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MARINE SAFETY, AND SECURITY AND INFRASTRUCTURE
OF THE
U.S. SENATE COMMITTEE ON COMMERCE, SCIENCE AND
TRANSPORTATION**

Written Testimony of

THE AMERICAN TRUCKING ASSOCIATIONS

Regarding

**“Federal Truck Driver Hours of Service (HOS) Rules
and Truck Safety”**

Held on

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Driving Trucking's Success

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Introduction

Chairman Lautenberg, Ranking Member Smith, and other Members of the Subcommittee, thank you for the opportunity to express the American Trucking Associations' (ATA)¹ perspectives on "Federal Truck Driver Hours of Service (HOS) Rules and Truck Safety."

My name is Dave Osiecki, Vice President of Safety, Security and Operations for the American Trucking Associations (ATA). I am responsible for directing and overseeing the policy development and regulatory affairs activities for ATA in numerous public policy areas, including truck driver safety and motor carrier safety. My involvement has included more than 10 years of work on issues associated with HOS rules, which has allowed me to develop knowledge and expertise on driver fatigue and alertness issues, and on how different HOS rules impact various segments of the trucking industry. It is my pleasure to appear before the Subcommittee today on behalf of ATA.

ATA's testimony is directed primarily at the effectiveness of the current HOS rules promulgated by the Federal Motor Carrier Safety Administration (FMCSA). ATA's testimony will:

- I. Emphasize the mutually dependent nature of the HOS rules' provisions;
- II. Illustrate the improved industry safety experience under the new HOS rules;
- III. Provide ideas to improve the HOS rules;
- IV. Evaluate driver fatigue in terms of crash causation; and
- V. Urge action on two safety initiatives that will have a real impact on truck safety.

I. The HOS Rules Are a Package with Mutually Dependent Provisions

The new HOS regulations provide improved tools in promoting safety, alertness and driver performance in the trucking industry by addressing basic physiological factors known to create fatigue. FMCSA provided in the rules an effective and balanced approach to promoting driver alertness and made significant improvements to enhance highway safety by:

- Increasing from 8 to 10 hours the minimum amount of time that drivers must be off-duty between shifts and, by doing so, providing a greater opportunity for drivers to obtain 7-8 consecutive hours of sleep;
- Reducing the maximum daily on-duty time limit by one hour from 15 to 14 and eliminating the provision allowing this time be extended by breaks;

¹ ATA is a united federation of motor carriers, state trucking associations, and national trucking conferences created to promote and protect the interests of the trucking industry. Its membership includes more than 2,000 trucking companies and industry suppliers of equipment and services. Directly and indirectly through its affiliated organizations, ATA encompasses over 34,000 companies and every type and class of motor carrier operation.

- Providing a maximum 11-hour driving time per shift to complete runs safely;
- Adopting a rule that promotes schedules nearer to a 24-hour circadian cycle; and
- Allowing for a minimum of 34 consecutive off-duty hours of rest, recovery and restart for drivers to address any potential sleep debt.

On December 17, 2007, FMCSA published an Interim Final Rule (IFR) that retains the 11-hour maximum driving limit and the 34-hour rest and restart provision, along with the rest of the HOS rules that have been in place since January, 2004. The IFR will become effective on December 27, 2007. ATA supports FMCSA in taking this action. The IFR addresses the D.C. Circuit Court of Appeals' procedural concerns expressed in its July 2007 decision, and provides a wealth of safety data which supports retention of the rule.

II. The Trucking Industry's Safety Experience Has Improved While Operating Under the New HOS Rules

Government-collected safety data and metrics, as well as data collected from the industry, clearly indicate that the current HOS rules are an improvement over the old rules in terms of driver health, truck safety and overall highway safety. With the exception of a more restrictive off-duty sleeper berth provision, the current rules – including the maximum 11-hour driving limit and the 34-hour, rest, recovery, and restart provision – have been in effect since January 2004. In other words, the rules have been in force for four years and industry safety has improved over this time period.

Recently released government-collected data demonstrates that the trucking industry is operating more safely under the current HOS rules. For example:

- The number of truck-involved fatalities decreased 4.7% in 2006 – from 5,240 in 2005 to 4,995 in 2006 – the largest percentage drop in truck-involved fatalities since 1992.
- The projected truck-involved fatal crash rate for 2006 is 1.94 fatal crashes per 100 million vehicle miles of travel (VMT). This projected rate is at its lowest point since the U.S. Department of Transportation (DOT) began keeping these records in 1975.
- The number of injuries resulting from truck-involved crashes decreased by almost 2,000 in 2005 and dropped another 8,000 in 2006.
- The injury crash rate, another accepted metric, is also at its lowest point since DOT recordkeeping began.

The positive trend in truck-involved injury crashes and related injuries is illustrated in the following table.²

² See National Center for Statistics and Analysis link at www.nhtsa.dot.gov.

Table 1: Large Truck Injury Crash Statistics, 2002-2006³

Year	Injury Crashes	Vehicles Involved	Persons Injured	Million Vehicle Miles Traveled	Injury Crashes per 100 Million Vehicle Miles Traveled	Vehicles Involved in Injury Crashes per 100 Million Vehicle Miles Traveled	Persons Injured per 100 Million Vehicle Miles Traveled	Large Trucks Registered
2002	90,000	94,000	130,000	214,603	41.9	43.9	60.4	7,927,280
2003	85,000	89,000	122,000	217,917	38.8	40.7	56.0	7,756,888
2004	83,000	87,000	116,000	220,811	37.5	39.3	52.6	8,171,364
2005	78,000	82,000	114,000	222,836	34.8	37.0	51.1	8,481,999
2006	***	***	106,000 ⁴	223,282 ^{**}	***	***	***	***

**2006 Large Truck Vehicle Miles Traveled (VMT) projection based on 2006 FHWA Total VMT projection

*** Not Yet Available

In addition to the DOT data, the Department of Labor’s Bureau of Labor Statistics collects and tracks occupational injury and illness data for various industries.⁵ Below are truck driver non-fatal incidence rates of occupational injuries and illnesses for 2002 through 2006, per 100 full-time employees. The 2004-2006 rates reflect a decrease of nearly 15%.

2002–2003	(the two years prior to current HOS rules)	6.8
2004–2005	(the first two years operating under current HOS rules)	6.1
2006	(the last year of operating under current HOS rules)	5.8

An additional study conducted by the American Transportation Research Institute (ATRI), a research organization affiliated with ATA, supports the government’s safety findings. ATRI’s study – “Safety and Health Impacts of the New Hours-of-Service Rules” – collected fleet data representing approximately 100,000 truck drivers and 10 billion annual VMT. Safety and health statistics for 2003 (under the old HOS rules) were compared to those for 2004 (under the current HOS rules) to identify changes in outcomes. The analysis found that there were significant decreases in the collision rate per million VMT (-3.7%), preventable collision rate (-4.8%), and non-preventable collision rate (-0.8%). Even larger reductions were found in the driver injury rate (a reduction of 2.6%), collision-related injury rate (a reduction of 7.6%), and non-collision injury rate (a reduction of 13.7%) per million VMT. These aggregated fleet statistics indicate clearly that 2004 was a safer year for participating fleets.⁶

To further determine the safety experience of the industry, in August 2007, ATA initiated a survey effort to collect motor carrier data for the month of June 2007. More than 769 motor carriers using 233,742 trucks and employing 214,987 professional drivers responded to the

³ See <http://www.fmcsa.dot.gov/facts-research/research-technology/report/Large-Truck-Crash-Facts-2005/Large-Truck-Crash-Facts-2005.pdf>, February 2007, page 10.

⁴ See <http://www.fmcsa.dot.gov/facts-research/facts-figures/analysis-statistics/MCSPR-06-30-07.htm>.

⁵ See <http://www.bls.gov/iif/oshsum.htm>.

⁶ See <http://www.atri-online.org/research/results/Hours-of-Service%20one-pager.pdf>.

survey and provided both 11 hour driving time and 34 hour restart use data, along with data on the number of DOT recordable crashes by driving hour.

The table that follows, based on ATA’s finalized review of the survey data, shows the number and percentage of crashes in each of the driving hours. In considering the following numbers, it should be remembered that the majority of serious truck accidents (about 67% according to FMCSA’s 2005 HOS Regulatory Impact Analysis) are not the fault of the truck driver, and only a small percentage of those that are the truck driver’s fault are fatigue-related. This issue will be addressed in detail later in this document under Section IV.

Table 2: ATA Survey Results on the Number and Percentage of Crashes per Driving Hour

Driving Hour	Number of Crashes	Percentage of Total Crashes
0-1	158	15.90 %
1-2	143	14.39 %
2-3	138	13.88 %
3-4	98	9.86 %
4-5	92	9.26 %
5-6	93	9.36 %
6-7	72	7.24 %
7-8	82	8.25 %
8-9	46	4.63 %
9-10	37	3.72 %
10-11	35	3.52 %

As Table 2 indicates, the 11th hour of driving time has both the fewest number and the lowest percentage of accidents. Even assuming significantly less driving time in the 11th hour, the accident frequency in that time frame is still apparently well below prior hours. While this data does not address the difference in risk in the driving hours, this is discussed immediately below.

In November 2007, the Virginia Tech Transportation Institute (VTTI) released a significant follow-up report⁷ to its previous study⁸ that addressed the research question:

Is crash risk, as measured by the frequency of critical incident occurrence, measurably different between the 10th and 11th hours of driving? The study was a naturalistic data collection approach

⁷ Hanowski, Olson, Bocanegra, Hickman, Dingus, Sudweeks, “Critical Incidents that Occur in the 10th and 11th Hour of Driving in Commercial Vehicle Operations: “Does Risk Increase in the 11th Hour?”, Virginia Tech Transportation Institute, November 7, 2007.

⁸ Hanowski, Dingus, Sudweeks, Olson and Fumero, “Assessment of the Revised Hours-of-Service Regulations: Comparison of the 10th and 11th Hour of Driving Using Critical Incident Data and Measuring Sleep Quantity Using Actigraphy Data”, June 2005.

through which data was collected as participants drove company trucks on their normal revenue-producing runs. This research produced a significant finding relevant to the assessment of the 2003 and 2005 HOS regulations. Specifically, the VTTI analysis on frequency of critical incident occurrence showed no statistical difference between the 10th and 11th hour of driving.

III. What Else Can Be Done to Improve the HOS Rules?

Effective HOS rules are only part of a solution aimed at keeping commercial operators alert and safe when working and driving. Managing operator alertness and fatigue in a trucking setting is a complex issue that calls for a comprehensive approach. ATA is hopeful that the national dialogue on this issue moves beyond simple on-duty, driving and off-duty limits toward a more comprehensive programmatic approach to managing alertness. This will take years, but movement toward this goal needs to begin.

Reconsider How the Sleeper Berth Provisions Benefit Driver Alertness

Reinstating aspects of the sleeper berth provision that was available and used by drivers for decades would be a great first step. ATA supports greater flexibility in the provision governing use of the sleeper berth. Greater flexibility, consistent with the provision in effect until 2005, would:

- **Encourage naps** because drivers would not lose work hours because of time spent in the sleeper berth. Naps are one of the most important fatigue countermeasures for drivers.
- **Encourage shorter continuous driving periods** by allowing drivers to take sleeper berth naps “off the clock” during their tour of duty. Drivers could split their daily driving periods (up to 11 hours) into shorter periods.
- **Encourage a “circadian friendly” approach.** Many driver duty tours begin in the morning and continue through the afternoon and into the evening. Under such a schedule, drivers are likely to work and drive during the morning hours, but take breaks for naps during the afternoon. For most people, the afternoon is the daytime period when it is most difficult to stay awake, and when most naps are taken.⁹ The evening hours are times of greater alertness. Compared to drivers working continuously, drivers taking advantage of a more flexible sleeper berth provision would tend to be rest and sleep during their afternoon circadian low periods, and drive during morning and evening hours when their alertness is high.
- **Aid congestion relief.** On many freight corridors, drivers must operate through or around major metropolitan areas (e.g., the I-95 corridor that includes Washington, Baltimore and Philadelphia), which are becoming increasingly congested for longer periods of time each day. A return to a more flexible provision would allow drivers to use their sleeper berth at these times to rest, which would also help reduce congestion at

⁹ Dinges, D.F., Broughton, R.J. and Eds., “Sleepiness and Alertness: Chronological, Behavioral, and Medical Aspects of Napping”, New York, Raven Press, 1989.

peak commuting and travel times.

To encourage sleep, rest, and naps and to also promote the efficient movement of freight, the sleeper berth provision should be reconsidered.

Electronic On-Board Recorders May Help in Gaining Better Compliance with the HOS Rules

ATA foresees a future state where certain trucking operations are required to use Electronic On-Board Recorders (EOBRs) for HOS recordkeeping. However, FMCSA must assure that the regulatory ground work for this technology is properly completed. ATA's membership established in October 2005 a comprehensive policy regarding EOBRs that is aimed at achieving prudent utilization of this technology.

Two prime points within ATA's policy, which were shared with this Senate Subcommittee in May 2007 are:

1. *"There should be sound, consensus-based evidence that EOBR use leads to enhanced fleet safety performance by such means as accident rate reduction and improved compliance, therefore, increasing the credibility of EOBR systems as a cost-effective technology for motor carriers."*

ATA is concerned that supporting research showing that EOBR use reduces fatigue, improves safety, prevents accidents and lowers costs does not exist. Such information is necessary not only to justify a regulation and its benefits, but also to provide motor carriers meaningful information in deciding whether to deploy such systems in their fleets. Given that FMCSA does not have benefit and cost data sufficient to support an overall mandate, ATA generally supports the agency's approach to provide incentives to drive voluntary adoption of EOBRs, with mandates limited to targeted enforcement against non-compliant carriers and drivers.

2. *"EOBR systems should be based on the minimal, functional and performance specifications necessary to accurately record and report hours-of-service compliance and assure reliability and utility of operation."*

The industry has asked for uniform, minimum performance criteria for EOBR devices and systems, which provides for flexibility in the design and delivery to the market. There needs to be design and operational requirements that will dependably, reliably, and comprehensively replace manual logbooks. Without consistent and recognizable specifications for EOBR devices and systems, there will continue to be questions related to utility, reliability, tamper-resistance, accuracy, durability and effectiveness.

IV. Evaluating Driver Fatigue In Terms of Crash Causation

Truck driver fatigue is an important issue. However, any objective evaluation of crash causation—and this would include the government's own studies—would not highlight driver fatigue as the paramount safety issue that it is often portrayed to be. In fact, those same

government studies, along with other reports, indicate that other, more mainstream, traffic safety problems are greater problems/concerns.

FMCSA annually analyzes the Fatality Analysis Reporting System (FARS) data maintained by the National Highway Traffic Safety Administration for fatigue factors. The analysis of the FARS data shows that fatigue-related fatal crashes involving trucks are a small portion of the total as indicated in the table below.

Table 3: Fatal Motor Vehicle Traffic Crashes Involving Large Trucks¹⁰

Year	Total	Fatigue-Related	Fatigue-Related LT Fatal Crashes, Percent of Total
2003	4,335	74	1.7%
2004	4,478	66	1.5%
2005	4,551	82	1.8%
2006	4,321	69	1.6%

Going back even further, for the 17 years from 1991 to 2006, just **1.7 percent** of large truck drivers in a fatal crash were identified as fatigued, based on FARS coding.

It is commonly argued that fatigue is underreported and, therefore, this percentage is likely to be understated to some degree. In addition, a fatigue coding in FARS does not mean that driver fatigue caused the crash, only that it was a contributing factor. For this reason, it is important to analyze the findings of FMCSA’s 2006 Large Truck Crash Causation Study (LTCCS).

The LTCCS determined the “Critical Reasons” for a sample of 963 serious (fatal and injury) large truck crashes. Critical Reasons (CRs) are the proximal causes of the crashes examined in the study. LTCCS crashes, and truck crashes in general, fall into three broad categories:

- Multi-vehicle crashes with the CR assigned to the other vehicle. In practice, this means the other vehicle is at-fault.
- Multi-vehicle crashes with the CR assigned to the truck (i.e., truck at-fault).
- Single-vehicle truck crashes (where the CR is almost always assigned to the truck).

¹⁰ Source: FMCSA Analysis of Fatality Reporting System (FARS) NHTSA, Declaration of Thomas Keane to the U.S. Circuit Court of Appeals for the D.C. Circuit, September 21, 2007.

Figure 1 below is a pie chart of LTCCS truck crash involvements per the three categories mentioned.¹¹ The largest block was multi-vehicle crashes in which the other vehicle (OV) was assigned the CR. The other two pieces of the pie were multi-vehicle crashes in which the truck had the CR and truck single-vehicle crashes.¹²

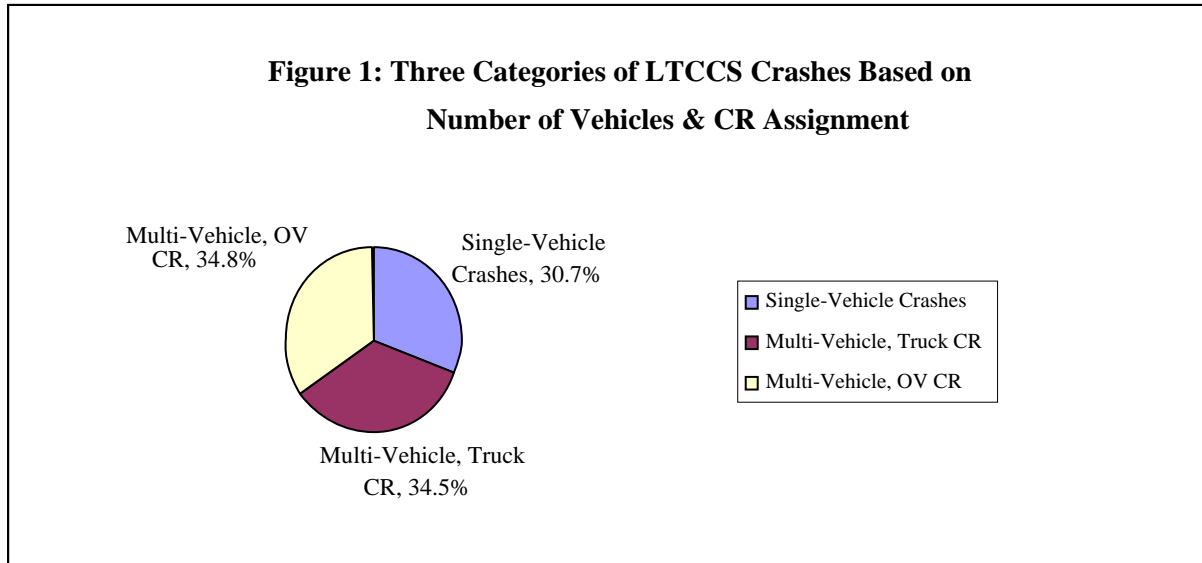
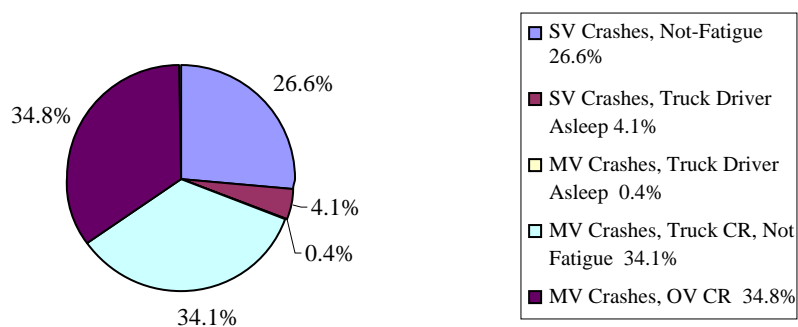


Figure 2 on the next page expands the categories further by adding “truck driver asleep” as a subcategory of both truck multi-vehicle and single-vehicle crashes. When all large truck crashes are considered, a total of 4.5% are primarily related to truck driver asleep-at-the-wheel. This includes asleep-at-the-wheel multi-vehicle crash involvements (0.4% of LTCCS crashes) and single-vehicle involvements (4.1% of LTCCS crashes).

¹¹ The two primary federal databases for estimating crash problem size and crash characteristics are the General Estimates System (GES) and FARS. In 2005, per GES and FARS, 87% of large truck injury (including fatal) crashes were multi-vehicle, and 13% were single-vehicle. The corresponding LTCCS percentages were 69% and 31%. This means that the LTCCS over-sampled single-vehicle truck crashes. This discrepancy between the LTCCS multi- vs. single-vehicle crash breakout and national percentages (based on GES and FARS) may well have skewed LTCCS statistics toward an overrepresentation of asleep-at-the-wheel crashes and other crash causes seen primarily in single-vehicle crashes. Nevertheless, the LTCCS findings provide important insight into the level of fatigue involved in serious truck crashes.

¹² Note that the denominator in these figures is all LTCCS *crashes* in which a critical event and CR were coded. For one truck, one light vehicle crashes, trucks were assigned the CR in 44%, OVs in 56%. For all truck *involvements* in multi-vehicle (2+ vehicles) LTCCS crashes, trucks were assigned the CR in 40%.

Figure 2: LTCCS Crashes Classified to Include Truck Driver Asleep Crashes



Looking at single-vehicle and multi-vehicle crashes separately, ‘truck driver asleep’ was the CR in 13.2% of truck single-vehicle crash involvements, but only 1.1% of their multi-vehicle crashes in which they were assigned the CR. This is a 12-fold difference. In all multi-vehicle crashes (truck driver CR + other vehicle CR), truck drivers were asleep in only 0.55%.

Below Table 4 shows percentages for top CRs for those LTCCS multi-vehicle crashes in which the truck was assigned the CR. In other words, when trucks were at-fault in multi-vehicle crashes, these were the proximal causes. Keep in mind that multi-vehicle crashes represent the largest crash type. As seen in the table, asleep-at-the-wheel is **not** a major cause. The overwhelming majority of these crashes are caused by driver error (e.g., too fast for conditions, following too closely, etc.), not driver fatigue.

Table 4: Most Common Truck CRs for Multi-Vehicle Crashes in Which the Truck Was Assigned the CR

CRTICIAL REASONS (includes some aggregations)	PERCENTAGE
Inadequate surveillance (didn’t look or looked but did not see)	19%
Inattention (e.g., distraction, daydreaming)*	19%
Too fast for conditions or curve/turn**	13%
Illegal maneuver	8%
Following too closely	8%
Vehicle factor (e.g., brakes, tires, cargo shift)	7%
Misjudgment of gap or other’s speed	5%
Driver error, type unknown	4%
False assumption of other driver’s actions	3%
Performance errors (e.g., overcompensation)	3%
Heart attack or other physical impairment	2%
Asleep-at-the-wheel	1%
Other CRs not shown	8%

Aggregations: * Internal distraction, + external distraction, + other inattention (daydreaming), + unknown recognition error.

** Too fast for conditions to be able to respond to unexpected actions of other road users, + too fast for curve/turn.

Percentages based on all trucks.

We are not providing a table for multi-vehicle crashes in which the other vehicle is assigned the CR (i.e., the other vehicle is at-fault). It is notable, however, that in 9% of these crashes, the *other driver* was coded as asleep-at-the-wheel. This means that in the LTCCS multi-vehicle crash data, the car driver was *nine times more likely* to be asleep at the wheel than the truck driver.¹³

For all vehicle types (trucks, other vehicles, etc.), driver fatigue is a larger factor in single-vehicle crashes. But for all vehicle types there is a much bigger factor than fatigue: excessive speed. Driver performance problems/errors—i.e., excessive speed and non fatigue-related driver inattention-- are the ubiquitous causes of crashes, far exceeding fatigue, other driver factors, vehicle-related causes, and roadway/environmental causes.

The overemphasis on truck driver fatigue as the paramount safety issue, however, has resulted in resources being allocated to that issue that could otherwise be directed toward more critical safety concerns. The biggest block of crashes involving large trucks is those precipitated by the errors of other drivers. To be certain, truck driver errors also cause crashes but the vast majority of these performance errors are not fatigue-related. Instead, they are the same errors that cause most serious car crashes: driver distraction, other non-fatigue related driver inattention, and excessive speed.

The countermeasures to address these problems include driver education, but they must also emphasize more stringent and effective traffic enforcement (including automated enforcement) and enlightened applications of active safety technologies on trucks and other vehicles to assist drivers.

ATA believes a truck safety paradigm shift must occur to directly confront the dominating and mainstream traffic safety issues that affect truck safety. For this reason, we offer these important recommendations immediately below.

V. Truck Safety Resources Need to Address Primary Crash Causes

To improve truck safety in a meaningful way, government policies, programs and countermeasures need to address the primary causes of truck crashes. After all, Congress funded the LTCCS for five years in order for government and industry to better understand the causes. Unfortunately, too much of the federal truck safety budget continues to focus on ensuring the safe condition of the truck, on driver fatigue issues, and on prevention of impaired driving. However, it is clear from the LTCCS and other causation research, that speeding is a more significant cause and contributing factor in crashes involving trucks, than any of the factors that currently receive the largest proportion of DOT's attention and resources. A lack of focus on speed as a causal or significant contributing factor in truck crashes represents a significant gap in the federal government's truck safety strategy.

¹³ A similar huge discrepancy was found by the AAA Foundation for Traffic Safety in a review of 10,732 fatal car-truck crashes occurring between 1995-98 (Kostyniuk et al., 2002). Only 44 of these 10,732 crashes (0.4%) involved a truck driver drowsy or asleep. In contrast, 300 of them (2.8%) involved a car driver impaired by fatigue. This is a seven-fold difference.

To address the speed issue, ATA urges Congressional support for two initiatives. First, ATA supports reinstatement of a national maximum speed limit. ATA further supports that the maximum speed limit be 65 mph applicable to all vehicles, including large trucks.

Second, ATA supports a requirement for all new large trucks to be electronically speed governed at a setting not to exceed 68 mph.

In fact, in October 2006, ATA petitioned the National Highway Traffic Safety Administration (NHTSA) to initiate a rulemaking to amend the Federal Motor Vehicle Safety Standards to require vehicle manufacturers to install a device limiting the speed of large trucks (defined as those with a Gross Vehicle Weight Rating of greater than 26,000 pounds) to no more than 68 mph. At the same time, ATA also petitioned FMCSA to initiate a concurrent rulemaking with NHTSA to prohibit owners and operators from adjusting the electronic control module in affected trucks in a way that enables the vehicles to exceed 68 mph. Now, more than a year later, it is unfortunate that DOT has not accepted and acted on ATA's petition.

Reducing speed-related crashes involving large trucks is critical to NHTSA's and FMCSA's safety missions. These new requirements are necessary in order to reduce the number and severity of crashes involving large trucks and other vehicles.

Summary

Based on government and industry safety data collected over the last 3-4 years since the new HOS rules have been in effect, it is becoming increasingly clear that the new HOS rules are more effective than the prior rules in helping to improve safety on the nation's highways, and provide for the safety and health of drivers. ATA supports their retention.

Additionally, an objective evaluation of driver fatigue in context with other crash causes indicates that other, more mainstream, traffic safety problems are far greater concerns. ATA supports a substantial realignment of DOT programs and resources to focus on critical truck-related crash causes.

Thank you for the opportunity for ATA to offer its views on truck driver HOS rules and truck safety. We look forward to working with this Subcommittee, Congress, DOT, FMCSA, and other reasoned stakeholders to improve the safety and productivity of our Nation's highway transportation system.