# U.S. Environmental Protection Agency Information Collection Request

Title: Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and

Medium-Duty Vehicles

**EPA ICR No.**: 2750.02

OMB Control No.: 2060-NEW

Docket ID No.: EPA-HQ-OAR-2022-0829

Abstract: This ICR covers the information collection activities associated with EPA's final rule establishing new, more protective emissions standards for criteria pollutants and greenhouse gases (GHG) for light-duty vehicles and Class 2b and 3 ("medium-duty") vehicles that will phase-in generally over model years 2027 through 2032. In addition, EPA is finalizing GHG program revisions in several areas, including off-cycle and air conditioning credits, the treatment of upstream emissions associated with zero-emission vehicles and plug-in hybrid electric vehicles in compliance calculations, medium-duty vehicle incentive multipliers, and vehicle certification and compliance. EPA is also establishing new standards to control refueling emissions from incomplete medium-duty vehicles, and battery durability and warranty requirements for light-duty and medium-duty plug-in electric vehicles. EPA is also finalizing minor amendments to update program requirements related to aftermarket fuel conversions, importing vehicles and engines, evaporative emission test procedures, and test fuel specifications for measuring fuel economy.

The new emission standards will apply to manufacturers beginning with MY 2027. Data would be submitted annually, consistent with EPA's existing certification program requirements.

Information activities associated with the final rule are largely covered by existing emission certification and reporting requirements for EPA's light-duty vehicle (LDV) and medium-duty (MDV) emission control program. To avoid duplication, this information collection statement covers only the incremental burden associated with the final rule, as briefly described in Section 12 below and in more detail in **Supplemental Information**, Section 8. Concerning other aspects of the rule, manufacturers already submit the data that would be required for certification to the revised standards to EPA's certification system (under programmatic ICRs); there would be a change only to the specific data, not to its reporting. The "programmatic" information collection request is:

 EPA ICR 0783.65, OMB Control Number 2060-0104, Motor Vehicle Emissions and Fuel Economy Compliance (Renewal) **Burden Statement:** The annual public reporting and recordkeeping burden for this collection is estimated to average 1,147 hours per respondent. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

#### **SUPPORTING STATEMENT**

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

EPA's emission programs are statutorily mandated; the Agency does not have discretion to cease these functions. The data required are necessary to comply with Title II of the Clean Air Act (42 U.S.C. 7521 et seq.; "CAA" or "the Act"), as amended. The Act charges EPA with developing standards for dangerous air pollutants, and issuing certificates of conformity for those engines and motor vehicle designs that comply with those standards. Such a certificate must be issued before engines and vehicles may be legally introduced into commerce. Section 206(a) of the CAA (42 USC 7521) states:

"The Administrator shall test, or require to be tested in such manner as he deems appropriate, any new motor vehicle or new motor vehicle engine submitted by a manufacturer to determine whether such vehicle or engine conforms with the regulations prescribed under §202 of this Act. If such vehicle or engine conforms to such regulations, the Administrator shall issue a certificate of conformity upon such terms, and for such period (not in excess of one year) as he may prescribe."

Section 206(b)(1) of the Act authorizes EPA to inspect and require testing of new vehicles and engines to: (1) verify that the manufacturer's final product complies with EPA standards; (2) assure that the correct parts are installed correctly in each engine; and (3) audit the manufacturer's testing process to ensure testing is being done correctly. The Production Line Testing (PLT) and Selective Enforcement Audits (SEA) Programs fulfill these requirements by inspecting and testing engines taken directly

from the assembly line and/or existing fleets, and by auditing the engine manufacturer's testing procedures and facilities. Section 207(b) of the CAA mandates the establishment of methods and testing procedures to ascertain whether certified engines in use actually comply with applicable emission standards throughout their useful lives. The In-Use Testing and similar programs are implemented in response to that mandate.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

EPA will use the information requested under this collection to verify and support the three-stage compliance assurance system envisioned in the CAA.

- First, certification information, including test data, is needed to verify that the
  proper prototype engines have been selected to represent each engine/vehicle
  family (group of engines/vehicles expected to have similar emission
  characteristics), and that the necessary testing has been performed. Based on
  this information, EPA issues a certificate of conformity.
- Second, data collected under the SEA program are used to verify that
  manufacturers have successfully translated their prototypes into mass-produced
  engines. This is necessary because prototypes are often hand-built and not
  typical of assembly line engines.
- Lastly, in-use testing is intended to determine if engines and vehicles maintained in accordance with the manufacturer's instructions continue to emit at acceptable levels after a prescribed number of years of actual use. If a family of engines or vehicles is found in noncompliance, manufacturers are required to recall the family.

The information described in this ICR will be collected by EPA's Compliance Division (CD) within the Office of Transportation and Air Quality (OTAQ), Office of Air and Radiation (OAR). It will be used by CD and various divisions within OTAQ that implement CAA mobile source requirements. In instances of noncompliance, the information may be used by EPA's enforcement office and the Department of Justice.

Non-confidential portions of the information submitted to CD are available to and used by trade associations, importers, environmental groups, members of the public, and state and local government organizations.

The information is collected electronically and stored in CD's databases.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other

forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

The information is collected electronically and stored in CD's databases. Specifically, the data required by the final rule will be collected electronically in the same manner as it is now, through the EPA's Engines and Vehicles Compliance Information System (EV-CIS). More information on the existing certification process and data requirements can be found at <a href="https://www.epa.gov/ve-certification/certification-and-fuel-economy-light-duty-passenger-cars-and-trucks">https://www.epa.gov/ve-certification/certification-and-fuel-economy-light-duty-passenger-cars-and-trucks</a>

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

Duplication: This collection request covers only the incremental information collection requirements associated with the final rule that supersede the current certification reporting requirements.

Availability of similar information: In general, the information necessary for certification to EPA's engine and vehicle standards is specific to the model years of engines and vehicles to be certified. The information to be collected is not available from any other sources, both because of its specialized nature and because most of it must be submitted to EPA <u>before</u> engines and vehicles can be sold. Furthermore, some of the data requested, such as projected sales volumes or certain engine designs, may be proprietary, and thus claimed as confidential business information (CBI) by manufacturers. Therefore, EPA can timely obtain the information only from the owners of that data: the engine and vehicle manufacturers.

5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.

EPA's light-duty and medium-duty engine and vehicle program includes small business flexibilities; these provisions will continue to apply.

The information being requested is the minimum needed to effectively conduct and maintain the integrity of the required certification and enforcement programs. Further measures to simplify reporting for small businesses are not prudent or necessary.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

The CAA states that emission certification must be done yearly (CAA 206(a)(1)), coinciding with the industry's 'model year.' EPA cannot issue Certificates of Conformity without obtaining the required information. Without a Certificate of Conformity, no engine or vehicle may be sold or entered into commerce in the United States.

# 7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- a) requiring respondents to report information to the agency more often than quarterly;
- b) requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;
- c) requiring respondents to submit more than an original and two copies of any document;
- d) requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;
- e) in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;
- f) requiring the use of a statistical data classification that has not been reviewed and approved by OMB;
- g) that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or
- requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

#### **Responses:**

- (a) Information related to engine and vehicle certification is required to be reported annually. The CAA states that emission certification must be done yearly (CAA 206(a)(1)), coinciding with the industry's 'model year.' Therefore, information must be collected and cannot be collected less frequently. However, it should be noted that when an engine or vehicle design is "carried over" to a subsequent model year, the amount of new information required to be submitted to EPA is substantially reduced. Major product changes typically occur at the start of a model year. For these reasons, the collection frequency for most certification requirements corresponds to one collection per engine family for each model year.
- (b) Information related to engine and vehicle certification is required to be submitted prior to entering engines or vehicles into commerce; the manufacturer is not subject to a 30-day response period.
- (c) Manufacturers submit their data electronically and so are not required to submit originals and/or copies of any documents.
- (d) Manufacturers are required to retain some information for more than three years. These include: §86.1862-04 defines an 8-year recordkeeping requirement for ABT reports for criteria emission fleet standards; §86.1843-01 specifies an 8-year

recordkeeping requirement for certification applications; §86.1965-12 defines an 8-year recordkeeping requirement for data used for demonstrating compliance with the fleet average GHG requirements. These records may be stored in any format and on any media if they are organized and can be sent promptly to EPA upon request. These recordkeeping requirements stem, in part, from the statutory requirement to warrant some emissions components and systems for long periods. However, data related to routine testing, such as test cell temperatures and relative humidity readings, must only be kept for one year after a certificate of conformity is issued.

- (e) The data is not being collected in connection with a statistical survey.
- (f) The data is not being collected in connection with a statistical survey.
- (g) The responses do not include a pledge of confidentiality.
- (h) Manufacturers are required to submit information such as sales projections and certain sensitive technical descriptions that may be entitled to confidential treatment. Manufacturers may assert a claim of confidentiality over information provided to EPA. Confidentiality is provided in accordance with the Freedom of Information Act and EPA regulations at 40 CFR part 2. We will release this information only as permitted or required under the Freedom of Information Act (FOIA) and EPA regulations at 40 CFR part 2. EPA recently amended regulations at 40 CFR 1068.11 to identify several categories of information that are not entitled to confidential treatment.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years – even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

In the proposed rulemaking (88 FR 29184, May 5, 2023), EPA requested public comment on the testing, reporting, and recordkeeping burden outlined in this Supporting Statement, associated with demonstrating compliance with the proposed emission standards. We also made the Supporting Statement available for public comment in the docket for the rule (EPA-HQ-OAR-2022-0829-0419). EPA received no comments on the draft Supporting Statement.

EPA used data gathered in consultations with the regulated industry during the development of burden estimates for the current program (the programmatic ICR) and its own experience implementing the programs that this final rule seeks to amend.

EPA also seeks input from affected entities as part of the periodic 3-year renewal of the relevant programmatic Information Collection Request.

EPA has ongoing outreach efforts with stakeholders as part of our rule development and our implementation activities.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

There are no payments or gifts to respondents; there is no remuneration of contractors or grantees for this engine and vehicle certification program.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy. If the collection requires a systems of records notice (SORN) or privacy impact assessment (PIA), those should be cited and described here.

Manufacturers may assert a claim of confidentiality over information provided to EPA. Confidentiality is provided in accordance with the Freedom of Information Act (FOIA) and EPA regulations at 40 CFR Part 2.

We will release this information only as permitted or required under the FOIA and EPA regulations at 40 CFR part 2.

This information collection does not require SORN or PIA.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

No sensitive questions are asked in this information collection. This collection complies with the Privacy Act and OMB Circular A-108.

- 12. Provide estimates of the hour burden of the collection of information. The statement should:
  - (a) Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.
  - (b) If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens.
  - (c) Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included under 'Annual Cost to Federal Government'.

The total labor burden to respondents or record keepers resulting from the collection of information, as set out in Tables 2a and 2b, is about 40,136 hours.

EPA is establishing new, more protective emissions standards for criteria pollutants and greenhouse gases (GHG) for light-duty vehicles and Class 2b and 3 ("medium-duty") vehicles that will phase-in generally over model years 2027 through 2032. In addition, EPA is finalizing GHG program revisions in several areas, including off-cycle and air conditioning credits, the treatment of upstream emissions associated with zero-emission vehicles and plug-in hybrid electric vehicles in compliance calculations, medium-duty vehicle incentive multipliers, and vehicle certification and compliance. EPA is also establishing new standards to control refueling emissions from incomplete medium-duty vehicles, and battery durability and warranty requirements for light-duty and medium-duty plug-in electric vehicles. EPA is also finalizing minor amendments to update program requirements related to aftermarket fuel conversions, importing vehicles and engines, evaporative emission test procedures, and test fuel specifications for measuring fuel economy. See **Supplemental Information**, Part 8, for additional information about information to be collected.

To estimate labor costs, EPA used the Bureau of Labor Statistics' (BLS) 2016 National Industry-specific Occupational Wage Estimates for the Engine, Turbine and Power Transmission Equipment Manufacturing Industry (NAICS 333600, available at <a href="https://www.bls.gov/oes/2016/may/naics4\_333600.htm">https://www.bls.gov/oes/2016/may/naics4\_333600.htm</a>). EPA used mean hourly rates increased by

For the number of respondents by manufacture category, see SUPPLEMENTAL INFORMATION, Section 4, below.

a factor of 2.1 to account for benefits and overhead. The labor costs used are set out in Table 1.

Table 1 - Labor Cost Estimates

Occupation	SOC Code Number	Mean Hourly Rate	Adjusted Mean Hourly Rate (Including Benefits and Overhead)
Mechanical Engineers	17-2141	\$45.17	\$94.86
Engineering Managers	11-9041	\$72.53	\$152.31
Lawyers	23-1011	\$85.75	\$180.08
Mechanical Engineering Technicians	17-3027	\$31.81	\$66.80
Computer and Information Analysts	15-1210	\$43.78	\$91.94
Secretaries, Except Legal, Medical and Executives	43-6014	\$21.84	\$45.86
Mechanical Engineering Technicians	17-3027	\$31.81	\$66.80

Table 2a - Estimated Burden and Cost to Respondents - Hours

				[	Burden and	Cost Per A	pplication			
Information Collection Activity	Enginee r Rate/ho ur \$ 94.86	Manag er Rate/ hour \$ 152.31	Legal Rate/ho ur \$ 180.08	Mechanic al Engineer Technical Rate/hour	IT Analysts Rate/ho ur \$ 91.94	Clerical Rate/Ho ur \$ 45.86	Responde nt total hr/yr	Labor Costs hr/yr	Capital Startup costs	O&M Cost¹
Vehicle										
manufacturers:										
review of new										
regulations, general	40	0.5		1.0			405			
system changes	40	25	10	10	50	0	135	\$14,668	\$0	\$200
LD/MD NMOG+NOx										
same fleet ave limit										
applies to 4 test cycles (was FTP and										
SFTP)	0.1	0	0	0.1	0.1	0.5	0.8	\$48	\$0	
LD NMOG+NOx fleet	0.1			0.1	0.1	0.5	0.0	Ψ10	ΨΟ	
ave limit -7°C FTP										
(was NMHC)	0.1	0	0	0.1	0.1	0	0.3	\$25	\$0	
LD/MD PM cap										
across 3 cycles (was										
2 cycles)	2	0	0	3	0	1	6	\$436	\$25,000	\$2,140
LD/MD PM cert at										
test group level										
2027-2029 (was			_							
durability group)	0	0	0	1	0	1	2	\$113	\$0	\$200
LD/MD PM IUVP FTP	0	1	0	1	1	1	4	\$357	\$0	\$200

					Burden and	Cost Per A	pplication			
Information Collection Activity	Enginee r Rate/ho ur \$ 94.86	Manag er Rate/ hour \$ 152.31	Legal Rate/ho ur \$ 180.08	Mechanic al Engineer Technical Rate/hour	IT Analysts Rate/ho ur \$ 91.94	Clerical Rate/Ho ur \$ 45.86	Responde nt total hr/yr	Labor Costs hr/yr	Capital Startup costs	O&M Cost <sup>1</sup>
testing on every test vehicle (was 50%)										
LD/MD PM IUVP USO6 testing on every test vehicle (was 50%)	0	1	0	1	1	1	4	\$357	\$0	\$200
LD/MD CO cap applies to 4 test cycles (was bin	0.4					0.5				·
specific for 2 cycles) LD PHEV HPCS bin- specific NMOG+NOx	0.1	0	0	0.1	0.1	0.5	6	\$48 \$436	\$0 \$0	\$920
LD Early driveaway bin specific NMOG+NOx	2	0	0	3	0	1	6	\$436	\$0	\$1,100
LD Intermediate soak mid- temperature start bin specific NMOG+NOx	2	0	0	3	0	1	6	\$436	\$0	\$1,100
MD NMOG+NOx fleet ave limit -7°C								<b>\$100</b>	Ψ0	Ψ1,100
FTP (new)	2	0	0	3	0	1	6	\$436	\$0	\$2,140
MD GCWR>22,000 Ib certify under HD engine dyno cert for	350	11	0	0	0	11	57	5,500	0	5,000

				- I	Burden and	Cost Per A	pplication			
Information Collection Activity	Enginee r Rate/ho ur \$ 94.86	Manag er Rate/ hour \$ 152.31	Legal Rate/ho ur \$ 180.08	Mechanic al Engineer Technical Rate/hour	IT Analysts Rate/ho ur \$ 91.94	Clerical Rate/Ho ur \$ 45.86	Responde nt total hr/yr	Labor Costs hr/yr	Capital Startup costs	O&M Cost <sup>1</sup>
criteria pollutants and chassis cert for GHG	7 1100	102.01	100.00	Ψ 00.00	72.7	10100				
ORVR from incomplete MD same as for completes	0	0	0	8	1	0	9	\$626	\$1,333	\$500
MD SC03 Testing		2	0	26	1	2	31	\$2,225	\$23,364	\$2,206
Electric vehicle test procedures	0	0	0	1	0	1	2	\$113	\$0	<del>+ -,-</del> -
Implement battery health monitor	20	3	0	20	0	15	58	\$4,378	\$O	\$15,100
Implement means to collect SOCE monitor values from in-use vehicles	16	16	0	16	16	1	65	\$6,540	\$0	\$15,000
Determine and report certified SOCE for each durability family at certification	2	1	1	2	0	1	7	\$702	\$0	\$0
Part A monitor accuracy vehicle recruitment @ 1,3,5 years per monitor family	4	2	1	8	0	2	17	\$1,490	\$0	\$0

				[	Burden and	Cost Per A	pplication			
Information	Enginee r	Manag er	Legal	Mechanic al Engineer	IT Analysts	Clerical	Responde		Capital	
Collection Activity	Rate/ho	Rate/	Rate/ho	Technical	Rate/ho	Rate/Ho	nt total	Labor Costs	Startup	O&M Cost¹
	ur \$	hour \$	ur \$	Rate/hour	ur \$	ur \$	hr/yr	hr/yr	costs	Cost
	94.86	152.31	180.08	\$ 66.80	91.94	45.86				
Part A monitor accuracy vehicle testing @ 1,3,5 years per monitor				00		0	0/	14 000	40	40
family Part A result	2	2	0	20	0	2	26	\$1,922	\$0	\$0
reporting @ 1,3,5 years per monitor									10	10
family Part B determine	2	1	1	0	0	2	6	\$614	\$0	\$0
representative sample annually per			_		_					
durability family	8	8	0	0	2	8	26	\$2,528	\$0	\$0
Part B collect and report SOCE monitor values	8	4	1	2	2	2	19	\$1,957	\$0	\$0
Battery and vehicle component warranty	0	0	1	0	0	5	6	\$409	\$0	\$0
Definitions of Battery Monitor Family and Battery			1			3		φίον	ų o	Ψ0_
Durability Family	2	0.5	0	0	0	0	2.5	\$266		
Definitions of Durability Group to include particulate	4	0.5	0	0	0	0	4.5	\$456	\$0	\$0

					Burden and	Cost Per A	pplication			
Information Collection Activity	Enginee r Rate/ho ur \$ 94.86	Manag er Rate/ hour \$ 152.31	Legal Rate/ho ur \$ 180.08	Mechanic al Engineer Technical Rate/hour	IT Analysts Rate/ho ur \$ 91.94	Clerical Rate/Ho ur \$ 45.86	Responde nt total hr/yr	Labor Costs hr/yr	Capital Startup costs	O&M Cost <sup>1</sup>
filter type										
TOTAL NEW BURDEN MEASURES								\$47,523	\$49,697	\$46,006
AC Credits	(1)	(2)	(1)	(5)	(1)	(2)	(12)	(\$1,097)	\$0	\$0
Off-cycle credits	(10)	(5)	(1)	(1)	(1)	(5)	(23)	(\$2,278)	\$0	\$0
SVM standards	(50)	(40)	(1)	(1)	(1)	(10)	(103)	(\$11,633)	\$0	\$0
TOTAL BURDEN REDUCTION MEASURES								(\$15,008)	\$0	<b>\$</b> 0
Reduced Light and Medium-duty Vehicle Testing and Reporting due to switch from ICE to EVs								(\$23,298,9 19)	(\$18,744,5 38)	(\$3,129,9 38)
TOTAL RULE								(\$23,266,4	(\$18,694,8 41)	(\$3,083,9

<sup>&</sup>lt;sup>1</sup>Includes lab maintenance, shipping and testing costs. Other lab-related costs have already been accounted for in the general certification collections, ICR 1684.20. See section 6(b)(ii) for details.

Table 3b - Estimated Total Burden and Cost to Respondents

		Total Bu	urden and Cost	
Information Collection Activity	Frequency or Applications/ Respondent <sup>1</sup>	Number of Respondents	Total hr/yr	Total Cost/yr
Vehicle manufacturers: review of new				
regulations, general system changes	1.0	35	4,725	\$520,375
LD/MD NMOG+NOx same fleet ave				
limit applies to 4 test cycles (was FTP				
and SFTP)	1	35	28	\$1,690
LD NMOG+NOx fleet ave limit -7°C FTP				
(was NMHC)	1	35	11	\$888
LD/MD PM cap across 3 cycles (was 2				
cycles)	2.9	35	600	\$2,757,598
LD/MD PM cert at test group level				
2027-2029 (was durability group)	128	35	8,960	\$1,400,739
LD/MD PM IUVP FTP testing on every				
test vehicle (was 50%)	867	19	65,854	\$9,168,819
LD/MD PM IUVP USO6 testing on every test vehicle (was 50%)	650	19	49,362	\$6,872,647
LD/MD CO cap applies to 4 test cycles			-	
(was bin specific for 2 cycles)	1	35	28	\$1,690
LD PHEV HPCS bin-specific NMOG+NOx	0.6	35	120	\$27,120
LD Early driveaway bin specific				
NMOG+NOx	2.9	35	600	\$153,598
LD Intermediate soak mid-temperature			_	_
start bin specific NMOG+NOx	2.9	35	600	153,598
MD NMOG+NOx fleet ave limit -7°C	_		0.65	
FTP (new)	1	35	210	\$90,159
MD GCWR>22,000 lb certify under HD				
engine dyno cert for criteria pollutants			1.00/	400.000
and chassis cert for GHG	3	6	1,026	188,999

		Total Bu	urden and Cost	
Information Collection Activity	Frequency or Applications/ Respondent <sup>1</sup>	Number of Respondents	Total hr/yr	Total Cost/yr
ORVR from incomplete MD same as for			,	·
completes	4	7	232	\$63,525
MD SC03 Testing	25	7	5,338	\$4,786,403
Electric vehicle test procedures	3	11	66	\$3,718
Implement battery health monitor	1.2	35	2,436	\$818,078
Implement means to collect SOCE monitor values from in-use vehicles	1	35	2,275	\$753,915
Determine and report certified SOCE for each durability family at certification	4.8	35	1,176	\$117,863
Part A monitor accuracy vehicle	4.0	33	1,170	\$117,003
recruitment @ 1,3,5 years per monitor				
family	57.6	35	34,272	\$3,004,374
Part A monitor accuracy vehicle testing				7 - 7 - 7 - 7
@ 1,3,5 years per monitor family	57.6	35	52,416	\$3,874,929
Part A result reporting @ 1,3,5 years per monitor family	14.4	35	3,024	\$309,370
Part B determine representative sample annually per durability family	24	35	21,840	\$2,123,648
Part B collect and report SOCE monitor values	24	35	15,960	\$1,644,210
Battery and vehicle component warranty	6	11	396	\$27,020
Definitions of Battery Monitor Family				
and Battery Durability Family	6	11	165	\$17,547
Definitions of Durability Group to				
include particulate filter type	10	35	1,575	\$159,455
TOTAL NEW BURDEN MEASURES	Varies	Varies	273,295	\$39,041,978
AC Credits	1	20	(240)	(\$21,945)

		Total B	urden and Cost	
Information Collection Activity	Frequency or Applications/ Respondent <sup>1</sup>	Number of Respondents	Total hr/yr	Total Cost/yr
Off-cycle credits	1	21	(483)	(\$47,844)
SVM standards	0.25	4	(103)	(\$11,633)
TOTAL BURDEN REDUCTION				
MEASURES	Varies	Varies	(826)	(\$81,421)
Reduced Light and Medium-duty Vehicle Testing and Reporting due to				
switch from ICE to EVs	Varies	Varies	(232,333)	(\$45,173,395)
TOTAL RULE	Varies	Varies	40,136	(\$6,212,838)

<sup>&</sup>lt;sup>1</sup>Frequency refers to the number of times a respondent performs each task per year. In most instances, this is tied to the number of engine families or certification applications in each category, except when in one-time tasks or tasks that apply all applications, such as reviewing regulations.

- 13. Provide an estimate for the total annual cost burden to respondents or record keepers resulting from the collection of information. (Do not include the cost of any hour burden already reflected on the burden worksheet).
  - (a) The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life) and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.
  - (b) If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collections services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.
  - (c) Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.

The total annual cost burden to respondents or record keepers resulting from the collection of information, as set out Tables 2a and 2b, is about \$6,213 million, which is a net burden reduction because the total new burden measures are offset by burden reduction measures and reduced light-and medium duty vehicle testing and reporting due to the switch from ICE to EVs. In addition to labor costs, the Agency estimates Capital or Operation and Maintenance costs of about \$5,703 million. The capital start-up costs of the new burden measures is about \$6,558 million; this is offset by \$18,745 million in burden savings from reduce light- and medium-duty vehicle testing and reporting due to a switch from ICE to EVs, for a net burden savings of \$12,187 million.

14. Provide estimates of annualized costs to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information. Agencies may also aggregate cost estimates from Items 12, 13, and 14 in a single table.

EPA has had a certification process in place for light- and medium-duty vehicles for many years. The incremental burden for the Agency associated with this final rule is expected to be revisions to the ABT reporting process to reflect the phase out of the SFTP fleet average standard and changes to EV-CIS data system to reflect new standards and certification reporting for BEVs and PHEVs. This work will be performed by EPA's contractor as part of an existing contract for the mobile source certification database. As such, there is no hourly burden. There is only a one-time \$350,000 cost, which is an estimate for the share of the total annual EV-CIS contracting cost for the Phase 3 module. The Agency burden is set out in Table 3.

Table 4 - EPA Burden

Collection Activity	Total EPA Burden - Hours	Total EPA - Costs	
Changes to EV-CIS to reflect new standards (one-time cost)	N/A <sup>1</sup>	\$350,000	
Total		\$350,000	

<sup>&</sup>lt;sup>1</sup>Work to be performed by EPA's contractors as part of an existing contract for the mobile source certification database

15. Explain the reasons for any program changes or adjustments reported on the burden worksheet (in hour or cost burden.)

This is a new information collection request for a final rulemaking. There are no program changes or adjustments reported on the burden worksheet.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

The information sought pertains to the certification of light-duty and medium-duty engines and vehicles. The information will be collected and made public using EPA's currently existing processes and public databases.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

The information sought pertains to the certification of light-duty and medium-duty engines and vehicles. The expiration date of the information collection approval will be publicly available on OMB's website. EPA will combine with information collection with the programmatic renewal in the future.

18.Explain each exception to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions."

EPA does not request an exception to the certification of this information collection.

#### SUPPLEMENTAL INFORMATION

# 1. Statutory Authorities

The sections of the CAA that provide statutory authority for the requirements contained in this final rule are 202, 203, 206, 207, 208, 213, 216, and 301 (42 U.S.C. 7521, 7522, 7525, 7541, 7542, 7547, 7550, and 7601).

# 2. Affected CFR Regulations

The provisions in the Code of Federal Regulations (CFR) regulations affected by the final rule are set out in Table 4:

*Table* 5 - *Principal Regulations Amended by the Final Rule* 

Industry	40 CFR <sup>1</sup> Part
Requirements for LD and MD Engines &	85, 86,
Vehicles	600
Control of Emissions from New and In-Use	
Heavy-Duty Highway Engines	1036
Control of Emissions from New Heavy-Duty	
Motor Vehicles	1037
Vehicle Testing Procedures	1066
General Compliance Provisions	1068

#### 3. Industries affected

Respondents are manufacturers that sell or import into the United States new light-duty or medium-duty highway engines and vehicles. Respondents affected by the final rule are classified in the North American Industry Classification System codes (NAICS) listed in Table 5.

Table 6 - Respondents North American Industry Classification Codes

Category	NAICS Codes	Examples of Potentially Affected Entities
Industry	336111	Motor Vehicle Manufacturers
	336112	
Industry	811111	Commercial Importers of Vehicles and Vehicle Components
	811112	
	811198	
	423110	
Industry	335312	Alternative Fuel Vehicle Converters

<sup>&</sup>lt;sup>1</sup> Code of Federal Regulations, <a href="https://www.ecfr.gov/">https://www.ecfr.gov/</a>. EPA emissions regulations are found in Title 40.

	811198	
Industry	333618	On-highway medium-duty engine & vehicle (8,501 -14,000
	336120	pounds GVWR) manufacturers
	336211	
	336312	

## 4. Number of Respondents

The number of respondents affected by this Information Collection Request is set out in Table 6, by category of company. Respondent totals were obtained from past response levels. EPA does not expect new HD companies to enter the market by 2027 or a significant number of new engine/vehicle families as these numbers tend to remain stable after the first few years of a new certification program.

*Table 7 - Number of Respondents per Category* 

Industry	Number of Respondents
LDV+MDV Manufacturers	35

### 5. Respondent Activities

Respondent activities are unchanged from those already indicated in the programmatic ICR (ICR 1684.20). Those activities are:

- Review the regulations and guidance documents
- Prepare and submit pre-model year reports or related production data for certification applications
- Develop engine or vehicle "test" or "family" groups
- Test engines and vehicles for compliance with emission and fuel consumption standards (for initial certification, in-use testing)
- Gather and analyze test results
- Submit the Application for Certification
- Label certified vehicles
- Prepare and submit carryover applications
- Prepare GHG compliance plan and reports, as needed
- Prepare and submit annual production reports and ABT reports
- Store, file and maintain records

# 6. Agency Activities

Agency activities are unchanged from those already indicated in the programmatic ICR (ICR 1684.20). Those activities are:

- Review and interpret regulations, provide guidance
- Review pre-model reports, evaluate test plans, and credit projections
- Meet with respondents as requested
- Review certification applications for completeness and accuracy
- Verify that the correct engines and vehicles have been selected and tested
- Evaluate test and related technical documents
- Determining if the use of carry-over/across data is appropriate
- Issue appropriate certificates of conformity
- Collect and review the various reports described in this ICR
- Determine compliance with all regulatory programs and provisions
- Review credit balances under ABT
- Conduct confirmatory testing and in-use testing
- Investigate potential violations and refer findings to the appropriate enforcement office
- Store, file and maintain data
- Answer questions from manufacturers, other government agencies, Congress, and the public
- Periodically perform maintenance or enhance certification and compliance databases as needed
- Make data available to the public and maintain public websites
- Answer FOIA requests, including analyzing and managing requests for confidentiality
- Collaborate with each other, including sharing data and providing access to databases

### 7. Programmatic Information Collection Request

The reporting requirements for EPA's LDV program are covered by a "programmatic" Information Collection Request: Motor Vehicle Emissions and Fuel Economy Compliance (Renewal), EPA ICR 0783.65, OMB Control Number 2060-0104. A copy of that document can be found in the docket for that ICR, EPA-HQ-OAR-2019-0489, and at <a href="https://www.reginfo.gov/public/do/PRAICList?ref\_nbr=202003-2060-015">https://www.reginfo.gov/public/do/PRAICList?ref\_nbr=202003-2060-015</a>.

Vehicles which are covered by these ICs are light-duty vehicles (LDVs), light-duty trucks (LDTs), medium-duty passenger vehicles (MDPVs), and heavy-duty vehicles from 8,500 to 14,000 lbs Gross Vehicle Weight Rating (GVWR)<sup>2</sup>. EPA regulates greenhouse gas (GHG), evaporative, and exhaust emissions from these vehicle classes. The emission standards EPA has set for these vehicles are full useful life standards. The EPA regulations

<sup>&</sup>lt;sup>2</sup> EPA uses the term "medium-duty vehicles" for vehicles in this category in this rulemaking.

can be found in 40 CFR parts 85, 86, 600, 1036, 1037, and 1068.

The programmatic ICR includes: two ICs covering light-duty vehicle and truck emissions, the Light-Duty Vehicles and Light Duty Trucks Emissions IC and the Tier 3 Motor Vehicle Emissions IC; two ICs covering fuel economy, the Fuel Economy IC and the Fuel Economy Labeling IC; one IC covering defects and recalls, the Defect Reports and Voluntary Emission Recall Reports IC; and, one IC covering in-use testing, the Manufacturers In-Use Verification Program IC.

The programmatic ICR describes all of the collection activities associated with each of the six separate ICs.

#### 8. Description of Information to be Collected by Manufacturers

The following are brief descriptions of the collection activities contained in Tables 2a and 2b, above. The actual requirements are contained in the draft regulations included in the final rule.

**Reduced emissions testing** – EPA expects that as manufacturers transition to BEVs, overall emissions testing burdens would decrease. EPA also expects that emissions testing burdens may be reduced because manufacturers would not be required to test on both E0 and E10 fuels (but could choose to do so in the near term). EPA has estimated a 60 percent reduction in emissions testing overall for the combined light- and medium-duty fleet due to these factors. EPA recognizes that there is significant uncertainty in this estimate due to uncertainty regarding how many vehicles with engines will remain in the fleet and also how manufacturers would respond to the test fuel options. However, EPA believes the 60 percent reduction estimate is reasonably conservative.

**AC Credits** – EPA is scaling back optional AC system credits for reducing AC refrigerant leakage and using alternative refrigerants. EPA is eliminating optional AC efficiency credits for BEVs. This would result in a small savings in manufacturer annual credit reporting and recordkeeping.

**Off-cycle credits** - EPA is phasing out optional off-cycle credits. This would result in a small savings in manufacturer annual credit reporting and recordkeeping.

Small volume manufacturer alternative standards – EPA is eliminating small volume manufacturer (SVM) alternative standards provisions which currently allow manufacturers with U.S. annual sales of less than 5,000 vehicles to apply for case-by-case manufacturer specific alternative GHG standards. Applications can include requests for alternative standards for up to five model years. There are currently four manufacturers using these provisions. EPA has estimated reduced reporting and recordkeeping associated with the elimination of the application process for participating manufacturers, due to the elimination of the SVM alternative standards provisions.

**Implement battery health monitor** – For light-duty and Class 2b and 3 BEVs and PHEVs, manufacturers will install a customer-accessible battery state of health monitor which estimates, monitors, and communicates the state of certified energy (SOCE), defined as the state of its usable battery energy (UBE) expressed as a percentage of the original UBE when the vehicle was new. In general, manufacturers already perform battery state of health monitoring by means of proprietary algorithms residing in the software of the battery management system. Meeting this provision may call for modification of the software to estimate this specific metric, testing of the algorithm, and providing a means for the customer to access the monitor value.

**Determine and report certified SOCE for each battery durability family at certification** – For BEVs, UBE is currently determined by the same MCT test used for range labeling. PHEVs perform a similar test for labeling but do not currently determine a UBE value. The new battery durability requirement calls for a certified UBE value to be established for each battery durability family, and coverage of these families may require additional testing and reporting over that required for labeling.

**Implement means to collect SOCE monitor values from in-use vehicles** – For light-duty BEVs and PHEVs, demonstrating compliance with the battery durability minimum performance requirement is based on SOCE monitor values collected from at least 500 in-use vehicles annually per battery durability family. It is expected that many manufacturers will utilize existing over-the-air (OTA) functionality to collect this information, while those that have not implemented such a system may arrange to collect the information through dealership networks, service facilities, or other existing means.

**Part A monitor accuracy vehicle recruitment** @ **1,3,5 years per monitor family** — Manufacturers will be required to meet a standard for accuracy of their on-board SOCE monitors. To determine the accuracy of the monitors, between 3 and 16 vehicles from each monitor family would be recruited and procured in-use at 1 year, 3 years, and 5 years. Because the testing regimen may require testing as few as 3 or as many as 16 vehicles from a given monitor family to reach an accuracy assessment for the family, as many vehicles must be recruited from the in-use fleet and prepared for testing at each interval.

**Part A monitor accuracy vehicle testing** @ **1,3,5 years per monitor family** – Once the required number of vehicles are recruited and procured, onboard monitor values for SOCE would be recorded for each. Each vehicle would then be tested to determine actual UBE capability of the battery by the same test that was used to determine certified UBE. The applicable test is SAE Standard J1634 for determining UBE for BEVs, and EPA is adopting a method for determining UBE for PHEVs based on SAE J1711. The UBE determined by the test would be used to calculate the measured SOCE and the measured value would be compared to the value reported by the SOCE monitor prior to the test. The reported accuracy of SOCE must be within 5 percent of the UBE value determined from the MCT, as defined and determined via the Part A statistical method defined in GTR No. 22.

**Part A result reporting @ 1,3,5 years per monitor family** – Results of the Part A accuracy determination for each monitor family would be compiled and reported to EPA.

**Part B - determine representative sample annually per durability family** – In a similar manner to the "Part B" compliance provisions of GTR No. 22, once having demonstrated Part A accuracy for the SOCE monitor through the 5<sup>th</sup> year, manufacturers would begin the battery durability compliance demonstration by annually determining a statistically adequate representative sample of generally no less than 500 in-use vehicles per battery durability family, from which SOCE monitor values will be collected for the purpose of demonstrating battery durability compliance for that family. The manufacturer would use good engineering judgment in determining that the sample is statistically adequate and representative of the in-use vehicles comprising each durability family, subject to approval by EPA.

**Part B - collect and report SOCE monitor values** – Manufacturers would demonstrate compliance with the MPR by collecting the values of the onboard SOCE monitors of the representative sample of in-use vehicles for each durability family, and reporting the data and results to EPA.

#### **Criteria Pollutants**

**LD/MD NMOG+NOx standards over four test cycles** – For LD/MD NMOG+NOx under the final rule, the same fleet average limit applies to four test cycles (Tier 3 requires reporting for FTP and SFTP). The final rule applies separate NMOG+NOx standards for testing over FTP, HFET, US06, and SC03. HFET is new but HFET is run anyway for GHG, so we assume no new HFETs need to be run. The additional burden is reporting 4 test results instead of 2 tests, and changing the reporting templates. We estimate that changing the template is the same effort as reporting NMHC instead of NMOG+NOx (1 hr engineer, 1 hr technician, 1 hr IT analyst and would be the same for each manufacturer. We estimate that reporting 4 numbers instead of 2 takes 0.5 hr clerical per test group per year.

**LD NMOG+NOx fleet ave limit -7°C FTP (was NMHC)** – The change from NMHC to NMOG+NOx does not require new instruments or test procedures, but the reporting template needs to be changed from NMHC to NMOG+NOx. 1 hr engineer, 1 hr technician, 1 hr IT analyst.

**LD/MD PM cap across 3 cycles (was 2 cycles)** – The final rule would add a -7°C FTP PM test. We assume that additional staff or an additional shift can cover this testing and that no additional cold test facilities need to be built. Not all test facilities may be equipped with PM sampling systems, however, so we assume each manufacturer would need to purchase one additional PM sampling system (\$250,000) and assume it lasts for 10 years. We estimate that -7°C FTP requires 3 hr technician (set up test, drive test, prepare and weigh filter media), 2 hr engineer (determine test settings, review results, troubleshoot), 1 hr clerical (reporting). \$2140/test O&M (based on an FEV quote). The amount of testing is estimated to be 600 test groups, and we assume half are BEV with no emissions testing. We estimate that 1/3 of ICE test groups would be tested in a year (due to 3 year phase-in), spread over 35 manufacturers.

**LD PM cert at test group level 2027-2029 (was durability group)** – LD PM was tested at the durability group level in Tier 3. The final rule requires LD PM at test group level. We assume

that additional staff or an additional shift can be used to cover this testing and that no additional test facilities need to be built and no additional equipment needs to be purchased. Additional testing includes -7°C FTP, 25C FTP, and US06 cycles for (test groups – durability groups) number of tests. We used FEV costs to estimate O&M costs for these cycles.

**LD PM IUVP testing on every test vehicle (was 50%)** – Tier 3 IUVP measured PM on 50% of vehicles. The final rule requires PM measurement on 100% of vehicles.

**LD/MD CO** cap applies to 4 test cycles (was bin specific for 2 cycles) – Tier 3 requires FTP and SFTP testing (FTP, US06, SC03). The final rule would require FTP, HFET, US06, SC03. That means HFET is new but HFET is run anyway for GHG, so we assume the same HFET can be used for GHG and criteria pollutants. The additional burden is reporting 4 numbers instead of 2 and changing over the reporting templates. We estimate that changing the template is the same effort as is estimated for reporting NMHC instead of NMOG+NOx (1 hr engineer, 1 hr technician, 1 hr IT analyst for each manufacturer. W divide by 10 years since this only needs to happen once. We estimate that reporting 4 numbers instead of 2 takes 0.5 hr clerical per test group per year.

**LD PHEV HPCS bin-specific NMOG+NOx** – Manufacturers would need to run a cold start US06 test for each test group. This is a new requirement. We estimate that cold start US06 testing requires 3 hr technician (set up test, drive test, process results), 2 hr engineer (determine test settings, review results, troubleshoot), 1 hr clerical (reporting). We estimate \$920/test O&M for facilities (based on FEV quote). We assume 600 test groups and assume 1/10 of the test groups are PHEVs and that 1/3 of these are tested in a year (due to 3-year phase-in), spread over 35 manufacturers.

**LD Early driveaway bin specific NMOG+NOx** – Manufacturers would need to run an early driveaway FTP test. This is a new requirement. We estimate that early driveaway FTP test requires 3 hr technician (set up test, drive test, process results), 2 hr engineer (determine test settings, review results, troubleshoot), 1 hr clerical (reporting). We estimate \$1100/test for O&M for facilities (based on FEV quote). We estimate 600 test groups and assume 50% are BEV that would not need this testing. We estimate testing of 1/3 of these in a year (due to 3-year phase-in), spread over 35 manufacturers.

**LD Intermediate soak mid-temperature start bin specific NMOG+NOx** – Manufacturers need to run 3 new intermediate soak FTP tests. We estimate that each early driveaway FTP test requires 3 hr technician (set up test, drive test, process results), 2 hr engineer (determine test settings, review results, troubleshoot), 1 hr clerical (reporting). We estimate \$1100/test O&M for facilities (based on FEV quote). We estimate the burden assuming 600 test groups, 3 new FTP tests, 50% of test groups are BEVs (so don't need this test for those test groups), manufacturers would test 1/3 of these in a year (due to 3-year phase-in), spread over 35 manufacturers.

**MD NMOG+NOx fleet ave limit -7°C FTP (new)** – Manufacturers would need to run a new -7°C FTP test. We estimate that -7°C FTP requires 3 hr technician (set up test, drive test, process results), 2 hr engineer (determine test settings, review results, troubleshoot), 1 hr clerical (reporting). We estimate \$2140/test O&M for facilities (based on FEV quote). We estimate the

burden assuming 600 test groups and assume half are BEVs (so don't need this test those test groups), and manufacturers would test 1/3 of ICE test groups in a year (due to 3-year phase-in), spread over 35 manufacturers.

**MD PM IUVP testing on every test vehicle (was 50%)** – Tier 3 IUVP measured PM on 50% of vehicles. The final rule requires PM measurement on 100% of vehicles.

**High GCWR MDV MAW in-use testing** – EPA is finalizing in-use moving average window (MAW) standards for spark ignition and compression ignition high GCWR MDV, which are defined as having agross combined vehicle weight (GCWR) above 22,000 pounds. EPA estimates the burden of high GCWR MDV MAW in-use testing will require about 35 hr engineer, 11 hr manager, and 11 hr clerical from each of 6 manufacturers. We estimate \$5,500/test O&M for facilities.

**MD** incomplete vehicle ORVR testing – EPA is adopting onboard refueling vapor recovery standards for incomplete MDVs. We estimate 7 potential MDV manufacturers would report data for an average of 4 test groups per manufacturer.

### Other Elements

The Agency is making a change to the charge depletion tests for plug-in hybrid electric vehicles (PHEVs). To comply with the battery durability requirements, PHEVs will now be required to determine and report the useable battery energy (UBE) determined from the existing charge depletion test requirement. This new requirement does not require any additional test equipment or unique new measurement during the test. The current charge depleting test data will be used to determine this value.

The Agency is codifying warranty requirements for BEV and PHEV batteries and related components (e.g., electric machines, inverters, and similar key electric powertrain components). EPA is designating light-duty vehicle BEV and PHEV batteries and associated electric powertrain components as Specified Major Emission Control Components. The Agency is also specifying warranty coverage for BEV and PHEV Class 2b and 3 vehicles. These new requirements may result in manufacturers revising their published warranty documents.

EPA is creating battery monitor and battery durability families for BEVs and PHEVs. As part of the new durability requirements, manufacturers of light-duty vehicles will be required to perform in-use testing of battery monitor families and record the state-of-certified-energy (SOCE) from battery durability families. Manufacturer staff will need to spend time specifying battery monitor and battery durability families for each new model year. Staff will be required to disclose the specifications for each monitor and durability family to EPA.

EPA is also revising the durability definition for internal combustion engines by including the particulate filter type as an additional descriptor for defining a durability group. Manufacturer staff will need to spend time specifying durability groups based on the addition of particulate filter type. Manufacturers will be required to disclose the group definitions to EPA at the time of certification.

The changes EPA is adopting to the IUCP program and the other miscellaneous regulatory changes will not have any impact or result in any new reporting requirements.

# LIST OF ATTACHMENTS

[No attachments]