts for the time needed to create paper copies, bac

*Sampling and analysis costs for the annual performance test option (without ab

*Represents time required to enter the data into EPA's electronic Greenhouse G

ICR)

formance testing, assumes 1.63 nitric acid trains per facility.

to store records, such as a flash drive, paper file or cloud storage

facility may potentially meet the offramp provisions of 40 CFR 98.2(b) and stop reporting

initial year savings are the same as the subsequent year savings because the facility is going to off-ramp and does not have any initial

test option (without abatement); if they need abatement, they would be less likely to be able to cease reporting.

ment shutdown prior to testing, contacting the test company, setting up the testing, attending the performance test
hours are not expected because the annual performance test (and related QA/QC) is performed by a contractor; as such both costs are
ckup to the cloud, or utilize another recordkeeping method

batement) include time to calculate the N2O emission factor (according to Equation V-1) using the information gathered during the pe

as Reporting Tool (e-GGRT) (for new facilities, set-up of account and first-time use of e-GGRT system.

year costs.

represented as O&M costs

rformance test and to calculate total N2O emissions from the nitric acid trains. **Confirmed affected facility has no abatement.**

This is the list of new reporters per segment from the increase in methane GWP provic
Bohman on November 10, 2022.*

Segment Number	Segment	2020 Facility Count	Change in Facility Count
1	Gathering and Boosting	361	0
2	LNG Import/Export	11	0
3	LNG Storage	5	1
4	Natural Gas Distribution	164	0
5	Natural Gas Processing	462	0
6	Natural Gas Transmission Compression	644	130
7	Natural Gas Transmission Pipelines	49	1
8	Offshore Production	134	7
9	Onshore Production	468	40
10	Underground Natural Gas Storage	52	9
	Total	**2,350**	**188**

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Quantitative Burden and Costs for Revisions to Applicability (implemented during R
Applicability is affected by changes to the globabl warming potential values.

led by Jennifer

Baseline W Monitoring Burden and Costs Per Reporter Calculated from From ICR Appendix E-4: Burden and Cost for Petroleum and Natural Gas Systems (Subpart W) June 2019 Calculated averages per reporter, scaled to 2021$				Increment New Rep Element Propose
Burden/ Reporter (hrs)	Labor Cost/Reporter (2021$)	O&M Cost/Reporter (2021$)	Total Cost/Reporter (2021$)	Burden/ Reporter (hrs)
98	$ 10,848	$ 229	$ 11,077	6.84
67	$ 7,363	$ 24,421	$ 31,784	3.05
64	$ 7,001	$ 6,897	$ 13,899	1.55
66	$ 7,231	$ 8,003	$ 15,234	0.69
69	$ 7,617	$ 26,686	$ 34,304	3.68
70	$ 7,683	$ 18,401	$ 26,083	1.44
63	$ 6,939	$ 62	$ 7,001	0.86
32	$ 3,556	$ 62	$ 3,618	0.75
300	$ 33,263	$ 206	$ 33,469	11.21
66	$ 7,217	$ 34,461	$ 41,678	1.55

Avg $/reporter

Note to EPA: For columns G, H, I, O, P, and Q, see the calculations in hidden input sheets

:Y2025) (Section 2.1)

al Labor Changes for orters from W Data ts After June 2022 d W Amendments	Incremental Labor and O&M Cost Changes for Monitoring After June 2022 Proposed W Amendments (2021$)				Total (
Labor Cost/Reporter (2021$)	Burden/ Reporter (hrs)	Labor $/ Reporter	O&M $/ Reporter	Total $/ Reporter	Burden (hrs)
$ 739	0		$ -	$ -	-
$ 329	0		$ -	$ -	-
$ 168	5.75	$ 645.65	$ -	$ 645.65	71.30
$ 74	0		$ -	$ -	-
$ 397	10.18	$ 1,166.58	$ -	$ 1,166.58	-
$ 155	5.75	$ 645.65	$ -	$ 645.65	10,034.38
$ 93	11.5	$ 1,291.30	$ -	$ 1,291.30	75.36
$ 81	5.75	$ 645.65	$ -	$ 645.65	269.48
$ 1,210	3.18	$ 505.95	$ -	$ 505.95	12,575.70
$ 168	5.75	$ 645.65	$ -	$ 645.65	659.72
$ 499				Totals	23,686

at back of this workbook.

QA:

$ 738.63	#REF!
$ 328.97	#REF!
$ 813.24	#REF!
$ 74.48	#REF!
$ 1,563.83	#REF!
$ 800.82	#REF!
$ 1,384.40	#REF!
$ 726.34	#REF!
$ 1,716.31	#REF!
$ 813.24	#REF!

#REF!

Costs (2021$) for All New W Reporters

Labor	O&M	Total
$ -	$ -	$ -
$ -	$ -	$ -
$ 7,815	$ 6,897	$ 14,712
$ -	$ -	$ -
$ -	$ -	$ -
$ 1,102,879	$ 2,392,078	$ 3,494,958
$ 8,323	$ 62	$ 8,385
$ 29,974	$ 437	$ 30,410
$ 1,399,157	$ 8,239	$ 1,407,395
$ 72,271	$ 310,150	$ 382,421
$ 2,620,418	$ 2,717,864	$ 5,338,282

Per Reporter

	Labor	O&M
	$ 7,815	$ 6,897
	$ 8,484	$ 18,401
	$ 8,323	$ 62
	$ 4,282	$ 62
	$ 34,979	$ 206
	$ 8,030	$ 34,461

	Labor	O&M	Total
Weighted Avg for Individual Reporter:	$ 13,938	$ 14,457	$ 28,395.12
Straight Average:	$ 11,985	$ 10,015	

$ 13,938 $ 14,457

Quantitative Burden and Costs for Revisions to Applicability (implemented during RY2025)
Applicability is affected by changes to the global warming potential values.

Table DD-1. Labor Costs – Subpart DD (from Appendix H to the 2019 ICR)

Activity	Labor Rates (per hour)						
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrat
	$ 114.80		$91.33		$73.83		$34
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours
Planning	1	1	1	1	2	2	0
QA/QC	0	0	0	0	2	2	0
Recordkeeping	0	0	0.5	0.5	5	5	0.5
Sampling and Analysis (Calculations)	0	0	2	2	12	12	4
Reporting	0	0	1	1	10	10	1
Total	**1**	**1**	**4.5**	**4.5**	**31**	**31**	**5.5**

Total labor, 1 facility:	**1**	**1**	**4.5**	**4.5**	**31**	**31**	**5.5**

Table DD-2a. Capital and O&M Costs – Subpart DD – All facilities (from Appendix H to th

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping	$ -		$ -	$ 62	$ 62	$ 62	*covers cost
Travel	–		–	–	–	–	
Sampling and Analysis Costs	–		–	$ 1,497	$ 1,497	$ 1,497	*Sampling O
Total	$ -		$ -	$ 1,559	$ 1,559	$ 1,559	

Total Capital and O&M, 1 new facility:					**$1,559**	**$ 1,559**	

Total Costs of Proposed Revisions, 1 facility:					**$4,561**	**$4,561**	

Cost of Proposed Revisions from Package 1 (per facility):					**$98**	**$98**

Calculation Methodology: Total costs for 1 facility = Labor Cost per facility + Capital and O&M Costs .

Labor Costs of Proposed Revisions		
# of Facilities	**Initial Year**	**Subseq. Years**
2	$6,200	$6,200

O&M Cost Per Year	
Initial Year	**Subseq. Years**
$3,119	$3,119

Calculation Methodology:

Labor Costs of Proposed Revisions = Number of Facilities x Total Labor Cost per Year per Facility + Cost of Proposed Revision from Package 1 (Adjusted to $2021)

Assumed two

Because affe
impacts shou

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) (Section 2.1)

	Total Labor Cost per Year per Facility (2021$)	
tive Support .09		
Subseq. Year Hours	Initial Year	Subseq. Year
0	$354	$354
0	$148	$148
0.5	$432	$432
4	$1,205	$1,205
1	$864	$864
5.5	**$3,002**	**$3,002**

5.5	**$3,002**	**$3,002**

Assumptions:

*reading the rule to become familiar with any changes to the rule requirements,
*QA/QC activities include review of calculations, testing, and reports;
*Recordkeeping burden accounts for the time needed to create paper copies, bac
*Specific labor costs related to sampling and analysis activities for Subpart DD
*Represents time required to enter the data into EPA's electronic Greenhouse G

Adjusted hours from package 1: $98.16

e 2019 ICR)

to store records, such as a flash drive, paper file or cloud storage

&M costs for Subpart DD are for an independent contractor to weigh gas cylinders for facilities that have a high quantity of cylinders

› existing reporters would no longer qualify for the off-ramp and would be required to continue reporting.

cted facilities are existing facilities that will continue reporting (instead of new reporters), the initial year and subsequent year
ld be the same.

asking questions about applicability, reviewing any overlap in existing reporting programs

ckup to the cloud, or utilize another recordkeeping method

include overseeing a contractor who weighs the gas cylinders and performing emission calculations

as Reporting Tool (e-GGRT) (for new facilities, set-up of account and first-time use of e-GGRT system).

**Quantitative Burden and Costs for Revisions to Applicability (implemented during RY20
Applicability is affected by changes to the global warming potential values.**

Table HH-1. Labor Costs – Subpart HH - Landfills - Facilities with gas collection system

Activity	Labor Rates (per hour)						
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrat
	$ 114.80		$91.33		$73.83		$34
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours
Planning	2	1	1	1	21	1	2
QA/QC	0	0	1	1	13	6	1
Recordkeeping	0	0	1	1	13	13	1
Sampling and Analysis (Calculations)	0	0	1	0	16	8	2
Reporting	0	0	2	2	26	26	2
Total	**2**	**1**	**6**	**5**	**89**	**54**	**8**

Total labor, 1 facility:	**2**	**1**	**6**	**5**	**89**	**54**	**8**

Table HH-2. Capital and O&M Costs – Subpart HH – Landfills - Facilities without gas c

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping	$0		$0	$62	$62	$62	*covers cost
Travel	–		–	–	–	–	
Sampling and Analysis Costs	–		–	–	–	–	
Total	$0		$0	$62	$62	$62	

Total Capital and O&M, 1 new facility:					**$62**	**$62**	

Total Costs of Proposed Revisions, 1 facility:					**$7,683**	**$4,825**	

Cost of Proposed Revisions from Package 1 (per facility):					**$4**	**$4**

Calculation Methodology: Total costs for 1 facility = Labor Cost per facility + Capital and O&M Costs .

Labor Costs of Proposed Revisions		
# of Facilities	**Initial Year**	**Subseq. Years**
6	$31,461	$28,603

O&M Cost Per Year	
Initial Year	**Subseq. Years**
$374	$374

Assumed 5 o
Table HH-1,
otherwise not

Calculation Methodology:

Labor Costs of Proposed Revisions = Number of Facilities x Total Labor Cost per Year per Facility + Cost of Proposed Revision from Package 1 (Adjusted to $2021)

"Initial year"

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)25) (Section 2.1)

s (from Table HH-2a in Appendix H to the 2019 ICR)

	Total Labor Cost per Year per Facility (2021$)	
tive Support .09		
Subseq. Year Hours	**Initial Year**	**Subseq. Year**
1	$1,939	$314
1	$1,085	$568
1	$1,085	$1,085
1	$1,341	$625
2	$2,170	$2,170
6	**$7,621**	**$4,763**

6	**$7,621**	**$4,763**

Assumptions:

Assumes the 6 new facilities affected by CH4 GWP change have GCS.

*New facilities in their initial year of reporting will incur additional planning hour

*QA/QC activities include review of calculations, testing, and reports;

*Recordkeeping burden accounts for the time needed to create paper copies, backu

*Sampling and analysis (calculations) hours include completion of the measureme

*Represents time required to enter the data into EPA's electronic Greenhouse Gas

Adjusted hours from

ollection systems (from Table HH-3b in Appendix H to the 2019 ICR)

to store records, such as a flash drive, paper file or cloud storage

pen landfills that have previously off-ramped from the GHGRP may have to resume reporting due to the changes to the GWP and
and one open landfill that is anticipated to become a new reporter due to the changes to the GWP and Table HH-1, that would
t have to report.

cost is based on one facility being new and 5 being earlier reporters that have only subsequent year costs.

s to familiarize themselves with the rule and hours for setup of compliance activities including sampling and QA/QC. Initial year hou

ıp to the cloud, or utilize another recordkeeping method

nts and calculations in (§98.346), including calculation of methane generation and emissions, estimating historical waste quantities, a

Reporting Tool (e-GGRT) (for new facilities, set-up of account and first-time use of e-GGRT system).

package 1: $4.49

rs are based on Appendix H of the 2019 ICR.

nd determining annual waste compositions, and the composition, flow, and destruction of landfill gas through the gas collection syste

m

Quantitative Burden and Costs for Revisions to Applicability (implemented during RY2025
Applicability is affected by changes to the global warming potential values.

Table II-1. Labor Costs – Subpart II (from Appendix H to the 2019 ICR)

Activity	Labor Rates (per hour)						
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrat
	$ 114.80		$91.33		$73.83		$34
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours
Planning	2	1	0.2	0.1	2.0	1.0	0.2
QA/QC	0	0	0.2	0.1	2.0	1.0	0.2
Recordkeeping	0	0	0.5	0.5	5.0	5.0	0.5
Sampling and Analysis (Calculations)	0	0	2.0	2.0	8.0	8.0	0
Reporting	0	0	1.0	1.0	10.0	10.0	1.0
Total	**2**	**1**	**3.9**	**3.7**	**27**	**25**	**1.9**

Total labor, 1 facility:	**2**	**1**	**3.9**	**3.7**	**27**	**25**	**1.9**

Table II-2. Capital and O&M Costs – Subpart II – All facilities (from Appendix H to the 20

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping	$0		$0	$62	$62	$62	*covers cost
Travel	–		–	–	–	–	
Sampling and Analysis Costs	$0		$0	$1,476	$1,476	$1,476	*Costs for th
Total	$0		$0	$1,538	$1,538	$1,538	

Total Capital and O&M, 1 new facility:					**$1,538**	**$1,538**	

Total Costs of Proposed Revisions, 1 facility:					**$4,182**	**$3,895**	

Calculation Methodology: Total costs for 1 facility = Labor Cost per facility + Capital and O&M Costs.

Labor Costs of Proposed Revisions	O&M Cost Per Year

# of Facilities	**Initial Year**	**Subseq. Years**
2	$5,288	$4,713

Initial Year	**Subseq. Years**
$3,077	$3,077

Assumed two

Calculation Methodology: Labor Costs of Proposed Revisions = Number of Facilities x Total Labor Cost per Year per Facility

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) (Section 2.1)

	Total Labor Cost per Year per Facility (2021$)	
tive Support		
.09		
Subseq. Year Hours	**Initial Year**	**Subseq. Year**
0.1	$402	$201
0.1	$173	$86
0.5	$432	$432
0	$773	$773
1.0	$864	$864
1.7	**$2,644**	**$2,356**

1.7	**$2,644**	**$2,356**

Assumptions:

Initial year hours are also from Appendix H to the 2019 ICR

*New facilities in their initial year of reporting will incur additional planning hc

*QA/QC activities include review of calculations, testing, and reports;

*Recordkeeping burden accounts for the time needed to create paper copies, bac

*Sampling and analysis (calculations) hours include completion of the measurer

*Represents time required to enter the data into EPA’s electronic Greenhouse G

19 ICR)

to store records, such as a flash drive, paper file or cloud storage

e calibration of the flow meter at a Subpart II facility. The O&M cost of $3,550 only occurs once every three years under Subpart II. T

› new reporters would be expected to start reporting to the GHGRP

)urs to familiarize themselves with the rule and hours for setup of compliance activities, including QA/QC

:kup to the cloud, or utilize another recordkeeping method

nents and calculations in §98.356, including calculation of any methane generation, emissions, and biogas collection and recovery an

·as Reporting Tool (e-GGRT).

Therefore, each facility (both new facilities and existing facilities) will be expected to incur a cost of $1,183 each year over a three-ye

ıounts and gas characterization if applicable

ar period

Quantitative Burden and Costs for Revisions to Applicability (implemented during RY2025)
Applicability is affected by changes to the global warming potential values.

Table OO-1. Labor Costs – Subpart OO - F-GHG Importers (from Table OO-1b in Appendi

Activity	Labor Rates (per hour)						
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrat
	$ 114.80		$91.33		$73.83		$34
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours
Planning	2.0	2.0	1.0	1.0	1	1.0	0
QA/QC	0	0	5.0	5.0	0	0	0
Recordkeeping	0	0	1.0	1.0	13	13.0	1.0
Sampling and Analysis (Calculations)	0	0	0.9	0.9	18	18.0	1.8
Reporting	0	0	2.0	2.0	26	26.0	2.0
Total	**2**	**2.0**	**9.9**	**9.9**	**58**	**58**	**4.8**

Total labor, 1 facility:	**2**	**2.0**	**9.9**	**9.9**	**58**	**58**	**4.8**

Table OO-2. Capital and O&M Costs – Subpart OO – F-GHG Producers (from Appendix H

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping	$0		$0	$62	$62	$62	*covers cost
Travel	–		–	–	–	–	
Sampling and Analysis Costs	–		–	–	–	–	
Total	$0		$0	$62	$62	$62	

Total Capital and O&M, 1 new facility:					**$62**	**$62**	

Total Costs of Proposed Revisions, 1 new facility:					**$5,642**	**$5,642**	

Cost of Proposed Revisions from Package 1 (per facility, labor):					**$13**	**$13**

Calculation Methodology: Total costs for 1 new facility = Labor Cost per facility + Capital and O&M Costs.

Labor Costs of Proposed Revisions		
# of Facilities	**Initial Year**	**Subseq. Years**
1	$5,592	$5,592

O&M Cost Per Year	
Initial Year	**Subseq. Years**
$62	$62

Calculation Methodology:

Assumed to b

Labor Costs of Proposed Revisions = Number of Facilities x Total Labor Cost per Year per Facility + Cost of Proposed Revision from Package 1 (Adjusted to $2021)

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(Section 2.1)

ix H to the 2019 ICR)

	Total Labor Cost per Year per Facility (2021$)	
tive Support		
.09		
Subseq. Year Hours	**Initial Year**	**Subseq. Year**
0	$395	$395
0	$457	$457
1.0	$1,085	$1,085
1.8	$1,472	$1,472
2.0	$2,170	$2,170
4.8	**$5,579**	**$5,579**

4.8	**$5,579**	**$5,579**

Note: Package 1 includes costs for new data elements for subpart OO that do

Assumptions:

Assumed the new reporter would be an importer (all producers are already require

*New facilities in their initial year of reporting will incur similar planning hours.

*QA/QC activities include review of calculations, testing, and reports;

*Recordkeeping burden accounts for the time needed to create paper copies, backu

*Importers develop an annual report that summarizes imports at the corporate leve

*Represents time required to enter the data into EPA's electronic Greenhouse Gas

Adjusted hours from package 1: $12.67

to the 2019 ICR)

to store records, such as a flash drive, paper file or cloud storage

ɔe one new reporter who would be expected to start reporting to the GHGRP

not overlap with new data elements added in this package that may need to be considered for new reporters.

d to report).

ıp to the cloud, or utilize another recordkeeping method

ıl

Reporting Tool (e-GGRT).

Quantitative Burden and Costs for Revisions to Applicability (implemented during RY2025)
Applicability is affected by changes to the global warming potential values.

Table TT-1. Labor Costs – Subpart TT (from Appendix H to the 2019 ICR)

Activity	Labor Rates (per hour)						
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrat
	$ 114.80		$91.33		$73.83		$34
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours
Planning	3	1	3	1	3	1	3
QA/QC	0	0	2	1	1	1	2
Recordkeeping	0	0	1	1	13	13	1
Sampling and Analysis (Calculations)	0	0	2	1	2	1	0
Reporting	0	0	2	2	26	26	2
Total	**3**	**1**	**10**	**6**	**45**	**42**	**8**

Total labor, 1 nev	**3**	**1**	**10**	**6**	**45**	**42**	**8**

Table TT-2. Capital and O&M Costs – Subpart TT – All facilities (from Appendix H to the 2

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping	$0		$0	$62	$62	$62	*covers cost
Travel	–		–	–	–	–	
Sampling and Analysis Costs	–		–	–	–	–	
Total	$0		$0	$62	$62	$62	

Total Capital and O&M, 1 new facility:					**$62**	**$62**	

Total Costs of Proposed Revisions, 1 new facility:					**$4,915**	**$3,996**	

Calculation Methodology: Total costs for 1 new facility = Labor Cost per facility (Table I-I) + Capital and O&M Costs

Labor Costs of Proposed Revisions	O&M Cost Per Year

# of Facilities	**Initial Year**	**Subseq. Years**
1	$4,853	$3,934

Initial Year	**Subseq. Years**
$62	$62

Calculation Methodology: Labor Costs of Proposed Revisions = Number of Facilities x Total Labor Cost per Year per Facility

Assumed to b

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(Section 2.1)

	Total Labor Cost per Year per Facility (2021$)	
tive Support		
.09		
Subseq. Year Hours	**Initial Year**	**Subseq. Year**
1	$942	$314
1	$325	$199
1	$1,085	$1,085
0	$330	$165
2	$2,170	$2,170
5	**$4,853**	**$3,934**

5	**$4,853**	**$3,934**

Assumptions:

*New facilities in their initial year of reporting will incur additional planning tir

*QA/QC activities include review of calculations, testing, and reports;

*Recordkeeping burden accounts for the time needed to create paper copies, bac

*Sampling and analysis (calculations) hours include completion of the measurer

*Represents time required to enter the data into EPA's electronic Greenhouse G

2019 ICR)

to store records, such as a flash drive, paper file or cloud storage

(Table I-2a).

ɔe one new reporter who would be expected to start reporting to the GHGRP.

ne to familiarize themselves with the rule. Initial year labor costs also include time for setup of compliance activities.

ckup to the cloud, or utilize another recordkeeping method

nents and calculations in (§98.276), including calculation of emissions, and volatile solids testing for the initial year of reporting, whe

as Reporting Tool (e-GGRT).

ere applicable.

Burden for Subparts in Section 2.2 of Impacts Assessment

B (New Subpart)
WW (New subpart)
XX (New subpart)
YY (New subpart)
ZZ (New Subpart)

Total Costs Section 2.2

	Initial Year	Subsequent Years
Total Labor costs:	$8,901,308	$4,821,181
Total Non-Labor costs:	$511,257	$511,257
Total Section 2.2:	$9,412,565	$5,332,438

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Quantitative Burden and Costs for New Subparts (implemented during RY2025) (Section 2

Table B-1. Labor Costs – Subpart B – Energy Consumption

Activity	Labor Rates (per hour)						
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administr
	$ 114.80		$91.33		$73.83		$3
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours
Planning	0.5	0.1	0.4	0.1	6.0	2.0	0.8
QA/QC	0	0	0.1	0.1	2.0	0.5	0.2
Recordkeeping	0	0	0.4	0.3	2.0	2.0	0.8
Sampling and Analysis (Calculations)	0	0	0.1	0.1	1.0	1.0	0.3
Reporting	0	0	0.1	0.1	1.0	1.0	0.1
Total	**0.5**	**0.1**	**1.1**	**0.7**	**12**	**6.5**	**2.2**

Total labor, 1 new facility:	**0.5**	**0.1**	**1.1**	**0.7**	**12**	**6.5**	**2.2**

Table B-2. Capital and O&M Costs – Subpart B

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping	$0		$0	$62	$62	$62	*covers cost
Travel	–		–	–	–	–	
Sampling and Analysis Costs	–		–	–	–	–	
Total	$0		$0	$62	$62	$62	

Total Capital and O&M, 1 new facility:					**$62**	**$62**	

Total Costs of Proposed Revisions, 1 new facility:					**$1,181**	**$662**

Calculation Methodology: Total costs for 1 new facility = Labor Cost per facility + Capital and O&M Costs.

Labor Costs of Proposed Revisions		
# of Facilities	**Initial Year**	**Subseq. Years**
7,840	$8,771,243	$4,700,877

O&M Cost Per Year	
Initial Year	**Subseq. Years**
$489,050	$489,050

Assume 7,58

Calculation Methodology: Labor Costs of Proposed Revisions = Number of Facilities x Total Labor Cost per Year per Facility

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.2)

	Total Labor Cost per Year per Facility (2021$)	
ative Support		
34.09		
Subseq. Year Hours	**Initial Year**	**Subseq. Year**
0.2	$564	$175
0.1	$164	$49
0.6	$211	$196
0.3	$93	$93
0.1	$86	$86
1.3	**$1,119**	**$600**

1.3	**$1,119**	**$600**

Assumptions:

Planning: sources are required to develop an Metered Energy Monitoring Plan (

QA/QC: Meters must comply with specified standards for electric metering. Ass

Recordkeeping: the rule has provisions for accounting for missing billing statem

Sampling and calculations: The rule does not have any calculations, but if a faci split energy consumption among subparts.

Estimated Reporting Costs (represents time required to enter the data into EPA'

12 data items (b) though (m) must be reported

Assume that all reporters have to report data items for both electric

Data items (f) and (l) apply only to electricity and not thermal ener

20 data elements x 0.05 hours per element = 1 hour of reporting.

Assumed manager hours are 5% of technical (rounded up to a min

to store records, such as a flash drive, paper file or cloud storage

$9,260,294

2 existing reporters per year, based on 2021 RY reporters in S3 data subject to direct emitter subparts , + 5 RR reporters, + 200 r

7582 Direct Emitters, from file: https://easternresearchgrou

5 RR facilities 7,840

200 GWP new reporters

53 New subpart reporters

MEMP). Assumed time to develop the initial plan and update it annually. Note that an energy audit would be required once every 5 y

sumed time to confirm that meters comply initially and periodically thereafter.

ients. Assumed 0.26 hours per month (3.2 hours per year) for recordkeeping in the initial year and 0.21 hours/month in subsequent ye

lity is subject to multiple DE subparts, they need to estimate the fraction attributable to each subpart. Assume 1.4 hours per year for r

s electronic Greenhouse Gas Reporting Tool (e-GGRT)):

city and thermal energy (e.g., natural gas).

gy, so the total for a facility using both electricity and thermal energy is 20 data elements.

imum of 0.1 hour) and administrative support are 10% of technical

ıew reporters from GWP changes + 53 reporters from new subparts WW, XX, YY, and ZZ.

ıp.sharepoint.com/:x:/r/sites/GHGRP/Shared%20Documents/General/Rulemaking/Supplemental%20Notice,

ears.

ars.

eporters to

/Impacts/Data%20Pulls/GHGRP_Rulemaking_DataAggregations_220824_FINAL.xlsx?d=w8e531e632f6c4555

91c93fbeb406e4a7&csf=1&web=1&e=bUnx5E

Quantitative Burden and Costs for New Subparts (implemented during RY2025) (Section 2.2)

Table WW-1. Labor Costs – Subpart WW – Coke Calciners

Activity	Labor Rates (per hour)						
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrat
	$114.80		$91.33		$73.83		$34
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours
Planning	1	1	0.3	0.3	6	3	0.2
QA/QC	1	1	0.2	0.2	2	2	0.1
Recordkeeping	0	0	0.5	0.5	2	2	0.5
Sampling and Analysis (Calculations)	0	0	1.2	1.2	12	12	0.6
Reporting	0	0	1	1	4	4	1
Total	**2**	**2**	**3.2**	**3.2**	**26**	**23**	**2.4**

Total labor,	**2**	**2**	**3.2**	**3.2**	**26**	**23**	**2.4**

Table WW-2. Capital and O&M Costs – Subpart WW – Coke Calciners

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping	$0		$0	$62	$62	$62	*covers cost
Travel	–		–	–	–	–	
Sampling and Analysis Costs	$0		$0	$1,248	$1,248	$1,248	*Cost to coll
Total	$0		$0	$1,310	$1,310	$1,310	

Total Capital and O&M, 1 new facility:					**$1,310**	**$1,310**	

Total Costs of Proposed Revisions, 1 new facility:					**$3,833**	**$3,612**

Calculation Methodology: Total costs for 1 new facility = Labor Cost per facility + Capital and O&M Costs.

Labor Costs of Proposed Revisions		
# of Faciliti	**Initial Year**	**Subseq. Years**
15	$37,847	$34,525

O&M Cost Per Year	
Initial Year	**Subseq. Years**
$19,649	$19,649

Calculation Methodology: Labor Costs of Proposed Revisions = Number of Facilities x Total Labor Cost per Year per Facility

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tive Support .09	Total Labor Cost per Year per Facility (2021$)	
Subseq. Year Hours	Initial Year	Subseq. Year
0.2	$592	$370
0.1	$284	$284
0.5	$210	$210
0.6	$1,016	$1,016
1	$421	$421
2.4	**$2,523**	**$2,302**

2.4

Assumptions:

For Subpart Y, EPA previously used model plants to estimate costs that assume

Because these facilities are already reporting under subpart Y or C, we asumed t

Only 1 of the 15 facilities currently reporting under subparts Y or C are Calcine burden for planning or QA/QC, and a burden of 2.0 hours for industrial technici analysis/calculations. This would result in a total labor cost of $1,030/facility ($

*Planning activities include familiarizing with the rule and hours for setup of co

*QA/QC activities include review of calculations, testing, and reports;

*Recordkeeping burden accounts for the time needed to create paper copies, bac

*Sampling and analysis (calculations) hours include completion of the measurer

*Reporting: Represents time required to enter the data into EPA's electronic Gr

to store records, such as a flash drive, paper file or cloud storage

ect and analyze samples to determine carbon content.

a variety of refinery emission units and a set amount of units for each model. For these reasons, these estimates instead assume the sa

that the initial and subsequent year costs are similar, though additional planning hours were added for the initial year.

r Units with/ CEMs. For this facility, we assume the same burden for reporting and recordkeeping, no
an, 0.2 hours for industrial manager, and 0.1 hours for administrative support for sampling and
2021) in initial and subsequent years.

mpliance activities including sampling and QA/QC

ckup to the cloud, or utilize another recordkeeping method

nents and calculations, including entering mass of materials used in the process into equations Eq. AAA-1 to estimate CO2 emissions

eenhouse Gas Reporting Tool (e-GGRT), including set-up of account and first-time use of e-GGRT system).

ıme labor hours and O&M costs as used for subpart Q - Iron and Steel Production (carbon mass balance option with sampling, see Tał

; and use of emission factors in Eq. AAA-2 and AAA-3 to estimate N2O and CH4 emissions.

ɔle Q-1a(1) in Appendix H) - because both rules rely on a carbon mass balance approach with carbon content sampling.

Quantitative Burden and Costs for New Subparts (implemented during RY2025) (Section 2.2)

Table XX-1. Labor Costs – Subpart XX – Calcium Carbide Production

Activity	Labor Rates (per hour)							
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrative Support	
	$ 114.80		$91.33		$73.83		$34.09	
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours
Planning	1	1	0.3	0.3	6	3	0.2	0.2
QA/QC	1	1	0.2	0.2	2	2	0.1	0.1
Recordkeeping	0	0	0.5	0.5	5	5	0.5	0.5
Sampling and Analysis (Calculations)	0	0	0.8	0.8	8	8	0.4	0.4
Reporting	0	0	1	1	10	10	1	1
Total	**2**	**2**	**2.8**	**2.8**	**31**	**28**	**2.2**	**2.2**

Total labor,	**2**	**2**	**2.8**	**2.8**	**31**	**28**	**2.2**	**2.2**

Table XX-2a. Capital and O&M Costs – Subpart XX

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping	$0		$0	$62	$62	$62	*covers cost to store recor
Travel	–		–	–	–	–	
Sampling and Analysis Costs	–		–	–	–	–	
Total	$0		$0	$62	$62	$62	

Total Capital and O&M, 1 new facility:					**$62**	**$62**

Total Costs of Proposed Revisions, 1 new facility:					**$2,911**	**$2,690**

Calculation Methodology: Total costs for 1 new facility = Labor Cost per facility + Capital and O&M Costs.

Labor Costs of Proposed Revisions		
# of Faciliti	**Initial Year**	**Subseq. Years**
1	$2,849	$2,627

O&M Cost Per Year	
Initial Year	**Subseq. Years**
$62	$62

Calculation Methodology:

Labor Costs of Proposed Revisions = Number of Facilities x Total Labor Cost per Year per Facility

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Total Labor Cost per Year per Facility (2021$)	
Initial Year	**Subseq. Year**
$592	$370
$284	$284
$432	$432
$677	$677
$864	$864
$2,849	**$2,627**

$2,849	**$2,627**

Assumptions:

From the draft preamble: There is currently one producer of calcium carbide in the U.S., Carb emissions under the GHG Reporting Program (GHGRP; 40 CFR part 98), subpart K – Ferroa production of calcium carbide.

Subpart K requires that analysis of the C-content of 6 input and output materials in the mass b

The existing carbide facility does not currently report under subpart C or K using CEMS. Bas ICR, except assume that hours for sampling and analysis (calculations) for subpart XX are 2/

Assumed additional planning hours for the initial year.

*Planning activities include familiarizing with the rule and hours for setup of compliance acti

*QA/QC activities include review of calculations, testing, and reports;

*Recordkeeping burden accounts for the time needed to create paper copies, backup to the clo

*Sampling and analysis (calculations) hours include completion of the measurements and cal

*Reporting: Represents time required to enter the data into EPA's electronic Greenhouse Gas

ds, such as a flash drive, paper file or cloud storage

ɔide Industries, LLC, located in Louisville, KY. Carbide Industries LLC, currently reports their process greenhouse gas (GHG)
ılloy Production (GHGRP Facility ID 528303). Their reporting under subpart K is voluntary as the subpart does not cover the

ɔalance equation; Subpart XX requires the analysis of 4 materials and does not require calculating CH4 emissions.

ɜed on this information, assume the same hour and O&M burden as for subpart K, Tables K-1 and K-2 of Appendix H to the 2019
3 of what they are for subpart K (e.g., 8 hours of engineer/technician instead of 12 hours).

ivities including sampling and QA/QC

ɔud, or utilize another recordkeeping method

culations, including collecting carbon content and calculating CO2 emissions from each calcium carbide process unit

ɜ Reporting Tool (e-GGRT), including set-up of account and first-time use of e-GGRT system).

Quantitative Burden and Costs for New Subparts (implemented during RY2025) (Section 2.

Table YY-1. Labor Costs – Subpart YY - Caprolactam, Glyoxal, and Glyoxylic Acid Produc

Activity	Labor Rates (per hour)							
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrative Support	
	$ 114.80		$91.33		$73.83		$34.09	
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours
Planning	1	1	0.3	0.3	6	3.3	0.2	0.2
QA/QC	0	0	0.8	0.8	8.1	8.1	0.4	0.4
Recordkeeping	0	0	0.5	0.5	2	2	0.5	0.5
Sampling and Analysis (Calculations)	0	0	0.2	0.2	1.6	1.6	0.1	0.1
Reporting	0	0	1	1	4	4	1	1
Total	**1**	**1**	**2.8**	**2.8**	**21.7**	**19**	**2.2**	**2.2**

Total labor,	**1**	**1**	**2.8**	**2.8**	**21.7**	**19**	**2.2**	**2.2**

Table YY-2. Capital and O&M Costs – Subpart YY - Caprolactam, Glyoxal, and Glyoxylic A

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping	$0		$0	$62	$62	$62	*covers cost to store recor
Travel	–		–	–	–	–	
Sampling and Analysis Costs	–		–	–	–	–	
Total	$0		$0	$62	$62	$62	

Total Capital and O&M, 1 new facility:				**$62**	**$62**

Total Costs of Proposed Revisions, 1 new facility:					**$2,110**	**$1,911**

Calculation Methodology: Total costs for 1 new facility = Labor Cost per facility + Capital and O&M Costs.

Labor Costs of Proposed Revisions		
# of Faciliti	**Initial Year**	**Subseq. Years**
6	$12,285	$11,089

O&M Cost Per Year	
Initial Year	**Subseq. Years**
$374	$374

There are approximately fo

Calculation Methodology: ~~of Facilities x Total Labor~~ Cost per Year per Facility

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2)

tion

Total Labor Cost per Year per Facility (2021$)	
Initial Year	**Subseq. Year**
$592	$393
$685	$685
$210	$210
$140	$140
$421	$421
$2,048	**$1,848**

$2,048	**$1,848**

Assumptions:

Assumed similar labor hours and O&M as for subpart V - Nitirc Acid Production for the Alte and accounting for abatement DRE.

Assumed additional planning hours for the initial year.

*Planning activities include familiarizing with the rule and hours for setup of compliance acti

*QA/QC hours related to maintaining the equipment used to comply with the alternative mon

*Recordkeeping burden accounts for the time needed to create paper copies, backup to the cl

*Sampling and analysis (calculations) hours include completion of the measurements and cal

*Reporting: Represents time required to enter the data into EPA's electronic Greenhouse Gas

Acid Production

ds, such as a flash drive, paper file or cloud storage

ɔur to six facilities, which is the known universe of facilities that produce caprolactam, glyoxal, and glyoxylic acid in the United State

ernative Monitoring Method Option. These are both subparts dealing with sources of N2O that include the use of emission factors

ivities including sampling and QA/QC

nitoring method option, along with review of all measurements and calculations used to determine emissions

oud, or utilize another recordkeeping method

culations, including estimating N2O base on the use of emission factors and accounting for abatement DRE.

Reporting Tool (e-GGRT), including set-up of account and first-time use of e-GGRT system).

's.

Quantitative Burden and Costs for New Subparts (implemented during RY2025) (Section 2.2)

Table ZZ-1. Labor Costs – Subpart ZZ - Ceramics Production

Activity	Labor Rates (per hour)							
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrative Support	
	$ 114.80		$91.33		$73.83		$34.09	
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours
Planning	1	1	0.4	0.4	6	4	0.2	0.2
QA/QC	1	1	0.2	0.2	2	2	0.1	0.1
Recordkeeping	0	0	0.5	0.5	5	5	0.5	0.5
Sampling and Analysis (Calculations)	0	0	0.1	0.1	1	1	0.1	0.1
Reporting	0	0	1	1	10	10	1	1
Total	**2**	**2**	**2.2**	**2.2**	**24**	**22**	**1.9**	**1.9**

Total labor,	**2**	**2**	**2.2**	**2.2**	**24**	**22**	**1.9**	**1.9**

Table ZZ-2a. Capital and O&M Costs – Subpart ZZ

Activity	Cost Categories				Total Capital and O&M Cost per Year per [illegible]		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping	$0		$0	$62	$62	$62	*covers cost to store recor
Travel	–		–	–	–	–	
Sampling and Analysis Costs	–		–	–	–	–	
Total	$0		$0	$62	$62	$62	

Total Capital and O&M, 1 new facility:					**$62**	**$62**	

Total Costs of Proposed Revisions, 1 new facility:					**$2,330**	**$2,182**

Calculation Methodology: Total costs for 1 new facility = Labor Cost per facility + Capital and O&M Costs.

Labor Costs of Proposed Revisions		
# of Faciliti	**Initial Year**	**Subseq. Years**
34	$77,083	$72,062

O&M Cost Per Year	
Initial Year	**Subseq. Years**
$2,121	$2,121

Calculation Methodology: Labor Costs of Proposed Revisions = Number of Facilities x Total Labor Cost per Year per Facility

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Assumptions:

Because the emissions from ceramics occur from the calcination of the materials, the labor ar
process. Subsequent year hours and O&M are from Tables S-1b and S-2 in Appendix H of th

Threshold analysis assumes 34 facilities would exceed the 25,000 mtCO2e threshold. Of the
regulations for ceramics manufacturers (NESHAP 5K and 6R) do not appear to require CEM
we estimate that the recordkeeping and reporting burden from facilities using CEMS would b
analysis.

Total Labor Cost per Year per Facility (2021$)	
Initial Year	**Subseq. Year**
$601	$453
$284	$284
$432	$432
$86	$86
$864	$864
$2,267	**$2,119**

$2,267	**$2,119**

*Planning activities include familiarizing with the rule and hours for setup of compliance acti

*QA/QC activities include review of calculations, testing, and reports;

*Recordkeeping burden accounts for the time needed to create paper copies, backup to the cl

*Sampling and analysis (calculations) hours include completion of the measurements and cal

*Reporting: Represents time required to enter the data into EPA's electronic Greenhouse Gas

ds, such as a flash drive, paper file or cloud storage

ıd O&M burden was assumed to be the same as for the non-CEMS option for lime manufacturing, which is also a calcination
e 2019 ICR. Assumed additional planning hours for the initial year.

16 facilities identified currently reporting under subpart C of Part 98, none appear to use CEMS. Additionally, other air quality
S. Therefore, we assume most ceramics manufacturers would not have CEMs unless required by state or other regulation. However,
ıe similar to costs for non-CEMS facilities; these sources would not have burden associated with planning, QA/QC, or sampling and

ivities including sampling and QA/QC

ɔud, or utilize another recordkeeping method

culations. Calculations include inputting the amounts of carbonate-based mineral into the equations to calculate CO2 emissions.

Reporting Tool (e-GGRT), including set-up of account and first-time use of e-GGRT system).

Burden for Subparts in Section 2.3 of Impacts Assessment

Subpart P (Applicability)
Subpart Y (Applicability)

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Total Costs Section 2.3

	Initial Year	Subsequent Years
Total Labor costs:	($3,072)	($3,072)
Total Non-Labor costs:	($1,689)	$551
Total Section 2.3:	($4,761)	($2,521)

Quantitative Burden and Costs for Revisions to Applicability (implemented during RY202
Applicability is affected by rule changes that increase the number of hydrogen plants repo
Table P-1. Labor Costs – Subpart P - Hydrogen Production - Mass Balance Option; Natura

Activity	Labor Rates (per hour)						
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrat
	$ 114.80		$91.33		$73.83		$34
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours
Planning	0	0	0.4	0.4	4	4	0.4
QA/QC	0	0	0.2	0.2	2	2	0.2
Recordkeeping	0	0	0.5	0.5	5	5	0.5
Sampling and Analysis (Calculations)	0	0	0.1	0.1	1	1	0.1
Reporting	0	0	1	1	10	10	1
Total	**0**	**0**	**2.2**	**2.2**	**22**	**22**	**2.2**

Total labor, 1 new facility:	**0**	**0**	**2.2**	**2.2**	**22**	**22**	**2.2**

Table P-2. Capital and O&M Costs – Subpart P - Hydrogen Production – Mass Balance Op

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping				$ 62	$ 62	$ 62	*covers cost
Travel	–		–	–	–	–	
Sampling and Analysis Costs	–		–	$ 2,178	$ 2,178	$ 2,178	*For samplin
Total	$0	$0	$0	$ 2,241	$ 2,241	$ 2,241	

Total Capital and O&M, 1 new facility:					**$2,241**	**$2,241**	

Total Costs of Proposed Revisions, 1 new facility:					**$4,141**	**$4,141**	

Cost of Proposed Revisions from Package 1 (per facility):					**$16**	**$16**

Calculation Methodology: Total costs for 1 new facility = Labor Cost per facility + Capital and O&M Costs.

Labor Costs of Proposed Revisions		
# of Facilities	**Initial Year**	**Subseq. Years**
2	$3,833	$3,833

O&M Cost Per Year	
Initial Year	**Subseq. Years**
$2,241	$4,481

Calculation Methodology:
Labor Costs of Proposed Revisions = Number of Facilities x Total Labor Cost per Year per Facility + Cost of Proposed Revision from Package 1 (Adjusted to $2021)

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5) (Section 2.3)
ting.
al Gas and Liquid/Solid Fuels (from Table P-1e of Appendix H to the 2019 ICR)

	Total Labor Cost per Year per Facility (2021$)		
tive Support .09	Subseq. Year Hours	Initial Year	Subseq. Year
	0.4	$345	$345
	0.2	$173	$173
	0.5	$432	$432
	0.1	$86	$86
	1	$864	$864
	2.2	**$1,900**	**$1,900**

Assumptions:

*reading the rule to become familiar with any changes to the rule requirements,
*QA/QC activities include review of calculations, testing, and reports;
*Recordkeeping burden accounts for the time needed to create paper copies, bac
*Sampling and analysis to determine the molecular weight and carbon content o
*Represents time required to enter the data into EPA's electronic Greenhouse G

Adjusted hours from Package 1: $16.36

2.2	**$1,900**	**$1,900**

ption; Natural Gas and Liquid/Solid Fuels (from Table P-2e in Appendix H to the 2019 ICR)

to store records, such as a flash drive, paper file or cloud storage

g and analysis of carbon content of natural gas

asking questions about applicability, reviewing any overlap in existing reporting programs

ckup to the cloud, or utilize another recordkeeping method

of the natural gas is performed annually

as Reporting Tool (e-GGRT) (for new facilities, set-up of account and first-time use of e-GGRT system).

Quantitative Burden and Costs for Revisions to Applicability (implemented during RY2025)
Applicability is affected by rule changes that shift certain operations to a new subpart for co

Table Y-1. Labor Costs – Subpart Y - Petroleum Refineries

Activity	Labor Rates (per hour)						
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrat
	$ 114.80		$91.33		$73.83		$34
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours
Planning	1	1	0.3	0.3	3	3	0.2
QA/QC	1	1	0.2	0.2	2	2	0.1
Recordkeeping	0	0	0.5	0.5	2	2	0.5
Sampling and Analysis (Calculations)	0	0	1.2	1.2	12	12	0.6
Reporting	0	0	1	1	4	4	1
Total	**2**	**2**	**3.2**	**3.2**	**23**	**23**	**2.4**

Total labor, 1 new facility:	**2**	**2**	**3.2**	**3.2**	**23**	**23**	**2.4**

Table Y-2. Capital and O&M Costs – Subpart Y – All facilities (from Appendix H to the 201

Activity	Cost Categories				Total Capital and O&M Cost per Year per Facility (2021$)		
	Capital Cost (2021$)	Equipment Lifetime	Annualized Capital Cost (2021$/year)	O&M Costs (2021$/year)	Initial Year	Subseq. Years	
Equipment (selection, purchase, installation)	–		–	–	–	–	
Performance testing	–		–	–	–	–	
Recordkeeping	$0		$0	$62	$62	$62	*covers cost
Travel	–		–	–	–	–	
Sampling and Analysis Costs	–		–	$1,248	$1,248	$1,248	*Cost to coll
Total	$0	$0	$0	$1,310	$1,310	$1,310	

Total Capital and O&M, 1 new facility:					**$1,310**	**$1,310**	

Total Costs of Proposed Revisions, 1 new facility:					**$3,612**	**$3,612**	

Calculation Methodology: Total costs for 1 new facility = Labor Cost per facility + Capital and O&M Costs.

Labor Costs of Proposed Revisions	O&M Cost Per Year

# of Facilities	**Initial Year**	**Subseq. Years**
-3	($6,905)	($6,905)

Initial Year	**Subseq. Years**
($3,930)	($3,930)

Table Y-1 in Calculation Methodology: ~~Labor Costs of Proposed~~ Revisions = Number of Facilities x Total Labor Cost per Year per Facility

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) (Section 2.3)
ke calciners.

	Total Labor Cost per Year per Facility (2021$)	
tive Support		
.09		
Subseq. Year Hours	Initial Year	Subseq. Year
0.2	$370	$370
0.1	$284	$284
0.5	$210	$210
0.6	$1,016	$1,016
1	$421	$421
2.4	**$2,302**	**$2,302**

2.4	**$2,302**	**$2,302**

Assumptions:

Subpart Y uses model plants to estimate costs that assume a variety of refinery e

*reading the rule to become familiar with any changes to the rule requirements,

*QA/QC activities include review of calculations, testing, and reports;

*Recordkeeping burden accounts for the time needed to create paper copies, bac

*Sampling and analysis to determine the carbon content of input materials is per

*Represents time required to enter the data into EPA's electronic Greenhouse G

.9 ICR)

to store records, such as a flash drive, paper file or cloud storage

ect and analyze samples to determine carbon content.

Appendix H to the 2019 ICR indicates 4 facilities in the model plant for "Large Upgrading Refinery with Coke Calcining." Based on

emission units and a set amount of units for each model. For these reasons, these estimates instead assume a reduced number of labor

asking questions about applicability, reviewing any overlap in existing reporting programs

ckup to the cloud, or utilize another recordkeeping method

rformed monthly.

as Reporting Tool (e-GGRT) (for new facilities, set-up of account and first-time use of e-GGRT system).

RY2021 data, this now appears to be 3 facilities. Assumed these would all move to subpart AAA.

hours that apply only for coke calcining units. Estimates are based on similar labor hours and O&M costs as used for subpart Q - Iron

and Steel Production (carbon mass balance option with sampling, see Table Q-1a(1) in Appendix H) - because both rules rely on a ca

ırbon mass balance approach with carbon content sampling.

Burden for Subparts in Section 2.4 of Impacts Assessment

Subpart AA (Calculations)
Subpart HH (Calculations)

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Total Costs Section 2.4

	Initial Year	Subsequent Years
Total Labor costs:	$31,066	$31,066
Total Non-Labor costs:	$0	$0
Total Section 2.4:	$31,066	$31,066

Quantitative Burden and Costs for Revisions to the Calculation Methodology for Subp

Labor Costs – Subpart AA

Activity	Labor Rates (per hour)						
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrat
	$ 114.80		$91.33		$73.83		$34
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours
Planning	0	0	0	0	0	0	0
QA/QC	0	0	0	0	0	0	0
Recordkeeping	0	0	0	0	0	0	0
Sampling and Analysis (Calculations)	0	0	0	0	1.3	1.3	0
Reporting	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**1.3**	**1.3**	**0**

Based on annual average hours per respondent for Tier 1, time to perform engineering calculation to determine C 1, C-1a, or C-1b of subpart C, and CH4 and N2O emissions (0.9 hours) using Eq C-8, Eq C-8a, or Eq C-8b of su and/or default emission factors. From Appendix F, Table F-1, of the 2019 ICR.

Labor Costs of Proposed Revisions		
# of Facilities	Initial Year	Subseq. Years
1	$96	$96

Revise 40 CFR 98.273 to include metho

Calculation Methodology:

~~Labor Costs of Proposed~~ Revisions = Number of Facilities x Total Labor Cost per Year per Facility

107 facilities are expected to report und

EPA estimates that just one (1) facility c

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›art AA (section 2.4)

‹ive Support	Total Labor Cost per Year per Facility (2021$)	
.09		
Subseq. Year Hours	Initial Year	Subseq. Year
0	$ -	$ -
0	$ -	$ -
0	$ -	$ -
0	$ 96	$ 96
0	$ -	$ -
0	**$ 96**	**$ 96**

CO2 emissions (0.4 hours) using Eq C-
ubpart C using default high heat values

Initial and subsequent year hours are based on required activities unique to the Tier 1 methodology from Appendix F to the 2019 ICR, specifically, the time to perform engineering calculations to total CO2, CH4, and N2O emissions .

Additional sampling and analysis labor costs specific to each tier approach are detailed in Appendix F-1 through F-9 of the 2019 ICR. These costs are incurred only by the facilities that report using the specified tier.

›dologies to calculate CH_4, N_2O and biogenic CO_2 emissions from the combustion of biomass fuels other than spent liquor solids, as w

er subpart AA, based on the 2019 ICR.

combusts biomass (other than spent liquor solids) with other fuels.

/ell as the combustion of biomass other than spent liquor solids with other fuels, according to the applicable methodology from the pr

ɔvisions for stationary combustion sources found at 40 CFR 98.33(a), 40 CFR 98.33(c), and 40 CFR 98.33(e).

Quantitative Burden and Costs for Revisions to the Calculation Methodology for Subpart HH (s

Labor Costs – Subpart HH - Facilities with Gas Collection Systems

Activity	Labor Rates (per hour)							
	Lawyer		Industrial Manager		Industrial Engineer/ Technician		Administrative Support	
	$ 114.80		$91.33		$73.83		$34.09	
	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours	Initial Year Hours	Subseq. Year Hours
Planning	0	0	0	0	0	0	0	0
QA/QC	0	0	0	0	0	0	0	0
Recordkeeping	0	0	0	0	0	0	0	0
Sampling and Analysis (Calculations)	0	0	0	0	0.5	0.5	0	0
Reporting	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0.5**	**0.5**	**0**	**0**

Labor Costs of Proposed Revisions		
# of Facilities	Initial Year	Subseq. Years
839	$30,970	$30,970

Revise Equations HH-6, HH-7, and HH-8 to add a te

Calculation Methodology:

~~Labor Costs of Proposed~~ Revisions = Number of Facilities x Total Labor Cost per Year per Facility

Based on crosswalk of GHGRP/NSPS reporters, 833

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ection 2.4)

Total Labor Cost per Year per Facility (2021$)	
Initial Year	**Subseq. Year**
$ -	$ -
$ -	$ -
$ -	$ -
$ 37	$ 37
$ -	$ -
$ 37	**$ 37**

Initial and subsequent year hours are based on required activities for landfills with gas collection systems that conduct surface monitoring measurements under 40 CFR Part 60 or Part 62 rules or use lower default CEs, specifically, the additional time to conduct engineering calculations incorporating the count and surface measurement methane concentrations that exceed 500 parts per million above background in the reporting year. There is no burden associated with surface measurement monitoring as landfills will use data previously collected for the Part 60 and Part 62 rules, or, if not subject to Part 60 and Part 62 rules, may use default CEs.

rm to adjust the estimated methane emissions based on methane surface monitoring measurements or lower default CEs.

reporters have GCS. Of these, 70% of GHGRP landfills (792 reporters) are likely subject to NSPS, EG, or FP. It is assumed that the 6

5 new facilities under subpart HH would review the new calculations, however, these facilities are not likely subject to the NSPS, EG,

, or FP since the majority of those facilities (91%) already report to the GHGRP.

Burden for Subparts in Section 2.5 of Impacts Assessment

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Quantitative Burden and Costs for New, Revised, and Deleted Data Elements - Existing Subparts (Section 2.5)

Total Costs Section 2.5

Subpart	# Reporters Affected	Incremental Annual Average Costs (2021$)	Annual Avg Cost/ Reporter
A	7,840	$64,133	$8
C	346	$9,906	$29
F	7	$57	$8
G	29	$119	$4
N	100	$1,227	$12
P	116	$3,346	$29
Y	6	$25	$4
AA	1	$8	$8
HH	1,126	$67,757	$60
OO	104	$1,088	$10
PP	11	$135	$12
QQ	33	$384	$12
Total Industry Costs and Avg. Cost/Reporter		$148,185	$16

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Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (Section

Item	Subpart A Data Element Revisions	
	Total	A (2)
Number of Reporters Affected (1, 2)	7,840	7,840
# of New Data Elements	2	2
# of Revised Data Elements	0	0
# of Removed Data Elements	0	0
Sum of Data Element Changes	2	2
Technical Respondent Hours Per Occurrence		0.05
Respondent Hours		
Technical	0.10	0.10
Clerical	0.01	0.01
Managerial	0.01	0.01
Total	0.12	0.12
Reporter Costs		
Technical	$7	$7
Clerical	$0	$0
Managerial	$0	$0
Total	$8	$8
Total Industry Costs and Avg. Cost/Reporter		
Total	**$64,133**	$64,133
	$8	$/reporter

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised + No. of Rem

(1) Based on the total number of existing reporters affected, based on RY2021 data and estimated during RY2

(2) Per RY2021 data, 7,587 direct emitters would be required to report new data elements for electricity and the OO, TT and 53 new reporters from proposed subparts WW, XX, YY, and ZZ. The proposed data element requi CFR 98.26(k). This document assumes that the data may generally be obtained from existing company records GGRT.

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2.5)

ayed Data Elements) x Technical Respondent Hours per Occurrence. Clerical and managerial hours are
025, unless otherwise noted. Additional details may be found in Appendix A of the Impacts Memo.

ermal energy consumption at 40 CFR 98.3(c)(4)(iv), in addition to 80 new reporters from subparts W, HH, II,
ires totaling annual purchases from each meter on each electric bill, which are reported under proposed 40
s or are readily available, and the labor is based on the time to enter the totalled purchase quantities into e-

Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (Section

Item	Subpart C Data Element Revisions	
	Total	C (2)
Number of Reporters Affected (1, 2)	346	346
# of New Data Elements	7	7
# of Revised Data Elements	0	0
# of Removed Data Elements	0	0
Sum of Data Element Changes	7	7
Technical Respondent Hours Per Occurrence		0.05
Respondent Hours		
Technical	0.35	0.35
Clerical	0.04	0.04
Managerial	0.02	0.02
Total	0.40	0.40
Reporter Costs		
Technical	$26	$26
Clerical	$1	$1
Managerial	$2	$2
Total	$29	$29
Total Industry Costs and Avg. Cost/Reporter		
Total	**$9,906**	$9,906
	$29	$/reporter

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised + No. of Rem

(1) Based on the total number of existing reporters affected, based on RY2021 data and estimated during RY2

(2) It is estimated that 346 respondents reporting under subpart C may have at least 1 potential EGU. The prop
common stack, or common pipe configuration an indicator of whether the unit is an EGU. If the reporter is usin
must also report an estimate of the group's total reported emissions attributable to electricity generation for eac
IDs and ORIS codes for facilities not in the GHGRP Power Sector that submitted reports in RY2020. See: http
(accessed September 29, 2022). Additional facilities with small EGUs that are less than 1 MW electric output c
definitively quantify the number of facilities with these units that would be required to report these additional da
data elements to identify the affected EGU Unit and the fraction of reported emissions attributable to electricity

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025, unless otherwise noted. Additional details may be found in Appendix A of the Impacts Memo.

posed requirements would require a facility to report for either the individual unit, aggregation of units,
g the reporting alternatives of aggregation of units, common stack, or common pipe configuration, the facility
ch reporting alternative. The number of facilities estimated is based on a crosswalk between GHGRP facility
s://www.epa.gov/system/files/documents/2022-04/ghgrp_oris_power_plant_crosswalk_12_13_21.xlsx
or that are not subject to reporting would also be required to report, however, we lack information to
ta elements. However, the provided estimate is a conversative estimate as reporters would only enter two
generation for the reported configuration.

Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (Section

Item	Subpart F Data Element Revisions	
	Total	F (2)
Number of Reporters Affected (1, 2)	7	7
# of New Data Elements	2	2
# of Revised Data Elements	0	0
# of Removed Data Elements	0	0
Sum of Data Element Changes	2	2
Technical Respondent Hours Per Occurrence		0.05
Respondent Hours		
Technical	0.10	0.10
Clerical	0.01	0.01
Managerial	0.01	0.01
Total	0.12	0.12
Reporter Costs		
Technical	$7	$7
Clerical	$0	$0
Managerial	$0	$0
Total	$8	$8
Total Industry Costs and Avg. Cost/Reporter		
Total	**$57**	$57
	$8	$/reporter

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised – No. of Rem

(1) Based on the total number of existing reporters affected within each segment, based on RY2021 data and e Impacts Memo.

(2) Per RY2021 data, 7 respondents report to subpart F who would be required to report new data elements at potline.

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2.5)

evad Data Elements) x Technical Respondent Hours per Occurrence. Clerical and managerial hours are
estimated during RY2025, unless otherwise noted. Additional details may be found in Appendix A of the

40 CFR 98.66(a) for production capacity (tons) and at 40 CFR 98.66(g) for annual operating days per

Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (Section

Item	Subpart G Data Element Revisions	
	Total	G (2)
Number of Reporters Affected (1, 2)	29	29
# of New Data Elements	1	1
# of Revised Data Elements	0	0
# of Removed Data Elements	0	0
Sum of Data Element Changes	1	1
Technical Respondent Hours Per Occurrence		0.05
Respondent Hours		
Technical	0.05	0.05
Clerical	0.01	0.01
Managerial	0.00	0.00
Total	0.06	0.06
Reporter Costs		
Technical	$4	$4
Clerical	$0	$0
Managerial	$0	$0
Total	$4	$4
Total Industry Costs and Avg. Cost/Reporter		
Total	**$119**	$119
	$4	$/reporter

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised + No. of Rep

(1) Based on the total number of existing reporters affected within each segment, based on RY2021 data and Impacts Memo

(2) Per RY2021 data, 29 respondents reporting to subpart G who do not use CEMs to measure emissions wou produced that is not consumed through the production of ammonia (metric tons).

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ı 2.5)

ıuld be required to report new data element 40 CFR 98.76(b)(16), annual quantity of excess hydrogen

Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (Section 2

Item	Subpart N Data Element Revisions	
	Total	N (2)
Number of Reporters Affected (1, 2)	100	100
# of New Data Elements	2	2
# of Revised Data Elements	1	1
# of Removed Data Elements	0	0
Sum of Data Element Changes	3	3
Technical Respondent Hours Per Occurrence		0.05
Respondent Hours		
Technical	0.15	0.15
Clerical	0.02	0.02
Managerial	0.01	0.01
Total	0.17	0.17
Reporter Costs		
Technical	$11	$11
Clerical	$1	$1
Managerial	$1	$1
Total	$12	$12
Total Industry Costs and Avg. Cost/Reporter		
Total	**$1,227**	$1,227
	$12	$/reporter

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised + No. of Rem

(1) Based on the total number of existing reporters affected within each segment, based on RY2021 data and e

Impacts Memo

(2) Per RY2021 data, 100 respondents reporting to subpart N would be required to report two new data elemen

quantity (tons) of recycled scrap glass (cullet) charged to each glass melting furnace and for all furnaces combi

year that missing data procedures are used to measure monthly quantities of recycled scrap glass (cullet).

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2.5)

ved Data Elements) x Technical Respondent Hours per Occurrence. Clerical and managerial hours are
stimated during RY2025, unless otherwise noted. Additional details may be found in Appendix A of the

ts under 40 CFR 98.146(a)(3) (CEMS facilities) or 98.146(b)(5) (non-CEMS facilities) to report the annual
ned, and one revised data element under 40 CFR 98.146(b)(9) to report the number of times in the reporting

Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (Section 2.5)

Item	Subpart P Data Element Revisions		
	Total	P (1, 2)	P (3)
Number of Reporters Affected	116	116	3
# of New Data Elements	7	5	2
# of Revised Data Elements	2	2	0
# of Removed Data Elements	0	0	0
Sum of Data Element Changes	9	7	2
Technical Respondent Hours Per Occurrence		0.05	0.05
Respondent Hours			
Technical	0.45	0.35	0.10
Clerical	0.05	0.04	0.01
Managerial	0.02	0.02	0.01
Total	0.52	0.40	0.12
Reporter Costs			
Technical	**$33**	$26	$7
Clerical	**$2**	$1	$0
Managerial	**$2**	$2	$0
Total	**$37**	$29	$8
Total Industry Costs and Avg. Cost/Reporter			
Total	**$3,346**	$3,321	$25
	$29	$/reporter	$/reporter

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised + No. of Remov

(1) Based on the total number of existing reporters affected within each segment, based on RY2021 data and esti
the Impacts Memo.

(2) Per RY2021 data, 114 existing respondents reporting to subpart P, plus two new reporters, would be required t
revised data elements at 40 CFR 98.166(b)(6)-(7).

(3) Per RY2021 data, 3 respondents reporting to subpart P who use CEMS to measure emissions would be requir

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)

d Data Elements) x Technical Respondent Hours per Occurrence. Clerical and managerial hours
mated during RY2025, unless otherwise noted. Additional details may be found in Appendix A of

to report five new data elements at 40 CFR 98.166(b)(1), (b)(2), (b)(3)(ii) and (b)(9), and two

ed to report two new data elements at 40 CFR 98.166(b)(2)(i-ii).

Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (Section

Item	Subpart Y Data Element Revisions	
	Total	Y(2)
Number of Reporters Affected (1)	6	6
# of New Data Elements	1	1
# of Revised Data Elements	0	0
# of Removed Data Elements	0	0
Sum of Data Element Changes	1	1
Technical Respondent Hours Per Occurrence		0.05
Respondent Hours		
Technical	0.05	0.05
Clerical	0.01	0.01
Managerial	0.00	0.00
Total	0.06	0.06
Reporter Costs		
Technical	$4	$4
Clerical	$0	$0
Managerial	$0	$0
Total	$4	$4
Total Industry Costs and Avg. Cost/Reporter		
Total	**$25**	$25
	$4	$/reporter

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised + No. of Rem

(1) Based on the total number of existing reporters affected within each segment, based on RY2021 data and e

of the Impacts Memo

(2) Per RY2021 data, 6 respondents reporting to subpart Y with asphalt blowing units would be required to rep

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2.5)

quad Data Elements) x Technical Respondent Hours per Occurrence, Clerical and managerial

estimated during RY2025, unless otherwise noted. Additional details may be found in Appendix A

ort one new data element at 40 CFR 98.256(j)(2).

Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (Secti

Item	Subpart AA Data Element Revisions	
	Total	AA (2)
Number of Reporters Affected (1)	1	1
# of New Data Elements	2	2
# of Revised Data Elements	0	0
# of Removed Data Elements	0	0
Sum of Data Element Changes	2	2
Technical Respondent Hours Per Occurrence		0.05
Respondent Hours		
Technical	0.10	0.10
Clerical	0.01	0.01
Managerial	0.01	0.01
Total	0.12	0.12
Reporter Costs		
Technical	$7	$7
Clerical	$0	$0
Managerial	$0	$0
Total	$8	$8
Total Industry Costs and Avg. Cost/Reporter		
Total	**$8**	$8
	$8	$/reporter

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised + No. of R

(1) Based on the total number of existing reporters affected within each segment, based on RY2021 data ar
Impacts Memo.

(2) EPA identified 1 respondent reporting to subpart AA that combusts biomass (other than spent liquor solic

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on 2.5)

amoved Data Elements) x Technical Respondent Hours per Occurrence. Clerical and managerial hours are
ıd estimated during RY2025, unless otherwise noted. Additional details may be found in Appendix A of the

ds) with other fuels would be required to report annual biogenic CO2 emissions under subpart C.

Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (S

Item	Subpart HH Data Element Revisions		
	Total	HH (2)	HH (3)
Number of Reporters Affected (1)	1,126	839	814
# of New Data Elements	17	4	4
# of Revised Data Elements	3	2	1
# of Removed Data Elements	0	0	0
Sum of Data Element Changes	20	6	5
Technical Respondent Hours Per Occurrence		0.05	0.05
Respondent Hours			
Technical	1.00	0.30	0.25
Clerical	0.10	0.03	0.03
Managerial	0.05	0.02	0.01
Total	1.15	0.35	0.29
Reporter Costs			
Technical	$74	$22	$18
Clerical	$3	$1	$1
Managerial	$5	$1	$1
Total	$82	$25	$20
Total Industry Costs and Avg. Cost/Reporter			
Total	**$67,757**	$20,590	$16,647
	$60	$/reporter	

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised - No. o
managerial hours are estimated as 10% and 5% of technical hours, respectively.
Total Reporter Costs = (Technical Respondent Hours x $71.45/hr) + (Managerial Respondent Hours x $8
Total Industry Costs = Number of Reporters Affected x Total Reporter Costs
Average Cost Per Reporter = Total Industry Costs / Total Number of Reporters Affected

(1) Based on the total number of existing reporters affected within each segment, based on RY2021 data
Appendix A of the Impacts Memo.

(2) Per RY2021 data, 833 facilities reporting to subpart HH report information for gas collection systems,
new data elements and 2 revised data elements under 98.346(j)(5) and (6).

(3) Per RY2021 data, 814 facilities reporting to subpart HH report information for gas collection systems
revised data element under proposed 98.346(j)(6)(v)(D).

(4) Per RY2021 data, 792 facilities reporting to subpart HH also meet the design criteria for landfills subje
8 new data elements under proposed 98.346(h) and (j)(7) related to surface methane measurements col

(5) Per RY2021 data, facilities reporting to subpart HH report 1 new data element under 98.346(h).

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ection 2.5)

HH (4)	HH(5)
792	1,126
8	1
0	0
0	0
8	1
0.05	0.05
0.40	0.05
0.04	0.01
0.02	0.00
0.46	0.06
$30	$4
$1	$0
$2	$0
$33	$4
$25,915	$4,605

›f Removed Data Elements) x Technical Respondent Hours per Occurance. Clerical and

37.45/hr) + (Clerical Respondent Hours x $36.28/hr)

ą and estimated during RY2025, unless otherwise noted. Additional details may be found in

and 6 new facilities are anticipated to have GCS. These facilities would be required to report 4

with destruction devices. These facilities would be required to report 4 new data elements and 1

ect to 40 CFR part 60 landfill NSPS, EG, or FP rules. These facilities would be required to report
lected under the 40 CFR part 60 landfill NSPS, EG, or FP rules.

Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (Secti

Item	Subpart OO Data Element Revisions		
	Total	OO (2)	OO (3)
Number of Reporters Affected (1)	104	58	104
# of New Data Elements	3	1	2
# of Revised Data Elements	0	0	0
# of Removed Data Elements	0	0	0
Sum of Data Element Changes	3	1	2
Technical Respondent Hours Per Occurrence		0.05	0.05
Respondent Hours			
Technical	0.15	0.05	0.10
Clerical	0.02	0.01	0.01
Managerial	0.01	0.00	0.01
Total	0.17	0.06	0.12
Reporter Costs			
Technical	$11	$4	$7
Clerical	$1	$0	$0
Managerial	$1	$0	$0
Total	$12	$4	$8
Total Industry Costs and Avg. Cost/Reporter			
Total	**$1,088**	$237	$851
	$10	$/reporter	$/reporter

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised + No. of R

(1) Based on the total number of existing reporters affected within each segment, based on RY2021 data ar
Impacts Memo.

(2) Per RY2021 data, 58 respondents reporting to subpart OO are bulk importers who would be required to

(3) Per RY2021 data, 103 respondents reporting to subpart OO are suppliers of F-HTFs who would be requ

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ion 2.5)

amoved Data Elements) x Technical Respondent Hours per Occurrence. Clerical and managerial hours are
nd estimated during RY2025, unless otherwise noted. Additional details may be found in Appendix A of the

report new data element 40 CFR 98.416(b)(11).
ired to report new data elements at 40 CFR 98.416(k), and one new reporter.

Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (Secti

Item	Subpart PP Data Element Revisions	
	Total	OO (2)
Number of Reporters Affected (1)	11	11
# of New Data Elements	0	0
# of Revised Data Elements	3	3
# of Removed Data Elements	0	0
Sum of Data Element Changes	3	3
Technical Respondent Hours Per Occurrence		0.05
Respondent Hours		
Technical	0.15	0.15
Clerical	0.02	0.02
Managerial	0.01	0.01
Total	0.17	0.17
Reporter Costs		
Technical	$11	$11
Clerical	$1	$1
Managerial	$1	$1
Total	$12	$12
Total Industry Costs and Avg. Cost/Reporter		
Total	**$135**	$135
	$12	$/reporter

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised + No. of R

(1) Based on the total number of existing reporters affected within each segment, based on RY2021 data ar Impacts Memo.

(2) It is estimated that 11 reporters subject to subpart PP would be required to implement reporting of the re Sequestration of CO2). From the 2022 Data Quality Improvements Proposal (Jule 21, 2022), EPA assumes year.

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ion 2.5)

amount Data Elements) x Technical Respondent Hours per Occurrence + Clerical and managerial hours are
nd estimated during RY2025, unless otherwise noted. Additional details may be found in Appendix A of the

vised data elements under 98.426(h). Per RY2021 data, 9 respondents report to subpart RR (Geologic
that 2 reporters will cease reporting under subpart UU and begin reporting under proposed subpart VV each

Quantitative Burden and Costs for New, Revised, and Deleted Data Elements (implemented during RY2025) (Sectic

Item	Subpart QQ Data Element Revisions		
	Total	QQ (2)	QQ (3)
Number of Reporters Affected (1)	33	33	28
# of New Data Elements	3	2	1
# of Revised Data Elements	0	0	0
# of Removed Data Elements	0	0	0
Sum of Data Element Changes	3	2	1
Technical Respondent Hours Per Occurrence		0.05	0.05
Respondent Hours			
Technical	0.15	0.10	0.05
Clerical	0.02	0.01	0.01
Managerial	0.01	0.01	0.00
Total	0.17	0.12	0.06
Reporter Costs			
Technical	$11	$7	$4
Clerical	$1	$0	$0
Managerial	$1	$0	$0
Total	$12	$8	$4
Total Industry Costs and Avg. Cost/Reporter			
Total	**$384**	$270	$115
	$12	$/reporter	$/reporter

Notes:

Calculation Methodology:

Total Technical Respondent Hours = Sum of Data Element Changes (Number of New + Revised + No. of Re

(1) Based on the total number of existing reporters affected within each segment, based on RY2021 data and

Impacts Memo

(2) Per RY2021 data, 33 respondents reporting to subpart QQ are bulk importers who would be required to re

(3) Per RY2021 data, 28 respondents reporting to subpart QQ are bulk exporters who would be required to re

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ɔn 2.5)

moved Data Elements) x Technical Respondent Hours per Occurrence. Clerical and managerial hours are
d estimated during RY2025, unless otherwise noted. Additional details may be found in Appendix A of the

eport two new data elements at 40 CFR 98.436(a)(7-8).

eport one new data elements at 40 CFR 98.436(b)(7).

Table 1. Summary of Burden and Cost by Source Category and Year

Year 1 (2025)								
Source Category	**No. Respondents (1)**	**Burden - Technical (hrs)**	**Burden - Managerial (hrs)**	**Burden - Clerical (hrs)**	**Burden - Legal (hrs)**	**Total Burden (hrs)**	**Total Labor Cost ($)**	**Capital Cost ($)**
A. General Provisions	7,840	784	39	78	0	901.60	$64,133	$0
B. Energy Consumption	7,840	94080	8624	17248	3920	123872.00	$8,771,243	$0
C. Stationary Combustion (general unspecified)	346	121	6	12	0	139	$9,906	$0
F. Aluminum Production	7	1	0	0	0	1	$57	$0
G. Ammonia Manufacturing	29	1.5	0.07	0.15	0	1.7	$119	$0
I. Electronics Manufacturing	46	0	0	0	0	0	0	$0
N. Glass Production	100	15	0.8	0.8	0	17	$1,227	$0
P. Hydrogen Production	116	85	6.4	8.5	0.00	100	$7,179	$0
V. Nitric Acid Production	1	-78	-58.0	-12	-1.00	-149	-$2,680	$0
W. Petroleum and Natural Gas Systems	188	12660	1675	462	136	23686	$2,620,418	$0
Y. Petroleum Refineries	6	-69	-9.6	-7	-6	-91	-$6,881	$0
AA. Pulp & Paper Mnfctrng	1	1.4	0.01	0	0	1.4	$104	$0
DD. Sulfur Hexafluoride (SF6) from Electric Power Systems	2	62	9	11	2	84	$6,200	$0
HH. Landfills	1,126	1782	77	131	12	2002	$130,188	$0
II. Industrial Wastewater Treatment	2	54	8	4	4	70	$5,288	$0
OO. Suppliers of Industrial GHG	104	71	11	6	2	90	$6,680	$0

PP. Suppliers of Carbon Dioxide	11	2	0.08	0.17	0	2	$135	$0
QQ. Importers/Exporters of FGHGs in Pre-Charged Equp. Or Foams	33	4.7	0.24	0.47	0	5.4	$384	$0
RR. Geologic Sequestration of Carbon Dioxide	9	0	0	0	0	0	$0	$0
TT. Industrial Waste Landfills	1	45	10	8	3	66	$4,853	$0
VV. Geologic Sequestration of CO2 with EOR	2	0	0	0	0	0	$0	$0
WW. Coke Calcining	15	390	48	36	30	504	$37,847	$0
XX. Calcium Carbide	1	31	2.8	2.2	2.0	38	$2,849	$0
YY. Caprolactum, Glyoxal, and Glyoxalic Acid Production	6	130	17	13	6	166	$12,285	$0
ZZ. Ceramics Production	34	816	75	65	68	1023	$77,083	$0
TOTAL	7,990	110,989	10,541	18,067	4,178	152,529	$11,748,619	$0

(1) Some respondents belong to multiple source categories, so the number of respondents is not additive.

O&M Cost ($)	Total Cost ($)
$0	$64,133
$489,050	$9,260,294
$0	$9,906
$0	$57
$0	$119
$0	$0
$0	$1,227
$2,241	$9,419
-$11,085	-$13,765
$2,717,864	$5,338,282
-$3,930	-$10,810
$0	$104
$3,119	$9,319
$374	$130,563
$3,077	$8,364
$62	$6,742

$0	$135
$0	$384
$0	$0
$62	$4,915
$0	$0
$19,649	$57,497
$62	$2,911
$374	$12,660
$2,121	$79,203
$3,223,041	$14,971,660

Table 2. Summary of Burden and Cost by Source Category and Year

Year 2 (2026)										
Source Category	**No. Respondents (1)**	**Burden - Technical (hrs)**	**Burden - Managerial (hrs)**	**Burden - Clerical (hrs)**	**Burden - Legal (hrs)**	**Total Burden (hrs)**	**Total Labor Cost ($)**	**Capital Cost ($)**	**O&M Cost ($)**	**Total Cost ($)**
A. General Provisions	7,840	784	39	78	0	901.60	$64,133	$0	$0	$64,133
B. Energy Consumption	7,840	50960	5488	10192	784	67424.00	$4,700,877	$0	$489,050	$5,189,927
C. Stationary Combustion (general unspecified)	346	121	6	12	0	139	$9,906	$0	$0	$9,906
F. Aluminum Production	7	1	0	0	0	1	$57	$0	$0	$57
G. Ammonia Manufacturing	29	1	0	0	0	2	$119	$0	$0	$119
I. Electronics Manufacturing	46	0	0	0	0	0	$0	$0	$0	$0
N. Glass Production	100	15	1	1	0	17	$1,227	$0	$0	$1,227
P. Hydrogen Production	116	85	6.4	8.5	0	100	$7,179	$0	$4,481	$11,660
V. Nitric Acid Production	1	-29	-3.8	-2.7	-1.0	-36	-$2,680	$0	-$11,085	-$13,765
W. Petroleum and Natural Gas Systems	188	12660	1675	462	136	23686	$2,620,418	$0	$2,717,864	$5,338,282
Y. Petroleum Refineries	6	-68.7	-9.6	-7	-6	-91	-$6,881	$0	-$3,930	-$10,810
AA. Pulp & Paper Mnfctrng	1	1.4	0.01	0	0	1.4	$104	$0	$0	$104
DD. Sulfur Hexafluoride (SF6) from Electric Power Systems	2	62	9	11	2	84	$6,200	$0	$3,119	$9,319
HH. Landfills	1,126	1516	71	119	6	1712	$127,330	$0	$374	$127,704
II. Industrial Wastewater Treatment	2	50	7	3	2	63	$4,713	$0	$3,077	$7,789
OO. Suppliers of Industrial GHG	104	71	11	6	2	90	$6,680	$0	$62	$6,742

PP. Suppliers of Carbon Dioxide	11	2	0.08	0.17	0	2	$135	$0	$0	$135
FGHGs in Pre-Charged Equp. Or Foams	33	4.7	0.24	0.47	0	5.4	$384	$0	$0	$384
Sequestration of Carbon Dioxide	9	0	0	0	0	0	$0	$0	$0	$0
TT. Industrial Waste Landfills	1	42	6	5	1	54	$3,934	$0	$62	$3,996
Sequestration of CO2 with EOR	2	0	0	0	0	0	$0	$0	$0	$0
WW. Coke Calcining	15	345	48	36	30	459	$34,525	$0	$19,649	$54,175
XX. Calcium Carbide	1	28	2.8	2.2	2.0	35	$2,627	$0	$62	$2,690
YY. Caprolactum, Glyoxal, and Glyoxalic Acid Production	6	114	17	13	6	150	$11,089	$0	$374	$11,464
ZZ. Ceramics Production	34	748	75	65	68	955	$72,062	$0	$2,121	$74,183
TOTAL	7,990	67,513	7,449	11,005	1,032	95,753	$7,664,140	$0	$3,225,282	$10,889,422

(1) Some respondents belong to multiple source categories, so the number of respondents is not additive.

Table 3. Summary of Burden and Cost by Source Category and Year

Year 3 (2027)										
Source Category	**No. Respondents (1)**	**Burden - Technical (hrs)**	**Burden - Managerial (hrs)**	**Burden - Clerical (hrs)**	**Burden - Legal (hrs)**	**Total Burden (hrs)**	**Total Labor Cost ($)**	**Capital Cost ($)**	**O&M Cost ($)**	**Total Cost ($)**
A. General Provisions	7,840	784	39	78	0	902	$64,133	$0	$0	$64,133
B. Energy Consumption	7,840	50960	5488	10192	784	67424	$4,700,877	$0	$489,050	$5,189,927
C. Stationary Combustion (general unspecified)	346	121	6	12	0	139	$9,906	$0	$0	$9,906
F. Aluminum Production	7	1	0	0	0	1	$57	$0	$0	$57
G. Ammonia Manufacturing	29	1	0	0	0	2	$119	$0	$0	$119
I. Electronics Manufacturing	46	0	0	0	0	0	$0	$0	$0	$0
N. Glass Production	100	15	1	1	0	17	$1,227	$0	$0	$1,227
P. Hydrogen Production	116	85	6	8	0	100	$7,179	$0	$4,481	$11,660
V. Nitric Acid Production	1	-29	-4	-3	-1	-36	-$2,680	$0	-$11,085	-$13,765
W. Petroleum and Natural Gas Systems	188	12660	1675	462	136	23686	$2,620,418	$0	$2,717,864	$5,338,282
Y. Petroleum Refineries	6	-69	-10	-7	-6	-91	-$6,881	$0	-$3,930	-$10,810
AA. Pulp & Paper Mnfctrng	1	1	0	0	0	1	$104	$0	$0	$104
DD. Sulfur Hexafluoride (SF6) from Electric Power Systems	2	62	9	11	2	84	$6,200	$0	$3,119	$9,319
HH. Landfills	1,126	1516	71	119	6	1712	$127,330	$0	$374	$127,704
II. Industrial Wastewater Treatment	2	50	7	3	2	63	$4,713	$0	$3,077	$7,789
OO. Suppliers of Industrial GHG	104	71	11	6	2	90	$6,680	$0	$62	$6,742

PP. Suppliers of Carbon Dioxide	11	2	0.08	0.17	0	2	$135	$0	$0	$135
FGHGs in Pre-Charged Equp. Or Foams	33	5	0.24	0.47	0	5	$384	$0	$0	$384
Sequestration of Carbon Dioxide	9	0	0	0	0	0	$0	$0	$0	$0
TT. Industrial Waste Landfills	1	42	6	5	1	54	$3,934	$0	$62	$3,996
Sequestration of CO2 with EOR	2	0	0	0	0	0	$0	$0	$0	$0
WW. Coke Calcining	15	345	48	36	30	459	$34,525	$0	$19,649	$54,175
XX. Calcium Carbide	1	28	3	2	2	35	$2,627	$0	$62	$2,690
YY. Caprolactum, Glyoxal, and Glyoxalic Acid Production	6	114	17	13	6	150	$11,089	$0	$374	$11,464
ZZ. Ceramics Production	34	748	75	65	68	955	$72,062	$0	$2,121	$74,183
TOTAL	7,990	$67,513	$7,449	$11,005	$1,032	95,753	$7,664,140	$0	$3,225,282	$10,889,422

(1) Some respondents belong to multiple source categories, so the number of respondents is not additive.

Table 4. Summary of Burden and Cost by Source Category

Annual 3-Year Average										
Source Category	No. Respondents (1)	Burden - Technical (hrs)	Burden - Managerial (hrs)	Burden - Clerical (hrs)	Burden - Legal (hrs)	Total Burden (hrs)	Total Labor Cost ($)	Capital Cost ($)	O&M Cost ($)	Total Cost ($)
A. General Provisions	7840	784	39	78	0	902	$64,133	$0	$0	$64,133
B. Energy Consumption	7840	65333	6533	12544	1829	86240	$6,057,665	$0	$489,050	$6,546,716
C. Stationary Combustion (general unspecified)	346	121	6	12	0	139	$9,906	$0	$0	$9,906
F. Aluminum Production	7	1	0	0	0	1	$57	$0	$0	$57
G. Ammonia Manufacturing	29	1	0	0	0	2	$119	$0	$0	$119
I. Electronics Manufacturing	46	0	0	0	0	0	$0	$0	$0	$0
N. Glass Production	100	15	1	1	0	17	$1,227	$0	$0	$1,227
P. Hydrogen Production	116	85	6	8	0	100	$7,179	$0	$3,734	$10,913
V. Nitric Acid Production	1	-45	-22	-6	-1	-74	-$2,680	$0	-$11,085	-$13,765
W. Petroleum and Natural Gas Systems	188	12660	1675	462	136	23686	$2,620,418	$0	$2,717,864	$5,338,282
Y. Petroleum Refineries	6	-69	-10	-7	-6	-91	-$6,881	$0	-$3,930	-$10,810
AA. Pulp & Paper Mnfctrng	1	1	0	0	0	1	$104	$0	$0	$104
DD. Sulfur Hexafluoride (SF6) from Electric Power Systems	2	62	9	11	2	84	$6,200	$0	$3,119	$9,319
HH. Landfills	1126	1604	73	123	8	1809	$128,283	$0	$374	$128,657
II. Industrial Wastewater Treatment	2	51	8	4	3	65	$4,904	$0	$3,077	$7,981
OO. Suppliers of Industrial GHG	104	71	11	6	2	90	$6,680	$0	$62	$6,742

PP. Suppliers of Carbon Dioxide	11	2	0.08	0.17	0	2	$135	$0	$0	$135
FGHGs in Pre-Charged Equp. Or Foams	33	5	0	0	0	5	$384	$0	$0	$384
Sequestration of Carbon Dioxide	9	0	0	0	0	0	$0	$0	$0	$0
TT. Industrial Waste Landfills	1	43	7	6	2	58	$4,240	$0	$62	$4,303
Sequestration of CO2 with EOR	2	0	0	0	0	0	$0	$0	$0	$0
WW. Coke Calcining	15	360	48	36	30	474	$35,633	$0	$19,649	$55,282
XX. Calcium Carbide	1	29	3	2	2	36	$2,701	$0	$62	$2,764
YY. Caprolactum, Glyoxal, and Glyoxalic Acid Production	6	119	17	13	6	155	$11,488	$0	$374	$11,862
ZZ. Ceramics Production	34	771	75	65	68	978	$73,736	$0	$2,121	$75,857
TOTAL	7,990	82,005	8,480	13,359	2,081	114,678	$9,025,633	0	$3,224,535	$12,250,168

Exhibit 6.2. Annual Average Burden Over the First Three Years of the Information Collection, by Source Category

Source Category	No. Respondents	Annual Average Burden (Hours)[1]	Annual Average Burden Per Respondent (hrs)	Average Annual Labor Costs ($)[1]	Average Annual Non-Labor Costs ($)[1]	Annual Average Labor and Non-Labor Costs ($)[1]
A. General Provisions	7,840	902	0.1	$64,133	$0	$64,133
B. Energy Consumption	7,840	86,240	11	$6,057,665	$489,050	$6,546,716
C. Stationary Combustion (general unspecified)	346	139	0.4	$9,906	$0	$9,906
F. Aluminum Production	7	1	0.1	$57	$0	$57
G. Ammonia Manufacturing	29	2	0.1	$119	$0	$119
I. Electronics Manufacturing	46	0	0	$0	$0	$0
N. Glass Production	100	17	0.2	$1,227	$0	$1,227
P. Hydrogen Production	116	100	0.9	$7,179	$3,734	$10,913
V. Nitric Acid Production	1	(74)	(73.9)	($2,680)	($11,085)	($13,765)
W. Petroleum and Natural Gas Systems	188	23,686	126.0	$2,620,418	$2,717,864	$5,338,282
Y. Petroleum Refineries	6	(91)	(15.2)	($6,881)	($3,930)	($10,810)
AA. Pulp & Paper Mnfctrng	1	1	1.4	$104	$0	$104
DD. Sulfur Hexafluoride (SF6) from Electric Power Systems	2	84	42	$6,200	$3,119	$9,319
HH. Landfills	1,126	1,809	1.6	$128,283	$374	$128,657
II. Industrial Wastewater Treatment	2	65	32.5	$4,904	$3,077	$7,981
OO. Suppliers of Industrial GHG	104	90	0.9	$6,680	$62	$6,742
PP. Suppliers of Carbon Dioxide	11	2	0.2	$135	$0	$135
QQ. Importers/Exporters of FGHGs in Pre-Charged Equp. Or Foams	33	5	0.2	$384	$0	$384
RR. Geologic Sequestration of Carbon Dioxide	9	0	0	$0	$0	$0
TT. Industrial Waste Landfills	1	58	58.0	$4,240	$62	$4,303
VV. Geologic Sequestration of CO2 with EOR	2	0	0	$0	$0	$0
WW. Coke Calcining	15	474	31.6	$35,633	$19,649	$55,282
XX. Calcium Carbide	1	36	36.0	$2,701	$62	$2,764
YY. Caprolactum, Glyoxal, and Glyoxalic Acid Production	6	155	25.9	$11,488	$374	$11,862

Table 5 - Annual Designated Administrator Burden and Cost of Recordkeeping and Reporting Requirements for Revisions to Reporting, Recordkeeping, and Verification Requirements under the Greenhouse Gas Reporting Program - Year 1 (2025)

Burden Item	(A) Number of Occurrences Per Year[a]	(B) EPA Hours Per Occurrence	(C) Labor Hours Per Year (C=AxB)	(D) EPA Cost Per Year[b]
1. Applications	not applicable			
2. Read and Understand Rule Requirements	not applicable			
3. Required Activities				
A. Observe stack tests	not applicable			
B. Excess emissions -- Enforcement Activities	not applicable			
C. Create Information	not applicable			
D. Gather Information	not applicable			
E. Report Reviews				
1. Review new/revised data elements[c]	154,550	0.02	3,091	$188,335
F. Prepare annual summary report	not applicable			
4. Travel expenses: (1 person * 30 hours per year / 8 hours per day * $75 per diem) + ($600 per round trip) =				$0
TOTAL			3,091	$188,335

FOOTNOTES

a Number of occurrences is the number of new or revised data elements to be reported times the number of facilities for each applicable subpart that would be required to submit data elements.

b Estimated based on an average hourly labor rate for salary and overhead and benefits for Agency staff of $60.93.

c Includes review of new and revised data elements effective for RY2023.

Table 6 - Annual Designated Administrator Burden and Cost of Recordkeeping and Reporting Requirements for Revisions to Reporting, Recordkeeping, and Verification Requirements under the Greenhouse Gas Reporting Program - Year 2 (2026)

	(A)	(B)	(C)	(D)
Burden Item	**Number of Occurrences Per Year[a]**	**EPA Hours Per Occurrence**	**Labor Hours Per Year (C=AxB)**	**EPA Cost Per Year[b]**
1. Applications	not applicable			
2. Read and Understand Rule Requirements	not applicable			
3. Required Activities				
A. Observe stack tests	not applicable			
B. Excess emissions -- Enforcement Activities	not applicable			
C. Create Information	not applicable			
D. Gather Information	not applicable			
E. Report Reviews				
1. Review new/revised data elements[c]	146,710	0.02	2,934	$178,781
F. Prepare annual summary report	not applicable			
4. Travel expenses: (1 person * 30 hours per year / 8 hours per day * $75 per diem) + ($600 per round trip) =				$0
TOTAL			2,934	$178,781

FOOTNOTES

a Number of occurrences is the number of new or revised data elements to be reported times the number of facilities for each applicable subpart that would be required to submit data elements.

b Estimated based on an average hourly labor rate for salary and overhead and benefits for Agency staff of $60.93.

c Includes review of new and revised data elements effective for RY2023.

Table 7 - Annual Designated Administrator Burden and Cost of Recordkeeping and Reporting Requirements for Revisions to Reporting, Recordkeeping, and Verification Requirements under the Greenhouse Gas Reporting Program - Year 3 (2027)

Burden Item	(A) Number of Occurrences Per Year[a]	(B) EPA Hours Per Occurrence	(C) Labor Hours Per Year (C=AxB)	(D) EPA Cost Per Year[b]
1. Applications	not applicable			
2. Read and Understand Rule Requirements	not applicable			
3. Required Activities				
A. Observe stack tests	not applicable			
B. Excess emissions -- Enforcement Activities	not applicable			
C. Create Information	not applicable			
D. Gather Information	not applicable			
E. Report Reviews				
1. Review new/revised data elements[b]	146,710	0.02	2,934	$178,781
F. Prepare annual summary report	not applicable			
4. Travel expenses: (1 person * 30 hours per year / 8 hours per day * $75 per diem) + ($600 per round trip) =				$0
TOTAL			2,934	$178,781

FOOTNOTES

a Number of occurrences is the number of new or revised data elements to be reported times the number of facilities for each applicable subpart that would be required to submit data elements.

b Estimated based on an average hourly labor rate for salary and overhead and benefits for Agency staff of $60.93

c Includes review of new and revised data elements effective for RY2023 and new data elements for the technology assessment report for subpart I. There are 25 subpart I facilities that would be required to submit a technology assessment report once every 5 years. The c associated with 2 new data elements would apply in year 2025.

Exhibit 6.3. Summary of Agency Burden and Cost of Revisions to the Greenhouse Gas Reporting Program

Year	Number of Occurrences Per Year (1)	Total Annual Burden Hours	Labor Costs
1	154,550	3,091	$188,335
2	146,710	2,934	$178,781
3	146,710	2,934	$178,781
Total	447,970	8,959	$545,896
Average	149,323	2,986	$181,965

(1) Number of occurrences is the number of new or revised data elements to be reported times the facility count for each applicable subpart with new data elements.