

**Submission for the Pre-Budget Consultations in Advance of the 2021 Federal  
Budget**

By: Clean Energy Canada

## **List of Recommendations**

**Recommendation 1:** Enable more Canadians to drive electric vehicles by extending and expanding the Incentive for Zero-Emission Vehicles (iZEV) rebate program by up to \$750 million over five years.

**Recommendation 2:** Up to \$350 million over five years to expand the scale and scope of the Zero-Emission Vehicle Incentive Program (ZEVIP) and the Electric Vehicle and Alternative Fuel Infrastructure Deployment (EVAFID) program to make charging stations accessible and conveniently located for all drivers.

**Recommendation 3:** Increase zero-emission vehicle (ZEV) supply in Canada to help meet demand through a phased-in, national zero-emission vehicle mandate.

**Recommendation 4:** Develop an Auto Sector Industrial Strategy to strengthen the sector's competitiveness, ensuring Canada captures a piece of the pie in the global shift to zero-emission vehicles.

**Recommendation 5:** Support Canadian leadership in a growing global low-carbon hydrogen economy and help Canada achieve its 2050 net-zero emissions goal by allocating up to \$1 billion over five years for innovation along the full value chain of hydrogen and the implementation of a national hydrogen strategy.

Canada's ambition to build a clean economy is a defining opportunity for our generation, an opportunity made even more poignant by our experience with the COVID-19 pandemic. Canada has opportunities and advantages to harness, and we believe that a sound economic recovery plan will firmly place the country on a trajectory towards a resilient recovery—with lower carbon pollution, enhanced global competitiveness, reconciliation with First Nations, greater equity, and shared prosperity.

## **Making Zero-Emission Vehicles Accessible to all Canadians**

Countries around the world are using economic stimulus and recovery spending to accelerate the transition to electric vehicles and help their automakers capture a greater share of the global market. Canada is the 12th largest vehicle producer but significantly trails other countries on electric vehicles, with only 0.4% of global production.<sup>1</sup> The competitiveness of our auto industry could be strengthened by doing more to build our zero-emission vehicle industry here at home—that starts with boosting local demand.

Getting more people in zero-emission cars also benefits Canadians. Zero-emission vehicles cost less to fuel and maintain, saving the average household thousands of dollars over the vehicle's life compared to owning a gas-powered car. And since zero-emission vehicles produce no tailpipe pollution, increasing their uptake would mean cleaner air and fewer air pollution-related illnesses in Canadian communities. Recognizing these benefits, the federal government has set targets to sell 100% zero-emission vehicles by 2040 and to reach net-zero emissions by 2050. But there is currently no plan in place to achieve these targets.

Budget 2021 offers an opportunity to better position our auto industry for the future and help more Canadians enjoy the benefits that zero-emission cars provide.

First, the federal government should build on the success of its Incentive for Zero-Emission Vehicles (iZEV) rebate program through its extension and expansion. Introduced in Budget 2019, the program is so popular that nearly half of its three year budget was spent in the first eight months.<sup>2</sup> As of July 2020, the iZEV program has benefited more than 53,000 Canadians and Canadian businesses.<sup>3</sup> While zero-emission vehicles are expected to reach upfront price parity within the decade, additional funding of up to \$750 million over five years is necessary in the short-term to close the gap

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<sup>1</sup> [ICCT & Pembina, Power Play \(2020\)](#).

<sup>2</sup> [CBC \(28 January 2020\)](#).

<sup>3</sup> Data provided via email by Transport Canada on July 29, 2020.

while the upfront cost of a zero-emission vehicle is still higher than its gas-powered equivalent.

As part of this, the government should also move forward on its mandate letter commitment to offer incentives for purchasing used zero-emission vehicles and modify the iZEV program so the scale of the incentive correlates with the applicant's income level. Low-income Canadians benefit most from the fuel and maintenance-related cost savings that come from owning a zero-emission vehicle, but are not always in a position to spend more up front even if they see the long-term benefit.

The good news is that purchase incentives work: following the iZEV program launch in May 2019, first quarter 2020 zero-emission vehicle sales in Canada were up 50% compared to the previous year—despite the coronavirus-induced recession.<sup>4</sup> Greater uptake of zero-emission vehicles is necessary for Canada to meet its climate targets. It is also a future that a majority of Canadians want to see.<sup>5</sup>

Second, the federal government should accelerate the installation of charging infrastructure across Canada by expanding the scale and scope of NRCan's existing funding programs (Zero-Emission Vehicle Incentive Program (ZEVIP) and Electric Vehicle and Alternative Fuel Infrastructure Deployment (EVAFID) program). The government should add up to \$350 million over five years to the programs and prioritize workplaces and multi-family homes, underserved regions like the Prairies and Atlantic Canada, and fleets. These investments will support Canadian jobs across the charging station supply chain—from Canadian mining and aluminum production, to the charging technology itself, to the electricians installing the chargers at locations in every province and territory.

Finally, every Canadian who wants a zero-emission vehicle should be able to access one. Despite growing policy support for zero-emission vehicles in Canada, the number and diversity of models available at dealerships actually decreased between 2018 and 2019.<sup>6</sup> Only one-third of dealerships in Canada have at least one zero-emission car in stock.<sup>7</sup> And supply is unevenly distributed across provinces and territories, with 78% of Canada's total zero-emission vehicle inventory in 2019 located in Quebec and British Columbia—the two provinces with purchase incentives and sales requirements in

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<sup>4</sup> [EMC, EV Sales \(2020\)](#).

<sup>5</sup> [Abacus Data & CEC \(14 March 2019\)](#).

<sup>6</sup> [Dunksy, EV Availability \(2020\)](#).

<sup>7</sup> Ibid.

place.<sup>8</sup> A phased-in, national zero-emission vehicle mandate would make clean cars available to Canadians across the country and enable Canada to meet its sales targets in an effective, low-cost way, while not being too restrictive on automakers.

## **Retooling Canada's Auto Sector**

The global pandemic and resulting economic shocks have underscored how vulnerable Canada's economy is to disruption—and the auto sector is no exception.

Right now, Canada has seven automotive plants employing more than 32,000 people, plus tens of thousands more in their vast network of suppliers—motor vehicle parts manufacturing alone employed more than 66,400 Canadians in 2019.<sup>9</sup> But the sector is changing.

In addition to the impacts from robotics, artificial intelligence and greater automation, the continued digitization of cars—driven by the global push towards electric vehicles, and the emergence of autonomous vehicles and related technologies—is forcing a shift in automotive manufacturing. Twenty years ago, Canada made two cars for every one sold here. That ratio is now one to one, and it will decline further if these trends continue.<sup>10</sup>

At the same time, electric car sales topped 2.1 million globally in 2019, driven by ambitious policies in various parts of the world that are sending clear, long-term signals for consumers and industry that the drive towards zero-emission vehicles will only increase over time.<sup>11</sup>

Without question, China has the most aggressive approach to electric vehicles. More than \$60 billion of government investment in research and development, tax exemptions and financing for battery-charging stations has encouraged some 400 Chinese companies to get into the electric car business.<sup>12</sup> While it appears that market dominance by China is a foregone conclusion, other countries are not willing to cede the opportunity.

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<sup>8</sup> Ibid.

<sup>9</sup> [Innovation Economy Council, Factory Forward \(2020\)](#).

<sup>10</sup> Ibid.

<sup>11</sup> [IEA, Global EV Outlook \(2020\)](#).

<sup>12</sup> [Washington Post \(17 January 2020\)](#).

Export-focused countries like Japan and South Korea are relying on their superior battery technology and production quality to compete internationally. Other countries, including the United Kingdom, Germany and the U.S., are looking to the future of auto manufacturing and the supply chain. Canada would be wise to follow suit.

The U.K.'s Automotive Transformation Fund aims to put the country at the heart of the zero-emission transition by supporting the electrification of the auto supply chain. Recognizing that battery manufacturing and assembly are key components of the electric vehicle supply chain, Germany is investing more than €1.5 billion in battery cell research and production. Battery manufacturers are typically located close to their customer base, which provides long-term stability for the growing electric vehicle market. This, in turn, opens up business opportunities for German subsidiaries of foreign companies looking to expand their operations. The U.S. just announced \$139 million in federal funding to advance electric vehicle technology under President Trump, and if Democratic candidate Joe Biden wins the fall election, he plans to retool factories to produce electric vehicles, their parts, and associated infrastructure.

If Canada is to capture the economic benefits of the domestic and global shift to electric vehicles, we need an industrial strategy that looks at Canada's comparative advantages across the entire electric vehicle supply chain. We have a mining sector that produces many of the metals and minerals needed for batteries, world-leading battery researchers, and a strong auto parts supply chain. Canada must leverage this opportunity to help build long-term economic resilience and ensure jobs in the future.

## **Seizing Canada's Hydrogen Opportunity**

Canada's target of achieving net-zero emissions by 2050 underscores the urgent need to identify and advance both policy- and technology-based solutions to meet this goal.

Increasingly, countries around the world have identified hydrogen as a fuel that has the potential to significantly reduce global emissions and are investing in its future as part of their economic stimulus and recovery packages.<sup>13</sup> Crucially, hydrogen may address the "toughest third" of global greenhouse gas emissions by 2050, which refers to sectors that are difficult to decarbonize and where alternatives for mitigation are limited, such as industry and heavy freight.<sup>14</sup>

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<sup>13</sup> [IEA, Future of Hydrogen \(2019\)](#); [IRENA, Hydrogen \(2019\)](#).

<sup>14</sup> [BloombergNEF, Hydrogen Economy Outlook \(2020\)](#).

Hydrogen can support our decarbonization efforts in three ways: by reducing the emissions-intensity of existing hydrogen production; by replacing other fuels with new hydrogen-based applications; and by using hydrogen as an energy storage solution.

In addition, there are long-term economic opportunities in exporting zero-carbon, made-in-Canada hydrogen and related technologies to other countries, and building a reputation as a low-carbon leader in a growing global hydrogen market.

Jurisdictions outside of Canada are recognizing this opportunity. Governments around the world are investing significant funds towards the development and expansion of their respective low-carbon hydrogen economies.

For example, the European Union has adopted a Union-wide hydrogen strategy and recently agreed on the world's greenest COVID-19 recovery package to date, which is expected to provide as much as €30 billion (\$47 billion) for the development of low-carbon hydrogen.<sup>15</sup> Additionally, Germany has allocated €9 billion (\$14 billion) for low-carbon hydrogen as part of its national hydrogen strategy.<sup>16</sup> Other European countries that have allocated significant funds towards hydrogen and adopted relevant strategies include the United Kingdom, the Netherlands, Spain, Portugal, and Denmark. Outside of Europe, South Korea plans to spend more than ₩114 trillion (CAD\$127 billion) on green projects that include hydrogen vehicles and infrastructure, while Australia is making up to A\$300 million (CAD\$287 million) available to support its national hydrogen strategy.<sup>17</sup>

Canada needs to make comparable investments to support its 2050 net-zero emissions goal and secure its share of a future global hydrogen market. Global demand for hydrogen could reach as much as 300 million tonnes by 2050, up from today's demand of around 70 million tonnes.<sup>18</sup> This anticipated growth in global hydrogen demand presents a significant long-term opportunity for Canada.

Therefore, we recommend foreseeing up to \$1 billion over five years to support Canada's national hydrogen strategy. This includes funding for research, development and demonstration along the full value chain of hydrogen (such as low-carbon hydrogen supply, distribution of hydrogen, and end-use applications) and establishing regional

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<sup>15</sup> [European Commission, Hydrogen Strategy \(2020\)](#); [Reuters \(20 July 2020\)](#); [Bloomberg \(20 May 2020\)](#).

<sup>16</sup> [Germany, National Hydrogen Strategy \(2020\)](#).

<sup>17</sup> [Reuters \(13 July 2020\)](#); [Australia \(4 May 2020\)](#).

<sup>18</sup> [Deloitte, Australian and Global Hydrogen Analysis \(2019\)](#); [IEA, Future of Hydrogen \(2019\)](#).

nodes that leverage local expertise and partnerships to design solutions where hydrogen is the optimal low-emission fuel of choice.

We thank the Standing Committee on Finance for inviting us to participate in this process. We would be pleased to discuss any of our recommendations with you in greater detail.