

Supporting Statement
for
Information Collection Request
Motor Vehicle Emissions and Fuel Economy Compliance (Renewal)
EPA ICR 0783.65
OMB Control Number 2060-0104

Compliance Division
Office of Transportation and Air Quality
Office of Air and Radiation
U.S. Environmental Protection Agency

Part A SUBMISSION

Section 1: Identification Of The Information Collection

1(a) Title And Number Of The Information Collection

Motor Vehicle Emissions and Fuel Economy Compliance (Renewal), EPA ICR number 0783.65, OMB control number 2060-0104.

1(b) Short Characterization/Abstract

EPA sets exhaust, evaporative, and greenhouse gas emissions standards for light-duty vehicles (LDVs) and light-duty trucks (LDTs) based on the authority granted to the Agency by the Clean Air Act (CAA). In addition, light-duty vehicle manufacturers use the results from the exhaust emission tests to calculate vehicle fuel economy. The fuel economy results are used to calculate fuel economy label values according to EPA regulations. EPA regulations define test procedures, in-use testing requirements, calculation methods, vehicle labeling, and reporting requirements for light-duty vehicle manufacturers.

This ICR is organized into six information collections (ICs): 1) Fuel Economy; 2) Manufacturers' In-Use Verification Program; 3) Light-Duty Vehicles and Light-Duty Trucks Emissions; 4) Defect Reports and Voluntary Emissions Recall Reports; 5) Fuel Economy Labeling; and, 6) Tier 3 Motor Vehicle Emission Standards. Previous ICRs in the 0783 ICR series included the on-highway motorcycle certification and compliance program.

This ICR covers the application submitted by light-duty vehicle manufacturers prior to production as well as various reports and information submitted during and after production. Processing and review of this information is conducted by the Light-Duty Vehicle Center, Compliance Division, Office of Transportation and Air Quality, Office of Air and Radiation US EPA.

Information collected consists of descriptions of motor vehicles (including vehicle specifications, i.e. weight and road load forces, required for testing and emission control system components), test results, defect and recall reports, and sales data (used to determine compliance with fleet average standards). EPA performs tests to confirm the emission and fuel economy results which have been generated by the manufacturer at their test facilities. EPA performs confirmatory testing on 10% to 15% of all the vehicle tests the manufacturers perform. All of these data are electronically submitted to the Agency.

All reporting covered by this ICR is done electronically via EPA's engine and vehicle compliance information system (EV-CIS). Subject to claims of confidentiality information made available to EPA by manufacturers is made available to interested parties upon request. In addition, once a manufacturer enters a vehicle into commerce EPA makes publicly available the fuel economy and emission test results for that vehicle. These data

can be located on the EPA website <https://www.epa.gov/compliance-and-fuel-economy-data>. EPA maintains a separate public document site, the EPA document index system (DIS, <https://iaspub.epa.gov/otaqpub/>), where the public can search and download copies of manufacturers applications with the confidential business information removed for vehicles which have been entered into commerce.

Section 2: Need For And Use of the Collection

2(a) Need/Authority For The Collection

EPA's emission compliance and fuel economy programs are statutorily mandated; the Agency does not have discretion to cease these functions. EPA uses information supplied by the manufacturer to verify that the proper test vehicles have been selected and that the necessary testing has been performed to assure that each vehicle design complies with the required emission standards.

Under Title II of the Clean Air Act (42 U.S.C. 7521 et seq.), EPA is charged with issuing certificates of conformity for motor vehicle designs that comply with applicable emission standards. A manufacturer must have a certificate before vehicles may be legally introduced into commerce. Provisions in the Energy Policy Conservation Act (EPCA; codified as Title III of the Motor Vehicle Information and Cost Savings Act, 15 U.S.C. 2001 et seq.) require fuel economy ratings to be determined and vehicles to be labeled. To insure compliance with these statutes, EPA reviews product information and manufacturer test results; EPA also tests some vehicles to confirm manufacturer results. Information is also shared with other agencies: the Internal Revenue Service for "gas guzzler" taxes and NHTSA for CAFE requirements.

Under Title I of the Energy Independence and Security Act of 2007 (49 U.S.C 32908), NHTSA, in consultation with EPA and the Department of Energy, were charged with establishing regulations to implement labeling requirements for new automobiles. Based on the criteria provided by EPA, NHTSA developed a program requiring manufacturers to label new automobiles with information reflecting an automobile's "fuel economy and greenhouse gas and other emissions" performance over the automobile's useful life. NHTSA developed a rating system making it easy for consumers to compare the fuel economy and greenhouse gas and other emissions of automobiles at the point of purchase, including designations of automobiles with the lowest GHG emissions over the useful life of the vehicles, and the highest fuel economy.

The regulations dealing with LDV emission control and can be found in 40 CFR Parts 85 and 86. EPA's LDV fuel economy provisions are found in 40 CFR Part 600. The regulations are not attached to this statement due to their length and technical nature.

2(b) Practical Utility/Users of the Data

This section outlines the major features of the programs covered by this ICR and is organized by information collection. As noted above in Section 1(b) the Highway

Motorcycles IC is being moved to a separate ICR (ICR 2535.02, OMB 2060-0710) and is not discussed in this ICR. Included in this ICR are: 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.

Vehicles which are covered by these ICs are light-duty vehicles (LDVs), light-duty trucks (LDTs), medium-duty passenger vehicles (MDPVs), and chassis-certified heavy-duty vehicles from 8,500 to 14,000 lbs Gross Vehicle Weight Rating (GVWR). 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 can be found in 40 CFR Parts 85, 86, 600, and 1037 Subpart B.

Emissions Programs for Light Duty Vehicles and Trucks

ICs covering emissions from LDVs and LDTs include the Light-Duty Vehicle and Light-Duty Truck Emissions IC and the Tier 3 Motor Vehicle Emissions IC. Motor vehicle manufacturers must submit an application for emission certification prior to beginning production. The application describes the vehicle and emission control systems for the proposed test group and evaporative emission family including technical details of the emission control systems and emission test results demonstrating compliance with the emission standards. The application and supporting test results are reviewed, and, if the application meets the regulatory requirements, a certificate of conformity is issued by EPA.

Prior to submitting an application for a certificate of conformity to EPA a manufacturer performs a variety of exhaust and evaporative emission tests on durability data vehicles and certification data vehicles. The certification data vehicles are low-mileage (the vehicle accumulates a minimum of 2,000 to a maximum of 6,000 miles) vehicles which are representative of the production vehicles the manufacturer will be producing.

The Compliance Assurance Program (CAP2000) final rulemaking was issued in May of 1999 (85 FR 23905, May 4, 1999). CAP2000 simplified and streamlined the procedures manufacturers follow to obtain certification of new motor vehicles. CAP2000 reduced certification costs for manufacturers and provided manufacturers greater control of production timing. A part of the certification process requires manufacturers demonstrate the durability of their emission control systems. The CAP2000 rulemaking simplified the durability process by aggregating vehicles expected to exhibit similar emissions deterioration into durability groups. Emissions durability is demonstrated by aging the worst-case vehicle in the durability grouping. EPA estimated the number of durability demonstrations by using the CAP2000 durability groupings would be reduced by as much as 75%.

Durability data vehicles are emission tested at low-mileage and at mileages

approaching or equivalent to the full useful life of the vehicle and emission control systems. The difference between the emission results when tested at low-mileage and when tested at full-useful life mileage is the deterioration factor (DF). EPA regulations require manufacturers to develop DFs for each of their test groups and report these results to EPA. The DF is added to the certification data vehicle test results to determine if the certification data vehicle will meet the full useful life emission standards.

Manufacturers have two primary methods for aging vehicles and emission control systems. One method is to drive the vehicles with the emission control systems until the vehicle has reached the full useful life mileage (150,000 miles for vehicles meeting EPA's Tier 3 emission standards). The second method is a bench aging process of critical emission control components which consists of accelerated aging of those components. EPA allows manufacturers to rapid age the catalytic converter and components of the evaporative emission control system. EPA believes rapid aging programs are effective at predicting the emission control system deterioration that occurs in-use. Currently diesel vehicles must perform vehicle aging by driving vehicles over the standard road cycle until the durability vehicle has accumulated 150,000 miles (40 CFR Appendix V To Part 86 – The Standard Road Cycle (SRC)).

Manufacturers notify EPA of their durability program processes prior to, or concurrent with their application for certification. The performance of the durability program and the estimation of emission deterioration is evaluated by the results of the manufacturer's IUVP testing.

Once a manufacturer has developed a DF for a durability group, this DF can be carried over to future model years assuming the important design characteristics of the durability group do not change from one model year to the next and the IUVP testing demonstrates the vehicles utilizing the DF meet the standards in-use.

With the establishment of the DF for a manufacturer's durability group, the manufacturer will next begin performing emission tests on certification data vehicles. Manufacturers currently perform certification emission tests to demonstrate each test group meets their GHG, exhaust, and evaporative emission standards. Manufacturer's submit the results of their certification testing to EPA using the Engines and Vehicles Compliance Information System (EV-CIS). EV-CIS, formerly known as Verify, is EPA's compliance information system for: Engines; Vehicles; and, Equipment used in transportation and other mobile source applications. Vehicle manufacturers use this system to report certification and compliance information for emissions and fuel economy.

EPA compliance division staff are notified when a manufacturer submits a certification test result in EV-CIS. Upon notification, EPA staff begin reviewing the certification test results to determine if EPA should perform a test on the vehicle to confirm the manufacturer supplied test results. EPA conducts confirmatory testing on 10% to 15% of all vehicles tested by the manufacturers as part of the certification testing process. EPA testing of manufacturer certification vehicles is performed to verify the manufacturer's results and ensure that EPA and the manufacturer's test laboratory are correlated.

The testing processes and the required tests have been updated over the decades since EPA began requiring manufacturers perform tests to demonstrate compliance with the emission standards. The EPA has been performing the Federal Test Procedure (FTP) and the Highway Fuel Economy Test (HFET) since the 1980's to measure exhaust emissions and the fuel economy of motor vehicles. These tests are performed in a laboratory on a chassis dynamometer with the test laboratory temperature controlled between 68°F and 86°F. The FTP is a cold start test since the vehicle must be “soaked” with the engine off for 12 to 36 hours prior to the vehicle being placed on the dynamometer before the engine is started. The test includes capturing the exhaust emissions that occur when the engine is started cold. The HFET is performed on a fully warmed up vehicle and the engine is running when the exhaust sampling is started as the vehicle begins to drive the highway test cycle. The speed-time traces for the various EPA driving cycles can be found in 40 CFR Appendix I To Part 86 – Dynamometer Schedules.

In 1996 the testing process was expanded with the creation of the Supplementary Federal Test Procedure rulemaking (61 FR 54851). This rulemaking added two additional test procedures and set additional Supplemental Federal Test Procedure (SFTP) exhaust emission standards. The added test procedures were included to represent higher speed driving and higher acceleration rates (the US06 test procedure) and air conditioning operation with the test cell temperature maintained at 95°F (the SC03 test procedure).

Another test procedure is the 20°F Cold Temperature Federal Test Procedure (Cold FTP). This test procedure is run on a chassis dynamometer with the test cell temperature maintained at 20°F throughout the test. EPA has set standards limiting the emissions of non-methane hydrocarbons (NMHCs) and carbon monoxide (CO) on the Cold FTP. The regulations adopting the NMHC standard were implemented as part of EPA's regulations for Control of Hazardous Air Pollutants from Mobile Sources (72 FR 8428) issued on February 26, 2007.

In addition to the exhaust emission tests described above, manufacturers perform evaporative emission tests on their certification data vehicles to demonstrate the vehicle meets EPA evaporative emission standards. Evaporative emission tests are performed to measure hot soak and diurnal evaporative emissions, running losses (evaporative emissions which occur while the vehicle and engine are operating), and refueling emissions. The evaporative emission test procedures are described in 40 CFR Part 86 Subpart B.

With the emission testing complete manufacturers have the necessary information to submit their Part 1 application and request a Certificate of Conformity (CoC). The Part 1 application includes information outlined in 40 CFR 86.1844-01(d) – including: the manufacturer's contact information; a description of the durability group, test group, and evaporative emissions family; durability information, including a description of the durability process utilized; a comprehensive list of all the tests including the applicable full useful life emission standards; a description of the operation of the diagnostics system; a description of the emission controls and their operation; and, identification and description of all vehicles.

At the time of certification, manufacturers submit their application and supporting information to EPA using EV-CIS, EPA's compliance information system for: Engines; Vehicles; and, Equipment used in transportation and other mobile source applications. Vehicle manufacturers use this system to report certification and compliance information for emissions and fuel economy.

Compliance division staff review the Part 1 application and any other documents that the manufacturer has submitted with the application and makes a determination whether the Part 1 application is complete and the test group and evaporative emission family meet all of the required standards prior to approving the request for a CoC.

On April 28, 2014 EPA issued the Final Tier 3 Motor Vehicle Emission and Fuel Standards Rule (79 FR 23414). The Tier 3 rule set more stringent exhaust and evaporative emission standards for LDVs, LDTs, MDPVs, and chassis-certified heavy-duty vehicles (HDVs). The final Tier 3 regulations harmonized the federal vehicle emissions program with California's LEVIII requirements. This ICR renewal includes the IC for vehicle emissions, the Tier 3 fuel standards are covered by a separate fuel ICR.

The Tier 3 Emissions rule, like the prior Tier 2 Emissions rule, includes multiple family emission limits (FELs) which manufacturers elect to certify individual test groups and evaporative emission families. Table 1 lists the seven unique Tier 3 exhaust emission FELs or bins which manufacturers can choose to certify individual test groups.

FEL Name	NMOG+NO _x FELs for low altitude	NMOG+NO _x FELs for high altitude	CO for low and high altitude
Bin 160	0.160	0.160	4.2
Bin 125	0.125	0.160	2.1
Bin 70	0.070	0.105	1.7
Bin 50	0.050	0.070	1.7
Bin 30	0.030	0.050	1.0
Bin 20	0.020	0.030	1.0
Bin 0	0.000	0.000	0.0

Manufacturers are free to choose the bin level when certifying their test groups as long as at the conclusion of the model year the manufacturers fleet average emission level meets the declining Tier 3 fleet average emission standard. EPA set a unique fleet average standard for LDVs and LDT1 trucks and a different unique fleet average standard for LDT2, LDT3, and LDT4 trucks. LDT1 through LDT4 are different classes of light-duty trucks based on rated vehicle weight. Trucks in classes LDT1 and LDT2 are considered light LDTs (LLDTs) and trucks in classes LDT3 and LDT4 are considered heavy LDTs (HLDTs). Table 2 lists the declining fleet average for these groups. By the 2025 model year, manufacturers are required to meet the .030 g/mi NMOG+NO_x fleet average standard.

Table 2. Declining Fleet-Average Tier 3 NMOG+NO_x Standards (g/mi)

Model Year	LDV, LDT1 - 150,000 mile useful life	LDT2, HLDT
2017	0.086	0.101
2018	0.079	0.092
2019	0.072	0.083
2020	0.065	0.074
2021	0.058	0.065
2022	0.051	0.056
2023	0.044	0.047
2024	0.037	0.038
2025	0.030	0.030

Manufacturers are also required to meet a Tier 3 fleet average NMOG+NO_x standard for the SFTP. Manufacturers are allowed to set the SFTP NMOG+NO_x FEL in any even increment of .010 g/mi up to a maximum of 0.180 g/mi. Table 3 lists the declining fleet average NMOG+NO_x SFTP standard for LDVs and LDTs.

Table 3. Declining Fleet-Average Tier 3 SFTP Standards

Model Year	NMOG+NO _x (g/mi)
2017	0.103
2018	0.097
2019	0.090
2020	0.083
2021	0.077
2022	0.070
2023	0.063
2024	0.057
2025	0.050

The Tier 3 rule includes chassis-certified HDVs, which also have fleet average standards for NMOG+NO_x on the FTP and SFTP. Like the LDVs, HDV manufacturers have a number of FELs from which to choose when selecting an emission level for each certified test group. HDV manufacturers are not free to choose an FEL for the SFTP however, as, the FEL selection includes both an FTP and SFTP NMOG+NO_x standard. Tables 4 and 5 list the NMOG+NO_x FTP and SFTP FELs for Class 2b HDVs and Class 3 HDVs respectively. Table 6 lists the declining fleet average for the FTP for both Class 2b and Class 3 HDVs.

Table 4. Tier 3 Family Emission Limits for Class 2b HDVs (g/mi)				
FEL Name	NMOG+NO _x		CO	
	FTP (FEL)	SFTP	FTP	SFTP
Bin 250	0.250	0.800	6.4	22.0
Bin 200	0.200	0.800	4.2	22.0
Bin 170	0.170	0.450	4.2	12.0
Bin 150	0.150	0.450	3.2	12.0
Bin 0	0.000	0.000	0.0	0.0

Table 5. Tier 3 Family Emission Limits for Class 3 HDVs (g/mi)				
FEL Name	NMOG+NO _x		CO	
	FTP (FEL)	SFTP	FTP	SFTP
Bin 400	0.400	0.550	7.3	6.0
Bin 270	0.270	0.550	4.2	6.0
Bin 230	0.230	0.350	4.2	4.0
Bin 200	0.200	0.350	3.7	4.0
Bin 0	0.000	0.000	0.0	0.0

Table 6. Declining Fleet-Average Tier 3 FTP NMOG+NO _x Standards (g/mi)			
Model Year	Class 2b	Class 3	
2016	0.333	0.548	
2017	0.310	0.508	
2018	0.278	0.451	
2019	0.253	0.400	
2020	0.228	0.349	
2021	0.203	0.298	
2022	0.178	0.247	

In addition to exhaust emission standards for NMOG+NO_x and carbon monoxide (CO), EPA has exhaust emission standards for formaldehyde and particulate matter (PM). EPA has evaporative emission standards for the total hydrocarbons (HCs) which evaporate from the vehicle while it is operating (running loss test procedure) and also when parked and not running (hot soak and diurnal test procedures) and when the vehicle is refueled (refueling emission test procedure).

EPA has exhaust emission standards for greenhouse gas emissions which include carbon dioxide (CO₂), nitrous oxide (N₂O), and methane (CH₄). Manufacturers have the option of demonstrating their vehicles meet the N₂O and CH₄ emission standards by measuring the emissions on their certification exhaust emission data vehicles. The other option is for manufacturers to demonstrate their vehicles meet the N₂O and CH₄ emission standards when testing their fuel economy data vehicles.

The CO₂ standards are regulated on a fleet average basis. Manufacturers are required

to meet a fleet average standard for LDVs and a separate fleet average standard for LDTs. Manufacturers determine their production weighted fleet average CO₂ emissions according to the procedures outlined in Part 86 and Part 600. The model-type carbon-related exhaust emission (CREE) results are determined according to 40 CFR Part 600 subpart F and the CREE results measured during testing become the certification standard for each model type. Part 600 and Part 86 includes the regulations for fuel economy labeling and GHG emissions from motor vehicles. EPA's fuel economy labeling program and GHG regulations are described below.

Fuel Economy Programs for Light Duty Vehicles and Trucks

The information submitted to EPA as a part of the existing certification and compliance program are used, in conjunction with additional tests and projected sales, to establish fuel economy ratings and LDV and LDT fleet average CO₂ emissions values. Based on FTP and HFET test results, EPA calculates a fuel economy value and CO₂ emissions for each vehicle model. EPA then computes an average fuel economy and CO₂ emissions rate for each manufacturer that is weighted by the number of units of each of its vehicle models in that year.

EPA and NHTSA over the years have issued rulemakings addressing GHG emissions and corporate average fuel economy requirements from LDVs and LDTs. These rulemakings have been based on the testing manufacturers perform and data manufacturers submit from their fuel economy data vehicles (FEDVs). FEDVs are tested to determine a vehicle's fuel economy while confirming that the vehicle meets the existing exhaust emission standards. In a joint rulemaking (75 FR 25324, May 7, 2010) EPA and NHTSA established harmonized federal greenhouse gas (GHG) emissions and corporate average fuel economy (CAFE) standards for new cars, sport utility vehicles, minivans, and pickup trucks. In a later joint rulemaking (77 FR 62624, October 15, 2012) EPA and NHTSA extended the harmonized federal GHG and CAFE standards for new cars, sport utility vehicles, minivans and pickup trucks.

EPA has been performing two-cycle (FTP and HFET) fuel economy tests on LDVs since the 1980's. The results from these tests have been used to generate fuel economy label values and used by NHTSA to determine manufacturer's CAFE results. In the "five-cycle" label rulemaking (71 FR 77872, December 27, 2006) EPA extended the required fuel economy labels to certain heavier vehicles up to 10,000 pounds gross vehicle weight, such as larger SUVs and vans, beginning with the 2011 model year.

In a 2011 rulemaking (76 FR 39478, July 6, 2011) EPA and NHTSA made revisions and additions to the fuel economy label. This rulemaking was driven by the requirements of the Energy Independence and Security Act of 2007 which imposed new labeling requirements and inclusion of advanced-technology vehicles as they began entering the market. The rule required labels for seven unique vehicle fuel technologies: gasoline, diesel, ethanol flexible fuel vehicles (FFVs), compressed natural gas (CNG) vehicles, battery electric vehicles (BEVs), fuel cell vehicles (FCVs), and plug-in hybrid electric vehicles (PHEVs). The rulemaking also codified the test procedures used to measure

emissions and vehicle economy for PHEVs and BEVs.

The 2011 rulemaking (76 FR 39478, July 6, 2011) also updated the fuel economy label by including PHEVs and BEVs in the labeling requirement and adopted modifications to the label format and information required to comply with the Congressional mandate in the Energy Independence and Security Act of 2007. Congress mandated that EPA and NHTSA: provide consumers information on performance with respect to “fuel economy and greenhouse gas and other emissions” over the automobile’s useful life; display a rating system that would make it easy for consumers to compare the fuel economy and GHG emissions of automobiles at the point of purchase, including designations of vehicles with the lowest GHG emissions over the useful life of the vehicle, and the highest fuel economy.

EPA regulations require manufacturers to test and provide data to EPA from the highest projected model year sales subconfiguration within the highest projected model year sales configuration for each base level. Manufacturers are required to submit the emission and fuel economy test results from the FEDV to EPA. These data are submitted into EV-CIS and the appropriate EPA Compliance Division staff are notified that emissions and fuel economy data have been submitted.

Upon notification, EPA staff begin reviewing the FEDV test results to determine if EPA should perform a test on the vehicle to confirm the manufacturer supplied test results. EPA conducts confirmatory testing on 10% to 15% of all vehicles tested by the manufacturers as part of the FEDV testing process. EPA testing of manufacturer FEDVs is performed to verify the manufacturer’s results and ensure that EPA and the manufacturer’s test laboratory are correlated. The data generated by the FEDV is used by the manufacturer to generate the fuel economy label and is included in the calculation the manufacturer performs to determine their fleet average GHG results. Data used for generating fuel economy labels is entered into EV-CIS along with reports summarizing the GHG performance of the manufacturer’s fleet.

Defect Reports and Voluntary Emission Recall Reporting

Light-duty vehicle and truck manufacturers are required to submit defect reports, voluntary emission recall reports, and voluntary recall quarterly reports. Manufacturers are required to report emission related defects affecting a given class or category of vehicles for five years from the end of the model year in which such vehicles were manufactured. Manufacturers file defect reports when a manufacturer determines a specific emission related defect exists in vehicles from the same model year. The report includes: a description of the defect; a description of the vehicles potentially affected by the defect; the number of vehicles known or estimated to have the defect and how this value was determined; the address of the plants where the defective vehicles were produced; an evaluation of the emissions impact and description of any driveability problems which the defective vehicle might exhibit; available emissions data related to the defect; and, an indication of any anticipated manufacturer follow-up.

Manufacturers initiating a voluntary emissions recall campaign submit a report

describing the voluntary recall plan. The report includes: information describing the vehicle or vehicles being voluntarily recalled; a description of the modifications and/or repairs to be made to correct the emission-related defect; a description of the method the manufacturer will use to determine the names and addresses of the affected vehicles owners; a description of any conditions for eligibility for repair and the reasons for imposing such conditions along with the proof required from the owner to demonstrate compliance with such conditions; a description of the procedure to be followed by the vehicle owner to obtain the repair; copies of the notification to be sent to vehicle owners; copies of the instructions sent to the individuals/businesses which are going to perform the repairs; and, a description of the impact of the repair on fuel consumption, driveability, and safety of the recalled vehicle.

For six calendar quarters following the initiation of a voluntary emission recall campaign, manufacturers submit a report to EPA reporting on the progress of the recall. Information reported includes: the date owner notification was started and completed; the number of vehicles involved in the recall campaign; number of vehicles inspected and number found to be affected by the emissions defect; number of vehicles repaired; number of vehicles unavailable for repair due to export, theft, scrappage or other reason; and, copies of communications sent to owners and dealers.

Manufacturers upload this information and these reports into EV-CIS.

Manufacturers' In-Use Verification Program

The In-Use Verification Program (IUVP) provides manufacturers and EPA with emission data from vehicles driven in 'real-world' conditions. Manufacturers and EPA use the results from IUVP testing to assess and improve the effectiveness of the manufacturer's certification durability and emission demonstration processes. IUVP data are also used to determine if additional vehicles need to be tested in support of evaluating whether an emission recall is necessary.

IUVP consists of testing two vehicle classes, a low-mileage class which has been in operation for a minimum of one year, and, a high-mileage class which has been in operation for a minimum of four years. The timing of the testing is to provide feedback on the emission performance of vehicles at both an early point in the vehicle's operating life and also at a point well into the statutorily defined useful life. The total number of in-use vehicles a manufacturer is required to test is dependent upon the number of test groups in a manufacturer's product line and the number of sales within the group. Small volume manufacturers selling less than 5,000 total vehicles in the U.S. are not required to perform IUVP testing. The number of vehicles a manufacturer is required to test increases up to a maximum of 4 vehicles for low-mileage testing, and, 5 vehicles for high-mileage testing from a test group with sales at or above 250,000 in a given model year.

Tests performed on vehicles procured for the IUVP program include the FTP, HFET, and US06. Testing on the SC03 A/C test cycle is not performed as part of the IUVP test program. Manufacturers are also required to perform a single evaporative emissions

test and on-board refueling loss test per evaporative/refueling family on both low- and high-mileage vehicle classes.

Because EPA's emission standards apply at high altitude as well as low altitude, EPA requires one vehicle per test group be tested under high altitude conditions. The test performed at high altitude is required only on the high-mileage vehicle class.

The results of the IUVP testing are used by the manufacturer and EPA to determine if the manufacturer is required to perform an In-Use Confirmatory Program (IUCP). IUCP testing is triggered when 50% or more of either the low- or high-mileage IUVP vehicles fail an emission standard and the mean exhaust emissions of any pollutant are equal to or greater than 1.30 times the applicable in-use standard.

Manufacturers that trigger the requirement to perform IUCP testing must test a minimum of ten vehicles. At their discretion, a manufacturer may test more than ten vehicles. IUCP testing must begin within three months of the manufacturer completing the IUVP testing that triggered the IUCP tests. The IUCP testing is required to be completed within seven months even if the manufacturer elects to test more than 10 vehicles. Prior to beginning the IUCP testing the manufacturer must submit a written test plan to EPA describing the details of the vehicle procurement, maintenance, and testing procedures (not otherwise specified by regulation) it intends to use. EPA must approve the test plan prior to the manufacturer starting IUCP testing.

Manufacturers that trigger the IUCP process are also required to perform an analysis of their approved durability procedures. Manufacturers must conduct a review of whether their durability procedures achieve the objectives of the EPA durability regulation. The objective is for the manufacturers durability program to predict the expected in-use emission deterioration rate and emission level that effectively represents a significant majority of the distribution of emission levels and the deterioration in actual use. This review consists of plotting the low- and high-mileage IUVP and IUCP test results and comparing the observed emission deterioration with the deterioration predicted from the manufacturers pre-production durability testing program.

Section 3: Nonduplication, Consultations, and Other Collection Criteria

3(a) Nonduplication

The Agency has made significant effort over the decades of the compliance programs to eliminate duplications in information collection. Under the Clean Air Act (CAA) EPA has been granted authority over setting emission standards for LDVs, LDTs, and HDTs. Mandating statutes provide both EPA and NHTSA authority over labeling requirements related to fuel economy and environmental information under EPCA and EISA, respectively. In order to implement the authority granted under these statutes in the most coordinated and efficient manner, EPA and NHTSA have coordinated rulemaking and information collection efforts.

EPA obtains information from vehicle manufacturers prior to the manufacturer introducing vehicles into commerce. The information the Agency collects is utilized to determine whether the vehicle meets the statutory requirements outlined in the CAA, EISA, and EPCA. Manufacturers electronically submit data to EPA and EPA has developed templates so that manufacturers can internally generate reports which are uploaded into EV-CIS further reducing the cost for submitting the information to the Agency.

Over the years, EPA has worked to streamline the amount of vehicle testing and to allow the use of the existing tests used for demonstrating compliance with the CAA emission requirements be utilized to develop fuel economy values for the different models the manufacturers offer. EPA has worked to streamline the durability process to further reduce the number of durability vehicles manufacturers need to produce and test to determine the predicted deterioration of the vehicle over the vehicle's useful life.

EPA's Tier 3 exhaust emission standards were developed in consultation with the California Air Resources Board (CARB) as California was developing their LEV III program. EPA and CARB worked to develop regulations which would allow manufacturers to sell the same vehicles in all 50 states. EPA worked with individual vehicle manufacturers and their trade associations who emphasized the importance of a harmonized national program. Consistency among the Federal and California program means special versions of vehicles with different emission control hardware and calibrations would not be necessary for different geographic regions. The harmonized regulatory requirements allow manufacturers to avoid the additional costs of parallel design, development, calibration and manufacture. This consistency also eliminates the need to supply unique aftermarket parts for repair of multiple versions of a vehicle.

3(b) Public Notice Prior to ICR Submission to OMB

The EPA solicited public comment on this ICR through a *Federal Register* notice on October 30, 2019 (84 FR 581564). No public submissions were received during the 60-day comment period.

3(c) Consultations

The regulations, including the cost analysis that is reflected in this ICR, were developed based on experience with similar regulations developed in the past in close consultation with the affected industry. Collaboration with the California Air Resources Board (CARB) and with industry and other stakeholders has been a key element in developing the agencies' rules over the decades. Throughout the development of the Tier 3 rule, EPA met extensively with individual manufacturers, groups of manufacturers, industrial trade associations, industry professional organizations, and other stakeholders. For example, EPA staff met with Frank Krich (fak6@chrysler.com), Bob Nankee (rjn6@chrysler.com) and Vaughn Burns (vrb8@chrysler.com) from Chrysler to discuss issues regarding the primary compliance option for fleet average FTP and SFTP fleet average standards. EPA staff also met with Dominic DiCicco (ddicicco@ford.com), Cynthia Williams (cwilli96@ford.com), Jeff Glodich (jglodich@ford.com), Dan Adsit (dadsit@ford.com), Johanna Dolch (jdolch1@ford.com), and

Will Ruona (wrouna@ford.com) from Ford to discuss issues related to test fuels, test procedures, and particulate matter standards. EPA staff met Robert Babik (robert.babik@gm.com), Andy Barren (andrew.s.barren@gm.com) and Jim Ehlmann (james.ehlmann@gm.com) with General Motors to discuss issues related to certification fuels, fleet averaging and credit provisions, test procedures and preconditioning, particulate matter standards and evaporative emissions. EPA also had numerous additional meetings with other manufacturers and their staff to discuss these and other issues related to the Tier 3 Emissions rule. Their comments have been reflected in the Tier 3 Emissions rule and also in the burden estimates discussed below. EPA continues to work regularly with impacted stakeholders to further enhance and streamline the reporting processes to reduce burden.

3(d) Effects of Less Frequent Collection

As required by the Clean Air Act (42 USC 7525(a)), emission and fuel economy information is submitted on a yearly basis coinciding with the manufacturer's "model year." EPA allows applicants to define their own "model year", thus granting some flexibility in this regard. Major product changes typically occur at the start of a model year. For these reasons, a collection frequency longer than a model year is not possible. However, when a vehicle design is "carried over" to a subsequent model year, the amount of new information required is substantially reduced. EPA regulations allow carry-over and carry-across data when manufacturers changes between model years are minimal. The allowance of carry-over data reduces the need to perform repeat testing on durability, emissions, and fuel economy data vehicles, saving significant costs for manufacturers.

Some information is also to be submitted during the model year, as with model-level GHG testing results, analogous to model-level fuel economy results, which are necessary because certification data are collected on a test group basis which does not allow for fleet total emissions and fuel economy calculations on a model level basis. Existing regulations also require an end-of-year report, with final production numbers.

In connection with the certification application, the manufacturer submits along with emissions data the projected sales and the definition of carlines corresponding to the models that will be for sale; this information is used to calculate the fuel economy label values and gas guzzler information that appears on the fuel economy label. Consequently, the label information collection, printing, and application to vehicles is inextricably linked to the annual model year time frame. For this reason, a collection frequency longer than a model year is not possible. Additional testing on an annual basis may not be required as the manufacturer can in many instances carry-over these data from one model year to the next. This provision significantly reduces costs and burdens for manufacturers.

In-use testing is currently required at low- and high-mileage intervals after a vehicle has entered commerce changing the timing and frequency of the limited number of in-use tests would reduce the ability of EPA and manufacturer's to identify in-use emission failures and take timely remedial action.

3(e) General Guidelines

This information collection activity complies with the remaining guidelines in 5 CFR 1320.5. There are no changes in the reporting and recordkeeping provisions since the last ICR submittal that impact any of the guidelines for information collections as approved in the existing approved collection.

3(f) Confidentiality

Information submitted by manufacturers is held as confidential until the specific vehicle to which it pertains is available for purchase in the U.S. market. After vehicles are available, most information associated with the manufacturer/importer's application is available to the public. Under section 208 of the Clean Air Act (42 USC 7542(c)) all information, other than trade secret processes or methods, must be publicly available. Proprietary information is granted confidentiality in accordance with the Freedom of Information Act, EPA regulations at 40 CFR Part 2, and class determinations issued by EPA's Office of General Counsel.

3(g) Sensitive Questions

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

Section 4: Respondents and Information Requested

4(a) Respondents/NAICS Codes

The respondents are potentially involved in the industries shown in the following table:

Category	NAICS ^a Code	SIC ^b Code	Examples of Potentially Affected Entities
Industry	336111, 336112	3711	Light-duty vehicle and light-duty truck manufacturers
Industry	811111, 811112, 811198	7538, 7533, 7534	Independent commercial importers
Industry	335312, 336312, 336322, 336399, 811198	3621, 3714, 3519, 3599, 7534	Alternative fuel converters
Industry	333618, 336120, 336211, 336312	3699, 3711, 3713, 3714	On-highway heavy-duty engine & vehicle (>8,500 lbs GVWR) manufacturers

^a North American Industry Classification System (NAICS)

^b Standard Industrial Classification (SIC).

4(b) Information Requested

(i) Data items

The information and reporting burden associated with this ICR occurs within the context of EPA's motor vehicle certification program (exhaust emissions and Tier 3 rule), fuel economy testing and labeling, defect and voluntary emission recall reporting, and the manufacturers' in-use testing program (IUVF). Current EPA regulations require manufacturers to submit information to the Agency in conjunction with these regulatory programs.

Manufacturers must submit an application for emission certification prior to beginning vehicle production. The application describes the major aspects of the product line, technical details of the emission control systems, and test results demonstrating compliance with emissions standards and the resulting fuel economy of the emissions data vehicle. Manufacturers submit updates to the application if during the model year the manufacturer makes any updates or changes to their certified products. The reports required to update the application information are called running change submissions.

Prior to EPA issuing a certificate of conformity to the manufacturer, the manufacturer submits the Part 1 application to EPA. The Part 1 application includes: contact information for the manufacturer; a description of the durability group; a description of the applicable evaporative emission families; durability information including a detailed description of the durability process including deterioration factors for the regulated emissions; a description of the test group including the engine displacement, number of engine cylinders, cylinder arrangement (e.g. in-line, v-shape, other), and the emission FEL applicable to the test group; identification and description of the durability data vehicle, the exhaust emissions data vehicle or data vehicles if there is more than one, and the evaporative emissions data vehicle(s); a comprehensive summary of all of the official certification tests and test results including the deterioration factors; vehicles certified to a Tier 3 FEL also require the inclusion of the Society of Automotive Engineers (SAE) drive cycle metrics for each chassis-dynamometer test performed; a description of the hydrocarbon emission measurement method used for determining evaporative hydrocarbon emissions; a summary, if needed, identifying any aspects of testing for which the regulations obligate EPA testing to conform to the manufacturer's selection of a test method, e.g. the method for measuring evaporative hydrocarbon emissions; information describing the operation of the emission control system on-board diagnostics including a description of the functional operation characteristics including all testing submitted to the California Air Resources Board, the general method of detecting malfunctions for emission-related components, any deficiencies with the diagnostic system and a plan for resolution of the deficiencies; and, if a test is required to demonstrate compliance with the evaporative leak standard a description of the test process including accessing the fuel system.

By January 1 of the applicable model year manufacturers submit their Part 2 Application to EPA. The Part 2 application includes: part numbers for all emission related components; a description of the operation and control of the emission control system including a description of the reasons for reducing the effectiveness of the emission control system and the regulatory reason allowing the reduction in effectiveness; a description of all vehicles covered by the certificate of conformity, identifying the test group and evaporative emissions family to which it belongs, applicable emission standards, sales area, engine displacement, engine code, transmission type, tire size and parameters necessary to conduct exhaust emission testing such as equivalent test weight, curb and gross vehicle weight, test horsepower, coast down time, shift schedules, cooling fan configuration, canister working capacity, canister bed volume, and fuel temperature profile; sales volumes; and, running change submissions including a detailed description of the change, reason for the change, product line affected by the change, and a description of the effect of any running change on emissions.

Subsequent to certification manufacturers perform and submit additional exhaust emission and fuel economy data to EPA to meet the testing requirements for fuel economy labeling and for demonstrating compliance with GHG standards. These tests are performed during the calendar year and result in the manufacturers submitting information used to generate fuel economy labels and test results used to compile reports to evaluate compliance with EPA's GHG fleet average standards and NHTSA's CAFE requirements.

After the model year, manufacturers procure vehicles from customers and test vehicles at low- and high-mileage intervals. The results of these tests are submitted to the Agency and reviewed by EPA staff to determine if EPA needs to perform surveillance testing based on the manufacturer provided emission results.

Additional post-production reports are generated if a manufacturer identifies a defect on one or more of the manufacturer's model. When a defect is identified the manufacturer generates a defect report and submits the report to the Agency. If a manufacturer determines that a voluntary emission recall is required to repair an emissions related defect, the manufacturer submits a report describing the recall and then regularly updates the Agency on the recall progress for the following 6 quarters.

All of applications and reports described are submitted to EPA electronically using the EV-CIS information management system.

(ii) Respondent Activities

Respondents are car and truck manufacturers and ICIs who submit certification applications to EPA via the EV-CIS information management system. The applications contain the results of testing conducted according to EPA regulations that, in addition to providing emissions information, yield fuel economy values for the tested vehicles.

Manufacturers activities include building, aging, and performing emission and fuel economy tests on durability, emissions, and fuel economy data vehicles. The manufacturers

develop vehicle design and emission controls system specifications which is used to build vehicles and the critical design specifications and method of operation are provided to EPA as part of their application process. This information is combined with the results of the requisite vehicle testing and the data. Part 1 and Part 2 applications are electronically submitted to EPA using EV-CIS. End of year reports are generated based on vehicle sales and the environmental performance of the individual vehicles. These end of year reports are submitted to EPA and demonstrate whether the manufacturers complied with the various fleet average standards for exhaust and evaporative emissions along with greenhouse gas emissions.

EPA performs confirmatory tests on 10% to 15% of the vehicles tested by manufacturers, manufacturers are required to deliver the vehicle to the EPA laboratory in Ann Arbor, Michigan if EPA selects a vehicle for testing. Manufacturers also send technical staff to support the test process and review the testing.

Manufacturers also monitor the emissions performance of vehicles which are owned by their customers. Manufacturers test vehicles at low- and high-mileage intervals one to four years after the vehicle has been delivered to the customer. The manufacturers are required to contact their customer and procure the vehicle for testing at an emission laboratory. Manufacturers electronically submit the test results to EPA using the EV-CIS information system.

Based on the results of the IUVP testing, and, other information manufacturers obtain on the performance of their vehicles from their service operations, manufacturers identify and monitor the defects which impact vehicle emissions. Manufacturers develop reports describing the defect and the impact of the defect on vehicle emissions. If a manufacturer concludes a voluntary recall is required, the manufacturer develops a recall plan and submits the plan to EPA. As the recall is conducted manufacturers report to EPA the effectiveness of the recall and the number of vehicles repaired on a quarterly basis for six quarters.

Section 5: The Information Collected—Agency Activities, Collection Methodology, and Information Management

5(a) Agency Activities

EPA staff are responsible for interacting with manufacturers and answer their questions regarding the various regulatory requirements. These staff are also the individuals responsible for reviewing the submittals manufacturers provide to EPA. Prior to a manufacturer submitting an application for certification, the manufacturer will typically submit test data from emission and fuel economy data vehicles. EPA staff review the test results and make a determination, in addition to the random selection process, if the specific data vehicle should be confirmatory tested at the EPA laboratory.

EPA staff review the results of any confirmatory testing performed and are

responsible for managing the confirmatory test process. The test process includes procedures for if the vehicle does not confirm emissions or fuel economy including steps to take if the vehicle fails an emission standard.

In addition, EPA staff review the IUVP data manufacturers submit to the Agency. EPA uses these data to assist in determining which vehicles the Agency decides to test as part of the EPA surveillance program. EPA's surveillance program is subject of a separate ICR, 2060-0086 – EPA's Light-Duty In-Use Vehicle Testing Program, however, the EPA staff that review the IUVP test results support the surveillance program by assisting with the selection of vehicles to procure from the general public.

EPA staff review the IUVP data and EPA surveillance results and discuss the emission performance of prior model vehicles which are still covered by the manufacturers emissions warranty of either 10 years and 120,000 miles, or 15 years and 150,000 miles. If EPA staff identify vehicles with a significant number of failures EPA staff review these data with the appropriate manufacturers and collaboratively work to determine if an emissions defect is present that requires repair.

Annually, EPA staff meet with individual manufacturers and discuss the manufacturers vehicles' durability, fuel economy, and certification testing plans for the upcoming year. Manufacturers describe their technologies and discuss any concerns they may have with testing their vehicles according to the existing regulations and Society of Automotive Engineer standards referenced by EPA regulations. EPA staff participate in evaluating the technologies and any issues that might exist related to the expected in-use performance or ability to test the vehicle in the laboratory environment.

5(b) Collection Methodology and Management

EPA currently makes extensive use of computers in collecting information from vehicle manufacturers. Manufacturers submit test results electronically in addition to uploading various reports and applications to EPA. All routine information, i.e. emission test results, vehicle descriptions in applications for certification and subsequent model tests, IUVP results, end-of-year report, and other data are electronically transmitted directly from the manufacturers into EV-CIS. All information submitted to EPA is subject to electronic review and also additional review by EPA staff.

To ensure the quality of the data entry into EV-CIS EPA has developed business rules and data requirements for the various data elements manufacturers submit to EPA. Including specifications and results from performing vehicle tests. By defining the format and validity of the data to be entered, this process minimizes data entry errors by manufacturers.

Another source of potential errors are the various laboratories manufacturers use to generate test results. EPA regulations define the test procedures including instrumentation and calibration requirements for laboratory equipment. Manufacturers are expected to perform the various quality checks and calibrations as outlined in the EPA regulations.

EPA utilizes the confirmatory testing program to evaluate whether the data manufacturers generate correlates with the test results generated at the EPA facility, the National Vehicle and Fuel Emissions Laboratory (NVFEL). As NVFEL tests multiple vehicles from a given test facility EPA generates data which demonstrates or fails to demonstrate correlation between the facilities. EPA staff will work with manufacturers to address issues which result in manufacturer laboratories not correlating with the results of NVFEL.

A significant amount of information submitted by manufacturers to the Agency is made electronically available to the public. When manufacturers submit information to EPA, the information submitted is maintained as business confidential until the manufacturer has begun public sales of their vehicle. Manufacturers provide EPA with their introduction to commerce date for their vehicles and once this date is reached, the Agency provides copies of the publicly available information the manufacturer has submitted.

EPA's Office of Transportation and Air Quality provides electronic copies of manufacturer applications and copies of certificates of conformity. These documents can be searched and downloaded using the EPA Document Index System (DIS), <https://iaspub.epa.gov/otaqpub/>. Emission data vehicle test results by test group and evaporative emission family can also be searched for and downloaded using the DIS and searching for certificate summary information data.

EPA also makes publicly available the results of the annual emission and fuel economy data vehicle test results. Results from fuel economy data vehicles can be found at the following web page segregated by model year, <https://www.epa.gov/compliance-and-fuel-economy-data/data-cars-used-testing-fuel-economy>; and, results from emission data vehicle testing can be found at the following web page, select the light-duty vehicles and trucks menu option, <https://www.epa.gov/compliance-and-fuel-economy-data/annual-certification-data-vehicles-engines-and-equipment>.

5(c) Small Entity Flexibility

EPA has a range of options specifically designed to provide flexibility and reduce the testing and reporting burden to small manufacturers. The major cost factors for manufacturers is designing, developing, and testing emission control systems over the full useful life of the vehicle. As such, EPA has a number of provisions for small business and small volume manufacturers that significantly reduce the design, engineering, and testing of their products. As the Tier 3 emission regulations are in the process of phasing-in, EPA has postponed the requirement for small volume manufacturers to meet the Tier 3 standards until 2022. Small volume manufacturers have a couple of options to meet relaxed standards compared to the Tier 3 required emission reduction phase-in fleet standards. EPA has a range of provisions for small businesses and small volume manufacturers related to complying the GHG regulatory requirements. Small businesses are exempt from the GHG requirements, while, small volume manufacturers have the opportunity to request EPA set a reduced standard based on the technical capability and resources available to the small volume manufacturer. Small volume manufacturers are not required to measure particulate matter during exhaust emission testing and are allowed to make a statement of compliance

in-lieu of performing testing. Small volume manufacturers are allowed to utilize assigned deterioration factors and are not required to perform mileage accumulation and emission testing on durability data vehicles.

Small volume manufacturers are also exempted from the IUVP program. Once their sales exceed the small volume limits (14,999 vehicles sold in a model year in the U.S.) the manufacturer is then required to test the minimum number of in-use vehicles required by the IUVP regulations.

5(d) Collection Schedule

Information must be submitted for each model year that a manufacturer intends to build (or import) vehicles. For emissions purposes, a “model year” is statutorily defined as the annual production period of a manufacturer, as decided by the Administrator, that includes January 1 of that calendar year; or, that calendar year if the manufacturer does not have an annual production period. During the model year, the results of such additional tests as the manufacturer conducts are also reported to EPA. After the end of the model year fleet-wide sales-weighted Tier 3, fuel economy, and GHG emissions levels are calculated and reported. If a product is unchanged between model years, much of the information can be “carried over” in the certification application. Collection frequency and burden are determined to a large extent by the manufacturer’s marketing and production plans. However, as required by law, some submission is required for each model year’s production.

Section 6: Estimating the Burden and Cost of the Collection

6(a) Estimating Respondent Burden

The analysis of labor hours falls primarily into two categories: labor associated with testing vehicles, and labor for reporting and record keeping.

Testing activities have not changed from previous ICRs, as the testing is defined by EPA regulatory requirements. Per hour test burdens for testing has therefore remained the same.

Paperwork burden includes estimates of reporting and recordkeeping, a portion of this burden is intended to account for the need prior to the beginning of a model year to determine which FELs to use for certification and how to meet the various fleet average standards for the Tier 3 FTP and SFTP NMOG+NO_x standard, Tier 3 evaporative emissions fleet average standards, and GHG fleet average standards.

6(b) Estimating Respondent Costs

The best testing cost information frequently comes from contractors, who quote a single price that comprises labor, overhead, O&M, startup, facility costs, and profit. Disaggregating this burden into labor hours, labor costs, O&M, and capital/startup is

difficult because of the wide variety of different manufacturers covered under this ICR -- each with differing facility construction needs, different availability of testing bays and different contractor arrangements. Previous ICS filed under this control number appear to have mishandled these calculations. Beginning with this ICR, the program has chosen to adopt a practice used in other collections in this policy area -- that is to report testing as if it were all outsourced and accordingly characterized only as O&M costs; not respondent labor hours.

(i) Estimating labor costs

Non-testing labor costs are considered to be approximated by the motor vehicle manufacturing industry, NAICS 336100. Rates for managers, mechanical engineers, and secretaries (except legal, medical, and executive) are from the May 2018 National Industry-Specific Occupational Employment and Wage Estimates (http://www.bls.gov/oes/current/naics4_336100.htm#11.0000, accessed August 18, 2019). With a 1.6 overhead multiplier, these are \$87.02, \$71.86, and \$34.82, respectively. Based on the latest BLS data, the hourly rates for managers and mechanical engineers has decreased since the last ICR 0783.64 was completed. Information technology specialists for analysis and coding are priced at \$100 per hour. Labor costs for revised FTP and HFET testing cycles for EVs and PHEVs and for EV preparation is based on the cost assumptions of previous ICRs 0783.47-0783.57 (2060-0104).

(ii) Estimating Operations and Maintenance Costs

Operation and Maintenance costs are associated with conducting the required emission and fuel economy tests. A much larger number of vehicles are tested in IUVP, 1,534 VINs were tested in calendar year 2017 which included 509 vehicles from the 2016 model year low-mileage vehicle class and 1025 high-mileage vehicles from the 2012 model year. The IUVP estimates includes FTP and US06 tests along with a lesser number of evaporative emission and refueling tests.

(iii) Capital Costs

Because manufacturers vary widely in their existing testing facilities, their excess capacities, their work shift arrangements and availabilities, real estate costs and land availabilities for hypothetical expansions, and their contractual arrangements with other testing facilities, the Compliance Division has for many years now used the approximation that a facility capable of performing 750 FTP/HFET tests per year costs \$4,000,000 and allocated this cost to each testing increment. This cost is then amortized to zero over ten years assuming an interest cost of 7%. It is assumed that after ten years the investment has to be renewed, so that the "facility capital cost" item is continuous. This methodology is considered conservative, because it assumes no excess capacity.

6(c) Estimating Agency Burden

The emission and fuel economy compliance programs are administered by EPA's Compliance Division and the Testing and Advanced Technology Division. Approximately

28 full time employee equivalents are directly involved in the combined emission and fuel economy programs; their cost is approximately \$3.5 million, including benefits but not overhead. EPA also participates in a program whereby the agency contracts with an organization that provides qualified persons to perform duties for the agency that are not performed by EPA employees. The cost associated with these persons who work directly on the combined emission and fuel economy program for the two divisions is approximately \$0.5 million, including overhead. The overhead percentage for the entire division is approximately 60 (i.e., the baseline labor costs are multiplied by 1.6), yielding an estimated total agency cost of \$6.10 million ($\$3.5\text{M} \times 1.6 + \0.5M).

The Agency also incurs database management costs on an on-going basis for the emissions and fuel economy program. Annual costs are estimated to be approximately \$0.75 million in contractor expenses.

The Agency also has on-going capital expenses to update and maintain the emissions testing facility. The Agency has 6 chassis dynamometer test cells which are used to perform confirmatory tests on manufacturers emission and fuel economy data vehicles. The Agency incurs on-going capital expenses which for this ICR are estimated to be \$4,000,000 per test cell which are amortized over a 10-year period at an interest rate of 7% resulting in an annual estimated capital cost \$3.42 million.

Running the laboratory incurs on-going operations and maintenance expenses including purchasing fuel, standard gases for calibrating emission instruments, maintenance contracts to maintain the emission analyzers and the chassis dynamometers. These on-going O&M expenses are estimated to run around \$1.44 million on an annual basis. Totalling these costs results in an annual estimate total cost of \$11.71 million.

6(d) Estimating the Respondent Universe and Total Burden and Costs

This ICR includes burden estimates for 6 ICs, one IC is primarily a paperwork reporting activity for manufacturers, the Defect Report and Voluntary Emission Recall Reporting (DR/VERR) IC. For this IC, EPA reviewed the number of DRs and VERRs manufacturers submitted to the Agency in the 2017 calendar year. In calendar year 2017 284 defect reports were filed from 18 different manufacturers. In addition, 86 recalls were active in calendar year 2017 being performed by 15 different manufacturers.

Historical estimates for labor hours by management, technical, and clerical staff was utilized with these hour estimates being combined with the updated labor rates. It was also discovered that the existing estimate included a mailing expense for providing the reports to EPA, which was deleted from the cost estimate. As the number of DRs and VERRs have increased from the prior analysis, the labor hours for compiling the data and preparing the report has increased to 4,799 hours from the prior estimate of 4012 hours. O&M costs for this IC have decreased with manufacturers electronically submitting their DRs and VERRs to the Agency instead of mailing them. This has reduced the O&M for this IC from the prior approved value of \$3,331 to \$1,902.

This ICR includes two ICs for estimating burden from performing testing on fuel economy data vehicles and for generating fuel economy labels, the Fuel Economy IC and the Fuel Economy Labeling IC. The fuel economy IC includes hybrid and conventional vehicles with internal combustion engines. A review of the fuel economy labeling submittals for the 2017 model year identified 26 different manufacturers that submitted fuel economy labels for model year 2017. The fuel economy labeling IC includes the addition of plug-in hybrid and battery electric vehicles to the fuel economy label requirements. In the 2017 model year 15 manufacturers submitted fuel economy labels for either plug-in or battery electric vehicles.

Over the years, the number of test groups manufacturers have been producing has been increasing resulting in an increase in the number of tests being performed for generating fuel economy labels. In the 2017 model year, manufacturers certified 599 unique test groups for the burden estimate this value has been rounded to 600. The previous number of test groups from the prior ICR was 427.

The same factor, an increase in the number of PHEVs and BEVs manufacturers are producing, applies to the Fuel Economy labeling. For the previously approved IC manufacturers generated labels for 35 unique PHEVs and BEVs, with the 2017 model year this value has increased to 49.

This ICR also includes an IC covering the estimated hour and cost burden for manufacturers performing their IUVP testing, the IUVP IC. In calendar year 2017 manufacturers would have completed their low-mileage IUVP testing from their 2016 model year fleet and their high-mileage testing from their 2012 model year fleet. Reviewing the IUVP data submittals identified 15 different manufacturers which submitted IUVP results.

The cost estimates for the IUVP IC have been determined by estimating the cost to procure vehicles from owners for testing at the manufacturer's facility, and, estimating the number of tests performed on the vehicles, accounting for performing an additional test when the vehicle has been found to fail an emission standard. In 2017 approximately 4% of the vehicles tested exceeded an emission standard.

It will also be observed for this activity that the number of responses has increased from the prior approved ICR. The previous ICR showed 271 responses and this ICR lists 1534 responses. It appears that the prior ICR used test groups, as opposed to the number of tests performed, as the response value. As manufacturers have to test multiple vehicles per test group the response basis was changed from test groups evaluated to the number of vehicles tested during the IUVP process.

This ICR also includes two ICs covering the emissions certification program including testing of emission data vehicles, the LDV and LDT Emissions IC and the Tier 3 Emissions IC. The LDV and LDT Emissions and the Tier 3 Emissions IC count manufacturers that submitted requests for certificates of conformity in the 2017 model year, this review identified 48 manufacturers including large and small volume manufacturers and alternative fuel conversion manufacturers. In 2017 manufacturers generated 599 test groups which has been rounded to 600 groups for this burden analysis. This is the same number of test group responses

as was used for the Fuel Economy IC. In the Tier 3 IC the number of responses was estimated by combining the Tier 3 test group submittals in addition to adding in the IUVP tests (as the Tier 3 rule includes additional test burdens for the IUVP program) and also adding the DR/VERR responses. This same approach was used for estimating the Tier 3 responses for this IC.

The Tier 3 Emissions IC was developed and maintained as a separate IC when EPA updated the exhaust emissions standards by adopting the Tier 3 rule. The LDV and LDT Emissions IC includes the base emission testing requirements for LDVs and LDTs, the Tier 3 rule includes labor, O&M, and capital cost estimates for the additional testing certification activities adopted as part of the Tier 3 program. The estimated Tier 3 Emissions IC O&M and capital cost burden has decreased slightly from the prior ICR as the labor rates have decreased slightly between the prior ICR and this renewal. The cost is decreasing from an estimate of \$7,690,934 to \$7,662,565.

6(e) Bottom Line Burden Hours and Cost

The results of adding these unit and respondent costs to the total units and respondents is summarized in the following tallies and in the tables presented at the end of the text. These are annualized estimates.

(i) Respondent Tally

The following table summarizes the number of respondents, responses, total estimated burden hours, and total estimated burden cost for each IC in this ICR:

IC Title	Respondents	Responses	Burden Hours	Labor Costs	Non-Labor Costs
Fuel Economy IC	26	600	166,565	\$10,281,044	\$4,695,506
IUVP IC	15	1,534	3,418	\$182,513	\$7,850,083
LDV and LDT Emissions IC	48	600	319,625	\$20,946,185	\$13,080,011
DR/VERR IC	18	370	4,799	\$375,257	\$1,902
FE Labeling IC	15	49	8,435	\$534,037	\$5,638,334
T3 Emissions IC	48	2,553	21,502	\$1,323,729	\$7,662,565
Total Burden Under ICR		5,706	524,344	\$33,642,765	\$38,928,401

(ii) Agency Tally

Combined Emission & Fuel Economy Program Labor Costs	\$6,100,000
Database Management Costs (contracted)	\$750,000
On-Going Capital Expenses for Testing Facility*	\$3,420,000

O&M for Laboratory	\$1,440,000
Total Annual Expenses	\$ 11,710,000

* Amount shown is annual portion of total amortized over a 10-year period at an interest rate of 7%

6(f) Reasons for change in burden

As noted in section 6b, it appears the Agency has been reporting burden associated with testing as both labor costs and hours as well as O&M costs. In doing so, EPA was effectively double counting the burden associated with these activities. For reasons explained above, the Agency is choosing to remedy the situation by treating the testing activities exclusively as O&M costs. As a result, four of the six ICs in this ICR show burden reductions when, in fact, the volume of activity in this ICR period are expected to slightly increase. Forces affecting the actual respondent reporting and recordkeeping burden are described in additional detail in section 6d.

One final factor, affecting the overall burden in this collection is the transfer of a previous IC, for “Motor Vehicle Emission and Fuel Economy Compliance: Highway Motorcycles” to a new control number. That new ICR, 2060-0710, was approved by OMB on 5/19/2017.

The modification to burden seen in this ICR are a result of administrative changes, corrections, and adjustments. The nature of EPA’s reporting or recordkeeping requirements in this field of regulatory activity are not being modified in this collection request.

The following table summarizes the respondents, total responses, hours, and non-labor costs for the current renewal and the previous renewal. Automobile manufacturers submitting information to the Agency are the Respondents for these information collections. Since the prior ICR was prepared at least one manufacturer has completely left the U.S. market (Suzuki) and there have been additional mergers and strategic alliance agreements. These changes in the structure of the automobile industry have led to a reduction in the total number of respondents to the various EPA regulatory requirements and information collections.

Current and Previous ICR Estimates

IC Title	Respondents	Responses	Hours	Costs (non-labor)	Hours per Response
Fuel Economy IC (current renewal)	26	600	166,565	4,695,506	278
Fuel Economy IC (previous renewal)	35	427	184,127	4,274,932	431
IUVP IC (current renewal)	15	1534	3,418	7,850,083	2
IUVP IC (previous renewal)	23	271	104,022	8,300,173	384

LDV and LDT Emissions IC (current renewal)	48	600	319,625	13,080,011	533
LDV and LDT Emissions IC (previous renewal)	54	427	380,092	13,085,248	890
DR/VERR IC (current renewal)	18	501	4,799	1,902	10
DR/VERR IC (previous renewal)	23	383	4,012	3,331	10
FE Labeling IC (current renewal)	15	49	8,435	5,638,334	172
FE Labeling IC (previous renewal)	35	35	8,548	4,986,806	244
T3 Emissions IC (current renewal)	48	2,553	21,502	7,662,565	8
T3 Emissions IC (previous renewal)	55	2,550	73,567	7,690,934	29
Highway Motorcycles IC (current renewal)	0	0	0	0	0
Highway Motorcycles IC (previous renewal)	418	418	7,814	293,586	19
Current Renewal Totals	170	5,837	524,344	38,928,401	1,003
Previous Renewal	643	4,511	762,182	38,635,010	2,007

Fuel Economy IC Burden Changes

Responses for the Fuel Economy IC are the number of unique vehicle models for which manufacturers are required to perform fuel economy testing. As noted above, the number of manufacturers has decreased somewhat from the time when the prior ICR was developed. While the number of manufacturers has decreased, the number of models offered by manufacturers has been increasing. This has resulted in the total number of models required to be tested for fuel economy increasing compared to the prior analysis.

Manufacturers have a couple of options available for performing fuel economy testing. One option, known as the derived 5-cycle method, allows manufacturers to perform only two tests (one test represents city driving and the second test represents highway driving) and adjust the results using a regression equation developed by the Agency. The regression adjusts these results to include the impact of driving the vehicle in hot, humid conditions with the air condition operating (this test is called the SC03), starting and driving the vehicle at cold temperatures (this

test is called the 20 F cold temperature test), and aggressive high-speed driving (this test is called the US06). The second method manufacturers can use is to perform all 5 tests – city test, highway test, SC03, 20 F cold temperature test, and the US06.

The capital costs for the SC03 and 20 F cold temperature tests are significantly higher than the capital costs for the city and highway tests since environmental test chambers are needed for these tests. Since the prior ICR, the Agency has estimated the number of tests required in the environmental chambers has decreased, as more models are being tested using only the city and highway tests, resulting in lower capital cost estimates from the prior ICR. While more models have been tested for fuel economy in this ICR estimate, the average capital costs for these tests have decreased. In addition, the estimated labor hours for performing these tests are revised based on the assumption that contractors have been used to perform these tests. Without this adjustment, the labor hours for this proposed renewal IC would have been slightly higher than the labor hours in the current approved ICR.

IUVP IC Burden Changes

The in-use verification program (IUVP) requires manufacturers procure vehicles from their owners when they have low mileage and when the vehicles have higher mileage. The intent of the program is to measure the emissions of the vehicles as they age to ensure they are meeting the emission standards in-use.

The Agency does not require all manufacturers to test every test group produced in the IUVP program. The Agency allows manufacturers which produce less than 5,000 vehicles per year to not procure or test any vehicles as part of the IUVP program. In addition, the Agency allows manufacturers to not procure and test vehicles from a test group which has production of less than 5,000 vehicles per year. The number of vehicles required to be tested will vary from year to year depending on the number of small volume manufacturers and the number of small volume test groups produced in a given model year.

The number of respondents has decreased from the estimate in the prior ICR as the total number of manufacturers has decreased as described above. The number of responses is different between the two ICs. The previous IC listed the number of test groups estimated to have been procured for the in-use testing program. The responses listed in the current IC are the total number of tests estimated to have been performed for the program. The number of tests performed between the two ICs are similar as the previous IC estimated a total of 1,733 tests compared to the current IC estimate of 1,534 tests.

The total non-labor costs are lower due to the current IC having fewer tests as part of the IUVP program.

The labor hours for testing have been removed from the estimate in the current IC as much of the IUVP labor is actually labor associated with testing vehicles. As noted above, labor for testing has been revised in this current IC to reflect the assumption that much of the labor has been performed by contractors. The reporting and recordkeeping labor estimate between the two ICs was estimated to be the same amount which is the value reported in the current IC of 3,418 hours.

LDV and LDT Emissions IC Burden Changes

The last update to the LDV and LDT Emissions IC occurred on April 8, 2011. Since that

time this IC has been renewed multiple times with no changes to the labor hours and non-labor costs for this IC. In addition, the analysis used to determine the non-labor costs reported in the previous IC has not been found. A burden analysis which it is assumed was the basis for the prior IC was located and has been used for the estimates in the current IC and for replicating the prior IC. When this spreadsheet is updated with the appropriate respondent numbers and other data, the spreadsheet estimates a non-labor IC cost of \$8,395,637, which is significantly below the value reported for the previous IC (\$13,085,248). The estimate using the prior IC's input data seems reasonable when compared to the current IC's estimate of \$13,080,011. The current IC's non-labor cost estimate would be expected to be significantly above the prior IC's estimate due to the increased number of tests required to be performed and an increase in the quantity of testing estimated to be performed in the environmental chambers which have a significantly higher capital cost.

The difference in labor hours is assumed to be due to the change made in the current IC to assume the testing labor is performed under contract and therefore is not included in the labor estimate. Since the prior analysis used to generate the labor hours and non-labor costs has not been located, it is unclear the impact of this revision on the current IC in comparison to the prior IC.

DR/VERR IC Burden Changes

The correct number of responses for this IC is actually 501 for the updated ICR as opposed to 370 as reported in the document. Manufacturers are required to submit defect reports, voluntary emission recall reports once a recall is initiated, and manufacturers are required to submit quarterly updates on their voluntary recalls as the recall is in progress. The value reported previously (370) was the total of the defect reports and the initial notification of a voluntary recall, it did not include the estimate of quarterly voluntary recall reports and updates to the manufacturers owner records (131).

FE Labeling IC Burden Changes

Compared to the prior IC the number of fuel economy labels being generated by manufacturers has increased, even though the number of manufacturers has decreased. In addition, additional capital costs have been incurred by manufacturers producing battery electric vehicles resulting in a slight increase to the non-labor costs compared to the prior IC.

T3 Emissions IC Burden Changes

Compared to the prior IC there is a minor reduction in the non-labor capital costs which is due to correcting a few minor errors with the amortization calculation of the capital costs. These corrections reduced the non-labor costs from the previous ICR by \$28,369.

The difference in labor hours is due to deducting the labor hours for performing the tests from the total labor hours. The rationale for this is the assumption that the labor has been performed by contractors to generate the data. Therefore, the labor hours reported in the current IC is strictly for reporting and recordkeeping.

Highway Motorcycles IC Burden Changes

The Highway Motorcycles IC was moved to a new ICR, 2060-0710, which was approved by OMB on May 19, 2017. Therefore, this ICR no longer includes the burden estimates Highway Motorcycles. This change reduces the totals for this ICR. The number of respondents and number of responses is reduced by 418, the hours is reduced by 7,814, and the costs is reduced by 293,586.

6(g) Burden Statement

The annual public reporting and recordkeeping burden for this collection of information is estimated to be 2 hours for the IUVP up to 533 for the LDV and LDV Emissions. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or 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.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID Number EPA-HQ- OAR-2019-0489, which is available for online viewing at www.regulations.gov, or in person viewing at the Air and Radiation Docket in the EPA Docket Center (EPA/DC), EPA West, Room 3334, 1301 Constitution Avenue, NW, Washington, D.C. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket is (202) 566-1742. An electronic version of the public docket is available at www.regulations.gov. This site can be used to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. When in the system, select "search," then key in the Docket ID Number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, D.C. 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID Number EPA-HQ- OAR-2019-0489 and OMB Control Number 2060-0104 in any correspondence.