

## Research Results



# Electronic On-Board Recorder Adoption in the Trucking Industry: Issues and Opportunities

## The Problem

In September 2004 the Federal Motor Carrier Safety Administration (FMCSA) released an Advance Notice of Proposed Rule Making (ANPRM) requesting stakeholder comments on new regulations relating to the use of Electronic On-Board Recorders (EOBRs) for monitoring driver Hours-of-Service (HOS). In addition to a variety of other topics, FMCSA requested comments on whether EOBRs should be mandated. The responses received described a general lack of adequate benefit-cost information; a need for EOBR technical specifications; and a request for more evidence linking EOBR usage and safety. The next Notice of Proposed Rule Making (NPRM) is expected to be published in late 2006.

In preparation for the 2006 NPRM and in response to the anticipated role of EOBRs in future HOS monitoring, ATRI was commissioned by its Board of Directors to conduct an analysis of factors relating to EOBR adoption and a potential EOBR mandate. This study includes an examination of the costs and functionalities of current or emerging EOBR technologies, a determination of motor carrier willingness and ability to purchase EOBRs and the role of various non-technical factors.

## Research Goal

Based on industry and government interviews as well as historical events, some form of EOBR mandate is a real possibility. As documented in the 2004 ANPRM-filed comments, many motor carriers have concerns with this prospect. It is the goal of ATRI's research to identify the primary barriers to industry utilization of EOBR devices and document countermeasures for resolving the issues in the likely case of an EOBR mandate.

## Methodology

ATRI utilized several research techniques to gain a thorough understanding of motor carrier perspectives on EOBRs. First, ATRI conducted a literature review to determine the current body of research on utilization issues associated with EOBRs. ATRI then analyzed the comments filed in response to FMCSA's ANPRM in 2004. Respondents were categorized based on affiliation and attitude towards an EOBR mandate. The rationale provided to support opinions was recorded in a spreadsheet for analysis.



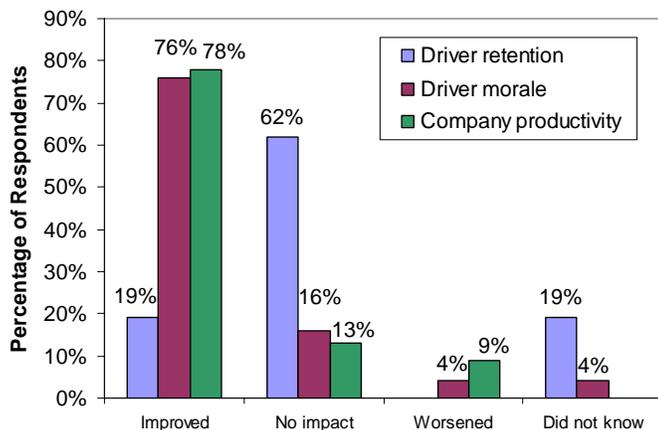
Next, ATRI conducted surveys with motor carriers both currently using and not using EOBRs and with EOBR vendors to better understand the reasons motor carriers are reluctant to deploy EOBRs. The research then juxtaposed motor carrier non-user expectations with actual experiences, and identified strategies to increase EOBR acceptance. Finally, ATRI conducted several follow-up interviews to further understand motor carrier and vendor perspectives regarding an EOBR mandate.

## Research Findings

The top concerns motor carriers gave for not using EOBRs or being opposed to a mandate related to the costs of EOBRs and possible negative impacts on driver retention. Based on survey responses, EOBRs that solely record HOS information are currently available or could be available at prices deemed affordable for medium and large carriers. However, even the most affordable systems are outside the “acceptable” price range reported by small carriers and owner-operators.

Motor carriers using EOBRs have not experienced the negative impacts on driver retention expected by the motor carrier non-users as shown below.

### Specific Impacts Identified by EOBR Users



Other key findings include:

- EOBR usage is typically rationalized as a compliance tool by both users and non-users, rather than a safety management system.
- Almost all carriers, including those opposed to an EOBR mandate, can articulate potential benefits that would derive from an EOBR mandate (e.g. level playing field, improved compliance).
- Carriers generally believe that EOBR mandate requirements should be flexible across sectors, but must be standard within sectors to ensure uniformity and a “level playing field.” Nevertheless, different fleet sizes will likely experience different financial impacts from an EOBR mandate.
- Vendors and carriers alike are concerned about the lack of EOBR standards and uniform practices.
- Carriers and enforcement agencies are extremely concerned about standardized EOBR enforcement of HOS compliance. Motor carriers are also concerned with data access for non-compliance purposes.



## Recommendations

ATRI recommends that the following actions are considered prior to an EOBR mandate:

- Explore the feasibility of tax credits or financial assistance for small carriers and owner-operators.
- Encourage cooperation among carriers, vendors and FMCSA to document, design and test EOBR systems that meet industry requirements for cost, functionality, maintenance, data privacy and technical standards.
- Some version of technical and functional standards should be included in the mandate requirements rather than in reaction to the rulemaking.
- Approaches and processes to inspect EOBRs are needed to ensure they are functioning correctly and within the specifications of the regulations.
- A mandate should only require the collection of the minimum information needed to accurately confirm driver identification and HOS status. Carriers and vendors should work together to ensure that any other data collected is only accessible by the motor carrier.

Based on this research, there is a clear potential for EOBRs to provide considerable compliance and limited productivity benefits, but there are a number of challenges that will have to be resolved before EOBRs meet this potential.

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*ATRI's primary mission is to conduct research in the field of transportation, with an emphasis on the trucking industry's essential role in a safe, efficient and viable transportation system.*