

SUPPORTING STATEMENT
FOR
VEHICLE PERFORMANCE GUIDANCE
FEDERAL AUTOMATED VEHICLES POLICY

1. Explain the circumstances that make the collection of information necessary. Attach a copy of the appropriate statute or regulation mandating or authorizing the collection of information.

The National Highway Traffic Safety Administration (NHTSA), under the U.S. Department of Transportation, was established by the Highway Safety Act of 1970, as the successor to the National Highway Safety Bureau, to carry out safety programs under the National Traffic and Motor Vehicle Safety Act of 1966 and the Highway Safety Act of 1966. The Vehicle Safety Act was subsequently re-codified under Title 49 of the U. S. Code in Chapter 301, Motor Vehicle Safety.

Under the authority of the National Traffic and Motor Vehicle Safety Act of 1966, as amended, NHTSA's purpose is to reduce traffic accidents and deaths and injuries resulting from traffic accidents. 49 U.S.C. § 30101. In support of that purpose, the Agency is authorized to carry out needed safety research and development. 49 U.S.C. § 30101(2).

In recognition of the safety potential of highly automated vehicles, as well as the technological advances the automobile industry has made with respect to highly automated vehicles, and in order to promote the safe design, development, testing and deployment of those vehicles, NHTSA released its Federal Automated Vehicles Policy. The Federal Automated Vehicles Policy recommends that manufacturers develop, retain, and submit certain information (such as information pertaining to data recording and sharing, privacy, vehicle cybersecurity, and ethical considerations) to NHTSA so it can verify manufacturers have given due consideration to particular safety-related factors in developing their automated vehicle systems. A part of this information will be made available to the public to further promote trust by both the public and states in efforts made by OEMs and other entities to work with the Agency to develop and roll out automated technologies in a safe manner. The collection of this information on highly automated vehicles serves to further NHTSA's statutory mission of reducing traffic accidents and deaths and injuries resulting from traffic accidents.

2. Indicate how, by whom, and for what purpose the information is to be used. Indicate actual use of information received from the current collection.

This information collection is comprised of two parts, the burden of compiling and maintaining the increased documentation that has been suggested in the guidance portions of the Federal Automated Vehicles Policy, and the burden associated with manufacturers and

other entities voluntarily submitting safety assessment letters to the Agency.

The burden associated with the increased documentation as suggested by the guidance document is intended for the manufacturers and other entities themselves, and is not to be collected by the Agency at this time. Much of this documentation burden is already called for by both industry consensus standards (such as ISO 26262) and good systems engineering practices.

3. Describe whether the collection of information involves the use of technological collection techniques or other forms of information technology.

Given that the entire field of automated vehicles involves high tech sensors, advanced electronic processing techniques, and electronic data storage, the Agency expects that much of the information covered by this ICR to use technological techniques in terms of data collection, retention, and submission. Manufacturers and other entities that choose to voluntarily follow the guidance in the Federal Automated Vehicles Policy will be using this data along with simulations, and other testing methods to validate their products.

The Agency expects that manufacturers and other entities voluntarily submitting a safety assessment letter will do so electronically. These documents contain 100% of the potential information collected by the Agency.

4. Describe efforts to identify duplication. Show specifically why similar information cannot be used.

The information collected under this guidance is unique and is not available through other sources. There is no other federal Agency with legal authority to regulate the safety of automated vehicles.

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

The documentation burden that is contained in the guidance portion of the Federal Automated Vehicles Policy is a natural extension of practices that are already current standard industry processes, and therefore minimizes the burden for all companies, including small businesses.

As to burden associated with the safety assessment letters, the Agency anticipates minimal information being submitted through the safety assessment letter process. This will help minimize the effort expended by small business entities that voluntarily choose to follow the Federal Automated Vehicles Policy.

6. Describe the consequences to the Federal program or policy activities if the collection is not collected or collected less frequently.

The safety assessment letter and the guidance are designed to capture documentation and processes that OEMs and other entities submitting a safety assessment letter are likely already doing in order to ensure that OEMs and other entities are giving due consideration to particular safety-related factors when developing and deploying automated vehicles. These are best practices and normal industry design processes that we have requested that they follow.

Infrequent collection, or even worse, non-collection of the safety assessment letter will not provide NHTSA, states, consumers nor the general public the assurance that manufactures and other entities are taking into consideration relevant factors contained in the Federal Automated Vehicle Policy.

7. Explain any special circumstances that require the information collection to be conducted in a manner inconsistent with the guidelines in 5 CFR 1320.6.

The procedures specified for this information collection are consistent with the guidelines set forth in 5 CFR 1320.6.

8. Provide a copy of the FEDERAL REGISTER document soliciting comments on the collection of information, a summary of all public comments responding to the notice, and a description of the Agency's action in response to the comments. Describe efforts to consult with persons outside the Agency to obtain their views.

The FEDERAL REGISTER (81 FR 65709), September 23, 2016 notice soliciting comments on the collection of information, is attached. The Agency received 11 comments on this notice from the general public, five of these commenters provided general comments on the Federal Automated Vehicles Policy (the Policy). The remaining commenters (Daimler Trucks North America, the Alliance of Automobile Manufacturers, Inc., Association of Global Automakers, Inc., Motor and Equipment Manufacturers Association (MEMA), Truck and Engine Manufacturers Association (EMA), and the Insurance Institute for Highway Safety (IIHS)) had comments that were responsive to the 60-Day notice. The Agency also received a number of substantive comments pertaining to the ICR as part of the overall general comments on the Policy (Docket # NHTSA-2016-0090). In general these comments were reflected in the specific comments received on the 60-Day Notice.

These comments can be grouped into the following categories:

1. Comments regarding the burden of voluntarily responding to the 15 point Safety Assessment
2. Comments regarding the burden hours imposed by the guidance (e.g. documentation related to the 15 point Safety Assessment) contained in the Federal Automated Vehicles Policy
3. Comments regarding the scope of the Safety Assessment Letter
4. Comments regarding submitting Safety Assessment Letters for test vehicles
5. Comments regarding submitting Safety Assessment Letters for vehicles

meeting the Society of Automotive Engineers (SAE) Level 2 automation

It is important to note that the Federal Automated Vehicles Policy was effective on September 23, 2016, and is intended to be updated on an annual basis. Therefore the burden hours outlined in the 60-Day notice and this subsequent 30 Day notice are reflective of that version of the policy.

The comments regarding the burden of voluntarily submitting a Safety Assessment Letter and the burden of following the guidance contained inside the Policy can be summed up as “NHTSA has underestimated the burden of following its policy.” However, none of the commenters offered substantive information regarding the specific details of the Agency’s underestimation of the burden in following the Policy’s Guidance. In light of these comments, NHTSA has reevaluated its analysis of the burden hours and looked to voluntary industry standards such as the International Organization for Standardization’s (ISO) 26262 - Road vehicles – Functional safety, SAE J3061 - Cybersecurity Guidebook for Cyber-Physical Vehicle Systems, and NHTSA’s own experience with safety defect investigations as it relates to record keeping by companies. Based on this analysis and the Agency’s observation that the Policy is not suggesting new documentation procedures, we have not made any adjustments to the burden hours.

Though NHTSA estimated all burdens resulting from following this guidance, the Agency expects that most of the new burden is a result of the need to consolidate and document current business practices as set forth in the guidance. For the most part companies voluntarily following this guidance are likely already following these processes, or similar processes. However, stakeholders are predominately questioning the burden of the safety letter. The Agency believes that only a small percentage of the total burden hours are related to the safety assessment letter. To illustrate the particular information NHTSA is recommending that manufacturers send in their safety assessment letters, the Agency has attached a letter template that represents the information the Agency would expect. In addition, NHTSA remains open to producing other templates and plan to have several public workshops in 2017 to provide additional clarity on suggested templates. Also, NHTSA will make available on its website a series of frequently asked questions. These questions and answers provided by the agency are intended to help clarify many aspects associated with this collection and the policy in general.

The sample letter template is a product of the type of public input discussed above. Leading up to the sample letter template’s development, the Agency held a public meeting on November 10, 2016, to solicit feedback on the guidance contained in the Federal Automated Vehicles Policy. The meeting included a session in the afternoon focused specifically on the Safety assessment Letter. This engagement yielded feedback from OEMs, technology and ridesharing companies, safety advocates, and suppliers. This feedback, along with sample letter forms submitted as public comments to the open docket for the Federal Automated Vehicles Policy was used to develop the initial letter template.

Several commenters suggested changes to the scope of the 15 point Safety Assessment on the basis that some elements (e.g., system safety) are difficult to quantify and others (e.g., ethical considerations) are still being studied. NHTSA recognizes these concerns, and is

continuing to invest in providing clarity and understanding in the safety assessment areas. Nonetheless, the agency believes that it is important to provide automakers the opportunity to voluntarily submit information that they independently determine to be appropriate in these areas, in order to build confidence with NHTSA and the general public in each of the 15 Areas.

Commenters also requested clarification on what will require the submission of an updated Safety Letter. Updates to the Safety Assessment Letter should only be submitted when a change in the underlying HAV or L2 system would result in a change to the safety evaluation for any of the 15 safety assessment areas (i.e., would change the content or structure of the Safety Assessment Letter). Updated Letters need only include the relevant areas that have been changed, not a full re-submittal. Manufacturers should use their discretion to avoid sending updates when they determine that changes are not material, consistent with the voluntary nature of the Letter.

Several commenters requested that SAE Level 2 systems be excluded from filing the voluntary letter. These commenters did not provide a substantive case for doing so. Other commenters applauded the overall policy, including, implicitly, allowing manufacturers of SAE Level 2 vehicles to file a letter. In the interest of enhancing safety and improving transparency, NHTSA will maintain the option of allowing manufacturers of SAE Level 2 systems to file a letter. We have, however, addressed comments regarding submission of a Safety Assessment Letter for SAE Level 2 systems and in the sample letter template, in addition to materials already published in Table 1 of the FAVP document. In particular, the scope of the Safety Assessment Letter for Level 2 systems is reduced from that for SAE Level 3, 4, or 5 systems.

Lastly, commenters also requested that test vehicles be exempted from certain elements of the 15 elements of the Letter, noting that these elements (e.g., consumer education) sometimes are not relevant to test vehicles. Other commenters applauded the overall policy, including, implicitly, allowing manufacturers of test vehicles to file complete letters if they chose to. In the interest of enhancing safety and improving transparency, NHTSA will maintain the option of allowing manufacturers of test vehicles to voluntarily submit information on all 15 elements. We fully expect, however, that manufacturers of test vehicles will, as appropriate, determine that some of the 15 elements may not be applicable to them.

The Agency has had numerous one-on-one meetings with industry representatives, to receive more detailed feedback on the Safety Assessment Letter and the Policy as a whole.

NHTSA recognizes that the guidance is a starting point and that the process needs to be iterative. All feedback from public meetings and other engagements, along with the comments from the main docket on the Policy itself (NHTSA-2016-0090), will be considered in further enhancements to the templates developed to assist entities with filling out and submitting their voluntary Safety Assessments.

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

No payment or gift will be or was provided to any respondent.

10. Describe any assurance of confidentiality provided to respondents.

The Agency intends to publish the safety assessment letters in a public forum, as an attempt to garner trust, both from the individual states, and the American public, that automated car manufacturers are working with the Agency to safely deploy automated vehicle technologies.

However the Agency realizes that as part of voluntarily following the guidance contained in the Policy document, OEMs and other entities may submit information that contains confidential, proprietary, or post-competitive information through NHTSA's normal Confidential Business Information processes (See 49 CFR Part 512). The agency expects that manufactures and other entities conforming with the guidance, and voluntarily submitting safety assessment letters will want to submit this business sensitive information to further discussion with the agency about safe roll out of automated safety technologies. This information should be submitted as a separate appendix to the letter so as not to have "redacted" areas in a public facing document.

11. Provide additional justification for any questions on matters that are commonly considered private.

There are no private questions involved in this information collection activity. The required information is exclusively business-oriented, with no personal data submitted or requested.

12. Provide estimates of the hour burden of the collection of information on the respondents.

A description of the total calculated burden hours can be found in the 60 Day notice. An excerpt is being supplied here for clarity.

Estimated Burden for this Collection: We estimate the following collection burden on the public. The numbers below are based on estimates that NHTSA has generated, and the Agency seeks comment on the burden calculations below.

HAV and L2 Safety Assessments

There are currently 15 manufacturers that have registered with the State of California as licensed entities capable of testing automated systems. NHTSA expects that this number will increase after the publication of *Federal Automated Vehicles Policy*, potentially doubling to 30 manufacturers and other entities within six months. As automated vehicle systems continue to develop, NHTSA expects either new manufacturers or entities to enter the market, or existing manufacturers or entities to progress to a point where they are introducing HAV systems. For purposes of estimating the burden of this collection, NHTSA estimates there will be a total of 45 respondents by the end of the three years covered by this information collection request. Likewise, NHTSA estimates that a similar number of manufacturers and other entities will submit L2 Safety Assessments, although the Agency notes that the 45 respondents for each assessment may not be identical, since some companies may be developing L3/L4 vehicles but not L2 vehicles, and vice versa.

The Agency expects much of the burden of submitting these Assessments to be a part of conducting good and safe engineering practices. It therefore believes that manufacturers and other entities will have access to all of the information needed to craft these Assessments already documented, and that the overall conformance burden will be the time needed to collate and review answers sourced from pre-existing documentation. The summary table below highlights the estimated burden in hours for entities seeking to submit Safety Assessments by category:

Area	Hours HAV L2		
General Overall Summary	80	✓	✓
Data Recording and Sharing	80	✓	✓
Privacy	40	✓	✓
System Safety	20	✓	✓
Vehicle Cybersecurity	20	✓	✓
Human Machine Interface	20	✓	✓
Crashworthiness	20	✓	✓
Consumer Education and Training	40	✓	✓
Registration and Certification	40	✓	✓
Post-Crash Behavior	20	✓	✓
Federal, State and Local Laws	80	✓	✓
Ethical Consideration	80	✓	✓
Operational Design Domain	20	✓	
Object and Event Detection and Response	40	✓	
Fall Back (Minimal Risk Condition)	80	✓	
Validation methods	80	✓	✓

Area	Hours HAV L2	
	HAV	L2
Total	760	620
Industry Burden		
Safety assessments	HAV	L2
Number of Respondents	45	45
Time per Response (hours)	760	620
Frequency of Collection (for each new HAV/L2 system)	1	1
Total Estimated Annual Burden (hours)	34,200	27,900

In addition to the industry burden, because NHTSA will be collecting these Assessments, there is a government burden that will be incurred by the Agency. NHTSA expects that it will take three employees an hour each to fully process, catalogue, store each submission for a total of three burden hours. It will take an hour for a single employee to craft an acknowledgement of receipt to both the submitter and the public. The Agency also expects that 5 engineers will review these Assessments for technical completeness, spending four hours each, for a total of 20 hrs. This is expected to occur every time a Safety Assessment is received.

Government Cost Burden

HAV and L2 Safety assessments	Estimate
Number of Safety Assessments	90
Time per Response (hours)	24
Frequency of Collection (for each new HAV/L2 system)	1
Total Estimated Annual Burden (hours)	2,160

Data Sharing and Recording

In conforming to this Guidance, manufacturers and other entities may see an increased burden to document their procedures. The Agency anticipates that the 45 manufacturers and other entities will have to spend an increased amount of time documenting their crash recorders, positive outcomes, event triggers/schema, data management, their data sharing plan, and data privacy. If these entities have already responded to the Safety Assessment discussed previously, the core of the information likely will already be documented. Below are estimates of the additional hourly burden NHTSA expects.

Area	Hours	HAV	L2
Crash Recorder	40	✓	✓
Positive Outcomes	40	✓	✓
Event Triggers, Schema	40	✓	✓

Area	Hours	HAV	L2
Data Privacy	40	✓	✓
Data Management	40	✓	✓
Data Sharing Plan	40	✓	✓
Total	240	240	240

Data Recording and Sharing for Purposes of Crash Reconstruction and General Knowledge Sharing

	HAV	L2
Estimated Number of Respondents	45	45
Estimated increased documentation burden (hours)	240	240
Frequency of Collection (for each new system)	1	1
Total Estimated Annual Burden (hours)	10,800	10,800

Systems Safety Practices

As with the prior discussions, manufacturers and other entities may choose to document their system safety practices in response to the Guidance. It is anticipated that up to 45 companies may choose to document their efforts in response to the NHTSA Guidance and that they will incur corresponding costs for each new L2 or HAV system in the field. NHTSA estimates this will happen about once per year. If manufacturers and other entities have already responded to a Safety Assessment, NHTSA anticipates that the core of the information will already be documented. The following table documents the additional estimated burden.

Area	Hours	HAV	L2
Industry Standards Followed	10	✓	✓
Best Practices, Design, and Guidance Followed	10	✓	
Hazard Analysis	40	✓	✓
Safety Risk Assessment	40	✓	✓
Redundancies	20	✓	✓
Software Development, Verification, and Validation	40	✓	✓
System Testing and Traceability	40	✓	✓
Total		200	200

Company Documentation for Recommended System Safety Practices

	HAV	L2
Number of Respondents	45	45
Estimated increased documentation burden (hours)	200	200
Frequency of Collection	1	1
Total Estimated Annual Burden	9,000	9,000

Consumer Education and Training

As previously stated, NHTSA expects that manufacturers will develop documentation to support a claim or assertion that they are following the Guidance. NHTSA may request a subset of this documentation in some instances. However, the burden estimated here reflects additional time the manufacturers and other entities may take, outside of normal business practices, to document and store information specifically pertaining to their efforts to educate and train their customers and users.

NHTSA anticipates that up to 45 companies may choose to document their efforts as part of the NHTSA Guidance. In the table below are estimates for the burden, in hours, for the task of documenting consumer education and training efforts, over and above normal business practices. This is currently estimated to occur about once per year. If manufacturers and other entities have already responded in a Safety Assessment, NHTSA anticipates that the core of the information will already be documented, reducing the relative burden. It is also expected that some of the entities may not directly interact with consumers, in which case their burden will be lower.

Area	Hours	HAV	L2
System Intent	5	✓	✓
Operational Parameters	10	✓	✓
System Capabilities	10	✓	✓
Engagement/Disengagement	20	✓	✓
HMI	20	✓	✓
Fallback	20	✓	
Driver Responsibilities	10	✓	✓
Changes in system performance in Service	10	✓	✓
On-Road Hands On Training	5	✓	✓
On-Track Hands On Training	5	✓	✓
Total		115	95
Consumer Education and Training			
		HAV	L2
Number of expected companies		45	45
Estimated increased documentation burden (hours)		115	95
Frequency of Collection		1	1
Total Estimated Annual Burden (hours)		5,175	4,275

Additional Areas

NHTSA anticipates that up to 45 companies may choose to document their efforts as part of the NHTSA Guidance. In the table below are estimates for the burden, in hours, for the task of documenting consumer education and training efforts, over and above normal business practices. This is currently estimated to occur about once per year. If manufacturers and other entities have already responded in a Safety Assessment, NHTSA anticipates that the core of the information will already be documented, reducing the relative burden. It is also expected that some of the entities may not directly interact with consumers, in which case their burden will be lower.

Area	Hours	HAV	L2
Vehicle Cybersecurity	60	✓	✓
Human Machine Interface	80	✓	✓
Crashworthiness	20	✓	✓
Post-crash Behavior	40	✓	✓
Federal, State, and Local Laws	20	✓	✓
Operational Design Domain	20	✓	
Object Event Detection and Response	20	✓	
Fall Back	60	✓	
Total		320	220

Additional Areas

	HAV	L2
Number of Respondents	45	45
Estimated increased documentation burden (hours)	320	220
Frequency of Collection	1	1
Total Estimated Annual Burden (hours)	14,400	9,900

Certification

Manufacturers and other entities that produce vehicles may choose to conform to the Guidance's recommendation regarding certification, and thus may incur an additional documentation burden over and above normal documentation retention practices. Secondly, some entities may choose to implement a physical label, thereby incurring additional costs. Not all of the companies that respond to the Safety Assessment may produce, alter, or modify vehicles in such a way that they would need extra labeling (*e.g.* tier 1 suppliers that do not offer aftermarket upgrades), Therefore it is expected that only 30 companies could choose to implement registration and certification procedures for new L2 or HAV systems in the field. The estimated burden is expected to occur once a year. The table below documents the additional estimated burden in terms of hours.

Area	Hours		
Identifying Information	10		
Description of L2 or HAV System	10		
Total	20		
Certification			
		HAV	L2
Estimated Number of Respondents	30	N/A	
Estimated increased documentation burden (hours)	20	N/A	
Frequency of Collection	1	N/A	
Total Estimated Annual Burden (hours)	600	N/A	

As discussed above, some entities may choose to implement a physical label. From previous documentation for Part 567 labels, ⁽⁵⁾ the cost of the physical label to approximately \$1 per label. This takes into account 3 minutes to install the label along with the actual cost of

the label. For the smaller fleets of HAVs, it is expected that this number will be more expensive per vehicle. NHTSA estimates that fleets will not exceed approximately 300 vehicles during the lifespan of the current ICR, and that the cost of labeling, including cost to design, print, and affix labels to be approximately \$10 per vehicle. For 30 fleets of 300 cars each, this represents a cost burden of \$90,000.

HAV L2

Overall Estimated Burden Hours per Year 74,175 61,875
 Total Estimated Burden Hours per Year 136,050
 Estimated 90 respondents (@ 1 response each) = 90 responses

13. Provide estimates of the total annual cost to the respondents or record keepers.

The estimated cost spent for each respondent following this guidance is estimated to be \$100.00 per hour (which includes the cost of their time plus the associated legal fees and administrative overhead).

Therefore, this estimated annual cost can be calculated is as follows:

Total estimated burden	136,050 hours
Average Cost of each burden hour to respondent (including administrative and legal)	\$100
Total estimated annual cost	\$16,305,000

14. Provide estimates of annualized cost to the Federal Government.

NHTSA expects that it will take three employees an hour each to fully process, catalogue, store each submission for a total of three burden hours. It will take an hour for a single employee to craft an acknowledgement of receipt to both the submitter and the public. The Agency also expects that five engineers will review these Assessment letters for technical completeness, spending four hours each, for a total of 20 hours. This is expected to occur every time a Safety Assessment is received.

Government Cost Burden

HAV and L2 Safety assessments		Estimate
Number of Safety Assessments	90	
Time per Response (hours)	24	
Frequency of Collection (for each new HAV/L2 system)	1	
Total Estimated Annual Burden (hours)	2,160	
Total Estimated Cost Burden		\$216,000 (\$100 per hour x 2160)

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-1.

In recognition of the safety potential of highly automated vehicles, as well as the technological advances the automobile industry has made with respect to highly automated vehicles, and in order to promote the safe design, development, testing and deployment of those vehicles, NHTSA released its Federal Automated Vehicles Policy. This new information collection increases NHTSA's overall burden hour total by 136,050 hours.

16. For collections of information whose results will be published, outline plans for tabulation, and publication.

The Agency plans to develop a micro site where the industry can submit the safety assessment letters and any supporting information to the Agency. There will be a public facing area of this micro site that will allow public access to the safety assessment letters.

The Agency at this time has no plans to collect the bulk of the documentation burden that is imposed by the guidance contained in the Policy outside of the safety assessment letter.

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

Approval is not sought to not display the expiration date for OMB approval.

18. Explain each exception of the certification statement identified in Item 19, Certification for Paperwork Reduction Act Submissions, of OMB Form 83-1.

No exceptions to the certification statement are made.