

Supporting Statement  
for  
Information Collection Request  
Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission  
and Fuel Standards (Final Rule)  
EPA ICR 0783.64  
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

Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards (Final Rule); EPA ICR number 0783.63, OMB control number 2060-0104.

#### 1(b) Short Characterization/Abstract

##### Introduction and Short Characterization

EPA is finalizing more stringent vehicle emissions standards and reduced sulfur content of gasoline beginning in 2017, as part of a systems approach to addressing the impacts of motor vehicles and fuels on air quality and public health. The final gasoline sulfur standard (see ICR 2459.01) would make emission control systems more effective for both existing and new vehicles, and would enable more stringent vehicle emissions standards. The final vehicle standards, which are the subject of this ICR, would reduce both tailpipe and evaporative emissions from passenger cars, light-duty trucks, medium-duty passenger vehicles, and some heavy-duty vehicles. These final vehicle standards are intended to harmonize with California's Low Emission Vehicle Program – LEVIII standards, thus creating a federal vehicle emissions program that would allow automakers to sell the same vehicles in all fifty states. The final vehicle standards would be implemented over the same timeframe as the greenhouse gas/fuel efficiency standards for light-duty vehicles, as part of a comprehensive approach toward regulating emissions from motor vehicles.

The burdens in this ICR have been allocated to the Certification (also called Emissions) and IUVP ICs (Information Collections, subaccounts of the overall ICR paperwork calculation).

Some of the changes occur as early as model year (MY) 2015 for those manufacturers who opt to accumulate early credits. The basic timeline for implementation of the new requirements is a phase-in beginning with MY 2017 and extending to 2025, similar to the current greenhouse gases rule (see Nonduplication, below). Most of the costs associated with the rulemaking involve an assessment by industry of the available technology and the costs of using it to meet the new standards and as such are outside the scope of this ICR.

ICRs normally have a three year time horizon. The burdens in this ICR are intended to cover the final paperwork costs for MY 2025 and later years.

In many cases, this ICR cost analysis includes both high and low cost estimates; unless otherwise indicated, the burden estimates given below are the high-cost estimates. The rule changes will result in estimated new costs (high estimate) of about \$7.7 million annually in capital and operations and maintenance costs with an increase in labor hours of

73,567 annually on the regulated manufacturers compared to the baseline.

### Summary of the Final Rule's New Paperwork-Affecting Features

This very abbreviated summary gives background on the pertinent paperwork burden-related provisions, including the meanings of numerous abbreviations, for the estimations given in Part 6.

The final regulations are intended to harmonize the federal vehicle emissions program with California's LEVIII requirements, as discussed below. Paperwork burdens that manufacturers would have to undergo anyway to comply with California's requirements are not considered new paperwork burdens required by this rulemaking in the low cost estimates. The majority of the low-cost testing burdens estimated below are for the manufacturers producing "49 state vehicles" or "Federal-only vehicles". Furthermore, a large majority of Federal-only vehicles are small-business alternative fuel converters and older model-year vehicles imported by small business Independent Commercial Importers (ICIs), both subject to various lowered certification requirements and entirely exempt from IUVP testing. High-cost certification testing estimates assume that all certification test groups other than California-only certifications are included on the rationale that, but for these regulations, the manufacturers thereof would have the option of avoiding the new requirements by certifying as California only vehicles. This is a conservative estimate because it assumes a universal choice to forego sales in California. The true cost of new certification testing requirements therefore most likely falls within these two extremes.

The final Tier 3 standards are very similar in structure to those in the existing Tier 2 program. As with the Tier 2 program, the final standards would apply to (a) all light-duty vehicles (LDVs, or passenger cars), light-duty trucks (LDT1s, LDT2s, LDT3s, and LDT4s) and Medium-Duty Passenger Vehicles (or MDPVs). The final rule also includes separate but closely related new standards for chassis-certified heavy-duty vehicles from 8,500 to 14,000 lbs Gross Vehicle Weight Rating (GVWR).

Most of the harmonizing emissions standards are fleet average standards with no new testing, so that the burdens are appropriately scored as pertaining to a manufacturer's entire fleet, rather than on a per-vehicle average; i.e., they are per-respondent burdens that primarily involve administrative costs, such as updating computer systems. (Minor complexity is added by the fact that the average ceilings decline through MY 2025.) However, the new PM standard (below) is a per-vehicle standard that requires new testing both for certification and the in-use program (IUVP). As this testing is necessary to produce the results that have to be reported to EPA, the costs of testing are included in the ICR burden, following previous practice in this ICR series. There are also new evaporative emissions standards which entail new testing for in-use vehicles. Those paperwork burdens are allocated only to the IUVP IC.

The final rule also includes credit and credit trading provisions of the kind familiar in the existing Federal regulations, and are considered to entail startup

paperwork burdens similar to but smaller than those already contained in the baseline.

For light-duty vehicle, light-duty truck, and medium-duty passenger vehicle tailpipe emissions, new fleet-average standards for the sum of NMOG (non-methane organic gases) and NO<sub>x</sub> (nitrogen oxides) emissions (presented as NMOG+NO<sub>x</sub>) and for PM (particulate matter) are finalized. For these pollutants, standards would be measured on test procedures that represent a range of vehicle operation, including the Federal Test Procedure (or FTP, simulating typical driving), the Highway Fuel Economy Test (or HFET, simulating urban highway driving) and the Supplemental Federal Test Procedure (or SFTP, a composite test simulating higher temperatures, higher speeds, and quicker accelerations). For this testing, the standards have changed but not the testing required, so no new testing costs are included.

The final FTP and SFTP NMOG+NO<sub>x</sub> standards would be fleet-average standards, meaning that a manufacturer would calculate the average emissions of the vehicles it produces in each model year and compare that average to the applicable standard for that model year. The manufacturer would certify each of its vehicles to a per-vehicle “bin” standard and sales-weight these values to calculate its fleet-average NMOG+NO<sub>x</sub> emissions for each model year. The standards for light-duty vehicles would begin in MY 2017. (For vehicles at or over 6,000 lbs GVWR, the standards would apply beginning in MY 2018). These final fleet-average standards would decline during the first several years of the program. The final FTP NMOG+NO<sub>x</sub> program includes two separate sets of declining fleet-average standards, with LDVs and LDT1s in one grouping and heavier LDTs (LDT2s, LDT3s, LDT4s) and MDPVs in a second grouping that would converge on a single standard in MY 2025 and later. Similarly, the final NMOG+NO<sub>x</sub> standards measured over the SFTP would be fleet-average standards, declining from MY 2017 until MY 2025. In this case, the same declining fleet-average standards would apply to both lighter and heavier vehicles.

Manufacturers could also earn credits for fleet average NMOG+NO<sub>x</sub> levels below the applicable standard in any model year. Credits that were previously banked or obtained from other manufacturers could be used, or credits could be transferred to other manufacturers. Unused credits would expire after 5 model years. Manufacturers would also be allowed to carry deficits in their credit balance for up to 3 model years.

The final rule includes PM standards, both on the FTP and US06 cycles (US06 is a component of the SFTP test). The final PM standards would apply to each vehicle separately (i.e., not as a fleet average). Also, in contrast to the declining NMOG+NO<sub>x</sub> standards, the final PM standard on the FTP for certification testing is the same for all vehicles and for all model years. As for the NMOG+NO<sub>x</sub> standards, for vehicles over 6,000 lbs GVWR, the FTP PM standard would apply beginning in MY 2018. Manufacturers can phase in their vehicle models as a percent of U.S. sales through MY 2022. The US06 PM standards would phase-in based on sales volume on the same schedule as the FTP PM standards. These PM programs' paperwork burdens are allocated to the Certification IC.

The final program also includes a separate, less stringent in-use FTP and US06 PM standard for the testing of in-use vehicles that would apply during the phase-in period only. In MY 2022 and after, the FTP PM in-use standard is the same as the certification standard. In MY 2023 and after, the US06 PM in-use standard is the same as the certification standard. The paperwork burdens of this program is allocated to the IUVP IC.

For complete heavy-duty vehicle (HDVs, defined as being between 8,501 and 14,000 lbs GVWR) tailpipe emissions, the final rule adds new exhaust emissions standards. Vehicles in this GVWR range are often referred to as Class 2b (8,501-10,000 lb) and Class 3 (10,001-14,000 lb) vehicles, and are typically full-size pickup trucks and work vans. "Complete" heavy-duty vehicles are covered by the Light Duty ICR because they are "complete" vehicles that are chassis certified on a dynamometer like light duty trucks and vehicles.

The final rule for HDVs parallels that for passenger cars and LDTs, with adjustments in standards levels, emissions test requirements, and implementation schedules. These include a combined NMOG+NOx declining fleet average standard, new PM standards phasing in on a separate schedule, adoption of a 10 percent ethanol by volume (E10) certification test fuel for gasoline-fueled vehicles, extension of the regulatory useful life to 150,000 miles or 15 years (whichever occurs first), and a new requirement to meet standards over an SFTP. (An alternative phase-in schedule based on sales volume for FTP standards and "indexed" phase-in for PM are also available.) The SFTP testing for complete HDVs is a new testing requirement for federally certified vehicles and results in a new testing cost burden, because these test results are necessary for reporting required by EPA.

The shorthand "SFTP testing" actually encompasses a variety of testing options and waivers for various classes of HDVs. Because this bears on testing costs, it is necessary to go through them in a more detail. For the existing light-duty Tier 2 testing and the final Tier 3 NMOG+NOx testing, a "composite cycle" combines test results from the FTP, US06 and SC03 cycles, the latter two being "supplemental" driving tests designed to capture emissions under conditions not fully accounted for by the FTP: aggressive driving and high speeds, and use of air conditioning, respectively. Under the final rule, in SFTP testing of Class 2b vehicles at or below 0.024 hp/lb, manufacturers may replace the full US06 component of the composite SFTP emissions with the test results from only the second of the three emissions sampling periods in the US06 test, generally referred to as the "highway" portion of the US06, subject to correspondingly lower SFTP standards levels. For Class 3 vehicles, the LA-92 cycle is used instead of the US06 component for calculating the composite SFTP. Both composite SFTP cycles are fully consistent with the MDV LEV III program, and cover CO and PM as well. Under the final rule HDV manufacturers have the option to substitute the FTP emissions levels, which are expected to be higher (more stringent) in general, for the SC03 emissions results for purposes of demonstrating compliance. How many vehicles benefit from this option depends on the extent to which the higher FTP emissions levels reduce the margin needed to comply with the bin's emission standards.

Fleet average NMOG+NOx standards are separate for Class 2b and Class 3. The final standards would become more stringent in successive model years from 2018 to 2022, with voluntary standards made available in 2016 and 2017, all of which would be set at levels that match those of California's LEV III program for these classes of vehicles. Each covered HDV produced by a manufacturer in each model year would contribute to this fleet average based on the NMOG+NOx level of the emission level ("bin") declared for it by the manufacturer. Manufacturers could also earn credits for fleet average NMOG+NOx levels below the standard in any model year. Tier 3 credits that were previously banked, obtained from other manufacturers, or transferred across the Class 2b/Class 3 categories could be used to help demonstrate compliance. Unused credits would expire after 5 model years. Manufacturers would also be allowed to carry deficits in their credit balance for up to 3 model years.

The final rule includes separate PM standards for Class 2b and Class 3 HDVs, respectively, phasing in as an increasing percentage of a manufacturer's production per year. The same phase-in schedule is being finalized as for the light-duty sector, and a more flexible but equivalent alternative PM phase-in is also being finalized. (Tier 3 HDVs would also be subject to more stringent CO and formaldehyde exhaust emissions standards, which entail no new testing costs.)

For evaporative emissions (non-tailpipe), for both light-duty and heavy-duty vehicles, EPA is proposing more stringent standards that would require covered vehicles to have essentially zero fuel-vapor emissions in use. These include more stringent evaporative emissions standards, new test procedures, and a new fuel/evaporative system leak emission standard. EPA is proposing phase-in flexibilities as well as credit and allowance programs. The final standards harmonized with California's "zero evap" standards. Evaporative emission regulations would phase-in over a six model year period. Manufacturers would be able to generate allowances through early certifications (basically before the 2017 model year) and to demonstrate compliance using averaging.

The final new testing requirement is referred to as the bleed emission test. Manufacturers would be required to measure diurnal emissions over the 2-day diurnal test procedure from just the fuel tank and the evaporative emission canister to help ensure vehicles maintain zero fuel vapor emissions over their full useful life beginning in MY 2018. As a practical matter, the leak emission standard would apply during In-Use Verification Program (IUVP) testing. To streamline the IUVP testing, the manufacturers could use either the EPA leak emission certification test procedure or the final 0.020 inch OBD evaporative system leak detection and monitoring system.

There are a number of alternative phase-in provisions (alternative phase-in of the FTP NMOG+NOx standard, percent-of-sales phase-in for the PM standard; alternative phase-in of the FTP PM standard that would be available for vehicles above 6,000 lbs GVWR, alternative phase-in of the SFTP NMOG+NOx standard that would be available for vehicles above 6,000 lbs GVWR, etc.), special credit provisions (DOR- Direct

Ozone Reduction—credit, credit for extension of the emission control system warranty), and regulatory fixes (updating the fuel economy label, for example) that do not alter the cost estimates generated for the major elements identified above but which add to the estimate for the startup costs and labor for understanding and implementing the new program for manufacturers.

Lastly, as a result of the change in certification test fuel from 9 RVP E0 to 9 RVP E10, EPA must assess the need to make test procedure adjustments related to fuel economy testing such that the change in test fuel quality does not impact the stringency of the CAFE standards. EPA recognized that this action was needed in the NPRM, but deferred proposing a specific adjustment or set of adjustments because the data needed to determine the value(s) for the adjustments was not available. Historically, manufacturers have used criteria pollutant emission information from the exhaust emission testing for certification as part of the data needed to determine fuel economy values. The final rule sets a process in motion for EPA to gather the information needed to develop any test procedure adjustments. While the basic data will likely be available in late 2016 or early 2017, any rule to enact potential test procedure adjustments will take additional time. During this interim period, any LEV III or early Tier 3 vehicles using E10 test fuel for exhaust emission certifications will have to be tested for fuel economy values on E0. EPA has studied the expected phase-in rates for these vehicles in LEV III and estimates that for the 2015-2017 model years there will be an average of about 35 additional tests per year for the industry with an hour burden of about 30 hours per test. Thus, over the three-year period the added hour burden is 1,050 hours and the sum of the cost of testing and the hour burden is \$402,150.

## Section 2: Need For And Use of the Collection

### 2(a) Need/Authority For The Collection

Section 202(a) of the Clean Air Act provides EPA with general authority to prescribe vehicle standards, subject to any specific limitations elsewhere in the Act. EPA is also setting standards for larger light-duty trucks and MDPVs under the general authority of section 202(a)(1) and under section 202(a)(3), which requires that standards applicable to emissions of hydrocarbons, NO<sub>x</sub>, CO and PM from heavy-duty vehicles reflect the greatest degree of emission reduction available for the model year to which such standards apply, giving appropriate consideration to cost, energy, and safety. In addition, section 202(k) provides EPA with authority to issue and revise regulations applicable to evaporative emissions of hydrocarbons from all gasoline-fueled motor vehicles during: (1) operation, and (2) over 2 or more days of nonuse; under ozone-prone summertime conditions. Regulations under section 202(k) shall take effect as expeditiously as possible and shall require the greatest degree of emission reduction achievable by means reasonably expected to be available for production during any model year to which the regulations apply, giving appropriate consideration to fuel volatility, and to cost, energy, and safety factors associated with the application of the appropriate technology. Further, section 206 and in particular section 206(d) of the Clean Air Act authorizes EPA to establish methods and procedures for testing whether a motor vehicle or motor vehicle engine conforms with section 202

requirements.

A manufacturer must have a certificate before vehicles may be legally introduced into commerce. To insure compliance with the Act, EPA reviews product information and manufacturer test results; EPA also tests some vehicles to confirm manufacturer results. Other elements of the legal and regulatory background relating to the need and authority for the rule are discussed in the preamble to the final rule.

The regulations dealing with LDV and LDT emission control can be found in 40 CFR Parts 85 and 86. The regulations are not attached to this statement due to their length and technical nature.

Because of its specialized nature and the fact that product plans and emission performance information must be submitted to EPA prior to the start of production, this information is not available from any source other than the manufacturer.

## 2(b) Practical Utility/Users of the Data

The information collection under the rule will be used to determine whether the new Tier 3 requirements have been complied with by means of the certification and in-use testing programs.

## Section 3: Nonduplication, Consultations, and Other Collection Criteria

### 3(a) Nonduplication

These final vehicle standards are intended to harmonize with California's LEV III program, thus creating a federal vehicle emissions program that would allow automakers to sell the same vehicles in all 50 states. The final vehicle standards would be implemented over the same timeframe as the greenhouse gas/fuel efficiency standards for light-duty vehicles, as part of a comprehensive approach toward regulating emissions from motor vehicles.

The Tier 3 final rule addresses interactions with the 2017 LD GHG rule in a manner that aligns implementation of the two actions, to achieve significant criteria pollutant and GHG emissions reductions while providing regulatory certainty and compliance efficiency. As vehicle manufacturers introduce new vehicle platforms for compliance with the GHG standards, they will be able to design them for compliance with the Tier 3 standards at the same time. The final Tier 3 standards are also closely coordinated with California's LEV III program to create a vehicle emissions program that would allow automakers to sell the same vehicles in all 50 states. We have worked closely with individual vehicle manufacturers and their trade associations, who have emphasized the importance of a harmonized national program.

Auto manufacturers have stressed to us the importance of their being able to



design and produce a single fleet of vehicles in all 50 states that would comply with requirements under the Tier 3 program and the LEV III program, as well as greenhouse gas/Corporate Average Fuel Economy (CAFE) requirements in the same timeframe. Consistency among the federal and California programs means that special versions of vehicles with different emission control hardware and calibrations would not be necessary for different geographic areas. This would allow manufacturers to avoid the additional costs of parallel design, development, calibration, and manufacturing. In addition, because both programs include fleet-average standards, consistency among the programs means that manufacturers would not need to separately monitor the numbers of different vehicle versions that were sold in different parts of the country. Consistency among programs would also eliminate the need to supply aftermarket parts for repair of multiple versions of a vehicle. We believe that the most cost-effective national program will result from close coordination of CARB LEV III and federal Tier 3 program elements and their implementation. To that end, we worked closely with CARB and with the vehicle manufacturers, both with individual companies and with their trade associations, to align the two programs in most respects.

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

EPA solicited public comment by means of the Federal Register Notice of the proposed rule. This ICR was placed in the docket. No comments were received.

### 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 California Air Resources Board (CARB) and with industry and other stakeholders has been a key element in developing the agencies' rules. Throughout the development of this final rule, EPA met extensively with individual manufacturers, groups of manufacturers, industrial trade associations, industry professional organizations, and other stakeholders. Their comments have been reflected in the burden estimates discussed below.

### 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. 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. Likewise, existing

regulations require an end-of-year report, with final production numbers, and the new requirements would be conformed to this existing requirement as well. In-use testing is currently required at low- and high-mileage intervals after a model year vehicle has entered commerce, and the final rule's provisions bearing on in-use testing conform to the current program.

### 3(e) General Guidelines

Manufacturers are required to keep some records for periods longer than three years. This requirement stems from the statutory requirement that manufacturers warrant some items for periods longer than 3 years.

This information collection activity complies with the remaining guidelines in 5 CFR 1320.5. The rule makes no changes in the reporting and recordkeeping provisions 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. After vehicles are available, most information associated with the manufacturer'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/NASIC Codes

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

Category	NAICS <sup>a</sup> Code	SIC <sup>b</sup> Code	Examples of Potentially Affected Entities
Industry	324110	2911	Petroleum refineries (including importers)
Industry	325110	2869	Butane manufacturers
Industry	325193	2869	Ethyl alcohol manufacturing
Industry	211112	1321	Natural gas liquids extraction and fractionation

Industry	325199	2869	Other basic organic chemical manufacturing
Industry	486910	4613	Natural gas liquids pipelines, refined petroleum products pipelines.
Industry	424690	5169	Chemical and allied products merchant wholesalers
Industry	325199	2869	Manufacturers of gasoline additives
Industry	424710	5171	Petroleum bulk stations and terminals. E51-83 manufacturers.
Industry	493190	4226	Other warehousing and storage- bulk petroleum storage
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

<sup>a</sup> North American Industry Classification System (NAICS)

<sup>b</sup> Standard Industrial Classification (SIC).

#### 4(b) Information Requested

##### (i) Data items

The information and reporting burden associated with this final rule occurs within the context of EPA's motor vehicle certification program and the manufacturers' in-use testing program (IUV). Current regulations require manufacturers to submit emissions information to EPA in conjunction with these two programs (Information Collections). Manufacturers must submit an application for emission certification prior to production. The application describes the major aspects of the final product line, technical details of the emission control systems, and the results of tests to indicate compliance with the emissions, greenhouse gases, and fuel economy limitations. The application and supporting test results are reviewed and, if appropriate, a certificate of conformity is issued. Subsequently, low- and high-mileage vehicles in use are tested for emissions by manufacturers and the results of those tests reported to EPA.

The data items in the Tier 3 final rule are summarized below:

Before the beginning of each model year:

- Tier 3 compliance plan including projected use of credits and alternative schedules.

At the time of certification:

- NMOG+NO<sub>x</sub>, CO, formaldehyde and PM emissions test results for each test group being certified as specified in the rule.

After the model year:

- End of model year emissions report for NMOG+NO<sub>x</sub> and PM, including the final fleet average, all values required to calculate the fleet average, the actual fleet average that was achieved, all values required to calculate the actual fleet average, the number of credits generated or debits incurred, all the values required to calculate the credits or debits, and the resulting balance of credits or debits.
- Report of credit transactions.

During in-use testing:

- Results of FTP and SFTP PM and evaporative emissions tests as specified in the regulations.

#### (ii) Respondent Activities

While there is no “typical” respondent, all manufacturers must describe their product and supply test data and other information to verify compliance, including the test data and reports added by this rule. After certification, additional tests are conducted and the results reported to EPA. After the end of the model year fleet average Tier 3, fuel economy and greenhouse gas emissions will be calculated and reported and credits, debits, and trades described. As now, high mileage and low mileage in-use vehicles are procured by manufacturers and tested for emissions in the IUVP program. EPA also conducts a limited number of “confirmatory tests” to monitor manufacturer results, and this will continue as before. This requires test vehicles to be shipped to EPA’s laboratory. Manufacturers must also retain records. These tasks are repeated for each model year, although typically previous data and information can be “carried over” when no significant changes have occurred. If, during the course of a model year a product change is made (a “running change”), EPA must be notified. Under some circumstances additional test data may be required.

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

#### 5(a) Agency Activities

The test data used by EPA to determine compliance with Tier 3 and other emissions and fuel economy standards are derived from vehicle testing done by vehicle manufacturers who report their own test data to EPA. A significant portion of EPA's emission and fuel economy compliance activity is spent reviewing such applications to verify that the correct vehicle tests have been conducted and necessary information submitted. Running change submissions must also be selectively reviewed for possible emissions impacts and manufacturers' evaluations thereof. A part of this process involves determining if "carry over" of data from a previous model year or "carry-across" data from testing of similar vehicles and engines is appropriate or if new testing will be required. EPA will also select a number of tests for confirmation at EPA's own laboratory. EPA maintains the relevant reporting systems and records and analyzes relevant data for regulatory and oversight purposes. EPA also prepares an annual report of emission test results. Applications for certification of compliance with the Clean Air Act, along with associated reports, such as end-of-year annual sales-weighted fleet emissions data, are received and processed at EPA's National Vehicle and Fuel Emissions Laboratory in Ann Arbor, Michigan where the "confirmatory" tests are also conducted.

#### 5(b) Collection Methodology and Management

EPA currently makes extensive use of computers in collecting information from vehicle manufacturers. Essentially all routine information (test results and vehicle descriptions in applications for certification and subsequent model tests, IUVP data, end-of-year reports, credits and ABT reports, deterioration determinations, etc.) is electronically transmitted directly from the manufacturers through the Verify system. The rule makes no changes in this reporting system, only changing the format and content of some of the information reported within it.

All information received by EPA is subject to review. Data submitted electronically are automatically screened; test results that are close to emission and fuel economy standards are reviewed in more detail. Narrative descriptions of the final product line are checked to verify that the appropriate vehicles have been tested. (The emission and fuel economy programs rely on a combination of "worst case" and representative data to accomplish their goals.) Except for projected sales and a limited amount of proprietary product information, all information is available to the public as soon as the vehicle is offered for sale. Emission and fuel economy data are available on the internet; other information is available upon request under the Freedom of Information Act.

#### 5(c) Small Entity Flexibility

The preamble to the final rule discusses several new and extended existing provisions specifically designed to give flexibility and relief to small manufacturers (generally those who qualify as small businesses under the Small Business

Administration definition): postponed compliance with the standards and other Tier 3 requirements otherwise applicable to earlier model years until model year 2022; extension of existing reduced testing requirements for "small manufacturers" in IUVP testing; allowing a statement of compliance in lieu of the new PM testing; extending availability to Tier 3 of assigned deterioration factors, used for determining the emissions levels necessary to insure compliance over the useful life of the vehicle; small business alternative-fuel converters may continue to comply with EPA's existing OBD requirements when the Tier 3 standards become effective rather than California's OBD requirements; availability of the substitution of FTP for new SFTP testing; and upon a "hardship" showing, additional time to meet the 100 percent phase-in requirements for exhaust and evaporative emissions, not limited to one year as in existing regulations.

#### 5(d) Collection Schedule

See the description in Part 4(b)(i). 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

The following estimates of changes in burden use baselines and methodologies developed in the process of continuing updates of the 0783 ICR series, including the last renewal (ICR 0783.54, OMB 2060-0104, approved August 31, 2009), the prior disaggregation of that ICR into five ICs, the cold hydrocarbon emissions standards rule (ICR 0783.52), the latest vehicle fuel-economy labeling rule (ICR 0783.60), and the second GHG rule (ICR 0783.62). The reasoning behind estimates of increased burden from the current baseline are given below and summarized in Section 6(f) based on provisions of the rule that are summarized in Section 1(b). Most of the burden is included in the underlying certification authorization baseline; the numbers below are only changes to the baseline. "Respondent Burden" is taken to refer to hours, while "Respondent Costs" are taken to refer to non-labor capital and O&M costs. Hours or costs are reported to the hour or dollar without intending to imply that the totals are significant to the last digit.

For both Respondent Burden and Respondent Costs, new and corrected estimates will be updated in subsequent ICRs, which should benefit from the most recent information available about real testing and reporting costs, gathered through Verify queries based upon actual rather than projected certification and IUVP test volumes.

#### 6(a) Estimating Respondent Burden

As described in Part 1b, this ICR presents both high-cost and low-cost estimates. Burden hours estimates are treated likewise. The analysis of labor hours fell into two categories: labor associated with new testing requirements, and labor for new reporting and recordkeeping. All labor associated with startup costs for familiarization with the new regulations and for installing (updating) information technology systems to incorporate the new information to be reported, are associated with the accounting category "capital/startup costs", so they are included under that heading without hour burdens.

The largest increase in labor hours is associated with the new PM testing. We estimated the time per PM test to be from 20 to 25 hours. Only about a quarter of an hour of this sum is during the actual test itself, since it is an add-on to the FTP or SFTP test previously conducted (thus the facility capital cost impact is de minimis); the rest is for the metrology and analytics involved in processing the sample. For the high estimate, this is allocated at the ratio of 5.34 : 1 to the IUVP and Certification ICs respectively, based on the most recent actual IUVP testing counts and estimated high durability group certification testing numbers. This allocation between the two programs is mandated by OMB, even though in most cases the testing is conducted in the same facilities. The total for both is 51,555 hours. This is in reasonable agreement with the estimate contained in Chapter 2 of the draft Regulatory Impact Analysis, although our labor cost estimate is somewhat lower.

The per-test burden for US06 tests follows the assumptions of prior ICRs; the per hour burden of the "highway" US06 and LA 92 tests added for HDVs is estimated to be equivalent. Only seventeen 2b and Class 3 HDVs were certified in model year 2012, and all of them were fifty-state vehicles. The bleed test is considered an IUVP burden and estimated at one hour per test for the estimated maximum of 5% that will not opt for the OBD alternative. All these add 4,005 hours to the burden total.

The estimate also includes a total of 21,502 hours for the paperwork burden of reporting and recordkeeping (distinct from the startup costs of computer programming and familiarization). This is intended to account for the need at the beginning of the year to figure out before certification for a model year which bin to certify families to and how to meet the fleet-average standards for NMOG+NO<sub>x</sub> based on projected sales, as well as projections on how to meet the declining standards applicable to later years, and separately for lighter and heavier vehicles. It also includes planning for credits, banking and trading. And it includes planning for which models to phase in for the PM requirements. During the year it includes submission of model vehicle emissions, and at the end of the year the reporting of compliance with fleet average Tier 3

requirements. At all times there is a small increment in recordkeeping, although this is considered mostly to be achieved by the architecture of the computer systems that are addressed in capital costs. These paperwork burdens are largely add-ons to existing reports in format: manufacturers already submit pre-model year plans for GHG compliance and Tier 2 NO<sub>x</sub>, MSAT, and NMHC; certification test results during the year; and end-of-year fleet-average GHG and fuel economy reports that incorporate sales figures for the model year. Once the startup costs, primarily IT costs, are incurred, and management has determined the schedules of compliance, the reporting should be routine.

In sum, these changes increase the baseline, under the low estimate, by 48,813 hours and increase the high estimate (which is used for the authorization request) by 73,567 hours.

#### 6(b) Estimating Respondent Costs

##### (i) Estimating labor costs

Testing labor costs are based on the EPA average of \$55.82 per hour from ICR 0783.54 adjusted from late 2008 to 2012 using the CPI Inflation Calculator ([http://www.bls.gov/data/inflation\\_calculator.htm](http://www.bls.gov/data/inflation_calculator.htm)) to 2012 as \$60.81 per hour. Other 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 2011 National Industry-Specific Occupational Employment and Wage Estimates ([http://www.bls.gov/oes/current/naics4\\_336100.htm](http://www.bls.gov/oes/current/naics4_336100.htm), accessed January 10, 2013). With a 160% overhead multiplier, these are \$95.28, \$73.14, and \$32.74, respectively. Information technology specialists for analysis and coding and label redesign are priced at \$100 per hour.

##### (ii) Estimating Operations and Maintenance Costs

Operation and Maintenance costs fall into the same categories as the labor burden: the non-labor and non-capital costs associated with conducting the new tests that are anticipated under the final rule and the paperwork and record storage costs of reporting to EPA.

For the Certification IC, the "Highway" US06 test and LA 92 tests are estimated



to cost \$1,860 per test and the new PM test is estimated to involve \$250 to \$400 per test (low and high estimates); In this ICR these are applied to the number of such tests estimated from test groups or durability groups in model year 2012. For the LA92 and Highway US06 tests, the low number reflects the absence of any 49-state heavy duty test groups while the high estimate reflects eleven and six fifty-state test groups respectively. The total is \$0 to \$131,160 per year. The number of PM tests is based on two tests per durability group times 25% tested each year. The low estimate of 20 tests reflects that only forty test groups were certified in MY 2012 that were not small businesses and were Federal-only. The high estimate a total of 404 unique durability groups, Federal, California-only, or 50-state, with two tests for each group, a quarter tested each year, and allowance for those manufacturers who may be too small to benefit fully from the 25% rule. The total for all new tests comes to \$5,000 to \$151,620 per year.

A much larger number of vehicles are tested in the IUVP, 1,602 VINs from February, 2012 through January, 2013. The estimate assumes two tests per vehicle but half the vehicles tested. The resulting cost is \$400,500 to \$640,800. The IUVP bleed test was estimated at a maximum of 80 tests at \$50 per test and based on contractor estimates.

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, as well as varying amounts of the direct application and paperwork filing burdens. It is difficult to allocate these global estimates to the accounting categories mandated by the ICR formalism. This is compounded by the wide variety of different manufacturers covered, with, for example, differing facility construction needs, different availability of testing bays and contractor arrangements. Combined ICR labor, O&M, and capital costs are consequently the more robust than these disaggregated estimates.

### (iii) Start-up Capital Costs

“Startup” costs are one-time costs to implement the new requirements in the rule that are applicable to vehicles being certified or in-use tested by the respondent manufacturers. These startup burdens fall into three categories: Familiarization and information technology, testing, and facility costs.

The estimates given below are after spreading the costs over ten years assuming an APR of 7% until the final value of the payment is zero, except for facility costs as explained below.

For the Certification IC, the largest item is information technology costs involving familiarization with the new data reporting requirements and installation of reformatted management information systems to carry out and report the necessary data and calculations. This estimate is based on EPA estimates of the cost of updating Verify, extended to the nine major marketing groups and to other manufacturers. All these burdens are add-ons to well established reporting requirements: manufacturers already submit similar data to EPA. This

estimate is highly imprecise because it is difficult for EPA to allocate information upgrade costs for an integrated system to a particular rulemaking. There is also a minor line item for programming the extension of existing Average, Banking and Trading systems to accommodate Tier 3. The subtotal for information technology is \$2,334,563.

Because manufacturers must not only program the reporting requirements, but also make management decisions about which of the compliance pathways to follow, this ICR adds a line item, familiarization cost. This item adds \$160,497 to the baseline for this category of startup costs.

The other major item in Certification IC startup costs is installation of equipment for PM testing. For purposes of this ICR, we follow the estimate in the draft RIA of 55 to 60 upgrades costing \$250,000 to \$500,000 each, resulting in a (discounted) yearly cost of \$629,636.

The total startup capital estimate for the Certification IC is consequently \$3,070,696 per year.

For the IUVP IC, startup capital costs are for bleed testing and PM testing. Startup costs for the bleed test are estimated at \$2,500 per rig applied to 20 to 30 manufacturers for a minor cost of \$10,678 per year. The PM analysis is similar to that given for the Certification ICR, but because of the greater number of tests the figure is 5.34 times higher: \$3,362,257. The total for the IUVP IC is consequently \$3,372,935. The total for non-facility startup costs for both ICs is consequently \$6,443,631 per year for ten years.

Finally, this ICR includes a separate accounting of "facility capital" costs. Because manufacturers vary widely in their existing testing facilities, their excess capacities, their work shift arrangements and availabilities, the real estate cost 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. The only cost in this category is to accommodate the increase in testing facilities required to meet the new HDV testing in the Certification IC, and totals \$12,064 per year over ten years.

### 6(c) Estimating Agency Burden

The emissions certification and IUVP programs are administered by EPA's Compliance Division. Testing for several categories of vehicles and engines is conducted by EPA's Testing and Advanced Technology Division (TATD) at the National Vehicle and Fuel Emissions Laboratory in Ann Arbor, Michigan. Approximately 75 fulltime employee equivalents from both divisions are either directly involved in the combined emission and

fuel economy programs or support the programs indirectly. The EPA employee labor cost is approximately \$10.5 million. EPA's direct program costs include funding for contractors or equipment that directly supports the motor vehicle and emissions compliance programs. Included are the funds used for supporting EPA's Verify database and support for EPA's in-use testing programs. The direct program costs for the CD and TATD divisions is approximately \$7.1 million. Indirect costs of the certification and IUVP programs include cost for facilities, communications and employee training. The indirect costs total is approximately \$3.1 million.

EPA's incurred costs incorporate the cost of equipment acquired for modernizing EPA's emissions laboratory, NVFEL, and buildings and facilities purchases and repairs. As new standards and regulations are developed, the NVFEL is updated so that EPA can do the testing necessary to confirm manufacturers' certification test results. Incurred costs are approximately \$3.2 million.

The overhead percentage for the Office of Transportation and Air Quality has historically been estimated to be 16.9%. This may change in the future but will be used for the purposes of this ICR. Using 16.9% as overhead, the overhead cost for the emissions certification and IUVP programs is about \$4 million. The approximate total for the certification and IUVP programs for FY 2011 is \$28 million.

Implementation of the new Tier 3 rule will be carried out by this existing staff. The 2017 greenhouse gases rule included startup costs for information systems and programming, including an estimate of \$1,333,333 in startup capital costs with a yearly discounted value of \$189,837, and \$160,000 a year including overhead in ongoing maintenance and management of the database, for a total of \$349,837 per year, with an associated 2,094 labor hours. The Agency has determined the level of effort for this rule is roughly comparable to the 2017 GHG rule, therefore this ICR will use the same estimate. This estimate includes costs associated with developing formats and collecting information within the Verify system for the new reporting elements summarized in 4(b)(i). Other ongoing database management, oversight, and certification activities are part of the fuel economy and emissions program Agency baseline (see above). This estimate does not include Agency burdens incurred prior to the effective date of the rule, such as costs of developing the rule and preliminary consultations with manufacturers on database issues.

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

For a large portion of the burden and costs, that arising from new testing, the most accurate estimation method was to derive the burden on the industry as a whole from recent testing costs, rather than estimating a cost per respondent for the industry and applying it to various categories of a very diverse respondent universe. This was done by counting the number of durability groups or vehicles that were tested in the most recent model year or twelve-month period, when this figure could provide a baseline for the estimate. Thus, for the Certification IC, the high estimate for the burden of new SFTP testing for heavy-duty vehicles was estimated from the count of

eleven 2b and six class 3 vehicles certified in model year 2012, and the per-test estimate applied to these numbers; for the low cost estimate the fact that all of these certificates were fifty-state was used. For PM testing, there were 40 Federal-only certificates, and with two tests per group and 25% tested each year the low figure was 20 tests. The high figure was from a count of 404 durability groups, two tests per group, and 25% tested each year, with an allowance for new HDV testing and for manufacturers potentially too small to benefit from the minimum in the final rule of two durability groups per manufacturer, for a high estimate of 300 tests.

Similarly, for the IUVP IC, the figure of 1,602 IUVP vehicles (counted by unique VINs, Vehicle Identification Numbers) from February, 2012, through January, 2013, was used. The final rule calls for two PM tests per vehicle but only half the vehicles are tested, for a total of 1,602 tests. For the bleed test, the low estimate assumes no tests on the grounds that all manufacturers will opt for the OBD compliance option in the final rule, while the high estimate assumes that 5% will undergo the testing instead.

A separate cost and burden estimate was made for the category of "reporting and recordkeeping" separate from the cost and burden of tests. This included beginning of the year and end of the year reporting, as well as credits, banking, and trading, applied to 25 respondents, a small business item applied to 30 respondents, a submission item during the year applied to 336 certification applications, submission of new model-level emissions for 648 vehicles, and IUVP and Certification recordkeeping for 25 manufacturers. For reporting purposes, we used 55 respondents and 648 responses, although from the foregoing it can be seen that with this diversity of reports and categories to which they apply, this is an approximation.

From the above discussion the following total burden and cost estimates can be calculated. Due to the diverse nature of the motor vehicle industry, there is no typical or average respondent, and this estimate makes many assumptions in an attempt to accommodate this diversity.

6(e) Bottom Line Burden Hours and Cost

(i) Respondent Tally

RESPONDENTS	55
BURDEN HOURS	73,567
OPERATING COST	\$1,235,239
CAPITALIZED COST	\$6,455,695

A more detailed summary can be seen in the tables below:

**TOTAL ANNUAL COST AND HOURS INCREASE: FINAL RULE**

**COST BURDEN**

	<b>Min</b>	<b>Max</b>
<b>Certification IC</b>		
<b>Startup: Capital one-time IT/Paperwork/Familiarization/PM (annualized 10yrs/7%)</b>	\$2,664,581	\$3,070,696
<b>New Facilities: Ongoing Capital (annualized 10yrs/7%)</b>	\$0	\$12,064
<b>Capital Subtotal</b>	\$2,664,581	\$3,082,760
<b>New Testing (O&amp;M)</b>	\$5,000	\$151,620
<b>New Reporting &amp; Recordkeeping</b>	\$115,753	\$409,842
<b>Total</b>	<b>\$2,785,334</b>	<b>\$3,644,222</b>

<b>IUVP IC</b>		
<b>Startup: one-time: Bleed, PM testing (10yrs/7%)</b>	\$1,548,153	\$3,372,935
<b>New Facilities: Ongoing Capital, annualized 10 yrs/7%)</b>	\$0	\$0

<b>Capital Subtotal</b>		\$1,548,153	\$3,372,935
<b>New Testing (O&amp;M)</b>		\$400,500	\$644,805
<b>New Reporting &amp; Recordkeeping</b>		\$20,552	\$28,973
<b>Total</b>		<b>\$1,969,205</b>	<b>\$4,046,713</b>

<b>TOTAL CAPITAL</b>	<b>\$4,212,734</b>	<b>\$6,455,695</b>
<b>TOTAL O&amp;M</b>	<b>\$541,805</b>	<b>\$1,235,239</b>
<b>TOTAL LDV &amp; IUVP</b>	<b>\$4,754,539</b>	<b>\$7,690,934</b>

#### HOURS BURDEN

<b>LDV/LDT Certification IC</b>			
<b>Startup: Capital one-time IT/Paperwork (annualized 10yrs/7%)</b>		0	0
<b>New Facilities: Ongoing Capital (annualized 10yrs/7%)</b>		0	0
<b>New Testing</b>		400	8,010
<b>New Reporting &amp; Recordkeeping</b>		13,195	18,224
<b>Total</b>		<b>13,595</b>	<b>26,234</b>

<b>IUVP IC</b>			
<b>Startup: one-time IT/Paperwork (annualized 10yrs/7%)</b>		0	0
<b>New Facilities: Ongoing Capital, annualized 10 yrs/7%)</b>		0	0
<b>New Testing (Labor &amp; O&amp;M)</b>		32,040	44,055
<b>New Reporting &amp; Recordkeeping</b>		3,178	3,278
<b>Total</b>		<b>35,218</b>	<b>47,333</b>

**TOTAL LDV & IUVP**

**48,813**

**73,567**

(ii) Agency Tally

EMPLOYEES	26
STARTUP	\$349,837
LABOR HOURS	2,094

6(f) Reasons for change in burden

The burden change is from new capital and operations and maintenance costs and labor hours associated with implementing the new programs detailed in this draft ICR. The increase in burden is due largely to new testing, an increase in the estimated (high estimate) cost of information system upgrades for industry, and familiarization. There is also a slight increase in the reporting burden associated with the new rule.

6(g) Burden Statement

The table in Section 6(e) presents the total estimated burden for the final rule: approximately 73,567 additional hours per year, with total annual capitalized and O&M costs estimated at \$7,690,934. These estimates represent the high end of a high-low range that was used for many of the cost elements. The annual costs and hours for information collection activities by a given manufacturer under any of the options in this rule depend upon manufacturer-specific variables, such as the number of different test groups, durability groups, or IUVP vehicles, the number of vehicles tested, the credit and other options chosen if any, and the cost of information system upgrades. The estimated number of likely respondent manufacturers is 25 (but there is a minor item for an additional 30 small businesses). The responses will be submitted annually and occasionally as a part of the existing EPA certification and IUVP programs.

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–2011–0135, which is available for online viewing at [www.regulations.gov](http://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](http://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–2011–0135 and OMB Control Number 2060-0104 in any correspondence.