October 10, 2022

Ministry of Environment, Conservation and Parks
135 St Clair Ave W, 8th Floor
Toronto, Ontario

Consultation: Emissions Performance Standards (EPS) program regulatory amendments for the 2023-2030 period (ERO # 019-5769)

The Canadian Steel Producers Association (CSPA) is the national voice of Canada's $15 billion steel industry. Our member companies annually produce approximately thirteen (13) million tonnes of primary steel as well as over one (1) million tonnes of steel pipe and tube products in facilities located across Canada. Domestic steel operations directly employ some 23,000 Canadians while supporting an additional 100,000 indirect jobs.

Canada's steel industry leads the world in producing low carbon intensity steel. In terms of lowest carbon footprint, Canada ranks first in the world (lowest greenhouse gas emissions intensity) for integrated steelmaking, all of which is in Ontario, and ranks second in the world for electric arc furnace (EAF) steelmaking considering both direct and indirect emissions.

The new large-scale Direct Reduced Iron (DRI) and EAF projects announced at Algoma and ArcelorMittal Dofasco have combined capital costs of approximately $3 billion. With reductions beginning in 2024 and continuing progressively to 2030, these projects will eventually remove approximately six (6) million tonnes of CO_2 annually.

With these investments and government support, Ontario's steel industry will be providing approximately 50% of Ontario's commitment of twelve (12) million tonnes of CO_2 reduction by 2030.

Looking ahead, additional decarbonization initiatives by our members will further improve the industry's emissions performance by 2030 and beyond. [1]

[1] Canadian Steel Industry Energy & Greenhouse Gas Emissions Intensity, Technology and Carbon Reduction Roadmap https://canadiansteel.ca/files/resources/Golder-Report-CSPA-NRCan.pdf

Comments

According to the proposal presented on the Environmental Registry, the CSPA understands that the Ministry of Environment, Conservation and Parks (MECP) is proposing changes to the Emissions Performance Standards (EPS) program for 2023-2030 to meet the benchmark set by the federal government.

Ontario's EPS program regulates greenhouse gas (GHG) emissions from large industrial facilities by setting emissions limits that are the basis for the compliance obligations of those facilities. The program was developed as an alternative to the federal output-based pricing system (OBPS) and helps Ontario achieve GHG emissions reductions. The EPS program came into full effect on January 1, 2022.

As a highly energy-intensive trade-exposed sector, the EPS Program needs to ensure Ontario's steel producers remain competitive within the 2023-2030 timeframe and beyond. It is imperative that the proposed EPS Program amendments, including stringency factors, do not result in instituting a carbon cost on our industry that is already making significant efforts to decarbonize. Otherwise, we risk the erosion of the competitiveness of Ontario's steel industry and an increase in global GHG emissions through carbon leakage. The following are the comments from CSPA regarding the proposed regulatory amendments.

Carbon Price

CSPA and its' members appreciate the constraints on the MECP with respect to carbon pricing. CSPA would like to point out that there was no consultation process with respect to the increasing price of carbon mandate by the Federal Government. CSPA would also point out that there is no carbon price in the United States, Mexico, China, Turkey, India and many other countries which import steel into Canada, and this will lead to carbon leakage to those jurisdictions.

The current and future rise in the price of carbon will have a significant cost to the Ontario steel industry, both in increasing the direct production cost of Ontario steel and indirectly by increasing the supply chain costs of raw materials.

Stringency Factors

The current proposal is for stringency factors to have a decline rate of 2.4% in 2023 from the stringency factors in 2022, and 1.5% per year from 2024-2030 and those factors will apply to both fixed process and non-fixed process emissions.

The imposition of the above noted decline rates would have a significant negative impact on Ontario steel producers.

In Section 7 of the proposed regulatory amendments, it states that "A significant portion of the steel sector is expected to make a transition to clean steel production in the coming years, with significant emission reductions. **In consideration of the transformative changes at these facilities, it is proposed that the stringency factors be considered differently** (e.g., leading to a smaller reduction requirement). This is to recognize the significant emissions reductions expected to be achieved by this transition."

CSPA acknowledges that the proposed decline rate is due to the requirements for the EPS to meet Federal backstop provisions, however we would note that Fixed Process Emissions (FPEs) cannot be reduced because they result from the chemical reactions and physical requirements of processes for which there are currently no commercially viable alternatives. In addition, there are minimum thermodynamic requirements in many of our processes, regardless of the efficiency of an operation, to make steel products that are not considered as part of the EPS Program.

This is a fundamental shift in approach where previously FPEs were recognised as irreducible. The proposed EPS Program amendment would result in a carbon cost on Ontario's steel producers due to their inability to reduce fixed process emissions.

Please see attached Appendix for a further explanation of FPEs

It is noted that Ontario's steel industry made significant investments to reduce emissions prior to the release of this proposal and as such it shows that Ontario's steel producers will invest in carbon emissions reductions without the need for tightening of stringency as a trigger.

CSPA appreciates that the efforts and investments made by Ontario's steel producers to decarbonize have been recognized by MECP in the proposal, and CSPA is looking for additional information as to how that the stringency factors will be considered differently for the steel sector as noted in the proposal.

Ontario's steel sector is committed to and will be doing more than its part in reducing Ontario's GHG emissions however CSPA would like to note that if the proposed stringency decline rates are

enacted for the steel sector, the **cumulative carbon costs to the sector would be in the order of $800 million for the period from 2023 – 2030.** This will significantly harm the financial viability and impair the competitiveness of steelmaking in Ontario.

Carbon Leakage and Related Competitiveness Assessment

The proposed decline rate for stringency factors combined with an increasing price on carbon fails to consider the significant global trade exposure faced by Ontario and Canada's steel sector. Without a doubt, the proposal will lead to higher production costs for steel manufactured in Ontario and deeply erode our ability to compete. Carbon leakage (the procurement of steel from higher carbon intensity jurisdictions outside Canada to replace greener Ontario sources) will be a direct result leading to significant economic harm to steelmaking in Ontario.

The price of steel in the market is set globally and regionally and as such Ontario produced steel must compete with steel from higher carbon intensity sources that already have a significant share of the Canadian market.

Steel is one of the most highly traded materials in the world. In fact, over 30% of all steel produced globally is traded with other countries, while over 40% of goods made of steel are traded with other countries. The OECD reported that current global steel excess capacity has grown over the past 3 years and is currently at 540 million MT (35 times the size of the entire Canadian steel market) and is expected to grow for at least the next four (4) years, furthering trade tensions.

Currently, imports are at an all time high with over 65% of Canada's steel needs being met by foreign steel suppliers and at the same time Canada is the #2 country in the world where anti-circumvention of trade measures by foreign producers occurs. This demonstrates the trade exposure of Ontario's steel sector and the challenging competitiveness climate. Current global overcapacity, unfair trade practices, lack of carbon tariffs and the high desirability of the Ontario market makes it very easy to procure non-Ontario produced steel in the province.

Carbon costs that will be paid by Ontario steel producers cannot be passed along to customers and will result in higher priced Ontario steel and a less competitive product.

As previously mentioned, Canadian steel is produced at the lowest or second lowest global carbon intensities (depending on the technology) and the imposition of the proposed stringency decline rates will have a direct negative impact on the competitiveness of Ontario's steel producers and will result in much higher emission intensity foreign steel in the Ontario marketplace leading to carbon leakage and overall higher global emissions.

Emissions Performance Standards

It is noted that there may be an error within the August 24, 2022, Stakeholder presentation to the iron and steel sector the revised Baseline Emissions Intensities (BEI) were listed as follows.

Industrial Activity	units	Revised ON BEI	Revised FPE BEI	Revised non FPE BEI
Basic Oxygen Furnace	t CO2e per tonne of Steel produced from BOF	0.158	0.148	0.011
Electric Arc Furnace	t CO2e per tonne of Steel produced from EAF	0.125	0.083	0.041

CSPA would ask MECP to verify the values as the total for Revised FPE BEI + Revised non FPE BEI does not equal the Revised ON BEI listed

There is a need for a DRI standard to be developed as soon as possible so that there is cost certainty for the investment made in the transformation from blast furnace to DRI to reduce emissions.

Similarly , there is also an urgent need for an iron fed EAF standard that is different than the current scrap based EAF standard. Iron fed EAF's can be approximately 25% higher in CO_2 emissions due to the higher carbon content in iron vs. recycled steel.

CPSA members are also concerned about the process and timing to develop facility specific standards for steel production facilities that are undergoing a transition in production processes as part of decarbonisation efforts. Facilities undergoing these transitions will be significantly decreasing emissions and require site specific BEI's to recognize the absolute GHG reductions being achieved and provide confidence in these investment decisions.

Significant Operational Impact

The Steel sector would like to see the implementation of a relief mechanism for situations of significant operational impact (i.e., major process upset/malfunction) where lower production decreases the absolute GHG emissions but results in a temporary increase in GHG intensity at a process leading to higher GHG costs per unit of production. The sector proposes the use of an adjustment factor. A "significant operational impact" may include, but not be limited to:

An unexpected malfunction or catastrophic event (such as a blast furnace chill);

A project/maintenance that is out of the norm (such as a blast furnace reline or coke battery rehabilitation);

Production sharply falling (i.e., to 50% or less) or ceasing (for example, due to global economic impacts).

Scenarios and/or criteria could be developed to identify when significant operational impact has occurred (i.e., a blast furnace chill, reline or outage due to major maintenance). We propose that significant operational impact could be defined, and adjustment factors could apply, to any steelmaking process. The sector could provide evidence that significant operational impact had occurred (i.e., actual production levels vs. historical levels; maintenance records) to support an adjustment. Adjustment factors would not be applied in situations of routine or short duration maintenance or for normal economic fluctuations.

Carbon Capture Utilization and Storage (CCUS)

CSPA is fully supportive of MECP's proposal to recognize CO_2 emissions that are captured at a covered facility and stored permanently in a storage project during a compliance period. In addition, CSPA is supportive for those CO_2 emissions that are captured and stored, to be deducted from the covered facility's reported emissions to determine verified GHG emissions.

CSPA is also supportive of MECP's recognition of emission reductions from carbon capture and utilization within the EPS program in the future. This will also be a key component to send a clear signal to promote maximizing our circular economy in a sustainable manner in the longer term.

Compliance

MECP is proposing that if the revised GHG report means that too many EPUs were distributed to a covered facility it is proposed that the covered facility would have a compliance obligation equal to the excess number of EPUs distributed.

The compliance instruments to satisfy this obligation would be required to be in the facility's account no later than 60 days from the submission of the related verification statement.

If the required number of instruments are not in the account after **60 days**, an additional compliance obligation, in the amount equal to three times this shortfall, would be required to be in the facility's account within **120 days** of the submission of the revised verification statement.

CSPA believes that this is an overly aggressive timeline and excessive penalty. The extensions should afford the time to gather the options (pay outright or purchase credits) but within a reasonable amount of time to fulfill.

CSPA recommends that the proposed 60 day time period be revised to at least 90 days and that if the required number of instruments are not in the account timeline be revised from 120 days to at least 180 days after.

CSPA would also recommend that the additional compliance obligation be revised from an amount equal to three times to an amount equal to two times the shortfall within 365 days .

About Us

Canadian steel producers are a critical component of Ontario's economy and industrial base, serving the needs of North American customers with high quality, competitive, and innovative products. Key market segments for member companies include automotive; energy discovery, extraction, and transport; major infrastructure projects; commercial/residential construction; renewable energy creation; and many general manufacturing applications.

CSPA is committed to fostering a strong and sustainable future for Ontario's vital steel producers and enabling our members to prosper in both domestic and international markets.

Early in 2020, the Canadian steel industry put forward a climate vision for our sector with the aspiration of achieving net zero carbon dioxide emissions by 2050. This long-term plan outlines a significant opportunity for our industry, through partnership with likeminded stakeholders including government, to reduce carbon emissions and find practical solutions that will ensure steel is made in Canada for generations to come. The steel sector looks forward to working with

the provincial government to develop a sustainable approach to reducing emissions with the lowest possible impact to the Ontario economy.

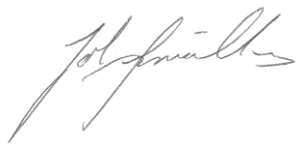
Conclusion

Regulations are not the only tool in the toolkit to support the Ontario steel industry's decarbonization. We must find a balance between regulatory requirements and an expanded portfolio of incentives such as carbon-based procurement policies, abundant & clean electricity, affordable hydrogen and access to CCUS.

It is imperative that we take the time to work together to get the revised EPS Program designed to achieve provincial greenhouse gas reductions while growing Ontario's businesses in both an environmentally and economically sustainable manner.

CSPA appreciates the effort made by the Ministry to consult on the EPS. The CSPA and its members are requesting, after the Ministry has had time to review these comments, a meeting with relevant Ministry staff and leadership to provide further feedback, background and steel sector concerns so that the goals of a thriving Ontario steel sector and progress to reducing Ontario's GHG emission can be met.

Sincerely,



John Smičiklas
Director (Interim), Environment
Canadian Steel Producers Association

Appendix

The iron and steel sector is characterized by processes that have high energy requirements because of the chemical reactions and thermal conditions involved.

Most of this sector's greenhouse gas (GHG) emissions result from fundamental and irreducible energy requirements dictated by the laws of thermodynamics. These Fixed Process Emissions (FPEs) cannot be reduced because they result from the chemical reactions and thermal requirements of processes for which there are no commercially viable alternatives for a particular activity.

Chemical reactions that generate CO_2 emissions occur in iron and steel manufacturing processes that include:

- production of pig iron from iron ore in blast furnaces and direct-reduced iron (DRI) processes
- refining of pig iron and DRI to produce steel
- injection of carbon in electric arc furnace (EAF) steelmaking to create a slag foam to maximize heat retention and minimize energy consumption
- production of lime from limestone and dolomite
- dissolution of carbon electrodes during steel melting in EAFs

FPEs also result from fundamental energy requirements to raise the temperature of materials to the level at which these chemical reactions occur or to allow physical processing. Sources of CO_2 from these thermodynamic requirements include:

- transformation of coal into coke
- melting of pig iron
- heating to rolling temperature in hot rolling processes
- annealing of steel to meet customer specifications

As summarized above, there are a series of chemical reactions and process requirements that inevitably result in irreducible GHG emissions. These FPEs are independent of equipment efficiency; even using optimized steelmaking technologies, the same FPEs per tonne are emitted. These requirements are based on laws of physics and chemistry, not technology choice. Therefore, in identifying the amount of GHGs that are amenable to reduction in the foreseeable future, until breakthrough technologies are commercially viable, it is necessary and appropriate to exclude the FPE components for each activity as described in this note.