

**Table 1: Annual Respondent Burden and Cost – NESHAP for Stationary Reciprocating Internal C**

Burden Item	A	B	C	D
	Technical person-hours per occurrence	No. of occurrences per respondent per year	Technical person-hours per respondent per year (AxB)	Respondents per year <sup>a</sup>
1. Applications	N/A			
2. Surveys and Studies	N/A			
3. Reporting Requirements				
A. Familiarize with rule requirement				
New sources	4	1	4	1,284
Existing sources	1	1	1	153,463
B. Required Activities <sup>c</sup>				
4-SRB >5,000 HP (once per year)	24	1	24	86
4-SRB ≥5,000 HP (once per year)	8	1	8	1
Quarterly Performance Test (Facilities with Multiple RICE)	24	4	96	1,605
Quarterly Performance Test (Facilities with One RICE)	6	1	6	5
Semiannual Performance Test	24	2	48	4,869
C. Gather Existing Information	Included in 3D			
D. Write Report				
Notification of Construction/Reconstruction <sup>d</sup>	2	1	2	1,179
Notification of Anticipated Startup <sup>d</sup>	2	1	2	1,179
Notification of Actual Startup <sup>d</sup>	2	1	2	1,179
Notification of Performance Test <sup>c</sup>				
Quarterly	2	4	8	1,605
Semiannually	2	2	4	4,460
Annually	2	1	2	87
Initial Notification for Exempt RICE	2	1	2	105
Initial Notification of Compliance <sup>d</sup>	2	1	2	1,179
Semiannual Compliance Report <sup>e</sup>	1	2	2	127,022
Annual Compliance Report <sup>f</sup>	1	1	1	25,995
Annual Compliance Report (Emergency RICE) <sup>g</sup>				
Utilities	16	0.33	5.33	446
Curtailement Service Providers	1,000	0.33	333.33	70
<b>Reporting Subtotal</b>				
4. Recordkeeping Requirements				
A. Familiarize with rule requirement	Included in 3A			
B. Train Personnel <sup>d</sup>	16	1	16	1,179
C. Continuous Monitoring <sup>h</sup>				
Portable CO Monitor	40	1	40	410
Pressure and Temperature	30	1	30	48,323
D. Record Information	1	1	1	768,776
<b>Recordkeeping Subtotal</b>				
<b>TOTAL LABOR BURDEN AND COSTS (rounded) <sup>i</sup></b>				
<b>TOTAL CAPITAL AND O&amp;M COST (rounded) <sup>i</sup></b>				
<b>GRAND TOTAL (rounded) <sup>i</sup></b>				

**Assumptions:**

<sup>a</sup> We estimate an average of 153,463 existing respondents and 1,284 new respondents will be subject to the standard per year. Respondents include 16,025 major source stationary RICE (>500 hp), 4,710 area source stationary RICE, 86,649 CI engines, 4,410 area source stationary RICE (>500 hp), 769 non-exempt major stationary RICE (>500 hp), 105 exempt major stationary RICE (>500 hp), and 410 area source stationary RICE (>500 hp).

<sup>b</sup> This ICR uses the following labor rates: \$141.06 per hour for Executive, Administrative, and Managerial labor; \$120.27 per hour for other labor. These rates are from the United States Department of Labor, Bureau of Labor Statistics, June 2019, "Table 2. Civilian Worker Compensation, Total Compensation." The rates have been increased by 110 percent to account for the benefit packages available to those workers.

<sup>c</sup> The estimated number of sources for these activities was obtained from EPA ICR Number 1975.04.

<sup>d</sup> We assume all non-exempt new sources have to complete these activities (1,284 new sources - 105 major exempt new sources).

<sup>e</sup> We assume 127,022 existing sources have to write semiannual reports. This estimate includes 16,025 existing major source stationary RICE (>500 hp), 4,410 existing area source stationary RICE (>500 hp), 86,649 existing CI engines, and 45,633 existing SI engines.

<sup>f</sup> We assume 25,995 existing CI engines have to complete annual reports. This estimate is based on EPA ICR Number 1975.04.

<sup>g</sup> We assume 446 local utilities and 16 hours per annual report, and 70 curtailment service providers with 1,000 hours per report amendment. Reporting requirements for emergencies RICE will begin in 2016 which is the final year covered in this ICR. This is every three years for this ICR.

<sup>h</sup> These estimates were obtained from EPA ICR Number 1975.04, 1975.05, 1975.07 and 1975.08.

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

4-SRB - 4-Stroke Rich Burn

**ombustion Engines (40 CFR Part 63, Subpart ZZZZ) (Renewal)**

<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	
<b>Technical hours per year (CxD)</b>	<b>Management hours per year (Ex0.05)</b>	<b>Clerical hours per year (Ex0.10)</b>	<b>Total cost per year<sup>b</sup> (\$)</b>	<b>Technical</b>
				<b>Management</b>
				<b>Clerical</b>
5,136	257	514	\$684,063.84	<b>Affected Source</b>
153,463	7,673	15,346	\$20,439,736.97	
2,064	103	206	\$274,904.16	
8	0.4	0.8	\$1,065.52	
154,080	7,704	15,408	\$20,521,915.20	
30	1.5	3	\$3,995.70	
233,712	11,686	23,371	\$31,128,101.28	
				<b>1975.04</b>
2,358	118	236	\$314,062.02	<b>1975.05</b>
2,358	118	236	\$314,062.02	
2,358	118	236	\$314,062.02	
				<b>1975.07</b>
12,840	642	1,284	\$1,710,159.60	<b>1975.08</b>
17,840	892	1,784	\$2,376,109.60	
174	8.7	17	\$23,175.06	
210	10.5	21	\$27,969.90	
2,358	118	236	\$314,062.02	
254,044	12,702	25,404	\$33,836,120.36	
25,995	1,300	2,600	\$3,462,274.05	
2,379	119	238	\$316,814.61	
23,333	1,167	2,333	\$3,107,766.67	
	<b>1,028,951</b>		<b>\$119,170,421</b>	<b>1975.09</b>
18,864	943	1,886	\$2,512,496.16	<b>1975.10</b>
16,400	820	1,640	\$2,184,316.00	
1,449,690	72,485	144,969	\$193,084,211.10	
768,776	38,439	76,878	\$102,393,275.44	
	<b>2,591,790</b>		<b>\$300,174,299</b>	
	<b>3,620,000</b>		<b>\$419,000,000</b>	
			<b>\$41,700,000</b>	
			<b>\$461,000,000</b>	

over the three-year period of this ICR. The number of existing 5,633 SI engines, and 446 utilities. The number of new respondents es.

hour for Technical labor, and \$58.67 per hour for Clerical labor. s, by Occupational and Industry group.” The rates are from column employed by private industry.

es = 1,179 sources).

stationary RICE (>500 hp), 4,710 existing area sources, 60,654

7.

ort. This estimate is based on the January 2013 Final Rule erefore, we assume an average annual occurrence of 0.33 (once

**1975.11**

2019 Labor Rates	
	\$120.27
	\$141.06
	\$58.67

### Cost Estimates

New Sources, Non-Exempt (see ICR, p. 1)	769	<u>Device</u>
New Sources, Exempt (see ICR, p. 1)	105	CO monitor
		CO monitor
		Press. & Temp. (Small)
		Press. & Temp. (Large)
Existing Sources (see ICR, p. 10)	11,096	
New Sources, Area (see ICR, p. 21)	410	<u>Device</u>
		Portable CO Monitor
		Press. & Temp. Monitor
Existing Sources (see ICR, p. 21)	2,250	
New Sources	0 Covers CI RICE	No capital/startup or O&M costs
Existing Sources (see ICR, p. 23)	825,545	
"Semiannual Reporters"	60,654	
"Annual Reporters"	25,995	
"Monitoring"	19,678	
"Recordkeeping"	738,896	
New Sources	0 Covers SI RICE	No capital/startup or O&M costs
Existing Sources (see ICR, p. 22)	62,167	
"Reporting"	45,633	
"Monitoring"	15,299	
"Recordkeeping"	16,534	
New Sources	0 Covers Emergency RICE	No capital/startup or O&M costs
Existing Sources (see 78 FR 6674)	446	
Utilities	446	
Curtailed Service Providers	70	
New Sources	<b>1,284</b> Covers all sources	<u>Device</u>
Major - non-exempt	769	CO monitor
Major - exempt	105	CPMS - small
Area	410	CPMS - large
		TOTAL
Sources with initial notification requirements (see comment table)	1,179	
Existing Sources	<b>149,926</b>	
Major	13,718	
Area	3,480	
CI engines	86,649 *only 60,654 submit semiannual reports	
SI engines	45,633	

Utilities

446

Sources that submit semiannual reports	<b>123,485</b>	
Existing sources that only keep records	755,430	
<b>New Sources</b>	<b>1,284</b>	<b>*New respondents include 769 major source non-exempt st</b>
Major - non-exempt	769	
Major - exempt	105	<b>*includes new sources which are exempt but have an initial</b>
Area	410	
Sources with initial notification requirements (non-exempt only)	1,179	
<b>Existing Sources</b>	<b>153,463</b>	<b>Existing respondents include 16,025 major source stationar</b>
Major	16,025	<b>*Adds existing (cellN43) to new major (non-exempt) (cellN</b>
Area	4,710	<b>*Adds existing (cellN44) to new area (cellN39)*3 years</b>
CI engines	86,649	<b>*pulled from 1975.10 - note only 60,654 submit semiannua</b>
SI engines	45,633	<b>*pulled from 1975.10</b>
Utilities	446	
Sources that submit semiannual reports	127,022	
Existing sources that only keep records	755,430	

hr/response

<u>No. Sources</u>	<u>Capital/Startup</u>	<u>O&amp;M</u>
682	\$583 --	
3,054 --		\$1,873
769	\$1,708	
366	\$421	

<u>No. Sources</u>	<u>Capital/Startup</u>	<u>O&amp;M</u>
410	\$583	\$1,873
410	\$1,708	

sts.

sts.

sts.

<u>No. Sources</u>	<u>Capital/Startup</u>	<u>O&amp;M</u>
1,179	\$687,357	\$32,211,854
1,179	\$2,013,732	
366	\$156,282	
	\$2,857,371	\$32,211,854

stationary RICE (>500 hp), 105 major source exempt stationary RICE (>500 hp), and 410 area source stationary RICE.

Notification requirement (105 per year or 315 over 3 years).

Major source stationary RICE (>500 hp), 4,710 area source stationary RICE, 86,649 CI engines, 45,633 SI engines, and 446 utilities.  
Major source stationary RICE (>500 hp) (137)\*3 years

Major source stationary RICE (>500 hp) submit annual reports, remaining 25,995 submit annual reports



**Table 2: Average Annual EPA Burden and Cost – NESHAP for Stationary Reciprocating IR**

Burden Item	A	B	C	D
	Technical person-hours per occurrence	No. of occurrences per respondent per year	Technical person-hours per respondent per year (AxB)	Respondents per year <sup>a</sup>
Report review				
Notification of Construction/Reconstruction	1	1	1	1,179
Notification of Anticipated Startup	1	1	1	1,179
Notification of Actual Startup	1	1	1	1,179
Notification of Performance Test				
Quarterly	1	4	4	1,605
Semiannually	1	2	2	4,460
Annually	1	1	1	87
Initial Notification for Exempt RICE	1	1	1	105
Initial Notification of Compliance	2	1	2	1,179
Semiannual Compliance Report <sup>c</sup>	2	2	4	127,022
Annual Compliance Report <sup>d</sup>	2	2	4	26,511
<b>TOTAL (rounded) <sup>e</sup></b>				

**Assumptions:**

<sup>a</sup> We estimate an average of 153,463 existing respondents and 1,284 new respondents will be subject to the standard. Respondents include 16,025 major source stationary RICE (>500 hp), 4,710 area source stationary RICE, 86,649 CI engines, and 769 non-exempt major stationary RICE (>500 hp), 105 exempt major stationary RICE (>500 hp).

<sup>b</sup> This ICR uses the following labor rates: \$66.62 for managerial, \$49.44 for technical, and \$26.75 for clerical labor. The rates have been increased by 60 percent to account for the 2019 General Schedule, which excludes locality rates of pay.

<sup>c</sup> We assume 127,022 existing sources have to write semiannual reports. This estimate includes 16,025 existing major source stationary RICE (>500 hp), 45,633 existing SI engines, and 65,364 existing CI engines.

<sup>d</sup> We assume 25,995 existing CI engines, 446 local utilities, and 70 curtailment service providers have to complete at the January 2013 Final Rule amendment.

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

**Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ) (Renewal)**

<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>
<b>Technical hours per year (CxD)</b>	<b>Management hours per year (Ex0.05)</b>	<b>Clerical hours per year (Ex0.10)</b>	<b>Total cost per year (\$) <sup>b</sup></b>
1,179	59	118	\$65,370.83
1,179	59	118	\$65,370.83
1,179	59	118	\$65,370.83
6,420	321	642	\$355,963.32
8,920	446	892	\$494,578.32
87	4	9	\$4,823.80
105	5	11	\$5,821.83
2,358	118	236	\$130,741.67
508,088	25,404	50,809	\$28,171,447.25
106,044	5,302	10,604	\$5,879,715.62
<b>731,000</b>			<b>\$35,200,000</b>

<b>Labor Rates</b>	
Technical	\$49.44
Management	\$66.62
Clerical	\$26.75

per year over the three-year period of this ICR. The number of existing engines, 45,633 SI engines, and 446 utilities. The number of new ), and 410 area sources.

. These rates are from the Office of Personnel Management (OPM), t for the benefit packages available to government employees.

r source stationary RICE (>500 hp), 4,710 existing area sources, 60,654

mual reports. This estimate is based on EPA ICR Number 1975.07 and

<b>Number of Respondents</b>					
	Respondents That Submit Reports		Respondents That Do Not Submit Any Reports		
Year	(A) Number of New Respondents <sup>a</sup>	(B) Number of Existing Respondents <sup>b</sup>	(C) Number of Existing Respondents that keep records but do not submit reports <sup>c</sup>	(D) Number of Existing Respondents That Are Also New Respondents	(E) Number of Respondents (E=A+B+C-D)
1	1,284	152,179	755,430	0	908,893
2	1,284	153,463	755,430	0	910,177
3	1,284	154,747	755,430	0	911,461
Average	1,284	153,463	755,430	0	910,177

<sup>a</sup> New respondents include 769 major source non-exempt stationary RICE (>500 hp), 105 major source exempt stationary RICE (>500 hp), and 410 area source stationary RICE (1,284 respondents total). The 105 major source exempt stationary RICE submit an initial notification but do not submit reports.

<sup>b</sup> Existing respondents include 16,025 major source stationary RICE (>500 hp), 4,710 area source stationary RICE, 86,649 CI engines, 45,633 SI engines, and 446 utilities (153,463 respondents total).

<sup>c</sup> Existing respondents that do not submit reports include 738,896 CI engines and 16,534 SI engines (738,896 + 16,534 = 755,430).

**Total Annual Responses**

(A) Information Collection Activity	(B) Average Number of Respondents	(C) Number of Responses	(D) Number of Existing Respondents That Keep Records But Do Not Submit Reports	(E) Total Annual Responses E=(BxC)+D
Notification of construction/reconstruction	1,179	1	0	1,179
Notification of anticipated startup	1,179	1	0	1,179
Notification of actual startup	1,179	1	0	1,179
Notification of performance test				
Quarterly	1,605	4	0	6,420
Semiannually	4,460	2	0	8,920
Annually	87	1	0	87
Initial notification for exempt RICE	105	1	0	105
Initial notification of compliance	1,179	1	0	1,179
Semiannual compliance report	127,022	2	755,430	1,009,474
Annual compliance report	26,511	1	0	26,511
			Total	1,056,233

**Capital/Startup vs. Operation and Maintenance (O&M) Costs**

(A)	(B)	(C)	(D)	(E)	(F)	(G)
Continuous Monitoring Device	Capital/Startup Cost for One Respondent	Number of New Respondents <sup>a</sup>	Total Capital/Startup Cost, (B X C)	Annual O&M Costs for One Respondent	Number of Respondents with O&M <sup>b</sup>	Total O&M, (E X F)
CO monitors <sup>c</sup>	\$583	1,179	\$687,357	\$1,873	20,735	\$38,836,655
CPMS - small <sup>d</sup>	\$1,708	1,179	\$2,013,732	N/A	N/A	
CPMS - large <sup>d,e</sup>	\$427	366	\$156,282	N/A	N/A	
Total <sup>f</sup>			\$2,860,000			\$38,800,000

<sup>a</sup> We estimate there 769 (non-exempt) new major source stationary RICE greater than 500 hp and 410 new area sources. We assume all non-exempt new sources will incur capital costs. (769 + 410 = 1,179 sources) There are an additional stationary RICE sources.

<sup>b</sup> We estimate an average of 16,025 existing major source stationary RICE greater than 500 hp and 4,710 existing area sources per year will have O&M costs over the three-year period of this ICR. (16,025 + 4,710 = 20,735 sources)

<sup>c</sup> Each facility can purchase one portable CO monitor and use it for several stationary RICE.

<sup>d</sup> CPMS – continuous parameter monitoring system for temperature monitoring and monthly pressure drop measurement

<sup>e</sup> We assume that only 366 of the 769 new (non-exempt) major source stationary RICE (>500 hp) have to additionally

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

\$41,700,000

ce stationary RICE per year.  
105 exempt new major

ea source stationary RICE

nent.  
y purchase large CPMS.