Reducing GHGs from transportation

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Over the past three decades, significant strides have been made to reduce the environmental impact of transportation fuels such as gasoline. These include reduced air emissions and water use in the refining process, and removal of lead and benzene in fuel.

The past decade has also seen a significant reduction in sulphur content by 90% in gasoline and 97% in diesel. Today, a newer vehicle using gasoline produces 90% fewer smog-causing pollutants than a similar vehicle built prior to 2005.

That said, transportation continues to be one of the largest sources of greenhouse gas (GHG) emissions in Canada, primarily from fuel consumption in passenger and freight vehicles.

"Helping Canadians understand how a complex interplay between fuel carbon intensity, fuel efficiency and their own transportation choices and behaviours determines the level of GHGs from transportation is an area where we're putting significant resources," says Peter Boag, president and CEO of the Canadian Fuels Association. The industry supplies 95% of Canada's transportation fuels.

In 2013, the organization partnered with an independent think tank - Canada's Public Policy Forum - in a series of expert discussions on the challenges and opportunities for GHG reduction in road transportation. The discussions focussed on three areas: fuel mix, vehicle technology and infrastructure choices as a means of reducing driving time and kilometres travelled.

The discussions concluded progress will come through a gradual transition, involving evolutionary advancements in vehicle technologies and fuels, and will require significant changes in consumer behaviour and choice. Fuel suppliers, vehicle manufacturers, technology providers, consumers and governments at all levels will play a role in achieving progress.

"There is no silver bullet here, it's a long process," notes Boag, "We need to approach the challenge with a full understanding of the importance of transportation to our quality of life and prosperity as a trading nation. It's a matter of finding the right balance between improving GHG performance without impairing the essential mobility that underpins our economy and standard of living."

While petroleum-based fuels will continue to power 80 to 90% of transportation globally for the foreseeable future, the fuel mix will become more diverse. "Implementation challenges still exist, especially for batterypowered vehicles, but forecasts show natural gas, electricity and biofuels as growing components of the mix to 2040," says Boag.

Conventional vehicle fuelefficiency improvements will play a big role in the GHG emission reductions required by new federal regulations. "A 2025 model year vehicle will be burning half the fuel of its 2008 model year predecessor, which will go a long way in

helping Canada manage GHG emissions in transportation," he says. Technology will play a big role in meeting that challenge.

"Consumers can play a big role in driving change," says Boag. "By understanding the environmental impacts of their transportation preferences and choices, they can make more informed decisions."

Municipalities can play a role by investing in transportation infrastructure and making land use decisions that reduce demand for transportation.

"The driver for all of these initiatives is protecting our environment and human health. Canadians can be assured that fuel providers are committed to continuous improvement."

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