We're missing a glaring opportunity to reduce emissions

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It's a pivotal year for the Pan Canadian Framework on Clean Growth and Climate Change. This policy umbrella is the foundation for achieving Canada's Paris Climate Accord commitment to reduce emissions to 30 percent below 2005 levels by 2030. The prognosis on achieving this target however, is not good.

In its 2017 Emissions Gap Report, the United Nations projects that Canada's emissions are to remain stable at about 2010 levels. According to the report, Federal government projections and independent studies agree that Canada will miss its Paris commitment under current policies by a large margin.

The Canadian emissions reduction effort doesn't lack ambition.

The federal government has set a progressing price on carbon out to 2022, released a Clean Fuel Standard regulatory framework, proposed a federal approach to carbon pricing for large industrial facilities, engaged the provinces in the development of a zero emissions vehicle (ZEV) strategy, and is spending millions to expand the network of electric vehicle charging and alternative refuelling stations.

Ambition isn't the issue; affordable and results-orientated action is.

The government's work on a Clean Fuel Standard, ZEV strategy and spending on electric vehicle charging infrastructure highlight the challenge and importance of reducing transportation GHG emissions. Road transportation alone accounts for 19% of Canada's total GHG emissions.

While transportation-related emissions growth has now largely been contained, reducing emissions will require a comprehensive and focused approach that involves improving propulsion systems and vehicle technologies already in place, conserving energy by shifting to less energy intensive travel modes, operating vehicles more efficiently, and transforming over time to alternative energy sources. Early reductions will be essential – the longer it takes to bend the curve, the harder it will be to achieve reduction targets.

To date, policy-makers at both the federal and provincial levels are fixated on the long term ambitions of transformative, long-term and high cost solutions like electrification, at the expense of immediate, lower cost opportunities available through the continuously improving internal combustion engine technology. Passing up these early reductions is a missed opportunity for climate policy-makers.

Researchers at the Massachusetts Institute of Technology (MIT) agree. In a 2015 entitled On the Road toward 2050, they concluded that when it comes to transportation emissions reductions "the impact of alternative energy sources such as electricity and hydrogen, even going out 30 years or so, is modest". Technology readiness aside, policy-makers are also swimming against the current of consumer preferences and behaviour in ignoring the MIT conclusion that "improvements in internal combustion engines, transmissions, and in

vehicle technology through reducing weight, aerodynamic drag and tire resistances, provide the largest fuel consumption and GHG emissions reductions for the next 20-plus years".

In 2017, auto makers sold more than two million vehicles in Canada for the first time ever. Among the 2,038,798 vehicles purchased last year, only 639,823 were passenger cars, the lowest level for cars since 1964. The mid-sized crossover and SUV have replaced the sedan as the vehicle of choice for Canadian families. Electric vehicles account for 0.9% of all vehicle types on the road.

Canadians have a clear preference for the proven reliability and quality of internal combustion (ICE) powered vehicles. Moreover, Canadians are holding-on to longer lasting vehicles. Of the nearly 22 million registered vehicles in Canada today, the average vehicle age is roughly 10 years, and nearly 1.5 million are pre-1995 model year vehicles. Replacing some of these older models with new fuel efficient ICE vehicles (yes, even new fuel sipping crossovers and SUVs) presents a huge opportunity for early emissions reductions that can help put Canada on a path to achieving its Paris commitment.

Across almost all vehicle segments, fuel efficiency has improved by more than 20 percent over the last decade. For SUVs, the improvement is between 25 and 30 percent with further efficiencies expected for the foreseeable future. A case in point shared with me by veteran auto industry analyst Dennis DesRosiers - the 2018 Jeep Wrangler, an iconic SUV, is 10% more fuel efficient than the previous year's model. Researchers and engineers see technology pathways to achieve a further 65 percent improvement in ICE powered vehicle fuel efficiency by 2050.

Rather than prodding Canadians to buy vehicles they clearly don't want, to achieve emissions reductions far into the future, policy-makers should focus on levering consumers' preferences to achieve real, cost-effective and immediate emissions reductions with policy solutions aimed at accelerating the replacement of older gas guzzlers, with new, much more fuel efficient ICE powered vehicles.