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ISSN 1499-3783

Legislative Assembly  
of Ontario  
Second Session, 37<sup>th</sup> Parliament

Assemblée législative  
de l'Ontario  
Deuxième session, 37<sup>e</sup> législature

**Official Report  
of Debates  
(Hansard)**

**Wednesday 5 December 2001**

**Journal  
des débats  
(Hansard)**

**Mercredi 5 décembre 2001**

**Select committee on  
alternative fuel sources**

**Comité spécial des sources  
de carburants de remplacement**

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Telephone 416-325-7400; fax 416-325-7430  
Published by the Legislative Assembly of Ontario



Service du Journal des débats et d'interprétation  
3330 Édifice Whitney ; 99, rue Wellesley ouest  
Toronto ON M7A 1A2  
Téléphone, 416-325-7400 ; télécopieur, 416-325-7430  
Publié par l'Assemblée législative de l'Ontario

LEGISLATIVE ASSEMBLY OF ONTARIO

**SELECT COMMITTEE ON  
ALTERNATIVE FUEL SOURCES**

Wednesday 5 December 2001

ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

**COMITÉ SPÉCIAL DES SOURCES  
DE CARBURANTS DE REMPLACEMENT**

Mercredi 5 décembre 2001

*The committee met at 1009 in room 228.*

**The Chair (Mr Doug Galt):** I call to order the select committee on alternative fuel sources. Our apologies for the small number here in the committee, but there are a lot of committees meeting this morning and an awful lot of things going on, so I'll extend their apologies.

ASSOCIATION OF MUNICIPALITIES  
OF ONTARIO

**The Chair:** Maybe we can start by calling forward the Association of Municipalities of Ontario, Marvin Caplan and Pat Vanini. Thank you on behalf of the committee for coming and presenting to us. Some of the things we have been looking at have been rather exciting, and we're interested in some of your thoughts on the kinds of policies that might be implemented to move toward greener, more environmentally friendly energy sources. We have set aside a total of a half-hour, so anything left over after your presentation we'll divide up among the three caucuses for questions. Go ahead.

**Ms Pat Vanini:** If I might, just a couple of things: we appreciate the opportunity to appear. To be quite honest, the paper that you have is perhaps not our final submission to you. It was fairly short notice and, to be quite frank, we had to scramble to get some stuff together for you. In terms of some clear recommendations and ideas, we would like the opportunity to make a further submission on that front as we have more chance to consult with our members.

The other thing I would just like to mention is that, unfortunately, I have to be at one of those other standing committees, so I need to leave probably around 10:30, but I can leave Mr Caplan with you.

**The Chair:** There will certainly be all kinds of opportunity for presentation, into February. We were just wanting to meet, prior to year-end, with a few specific groups that we hadn't met with earlier. So please go ahead.

**Mr Marvin Caplan:** Thank you for inviting us here today.

The development and broad availability of fuels with little or no impact on air quality is clearly of great interest to municipalities in Ontario, particularly those in the south that suffer through more and more smog days each summer. Vehicle exhaust is a major component of that smog soup that sends thousands of Ontarians to emergency wards each year with respiratory problems.

Concern over air emissions extends to all municipalities that care about ecology and climate change. Emissions from the transportation sector account for nearly one third of all greenhouse gas emissions in Ontario. We all have a stake in reducing greenhouse gas emissions and doing our part to meet the Kyoto targets that Canada has committed to.

Municipalities aren't only interested in this because it affects our communities and those who live in them, but also because larger municipalities, like my own hometown of Hamilton, are pollution emitters themselves and have a responsibility to reduce their emissions, particularly from their municipal fleet, their transit fleet and their landfills. This is what I am going to talk about today: activities that are already underway in municipalities to reduce their air emissions that contribute to summer smog and climate change.

My own community is a good example. The industries, and the actions of our city council and staff, are helping Hamilton make progress in many ways. In fact, last year our city won the Dubai award for the improvement in our air quality. We were selected as the fore-runner in the world in improvement in air quality.

As if the health of our citizens and our planet is not enough of an incentive to reduce our emissions, there are some other compelling reasons. In terms of building a business case for emission reduction initiatives, often you can demonstrate cost savings by reducing your consumption of more costly fuels or generating revenue by selling emission reduction credits or selling your own alternative fuel, like gas or electricity derived from landfills.

There may also be some economic development spin-offs that can benefit our communities. For example, increased ethanol production in Ontario could benefit corn farmers in agricultural areas and ethanol processing plants in other municipalities. So these spinoff benefits should always be factored in when considering the business case for investing in emission reduction technologies.

What can municipalities do to help? They can show leadership by adopting low emission initiatives for their government and transit fleet, a low-sulphur fuel policy, a low-emission vehicle procurement or conversion policy, promoting public transit, building bicycle paths, promoting energy efficiency programs through their hydro utilities, and capturing and using methane gas from their landfills. Municipalities can also show leadership by

testing new technologies in partnership with energy or vehicle companies. And municipalities can go even further by publicly committing to air quality or greenhouse gas emission reduction targets in their official plans.

Let me give you some examples of the fleet programs in operation today in Ontario, some municipalities with the largest fleets and some examples from some with not-so-large fleets.

My personal favourite, Hamilton, was the first transit system in North America to put a natural-gas-powered bus into service, in 1985. In the early 1990s, our council voted in favour of replacing retiring buses with natural gas buses. Hamilton has since met its goal of replacing 50% of its transit fleet with natural-gas-powered buses. There are now 90 natural-gas-powered buses on the road in Hamilton and the Hamilton public transit authority, the HSR, continues a policy of purchasing natural gas buses as it retires its old gas-powered buses.

Cornwall initiated a process in 1994 to convert its bus fleet from diesel to natural gas. This was based on the lower cost of fuel and greenhouse gas emission reductions. To date, 12 out of Cornwall's 34 buses are now natural-gas-run. It is estimated that Cornwall saves \$13,000 per bus per year in terms of fuel costs. As natural gas buses cost \$50,000 to \$70,000 more than conventional buses, Cornwall is able to recoup this additional cost within four to five years.

There was no public natural gas fuelling station within the vicinity of Cornwall. The city had to build its own slow-filling station at a cost of \$250,000. The cost was significantly subsidized by volunteer engineering services from a local environmental committee. While the compression station has worked well, the absence of any backup filling station does put Cornwall in a vulnerable situation in the event of a breakdown.

The city of Toronto has a number of initiatives on the go to reduce their overall fleet emissions. With a fleet of 4,400 vehicles, not including transit vehicles, Toronto is under pressure to reduce their cumulative emissions. It has instituted a low-sulphur fuel policy so that all bulk purchasing for internal fuel sites must meet their low-sulphur standard. They are also involved in a series of low-emission testing programs. This includes purchasing several hybrid cars that use both electricity and gas to test them for reliability and emissions. Hybrid cars are significantly more expensive—in the range of \$8,000 per car—but with government rebates for low-emission cars, this difference is reduced to about \$1,000, making them a more affordable option. My own council committed last week to move 10% of our fleet to hybrid cars.

Toronto has also entered into a joint venture with Enbridge to test the reliability and emissions reduction potential of natural gas vehicles. Through the joint venture, the city has purchased nearly 100 natural gas vehicles, including pickup trucks and vans. However, the use of natural gas vehicles is limited by the lack of commercial natural gas distribution outlets. Because of their limited range, high-mileage vehicles must fill up two or three times a day in different parts of the city, but there

are areas of the city where there are no stations to fill up. That causes a logistical headache.

Toronto is also exploring a conversion program for their garbage collection fleet.

Toronto has also introduced a public awareness component to their emission reduction initiatives. They have developed a green fleet symbol, which is displayed prominently on low- and no-emission vehicles in their fleet.

Toronto is also supporting research and development with new technologies, particularly fuel cells. It is part of a demonstration project with Fuel Cells Canada. Toronto is confident that fuel cell vehicles will be on the roads soon, but the infrastructure to support them will not. So they are urging the senior levels of government to support both fuel cell research and development and supporting infrastructure.

To encourage more fleet managers to adopt similar policies, we must understand the factors they consider in their business decisions. All municipal departments are under tight budget control and, until very recently, public transit received no provincial or federal assistance. So an alternative that is going to represent a large additional upfront cost won't be very popular unless the payback time is reasonable. So the first factor is the payback period.

The payback on natural-gas-powered vehicles works best for high-fuel-consuming vehicles such as big vehicles that travel a lot. That means public transit vehicles and garbage trucks. That is because the cost savings are realized due to the cost of natural gas being lower than diesel. So the more you have to consume, the more you save. Over a number of years, that saving compensates for the higher cost of purchasing a natural gas vehicle and the higher cost of maintenance for natural gas vehicles.

#### 1020

For other municipal fleet vehicles, the economic benefit may not be realized so quickly. For example, a mid-sized natural-gas-powered vehicle may cost a third more than its gas-powered equivalent, and the cost savings from gas are lower due to lower fuel consumption.

We've heard from large municipalities that their business decisions regarding fleet procurement have been influenced by government rebate programs, so these are vitally important and should be expanded. Even more may be needed to convince municipalities to change their fleet-purchasing policies. The most direct incentive that could be offered to municipalities with transit fleets would be a funding program, even a revolving fund, that would provide low-cost or no-interest loans matching the additional cost of a natural-gas-powered vehicle and a payback period that is equivalent to the payback from lower fuel costs.

There is also an important education component that is needed. Some fleet managers remain leery of either natural gas or ethanol fuels since there is still concern that use of the alternative fuel significantly increases maintenance costs. There are also some questions about how

much cleaner these fuels are from conventional fuels, particularly in the absence of frequent maintenance. Costs of different types of fuels fluctuate with the market, so anticipated savings from one kind of fuel may not be realized over the longer term. So fleet managers are reluctant to commit. They need accurate information to make informed decisions that they can stand by, either from test programs or the ongoing performance of alternative fuel vehicles in other fleets. This is the type of information that municipal fleet managers can share with each other. Parenthetically, and not part of my prepared remarks, this is an opportunity for AMO and the province to partner in helping fleet managers and municipalities share information.

I'll turn now to landfills, which are a major source of methane gas, one of the most potent of the greenhouse gases. Landfill gas is a hazard for other reasons too. If not properly managed, it can cause explosions that can threaten nearby homes, so many municipalities already have landfill-gas-capturing systems, a network of pipes and wells under the landfill that recover the gas. In most cases, this gas is then flared or burnt off. This is done because it converts the methane component to carbon dioxide and water, which significantly reduces the climate change impact of the gas that would otherwise result from its release.

Rather than flaring it, the gas could also be used as a source of energy itself if it is piped to a nearby facility that can use the gas for heating or if it is channelled into generating electricity.

Ontario regulation 232/98, which regulates landfill sites, requires that for any new or expanded landfill with a volume of over three million cubic metres, the collection, burning or use of the landfill gas be a condition of its certificate of approval. The threshold of three million cubic metres was calculated as a reasonable size where the unit cost of establishing the recovery system per tonne of waste disposed was relatively low.

A 1999 study prepared for Environment Canada identified 35 landfill sites in Ontario that had the potential to capture landfill gases, particularly methane. At last count, 15 of these already had some form of methane-capturing system. The smallest one, the Glenridge quarry landfill in St Catharines, captures 760 tonnes per year of methane from 1.2 million tonnes of waste disposed. The largest, the Keele Valley site in Vaughan, captures nearly 80,000 tonnes of methane a year from 25 million tonnes of waste disposed. These sites will likely generate enough methane gas to capture up to 20 years after they are closed. Of these 15 sites, 10 of them use high-temperature flaring of the captured landfill gases.

In the largest of these sites, those that capture the most methane have developed utilization systems that use their captured methane either to generate electricity or to use the gas directly for heating. The economic benefits of methane utilization are highly dependent on the energy market price at any given time. In a 1999 study commissioned by Environment Canada, six sites in Ontario were identified as being economically viable for elec-

trical power generation, given the prevailing energy price at the time. Five out of six of those sites were already, or have since been, developed for gas utilization.

The city of Toronto is a leader in electricity generation from landfill gas recovery, with three of the five gas recovery and utilization programs in the province. It has a fourth, at the Thackery landfill, in the works. Currently, Toronto captures methane from its Keele Valley, Brock West and Beare Road landfills, and uses the gas to generate approximately 65 megawatts of electricity from the three sites, resulting in royalties of \$2.5 million per year.

The fourth gas recovery and electricity generating project operating in Ontario today is in the city of Waterloo. Its recovery and utilization project generates 3.5 megawatts of electricity, enough to power almost 3,000 homes. Waterloo negotiated a deal with Toromont Energy, where the company constructed, owns and operates an electrical generating station fuelled by landfill gas. Toromont footed the \$7-million capital cost of the generating station, and in return sells the power to Ontario Power Generation. Not only are there clear environmental benefits in terms of reducing greenhouse gas emissions; it is also a revenue generator for the region of Waterloo, which receives \$200,000 in royalties each year. The generating capacity is expected to grow as the landfill grows.

The Waterloo project is noteworthy because it is one of the earliest entrants in the province's nascent emissions trading market. Waterloo receives credit under the emissions trading scheme, which it in turn gives to Toromont to sell through the emissions trading market. This increases revenues for Toromont.

Now, we know that emissions trading is somewhat controversial, but the sale of credits could make some borderline projects economically viable in the future. Currently, the economics of recovery and utilization projects only make sense for the largest sites, as the recovery technology is costly. Depending on the price that emission credits can fetch on the emissions trading market, the cost-benefit of constructing recovery and utilization systems for some sites may improve. Companies would then be more willing to undertake gas capturing and utilization projects in return for the emission credits that they could sell on the market. The economic imperative is the best tool to lever changes in the private sector.

The fifth gas utilization project is at the Cambridge landfill. Its methane gas is piped directly to a neighbouring industrial user to generate 27 million BTUs an hour of heat production. Waterloo region, which owns the site, receives royalties amounting to \$35,000 annually. Piping gas directly to a nearby industry is obviously less expensive than building a generating station to produce electricity.

Peel region's 10-million-tonne Britannia site, which currently captures methane, is currently receiving proposals on the development of a utilization system.

While these are success stories that should be celebrated, there remain many more smaller sites where no gas recovery is taking place, let alone utilization. This is

primarily a function of the cost of establishing a recovery and flaring or utilization system. With the electricity market opening in Ontario in 2002, and greater access to the grid, we may see some electricity generating projects become more viable.

In terms of the benefits to municipalities, gas utilization, rather than flaring, has greater economic returns. Those sites that capture methane for utilization usually capture a much larger percentage of methane, because there is an economic incentive to do so.

As I have mentioned, municipalities, like any other generator, are at the mercy of the electricity market. The economic viability of an electricity generating project is entirely dependent on the price that can be secured from the purchaser, usually Ontario Power Generation. If OPG is willing to buy green energy at a higher price because it can sell it for a premium as green energy, say at seven cents a kilowatt-hour, then many more projects would be profitable. However, if the going rate is more like two cents per kilowatt-hour, very few projects will be viable.

Again, I'll depart from my notes for a moment. By fortuitous circumstance, I rode in from Hamilton today with a civil servant who tells me that Waterloo has negotiated a price of a little over four cents a kilowatt-hour, and that seems to be the break-even point for theirs. So I think that the kinds of numbers that make methane recovery viable are in the ballpark of what's achievable.

#### 1030

One other factor that may work against more methane recovery, but is environmentally beneficial in other ways, is the trend toward reducing, through backyard or centralized composting, the organic component of waste that is landfilled.

Nevertheless, you've heard from the Ministry of Energy, Science and Technology that electricity generation from landfill gas could expand two- or three-fold over the next five to 10 years. Municipalities will work with the ministry and private companies to make that happen.

I understand you have already heard from Toronto Hydro and will be hearing from EDA later, so I will not go into more detail about other municipal green energy generation projects. But, as you know, with the market opening next spring, there will be easier access to the grid, and that will open up opportunities that municipal utilities can take advantage of in terms of developing their own electricity generating capacity.

As I mentioned at the outset of my presentation, there could be spinoff benefits from promoting alternative fuels like ethanol, biodiesel and biomass, particularly for rural agricultural Ontario. It feels like the time for these alternative fuels has come with Minister Anderson's commitment for further federal support for ethanol. I know the Ontario Ministry of Agriculture, Food and Rural Affairs is supportive, with Sunoco stations carrying ethanol-blended gasolines. With the USDA's bioenergy program committing \$300 million toward promoting ethanol and biodiesel, there is a greater potential in the development of a larger ethanol industry in Canada.

Ontario already has two ethanol refineries up and running, in Chatham and Tiverton, and a third one in Cornwall is in the works. You have heard from OMAFRA that a USDA report has calculated that a plant that produces 100 million gallons of ethanol creates about 2,500 direct and indirect jobs. That's a pretty good economic development plan.

There are also leading alternative fuel companies in Ontario: biodiesel company Biox in Oakville, and a cellulose-based fuel company in Ottawa. I believe you have heard of the economic potential of these products to the Ontario economy from them already.

Let me focus briefly on ethanol. Ethanol production means a new and expanding market for Ontario corn and grain. Already, 15 million bushels of Ontario corn go into ethanol production. Expansion of ethanol blends would mean direct job creation in rural areas and a shot in the arm for the corn agricultural industry generally. That is a win-win situation for Ontario: cleaner air and more jobs.

I hope my presentation has given you some idea of the importance of alternative fuels to Ontario communities and some sense of the breadth of emission reduction initiatives that are already underway in Ontario municipalities.

My prepared remarks end here, but I just wanted to refer briefly to the experience in my own community. We adopted a plan called Vision 2020 as our official plan in Hamilton, I guess a decade ago. One of the reasons we've been making the kinds of moves we've made to natural gas that have led to the single-largest increase in air quality in the country was because we had this vision, and we're working toward it. So as you're thinking through the kinds of things that you're doing here, first of all, thank you for doing it. But, second, I would encourage you to express for your colleagues in the provincial government a vision that talks about where we would like to get to, so that as you make law, as you legislate this, as you help municipalities move to where they want to get to, that vision of colour: how we move there.

Thank you for your time. I don't know if Pat's going to be able to stay, but I'd be more than happy to try to answer any questions you might have.

**The Chair:** Thank you very much for your presentation. It's an exceptional presentation, very practical, common sense, down-to-earth, the kind of thing we've been looking for. You've zeroed in on a lot of it, particularly emissions trading. The committee wanted to get a better understanding of it, and I think you've given us a better understanding than we received from some of the other organizations coming before us. Excellent.

**Mr Caplan:** If I can just add something to that, my son, of whom I'm very proud, is now working for Price-waterhouseCoopers Consulting in London, England, on issues around sustainability, and he and I had a long debate. I expected him to be opposed to emissions trading, as are many people who are strong proponents of good ecology, and he said, "Dad, we have to be practical. The truth of the matter is that the economic imperative is

there. If the end result moves us toward the goals we have, isn't that what's most important?"

My son, who is far more aggressive on these things than I am but has taken the time to study it—and he's smarter than I am—thinks it's the right thing to do, so I'll tell you that if Aaron Caplan says it's the right thing—

**The Chair:** Darned kids being smarter than us, eh?

**Mr Caplan:** Oh, believe me.

**Ms Vanini:** On that point, if the committee would find it useful, I would be prepared to pull together some of our municipal experts to give you the opportunity, and maybe some of your staff, in a more informal way to explore this emissions trading piece. There have been some good and practical examples that might just round out what you heard today and give you another layer of information and practice. If you wish that, we would certainly be more than prepared to facilitate—

**The Chair:** We will be carrying out extensive hearings in February. That might be a time when we could do that—whatever. We'll certainly keep it in mind.

We have about two minutes per caucus. We'll start with Dr Bountrogianni.

**Mrs Marie Bountrogianni (Hamilton Mountain):** Welcome, and welcome to my neighbour from Hamilton, Marvin Caplan. First of all, congratulations on the Dubai award to the city of Hamilton. Marvin Caplan is a great proponent of the anti-smoking bylaws in Hamilton too. He believes what he says when he's talking about pollution and health care.

With respect to emissions trading, I would agree with you that it's something we can't ignore. Europe is way ahead of us on that score and we can learn a lot from Europe, but I'm looking forward to consultation from the municipalities on that issue as well. Your report was very comprehensive and complete. I have no questions.

**Mr Jerry J. Ouellette (Oshawa):** Thank you very much for your presentation. I have a couple of things. First of all, you mentioned the difficulty for fleet managers to monitor maintenance because of use of things—although you didn't say it, I think you were implying the ethanol issue.

**Mr Caplan:** There's some concern. I'm not an expert and I don't know if Pat can help us, but I think things have changed and I don't know if the level of understanding is there.

**Mr Ouellette:** But then at the closing, you actually did a bit of a promotion for ethanol, which is good—I believe anyway. My concern is, are they looking at other alternatives such as low-sulphur diesel as a policy—

**Mr Caplan:** Yes.

**Mr Ouellette:** —or low-sulphur gasoline as alternatives to come forward? Does AMO have a policy regarding those issues?

**Mr Caplan:** The policy piece is Pat's.

**Ms Vanini:** On the latter, we don't know, but we'll obviously be doing some more work along those lines and we can address those questions for you.

**Mr Caplan:** My understanding is that both Hamilton and Toronto have moved to having policies on low-sulphur fuels, yes.

**Mr Ouellette:** We've had considerable conversation about listing of old dump sites. Do you know if there's a requirement for listing in the municipalities? Do you think it's possible to start tapping into some of the old sites before any of the regulations came forward, and possibly even the smaller ones, where the methane could be captured in some form and transferred to another site for utilization and generation?

**Mr Caplan:** That's precisely the kind of thing we're talking about here. We believe methane continues to be produced. The answer to the first question is that I know that in my municipality we do not have as good an understanding of where old dump sites are. Yes, there is a resource there that could be used. The difficulty is that resource, when it is captured—I don't believe the regulations require it to be captured in other than very large sites, and I'm not looking for more expenses for our municipalities, but if there are ways of helping us to do it—the tendency is to always see municipalities coming to the province asking for more money. What I think we're looking for is help in finding ways of doing these things. We have similar constraints and sometimes some short-term help gets us through to some long-term savings for the environment and the municipality.

Pat wants to add something.

**Ms Vanini:** Just a plug for the Waste Diversion Act, which I believe is in the House for debate. If we could get that act through, that would generate some additional revenues for municipalities. That probably could help on further waste and environmental issues, so I would encourage the government to get this bill through. We've certainly worked hard on it. It's a critical demonstration of private-public partnerships in an area of waste management. I think it's an important symbol of moving forward on this matter. Sorry, I just had to do that.

**The Chair:** Sure. We're really out of time. However, if you have a quick comment or question, Mr Arnott.

**Mr Ted Arnott (Waterloo-Wellington):** We're working very hard to try and get it passed before Christmas, and we look to the opposition to assist us in that. So thank you very much for your comment.

**The Chair:** On behalf of the committee, thank you very much for coming forward and presenting us with an excellent working paper. Good luck in your next committee.

1040

#### CANADIAN URBAN TRANSIT ASSOCIATION

**The Chair:** The next delegation we have before us this morning is the Canadian Urban Transit Association: Michael Roschlau, president and chief executive officer. We have a half-hour and look forward to your presentation. What's left over after your presentation we'll divide between the caucuses for questions and comments.

**Mr Michael Roschlau:** Mr Chair, members of this committee, I certainly appreciate the opportunity to appear before you and to share with you some of the experiences we've had, specifically in the public transit sector with regard to alternative fuels.

Just a bit of background: the Canadian Urban Transit Association is a non-profit association representing the public transit industry across Canada. Our members consist of about 100 transit systems, from Newfoundland to the Northwest Territories to BC, and about 60% of those are in Ontario, just to give you an idea. Also members of the association are about 200 businesses that are suppliers and consultants to the industry, including some of the fuel suppliers, as well as about 50 affiliates that include a variety of government agencies and other research institutions.

I'm not going to spend a lot of time this morning telling you about some of the emissions issues that I'm sure you've heard about dozens of times in the last few months, but suffice it to say that transportation is a very important contributor to greenhouse gas emissions, as well as to air pollution. This year we had a record number of smog days in southern Ontario, and the work of this committee is clearly critical in terms of addressing that whole question of air quality and climate change.

By way of context, in Ontario, public transit carries about 700 million passengers a year and transit ridership in this province has been growing by a rate exceeding 6% in the past year, which is the highest growth rate in over 10 years. Transit ridership is on its way up. More people are riding buses and subways and commuter trains.

On a passenger-kilometre basis, bus emissions are almost four times less than car emissions. Clearly a bus emits more pollutants than a car, but if you factor in the average occupancy of that car, which might be about 1.2, and the average occupancy of a bus including the travel to and from the garage when they're not carrying people and so forth, it's about four times less. Travel by car emits about four times more pollutants than travel by transit. Probably the single greatest opportunity to reduce harmful emissions is to encourage a switch from automobile travel to public transportation, which is one of the things we're working on, and we're hoping governments are helping by working on it as well.

In fact, many regions and municipalities across Ontario—this is something AMO didn't mention—have goals in their transportation master plans of significantly reducing the modal share of automobile travel in favour of public transit. Some of them are looking to go from something like 5% to 20% in the next 20 years, doubling or tripling transit ridership and reducing the modal share of automobile travel by about 10%. That in itself would have a much more significant impact on air quality and emissions than any changes to technology. I'm not belittling technology and I'm going to spend most of my time on that, but it's just to preface the presentation with a recognition that modal shift and behavioural change is probably the most important and most significant impact we could have.

Imagine for a moment what our cities would look like without public transit—Toronto without the subway or without GO trains, Ottawa without the Transitway. We don't get the opportunity very often to see what that would be like. Thank goodness we don't. But three years ago in Hamilton, and I'm sure you remember this, there was a transit strike for about four months. It was right in the middle of winter and figures from the Ministry of the Environment—it was actually very interesting looking at their monitoring. Figures on air quality in downtown Hamilton showed an increase of 20% in nitrous oxides in the air during that period compared to the same period a year earlier. As I say, we don't like to have that opportunity or often get it, but that was a very interesting comparison, and similar observations resulted from monitoring in Calgary and Vancouver earlier this year when their transit systems were shut down for several months.

That's to set the context of the importance of transit and the potential that can be reached simply by encouraging more people to move out of their cars.

What about transit itself? Even though transit vehicles contribute less than 1% of the total emissions from transportation, there clearly is room for improvement. In our industry we've been experimenting for quite some time with a whole series of different alternative fuels. What I'd like to do is to give you some factual information on some of that experience, what some of those alternatives are. I will be leaving with you 25 copies of a paper that summarizes the majority of that for you, so there's no need to take copious notes at this point.

The vast majority of transit vehicles run on diesel fuel, 90% of buses and commuter trains. Subways, light rail and trolley buses run on electricity and there are some buses that run on compressed natural gas, but it amounts to less than 5% of the total fleet.

Just to go over those different fuels for a moment, there are five cities in Canada that use electricity as a major source of propulsion for transit. This is old technology. Electricity dates to the 19th century. Running streetcars on electric power was introduced in the 1890s. But it's still very effective. It's probably the single most enduring and still current form of propulsion in the world.

What are its advantages? It's zero emissions, absolutely no emissions at street level. Clearly in the bigger picture the emissions depend on how that power is generated, whether it's hydro, thermal, nuclear or indeed wind generation. We had a very interesting launch earlier this year of the Ride the Wind program in Calgary where the city's entire light rail transit system is powered from wind generation facilities in southern Alberta.

Some other advantages of electric propulsion: the vehicles tend to last a lot longer because there's less vibration. It's a single motor that's propelling the axle or the wheels. There's no engine in there that's rumbling or vibrating all the time. Electric power allows the vehicles to accelerate a lot faster, which is again important in the starting and stopping environment of public transit.

Finally, there's a lot less noise. The vehicles are a lot quieter, both inside and outside, than diesel or other fossil fuel powered vehicles.

Some of the disadvantages: first of all, they need to be connected to the power supply. You either need to have a third rail as in the subway or you need to have overhead wires that provide the power to the vehicle, because batteries on their own cannot supply and handle the amount of electricity that's required either to move a large vehicle of that nature or to last long enough until they would need to be recharged. As a result, there's a huge infrastructure cost, both in terms of installing that network and maintaining it. The biggest drawbacks are that infrastructure and the cost of maintaining that power supply.

The second example is natural gas. There's been a lot of experimentation. Probably the most significant of any alternative fuel in the last 20 years has been natural gas in transit. Six cities across Ontario are currently using compressed natural gas fuel for their transit vehicles: Toronto, Hamilton, London, Kitchener, Burlington and Cornwall. Some of those examples were mentioned by AMO as well.

#### 1050

Advantages are that emissions are lower than diesel. They have been experiments in the US as well with liquefied natural gas, but those haven't really been very successful up here. The drawbacks are that the capital costs are higher, about a \$100,000 premium on the cost of a new bus, natural gas versus diesel. That would be about 25%. Maintenance costs are about \$5,000 a year higher. There is also a requirement for a larger spare ratio because the downtime is longer. If you have a fleet of natural gas buses, experience in those six cities in the last 10 years has been that those buses are out of service more than the diesel buses are. Some of that might be because it's a small proportion of the fleet, there are teething pains and so forth, but the experience to date is that you need a larger fleet to perform the same service because of that issue.

Finally, in order to be efficient, it needs a fast-fuelling infrastructure station. It's over \$1 million to install one of those. I believe that right now there are three of them in the province: one in Hamilton, one in London and one in Toronto.

Of some of the other perhaps more innovative and less-tested technologies at this point, we hear a lot about fuel cells; again, zero vehicle emissions. Hydrogen is the most common power source that generates electricity on board. Basically you have an electric motor that drives the vehicle and you're generating that electricity on board the bus through the hydrogen fuel cell process. There were three buses tested as part of an earlier generation demo in Vancouver. This was part of the Ballard-Xcellsis fuel cell program. All of this demonstration has now left Canada and moved to California and Europe due to lack of funding. There has been no further commitment to funding the Canadian fuel cell bus project. I think that even though this technology has

significant potential in the longer term, it won't be happening here in Canada; it will be in the US and in Europe. Clearly, at this point it's experimental. It's still unproven. It's extremely expensive. The vehicles are over \$1 million each, which is about two and a half times the cost of a diesel bus.

One of the other technologies that holds more potential in the near term is the concept of hybrid electric. One could argue that the fuel cells are a form of hybrid electric in themselves. This is really the best of both worlds. It significantly reduces the energy requirements through a regenerative braking system. I might spend a moment to explain what that means.

Transit is kind of unique in the sense that in most cities you have a lot of stops. The buses are starting up, accelerating, stopping again, braking, starting up, braking, starting up, braking. So in the duty cycle of these vehicles there is a lot of up and down. Every time a vehicle brakes, when you're putting on the brakes, you're creating energy, you're wasting energy that dissipates through heat. If there's a way of capturing that energy and reusing it, you're significantly reducing the energy requirements, and that's what regenerative braking does. It can only be done effectively with an electric propulsion system, so that when the vehicle slows down, the brakes are put on, it recaptures that energy through braking and feeds it back into a battery. The newer electric trolley buses run that way and the hybrids run that way. What you have is a battery that stores electricity, partly fed from the regenerative braking and partly fed from a power source on board. With a fuel cell, that's a hydrogen fuel system, but it can also be a small diesel engine or a small natural gas engine. The more immediate hybrid applications are the latter, where you would have a small clean diesel engine or a CNG engine in the back that's a fraction of the size of what a regular bus would have, through the benefit of the regenerate braking.

All three Canadian bus manufacturers are currently working on hybrid technology. At the moment the only prototypes are running in New York City. New York City has placed an order for several hundred of these. They are actually being built largely here in Ontario.

The biggest barrier is still the cost. It's about double the cost of a conventional diesel bus at this point. You're looking at about \$800,000 for a hybrid vehicle. In the medium term, I think there's great potential for this. Once the production runs become common, the cost will come down, but it's always going to be higher than diesel, I think. You're not going to get down to less than about \$600,000, even once it becomes more of a regular production.

The other two that I'm going to comment on are, first of all, biomass fuels, and lastly, probably the most common, clean diesel. On biomass, you're really looking at various options here: biodiesel, which is a mixture of vegetable oils and diesel fuel; ethanol, which is fermented sugar; and methanol, which is an alcohol-based fuel. There have been some experiments with these in transit vehicles. None has been particularly successful.

Advantages are that it's easy to use and they can apply to existing vehicles and existing engines. Drawback: there is some concern with some of these fuels about the corrosion that they create in the engines.

We had an experiment in Alberta a few years ago with methanol. There is still a lawsuit from the union going on about the toxicity of the fuel and how the vapours can be inhaled by the people working around them. Apparently there are people whose health has been adversely affected as a result of that.

There is a project with biodiesel that's just starting up in Montreal, and that's going to be very interesting to watch. They're looking at potentially converting up to 100 vehicles on a trial basis to this biodiesel fuel. We're very interested in seeing where that goes.

Finally, on clean diesel: as much as that term sounds unlikely, today's diesel engines are a lot cleaner than the ones of 10 or 20 years ago. The sulphur content in the fuels is coming down and is going to come down a lot more in future years. A lot of experiments are currently underway to retrofit engines with catalytic particulate filters to further reduce the emissions.

The problem is, how clean is clean and how low is low sulphur? Right now, the province of Ontario, according to my information, has the highest sulphur content diesel in the country. There is no low-sulphur fuel of the type that will be required by the EPA in the US available in Ontario today. The only Canadian supplier is Irving fuels out of New Brunswick, and they are selling the bulk of their production to New York state and Massachusetts. Some of it is available in Nova Scotia, but they're not shipping it to Ontario. The mainstream fuel suppliers—the Essos, Shells, Petrocans and so forth—are not currently producing any ultra-low-sulphur diesel fuel. When I talk about low sulphur, I'm talking less than 100 parts per million. It may be worthwhile having a look at what people mean when they say “low sulphur.” How low is low?

In conclusion, and in terms of some analysis of all of this, right now and in the last few years, the problem that the Canadian and certainly the Ontario transit industry has been facing is one of a funding crisis. The average age of most city bus fleets in Ontario is 12 to 15 years; 12 to 15 years is the average age of our bus fleets in this province for vehicles that are built with a 15-year life cycle. In the US, transit funding is based on a six-year average age. Buses in the US are replaced after 12 years. Here that's our average age.

The US standards are important, because they represent 90% of the North American market for buses. So all the buses that are built in North America, and many of them are built in Canada—in fact, the three Canadian bus manufacturers build 80% of their production for export to the US. Because of the size of that market, all the vehicles are designed around the US standards, and the US standards are a 12-year life. That gives you a feeling of what we're getting and the situation we're in.

The industry is playing catch-up right now, major catch-up. The new funding announcement of a couple of

months ago is largely going to be geared to dealing with that deficit in infrastructure and renewing the fleets that have been left, in many cases, to get older and older in the last few years.

Just as an example, what are our transit systems doing? They're buying second-hand buses from Arizona, Texas and California that are 12 years old and they're putting them into service here for another five or six years. These are not the vehicles with the latest, cleanest engines. They're not vehicles that can run on the lowest-sulphur diesel fuel. Some systems are buying 18-year-old buses from Quebec that are on the scrap line. Toronto has done that. They bought 100 buses from Montreal, brought them over here and rebuilt them for another six years. That's the level of funding difficulty municipalities and their transit agencies have been facing.

#### 1100

It's with that backdrop that we come and look at what's happening in those six communities that are using or that have had some success with natural gas, because the reality of the matter is, they're all going back to diesel, except for Hamilton. The final decision was yesterday at the region of Waterloo's council meeting where they decided on their next 10-year fleet acquisition program to move from natural gas to clean diesel. While to some extent that may be bad news, it's based on a strict evaluation of the cost and benefit of the life cycle of these vehicles: the difference in capital cost, the difference in maintenance cost, the difference in operating cost vis-à-vis the projected difference in emissions from clean diesel with particulate traps and catalytic converters versus a natural gas alternative.

What are the prospects? I think in the near term, five years, we're looking at clean diesel and natural gas; in the medium term, 10 years, we're looking at hybrid electric; and in the long term, 20 years, we're looking at fuel cells.

Again to sum up on the average capital costs of those technologies: a clean diesel bus, \$400,000 to \$450,000 today; a CNG bus, \$500,000 to \$550,000; a hybrid electric \$800,000 to \$850,000; and a fuel cell, between \$1 million and \$1.2 million. That's today's costs, today's dollars, with the technologies at the state of development that they're at today.

I didn't come here with a prepared recommendation. It's not something that was requested in the invitation. However, I have given it some thought, and given where we're at with transit in Ontario, any aggressive move toward alternate fuels in this province is going to depend heavily on what financial resources are available.

My recommendation would be that if we want to see a quicker move in that direction, the province would really have to implement some kind of an incentive for the transit systems and municipalities to invest more aggressively in more expensive technology. That would require some kind of a supplementary funding program that would increase the level of provincial investment in vehicles that use fuel sources other than conventional diesel. That would not only provide an incentive to build

up fleets and convert those vehicles, but would also help to promote the R&D industry in Ontario and across Canada that's working on these initiatives, because right now what little R&D there is is focused on the US and other parts of the world.

There would be two ways of doing that. One would be to increase the provincial share from 33% to 50% for such vehicles. Another way would be to find a way to introduce a program that would cover the cost differential between conventional diesel and alternate fuel vehicles in addition to the funding that's already in place.

Those are my comments. As I say, I do have some handouts that I'll be leaving with you. I'm more than happy to answer any questions you might have or discuss any issues you might be concerned about.

**The Chair:** Thank you very much for the presentation. Interesting statistics you have there for urban transportation and some of the challenges you're facing and we're facing as well.

We have about three minutes per caucus.

**Mr Steve Gilchrist (Scarborough East):** Let me start off by thanking you again for coming before us here today. You closed with perhaps the most relevant aspect of our deliberations as they affect urban transit, and that's going to be the cost implications, both to you and to us. With the announcement of the new funding the province is putting in, and hopefully the federal government will match us on it, would you be averse to receiving directions as to how fleets should be rebuilt even now? Leaving aside any new programs that might come in place, is there merit in suggesting that those funds be directed only to clean diesel or natural gas fuels or some other incentive?

**Mr Roschlau:** Clearly, the industry and our members are interested in optimizing the return on their investment, which is basically now, as I say, playing catch-up to replacing vehicles that are upwards of 20 years old. The trend has been to concentrate on the clean diesel alternative. I don't think anybody is really considering conventional in the old sense of high-sulphur, high-polluting diesel engines. I think that's almost a given.

**Mr Gilchrist:** Let me cut to the chase. If by bringing in new standards and by setting a clear direction, this committee then through Parliament had recommendations accepted that did mandate certain changes, are you still comfortable at 33% funding if we, as a result of leveraging the bus manufacturers and through bulk purchasing, got other technologies down to the same price as diesel, because obviously you would then have on the other side the offsetting savings in fuel costs?

**Mr Roschlau:** Maybe I'll preface my response with a comment that we're not really comfortable with 33% to begin with. It should be higher than that. Recognizing what the announcement was and that we're moving toward 33%, and we're looking forward to that day, to this point we still don't have confirmation on the details of that, but it's going to be difficult enough to make ends meet with 33% with the current cost of diesel vehicles, which are probably 25% more expensive than they were

five or six years ago, given that we've moved to a whole different vehicle design as well with the low floor that's now fully accessible to people with disabilities and so forth.

Really, the cost differential is going to be between the clean diesel options and the other alternate fuels. If there is a way of assisting on the design and manufacturing side of bringing the cost of those vehicles down to a comparable level to clean diesel, I think that would be wonderful. It would be a no-brainer to go for the hybrid electrics or even natural gas if the prices were the same.

**Mr Gilchrist:** If the cost issue was dealt with, you and your members would be prepared to accept the province laying out standards that mandated that the new technologies would be the only option?

**Mr Roschlau:** If there was no difference in the capital, maintenance and operating costs of the vehicles across those technologies, then we would be comfortable with that kind of requirement, yes.

**Mr Gilchrist:** Thank you.

**Mrs Bountrogianni:** Our previous presenter from AMO, Marvin Caplan, on page 5 of his submission said that the payback on natural—gas-powered vehicles works best for high-fuel-consuming vehicles, "big vehicles that travel a lot"—and I'm quoting in the language—the more that's consumed, the more you save. Therefore, over a number of years, that saving compensates for the higher cost of purchasing a natural gas vehicle. Would your analysis agree with that or would you dispute that statement?

**Mr Roschlau:** The analysis I'm quoting, which is based on the most recent study that was released last month and that was tabled at the regional municipality of Waterloo yesterday—which I don't have with me, but I can look into seeing if I can get the committee a copy of—looks at the relative cost differences between natural gas and clean diesel over the next 20-year life cycle in that community and suggests that there is still a significant premium to be paid for natural gas. I think the ultimate difference in the vehicle price after you subtract the PST rebate and any other advantages that are provided for natural gas vehicles is about \$65,000 on the purchase price plus about \$5,000 a year on the maintenance cost. Those are the most recent figures that I have access to. I know that some of the comments AMO referred to related to the experience in Cornwall. In Cornwall the natural gas vehicles they have are small, 20-foot minibuses that are not really comparable to the big 40-foot transit buses that we refer to. So there may be an issue there as well, I'm not sure.

1110

**Mrs Bountrogianni:** If there could be one specific recommendation you would give to us, what would it be?

**Mr Roschlau:** The one specific recommendation would be the one I mentioned, which is for the province to be proactive in compensating for the cost differential between conventional diesel and alternate-fuelled propulsion system vehicles.

**Mr James J. Bradley (St Catharines):** What is your opinion or evaluation of the research that has been done to this point in time and that is underway in terms of alternative fuels for public transit vehicles? That's going to have some effect, following on Mr Gilchrist's suggestion that the committee might recommend, or that the Ontario government might recommend, that there be a mandating of utilization of certain fuels. What is your view of the present state of research and development in that field nationally, provincially or internationally?

**Mr Roschlau:** It's certainly more advanced in other parts of the world than it is here. That, again, is largely as a result of the investment that other governments have made in R&D, which far outstrips anything we have done here in Canada. The fact that there has been a lot of work done in BC on fuel cells I think is a bit of a fluke of location. Ballard happened to locate there, happened to have some commitments and was getting some financial support from the province, which was supplemented by support from the federal government. A lot of that, as I mentioned earlier, has now moved elsewhere. I think that the business case in Canada is pretty weak. There just isn't the demand to support it. On the hybrid side, we're very fortunate that we have the three largest North American bus manufacturers based in Canada today. They may not be here tomorrow. The reason I say that is because of the size of the market. The market has been shrinking for the last 10 years, to the point where several of them have now moved their head offices to the US and are really questioning their future in Canada. I hope that's not a sign of things to come.

I think, clearly, signals from our federal and provincial governments are going to be critical. The announcement on September 27 was a very important one in terms of giving some of our manufacturing partners a bit more confidence about investing in R&D, and investing in particular in the hybrid R&D, which is the area that seems to have the greatest promise in the medium term.

**Mr Bradley:** We have the advantage in this committee, you'll be pleased to know, of being parasites, if we wish. That is, we can travel to other places—some members of the committee have had that opportunity and the committee will eventually have that opportunity—to look at other examples. I say we can be parasites in the best possible way, that we can get ideas from elsewhere.

I am intrigued by your comments and your evaluation that in Canada, so far the research and development hasn't been—I guess I'll understate what you said—what we'd like it to be. Perhaps one of the recommendations that will come forward—the committee will have to discuss that—will be in the field of research and development and what we could recommend to the federal and provincial governments. We're a provincial committee, but that doesn't prevent us from looking at areas where we think the federal government can play a role as well. In national research, one would assume that the federal government could play a role there as well.

I guess another question I have is, are you really going to have much choice in replacing vehicles in any event? I

know what the cost is estimated to be, but you're not going to be able to continue to use those old vehicles forever anyway. So won't you have to replace them anyway, and isn't that a great opportunity to start converting?

**Mr Roschlau:** It is, and to be honest—

**The Chair:** We're well over time, so maybe just a quick response.

**Mr Roschlau:** —we wish we weren't using them now. If we could provide the sustainable funding that would allow us to be replacing the vehicles on the cycle they should be replaced on, then I think a lot of that would be looked after. We don't want to be keeping our buses for 20 and 25 years. We want to be replacing them at 15 years. If we can get back to that kind of cycle in terms of keeping our fleets up to date, some of that would be looked after in the natural progression of technology.

**The Chair:** On behalf of the committee, thank you very much for coming forward with just excellent information, new directions and new thinking for us.

#### COMMITTEE BUSINESS

**The Chair:** The next point on our agenda is committee business. It has to do with January, February and travel. The committee laid out a month or so ago suggesting that we travel the week of January 28 through February 1. We have a committee meeting during the following week on Wednesday and then we do public hearings the week of February 18 and 25. I understand Mr Ouellette had some difficulty with the January 28 week, but he was the only one who seemed to have any. As I listened and we started to look at other weeks, there were travel difficulties with other weeks. Maybe we should confirm that week as travel and have him catch up with us whenever he can.

**Mr Gilchrist:** I guess recognizing that there are any number of events and sites that we will want to visit here in Ontario, as well as possibly outside the province, I wonder if it might be as appropriate to ask individual members to notify the Chair of their availability on any given week through January and February. As site visits are developed, the Chair would have at his disposal all of the information he needs to make sure there's a good representation in attendance at any one of those site visits or specific conventions and events. If in fact we want to, amongst that, already schedule a specific trip, we could deal with that.

But I think at the same time it would behoove the Chair to have at his fingertips information so that you could react quickly if information comes in, as it will, about for example an opportunity to tour some of the hydrogen production facilities and research and development facilities. That's being put together right now by Fuel Cells Canada for the committee. Their plan is to do that at some point in January. Rather than continue to rehash and your having to phone or the clerk having to phone every time a new event comes up, why don't we simply give you our calendars and say, "Here are the

weeks we are available for any AFS business.” At that point, the only onus will be on you to then send information back to all members and to expect those members who have said they are free any given week to attend those site visits.

**The Chair:** The intent for this week in January was to visit Alberta, BC and California as a committee.

**Mr Gilchrist:** I understand that, but I guess I’m saying over and above that. I’m certainly aware of a number of other conferences, a number of other site visits, particularly here in Ontario. Given that we only have one more meeting, I’m just concerned that we may miss it or there may be some reaction if we come back in February and somebody finds out that there was a site visit and they didn’t get invited to it.

**The Chair:** If that week is in order—unless staff have some comments to make as it relates. Maybe that week isn’t good as far as getting to various—did you want to comment?

**Mrs Bountrogianni:** Yes, I’d like to comment on the original item, which was the week of the 28th. I’d also like to comment on Mr Gilchrist’s proposal.

**The Chair:** OK.

**Mrs Bountrogianni:** The week of the 28th, the Liberal members of this committee will—I’ll speak for myself. I’ll be available for the first three days, but I do know that we have Liberal business between January 31 and February 3. That’s our annual general meeting on that weekend.

**The Chair:** So you’re telling me that isn’t particularly good for the Liberal caucus.

1120

**Mrs Bountrogianni:** Well, not the whole week. Three out of the five days are good for me personally.

I’d like to also respond to Mr Gilchrist’s proposal. The only problem with that, Mr Gilchrist, is that you can keep a week free, but only for so long. Dr Galt constantly will be inundated, at least from my office and I’m sure from everyone else’s, with updated schedules, probably on a daily basis. That’s the only thing. You can keep a week free, but if it is not filled very soon, you have to fill it. If you can have a counter-solution to that challenge, I’d be happy to hear it.

**Mr Ouellette:** As I stated, I think I stirred the pot on this whole issue, that there were dates in there, and if I could accommodate and come out to see some of the events before or after a date that I couldn’t be in attendance, that would be fine. However, the week before that week or the week after is just fine for me, but I wouldn’t try to accommodate the committee to make sure I was there. It’s whatever the most can be in attendance for.

**The Chair:** We are finding out that week is bad for the Liberal caucus.

**Mrs Bountrogianni:** Just two days of that week: Thursday and Friday.

**Mr Ouellette:** I would think the week after then would be—

**Mr Bradley:** We have a provincial council or something like that.

**Mrs Bountrogianni:** On the weekend. It starts on the Friday.

**The Chair:** How does the next week strike everybody?

**Mrs Bountrogianni:** The next week is fine.

**Mr Bradley:** The next week looks good off the top of my head. I’m going to try to provide my availability for the committee. I know that switches, but I’m still going to try to keep you updated on my availability. We all know what happens for all of us. The day you commit to something, a better invitation comes in the next day.

**The Chair:** Am I trying too hard to have the committee go to several sites as a committee? Is that still sound?

**Mr Bradley:** I think that’s a good try. It’s worthy of—

**Mrs Bountrogianni:** You just cannot get all of us for all the dates.

**The Chair:** The week of February 4: how does that strike the committee members who are here?

**Mr Bradley:** Off the top of my head, that’s better.

**Mr Gilchrist:** If I may, it is certainly as good for me as the week before. My only concern is, every time we move things back, we continue to box ourselves in that much more.

**The Chair:** But we do hearings the last week in January.

**Mr Gilchrist:** Oh, you’re suggesting we would then switch and have hearings instead. OK. As long as we are not losing time in the picture here, then that would be fine.

**The Chair:** Sorry about the ones who are not here, but at least we have five of the regular committee members here out of nine. Let’s confirm, then, and those whom it doesn’t work for will have to catch up to us or whatever. Do you have a problem?

*Interjection.*

**The Chair:** What has been suggested is that we leave on the Sunday night so we are in Calgary first thing Monday morning. The first three days of that week of January 28 would be hearings because you’re off on the Thursday for your conference.

**Mrs Bountrogianni:** Thursday, Friday and Saturday.

**The Chair:** OK. The first three days of that week; the next week, February 4, we will travel with whoever can travel with us. How many days of public hearings should we be setting aside? Then I’ll get the subcommittee going.

**Mr Gilchrist:** I think we have the flexibility right now to allow everyone who wants to contribute a chance to contribute. Without getting silly, you could set your first range of dates. But then depending on the response we get, given that we are not stepping on anyone’s toes in an intersession and that the regular committees that will appear are not going to be empowered to hold hearings, room 151 will be available. Might I suggest both that we make plans to occupy that room for all of our hearings

and, secondly, as an absolute given, that every single day, or if it can be coordinated into specific days, video-conferencing access be afforded to every single person in this province who can make their way to a community college or any other site appropriately equipped so that there is no need for the expenditure of funds to travel around the province. On the flip side, there is an infinite geographical reach to this committee. People from Manitoulin Island to Moosonee would be able to share their views, something that committees traditionally just never had the opportunity to do before.

**The Chair:** Your point is very well taken. We will confirm three days in the week of January 28: Monday, Tuesday and Wednesday. In the week of February 18 we will confirm four days, Monday through Thursday, and then whatever else might be needed after we advertise. We'll let the subcommittee deal with the rest of it.

**Mrs Bountrogianni:** I have another item after this. We'll adjourn quickly.

**The Chair:** OK, so Tonia will try and collect four of us together for a subcommittee meeting Monday or Tuesday.

**Mrs Bountrogianni:** Are we finished with the scheduling?

**The Chair:** Yes.

**Mrs Bountrogianni:** Mr Parsons couldn't be here—he's in ODA hearings—but he would like permission to attend a conference in Boston in early March: the Building Energy Conference. It deals with such issues as one quarter of building energy being used to heat water. I'm sorry; I'm just trying to read from his notes. The approximate cost is \$3,800.

**The Chair:** Comments from the committee members? Agreed? OK, it's agreed. The motion has passed.

**Mrs Bountrogianni:** I'll tell him; thanks.

**The Chair:** Do we have any feeling where we're at financially? Do we have any feeling of what it's going to cost us to travel for that one week?

**Mr Gilchrist:** You're looking at about—you should be able to get a circle airfare, because we're going in a continuous direction, for somewhere in the neighbourhood of \$1,200 to \$1,300 if we book far enough in advance. If members are going to travel, I think perhaps we should institute a rule that, to keep costs down, those decisions are made at least two weeks before the trip, because there's a dramatic difference in airfare. Again, given that we don't have any other conflicts in the House, I don't think that's unreasonable for this specific trip.

**The Chair:** The probability is it's going to be two days per stop: one to do some hearings and one to go and see, which means it could be a Saturday in California. Therefore, if we come back on the Sunday, you would save significantly by staying over that Saturday night.

**Mr Gilchrist:** Absolutely. We've got to make sure that we've looked at all of those options. In fact, you might even want to consider flying out on Saturday—

**Mrs Bountrogianni:** That would be difficult.

**Mr Gilchrist:** —but that poses a problem for you; OK. Then it really has to be the case that we stay over the

following Saturday night. The airfare difference would more than pay for the one day hotel factor. It would be infinitely greater.

**The Chair:** So this is six days, seven days really, until we get back. Will you notify the other three who are not here of that: of where we're at, to save that Saturday night and not to commit yourself if at all possible?

We'll get the subcommittee together to have a report for Wednesday morning.

**Mr Gilchrist:** I think we're agreed on Mr Parsons; I don't know whether you're still inviting debate on that.

The only other issue is, what sort of different protocol will we need once we aren't having weekly meetings? Because if events such as that come up, let me offer that a canvass of the subcommittee might be an appropriate solution.

**The Chair:** It could be. The other could be in the memo that Tonia's going to send out: if anybody has ideas of travelling before the first of February, to get it before the committee next week.

**Mr Gilchrist:** The only problem with that is if you just plain come across an opportunity. For example, at one of the open houses in the building here last week from—I can't even remember; I think it was the manufacturers and exporters—Ford formally invited me and the committee to visit its research and development facilities, not just in Canada but in Dearborn, Michigan. These sorts of invitations could crop up at any time. Recognizing that if we are going to take a significant portion of February, potentially, for more hearings—depending on the sort of response—and then our response to those hearings, it almost follows that January is the time we're going to have to make those sorts of side trips here in Ontario in particular. I just throw it out for the committee's consideration that when that happens, the subcommittee—

**The Chair:** Put a motion on the floor and we'll see if it can get through.

**Mr Gilchrist:** I move that after next Wednesday, the subcommittee will deal with any requests for travel inside or outside of Ontario.

**The Chair:** Further discussion?

Those in favour? Those opposed? The motion is carried.

OK, anything else?

**Mr Ouellette:** So the trip—it's two days in each location we mentioned?

1130

**The Chair:** This is what staff are finding out. If we're going to sit down and talk to people, then—it isn't just around the corner, some of the places we'll want to go to.

**Mr Ouellette:** Can we as committee members get some input as to which sites would be available to visit? I think it's pretty much impossible to visit all the sites listed here in two days, but there may be some specific things of interest to certain individuals that, even if we had to take half of the committee to one location and the other half would go to the other, it would be far more productive.

**The Chair:** Please feed that in directly to Tonia.

**Mr Gilchrist:** Chair, let me just add, apropos of that, that Fuel Cells Canada has already indicated they will coordinate all of the fuel-cell-related manufacturers in the Vancouver area and facilitate one meeting site where all of the manufacturers will come to us.

**The Chair:** I think we have to be careful, when we're being offered various things from private companies, that we don't accept something—I'll leave that to Tonia to keep an eye on—that might give the impression that we're supporting one company over another, or we might feel obliged down the road.

**Mr Gilchrist:** A valid point, but in this case in fact I think it would be, if anything, assuring just the opposite, because their commitment was that every single manufacturer would be represented if we gave them that amount of notice.

**The Chair:** Jerry's just going to give you an example of what he has sorted out if we stop in Alberta, and then give you some indication of how the travel will flow.

**Mr Jerry Richmond:** These are just some preliminary ideas. You'll see a short memo was distributed to you. I canvassed a number of potential sites, companies and government agencies. It's certainly not exhaustive and if the members have other places or offices that they've had contact with, I would suggest you provide that to Tonia, because if we're going to be in the area and you've read or heard of other things—the list is certainly not exhaustive. I've tried to canvass some of the major ones. Fuel Cells Canada is listed there and Mr Gilchrist has had other contact with them.

Just in terms of a possible schedule—and this is subject to further deliberations—if the committee, say, went out west for a week, as Mr Gilchrist indicated, those sites are sort of in a circle. If we left for Calgary on the weekend before, whatever Sunday, we would avoid wasting a half day travelling out west. In Calgary we could probably schedule a day of hearings if we stayed in a downtown hotel. From the preliminary contact I've had with officials, they seem to be more than willing to come to us, which would probably remove any sense of corporate conflict.

Out west, they are in both Alberta and Vancouver, the notes indicate—Edmonton being the provincial capital,

other government offices are in Edmonton—but officials are more than willing to travel down to Calgary. It's only 180 miles and I got the impression they would do that on their ticket. They do it all the time. There's a similar situation in BC, with Victoria being the capital on Vancouver Island. Officials are more than amenable to, not swimming across the Strait of Georgia, but coming over to Vancouver for any meetings. They seem to be more than amenable; they do that all the time. So the geography can be worked out.

So I think we could fit in, reasonably, a day of hearings in Calgary, with some of the key players. They're into wind power; I've got some contacts with the coal industry, that issue has cropped up; Alberta government officials. So a day of hearings. The committee could tentatively go down the next day, if we started on a charter bus early in the day, to see the wind farms in the Pincher Creek area. Then, if we got back to Calgary, it's only a hop, skip and a jump over the Rockies—it's a little over an hour flight—so we could get to Vancouver the next day, which would be the Tuesday evening, then have a day of hearings in Vancouver, and then a day or a day and a half later get down to California. So we might even be able to fit it into five working days and then the committee could debate whether to come back the following weekend or whatever.

It seems doable, and tentatively the officials, even if they're not in those three cities, seem amenable to travel, or maybe we can make some electronic arrangement for them to be videoconferenced in. But certainly Edmonton, being the capital, and Victoria—there's no problem there. In California, some offices are in other locations, but maybe we could work something out that if we were in the state capital of Sacramento, officials from other locations would just come to us. That's my sense of it and, subject to additional committee requests and Tonia doing the scheduling, I think it would work.

**The Chair:** Possibly for our next meeting you might put together a tentative schedule to have a quick look at, and a possible cost, so we have some idea where we're at.

If there's nothing further, the committee is adjourned until next week.

*The committee adjourned at 1136.*

## CONTENTS

Wednesday 5 December 2001

Association of Municipalities of Ontario.....	S-343
Ms Pat Vanini	
Mr Marvin Caplan	
Canadian Urban Transit Association .....	S-347
Mr Michael Roschlau	
<b>Committee business</b> .....	S-352

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