

# THE ATRI INSIDER



The American Transportation Research Institute

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**Electronic On-Board Recorders (EOBR) Survey**

**Idle Reduction Technology: Fleet Preferences Survey Full Report and One-Page Summary**

**Safety & Health Impacts of the New Hours-of-Service Rules Full Report and One-Page Summary**

**Synthesis of Commercial Motor Vehicle Safety Technology Surveys: What Have We Learned? One-Page Summary**

**Updated 50 State Economic Data and Fast Facts**

## Idle Reduction Technology Use Expands in U.S. Trucking Industry

Nearly \$56 million is expected to be spent on idle reduction technologies over the next five years by a sampling of trucking companies, according to an ATRI report released in early February.

The report, *Idle Reduction Technology: Fleet Preferences Survey*, imparts the results of a nationwide survey that collected data on more than 55,000 trucks. The survey, initiated in partnership with the Department of Energy Clean Cities Program and the New York State Energy Research and Development Authority, was designed to further understand the extent of idling during truck operations and identify actions fleets are taking to reduce idling.

Survey participants have already spent an estimated \$8.8 million on on-board idle reduction technologies. These technologies include direct-fired heaters (used by 32% of respondents), auxiliary power units/generators (12%), and battery-powered air conditioners (24%).

According to the report, the majority of users (81%) are generally satisfied with available idle reduction technologies, although the average costs for these technologies appear to be a disincentive for purchase.

Sleeper cabs were reported to idle an average of 28 hours per week or 1,456 hours annually, 15-20% lower than estimates contained in previous studies

regarding truck idling. This may be the result of increased use of idle reduction technologies by trucking companies in recent years. The idling of sleeper cabs was reported to occur primarily at truck stops (33%), rest stops (21%), and at loading and unloading locations (20%).

The report comes after the trucking industry spent a record breaking \$87.7 billion on fuel in 2005, a \$21.8 billion increase over 2004. For many motor carriers, fuel represents the second-highest operating expense, accounting for as much as 25 percent of total operating costs.

For a copy of this report and other ATRI studies, please visit: [www.atri-online.org](http://www.atri-online.org).

## Commercial Motor Vehicle Safety Technologies

### What Have We Learned?

While large truck crash and fatality rates have steadily declined over the last decade, the trucking industry and Federal Motor Carrier Safety Administration (FMCSA) continue to seek innovative ways to improve highway safety. Research now indicates that on-board truck safety technologies may offer several important safety enhancements ranging from driver behavior feedback to direct accident intercession.

Until recently, government and industry research has focused on the development and evaluation of specific technologies and functionalities. However, these efforts did not attempt to synthesize and analyze data collection across the discrete research projects. A safety technology research synthesis could offer synergies to safety stakeholders by identifying research redundancies and information gaps, as well as providing important direction for future safety technology research.

FMCSA recently sponsored an

ATRI initiative to conduct such research. The "safety technology survey synthesis" (STSS) consolidated all available survey data pertaining to on-board safety technologies to provide a more integrated understanding of technology deployment issues and impacts. More than 19 studies and surveys were collected and processed.

Among the more evident findings is an increasing acceptance and deployment of in-vehicle safety technologies.

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## Board of Directors

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## Message from the Chairman

I firmly believe that research holds the key to unlocking ways to more safely and efficiently move the nation's freight – it's why I was so pleased to accept the chairmanship of ATRI last October. As trucking executives, we all desire to be good corporate citizens – we want to share the highways safely, safeguard the environment and protect our greatest asset, our employees. But we want to do so armed with the latest information ensuring that what we do makes scientific sense and business sense.

Take the issue of crash reduction. As an industry we have pursued numerous avenues for reducing the number and severity of accidents involving our trucks. We've purchased new equipment, invested in on-board safety technologies, and done what we can to ensure that the safest drivers are behind the wheel of that equipment. With the release of ATRI's Crash Predictor research, we now have scientifically developed, credible data about which driver behaviors to look for as indicators of future crash involvement, greatly enhancing our driver hiring and training practices.

And it's not just motor carriers who benefit from ATRI's research. That same crash predictor study provides law enforcement with direction on where to focus enforcement and provides examples of some of the most successful enforcement strategies. ATRI's work zone research helped crystallize many of the issues facing large trucks as they navigate through construction and work zones, providing critical data for state Departments of Transportation in the design of safer work zones.

Our success as an industry will come from our ability to manage our assets and investments more effectively and to provide – on a continuous basis – the safe and efficient movement of goods. Sound science will be a defining factor in how we do that and ATRI is here to provide that science.

Douglas G. Duncan  
 President and Chief Operating Officer  
 FedEx Freight

## Board Member Spotlight: Lud Koci

As a member of the ATRI Board of Directors since its inception in 2001, Lud Koci provides valuable input garnered from a lifelong career in the transportation industry.

Born in Chicago, Mr. Koci began his career with General Motors in 1954. Lud served in a variety of capacities during his time at GM, including Vice President and General Manager of Detroit Diesel Allison Division.

After Penske Corporation bought Detroit Diesel, Lud eventually became President and CEO. Subsequent to the purchase by DaimlerChrysler, he was a Vice President of DaimlerChrysler in charge of commercial



on-highway engines worldwide.

Currently, Mr. Koci serves as President of Penske Transportation Components LLC and as a director of Penske Corporation.

While no stranger to those in the industry, Lud is also well known for his commitment to service in a number of civic and charitable organizations. He has served on the

boards of Focus Hope, Mary's Children Family Center, and is a Knight of the Order of Malta and a Knight of the Order of the Holy Sepulchre. Lud has been married for almost 50 years and he and his wife, Trudy, have had eight children; three natural and five adopted.

## ATRI Research Featured at TRB 85<sup>th</sup> Annual Meeting

**A**TRI's research was recognized for its excellence by invitation for publication and presentation at the Transportation Research Board 85<sup>th</sup> Annual Meeting in January 2006. Only a select number of research submissions are accepted for recognition by TRB each year, and ATRI had the honor of participating in a variety of capacities throughout the four-day long meeting, entitled "Transportation 2025: Getting There from Here," in Washington, D.C.

The TRB Annual Meeting draws over 9,000 attendees from a variety of fields in transportation -- policy makers, administrators, practitioners, researchers, and representatives of the transportation industry, government, and academic institutions attended from around the world.

ATRI staff actively participated in a number of the presentations and sessions that covered a wide swath of topics, including driver behavior, safety, and freight performance. ATRI is represented on a number of TRB committees, including the

TRB Executive Committee. ATRI staff also participated in the exhibition, disseminating research reports and one-page summaries of ATRI studies.

The following is a list of ATRI's presentations at the Transportation Research Board's 85<sup>th</sup> Annual Meeting:

*Future of Truck & Bus Safety Research: Highlights from three 2005 Conferences*

Rebecca Brewster  
President and COO

*Freight Bottlenecks in Corridors*

Daniel Murray  
Vice President, Research

*Synthesis of Commercial Motor Vehicle Safety Technology Surveys: What Have We Learned?*

Virginia Dick, Ph.D.  
Research Associate

*Predicting Truck Crash Involvement: Developing a Commercial Driver Behavior Model and Requisite Enforcement Countermeasures*

Daniel Murray  
Vice President, Research

*New Hours-of-Service Rules: Trucking Industry Reactions & Safety Outcomes*

Virginia Dick, Ph.D.  
Research Associate

*Advanced Truck Engine Programs and Impacts on Highway Financing*

Michael Tunnell  
Director, Environmental Research

### RAC Member John Culp



**J**ohn A. Culp first became involved with ATRI in August 2004 when he served as a panelist on data privacy concerns as part of the 2004 RAC Annual Meeting. His participation in that meeting included a call for an in-depth look at transportation funding, which eventually led to RAC members ranking the Highway Funding

Analysis as a top priority for the Institute. In 2005, the ATRI Board appointed John to serve as a member of the Research Advisory Committee (RAC).

John earned a Bachelor's of Science in Business Administration degree in Accounting from the University of Arkansas. John's career in transportation spans over 20 years, with the past 16 of those years as a committed employee of Maverick Transportation, Inc. Maverick, based in Little Rock, Arkansas, is a privately-held flatbed carrier, operating 994 company-owned tractors and 317 owner-operators. The company specializes in the transportation of steel and building materials, and operates primarily east of the Rocky Mountains. As Maverick's Executive Vice President and Chief Financial Officer, John is responsible for the financial, human resources, information technology, and maintenance areas of the company.

John also serves as a financial consultant to the Board of Directors of the Arkansas Trucking Association and is the current Chairman of the National Accounting & Finance Council of the American Trucking Associations.

### 2005-2006 Research Advisory Committee

<b>Pete Martin, RAC Chairman</b> Lakeville Motor Express	<b>Duke Drinkard</b> Southeastern Freight Lines	<b>Danilo J. Santini, Ph.D.</b> Argonne National Laboratory
<b>John R. Berry</b> FedEx Freight East	<b>James J. Eberhardt, Ph.D.</b> U.S. Department of Energy	<b>Robert W. Schomber</b> Florida Power & Electric Company
<b>Stephen F. Campbell</b> Commercial Vehicle Safety Alliance	<b>Williams G. Joyce, Jr.</b> New York State Motor Truck Association	<b>Michael C. Smith, Ph.D.</b> University of Virginia
<b>Michael Conyngham</b> International Brotherhood of Teamsters	<b>Dimitri N. Kazarinoff</b> Eaton Corporation	<b>Greer Woodruff</b> J.B. Hunt Transport Services
<b>John Corbin</b> Wisconsin Department of Transportation	<b>Ronald R. Knipling, Ph.D.</b> Virginia Tech Transportation Institute	<b>Garland L. Woods</b> ABF Freight System, Inc.
<b>David M. Creer</b> Utah Trucking Association	<b>Don Osterberg</b> Schneider National, Inc.	<b>Skip Yeakel</b> Volvo Trucks North America, Inc.
<b>John Culp</b> Maverick Transportation, Inc.	<b>Robert G. Petrancosta</b> Con-Way Transportation Services, Inc.	ATRI's Research Advisory Committee (RAC) is responsible for annually recommending a research agenda for the Institute.
<b>Tom Doyle</b> QUALCOMM Wireless Business Solutions	<b>Karen Rasmussen</b> Arizona Trucking Association	

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Conversely, among fleets that had not operationally deployed any onboard technologies, the research identified "technology costs" and a need for "objective validation of safety benefits" were two of the top concerns of motor carriers.

Interestingly, the technologies that are the most widely recognized (rollover stability and control, lane departure warning, and forward-looking radar systems) are not presently among the most widely installed. The study notes, however, that these technologies are among the fastest-growing, with more than 20% of respondents indicating plans for future installation.

The associated STSS gap analysis found that additional research was needed by industry decision-makers for determining optimal return-on-investment timelines, developing effective driver training programs, and expanding research on technology maintenance costs, issues and training.

Syntheses like the STSS research are an effective mechanism for identifying important system and user issues, and can assist safety researchers by quickly identifying research gaps and future opportunities. For a summary of ATRI's report to FMCSA, visit [www.atri-online.org](http://www.atri-online.org).

### **ATRI WANTS YOUR OPINION ON ELECTRONIC ON-BOARD RECORDERS!**

In order to better understand the current perspectives and usage of EOBRs for Hours-of-Service, ATRI is conducting surveys of EOBR users and vendors. In particular, ATRI would like to hear from carriers that are currently using EOBR technology for HOS record-keeping, and motor carriers that have considered but rejected EOBR technology for HOS record-keeping. To participate in the survey, please visit [www.atri-online.org](http://www.atri-online.org).

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