Department of Transportation

Office of the Chief Information Officer

SUPPORTING STATEMENT

Commercial Motor Vehicle Marking Requirements

INTRODUCTION

Federal Motor Carrier Safety Administration (FMCSA) vehicle marking regulations in 49 CFR part 390 require freight-carrying motor carriers, passenger-carrying motor carriers, and intermodal equipment providers (IEPs) engaging in interstate transportation to display certain information on their vehicles or equipment. These vehicle marking regulations are an information disclosure requirement that constitute a collection of information under the Paperwork Reduction Act (PRA), and for which the Agency has in place a currently approved collection of information with Office of Management and Budget (OMB) Control Number 2126-0054 titled “Commercial Motor Vehicle Marking Requirements” which was most recently approved on October 18, 2018, and which has an expiration date of October 31, 2021.

The FMCSA final rule titled “Lease and Interchange of Vehicles; Motor Carriers of Passengers,” to be published, amends the existing regulations in 49 CFR part 390 regarding the lease and interchange of passenger-carrying commercial motor vehicles (CMVs), including how leased and interchanged passenger-carrying vehicles must be marked. In doing so, this final rule affects the burden associated with the existing currently approved collection of information (OMB Control No. 2126-0054). Furthermore, on December 4, 2018, the Agency also published a separate final rule, titled “Lease and Interchange of Vehicles; Motor Carriers of Passengers; Extension of Compliance Date” (83 FR 62505) (Attachment A), that extended from January 1, 2019, to January 1, 2021, the compliance date of existing regulations in 49 CFR part 390 regarding the lease and interchange of passenger-carrying CMVs, including how leased and interchanged passenger-carrying vehicles must be marked. This compliance date extension also affects the burden associated with the existing currently approved collection of information (OMB Control No. 2126-0054).

On September 20, 2018, the Agency published a Notice of Proposed Rulemaking (NPRM) titled, “Lease and Interchange of Vehicles; Motor Carriers of Passengers” (83 FR 47764) (Attachment B), and provided the public the opportunity to comment on its proposed revised collection of information under this information collection request (ICR). No comments concerning the proposed revised collection of information were received. On August 14, 2019, the Agency published a final rule titled, “Lease and Interchange of Vehicles; Motor Carriers of Passengers” (84 FR 40272) (Attachment C). The Agency hereby requests OMB approval of this revision of the existing currently approved collection of information with OMB Control Number 2126-0054 titled “Commercial Motor Vehicle Marking Requirements.”

**Part A. Justification**

1. **CIRCUMSTANCES THAT MAKE THE COLLECTION OF INFORMATION NECESSARY**

The USDOT number is used to identify all motor carriers in FMCSA's registration and information systems. It is also used by States as the key identifier in the Performance and Registration Information Systems Management (PRISM) system, a cooperative Federal/State program that makes motor carrier safety a requirement for obtaining and maintaining CMV registration and privileges.

FMCSA has authority to require motor carriers to conduct recordkeeping, reporting, and disclosure of information (see 49 U.S.C. 31133(a)(8) or 31133(a)(10)) (Attachment D).

49 U.S.C. 31133. **General powers of the Secretary of Transportation**

(a) GENERAL.—In carrying out this subchapter and regulations prescribed under section 31102 of this title, the Secretary of Transportation may—

\* \* \*

(8) prescribe recordkeeping and reporting requirements;

\* \* \*; and

(10) perform other acts the Secretary considers appropriate.

Vehicle marking requirements are intended to ensure that FMCSA, the National Transportation Safety Board (NTSB), and State safety officials are able to identify motor carriers and correctly assign responsibility for regulatory violations during inspections, investigations, compliance reviews, and crash studies. These marking requirements will also provide the public with beneficial information that could also assist in identifying carriers for the purposes of commerce, complaints, or emergency notification.

The burden for the CMV marking requirement was initially documented in the final rule entitled, “Federal Motor Carrier Safety Regulations: General Commercial Motor Vehicle Marking,” (65 FR 35287), June 2, 2000.[[1]](#footnote-1)

FMCSA needs to update the annual burden for CMV marking requirements due to changes resulting from the final rule “Lease and Interchange of Vehicles; Motor Carriers of Passengers,” to be published, which removes the temporary marking requirement for leased passenger-carrying CMVs. The Agency, therefore, submits this revised ICR.

This information collection (IC) supports the DOT strategic goals of safety and organizational excellence.

1. **HOW, BY WHOM, AND FOR WHAT PURPOSE IS THE INFORMATION USED**

The marking requirements apply to freight-carrying motor carriers, passenger-carrying motor carriers, and IEPs engaging in interstate transportation. The Agency provides performance-based requirements for the marking but does not require a specific method of marking as long as the method complies with FMCSA’s performance-based requirements. These requirements ensure that FMCSA, NTSB, and the States are able to identify motor carriers and correctly assign responsibility for regulatory violations during inspections, investigations, compliance reviews, and crash studies. These requirements also provide the public with beneficial information that could assist in identifying carriers for the purposes of commerce, complaints, or emergency notification.

1. **EXTENT OF AUTOMATED INFORMATION COLLECTION**

Intermodal equipment providers (IEPs) may choose to meet the marking requirements of 49 CFR 390.21(h) for intermodal equipment (IME) by entering and maintaining equipment identification information in the Intermodal Association of North America (IANA), Global Intermodal Equipment Registry (GIER).[[2]](#footnote-2) This is in lieu of physically marking intermodal equipment with stencils or labels. Registering intermodal equipment in the GIER is optional and discretionary on the part of IEPs, and IEPs can choose to do so to the extent that they find it the least burdensome way to meet the marking requirements. This electronic alternative reduces the information collection burden of the vehicle marking regulations because physical marking of the equipment with the IEP name and USDOT number using stencils or labels need not be performed. As discussed in Section 12 below, it is estimated that 90% of intermodal equipment is registered in the GIER database.

1. **EFFORTS TO IDENTIFY DUPLICATION**

There are no other Federal agencies that require CMV marking.

1. **EFFORTS TO MINIMIZE THE BURDEN ON SMALL BUSINESSES**

The marking requirements impose minimal burden on small businesses. Considerable flexibility is afforded in meeting the requirements. Marking may be painted on the vehicles, applied with stencils, applied with decals, or affixed by any other means, provided that the marking meets the performance-based requirements. Furthermore, for IME, in lieu of physical marking the marking requirements may instead be met by entering and maintaining equipment identification information in the GIER.

1. **IMPACT OF LESS FREQUENT COLLECTION OF INFORMATION**

The appropriate marking of vehicles owned, leased, or rented, assists FMCSA in identifying motor carriers and monitoring their safety performance and crash involvement, thereby helping the Agency identify unsafe, high-risk motor carriers. This ICR also greatly assists FMCSA and its State partners in meeting the standard burden of proof for enforcement actions against non-compliant carriers, as well as assists State partners during accident investigations in determining the responsible motor carrier involved in a CMV crash. The frequency of vehicle marking is a function of the rate at which new vehicles are acquired that require initial marking, the rate at which existing vehicles are resold and must be re-identified, and the rate at which labels reach the end of their useful life and must be replaced, and therefore changes to frequency of marking would not directly result from any changes to this ICR. If the this ICR were not conducted, the Agency’s vehicle marking requirements could not be met, and FMCSA, NTSB, and the States would not be able to identify motor carriers and correctly assign responsibility for regulatory violations during inspections, investigations, compliance reviews, and crash studies. Also, the public would not be able to as easily identify carriers for the purposes of commerce, complaints, or emergency notification.

1. **SPECIAL CIRCUMSTANCES**

There are no special circumstances associated with this ICR.

1. **COMPLIANCE WITH 5 CFR 1320.8**

On September 20, 2018, the Agency complied with 5 CFR 1320.8(d)(3) by asking for public comment on its proposed collection of information in the NPRM titled, “Lease and Interchange of Vehicles; Motor Carriers of Passengers” (83 FR 47764) (Attachment B). No comments concerning the collection of information were received to the NPRM. On August 14, 2019, the Agency published a final rule titled, “Lease and Interchange of Vehicles; Motor Carriers of Passengers” (84 FR 40272) (Attachment C).

1. **PAYMENTS OR GIFTS TO RESPONDENTS**

No payments or gifts are provided.

1. **ASSURANCE OF CONFIDENTIALITY**

There are no confidential reporting requirements associated with this information collection. The requirement is limited to marking vehicles operated in interstate commerce with an FMCSA-furnished USDOT registration number.

1. **JUSTIFICATION FOR COLLECTION OF SENSITIVE INFORMATION**

The information requested and collected is not of a sensitive nature.

**12. ESTIMATE OF BURDEN HOURS FOR INFORMATION REQUESTED**

The estimate of burden hours is primarily dependent on the type of entity (freight-carrying carrier, passenger-carrying carrier, or intermodal equipment provider), and the type of marking (physical, or in the case of intermodal equipment providers, electronic). Each of the three distinct types of motor carriers is addressed separately below.

**IC 1:** **Freight-carrying commercial motor carriers (i.e., trucking companies)**

FMCSA’s Motor Carrier Management Information System (MCMIS) and Safety Measurement System (SMS) data indicate that there are 535,309 active interstate freight carriers and intrastate hazardous materials carriers operating approximately 4,230,195 power units, as of a September 29, 2017 snapshot. To estimate the IC 1 burden on a consistent basis relative to ICs 2 and 3, these 2017 carrier and power unit counts are projected forward to the years 2018 through 2022. These projections are made using an estimated annual carrier growth rate of 0.275 percent, which is based on U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS), industry employment projections for the General Freight Trucking industry (North American Industry Classification System (NAICS) Code 484100) for the years 2016 through 2026.[[3]](#footnote-3)

Table 1 shows the resulting estimated number of freight-carrying motor carriers and freight-carrying CMVs for the years 2017 through 2022. The three-year period covered by this ICR is 2020 through 2022, and over that three-year period the average number of freight-carrying motor carriers is 541,219 and the average number of freight-carrying CMVs is 4,276,900.

**Table 1. Freight-Carrying Commercial Motor Carrier Industry Growth**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 3-Year Average  (2020-2022) |
| Number of Freight-Carrying Motor Carriers | 535,309 | 536,780 | 538,255 | 539,735 | 541,218 | 542,705 | 541,219 |
| Number of Freight-Carrying CMVs | 4,230,195 | 4,241,821 | 4,253,478 | 4,265,168 | 4,276,890 | 4,288,644 | 4,276,900 |

The U.S. Department of Transportation’s National Highway Traffic Safety Administration (NHTSA) published a report in 1994 which suggests that the average operational life of a heavy-duty CMV was 14.7 years.[[4]](#footnote-4) Therefore, the Agency assumes that each freight-carrying CMV is replaced by a newly acquired vehicle every 14.7 years.

In addition, because of the absence of more reliable data on the sale and resale of used freight carrying CMVs, for purposes of this analysis and to simplify calculations the Agency assumes that the average turnover of freight-carrying vehicles is once every 3 years. The implication of this assumption is that on an annual basis, one-third of freight-carrying CMVs, less newly-acquired freight-carrying CMVs, are estimated to be resold in a secondary market and undergo re-identification.

Finally, the regulatory evaluation for FMCSA’s final rule on “Requirements for Intermodal Equipment Providers and for Motor Carriers and Drivers Operating Intermodal Equipment” suggests that the average life of a weatherproof vinyl label (as affixed to IME) is 3 years.[[5]](#footnote-5) Without more authoritative information on the average useful life of labeling used on freight-carrying CMVs, the Agency uses this value of 3 years as an estimate of the average useful life of labels on freight-carrying CMVs. Therefore, FMCSA assumes that on an annual basis one-third of freight-carrying CMVs that are retained by the owner (i.e., that are not newly acquired, and that are not among those resold in a secondary market) must undergo relabeling (due to the label reaching the end of its useful life).

With these assumptions in mind, the Agency estimates the following for freight-carrying CMVs:

* The average annual number of newly-acquired freight-carrying CMVs is 290,946 (4,276,900 power units ÷ 14.7 years average operational life).
* The average annual number of resold freight-carrying CMVs, which require re-identification, is estimated to be 1,328,651 ([4,276,900 power units – 290,946 newly acquired power units] ÷ 3 years average turnover rate).
* The average annual number of freight-carrying CMVs retained by the owner and that undergo relabeling due to the label reaching the end of its useful life is 885,768 ([4,276,900 power units – 290,946 newly acquired power units – 1,328,651 resold and relabeled power units] ÷ 3 years average label useful life).

This results in an annual average of **2,505,365 freight-carrying CMVs (290,946 + 1,328,651 + 885,768) impacted by the marking requirements**. These estimated 2,505,365 freight-carrying CMVs impacted by the marking requirements are expected to generate 2,505,365 responsesannually.

The estimated average time for affixing a USDOT number (assuming an average of 7 digits) is 12 minutes (0.20 hours), and the estimated average time for affixing a carrier name (assuming an average of 21 alphanumeric characters) is 14 minutes (0.233 hours). These estimates incorporate a number of factors that vary, including marking via stencils versus decals, amount of cleaning required, weather, and whether a new or existing vehicle is being marked. These estimates are based on responses to the Federal Highway Administration (FHWA, the predecessor organization to the FMCSA) from interviews with metropolitan Washington, DC, signage companies and Agency employees formerly employed by the motor carrier industry, which were undertaken during the original rulemaking process. This rule was published June 3, 2000.[[6]](#footnote-6) The combined total average time for affixing both a USDOT number and a carrier name is 26 minutes (0.433 hours).

Given the above estimate of 26 minutes (0.433 hours) per vehicle for the total average time for affixing both a USDOT number and a carrier name, the estimated total average annual **burden hours is 1,085,658** (2,505,365 responses × 0.433 hours per response). The estimated total average annual number of **respondents (i.e., impacted freight-carrying motor carriers) is 317,041** ([2,505,365 impacted vehicles ÷ 4,276,900 total vehicles] × 541,219 total freight carriers).

“Cost to respondents” (sometimes referred to as “burden hour cost”), as reported here in Section 12, represents the burden hours monetized at an appropriate hourly wage rate.[[7]](#footnote-7) Note that “cost to respondents” is separate and distinct from “cost burden”, which is reported later in Section 13 and represents capital or start-up costs, operation or maintenance costs (such as those for supplies and equipment), or purchases of services resulting from the collection of information.

We assume that respondent occupations correspond to Bus and Truck Mechanics and Diesel Engine Specialists, Standard Occupational Classification (SOC) Code 49-3031. The median hourly wage of Bus and Truck Mechanics and Diesel Engine Specialists (SOC Code 49-3031) in the Truck Transportation industry (NAICS Code 484000) is $20.50.[[8]](#footnote-8)

To arrive at a loaded wage, we first estimated a fringe benefits rate of 57 percent by dividing the total benefit costs ($14.09 per hour) by the wages and salaries ($24.73 per hour) for the transportation and warehousing industry.[[9]](#footnote-9) We then estimated an overhead rate of 27 percent by dividing management and overhead costs ($0.107 per mile) by labor costs ($0.39 per mile) for the trucking industry.[[10]](#footnote-10) Using these estimated fringe benefits and overhead rates, we calculated a fully loaded wage rate factor of 1.99 by multiplying the fringe benefits rate (1+0.57) by the overhead rate (1+0.27). Finally, multiplying the median hourly base wage of $20.50 by this fully loaded wage rate factor results in a fully loaded hourly wage of $40.72.

We estimate that the 317,041 freight-carrying motor carriers impacted annually will each incur an average of 3.4 burden hours and a cost to respondents of $138.44 ($40.72 × 3.4 hours). **The total burden for IC 1 is 1,085,658 hours** (0.433 hours per response × 2,505,365 responses) with a **cost to respondents of $44,206,626** ($40.72 × 1,085,658 hours).

IC 1 Summary

Estimated Average Annual Burden: 1,085,658 hours

Estimated Average Annual Number of Respondents: 317,041

Estimated Average Annual Number of Responses: 2,505,365

Estimated Average Annual Burden Hour Cost to Respondents: $44,206,626

**IC 2: Passenger-carrying commercial motor carriers**

The passenger carrier population impacted by the marking requirements consists of motor carriers transporting passengers in interstate commerce in CMVs that: (1) have a gross vehicle weight rating or gross vehicle weight of at least 10,001 pounds, whichever is greater; or (2) are designed or used to transport more than 8 passengers (including the driver) for compensation; or (3) are designed or used to transport more than 15 passengers (including the driver) and are not used to transport passengers for compensation.

FMCSA’s MCMIS and SMS database indicates that there are 15,756 active passenger carriers in active operation as of a September 29, 2017 snapshot (note that this value is comprised of 12,891 distinct carriers; carriers operating in multiple categories are counted as multiple carriers in such cases). Of the 15,756 carriers, 9,627 are for-hire carriers, and 6,129 are privately owned not-for-compensation business, or non-business, carriers. The 12,891 distinct carriers are subject to the permanent marking requirements. These carriers operate approximately 263,200 vehicles. To estimate the IC 2 burden on a consistent basis relative to ICs 1 and 3, these 2017 passenger carrier and vehicle counts are projected forward to the years 2018 through 2022. These projections are made using an estimated annual carrier growth rate of 0.864 percent, which is based on U.S. DOL, BLS, industry employment projections for SOC 53-3021 (Bus drivers, transit and intercity) for the years 2016 through 2026.[[11]](#footnote-11)

Table 2 shows the resulting estimated number of passenger-carrying motor carriers and passenger-carrying CMVs for the years 2017 through 2022. The three-year period covered by this ICR is 2020 through 2022, and over that three-year period the average number of passenger-carrying motor carriers is 13,342 and the average number of passenger-carrying CMVs is 272,417.

**Table 2. Passenger-Carrying Commercial Motor Carrier Industry Growth**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 3-Year Average  (2020-2022) |
| Number of Passenger-Carrying Motor Carriers | 12,891 | 13,002 | 13,115 | 13,228 | 13,342 | 13,457 | 13,342 |
| Number of Passenger-Carrying CMVs | 263,200 | 265,473 | 267,766 | 270,078 | 272,410 | 274,763 | 272,417 |

The average operational life of passenger-carrying CMVs varies depending on the type of vehicle (e.g., motorcoach, cutaway, etc.) and a variety of other factors. Information at a sufficiently detailed level could not be readily obtained so as to calculate the average operational life of passenger-carrying CMVs subject to the vehicle marking regulations. Therefore, the Agency uses the same estimate of an average 14.7 year vehicle operational life that was used above for freight-carrying vehicles. Based on a variety of anecdotal evidence regarding the typical useful life of large heavy-duty diesel-powered passenger carrying vehicles (motorcoaches, transit buses, etc.), as well as medium and smaller cutaway style shuttle bus type vehicles, this estimated average of 14.7 years appears to be reasonable.[[12]](#footnote-12)

Reliable data on the sale and resale of used passenger-carrying CMVs could not be readily obtained. Therefore, the Agency assumes that the average turnover of passenger-carrying vehicles is once every 3 years, similar to the assumptions made above in the analysis of freight-carrying vehicles. The implication of this assumption is that on an annual basis, one-third of passenger-carrying CMVs, less newly-acquired passenger-carrying CMVs, are estimated to be resold in a secondary market and undergo re-identification.

Finally, similar to the assumptions made above in the analysis of freight-carrying vehicles, the agency assumes 3 years as an estimate of the average useful life of labels on passenger-carrying CMVs. Therefore, FMCSA assumes that on an annual basis one-third of passenger-carrying CMVs that are retained by the owner (i.e., that are not newly acquired, and that are not among those resold in a secondary market) must undergo relabeling (due to the label reaching the end of its useful life).

With these assumptions in mind, the Agency estimates the following for passenger-carrying CMVs:

* The average annual number of newly-acquired passenger-carrying CMVs is 18,532 (272,417 power units ÷ 14.7 years average operational life).
* The average annual number of resold passenger-carrying CMVs, which require re-identification, is estimated to be 84,628 ([272,417 power units – 18,532 newly acquired power units] ÷ 3 years average turnover rate).
* The average annual number of passenger-carrying CMVs retained by the owner and that undergo relabeling due to the label reaching the end of its useful life is 56,419 ([272,417 power units – 18,532 newly acquired power units – 84,628 resold and relabeled power units] ÷ 3 years average label useful life).

This results in an annual average of **159,579 passenger-carrying CMVs (18,532 + 84,628 + 56,419) impacted by the marking requirements**. These estimated 159,579 passenger-carrying CMVs impacted by the marking requirements are expected to generate 159,579 responsesannually.

It is assumed that the marking of passenger-carrying vehicles is generally similar in practice to the marking of freight-carrying vehicles, and therefore the Agency estimates that the combined total average time for affixing both a USDOT number and a carrier name to a passenger-carrying CMV is 26 minutes (0.433 hours), similar to the estimate used above in the analysis of freight-carrying vehicles.

Given the above estimate of 26 minutes (0.433 hours) per vehicle for the total average time for affixing both a USDOT number and a carrier name, the estimated total average annual **burden hours is 69,151** (159,579 responses × 0.433 hours per response). The estimated total average annual number of **respondents (i.e., impacted passenger-carrying motor carriers) is 7,816** ([159,579 impacted vehicles ÷ 272,417 total vehicles] × 13,342 total passenger carriers).

We assume that respondent occupations correspond to Bus and Truck Mechanics and Diesel Engine Specialists, SOC Code 49-3031. The median hourly wage of Bus and Truck Mechanics and Diesel Engine Specialists (SOC Code 49-3031) in the Interurban and Rural Bus Transportation industry (NAICS Code 485200) is $26.01.[[13]](#footnote-13)

To arrive at a loaded wage, we first estimated a fringe benefits rate of 57 percent by dividing the total benefit costs ($14.09 per hour) by the wages and salaries ($24.73 per hour) for the transportation and warehousing industry.[[14]](#footnote-14) We then estimated an overhead rate of 27 percent by dividing management and overhead costs ($0.107 per mile) by labor costs ($0.39 per mile) for the trucking industry.[[15]](#footnote-15) Using these estimated fringe benefits and overhead rates, we calculated a fully loaded wage rate factor of 1.99 by multiplying the fringe benefits rate (1+0.57) by the overhead rate (1+0.27). Finally, multiplying median hourly base wage of $26.01 by this fully loaded wage rate factor results in a fully loaded hourly wage of $51.66.

We estimate that the 7,816 passenger carriers impacted annually will each incur an average of 8.8 burden hours and a cost to respondents of $454.64 ($51.66 × 8.8 hours). **The total burden for IC 2 is 69,151 hours** (0.433 hours per response × 159,579 responses) with a **cost to respondents of $3,572,558** ($51.66 × 69,151 hours).

IC 2 Summary

Estimated Average Annual Burden: 69,151 hours

Estimated Average Annual Number of Respondents: 7,816

Estimated Average Annual Number of Responses: 159,579

Estimated Average Annual Burden Hour Cost to Respondents: $3,572,558

**IC 3:** **Intermodal equipment providers (IEPs)**

FMCSA’s MCMIS indicates that there were 105 IEPs operating approximately 555,000 pieces of IME as of a January 23, 2015 snapshot.[[16]](#footnote-16) As noted earlier in Section 3, IEPs may choose to meet the marking requirements of 49 CFR 390.21(h) for IME by entering and maintaining equipment identification information in the IANA GIER. More up-to-date information than that available in MCMIS regarding the current population of IEPs and IME was therefore obtained from GIER. The IANA reports that approximately 670,000 pieces of IME were registered in GIER as of early 2019, representing an estimated 90% of the total population of IME in North American subject to the vehicle marking requirements.[[17]](#footnote-17) Therefore, based on this information, it is estimated that the total population of IME subject to the vehicle marking requirements is currently 744,000.[[18]](#footnote-18)

The number of IEPs represented in GIER is 100, consistent with the FMCSA estimate of 105 above, and therefore the FMCSA estimate of 105 IEPs is used for this analysis.[[19]](#footnote-19)

The number of IEPs has been variable in recent years with no clear trend while the number of intermodal trailers, chassis and equipment has remained steady. Due to the lack of a clear upward trend in the number of IEPs in recent years and the relatively static number of IEP-owned or leased equipment, the Agency assumes that these estimated population values of 105 IEPs and 744,000 pieces of IME will remain representative of the universe of IEPs and IME subject to the vehicle marking requirements during the three-year period of 2020 through 2022 covered by this ICR.

Although 105 IEPs and 744,000 pieces of IME are estimated to be subject to the vehicle marking requirements, as noted earlier in Section 3, the electronic registration of IME by IEPs in GIER is in lieu of physically marking IME with stencils or labels. Therefore, because an estimated 90% of IME are registered in GIER, physical marking of IME with the IEP name and USDOT number using stencils or labels need only be performed on the 10% of IME that are estimated to not be registered in GIER. This is equal to an estimated 74,400 pieces of IME of the total population of 744,000 estimated above. A similar proportion of only 10% of IEPs are estimated to physically mark their IME, equal to 11 IEPs of the total population of 105 IEPs estimated above. The burden associated with the electronic registration in GIER of the remaining 90% of IME is considered *de minimis*, consistent with the methodology used in previous versions of this information collection.

Detailed information regarding the average operational life of IME could not be readily obtained. Therefore, the Agency uses the same estimate of an average 14.7 year operational life that was used above for freight-carrying vehicles. Based on a variety of anecdotal evidence, this estimated average of 14.7 years operational life appears to be a reasonable representation of the average operational life of IME.[[20]](#footnote-20)

Reliable data on the sale and resale of used IME was also not readily available. Therefore, the Agency assumes that the average turnover of IME is once every 3 years, similar to the assumptions made above in the analysis of freight-carrying vehicles. The implication of this assumption is that on an annual basis, one-third of IME that are not registered in GIER and that therefore require physically marking, less those newly-acquired, are estimated to be resold in a secondary market and undergo re-identification with physical marking.

Finally, similar to the assumptions made above in the analysis of freight-carrying vehicles, the agency assumes 3 years as an estimate of the average useful life of labels on IME that are physically marked. Therefore, FMCSA assumes that on an annual basis one-third of IME that are physically marked and are retained by the owner (i.e., that are not registered in GIER, that are not newly acquired, and that are not among those resold in a secondary market) must undergo relabeling (due to the label reaching the end of its useful life).

With these assumptions in mind, the Agency estimates the following for IME:

* The average annual number of newly-acquired IME that are physically marked is 5,061 (74,400 pieces of IME not registered in GIER ÷ 14.7 years average operational life).
* The average annual number of IME not registered in GIER that require physical marking and that are resold and require re-identification is estimated to be 23,113 ([74,400 pieces of IME not registered in GIER – 5,061 newly acquired] ÷ 3 years average turnover rate).
* The average annual number of IME not registered in GIER that require physical marking and are retained by the owner and undergo relabeling due to the label reaching the end of its useful life is 15,409 ([74,400 pieces of IME not registered in GIER – 5,061 newly acquired – 23,113 resold and relabeled power units] ÷ 3 years average label useful life).

This results in an annual average of **43,583 pieces of IME (5,061 + 23,113 + 15,409) impacted by the marking requirements**. These estimated 43,583 pieces of IME impacted by the marking requirements are expected to generate 43,583 responsesannually.

It is assumed that the physical marking of IME is generally similar in practice to the marking of freight-carrying vehicles, and therefore the Agency estimates that the combined total average time for affixing both a USDOT number and a carrier name to IME is 26 minutes (0.433 hours), similar to the estimate used above in the analysis of freight-carrying vehicles.

Given the above estimate of 26 minutes (0.433 hours) per vehicle for the total average time for affixing both a USDOT number and a carrier name, the estimated total average annual **burden hours is 18,886** (43,583 responses × 0.433 hours per response). The estimated total average annual number of **respondents (i.e., impacted IEPs) is 11** (the 10% of IEPs that are estimated to physically mark their IME).

We assume that respondent occupations correspond to Bus and Truck Mechanics and Diesel Engine Specialists, SOC Code 49-3031. The median hourly wage of Bus and Truck Mechanics and Diesel Engine Specialists (SOC Code 49-3031) in the Truck Transportation industry (NAICS Code 484000) is $20.50.[[21]](#footnote-21)

To arrive at a loaded wage, we first estimated a fringe benefits rate of 57 percent by dividing the total benefit costs ($14.09 per hour) by the wages and salaries ($24.73 per hour) for the transportation and warehousing industry.[[22]](#footnote-22) We then estimated an overhead rate of 27 percent by dividing management and overhead costs ($0.107 per mile) by labor costs ($0.39 per mile) for the trucking industry.[[23]](#footnote-23) Using these estimated fringe benefits and overhead rates, we calculated a fully loaded wage rate factor of 1.99 by multiplying the fringe benefits rate (1+0.57) by the overhead rate (1+0.27). Finally, multiplying the median hourly base wage of $20.50 by this fully loaded wage rate factor results in a fully loaded hourly wage of $40.72.

We estimate that the 11 IEPs impacted annually will each incur an average of 1,717 burden hours and a cost to respondents of $69,914 ($40.72 × 1,717 hours). **The total burden for IC 3 is 18,886 hours** (0.433 hours per response × 43,583 responses) with a **cost to respondents of $769,014** ($40.72 × 18,886 hours).

IC 3 Summary

Estimated Average Annual Burden: 18,886 hours

Estimated Average Annual Number of Respondents: 11

Estimated Average Annual Number of Responses: 43,583

Estimated Average Annual Burden Hour Cost to Respondents: $769,014

**Summary**

The totals are presented below in Table 3. The table displays previously calculated estimates, including number of respondents (number of carriers and IEPs with impacted CMVs and IME), number of responses (number of impacted CMVs and IME), and the total annual hour burden of all responses across vehicles and equipment.

**Table 3. Summary of Average Annual Respondents, Responses, and Burden by IC**

|  |  |  |  |
| --- | --- | --- | --- |
| **IC** | **Number of Respondents** | **Number of Responses** | **Burden Hours** |
| IC 1: Freight Carriers | 317,041 | 2,505,365 | 1,085,658 |
| IC 2: Passenger Carriers | 7,816 | 159,579 | 69,151 |
| IC 3: IEPs | 11 | 43,583 | 18,886 |
| **Total** | **324,868** | **2,708,527** | **1,173,695** |

**Estimated Average Annual Burden:** 1,173,695 hours

**Estimated Average Annual Number of Respondents:** 324,868

**Estimated Average Annual Number of Responses:** 2,708,527

**Estimated Average Annual Burden Hour Cost to Respondents**: $48,548,198

1. **ESTIMATE OF TOTAL ANNUAL COST BURDEN**

Cost burden, as reported here in Section 13, represents capital or start-up costs, operation or maintenance costs (such as those for supplies and equipment), or purchases of services resulting from the collection of information.[[24]](#footnote-24) Note that “cost burden” is separate and distinct from the “cost to respondents” (sometimes referred to as “burden hour cost”), which simply represents the burden hours monetized at an appropriate hourly wage rate, and is reported earlier in Section 12.

The estimated total annual cost burden varies by the type of entity (freight-carrying carrier, passenger-carrying carrier, or intermodal equipment provider), and depends on the material cost per vehicle. The marking requirements call for the display of the carrier’s name and USDOT number, and the marking must be displayed on both sides of the vehicle or equipment. The annual cost burden for each of the three distinct types of motor carriers is addressed separately below.

1. **Freight-carrying commercial motor carriers**

The vast majority of freight-carrying commercial motor carriers currently use stencils or decals for marking, as these are the least expensive methods. The distribution of freight carriers by size is presented below in Table 4. As shown in Table 4, the majority (85 percent) of those carriers is in the smallest fleet size category (1–6 CMVs).

**Table 4. Distribution of Freight Carriers by Size**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Carrier Size** | **Carriers** | **Carriers percent** | **CMVs** | **CMVs percent** |
| 1 to 6 | 455,082 | 85.0% | 875,881 | 20.7% |
| 7 to 19 | 53,741 | 10.0% | 584,629 | 13.8% |
| 20 to 100 | 22,511 | 4.2% | 885,343 | 20.9% |
| 101+ | 3,975 | 0.7% | 1,884,342 | 44.5% |
| **Total** | **535,309** | **100%** | **4,230,195** | **100%** |

The Agency applies the percentage distributions from Table 4 to the estimated total annual number of impacted freight carriers (317,041) and CMVs (2,505,365) to estimate the distribution of impacts by carrier fleet size category (see Table 5).

**Table 5. Distribution of Freight Carriers by Size**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Carrier Size** | **Carrier Percent** | **Impacted Carriers** | **CMVs Percent** | **Impacted CMVs** |
| 1 to 6 | 85.0% | 269,526 | 20.7% | 518,747 |
| 7 to 19 | 10.0% | 31,829 | 13.8% | 346,251 |
| 20 to 100 | 4.2% | 13,332 | 20.9% | 524,351 |
| 101+ | 0.7% | 2,354 | 44.5% | 1,116,016 |
| **Total** | **100%** | **317,041** | **100%** | **2,505,365** |

The estimated marking costs per CMV are depicted below in Table 6, presented by carrier fleet size category. Current research shows prices ranging from $6 to $1,000, depending on the type, quality, quantity, and durability of the option, as well as whether it is a do-it-yourself application or custom-made.

**Table 6. Average Material Cost per CMV by Carrier Fleet Size Category**

|  |  |  |  |
| --- | --- | --- | --- |
| **Carrier Size** | **Material Cost per CMV** | | **Total Material Cost per CMV by Carrier Size Category** |
| **Affixing Carrier USDOT #** | **Affixing Carrier Name** |
| 1 to 6 | $11.10 | $16.70 | $27.80 |
| 7 to 19 | $8.30 | $12.50 | $20.80 |
| 20 to 100 | $5.50 | $8.30 | $13.80 |
| 101+ | $2.80 | $4.10 | $6.90 |

The estimated marking cost burden per carrier (summarized in Table 7) will vary according to the fleet size per carrier.

**Table 7. Average Material Cost per Carrier by Carrier Fleet Size Category**

|  |  |  |  |
| --- | --- | --- | --- |
| **Carrier Size** | **Average Fleet Size** | **Material Cost**  **per CMV** | **Average Cost per Carrier** |
| 1 to 6 | 2 | $27.80 | $54 |
| 7 to 19 | 11 | $20.80 | $226 |
| 20 to 100 | 39 | $13.80 | $543 |
| 101+ | 474 | $6.90 | $3,271 |

The total cost burden for all freight-carrying motor carriers is estimated by applying the material cost per vehicle to the number of CMVs corresponding to its size category. This information is presented in Table 8. For example, the 1 to 6 carrier size category incurs a cost burden of $14,421,171 (518,747 impacted CMVs × $27.80 per CMV). The total average annual cost burden for all categories of freight-carrying motor carriers is **$**36,559,745.

**Table 8. Total Cost Burden to Freight-Carrying Commercial Motor Carriers**

|  |  |  |  |
| --- | --- | --- | --- |
| **Carrier Size** | **Total Number of Impacted CMVs** | **Material Cost**  **per CMV** | **Total Cost Burden** |
| 1 to 6 | 518,747 | $27.80 | $14,421,171 |
| 7 to 19 | 346,251 | $20.80 | $7,202,020 |
| 20 to 100 | 524,351 | $13.80 | $7,236,045 |
| 101+ | 1,116,016 | $6.90 | $7,700,509 |
| **Total** | **2,505,365** | **-** | **$36,559,745** |

1. **Passenger-carrying commercial motor carriers**

As noted earlier in Section 12, there are an estimated 159,579 passenger-carrying CMVs that require marking with decals or stencils annually. The estimated cost per passenger-carrying CMV of such marking is $27.80 ($11.10 to affix carrier USDOT number + $16.70 to affix carrier name). A December 4, 2018, final rule (83 FR 62505) extended the compliance date of the existing May 2015 final rule titled “Lease and Interchange of Vehicles; Motor Carriers of Passengers”, from January 1, 2019, to January 1, 2021, and the final rule, also titled “Lease and Interchange of Vehicles; Motor Carriers of Passengers”, eliminates the temporary marking requirement for leased passenger-carrying CMVs altogether. Therefore, the cost burden presented in Table 9 specific to temporary marking for leased passenger-carrying CMVs is now reported as $0 under this revised ICR. Therefore, the total cost burden for all passenger carriers impacted by this IC of the marking rule is $4,436,296 per year (159,579 CMVs × $27.80 per vehicle) as shown in Table 9. This equates to an annual average of $568 per impacted passenger carrier ($4,436,296 ÷ 7,816 impacted carriers).

**Table 9. Total Cost Burden to Passenger-Carrying Commercial Motor Carriers**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Material Cost per Vehicle** | | | **Total Affected Vehicles** | **Total Cost Burden for Permanent Marking** | **Total Cost Burden for Temporary Marking for Leased Vehicles** | **Total Cost Burden for Passenger-Carrying CMVs** |
| **Affixing Carrier USDOT #** | **Affixing Carrier Name** | **Total Cost per Vehicle** |
| $11.10 | $16.70 | $27.80 | 159,579 | $4,436,296 | $0 | $4,436,296 |

1. **Intermodal equipment providers (IEPs)**

As noted earlier in Section 12, of the average annual total population of 744,000 pieces of IME subject to the vehicle marking requirements, physical marking of IME with the IEP name and USDOT number using stencils or labels need only be performed on the 10% of IME that are estimated to not be registered in GIER. Of that sub-population of 74,400 pieces of IME (744,000 × 10%), it was estimated that an annual average of 43,583 are impacted by the marking requirements, as described earlier in Section 12.

The cost burden of physical marking per piece of IME depends on the material cost of physical marking per piece of IME, which in turn depends on the quantity of IME being physical marked by an IEP. The annual average number of pieces of IME impacted by the marking requirements per each of the 11 impacted IEPs equals 3,962 (43,583 impacted pieces of IME ÷ 11 impacted IEPs). Based on this average fleet size of impacted IME per impacted IEP, for simplicity the Agency applies the total material cost per vehicle (for affixing USDOT number plus affixing the carrier name) estimated for freight-carrying commercial motor carriers that have a fleet size of more than 1,000 CMVs. That cost burden estimate is $3.50 per vehicle.

There are an estimated annual average of 43,583 pieces of IME that require physical marking with decals or stencils. Therefore, the total cost burden for all IEPs impacted by this IC of the marking rule is $152,541 per year (43,583 pieces of IME × $3.50 per piece of IME) as shown in Table 10. This equates to an annual average of $13,867 per impacted IEP ($152,541 ÷ 11 impacted IEPs).

**Table 10. Total Cost Burden to Intermodal Equipment Providers (IEPs)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Material Cost per Vehicle** | | | **Annual Average Number of Affected Pieces of IME** | **Total Cost Burden for IEPs** |
| **Affixing Carrier USDOT #** | **Affixing Carrier Name** | **Total Cost per Piece of IME** |
| $1.40 | $2.10 | $3.50 | 43,583 | $152,541 |

**Summary**

Table 11 presents the average annual cost burden incurred per carrier or IEP, and the total cost burden for all carriers or IEPs. The average cost burden per freight carrier is estimated as a weighted average of the fleet size categories.

**Table 11. Total Annual Cost Burden**

|  |  |  |  |
| --- | --- | --- | --- |
| **Respondent Type** | **Average Cost per Carrier/IEP** | **Calculation of Average Cost per Carrier/IEP** | **Total Cost** |
| Freight Carriers | $115 | $36,559,745 ÷ 317,041 | $36,559,745 |
| Passenger Carriers | $568 | $4,436,296 ÷ 7,816 | $4,436,296 |
| IEPs | $13,867 | $152,541 ÷ 11 | $152,541 |
| **Total** | | | **$41,148,582** |

1. **ESTIMATE OF COST TO THE FEDERAL GOVERNMENT**

None. The cost of educating the motor carriers and lessees of the marking requirements and the enforcement of those requirements at the roadside during crash and compliance investigations are covered by existing personnel without further impact to the government.

1. **EXPLANATION OF PROGRAM CHANGES OR ADJUSTMENTS**

Table 12 presents the burden for the currently approved information collection, the new burden estimates from this revision, and the resulting total change in burden from the currently approved information collection to this revision.

**Table 12. Total Change in Burden from Currently Approved IC**

|  |  |  |  |
| --- | --- | --- | --- |
| **Information Collection Version** | **Annual Number of Responses** | **Annual Burden Hours** | **Annual Cost Burden** |
| Currently Approved under OMB Control Number 2126-0054 | 2,633,302 | 1,134,996 | $33,311,174 |
| Revised Estimates | 2,708,527 | 1,173,695 | $41,148,582 |
| **Total Change in Burden from Currently Approved IC** | **75,225** | **38,699** | **$7,837,408** |

Next, the Agency differentiates the total change in burden that is presented in Table 12 into the program change portion, and the adjustment change portion. The program change portion of the total change in burden is that which is the result of deliberate Agency action, in this case the final rule “Lease and Interchange of Vehicles; Motor Carriers of Passengers” to be published, that is the basis for this ICR revision. The adjustment portion of the total change in burden is the result of factors other than deliberate Agency action, and may include, for example, changes resulting from the availability of new or improved data, the use of enhanced analysis or estimation methodologies, or the correction of arithmetic or other errors made previously when calculating the burden for the currently approved information collection.

To differentiate between the program change portion and the adjustment portion of the total change in burden, the Agency first calculated updated burden estimates based on the currently approved information collection, incorporating only updated information regarding industry population and growth projections as presented earlier, and if necessary making certain methodological or arithmetic corrections or enhancements. This first set of updates does not, however, reflect the final rule “Lease and Interchange of Vehicles; Motor Carriers of Passengers” to be published. Therefore, this first set of updates includes only adjustment impacts on burden, and excludes any program change impacts. Next, the Agency then further revised these adjusted estimates to reflect the final rule “Lease and Interchange of Vehicles; Motor Carriers of Passengers” to be published, which eliminates the current requirement for temporary marking of leased passenger-carrying CMVs. Therefore, this second further revision includes only the program change impacts on burden. The resulting program change portion and adjustment change portion of the total change in burden from the currently approved IC are presented separately in Table 13 below.

**Table 13. Changes Due to Agency Discretion and Adjustment in Agency Estimate**

|  |  |  |  |
| --- | --- | --- | --- |
| **IC of Total Change** | **Change in Annual Number of Responses** | **Change in Annual Burden Hours** | **Change in Annual Cost Burden** |
| **Total Change in Burden from Currently Approved IC** | **75,225** | **38,699** | **$7,837,408** |
| Program Change due to Agency Discretion | 0 | 0 | -$35,776 |
| Change due to Adjustment in Agency Estimate | 75,225 | 38,699 | $7,873,184 |

The currently approved burden estimate assumes that the time required to apply temporary markings to passenger-carrying CMVs is *de minimis*, and therefore there are no burden hours estimated for this task in the currently approved estimate. Accordingly, the elimination of this requirement for temporary marking of leased passenger-carrying CMVs in the final rule does not result in any burden hours reduction due to program change.

There is an adjustment increase in both the number of responses and annual burden hours as compared to the currently approved information collection, resulting in small increases of only about 3% over the currently approved values. These adjustments changes are due to updated information regarding industry population and growth projections for all three carrier types, as well as some small methodological enhancements and corrections to the burden estimates for passenger-carrying commercial motor carriers and IEPs.

There is a small reduction in cost burden of $35,776 due to program change, resulting from the elimination of the requirement for temporary marking of leased passenger-carrying CMVs under the final rule. Finally, the currently approved information collection inadvertently reported the value for cost burden, using the value of the cost to respondents ($33,311,174) instead of the value of the cost burden (which was $40,404,329 as reported in Section 13 of the Supporting Statement for the ICR approved on October 18, 2018). Correcting this discrepancy in the current revision results in a substantial adjustment increase in cost burden of $7.8 million as shown in Table 13, equal to almost a 25% increase over the currently approved cost burden value.

1. **PUBLICATION OF RESULTS OF DATA COLLECTION**

The results of this ICR will not be published.

1. **APPROVAL FOR NOT DISPLAYING THE EXPIRATION DATE OF OMB APPROVAL**

Not applicable.

1. **EXCEPTIONS TO CERTIFICATION STATEMENT**

None.

**ATTACHMENTS**

A. U.S. DOT FMCSA. “Lease and Interchange of Vehicles; Motor Carriers of Passengers; Extension of Compliance Date.” Final rule; extension of compliance date. 83 FR 62505. December 4, 2018.

B. U.S. DOT FMCSA. “Lease and Interchange of Vehicles; Motor Carriers of Passengers.” Notice of proposed rulemaking (NPRM); request for comments. 83 FR 47764. September 20, 2018.

C. U.S. DOT FMCSA. “Lease and Interchange of Vehicles; Motor Carriers of Passengers” Final rule; 84 FR 40272. August 14, 2019.

D. 49 U.S.C. 31133. “General powers of the Secretary of Transportation.” October 30, 1984.

ACRONYMS LIST

ABA American Bus Association

BLS Bureau of Labor Statistics

CFR Code of Federal Regulations

CMV Commercial Motor Vehicle

DOL Department of Labor

DOT Department of Transportation

ECEC Employer Costs for Employee Compensation

FHWA Federal Highway Administration

FMCSA Federal Motor Carrier Safety Administration

FR Federal Register

FTA Federal Transit Administration

GIER Global Intermodal Equipment Registry

GSA General Services Administration

IANA Intermodal Association of North America

IC Information Collection

ICR Information Collection Request

IEP Intermodal Equipment Provider

IME Intermodal Equipment

MCMIS Motor Carrier Management Information System

NAICS North American Industry Classification System

NHTSA National Highway Traffic Safety Administration

NPRM Notice of Proposed Rulemaking

NTSB National Transportation Safety Board

OES Occupational Employment Statistics

OIRA Office of Information and Regulatory Affairs

OMB Office of Management and Budget

PRA Paperwork Reduction Act

PRISM Performance and Registration Information Systems Management

RISC Regulatory Information Service Center

ROCIS RISC and OIRA Consolidated Information System

SMS Safety Measurement System

SOC Standard Occupational Classification

U.S.C. United States Code

USDOT United States Department of Transportation

1. U.S. Department of Transportation (USDOT), Federal Motor Carrier Safety Administration (FMCSA). “Federal Motor Carrier Safety Regulations; General; Commercial Motor Vehicle Marking. Final Rule.” 65 FR 35287. June 2, 2000. [↑](#footnote-ref-1)
2. Intermodal Association of North America (IANA). “Global Intermodal Equipment Registry (GIER)”. Available at: https://www.gierregistry.com/ (accessed February 20, 2019). [↑](#footnote-ref-2)
3. U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS). “Employment Projections. Industry-occupation matrix data, by industry. Employment by industry, occupation, and percent distribution, 2016 and projected 2026. NAICS 484100 (General freight trucking).” Available at: https://www.bls.gov/emp/ind-occ-matrix/ind\_xlsx/ind\_484100.xlsx (accessed April 4, 2019). [↑](#footnote-ref-3)
4. U.S. Department of Transportation (DOT), National Highway Traffic Safety Administration (NHTSA). “A Study of Commercial Motor Vehicle Electronics-Based Rear and Side Object Detection Systems. Final Report.” DOT HS 808 080. January 1994. Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/

   dot\_hs\_808\_080.pdf (accessed April 3, 2019). [↑](#footnote-ref-4)
5. U.S. Department of Transportation (DOT), Federal Motor Carrier Safety Administration (FMCSA). “Requirements for Intermodal Equipment Providers and for Motor Carriers and Drivers Operating Intermodal Equipment. Final Rule.” December 17, 2008. 73 FR 76793. Available at: https://www.federalregister.gov/documents/2008/12/17/E8-29254/requirements-for-intermodal-equipment-providers-and-for-motor-carriers-and-drivers-operating (accessed April 3, 2019). [↑](#footnote-ref-5)
6. U.S. Department of Transportation (DOT), Federal Motor Carrier Safety Administration (FMCSA). “Federal Motor Carrier Safety Regulations; General; Commercial Motor Vehicle Marking. Final Rule.” 65 FR 35287. June 2, 2000. Available at: https://www.federalregister.gov/documents/2000/06/02/00-13697/federal-motor-carrier-safety-regulations-general-commercial-motor-vehicle-marking (accessed April 3, 2019). [↑](#footnote-ref-6)
7. U.S. General Services Administration (GSA), Regulatory Information Service Center (RISC). “ROCIS How To Guide for Agency Users of the Information Collection Request (ICR) Module. September 1, 2017. Page 106. Available at: https://www.rocis.gov/rocis/jsp3/common/ROCIS\_HOW\_TO\_Guide\_for\_AGENCY\_Users\_ of\_ICR\_Module-090117.pdf (accessed April 4, 2019). [↑](#footnote-ref-7)
8. U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS). “Occupational Employment Statistics (OES). National. May 2017. National Industry-Specific Occupational Employment and Wage Estimates. NAICS 484000 (Truck Transportation).” March 30, 2018. Available at: https://www.bls.gov/oes/2017/may/naics4\_484000.htm#49-0000 (accessed April 4, 2019). [↑](#footnote-ref-8)
9. U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS). “Employer Costs for Employee Compensation (ECEC). June 2016.” September 8, 2016. Available at: https://www.bls.gov/news.release/archives/ ecec\_09082016.pdf (accessed April 4, 2019). [↑](#footnote-ref-9)
10. Mark Berwick and Mohammad Farooq of the Upper Great Plains Transportation Institute, North Dakota State University, August 2003. "Truck Costing Model for Transportation Managers", pages 41, 43, and 45. Available at: https://www.mountain-plains.org/pubs/pdf/MPC03-152.pdf (accessed April 4, 2019). [↑](#footnote-ref-10)
11. U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS). “Occupational Employment Projections. Table 1.2: Employment by detailed occupation, 2016 and projected 2026.” Available at: https://www.bls.gov/emp/ind-occ-matrix/occupation.xlsx (accessed April 4, 2019). [↑](#footnote-ref-11)
12. For example, sources referenced included information from the American Bus Association (ABA) and the Federal Transit Administration (FTA). [↑](#footnote-ref-12)
13. U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS). “Occupational Employment Statistics (OES). National. May 2017. National Industry-Specific Occupational Employment and Wage Estimates. NAICS 485200 (Interurban and Rural Bus Transportation).” March 30, 2018. Available at: https://www.bls.gov/oes/2017/may/ naics4\_485200.htm#49-0000 (accessed April 4, 2019). [↑](#footnote-ref-13)
14. U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS). “Employer Costs for Employee Compensation (ECEC). June 2016.” September 8, 2016. Available at: https://www.bls.gov/news.release/archives/ ecec\_09082016.pdf (accessed April 4, 2019). [↑](#footnote-ref-14)
15. Mark Berwick and Mohammad Farooq of the Upper Great Plains Transportation Institute, North Dakota State University, August 2003. "Truck Costing Model for Transportation Managers", pages 41, 43, and 45. Available at: https://www.mountain-plains.org/pubs/pdf/MPC03-152.pdf (accessed April 4, 2019). [↑](#footnote-ref-15)
16. More recent data is not available because FMCSA no longer collects comparable information. [↑](#footnote-ref-16)
17. Intermodal Association of North America (IANA). “Global Intermodal Equipment Registry (GIER)”. Available at: https://www.gierregistry.com/ (accessed February 20, 2019). [↑](#footnote-ref-17)
18. Of this estimated total of 744,000 pieces of IME, 90% (or 670,000) are estimated to be registered in GIER, and the remaining 10% (or 74,400) are not registered in GIER and are physically marked. [↑](#footnote-ref-18)
19. Intermodal Association of North America (IANA). “Global Intermodal Equipment Registry (GIER)”. Available at: https://www.gierregistry.com/ (accessed February 20, 2019). [↑](#footnote-ref-19)
20. Sources referenced included information from the Journal of Commerce (see for example https://www.joc.com/trucking-logistics/drayage/chassis-models-still-evolving\_20140707.html), and a paper on intermodal chassis utilization (see https://people.hofstra.edu/jean-paul\_rodrigue/downloads/ ChassisUtilizationPaperJPRev3.pdf). [↑](#footnote-ref-20)
21. U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS). “Occupational Employment Statistics (OES). National. May 2017. National Industry-Specific Occupational Employment and Wage Estimates. NAICS 484000 (Truck Transportation).” March 30, 2018. Available at: https://www.bls.gov/oes/2017/may/naics4\_484000.htm#49-0000 (accessed April 4, 2019). [↑](#footnote-ref-21)
22. U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS). “Employer Costs for Employee Compensation (ECEC). June 2016.” September 8, 2016. Available at: https://www.bls.gov/news.release/archives/ ecec\_09082016.pdf (accessed April 4, 2019). [↑](#footnote-ref-22)
23. Mark Berwick and Mohammad Farooq of the Upper Great Plains Transportation Institute, North Dakota State University, August 2003. "Truck Costing Model for Transportation Managers", pages 41, 43, and 45. Available at: https://www.mountain-plains.org/pubs/pdf/MPC03-152.pdf (accessed April 4, 2019). [↑](#footnote-ref-23)
24. U.S. General Services Administration (GSA), Regulatory Information Service Center (RISC). “ROCIS How To Guide for Agency Users of the Information Collection Request (ICR) Module. September 1, 2017. Page 106. Available at: https://www.rocis.gov/rocis/jsp3/common/ROCIS\_HOW\_TO\_Guide\_for\_AGENCY\_Users\_ of\_ICR\_Module-090117.pdf (accessed April 4, 2019). [↑](#footnote-ref-24)