



MOTOR CARRIER SAFETY ADVISORY COMMITTEE

C/O: Federal Motor Carrier Safety Administration
1200 New Jersey Avenue, SE
Room W64-232
Washington, DC 20590

August 6, 2008

The Honorable John H. Hill
Administrator
Federal Motor Carrier Safety Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Administrator Hill:

The Motor Carrier Safety Advisory Committee (MCSAC) accepted Task 07-03, Safety Technologies, at its September 2007 meeting. The Workgroup on Task 07-03, chaired by Mr. Stephen Owings, was created to conduct work and submit a report for Committee review and approval.

The Workgroup was asked to:

- Examine incentives to promote the use of safety and futuristic technologies; and,
- Examine incentives to promote the voluntary use of EOBRs and any supplemental information on successful carrier deployment.

The Workgroup met in person, held conference calls and conducted work through e-mail. At the MCSAC June 2008 meeting, the Workgroup presented the Committee with a report outlining its findings and recommendations. The Committee approved the report and recommended that FMCSA employ the following seven safety technology incentives.

1. Work to eliminate excise tax on all safety technology investments.
2. Work with taxing authorities to provide tax credits for all safety technology investments without limitations on the size of the fleet.
3. Provide additional funding for research to quantify the benefits of safety technologies for the industry.
4. Publish and promote success stories of technology implementation.
5. Work with Congress to pass legislation to provide tax credits to safety technology manufacturers to offset research and development costs with the expectation that this will reduce the cost to purchase and install safety technologies for the motor carrier industry.
6. Consider government loans with attractive terms for the purchase of safety technologies.
7. The MCSAC strongly supports the voluntary use of EOBRs for tracking hours of service and other purposes.

I respectfully submit the report to FMCSA for consideration.

Sincerely,

//signed//

David R. Parker
Chair
Motor Carrier Safety Advisory Committee

Attachment

SAFETY TECHNOLOGIES

Report from

Workgroup on Task 07-03

to the

Motor Carrier Safety Advisory Committee

of the

**Federal Motor Carrier Safety Administration
U.S. Department Of Transportation**

August 6, 2008

At its September 2007 meeting, the Motor Carrier Safety Advisory Committee (MCSAC) unanimously accepted Task 07-03, Safety Technologies. Workgroup 07-03 was established and asked to:

- a) Examine incentives to promote the use of safety and futuristic technologies; and,
- b) Examine incentives to promote the voluntary use of EOBRs and any supplemental information on successful carrier deployment.

The workgroup met to discuss the tasking at the September 2007 MCSAC meeting, held a conference call on November 9, 2007, and met again at the December 2007 MCSAC meeting. This report was presented at the June 2008 MCSAC meeting. The Committee approved the report on June 4, 2008.

Discussion

As resources become scarce, FMCSA recognizes the importance of achieving safety gains through innovative technology, such as a: Lane Departure Warning System, which warns drivers if they are deviating from the lane; Forward Collision Warning System, which issues urgent warnings when a large truck or bus with the system approaches a slower moving vehicle; and Roll Stability Control and Electronic Stability Control Systems, which are two different types of automated control systems that reduce the vehicle's throttle and applies brakes without driver intervention to decelerate the vehicle if a high rollover risk is detected. An Electronic On-Board Recorder (EOBR) (electronic driver log), is another safety technology that may contribute to highway safety. In January 2007, the FMCSA Administrator held a news conference to announce a Notice of Proposed Rulemaking (NPRM) on EOBRs. The proposed rule outlined the Agency's position on the use of this technology. In summary, the NPRM proposes that the use of EOBRs be mandatory by the worst offenders. At the same time, the NPRM encourages all other companies to improve further by voluntarily embracing this technology. The NPRM included incentives to promote the voluntary use of EOBRs by safe carriers. The proposed rule also sets performance-based standards. The Administrator is very committed to encouraging the industry to embrace these types of technologies.

FMCSA is working with its State and other partners in private industry to advance innovative safety technologies that have the potential to reduce serious injury and fatal crashes involving large trucks and buses and recently tested and evaluated a number of on-board safety systems. FMCSA would like recommendations on ways to promote the use of safety technologies throughout the industry.

Findings

The Workgroup agrees that incentives could come in various forms from various sources including, but not limited to, tax incentives in the form of credits¹, insurance industry incentives in the form of premium discounts, and non-monetary incentives such as reductions in paperwork required for compliance if the information is being electronically recorded.

Through the Commercial Vehicle Safety Alliance (CVSA) network, the motor carrier industry was asked to comment on this task. A summary of comments received follows:

- There is a strong consensus that incentives in the form of tax credits to motor carriers are preferred.

¹ Judith Stone does not agree with the use of the tax system to encourage safety technology use in the trucking business.

- Legislation to shield motor carriers that deploy safety technologies from certain civil liabilities is warranted.²
- The insurance industry is a stakeholder that can provide incentives through premium discounts and other financial incentives.
- The Federal government should explore the legality and feasibility of initiating price controls on the cost of acquiring safety technologies.
- Safety technologies eligible for incentives must directly address the causation factors identified in the FMCSA Large Truck Crash Causation Study.
- Support for passage of HR 3820 is needed on Capitol Hill.

Contact with the insurance industry and technology manufacturers elicited the following comments:

- Premium discounts are not customary in the commercial insurance arena because the margins are significantly lower than those in the personal business.
- If empirical data showing the direct effect of before and after experience in test and control groups existed, tested technologies could potentially be encouraged using premium discounts.
- Both industries would like to see funding made available to test the effects of these technologies on safety performance.
- Basics such as hiring carefully, training well, maintaining equipment and being compliant with the letter and spirit of the laws must be done as the foundation of safety as well (advanced technology is not a magic bullet).

The group also discussed the following:

- The need to identify and showcase successful motor carrier safety technology “champions:” Government and/or safety technology manufacturers must be able to demonstrate that safety and economic benefits far outweigh implementation costs for safety technologies for the motor carrier industry to voluntarily embrace and deploy such technologies. Success stories based on actual deployment (as opposed to tests and pilots), if identified and communicated to the industry, would show carriers tangible positive (bottom-line enhancing) results achieved by peer companies that have successfully deployed technologies over time. Without such data most companies will take a position that they cannot afford to be the guinea pig, as the costs of implementation are known to them while the benefits are not.
- Companies using technologies like adaptive cruise control and forward collision warning systems with enhanced braking will likely be viewed favorably from a liability standpoint.
- The need for individual states to consider granting business tax credits for deployment of safety technologies.
- The possibility of extending incentives to motor carriers based outside the United States. For example, providing special consideration for Mexican carriers that want to operate beyond the commercial zone and for Canadian carriers that voluntarily deploy safety technologies.

² Stephen Owings strongly disagrees with the assertion that companies should be shielded from liability for their actions just because they use safety technologies. Instead, these technologies should prevent crashes and determine the guilt or innocence of truck drivers when crashes do occur.

The Workgroup found that EOBRs could be valuable tools for the Agency and the industry to use in their efforts to improve safety performance. Efforts to record HOS and other driver activity automatically in the U.S in a manner that cannot be falsified have been ongoing for 30 years, yet we still rely on manual paper logbooks to prove compliance. Compliance via customary methods in the 21st century fundamentally means electronic verification. All significant business measures are recorded electronically today.

EOBRs capturing the time of commercial motor vehicle (CMV) operation have been mandated in the European Economic Community and are currently required in several countries outside Europe. The use of EOBRs that are integrated with vehicle functions such as engine RPM and transmission use and the information captured by the CMV electronic control module (ECM) are crucial to reducing the ability of some motor carriers and professional drivers from falsifying paper logbook entries to conceal violations of hours of service, especially shift and weekly driving time that exceed the ceilings in current federal regulation. Reducing hours of service violations is the main purpose of EOBRs. Drivers logging legal hours will be less prone to fatigue and unsafe driving performance. Keeping drivers within the legal limits of hours of service also reduces the amount of crash risk exposure both for commercial drivers as well as for others who share the road with large trucks and motorcoaches.

There are some logistical obstacles that must be overcome for EOBR use to become widespread. FMCSA and its partners must clarify what the minimal functional and performance specifications are to accurately record and report compliance with HOS rules. The pending EOBR proposed rule still allows for use of technologies that are not hard-wired to the vehicle's operating system, and the agency has insufficient controls proposed to ensure the security of EOBRs, including their resistance to tampering with captured data. This clarity must be provided to EOBR providers to drive the volume manufacturing commitment required to get prices down for the devices, hopefully to the \$300 per-unit level. It is this committee's belief that EOBRs must, at minimum, be integrated with the ECM of the truck and provide location via GPS. EOBRs have other important safety functions when they are capable of providing moment-to-moment real-time location of a CMV. EOBRs with GPS will deter CMVs from evading weight stations and taking routes that are prohibited for certain sizes and weights of large trucks. EOBRs with GPS are also crucial to ensuring safe transport of certain hazardous materials by using only approved routes to cargo destinations.

EOBRs must also be quickly and easily accessible to roadside inspections for downloading data showing CMV operating time. Used in connection with supporting documents providing corroborative information on vehicle time of operation and location, EOBRs can substantially reduce hours of service violations.

The MCSAC believes there is a strong nexus between HOS compliance and safety. The MCSAC further believes the use of EOBR's will enhance compliance with HOS rules.

A multi-faceted approach will be most successful in achieving the goal of promoting the proliferation of safety technologies throughout the motor carrier industry. Tax credits appear to be the single most effective incentive for EOBR use. However, tax credits are not the only form of incentive that should be promoted. Safety technology investments should also unquestionably be exempted from excise taxes. Insurance premium discounts and incentives should also be promoted. Non-monetary incentives can be effective too. For any incentive to be effective it is going to have to be applied to technologies that have been proven through real-world use to be 1) effective in actually preventing crashes and/or reducing costs, 2) reliable over long periods of use, 3) user friendly, and 4) require minimal maintenance.

Recommendations

The Workgroup recommends that MCSAC approve seven recommendations for safety technology incentives for submission to FMCSA.

1. Work to eliminate excise tax on all safety technology investments.
2. Work with taxing authorities to provide tax credits for all safety technology investments without limitations on the size of the fleet.
3. Provide additional funding for research to quantify the benefits of safety technologies for the industry.
4. Publish and promote success stories of technology implementation.
5. Work with Congress to pass legislation to provide tax credits to safety technology manufacturers to offset research and development costs with the expectation that this will reduce the cost to purchase and install safety technologies for the motor carrier industry.
6. Consider government loans with attractive terms for the purchase of safety technologies.
7. The MCSAC strongly supports the voluntary use of EOBRs for tracking hours of service and other purposes.

Work to Eliminate Excise Tax on All Safety Technology Investments

Issue

Excise taxes on safety technology investments deter their use. Technologies such as lane departure warning systems, EOBR's, drive cam systems, forward collision warning systems with enhanced braking, adaptive cruise control with active braking systems, electronic stability systems, rollover prevention systems and automatic transmissions all contribute to safer commercial motor vehicle (CMV) operations.

Implementation Strategies

- Draft guidelines for excise tax exemptions.

Expected Benefits

- Reduced CMV crashes.

Work with Taxing Authorities to Provide Tax Credits for All Safety Technology Investments without Limitations on the Size of the Fleet

Issue

Tax credits for safety technology investments promote their use. Technologies such as lane departure warning systems, EOBR's, drive cam systems, forward collision warning systems with enhanced braking, adaptive cruise control with active braking systems, electronic stability systems, rollover prevention systems and automatic transmissions all contribute to safer CMV operations. Large fleets should not be penalized for implementing multiple units through limits on the total credit/incentive per company.

Implementation Strategies

- Draft guidelines for tax credit applications.

Expected Benefits

- Reduced CMV crashes.

Provide Additional Funding for Research to Quantify the Benefits of Safety Technologies for the Industry

Issue

Motor carriers are slow to adopt new technologies unless tangible safety and economic benefits associated with the new technologies are known to them. Demonstrating through data analysis that implementation of new technologies pays off will encourage their adoption.

Implementation Strategies

- Secure funding and draft RFPs.

Expected Benefits

- Encourages quick, broad deployment.

Publish and Promote Success Stories of Technology Implementation

Issue

Motor carriers are slow to adopt new technologies unless tangible safety and economic benefits associated with the new technologies are known to them. Publishing positive implementation results will encourage their adoption. Webinars and panels at conferences are effective.

Implementation Strategies

- Webinars and panels at conferences are effective.

Expected Benefits

- Encourages quick, broad deployment.

Work with Congress to Pass Legislation to Provide Tax Credits to Safety Technology Manufacturers to Offset Research and Development Costs with the Expectation that this Will Reduce the Cost to Purchase and Install Safety Technologies for the Motor Carrier Industry

Issue

Manufacturers' research and development (R&D) costs must be recovered through product sales. Subsidizing R&D activities through tax incentives would reduce the purchase price for safety technologies and devices for the motor carrier industry.

Implementation Strategies

- Draft guidelines for tax credit applications.

Expected Benefits

- Encourages quick, broad deployment.

Consider Government Loans with Attractive Terms for the Purchase of Safety Technologies

Issue

Cash flow problems prevent investment in safety. A loan program could help willing carriers get over the financial hurdles associated with technology implementation.

Implementation Strategies

- Draft guidelines for loan programs.

Expected Benefits

- Increased implementation.

The MCSAC Strongly Supports the Voluntary Use of EOBRs for Tracking Hours of Service and Other Purposes

Issue

The MCSAC believes there is a strong nexus between HOS compliance and safety. The MCSAC further believes the use of EOBR's will enhance compliance with HOS rules. Increased use of EOBRs would improve HOS compliance. The EOBRs must, at a minimum, be integrated with the ECM of the CMV and have GPS capability.

Implementation Strategies

- Actively promote the advantages of eliminating the requirement to manually keep logbooks.

Expected Benefits

- Increased implementation.
- Improved HOS compliance.

**Motor Carrier Safety Advisory Committee (MCSAC)
Task Statement
Task 07-03**

I. TASK TITLE

Safety Technologies

II. BACKGROUND

As resources become scarce, FMCSA recognizes the importance of achieving safety gains through innovative technology, such as a: Lane Departure Warning System, which warns drivers if they are deviating from the lane; Forward Collision Warning System, which issues urgent warnings when a large truck or bus with the system approaches a slower moving vehicle; and Roll Stability Control and Electronic Stability Control Systems, which are two different types of automated control systems that reduce the vehicle's throttle and applies brakes without driver intervention to decelerate the vehicle if a high rollover risk is detected. An Electronic On-Board Recorder (EOBR) (electronic driver log), is another safety technology that may contribute to highway safety. In January 2007, the FMCSA Administrator held a news conference to announce a Notice of Proposed Rulemaking (NPRM) on EOBRs. The proposed rule outlined the Agency's position on the use of this technology. In summary, the NPRM proposes that the use of EOBRs be mandatory by the worst offenders. At the same time, the NPRM encourages safe companies to improve further by voluntarily embracing this technology. The NPRM included incentives to promote the voluntary use of EOBRs by safe carriers. The proposed rule also sets realistic performance-based standards. The technical elements of the proposed rule will help standardize the technology for industry-wide use. The public comment period closed on April 18, 2007, and the Agency is currently analyzing the comments. The Administrator is very committed to encouraging the industry to embrace these types of technologies.

III. PROBLEM STATEMENT

FMCSA is working with its State and other partners in private industry to advance innovative safety technologies that have the potential to reduce serious injury and fatal crashes involving large trucks and buses and recently tested and evaluated a number of on-board safety systems. FMCSA would like recommendations on ways to promote the use of safety technologies throughout the industry.

IV. TASK

The Committee should:

- 1) Examine incentives to promote the use of safety and futuristic technologies; and,
- 2) Examine incentives to promote the voluntary use of EOBRs and any supplemental information on successful carrier deployment.

V. ESTIMATED TIME TO COMPLETE TASK

The Committee should submit a report to the Federal Motor Carrier Safety Administration outlining findings, progress, and recommendations at the next Committee meeting.

VI. FMCSA TECHNICAL REPRESENTATIVE

Amy Houser, Technology Division (MC-RRT), Phone: 202-385-2382, Email: Amy.Houser@dot.gov

**Workgroup on 07-03
Safety Technologies**

Stephen Owings, Chair, *Road Safe America*

* * *

John Bauer, *Kohls Corporation*

Michael Greene, *Columbia Machine Works.*

David Osiecki, *American Trucking Association*

Robert Powers, *Michigan State Police*

Judith Stone, *Advocates for Highway and Auto Safety*

* * *

Amy Houser, Technical Representative, *Federal Motor Carrier Safety Administration*