

**Table 1: Annual Respondent Burden and Cost - NSPS for New Residential Hydronic Heaters**

Burden Item	(A) Person-hours per occurrence	(B) No. of occurrences per respondent per year
<b>Reporting Requirements</b>		
<i>Manufacturers</i>		
1. Certification test notification (new model lines) <sup>c</sup>	2	1
2. Application for certification (new model lines) <sup>c</sup>	8	1
3. Application for recertification (existing model lines) <sup>d</sup>	8	0.52
4. Biennial reporting <sup>e</sup>	2	1.31
5. Review annual QA program audit report <sup>f</sup>	4	2.62
6. Review QA program performance test results <sup>g</sup>	2	0.33
7. Review EPA compliance audit testing <sup>h</sup>	8	0.33
<i>Test Laboratories</i>		
1. Application for test lab approval (new) <sup>i</sup>		
a. Already has ISO accreditation	20	1
b. Needs to obtain ISO accreditation	80	1
2. Application for re-approval as a test lab <sup>j</sup>	20	1
3. EPA compliance audit testing <sup>k</sup>	20	0.33
4. Biennial proficiency testing and report development <sup>l</sup>	150	0.50
<i>Third-Party Certifier</i>		
1. Application for approval as a third-party certifier (new) <sup>m</sup>		
a. Already has ISO accreditation	20	1
b. Needs to obtain ISO accreditation	80	1
2. Application for re-approval as a third-party certifier <sup>n</sup>	20	1
3. QA program annual audit reports <sup>o</sup>	20	4.25
4. Certification test <sup>p</sup>	2	1
<b>Subtotal for Reporting Requirements</b>		
<b>Recordkeeping Requirements</b>		
<i>Manufacturers</i>		
1. Test and re-certification documentation <sup>q</sup>	1	0.52
2. QA parameter inspections <sup>r</sup>	2	4
3. Retained (sealed) stoves <sup>s</sup>	1	0
<i>Test Laboratories</i>		
1. Certification test, proficiency test, and audit test results <sup>t</sup>	2	12
<i>Third-Party Certifier</i>		
1. Certification test, QA program inspection and audit tests <sup>u</sup>	2	12
<b>Subtotal for Recordkeeping Requirements</b>		
<b>Total Labor Burden and Costs (rounded) <sup>v</sup></b>		
<b>Total Capital and O&amp;M Cost (rounded) <sup>v</sup></b>		
<b>GRAND TOTAL (rounded) <sup>v</sup></b>		

**Assumptions**

- <sup>a</sup> We assume there are 10 hydronic heater manufacturers with 31 model lines and 3 forced-air furnace manufacturers. We assume there are 11 laboratories with 8 acting as testing labs and 8 acting as third-party certifiers.
- <sup>b</sup> This ICR uses the following labor rates: Managerial \$153.55 (\$73.12+ 110%); Technical \$122.20 (\$58.19 + 110%) Statistics, March 2021, “Table 2. Civilian Workers, by occupational and industry group.” The rates are from column those employed by private industry. Management person-hours and clerical person-hours are assumed to be 5 percent
- <sup>c</sup> We assume that no manufacturers will certify new model lines during the three-year period of this ICR.
- <sup>d</sup> All 34 existing certified model lines must be re-certified every five years. We assume that, for all model lines that re their currently-certified models without testing by affirming that the central heaters are similar in all respects to the re years/13 manufacturers = 0.52 model lines recertified each year per manufacturer).
- <sup>e</sup> Manufacturers are required to submit a report every two years following issuance of a certification of compliance for
- <sup>f</sup> Manufacturers must conduct a quality assurance program for each certified model line. The quality assurance plan is party certifier and to the Administrator its corrective actions and responses to any deficiencies identified in the audit i
- <sup>g</sup> We assume that each manufacturer will perform a quality assurance performance test on one model line under the q
- <sup>h</sup> EPA may require a manufacturer to perform compliance audit testing on a manufacturer's model line(s). We assum
- <sup>i</sup> We assume no new laboratories will apply for approval from EPA to perform testing under this program during the
- <sup>j</sup> All 8 testing labs are currently accredited under ISO-IEC Standard 17025 to perform testing and are approved by EI year period of this ICR. (5 testing labs/3 years = 1.67 testing labs/year).
- <sup>k</sup> EPA may require a manufacturer to perform compliance audit testing on a manufacturer's model line(s). We assum submit a report containing all documentation pertaining to the test to both the manufacturer and the Administrator.
- <sup>l</sup> Assume 8 testing labs participate in proficiency testing every 2 years. 40 CFR 5479(b) requires that each approved i
- <sup>m</sup> We assume no new laboratories will apply for approval from EPA to act as third-party certifiers under this program
- <sup>n</sup> All 8 third-party certifiers are ISO accredited and approved by EPA. Four third-party certifiers will require ISO re- accreditation credentials to the Administrator. (4 third-party certifiers/3 years = 1.33 third-party certifiers/year).
- <sup>o</sup> Manufacturers must contract with third-party certifiers to conduct annual audits on the quality assurance program for manufacturer identifying any deviations and specifying corrective actions that need to be taken. (34 model lines/8 thi
- <sup>p</sup> Third-party certifiers are required to submit certification tests to the Administrator. No new models are expected to
- <sup>q</sup> Assumes that manufacturers will spend one hour per certification test and recertification to keep the required recor
- <sup>r</sup> Quality parameter inspections are part of the existing safety inspections program. Assume that all manufacturers (1
- <sup>s</sup> Assumes that one stove is sealed and retained for each certification test. Assumes all stoves certified to 2020 standa
- <sup>t</sup> Proficiency testing is required every two years for each lab. Assume that test laboratories will spend 2 hours per mo
- <sup>u</sup> Quality assurance program inspections are performed annually for each certified model. Assume that third-party c
- <sup>v</sup> Totals have been rounded to three significant values. Figures may not add exactly due to rounding.

**rs and Forced-Air Furnaces (40 CFR Part 60, Subpart QQQQ) (Renewal)**

(C) Person-hours per respondent (C=AxB)	(D) Respondents per year <sup>a</sup>	(E) Technical hours per year (E=CxD)	(F) Management hours per year (F=Ex0.05)	(G) Clerical person- hours per year (G=Ex0.1)	(H) Total Cost per year (\$) <sup>b</sup>
2	0	0	0	0	\$0
8	0	0	0	0	\$0
4.18	13	54.4	2.7	5.4	\$7,399.95
2.62	13	34.0	1.7	3.4	\$4,624.97
10.5	13	136	6.8	13.6	\$18,499.88
0.67	13	8.7	0.4	0.9	\$1,177.73
2.66	1	2.7	0.1	0.3	\$362.38
20	0	0	0	0	\$0
80	0	0	0	0	\$0
20	1.67	33	1.7	3.3	\$4,534.28
6.7	1	6.7	0.3	0.7	\$905.95
75	8	600	30	60	\$81,617.10
20	0	0	0	0	\$0
80	0	0	0	0	\$0
20	1.33	27	1.3	2.7	\$3,627.43
85	8	680	34	68	\$92,499.38
2	0	0	0	0	\$0
			<b>1,820</b>		<b>\$398,433.19</b>
0.52	13	6.8	0.3	0.7	\$924.99
8	13	104	5	10	\$14,147
0	13	0	0	0	\$0
24	8	192	9.6	19.2	\$26,117.47
24	8	192	9.6	19.2	\$26,117.47
			<b>569</b>		<b>\$67,307.00</b>
			<b>2,390</b>		<b>\$466,000</b>
					<b>\$484,000</b>
					<b>\$950,000</b>

with 3 model lines. We assume no new manufacturers and no new model lines during the three-year period of this ICR.

; and Clerical \$61.51 (\$29.29 + 110%). These rates are from the United States Department of Labor, Bureau of Labor Statistics, "Total compensation." The rates have been increased by 110 percent to account for the benefit packages available to employees and 10 percent of technical person-hours, respectively.

require re-certification during the three-year period of this ICR, that manufacturers will choose to renew the certification of a representative central heater submitted for testing and requesting a waiver from certification testing. (34 model lines/5

or each model line. (34 model lines/13 manufacturers/2 years = 1.31 reports/manufacturer/year).

is audited annually by the third-party certifier. After receiving each audit report, the manufacturer must report to the third-party certifier. (34 model lines/13 manufacturers/audited once per year = 2.62 audit report responses/manufacturer/year).

quality assurance program during the three-year period.

one model gets audited by EPA in the three-year period of this ICR.

three-year period of this ICR.

EPA to perform testing under this rule. Five test labs will require ISO re-accreditation and EPA approval during the three-

one model gets audited by EPA in the three-year period of this ICR. The testing lab performing this test is required to

test laboratory submit accreditation credentials and all proficiency test results to the Administrator.

1 during the three-year period of this ICR.

accreditation and EPA approval during the three-year period of this ICR. Each third-party certifier must submit ISO-IEC

or each model line. The third-party certifier is required to submit a report of these audits to the Administrator and the third-party certifiers/once per year audits = 4.25 audit reports/certifier/year).

be tested/certified during the three-year period of this ICR.

ls.

3) will spend 2 hours per quarter to document results for each certified model.

records are stored for the 3-year period.

third-party certifiers must maintain the required records.

third-party certifiers will spend 2 hours per month to maintain the required records.

Labor Rates	
Management	\$153.55
Technical	\$122.20
Clerical	\$61.51









**Table 2: Average Annual EPA Burden and Cost - NSPS for New Residential Hydronic Heaters and**

Burden Activity	(A) EPA person- hours per occurrence	(B) No. of occurrences per year	(C) EPA person- hours per year (C=AxB)
1. Review certification test notification (new model lines) <sup>c</sup>	0.5	1	0.5
2. Observe certification test (new model lines) <sup>c, d</sup>	20	0.2	4
3. Review performance test report and application for certification (new model line) <sup>c</sup>	8	1	8
4. Review application for recertification of model line <sup>e</sup>	8	0.52	4.2
5. Review biennial reporting for certified models <sup>f</sup>	1	1.31	1.31
6. Review QA performance test results <sup>g</sup>	2	0.33	0.67
7. Review and approval of test lab credentials <sup>h</sup>	4	1	4
8. Review EPA Compliance Audit results <sup>i</sup>	40	0.33	13.3
9. Review test lab biennial proficiency test reports <sup>j</sup>	10	0.5	5
10. Review and approval of third-party certifier credentials <sup>k</sup>	8	1	8
11. Review QA audit report <sup>l</sup>	2	4.25	8.5
<b>TOTAL (rounded) <sup>m</sup></b>			

**Assumptions:**

<sup>a</sup> We assume there are 10 hydronic heater manufacturers with 31 model lines and 3 forced-air furnace manufacturers with 3 mo tested/certified during the three-year period of this ICR. We assume there are 11 laboratories with 8 acting as testing labs and 8

<sup>b</sup> This cost is based on the average hourly labor rate as follows: Managerial \$69.04 (GS-13, Step 5, \$43.15 + 60%); Technical \$ assumes that Managerial hours are 5 percent of Technical hours, and Clerical hours are 10 percent of Technical hours. These rat locality, rates of pay. The rates have been increased by 60 percent to account for the benefit packages available to government e percent of technical person-hours, respectively.

<sup>c</sup> We assume no new manufacturers. We assume no new model lines will be tested/certified during the three-year period of this

<sup>d</sup> Assumes that EPA will observe 20 percent of certification tests.

<sup>e</sup> We assume there are 10 hydronic heater manufacturers with 31 model lines and 3 forced-air furnace manufacturers with 3 mo certification expires during the three-year period of this ICR. (34 model lines/5 years/13 manufacturers = 0.52 model lines recer

<sup>f</sup> We assume that the EPA will review biennial reports for each of the certified model lines over the 3-year ICR period. (34 moc

<sup>g</sup> We assume that there will be one QA audit performance test per manufacturer under the QA program during the 3-year period

<sup>h</sup> All 8 testing labs are currently ISO accredited and are approved by EPA to perform testing under this rule. Five test labs will r labs/3 years = 1.67 testing labs/year).

<sup>i</sup> We assume that one model line for one of the manufacturers will be audited by the EPA during the ICR three-year period of tl

<sup>j</sup> We assume that each testing lab conducts a laboratory proficiency test every two years.

<sup>k</sup> All 8 third-party certifiers are currently ISO accredited and approved by EPA. Four certifiers will require ISO re-accreditation third-party certifiers/year).

<sup>l</sup> We assume that EPA will review the annual QA audits performed by the third-party certifiers on each certified model line ove audit reports/certifier/year).

<sup>m</sup> Totals have been rounded to three significant values. Figures may not add exactly due to rounding.

**Forced-Air Furnaces (40 CFR Part 60, Subpart QQQQ) (Renewal)**

(D) Respondents per year <sup>a</sup>	(E) Technical person- hours per year (E=CxD)	(F) Management person-hours per year (F=Ex0.05)	(G) Clerical person- hours per year (G=Ex0.1)	(H) Total Cost per year (\$) <sup>b</sup>
0	0	0	0	\$0
0	0	0	0	\$0
0	0	0	0	\$0
13	54.4	2.7	5.4	\$3,125.55
13	17.0	0.9	1.7	\$976.74
13	8.7	0.4	0.9	\$497.45
1.67	6.7	0.3	0.7	\$383.03
1	13.3	0.7	1.3	\$765.30
8	40.0	2.0	4.0	\$2,298.20
1.33	10.7	0.5	1.1	\$613
8	68.0	3.4	6.8	\$3,906.94
		<b>252</b>		<b>\$12,600</b>

del lines. We assume no new manufacturers. We assume no new model lines will be acting as third-party certifiers.

51.23 (GS-12, Step 1, \$32.02 + 60%); and Clerical \$27.73 (GS-6, Step 3, \$17.33 + 60%). This ICR tes are from the Office of Personnel Management (OPM), 2021 General Schedule, which excludes employees. Management person-hours and clerical person-hours are assumed to be 5 percent and 10

ICR.

del lines. We assume that manufacturers will apply for recertification of all model lines whose tified each year per manufacturer).

lel lines/13 manufacturers/2 years = 1.31 reports/manufacturer/year).

l.

quire ISO re-accreditation and EPA approval during the three-year period of this ICR. (5 testing

nis ICR.

and EPA approval during the three-year period of this ICR. (4 third-party certifiers/3 years = 1.33

r the three-year ICR period. (34 model lines/8 third-party certifiers/once per year audits = 4.25



Labor Rates	
Management	\$69.04
Technical	\$51.23
Clerical	\$27.73

**NSPS for New Residential Hydronic Heaters and Forced-Air Furnaces (40 CFR Part 60, Subpart QQQQ) (Renew**

<b>Number of Respondents That are Manufacturers</b>				
Year	Respondents That Submit Reports		Respondents That Do Not Submit Any Reports	(D) Number of Existing Respondents That Are Also New Respondents
	(A) Number of New Respondents	(B) Number of Existing Respondents <sup>a</sup>	(C) Number of Existing Respondents that keep records but do not submit reports	
1	0	24	0	0
2	0	24	0	0
3	0	24	0	0
Average	0	24	0	0

**Assumptions**

<sup>a</sup> Assumes there are 10 hydronic heater manufacturers with 31 model lines, 3 forced-air furnace manufacturers with 3 model lines, and 3 manufacturing laboratories acting as testing labs and/or third-party certifiers.

<b>EPA-approved Test Labs and Third-party Certifying Entities for 2015 Residential</b>				
Name	EPA-approved Test Lab			EPA-approved
	Wood Stove	Forced Air Furnace	Hydronic Heater	Wood Stove
PFS-TECO	Yes	Yes	Yes	Yes
Intertek	Yes	Yes	Yes	Yes
OMNI	Yes	Yes	Yes	Yes
Polytests Inc.	Yes	Yes	Yes	No
CSA Group	No	No	No	Yes
UL, LLC	No	No	No	Yes
Research Institutes of Sweden (RII)	Yes	Yes	Yes	Yes
ClearStak, LLC	Yes	Yes	Yes	No
SZU	Yes	Yes	Yes	Yes
Danish Technological Institute	Yes	Yes	Yes	No
Guardian Fire Testing Laboratories	No	No	No	Yes

Source: U.S. Environmental Protection Agency. (April 2021). EPA-approved Test Labs and Third-Party Certifiers for Residential Hydronic Heaters and Forced-Air Furnaces. Available from [https://www.epa.gov/sites/default/files/2021-04/documents/epa\\_approved\\_test\\_labs\\_and\\_third\\_party\\_certifiers\\_apr21.pdf](https://www.epa.gov/sites/default/files/2021-04/documents/epa_approved_test_labs_and_third_party_certifiers_apr21.pdf) (pdf) (04/07/2021) "

val)

(E) Number of Respondents (E=A+B+C-D)
24
24
24
24

odel lines, and 11

Residential Wood Heaters NSPS		
Approved Third-Party Certifier		Expiration Date of EPA Approval
Forced Air Furnace	Hydronic Heater	
Yes	Yes	2/5/2023
Yes	Yes	10/30/2025
Yes	Yes	10/9/2025
No	No	10/30/2025
Yes	Yes	11/3/2025
Yes	Yes	11/12/2025
Yes	Yes	11/14/2022
No	No	11/7/2021
Yes	Yes	4/17/2022
No	No	11/22/2022
Yes	Yes	4/25/2024

<will need to obtain reapproval as test lab

<will need to obtain reapproval as test lab

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<will need to obtain reapproval as test lab

Residential Wood Heaters. Accessed November 8, 2021. Retrieved  
 file\_2021.pdf. "EPA Approved Test Labs and Third Party

<will need to obtain reapproval as certifier

<will need to obtain reapproval as certifier

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<will need to obtain reapproval as certifier



**NSPS for New Residential Hydronic Heaters and Forced-Air Furnaces (40 CFR Part 60, Subpart QQQQ**

<b>Total An</b>
(A)
Information Collection Activity
<i>Manufacturers</i> <sup>a</sup>
Certification test notification (new model lines) <sup>b</sup>
Application for certification (new model lines) <sup>b</sup>
Application for re-certification (existing model lines) <sup>c</sup>
Biennial reporting <sup>d</sup>
Review annual QA program audit report <sup>e</sup>
Review QA program performance test results <sup>f</sup>
Review EPA compliance audit testing <sup>g</sup>
<i>Test Laboratories</i> <sup>a</sup>
New application for test lab approval - needs to obtain ISO accreditation <sup>h</sup>
New application for test lab approval - already has ISO accreditation <sup>h</sup>
Re-application for test lab approval <sup>i</sup>
EPA compliance audit testing <sup>j</sup>
Biennial proficiency testing and report development <sup>k</sup>
<i>Third-Party Certifiers</i> <sup>a</sup>
New application for approval as a third-party certifier - needs to obtain ISO accreditation <sup>l</sup>
New application for approval as a third-party certifier - already has ISO accreditation <sup>l</sup>
Re-application for approval as a third-party certifier <sup>m</sup>
QA program annual audit reports <sup>n</sup>
Certification test <sup>o</sup>

**Assumptions:**

<sup>a</sup> We assume there are 10 hydronic heater manufacturers with 31 model lines and 3 forced-air furnace manufacturer certifiers.

<sup>b</sup> We assume that no manufacturers will certify new models during the three-year period of this ICR. 40 CFR 60

<sup>c</sup> 40 CFR 60.5475(i) requires that existing certified model lines be re-certified every five years. We assume that, to renew the certification of their currently-certified models without testing by affirming that the central heaters ; certification testing. (34 model lines/5 years/13 manufacturers = 0.52 model lines recertified each year per manu

<sup>d</sup> 40 CFR 60.5479(d) requires manufacturers to submit a report every two years following issuance of a certifica

<sup>e</sup> Under 40 CFR 60.5479(m), manufacturers must conduct a quality assurance program for each certified model l manufacturer must report to the third-party certifier and to the Administrator its corrective actions and responses report responses/manufacturer/year).

<sup>f</sup> We assume that each manufacturer will perform a quality assurance performance test on one model line under t

<sup>g</sup> Under 40 CFR 60.5475(n), EPA may require a manufacturer to perform compliance audit testing on a manufac

- <sup>h</sup> We assume no new laboratories will apply for approval from EPA to perform testing under this program during the study period.
- <sup>i</sup> All 8 testing labs are ISO accredited and approved by EPA to perform testing. Five test labs will require ISO re-accreditation (1.67 labs/year).
- <sup>j</sup> Under 40 CFR 60.5475(n), EPA may require a manufacturer to perform compliance audit testing on a manufacturer. A manufacturer performing this test is required to submit a report containing all documentation pertaining to the test to both the Administrator and the manufacturer.
- <sup>k</sup> Under 40 CFR 60.5477(a), all 8 testing labs participate in a proficiency testing program every 2 years.
- <sup>l</sup> We assume no new laboratories will apply for approval from EPA to act as third-party certifiers under this program during the study period.
- <sup>m</sup> All 8 third-party certifiers are ISO accredited and approved by EPA. Four certifiers will require ISO re-accreditation credentials to the Administrator. (4 third-party certifiers/3 years = 1.33 third-party certifiers/year).
- <sup>n</sup> Under 40 CFR 60.5479(f), manufacturers must contract with third-party certifiers to conduct annual audits on a manufacturer. A manufacturer performing this test is required to submit a report containing all documentation pertaining to the test to the Administrator and the manufacturer identifying any deviations and specifying corrective actions that need to be taken.
- <sup>o</sup> Third-party certifiers are required to submit certification tests to the Administrator. No new models are expected to be introduced during the study period.

) (Renewal)

Annual Responses			
(B)	(C)	(D)	(E)
Number of Respondents	Number of Responses	Number of Existing Respondents That Keep Records But Do Not Submit Reports	Total Annual Responses $E=(B \times C)+D$
0	1	N/A	0
0	1	N/A	0
13	0.52	N/A	6.8
13	1.31	N/A	17
13	2.62	N/A	34
13	0.33	N/A	4.33
1	0.33	N/A	0.33
0	1	N/A	0
0	1	N/A	0
1.67	1	N/A	1.67
1	0.33	N/A	0.33
8	0.5	N/A	4
0	1	N/A	0
0	1	N/A	0
1.33	1	N/A	1.33
8	4.25	N/A	34
0	1	N/A	0
		<b>Total</b>	<b>104</b>

ers with 3 model lines. We assume there are 11 laboratories with 8 acting as testing labs and 8 acting as third-party

1.5476(h) requires manufacturers to notify EPA in advance of a certification test.

. for all model lines that require re-certification during the three-year period of this ICR, that manufacturers will choose are similar in all respects to the representative central heater submitted for testing and requesting a waiver from (facturer).

tion of compliance for each model line. (34 model lines/13 manufacturers/2 years = 1.31 reports/manufacturer/year).

line. The quality assurance plan is audited annually by the third-party certifier. After receiving each audit report, the to any deficiencies identified in the audit report. (34 model lines/13 manufacturers/audited once per year = 2.62 audit

the quality assurance program during the three-year period.

cturer's model line(s). We assume one model gets audited by EPA in the three-year period of this ICR.

g the three-year period of this ICR.

accreditation and EPA approval during the three-year period of this ICR. (5 testing labs/3 years = 1.67 testing

manufacturer's model line(s). We assume one model gets audited by EPA in the three-year period of this ICR. The testing lab manufacturer and the Administrator.

gram during the three-year period of this ICR.

itation and EPA approval during the three-year period of this ICR. Each third-party certifier must submit ISO-IEC

the quality assurance program for each model line. The third-party certifier is required to submit a report of these audits to be taken. (34 model lines/8 third-party certifiers/once per year audits = 4.25 audit reports/certifier/year).

ed to be tested/certified during the three-year period of this ICR.

**Rule Citation**

§ 60.5476(h)

§ 60.5475 (a), (b), (f)

§ 60.5475(i)

§ 60.5479 (d)

§ 60.5479 (m)

§ 60.5478 (a)(5)(iii) and § 60.5478 (b)

§ 60.5477 (a), § 60.5479 (b)

§ 60.5477 (a), § 60.5479 (b)

§ 60.5475 (n)

§ 60.5477 (a)

§ 60.5477 (d), § 60.5479 (b)

§ 60.5477 (d), § 60.5479 (b)

40 CFR 60.5479(f)

§ 60.5479 (b)

hrs/response: 23

## NSPS for New Residential Hydronic Heaters and Forced-Air Furnaces (40 CFR Part 60, Subpart

<b>Capital/Startup Costs</b>		
(A)	(B)	(C)
Data Collection Device	Capital/Start-Up for One Respondent/Unit	Number of New Respondents/Models per Year
Certification Test <sup>a, b</sup>	\$55,000	0 models
Cost of Permanent Label <sup>b</sup>	\$1,250	0 models
QA Performance Test <sup>c</sup>	\$55,000	4.33 models
EPA Compliance Audit Test <sup>d</sup>	\$63,564 per model	0.33 models
Owner's Manual <sup>e</sup>	\$3,750	0 models
ISO Accreditation-Test Laboratories <sup>f</sup>	\$75,000 per respondent	1.67 respondents
ISO Accreditation-Third-Party Certifiers <sup>g</sup>	\$75,000 per respondent	1.33 respondents
<b>Annual Totals (rounded) <sup>h</sup></b>		

<sup>a</sup> We assume that, for all model lines that require re-certification during the three-year period of this ICR, that manufacture certification of their currently-certified models without testing by affirming that the central heaters are similar in all respect submitted for testing and requesting a waiver from certification testing.

<sup>b</sup> The cost of certification testing is \$55,000 per test (includes EPA testing (\$30,000), confirmation safety testing or full safety prototype(s)(\$2,500) costs)). Total costs of permanent labels are estimated to be \$1,250 per model.

<sup>c</sup> Assumes each of the manufacturers will be required to test one of their models under their QA program during the three-year period (2022-2025) at \$55,000 per test ( includes EPA testing (\$30,000), confirmation safety testing or full safety testing (\$22,500), and costs) (13 manufacturers \* 1 model tested / 3 years = 4.33 models tested/year).

<sup>d</sup> Assumes one model line will be audited by EPA during the three-year ICR period (2022 – 2025). Costs assume the cost of three appliances: 1 outdoor (\$11,571) and 1 indoor (\$11,543) hydronic heater and 1 forced-air furnace (\$2,579) plus (assumes EPA testing costs of \$30,000, full safety cost of \$22,500 and \$2,500 in shipping costs).

<sup>e</sup> Assumes an average fixed cost of \$3,750 for owner's manual (revised or new, possibly bilingual) per model certified.

<sup>f</sup> 8 testing labs are ISO accredited and these 8 labs are currently certified by EPA. 5 testing labs will require ISO re-accreditation during the three-year period of this ICR. We assume an average cost to obtain ISO accreditation is \$75,000 based on cost estimate testing labs/3 years = 1.67 labs/year).

<sup>g</sup> 8 third-party certifiers are ISO accredited and these 8 third-party certifiers are currently certified by EPA. 4 third-party certification and EPA recertification during the three-year period of this ICR. We assume an average cost to obtain ISO accreditation estimates provided by manufacturers. (4 third-party certifiers/3 years = 1.33 third-party certifiers/year).

<sup>h</sup> Totals have been rounded to 3 significant figures. Figures may not add exactly due to rounding.

**rt QQQQ) (Renewal)**

(D)
Total Capital/Start-Up Cost (B x C)
\$0
\$0
\$238,095
\$21,167
\$0
\$125,000
\$100,000
\$484,000

rs will choose to renew the  
s to the representative central heater

fety testing (\$22,500), and shipping of

ear period covered by this ICR (2022-  
shipping of prototype(s))(\$2,500)

f one appliance (based on the average  
is the cost of testing at \$55,000

tation and EPA recertification during  
s provided by manufacturers. (5

rtifiers will require ISO re-  
creditation is \$75,000 based on cost

**EPA-Certified Wood Stove Database**, <https://www.epa.gov/burnwise> and <https://cfp>

New	Model	Manufacturer	Firebox Volume
	Classic Edge 760	Central Boiler	0.1
	Classic Edge 560	Central Boiler	0.14
	Classic Edge 360	Central Boiler	0.12
	S3 Turbo 50	Fröling Heizkessel und Behälterbau Ges.n	0.12
	PE1 Pellet 20	Fröling Heizkessel und Behälterbau Ges.n	0.05
	PE1 Pellet 35	Fröling Heizkessel und Behälterbau Ges.n	0.05
	Crown Royal Stoves 7300E	Greentech Manufacturing Inc.	0.08
	Crown Royal Stoves 7400E	Greentech Manufacturing Inc.	0.06
	Crown Royal Stoves 7200E	Greentech Manufacturing Inc.	0.08
	ECO-HK 70 Multifuel	Hargassner GmbH	0.07
	ECO-HK 120 Multifuel	Hargassner GmbH	0.04
	Pellematic Smart XS (Condensing Model)	Maine Energy Systems, LLC	0.05
	Pellematic 20	Maine Energy Systems, LLC	0.02
	Pellematic 56	Maine Energy Systems, LLC	0.05
	Pellematic 32	Maine Energy Systems, LLC	0.02
	G-Class G2Plus	Polar Furnace Manufacturing Inc.	0.07
	G Class G3	Polar Furnace Manufacturing Inc.	0.06
	G Series G7000	Steel Tech, Inc.	0.11
	G Series G4000	Steel Tech, Inc.	0.09
	Vedolux 350	Varmebaronen AB	0.08
	Vedolux 37	Varmebaronen AB	0.11
	Vedolux 450	Varmebaronen AB	0.04
	Vedolux 55	Varmebaronen AB	0.11
	Vedolux 650	Varmebaronen AB	0.08
	BioWIN 152	Windhager Zentralheizung Technik GmbH	0.04
	BioWIN 212	Windhager Zentralheizung Technik GmbH	0.06
	BioWIN 262	Windhager Zentralheizung Technik GmbH	0.04
	BioWIN 332	Windhager Zentralheizung Technik GmbH	0.04
	CleanFire 700	WoodMaster Inc.	0.1
	CleanFire 500	WoodMaster Inc.	0.14
	CleanFire 300	WoodMaster Inc.	0.12
	SF1000E, FC1000E, X1020, L1020	HY-C Company, LLC	0.14
	Vapor Fire 100 (VF100)	Lamppa Manufacturing, Inc.	0.09
	SR-3.6 Series Heat Commander, Cad	Stove Builder International, Inc.	0.1



Emission Rate Annual Average (lb/mmBTU)	Heat Output Maximum (BTUs)	Efficiency	Type	Subtype	Fuel Type
0.1	235938	83	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.14	194724	84	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.12	148625	82	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.12	83097	73	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.05	67744	78	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.05	121300	80	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.08	199000	75	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.06	325000	83	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.08	125000	77	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.07	239000	87	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.04	409500	88	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.05		90	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.02	68300	77	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.05	191000	86	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.02	109000	77	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.07	183307	73	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.06		77	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.11	200000	70	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.09	110000	82	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.08	118724	74	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.11	132119	69	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.04	130731	75	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.11	170418	67	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.08	201743	73	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.04	51200	65	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.06	71700	58	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.04	88400	71	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.04	110900	71	Hydronic Heater	Non-Catalytic Stove	Wood Pellets
0.1	235938	83	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.14	194724	84	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.12	148625	82	Hydronic Heater	Non-Catalytic Stove	Cord Wood
0.14		70	Forced Air Furnace	Non-Catalytic Stove	Cord Wood
0.09		79	Forced Air Furnace	Non-Catalytic Stove	Cord Wood
0.1		77	Forced Air Furnace	Non-Catalytic Stove	Cord Wood



**EPA Test Lab and Thid Party Certifiers data. EPA Approved Test Labs and Third Party Certifiers Ap**

[https://www.epa.gov/sites/default/files/2021-04/documents/epa\\_approved\\_test\\_labs\\_and\\_third\\_party\\_certifiers\\_april\\_20](https://www.epa.gov/sites/default/files/2021-04/documents/epa_approved_test_labs_and_third_party_certifiers_april_2021.pdf)

Company Name	Address	Contact	Test Lab Y/N	Third Party Y/N	
OMNI-Test Laboratories, Inc. <a href="http://www.omni-test.com/">http://www.omni-test.com/</a>	13327 NE Airport Way Portland, Oregon 97230	Alex Tieg <a href="mailto:atiegs@omni-test.com">atiegs@omni-test.com</a> (503) 643-3788	Yes	Yes	1
Intertek Testing Services NA, LTD. <a href="http://www.intertek.com/">http://www.intertek.com/</a>	8431 Murphy Drive Middleton, Wisconsin 53562	Brian Brunson <a href="mailto:brian.brunson@intertek.com">brian.brunson@intertek.com</a> 608-824-7444	Yes	Yes	1
	1829 32nd Avenue Lachine, Quebec H8T-3J1	Claude Pelland <a href="mailto:claudio.pelland@intertek.com">claudio.pelland@intertek.com</a> (514) 631-3100	Yes	Yes	1
PFS-TECO <a href="http://www.pfsteco.com/testing">http://www.pfsteco.com/testing</a>	11785 SW Highway 212-Suite 305 Clackamas, Oregon 97015-9050	John Steinert <a href="mailto:john.steinert@pfsteco.com">john.steinert@pfsteco.com</a> (503)-650-0088	Yes	Yes	0
	1507 Matt Pass Cottage Grove WI 53527	Wayne Terpstra <a href="mailto:WTerpstra@PFSCorporation.com">WTerpstra@PFSCorporation.com</a> (319) 217-0969	No	Yes	0
Polytest Services, Inc. <a href="http://www.polytests.com/">http://www.polytests.com/</a>	695 B Rue Gaudette St- Jean-sur-Richelieu Quebec, Canada J3B 7S7	Danick Powers <a href="mailto:dpower@polytests.com">dpower@polytests.com</a> (450)-741-3636	Yes	No	1
CSA Group <a href="http://www.csagroup.org">www.csagroup.org</a>	178 Rexdale Blvd, Toronto, ON M9W 1R3, Canada	Benjamin Barker <a href="mailto:Benjamin.Barker@csagroup.org">Benjamin.Barker@csagroup.org</a> (416) 747-4013	No	Yes	1
UL, LLC <a href="http://www.ul.com">www.ul.com</a>	12 Laboratory Drive RTP, NC 27709	Travis F. Hardin 919.549.1670 <a href="mailto:Travis.F.Hardin@UL.com">Travis.F.Hardin@UL.com</a>	No	Yes	1
Research Institutes of Sweden (RISE) <a href="https://www.ri.se/en">https://www.ri.se/en</a>	Box 857, SE-501 15 Borås, Sweden	Lennart Aronsson <a href="mailto:lennart.aronsson@ri.se">lennart.aronsson@ri.se</a> +46 (0)10 516 52 41	Yes	Yes	1
ClearStak, LLC <a href="http://www.clearstak.com">www.clearstak.com</a>	99 Canal Street PO Box 109 Putnam, CT 06260	Kelly O'Brien <a href="mailto:Kelli@clearstak.com">Kelli@clearstak.com</a> (860) 237-8245	Yes	No	1
SZU <a href="http://www.szutest.cz/en">http://www.szutest.cz/en</a>	Engineering Test Institute Hudcova 424/56b, CZ-621 00 Brno Czech Republic	Dr. Michal Dvoracek <a href="mailto:dvoracek@szutest.cz">dvoracek@szutest.cz</a> +420 541 120 510	Yes	Yes	0
Danish Technological Institute <a href="http://www.dti.dk/">http://www.dti.dk/</a>	Gregersensvej 1 2630 Taastrup Denmark	Mr. David Tveit <a href="mailto:dt@teknologisk.dk">dt@teknologisk.dk</a> 45 72 20 20 00	Yes	No	1
Guardian Fire Testing Laboratories, Inc. <a href="https://www.firetesting.com">https://www.firetesting.com</a>	114 Lincoln Avenue Cobleskill, NY 12043	Ms. Laura Hinton <a href="mailto:lhinton@guardiantestlabs.com">lhinton@guardiantestlabs.com</a> 888.680.7974	No	Yes	0

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