Department of Transportation
Federal Motor Carrier Safety Administration

SUPPORTING STATEMENT
"CRASH RISKS BY COMMERCIAL MOTOR VEHICLE (CMV) DRIVER SCHEDULES" ICR
OMB Control No. 2126-TBD

SUMMARY

- This submittal is for a new information collection request (ICR).
- FMCSA needs additional data to answer important questions related to driver schedules and how these factors impact overall driver performance and fatigue. This research requires data to be collected for HOS duty logs, crash and incident data, and inspection violations records. There are three ICs: IC1 - Carrier Task: TSP Setup for HOS Data; IC2 - Carrier Task: TSP Setup for SCE Data; and IC3 - Carrier Task: Driver Demographic Data Exports.
- There are no forms used in the study. All data will be collected electronically. The information collected will be used to examine the relative risk of crashes and inspection violations based on various factors related to the driver's work schedule and demographics.

INTRODUCTION

This is to request the Office of Management and Budget's (OMB) review and approval of a new Federal Motor Carrier Safety Administration (FMCSA) information collection request (ICR) entitled, Crash Risks by Commercial Motor Vehicle (CMV) Driver Schedules.

Part A. Justification

1. CIRCUMSTANCES THAT MAKE THE COLLECTION OF INFORMATION NECESSARY

FMCSA conducted a study (2011) that evaluated the impact of time-on-task, in terms of driving hours and working hours on Safety Critical Events (SCEs) and the benefits of breaks from driving[1]. The study included 99 drivers who drove a total of 700,000 miles, during which naturalistic driving video and data were collected. That study found that, as the number of driving hours increased, so did the number of SCEs. When evaluating the interaction between driving and non-driving work, drivers driving late into their work shifts showed a greater time-on-task effect with increased SCE risk; driving breaks decrease risk in the hour after a break (from 30- to 50-percent reduction in SCEs depending on the type of break).

FMCSA needs additional data to answer important questions related to driver schedules and how these factors impact overall driver performance and fatigue. This project will collect additional information to improve decision making regarding various aspects of the hours-of-service (HOS)

[1]Blanco, M., Hanowski, R., Olson, R., Morgan, J., Soccolich, S., Wu, S., Guo, F. (2011). The Impact of Driving, Non-Driving Work, and Rest Breaks on Driving Performance in Commercial Motor Vehicle Operations. http://hdl.handle.net/10919/55114

provisions, how HOS provisions are being used, and the impact of driver schedules on crash risk. The preamble of FMCSA's 2011 Final HOS Rule (76 FR 81134) stated: "FMCSA is committed to an analysis of the relative crash risk by driving hour, the impact of the changes in the HOS provisions, and examine difference in crash risk after restarts that include two nights and those that do not." R934n9390

FMCSA is authorized to conduct this research under 49 U.S.C. 31108[2] (see Attachment A), Motor Carrier Research and Technology Programs. Under section 31108(a)(3)(A-B), FMCSA may fund research, development, and technology projects related to (A) the causes of SCEs, injuries, and fatalities involving commercial motor vehicles and (B) means of reducing the number and severity of SCEs, injuries, and fatalities involving commercial motor vehicles. This information collection supports the U.S. Department of Transportation (DOT) Strategic Goal of Safety. The study aim is to improve decision making related to the usage of HOS provisions and the impact of CMV driver schedules on crash risk.

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

Pulsar Informatics, Inc. (Pulsar), under contract to FMCSA, will collect the data necessary to address the study objectives and research questions. This project will collect additional information to improve decision making regarding various aspects of the hours-of-service (HOS) provisions, how HOS provisions are being used, and the impact of driver schedules on crash risk. In addition, the National Academies of Sciences, Engineering, and Medicine completed the 2015 report "Research Needs on CMV Driver Fatigue, Long-Term Health and Highway Safety"[3]. One of its recommendations was:

> *"FMCSA should incentivize those who capture driver performance data (e.g., large fleets, independent trucking associations, companies that collect telematics data, insurance companies, researchers) to increase the availability of those data relevant to research issues of operator fatigue, hours of service, and highway safety. Any such efforts should ensure that data confidentiality is maintained, perhaps through restricted access arrangements or use of statistical techniques for disclosure protection […] Clearly, such carrier-collected data could offer a rich opportunity for analysis of various questions of interest concerning HOS regulations, fatigue, and crash frequency. If data from several large carriers across the commercial trucking industry could be collected, organized in a database, and made available to researchers, these data could represent an important segment of the trucking industry".*

Collecting Electronic Logging Device (ELD) and crash data from property-carrying and passenger-carrying commercial motor vehicle (CMV) carriers will enable the research team to

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[2] House of Representatives, Congress. (2024, January 3). 49 U.S.C. 31108 – Motor carrier research and technology program. [Government]. U.S. Government Publishing Office. https://www.govinfo.gov/app/details/USCODE-2023-title49/USCODE-2023-title49-subtitleVI-partB-chap311-subchapI-sec31108

[3] National Academies of Sciences, Engineering, and Medicine. 2016. *Commercial Motor Vehicle Driver Fatigue, Long-Term Health, and Highway Safety: Research Needs*. Washington, DC: The National Academies Press. https://doi.org/10.17226/21921.

assess risks posed by alternative schedules as they relate to various aspects of HOS provisions.

The study requires data to be collected for HOS duty logs, SCE and crash data, and inspection violations records. HOS duty logs, as well as SCE and crash data, will be obtained through an integration with the telematics system provider (TSP), and driver demographic data will be provided directly by participating carriers. The DOT will provide access to the Motor Carrier Management Information System (MCMIS) database, which provides records of all DOT recordable crashes and inspection violation records. The table below summarizes the types of data that will be analyzed and the sources for each data type.

Table 1: Data types and sources.

Data	Source
HOS Duty Logs	Carrier (via TSP integration)
SCE and Crash Data	Carrier (via TSP integration)
Driver Demographic Data	Carrier
Crash Data	MCMIS
Inspection Violations	MCMIS

All data will be collected electronically. Data from MCMIS (i.e., crash data and inspection violations) will be collected monthly via a link to a secure, password-protected website used by DOT. Each link is delivered to the research team by email from the Data Analysis and Reports Team (DART) in the FMCSA Analysis Division. HOS and incident and crash data will be collected continuously and automatically through an integration with carriers' telematics system provider (TSP). Driver demographic data will be collected from electronic reports that carriers export from their existing fleet management software, human resources management system, driver management platform, or other appropriate system on a quarterly basis. These processes are detailed further in Section 3 below and in Attachments B, C, and D.

The information collected will be used to examine the relative risk of crashes and inspection violations based on various factors related to the driver's work schedule and demographics. The relative risk is the risk compared within a baseline value for each factor. One example of this is the relative risk for cumulative hours of driving in duty compares the risk of crashes at the 11th hour of driving compared to the risk of crashes at the first hour of driving in a duty. The specific factors that will be analyzed are:

Cumulative Hours of Driving in Duty — how many hours the driver has been driving since starting duty

Cumulative Hours of Driving in Prior 7 Days — how many hours the driver drove in the 7 days prior to the start of duty

Number of Driving Breaks — whether the driver has taken no breaks, one 30-minute break, or two 30-minute breaks during a duty period

Number of Nights in Restart Period — whether the driver's restart period (34 hours consecutive time off) contains one, two, or at least three consecutive time periods spanning between 1:00am and 5:00am (a period known as the Window of Circadian Low, or WOCL)

Number of Consecutive Hours in Sleeper Berth

Personal Conveyance Use — whether or not the driver has used personal conveyance before or after their duty period

Time of Day — time of day when the driver started and ended duty day and time of day for each driving hour in duty day

Covariates:

- **Driver-Specific Covariate Factors** — age group, sex, years of experience, total number of inspection violations, etc.
- **Carrier-Specific Covariate Factors** — operation size, operation type, total number of inspection violations, total number of inspections, etc.
- **Crash-Specific Covariate Factors** — crash type, whether or not the crash was DOT recordable, whether or not the crash was preventable, number of injuries, number of fatalities, number of vehicles involved, number of vehicles requiring towing away, type of trafficway, weather conditions, light conditions, state in which the crash occurred, whether or not a citation was issued, any post-SCE indicators, etc.
- **Schedule-Based Fatigue Factors** — estimates of sleep and fatigue derived using a biomathematical model based on the HOS schedules

All of the above factors are expected to influence crash risk statistics, while all except the crash-specific covariate factors are expected to influence inspection violation statistics.

As part of the study, the HOS records will be linked to the SCE and inspection reports. For example, data related to a crash that took place on March 23rd is identified by carrier (DOT Number) and driver (name, license), and will be linked to HOS record of March 23rd for the driver involved in the crash. Data aggregation and linking will be performed as a processing step once the research team has had the opportunity to verify and validate the completeness of the data. The study data collection plan involves retaining HOS data for rolling six-month periods, which corresponds to the regulatory minimum retention period.

Pulsar, under contract with FMCSA, is required to develop a publicly available deidentified data set to be housed in the FMCSA Data Repository. All personally identifiable information (PII) shall be removed, and other methods of protecting privacy shall be utilized as needed. Additional details are provided in Section 10.

3. EXTENT OF AUTOMATED INFORMATION COLLECTION

This information collection will be obtained entirely electronically. ELD and crash data from carriers will be collected electronically via integration with Pulsar tools. MCMIS data for crashes and inspections will be collected via periodic database exports in electronic format.

To automate information collection to the greatest extent possible, Pulsar will support continuous ongoing data collection by leveraging Pulsar's Trucking Fatigue Meter technology. Trucking Fatigue Meter is a software product that integrates with ELD and telematics service providers in

the CMV industry to collect ELD data and Safety Critical Event (SCE) data (including crash data) and to enable monitoring of operational factors associated with elevated fatigue risk. Pulsar and many ELD and telematics service providers in the CMV industry already maintain existing integrations. After carriers complete the sign-up process, Trucking Fatigue Meter technology and existing integrations with ELD and telematics service providers will be utilized to support direct, secure, automatic transfer of the carriers' ELD and crash data without the need for any manual steps to be completed by the CMV carrier. This approach offers more scalability, enhanced data security, and fewer opportunities to introduce errors into the data set. The research team believes that offering CMV carriers an approach that is automatic and less burdensome has two strong advantages: (1) it will lower the barrier for CMV carriers to sign up to provide their data; (2) it will make it easier for carriers to continue to provide data through the duration of the study.

Information related to driver demographics will be collected electronically from carriers on a quarterly basis. Carriers will use their existing fleet management software, human resources management system, driver management platform, or other appropriate system to export an electronic report containing driver demographic information that they will upload to a secure file management system maintained by the research team.

For the information from MCMIS, DART will utilize a programmatic script to prepare the data for the research team each month. DART will then upload a compressed file containing the data to a secure website used by DOT and email the research team a link to access and download this data file.

4. EFFORTS TO IDENTIFY DUPLICATION

The research team conducted a comprehensive review of the published literature related to the research topic and found only two significant studies where ELD data was synchronized to data related to crashes and inspections[1,4]. The Blanco study[1], described in Section 1, was an important step in identifying HOS-related factors that contribute to driver crash risk. However, the Blanco study was insufficient in terms of: (1) the number of drivers in the study; (2) the duration of data collection; and (3) the recency of the data reflecting HOS rule changes to fully characterize HOS-related factors that contribute to crash risk. The second study by Park[5] also identified HOS-related factors that contribute to crash risk, but the authors note that the study was limited due to its small sample size and identified the need for additional research that includes a larger number of carriers over a longer data collection period.

Based on the findings of the literature review, the research team and FMCSA have concluded that the information contained in the 2011 Blanco study and the 2010 Park study do not fulfill the needs of this study, making the requested information collection necessary.

Additionally, the U.S. DOT's Crash Causal Factors Program (CCFP) collects detailed data through post-crash investigations. However, the CCFP does not capture ELD or HOS data from non-crash operational periods. The proposed study requires a broader record of duty days—including both crash and non-crash days—to evaluate the relative risk of crashes for schedule-

[4] Park SW, Jovanis PP. Hours of Service and Truck Crash Risk: Findings from Three National US Carriers during 2004. *Transportation Research Record*. 2010(2194):3-10.

related factors. As such, the CCFP dataset does not support the specific analytic objectives of this research effort.

5. EFFORTS TO MINIMIZE THE BURDEN ON SMALL BUSINESSES

While the information collection is designed to minimize the burden for all carriers, steps will be taken to further minimize the burden for small business operators. As needed, the research team will allocate extra resources to integrating with their ELD and telematics service providers to support direct, automatic transfer of the carriers' ELD and crash data without the need for any manual steps to be completed by the small business. Additionally, the research team can work with small businesses to streamline the collection of driver demographic information when necessary.

6. IMPACT OF LESS FREQUENT COLLECTION OF INFORMATION

FMCSA has determined that this collection of information is necessary for study completion; currently, there is no comprehensive, existing data set that can be used for this project. Not collecting this data would result in an incomplete understanding of HOS-related factors that impact crash risk and the effect of alternative schedules as they relate to various aspects of HOS provisions on crash risk in CMV operations. Further, the absence of this information collection would prevent FMCSA from meeting its goal—derived from the 2015 report by the National Academies of Sciences, Engineering, and Medicine—of developing a comprehensive, structured database of crash data and driver schedules to benefit future research.

7. SPECIAL CIRCUMSTANCES

There are no special circumstances related to this information collection.

8. COMPLIANCE WITH 5 CFR 1320.8:

FMCSA published a Federal Register notice with a 60-day comment period soliciting comments on the following collections of information on November 17, 2025. FMCSA received 19 comments on the 60-day notice which are addressed below. They were from individuals, anonymous commenters, and industry groups. FMCSA considered the comments and concluded that it will not make any changes to the information collections before it submits the ICR to OMB for approval.

Concerns About Fatigue Risks

Twelve comments from the public expressed concerns related to recognizing fatigue as a major safety risk while noting that current regulations compel them to operate CMVs while fatigued. These comments also indicated that fear of discipline discourages honest self-reporting of fatigue. Drivers' concerns about the significance of fatigue risks in CMV operations are of incredible importance. This proposed data collection aims to better understand fatigue-related factors that may correlate with accidents and incidents to inform future decision-making in the industry.

Concerns About Inflexibility of Hours-of-Service (HOS) Regulations
Eight comments focused on how the rigid structure of HOS rules, particularly the 14-hour on-duty and 34-hour restart, fails to reflect the actual nature of CMV operations. One objective of this study is to collect data related to how HOS provisions are being used. This data will assist in understanding HOS-related factors that impact crash risk and the effect of alternative schedules as they relate to various aspects of HOS provisions on crash risk in CMV operations. Further, this data will aid FMCSA in developing a comprehensive, structured database of crash data and driver schedules to benefit future research.

Concerns Regarding Safe and Legal Parking
Four comments discussed concerns related to the lack of adequate, legal parking options near customers, urban centers, and rest areas. These comments also mentioned concerns about having to choose between violating HOS rules, parking illegally, or driving while fatigued due to parking shortages. While this study does not focus on the availability of legal CMV parking, the relevance of driving while fatigued in these circumstances is important. By collecting data on factors related to HOS, crashes, and inspection violations, future research may use this deidentified dataset to improve the understanding of parking shortages as it relates to fatigued driving, illegal parking, and HOS violations.

Concerns Regarding Driver Autonomy
Seven comments mentioned a growing loss of control over their schedules, citing pressure from carriers, shippers, and enforcement agencies to prioritize productivity over safety. While the broader issues of scheduling pressures and driver autonomy are relevant to discussions of occupational well-being, they are beyond the scope of the present study. This research is specifically designed to examine the association between HOS and CMV crash and inspection violation involvement. System-level or organizational factors, while potentially related, are not directly evaluated within the current analytical framework. Data collected in this study may assist in future research efforts.

Concerns Regarding Study Design
One comment discussed concerns related to the study design, specifically about the lack of control for time-of-day and the lack of connection between HOS logs and driver fatigue. The study is an observational study, and the study design controls for time-of-day effects by including duty and driving time-of-day as covariates in the modeling framework. This separates time-of-day effects from the effects of schedule factors (e.g., long duty) and prevents confounding between these factors.

While the commenter noted HOS logs do not directly measure fatigue and do not capture all the factors influencing driver fatigue, HOS logs do provide information on sleep opportunity, time awake, and time-on-task, all of which are directly related to fatigue risk.

Concerns Regarding Study Recruitment
One comment discussed concerns about the recruitment strategy and whether participating carriers would be representative of the broader trucking industry, citing the reliance on telematics and the number of carriers.

The study aims to recruit a diverse range of carriers based on industry segments and carrier size. Carriers' participation is voluntary, but carriers will be contacted through a recruitment

campaign that includes random outreach from the FMCSA census, targeted outreach through advertisement and trade shows, and coordinated efforts with FMCSA. The 60 carriers are based on the expected number of miles driven needed to observe crashes based on power analysis to determine sample size. Enrollment is not limited to 60 and will include additional carriers as feasible. The research team will work with all carriers wanting to participate to support the transfer of ELD data for inclusion in the study to the extent practicable.

Also, because this study relies on the cooperation and assistance of companies to gather data, larger companies that are well-resourced may be overrepresented in the study data. These biases will be accounted for by the modeling approach but have the anticipated effect of underestimating the true risk of fatigue in the industry. The recruitment and data collection methods will be documented in publications to guide interpretation relative to potential bias.

9. PAYMENTS OR GIFTS TO RESPONDENTS

Respondents are not provided with any payment or gift for this information collection.

10. ASSURANCE OF CONFIDENTIALITY

All data collected during this study will be stored on a secure, password-protected encrypted server hosted by Pulsar. The collection of individual driver and carrier identifiers will be required to link ELD and crash data to MCMIS data as a first step of the analysis. Once the data are linked, the data will be de-identified by assigning a random number / letter code to each driver and carrier.

Pulsar, under contract with FMCSA, is required to develop a publicly available data set. Data sets that have been processed and reduced will be developed into de-identified data sets that are made publicly available. This requirement is outlined in the policy memorandum from the Office of Science and Technology Policy ”Ensuring Free, Immediate, and Equitable Access to Federally Funded Research” dated August 25, 2022 available at https://bidenwhitehouse.archives.gov/wp-content/uploads/2022/08/08-2022-OSTP-Public-Access-Memo.pdf. Because the requested data contains sensitive, personally identifiable information (PII), any data transfer or storage will be done in accordance with the DOT Privacy Policy (https://www.transportation.gov/individuals/privacy/dot-privacy-policy). All PII shall be removed, including names of drivers, names of fleets, and other relevant variables. Pulsar will delete all PII data in accordance with the study’s deidentification protocol. If necessary, other methods of protecting privacy shall be utilized, such as data aggregation, top-coding, bottom-coding, data swapping, or applying differential privacy techniques to protect study participants while still facilitating public-use files. This deidentified data set will be provided to FMCSA after all relevant statutes of limitations (at both State and Federal levels) pertaining to legal discoverability processes have expired. This data shall be housed in the FMCSA Data Repository.

11. JUSTIFICATION FOR COLLECTION OF SENSITIVE INFORMATION

This research does not include questions about sexual behavior and attitudes, religious beliefs, or

other matters that are commonly considered private.

12. ESTIMATE OF BURDEN HOURS FOR INFORMATION REQUESTED

A total of 60 carriers will be recruited for the Crash Risks by Commercial Motor Vehicle (CMV) Driver Schedules program. Due to the voluntary nature of participation and anticipated recruitment challenges, it may not be feasible to secure all 60 carriers prior to the start of data collection. Using a continuous enrollment approach, we will start data collection as carriers are recruited. We aim to recruit as many carriers as early into the study as possible, but given the aforementioned recruitment challenges, we estimate that 15 carriers will begin participating in the first study year (for a total of 4 years of participation), 15 carriers will begin participating in the second study year (for a total of 3 years of participation), 15 carriers will begin participating in the third study year (for a total of 2 years of participation), and 15 carriers will begin participating in the fourth study year (for a total of 1 year of participation). Although we are targeting 60 carriers for this study, carriers beyond this number will not be excluded. If our recruitment target is not met, we will perform an analysis using the available data. Any limitations due to sample size will be addressed in the analysis and discussion of findings.

Because HOS (IC1) and crash and incident data (IC2) will be collected automatically through an integration between carriers' TSPs and Pulsar's platform, the primary burden on carriers will be to provide quarterly uploads of driver demographic information (IC3).

The total number of respondents is 60 (60 carriers).

The Crash Risks by Commercial Motor Vehicle (CMV) Driver Schedules program will comprise three categories of IC associated with carrier tasks (IC1, IC2, IC3).

IC1 – Carrier Task: TSP Setup for HOS Data
IC1 covers HOS duty logs collected from carriers (see Attachment B). FMCSA mandates that carriers use ELDs to capture HOS information[5], and the research team will utilize Pulsar's existing integrations with TSPs to continuously and automatically collect the HOS information from carriers without the need for any manual steps to be completed by the CMV carrier. Pulsar has direct experience collecting CMV ELD using its Trucking Fatigue Meter software. The Trucking Fatigue Meter is a software product (developed with support from FMCSA through the SBIR program) that integrates with ELD and telematics service providers in the CMV industry to enable the monitoring of conditions associated with elevated fatigue and crash risk. The research team estimates a burden of 15 minutes per carrier will be associated with the initial setup process to ensure the carrier's TSP is successfully integrated with Pulsar's software tools. Each carrier will only need to complete this process one time, at the start of their participation. The table below shows the estimates of burden hours associated with IC1.

Table 2: IC1 Carrier Task: TSP setup for HOS data.

Year	Total	Responses per	Total Annual	Hours per	Total Burden

[5] Federal Motor Carrier Safety Administration. 2015. Electronic Logging Device: Final Rule. Federal Register: 2015-31336.

	Respondents* (A)	Respondent (B)	Responses (C) = (A*B)	Response (D)	Hours (E) = (C*D)
1	15	1	15	0.25	3.75
2	15	1	15	0.25	3.75
3	15	1	15	0.25	3.75
4	15	1	15	0.25	3.75
4-year Total	-	-	60	-	15
Annual Average	-	-	15	-	3.75

* Using continuous enrollment, the research team estimates 15 carriers enrolling in Year 1 (4 years), 15 carriers enrolling in Year 2 (3 years), 15 carriers enrolling in Year 3 (2 years), and 15 carriers enrolling in Year 4 (1 year), for a total of 60 carriers.

The research team assumes that clerical staff at a carrier will work with the research team to complete the one-time TSP setup process. The closest occupation match available in the Bureau of Labor Statistics (BLS) is "Information and Record Clerks, All Other (SOC-43-4199)", which has a median wage of $23.25 per hour (May 2024).[6]

The following was used to determine the load factor. BLS reports that the total cost of compensation (wages and salaries plus benefit costs) for transportation and warehousing private industry workers is $49.88 per hour, while the average cost of hourly wages and salaries is $33.66.[7] Dividing the total cost of compensation ($49.88) by the cost of hourly wages and salaries ($33.66) gives an estimated load factor of 1.48. To estimate the loaded hourly wage for a clerical staff member at a carrier, the mean wage ($23.25) is multiplied by the load factor (1.48). The estimated loaded wage is shown in the table below.

Table 3: IC1: Estimated loaded hourly wage.

Occupation	Load Factor (A)	Median Hourly Wage (B)	Loaded Hourly Wage (C) = (A*B)
Carrier Clerical Staff	1.48	$23.25	$34.45

To estimate the annual burden cost to respondents, the total burden hours are joined with the loaded wage.

Table 4: IC1: Estimated respondent burden cost.

[6] US Bureau of Labor Statistics. (2024). May 2024 National Occupational Employment and Wage Estimates.
[7] US Bureau of Labor Statistics. (2024). Employer Costs for Employee Compensation – September 2024.

Year	Total Annual Responses (A)	Hours per Response (B)	Total Burden Hours (C) = (A*B)	Hourly Cost (D)	Total Cost (E) = (C*D)
1	15	0.25	3.75	$34.45	$129.19
2	15	0.25	3.75	$34.45	$129.19
3	15	0.25	3.75	$34.45	$129.19
4	15	0.25	3.75	$34.45	$129.19
4-year Total	60	-	15	-	$516.75
Annual Average	15	-	3.75	-	$129.19

IC1 Summary:
Estimated Annual Number of Responses: 15
Estimated Annual Burden Hours: 3.75
Estimated Annual Burden Hour Cost: $129.19

IC2 – Carrier Task: TSP Setup for SCE Data
IC2 covers incident and crash information collected from carriers (see Attachment C). This information will be collected automatically through Pulsar's integrations with TSPs delivered by its Trucking Fatigue Meter technology. Pulsar has experience using this technology to collect data related to SCEs without the need for any manual steps to be completed by the carrier. The research team estimates a burden of 15 minutes per carrier will be associated with the initial setup process to ensure the carrier's TSP is successfully integrated with Pulsar's software tools. Each carrier will only need to complete this process one time, at the start of their participation. The table below shows the estimates of burden hours associated with IC2.

Table 5: IC2 Carrier Task: TSP setup for SCE data.

Year	Total Respondents* (A)	Responses per Respondent (B)	Total Annual Responses (C) = (A*B)	Hours per Response (D)	Total Burden Hours (E) = (C*D)
1	15	1	15	0.25	3.75
2	15	1	15	0.25	3.75
3	15	1	15	0.25	3.75
4	15	1	15	0.25	3.75
4-year Total	-	-	60	-	15
Annual Average	-	-	15	-	3.75

* Using continuous enrollment, the research team estimates 15 carriers enrolling in Year 1 (4 years), 15 carriers enrolling in Year 2 (3 years), 15 carriers enrolling in Year 3 (2 years), and 15 carriers enrolling in Year 4 (1 year), for a total of 60 carriers.

The research team assumes that clerical staff at a carrier will work with the research team to complete the one-time TSP setup process. The closest occupation match available in the Bureau

of Labor Statistics (BLS) is “Information and Record Clerks, All Other (SOC-43-4199)”, which has a median wage of $23.25 per hour (May 2024).[7]

The following was used to determine the load factor. BLS reports that the total cost of compensation (wages and salaries plus benefit costs) for transportation and warehousing private industry workers is $49.88 per hour, while the average cost of hourly wages and salaries is $33.66.[8] Dividing the total cost of compensation ($49.88) by the cost of hourly wages and salaries ($33.66) gives an estimated load factor of 1.48. To estimate the loaded hourly wage for a clerical staff member at a carrier, the mean wage ($23.25) is multiplied by the load factor (1.48). The estimated loaded wage is shown in the table below.

Table 6: IC2: Estimated loaded hourly wage.

Occupation	**Load Factor** (A)	**Median Hourly Wage** (B)	**Loaded Hourly Wage** (C) = (A*B)
Carrier Clerical Staff	1.48	$23.25	$34.45

To estimate the annual burden cost to respondents, the total burden hours are joined with the loaded wage.

Table 7: IC2: Estimated respondent burden cost.

Year	**Total Annual Responses** (A)	**Hours per Response** (B)	**Total Burden Hours** (C) = (A*B)	**Hourly Cost** (D)	**Total Cost** (E) = (C*D)
1	15	0.25	3.75	$34.45	$129.19
2	15	0.25	3.75	$34.45	$129.19
3	15	0.25	3.75	$34.45	$129.19
4	15	0.25	3.75	$34.45	$129.19
4-year Total	60	-	15	-	$516.75
Annual Average	15	-	3.75	-	$129.19

IC2 Summary:
Estimated Annual Number of Responses: 15
Estimated Annual Burden Hours: 3.75
Estimated Annual Burden Hour Cost: $129.19

IC3 – Carrier Task: Driver Demographic Data Exports
IC3 covers driver demographic information collected from carriers (see Attachment D). It is estimated that 60 carriers will participate. On a quarterly basis, each carrier will provide driver demographic information to the research team. Based on experience with CMV carriers in the commercial space, the research team estimates a time burden of 15 minutes, or 0.25 hours, for a carrier to use their existing fleet management software, human resources management system, driver management platform, or other appropriate system to export an electronic report

containing driver demographic information and upload it for the research team. The estimates of burden hours for the carrier task in IC3 are presented below in Table 8.

Table 8: IC3 Carrier Task: Driver demographic data exports.

Year	Total Respondents* (A)	Responses per Respondent (B)	Total Annual Responses (C) = (A*B)	Hours per Response (D)	Total Burden Hours (E) = (C*D)
1	15	4	60	0.25	15
2	30	4	120	0.25	30
3	45	4	180	0.25	45
4	60	4	240	0.25	60
4-year Total	-	-	600	-	150
Annual Average	-	-	150	-	37.5

* Using continuous enrollment, the research team estimates 15 carriers enrolling in Year 1 (4 years), 15 carriers enrolling in Year 2 (3 years), 15 carriers enrolling in Year 3 (2 years), and 15 carriers enrolling in Year 4 (1 year), for a total of 60 carriers.

The research team assumes that clerical staff at a carrier will export and upload the driver demographic information. The closest occupation match available in the Bureau of Labor Statistics (BLS) is "Information and Record Clerks, All Other", which has a median wage of $23.25 per hour (May 2024).[7]

The following was used to determine the load factor. BLS reports that the total cost of compensation (wages and salaries plus benefit costs) for transportation and warehousing private industry workers is $49.88 per hour, while the average cost of hourly wages and salaries is $33.66.[8] Dividing the total cost of compensation ($49.88) by the cost of hourly wages and salaries ($33.66) gives an estimated load factor of 1.48. To estimate the loaded hourly wage for a clerical staff member at a carrier, the mean wage ($23.25) is multiplied by the load factor (1.48). The estimated loaded wage is shown in the table below.

Table 9: IC3: Estimated loaded hourly wage.

Occupation	Load Factor (A)	Median Hourly Wage (B)	Loaded Hourly Wage (C) = (A*B)
Carrier Clerical Staff	1.48	$23.25	$34.45

To estimate the annual burden cost to respondents, the total burden hours are joined with the loaded wage.

Table 10: IC3: Estimated respondent burden cost.

Year	Total Annual	Hours per	Total	Hourly Cost	Total Cost

	Responses (A)	**Response** (B)	**Burden Hours** (C) = (A*B)	(D)	(E) = (C*D)
1	60	0.25	15	$34.45	$516.75
2	120	0.25	30	$34.45	$1033.50
3	180	0.25	45	$34.45	$1,550.25
4	240	0.25	60	$34.45	$2,067.00
4-year Total	600	-	150	-	$5,167.50
Annual Average	150	-	37.5	-	$1,291.88

IC3 Summary:
Estimated Annual Number of Responses: 150
Estimated Annual Burden Hours: 37.5
Estimated Annual Burden Hour Cost: $1,291.88

Totals for all ICs:

IC	**Total Responses** (A)	**Hours per Response** (B)	**Total Burden Hours** (C) = (A*B)	**Hourly Cost** (D)	**Total Cost** (E) = (C*D)
IC1	60	0.25	15	$34.45	$516.75
IC2	60	0.25	15	$34.45	$516.75
IC3	600	0.25	150	$34.45	$5,167.50
Total	720	-	180	-	$6,201

13. ESTIMATE OF TOTAL ANNUAL COSTS TO RESPONDENTS

There are no additional costs to respondents beyond those associated with the hourly burden presented above.

14. ESTIMATE OF COST TO THE FEDERAL GOVERNMENT

Pulsar Informatics is conducting the research described in this ICR under contract with FMCSA. The total cost for the contract is $1,793,220. This includes the development of the research protocol, participant recruitment, participant payments, executing the study procedures, analyzing the data, and writing the final report. Thus, the total cost to the Federal Government is $1,793,220.

15. EXPLANATION OF PROGRAM CHANGES OR ADJUSTMENTS

This is a new data information collection.

16. PUBLICATION OF RESULTS OF DATA COLLECTION

The collection of information will begin shortly after approval is received for this ICR, and the collection will end in 2028. The results of this information collection will be documented in a technical report to be delivered to and maintained by FMCSA. To determine the relative risk of crashes and inspection violations based on various factors related to drivers' work schedules and demographics, the collected data will be aggregated, with relevant features extracted. The analysis that will be delivered in the report will be based on a generalized linear regression model (including Poisson and Negative Binomial models) to determine the relative contribution of schedule factors while controlling for any potentially confounding covariates. In addition, a public-use data set will be produced for the FMCSA Data Repository and FMCSA website, with no driver identifying information included. The research team expects to deliver both the technical report and data set to FMCSA in 2028, following the conclusion of the project.

17. APPROVAL FOR NOT DISPLAYING THE EXPIRATION DATE OF OMB APPROVAL

No such approval is being requested.

18. EXCEPTIONS TO CERTIFICATION STATEMENT

No exceptions to the certification statement are requested.

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ATTACHMENTS:

A. House of Representatives, Congress. (2024, January 3). 49 U.S.C. 31108 – Motor carrier research and technology program. [Government]. U.S. Government Publishing Office. https://www.govinfo.gov/app/details/USCODE-2023-title49/USCODE-2023-title49-subtitleVI-partB-chap311-subchapI-sec31108
B. IC1: HOS duty log data
C. IC2: Incident and inspection violation data
D. IC3: Driver and carrier demographic data