REVIEW OF FMCSA'S REGULATORY IMPACT ANALYSIS FOR THE 2010-2011 HOURS OF SERVICE RULE

Introduction and Summary of Findings

The American Trucking Associations (ATA) asked Edgeworth Economics to review the Regulatory Impact Analysis ("RIA") for the 2010-2011 Hours of Service Rule issued by the Federal Motor Carrier Safety Administration (FMCSA) on December 29, 2010. FMCSA's proposal includes several significant changes to current hours-of-service ("HOS") regulations, including: a restriction of daily on-duty time to a maximum of 13 hours; a reduction of daily driving time to a maximum of 10 hours; and a requirement that the "restart" period include two consecutive off-duty periods from 12 a.m. to 6 a.m.

FMCSA estimates the impact of the proposal on industry productivity, the frequency of fatigue-related crashes, and driver health. FMCSA concludes that its proposal would generate net benefits of $380 million annually under the agency's central assumptions, with a range based on other assumptions from $1.45 billion to -$750 million per year.

Edgeworth's analysis of the proposed rule focuses on the following questions:

- Can FMCSA's analyses be replicated and its conclusions verified using information provided in the RIA or elsewhere in the public record?

- Are the assumptions and methodologies used by FMCSA to calculate the costs and benefits associated with the proposed rule internally consistent within the RIA and consistent with available data and economics/statistics precepts?

- Are the assumptions and methodologies in this RIA consistent with previous FMCSA analyses—in particular, the RIAs issued by FMCSA in 2007 and 2002 for previous versions of HOS rules?

- Do any errors, inconsistencies, or unreasonable assumptions in the RIA affect FMCSA's conclusions regarding the costs and benefits of the proposed rule?

FMCSA has made a number of substantial changes to its approach since the previous RIA issued in 2007. **We find that, in every instance, FMCSA's new methodologies and assumptions increase the apparent net benefits of the proposed rule. However, many of FMCSA's new approaches rely on misapplication of available data, use of outdated information, or lack empirical support entirely.** FMCSA also makes a number of errors in its calculations which serve to further overstate its findings.

Our main conclusions include the following:

- FMCSA overestimates the total number of hours at issue by misusing the data from the 2005 and 2007 Field Surveys. In particular, the agency fails to consider that carriers sampled in those surveys, particularly those chosen because of poor safety performance, may use drivers more intensely than other carriers. FMCSA also overestimates the extent to which drivers sampled in the surveys actually exceeded 9 hours of driving or 13 hours of work and assumes, inappropriately, that drivers who were measured by the surveys to be out of compliance with current HOS rules would nonetheless comply with the new, more restrictive rules. **These factors result in an overstatement of both the costs and benefits of the proposed rule.**

- FMCSA has abandoned its model of carrier logistics, which the agency previously had used to calculate the impact of HOS rule changes on industry productivity in the 2007 RIA. Instead, FMCSA estimates costs using a series of assumptions based only on the agency's "judgment and knowledge of the industry." Under these unsupported assumptions, FMCSA estimates that the proposed rule would reduce productivity by 2.8 percent,

compared to the agency's previous finding of a 7.1-percent impact for similar changes in HOS policies. **This change in approach increases the net benefits of the proposed rule by more than $1.5 billion annually**.

- FMCSA overstates the risk of driver fatigue and the extent to which a reduction in driving or work time would reduce such risk. For its estimate of the rate of fatigue risk, FMCSA relies on the finding from the Large Truck Crash Causation Study that 13 percent of crashes had driver fatigue as an "associated factor." This figure is almost double the 7-percent estimate of average fatigue risk used in the 2007 RIA. The LTCCS, however, was based on crash data collected prior to the implementation of current HOS rules, which were designed specifically to reduce fatigue risk. FMCSA fails to adjust the findings of the LTCCS to reflect the impact of current HOS rules. Additionally, FMCSA treats the LTCCS's coding of fatigue as an "associated factor" in a crash as an indication that fatigue was the "cause" of that crash, despite the fact that many crashes have multiple associated factors. FMCSA's approach contradicts the agency's previous analysis of LTCCS data. **Applying the 7-percent figure rather than FMCSA's new assumption of 13 percent reduces the apparent benefit of the proposed rule by $330 million annually.**

- In previous RIAs and in public comments related to those analyses, FMCSA repeatedly asserted that current rules provide sufficient flexibility for drivers to eliminate any concern about fatigue caused by accumulation of on-duty time (as opposed to "acute" fatigue caused by a long tour on a particular day). FMCSA now has reversed its position and estimates substantial crash-reduction benefits associated with reducing weekly work time. The agency, however, again relies inappropriately on an analysis of pre-2004 crash data from the LTCCS for its calculations. FMCSA further errs by assuming that the risk of a crash is the same during a non-driving work hour as it is during a driving hour, which is obviously false, and by rounding up any reductions in work time to a whole hour, even if the calculated effect is only a small fraction of an hour. **These two errors alone serve to inflate the apparent benefits of the proposal by almost $200 million per year**.

- FMCSA calculates the cost of crashes by long-haul drivers using an assumption of 434,000 crashes per year—approximately the level of crashes during the 2000-2003 period. Since that time, however, the frequency of crashes by long-haul drivers has fallen substantially —to 286,000 in 2009. **FMCSA's use of outdated crash numbers results in an overstatement of benefits by about 34 percent.**

- In previous statements, FMCSA had taken the position that current HOS rules allow drivers to obtain sleep levels "within normal ranges consistent with a healthy lifestyle." In contrast, FMCSA now assumes that the small reductions in work time under the proposed rule will translate into even smaller increases in average sleep levels for long-haul truck drivers, and that this will result in improved driver health. FMCSA bases its calculations on two fundamentally flawed analyses described at length in the report. **FMCSA ignores the conclusions of sleep researchers that the agency itself cites in the RIA, who state that "there is no evidence that sleeping habitually between 6 and 8 [hours] per day in an adult is associated with harm and long term health consequences."**

- Where adequate data is available, we correct the errors and unreasonable assumptions in FMCSA's analysis described above. **We estimate that FMCSA's proposal would result in a net *cost* of $320 million per year. That is, we find that FMCSA has overstated the net benefits of the proposed rule by about $700 million annually and that the proposed rule would impose a net cost on society, rather than a net benefit as claimed by FMCSA.** This estimate excludes any health-related benefits associated with increased sleep levels. If health-related benefits are included in the model as calculated by FMCSA, while making the other corrections, we calculate a net cost to society of $20 million annually—i.e., FMCSA has overstated the net benefits of the proposed rule by $400 million per year.