

# CTA MEETINGS



## **CTA Participation Guide for Fuel Efficiency / Vehicle Specifications Workshop Series Spring 2015**

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**Canadian Trucking Alliance**  
555 Dixon Road, Toronto, ON M9W 1H8  
Tel: 416-249-7401 – email: [govtaffairs@cantruck.ca](mailto:govtaffairs@cantruck.ca)  
Follow us on Twitter @cantruck and on the internet at [www.cantruck.ca](http://www.cantruck.ca)

## **CTA Participation Guide for Fuel Efficiency / Vehicle Specifications Workshop Series Spring 2015**

The purpose of this document is to provide background information on proposed fuel efficiency rules and potential discussion items that can be addressed by carriers and suppliers at CTA's workshop series that will take place with Provincial Trucking Associations across Canada in the spring of 2015. As carriers and suppliers, you know better than anyone how you choose to spec your trucks for efficiency and the types of capital investment decisions you make has a profound impression on your operations and your bottom line. You also know for Canadian operations, a one-size-fits-all approach does not necessarily work due to a huge range of trailer body styles, axle configurations and allowable weights. Please take the time to read this document so you will be prepared to discuss the issues identified below:

### **Background on Proposed Regulatory Changes**

- U.S. EPA and the U.S. Department of Transportation will develop a comprehensive National Program for Medium and Heavy-Duty Vehicle Greenhouse Gas (GHG) Emissions and Fuel Efficiency standards for model years beyond 2018 (standards will not be applied retroactively);
- Based on past experience, it is likely Environment Canada rules will mirror the US rules;
- The onus will fall on manufactures to meet the standards and offer equipment to carriers that complies with the standards;
- Standards will follow the same regulatory categories for truck tractors and engines as in previous rules. However, standards and certification requirements will be added for new trailers pulled by truck-tractors;
- There has been preliminary discussions regarding select truck-tractor, engine and trailer technology, but the scope of the technology is limited compared to current market options;
- Goal is to improve fuel economy by 10%-23% over the EPA baseline established in 2010;
- Plan is to meet this goal through the addition of technologies that are: technically feasible, can be practically implemented and safe; provide meaningful emission reductions at reasonable costs; and have reasonable payback periods. CTA's concern is technology will focus too much on U.S. trucking operations.

### **Opportunity and Obligations for the Canadian Trucking Industry**

- Onus will be on CTA and its member carriers to make sure manufacturers and governments are aware of the types of equipment and technology that carriers have and will continue to need in the Canadian context, which should be taken into consideration to ensure there is a suitable compliance pathway to address Canadian operating requirements. In addition, should Canadian weight and dimensions regulations need to be amended to achieve the desired results; this exercise will form a component of the advocacy efforts going forward.

### **Why This Issue is Important for Canadian Trucking Companies and Their Suppliers?**

- In order to maintain the productivity of the trucking industry and existing business models that Canadian trucking companies have developed to support the Canadian supply chain, it is critical that all of the options for compliance are examined in the Canadian context. Canadian equipment as well as weights and dimensions regulations are significantly different than in the United States. A U.S. solution will not be practical for Canada, especially when considering the gross weight differences and the dynamic performance measures Canadian equipment is held to. (This will also be key for many U.S. states with higher GVW limits);
- Failure to address the issues could limit the types of equipment that can be sold legally in Canada after 2018, reducing carriers' ability to service the Canadian supply chain within existing business models;
- Lack of input by industry could result in existing proven technologies being overlooked by government and replaced with technologies that are not real life tested to meet the needs of the Canadian trucking industry.
- It is CTA's belief that proven technology currently in use and more broadly utilized could significantly help the manufacturing community hit future government mandated GHG targets. However these

technologies need to be identified and prioritized and the Canadian government needs to include all options in its rulemakings going forward.

## **Technologies to Consider and How Would They Apply in the Canadian Market**

**Truck Tractors and Engines** – EPA’s direction on this issue currently identifies tractor aerodynamics, weight reduction, tire rolling resistance, as well as engine idle reduction and speed reduction as categories of technology that can be applied to a vehicle for compliance. Should further subsets of the technologies above be considered, for example in the aerodynamics category:

- Hoods and fenders;
- Bumpers;
- Roof air fairings;
- Wheel covers;
- Chassis skirts
- Mirrors
- Cab over designs

How are you using these technologies today and how would you like the direction of the requirements to go with regards to this technology?

Would it also make sense that additional technologies be considered for the tractor and engine categories such as those listed below? How applicable would they be for tractors and engines being manufactured for the Canadian market going forward to account for GHG credits?

- Engine downsizing;
- European engine technology;
- Automated or automatic transmissions;
- Managing electronic engine parameters;
- Synthetic engine and transmission oils;
- Fuel additives or alternative fuels;
- Vehicle gearing;
- 4x2, 6x2, 8x4 drive axles in lieu of traditional drive axle spec’s

**Trailers** – EPA’s current direction is focused on aerodynamics, weight reduction and tire rolling resistance for 53-foot (or longer) van and refrigerated trailers. It is understood, however, that the new rulemaking may also include tankers, flat beds, and container chassis, while other trailers, such as traditional open auto haulers, livestock, and other bulk type trailer body styles may be exempted. Nevertheless, the requirement for low rolling resistance tires is expected to apply to all trailer axles regardless of trailer types.

From an aerodynamics perspective, side skirts, boat tails and gap reducers are being considered. For weight, wide single tires and aluminum wheels are regarded as possible preferences. Low rolling resistance dual tires, wide single tires, tire pressure monitoring and automatic tire pressure inflation systems are being discussed as rolling resistance options.

Should we rule out an attempt to get fuel efficiency credits from non-box type trailers or technologies not currently on EPA’s radar or should we plan to address everything regardless of EPA direction? (e.g. are there trailer specifications that Canadian fleets are using on this type of equipment that should qualify or are there other technologies in use on box-type trailers that do not qualify)?

- Fuel efficient pumps and blowers for bulk commodities (burn less PTO fuel);
- For flat beds, if a permanent tarping structure is being used, should this receive credit?
- Should we be asking for credits for invisible axles or lift axles that are raised when payload weights are reduced, without disqualifying vehicles from productive provincial regulatory weight and dimensions regimes?

- Should refrigerated/heater units on the front of trailers be given consideration as an aerodynamic device? Can trailers with this type of equipment be credited for having fuel efficient operating characteristics?
- Should carriers operating multi-axle trailers determine if more axles provide better aerodynamics?
- If trailers are required to be light-weighted further, what does that mean and should we put limits on the scope of this issue? Are there safety and service life issues we are not prepared to sacrifice?
- Carriers/suppliers to add additional items.

In addition to the technologies discussed above, should we also be looking at the following trailer technologies in the Canadian context?

- The use of nose cones;
- Mudflaps;
- Fenders;
- Wheel covers;
- Vortex generators

Are there things from a fuel efficiency perspective not identified above that Canadian fleets do differently when specifying tractors/trailers compared to US fleets?

### **Safety Performance Considerations/Discussion**

Are there items identified by EPA that would reduce the safety performance, productivity, or the service life of equipment being sold in the Canadian market? For instance, if weight reduction is a requirement on tractors/trailers, how should this be addressed for equipment designed to move heavy Canadian loads vs. lighter US loads? What are the risks? Is it reasonable to expect that OEM's be forced to further value engineer equipment to the point where the equipment's service life, operating reliability, and dynamic performance in the Canadian market are negatively impacted? There is a belief in the carrier community that existing light-weighting practices (especially in the dry van market) have negatively impact the dynamic performance of trailers, causing increased risk of rollovers.

### **Productivity Performance Considerations/Discussion**

With the differences in U.S. and Canadian weights and dimensions regulations, should we be examining the benefits from a productivity standpoint the Canadian regulations provide? Canadian axle and gross weight limits are generally much more productive than those in the US resulting in significantly less fuel used per tonne per mile hauled which, in turn, leads to lower GHG emissions. In addition to weight, should we also be looking at cubic capacity and how LCV's and other unique Canadian configurations can achieve GHG credits?

### **ISO Standards on Life Cycle Assessment Considerations/Discussion**

The 14040 series of ISO standards deals with life-cycle assessment (LCA). This is a cradle-to-grave analysis of the vehicle from raw material extraction through materials processing, manufacturing, distribution, use, repair and maintenance, and disposal or recycling. LCA is commonly used to evaluate the total energy consumption, carbon footprint, and emissions impact of vehicles. Would it make sense for the Canadian government to explore these types of standards as part of the discussion on fuel efficiency? The standards typically apply to the OEM level rather than the end user and seem to fit within the approach EPA/USDOT is taking in regards to OEM level compliance.