CHEMISTRY INDUSTRY ASSOCIATION OF CANADA

MEDIA BACKGROUNDER

Cumulative impact of federal carbon pricing backstop and Clean Fuel Standard on chemistry

Canada's chemistry industry is an important contributor to our nation's economy. It converts and adds value to raw resources such as natural gas liquids, hydroelectricity and biomass, creating intermediate products that are used as inputs in almost all other manufacturing sectors. Advances in key sectors such as green buildings, sustainable transportation, clean energy and sustainable agriculture would be impossible without chemistry. Shipments were $55 billion in 2018, making chemistry the fourth largest manufacturing sector; exports were $39.8 billion, second only to automotive.

The chemistry industry is the sixth largest manufacturing employer, directly responsible for 91,600 jobs. Industry employees are highly-skilled and well paid. Statistics Canada has estimated that for every job in the industry, another five indirect jobs are supported in complimentary sectors. In total, the industry supports almost 525,000 jobs in Canada.

Recent investments in Canada's chemistry sector tell more than just an economic story. These investments are helping us to create some of the lowest GHG-intensive products on the plant. Canada's chemistry products are already 80 per cent less GHG-intensive than those produced in some European or Asian markets, which rely on crude oil as their feedstock. Chemistry is such an integral part of the solution to address the global challenges of the future that it will likely require a tripling of chemical production volumes by 2050. Carbon policies and rules that serve to encourage development and investment in the chemistry sector in Canada are critical as the country resolutely seeks to transition to a more sustainable low-carbon economy.

Pricing pollution

As the federal government pursues carbon pricing, CIAC believes that a transparent pricing policy can be an effective tool in reducing emissions, when accompanied by complementary measures that ensure the competitiveness of Canada's industrial sectors. We agree the environment and the economy do not have to be competing priorities.

However, Canada's industry and Canadians overall lose when domestic production and associated emissions are simply moved offshore to other jurisdictions, a phenomenon known as carbon leakage. Whereas Environment and climate Change Canada (ECCC) made carbon leakage and competitiveness a core consideration in the design of the carbon pricing backstop (Backstop), no such mechanism is contemplated to holistically measure the cumulative carbon leakage risks to inform the Clean Fuel Standard (CFS). CIAC's initial analysis suggests the costs of the CFS, should it be implemented as proposed, will significantly add to the $50 per tonne federal carbon pricing backstop price to push the total carbon price in excess of $200 a tonne. Failure to contemplate how the CFS will compound the already known competitiveness and carbon leakage risks associated with the Backstop is a critical failure of policy coherence.

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Running the numbers

CIAC has prepared two scenarios to help illustrate the duplicative and costly nature of the Clean Fuel Standard.

Scenario 1:

This facility emits 100,000t CO2 annually. Its output-based standard (OBS) is set at 80 per cent emissions so that everything above 80 per cent will be subject to the Backstop. The total site energy consumption is 2,270 TJ – 80 per cent of this is natural gas, 20 per cent electricity). The emissions split is 90 per cent natural gas combustion emissions and 10 per cent process emissions.

With the estimated costs of natural gas at $5/GJ or $9,073,000 the expected cost to the facility of the Backstop is an additional $1.25 to $1.45 million per year as as detailed below:

Incremental Costs Under OBPS Policy ($50 Carbon Price)	
Direct Compliance Cost	$1,000,000
Indirect Electricity Costs	~ +100k to 150k
Indirect Supply Chain Costs	~ +150k to 300k
Total Costs	**$1.25 to $1.45 Million**

Then, layer on top of this increase the additional annual cost of the Clean Fuel Standard at $15 to $30/GJ or $1.8 to $3.7 million, to the cost of natural gas in Ontario ($5/GJ or $9,073,00) and Alberta ($2.15/GJ or $3,883,000), and the results are staggering:

Ontario increase in natural gas costs of 20-40 per cent
Alberta increase in natural gas costs of 45-95 per cent

Scenario 2

This facility emits under 10,000t CO2 annually. The fuel levy will fully apply in this instance as there is no opt-in to the Backstop. The total site energy consumption is 270 TJ – 80 per cent of this is natural gas, 20 per cent electricity). The emissions split is 90 per cent natural gas combustion emissions and 10 per cent process emissions.

With the estimated costs of natural gas at $907,300 the expected cost to the facility of the OBPS is an additional $525K to $545 million as detailed below:

Costs Under Carbon Policy ($50 Carbon Price)	
Direct Compliance Cost	**$500,000**
Indirect Electricity Costs	~ +10k to 15k
Indirect Supply Chain Costs	~ +15k to 30k
Total Costs	**$525k to $545k**

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Again, layer on top of this increase the additional annual cost of the Clean Fuel Standard at $15 to $30/GJ or $180K to $370K, to the cost of natural gas in Ontario ($5/GJ or $907,30) and Alberta ($2.15/GJ or $388,300), and the results are once again staggering given the small size of these facilities and the difficulty in absorbing these costs:

Ontario increase in natural gas costs of 20-40 per cent
Alberta increase in natural gas costs of 45-95 per cent

Brought together, the additional aggregate cost to a company can reach up to $200/t of carbon rather than the $50/t price that has been publicly shared by ECCC.

Facility Emissions 100,000t C02e	
Federal Output Based Pricing Standard (OBPS)	= $1.2 to $1.45 million
Clean Fuel Standard	= $1.8 to $3.7 million
TOTAL increase	= $2.05 to $5.5 million
Facility emissions 10,000t CO2e	
Carbon levy	= $525K to $545K
Clean Fuel Standard	= $180K to $370K
TOTAL increase	= $750K to $915K

To keep Canada's chemistry sector competitive, governments must assess the additional costs on the sector as they implement policies to tackle climate change. CIAC believes Canada should support a carbon policy that recognizes emission-intensive, trade-exposed sectors and encourages investment.

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The Chemistry Industry Association of Canada (CIAC) is the Association for leaders in the chemistry sector in Canada; a $53 billion industry. The Association represents more than 50 members and partners across the country. Members of CIAC are signatories to Responsible Care® – the Association's UN-recognized sustainability initiative.

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