

Keynote Presentation By
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Thank you, Rich, for your introduction. I appreciate the opportunity to bring a Canadian perspective to this year's NGV America Conference and I think this year's theme "Natural Gas Vehicles - North America's Transportation Future – *Today*" has never been so timely, nor has it been so important for both Canada and the United States.

You know when you lead a trade association like the Canadian Natural Gas Vehicle Alliance or NGV America, you talk to a lot of different people in the public, private, and non-governmental sectors. Everyone recognizes that you're paid to represent your members and to promote the industry's self-interest. Market growth, jobs in the industry, and success for all of our sector members are what Rich and I work toward every day.

But an interesting development is taking place in our industry and it's all the more surprising because it not only builds upon, but it also transcends our industry's interests. This change puts our industry at the intersection of the two of the most important issues of our times – economic growth and environmental challenges. Whether it's mature commercial technologies, abundant fuel supply, lower carbon intensity fuel or lower-cost fuel, the North American natural gas vehicle industry is uniquely positioned to contribute to economic and environmental policy priorities on both sides of our shared border.

Our friends at EnCana have coined a term that I think provides an excellent way to describe what's ahead and how significant a role our industry will play. That term is the "new natural gas economy." As North America's largest producer of natural gas, EnCana sees increased use of natural gas for transportation and power generation as strategic – both for their own interests as well as for the Canadian and American economies. My remarks today will focus on the transportation aspect of this vision.

Now, I don't need to tell any of you what each of our petroleum-based economies look like. We all understand the extent to which crude oil-based products play such an important role in our lives for everything from transportation to heating, to consumer goods and plastics. The United States relies on oil to meet 38% of its total energy needs; in Canada, that figure is 31%. And while Canada is the fifth largest oil producer in the world and a net exporter of crude oil, we nonetheless import more than one third of the petroleum-based energy that we use from off-continent sources and these imports negatively affect Canada's balance of payments. All of us here also understand the pressures that such a high reliance on oil brings in terms of security, environmental impact, and fuel costs.

By comparison, what does a new natural gas economy have to offer? A lot!

First, greater use of natural gas for transportation means lower emissions. Transportation emissions are an important part of the overall greenhouse gas emissions picture both in Canada and the US. Transportation is responsible for 27% of carbon emissions in Canada and 33% in the United States. On-road vehicles account for close to two-thirds of emissions from all transportation sources. Energy used for transportation is also the

fastest growing area of energy demand in Canada and the growth in emissions from transportation sources is projected to be second only to the growth in emissions from the Alberta oil sands out to 2020 according to Natural Resources Canada.

Transportation emissions are a notoriously tough target. Canada has expressed its intent to align with the new EPA passenger vehicle efficiency regulations. This will certainly help reduce carbon emissions from new light-duty vehicles, but what about existing light-duty vehicle stock and what about heavy-duty vehicles?

Approximately 4% of vehicles in Canada are heavy-duty vehicles and these vehicles account for a third of carbon emissions and more than half of NOx emissions from on-road sources. Natural gas can play an important role in reducing emissions from these transportation sources. And, with three of ten Canadian provinces expressing interest in establishing low carbon fuel standards, the CNGVA is working to ensure that Canadian policymakers understand the effectiveness of natural gas as a low carbon compliance strategy.

A new natural gas economy also means lower cost fuel for fleets and for consumers. Compressed natural gas in Canada currently sells at a price that is about 30-40% below the retail price of gasoline and diesel fuel. Gasoline retails at present for about \$3.50 per US gallon.

Retail fuels are taxed more heavily in Canada than they are in the United States with one-third of the pump price of gasoline consisting of various layers of taxation. Natural gas has an edge here too. The Government of Canada exempts natural gas for transportation from excise tax which is a \$.37 per gallon benefit compared to gasoline and a \$.15 per gallon benefit compared to diesel. Several Canadian provinces also exempt natural gas from provincial road tax. This benefit averages about \$.55 per gallon compared to conventional fuels.

Abundant North American supply is another strong element of the new natural gas economic outlook and, as Rich mentioned, Christopher McGill of AGA is going to speak next on this topic and discuss the very positive implications for our industry.

The new natural gas economy also means more green-collar jobs for North Americans. The list of successful Canadian exporters whose sales in Canada would barely keep the lights on amply illustrates the value of green-collar economic activity. Westport Innovations, IMW Industries, Cummins Westport, Xebec Adsorption, ECO Fuels, Kraus Global and Dynetek Industries can all trace their success to a growing global market for cost-effective technologies that address climate change, air quality, and energy security issues. Sustainable, knowledge-based green-collar jobs are fundamental to the health of both of our economies and the natural gas vehicle industry has an important role to play in this area.

International Trade Canada recognizes the value of the Canadian natural gas vehicle sector with funding support to encourage industry participation at international exhibitions including the upcoming Asia-Pacific conference in Korea and support for outgoing trade missions such as our successful mission to Lima, Peru in 2007. While the majority of Canadian exporters in other industries rely primarily on the U.S. market for export revenues, the natural gas vehicle industry stands out as a global player with its sights set on high growth markets including Bangladesh, Pakistan, China, and South America. This is all the more remarkable when you consider that many of these companies are small- or medium-sized enterprises with sales of less than \$25 million per year.

I could go on, but I think we'd all agree that the benefits of a new natural gas economy are many and that they extend well beyond current market opportunities to encompass education in advanced fuels and alternative energy sources, as well as to helping to establish a pathway for renewable biomethane use and for

greater use of hydrogen either directly through hydrogen-enriched natural gas fuel blends or indirectly through fleet and first-responder education, work on gaseous fuel codes and standards, and the construction of fuel-flexible facilities that can safely accommodate both heavier-than-air and lighter-than-air vehicle fuels.

So if the future is now, as Rich suggests, how do we capitalize on current conditions and work to establish an extensive new natural gas economy?

As an industry, we absolutely have to start with the customer. What are their needs and goals? How does their operation work? What changes are coming to their operating environment and how might natural gas support the direction that they want to go in? As an industry, we're understandably keen to talk about all the great technologies that we have and the benefits that come with natural gas, but if we're to make progress, we must start with the customer and assess the fit for natural gas and how it can help the customer get to where they want to go.

As most of you know, natural gas transit bus technology was developed in Canada in the 1980's. Our federal government partnered with the province of Ontario to fund development work, integrating a stationary natural gas engine into a transit bus. Canada's steel-making capital, the City of Hamilton, was selected in large part due to its poor air quality. The results were very positive and the province moved decisively, funding natural gas technology at seven municipal transits in Ontario. It all seemed good at the time, but it was a technology push that effectively tied the hands of the customer due to a funding rule that penalized the early removal of buses from service. There is no federal transit funding in Canada. The province of Ontario provides one-third capital funding for transit buses, but up until two years ago, this program required transits to keep their vehicles on the streets for 18 years or lose funding for replacement vehicles. The last of the Ontario early adopters took their first generation natural gas transit buses off the road in April, sixteen years after they were put into service and three generations of engine technology behind the times!

Understandably, we don't get the warmest welcome when we talk to transits in Ontario. That said, we also recognize that these customers are operating in an increasingly complex environment when it comes to diesel technology and that limited performance benefits from diesel-electric hybrid buses are, if nothing else, creating an understanding that hybrid technology is not a one-size-fits-all solution.

In Canada, our industry's strategy for the transit market is focused on outreach and education in a low-key fashion. The association initiates the discussion with senior maintenance personnel at what we consider to be "soft" targets and then the association pulls in different industry members depending on their degree of interest and stage in the decision-making process. We pool industry intelligence by means of monthly conference calls and we work a top prospects list that focuses on the larger transit properties in Canada.

In conjunction with a customer-centric approach, if we are to advance a new natural gas economy, it's essential that we have the right models to encourage market uptake. These models must be based on fundamental concepts including simplicity, transparency, and pushing fuel cost savings through to the customer.

Let's start with simplicity. For the Canadian market, Measurement Canada requires that compressed natural gas be dispensed on a dollar-per-kilogram basis. There may be an opportunity to also provide pump pricing to consumers on a dollar-per-litre basis, but to date, that's not typically what has been done. I don't know about you, but the last thing I want to do when I pull into a gas station is to get out my calculator and do some math.

Transparency is another vital element of the model that we need to take natural gas to the next level in transportation. We have a relatively complex story to tell vehicle owners, in part because we're not the status quo and in part because our infrastructure can be fairly demanding. Customers need to understand the cost structure that goes with natural gas as a transportation fuel. Having this information is the only way that they can make a reasonable comparison to what they are doing now and customers rely on our industry to provide them with information they can use in their assessments.

As Bob Carrick of Freightliner advised in yesterday's MAC meeting, we've got to get the message straight on infrastructure and fuel pricing or we won't be able to take this where we want to go. In Canada, we're currently working with five prospective bidders and a local regional government to bring all the parties up-to-speed on natural gas for refuse trucks. The regional government will soon issue a request for proposals for a seven year contract. They aim to reduce emissions and the cost of fuel over the contract term. Our goal is to see this contract awarded to a party that bids on the basis of natural gas. With 60 trucks and 2 million litres of diesel per year at stake, it is vital that everyone involved has a comfort level with natural gas pricing and their options for trucks and infrastructure.

In closing, I would like to make one final point and that is in regards to pushing fuel cost savings out to the customer. We've still got work to do in this direction as an industry particularly in Canada where the various regulatory models and the lack of competition at the retail station level tend to weaken the value proposition for the customer. We can only build a sustainable new natural gas economy by ensuring that we really do have a meaningful price advantage compared to conventional fuels. And, with the pricing outlook for natural gas over the next few years, there is no better time to get the model right and secure that lower cost positioning that is a fundamental driver for customer adoption.

The future really is now for the new natural gas economy.