

ENGINE AND VEHICLE AFTER-MARKET DEVICES (EAMDs) A Problem AND an Opportunity?

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BACKGROUND

- Purchasing departments and municipal vehicle fleet managers are inundated by companies selling engine and vehicle after-market (EAMD) devices and additives that **claim** to increase fuel economy and reduce tail-pipe emissions.
- EAMDs are primarily targeted to diesel engines and medium- to heavy- duty trucks, although many are applicable to gasoline engines or both.



THE ISSUES

- Fleet managers do not have the time nor technical training to evaluate EAMDs and test reports – compounded by the number of vendors soliciting them.
- There is a wide variety in purported effectiveness of the products and widely varying capital, operating and maintenance costs to implement them.
- Some fleet managers have been misled by some products – consequently, word spreads, and **all** fleet managers become skeptical of **all** EAMDs.
- Supporting test data are often highly variable, from anecdotal comments, vague letters of support, Drive Clean results, and questionable “lab reports”.



STAKEHOLDER PROCESS INITIATED

- A series of meetings was held in early 2007 to address the issues and concerns.
- Stakeholders involved:
 - Canadian Association of Municipal Fleet Managers (CAMFM), through various municipal representatives from Toronto, Hamilton, Ottawa and others.
 - OCETA and ETV Canada
 - Engine/vehicle test labs
 - Environment Canada
 - EAMD vendors



KEY OUTCOMES

- Draft Testing Protocol developed – a 5-Step process leading to ETV Canada verification. Consensus agreement was achieved at this point.
- Endorsed by CAMFM Board of Directors on May 31, 2007.
- The City of Hamilton was the 1st to formally adopt the protocol as a procurement condition – it is expected that other municipalities will do likewise.
- Vendors **MUST** have ETV Canada verification otherwise many fleet managers will not deal with them.



POST-PROTOCOL STATUS

- OCETA and ETV Canada staff continue to be contacted by numerous vendors – running total over 55 EAMD vendors.
- Vendors represent 12 different technologies in three general categories:
 - Fuel additives, lubricants etc.
 - Retrofit devices, auxiliary power systems
 - Catalytic devices and others
- Fleet managers and many municipalities are referring EAMD vendors to OCETA.
- Vendors are reluctant to spend a minimum \$40,000 for testing of their product under controlled conditions – feel it is a “forced march”. But, it is the cost to enter the market.
- However, in this case, the buyer rules!



A NEW SOLUTION

- What is needed is a fair, open and transparent solution that will allow fleet managers to decide which of the many products is appropriate to the mix of vehicles in **their** fleet.
- Need to create a level playing field to allow EAMD vendors and buyers to compare devices on the same sound basis.
- Such a program must be scientific in nature.
- It would also feature voluntary participation by the EAMD vendors.
- It would ultimately allow the “cream to rise to the top”.
- The program needs to be well-designed to ensure fairness, accuracy and include appropriate QA/QC protocols.



DEMONSTRATION PROJECT

- OCETA and ETV Canada has recommended a Demonstration Project to test and evaluate at least one EAMD device in each technology, i.e. 10+ devices as a minimum.
- This will put all EAMDs on a level playing field and allow the user community (public and private fleets) to choose the most suitable products themselves.
- Demonstration Project Details:
 - Estimated cost \$1 - \$1.5 million; 12-18 month duration.
 - Phase 1 – Feasibility Study - Program Design, Test Plans, stakeholder buy-in etc. - \$100,000 cost.
 - Strategy is to solicit needs of key associations, namely:
 - CAMFM (on board)
 - CUTA – Canadian Urban Transit Association (on board)
 - Others to contact: e.g. Canadian Trucking Alliance



DEMONSTRATION PROJECT

- Funding sources to be (or have been), approached for financial support include:
 - Environment Canada
 - NRCan
 - Industry Canada
 - Transport Canada
 - Members of key stakeholder associations (as in-kind contributions, e.g. provision of vehicles)
 - EAMD vendors (there would be some reasonable cost to participate)



KEY BENEFITS AND OUTCOMES

- Addresses the central issue of the comparative performance of engine and vehicle after-market devices and products, based on equivalent testing, known protocols, credible test labs and relevant engine/vehicle combinations and duty cycles.
- Results would be widely distributed.
- Fleet managers can assess individual and collective results on a more informed and sound basis.
- Will lead to meaningful ETV Canada verifications, if the EAMD vendor wishes to pursue this outcome.
- Will demonstrate an effective stakeholder-driven process with a clear and important outcome.



OCETA STAFF PARTICIPATION

- **John Neate**, Senior Associate
- **Steve Guerin**, General Manager, ETV Canada
- **Andrew Houlson**, Assistant Technical Director, ETV Canada
- **Kevin Jones**, President and CEO





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Questions / Comments ?