



Transportation Discussion Paper

**By John Bennett
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May 2003**

Transportation Discussion Paper

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Executive Summary

The Climate Action Network (CANet) has worked on climate change policy with its members for more than a decade and contributed extensively to the public dialogue leading to ratification of the Kyoto Protocol, December 17th, 2002. This paper is a continuation of this participation and is designed to assist Canadians.

The federal government released a climate plan in November of 2002, and it remains the basis for Canada's action to reduce greenhouse gas emissions. It was followed by the federal budget in February 2003, which set aside \$1.7 billion for climate change action. Only about \$300 million is actually budgeted to specific actions and the bulk remains unallocated.

CANet developed a short list of actions prior to the budget's release that were sufficiently well understood for them to be included. Unfortunately, they were not included, but neither were they precluded by the climate plan or the budget.

This paper describes the transportation initiatives submitted by CANet, provides the basis for them, and the evidence to support them.

The conclusions reveal a significant shortfall between what the federal government has committed to do to reduce greenhouse gas emissions from the transportation sector and what needs to be done.

The conclusions include:

- I. The federal government, although it has ratified the Kyoto Protocol and recognized the importance of emissions from transportation, has failed to articulate a plan of action that adequately addresses even the few transport issues discussed in this paper;
- II. The lack of a clear plan for assisting municipalities to provide improved urban transit is a huge gap in the federal plan. This could be easily fixed by creating an urban transit fund based on the development of integrated urban transportation plans;
- III. The benefits of providing a tax free bus pass far outweigh the federal government's arguments against it;
- IV. The trucking industry and other vehicle fleet operators have a legitimate need for accelerated capital retirement through the tax system for economic, climate change and pollution prevention initiatives;
- V. The federal government has a clear opportunity to use its investment and regulatory power to attain its goal of improving vehicle fuel efficiency by 25% by 2010. Unfortunately, the decision to continue with a failed policy of voluntary fuel efficiency

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standards for vehicles borders on folly;

VI. The evidence is clear that mandatory regulations with penalties works and Canada's voluntary system does not; and

VII. Polluters are rewarded, while purchasers of more environmentally friendly vehicles are punished by the present system. The federal government should move to remedy this situation by creating a feebate system for cars to encourage more environmentally acceptable choices.

CANet and its members need to increase pressure on the federal government around transportation issues if the sector is to receive the necessary policy instruments and public investment to achieve the required reductions in greenhouse gas emissions.

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Introduction

Transportation is responsible for about 20% of Canada's greenhouse gas (ghg) emissions, a major contributor to poor air quality in urban and rural areas, which affects the life and lifestyle of every Canadian. The federal government has challenged each Canadian to reduce her or his personal ghg emissions by one metric tonne. Key to achieving this reduction is the choice of transportation each person makes. Unfortunately, personal actions are limited to a great extent by the existing transportation infrastructure, availability of and access to efficient forms of transport, employer participation and urban design. Much can be achieved, but only through a combination of individual action, public investment and regulation.

The purpose of this paper is to put forward some of the solutions to this complex issue and provide the basis for the Climate Action Network to adopt a series of policy positions.

Background

The Climate Action Network submitted a briefing note to the federal government prior to the release of the 2003 budget which contained several transportation initiatives that could have been incorporated into the federal government's climate action plan. None of the suggestions were included though none were explicitly excluded in the budget's vague announcement of close to \$2 billion for climate change over the next four years.

CANet's Transportation Budget Suggestions:

- I. Allocate \$1 billion per year to a federal-provincial-municipal urban transit improvement fund to help limit urban sprawl, improve air quality and public health, and deliver concrete greenhouse gas emissions reductions;
- II. Make the provision of a bus or public transit pass to employees a non-taxable benefit;
- III. Accelerate capital retirement for fleet vehicles to encourage more rapid turnover of transport vehicles and replacement with more efficient machines;
- IV. Create an incentive package for car manufacturers to locate and/or expand facilities in Canada contingent upon the production of more fuel efficient vehicles, including cars, trucks and railway equipment, in line with updated fuel efficiency standards;
- V. Make the exemption of auto manufacturers' production plants from the large industrial emitters trading regime conditional on fuel efficiency improvements

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as outlined in g;

VI. Create a “feebate” system to reward buyers of efficient vehicles. This would be financed by an equivalent surcharge on inefficient vehicles (this means revenue neutrality for the Crown).

VII. Proclaim the never-proclaimed 1981 Motor Vehicle Fuel Consumption Standards Act. Then, working with California and other US states use this regulatory power to require a 30% improvement in efficiency for cars, light and heavy trucks by 2008.

Funding Urban Transit

“Allocate \$1 billion per year to a federal-provincial-municipal urban transit improvement fund that will help limit urban sprawl, improve air quality and public health, and deliver concrete greenhouse gas emissions reductions;”

A. What is needed?

Canada is the only OECD member that does not invest in urban public transit. The federal government is currently supporting four demonstration projects, but has no ongoing support for public transit. The combined support for urban transit from federal and provincial governments in Canada amounts to only about 4% of operating costs and 11% of capital costs.¹

Annually, Canadians invest more than \$3.1 billion on transit operating costs.² According to the Canadian Urban Transit Association (CUTA), nearly \$ 2 billion, or 63%, comes from the fares paid by riders, more than in any other country. The rest, an estimated \$1 billion in capital costs, comes mostly from municipalities.

A CUTA survey of urban transit capital needs suggests Canada should invest \$13.6 billion between 2002 and 2006. Present municipal and provincial sources have budgeted only \$4.8 billion, leaving a shortfall of \$6.8 billion.³

A federal program dedicating \$1 billion in a matching infrastructure fund with provincial participation could meet the needs of Canada’s urban transit systems.

B. Fund Design

The federal government should ensure the fund does not merely replace funding withdrawn by the provinces of municipalities. The money should be earmarked to achieve an overall reduction in greenhouse gas emissions from the transportation sector by:

¹Ibid

²Canadian Urban Transit Association, CUTA Transit Fact Book, 2001

³Canadian Urban Transit Association, Report on a Survey of Transit Infrastructure Needs for the Period 2002-2006, 2001

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- I. Requiring and assisting in the development of integrated transportation plans prior to providing capital investment funds;
- II. Encouraging the deployment of lower, low, and zero emitting rolling stock;
- III. Providing support for walking and biking routes; and
- IV. Supporting telecommuting and other demand-side measures.

C. Present Federal Position

The federal government has set aside \$3 billion over the next three years to support infrastructure programs across Canada, arguing that this includes funding for transit. A lack of specific targeting, however, causes transit projects to compete with water treatment, sewer and other urgently required infrastructure projects across Canada.

Further, this amount is inadequate to meet Canada's transit needs. It does not ensure transit projects will lead to greenhouse gas reductions nor will it require integrated transportation plans.

Promoting Transit Ridership

“Make the provision of a Bus Pass to employees a non-taxable benefit”

Environmentalists, transit workers, and the Canadian Urban Transit Association as well as the House of Commons have supported the concept of making employer provided bus passes a non-taxable benefit. However, the federal government refuses to create this simple program.

The evidence from the United States is clear. Employer provided non-taxable bus passes lead to more - as many as 25% more - new transit riders, as well as more use of transit by existing riders⁴.

A. Levelling the Playing Field

Under the federal Income Tax Act, employer provided parking and employer provided transit passes are considered taxable benefits. According to CUTA, Revenue Canada's interpretation of the Act and tax preferences in the Act allows many, if not most, employees to receive free parking as a benefit without paying income tax on it. It has been estimated that as many 80% of car driving commuters receive subsidized parking.⁵

⁴United States General Accounting Office, Mass Transit, Federal Participation in Transit Benefits Program, 1993

⁵IBI Group and Management of Technology Services, Tax-Exempt Status for Employer Provided Transit Benefits, Report to the Transportation Climate Change Table, 1999

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B. The U.S. Experience

The United States has used tax exempt bus passes to promote transit ridership for two decades. The costs were controlled by limiting the number of employers allowed to provide the benefit and by requiring that the benefit be new compensation and not a conversion of existing salary.

The program originally allowed \$15 to \$21 a month in 1984. It was increased to \$60 in 1993, and \$100 in 2002. The restrictions on employer eligibility have also been lifted, making the program available to all employers. In San Francisco, the expanded program resulted in an increase in participation from 3% to 27%⁶ of companies in 2001.

C. Employer Benefits Too

Employers in the US get a tax deduction for the expense of the bus pass as well as saving on payroll taxes. Payroll taxes are the most demonized by Canadian business, which regularly and vocally calls for their elimination. It is also less expensive for an employer to offer the pass. To provide an employee with enough salary to purchase a \$100/month pass could cost as much a \$2000 a year.

D. Potential Cost⁷

| Scenario | Contribution Mechanism | Benefit Cap | Employer Participation | Employee Transit Use | Federal Cost (forgone taxes) |
|---------------------------------|--|----------------|-----------------------------|----------------------|-------------------------------------|
| Basic (US up to 1991) | Employer only New Benefit (no salary conversion) | \$21 per month | Year 1: 1% Year 10: 5% | 25% to 35% increase | Year 1: \$0.67M Year 10: \$3.35M |
| Advanced (US in 2002) | Employer and/or employee New benefit of salary conversion | None | Year 1: 10% Year 10: 60% | 50% increase | Year 1: \$19.8M Year 10: \$119M |

E. Present Federal Position

The Department of Finance has rejected the non-taxable bus pass as an expensive way to reduce carbon dioxide emissions on a per tonne basis, arguing that it will mostly reward those who are already transit riders. It has ignored evidence of increased ridership in the United States and the educational value of giving preference to transit riders.

⁶www.commutercheck.com, "Commuter Check Enrollment Soars in Bay Area", media release April 2002

⁷Figures provided by CUTA

Truck Fleets

A. What is needed?

“Accelerate capital retirement for fleet vehicles to encourage more rapid turnover of transport vehicles and replacement with more efficient machines.”

Emissions from road freight transportation (trucks) are the fastest growing segment of transportation emissions. This is a reflection of a growing economy and the increasing reliance on “just in time” delivery, which, in effect, turns public highways into rolling warehouses. There are numerous measures which should be taken to reduce truck traffic. There will, however, continue to be great numbers of trucks in Canada, and many of them will be owned and operated by small to medium sized businesses. Accelerating the rate of capital retirement (rate of deducting the cost of purchasing vehicles from income tax) of existing vehicles will result in a more rapid increase in the number of new, more efficient, less polluting trucks, thereby reducing the growth in emissions.

According to the Ontario Trucking Association (OTA), the present taxation system could be changed to achieve rapid renewal of the truck fleet as well as help Canadian truckers compete.

“In trucking, this means that a US carrier is typically able to completely re-equip its tractor fleet every 3 to 5 years, whereas in Canada the frequency is every 5 to 7 years. This means that Canadian companies must use equipment that is older and therefore has higher maintenance and repair costs.”⁸

The OTA said, *“The slower Canadian CCA rates not only cause the Canadian industry to absorb higher maintenance and other costs, but it also impedes the penetration of the next generation of cleaner truck engines into the marketplace. Such investment would clearly be consistent with Canadian government policy to reduce emissions of smog causing pollutants.”⁹*

The OTA also describe additional tax incentives and grants available to truckers in California, Texas, and Georgia, which range up to a \$50,000 tax deductions for the

⁸Transportation Briefing Document: Issues & Policy (November 2000), Ontario Trucking Association

⁹Tax Treatment of Canadian and US Trucking Equipment, Ontario Ontario Trucking Association, September 16, 2002

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purchase of a bus or truck over 26,000 pounds GVW.¹⁰

Accelerating the rate of retirement is a simple and inexpensive means of encouraging the deployment of new vehicles that would produce less carbon dioxide and other pollutants while stimulating the economy.

B. Present Federal Position

The Ontario Trucking Association has made numerous representations to the Department of Finance and Natural Resources Canada and has been rebuffed.

More Efficient Cars and Light Trucks

“Create an incentive package for car manufacturers to locate and or expand facilities in Canada contingent upon the production of more fuel-efficient vehicles, including cars, trucks and railway equipment, in line with updated fuel efficiency standards; and

Make the exemption of auto manufacturers’ production plants from the large industrial emitters trading regime conditional on fuel efficiency improvements.”

Nearly two million cars are made in Canada every year nearly, and a million are sold domestically. The average car in Canada emits about 4 tonnes of carbon dioxide per year, and the average "light truck" emits about 5 tonnes.¹¹ Driving is the most carbon intensive, directly polluting activity, yet the federal climate change plan relies on negotiating a voluntary agreement with the automotive manufacturers to achieve a 25% increase in fuel efficiency for passenger cars. The current guideline for car fuel economy, set in 1985, is 8.6 litres of gasoline for every 100 kilometres driven, but the goal for light trucks under the present voluntary programs is an unambitious 11.4 litres for every 100 kilometres.

A. Background

Efficiency standards for cars, known as CAFE (Corporate Average Fleet Economy), were devised in the United States in the mid-1970s as a result of the 1973 oil embargo. US law forced automobile manufacturers to meet efficiency standards or face stiff fines. There are a number of problems with the US system, but the regulation resulted in an increase in fuel efficiency from an average of about 9 miles per gallon to 20 miles per gallon between 1975 and 1990. Pressure from automotive manufacturers, however, has forestalled efforts in the US Congress to extend the law and force greater improvements.

Canada waited until 1981 to pass *the Motor Vehicle Fuel Consumption Standards*

¹⁰Ibid

¹¹End-Use Energy Data Handbook 1990 to 2000, Natural Resources Canada. , 2002.

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Act, but has yet to proclaim it into law. Instead, a voluntary agreement with the automotive manufacturers with no penalties or other means of enforcement has been in place since the early 1980s. Transport Canada has recognized that the lack of legal authority has led to difficulties in gaining compliance with the voluntary agreement.

This Act was never proclaimed since industry agreed, through a Memorandum of Understanding, to follow a voluntary program. For the past two decades, the voluntary fuel consumption program has been subject to a number of deficiencies including the failure of some vehicle manufacturers to submit fuel consumption data to Transport Canada. Furthermore, there has been a failure on the part of certain manufacturers to meet the annual fuel consumption target. The Department proposes to re-institute sufficient authorities in the Act to ensure that corrective action can be taken without having to legislate the whole program or proclaim the Motor Vehicle Fuel Consumption Standards Act.¹²

The introduction of the SUV and the minivan in the late 1980s has further complicated the situation. These vehicles, although they are largely used as passenger cars, are categorized as light trucks, and as such, US regulations allow greater smog causing emissions and less efficient performance. This only became a problem when the sales of these so called “light trucks” rose sharply in the 1990s. In the United States, sales of light trucks have grown to equal those of passenger cars. In Canada sales of light trucks are not as high, but the trend is the same.

D. Cost of Fuel Efficiency

The relatively low cost of fuel in North America has led many commentators to consider investments in fuel efficient vehicles uneconomic. They argue that although auto industries Japan and Europe have negotiated agreements with their governments, this is irrelevant to the North American market, where fuel costs are significantly lower. However, a recent report commissioned by the US Department of Energy (DOE) and Natural Resources Canada (NRCan) suggests the opposite:

“.....even at relatively low gasoline prices (\$1.35US/gallon), significant levels of fuel economy improvement are cost-effective in the U.S. market if consumers value fuel savings over the full lifetime of their vehicles. Similar conclusions can be drawn about the applicability of the Japanese and European initiatives to Canada, with the primary difference being that Canadian gasoline prices have tended to be a bit higher than those in the U.S. and Canadian vehicle taxes are a bit

¹²Motor Vehicle Safety Act Review, Discussion Paper: Road Safety and Motor Vehicle Regulation Directorate, Transport Canada April 2002

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*higher, with the net result being that the commercialization potential for fuel economy technologies in both countries is similar.*¹³

E. Technical Feasibility

Fuel efficiency of passenger vehicles has been intensively researched since the 1970s, with massive investments from government and industry. The conclusion is clear; cars can be much more fuel efficient with little or no sacrifice in comfort or performance. *“A variety of technologies, most already introduced to the North American fleet, are available to improve the fuel economy of the fleet over the next decade.”*¹⁴ Table 1 lists some of the technologies

A few examples for a midsize car, with a baseline fuel economy of 26.5 mpg (EPA test rating) are:¹⁵

•**2015 MODT** (moderate technology)

This technology package yields an incremental improvement over the baseline vehicle with moderate improvements in aerodynamics (0.28 CD) and tires, valve timing and lift controls, and a 5-speed automatic transmission – which, combined, are expected to yield about a 17 percent fuel economy improvement from the baseline 26.5 mpg, to about **31 mpg**. Its estimated price increase is **\$585** measured against a **950-gallon** lifetime fuel savings. The discounted value of that lifetime fuel savings, at \$1.35/gallon, is about \$685.¹⁶

•**2015 HT** (high technology) package combines substantial weight reduction (16 percent) from the use of an aluminium-intensive structure, an engine downsize from 6 cylinders to 4 (possibly with some increase in vibration and noise), further improvements in aerodynamics and tires, and a CVT to yield a bit more than 30 percent fuel economy increase over the baseline, to **35.1 mpg**. The estimated price increase from the baseline is **\$1250** measured against a lifetime fuel savings of **1630 gallons**, worth a discounted \$1174.

¹³ Examining the Potential for Voluntary Fuel Economy Standards in the United States and Canada, Department of Energy (DOE), U.S. Government Natural Resources Canada (NRCAN), David Greene, Oak Ridge National Laboratory, Steve Plotkin, Argonne National Laboratory, K. G. Duleep, Energy & Environmental Analysis Inc., November 08, 2002, pages 1-5

¹⁴ Examining the Potential for Voluntary Fuel Economy Standards in the United States and Canada, Department of Energy (DOE), U.S. Government Natural Resources Canada (NRCAN), David Greene, Oak Ridge National Laboratory, Steve Plotkin, Argonne National Laboratory K. G. Duleep, Energy & Environmental Analysis Inc., November 08, 2002, page 1-6

¹⁵ Ibid, page 1-8

¹⁶ Assumptions: 12 percent discount rate, vehicle vmt/year

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- 2015 HT + 42V** package adds an integrated starter-generator and electric power steering to the 2015 HT to obtain an additional 8 percent fuel economy increase, to **38 mpg** (a total increase of 43 percent over the baseline 26.5 mpg). The estimated price increase (from the baseline) is **\$2504** against a lifetime fuel savings of about **2000 gallons** (worth a discounted \$1,800) and improved noise and vibration levels.

- 2015 HT 300v hybrid** adds a full hybrid drive train to the previous example, adding a 26% fuel economy gain, to nearly **48 mpg**, at a total price increase over the baseline of **\$4870** and saving a total of **2940 gallons** of fuel (worth about \$2100 discounted). Even without discounting, the lifetime fuel savings will not pay for the price increase unless fuel prices rise, or unless significant cost reductions in hybrid components are realized. Similar packages of technologies were examined for a compact 4-wheel-drive SUV, with somewhat similar results.

A **2015 MODT** package is expected to achieve a 20 percent fuel economy gain (20.3 mpg to 24.5 mpg), saving about 1500 gallons (\$1100 discounted) of gasoline at a vehicle price increase of under \$700. The **2015 HT** package is expected to achieve a 40 percent gain, to 28.4 mpg, saving nearly 2500 gallons (\$1,800) at a price of slightly more than \$2000 – but with some loss of towing capacity due to its downsized engine. And the **2015 HT + 42V** package is expected to achieve nearly a 70 percent fuel economy gain, to 34 mpg, with a \$3600 price difference and a gasoline savings of 3500 gallons, worth about \$2,500 – and with some loss of both towing and off-road capability. The hybrid version (**2015HT + 300V**) is expected to achieve an even higher increase, over 90 percent (to 39 mpg), with both high cost (\$5800) and high savings (over 4100 gallons, or about \$3,000), but it loses its towing and off-road capability.

And it works for sports utility vehicles too!

Similar packages of technologies were examined for a compact 4-wheel-drive SUV, with somewhat similar results. A **2015 MODT** package is expected to achieve a 20 percent fuel economy gain (20.3 mpg to 24.5 mpg), saving about 1500 gallons (\$1100 discounted) of gasoline at a vehicle price increase of under \$700. The **2015 HT** package is expected to achieve a 40 percent gain, to 28.4 mpg, saving nearly 2500 gallons (\$1,800) at a price of slightly more than \$2000 – but with some loss of towing capacity due to its downsized engine. And the **2015 HT + 42V** package is expected to achieve nearly a 70 percent fuel economy gain, to 34 mpg, with a \$3600 price difference and a gasoline savings of 3500 gallons, worth about \$2,500 – and with some loss of both towing and off-road capability. The hybrid version (**2015HT + 300V**) is expected to achieve an even higher increase, over 90 percent (to 39 mpg), with both high cost (\$5800) and high savings (over 4100 gallons, or about \$3,000), but it loses its towing and off-road capability.

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Clearly, the moderate Action Plan 2000 goal of a 25% improvement in fuel economy is cost effective for consumers and automotive manufacturers, who will be able to pass the additional cost to the buyer. Even greater improvements could be achieved with a modest incentive program to encourage the purchase of more efficient hybrid vehicles. It should also be noted that the fuel savings estimates are based on a model that assumes average use of the vehicle. For commercial vehicles that are used much more than private cars and trucks, the savings would be substantially greater.

F. Table 1 Technologies for Improving LDV Fuel Economy

| TECHNOLOGY | FUEL ECONOMY | EFFECT ON PRICE, \$ |
|------------------------------------|--------------|---------------------|
| Aero Improvements | %* | \$ |
| CD (0.31 to 0.28) 2.2 35 | 2.2 | 35 |
| CD (0.28 to 0.25) 2.2 60 | 2.2 | 60 |
| Improved Tires | | |
| CR (0.095 to 0.085) 2.0 20 | 2 | 20 |
| CR (0.085 to 0.075) 2.0 30 | 2 | 30 |
| Improved Accessories | | |
| Alternator 0.5 15 | 0.5 | 15 |
| Electric power steering (12V) 2.0 | 2 | 40 |
| Gear Drive Oil Pump 0.5 3 | 0.5 | 3 |
| Weight Reduction | | |
| Computerized redesign and | | |
| Increased use of high strength | 3.3 | 0.3 per lb saved |
| Composites for closures | 1.7 | 0.5 per lb saved |
| Engine Improvements | | |
| Engine Friction Reduction | 2-4 | 20 to 50 |
| 4-Valve Engine (+ higher CR) | 5 | 125 (4-cylinder) |
| Variable Valve Timing & | 6.5 to 8 | 170 (4-cylinder) |
| | | 230-290 (6-cyl) |
| Cylinder deactivation + VVTL | 11 to 12 | 350 (8 cyl DOHC) |
| Turbo DI Diesel | 35 to 38 | 1600 (4-cyl) |
| | | 2200 (6-cyl) |
| Advanced Transmissions | | |
| 5-speed automatic | 3 to 5 | 120 |
| Continuously Variable | 5 to 8 | 100 (long-term) |
| Hybrid Electric Drivetrains | | |
| 42-Volt (Mild) Hybrid | 8 to 9 1050 | 1050 (long-term) |
| Full Hybrid (Prius-type) | 35 | 3600 to 4800 |

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* The fuel economy benefits shown here apply to the EPA test cycle; benefits on other test cycles will be different. The benefits may not be additive in every case. For example, the diesel benefit does not add fully to the benefit from hybridization, because both technologies are aimed at reducing engine inefficiencies at low vehicle loads. Benefit values are referenced to a current vehicle, e.g. the 5-speed automatic transmission benefit is referenced to a 4-speed automatic, the more common technology today. The benefits are measured on a "constant performance" basis, that is, the vehicle with the added technology and the baseline vehicle with which it is compared have the same performance. From Examining the Potential for Voluntary Fuel Economy Standards in the United States and Canada, Department of Energy (DOE), U.S. Government Natural Resources Canada (NRCan), David Greene, Oak Ridge National Laboratory, Steve Plotkin, Argonne National Laboratory K. G. Duleep, Energy & Environmental Analysis Inc., November 08, 2002, page 1-6

G. Protecting Canada Auto Industry/Protecting the Environment

The Canadian automotive industry is a significant part of the Canadian economy, contributing hundreds of thousands of jobs and billions of dollars of wages and taxes. It is also an international industry with the majority of the cars produced in Canada being exported (mostly to the United States).

Canada has succeeded by providing a well-educated skilled workforce, universal health care and an excellent road/rail infrastructure. From time to time the auto industry has sought and received additional assistance through direct and indirect subsidies in return for investment in updating or building new assembly plants.

The Canadian automotive industry has already received a major subsidy from the federal government through its exception from the Large Industrial Emitters emissions cap of 55 megatonnes. The car industry will not have to invest to make its plants less carbon intensive. This constitutes a significant financial subsidy from the federal government.

Throughout 2002 the industry raised the question of new assistance, suggesting lucrative offers from the Southern United States would result in relocation of new facilities outside of Canada unless the federal, provincial and municipal governments were prepared to ante up as well. Industry Minister Alan Rock responded by setting up an industry-government-union committee to advise him.

In the late fall, both Ford Canada and DaimlerChrysler announced they needed government support for investments in Canada. The Ontario Government has already announced several hundred million dollars in assistance. The federal government is still considering its action.

Environment Minister David Anderson has been quoted as saying that investment by government should be tied to producing more fuel efficient vehicles. This statement is consistent with the 2003 budget statement that said all government actions should be seen through a "Kyoto Lens". There have not been any subsequent statements by Mr. Rock.

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The request for public money from the auto industry provides an opportunity for the government to demand fuel efficient vehicles in return for the investment. Traditionally, government has settled for jobs in return for subsidies and infrastructure, but in the present situation, automotive jobs would be more secure if the government forced the introduction of new technology.

To maintain its position in the international automotive industry, Canada needs to be producing the most advanced vehicles with the most advanced methods of production. The proposed DaimlerChrysler flexible production facility would actually be more energy efficient in its production by congregating its suppliers in a single location, eliminating the need to transport parts great distances.

The European Union and Japan have a different tradition of working with industry and have negotiated agreements with automotive manufacturers to produce more efficient vehicles. As those vehicles come onto the market, they will be imported into North America, and will eventually undermine the existing car market, just as the Japanese cars of the 1970s did.

To protect Canada's future jobs, the federal government must require cars of the future to be built in Canada.

Therefore, the three levels of government, in considering supporting automotive investments, must demand the production of the most advanced and fuel efficient vehicles in return.

H. Voluntary vs. Mandatory

Proclaim the never-proclaimed 1981 Motor Vehicle Fuel Consumption Standards Act. Then, working with California and other US states, use this regulatory power to require a 30% improvement in fuel efficiency for cars and light and heavy trucks by 2008.

The federal government has entered into negotiations with the automotive industry in the hope of obtaining a voluntary agreement to produce vehicles that are 25% more efficient by 2010. This goal was announced in October 2000. To date there has been no announcement of an agreement.

Reports indicate the industry is suggesting a 20 year timeline rather than the 10 year plan set out in Action Plan 2000, but none of the sessions have been public. The likelihood of successful negotiations seems remote because the industry has done everything it can to fight improved CAFE standards in the United States, using its powerful lobby to defeat every Congressional attempt.

California decided to go forward and legislate its own regulations. The same industry Canada hopes will strike a voluntary deal, responded to California's legislation by going to court and suing the state.

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Transport Canada (as mentioned above) has reported that the present voluntary agreement has been violated by some car manufacturers and others have not even bothered to provide data to the government. There are, of course, no repercussions, no fines, and no penalties for companies that fail to comply.

Is it likely that an industry prepared to sue California, spend millions lobbying the US Congress, and openly violate the present voluntary agreement will sit-down and negotiate a new voluntary agreement that will require it to invest billions in new vehicles?

The evidence supporting CAFE standards is clear. When faced with stiff fines for failure to comply and stiff competition from more efficient foreign manufacturers, the industry flourished in Canada and the United States.

Chrysler filed for bankruptcy about 20 years ago, after a decade of producing gas guzzling machines in the face of rising gasoline prices. It was saved during the 1980s by the fuel efficient K-car --- a design forced on the company by the introduction of mandatory CAFE standards.

It is not logical to assume the automotive industry will negotiate a voluntary agreement and stick to it based on present and past behaviour. The federal government should proclaim the Motor Vehicle Fuel Consumption Standards Act and put mandatory fuel efficiency standards in place. Those standards should be in accord with California legislation. This would encourage New York and a number of other northeast states that are considering CAFE standards to act as well.

I. Fees and Rebates

Create a "feebate" system to reward buyers of efficient vehicles financed by an equivalent surcharge on inefficient vehicles (this means revenue neutrality for the Crown).

The capital costs of new fuel efficient vehicles will be higher, and although consumers will recoup most or all of the additional cost through reduced fuel bills, the increased cost remains a barrier to sales. The car manufacturers know full well that fuel efficiency is not the most important factor in a consumer's choice of vehicle. The decision is based on a combination of factors that make simple straightforward solutions difficult.

The present economy does not reward individuals or business for protecting the environment. It is true that often environmental choices are more economic, but it is also true that choosing the environmentally-friendly route can be more complicated and more expensive. In Calgary, for example, environmentalists prepared to pay a premium for wind power pollute less than their neighbours who pay less for polluting coal fire electricity. The pollution from the coal makes people sick and damages the environment, and those who pay extra for wind pay those costs as well. The playing

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field is not level.

If we are going to require fuel efficient vehicles by 2010, what will encourage car makers to be early actors and bring out vehicles sooner? – Ultimately it is consumer demand.

Yet those consumers will be forced to pay twice. Once, for the more expensive vehicle and again for the extra pollution from those who purchase less efficient vehicles. The answer is a feebate system that recognizes the “polluter pays” concept.

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i. The Fee

Those who buy inefficient, more polluting cars will cause more air pollution and make it harder for Canada to reach its Kyoto target. They should be required to pay the increased costs of their actions - polluters pay. This could be levied in the form of a fee at the point of purchase, exactly the way Canada discourages cigarette smoking with higher taxes than other consumer products. The amount of the fee should be significant enough to be noticed by the purchaser.

ii. The Rebate

At the same time, those who pay more to pollute less are saving health care and environmental costs, and should be rewarded. The amount of the rebate should be based on the increased cost of the vehicle and large enough to be noticed. Existing rebates are far too small make a difference in the purchase decision. In Ontario for example the rebate is \$100. In the context of complicated \$20,000 purchase, it is meaningless.

J. Present Federal Position

1. The federal government is contemplating requiring the production of fuel efficient vehicles in return for subsidies for new facilities, but there is no indication of this beyond Minister Anderson's comment in one Globe and Mail story.
2. The federal government continues to maintain that it can negotiate a voluntary fuel efficiency standard agreement with the auto industry.
3. There is no indication the federal government is even thinking about proclaiming the Motor Vehicle Fuel Consumption Standards Act, even as a negotiating tool. On the contrary, one of the goals of recent review of the Motor Vehicle Safety Act was to find a means to obtain better standards and compliance without proclaiming Motor Vehicle Fuel Consumption Standards Act.
4. There is no indication the federal government is contemplating a feebate system to discourage/encourage car buyers.

Conclusions

- a. The federal government, although it has ratified the Kyoto Protocol and recognized the importance of emissions from transportation, has not put forward a plan of action to adequately address even the few transportation issues discussed in this paper.
- b. The lack of a clear plan for assisting municipalities to provide improved urban transit is a huge gap in the federal plan that could be easily fixed by creating an urban transit fund based on the development of integrated urban transportation plans.
- c. The benefits of providing a tax free bus pass far outweigh the federal

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government's arguments against it.

d. The trucking industry and other vehicle fleet operators have a legitimate need for accelerated capital retirement through the tax system for economic, climate change and pollution prevention reasons.

e. The federal government has a clear opportunity to use its investment and regulatory power to attain its goal of improving vehicle fuel efficiency by 25% by 2010. Unfortunately, the decision to continue with a failed policy of voluntary fuel efficiency standards for vehicles borders on folly.

f. The evidence is clear that mandatory regulations with penalties work and Canada's voluntary system does not.

g. Polluters are rewarded while purchasers of more environmentally friendly vehicles are punished by the present system. The federal government should move to remedy this situation by creating a feebate system for cars to encourage more environmentally acceptable choices.