

Electric car variables

The Chronicle Herald
Halifax, Nova Scotia

6 January 2018

The First Drive review of the 2017 Chrysler Pacifica Hybrid minivan (Herald Wheels, 23 December 2017), while very positive, raises a couple of issues regarding electric vehicles in Nova Scotia.

The article states that, “But here in the east, if your driving habits are mostly of the short-haul variety and you wish to save the environment and some gas – the Pacifica hybrid is a great choice”.

While it is unlikely that driving a Pacifica will allow anyone to save the environment, the emissions associated with driving it will depend on the mode (gasoline or electric) and where in the east you live.

Regardless of where the Pacifica is driven, when in gasoline mode, the combined city/highway gasoline consumption is about 16.7 kg CO₂e per 100 km. On the other hand, driving a Pacifica in electric mode in Quebec, Newfoundland and Labrador, or New Brunswick will result in emissions of about 0.04, 0.82, or 7 kg of CO₂e per 100 km, respectively.

In Nova Scotia, a Pacifica driven in electric mode using electricity supplied by Nova Scotia Power would produce in about 16.7 kg of CO₂e per 100 km. In other words, when it comes to emissions, there isn’t much difference in driving a Pacifica in electric or gasoline mode in Nova Scotia.

Having said that, if the Muskrat Falls project is completed by the early 2020s, operating a Pacifica in electric mode in Nova Scotia will reduce emissions to about 11.2 kg per 100 km – much better than today, but still a far cry from provinces such as Quebec or Newfoundland and Labrador.

The article also mentions that for drivers in Nova Scotia, “Recharging a 90 percent depleted battery at 15 cents/kWh will cost about \$2. If you do that every night, that is only \$60-\$70 a month – darn cheap”.

Given the current cost of electricity and gasoline, this is true. At \$1 a litre, the cost of driving a Pacifica in gasoline mode would be about double that of using it in electric mode. So yes, it is “darn cheap”.

However, the article doesn’t mention that the cheapness of electricity is due in part to the fact that the price of gasoline, unlike the price of electricity, includes taxes used to maintain Nova Scotia’s road network. This allows drivers of electric vehicles (including the Pacifica Hybrid driven in electric mode) to take advantage of the road network without paying for its upkeep.

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