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UPDATE ON THE FEDERAL

Clean Fuel Standard

On Friday, December 19, 2020, the federal government released its updated – and long awaited – draft regulations for the upcoming Clean Fuel Standard (CFS) in the *Canada Gazette, Part I*. Importantly, it revealed sweeping changes to the CFS that will significantly alter the impact of the policy across various sectors in Canada, as well as its contribution to GHG emissions reductions.

This briefing provides a summary of the key changes. It also reviews the government's cost analysis, which was publicly provided for the first time in the *Gazette*.

A Citizen's Guide to the Clean Fuel Standard

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What is the Clean Fuel Standard?

The Clean Fuel Standard (CFS) is a regulation that will require fossil fuel suppliers to gradually decrease the *carbon intensity* of liquid fossil fuels. Carbon intensity refers to the amount of greenhouse gas (GHG) emissions that are released along the full lifecycle – from production to consumption – of a given volume of fuel. The regulation will come into effect starting in 2022.

For a full explanation of the Clean Fuel Standard, including what it is, how it works, and what the implications are, please see our report *A Citizen's Guide to the Clean Fuel Standard*, published in early December, 2020.

What changed?

Reduced scope – only liquid fuels

The most significant change being made to the CFS is its scope.

When the CFS was initially introduced in 2016, the policy was intended to apply to all fossil fuels, including liquid, gaseous and solid fuels. It will now apply *only to liquid fossil fuels* – primarily gasoline and diesel, but also kerosene, fuel oils and some jet fuel. It will still not apply to those fuels that are exported.

This is a welcome change. Applying the CFS to only liquid fuels represents a policy based on strong precedent and successes in other jurisdictions, such as B.C. and California. In addition, it addresses serious concerns about competitiveness raised by emissions-intensive trade-exposed (EITE) industries, and logistical difficulties in ascertaining compliance across the gaseous fuel stream.

Reduced impact on GHG emissions

Due to the limitation in scope, the government now anticipates that the CFS will achieve between 17.5 and 20.6 megatonnes (Mt) of GHG reductions by 2030, rather than the 30 Mt that they initially projected.

Changes in carbon intensity reduction requirements

The carbon intensity (CI) reduction requirements have been reduced for the initial years of implementation (in part as a response to COVID) but will eventually increase to levels higher than originally stated.

Reduction requirements for 2022 will be 2.4 gCO_2e /MJ, compared to the original requirement of 3.6 gCO_2e /MJ.

However, the reduction requirement will reach 12 gCO_2e /MJ by the year 2030, as compared to the original requirement of 10 gCO_2e /MJ.

CONTEXT

Along with the updates to the CFS regulations, the federal government introduced a suite of additional plans, strategies and regulations near the end of 2020. Because these policies work together both in terms of how they will reduce GHG emissions and their economic and societal impacts, it is worth noting the full scope of what has been put forward.

BILL C-12
The *Canadian Net-Zero Emissions Accountability Act*
If passed, this bill will commit the federal government to reaching net zero emissions by 2050.

A Healthy Environment and a Healthy Economy strategic plan
This strategy lays out a clear and comprehensive framework for how the federal government intends to reach net zero emissions and bolster the economy in the process.

Carbon tax
The carbon tax will increase to $170 per tonne by 2030 from its current rate of $30 per tonne.

Hydrogen strategy
The strategy aims to enshrine Canada as a leader in hydrogen production, use and export. The CFS complements the strategy by providing a means for hydrogen to generate monetizable credits.

Small Modular Reactor (SMR) Action Plan
In collaboration with 109 partners, the government is positioning Canada for strength in the production and use of small modular nuclear reactors – a zero-emission source of power.

BILL C-15
Rights of Indigenous Peoples
Although this bill doesn't directly address either energy or emissions, it commits the government to ensure all Canadian laws become consistent with the objectives of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

Date of implementation pushed back

The CFS will now take effect in December 2022 – a six-month push back from its anticipated commencement date of June 2022.

Streamlined land use and biodiversity requirements

The major way that fuels are anticipated to decarbonize under the CFS is through supplementation with biofuels. This represents a substantial opportunity for Canadian biofuel producers. However, farm and commodity groups had raised concerns around the specific details of what feedstocks would or would not be eligible.

The new regulations have streamlined the land use and biodiversity criteria, and also introduced changes that will allow greater flexibility in feedstock qualification. In particular, the baseline for determining crop expansion was amended from 2008 to 2020.

However, the overall intent of including these criteria was preserved: ensuring that feedstocks used for the CFS do not result in negative environmental or emissions impacts.

Additional criteria around credit generation and use

Under the CFS, credits can be used by fuel suppliers as one mechanism of reaching the reduction targets (other mechanisms include supplementing with biofuel and introducing process improvements – like electrification during fuel refining – that reduce the actual emissions associated with producing the fuel). The new regulations have more specificity around how credits can be generated and by whom, and how those credits can be carried forward.

- Credits can be generated by a variety of activities that sequester or avoid emissions. For some of these methods, the government has developed a specific methodology for calculating the emissions decreases. This includes carbon capture, utilization and storage (CCUS), hydrogen, co-processing and end-use fuel switching (e.g., electric vehicles). For these, there is no limit on the amount of credits that can be generated or used.
- For everything else, however, a "generic methodology" is used to calculate emissions decreases. There is a cap of 10% for a fuel supplier to use these "generic methodology" credits towards their reduction requirements. As specific methodologies continue to be developed, more things will come out of the "generic methodology" bucket and allow for unlimited credit use.
- There is also a separate 10% cap on "cross-class" reductions from gaseous and solid fuels. Although gaseous and solid fuels are no longer regulated under the CFS, reductions in the CI of gaseous and solid fuels can also create sellable credits. There is an additional cap of 10% per year on the use of those credits.

The 10% caps (as well as the government's requirements for biofuel blending) are at odds with the idea of using an outcome-based approach to accomplish emission reductions. Rather than allowing the market to decide what are the most efficient and lowest-cost ways of reducing emissions, the government has taken a more prescriptive approach in order to direct investment to specific preferred low-carbon alternatives and activities.

Options for when reduction targets aren't met

If a fuel supplier is still unable to meet its reduction requirement, it may carry forward up to 10% of its CI reduction requirement into a future compliance period, for up to two years.

Finally, a fuel supplier may pay into a compliance fund for up to 10% of their reduction requirement, rather than purchasing credits. It is costly, however: the price has been set at $350 per tonne.

Key changes in the Clean Fuel Standard regulations

	PREVIOUS (2019)	NEW (DECEMBER 2020)
Scope	All fossil fuels – liquid, solid or gaseous	Only liquid fuels
Target impact on GHG emissions, annually	30 megatonnes	Between 17.5 and 20.6 megatonnes
Carbon intensity reductions	Starting at 3.6 gCO_2e /MJ in 2022 Reaching 10 gCO_2e /MJ by 2030	Starting at 2.4 gCO_2e /MJ in 2022 Reaching 12 gCO_2e /MJ by 2030
Date of implementation	June 2022	December, 2022
Land use and biodiversity requirements		Reference year for determining compliance moved from 2008 to 2020 Compliance assessed on an aggregate national or provincial basis rather than by individual farm or lot Non-Canadian feedstocks eligible if they meet similar national or sub-national requirements
Credit generation and use		No limit on using credits from CCUS, hydrogen, co-processing and end-use fuel switching 10% cap on credits using generic methodology 10% cap on “cross-class” reductions from gaseous and solid fuels 10% carry-forward of reduction obligations 10% cap on paying into the compliance fund and a fee set at $350/tonne

What will it cost?

In the *Gazette*, the government also finally published its cost-benefit analysis of the regulation. Here are some of what we consider to be the highlights.

Fuel prices. The federal government estimates that the CFS will result in fuel prices increasing by the year 2030 by the following amounts:

Gasoline | 7 cents per litre

Diesel | 9 cents per litre

Light fuel oil | 9 cents per litre

Heavy fuel oil | 10 cents per litre

These estimates are slightly higher than – but still in the range of – estimates produced by the Canadian Energy Research Institute (5-6 cents per litre of gasoline and diesel), and Navius Research (5 cents for gas and 7 cents for diesel).

These increases are distinct from the increases in fuel price that will stem from the carbon tax (which may result in an additional cost of 30 cents per litre by 2030).

Total cost. The total cost of the CFS to society is estimated to be $20.6 billion between 2021 and 2041 (range of $14.1 to $26.7 billion). The anticipated reductions would be achieved at an estimated cost per tonne of $123 and a net cost per tonne (subtracting a specific subset of monetized societal benefits – primarily the positive economic benefit of credit creation) of $94.

The policy will result in a slight decrease in GDP of up to 0.2% in 2030.

Net economic impacts by province. In terms of net economic impacts at a provincial level, the western provinces are expected to experience GDP declines of less than 0.1%, with the exception of Manitoba where the decline is similar to Ontario at 0.4%.

The analysis estimates a "negligible impact" on B.C. due to revenues generated from actions under their low carbon fuel standard.

Alberta and Saskatchewan are also estimated to have "negligible impacts" since the upstream oil and gas sectors will have more opportunities than in other provinces to generate credits (through carbon capture and storage (CCS) and methane reduction, for example).

Manitoba's largest opportunity to generate additional credits comes from higher-than-forecast electrification.

The negative impacts are projected to be the largest in the Atlantic provinces due to limited opportunities to create credits, and a heavier reliance on fuel oil for heating.

A net provincial impact, however, is not a good representation of what is experienced at an individual or company level; those companies that are positioned to take advantage of the benefits are not necessarily the same as those that will feel the pinch of the costs.

Competitiveness for oil producers, upgraders and refiners. The federal government says that fossil fuel producers and importers will remain competitive, because they can pass along costs in the short term. In the long term, however, the government anticipates that reduced demand for fossil fuels overall will erode the industry's competitiveness.

The government also claims that heavy oil producer/upgraders won't be badly affected, for two reasons: because their exports are exempt from the CFS, and because most upgraders also own refineries and can generate credits.

Overall, the costs will be highest for those companies that rely on buying credits from third parties rather than generating the emissions reductions themselves.

The government is expecting CCS to be a big contributor and credit generator, particularly in the early years. With current capacity, CCS will generate 1.3 million credits per year (equal to 1.3 million tonnes of CO_2 sequestered). Additional future capacity could potentially add an additional 3 million credits per year (about 15% of total annual reductions in 2030).

Because of the availability of CCS credits, the government anticipates that refinery process improvements will not be needed for compliance until 2026, giving refiners some years to get ready.

Even though the objectives and mechanisms of the CFS have been clearly defined, the government is still working on translating these into the fine print of regulations – a critical step in a policy as complicated as this.

CONCLUSION

With the changes introduced in December, the federal government seems to have responded to the main concerns put forward by several key stakeholder groups, including the fossil fuel suppliers who will be the regulated parties, the industries that would be impacted by the changes, the agricultural suppliers who will provide the bulk of the biofuels needed to reduce emissions, and those interested in ensuring that Canada makes meaningful strides towards emissions decreases.

However, the dust has not completely settled. Even though the objectives and mechanisms of the CFS have been clearly defined, the government is still working on translating these into the fine print of regulations – a critical step in a policy as complicated as this.

The proposed regulations put forward in the *Gazette* remain open for comments until March 3, 2021.

CWF // A Citizen's Guide to the Clean Fuel Standard

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