



# BRIDGE TO THE FUTURE:

FINAL REPORT FROM THE TASK FORCE  
FOR A RESILIENT RECOVERY

SEPTEMBER 2020



TASK FORCE  
FOR A RESILIENT  
RECOVERY



GRUPE DE TRAVAIL  
POUR UNE REPRISE  
ÉCONOMIQUE  
RÉSILIENTE

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As Canada comes out of the COVID crisis, governments and the private sector will turn their attention to building a long-term economic recovery. Let’s make that recovery resilient by supporting the jobs, infrastructure and growth that will keep Canada competitive in the clean economy of the 21st century.

The Task Force for a Resilient Recovery is an independent group of Canadian finance, policy and sustainability leaders determined to make sure Canada seizes this opportunity.

For a list of the members of the Task Force for a Resilient Recovery, see Appendix 6.

**For more information, visit: [www.recoverytaskforce.ca](http://www.recoverytaskforce.ca)**





## Executive Summary

The COVID-19 pandemic is a global health and economic crisis. Since it began, governments around the world have focused on the need for health care support and immediate economic relief for those directly affected.

Countries are now setting their sights on the longer-term horizon and determining how to drive an economic recovery. A number of historic green stimulus announcements, particularly in Europe and Asia, show positive signs that the recovery will support urgent climate goals and the growth of a low-carbon economy.

What will be Canada's response? How can we foster a recovery that gets Canadians back to work while ensuring our country is competitive, prosperous and climate-resilient in the clean economy of the twenty-first century? This is the urgent question that inspired the work of the Task Force for a Resilient Recovery.

The Task Force came together in May 2020 to provide independent and urgent advice on how government can build this kind of recovery through actions and investments over the next five years.

In developing this advice, the Task Force drew on leading international efforts while also assessing dozens of Canadian recovery proposals for economic, equity and climate benefits.

The result is five overarching bold moves, supported by 22 recommendations, and calling for \$55.4 billion in government investment over the next five years.

The decisions we make coming out of COVID will shape our country for years to come. We encourage governments, and all Canadians, to envision and work towards the future we truly want. The Task Force offers these recommendations as a bridge to a better Canada – one that is clean, prosperous and climate-resilient.

## 5 BOLD MOVES FOR A RESILIENT RECOVERY INVESTMENT SUMMARY

Gov't investment  
over 5 years, \$B

<b>#1 Invest in climate-resilient and energy-efficient buildings</b>	<b>27.25</b>
1.1 Expand public-private financing facilities for building retrofits	13.0
1.2 Expand existing provincial and municipal building retrofit programs, enhancing energy efficiency and climate resiliency	10.0
1.3 Train a diverse green building workforce	1.25
1.4 Demonstrate large-scale standardized retrofits	2.0
1.5 Work with provinces to ensure that new buildings meet stringent net-zero and resilience codes, and that a newly developed 'ResiliGuide' rating system can enable the financial sector to incent building resilience	-
1.6 Create an Indigenous Infrastructure Fund	1.0
<b>#2 Jumpstart Canada's production and adoption of zero-emission vehicles</b>	<b>7.0</b>
2.1 Support the development of the Canadian ZEV industrial ecosystem	2.5
2.2 Introduce a phased in ZEV mandate for all vehicle classes	-
2.3 Kickstart the adoption of ZEVs across Canada	2.5
2.4 Accelerate the installation of EV charging infrastructure across Canada	2.0
<b>#3 Go big on growing Canada's clean energy sectors</b>	<b>11.5</b>
3.1 Accelerate investments in clean, robust power grids	5.0
3.2 Support Canada's next-generation energy solutions	5.0
3.3 Catalyze and support national Indigenous clean energy action platforms	0.5
3.4 Support Canadian leadership in an emerging low-carbon hydrogen economy	1.0
<b>#4 Invest in the nature that protects and sustains us</b>	<b>4.65</b>
4.1 Invest in natural infrastructure	2.0
4.2 Accelerate global leadership in conservation and support Indigenous reconciliation	1.0
4.3 Grow financing for nature-based services	1.25
4.4 Grow and train the workforce for ecosystem restoration, monitoring and management, and nature tourism	0.4
<b>#5 Grow clean competitiveness and jobs across the Canadian economy</b>	<b>5.0</b>
5.1 Develop clean competitiveness roadmaps, capital strategies and action plans for key sectors	-
5.2 Invest in advanced skills and infrastructure	-
5.3 Accelerate the production and adoption of clean technologies across the economy	5.0
5.4 Increase the fairness of climate action	-

**TOTAL INVESTMENT OVER FIVE YEARS**

**\$55.4 Billion**



# BRIDGE TO THE FUTURE: FINAL REPORT FROM THE TASK FORCE FOR A RESILIENT RECOVERY

## The future we want.

It's been a hard few months. For businesses and workers, for seniors, for young people, for families, for Canadians everywhere. But when we come out of the COVID crisis, Canada will have the opportunity to rebuild. To restore our lives and livelihoods. To re-focus on the future we want, and build the bridge to get there.

What is the future we want? It's lots of things. It's safe. It's inclusive. It champions health care and education. It supports those disproportionately impacted by COVID. These and other important needs all deserve attention in Canada's recovery planning.

The future we want is also defined by three other qualities: it's clean, it's prosperous and it's resilient. It's clean because, by 2025, Canada is quickly and successfully transitioning away from a high-pollution economy to one that is resource-efficient and climate friendly. It's prosperous because our economy is growing, businesses are tapping fast-growing markets for low-carbon solutions, and Canadians across all regions have the opportunity for meaningful and rewarding work. And it's resilient because Canada's communities are built to withstand the impacts of climate change.

Clean, prosperous and resilient: that's the vision that inspired the focus of the Task Force for a Resilient Recovery. Our independent group of 15 Canadian finance, policy and sustainability leaders was established in May 2020 to urgently identify and recommend the key ingredients, over the next 1-5 years, for building the bridge to that kind of future.

Because in 2010 the world missed an opportunity. In a rush to re-boot economic growth following the 2008-09 financial crisis and ensuing recession, governments invested in a high-pollution recovery. They succeeded in getting people back to work, but did so on the back of a historic increase in climate pollution.<sup>1</sup>

In 2020-21, the world is poised to do better. Over the past few months, countries all around the globe, from France to Australia and from South Korea to Germany, have announced the first pieces of big green economic recovery packages. Like us, they envision a recovery from COVID that grows the economy while accelerating progress towards a net-zero emissions future; a recovery that pulls us out of this acute health and economic crisis while getting us on track to tackle a dangerous and quickly-unfolding one in climate change.

How will Canada respond? Will we lead, follow or lag behind our global peers?

Let's get Canadians back to work today, and let's get them back to work building the economy of tomorrow. As governments rush to support Canadian households and businesses, let's make sure that we're not making short-sighted investments that set us back on Canada's long-term goals. Let's not repeat the mistakes of the past. Let's instead invest in a recovery that creates jobs and growth for a cleaner, more prosperous, and more resilient future.

## **Building on momentum.**

Before COVID hit, Canada had been making important progress. The recommendations made in this report assume that this progress will continue apace. Canada must continue to advance climate policies that are stringent and predictable, yet streamlined and flexible. This requires moving ahead with federal and provincial commitments, and strengthening those commitments where needed, such as: Federal and provincial carbon pricing systems; clean fuel, efficiency and resilience standards; pollution regulations; investments in disaster mitigation; building code improvements; nature conservation commitments; phasing out fossil fuel subsidies; and support for equitable transitions.

In choosing which steps to take forward, let's not take any steps backward.

We also base our recommendations on the assumption that governments will incorporate the good advice already brought forward through important initiatives like the Economic Strategy Tables, the Expert Panel on Sustainable Finance, Generation Energy and the Pan-Canadian Framework for Clean Growth and Climate. Our advice is intended to complement and reinforce this existing work, while also giving it renewed purpose as part of a post-COVID response.

Canada should also support resilient recovery efforts abroad. As a major fossil fuels producer and environmental innovator, and a country warming at twice the international average, Canada has an important role to play on the world stage, including in shaping the trade and investment driving a low-carbon future and minimizing the destabilizing impacts of a warming world.

## **Where we ended up and how we got there.**

The question is what actions Canada's governments can take over the next 1-to-5 years that will kickstart Canadian jobs and economic growth while bridging us to a clean, prosperous and resilient future.

The Task Force for a Resilient Recovery is recommending five bold moves. Each of these bold moves is broken down in this report into a number of policy recommendations, with associated federal investments where appropriate, and then supported by suggested policy instruments in



the appendices. But the bold moves themselves stand out. They are major opportunities that rise to the top of all the many opportunities that are out there. Where government and private sector investment resources will be constrained coming out of COVID, we offer these as the surest five ways to secure Canada's clean, prosperous and resilient future.

The process that arrived at these five bold moves was rigorous and multi-pronged:

1. We analyzed international recovery initiatives and investments
2. We reviewed dozens of Canadian recovery proposals
3. We evaluated and refined ideas against a Resilient Recovery Assessment Framework, which assessed them on criteria of economy, environment and equity<sup>2</sup>
4. We considered ideas against a "Pathway to Net Zero" decision support tool to see just how well they could support Canada's transition to net-zero emissions by 2050
5. We incorporated input from 11 expert advisors
6. We narrowed down and crystallized the actions that we believe could have the biggest impact
7. We circulated a preliminary report, and finetuned our advice based on the feedback to it

What we've ended up with is in-depth analysis behind major actions in four economic sectors: Buildings, Transportation, Energy and Nature. These are the same areas of focus we see emerging in many international recovery efforts (see Box 1). Added to the actions in these four sectors is a bold move for driving economy-wide benefits.

Why are other opportunities not addressed here? First, because our Task Force is focused on the nexus of inclusive economic growth and climate progress. Recovery priorities that fall outside of this scope have been left to the other important expert initiatives underway. Secondly, because we recognize that Canadian governments are looking for the biggest bang for buck when considering the hundreds of opportunities out there for growing a cleaner, more resilient economy. We have attempted in our work to narrow down to the five opportunities that will yield the greatest number of long-term jobs and growth, while making the greatest contribution to Canada's climate goals. Here they are, the five bold moves for building a resilient recovery.

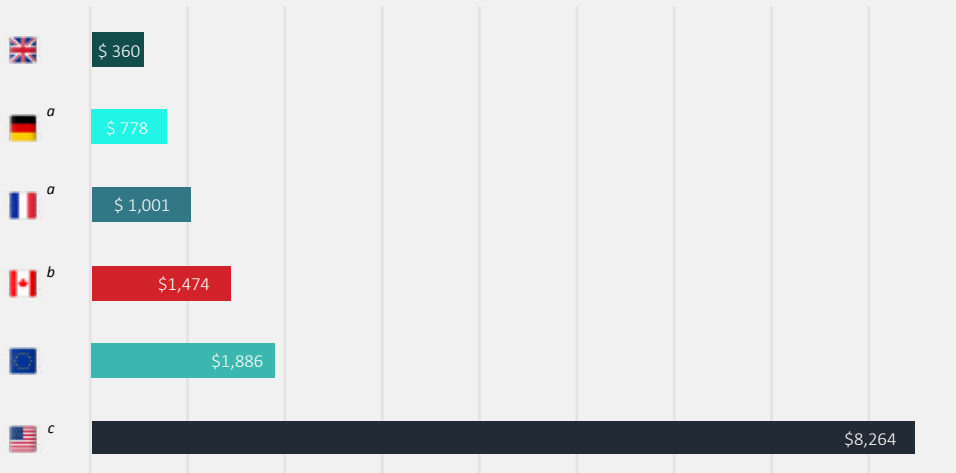
# INTERNATIONAL PERSPECTIVE: A LOOK AT SOME OF CANADA'S PEERS

\* Current to Sep 9, 2020  
 \* All figures \$CDN  
 \* Includes confirmed and proposed investments

## GREEN RECOVERY INVESTMENTS ANNOUNCED TO DATE

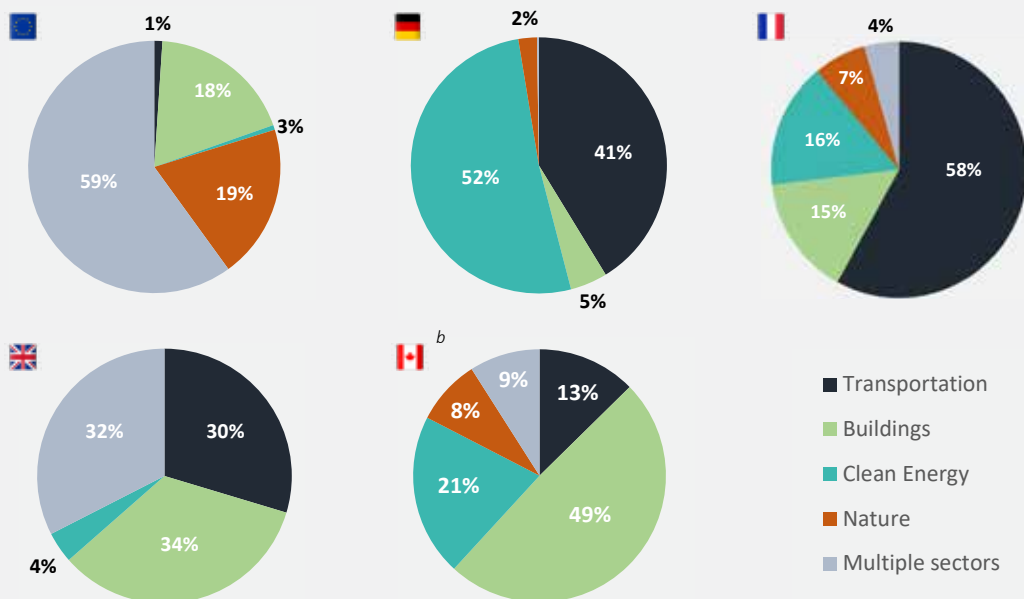
-  **European Union: \$1,135.0 B (over 1-10 yrs)**
-  **Germany: \$68.2 B (over 1-11 yrs)**
-  **France: \$67.4 B (over 1-11 yrs)**
-  **United Kingdom: \$25.1 B (over 1-7 yrs)**
-  **US (Biden proposal): \$2,712.0 B (over 4 yrs)**

## GREEN RECOVERY INVESTMENTS - PER CAPITA OVER THE NEXT 5 YEARS



<sup>a</sup> These investments in addition to share of EU investments  
<sup>b</sup> Based on recommendations by the Task Force for a Resilient Recovery  
<sup>c</sup> Based on a 4-yr commitment proposed by presidential candidate Joe Biden

## DISTRIBUTION OF GREEN RECOVERY INVESTMENTS OVER THE NEXT 5 YEARS



- Transportation
- Buildings
- Clean Energy
- Nature
- Multiple sectors



# BOLD MOVE

# #1



## INVEST IN CLIMATE-RESILIENT AND ENERGY-EFFICIENT BUILDINGS

The COVID crisis has sensitized Canadians to buildings – whether it’s the homes where we need to self-isolate, the office buildings that have been temporarily shuttered, or the grocery stores and businesses that we need to take precautions before entering. These buildings are a massive opportunity for Canada’s economic recovery from COVID.

The buildings sector employs millions of Canadians. Construction, alone, employed more than 1.4 million Canadians in 2019<sup>3</sup> and is our country’s largest private-sector industry.<sup>4</sup> The workforce behind making Canada’s buildings more energy efficient was 435,000-strong prior to COVID, and growing.<sup>5</sup>

At the same time, Canada’s buildings are one of our largest sources of carbon pollution. Almost 13 percent of Canada’s emissions come from buildings<sup>6</sup>, with the majority of those emissions coming from the energy needed for space heating in cooler months.<sup>7</sup>

By investing to make Canada’s buildings more energy efficient, we can support growth in Canada’s energy efficiency and buildings workforces while also cutting Canada’s carbon emissions and lowering energy costs for Canadian households and businesses. A win-win-win.

Canada’s buildings are also increasingly vulnerable to the impacts of climate change, with extreme weather events like flooding and wildfires leading to a steady rise in insured catastrophic losses over the past three decades (see Box 5). The costs of these impacts are borne by households, businesses and governments alike. Climate-resilient building retrofits are a cost-effective way to future-proof existing buildings and to save Canadians

BOX 02

### 16 to 30 JOBS

are created for every  
\$1M invested in energy  
efficiency<sup>12</sup>

BOX 03

Energy efficiency could  
cut an estimated

### 79 million tonnes

of carbon pollution by  
2030—or nearly 40% of  
Canada’s Paris climate  
commitment<sup>13</sup>

costs on disaster recovery. Studies calculate that every dollar invested in resilience averts as much as \$6 in future costs.<sup>8</sup>

Let's spearhead Canada's economic recovery and long-term growth by investing in deep energy and climate resilience upgrades for Canada's 15.5 million homes<sup>9</sup>, including public housing and in Indigenous communities, as well as for Canada's 482,000 commercial and institutional buildings<sup>10</sup>, including the government's own building portfolio.

Let's also make sure that the roughly 200,000 new buildings that we construct every year<sup>11</sup> are built using advanced building codes and efficiency standards so that new buildings produce less pollution, are more resilient to extreme weather events, and have lower energy costs.

It's crucial that, going forward, our definition of housing affordability fully account for the lower operating costs associated with better energy efficiency and climate resilience.

Canada's post-COVID economy needs to be a champion of energy-efficient and climate-resilient buildings.

Here is the policy combination to do that.

- **RECOMMENDATION 1.1:  
EXPAND PUBLIC-PRIVATE  
FINANCING FACILITIES FOR  
BUILDING RETROFITS**

**Objective:** Create a well-functioning building retrofit market that sustains jobs and manages health and affordability concerns.

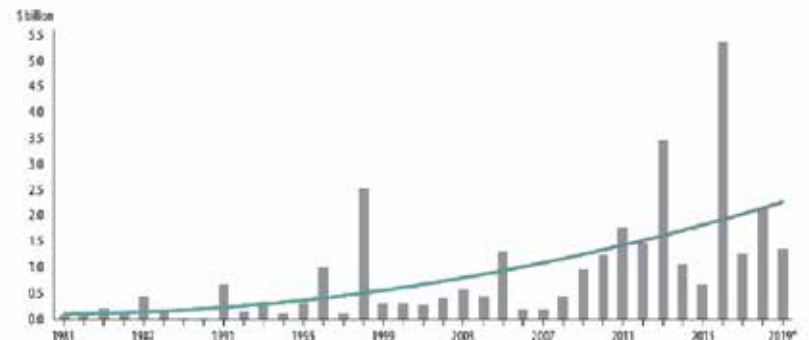
**How:** By using a \$13-billion public investment to leverage \$35 billion in private capital through de-risking and co-investment strategies, and enabling regional efficiency finance networks through standardized project origination and underwriting approaches, and aggregation and warehousing of projects to attract large institutional investors.

BOX 04

**2.8 million**  
**Canadian households**  
**live in energy poverty<sup>14</sup>.**  
**Greater energy efficiency**  
**helps households save**  
**money**

BOX 05

**Insured catastrophic losses in Canada have been rising steadily over three decades<sup>15</sup>**



- **RECOMMENDATION 1.2:**  
**EXPAND EXISTING PROVINCIAL AND MUNICIPAL BUILDING RETROFIT PROGRAMS, ENHANCING ENERGY EFFICIENCY AND CLIMATE RESILIENCY**

**Objective:** Accelerate the retrofitting of existing home and building stocks across Canada, creating jobs, improving energy efficiency and resiliency (including flood proofing), cutting energy costs, reducing energy poverty, increasing Indigenous participation, and advancing zero-carbon heating systems.

**How:** With \$10 billion for expanding the scale and scope of existing provincial and municipal energy efficiency and resilience program portfolios

- **RECOMMENDATION 1.3:**  
**TRAIN A DIVERSE GREEN BUILDING WORKFORCE**

**Objective:** Create new jobs and ensure there are sufficient skilled workers, particularly among women and Indigenous, to meet demand for energy efficient and climate resilient retrofit and building projects.

**How:** By investing \$1.25 billion in workforce development for energy efficiency and climate resiliency, including for enhancing access to training programs and for developing new approaches, and working through Canadian Colleges for a Resilient Recovery.

- **RECOMMENDATION 1.4:**  
**DEMONSTRATE LARGE-SCALE STANDARDIZED RETROFITS**

**Objective:** Transform energy retrofit approaches and develop economies of scale for Made-In-Canada innovative retrofit techniques.

**How:** With \$2 billion to select a diversity of large-scale demonstration projects through a competitive process, and applying innovative techniques to significantly reduce the cost, time, and customer disruption of deep energy retrofits.

- **RECOMMENDATION 1.5:**  
**WORK WITH PROVINCES TO ENSURE THAT NEW BUILDINGS MEET STRINGENT NET-ZERO AND RESILIENCE CODES, AND THAT A NEWLY DEVELOPED 'RESILIGUIDE' RATING SYSTEM CAN ENABLE THE FINANCIAL SECTOR TO INCENT BUILDING RESILIENCE**

**Objective:** Reduce emissions from Canada's building sector and improve the resilience of homes and businesses to the effects of climate change.

**How:** By adopting the new national model building code incorporating net-zero and resiliency measures, in the next year, while also providing incentives for provincial uptake; collaborating with provinces and the private sector on adoption of building energy

performance and resilience disclosure requirements; and investing \$2 million to integrate a 'ResiliGuide' rating, to measure the climate resilience of buildings, into the EnerGuide for Homes certification system.

▪ **RECOMMENDATION 1.6:**

**CREATE AN INDIGENOUS INFRASTRUCTURE FUND TO BOLSTER INVESTMENT IN SUSTAINABLE INFRASTRUCTURE IN INDIGENOUS COMMUNITIES ACROSS CANADA**

**Objective:** Drive investment in critical infrastructure, improve access to private capital in Indigenous communities, and enhance Canada's innovation and industrial base.

**How:** By creating a rotating \$1-billion-per-year, non-lapsing infrastructure fund, capitalized by the federal government and administered by an Indigenous-led governance structure.

*See Appendix 1 for additional detail and suggested policy instruments.*



# BOLD MOVE

# #2



## JUMPSTART CANADA'S PRODUCTION AND ADOPTION OF ZERO-EMISSION VEHICLES

Canada has a proud history of auto manufacturing. It is one of our largest manufacturing sectors, one of our biggest exporters, and historically a major employer. In 2018, the industry provided about 130,000 direct jobs and an estimated 370,000 indirect ones.<sup>16</sup>

Today, the auto industry is one of the most disrupted by the transition to a cleaner global economy. The internal combustion engine, which has been at the core of auto technology for over a hundred years, is one of the world's biggest sources of climate pollution. Meanwhile, zero-emission vehicle (ZEV) technologies are quickly establishing market dominance. Bloomberg New Energy Finance calculates that the internal combustion engine vehicle reached its peak sales in 2015 and will be overtaken by ZEV sales globally by 2035.<sup>17</sup>

If Canada is to have an auto sector in twenty years, it will be an auto sector that builds zero-emission vehicles.

Now is the time to invest in that transition. Let's fuel our economic recovery from COVID by harnessing Canadian know-how to accelerate towards a Canadian auto sector 2.0.

Let's build on success stories, like New Flyer, in Winnipeg, which manufactures electric transit buses and exports them around the world; like Lion Electric in Saint-Jérôme, Quebec, which builds electric school buses for Canadian and US customers; like Ontario auto plants in Windsor and Woodstock that are assembling the Chrysler Pacifica hybrid van and the Toyota RAV-4 hybrid

### BOX 06

**Ten biggest national markets already committed to phasing out sales of internal combustion engine vehicles<sup>18,19</sup>**

Market (by size) <sup>20</sup>	Cut-off year
GERMANY	2030
UNITED STATES (10 STATES)	2050
FRANCE	2040
UNITED KINGDOM	2035
INDIA	2030
CANADA	2040
SPAIN	2040
EGYPT	2040
NETHERLANDS	2030
TAIWAN	2040

SUV; and like the Alberta initiative that is currently piloting hydrogen-powered transport trucks. These successes, driven by Canadian ingenuity, are ready to be replicated and scaled up to drive the next generation of good Canadian manufacturing jobs.

But let's not just reap the economic rewards of manufacturing cleaner vehicles. As we come out of COVID, let's also capture the climate benefits. By making zero-emission cars, light trucks, buses and heavy-duty trucks more affordable here at home, and accelerating the replacement of pollution-emitting vehicles, we can dramatically cut the more than 180 megatonnes of carbon emissions coming from our transportation sector (see Box 8). So, at the same time as building our capacity to build and sell ZEVs, let's also give Canadians greater access to owning and riding on them.

Canada's post-COVID economy needs to be a champion of zero-emission vehicles. Here is the policy combination to do that.

- **RECOMMENDATION 2.1:**  
**SUPPORT THE DEVELOPMENT OF THE CANADIAN ZEV INDUSTRIAL ECOSYSTEM**

**Objective:** Support the retention and attraction of ZEV value-chain manufacturers and nurture a Canada-wide clean transportation jobs ecosystem.

**How:** By offering \$2.5 billion in dedicated repayable and non-repayable funding streams to support manufacturing of zero-emission vehicle and e-mobility components throughout the value-chain in Canada.

- **RECOMMENDATION 2.2:**  
**INTRODUCE A PHASED IN ZEV MANDATE FOR ALL VEHICLE CLASSES**

**Objective:** Ensure that Canadians in all provinces have access to ZEVs across all vehicle classes and provide a clear signal to the private sector in order to support industry training, retooling, investment and jobs.

**How:** By introducing ZEV mandate legislation that requires manufacturers to phase in a growing share of zero-emission vehicles on sales of both light-duty vehicles (similar to mandates in Quebec, BC and 12 U.S. states) and medium- and heavy-duty vehicles (similar to California's mandate).

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BOX 07

**35 of the world's biggest cities** have committed to buying only zero-emission buses for public transit by 2025<sup>21</sup>

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BOX 08

**EMISSIONS BY VEHICLE TYPE<sup>22</sup>:**

**65Mt** Freight trucks  
**54Mt** Pick-up trucks, SUVs, vans  
**35Mt** Cars

- **RECOMMENDATION 2.3:**  
**KICKSTART THE ADOPTION OF ZEVS ACROSS CANADA**

**Objective:** Increase the number and diversity of ZEV owners and riders in Canada, to support domestic industry and jobs, and to reduce pollution.

**How:** With \$2.5 billion for increasing and targeting the incentives available to consumers, including low-income Canadians, businesses, and local governments for purchasing or leasing zero-emission light-, medium- and heavy-duty vehicles.

- **RECOMMENDATION 2.4:**  
**ACCELERATE THE INSTALLATION OF EV CHARGING INFRASTRUCTURE ACROSS CANADA**

**Objective:** Make electric vehicle (EV) charging stations accessible and conveniently located for all drivers.

**How:** With \$2 billion for increasing funding for existing EV charging infrastructure programs in order to expand their scale and scope.

*See Appendix 2 for additional detail and suggested policy instruments.*

# BOLD MOVE

## #3



## GO BIG ON GROWING CANADA'S CLEAN ENERGY SECTORS

Canada's energy sectors are an enormous driver of our economic prosperity. They generated 832,500 direct and indirect jobs and contributed 10.6% of our GDP in 2018.<sup>23</sup> They also provide Canadian households and businesses with affordable electricity, heating and fuels – an energy advantage that produces benefits throughout the economy.

And Canada's energy advantage is increasingly low-carbon and clean. Our clean energy sectors grew 25% faster than the broader energy sector from 2007-2017.<sup>24</sup> They employed almost 300,000 Canadians in 2017, and were growing jobs 60% faster than the rest of the economy.<sup>25</sup>

It's this workforce that is putting Canada on track to hit a 90% target for emissions-free electricity by 2030,<sup>26</sup> giving Canada one of the cleanest power grids in the world. It's also driving a homegrown biofuel industry that is cutting emissions from diesel, gasoline, natural gas and jet fuels. It's installing solar power, biomass and district energy to reduce emissions and improve energy security in Indigenous and remote communities. And it's developing world-leading expertise in carbon capture and storage to cut fossil fuel emissions at the source.

Right now is the time to go big on Canada's clean energy sectors. Investments in this area have been shown to create almost three times as many jobs per investment dollar than fossil fuels.<sup>27</sup> And international studies bear out that these investments have particularly high and positive knock-on effects throughout the economy.<sup>28</sup> On the other hand, they also have the potential to dramatically reduce the 81% of Canada's carbon emissions currently coming from energy.<sup>29</sup>

BOX 09

**18 countries comprising  
more than  
75% of  
global GDP  
are currently rolling out  
hydrogen strategies<sup>31</sup>**



Smart investments now will help scale up Canadian ambition and cement Canada as a global clean energy powerhouse for years to come.

These investments should focus on three key areas. First, electricity. Canada has a unique advantage in clean and low-cost electricity. We need to strengthen our power grids to fully harness it. Second, on financing and growth of emerging low-carbon solutions, such as clean hydrogen and small modular nuclear reactors, where Canada has a clear global edge. And, third, on supporting Indigenous-led solutions. Indigenous businesses and communities are already behind more than 2,000 clean energy projects across Canada.<sup>30</sup> Many more are ready to be unleashed.

Canada's post-COVID economy needs to harness our clean energy advantage. Here is the policy combination to do that.

▪ **RECOMMENDATION 3.1:**

**ACCELERATE INVESTMENTS IN CLEAN, ROBUST POWER GRIDS**

**Objective:** Ensure Canada's power grids are robust, flexible, resilient and capable of supporting clean electrification of transportation, building heating and industry.

**How:** Launch the proposed \$5-billion Clean Power Fund – and consider additional capital if needed – with the modified purpose of accelerating investment in two areas: (1) to expand, extend or supplement electrical transmission and distribution grid capacity, where needed, to accommodate large-scale electrification of transportation, heating and industrial needs, and (2) to accelerate deployment of “smart” infrastructure, for both grids and loads, that enable grids across Canada to receive and balance more renewables.

▪ **RECOMMENDATION 3.2:**

**SUPPORT CANADA'S NEXT-GENERATION ENERGY SOLUTIONS**

**Objective:** Create or expand a financing agency that can support the development of promising low-carbon and diversification solutions across the innovation cycle, and act now to support shovel-ready next-generation projects.

**How:** With an arms-length government agency with the technical depth to support promising technologies that offer a net-zero future for Canada's resources sectors. The agency would be capitalized with \$5 billion over seven years and focused on two streams: scaling up existing shovel-ready projects, and investing in higher risk, earlier stage technologies such as geothermal power, advanced energy storage, renewable fuels, small modular reactors (SMRs) and bitumen beyond combustion.

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BOX 10

**In 2017, Canada's clean energy sectors employed almost 300,000 Canadians and were growing**

**60% faster**

**than the rest of the economy<sup>32</sup>**

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BOX 11

**81% of Canada's emissions are from energy production and consumption<sup>33</sup>**

- **RECOMMENDATION 3.3:**  
**CATALYZE AND SUPPORT NATIONAL INDIGENOUS CLEAN ENERGY ACTION PLATFORMS**

**Objective:** Support the development of 21<sup>st</sup>-century energy infrastructure across the country through Indigenous leadership and participation, enabling capacity building, partnerships and projects.

**How:** With \$500 million to accelerate the diffusion of clean energy technologies and infrastructure through an Indigenous-led capacity-building platform; project financing for clean energy systems; clean growth, employment and economic development programming; federal procurement; and national partnership building.

- **RECOMMENDATION 3.4:**  
**SUPPORT CANADIAN LEADERSHIP IN AN EMERGING LOW-CARBON HYDROGEN ECONOMY**

**Objective:** Harness Canada's global advantage in low-carbon hydrogen by de-risking investment, building infrastructure, growing export markets and supporting targeted commercialization of the cleanest hydrogen in the world.

**How:** By allocating \$1 billion to develop and implement an integrated national hydrogen strategy, in partnership with expert groups like the Transition Accelerator, including \$100 million to establish regional hydrogen nodes that leverage local expertise and partnerships to design solutions where hydrogen is the optimal low-emission fuel of choice.

*See Appendix 3 for additional detail and suggested policy instruments.*

# BOLD MOVE

## #4



## INVEST IN THE NATURE THAT PROTECTS AND SUSTAINS US

Canada is defined by its nature. We are home to the planet's largest uninterrupted area of forest, one quarter of its wetlands, 20% of its freshwater and the longest coastline in the world. This natural wealth underpins our economy. Our marketable natural resources, from energy to timber to minerals, employ 1.7 million Canadians directly and indirectly.<sup>33</sup> Add to that Canada's broader nature economy, including agriculture, tourism, fishing and hunting, Indigenous economic activities, and conservation, restoration and management, which employ hundreds of thousands more.

Nature is also one of the most cost-effective ways to fight climate change. An international study published last year found that nature-based solutions like forest conservation and regenerative agriculture could sequester enough carbon to get us more than a third of the way to the world's 2030 climate targets.<sup>34</sup> Natural infrastructure also provides us with an affordable solution for building resilience to the effects of climate change. Natural wetlands, for instance, are shown to reduce climate-related disaster costs by up to 38%.<sup>35</sup>

In other words, our nature economy is Canada's secret weapon for spurring a resilient recovery from COVID-19.

By investing in nature, we can create jobs across all regions and demographics at the same time as making cost-effective progress on climate change. We can further empower Indigenous leadership in conservation, drawing on a backlog of Indigenous-proposed protected areas. We can equip communities to harness natural infrastructure and

### BOX 12

**Natural wetlands can reduce climate-related disaster costs by:**

**29%** in rural areas

**38%** in urban areas<sup>37</sup>

### BOX 13

**Planting 2 billion trees will sequester carbon at the comparatively low cost of \$16-\$36 per tonne<sup>39</sup>**

reduce the costs of extreme weather events. We can provide farmers and forestry companies with access to environmental markets that reward carbon sequestration, soil health and conservation stewardship. We can create thousands of jobs for young people in tree planting, ecosystem restoration and nature tourism. And we can advance the next generation of employment by growing the world's most sustainably-managed resource sectors.

Canada's post-COVID recovery needs to be a champion of the nature economy. Here is the policy combination to do that.

- **RECOMMENDATION 4.1:**

- **INVEST IN NATURAL INFRASTRUCTURE**

- **Objective:** Restore and conserve natural infrastructure, such as wetlands, coastal marshes and riparian forests, to increase the climate resilience of nearby communities while also securing co-benefits like carbon storage, biodiversity conservation and cost savings.

- **How:** By adding a new dedicated \$500 million allocation for natural infrastructure as part of an expanded \$4-billion Disaster Mitigation and Adaptation Fund, with programming that expands eligibility to small-scale projects and spurs partnerships across the public sector while attracting private capital and leveraging insurance frameworks.

- **RECOMMENDATION 4.2:**

- **ACCELERATE GLOBAL LEADERSHIP IN CONSERVATION AND SUPPORT INDIGENOUS RECONCILIATION**

- **Objective:** Be a global conservation leader while advancing Indigenous reconciliation, mitigating climate change, creating jobs, and stewarding the natural capital that underpins our economy, health and well-being.

- **How:** By investing \$1 billion in the further expansion and management of Canada's Protected Areas network, particularly Indigenous Protected and Conserved Areas, but also national urban parks, while supporting infrastructure for nature tourism; growing investment in Indigenous guardians; and strengthening ecological monitoring, accounting, and systems-planning capacity.

- **RECOMMENDATION 4.3:**

- **GROW FINANCING FOR NATURE-BASED SERVICES**

- **Objective:** Leverage private capital to support stewardship and conservation by landowners, farmers, communities and resource managers.

- **How:** By implementing policies that grow and strengthen domestic environmental markets and drive private investment, and providing \$1.25 billion in incentives for carbon storage and biodiversity protection across Canada, building on existing legal frameworks and funding mechanisms.



- **RECOMMENDATION 4.4:**  
**GROW AND TRAIN THE WORKFORCE FOR ECOSYSTEM RESTORATION,  
MONITORING AND MANAGEMENT, AND NATURE-TOURISM**

**Objective:** Leverage existing conservation and resource management initiatives, such as the 2-billion tree commitment and Nature Fund, to grow the work force for a nature economy, and build capacity for increased ecosystem restoration, environmental monitoring, sustainable resource management and nature tourism.

**How:** By investing \$400 million to connect unemployed and underemployed Canadians with opportunities in the nature economy, and to boost the planning and implementation capacity of local governments, Indigenous groups, conservation agencies, forestry and agriculture operations, NGOs and tourism bodies.

*See Appendix 4 for additional detail and suggested policy instruments.*

# BOLD MOVE

# #5



## GROW CLEAN COMPETITIVENESS AND JOBS ACROSS THE CANADIAN ECONOMY

In 2015, with the signing of the Paris Agreement, 197 countries sent a powerful market signal to the world. The Global Commission on the Economy and Climate has since estimated US\$26 trillion in economic benefits, and as many as 65 million new jobs, globally by 2030, by advancing towards these goals and meeting the global demand for climate-smart solutions.<sup>39</sup> To put that in context, those job projections amount to three full-time jobs for every working Canadian. As far as economic growth opportunities go, there are few that are bigger than this.

But other countries are competing for these benefits and jobs too, and Canada can only earn its share by moving swiftly to deliver the low-carbon solutions the world wants.

To achieve that means accelerating the development and adoption of low-carbon solutions across all sectors of Canada's economy. Because in 2025, the most competitive and most resilient business, in any sector, will be the one that can provide the same product with lower environmental impact.

Positioning Canadian businesses and workers for this opportunity will take clear-sighted private sector initiative. Government can support this kind of initiative by articulating a clear destination, and then providing a roadmap to get there. That's why we are recommending clean competitiveness roadmaps, with associated sector-by-sector capital plans, that target key opportunities for Canada to succeed in a changing global economy.

BOX 14

**65 million**  
jobs from ambitious  
global climate action  
through 2030

BOX 15

Energy efficiency  
technologies have the  
potential to save industry  
**\$784 billion**  
per year<sup>41</sup>

These roadmaps will help unleash private sector initiative to get Canada to its net-zero destination. This echoes the very first recommendation of the Expert Panel for Sustainable Finance in 2019.

We also suggest a mix of supports – incentives, infrastructure and investment – that will help to drive clean innovation, growth and jobs across the Canadian economy. These will help reverse the dip in private investment in clean technology production and adoption caused by COVID, and get Canada’s clean economy powering forward again.

Canada’s post-COVID economy needs to support clean competitiveness and jobs across all sectors. Here is the policy combination to do that.

- **RECOMMENDATION 5.1:**  
**DEVELOP CLEAN COMPETITIVENESS ROADMAPS, CAPITAL STRATEGIES AND ACTION PLANS FOR KEY SECTORS**

**Objective:** Develop clear long-term pathways to drive Canadian jobs and success in the emerging global low-carbon and climate-resilient economy that builds on Canada’s sectoral and regional strengths.

**How:** By implementing the first recommendation of the Expert Panel on Sustainable Finance- “Map Canada’s long-term path to a low-emissions, climate-smart economy, sector by sector, with an associated capital plan” - and engaging all levels of government, business, experts and civil society in developing action plans to capture those opportunities.

- **RECOMMENDATION 5.2**  
**INVEST IN ADVANCED SKILLS AND INFRASTRUCTURE**

**Objective:** Build the skilled workforce and infrastructure that are the foundation for a clean, competitive and climate-resilient economy, and the next generation of jobs.

**How:** By working with provincial, territorial, municipal and Indigenous governments over the next 1-2 years to design, fund and implement system plans for skills and infrastructure that align with Canada’s clean competitiveness roadmaps.

- **RECOMMENDATION 5.3:**  
**ACCELERATE THE PRODUCTION AND ADOPTION OF CLEAN TECHNOLOGIES ACROSS THE ECONOMY**

**Objective:** Make Canada the best place in the world to grow a clean business in any sector.

**How:** By using targeted investment, blended finance and other incentives to attract the

BOX 16

**14 of the  
19 metals  
and minerals  
used to make solar panels  
are found in Canada<sup>42</sup>**

private investment needed to grow the production and use of clean technologies by businesses, industry and households across Canada, and committing an additional \$1 billion per year to support their scale-up and commercialization by expanding public co-investment and green procurement.

- **RECOMMENDATION 5.4:**

- **INCREASE THE FAIRNESS OF CLIMATE ACTION**

**Objective:** Increase affordability, reduce after-tax income inequality, and ensure the benefits and costs of climate action are fairly distributed.

**How:** By advancing equity in the design of climate policies and making the Climate Action Incentive more accessible.

*See Appendix 5 for additional detail and suggested policy instruments.*

# Road to recovery



The COVID-19 pandemic has locked the world in the deepest global recession since the 1930s. In Canada, it has resulted in record job losses that are unique not only in their scale, but also their scope and the types of jobs lost. The burden on Canadian households, businesses, communities and vulnerable populations has been extreme, and governments across Canada have responded by investing in much-needed relief measures.

As Canada comes out of the COVID crisis, governments and the private sector will turn their attention to building a long-term economic recovery.

The nature of this recovery can either accelerate us towards Canada's cleaner, more prosperous and more resilient future, or it can lock us into bad habits that undermine Canada's ability to succeed in the clean and climate-resilient economy of the 21<sup>st</sup> century.

This is an important moment. The decisions we make coming out of COVID will be ones that we and future Canadians live with for a long time. We urge governments, and Canadians everywhere, to think about the future we truly want. And then how to build the bridge to get from here to there.



# APPENDIX 1:

## BOLD MOVE #1: INVEST IN CLIMATE-RESILIENT AND ENERGY-EFFICIENT BUILDINGS

### Detailed recommendations and policy instruments

*Prepared by the Secretariat for the Task Force for a Resilient Recovery, which includes contributions from a number of organizations and researchers (see Appendix 6).*

#### ■ **RECOMMENDATION 1.1:** **EXPAND PUBLIC-PRIVATE FINANCING FACILITIES FOR BUILDING RETROFITS**

**Objective:** Create a well-functioning building retrofit market that sustains jobs and manages health and affordability concerns.

**How:** By using a \$13-billion public investment to leverage \$35 billion in private capital through de-risking and co-investment strategies, and enabling regional efficiency finance networks through standardized project origination and underwriting approaches, and aggregation and warehousing of projects to attract large institutional investors.

**Policy Instruments:** A \$13 billion capitalization<sup>42</sup> of public investment into a retrofit finance platform, divided between different administrative agents, each focusing on different parts of the market:

- Canada Infrastructure Bank (CIB) will focus on public, commercial & institutional buildings. CIB will also facilitate aggregation, securitization, and incentives for project origination.
- Canada Mortgage and Housing Corporation (CMHC) will underwrite residential financing, in partnership with Green Municipal Fund and utilities offering on-bill financing, and will offer a new 25% reduction in mortgage insurance premiums as an incentive to make resilience retrofits (mirrors existing incentive for energy efficiency).
- Natural Resources Canada (NRCan) will facilitate a network of regional organizations developing “on-the-ground” projects capable of meeting federal finance criteria. This will support a robust pipeline of projects.

**Key features:** Initial investments to focus on air quality, thermal comfort, and climate resilience improvements in affordable housing, schools, hospitals, and municipal buildings (MUSH and low-income multi-unit residential retrofits).

**Existing efforts:** CIB’s interpretation of “green infrastructure” has led to a focus on large-scale projects. This has created a gap for distributed energy solutions like building retrofits and solar energy. The Federation of Canadian Municipalities has developed financing programs for low-rise residential market using strategies such as PACE and on-bill financing. Efficiency One in Nova Scotia has expressed interest in administering a Green

Bank for Atlantic Canada that supports the establishment of well-functioning retrofit market, creates jobs and addresses affordability.

■ **RECOMMENDATION 1.2:**  
**EXPAND EXISTING PROVINCIAL AND MUNICIPAL BUILDING RETROFIT PROGRAMS, ENHANCING ENERGY EFFICIENCY AND CLIMATE RESILIENCY**

**Objective:** Accelerate the retrofitting of existing home and building stocks across Canada, creating jobs, improving energy efficiency and resiliency (including flood proofing), cutting energy costs, reducing energy poverty, increasing Indigenous participation, and advancing zero-carbon heating systems.

**How:** With \$10 billion for expanding the scale and scope of existing provincial and municipal energy efficiency and resilience program portfolios

**Policy instruments:**

- Three-year rapid and accountable funding increase of \$10 billion, split between the Low-Carbon Economy Fund and the Green Municipal Fund
- New homeowner tax credit for resiliency retrofits analogous to the Home Accessibility Tax Credit and designed to encourage immediate activity

**Key features:** This program would be administered by experienced energy efficiency and climate resiliency program administrators who operate portfolios of programs, and with established systems for cost-effectiveness testing; evaluation, measurement and verification; and performance tracking. It would also leverage the expertise of FCM and the successful track record of the Green Municipal Fund.

**Existing efforts:** The Low-Carbon Economy Fund has already disbursed funds to provincial energy efficiency program administrators. A direct application from program administrators, rather than negotiation with provinces, will enable quicker investments.

■ **RECOMMENDATION 1.3:**  
**TRAIN A DIVERSE GREEN BUILDING WORKFORCE**

**Objective:** Create new jobs and ensure there are sufficient skilled workers, particularly among women and Indigenous, to meet demand for energy efficient and climate resilient retrofit and building projects.

**How:** By investing \$1.25 billion in workforce development for energy efficiency and climate resiliency, including for enhancing access to training programs and for developing new approaches, and working through Canadian Colleges for a Resilient Recovery.

**Policy instruments:**

- Increase funding through existing training organizations such as the Canada Green Building Council, the Canadian Institute for Energy Training, Eco Canada, Passive House Canada, the Canadian Home Builders Association, post-secondary institutions, professional associations, and trade unions.
- Work with universities and technical colleges to develop new training programs, such as the emerging collaboration across community colleges to develop a Resilient Recovery Building Training Program.
- Expand skills and knowledge of existing private sector energy advisors as (now) energy and resilience advisors.

**Key features:** Implement a dedicated strategy to engage women and young people who have lost their jobs in low-wage service sectors to find new careers in energy efficiency/resilience in areas such as sales and customer engagement, administration, and the skilled trades. Dedicate \$100 million of these funds to update and extend training in resilience to extreme weather.

■ **RECOMMENDATION 1.4:**  
**DEMONSTRATE LARGE-SCALE STANDARDIZED RETROFITS**

**Objective:** Transform energy retrofit approaches and develop economies of scale for Made-In-Canada innovative retrofit techniques.

**How:** With \$2 billion to select a diversity of large-scale demonstration projects through a competitive process, and applying innovative techniques to significantly reduce the cost, time, and customer disruption of deep energy retrofits.

**Policy instruments:**

- \$2 billion funding for a competition implemented through a partnership between Impact Canada, Federation of Canadian Municipalities, and Natural Resources Canada's Office of Energy R&D.

**Key features:** Early candidates for awards include already-designed Community Energy Plans and at-scale retrofit concepts, such as The Atmospheric Fund's "retrofit concierge" concept, Sustainable Building Canada's net-zero energy program platform, the Energize Bridgewater in Nova Scotia, the Windsor Deep Energy Retrofit project, and the Pembina Institute's Affordable Housing Renewal Project.

**Existing efforts:** Standardized retrofits have been piloted on a small scale in the Sundance Co-op in Edmonton, Alberta, and CanmetENERGY is developing, testing and validating prefabricated building envelope technologies.<sup>43</sup>

■ **RECOMMENDATION 1.5:**

**WORK WITH PROVINCES TO ENSURE THAT NEW BUILDINGS MEET STRINGENT NET-ZERO AND RESILIENCE CODES, AND THAT A NEWLY DEVELOPED ‘RESILIGUIDE’ RATING SYSTEM CAN ENABLE THE FINANCIAL SECTOR TO INCENT BUILDING RESILIENCE**

**Objective:** Reduce emissions from Canada’s building sector and improve the resilience of homes and businesses to the effects of climate change.

**How:** By adopting the new national model building code incorporating net-zero and resiliency measures, in the next year, while also providing incentives for provincial uptake; collaborating with provinces and the private sector on adoption of building energy performance and resilience disclosure requirements; and investing \$2 million to integrate a ‘ResiliGuide’ rating, to measure the climate resilience of buildings, into the EnerGuide for Homes certification system.

**Policy instruments:**

- Provide bonus funding for provincial adoption of upper tiers of model energy codes
- Develop a rating system to assess climate resilience as a first step towards incenting development and uptake of resilient retrofit programming (e.g. enabling green mortgages).

**Key features:** Achieve 90% compliance with net-zero energy ready building codes by 2030. Natural Resources Canada to leverage new residential climate resilience measures incorporated by National Research Council in the National Model Building Code to develop a ResiliGuide label and scoring system. This would form the basis in training existing private sector energy advisors in resilience measures.

**Existing efforts:** Model energy codes are expected to be released in the Fall of 2020. Between 2016 and 2018, the Intact Centre at the University of Waterloo conducted over 500 home flood protection assessments in Burlington, Toronto and Saskatoon. This pilot effort has demonstrated the viability of performing a residential flood resilience assessment using similar methods to that previously deployed for energy efficiency. Flood risk disclosure in the residential real estate market is driving a retrofit market in locations where flooding has recently occurred.

■ **RECOMMENDATION 1.6:**

**CREATE AN INDIGENOUS INFRASTRUCTURE FUND TO BOLSTER INVESTMENT IN SUSTAINABLE INFRASTRUCTURE IN INDIGENOUS COMMUNITIES ACROSS CANADA**

**Objective:** Drive investment in critical infrastructure, improve access to private capital in Indigenous communities, and enhance Canada’s innovation and industrial base.

**How:** By creating a rotating \$1-billion-per-year, non-lapsing infrastructure fund, capitalized by the federal government and administered by an Indigenous-led governance structure.

**Policy instruments:**

- Develop a \$1B funding mechanism, established with seeding assistance, that will offer a blended finance mechanism to crowd in funding from financial institutions, the private sector, university and foundation endowments, international funding agencies and private philanthropists
- This fund should be administered by an external third-party Indigenous-led organization

**Key features:** Offers funding mechanism that enables direct community access and is free of allocative quotas. This will ensure projects come directly from Indigenous communities. All project submissions should come from Indigenous communities or be developed/ designed in partnership with Indigenous communities.

**Existing initiatives:** There is a similar proposal emerging in the First Nations Climate Initiative (FNCI)- brought forward by the Haisla Nation, Lax Kw'alaams Band, Nisga'a Nation and Metlakatla First Nation. FNCI Nations of British Columbia recently released a Policy Discussion Framework Proposal calling on Federal, Provincial and other First Nations Governments, as well as the private sector and civil society organizations, to join in a new initiative to mitigate climate change and alleviate poverty within First Nation communities.

## POTENTIAL PARTNERS FOR BOLD MOVE #1:

- Canadian Home Builders Association
- Buildings Trades Union
- Canadian Council for Aboriginal Business
- Canada Green Building Council
- Canadian Institute for Energy Training
- The Atmospheric Fund
- Eco Canada
- Passive House Canada
- Sustainable Building Canada
- Indigenous Clean Energy
- Indigenous Infrastructure Fund
- Intact Centre on Climate Adaptation
- Efficiency Canada
- Insurance Bureau of Canada
- Brookfield Global Integrated Solutions
- Post-secondary institutions
- Professional associations
- Federation of Canadian Municipalities
- Low-Carbon Cities Canada
- First Nations Climate Initiative



- Provincial energy efficiency program administrators
- Energy utilities
- Energy-efficiency product manufacturing sector
- Financial sector
- Real estate sector
- Natural Resources Canada
- Employment and Services Development Canada
- Canada Infrastructure Bank
- Canada Mortgage and Housing Corporation
- Impact Canada

# APPENDIX 2:

## BOLD MOVE #2: JUMPSTART CANADA'S PRODUCTION AND ADOPTION OF ZERO-EMISSION VEHICLES

### Detailed recommendations and policy instruments

*Prepared by the Secretariat for the Task Force for a Resilient Recovery, which includes contributions from a number of organizations and researchers (see Appendix 6).*

#### ■ **RECOMMENDATION 2.1:** **SUPPORT THE DEVELOPMENT OF THE CANADIAN ZEV INDUSTRIAL ECOSYSTEM**

**Objective:** Support the retention and attraction of ZEV value-chain manufacturers and nurture a Canada-wide clean transportation jobs ecosystem.

**How:** By offering \$2.5 billion in dedicated repayable and non-repayable funding streams to support manufacturing of zero-emission vehicle and e-mobility components throughout the value-chain in Canada.

#### **Policy instruments:**

- Create a dedicated program under Stream 3 of the Strategic Innovation Fund (SIF), to focus on investments in:
  - o Development of the Canadian battery supply chain throughout the supply chain (from mining and extraction and chemical processing, to battery packing and recycling)
  - o Electric vehicle assembly from original equipment manufacturers (OEMs) to support investments in domestic ZEV production and attract foreign direct investment
  - o Wider ZEV supply chain parts manufacturing
- Create a dedicated program under Stream 5 of SIF to develop a national e-mobility ecosystem that promotes collaboration in areas of clean and smart mobility.

**Key features:** By announcing the total amount of support from the beginning, this policy will create a clear market signal. The policy can be executed leveraging the existing infrastructure of the Strategic Innovation Fund. However, several federal departments should collaborate on the development of the policy including: ISED, Privy Council, TBS, NRCan, ECCC and Global Affairs. Given that these policies can fit within an existing program, the most important criteria for success will be political support and dedicated leadership from the private sector.

**Existing efforts:** The Strategic Innovation Fund could technically support ZEV related projects, however to date there has been limited activity in this area due to the program’s wide applicability across multiple sectors. Specifically, in 2017, the SIF consolidated and simplified the Strategic Aerospace and Defence Initiative, Technology Demonstration Program, Automotive Innovation Fund and Automotive Supplier Innovation Program. While this was an attempt to streamline funding applications, it lacked the “strategic” focus needed for industries that are undergoing major changes, such as the automotive industry.

■ **RECOMMENDATION 2.2:**  
**INTRODUCE A PHASED-IN ZEV MANDATE FOR ALL VEHICLE CLASSES**

**Objective:** Ensure that Canadians in all provinces have access to ZEVs across all vehicle classes and provide a clear signal to the private sector in order to support industry training, retooling, investment and jobs.

**How:** By introducing ZEV mandate legislation that requires manufacturers to phase in a growing share of zero-emission vehicles on sales of both light-duty vehicles (similar to mandates in Quebec, BC and 12 U.S. states) and medium- and heavy-duty vehicles (similar to California’s mandate).

**Policy instruments:**

- Broad instrument: ZEV mandate
  - o Annual %-of-sales requirements to grow over 10+ year timeframe
  - o Tradeable credits provides for flexibility among manufacturers
- Targets for LDVs (light-duty vehicles):
  - o Set ambitious but achievable requirements based on rigorous analysis
  - o Current federal voluntary target (30% of new sales by 2030) considered a minimum
- Targets for MHDVs (medium and heavy-duty vehicles): Align with California’s MHDV ZEV mandate<sup>44</sup>
  - o Requirement begins in 2024
  - o Ensures approximately 1 in 3 MHDVs sold in 2030 are ZEVs (specific requirements vary by vehicle class)
  - o Covers all classes: pick-ups, straight trucks and truck tractors

**Key features:**

- Targets should be based on rigorous modeling to determine what is achievable based on other constraints on adoption.
- Extensive engagement with industry is required to achieve buy-in and send a clear signal to manufacturers and encourage production of ZEVs to meet targets.
- Target is for between one third and one half of new vehicle sales to be zero-emitting within a decade.

**Existing efforts:** Both Quebec and BC have adopted ZEV mandates for light-duty vehicles, requiring automakers to sell a minimum number of ZEVs based on a percentage of overall vehicle sales, with targets that increase over time. Quebec’s mandate was adopted in 2018, and the first compliance report released in April 2020 shows full compliance by all automakers.<sup>45</sup> BC’s ZEV mandate<sup>46</sup> targets align exactly with Canada’s voluntary ZEV sales targets (10% of sales by 2025, 30% by 2030 and 100% by 2040). The Quebec government is currently conducting a consultation to understand whether targets should be revised upwards, and whether the scope should be expanded to include medium- and heavy-duty vehicles.

■ **RECOMMENDATION 2.3:**  
**KICKSTART THE ADOPTION OF ZEVS ACROSS CANADA**

**Objective:** Increase the number and diversity of ZEV owners and riders in Canada, to support domestic industry and jobs, and to reduce pollution.

**How:** With \$2.5 billion for increasing and targeting the incentives available to consumers, including low-income Canadians, businesses, and local governments for purchasing or leasing zero-emission light-, medium and heavy-duty vehicles.

**Policy instruments:**

- Increase funding for existing ZEV federal purchasing initiatives and ZEV awareness programs, while:
  - Increasing incentive levels to improve affordability of ZEVs
  - Expanding incentives to include ZEV trucks and buses
  - Tying federal funding for government fleets to ZEV procurement requirements
  - Ensuring sufficient funding to sustain incentives for multiple years to eliminate uncertainty for industry stakeholders
  - Expanding NRCan’s heavily oversubscribed ZEV Awareness Initiative

**Key features:**

- Incentives will be designed with careful attention to the current and forecasted incremental cost of ZEVs compared to conventional vehicles, as well as the weighting of up-front costs vs long-term savings for different segments of the market (e.g. personal vehicle purchases vs fleet purchases).
- Vehicle purchase price caps intended to exclude luxury vehicles need to consider the forecasted availability of ZEV SUVs and pickup trucks in the near future. These are segments that are especially popular in regions that are particularly hard hit by the COVID crisis.
- The federal government will coordinate with provincial governments that are also offering support in order to anticipate the combined impact of all incentives.

**Existing efforts:** The Federal iZEV program currently offers up to \$5000 per light-duty ZEV, with a vehicle base-price cap of \$45,000. Ongoing funding for this program has not been confirmed. Quebec currently offers up to \$8,000 per light-duty ZEV and has announced intentions to continue its incentive program through to 2026, although incentive levels may be reduced over that time.<sup>47</sup> Quebec also offers incentives for some medium- and heavy-duty ZEVs, including school buses<sup>48</sup> and commercial trucks<sup>49</sup>. BC currently offers up to \$3,000 for light-duty EVs<sup>50</sup>, and up to \$50,000 for heavy-duty ZEVs<sup>51</sup>.

■ **RECOMMENDATION 2.4:**  
**ACCELERATE THE INSTALLATION OF EV CHARGING INFRASTRUCTURE ACROSS CANADA**

**Objective:** Make electric vehicle (EV) charging stations accessible and conveniently located for all drivers.

**How:** With \$2 billion for increasing funding for existing EV charging infrastructure programs in order to expand their scale and scope.

**Policy instruments:** Bolster two existing funding programs: NRCan’s Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative (EVAFIDI) and NRCan’s Zero Emission Vehicle Infrastructure Program (ZEVIP), in order to:

- Expand charging infrastructure beyond highways and into communities (increase from 1,000 to 5,000 fast charging ports by 2025)
- Support charging infrastructure in multi-unit residential buildings (increase from 20,000 to 40,000 by 2024)
- Create a new dedicated funding stream for heavy-duty and bus fleet charging infrastructure

**Key features:** NRCan’s existing programs have ambitious targets, but deployment has been limited by the capacity to handle a large number of applications. Increasing these targets will require either additional resources to handle a larger volume of applications or adjustments to program design that minimize administrative efforts, or both.

**Existing efforts:**

NRCan has two existing ZEV infrastructure funding initiatives that can be built upon:

- EVAFIDI, which is primarily focused on fast charging infrastructure along highway corridors
- ZEVIP, which is primarily focused on charging infrastructure in the built environment, including in multi-unit residential buildings, workplaces, and fleet depots



## POTENTIAL PARTNERS FOR BOLD MOVE #2:

- Electric Mobility Canada
- Plug N' Drive
- Automotive Parts Manufacturers Association
- Original equipment manufacturers
- Provincial governments
- Strategic Innovation Fund
- Invest in Canada
- Innovation Science and Economic Development Canada
- Transport Canada
- Natural Resources Canada
- Global Affairs Canada

# APPENDIX 3:

## BOLD MOVE #3: GO BIG ON GROWING CANADA'S CLEAN ENERGY SECTORS

### Detailed recommendations and policy instruments

*Prepared by the Secretariat for the Task Force for a Resilient Recovery, which includes contributions from a number of organizations and researchers (see Appendix 6).*

#### ■ RECOMMENDATION 3.1: ACCELERATE INVESTMENTS IN CLEAN, ROBUST POWER GRIDS

**Objective:** Ensure Canada's power grids are robust, flexible, resilient and capable of supporting clean electrification of transportation, building heating and industry.

**How:** Launch the proposed \$5-billion Clean Power Fund – and consider additional capital if needed – with the modified purpose of accelerating investment in two areas: (1) to expand, extend or supplement electrical transmission and distribution grid capacity, where needed, to accommodate large-scale electrification of transportation, heating and industrial needs, and (2) to accelerate deployment of “smart” infrastructure, for both grids and loads, that enable grids across Canada to receive and balance more renewables.

**Policy instrument:**

- Financial support for multi-stakeholder planning and decision-making, allocated by NRCan to advance the agenda laid out in Regional Electricity Cooperation and Strategic Infrastructure (RECSI) initiative.
- Partial infrastructure funding for already-approved projects, allocated through the \$5B Clean Power Fund under the Investing in Canada Plan.
- “Top-off” capital for deployment of storage, smart meters and other demand-side initiatives, where needed, to ensure utility cost-effectiveness.

**Key features:** Will support multi-stakeholder planning and decision-making. This is important in light of the lack of federal jurisdiction over electricity infrastructure within Canada. This means success depends on political will and cooperation between provincial governments, Indigenous governments, regional system operators, private landowners, and private sector investors.

**Existing Efforts:** This proposal builds on NRCan's Regional Electricity Cooperation and Strategic Infrastructure (RECSI) initiative that took a first step in drawing together planners and policy makers from different provinces to identify cost-effective opportunities. The support for this initiative should come through the \$5B Clean Power Fund to be established by Infrastructure Canada and sourced through the Canada Infrastructure Bank.

## ■ RECOMMENDATION 3.2: SUPPORT CANADA'S NEXT-GENERATION ENERGY SOLUTIONS

**Objective:** Create or expand a financing agency that can support the development of promising low-carbon and diversification solutions across the innovation cycle, and act now to support shovel-ready next-generation projects.

**How:** With an arms-length government agency with the technical depth to support promising technologies that offer a net-zero future for Canada's resource sectors. The agency would be capitalized with \$5 billion over seven years and focused on two streams: scaling up existing shovel-ready projects, and investing in higher risk, earlier stage technologies such as geothermal power, advanced energy storage, renewable fuels, small modular reactors (SMRs) and bitumen beyond combustion.

### **Policy instruments:**

- An arms-length government agency with the technical depth required to support high-potential technologies that offer a net-zero future for Canada's resource sectors. This agency should be capitalized with \$5B over the first seven years.
- For a suite of projects ready to go at this time, the government should leverage existing programs and funding from Business Development Canada and Export Development Canada, as well as funding from NRCan, ISED, Regional Development Agencies, SDTC and third parties such as the Federation for Canadian Municipalities.

### **Key features:**

- The \$5 billion commitment will be divided between two streams:
  - One will fund disruptive innovation in a mission-oriented approach, moving high-potential ideas from applied research to commercialization (IP publicly retained).
  - The other will play a project finance role, scaling up existing commercial technologies, co-investing with the private sector, institutional investors to crowd in finance. Designated support will be allocated to SMEs and aboriginal innovation.
- Offer support for universities and colleges to ensure graduates are prepared to advance the next generation of Made-In-Canada energy and resource solutions.

### **Existing efforts:**

- ARPA-E in the United States (created in American Recovery and Reinvestment Act, 2010 and modelled after DARPA). ARPA-E was created to offer long-term patient capital to innovative leading technologies, and allow for private sector co-investment. Over the first eight years, ARPA-E invested USD\$2.8 billion, crowded in USD\$3.2 billion, created 385 patents and spawned 82 new companies.
- Horizon 2020 in the EU (now transitioning to Horizon Europe for the 2021-2027 period) is the EU's Framework Program for Research and Innovation. Its 7-year budget was almost EUR 80 billion.
- The Alberta Oil Sands Technology and Research Authority (AOSTRA) invested \$1.4 billion (2019 \$) in commercializing *in situ* production techniques, allowing access to the 80% of Alberta oil sands not amenable to mining.

- The work of an Innovation Fund would need to align with a number of existing government agencies with similar goals, including Sustainable Development Technologies Canada, Alberta Innovates, the Regional Development Agencies and Innovation, Science and Economic Development Canada.

### ■ **RECOMMENDATION 3.3:**

#### **CATALYZE AND SUPPORT NATIONAL INDIGENOUS CLEAN ENERGY ACTION PLATFORMS**

**Objective:** Support the development of 21<sup>st</sup>-century energy infrastructure across the country through Indigenous leadership and participation, enabling capacity building, partnerships and projects.

**How:** With \$500 million to accelerate the diffusion of clean energy technologies and infrastructure through an Indigenous-led capacity-building platform; project financing for clean energy systems; clean growth, employment and economic development programming; federal procurement; and national partnership building.

#### **Policy instruments:**

- \$28 million in programming support for a capacity-building platform led by Indigenous organizations, including participation by youth and women
- \$380 million in project finance for micro-grid systems, off-grid diesel reduction, community energy planning, energy efficient infrastructure, renewable energy, smart grids, energy storage, viable grid connections and innovative technologies
- \$75 million for high-impact economic development programming advancing federal and provincial-territorial cooperation for Indigenous clean energy leadership
- \$5 million for a federal procurement arrangement for Indigenous clean energy services and clean power
- \$12 million to support national gatherings that bring together Indigenous communities and people with all levels of government (including municipalities), the broader energy sector and private corporations, to advance the diffusion of clean energy technologies and infrastructure investment

#### **Existing efforts:**

- Indigenous capacity building support through Indigenous Clean Energy (ICE) including 20/20 Catalysts Program, ICE Network and CoLabs and Bringing it Home (housing and energy efficiency)
- Indigenous Off Diesel Initiative (NRCan, ICE, Pembina)
- First Nations Clean Energy Working Group (BC)
- Ontario Community Energy Champions (supported by Ontario energy agency – IESO)
- Youth Employment: Canada Works, ECO Canada, and Canadian Electricity Human Resources Council
- First Nations Power Authority (SK)
- A.R.E.N.A. Arctic Renewable Energy Network Academy (Polar Canada, on hold due to COVID)
- Energy Retrofits training in person and remotely (Energy Matters (ON), EfficiencyOne (NS),
- Clean Foundation (NS)

■ **RECOMMENDATION 3.4:**  
**SUPPORT CANADIAN LEADERSHIP IN AN EMERGING LOW-CARBON HYDROGEN ECONOMY**

**Objective:** Harness Canada’s global advantage in low-carbon hydrogen by de-risking investment, building infrastructure, growing export markets and supporting targeted commercialization of the cleanest hydrogen in the world.

**How:** By allocating \$1 billion to develop and implement an integrated national hydrogen strategy, in partnership with expert groups like the Transition Accelerator, including \$100 million to establish regional hydrogen nodes that leverage local expertise and partnerships to design solutions where hydrogen is the optimal low-emission fuel of choice.

**Policy instruments:**

- Launch multiple hydrogen hubs at regions across Canada that can advance locally-design solutions, remove regulatory barriers, design public-private partnerships and coalitions.
- Launch a five-year Canadian hydrogen institute to leverage independent expertise, convene regional actors, and advance national and regional policy that accelerates the adoption of low-carbon hydrogen.

**Key features:**

- The launch of regional hydrogen hubs will be supported through Stream 5 of the Strategic Innovation Fund.
- Mandate of the hydrogen hubs would be to develop projects with local actors, and work with regulators to enable the development of hydrogen transmission and fuelling infrastructure. Projects should be prioritized based on technological readiness and demand.
- The Hydrogen Institute will have a five-year mandate to research regulatory and policy alignment across different levels of government, conduct independent analysis and work with industry groups to identify net-zero pathways and economic opportunities across regions. The Institute would support the work being conducted on-the-ground by the hubs.

**Existing efforts:**

Hydrogen strategies have been advanced as components of green recovery packages in Germany, the European Union and South Korea.<sup>52</sup> Japan has a hydrogen strategy, but not a low-carbon hydrogen strategy. Canada is currently developing a National Hydrogen Strategy.<sup>53</sup> This would build on existing efforts to ensure that hydrogen’s versatility leads to regionally-driven solutions, lowers barriers to adoption, and advances the energy carrier’s export potential.



## POTENTIAL PARTNERS FOR BOLD MOVE #3:

- The Transition Accelerator
- The Clean Resource Innovation Network (CRIN)
- Indigenous Clean Energy
- Alberta Innovates
- Energy Futures Lab
- Energy Storage Canada
- QUEST (Quality Urban Energy Systems of Tomorrow)
- Utilities and local distribution companies
- Federation of Canadian Municipalities
- Local governments
- Technology developers
- Business Development Canada
- Canada Infrastructure Bank
- Export Development Canada
- Infrastructure Canada
- Innovation Science and Economic Development Canada
- Natural Resources Canada
- Regional Development agencies
- Strategic Innovation Fund
- Sustainable Development Technology Canada

# APPENDIX 4:

## BOLD MOVE #4: INVEST IN THE NATURE THAT PROTECTS AND SUSTAINS US

### Detailed recommendations and policy instruments

*Prepared by the Secretariat for the Task Force for a Resilient Recovery, which includes contributions from a number of organizations and researchers (see Appendix 6).*

#### ■ **RECOMMENDATION 4.1:** **INVEST IN NATURAL INFRASTRUCTURE**

**Objective:** Restore and conserve natural infrastructure, such as wetlands, coastal marshes and riparian forests, to increase the climate resilience of nearby communities while also securing co-benefits like carbon storage, biodiversity conservation and cost savings.

**How:** By adding a new dedicated \$500 million allocation for natural infrastructure as part of an expanded \$4-billion Disaster Mitigation and Adaptation Fund, with programming that expands eligibility to small-scale projects and spurs partnerships across the public sector while attracting private capital and leveraging insurance frameworks.

#### **Policy instruments:**

- Earmark an allocation for a ‘Nature-Based Solutions’ fund within the Disaster Mitigation and Adaptation Fund (DMAF), with eligibility criteria adjusted to distinctive profile of natural infrastructure

**Key features:** Specific changes for DMAF include an additional \$2 billion expansion to the fund as well as the following changes: remove minimum funding threshold to improve accessibility for smaller, community projects, and enable bundling of individual projects using blended finance tools; value co-benefits from biodiversity and habitat protection in scoring, and prioritize projects that yield long-term resilience benefits; and expand eligibility of investors to enable greater investment from insurance and reinsurance providers.

**Existing initiatives:** Currently, major federal infrastructure funding envelopes such as ICIP and DMAF are not designed with natural infrastructure in mind. Changes would need to be made to improve funding access for smaller projects, better integrate biodiversity values and ensure projects can be funded by a range of investors.

■ **RECOMMENDATION 4.2:**  
**ACCELERATE GLOBAL LEADERSHIP IN CONSERVATION AND SUPPORT  
INDIGENOUS RECONCILIATION**

**Objective:** Be a global conservation leader while advancing Indigenous reconciliation, mitigating climate change, creating jobs, and stewarding the natural capital that underpins our economy, health and well-being.

**How:** By investing \$1 billion in the further expansion and management of Canada's Protected Areas network, particularly Indigenous Protected and Conserved Areas, but also national urban parks, while supporting infrastructure for nature tourism; growing investment in Indigenous guardians; and strengthening ecological monitoring, accounting, and systems-planning capacity.

**Policy instruments:**

- Increase and expand the Challenge Stream of the *Nature Fund* to scale creation and management of protected areas, especially Indigenous Protected and Conserved Areas (IPCAs)
- Increase investment to expand the Indigenous Guardians Program
- Support funding to conservation agencies to increase planning, monitoring, natural asset accounting, and management activities for an expanding network of terrestrial and marine protected areas
- Develop new types of protected areas to reflect the unique situations in the north (Indigenous, mineral exploration) and in urban areas, while ensuring ecological integrity

**Key features:** The Challenge Fund has focused on the costs of establishing protected areas, with limited funding for stewardship and management. Extension and expansion of funds would enable:

- Not all challenge fund conservation projects are included in national inventory of protected and conserved areas. Extending length and extent of existing projects ensures current work counts as progress towards Canada's conservation targets.
- Support for new IPCAs, expansion of Guardians program, and a number of large-scale Indigenous-led land use plans.

**Existing initiatives:** Canada Nature Fund for expansion of protected areas put forward 500M for conservation, leveraging a further 500M from non-public sources. Through this process more than 25 IPCA proposals are moving forward. A further 300M investment from Budget 2018 enhancing protected area networks, management, and planning processes. The \$25 million National Indigenous Guardians pilot project, launched in 2017, funded almost 60 Guardians, but is short-term and could only respond to a small fraction of the Indigenous communities that expressed interest.

■ **RECOMMENDATION 4.3:**  
**GROW FINANCING FOR NATURE-BASED SERVICES**

**Objective:** Leverage private capital to support stewardship and conservation by landowners, farmers, communities and resource managers.

**How:** By implementing policies that grow and strengthen domestic environmental markets and drive private investment, and providing \$1.25 billion in incentives for carbon storage and biodiversity protection across Canada, building on existing legal frameworks and funding mechanisms.

**Policy instruments:**

- Implement credible programs for nature-based offsets under relevant environmental laws (climate, biodiversity, fisheries, impact assessment). Align with provincial offset programs.
- Target federal funding (\$1.25B) to support carbon sequestration, habitat conservation and ecosystem services on private and public lands, including lands and forests in Canada's north.
- Reserve a pool of federal funding for non-profit and professional service providers to develop metrics, tools, and training to promote shared understanding of nature-based investment opportunities and facilitate growth of ES markets

**Key features:**

- Offsets – carbon offset rules should include land use activities (agricultural practices, afforestation, reforestation, improved management, conservation). They should promote biodiversity co-benefits, and ensure credible offsets (additional, verifiable, etc.).
- PES – medium-term payment contracts, designed to maximize targeted environmental benefits; should provide flexibility but also sustained income source
- PES – government funds are separate from private offsets; they should secure benefits (carbon, biodiversity) that help Canada meet its international targets.
- Land-based carbon – Canada's carbon accounting rules should include northern, intact lands and forests to reflect their large carbon storage values, and provide reasonable incentives (payments) for actions to secure that carbon and reduce long-term threats.
- ES markets – develop information base and necessary metrics to (a) account for natural capital in decision-making and (b) create investment cases for nature.

**Existing initiatives:**

- Proposed offset markets under GGPPA. Also now enabled under SARA, and (new) Impact Assessment Act. Exists under Fisheries Act.
- Many examples in provinces too: CO2 offsets (AB, QC), species offsets (ON), wetland offsets (AB). Important to align federal and provincial markets.
- ALUS Canada leverages corporate philanthropic dollars alongside public funding to provide financial support to farmers engaging in conservation and ecosystem stewardship on their lands.
- Government initiatives for agriculture that fund these types of activities:
  - Canadian Agricultural Partnership- AAFC One-time payments, no on-going landowner engagement, project eligibility and funding levels set by provinces.
  - Environmental Farm Plan- AAFC One-time payments, and no on-going landowner engagement or verification. Principally designed as a risk management program.

■ **RECOMMENDATION 4.4:**  
**GROW AND TRAIN THE WORKFORCE FOR ECOSYSTEM RESTORATION,  
MONITORING AND MANAGEMENT, AND NATURE-TOURISM**

**Objective:** Leverage existing conservation and resource management initiatives, such as the 2-billion tree commitment and Nature Fund, to grow the work force for a nature economy, and build capacity for increased ecosystem restoration, environmental monitoring, sustainable resource management and nature tourism.

**How:** By investing \$400 million to connect unemployed and underemployed Canadians with opportunities in the nature economy, and to boost the planning and implementation capacity of local governments, Indigenous groups, conservation agencies, forestry and agriculture operations, NGOs and tourism bodies.

**Policy instruments:** Create funding program through which federal/provincial agencies, Indigenous groups, local governments, forestry and agriculture operations, tourism bodies, and ENGOs are able to hire and train a workforce for ecosystem restoration, environmental monitoring, and nature tourism.

**Key features:** Matching process will align applicant skills to available positions. Investment level supports 10,000 jobs/year for 5 years. This would be the workforce capable of operationalizing projects such as the “two billion trees” initiative, and would enable this pledge to be potentially scaled up in the future.

**Existing initiatives:** Funding can build upon existing initiatives such as the Canada Service Corps, Ocean Bridge, and the Canadian Conservation Corps. Explicit focus should be given to hiring Indigenous youth through successful programs such as the Outland Youth Employment Program.<sup>54</sup>

## POTENTIAL PARTNERS FOR BOLD MOVE #4:

- Canadian Wildlife Federation
- Ducks Unlimited
- Indigenous Leaders Initiative
- Nature Conservancy of Canada
- CPAWS
- Nature United
- Greenbelt Foundation
- ALUS
- Nature Canada
- WWF Canada
- Local governments
- Regional conservation authorities
- Forest Products Association of Canada
- Canadian Federation of Agriculture
- International Institute for Sustainable Development
- Provincial and territorial governments
- Financial sector
- Insurance sector
- Philanthropic sector
- Canada Service Corps
- Environment and Climate Change Canada
- Infrastructure Canada
- Parks Canada
- Federal, provincial and territorial departments of agriculture, forestry, resources and environment

# APPENDIX 5:

## BOLD MOVE #5: GROW CLEAN COMPETITIVENESS AND JOBS ACROSS THE CANADIAN ECONOMY

### Detailed recommendations and policy instruments

*Prepared by the Secretariat for the Task Force for a Resilient Recovery, which includes contributions from a number of organizations and researchers (see Appendix 6).*

#### ■ **RECOMMENDATION 5.1:** **DEVELOP CLEAN COMPETITIVENESS ROADMAPS, CAPITAL STRATEGIES AND ACTION PLANS FOR KEY SECTORS**

**Objective:** Develop clear long-term pathways to drive Canadian jobs and success in the emerging global low-carbon and climate-resilient economy that builds on Canada’s sectoral and regional strengths.

**How:** By implementing the first recommendation of the Expert Panel on Sustainable Finance- “Map Canada’s long-term path to a low-emissions, climate-smart economy, sector by sector, with an associated capital plan” - and engaging all levels of government, business, experts and civil society in developing action plans to capture those opportunities.

#### **Policy instruments:**

- An independent arm’s length process, grounded in research, that engages experts in government, business, finance, communities and civil society. This would build on existing processes undertaken for initiatives like the Economic Strategy Tables and ongoing net-zero planning.

#### **Key features:**

- These roadmaps will involve both:
  - a top-down element to map what will a net zero *global* economy look like, and where are *Canada’s* opportunities to compete in that global economy based on our strengths
  - a bottom-up element that researches individual sectors, systems and technologies, then actively engages with key actors to build action plans that incorporate policies to support areas of greatest potential
- These roadmaps are foundational. They inform where Canada should “make its bets”. They focus and align the efforts of different private and public sector actors, help to attract private capital, and identify project pipelines that will drive investment over the coming decades.



- This process will result in the development of roadmaps outlining opportunities and objectives for clean growth by sector. These roadmaps will inform the development of action plans to achieve these objectives, setting out a mix of policies and tools to support the infrastructure, policy environment, and workforce needed to meet objectives. These plans will outline both clear present opportunities (such as hydrogen and climate-smart buildings) and identify other opportunities for sectors trying to create their own clean growth visions.

**Existing initiatives:**

- This will complement ECCC’s upcoming work on net-zero *emission reduction* planning, by providing the *economic opportunity* side of the story (“what we *make*” vs “what we *use*”). It would build on the work of the Economic Strategy Tables, the Advisory Council on Growth, and the new Industry Advisory Council.
- The roadmaps can draw on work being done by Canadian think tanks such as the Transition Accelerator as well as International Institute for Sustainable Development, Circular Economy Coalition, The Natural Step, the Canadian Institute for Climate Choices and Smart Prosperity Institute.

■ **RECOMMENDATION 5.2**

**INVEST IN ADVANCED SKILLS AND INFRASTRUCTURE**

**Objective:** Build the skilled workforce and infrastructure that are the foundation for a clean, competitive and climate-resilient economy, and the next generation of jobs.

**How:** By working with provincial, territorial, municipal and Indigenous governments over the next 1-2 years to design, fund and implement system plans for skills and infrastructure that align with Canada’s clean competitiveness roadmaps.

**Policy instruments:**

- Specify that future federal infrastructure funding, within 2 years, will require each province and territory to have in place an infrastructure *system* plan to build a low carbon economy.
- Provide financial support to provinces and territories to help cover the costs of developing these system plans, including support to communities for the development of Municipal low carbon infrastructure plans.
- While these low carbon system plans are being completed, ensure that climate mitigation and resilience is prioritized as a requirement in federal and CIB Infrastructure funding decisions.
- Develop and fund a national inclusive workforce strategy. This strategy would align with the economic opportunities that will emerge in the development of clean competitiveness roadmaps. Notably, this strategy will touch on major topics such as addressing the skills gap, investing in training, reforming the education system to improve workforce readiness, and improving accessibility to labor force participation.
- Work with Canadian Colleges for a Resilient Recovery to train 50,000 workers in the resilient recovery workforce including dedicated support for women and Indigenous Canadians.

**Key features:**

- Each province and territory’s infrastructure system plan should be designed to help meet Canada’s 2030 climate target, address resilience priorities, and prepare for a net zero future by 2050. The system plans should draw on the economic priorities identified in the clean competitiveness roadmaps (which provinces and territories help develop).
- These system plans will be more efficient and effective. By building the overall plan around shared higher-level goals and priorities (climate, competitiveness), it will lessen the need for substantial FPT negotiations over each project.
- Provide support for municipal plans that contribute to overall provincial plans. These ensure that infrastructure projects meet local needs and goals (economic, social, environmental, resilience), build capacity, and have buy-in from the community.
- An inclusive workforce strategy will be developed in collaboration with the provinces and territories. The aim of the strategy is to allow provinces to develop skills programs and training that advance clean, inclusive growth. These programs would then be supported by federal funding.

**Existing initiatives:**

- Ontario’s long-term infrastructure plan is an example of planning for a low-carbon future, incorporating GHG reduction and adaptation to meet climate goals.
- The Innovation and Skills Plan is a national strategy. This proposal would build upon this initiative by undertaking a pan-Canadian approach to priority setting and skills development, tied to clean competitiveness roadmaps, supported by federal funding.

**■ RECOMMENDATION 5.3:****ACCELERATE THE PRODUCTION AND ADOPTION OF CLEAN TECHNOLOGIES ACROSS THE ECONOMY**

**Objective:** Make Canada the best place in the world to grow a clean business in any sector.

**How:** By using targeted investment, blended finance and other incentives to attract the private investment needed to grow the production and use of clean technologies by businesses, industry and households across Canada, and committing an additional \$1 billion per year to support their scale-up and commercialization by expanding public co-investment and green procurement.

**Policy instruments:**

- Expand existing tax incentives for clean technology adoption (Accelerated Capital Cost Allowance, Canadian Renewable Conservation Expense) to cover *all* low carbon and clean technologies (RFEST).
- Create a federal investor tax credit to boost investment in growing clean technology SMEs (RFEST).
- Implement the planned corporate tax rate cut for zero-emission manufacturing businesses,<sup>55</sup> and for a limited time further drop the rate to 5% for large businesses

and 2.5% for small businesses.

- Provide incentives for Canadians who want to invest their savings to support sustainability and clean growth (RRSP, TFSA), as recommended by the Expert Panel on Sustainable Finance.
- Generate the information needed to grow private sustainable investment through the mainstreaming of climate disclosure (TCFD) for companies.
- Eliminate import tariffs on inputs used by clean technology companies.<sup>56</sup>
- Create a new \$800M/year Clean Innovation Fund, modelled on the Strategic Innovation Fund, targeting the scale-up and production of clean technologies in Canada (a key gap in existing funding programs). [RFEST]
- Grow the Procurement of promising Canadian clean products and technologies through stronger requirements (internal pollution price, choose 'cleanest' alternative), greater information and support, and increased funding (\$200M/year)

#### **Key features:**

- Most of the above recommendations – tax incentives, investment, procurement, TCFD – come from recent expert advisory body reports (Economic Strategy Tables, Expert Panel on Sustainable Finance), or from the 2019 Liberal Platform, including lowering the corporate tax rate for clean tech companies, and expanding the list of eligible clean-tech businesses.<sup>57</sup>
- These measures span a range of objectives. Some aim to develop the ecosystem needed to support sustainable finance, others aim to supporting greater private and public investment into clean technology companies, and some are directed at simplifying the regulatory regime to build and buy clean technologies.

#### **Existing initiatives:**

- These recommendations build on Canada's recent progress on clean investment, tax incentives and procurement, expanding and strengthening those policies: e.g. by extending existing tax incentives (ACCA, CRCA) to all clean tech companies, or expanding existing programs for clean tech investment (SDTC, BDC, EDC, IRAP, NRCan) to fill a key gap of scale-up and commercialization of high cap-ex businesses.
- Clean technology Investor Tax Credits exist in several provinces (BC, AB, NB) and have been effective.
- Additionally, clean technology is supported by the Clean Technology Data Strategy, Innovation and Skills Plan, and several other strategies.

### ■ **RECOMMENDATION 5.4** **INCREASE THE FAIRNESS OF CLIMATE ACTION**

**Objective:** Increase affordability, reduce after-tax income inequality, and ensure the benefits and costs of climate action are fairly distributed.

**How:** By advancing equity in the design of climate policies and making the Climate Action Incentive more accessible.

**Policy Instruments:**

- Increase funding for programs to assist marginal and vulnerable groups in filing tax returns, to make it easier for low-income households to collect Climate Action Incentive payments.
- Introduce a deemed filing rule for those who are issued a T5007 (Statement of Benefits), to make it easier for low-income households to collect Climate Action Incentive payments.

**Key features:**

- 12% of working-age adults do not file tax returns. Those adults do not collect the climate-action incentive.<sup>58</sup> Non-filers are likely low-income households. If more low-income Canadians collected these benefits, poverty would be reduced, after-tax income inequality would decline, and the increased spending would create a stimulus effect for the economy.

## POTENTIAL PARTNERS FOR BOLD MOVE #5:

- Expert Panel on Sustainable Finance
- Economic Strategy Tables
- Institute for Sustainable Finance
- Canadian Institute for Climate Choices
- The Natural Step
- Smart Prosperity Institute
- International Institute for Sustainable Development
- Provincial and territorial governments
- Local government
- Indigenous governments
- National industry associations
- Sector innovation councils
- Innovation superclusters
- Major banks
- Finance Canada
- Infrastructure Canada
- Innovation Science and Economic Development Canada
- Innovative Solutions Canada
- Export Development Canada
- Business Development Canada
- Sustainable Development Technology Canada
- National Research Council of Canada Industrial Research Assistance Program

# APPENDIX 6:

## TASK FORCE MEMBERS, EXPERT ADVISORS, RESEARCH PARTNERS AND SECRETARIAT

Many individuals, groups and organizations contributed to this initiative in different capacities. Here is the who's who.

### ▪ 6.1 Members of the Task Force for a Resilient Recovery:

- Andy Chisholm – Member, Board of Directors, Royal Bank of Canada & Member, Expert Panel on Sustainable Finance
- Barbara Zvan – Former Chief Risk & Strategy Officer, Ontario Teachers' Pension Plan
- Bruce Lourie – President, Ivey Foundation
- Don Forgeron – President and CEO, Insurance Bureau of Canada
- Gerald Butts – Senior Advisor, Eurasia Group
- Helen Mountford – Vice President, Climate & Economics, World Resources Institute
- James Meadowcroft – Professor, School of Public Policy and Administration and Department of Political Science, Carleton University
- JP Gladu – Former President and CEO, Canadian Council for Aboriginal Business
- Merran Smith – Executive Director, Clean Energy Canada
- Michael Horgan – Senior Advisor, Bennett Jones
- Mitchell Davidson – Executive Director, Strategy Corp Institute of Public Policy and Economy
- Mira Oreck – Executive Director, The Houssian Foundation
- Philippe Dunsky – President, Dunsky Energy Consulting
- Richard Florizone – President & CEO, International Institute for Sustainable Development
- Stewart Elgie – Executive Chair, Smart Prosperity Institute

### ▪ 6.2 Expert Advisors:

- Kathy Bardswick – President and CEO, Canadian Institute for Climate Choices
- Sonia Baxendale – President and CEO, Global Risk Institute
- Corinne Boone – Chair, Canadian Energy Research Institute
- Edward Greenspon – President & CEO, Public Policy Forum
- Christopher Henderson – Executive Director, Indigenous Clean Energy Social Enterprise (ICE)
- Stephen Huddart – President & CEO, The McConnell Foundation
- Melissa Kennedy- Executive Vice-President, Chief Legal Officer & Public Affairs, Sun Life
- Jeremy Kronick – Associate Director, Research, CD Howe Institute
- Jeremy Oppenheim – Senior Managing Partner, SYSTEMIQ
- Kyla Tienhaara – Assistant Professor and Canada Research Chair in Economy and Environment, Queen's University
- Christian Zabbal – Managing Partner, Spring Lane Capital

### ■ 6.3 Funders:

- The Echo Foundation
- Ivey Foundation
- Jarislowsky Foundation
- The McConnell Foundation
- The Schad Foundation

### ■ 6.4 Research Partners:

- International Institute for Sustainable Development
- Smart Prosperity Institute
- The Transition Accelerator
- Insurance Bureau of Canada
- Efficiency Canada
- Institute for Sustainable Finance
- Clean Energy Canada
- Dunsky Energy Consulting

### ■ 6.5 Secretariat:

- Stephanie Cairns, Director
- Natalie Ethier, Administrative Support
- Eric Campbell, Communications and Writing
- John McNally, Research Coordinator

#### *Working Group:*

- Joanna Dafoe, Insurance Bureau of Canada
- Lorne Johnson, Ivey Foundation
- Johanna Leffler, Clean Economy Fund
- Jane McDonald, International Institute for Sustainable Development
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- Sarah Petrean, Clean Energy Canada
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- Mike Moffatt, Smart Prosperity Institute
- Katherine Monahan, Smart Prosperity Institute
- Natalia Moudrak, Intact Centre for Climate Adaptation
- Paige Olmsted, Smart Prosperity Institute
- Sonia Cyrus Patel, Smart Prosperity Institute
- Craig Stewart, Insurance Bureau of Canada
- Jeff Turner, Dunsky Energy Consulting
- Dan Wicklum, Transition Accelerator
- Laura Wohrizek, Smart Prosperity Institute
- Dan Woynillowicz, Polaris Strategy



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