



**Pollution Probe submission to Environment Canada
Regarding *Options for Incentives to Accelerate Scrappage of Older
Vehicles in Canada***

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Introduction

Pollution Probe believes that reducing greenhouse gas emissions from the light-duty vehicle fleet in Canada requires a policy package of effective, complementary measures requiring actions on the part of government, industry and consumers to increase the use of more fuel efficient, lower-emission vehicles. As the cornerstone piece of this policy package, Pollution Probe calls for the design and implementation of a world-class fuel efficiency standard for Canada. A properly designed standard should increase the average fuel efficiency levels of new vehicle fleets brought to market. The benefits of this standard can be realized sooner if the vehicle stock turnover is accelerated, provided new vehicles are more fuel efficient than the older models they replace.

The Vehicle Efficiency Incentive and Green Levy announced in Budget 2007 increases the appeal of fuel efficiency in the new vehicle market by attaching a financial incentive to models that consume less fuel. In addition, Budget 2007 committed federal funds to support accelerated retirement of older, more polluting vehicles from service. Both of these measures have the potential to increase market demand for new, more fuel efficient vehicles, thus complementing the objectives of a fuel efficiency standard.

Furthermore, new vehicles are subject to more stringent criteria air contaminant emissions standards (i.e., Federal Tier 2 emissions standards) compared to older vehicles that are designed to comply with less stringent emissions standards. In addition, the effectiveness of some automotive emissions control systems degrades over time. All things held equal, if the rate at which newer vehicles

replace older vehicles were to increase, then the fleet-wide emissions that contribute to smog and air pollution should decrease more rapidly.

Pollution Probe is pleased to be invited to comment on Environment Canada's discussion paper, *Options for Incentives to Accelerate Scrappage of Older Vehicles in Canada*. This submission includes our general comments and recommendations, as well as our responses to some of the questions posed in the paper. Pollution Probe is not in the business of delivering vehicle scrappage programs, but we do have knowledge and expertise on the topic of vehicle fuel efficiency and emissions, and we would like to be involved in the Environment Canada- and Transport Canada-led process of designing incentives to complement the Government of Canada's programs: ecoAUTO, ecoMOBILITY and ecoENERGY for Personal Vehicles.

General Comments and Recommendations

- According to the discussion paper, the stated goal of the Government of Canada is "*to reduce air pollutants and greenhouse gas emissions by removing older vehicles from the road and promoting sustainable transportation alternatives*". Pollution Probe points out that this goal is premised on the assumption that new vehicles emit less air pollutants and greenhouse gas emissions than older vehicles.

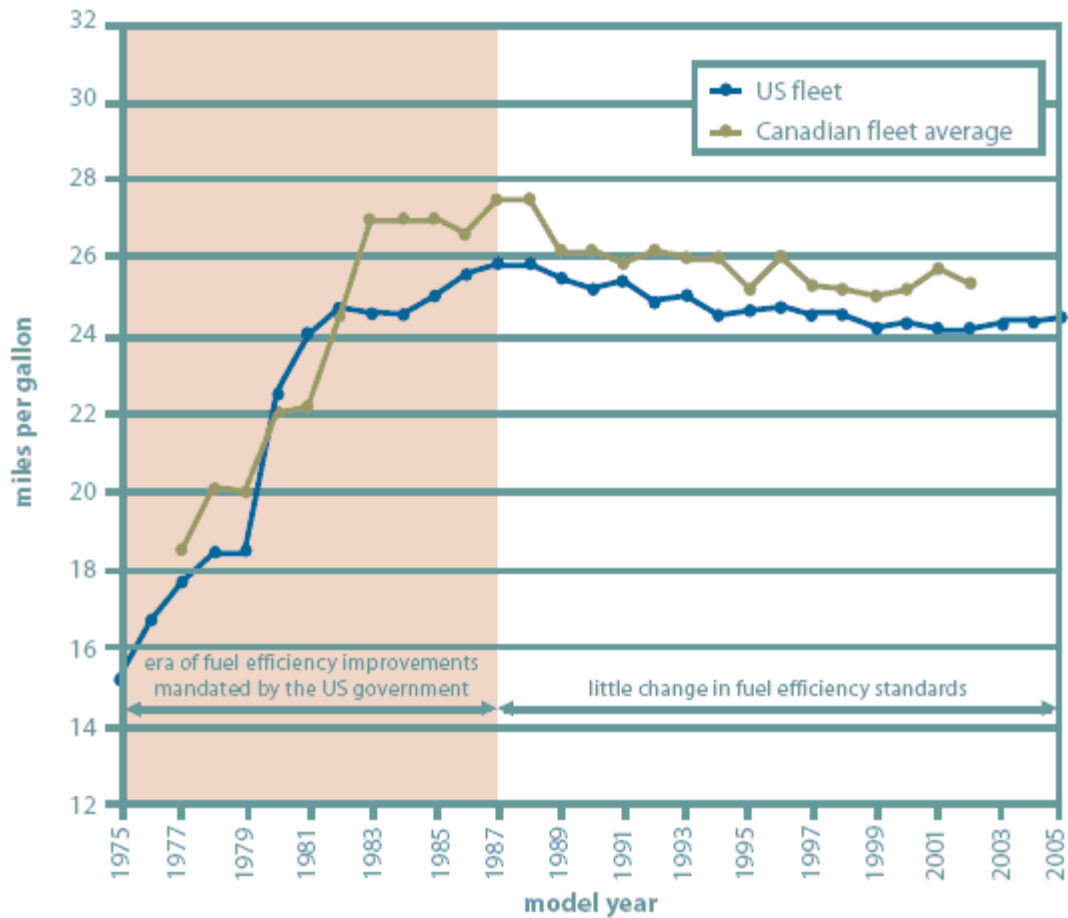
However, there is currently no policy in force that guarantees new vehicles outperform older vehicles on fuel efficiency ratings, which is the main determinant of expected greenhouse gas emissions¹. As the chart on the opposing page demonstrates, in the absence of progressive fuel efficiency standards new vehicle fleet fuel efficiency levels in the U.S. and Canada can decline over time.

Furthermore, unlike the effectiveness of certain emissions control devices, the fuel efficiency performance of properly maintained vehicles does not degrade over time².

¹ There exists a memorandum of understanding between the Government of Canada and automakers, voluntarily committing automakers to achieving reductions in greenhouse gas emissions from the light-duty vehicle sector in Canada with targets set for 2007-2010. It is unclear what improvements in new vehicle fuel consumption levels are expected from this voluntary commitment. The Government of Canada has also committed to regulate new vehicle fuel consumption levels beginning with the 2011 model year. It is possible that these policies will generate sustained year-over-year improvements in new vehicle fuel efficiency levels, but this can only be speculated at present.

² Greene, 2007

Average Fuel Economy Levels of New Light-duty Vehicle Fleets (unadjusted EPA values)



Source: US data from US Environmental Protection Agency. *Light-Duty Automotive Technology and Fuel Economy Trends: 1975 Through 2006*; Canadian data from Natural Resources Canada

Therefore, simply replacing older vehicles with new models may not achieve the goal of reducing greenhouse gas emissions. Pollution Probe recommends that an additional guiding principle be added to the seven listed in the discussion paper:

A new vehicle purchased as a replacement for one retired under the scrappage program should have a lower fuel consumption rating than the retired vehicle.

This will ensure that the scrappage program will contribute to a lower-emitting fleet in terms of air pollutants *and* greenhouse gases.

- Pollution Probe agrees with the need for an educational component increasing awareness about the environmental impacts of transportation choices (one of

the guiding principles listed in the discussion paper). However, specifically targeting owners of older vehicles with information about the impacts of the continued use of *their* vehicles should be very carefully considered.

As an alternative, **Pollution Probe advises a broader and more general information campaign that raises awareness of the facts about automobile fuel efficiency and emissions.** The entire motoring public would benefit from access to information and guidance about more environmentally responsible transportation choices, including information about the potential impacts of the prolonged use of higher-polluting vehicles. By singling out segments of the motoring public (e.g. owners of older vehicles) the impacts of the campaign could be limited or counterproductive.

- Pollution Probe agrees with the guiding principle concerning minimizing the environmental impact of end-of-life vehicle recycling. **Pollution Probe advises that mercury containing vehicle components be recognized as a key part of this principle.** Mercury is a neurotoxin that bio-accumulates in food chain and threatens human health. Both new and older vehicles often have mercury containing components (e.g. mercury switches, mercury-containing headlamps, mercury-containing anti-lock brakes), which, if not removed before recycling, can become of source mercury released into the environment.
- The discussion paper claims that because older vehicles are driven less than new vehicles, a possible outcome of the vehicle scrappage program is that greenhouse gas emissions could increase even if new vehicles are more fuel efficient. **Pollution Probe cautions that this logical analysis is incomplete and the conclusion may be incorrect** (e.g., By this logic, the government should *encourage* people to drive only used cars as a means to reduce overall vehicle use and greenhouse gas emissions).

Older vehicles are not driven less simply because they are old, but because they are often the *older option in a multi-vehicle household*. In replacing an older vehicle with a new vehicle, household travel demand does necessarily increase (as implied by the reference to the Canadian Vehicle Survey in the discussion paper). Note that the Canadian Vehicle Survey data does not indicate that annual average vehicle kilometers traveled per person is a function of vehicle age (although it does vary by region and by the driver's age).

More probably, new vehicles absorb the majority of the household travel demand while older vehicles (i.e., second and third vehicles) will satisfy less of that demand³. Thus, it does not follow that replacing an older vehicle with a

³ Davis, Diegel. 2006. Transportation Energy Data Book: Edition 25. Table 8.9 and 8.10 show that newer vehicles are driven more than older vehicles in multi-vehicle households.

new vehicle will effectively increase total household or individual vehicle kilometers traveled.

In general, **Pollution Probe agrees with the concept of using a vehicle scrappage program to encourage transportation alternatives to private vehicle use**, such as cycling and public transit. **However, we are uncertain about whether it is productive to constrain the design of the program to ensure 50 per cent of participants select alternatives to new vehicle ownership.** This target may serve as goal for which programs delivery agents should strive and try to exceed, but as an arbitrary constraint it could lead to complications in the administration of a program.

Questions for Discussion

The discussion paper lists several questions for discussion. As previously stated, Pollution Probe is not a scrappage program delivery agent. As a result, our knowledge of the potential challenges faced by program managers is limited. However, we have submitted answers to two of the questions, as follows.

- **Are there other incentive options that haven't been addressed?**

The value of the incentive could be linked to the “environmental performance improvement” of the new vehicle compared to the older vehicle it replaces. For example, the difference in fuel consumption ratings between the retired vehicle and its replacement could determine the value of the incentive. The more fuel efficient the new vehicle compared to the old, the bigger the financial reward. This would not only encourage drivers to seek out the most fuel efficient vehicle options that meet their needs, it would also encourage automakers to build and supply more fuel efficient vehicle models overall.

- **What role do vehicle scrappage programs have to ensure that the environmental impacts of recycling end-of-life vehicles are minimized? How can this be achieved?**

Proper removal and handling of mercury containing components in vehicles is an absolute requirement in end-of-life vehicle recycling. Pollution Probe has provided input to government policies regarding the collection of mercury from vehicles. Below is a list of links to resources available on the Pollution Probe website:

- ✓ <http://www.pollutionprobe.org/Reports/comments%20RMS%20March%2031%202007.pdf>
- ✓ <http://www.pollutionprobe.org/Reports/comment%20Lorrie%20Hayes%20Mercury%20Switch%20Feb%207%202007.pdf>

- ✓ <http://www.pollutionprobe.org/Reports/Mercury%20Product%20Standards%20Case%20Study%20-%20May%207%202007.pdf>
- ✓ <http://www.pollutionprobe.org/Reports/mercswitchout.pdf>

There is an excellent opportunity to design a vehicle scrappage program that complements the government's announced preparation and implementation of pollution prevention plans with respect to mercury releases from end-of-life vehicles.

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Concluding Remarks

Pollution Probe supports the Government of Canada's commitment to introduce a fuel consumption standard for new vehicles, as well as the complementary measures announced in Budget 2007 (namely, the Vehicle Efficiency Incentive and Green Levy and support for vehicle scrappage programs designed to reduce greenhouse gas emissions and air pollutants from the light-duty vehicle fleet in Canada).

Pollution Probe would be pleased to offer our knowledge and expertise in the development of these and future measures to contribute to a cleaner, more fuel efficient vehicle market in Canada. We are committed to good policy development. Open and transparent stakeholder involvement is crucial for this to occur and we are pleased that Environment Canada and Transport Canada have taken steps to begin this process.