

CHEMISTRY INDUSTRY

Vital to achieving Canada's
net-zero emissions targets



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ASSOCIATION OF CANADA

Canada's chemistry industry shares Canadians' concerns on the impacts of a changing climate and the urgency of reducing emissions in line with scientific evidence and Canada's international commitments. In 2019, the federal government committed to the goal of **net-zero carbon emissions for all of Canada by 2050**. Achieving this will require chemistry-based solutions. Our industry has historically been a solutions-provider to the world's most challenging problems.

WE ARE READY TO STEP UP TO MEET THIS AMBITIOUS GOAL.

HELPING ALL CANADIANS REDUCE EMISSIONS

More than 95 per cent of all manufactured products rely on chemistry. Advances in key sectors such as green buildings, sustainable transportation, clean energy and sustainable agriculture would be impossible without chemistry and plastics.

In Canada, the building sector alone is responsible for 40 per cent of greenhouse gas emissions (GHGs). Insulation, window coatings, reflective roofing and other innovative chemistry-based materials dramatically lower emissions from the building sector by reducing heat loss and the demand for cooling. In transportation, lighter vehicles, alternative fuels and electric vehicles will depend on advances in materials (including plastics), fuel and batteries developed through chemistry.

Chemistry is also a critical part of nearly every renewable power generation source. From the composite materials in wind turbine blades, to solar panels, and even nuclear and hydropower, chemistry is essential. And with fully 10 per cent of Canada's GHGs from crop and livestock production, chemical fertilizers and crop protection in farming increases agricultural

yields while advanced, lightweight packaging, made possible by chemistry, reduces food waste and transportation-related emissions.

KEY TO CANADA'S ECONOMIC RECOVERY

Despite the COVID-19 pandemic, demand for chemistry products has not slowed down – in fact, the need for our sector's products have never been greater. By 2050, chemical production will need to triple in volume to address both emission reduction targets and economic challenges in the future.

Currently, over \$7 billion of capital investment in the sector remains underway and scheduled to come into production in late 2021 and early 2022. We anticipate that a significant portion of the additional \$11 billion in committed or announced capital investment that was deferred due to COVID will materialize to assist the recovery.

Carefully designed, in collaboration with industry, Canada's net zero emissions plan has the potential to strengthen Canada's chemistry sector further and contribute to making Canada's economy more resilient and competitive.

THE CANADIAN LOW-CARBON ADVANTAGE

Canada's chemistry industry is a world leader in low-intensity carbon chemical production making some of the lowest GHG-intensive products on the planet. Perhaps the biggest natural advantage the sector enjoys is access to abundant low-carbon fossil fuel feedstocks such as natural gas liquids which include ethane, propane, butane and pentanes.

These are used as building blocks for plastics and solvents, polypropylene,

refrigerants, rubbers and more. Canada's chemistry products are 80 per cent less GHG-intensive than those produced in some European or Asian markets, which rely on crude oil as their feedstock.



Responsible Care®

OUR MEMBERS ARE COMMITTED TO SUSTAINABILITY THROUGH RESPONSIBLE CARE®

Through the U.N. recognized sustainability initiative, Responsible Care®, CIAC's members have engaged in safe, responsible, and sustainable chemical manufacturing for 35 years. Investments in research and innovation have allowed our sector to modify our industrial processes to utilize cleaner energy sources reducing our carbon emissions.

Further technological investments are needed to ensure the products we manufacture continue to produce emissions reductions. Active engagement and partnership with the chemistry sector is critical to spur the innovation and demand needed to ensure our climate-friendly solutions remain economically feasible and support other sectors in achieving reductions.



WORKING TOGETHER TO ACHIEVE NET-ZERO GOALS

The Canadian chemistry sector has reduced its overall GHG emissions by 67 per cent since 1992 as a result of significant investment. There is opportunity to do even more while providing Canadian-made products to help other sectors achieve further reductions.

Our sector will be focused on working with federal and provincial governments in critical areas involving: **carbon capture and storage; hydrogen production and utilization; energy efficiency; bio-based chemistries, and; creating a circular economy for plastics**, which will allow carbon already in the economy (in the form of post-consumer use plastics) to be continuously recycled and avoid emissions from the production of new plastic resin.

WHAT CANADA'S CHEMISTRY SECTOR NEEDS TO BE SUCCESSFUL

To successfully transition to a low-carbon economy and achieve net-zero emission goals, the chemistry sector requires **closer collaboration and alignment** between the **federal** and **provincial governments** through:



Recognize the important role of the chemistry sector in research, innovation, and the implementation of climate-focused solutions

Chemistry plays a crucial role in the supply chain for almost all manufacturing in Canada. Decarbonizing this supply chain will require significant investment in research and development which will ultimately lead to building a net-zero economy through our products. The government must recognize the innovative role the Canadian chemistry sector has played, and will continue to play, in the development of low-carbon solutions that support Canada's goal of net-zero emissions by 2050.



Promote active engagement and collaboration with industry

Achieving net-zero will require transformative changes and policies that involves all Canadians. Industry must be an active partner with collaboration between all stakeholders to support collective action, technological innovation and the sharing of best practices. The government should engage in a transparent and inclusive dialogue with stakeholders and seek to harmonize regulations domestically and where possible globally.



Support the low carbon transition of the chemistry sector

Government regulations, policies, and funds should incentivize domestic investments in research, the development of clean technology and infrastructure, and the implementation of climate-focused solutions. To grow Canada's low-carbon economy, we need a flexible and open market that supports the adoption of all low-carbon solutions, with consideration for trade exposure. Otherwise, we risk carbon leakage to other jurisdictions. The government can help to ensure that Canada is a global leader in clean technology and low-carbon solutions by considering integrated strategies for decarbonizing energy value chains and encouraging demand circularity for all products while creating favorable conditions for new low carbon investment.

National standards **and** harmonization **between the federal government and the provinces** will be vital.

Canada is a country with diverse energy resources and needs which will require regional solutions and a range of options to address the requirements of Canadians, businesses and industry. The chemistry industry wants to ensure the Government of Canada recognizes that its plan to achieve net-zero emissions by 2050 should contribute to making Canada's economy more resilient, inclusive and competitive.



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