

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

Number of Respondents That are Manufacturers				
	Respondents That Submit Reports		Respondents That Do Not Submit Any Reports	
Year	(A) Number of New Respondents	(B) Number of Existing Respondents	(C) Number of Existing Respondents that keep records but do not submit reports	(D) Number of Existing Respondents That Are Also New Respondents
1	0	50	0	0
2	0	50	0	0
3	0	50	0	0
Average	0	50	0	0

Assumptions

Assumes there are 32 hydronic heater manufacturers with 127 model lines, 7 forced-air furnace manufacturers, and 11 laboratories acting as testing labs and/or third-party certifiers.

EPA-approved Test Labs and Third-party Certifying Entities for 2015				
Name	EPA-approved Test Lab			EPA-ap
	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
PFS Corp.	No	No	No	Yes
CSA Group	No	No	No	Yes
UL, LLC	No	No	No	Yes
Research Institutes of Sweden (RISE)	Yes	Yes	Yes	Yes
ClearStak, LLC	Yes	Yes	Yes	No
SZU	Yes	Yes	Yes	Yes
Danish Technological Institute	Yes	Yes	Yes	No

Source: U.S. Environmental Protection Agency. (April 10, 2018). EPA-approved Test Labs and Third-Party Certifiers. Retrieved from <https://www.epa.gov/burnwise/epa-approved-test-labs-and-third-party-certifiers-report> "epa_approved_labs_and_third_party_certifiers_11-15-17.pdf"

9999 (Renewal)

(E) Number of Respondents (E=A+B+C-D)
50
50
50
50

units with 19 model

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	10/30/2020
Yes	Yes	10/8/2020
No	No	10/30/2020
Yes	Yes	11/4/2020
Yes	Yes	11/3/2020
Yes	Yes	11/12/2020
Yes	Yes	11/14/2022
No	No	11/7/2021
Yes	Yes	4/17/2022
No	No	11/22/2022

<will need to obtain reapproval as test lab and certifier
 <will need to obtain reapproval as test lab and certifier
 <will need to obtain reapproval as test lab
 <will need to obtain reapproval as certifier
 <will need to obtain reapproval as certifier
 <will need to obtain reapproval as certifier

Authority Certifiers for Residential Wood Heaters. Accessed December 2022. [residential-wood-heaters](#).

NSPS for New Residential Hydronic Heaters and Forced-Air Furnaces (40 CFR Part 60.420)

(A)	Total Annual Responses	
	(B)	(C)
Information Collection Activity	Number of Respondents	Number of Responses
Manufacturers		
Certification test notification ^{a,b}	39	1.25
Application for certification/re-certification ^b	39	1.25
Biennial reporting ^c	39	1.9
EPA compliance audit testing ^d	1	0.33
QA performance test results ^e	39	0.33
QA annual audit reports ^f	8	4.88
Review annual QA audit report ^g	39	0.33
Test Laboratories		
Application for test lab approval - already has ISO accreditation ^h	5	0
Application for test lab approval - needs to obtain ISO accreditation ^h	3	1
Biennial proficiency testing and report development ⁱ	8	0.5
Third-Party Certifiers		
Application for approval as a third-party certifier - already has ISO accreditation ^j	3	0
Application for approval as a third-party certifier - already has ISO accreditation ^j	5	1
Certification test, QA program report, credentials ^k	8	12

Assumptions:

a Assume there are 32 hydronic heater manufacturers with 127 model lines, 7 forced-air furnace manufacturers, 7 test laboratories acting as testing labs and/or third-party certifiers.

b Over the next three years, assume a like number of existing models certified to 2015 standards and certification testing is performed.

c Report every certified model 0.5 times per year

d One model gets audited in the three-year period

e 1 QA audit performance test per mfr. in the 3-year period.

f Assumes there will be three QA audits by third-party certifiers for each of the 39 manufacturers. These audit reports will be reviewed by the manufacturer (in all cases) and may require preparation of a report if deficiencies are identified).

g Review the report of annual QA audit for each model line.

h All 8 testing labs are ISO accredited and certified by EPA. Three testing labs will require ISO accreditation.

i 8 labs participate in proficiency testing every 2 years

j All 8 third-party certifiers are ISO accredited and certified by EPA. Five certifiers will require ISO accreditation.

k All 8 third-party certifiers will file certification tests, QA program reports, and their credentials.

60, Subpart QQQQ (Renewal)

(D)	(E)
Number of Existing Respondents That Keep Records But Do Not Submit Reports	Total Annual Responses E=(BxC)+D
N/A	48.7
N/A	48.7
N/A	73
N/A	0
N/A	13
N/A	39
N/A	13
N/A	0
N/A	3
N/A	4
N/A	0
N/A	5
N/A	39
Total	287

hrs/response: 15

race manufacturers with 19 model lines, and 11

boards are replaced with models certified to 2020

urers over the three-year ICR period and that each of
 aring a response to the audit (in cases where

re-accreditation in the three year period.

ire ISO re-accreditation in the three year period.
 ntials with EPA.

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

Burden Item	(A) Person-hours per occurrence	(B) No. of occurrences per respondent per year
Reporting Requirements		
<i>Manufacturers</i>		
1. Certification test notification ^c	2	1.25
2. Application for certification ^c	8	1.25
3. Biennial reporting ^d	2	1.9
4. EPA compliance audit testing ^e	8	0.33
5. QA performance test results ^f	2	0.33
6. QA annual audit reports ^{g,h}	20	4.88
7. Review annual QA audit report ^g	4	0.33
<i>Test Laboratories</i>		
1. Application for test lab approval ^h		
a. Already has ISO accreditation	20	0
b. Needs to obtain ISO accreditation	80	1
2. Biennial proficiency testing and report development ⁱ	150	0.5
<i>Third-Party Certifier</i>		
1. Application for approval as a third-party certifier ^j		
a. Already has ISO accreditation	20	0
b. Needs to obtain ISO accreditation	80	1
2. Certification test, QA program report, credentials ^k	2	12
Subtotal for Reporting Requirements		
Recordkeeping Requirements		
<i>Manufacturers</i>		
1. Test and re-certification documentation ^l	1	1.25
2. QA parameter inspections ^m	2	4
3. Retained (sealed) stoves ⁿ	1	1.25
<i>Test Laboratories</i>		
1. Certification test, proficiency test, and audit test results ^o	2	12
<i>Third-Party Certifier</i>		
1. Certification test, QA program inspection and audit tests ^p	2	12
Subtotal for Recordkeeping Requirements		
TOTAL Labor Burden and Costs (rounded) ^q		
TOTAL Capital and O&M Cost (rounded) ^q		
GRAND TOTAL (rounded) ^q		

Footnotes:

^a Management person-hours and clerical person-hours are assumed to be 5 percent and 10 percent of technical person

^b This ICR uses the following labor rates: \$147.40 per hour for Executive, Administrative, and Managerial labor; \$11 Department of Labor, Bureau of Labor Statistics, June 2018, "Table 2. Civilian Workers, by Occupational and Indust benefit packages available to those employed by private industry.

^c Assume there are 32 hydronic heater manufacturers with 127 model lines and 7 forced-air furnace manufacturers replaced with models certified to 2020 standards and certification testing is performed.

-
- ^d Manufacturers submit a report for every certified model 0.5 times per year, at 2 hours per report.
-
- ^e Assumes that one of the manufacturers will be required to undergo an EPA compliance audit test for one of their models.
-
- ^f Assumes that there will be one QA audit performance test per manufacturer under the QA program during the 3-year period.
-
- ^g 40 CFR 60.5475(m) requires an annual audit of the QA plan for each model line. Assumes there will be three QA audit reports will be reviewed by the manufacturer (in all cases) and may require preparing a response to the audit (in cases where a deficiency is identified).
-
- ^h Assume that there are 11 laboratories acting as testing labs and/or third-party certifiers, including 8 testing labs. The testing labs must reapply for re-accreditation in the three-year period.
-
- ⁱ Assume 8 testing labs participate in proficiency testing every 2 years. 40 CFR 5479(b) requires that each approved testing lab participate in proficiency testing every 2 years.
-
- ^j Assume 8 third-party certifiers are ISO accredited and currently certified by EPA; 5 third-party certifiers are currently not certified.
-
- ^k 40 CFR 63.5479(b) requires that each third-party certifier must submit each certification test, quality assurance program, and records to EPA for review.
-
- ^l Assumes that manufacturers will spend one hour per certification test and recertification to keep the required records.
-
- ^m Quality parameter inspections are part of the existing safety inspections program. Assume that all manufacturers (30) will have a quality parameter inspection every 2 years.
-
- ⁿ Assumes that one stove is sealed and retained for each certification test. Assumes all stoves certified to 2015 standards.
-
- ^o Proficiency testing is required every two years for each lab. Assume that test laboratories will spend 2 hours per month on proficiency testing.
-
- ^p Quality assurance program inspections are performed annually for each certified model. Assume that third-party certifiers will spend 2 hours per model on quality assurance program inspections.
-
- ^q Totals have been rounded to three significant values. Figures may not add exactly due to rounding.

Furnaces (40 CFR Part 60, Subpart QQQQ) (Renewal)

(C) Person-hours per respondent (C=AxB)	(D) Respondents per year	(E) Technical hours per year (E=CxD)	(F) Management hours per year ^a (F=Ex0.05)	(G) Clerical person- hours per year ^a (G=Ex0.1)	(H) Total Cost per year, ^b
2	39	97.3	4.9	9.7	\$12,750.08
10	39	389.3	19.5	38.9	\$51,000.33
4	39	146.0	7.3	14.6	\$19,125.12
2.7	1	2.7	0.1	0.3	\$348.97
1	39	26.0	1.3	2.6	\$3,402.44
97.5	8	780.0	39.0	78.0	\$102,175.32
1.3	39	52.0	2.6	5.2	\$6,811.69
0	5	0.0	0.0	0.0	\$0
80	3	240.0	12.0	24.0	\$31,439
75	8	600.0	30.0	60.0	\$78,596.40
0	3	0.0	0.0	0.0	\$0
80	5	400.0	20.0	40.0	\$52,398
23	8	185.3	9.3	18.5	\$24,278
			3,356		\$382,324.07
1	39	48.7	2.4	4.9	\$6,375.04
8	39	312.0	15.6	31.2	\$40,870.13
1	39	48.7	2.4	4.9	\$6,375.04
24	8	192.0	9.6	19.2	\$25,150.85
24	8	192.0	9.6	19.2	\$25,150.85
			912		\$103,922.00
			4,270		\$486,000
					\$4,280,000
					\$4,770,000

-hours, respectively.

7.92 per hour for Technical labor, and \$57.02 per hour for Clerical labor. These rates are from the United States
 ry group.” The rates are from column 1, “Total Compensation.” The rates have been increased by 110% to account for the

th 19 model lines. Over the next three years, assume a like number of existing models certified to 2015 standards are

odels during the three-year ICR period.

r period.

adits by third-party certifiers for each of the 39 manufacturers over the three-year ICR period and each of these audit
; where deficiencies are identified).

: 8 testing labs are currently certified by EPA; 3 testing labs are certified through the end of 2020 and would be anticipated

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

d through the end of 2020 and would be anticipated to reapply for re-accreditation in the three-year period.

gram inspection report and ISO-IEC accreditation credentials to the Administrator.

s.

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

rd and all stoves certified to 2020 standard are stored for the 3-year period.

nth to maintain the required records.

ertifiers will spend 2 hours per month to maintain the required records.

Labor Rates		Notes:
Management	\$147.40	Updated 12/3/18 to match the United States Department of Labor, Bureau of Lab
Technical	\$117.92	Updated 12/3/18 to match the United States Department of Labor, Bureau of Lab
Clerical	\$57.04	Updated 12/3/18 to match the United States Department of Labor, Bureau of Lab

<-- new line item, includes submittal of certification,QA audit reports, and credentials.

or Statistics, June 2018, "Table 2. Civilian Workers, by occupational and industry group
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Table 2: Average Annual EPA Burden and Cost - NSPS for New Residential Hydronic Heaters and Forc

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 ^c	0.5	1.25	0.6
2. Observe certification test ^d	20.0	1	20.0
3. Review application for certification of model line ^c	8.0	1.25	10.0
4. Biennial reporting for certified models ^e	1.0	1.9	1.9
5. Review and approval of test lab credentials ^f	4.0	0	0
6. Review test lab biennial proficiency test reports ^g	10.0	0.5	5.0
7. Review QA performance test results ^h	2.0	0.33	0.7
8. Review QA audit report ⁱ	2.0	5	9.8
9. EPA Compliance Audit ^j	40.0	0.33	13.3
10. Review and approval of third-party certifier credentials ^k	8.0	0	0
TOTAL (rounded) ^l			

Footnotes:

^a Management person-hours and clerical person-hours are assumed to be 5 percent and 10 percent of technical p

^b This cost is based on the following labor rates which incorporates a 1.6 benefits multiplication factor to accou
Technical rate of \$48.75 (GS-12, Step 1, \$30.47 + 60%), and Clerical rate of \$26.38 (GS-6, Step 3, \$16.49 + 60
which excludes locality rates of pay.

^c Assume there are 32 hydronic heater manufacturers with 127 model lines, 7 forced-air furnace manufacturers
to 2015 standards are replaced with models certified to 2020 standards and certification testing is performed.

^d Assumes that EPA will observe 20 percent of certification tests (5.3/year x 0.2) conducted during the ICR rep

^e Assumes that the EPA will receive one biennial report for each of the certified model lines over the 3-year IC

^f Assumes 8 testing labs are currently approved by EPA; 3 testing labs are certified through the end of 2020 and

^g Assumes that each testing lab conducts a laboratory proficiency test every two years.

^h Assumes that there will be one QA audit performance test per manufacturer under the QA program during the

ⁱ Assumes that EPA will review the QA audits performed by the third-party certifiers on each certified model li

^j Assumes that one model line for one of the manufacturers will be audited by the EPA during the ICR three-ye

^k Assumes 8 third-party certifiers are currently certified by EPA; 5 third-party certifiers are certified through the

^l Totals have been rounded to three significant values. Figures may not add exactly due to rounding.

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

(D) Respondents per year	(E) Technical person- hours per year (E=CxD)	(F) Management person-hours ^a per year (F=Ex0.05)	(G) Clerical person- hours ^a per year (G=Ex0.1)	(H) Total Cost per year,\$ ^b
39	24.3	1.2	2.4	\$1,330.39
8	160.0	8.0	16.0	\$8,747.76
39	389.3	19.5	38.9	\$21,286.22
39	73.0	3.7	7.3	\$3,991.17
3	0.0	0.0	0.0	\$0.00
8	40.0	2.0	4.0	\$2,186.94
39	26.0	1.3	2.6	\$1,420.09
8	78.0	3.9	7.8	\$4,264.53
1	13.3	0.7	1.3	\$728.25
5	0.0	0.0	0.0	\$0
		925		\$44,000

erson-hours, respectively.

nt for government overhead expenses: Managerial rate of \$65.71 (GS-13, Step 5, \$41.07 + 60%),
%). These rates are from the Office of Personnel Management (OPM) "2018 General Schedule"

with 19 model lines. Over the next three years, assume a like number of existing models certified

orting period, which is rounded to 1 test per year.

R period.

l would be anticipated to reapply for re-accreditation in the three-year period.

3-year period.

ne over the three-year ICR period.

ar period.

end of 2020 and would be anticipated to reapply for re-accreditation in the three-year period.

Labor Rates	
Management	\$ 65.71
	\$ 48.75
Technical	
Clerical	\$ 26.38

Notes:

Updated 12/3/18 to match the rates from the Office of Personnel Manager

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Updated 12/3/18 to match the rates from the Office of Personnel Manager

ment (OPM), 2018 General Schedule.

ment (OPM), 2018 General Schedule.

ment (OPM), 2018 General Schedule.

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

(A) Data Collection Device	(B) Capital/Start-Up for One Respondent/Unit	(C) Number of New Respondents/Models per Year
Certification Test ^a	\$55,000 per model	49 models
Cost of Permanent Label ^b	\$1,250 per model	49 models
QA Performance Test ^c	\$55,000 per respondent	13 respondents
EPA Compliance Audit Test ^d	\$63,564 per model	0.33 model
Owners Manual ^e	\$3,750 per model	49 models
ISO Accreditation-Test Laboratories ^f	\$75,000 per respondent	3 respondents
ISO Accreditation-Third-Party Certifiers ^g	\$75,000 per respondent	5 respondents
Annual Totals ^h		

^a We assume that manufacturers will test approximately 49 new models per year (127 hydronic heater models + 19 forced-air models or 49 models) at a cost of \$55,000 per test (includes EPA testing (\$30,000), confirmation safety testing or full safety prototype(s)(\$2,500) costs) and apply to meet Step 2 emission standards during the three year ICR period.

^b Total costs of permanent labels are estimated to be \$1,250 per model.

^c Assumes each of the manufacturers will be required to test one of their models under their QA program during the period \$55,000 per test (includes EPA testing (\$30,000), confirmation safety testing or full safety testing (\$22,500), and shipping manufacturers * 1 model / 3 years = 13 manufacturers/model/year).

^d Assumes one model line will be audited by EPA during the three-year ICR period (2019 – 2021). 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).

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

^f 8 testing labs are ISO-accredited. 8 labs are currently certified by EPA, and 3 labs would require recertification following obtain ISO accreditation is \$75,000 based on cost estimates provided by manufacturers.

^g 8 third-party certifiers are ISO accredited. 8 are currently certified by EPA and 5 would require recertification following 2 obtain ISO accreditation is \$75,000 based on cost estimates provided by manufacturers.

^h 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)
\$2,695,000
\$61,250
\$715,000
\$20,976
\$183,750
\$225,000
\$375,000
\$4,280,000

<-- adjusted formula to round # of models tested per year

<-- adjusted formula to round # of models tested per year

<-- adjusted formula to round # of respondents per year

<-- adjusted formula to round # of respondents per year

<-- adjusted formula to round # of models tested per year

air furnace models / 3 years = 48.667
 y testing (\$22,500), and shipping of

covered by this ICR (2019-2021) at
 of prototype(s)(\$2,500 costs) (39

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

2020. We assume an average cost to

!020. We assume an average cost to