

# GM Presentation- Québec ZEV Consultation

## Key Points

Je vous remercie de l'occasion de vous parler aujourd'hui. Mon nom est David Paterson, vice-président Affaires publiques et environnement de General Motors du Canada et je suis accompagné aujourd'hui par Tammy Giroux et Phil Petsinis (Directeurs, Relations gouvernementales). Nous avons distribué quelques diapositives et une copie de mes remarques en français. Nous avons l'intention de prendre la parole dans un mélange d'anglais et de français aujourd'hui pour assurer que je réponds précisément à vos questions.

First I would like to start by acknowledging the Government of Quebec's coordinated efforts to develop its advantage in clean electricity and make progress in its fight against climate change. We have seen that in a series of initiatives including your Electrification Strategy and Cap & Trade program. We appreciate that Bill 104 is a further step in that direction, focused on promoting the adoption of electric vehicles in Quebec. At GM, we are already thinking and acting well beyond the need for mandates or regulation. We share your belief in the importance of taking action to reduce greenhouse gases and the important role electrification can take in those efforts.

As you see in our first slide, General Motors has been the Quebec leader in plug-in vehicle sales since 2011, led by our Chevrolet Volt electric vehicle with extended range. Our company has invested billions of dollars in developing electric vehicle and battery technology to be appealing to our customers. GM dealers have also made considerable investments in electric vehicle tooling and training. Today, GM has the most extensive EV dealer network in Québec, with over 95% of Chevrolet dealers being EV certified (80 of 83 total Quebec Chev dealers) and they do a great job of educating prospective customers on EVs.

I am pleased to say that we are seeing increasing consumer demand for our new second generation Chevrolet Volt – setting Québec and Canadian month over month sales records. Québec consumers place a significant value on the Volt EV's range extender system (alleviating range anxiety and associated safety concerns in cold weather) and have made it the overwhelming Plug-in electric vehicle sales leader in the province. With its backup generator system to recharge the battery on the go, we believe the Volt is especially suitable to Quebec's winter weather and long distances.

GM is set to build on our EV leadership with the upcoming introduction of the first affordable long range Battery Electric Vehicle, the Chevrolet Bolt EV with over 300 kilometres of range. We believe these products will help accelerate the transition toward more electric vehicles on our roads. But we also have a realistic view on the time horizons for that transition.

The main point I hope to leave you with today is that the move to EV technology is happening but it's actually very difficult to regulate fast changing technology – and our advice with respect

to Bill 104 is that, it's important to have adequate flexibilities and be aware of the implications for Quebec auto dealers and the consumers who ultimately must pay for these new products.

Therefore we would like to offer a few specific comments with respect to Bill 104.

First and foremost, all our experience tells us that the key driver of success for evolving technologies like electric vehicles is consumer demand. After all, it is the consumer that has to purchase an electric vehicle which can be one of the largest purchases individuals make in their lives.

As illustrated in our second slide, we know that first time EV consumers are concerned about the range of EV batteries and how cold weather affects range and performance, this is something we are addressing with the Chevrolet Volt. Consumers are concerned about the charging infrastructure – or more specifically the lack of it. And even when they understand the charging options, they are concerned about pulling up to a charging location only to have to wait in line behind several others. They wonder about the up-front costs and have concerns about the resale value of EVs and the longer term trends of EVs in the market. These are significant issues that a regulation simply cannot address on its own. They need to be addressed by working together over time to generate consumer demand and to further develop the technology to meet mainstream consumer needs.

Accordingly, we encourage you to:

- Maintain consumer purchase incentives as these remain essential to help offset the still higher costs of EV technology.
- Quebec also need to accelerate its support and expansion of charging infrastructure– In terms of priorities, infrastructure support should be directed to:
  1. Homes – where most vehicles spend the most stationary time
  2. Work – the second best opportunity to recharge and also promotes EV and charging technology to co-workers
  3. Public – a network of select sites focused in underground public parking, and level 2 and 3 charging along travel corridors

Just as we need to recognize and address consumer concerns, we also need to acknowledge concerns we are hearing from our dealers, especially those in rural areas across Quebec.

Dealers know their customers and their needs. Our dealers will tell you that vehicle electrification is an excellent technology choice for smaller vehicles in urban environments. But EV battery technology cannot practically electrify larger vehicles like pickup trucks that Quebecers also need. Dealers outside of Montreal and Quebec City worry that an overly rigid regulatory sales ratio or quota could leave them with unreasonable financing and carrying costs for EVs they cannot realistically sell to their rural customers. They also worry that rigid ratios

could restrict their access to or ability to offer the vehicles that do meet their customer's family and business needs.

To address this, Bill 104 and its regulations need to include flexibility measures that should account for some of Quebec's unique circumstances – for example longer rural driving distances and cold weather.

We have a few recommendations in this regard for the Committee:

First, one of the flexibility measures that the NE US States provided was offering 5 years or more of early action credits to smooth the introduction of new EV sales quotas. These early action credits encourage other manufacturers and their dealers to introduce more EVs and it also recognizes those that acted early on the government's original Electrification Strategy. Bill 104 only provides 2 years of early action credits and we would like to see five years as was provided in other jurisdictions in North America.

A second flexibility to consider is to ensure you don't limit credits for the kinds of EVs that Quebecers want to purchase. In Quebec the Chevrolet Volt along with other Plug-in hybrid EVs, have been the product preferences for good reason. It addresses range anxiety in cold weather. California on the other hand having a significantly warmer climate that doesn't reduce battery range has established a requirement to sell a minimum number of pure battery electric vehicles and limit the ability to count plug-in hybrid EVs under their regulation.

Given Quebec's colder winters, we would hope the province would not limit the credits for a type of Plug-in electric vehicle that meets a large number of Quebecers needs.

And finally we would encourage the Committee to build in a frequent review period for the legislation and regulations to ensure you keep up with fast changing technology. California has recognized this. It is worth noting that their regulations have been modified numerous times when it became evident that there was no pathway to compliance for the participants. We recommend a review every 2 or 3 years.

In conclusion GM is very proud to be the sales leader of EVs in Quebec, we intend to maintain that role with the introduction of our Chevrolet Bolt EV later this year. We are looking out to the future of the EV market.

As you consider Bill 104, we encourage you to focus on addressing practical consumer adoption issues including the ongoing provision of meaningful consumer purchase incentives as the key to expanding Quebec's EV market. We encourage you to continue expanding Quebec's recharging network with particular focus on at home and at work charging capability. And we encourage you to ensure that Bill 104 has sufficient flexibility and frequent enough review to avoid unintended consequences for consumers and dealers – especially if consumer adoption rates become out of step with the sales ratios you are establishing in this legislation.

We would be happy to address any questions you may have for us.







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Véhicules automobiles  
zéro émission



*BOLT EV*



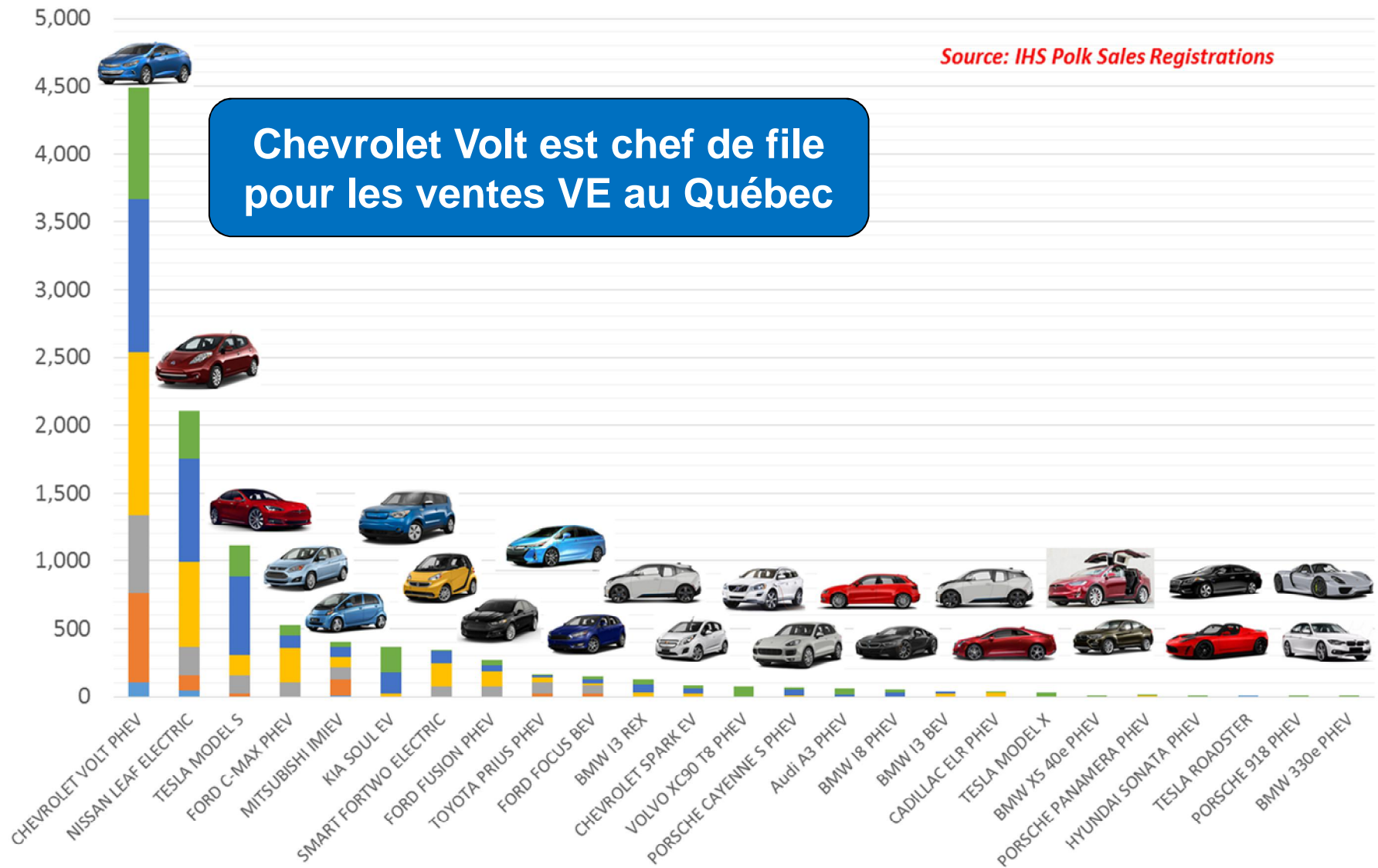


# Ventes totales de véhicules branchables en Québec par année

■ 2011 CY ■ 2012 CY ■ 2013 CY ■ 2014 CY ■ 2015 CY ■ 2016 CYTD Jun'16

Source: IHS Polk Sales Registrations

**Chevrolet Volt est chef de file pour les ventes VE au Québec**



# L'ADOPTION DES VE EST LIE A LA DEMANDE DES CONSOMMATEURS - ET ILS ONT ENCORE DES QUESTIONS.

Quelle sera la valeur de revente pour mon VE?

Où puis-je charger?

Est-ce la technologie d'aujourd'hui?

A quelle distance peut-il aller?

Quel est l'impact du temps froid sur la gamme de conduit VE?

Prix de l'essence à la hausse?

Combien le coût de l'électricité par rapport à l'essence?

Combien de temps faut-il pour recharger?



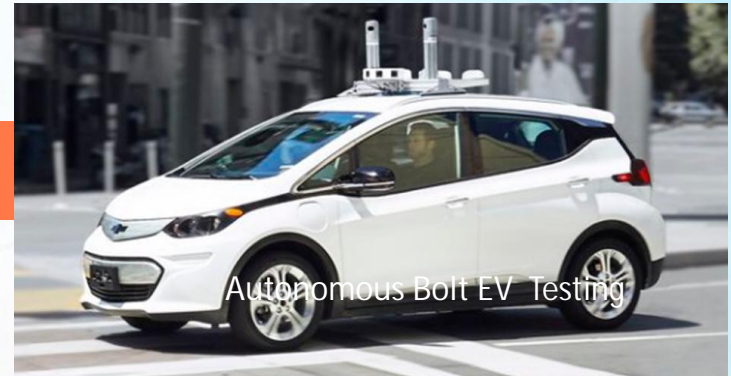
# LES TRANSPORTS CHANGENT...

## ET GM SE DÉSÉQUILIBRE POUR ÊTRE CHEF DE FILE ET RÉUSSIR



ÉLECTRIQUES

AUTONOMES



CONNECTÉS

PARTAGÉS

