

TASK FORCE FOR



**real jobs,
real recovery**

SECURING CANADA'S ECONOMIC FUTURE:

Natural resources for real jobs and real recovery



FINAL REPORT OF THE TASK FORCE FOR REAL JOBS, REAL RECOVERY

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**READ THE SUMMARY
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Executive summary

To help spur a recovery that generates significant, sustained and shared benefits for all, the Task Force for Real Jobs, Real Recovery conducted an extensive study throughout the summer of 2020.

It concludes that Canada's natural resource sector can play a critical role in ensuring a competitive, prosperous economy while accelerating innovation and environmental competitiveness.



Resource industries are accustomed to change and are ready to work in partnership with government on a dynamic effort to achieve Canada's climate goals and build a more robust, inclusive and globally competitive economy.

In ways not witnessed in many decades, the COVID-19 crisis has disrupted norms and challenged Canadians' ability to keep the economy functioning. As we recover, we must recognize that this cataclysmic event has also brought us to a crossroads where Canadians have a unique chance to take stock of our record, our assets and our opportunities to re-imagine our economic future.

Canada's natural resource enterprises can make an enormous contribution to the rebuilding challenge ahead. In recent years, as environmental concerns have become a more pressing global issue, the sector has demonstrated its ingenuity, resiliency and commitment to change through a determined, multi-faceted response.

Resource companies are exporters of leading environmental practices and ethical standards in mining, forestry, chemical production and oil and gas.

Across Canada's natural resource industries, innovators are working with governments to reduce emissions and minimize impacts on water, land, air and wildlife and contributing to the advancement of clean technologies and sustainable products

In the first quarter of 2019, natural resource industries directly contributed \$236 billion to GDP, representing 11.3 per cent of the Canadian economy.

Even before the pandemic, the natural resource sector was grappling with ongoing challenges due to low prices, declining capital investment and market access constraints for several key resource commodities. To stay competitive and continue to support Canada's economic performance, the sector has undergone a major overhaul to adopt more efficient, emissions-reducing technologies, processes and products.

And the sector remains at the forefront of creating meaningful, well-paying jobs that support families and communities across Canada and provide much-needed economic opportunities for remote, northern and Indigenous communities.

The natural resource sector is now poised to lead efforts with the federal government to rebuild a prosperous economy while meeting our climate targets.

Collaborative and ambitious leadership by the federal government and alignment with other levels of government and business can unleash the full potential of Canada's natural resource industries.



Our recommendations draw on extensive research and input from a 36-member coalition of industry, business, labour and Indigenous groups from mining, construction, forestry, labour, chemistry, transportation, oil and gas and Indigenous economic development, **representing more than three million workers and a quarter of a million businesses.**

Executive summary

Economic modelling conducted for the Task Force for Real Jobs, Real Recovery by Dr. G.K. Fellows shows that the right success conditions for natural resources and manufacturing could result in improved capital productivity and reduced trade costs. This could mean up to 2.6 million new jobs and as much as a 17 per cent jump in real GDP, yielding nearly \$200 billion in potential increases in labour earnings – at time when Canada’s economic future is uncertain due to the impacts of COVID-19.



The right success conditions for natural resources and manufacturing could mean up to 2.6 million new jobs and as much as a 17 per cent jump in real GDP.

Securing Canada’s Economic Future includes a series of extensive, wide-ranging recommendations that could help us to achieve these goals, falling into three categories:

- **Mobilizing resource prosperity** by leveraging Canada’s world-class industries, advancing regulatory efficiency, attracting capital investment, enhancing critical infrastructure, ensuring access to resource lands and maximizing Indigenous economic participation.
- **Building meaningful employment** by ensuring job creation, building employment resiliency, advancing Indigenous employment and enhancing skilled workforce mobility.
- **Accelerating innovation and environmental competitiveness** by aligning climate action and natural resource development, driving challenge-oriented innovation, updating federal support programs and tax incentives, advancing emissions reduction technologies and plastics innovation, supporting advancements in sustainable forestry, bioeconomy and mining and developing hydrogen and small modular nuclear reactor industries.

By acting on our recommendations as part of Canada’s economic recovery policy, the federal government can ensure our nation-building resource assets aid environmental goals and help secure our economic future.

During the COVID-19 emergency, natural resource companies responded by providing the necessary raw materials and manufactured products for the global public health response and by adapting quickly to help remote workforces and communities stay safe and healthy – while keeping Canadians working.

Recommendations

MOBILIZING RESOURCE PROSPERITY

Canada has an extremely ethical, environmentally responsible and highly regulated resource-based economy that is globally recognized for producing cutting-edge, low-emissions commodities. However, the advantage of fixed resource assets which can't be relocated requires the appropriate enabling conditions.

In the post-COVID-19 global economy, Canada needs to mobilize and enhance its competitive advantage to compete effectively in international markets and for international investment.



1. **Leverage Canada's world-class resource industries:**

- Publicly and vocally endorse the Canadian natural resource brand.
- Work in partnership with industries to improve policies, processes and regulations.
- Establish an integrated table for investment and major projects to ensure workable long-term solutions to COVID-19 economic impacts.

2. **Improve public and investor confidence in regulation and decision-making:**

- Commit to evidence-, science- and outcomes-based impact assessment decisions.
- Advance more agile regulations and policies.
- Coordinate with provincial and territorial governments on legislative and regulatory priorities.

3. **Attract capital investment to boost COVID-19 recovery:**

- Focus on implementing easy and effective measures that deploy resource prosperity.
- Conduct a comprehensive review of Canada's business taxation environment.
- Extend the Accelerated Capital Cost Allowance for major capital projects to 2030 and consider making it permanent.
- End federal taxation of provincial and municipal stimulus funding incentives.

Recommendations

MOBILIZING RESOURCE PROSPERITY

4. Enhance critical infrastructure:

- Improve Canada's ranking on the World Bank's Logistics Performance Index by 2025 in partnership with the private sector and all levels of government.
- Build road, rail, deep seaport and IT infrastructure, especially in areas where infrastructure gaps constrain socioeconomic development.
- Establish a national low-carbon energy grid and promote electricity interties between provinces.
- Invest dedicated funds in northern infrastructure to reduce the cost of resource development, generate important economic activity and support Canadian sovereignty in Arctic regions.
- Mandate a stronger resource development focus for the Canada Infrastructure Bank.

5. Ensure access to resource lands for development:

- Base land use decisions on science-based assessments that determine the value of an area's resource potential.
- Coordinate with provincial and territorial governments on conservation commitments.



Recommendations

MOBILIZING RESOURCE PROSPERITY



6. Maximize Indigenous economic participation:

- Integrate meaningful reconciliation into Canada's economic recovery strategy.
- Consult and work in partnership with Indigenous communities to review and amend the *Indian Act*, improve existing Indigenous consultation and accommodation processes and resolve outstanding land claims to create a secure environment for investment.
- Consider lending Indigenous communities use of the federal sovereign guarantee to ensure Indigenous entrepreneurs and businesses can access the proper capital and financial tools to succeed.
- Prioritize procuring at least five per cent of goods and services from Indigenous-owned businesses.
- Review tax incentives such as the Mining Exploration Tax Credit with a focus on helping to develop Canada's North and benefitting Northern Indigenous communities.

Recommendations

BUILDING MEANINGFUL EMPLOYMENT

Building real jobs means looking for areas of real opportunity, right here at home. Fortunately, we already know where we have unassailable strategic advantages and it makes sense to start recovery efforts by encouraging efforts within our control where markets are already waiting for goods and services that result from people doing their jobs.

A healthy, competitive natural resource sector will drive new employment, skills, create a larger ecosystem of service providers, and boost emerging sectors. It will bring workers along by creating opportunities for jobs that leverage specialized skills and expertise and by preparing workers for continued employment in an evolving sector.

7. **Ensure job creation:**

- Establish a regulatory and policy environment that encourages investment in industry in order to get Canadians back to work.

8. **Build employment resiliency:**

- Coordinate with industry to address pending shortages and the disruption of the natural resource sector's labour force.
- Work with provinces and territories to modernize Canada's education and training ecosystem to better support lifelong learning.
- Emphasize flexible, affordable training and continuous skills development.
- Accelerate digital literacy and competency.



Recommendations

BUILDING MEANINGFUL EMPLOYMENT



9. **Advance Indigenous employment:**

- Work with Indigenous governments to develop a framework to guide the development of the Indigenous natural resource workforce.
- Increase employment retention and readiness for skills development by addressing social and systemic barriers faced by Indigenous peoples and communities.

10. **Attract and retain talent:**

- Help industry promote the natural resource sector as a meaningful career pathway.

11. **Enhance skilled workforce mobility:**

- Work with provinces and industry to address barriers to mobility for tradespeople and apprentices in natural resources and supporting industries.

Recommendations

ACCELERATING INNOVATION AND ENVIRONMENTAL COMPETITIVENESS

Canada's natural resource industries are productive, innovative and uniquely positioned to support an inclusive and transformative low-emissions economic recovery.

We have an obligation to Canadians to use these strengths and assets to address the challenges and opportunities presented by climate change and the path to global recovery and renewal from COVID-19.

12. **Align climate action and natural resource development:**

- Develop an integrated climate and natural resource strategy that reconciles climate objectives and export of low-emissions resource commodities.
- Rationalize the cumulative cost of the Clean Fuel Standard with federal and provincial GHG pricing systems.
- Collaborate with provinces on:
 - a. Implementing a robust GHG offset system, including the necessary protocols and market mechanisms to incentivize innovation.
 - b. Ensuring a level playing field on carbon taxes or cap-and-trade emissions trading allowance pricing to ensure they don't become barriers to internal trade.
 - c. Accelerating investment in low-emissions innovations for facilities and sectors that are best positioned to fast-track the post-COVID-19 economic recovery.



Recommendations

ACCELERATING INNOVATION AND ENVIRONMENTAL COMPETITIVENESS



13. **Drive challenge-oriented innovation:**

- Review federal R&D funding programs and prioritize support for innovation and investment in the natural resource sector to align with a low-emissions future.
- Ensure optimal delivery of direct and indirect funding to upscale and commercialize critical technologies.
- Modernize and improve the Scientific Research and Experimental Development (SR&ED) program by:
 - a. Raising the SR&ED investment tax credit to 20 per cent from the current 15 per cent.
 - b. Eliminating or substantially raising the \$50 million upper threshold for the taxable capital phase-out range.
 - c. Reinstating capital expenditure eligibility (phased out beginning in 2013).
 - d. Eliminating the 20 per cent disallowance on arm's-length consulting payments.

Recommendations

ACCELERATING INNOVATION AND ENVIRONMENTAL COMPETITIVENESS



14. **Advance emissions reduction technologies:**

- Adopt a tax credit at a globally competitive rate for the successful deployment of carbon capture, utilization and storage (CCUS) and direct air capture (DAC) technologies.

15. **Leverage mining as a low-emissions enabler:**

- Continue to deliver the Canadian Minerals and Metals Plan and cooperate on the Canada–US Joint Action Plan on Critical Minerals Collaboration.

16. **Support sustainable forestry and forest products:**

- Work with provinces, territories, Indigenous communities and industry to accelerate implementation of the Canadian Council of Forest Ministers' (CCFM) Forest Bio-economy Framework.
- Continue to promote innovation activities and partnerships with the forestry sector.

Recommendations

ACCELERATING INNOVATION AND ENVIRONMENTAL COMPETITIVENESS

17. **Develop a Canadian hydrogen industry:**

- Continue to work with provinces and municipalities on charting a path to large-scale deployment.
- Improve regulatory timelines limiting hydrogen's growth by working with the Canada Energy Regulator and the private sector to prioritize and streamline reviews of critical expansions in the natural gas transmission system.

18. **Deliver on the potential of small modular reactors (SMRs):**

- Work with provinces, territories, utilities, Indigenous communities and industry to fast-track and swiftly implement the recommendations and findings of the forthcoming SMR Action Plan.
- Engage with industry on a public education campaign to build Indigenous and public confidence and support for SMRs.

19. **Build a world-class ecosystem for chemistry innovation:**

- Establish a Plastics Technology Innovation Fund (PTIF) with an initial funding allocation of \$200 million, managed by Natural Resources Canada (NRCan).



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Our work benefitted from the advice of an expert panel of leaders in public policy, business and Indigenous economic development.



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Coalition

The following organizations support the coalition behind the Task Force for Real Jobs, Real Recovery:



- Aboriginal Skilled Workers Association
- Alberta Chamber of Resources
- Alberta Forest Products Association
- Alberta's Industrial Heartland Association
- Association for Mineral Exploration of BC
- Atlantic Chamber of Commerce | Chambre de Commerce de l'Atlantique
- Atlantica Centre for Energy
- BC Chamber of Commerce
- BC Construction Association
- Business Council of Alberta
- Canada West Construction Union
- Canada Works Council
- Canada's Ironworkers
- Canadian Association of Oilwell Drilling Contractors
- Canadian Association of Petroleum Producers
- Canadian Chamber of Commerce | Chambre de Commerce du Canada
- Canadian Energy Pipelines Association | Association canadienne de pipelines d'énergie
- Canadian Fuels Association | Association canadienne des carburants

Coalition

The following organizations support the coalition behind the Task Force for Real Jobs, Real Recovery:



- Canadian Manufacturers & Exporters | Manufacturiers et Exportateurs du Canada
- Christian Labour Association of Canada (CLAC)
- Conseil provincial du Québec des métiers de la construction (International) | Québec Provincial Building Trades Council (International)
- Des Nedhe Development
- First Nations LNG Alliance
- Forest Products Association of Canada | Association des produits forestiers du Canada
- Independent Contractors and Businesses Association of BC
- Indigenous Resource Network
- International Brotherhood of Boilermakers
- NWT & Nunavut Chamber of Mines
- Petroleum Services Association of Canada (PSAC)
- Prince George Chamber of Commerce
- Progressive Contractors Association of Canada
- Resource Municipalities Coalition
- Resource Works Society
- Saskatchewan Mining Association
- Surrey Board of Trade
- Truck Loggers Association



Purpose

- The COVID-19 pandemic has uniquely challenged Canada and the world. The crisis, and our country's ongoing response to its social and economic impacts, is transforming how Canadians perceive the value of jobs and economic activity, the role of government and the urgency of action to address climate change.

In early May 2020, the Resource Works Society, a non-partisan, non-profit organization based in British Columbia, identified the need for a national conversation about how Canada's most economically productive, foundational industries – mining, oil and gas and forestry – could be leveraged to their full potential given the COVID-19 recovery imperative.

The Task Force for Real Jobs, Real Recovery was created to collaboratively identify and respond to major emerging opportunities and challenges for Canada's natural resource industries.

The Task Force has developed recommendations that will meaningfully advance the prosperity and vitality of Canadian society and workers, not only meeting the challenges of today, but also seizing the opportunities of tomorrow.

This initiative has been animated by the principles of reconciliation and the spirit of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), particularly with respect to Indigenous economic self-determination.

It has addressed the challenge inherent with the Government of Canada's target of net-zero emissions by 2050. It views Canada's actions on climate change, both domestically and abroad through trade and cooperation, as among our country's most critical priorities.

Maximizing resource industries' recovery potential must be a fundamentally inclusive, forward-thinking process. We urge governments to build a national economic recovery plan using the same approach.





Introduction

- An empowered natural resource sector will drive Canada's economic recovery from COVID-19 in the short term and rebuild our global competitiveness in the medium and long term.

It is not an understatement to say that the COVID-19 pandemic has seriously affected nearly every Canadian industrial sector. Statistics Canada reported the Canadian economy [shrank 11.6 per cent in April](#) – the largest monthly drop on record. That followed a 7.5 per cent contraction in real gross domestic product in March.

Before the pandemic, weak productivity growth, an aging population and trade impacts in early 2020 already put Canada on the path for economic growth under two per cent (without inflation). Canada's per capita GDP, a good representation of a country's standard of living, has [grown slowly](#) in recent years, emerging as the worst in the G7. Assuming that a vaccine is made available by the end of 2021, Canada's economy is not expected to return to pre-crisis levels until the second half of 2022.

In June, the OECD projected that Canada's economy may shrink by between [eight per cent \(no second wave\) and 9.4 per cent \(second wave\)](#) in 2020 – worse than the projected six per cent to 7.4 per cent decline globally. Recent economic indicators have been better than expected, but current forecasts still see Canada's GDP shrinking by [between 6 and 7 per cent](#) this year.

Decision-making in response to COVID-19 is made difficult due to considerable scientific, social and economic uncertainty. Will rapidly deployed research address outstanding questions about the virus's transmission, prevention and long-term health impacts? Will a vaccine be brought to market and when? How effectively will social distancing and quarantine measures stop or slow the spread? How will the economic recovery unfold?

The human cost of this uncertainty and ensuing economic contraction is clear: loss of family-supporting incomes, increased [household financial stress](#) and indebtedness and delayed socioeconomic development and economic reconciliation.

In response, the federal government has taken an unprecedented role in directly supporting households, businesses and regional governments through initiatives such as the Canada Emergency Response Benefit (CERB), the Canada Emergency Wage Subsidy (CEWS), the Canada Emergency Student Benefit (CESB), the Canada Emergency Business Account (CEBA) and the Safe Restart Agreement. As a result, the federal government's [recent fiscal snapshot](#) forecasts the deficit to hit a staggering \$343 billion in the current fiscal year.

Introduction



Source: *Figure 1: Potential impact of COVID-19 pandemic* from “Our COVID-19 response: navigating diverse economic impacts.” ([Bank of Canada, 2020](#))

As economies reopen and the government looks toward a post-pandemic recovery strategy, we must look to our most promising opportunities: global leadership in resource development, a revitalized manufacturing sector, a new era in exporting high-tech Canadian solutions to the world and a path towards a sustainable economy that advances towards Canada’s low-emissions targets.

Overcoming these immediate challenges will present incredible opportunities for innovation and economic prosperity — challenges that Canada’s natural resource sector is ready and willing to work on in partnership with the federal government.

Fellows Economic Consulting (Dr. G.K. Fellows) conducted an economic impact assessment to identify the importance of the policy prescriptions advocated in *Securing Canada’s Economic Future*. Assuming substantial unemployment from COVID-19 and policy change resulting in modest increases to capital productivity (six per cent) and reductions in trade costs (eight per cent) for both manufacturing and natural resources, the assessment indicates that the right success conditions for natural resources and manufacturing could result in as many as 2.6 million new jobs, yielding up to \$379 billion in real GDP – a 17 per cent increase – and nearly \$200 billion in potential increases in labour earnings. ([See Appendix II for further details.](#))

Urgent action is required to unleash this potential. This report provides the pathway.

The Task Force for Real Jobs, Real Recovery identifies that global competitiveness will be a core determinant of the success of economic recovery planning. Many of the structural challenges that Canada faces are not unique to COVID-19. Still, they affect how rapidly and effectively recovery can occur – and the scale, longevity and distribution of its benefits.

Just as structural factors influence recovery pathways, so too do recovery pathways influence long-term economic outcomes. Delayed recovery has a significant risk of resulting in long-lasting structural economic damage, as well as uncertainty and confidence effects.

A status quo approach to economic recovery would neglect opportunities to generate significant, sustainable and shared benefits for all Canadians. We must ensure that Canada’s economic recovery strategy sets us on a path to meet social, environmental and economic goals for generations to come. Leveraging the immense potential of Canada’s natural resources is an important way to get there.



■ Unleashing natural resource potential

At the onset of the COVID-19 pandemic, natural resource sectors and supply chains were identified by governments across Canada as [essential to the economy](#).

Natural resource industries also continue to bolster Canada's economic performance despite ongoing challenges due to a sub-optimal pricing environment, declining capital investment and market access constraints for several key resource commodities. In the first quarter of 2019, resource industries directly contributed [\\$236 billion to the GDP](#), representing 11.3 per cent of the Canadian economy.

Natural resources are already at the forefront of creating meaningful, well-paid employment that supports households across Canada and provides much-needed economic opportunities for remote, northern and Indigenous communities. Furthermore, private and public investment in natural resources is a foundation for many other industries, including construction, chemistry, transportation and manufacturing. It also generates substantial government revenues through taxes and royalties, helping to pay for important social programs and infrastructure across the country at all levels of government, which have only become more expensive due to COVID-19.

Canada's substantial endowment of natural resources is the underpinning of our economic prosperity. Labour productivity in Canada's mining and oil and gas production sectors offers the greatest contribution to our national GDP at [\\$304 of real income](#) for every hour worked – far ahead of the utilities and real estate sectors that come in second and third with contributions of \$183 and \$135 per hour respectively.

Natural resource workers have the country's highest average annual salary. Ensuring they get back to work will help generate the demand for goods and services needed to drive employment in other sectors, including retail, real estate, entertainment, hospitality and tourism. An investment in one oil and gas job is an investment in [six other jobs](#) across our economy, according to Statistics Canada.

Natural resources represent the best opportunity for Canada's economy to recover and build back better. This means creating and growing well-paying jobs, generating revenues for governments to create more fiscal capacity, advancing sustainability and environmental performance and addressing deep structural challenges that have affected Canada's labour and capital productivity, innovation performance, attractiveness to investors and emissions intensity.

■ Improving the export advantage

As a trading nation, Canada owes its economic prosperity and relatively high per capita income to the export of large-volume commodity and resource-based manufactured goods. In 2019, natural resources provided the greatest net contribution to Canada's [merchandise trade](#). Basic & industrial chemicals added a further \$18.1 billion to gross exports.

The impact of oil exports further illustrates the importance of Canada's natural resource sector to the economy. Even in 2019, when WTI prices fell US\$8 per barrel to US\$57, [gross exports](#) of crude oil and bitumen still came in at \$81.3 billion.

Greatest net contributors to Canada's [merchandise trade](#):

Sector	2019
Energy	\$76.6 billion
Metals and minerals	\$32.4 billion
Agriculture and agri-products	\$16.8 billion
Forest products	\$15.5 billion

* Exports less imports.

Canada's forest product trade balance is described as the world's largest. No other nation derives more net benefit from trade in forest products. And more than 60 minerals and metals – and the discovery of them through exploration — resulted in gross exports worth [\\$105 billion in 2018](#), accounting for 19 per cent of total merchandise exports. As Canada recovers and rebuilds, it is essential to grow our traditional resource-based export industries, enhance their cost and carbon competitiveness and, at the same time, develop new industries and technologies to diversify our trading economy.





■ **Prioritizing resilience and innovation for Canada's future**

The question remains: how can Canada leverage this economic crisis to transition towards a modern economy that can successfully compete on a global stage for investment? The future economy will demand:

1. A low-emissions footprint across the lifecycle of a product from extraction in the field through to basic processing and towards a final product.
2. The ability to rapidly increase production of critical goods necessary to ensure the safety and well-being of Canadians during a time of crisis and trade protectionism.
3. Training, employment and equity interest opportunities for underrepresented groups that have struggled to benefit from the world's quickly evolving social and economic dynamics.

The natural resource sector can be the backdrop in which we collectively align the nation's climate, economic diversification, inclusive growth and economic recovery objectives in a way that ensures prosperity for Canadians. It is also key to what Canada can do for the world. By processing natural resources into products for global markets, Canada can make a meaningful contribution to the emissions reduction efforts of other countries.

Domestically, Canada can both mitigate and remove emissions. Reducing the emissions intensity of industrial processes goes hand-in-hand with negative emissions technologies (NETs), such as direct air capture (DAC).

The Canadian economy of the future will rely upon innovation and technology to extract raw resources in an environmentally and socially sustainable fashion and move further along the value chain towards higher value products. Just as Canada needs its most productive industries for economic recovery, the world needs minerals and metals, oil and gas, chemicals, forestry products and resource-based manufactured goods produced under the most globally robust environmental, social and governance (ESG) conditions.

With sound public policy, Canada can help develop a circular economy for the world and define the global natural resource sector of the future. We can export not only raw natural resource goods, but also good governance, expertise, technologies and resource-based manufacturing products that connote being a world leader in sustainable natural resource products.

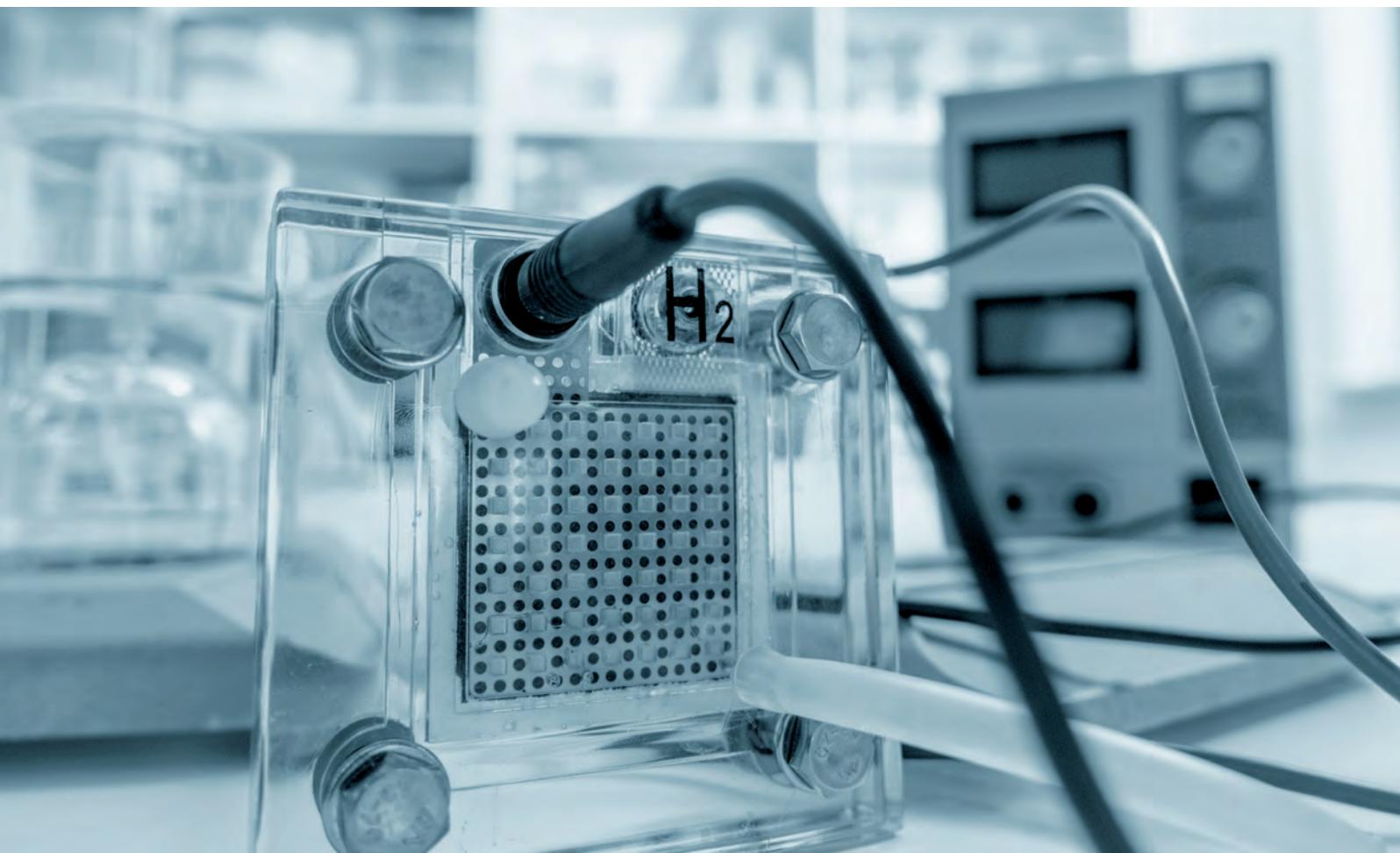
■ **Prioritizing resilience and innovation for Canada's future**

Canada needs to begin to manage its natural resources from a full value chain perspective, where the country can offset declines in traditional markets by securing markets elsewhere and fulfilling domestic demand, thus driving growth in mining, forestry and oil and gas. While ensuring a healthy export sector, Canada also needs to embrace value-added opportunities by leveraging our abundant natural resource feedstocks to create low-carbon products.

For Canada's natural resource diversification objectives to succeed, our country requires a healthy upstream natural resource sector. Downstream diversification is dependent upon an ample supply of competitively priced feedstocks. Fiscal competitiveness, while providing opportunities for companies to demonstrate their environmental, social and governance (ESG) commitments, underpins capital investment decisions. The country is well-positioned to be the destination of choice for global investors who wish to become a part of a sustainable product transition.

Canada, with the support of its innovative and resilient natural resource sector, has an opportunity to build a robust post-pandemic economy. This will require collaborative and ambitious leadership by the federal government to unleash the potential of Canada's natural resource industries. Policy alignment and collaboration across all three levels of government is crucial to our national success. It requires an acknowledgement that we need to diversify our economy based on our natural competitive advantages rather than divesting away from our positions of strength.

Many of the Task Force's recommendations in *Securing Canada's Economic Future* build on the work of the federally convened Economic Strategy Tables, particularly the [final report](#) of the Resources for the Future Table published in September 2018. The federal government should build upon that effort and continue to embrace collaboration and strategic co-production to benefit from the institutional expertise of Canada's resource industries.





MOBILIZING
RESOURCE
PROSPERITY



01

Canada's opportunity to recover from COVID-19 is coming. Our natural resource industries will be essential to rebuilding and growing our economy in the post-pandemic era.

We are already a world-leading producer of resource-based commodities and products required by the world's growing population. Building on this record of global leadership in ESG performance, the resource sector has the potential to create and restore jobs, generate revenues and realize Indigenous economic development.

The wealth generated by the responsible development of our resources has enabled Canada to industrialize as a nation, creating one of the world's most advanced societies and highest standards of living. Canada has an extremely ethical, environmentally responsible and highly regulated resource-based economy that is globally recognized for producing cutting-edge, low-emissions commodities.

However, the advantage of fixed resource assets which can't be relocated requires the appropriate enabling conditions.

In the post-COVID-19 global economy, Canada needs to mobilize and enhance its competitive advantage to compete effectively in international markets and for international investment.

The Task Force for Real Jobs, Real Recovery has several recommendations surrounding this goal, many of which require (and have the benefit of) building stronger, more active partnerships between governments, industry and Indigenous communities.



1. Leverage Canada's world-class resource industries

■ Promote the Canadian brand

The Canadian natural resource brand is defined by early adoption of technology and high-tech innovation – innovations we export around the planet and the world's growing population relies on for food and energy security. International markets know Canadian crude oil, natural gas, chemicals, pulp and paper, potash, uranium and base and precious metal resources are being developed not just with rigorous environmental, social and governance (ESG) standards, but also under a very robust regulatory regime.

Liquefied natural gas in particular has the potential to serve as a cleaner-burning transition fuel for Asian markets, where demand has [already doubled in two decades](#) and is expected to continue to grow. Similarly, natural gas can be used as a feedstock with carbon capture, utilization and storage (CCUS) resulting in zero-emissions hydrogen fuel.

Likewise, uranium mined in Canada is used to fuel nuclear reactors to provide zero-emissions energy for a variety of industrial processes. And building with carbon-storing wood products and using residuals from the forest product manufacturing process as feedstocks for advanced bioproducts can contribute significantly to Canadian and international climate change goals.

Our oil and gas, energy, mining, chemistry, manufacturing and forestry sectors are consistently the largest innovation spenders. Moreover, the natural resource value chain is responsible for [85 per cent of all private sector spending on environmental protection](#).

Canada's customers also know that our natural resource commodities are produced by a highly skilled and trained, well-paid workforce. Workers in the natural resource sector provide confidence for international trading partners abroad and help drive local economies with their spending at home.

Public and continuing endorsement by government for the Canadian natural resource brand, natural resource industries and projects that deliver resources to market is key to rebuilding our economy in the post-COVID-19 era. With proper policy support, Canada can enhance its global competitiveness to become the global supplier of choice for ESG-friendly natural resource products.

■ Establish an integrated table for investment and major projects

In the immediate wake of COVID-19, Canada will be competing with every other global jurisdiction for investment capital. Failure to compete is not an option – attracting global capital will be critical to growing our economy, getting Canadians back to work and bolstering productivity, thus limiting [negative repercussions from this economic downturn](#) on future generations.

Government acted rapidly to absorb the immediate economic shocks of the pandemic, taking on debt “so that Canadians didn’t have to,” as the Prime Minister has said. Enduring and workable solutions to COVID-19 economic impacts will require public and private coordination. They will also require evaluating all possible options for economic recovery and giving the most promising – most productive – options precedence.

Canada’s natural resource industries are ready to play an essential role in developing solutions and delivering results. They are ready to mobilize resource prosperity for Canada’s economic recovery. Improved pathways to industry-government collaboration will make that possible.

Natural resource industries can advance national priorities such as capital and labour productivity growth, while upholding Canada’s commitments on emissions reduction, water protection and land and species management. By continuing to work together, industry and government can co-develop strategies to position Canada for rapid recovery with the support of a re-energized and empowered natural resource sector.

A vehicle for consensus-building, recommended by numerous industry groups in this coalition, is the establishment of an integrated table for investment and major projects with membership from government and business, as well as clear objectives and timelines. The recently established [Industry Strategy Table](#), focused on understanding immediate sectoral pressures from the pandemic, represents a positive start.

However, it points to the ongoing need for industry and government to work together over the long term on economic growth, job creation, infrastructure development, energy transition, technology export and economic reconciliation. These challenges and opportunities have taken on a new and escalated urgency and must be met with problem-solving approaches that are accountable and well-resourced, integrated with government priorities and inclusive of both policy stakeholders and actors.

1. The Task Force recommends that the federal government:

- Publicly and vocally endorse the Canadian natural resource brand.
- Work in partnership with industries to improve policies, processes and regulations.
- Establish an integrated table for investment and major projects to ensure workable long-term solutions to COVID-19 economic impacts.





2. Improve public and investor confidence in regulation and decision-making

Strong environmental, health and safety regulations are vital to a thriving natural resource sector. Bolstering investor confidence in Canada is also important. While the quality and sustainability of Canadian-sourced and manufactured resource products represents a significant competitive advantage, growing regulatory complexity is holding Canada back as all industries work to push through COVID-19.

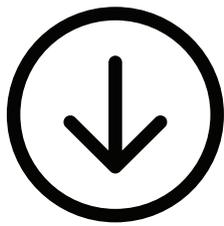
Measures of Canada's regulatory burden in comparison to global competitors [paint a concerning picture](#). Canada performed second-worst in the OECD on [openness to foreign direct investment](#) (FDI), dropped to 22nd in 2019 on the World Bank's [Ease of Doing Business Index](#) and ranked 53rd in 2018 for [burden of government regulation](#), according to the World Economic Forum.

■ Affirm regulatory independence and science-based decisions

Responsible natural resource development is in Canada's national interest. The federal government has recently undertaken significant efforts to streamline the federal regulatory environment in Canada – setting legislated timelines for regulatory assessment while also expanding the legislated scope of impact assessment on environmental and social factors and increasing Indigenous consultation and engagement requirements at the front end of the regulatory process. Public discourse around climate change, environmental performance, economic development, Indigenous consultation, reconciliation and industrial strategy is vital to securing Canada's economic and social future.

Decision-making processes on major projects under federal jurisdiction are inherently tied to public trust, both shaping and responding to it. To be meaningful, federal decision-making must also take into consideration local Indigenous consultation and engagement, including by strengthening the [institutional capacity](#) of local authorities so that they can be effective, positive contributors within the defined scope of engagement. New participant funding models under the *Impact Assessment Act* have begun this process.

Regulators must be empowered to function efficiently and impartially in their evaluation of major projects. Making clear the government will accept recommendations on project approval by the Impact Assessment Agency and Canada Energy Regulator could accomplish this without legislative appeal or revision and would result in improved efficiency, increased public trust and higher investor confidence in regulatory institutions.



2nd
worst in the OECD
on openness to
foreign direct
investment

53rd
globally for burden
of government
regulation

■ **Provide clarity and certainty for investors**

For investors, final decisions must include specific and long-term requirements with clear pathways to compliance. Anything less drives capital elsewhere and deprives Canada of an opportunity to resolve the significant economic damage created by COVID-19. Findings show that Canada's LNG industry prospects, beyond LNG Canada, remain constrained due to "self-inflicted regulatory uncertainty" despite [considerable potential and high global demand](#).

Certainty is essential to secure domestic and international investment for all resource industries, which are competing fiercely with other major global exporters of energy products, forest products, metals, minerals and chemicals. This can be accomplished while prioritizing policies and regulations that can maintain or even enhance environmental performance, ensure safety, address inclusivity goals and meet obligations and commitments to Indigenous people.

Close cooperation with provincial and territorial governments is key to leveraging industry's capacity to be a leader in economic recovery and to support Canada's move to a low-emissions economy.

This should include coordination with the Canadian Council of Forest Ministers and the Energy and Mines Ministers on legislative, regulatory and policy priorities including the *Species At Risk Act*, the *Canadian Environmental Protection Act*, the *Fisheries Act*, the *Canadian Navigable Waters Act* and the *Pulp & Paper Effluent Regulations*.

2. The Task Force recommends that the federal government:

- Commit to evidence-, science- and outcomes-based impact assessment decisions.
- Advance [more agile](#) regulations and policies.
- Coordinate with provincial and territorial governments on legislative and regulatory priorities.





3. Attract capital investment

The COVID-19 pandemic has severely disrupted the normal investment cycle in Canada. In its most recent [Business Outlook Survey](#), the Bank of Canada found that “firms signalled a significant decrease in capital spending over the coming months with the balance of opinion on investment intentions in machinery and equipment turning to a near-record low.” Statistics Canada now expects a [9.5 per cent decrease](#) from 2019.

Nowhere is this more apparent than oil and gas. Major producers are cutting production and capital spending in oil and gas extraction is expected to [decrease by 31.7 per cent](#). Unless market conditions significantly improve by the end of the year, this short-term investment decline in the energy sector is predicted to have [severe consequences for Canada’s GDP and employment figures](#).

As one of the most capital-intensive sectors, declining investment in oil and gas affects the entire economy. [Statistics Canada estimates that For each dollar of lost GDP in the oil and gas industry, \\$1.14 is lost in other industries due to indirect \(\\$0.77\) and induced \(\\$0.37\) impacts.](#)

Federal policy cannot resolve market conditions, but it can position Canada strategically to attract investment when the market improves. In the short term, this must start with quick, easily implemented measures to boost COVID-19 recovery. In the long term, improvements must recognize the decades-long investment time frames for major capital projects across mining, chemistry, oil and gas, infrastructure, forestry and more.

■ Conduct a comprehensive review of business taxation

Many major business groups, including the [Canadian Manufacturers and Exporters](#), the [Chemistry Industry Association of Canada](#), the [Business Council of Canada](#) and the [Canadian Chamber of Commerce](#), agree that Canada’s business taxation environment is in urgent need of a comprehensive review.

The last federal review was conducted in 1996-1997. Canada’s economy has changed dramatically since then and so has the economy of the world. The COVID-19 crisis offers an opportunity to have this critical discussion to ensure long-term and sustainable economic recovery.

It’s time for a comprehensive review of business taxation in Canada compared to other resource producing jurisdictions, particularly as many global competitors do not have comparable standards and regulations.

■ Extend the Accelerated Capital Cost Program

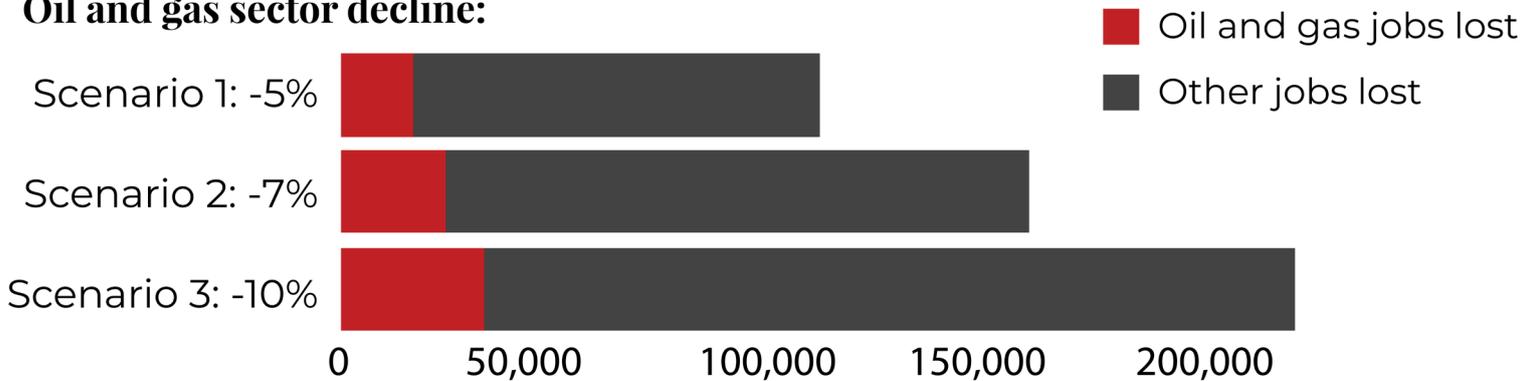
In 2018, the federal government introduced the 100 per cent [Accelerated Capital Cost Allowance](#) for major capital projects (specifically Class 53 equipment). This program will operate through 2028, subject to a phase-out for property that becomes available for use after 2023.

Good capital projects interrupted by the pandemic should not be put at further risk because they miss a program window. The federal government should extend the measure to 2030 to recognize the business planning cycle for major capital investments and consider making it permanent to offset the impact of the COVID-19 pandemic. This would provide [long-term certainty](#) to capital-intensive investments.

When oil and gas jobs shrink, others feel it hardest.

85 per cent of job losses due to a shock to the oil and gas industry caused by an event like COVID-19 occur in industries other than oil and gas. Worst hit include manufacturing, finance, real estate, mining and professional services. A 10 per cent decline means 222,000 lost jobs in total.

Oil and gas sector decline:



Statistics Canada Economic Insights 11: 626-X No. 109, July 2020.
Modelling by Statistics Canada. Chart by Task Force for Real Jobs, Real Recovery.

■ Boost impact of investment support programs

Investment support programs are critical to attracting global scale investments. However, stimulus funding incentives are currently treated as either revenue or an avoided cost and are therefore taxed at both federal and provincial levels, lowering incentive value by up to 30 per cent, depending on jurisdiction, and decreasing the effectiveness of provincial and municipal economic stimulus measures.

Capital-intensive projects have significant domestic economic spinoffs. Recent ventures in chemical manufacturing have shown that up to 75 per cent of spending went to Canadian companies and over 50 per cent of spending occurred within 100 kilometres of the project.

Those potential economic benefits present a compelling case beyond tax revenue. Eliminating the federal taxation of provincial and municipal stimulus funding would maximize the impact of investment support programs.

3. The Task Force recommends that the federal government:

- Focus on implementing easy and effective measures that deploy resource prosperity.
- Conduct a comprehensive review of Canada's business taxation environment.
- Extend the Accelerated Capital Cost Allowance for major capital projects to 2030 and consider making it permanent.
- End federal taxation of provincial and municipal stimulus funding incentives.

4. Enhance critical infrastructure

Targeted, strategic and substantive investments in rail, roads, ports, electricity transmission and IT are vital not only for export-based natural resource industries, but also for all communities across Canada, large and small. They require coordination with provincial and territorial governments.

Accessibility, reliability and affordability of rail were recurring concerns raised by Task Force advisors and coalition members. Natural resource industries are the single largest industrial customer group of Canada's railways and are major users of Canada's ports. Mining alone accounts for approximately [50 per cent of total rail freight](#) revenue generated and is the largest single shipping sector by volume for both rail and marine modes. While sector-based advocacy on rail infrastructure is the prevailing approach, government should work with all major and dependent users of rail to identify and proactively resolve barriers to the predictable movement of products to key domestic and international markets.

Numerous studies have been completed in recent years highlighting the potential value of interties to connect electricity markets across Canada – in terms of emissions reduction and increased competitiveness for energy-intensive, trade-exposed industries. While various provinces sell to and buy electricity from the United States, there is [limited transmission between Canadian jurisdictions](#).

Calls for a national low-carbon grid – or at least more interties – have increased in recent years, and the federal government would be well-equipped to take leadership on this file given its strategic importance to achieving both environmental and economic goals.

Connectivity is another critical component of Canada's competitiveness. Accessibility, affordability and reliability of IT infrastructure will determine whether communities and industries can fully participate in the global economy.

Canada's northern regions, in particular, suffer from [critical infrastructure gaps](#), especially in terms of transportation networks. At present, it costs 2 to 3 times more to explore for and develop a mine in northern Canada and up to 6 times more for exploration in the most remote areas, largely due to the [lack of transportation and electricity infrastructure](#). Dedicated funding for northern infrastructure would enable resource development, generate economic activity to create jobs and government revenue and support Canadian sovereignty in the Arctic. Northern infrastructure renewal would also advance [Canada's Arctic and Northern Policy Framework](#).

Achieving a Top 10 ranking on the [World Bank's Logistics Performance Index](#) by 2025, a goal prominently identified in the 2018 report of Canada's Economic Strategy Tables, would open "access to new export markets or increase growth at home." It would also enhance Canada's reputation as a reliable global trade partner that can deliver products on time.

All would have measurable benefits for Canadians and further position our country to recover from the economic consequences of COVID-19.

4. The Task Force recommends that the federal government:

- Improve Canada's ranking on the World Bank's Logistics Performance Index by 2025 in partnership with the private sector and all levels of government.
- Build road, rail, deep seaport and IT infrastructure, especially in areas where infrastructure gaps constrain socioeconomic development.
- Establish a national low-carbon energy grid and promote electricity interties between provinces.
- Invest dedicated funds in northern infrastructure to reduce the cost of resource development, generate important economic activity and support Canadian sovereignty in Arctic regions.
- Mandate a stronger resource development focus for the Canada Infrastructure Bank.



5. Ensure access to resource lands for development



Canada is a resource-based economy with a critical role in ensuring global food and energy security. Access to the land base is a fundamental requirement of a sustainable resource economy, particularly for activities such as mining and oil and gas development, which require large tracts of land to explore for potential deposits below the surface.

Ultimately, resource development entails temporary and sustainable land use, as resource projects have a finite life span and reclamation and rehabilitation activities occur during the life cycle of a project.

Responsible resource industries understand that [certain lands](#) may be withdrawn from development because of economic, ecological, cultural, spiritual or aesthetic values. Land use decisions and the creation of any protected and conservation areas should not unduly erode access to prospective resource lands and their related local and global economic benefits.

Land use decisions and the creation of expanded protected and conservation areas must be informed by comprehensive resource assessment and establishing credible, inclusive and evidence-based processes that balance diverse societal goals and values. Mineral resource assessment or forest production modelling can help determine the value of an area's resource potential.

A sector-by-sector approach should be considered to address federal regulatory duplication where provincial and territorial governments have primary jurisdiction.

For instance, [over 90 per cent of Canada's forest sector operations](#) are in working forests and land-use decisions are based on local input, science and multiple values and purposes. These lands are under the purview of provincial and territorial government and are already governed by robust laws, regulations and policies.

Collaboration sets the foundation for joint pursuit of international obligations using internationally recognized classifications and measures such as [Other Effective Conservation Measures](#) (OECM).

5. The Task Force recommends that the federal government:

- Base land use decisions on science-based assessments that determine the value of an area's resource potential.
- Coordinate with provincial and territorial governments on conservation commitments.



Photo credit: Government of Saskatchewan

6. Maximize Indigenous economic participation

■ Embrace meaningful reconciliation

Any natural resource industry-led post-COVID-19 recovery strategy must welcome Indigenous communities and people throughout Canada as full partners in the economy. First Nations, Métis and Inuit communities are already involved in economic development, much of it linked to resource development, including hydroelectricity, oil and gas, mineral exploration and mining, fisheries, forestry and, more recently, legal cannabis. For many Indigenous communities, business venture revenues are rapidly overtaking federal transfers, providing own-source revenues that enable full financial independence.

Indigenous communities are also [accessing conventional market capital as never before](#). Market capital to support business and economic development in Indigenous communities [grew from \\$2.8 billion to \\$5.9 billion](#) (in constant 2013 dollars) between 2003 and 2013, an increase of 111.6 per cent, or 2.5 times the rate of the increase of capital at work in Canada during the same period. Prior to the pandemic, this growth was only increasing, representing a coming of age of Indigenous capital – and the kind of economic development that is necessary for meaningful reconciliation.

However, Indigenous communities have been hit hard by the COVID-19 pandemic, particularly those in remote and northern regions reliant on mining, forestry and oil and gas. In the early days of the COVID-19 pandemic, many natural resource operations were suspended to reduce the risk of COVID-19 transmission into susceptible communities. While many resource companies kept Indigenous employees on payroll, Indigenous-owned businesses have been disproportionately affected due to their close relationship as suppliers to resource companies.

It will be important to ensure Indigenous communities are at the table in any economic recovery strategy, which starting with proactive community engagement that include Indigenous languages, elders, women and youth.

Indigenous partners are not just stakeholders but are also constitutionally recognized rights holders who must be meaningfully consulted and accommodated insofar as their rights and titles are affected. This relationship has the potential to empower a post-pandemic recovery, led by the natural resource sector, that generates the capital, jobs and commodities to put Canada on a path of renewed, shared prosperity with Indigenous communities.





■ **Enable Indigenous communities to become active beneficiaries of major projects**

Many Indigenous communities want to become full partners in major projects, including as owners and operators, moving beyond the familiar impact-benefit agreement model. In the current regulatory environment, partnership can more actively ensure project approval (through provincial or federal processes) and project success, creating prosperity for Indigenous and non-Indigenous workers, communities and businesses.

Meaningful equity partnership may indeed be the main pathway towards economic reconciliation for Indigenous peoples in Canada – it can create multi-generational wealth as communities invest in infrastructure and become asset owners with their own revenue streams. The post-pandemic recovery is an opportune moment to provide more Indigenous communities with the proper capital and financial tools to make investments, breaking cycles of poverty and financial dependence.

However, the potential for Indigenous communities to invest in major infrastructure projects and become equity partners is hindered by the [Indian Act](#), which limits Indigenous governments' ability to raise revenue through borrowing and private investment. Most problematic for Indigenous entrepreneurs and governments is the *Act's* limits on their ability to use land and property as collateral for loans. These restrictions make it more difficult for Indigenous communities to borrow at lower interest rates and, as a result, less likely to invest in important infrastructure. Innovative financing solutions may offer the answer.

Lending Indigenous communities use of the federal sovereign guarantee to secure lending, as proposed by the [First Nations Major Projects Coalition](#), may be among the most effective ways for government to demonstrate its commitment to this important file. It could operate just as the federal government currently backs Indigenous housing through [Ministerial Loan Guarantees](#) that protect on-reserve mortgages.

Beyond loan guarantees, Indigenous communities have other lending options, such as the First Nations Finance Authority (FNFA), which provides Indigenous communities with [long-term loans at good interest rates and investment options](#). As of 2018, the FNFA had accessed over \$600 million from financial markets. The federal government should continue to provide proper resources for the FNFA and make it easier for interested Indigenous communities to access loans.



■ **Promote Indigenous procurement for federal contracts**

The Indigenous economy contributes an estimated \$31 billion to Canada's GDP and about \$12 billion comes directly from Indigenous entrepreneurs. By 2023, it may reach \$100 billion, as Indigenous businesses are growing at nine times the rate of the average non-Indigenous business.

Resource industries already rely on Indigenous-owned businesses and workers, but key capacity issues continue to exist. Many Indigenous-owned businesses can help service the resource economy but lack access to capital, proper business networks or an optimal location. Government procurement is a key tool for that necessary capacity building.

To jumpstart Indigenous businesses, the federal government should build on Public Services and Procurement Canada's [aspirational five per cent procurement target](#) for federal contracts. In 2019, the Canadian Council for Aboriginal Business (CCAB) determined this is [completely achievable](#) and Indigenous businesses have the capacity to supply over 20 per cent of the federal government's goods and services.

■ **Tailor solutions to northern Indigenous communities**

Canada is a northern power and must leverage this advantage. The post-pandemic recovery should work to advance both Indigenous and non-Indigenous communities in the North, which would build on [Canada's Arctic and Northern Policy Framework](#) and help affirm Canada's Arctic sovereignty. Resources and infrastructure are essential to those objectives.

The potential for new investment in the North is enormous. Canada's North has promising mineral potential and opportunities for economic development, especially for Indigenous communities. This applies to Far North jurisdictions such as Nunavut, the Yukon and the Northwest Territories and also includes northern British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Québec and Newfoundland and Labrador.

The long-term global demand for commodities from these regions is increasing and Canada is well-positioned to take advantage of this opportunity. However, high operating costs, including energy costs, continue to limit capital investment. As the government looks to promote investment through the COVID-19 recovery, it should focus on tax incentive programs such as the [Mining Exploration Tax Credit](#) and assess whether they adequately address northern considerations. Improving existing Indigenous consultation and accommodation processes and resolving outstanding land claims, will also help create a secure investment environment.

To fully capitalize on the opportunity that resource development presents, training programs for northern and Indigenous communities are also needed to address the current skills gaps. Governments and proponents need to engage with Indigenous and non-Indigenous communities to meet this need.

■ Advance opportunities for Indigenous communities through forestry

The forest sector transformation underway in Canada over the last two decades hasn't been limited to making changes in technology, products and markets, according to the [Forest Products Association of Canada](#). Land claim settlements, modern treaties and inclusive forest management practices are all creating [opportunities to meaningfully advance](#) the process of reconciliation with Indigenous peoples in this country. These changes are also improving Indigenous peoples' access to forest resources and increasing their control over decisions on forests' use, harvesting and management.

Between 2003 and 2013, Indigenous interests increased [their share of total Canadian tenure](#) volume from 5 per cent to over 10 per cent. Examples of collaboration with Indigenous communities are numerous across Canada. They include initiatives related to business development, skills training, capacity building, infrastructure and others. Forestry, through its long-standing collaboration with Indigenous communities, creates greater economic and social opportunity for Indigenous communities. Canada's forest sector is one of the largest employers of Indigenous peoples in Canada and works closely with [over 1,400 Indigenous-owned forestry businesses](#). Indigenous communities now hold [over 10 per cent of the nation's wood supply](#), including over 30 per cent in Manitoba and Saskatchewan.

6. The Task Force recommends that the federal government:

- Integrate meaningful reconciliation into Canada's economic recovery strategy.
- Consult and work in partnership with Indigenous communities to review and amend the *Indian Act*, improve existing Indigenous consultation and accommodation processes and resolve outstanding land claims to create a secure environment for investment.
- Consider lending Indigenous communities use of the federal sovereign guarantee to ensure Indigenous entrepreneurs and businesses can access the proper capital and financial tools to succeed.
- Prioritize procuring at least five per cent of goods and services from Indigenous-owned businesses.
- Review tax incentives such as the Mining Exploration Tax Credit with a focus on helping to develop Canada's North and benefitting Northern Indigenous communities.



02

In a post-pandemic economic recovery, it's essential we not only create jobs, but also ensure they are meaningful and inclusive of Canada's diverse population. In other words, we must restore pre-pandemic employment levels within the natural resource sector and create relevant new jobs in an evolving and competitive environment.

The disruption of the natural resource sector's labour force began long before the pandemic. Oil and gas, mining and forestry companies have been adapting to uncertain business, market, regulatory and investment conditions since 2014 and in some ways long before that. Adaptation has required structural shifts and significant workforce adjustments that have left a great number of [skilled, experienced and previously well-paid workers](#) unemployed or underemployed and new grads without first jobs in their desired field.

Nevertheless, there is considerable growth potential in many sectors. Recent projections indicate that [almost 80,000 workers](#) will need to be hired in mining over the next decade to replace retirees and fill baseline positions.

Real recovery of our natural resource workforce requires measures that not only involve rehiring workers affected by COVID-19, but also increase overall employment levels and support the transition of the skilled and experienced talent impacted by structural shifts. Unemployed and underemployed resource workers deserve opportunities to again meaningfully contribute to resource industries and the national economy.

Building real jobs means looking for areas of real opportunity, right here at home. Fortunately, we already know where we have unassailable strategic advantages and it makes sense to start recovery efforts by encouraging efforts within our control where markets are already waiting for goods and services that result from people doing their jobs.

A healthy, competitive natural resource sector will drive new employment, skills, create a larger ecosystem of service providers, and boost emerging sectors. It will bring workers along by creating opportunities for jobs that leverage specialized skills and expertise and by preparing workers for continued employment in an evolving sector.



BUILDING
MEANINGFUL
EMPLOYMENT



7. Ensure job creation

As natural resource industries continue to evolve, not all of today's unemployed natural resource workers will work in the same occupations or industries as they did previously. There have been too many business, social and technological shifts. However, practical ways to leverage the skills and expertise of affected workers must be identified as the sector recovers and supply chains expand.

The labour market inefficiencies Canada is currently experiencing decrease the value offered by the natural resource workforce. Looking ahead, the potential lack of qualified talent also threatens Canada's attractiveness for investment.

Regardless of location, natural resource activity and related infrastructure projects have a positive impact on nationwide employment levels. Resource-based construction and operations draw workers from across Canada and provide economic and social benefits to their home communities through mining and exploration, sustainably-managed forestry, forest product manufacturing, oil and gas production, natural gas and LNG processing, chemical manufacturing, fuel production and pipeline transmission.

Healthy industry has a proven track record of investing in measures, innovation and technology that will increase its cost and carbon competitiveness. Establishing a regulatory and policy environment that encourages investment can ramp up activity and get Canadians back to work within the natural resource and the industrial engineering, manufacturing and construction sectors.

7. The Task Force recommends that the federal government:

- Establish a regulatory and policy environment that encourages investment in industry in order to get Canadians back to work.



8. Build employment resiliency

Research indicates the [domain knowledge and expertise](#) of the existing natural resource workforce are valuable for industry's implementation of technology to achieve cost and carbon competitiveness. Upskilling activities can provide the natural resource labour supply pool with opportunities to augment existing skills and knowledge with the skills driven by a competitive natural resource sector.

These measures can help qualify more workers for employment, reduce the risk of future skills shortages and ensure that industry and its supply chain can rapidly respond to the opportunities emerging from new technologies.

An ROI analysis for existing cases by PwC shows a yield of [at least \\$2 in revenue or savings for each dollar invested in upskilling](#): "Besides [avoiding] the major cost that comes with rehiring, upskilling brings economic benefits to people and communities as well. And it allows people to move to new jobs that are better and more future-proof and helps preserve a nation's taxation revenues and reduce social safety net expenses."

The issue of labour market adjustment for the natural resource workforce is a consideration for numerous organizations, including [PetroLMI](#) – a division of Energy Safety Canada – and the [Mining Industry Human Resources Council](#) (MiHR).

Any national strategy for employment and skills development, such as successors to the federal [Innovation and Skills Plan](#), should reflect best practices related to workforce transition and upskilling to address shifting skill and knowledge requirements within the natural resource sector and its supply chain. The strategy should identify potential economies of scale for workforce transition and upskilling activities that are beneficial across multiple sectors.

For example, the forest sector's successful [Greenest Workforce](#) website, which aims to match employers and interested workers in forestry-related jobs, could be a platform for expanding to a broader natural resource industries site.

Another consideration could be the development and implementation of short-term training and micro-credentials for skills required across several sectors, such as:

- Automated hauling systems (AHS) for mining and oil sands.
- Automation and optimization associated with process manufacturing found in forestry, chemical manufacturing, oil and gas and mining.
- Skills and knowledge for the emerging geothermal energy sector.
- Skills required for data acquisition, wrangling, analysis and visualization in all natural resource sectors.

The speed of technology development and adoption will further drive the need for continuous upgrading of skills and knowledge across all workforces.





■ Enhance digital literacy and competency

Digital technology is a path to both cost and carbon competitiveness of the natural resource sectors. It's anticipated that COVID-19 will be a catalyst to accelerate implementation of digital solutions. [All occupations will be impacted by digitization](#). A basic level of digital skill and competency will not only be required by those looking for work but also those looking to stay qualified for their current employment.

The digital transformation anticipated for the natural resource sector does not mean all employees will require a computer engineering degree or coding skills, but they will need to know how to navigate software programs and operate mobile devices.

Digitization has clear benefits for productivity. In particular, AI application has been described as a [“game changer” for manufacturing](#). Resource-based industries stand to gain a lot from its expanded application, particularly the forestry sector. As the ICTC [points out](#), this must be balanced with what is needed for deployment success: high-volume, high-quality datasets and robust network infrastructure.

Ensuring that workers are ready for these possibilities can be accomplished by following the recommendations in [Canada's Digital Charter in Action: A Plan by Canadians, for Canadians](#). Canada's plan for a “competitive, data-driven, digital economy” must be practical and include a framework that defines standard digital competency levels to assist organizations, educational institutions and other training organizations, as well as helps individuals assess strengths and gaps.

8. The Task Force recommends that the federal government:

- Coordinate with industry to address the disruption of the sector's labour force and pending shortages.
- Work with provinces and territories to modernize Canada's education and training ecosystem to better support lifelong learning.
- Emphasize flexible, affordable training and continuous skills development.
- Accelerate digital literacy and competency.

9. Advance Indigenous employment



Much of the current and prospective development of Canada's natural resource prosperity involves the traditional territories and reserve lands of Indigenous communities. Indigenous peoples deserve to share in the benefits of this wealth.

Indigenous communities have worked collaboratively with industry to negotiate benefits associated with resource development, including employment with resource companies and contracts for local Indigenous business to provide goods and services.

There are many examples of the [advancements Indigenous communities have made](#) in helping to develop Canada's natural resources. Several Indigenous-led organizations, including the [First Nations LNG Alliance](#) and the [First Nations Major Projects Coalition](#), have been established to ensure Indigenous communities continue to realize benefits from resource development.

“Indigenous-owned businesses are 40 times more likely to be involved in the mining and oil and gas sectors than the average Canadian business. The extractive sector hires [twice as many Indigenous employees](#) and pays on average twice as much in wages as other sectors.”

– **DALE SWAMPY**, President of the National Coalition of Chiefs



■ **Develop resilience among the Indigenous workforce**

Indigenous communities and natural resource workers have been [severely impacted by the COVID-19 pandemic](#) and by the previous downturn across the sectors. While the solutions related to training and enhanced digital literacy skills also apply, barriers to implementing these solutions are greater in some Indigenous communities.

Digital infrastructure is [less reliable in many Indigenous communities](#), creating challenges for the development of the digital competencies and literacy required to be successful and resilient in the workplace. Connectivity limitations also create barriers for accessing online training that has become a mainstay during the pandemic. Investment requirements such as those outlined in [Canada's Digital Charter](#) are needed to address the digital divide experienced by Indigenous communities.

Developing a framework to guide the [development of the Indigenous natural resource workforce](#) could increase return on workforce development investment. Often, funds for training the Indigenous workforce are focused on a specific resource sector or project. As a result, workers may face unemployment if the resource sector experiences a downturn or a project is completed.

There is significant transferability of occupations and skills across all the natural resource sectors and industrial construction and maintenance. A framework that assists Indigenous communities in planning education and training programs that teach transferable skills would assist in building a more resilient workforce.

Building a pipeline of Indigenous natural resource workers requires ongoing work to address the social and health issues that continue to create employment readiness barriers in some Indigenous communities. Support for programs designed to address system barriers such as poverty, homelessness, mental health and addictions needs to continue to increase readiness for skill development and employment retention.

9. The Task Force recommends that the federal government:

- Work with Indigenous governments to develop a framework to guide the development of the Indigenous natural resource workforce.
- Increase employment retention and readiness for skills development by addressing social and systemic barriers faced by Indigenous peoples and communities.



10. Attract and retain talent

A priority for the natural resource industries must be to re-employ the existing trained and skilled workforce. There may be significant risks to cost and performance if industry is not able to re-employ the skills and expertise of workers affected by the pandemic.

Going forward, Canada's natural resource sector will need to attract and retain a wide variety of talent, from Canada and abroad, to maintain its place as a global leader in responsibly developed natural resources and continue to contribute solutions for the worldwide low-emissions transition. In addition, as Canadian jurisdictions that bid for Amazon's HQ2 learned, having the right talent pool in place is a [critical investment factor](#).

The expertise behind Canada's world-class brand for natural resource technical innovation and high environmental, social and governance (ESG) standards is deep and diverse. Workers are proud of the work they do. It is important to tell their stories as part of what makes Canada's natural resources a great investment opportunity.

All levels of government must acknowledge the importance of Canada's resource sector today and for the foreseeable future to increase the confidence among the brightest scientists, engineers, technologists and trades and skilled workers so that they can build a meaningful, long-term career in industry.

10. The Task Force recommends that the federal government:

- Help industry promote the natural resource sector as a meaningful career pathway.

11. Enhance skilled workforce mobility

The natural resource, manufacturing and industrial construction industries are inextricably connected. Natural resource investment in infrastructure is a key driver of construction employment. The growth of natural resource industries, including implementation of clean technologies such as carbon capture, utilization and storage (CCUS), manufacturing of biofuels and deployment of small modular reactors (SMRs), requires the skilled construction, manufacturing and maintenance workforces.

Even as the pandemic continues, [energy-related construction in BC](#) is generating jobs. Currently numbered at 5,400, thousands more jobs are expected by 2021. In addition to this expansion in demand, an aging workforce is increasing the risk of a shortage. By 2029, an estimated 257,100 construction workers – 22 per cent of the 2019 labour force – are [expected to retire](#).

Timely access to a skilled construction workforce is an imperative in a capital-intensive environment. BuildForce Canada identifies labour mobility, or the ability to [draw workers from across Canada](#), as key to meeting the demand for energy-related infrastructure projects.

However, there is a need to harmonize provincial minimum standards for apprentices to address mobility barriers. Currently, apprentices looking to pursue employment on a project outside of their home province face challenges in maintaining their status. These barriers reduce access to labour for large infrastructure projects and have a detrimental effect on building a sustainable construction workforce.

Apprenticeships are the pipeline to building a career in the construction sector and anything impeding an apprentice's ability to build hours towards journey certification is a serious retention impediment.

11. The Task Force recommends that the federal government:

- Work with provinces and industry to address barriers to mobility for tradespeople and apprentices in natural resources and supporting industries.



Addressing climate change and moving towards a low-emissions future require collective effort. A competitive natural resource sector will play a key role as Canada works together to build a more inclusive economy and reduce emissions in the wake of the pandemic.

The Government of Canada's commitment to [net-zero emissions by 2050](#) demands innovation to reduce emissions drastically. Energy-intensive industries will need substantial improvements to energy generation and utilization, as well as the development and commercialization of carbon sequestration technologies.

This necessary growth and acceleration of clean technology will require investment and expertise. Fortunately, Canada's natural resource industries are prepared to leverage their creativity and technology to introduce industry-changing innovations.

The development and commercialization of clean technologies, such as biofuels and biochemicals, small modular reactors (SMRs), hydrogen or geothermal energy, emissions detection and mitigation, environmental remediation and reclamation, water treatment, recycling and carbon capture, utilization and storage (CCUS), all rely on foundational expertise and equipment currently found within the oil and gas industry.

The energy sector is also helping to increase the use of renewable energies and unlocking the potential of new energy sources such as blue hydrogen – which is effectively a zero-emissions fuel.

Fundamentally, Canada's natural resource industries are productive, innovative and uniquely positioned to support an inclusive and transformative low-emissions economic recovery. We have an obligation to Canadians to use these strengths and assets to address the challenges and opportunities presented by climate change and the path to global recovery and renewal from COVID-19.



ACCELERATING
INNOVATION AND
ENVIRONMENTAL
COMPETITIVENESS





■ Leverage innovation expertise

A low-emissions rebuilding of natural resource industries must accelerate implementation of technological solutions. Automation and digital technologies already have a foothold in resource sectors. With further investments, their adoption will accelerate, supporting growth, innovation and cleaner, high-tech jobs.

Canada's natural resource sector currently invests heavily in innovation and technology towards a low-emissions economy. The natural resource value chain is responsible for [85 per cent of all industry spending on environmental protection](#), including investments in pollution prevention and control. Statistics Canada data shows mining and oil and gas industries are [leading the way in innovation spending](#), including research, development, acquisition and implementation of advanced technologies.

Canada's mining sector – and oil and gas industries through advanced processing – has an opportunity to supply key metals and minerals in the transition to cleaner energy sources. Metals and minerals, such as copper, zinc, nickel, lithium, indium and uranium, are valuable resources necessary in the global energy transition and reduction of carbon emissions.

With the carbon-storing benefits of sustainably managed forests, wood products and Canada's growing forest-based bioeconomy, Canada's forest sector can be a leader in moving towards a low-emissions future and can help make Canada a clean technology and green growth powerhouse. The Canadian Council of Forest Ministers (CCFM) has recognized the [clean technology and bioeconomy potential of Canada's forestry sector](#), charting a detailed path in 2018 to [utilize forest biomass](#) throughout the economy.

More than 95 per cent of all manufactured products rely on chemistry and advances in key sectors such as green buildings, sustainable transportation, clean energy and sustainable agriculture would be impossible without it. Combining the knowledge and expertise of the petroleum refining, forestry, chemistry and agriculture sectors is key to developing cleaner fuel sources and opening new opportunities to contribute to a low-emissions future.

In partnership with the federal government, provinces and Indigenous communities, natural resource industries are poised to develop a new industrial subsector with small modular nuclear reactor (SMR) technology. This industry has the potential to create jobs and economic opportunities across the country and build on the existing nuclear supply chain (from uranium exploration and mining through to power generation) to encourage a low-emissions economy.



■ Build on Canada's international leadership

Canada's economic recovery is an opportunity to advance a resilient, growth-oriented economy and further demonstrate international leadership on climate change and the environment. We can lead on low-emissions climate advancements with our international partners, while benefitting from sustainable natural resource exports that lead in emissions reduction.

International natural resource markets recognize that Canadian crude oil, natural gas, chemicals, pulp and paper, potash, minerals and base and precious metal resources are developed under rigorous environmental, social and governance (ESG) standards and a robust regulatory regime.

Globally, Canada is recognized as an exporter of leading environmental practices, also helping set international standards. Mexico, for instance, recently adopted the Mining Association of Canada's [Towards Sustainable Mining \(TSM\)](#) initiative, joining many other countries that look to Canada for inspiration on environmental and local consultative policies. This approach also translates to clear emissions advantages. For example, Canadian potash is also the most sustainable in the world – it is produced with 70 per cent lower GHG emissions than that of other producers.

Through both voluntary corporate social responsibility (CSR) measures and regulation, Canada's oil and gas industry sets the global standard for high environmental performance from production to transportation. Among energy-producing nations, Canada is a leader on [stringent environmental regulations](#). For that reason and others, global markets now view Canada's liquefied natural gas (LNG) as having potential to serve as a cleaner-burning transition fuel for Asian markets, where demand has [doubled in two decades](#). The Canadian Energy Pipeline Association's [Integrity First](#) safety program is an international industry standard.

Canada has also led the way internationally on ethics and sustainability in chemical production. Founded in Canada in 1985, [Responsible Care](#) is a UN-recognized sustainability initiative that is now practised in 73 countries and by 96 of the world's 100 largest chemical producers.

Surveys confirm that, as a supplier of forest products, Canada has the most respected environmental reputation in the world. The environment is a growing consideration for buyers of our products. Today, sustainable forest management has several [criteria and indicator programs](#) designed to guide the practice of sustainable forestry. This Canadian advantage is strengthened by industry's commitment to continuous improvement and [comprehensive planning](#) to improve carbon sequestration, lower carbon emissions in Canadian forests and mills and store carbon in long-lived wood products.



12. Align climate action and natural resource development

Climate change is a global phenomenon and action to reduce emissions must be a coordinated effort among all signatories to the Paris Agreement. Since its signing in 2015, many industrialized nations have adopted a net-zero target by 2050, an objective that requires radically increased use of emerging or disruptive technologies. This reality is apparent in the challenges faced by Canada's energy-intensive, trade-exposed industries.

Unlike many highly developed economies, Canada does not have an integrated strategy charting a path forward for both climate action and the export of natural resource commodities.

As it considers investment decisions with the capacity to significantly affect the path of the post-COVID-19 recovery, industry is carefully evaluating our country's many ambitious targets and how clearly and effectively we develop mechanisms to get there.

Nearly all reductions in greenhouse gas emissions by countries that have made progress have relied on fuel switching in the electricity sector. The existing 80 per cent clean generation infrastructure is a real asset, but it constrains Canada's potential gains in a way distinct from global competitors. As a result, the marginal cost of progress is far more expensive than in other places and the same is true for many jurisdictions across Canada that are ahead of the curve.

Nevertheless, most industrialized nations have seen declining emissions intensity in their economies. [Canada is no different](#). Most critically, because Canada represents only 1.6 per cent of global emissions, among the greatest potential impacts we can have is in the export of natural resources and advanced manufactured goods produced with a comparably lower GHG emissions intensity. These products can and should displace products from elsewhere with high emissions intensity, particularly if Canadian industrial processes benefit from electrification (such as with [LNG export](#)), carbon capture, utilization and storage (CCUS) and use of forest-derived biofuels, biochemicals and biomaterials to further reduce emissions.

■ Minimize carbon leakage

In 2016, Canada adopted the [Pan-Canadian Framework on Clean Growth and Climate Change](#), a foundation for its climate strategy and carbon pricing regime. It acknowledges the [separate and shared responsibilities](#) of the federal and provincial governments as articulated in the [Constitution Act, 1867](#). While the federal government coordinates the delivery of greenhouse gas management actions across this country, whether through carbon pricing or regulatory measures such as the [Clean Fuel Standard](#), it must continue to recognize the way our federation works – and that should remain a respected tenet of collaborative action going forward.

As an open export economy, with a small domestic market, Canada is dependent on international trade. Our country also has a clear comparative advantage in natural resources. It is what we are good at, and it is what [“pays the bills.”](#) according to the Business Council of BC, as well as [economist Patricia Mohr](#). Effective, meaningful recovery from the devastation of COVID-19 depends on harnessing the enormous heavy lifting that our natural resource sectors can do while also moving towards a cleaner economy. These things are not in opposition: we can be a supplier of choice for the rest of the world seeking low-emissions products.

Choosing cost-effective, transparent policies that prevent carbon leakage and yield multiple benefits across sectors and for the economy as a whole, with limited or no additional costs, is a Canadian imperative. Without careful consideration and deliberate focus on this, we will only accelerate the contraction of our most valuable GDP-generating sectors and undermine the long-term well-being of Canadians and people around the world.

12. The Task Force recommends that the federal government:

- Develop an integrated climate and natural resource strategy that reconciles climate objectives and export of low-emissions resource commodities.
- Rationalize the cumulative cost of the Clean Fuel Standard with federal and provincial GHG pricing systems.
- Collaborate with provinces on:
 - a. Implementing a robust GHG offset system, including the necessary [protocols and market mechanisms](#) to incentivize innovation.
 - b. Ensuring a level playing field on carbon taxes or cap-and-trade emissions trading allowance pricing to ensure they don't become barriers to internal trade.
 - c. Accelerating investment in low-emissions innovations for facilities and sectors that are best positioned to fast-track the post-COVID-19 economic recovery.





13. Drive challenge-oriented innovation

Canada's approach to post-pandemic recovery must address the major outstanding technological challenges to meet climate targets, grow investor confidence and fulfil evolving ESG requirements. Reasserting Canada's role as a major innovation performer will help reap the considerable productivity benefits of capital-intensive R&D.

While Canada's R&D intensity – spending as a proportion of GDP – has [steadily declined](#) over the past 20 years, natural resource industries have joined manufacturing – which continues to be the highest spender – to serve as the foundation of Canada's R&D performance. This has only been possible with considerable private-sector investment, only some of which is eligible for [direct or indirect support](#). Unlike its G7 peers and many other countries, Canada overwhelmingly chooses to indirectly, rather than directly, fund R&D through tax incentives.

The high-capital productivity of resource investment, including in R&D, optimally positions natural resource industries to further improve Canada's innovation performance – provided that the right conditions for investment are set.

Attracting investment has clear and consistent benefits for innovation performance, which in turn benefits Canadian workers and businesses. A collaborative, challenge-oriented innovation strategy must promote R&D linkages between innovation funders and performers and recognize that solving big problems, such as building a path to net-zero, has a high degree of risk and uncertainty.

Regulatory pathways to [foster innovation](#) can also be a core part of the solution, whether through [innovation sandboxes](#) or [outcomes-driven agile regulations](#).

Funding must be carefully geared towards the innovation we want and need. Delivery of programs, such as the Scientific Research and Experimental Development (SR&ED) program, the Industrial Research Assistance Program (IRAP), the Energy Innovation Program (EIP) and the Investments in Forest Industry Transformation (IFIT) program, must be fit for purpose – whether that is emissions reduction or the production of high-value products for domestic use and export, such as [future-fit hydrocarbons](#).

Fundamentally, preventing the flight of promising innovation is critical and requires Canada to evaluate both the design and administration of innovation supports.

■ Boost innovation commercialization

In recent years, substantial public funding has been channelled into R&D to reduce GHGs. While the technology has been advanced, the commercialization of emissions reduction technology has not yet been realized to its full potential. Low market adoption partly reflects the lengthy lead time for developing new technology. It also reflects Canada's relatively small venture capital market. Start-up companies need to find the capital to transition from developing and piloting technology into actual production.

More recently, corporate financial constraints due to the COVID-19 global downturn have put commercialization of necessary technologies at risk.

Economic incentives aimed at commercialization and upscaling are required to reduce the cost of investment in technology development, to de-risk first-mover efforts and to enable faster adoption of advanced and innovative technologies, particularly those that are related to the broader societal goals around climate change.

■ Modernize the federal SR&ED tax incentive

The [Scientific Research and Experimental Development \(SR&ED\)](#) tax incentive program is the Government of Canada's largest and most widely available tax credit program that fosters research and development. The program, administered by the Canadian Revenue Agency (CRA), provides more than \$3 billion annually to more than 20,000 claimants. Given the SR&ED program's long-standing position in the federal taxation architecture, many provincial programs use it as a model (or a co-qualifying program) for their own R&D tax credit regimes.

If Canada is to re-establish itself as a destination for global research mandates and maximize opportunities for a low-emissions economy, changes to the SR&ED program are needed. It is difficult to access and onerous for companies, with the CRA performing the dual role of adjudicating and auditing SR&ED compliance. It has also seen its [eligibility criteria tightened](#) since the early 2000s while the investment tax credit itself has decreased from 20 per cent to 15 per cent.

Reforming some of these aspects will help re-invigorate private sector R&D in Canada during a time when investment is critically needed to create jobs, generate economic activity and chart a path beyond COVID-19.

13. The Task Force recommends that the federal government:

- Review federal R&D funding programs and prioritize support for innovation and investment in the natural resource sector to align with its goal of a low-emissions future.
- Ensure optimal delivery of direct and indirect funding to upscale and commercialize critical technologies.
- Modernize and improve the Scientific Research and Experimental Development (SR&ED) program by:
 - a. Raising the SR&ED investment tax credit to 20 per cent from the current 15 per cent.
 - b. Eliminating or substantially raising the \$50 million upper threshold for the taxable capital phase-out range.
 - c. Reinstating capital expenditure eligibility (phased out beginning in 2013).
 - d. Eliminating the 20 per cent disallowance on arm's-length consulting payments.





14. Advance emissions reduction technologies

Advancing the use of emissions reduction technologies, particularly carbon capture, utilization and storage (CCUS), is a critical part of achieving greenhouse gas reductions. The International Energy Agency (IEA) suggests that [CCUS can contribute as much as one-fifth of emissions reduction to meeting climate objectives](#), as both point-source technology in industrial facilities and if used in the production of liquefied natural gas or hydrogen fuels.

Canada is a global leader with two of four worldwide industrial scale operating CCUS projects. The Saskatchewan Power Boundary Dam facility [captures 90 per cent of plant CO₂ emissions](#), while the Quest project in Alberta [stored more than five million tonnes of CO₂](#) to date. But large-scale ubiquitous deployment has not occurred. The European Union's experiences have [substantially reflected](#) these same challenges.

Canadians can take further pride that our country hosts two of the world's three carbon capture refinery complexes and one of the world's three carbon capture fertilizer facilities. As noted in the Global CCS Institute's [2019 report](#), with the recent addition of the Alberta Carbon Trunk Line, the world's largest CO₂ pipeline, Canada is well positioned to become a leader in low-carbon transportation fuels and chemical products.

Even without CCUS, energy producers in Alberta have already substantially cut greenhouse gas emissions intensity over the past decade. Emissions intensity is on track to [drop another 20 per cent and even more](#) through 2030 with transformative technology, such as solvent-based technologies for steam-assisted gravity drainage (SAGD) bitumen extraction.

However, viable, cost-effective and scalable CCUS options would be a game changer and would enable several oil sands producers to meet their net-zero by 2050 commitments. To fully realize the potential of CCUS in the oil sands, the Alberta Carbon Trunk Line would need to be extended. This type of major infrastructure investment would not only help to enable significant emissions reductions, but it would also help get individuals back to work.

■ Use tax incentives to spur investment

For Canada to become a competitive jurisdiction for CCUS and negative emissions technologies (NETs), government must explore ways to lower the costs of capital investment. This can broadly be [accomplished in two ways](#):

- Lowering costs through tax credits by using accelerated depreciation.
- Providing revenue enhancements, such as production tax credits, contracts for differences or sufficiently long and stable electricity guaranteed energy purchase agreements, to cover the cost gap.

The United States has pursued a market mechanism, the [45Q set of tax incentives](#), which provides large carbon credit incentives for carbon dioxide stored permanently underground but not used commercially (US\$50 per metric tonne) and for use in enhanced oil-recovery operations (EOR) and in other commercial uses (US\$35 per tonne). [California's Low-Carbon Fuel Standard](#) (LCFS) offset credit for direct air capture (DAC) is currently trading at US\$200 per tonne.

The re-formulation of the IRS credits in 2018, supported by the Trump administration to bolster industrial competitiveness, has [triggered construction of 17 additional CCUS facilities](#) in the US, adding to the existing 10 facilities and making the United States the world leader in CCUS.

Carbon pricing alone will not necessarily spur the required innovation. Nor will CFS offset credits for CCUS without a guaranteed price floor. Ultimately, a CFS offset credit may be too volatile and is likely not durable across election cycles. Without credit price stability and predictability, the private sector will be unable to make large capital investments in CCUS.

Moreover, Canada is distinct as an energy and resource commodity producer for operating under a carbon price, while most other global producers do not. Even if accomplished through a higher carbon price or CFS mechanisms, potential Canadian industrial users of CCUS or NETs would be at a significant competitive disadvantage. Given the considerable need for this innovation and the inability of disincentives alone to spur investment, the federal government should provide a Canadian alternative to the United States' 45Q incentives.

A market-oriented mechanism to reward successful deployment of negative emissions and CCUS technologies would spur private-sector investment and lead to climate-relevant outcomes with potential wide-scale applications to oil and gas, power production, cement, steelmaking, pulp and paper and more. The sector has [potential to create high-paying jobs](#), drive economic activity and advance export of high-value, low-emissions hydrocarbon products and technologies.

Choosing to accelerate innovation in these highly necessary technologies would serve as a smart, forward-thinking choice for Canada's economic recovery and help ensure that high-potential Canadian industries are kept competitive and productive as we move towards a low-emissions economy.

14. The Task Force recommends that the federal government:

- Adopt a tax credit at a globally competitive rate for the successful deployment of carbon capture, utilization and storage (CCUS) and direct air capture (DAC) technologies.





15. Leverage mining as a low-emissions enabler

The mining sector is a significant player in the Canadian economy and will play a major role in the post-pandemic recovery. In 2018, the minerals sector [directly and indirectly](#) contributed \$97 billion, or five per cent, to Canada's total nominal GDP. The industry [directly employs 409,000 workers](#) across the country in mineral extraction, smelting, fabrication and manufacturing and indirectly employs an additional 217,000 people through the supply chain. The sector is also the [largest private sector employer](#) of Indigenous peoples, providing more than 16,500 jobs.

Canada is one of the world's largest producers of minerals and metals. Canada is also known for having some of the most stringent environmental standards in the world in terms of environmental performance and emissions intensity.

■ Develop supply chains for critical minerals and metals

Canada's minerals sector is also an important global supplier of critical minerals and metals that are essential ingredients to the global transition to a low-emissions and digitalized economy. The [Canadian Chamber of Commerce](#) recommends that the [Canadian Minerals and Metals Plan](#) (CMMP) be used to "improve Canadian resilience and develop an export strategy that helps Canada feed into the recovery packages of other nations, especially as they pursue mineral-intensive green infrastructure and energy projects."

According to the Mining Association of Canada, our country ranks among the [top five countries in the global production of 15 minerals and metals](#), including aluminum, potash, cobalt, copper, gold, silver, zinc, nickel and uranium. Many are essential in providing the world with low-emissions energy, food security and emerging technologies. However, secure access to critical minerals in the manufacturing process faces high supply risks that are largely geopolitical.

As an example, Canada is the world's leading producer of potash – a critical feedstock for fertilizers used globally in agriculture. It is produced with only one-third of the average carbon intensity of other jurisdictions, which has considerable positive impacts for reducing emissions in global agricultural production.

[Global demand for critical minerals and metals](#) is increasing in tandem with the rapid expansion of electric vehicle and energy storage markets, which require copper, nickel, cobalt, graphite, lithium and other metals. Renewable and low-emissions energy technologies, including SMRs, are driving the global demand for uranium and rare elements. Renewable energy and health technologies are also increasing the demand for metals such as silver, gold, zinc potash, aluminum and chromium.

As a result of Canada's strong reputation as a sustainable producer, trusted trading partner and stable political jurisdiction, we have the opportunity to be a preferred and strategic global supplier of critical minerals. This global opportunity is also supported at home. A [recent poll](#) by the Mining Association of Canada showed that almost 90 per cent of those surveyed "like the idea of Canada being a preferred source for critical minerals and would like to see government take a number of steps to support this approach."

To do this, Canada needs to work on its global competitiveness and mineral processing technology. China dominates the world stage in producing many critical minerals, controlling more than 80 per cent of the global supply chain of rare earth elements – the group of 17 metals critical for the development of new clean energy technologies, including electric vehicles, as well as cutting-edge space and defence materials.

Our country has taken steps to challenge China's near-monopoly in this sector, including signing a Memorandum of Understanding with the United States confirming [Canada's participation](#) in the US-led [Energy Resource Governance Initiative](#), which has resulted in the [Canada-US Joint Action Plan on Critical Minerals Collaboration](#). This collaborative work must continue to be supported, as it represents an opportunity to leverage Canada's mineral resource potential, attract investment to Canadian exploration and mining projects and spur job creation and economic growth in various downstream industries.

15. The Task Force recommends that the federal government:

- Continue to deliver the Canadian Minerals and Metals Plan and cooperate on the Canada-US Joint Action Plan on Critical Minerals Collaboration.



16. Support sustainable forestry and forest products

Forests have a pivotal role to play in the sequestration of carbon in trees, soil and other vegetation, as well as providing products with a smaller carbon footprint, such as harvested wood products and bioproducts made from what would otherwise be wood waste from Canadian sawmills. The sector also [directly employs 230,000 Canadians](#) in more than 600 communities.

Canada's forest products industry has long been committed to lowering its carbon footprint. Canadian pulp and paper mills alone have cut their greenhouse gas emissions by nearly 70 per cent since 1990. Laws governing sustainable forest management in Canada are among the most rigorous in the world. Moreover, Canada has the [world's highest level of sustainable forest management certification](#), which supports biodiversity, assures forest health, maximizes carbon sequestration, sustains family-supporting jobs, and keeps communities safe from wildfires. At the same time, the forestry sector provides Canada and the world with essential products such as lumber for buildings and wood products and pulp for medical masks, hospital gowns and toilet paper.

Using wood as a construction material stores carbon in buildings while the forest regenerates and absorbs more carbon. To renew our forests and replace more than what is harvested, Canada's forest industry plants [500 to 600 million seedlings every year](#) and is prepared to lend its expertise to support the federal government's [2 Billion Trees program](#).

The forest products sector is working actively with provinces on low-carbon procurement and building policies, changes to the national building codes, and market development programs and initiatives such as the Canada Wood Council (CWC). These could lead to significant results that would accelerate the construction of up to 900 new commercial and institutional wood buildings in Canada, including over 30 wood high rises showcasing Canadian innovation and generating \$7.5 billion of economic activity benefitting the entire construction industry, including wood products manufacturing.

Before the pandemic, the Canadian forest products sector was already facing significant challenges, including price decreases, lower demand and wood fibre supply challenges. COVID-19 has made an already difficult time even more challenging for forest sector workers, communities, and businesses – though market conditions have recently improved.



■ Accelerate innovation in the forest bioeconomy

Following the 2009 recession, the forest sector invested heavily in research and technology to produce a multitude of new bio-products to improve utilization, lower GHG emissions and diversify product lines.

COVID-19 has put many additional investments on hold, given that new bio-projects require regulatory certainty, technology, market access and investment risk-taking. In partnership with the federal government, the forest sector is ready and able to advance dozens of projects across the country that can create economic, social and environmental benefits by:

- Opening new markets for lignin (pulp and paper mill biomaterials) in a host of new and emerging consumer products applications.
- Increasing the amount of renewable fuels produced to help the energy transition.
- Creating thousands of jobs in Indigenous, rural, and northern communities to construct and operate new equipment.
- Promoting made-in-Canada technologies and operations to produce bio-products for export.
- Growing the production of high-value biomaterials and biochemicals.
- Providing low-carbon products to other industries to help them lower carbon emissions.

Since the publication of the Canadian Council of Forest Ministers' (CCFM) [Forest Bio-economy Framework](#) in 2018, the sector has responded positively to government policies and programs to advance the bioeconomy, investing more than \$750 million in more than 90 different projects. There are 140 shovel ready projects, worth more than \$1.5 billion, that can help kick start Canada's economic recovery.

Unfortunately, the pandemic and the ongoing lack of certainty and predictability for forest sector businesses operating on Canada's working land base have caused companies to pause millions more in planned strategic investments.

16. The Task Force recommends that the federal government:

- Work with provinces, territories, Indigenous communities and industry to accelerate implementation of the Canadian Council of Forest Ministers' (CCFM) Forest Bio-economy Framework.
- Continue to promote innovation activities and partnerships with the forestry sector.

17. Develop a Canadian hydrogen industry

The most ubiquitous machine in the world is the internal combustion engine, which delivers more useful work than all other mobile and stationary prime movers combined. In Canada there are over 34 million registered vehicles, 65 per cent of them personal vehicles. Most run on highly dense and portable refined petroleum products, contributing about one-quarter of our total greenhouse gas emissions.

As such, developing and using alternative transportation fuels could make a substantial dent in our total domestic emissions profile and create yet another high-value, low-carbon export.

Hydrogen is a versatile energy carrier made from a range of feedstocks, including natural gas, for which Canada has abundant supply. It presents an enormous economic and climate leadership opportunity for Canada. Hydrogen is energy-dense and does not produce emissions, pollutants or greenhouse gases when consumed. The Hydrogen Council predicts [global demand for hydrogen](#) could increase tenfold by 2050, leading to improved air quality in urban centres and a low-carbon alternative for the transport sector. The hydrogen economy is rapidly taking shape, and Canada has a natural competitive advantage and opportunity to lead this decarbonization effort that is applicable worldwide.

British Columbia, Alberta and Canada have either developed or plan to develop hydrogen strategies to foster ongoing research. In Alberta, the [Industrial Heartland Task Force on Hydrogen](#) is developing recommendations for the public and private sectors to grow the domestic market and Canada's ability to export to world markets.

Throughout Canada, millions of tonnes of clean, reliable hydrogen are already supplied to the transport sector and industrial users. In Central Canada, Enbridge, the country's largest pipeline company, has partnered with Hydrogenics to build [North America's first multi-megawatt power-to-gas facility](#). It produces "green hydrogen" through an electrolysis process for zero-emissions fuel-cell electric vehicles and other applications. The process uses surplus renewable power during low-energy-demand periods to produce hydrogen from water.

Green hydrogen can help stabilize supply-and-demand fluctuations with alternative sources of energy, making it an excellent renewable storage option. While hydrogen created through electrolysis is showing great promise as a sustainable fuel option, the economics of this process must improve before hydrogen can take a more active role in the market and reduce overall emissions in a significant manner.

Western Canada's extensive carbon capture, utilization and storage (CCUS) infrastructure and world-leading sustainable natural gas production can supply Canada and the world with abundant and reliable low-carbon "blue hydrogen" fuel. When reforming natural gas to produce hydrogen, a pure stream of carbon dioxide is produced, making it ideal for CCUS deployment – with which it can become an obvious pillar in the world's energy transition. Alberta, bolstered by a 48-kilometre hydrogen pipeline, currently produces some of the lowest-cost hydrogen in the world and could produce more under favourable policy conditions.

With extremely low-cost natural gas feedstock and readily available CCUS infrastructure, the affordability of blue hydrogen makes it a more viable fuel choice in the near- and mid-term. It can be produced for less than half the cost of diesel, though it requires a [critical scale of demand and investment](#) in the distribution system.

Blue and green hydrogen can also be a feedstock for the [production of synthetic fuels](#) – also known as e-fuels. Hydrogen-derived synthetic liquid fuels have high energy density and are technically the same as their conventional counterparts. They are compatible with the existing vehicle fleet and can be distributed and sold to consumers via the existing fuel distribution network. E-fuels are especially suited to transport modes that are hard to electrify (aviation and long-distance road transport).



■ **Make large-scale deployment a reality**

Starting immediately, Canada could become a multifaceted supplier of this low-carbon fuel by embracing both green and blue hydrogen assets across the country.

Notwithstanding the immense opportunity to curb emissions in the industrial sector, hydrogen offers a critical path to dramatically reduce transportation-related emissions, beginning with the heavy-duty transportation sector and public transit. Advanced countries throughout the world, including Germany, Norway and Japan, are sending a clear market signal to automotive manufacturers, the fuel-cell manufacturing industry and potential blue hydrogen producers that now is the time to act.

Canada should work with its municipal, provincial and international partners to scale up hydrogen technologies and encourage new demand domestically and abroad. The federal government can facilitate competitive costs that lead to mass market acceptance.

British Columbia and Alberta are already considering large-scale deployment initiatives and the federal government is poised to release a hydrogen strategy that could become a key pillar of the country's low-emissions aspirations. But we must move quickly to catch up to other countries and harness our existing hydrocarbon and industrial expertise to build a domestic market and export opportunities.

The Task Force looks forward to seeing the results of ongoing strategic development on hydrogen by [federal](#), provincial and municipal governments.

However, there are federal regulatory hurdles limiting hydrogen's growth and Canada's ability to decarbonize the global economy. Currently, a new hydrogen facility faces a four- to five-year wait between an application for natural gas service and the delivery of this crucial feedstock. Proceeding with planned expansions to the northwestern and western legs of the [NOVA Gas Transmission Ltd. \(NGLT\) system](#) is particularly essential to enabling hydrogen's growth in Alberta.

17. The Task Force recommends that the federal government:

- Continue to work with provinces and municipalities on charting a path to large-scale deployment.
- Improve regulatory timelines limiting hydrogen's growth by working with the Canada Energy Regulator and the private sector to prioritize and streamline reviews of critical expansions in the natural gas transmission system.



18. Deliver on the potential of small modular reactors

As diverse as it is, Canada's energy ecosystem has an opportunity to be enhanced even further by developing the enormous potential of small modular nuclear reactors. SMRs can typically produce between 50 and 300 MW, compared to more than 1,000 MW in traditional reactors, as well as produce hydrogen fuels.

Strong government support for SMRs in partnership with the established Canadian nuclear industry would create jobs and boost economic growth and innovation while helping Canadians achieve a low-emissions future. It's a potential win-win-win that could make Canada a world leader in an industry that's estimated to have global export potential of approximately \$150 billion a year between 2030 and 2040. As noted in [A Call to Action: A Canadian Roadmap for Small Modular Reactors](#), SMRs are "a source of safe, clean, affordable energy ... capturing benefits for Canada and Canadians."

The commercialization of SMR technology has the potential to help Canada meet its climate targets by replacing fossil fuels in several sectors, particularly natural resource industries. SMRs can replace diesel power generation in rural, remote and Indigenous communities, including those in northern Canada. The technology can replace coal, still used to generate on-grid power in provinces such as Saskatchewan and Alberta. And it can provide power and heat for energy-intensive resource projects such as potash production or oil sands recovery.

Additionally, SMRs could create a new industrial subsector that creates jobs and economic opportunities across the country. Canada has a robust nuclear industry with an international presence, businesses engaged in mining, reactor design and operation, supply chain and waste management and a dedicated regulator with decades of expertise. The demand for SMRs is forecast to increase substantially over the next three decades as other countries look for alternative energy sources.

SMRs require less capital investment and modular designs that control costs, making them competitive with other low-cost forms of electricity generation. They're also safe, with enhanced safety features. The development of SMR technology has been part of the culture of innovation in which Canadians excel.



■ Act swiftly to seize the opportunity

There is strong federal and provincial support for advancing SMR technology. The SMR Roadmap is being followed up by an [SMR Action Plan](#), scheduled to be released later this year. According to *Policy Options*, it's expected to contain recommendations on choosing a design and site for a demonstrator reactor and [reaching a cost-sharing arrangement](#) between governments and industry.

However, as noted in the Roadmap, Canada has a narrow window to lead in the emerging domestic and global market for SMRs. China, Russia, the US and France are developing their own SMR technologies to meet global demand. That's why the federal government needs to use its convening power to bring together provinces, territories and utilities to swiftly deliver on the enormous potential economic and environmental benefits offered by SMRs. Moving quickly will position Canada as a policy leader and international standard-setter for strategic influence in this emerging industry.

■ Publicize nuclear's strong safety record

Furthermore, the Task Force recommends that government and industry engage in a public education campaign to [build Indigenous and public support and confidence for SMRs](#) in regions where nuclear technology is not well understood. While support for nuclear power is strong in those regions where it has a history, other areas still hold attitudes regarding industry safety based on old technology. Promoting Canada's safety and operational record in nuclear operations, as well as the [innovative "passive safety" features](#) of proposed SMR technologies, could help to address concerns.

18. The Task Force recommends that the federal government:

- Work with provinces, territories, utilities, Indigenous communities and industry to fast-track and swiftly implement the recommendations and findings of the forthcoming SMR Action Plan.
- Engage with industry on a public education campaign to build Indigenous and public confidence and support for SMRs.

19. Build a world-class ecosystem for chemistry innovation

The chemistry sector is [one of the most research-intensive sectors](#) in the global economy. Chemistry consistently ranks as among the world's most patented sectors and in Canada it employs the [second-highest rate of university graduates](#) behind electronic and computer manufacturing.

However, Canada is lagging other jurisdictions in attracting private chemistry research and development mandates. Canada is also behind on the commercial deployment of ground-breaking technologies and processes that can help resolve some of the pressing issues of our time: raising the standards for public health; leading the transition to a low-emissions future; and delivering a circular economy for plastic waste.

A strong economy requires a strong research and development architecture and government could help address longstanding concerns and invigorate Canada's economy by implementing recommendations in this report on reforming the SR&ED tax incentive program.





■ Establish a Plastics Technology Innovation Fund (PTIF)

More than 95 per cent of all manufactured products rely on chemistry and many of these include plastic resins. From personal protective equipment and sanitation measures for food products to wind turbines, vehicle and aircraft components and building materials, plastics chemistry is vital to our lives. These products enable our modern way of life, but they do not belong in our waterways or environment.

Today in Canada, due to inadequate sorting, contamination, limited end markets and underuse of all the technologies available, [86 per cent of all post-consumer plastics end up in landfills](#) – three million tonnes annually. The current approach to producing, using and disposing of plastics poses a real threat to the environment and results in a significant loss of value, resources and energy. However, there is not a one-size-fits-all solution to managing plastic waste. Various technologies and approaches are needed to keep plastic waste out of the environment and in the economy. The chemistry industry is already stepping up to do its part and reach Canada's goal of a zero plastic waste future.

The [Alliance to End Plastic Waste \(AEPW\)](#) was created in 2019 to advance solutions to eliminate plastic waste by transitioning to a circular economy for plastics. The AEPW has committed over US\$1.5 billion so far to deliver waste management solutions globally.

Further innovation and ingenuity, particularly from the chemistry sector, will be key in developing a truly circular economy for plastic products. In further pursuit of this goal, the federal government must build on successful models such as the [Energy Innovation Program](#) and the [Expanding Market Opportunities Program](#) for wood products to nurture and expand Canada's technological capacity to address the problem of plastic waste.

A game-changing program for plastic technology research and development in Canada would be the creation of a Plastics Technology Innovation Fund (PTIF) with an initial funding allocation of \$200 million, managed by Natural Resources Canada (NRCan).

NRCan would assess applications from the private sector and research communities that would accelerate innovation in product design and advanced plastics recycling and recovery technologies such as chemical recycling, pyrolysis, gasification and energy recovery. Additionally, the fund would support demonstration projects to help normalize the use of products made with recycled plastic for consumers and businesses, and test new technologies in pre-commercial applications.

The road to recovery from the COVID-19 pandemic, as well as the policy challenges of climate change, plastic waste and the transition to a low-emissions future, will require chemistry solutions. Chemistry is an important part not only of Canada's economy but also the energy sector and we are recognized for utilizing abundant, low-emissions resources, such as natural gas and natural gas liquids, hydroelectricity and biomass, as chemical feedstocks.

19. The Task Force recommends that the federal government:

- Establish a Plastics Technology Innovation Fund (PTIF) with an initial funding allocation of \$200 million, managed by Natural Resources Canada (NRCan).



Conclusion

- An empowered natural resource sector is an essential engine to drive Canada's economic recovery from COVID-19 in the short term and rebuild our global competitiveness in the medium and long term.

Securing Canada's Economic Future represents an unprecedented effort by representatives of the natural resource industries that truly are the backbone of the Canadian economy and the provider of one of the world's highest living standards. We hope that this work will be instrumental in opening a national discussion on the best strategies for Canada to unleash its natural resources for the good of all as the country rebounds and seizes its full economic potential in the years ahead.

Canadians have witnessed unprecedented impacts on our economy, health systems and daily way of life during the COVID-19 crisis. Rebuilding will be a lengthy, rigorous effort but the shock of the epidemic has the potential to usher in a new era of progress and revitalization based on Canada's globally recognized strengths and collective will. Achieving such a breakthrough will require governments, Indigenous communities, entrepreneurs, workers, unions and others in society to re-examine Canada's assets, goals and most promising options and pull together in the best interests of the country and our future.

As the work of our expert collaborators and advisors reminds us, Canada is blessed as it begins its recovery with a tremendous advantage. Few other realistic growth opportunities exist that could come close to matching the 2.7 million new jobs that could be made possible with the right success conditions for natural resources and manufacturing. In a period of substantial unemployment, this is particularly important.

Canada has an unmatched array of natural resources and the world-class talent and expertise to build the resource powerhouse of the future – one that can drive national prosperity while simultaneously making Canada a world leader in emissions reduction technology and action on climate change.

As we look forward, it is undeniable that improving Canada's innovation performance and embracing competitiveness on global investment and trade is essential to ensuring a successful economic recovery. To achieve a real recovery, Canada must mobilize resource prosperity, build meaningful employment and accelerate innovation and environmental competitiveness.



Appendix I: Methodology

The Task Force asked for submissions from the coalition of supporting organizations on the subject of Canada's economic recovery. Advisors and other experts also contributed to the process via interviews, comments on draft versions of the report and participation in video conferences to elicit ideas and review recommendations.

The Task Force drafting team took this material forward into a first draft on July 22 and a second on July 30. Through this period, numerous individuals volunteered their time, resulting in a tremendous amount of high quality, thoughtful research. The final draft was approved on August 14.

The process was collaborative, collegial and open. The resulting blueprint is a synthesis of that research arrived at by consensus and consultation. Resource Works, the convener of the process, would like to thank all who contributed.

The Task Force's final recommendations strike a balance between identifying opportunities, prescribing solutions and identifying where structural change, rather than incremental improvement, is necessary to help achieve Canada's social, economic and environmental goals. They are the culmination of the collective expertise and research of a broad coalition of stakeholders who represent a cross-section of the Canadian economy and millions of workers in almost every sector.

Appendix II: Economic impact assessment

To identify a rough magnitude of the importance of some of the policy prescriptions advocated in the panel report, Fellows Economic Consulting (Dr. G.K. Fellows) defined a set of economic impact assessment simulations and conducted these via a Computational General Equilibrium (CGE) model.

While there are several policy recommendations in the panel report, this economic impact assessment focuses broadly on two generally consistent types of direct economic impact:

1. Improvements to capital productivity
2. Reductions in export trade costs

No. 1 can be considered an abstraction of an improved capital investment climate whereas No. 2 can be considered an abstraction of improved market access.

These direct impacts are fed into the CGE model as a “shock.” The model then solves for a new “general equilibrium” in the economy that is consistent with this shock. The result is a projection that measures the economy-wide (indirect and induced) economic impacts that would result from such a shock.

The CGE model employed is a micro-consistent inter-region and inter-sector economic projection model of the Canadian economy. This model tracks and calculates the total value added to different goods in each region and allows for simulations of differing economic circumstances. It is essentially a collection of related supply and demand functions representing the Canadian economy in its entirety. Consider that a simple supply and demand relationship describes a balance between quantity demanded and quantity supplied in one sector or market.

Across the economy, different industries purchase inputs from each other and sell outputs to each other. This is true of different provinces as well. Households similarly supply labour and capital and demand final production goods. To reflect this, the CGE model links all supply and demand equations together and solves for a demand and supply equilibrium in all markets simultaneously accounting for the production structure (input-output linkages) within and between sectors.

The model in use represents 33 productive sectors with each sector producing output using labour, capital, natural resources and intermediate inputs produced by other sectors. There are 12 separate Canadian regions modelled: the 10 provinces, Nunavut and a region representing the combined economies of Yukon and Northwest Territories (YNT). The model is based on the one developed in [Fellows et. al. \(2018\)](#). The version used here is calibrated to the [2009 Statistics Canada Provincial Symmetric input-output tables](#).

While more recent calibration data is available, 2009 was chosen as the most appropriate calibration year given that the 2009 Canadian economy was depressed following the 2008 global financial crises. While the impact of the COVID-19 related disruption is unprecedented, the 2009 calibration data represents likely the closest available calibration data available.

The model is static in that it provides a snapshot of the economy (under a benchmark and under a policy change counterfactual) but does not provide insights about longer-term growth rates.

While 2009 calibration data is used, model results are projected to 2019 using a simple GDP deflator. Dollar values in the results can be interpreted as real 2019 dollars.

Results should be interpreted with caution and qualification. COVID-19 has had an unprecedented impact on the Canadian economy and these simulation results are presented relative to a benchmark that is representative of a depressed economy but is not directly representative of the 2020 or 2021 Canadian economy. Results are intended to show the distributional effect of the economic impacts across sectors and regions along with a rough indication of likely magnitude, but they should not be attributed a high degree of accuracy.

Appendix II: Economic impact assessment

Of the 33 sectors in the model, the direct effects of the policy recommendations indicated in the panel report primarily affect six sectors: Forestry and Logging, Crude Oil Extraction, Natural Gas Extraction, Coal Mining, Other Mining and Manufacturing. The first four of these are collectively the “Resources sectors.”

It is important to note that the Manufacturing sector defined in the model (and the underlying calibration data) is very broad and includes several subsectors that might generally be considered as part of the downstream of the resources sector. Three examples would be petroleum refining, primary metal manufacturing and non-metallic mineral product manufacturing. Because of this, shocks to the Manufacturing sector will generally carry more substantial economic impacts, some of which would (but for the data classification) more appropriately be associated with resources.

International export costs are shocked following the methodology established in [Fellows and Tombe \(2019\)](#). Capital productivity costs are shocked by scaling the parameter governing the production share of capital in each shocked sector in each region. (See the capital labour nest equation on page 33 of [Fellows et. al. \(2018\)](#).)

The economic disruption associated with COVID-19 is largely unprecedented. Additionally, there is a lack of analysis regarding the specific magnitudes of the direct impacts of the panel report’s policy prescriptions. However, we can identify a rough magnitude for these direct impacts by examining available estimates of overall trade costs and measures of historical capital productivity changes.

[Albrecht and Tombe \(2016\)](#) present the most comprehensive set of trade cost estimates for Canada. They show trade costs of 24 per cent for oil and gas, and 60 per cent for manufacturing. (To aid in interpretation, consider that a 100 per cent trade cost would mean that the delivered cost of a traded good would be two times the delivered costs of a domestically produced good.) Some of what is defined as a “trade cost” includes the physical act of moving a good so some proportion of these costs are unavoidable and cannot be mitigated through policy prescriptions.

According to [Fellows and Tombe \(2018\)](#):

“Trade costs, broadly understood, include anything inhibiting trade between two regions that would have otherwise occurred. Taxes and fees on imports or exports, quota restrictions on the amount of imports, the distance and time required to ship goods, lack of knowledge of which products are available, poor quality transportation infrastructure and policies (such as regulations or product certifications that differ across regions), are just a few examples of what contribute to trade costs.”

Given this magnitude we assume potential modest trade cost reductions of four per cent, eight per cent and 12 per cent.

A recent Statistics Canada report by [Gu \(2018\)](#) outlines measures of annual capital productivity growth. While there is significant variation across sectors and time periods annual productivity growth generally falls in the one per cent to three per cent region for most sectors presented. Specifically, Gu (2018) presents an annual growth rate of three per cent for capital productivity in oil and gas and 2.1 per cent in other mining sectors. Given that the impact modelled here is a one-time bump caused by policy changes, we assume potential modest capital productivity changes of three per cent, six per cent and nine per cent.

All scenarios are run with a “medium run” capital mobility assumption. This is a hybrid of the conventional “short run” and “long run” approaches in economic theory. In a conventional short run, all capital is assumed immobile (that is, all of the capital stock in each sector is fixed), in the long run all capital is assumed mobile (that is, all of the capital stock in each sector is variable). In the “medium run” hybrid, half of the capital in each sector is fixed and half of the (calibrated) capital is mobile and free to respond to policy shocks. This is an effective compromise within a static model.

There are two labour assumptions presented. Under the Natural Unemployment scenario, the labour supply is assumed finite. As such, labour will reallocate (reducing in some sectors, increasing in others) to adjust to a shock. Under the Substantial Unemployment scenario, the labour supply is assumed sufficient to supply any additional labour demand without need to reallocate away from some sectors to others.

Appendix II: Economic impact assessment

In all cases the presented metric for Labour Earnings reflects the combined effect of changes in the real wage rate and changes in employment (jobs) and in each sector and region.

In addition to the CGE model estimates, CGE model output also informed a separate rough projection of job creation.

All economic modelling represents an abstraction of the economic relationships and factors deemed relevant to the situation being modelled. Under the Natural Unemployment scenario, the working assumption is that no new jobs will be created (labour supply is assumed fixed and increases in labour income come from increases in the equilibrium wage rate). Under the Substantial Unemployment scenario, the working assumption is that the wage rate is fixed, and any additional labour demand is met with “new” supply (unemployed workers who become employed). Due to this, the job creation projections are limited to the Substantial Unemployment scenario.

In the initial CGE model and calibration data, total wages in each sector and region are observable, but job numbers are not. Because of this, job creation projections are calculated outside the model by multiplying observed employment (jobs) in each sector and region by the per cent change in labour income (total wages) projected by the model.

Consider that: total wages = (wage rate) x (jobs)

Since the wage rate is assumed fixed in the Substantial Unemployment scenario, it follows that the per cent change in total wages is equal to the per cent change in jobs. Formally:

$$\text{Benchmark Jobs} = \text{Benchmark Jobs} \times \frac{\text{Scenario Total Wages} - \text{Benchmark Total Wages}}{\text{Benchmark Total Wages}}$$

Total job numbers by sector and province for 2019 are available in Statistics Canada Table: 14-10-0092-01. To account for COVID-19-related unemployment in 2020, these numbers are scaled to 80 per cent of their reported values. This also ensures that the benchmark job numbers are consistent with the Substantial Unemployment assumption underlying the CGE estimate of the change in total wages.

Unfortunately, consistent employment figures for the territories are not available and as such no job creation projections are included for them.

Appendix II: Economic impact assessment

GDP Real Level Change vs Benchmark When Shocking Both, (All) Regions					
Substantial Unemployment					
Percent Reduction in Trade Costs					
		0 %	4 %	8 %	12 %
Percent Increase in Capital Productivity	0 %	\$128,783 M			
	3 %	\$26,474 M	\$159,451 M	\$306,251 M	\$552,316 M
	6 %	\$52,881 M	\$190,065 M	\$342,676 M	\$596,429 M
	9 %	\$79,223 M	\$220,627 M	\$379,041 M	\$640,431 M
				\$415,342 M	\$684,316 M

GDP Real Percent Change vs Benchmark When Shocking Both, (All) Regions					
Substantial Unemployment					
Percent Reduction in Trade Costs					
		0 %	4 %	8 %	12 %
Percent Increase in Capital Productivity	0 %		5.97%	14.20%	25.61%
	3 %	1.23%	7.39%	15.89%	27.66%
	6 %	2.45%	8.81%	17.58%	29.70%
	9 %	3.67%	10.23%	19.26%	31.74%

North American Industry Classification System (NAICS)	AB	BC	MB	NB	NL	NS	ON	PE	QC	SK	Grand Total (Excluding Territories)
Job Creation - Provincial Totals, 8 per cent reduction in resource and manufacturing trade costs, 6 per cent increase in resource and manufacturing capital productivity	277,208	258,872	83,221	43,254	15,882	41,322	1,225,687	10,688	620,412	44,320	2,620,868
Agriculture	8,016	3,995	5,336	1,322	174	1,235	20,684	1,389	16,014	4,200	62,366
Forestry, fishing, mining, quarrying, oil and gas	27,244	10,576	532	2,555	643	2,282	10,733	954	10,031	1,438	66,990
Utilities	4,045	830	371	614	213	421	11,512	19	1,881	513	20,419
Construction	29,116	18,234	4,776	2,190	1,728	2,185	76,693	492	29,811	3,630	168,854
Manufacturing	37,882	67,120	29,496	14,356	1,900	12,097	384,134	3,589	218,535	6,860	775,968
Wholesale and retail trade	42,049	38,585	10,414	4,826	2,976	6,181	176,980	1,294	88,998	6,823	379,126
Transportation and warehousing	15,443	14,948	5,757	2,648	1,156	2,271	70,116	390	35,836	2,116	150,680
Finance, insurance, real estate, rental and leasing	13,540	16,223	4,106	2,067	665	1,825	90,724	325	30,860	2,592	162,928
Professional, scientific and technical services	18,459	18,935	2,976	2,000	774	2,219	85,160	380	38,059	2,177	171,139
Business, building and other support services	9,352	10,050	2,435	1,802	605	1,303	39,466	195	21,053	1,284	87,545
Educational services	14,423	10,848	2,869	1,417	716	1,685	47,072	116	26,348	1,562	107,055
Health care and social assistance	15,525	10,505	3,954	2,293	1,176	2,068	56,479	402	29,846	2,963	125,212
Information, culture and recreation	8,651	11,212	2,460	1,346	657	1,508	40,057	209	19,625	1,832	87,557
Accommodation and food services	16,040	13,747	4,186	1,909	1,422	2,525	59,424	509	27,096	3,499	130,358
Other services (except public administration)	14,345	10,828	2,924	1,559	915	1,183	43,533	320	21,380	2,383	99,370
Public administration	3,079	2,236	630	349	163	334	12,920	104	5,040	446	25,300
*Results Assume Substantial Unemployment											

Appendix II: Economic impact assessment

Labour earnings increase assuming substantial unemployment - Provincial Totals, 8 per cent reduction in resource and manufacturing trade costs, 6 per cent increase in resource and manufacturing capital productivity	\$25,999 M	\$17,997 M	\$5,561 M	\$2,973 M
Crop and Animal Production	\$155 M	\$146 M	\$106 M	\$37 M
Forestry and Logging	\$104 M	\$579 M	\$9 M	\$119 M
Fishing, Hunting and Trapping	\$0 M	\$4 M	\$0 M	\$15 M
Support Activities for Agriculture and forestry	\$36 M	\$90 M	\$15 M	\$18 M
Coal Mining	\$60 M	\$71 M	\$0 M	\$0 M
Crude Oil Extraction	\$268 M	\$14 M	\$5 M	\$0 M
Natural Gas Extraction	\$580 M	\$90 M	\$0 M	\$6 M
Other (non energy) Mining	\$1,998 M	\$161 M	\$22 M	\$18 M
Support activities for oil and gas extraction and mining	\$2,248 M	\$68 M	\$0 M	\$0 M
Utilities	\$530 M	\$129 M	\$59 M	\$100 M
Residential Construction	\$663 M	\$385 M	\$78 M	\$66 M
Non-Residential Building Construction	\$524 M	\$201 M	\$58 M	\$34 M
Engineering Construction	\$1,567 M	\$316 M	\$111 M	\$60 M
Repair Construction	\$368 M	\$214 M	\$98 M	\$29 M
Other activities of the construction industry	\$19 M	\$8 M	\$3 M	\$1 M
Manufacturing	\$4,707 M	\$6,480 M	\$2,646 M	\$1,202 M
Wholesale Trade	\$1,534 M	\$994 M	\$298 M	\$78 M
retail Trade	\$1,697 M	\$1,253 M	\$336 M	\$200 M
Transportation and Warehousing	\$1,089 M	\$1,088 M	\$388 M	\$170 M
Information and Cultural Industries	\$412 M	\$403 M	\$102 M	\$61 M
Finance, Insurance, Real Estate and Rental and Leasing and holding companies	\$2,089 M	\$1,581 M	\$419 M	\$201 M
Professional, Scientific and Technical Services	\$1,639 M	\$1,047 M	\$145 M	\$113 M
Administrative and Support, Waste Management and Remediation Services	\$746 M	\$510 M	\$92 M	\$154 M
Educational Services	\$36 M	\$41 M	\$4 M	\$6 M
Health Care and Social Assistance	\$257 M	\$172 M	\$40 M	\$27 M
Arts, Entertainment and Recreation	\$167 M	\$138 M	\$37 M	\$14 M
Accommodation and Food Services	\$719 M	\$520 M	\$126 M	\$70 M
Other Services (Except Public Administration)	\$588 M	\$364 M	\$80 M	\$42 M
Non-profit institutions serving households	\$375 M	\$332 M	\$113 M	\$36 M
Government education services	\$348 M	\$253 M	\$70 M	\$39 M
Government health services	\$105 M	\$51 M	\$21 M	\$12 M
Other federal government services	\$81 M	\$76 M	\$29 M	\$22 M
Other provincial and territorial government services	\$51 M	\$45 M	\$14 M	\$8 M
Other municipal government services	\$238 M	\$175 M	\$38 M	\$16 M
Other aboriginal government services	\$0 M	-\$1 M	-\$1 M	\$0 M

\$1,049 M	\$2,763 M	\$22 M	\$96,031 M	\$499 M	\$40,817 M	\$2,768 M	\$216 M	\$196,696 M
\$7 M	\$35 M	\$0 M	\$620 M	\$39 M	\$407 M	\$55 M	\$0 M	\$1,608 M
\$16 M	\$31 M	\$0 M	\$209 M	\$0 M	\$442 M	\$10 M	\$0 M	\$1,520 M
\$8 M	\$62 M	\$0 M	\$4 M	\$8 M	\$12 M	\$0 M	\$0 M	\$115 M
\$2 M	\$13 M	\$0 M	\$97 M	\$3 M	\$118 M	\$14 M	\$0 M	\$406 M
\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$131 M
\$22 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$56 M	\$1 M	\$366 M
\$0 M	\$15 M	\$0 M	\$0 M	\$0 M	\$0 M	\$106 M	\$14 M	\$811 M
\$0 M	\$9 M	\$0 M	\$96 M	\$0 M	\$89 M	\$0 M	\$23 M	\$2,416 M
\$0 M	\$15 M	\$0 M	\$1,027 M	\$0 M	\$166 M	\$0 M	\$0 M	\$3,524 M
\$27 M	\$32 M	\$1 M	\$2,022 M	\$2 M	\$232 M	\$38 M	\$4 M	\$3,176 M
\$45 M	\$40 M	\$0 M	\$1,516 M	\$7 M	\$855 M	\$53 M	\$4 M	\$3,711 M
\$16 M	\$29 M	\$0 M	\$1,154 M	\$6 M	\$388 M	\$54 M	\$7 M	\$2,470 M
\$52 M	\$41 M	\$0 M	\$1,024 M	\$5 M	\$707 M	\$169 M	\$14 M	\$4,065 M
\$13 M	\$30 M	\$0 M	\$1,244 M	\$6 M	\$420 M	\$57 M	\$5 M	\$2,485 M
\$0 M	\$1 M	\$0 M	\$35 M	\$0 M	\$15 M	\$1 M	\$1 M	\$85 M
\$234 M	\$1,224 M	\$1 M	\$41,517 M	\$233 M	\$19,509 M	\$670 M	\$5 M	\$78,429 M
\$39 M	\$125 M	\$0 M	\$6,320 M	\$15 M	\$2,450 M	\$151 M	\$6 M	\$12,011 M
\$137 M	\$195 M	\$3 M	\$5,338 M	\$38 M	\$2,589 M	\$262 M	\$23 M	\$12,071 M
\$66 M	\$145 M	\$4 M	\$4,205 M	\$16 M	\$1,846 M	\$153 M	\$33 M	\$9,204 M
\$30 M	\$57 M	\$0 M	\$2,110 M	\$6 M	\$803 M	\$75 M	\$8 M	\$4,068 M
\$94 M	\$184 M	\$1 M	\$9,340 M	\$29 M	\$2,925 M	\$248 M	\$16 M	\$17,127 M
\$48 M	\$110 M	\$3 M	\$5,107 M	\$16 M	\$1,928 M	\$108 M	\$8 M	\$10,273 M
\$33 M	\$68 M	\$2 M	\$2,782 M	\$12 M	\$1,101 M	\$70 M	\$5 M	\$5,576 M
\$1 M	\$3 M	\$0 M	\$129 M	\$0 M	\$45 M	\$2 M	\$0 M	\$267 M
\$14 M	\$27 M	\$0 M	\$895 M	\$4 M	\$213 M	\$26 M	\$2 M	\$1,678 M
\$6 M	\$14 M	\$0 M	\$702 M	\$3 M	\$273 M	\$30 M	\$1 M	\$1,383 M
\$43 M	\$71 M	\$1 M	\$1,847 M	\$15 M	\$942 M	\$106 M	\$14 M	\$4,474 M
\$30 M	\$38 M	\$0 M	\$1,463 M	\$9 M	\$657 M	\$64 M	\$3 M	\$3,338 M
\$28 M	\$47 M	\$1 M	\$1,779 M	\$7 M	\$761 M	\$58 M	\$9 M	\$3,545 M
\$23 M	\$49 M	\$0 M	\$1,549 M	\$9 M	\$427 M	\$52 M	\$3 M	\$2,821 M
\$4 M	\$14 M	\$0 M	\$344 M	\$2 M	\$109 M	\$20 M	\$0 M	\$682 M
\$5 M	\$16 M	\$0 M	\$603 M	\$5 M	\$122 M	\$18 M	\$2 M	\$979 M
\$0 M	\$10 M	\$1 M	\$126 M	\$3 M	\$99 M	\$20 M	\$1 M	\$377 M
\$5 M	\$16 M	\$1 M	\$828 M	\$2 M	\$170 M	\$23 M	\$2 M	\$1,512 M
-\$1 M	\$0 M	\$0 M	-\$1 M	\$0 M	-\$3 M	-\$1 M	\$0 M	-\$9 M





TASK FORCE FOR

**real jobs,
real recovery**