



## North America Making Great Strides in Electrification

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- Canada also experienced a slow start in the road to electrification. However, recent developments have been more encouraging, with plans to electrify the bus fleet in Canada.
- Biased funding policies initiated by the U.S. may prompt international OEMs to focus on South America.

The Paris Agreement of 2015, a legally binding international treaty, marked the turning point for climate action on a global scale. The ratification of the treaty involved calling for countries to transition the transportation sector to electric, in order to reduce greenhouse gas emissions (GHG) from traditional internal combustion engines (ICE). Countries in Europe as well as North and South America were among the signatories of the treaty and committed to the EV transition. However, the initial pace of the transition was slower than expected; for example, in the U.S., the Trump government stood against the idea of electrification, reasoning that it was financially infeasible and hampering an immediate transition.

However, the turn of the decade has prompted an accelerated transition towards electrification. This is made evident by multiple electric vehicles (EV), both in the passenger and commercial vehicles segments, being introduced into markets around the world. The U.S. and Canada in North America have also seen this trend rise and their respective policies with regard to EV-uptake are discussed below in detail.

## The Electrification Landscape in North America

### The U.S.

While Trump's government impeded the electrification trend in the U.S., it has quickly regained its footing in the post-Trump era, with the U.S. being the first in line to introduce multiple emissions initiatives.

- Electrify America, set up by Volkswagen as part of its emissions scam settlement with the U.S., has been crucial in incentivizing EV-uptake by rolling out a network of fast chargers. It has USD 2b in funding from Volkswagen's 2016 diesel emissions settlement.
- The Biden-Harris administration has also set up policies to encourage accelerated EV adoption, including a goal to build a national network of 500,000 EV chargers as part of the Bipartisan Infrastructure Law. Historic funding of USD 7.5b has been secured to achieve this goal, and another USD 7b has been dedicated to acquiring mineral supply chains needed for batteries, components, etc..
- California's Clean Trucks Act has played a pioneering role in the adoption of EVs by requiring truck manufacturers to sell an increasing number of zero-emissions trucks in the state, replacing dirty diesel and gasoline and encouraging reduced GHG emissions. Other states have followed suit, with a Memorandum of Understanding (MOU) being signed by fifteen states, with plans to achieve 30% zero-emissions vehicle sales by 2030 and 100% zero-emissions vehicle sales by 2050. The signatories included California, Connecticut, Colorado, Hawaii, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington.
- For California, the Innovative Clean Transit (ICT) regulation applies to all transit agencies that own, operate, or lease buses with a gross vehicle weight rating greater than 6,350 kg. For large transit companies, 25% of their new bus purchases need to be zero-emission in 2023. That share increases to 50% in 2026 and reaches 100% in 2029. For small transit companies, phased-in targets start at 25% in 2026, and reach 100% in 2029.
- The state of Boston is set to replace its entire fleet, amounting to more than 700 buses, with electric vehicles by 2030. The Washington Metropolitan Area Transit Authority is set to build its first all-electric bus garage, equipped to run 100% electric vehicles in Northwest Washington.
- Multiple OEMs are also leading the charge into electrification. EV adoption by companies like Ford and General Motors has been government-mandated, to some end. However, a step back in this regard is the fact that some internationally funded OEMs, such as BYD (headquartered in China), have been denied funding with a potential threat to national security being cited as the reason.

### Canada

Similar to its neighbor, Canada also experienced a slow start in the road to electrification, with the initial government investment being ten times less than what had been expected. However, recent developments have been more encouraging, with plans to electrify the bus fleet in Canada:

- The state of Quebec has invested USD 18m into electric school buses in Montreal and buying 120 e-buses from Lion Electric. This is part of Quebec's "Plan for a Green Economy 2030" and to electrify 65% of its school buses by 2030.

- Canada's national school transportation company, Student Transportation of Canada (STC), has placed a conditional order for 1,000 electric school buses from Lion Electric. The order rests on financial support from Canada's federal Zero Emission Transit Fund. If the funds are acquired, LionC buses would replace the existing diesel buses in STC's fleet. Starting in 2022, the replacements would be spread over a period of four years.

## Looking Ahead

North America has seen accelerated electrification as of late. However, biased funding by the U.S. government in the name of national security may eventually induce key international players in the EV space to shift their focus to countries in South America, where the rate of electrification has been increasing through multiple initiatives. For example, the Zero Emission Bus Rapid-deployment Accelerator (ZEBRA) initiative, launched in 2019, aims to accelerate the deployment of zero-emission buses in major cities in Latin America. A coalition of international investors committed an investment of more than USD 1b in Latin America's zero-emission public bus fleet in 2021. While North America has made great strides in its electrification, these developments signal that it may well be overtaken by South America in this regard.

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