CHEMISTRY INDUSTRY ASSOCIATION OF CANADA
PLASTICS DIVISION

ASSOCIATION CANADIENNE DE L'INDUSTRIE DE LA CHIMIE
DIVISION DES PLASTIQUES

JANUARY 13, 2023

Denis Gingras
Standard Developer
Bureau de normalisation du Québec
333, rue Franquet
Québec (Québec) G1P 4C7
secretariat.normalisation@bnq.qc.ca

RE: BNQ Draft Standard D 3840-100-6 Recycled Plastic Content Products

Dear Mr. Gingras,

The Chemistry Industry Association of Canada (CIAC) appreciates the opportunity to respond to the Bureau de normalisation du Québec (BNQ) public consultation on draft standard D 3840-100 *Recycled Plastic Content Products*. We have developed this cover letter as an accompaniment to the comment form provided. This cover letter provides additional context and justification to support the technical rationale provided in the comment form.

The CIAC Plastics Division represents Canada's leaders in plastics industry sustainability – a $29-billion sector that directly employs nearly 100,000 Canadians. The Division encompasses the entire plastics value chain, including resin and raw material suppliers, processors/converters, equipment suppliers, recyclers, and brand owners.

As you are aware, the Canadian plastics industry has committed that 100 per cent of plastics packaging will be recyclable or recoverable by 2030, and 100 per cent of plastics packaging will be reused, recycled, or recovered by 2040. Only by working together can industry, government and other stakeholders achieve shared goals for a circular economy and zero plastic waste. Having standards in place that allow industry and Canadians to consistently and accurately represent the progress being made towards those goals is paramount.

As a participant on the technical committee responsible for shaping the draft standard D 3840-100-6, CIAC is supportive of many key elements in the draft standard. In particular, the inclusion of the "Free allocation – Fuel Free" is supported by CIAC and its members for the reasons outlined in Annex E section E.2 of the draft standard. However, for clarity, we recommend changing the title to "Free allocation – excluding products used or sold as fuels."

CIAC recognises that the current treatment of recycled content claims more than two decades ago, in 1999, when recycling was just getting started. A lot has changed since then, including the introduction of new recycling technologies that use chemical processes, and regulations that will mandate recycled content minimums. There is a need to look at these recyclability claims now with this new frame in mind.

Only about 50 per cent of the plastic packaging today can be managed through mechanical recycling, hence the focused effort on advanced chemical recycling technologies and innovation. The end goal is keeping plastic in the economy and out of the environment. With advanced recycling complimenting mechanical recycling process and providing an end-of-life treatment for those plastics that cannot be managed

mechanically, we can achieve that goal. Furthermore, the outputs of advanced recycling, having the same properties as virgin plastics and can increase the scope of what products can contain recycled plastic.

Of critical importance for advanced recycling is recognition as recycled content, allowing its outputs to be included for regulatory and compliance purposes. As the standard allows for mass balance attribution for advanced recycling, we need to be able to directly claim those attributed volumes in the mass per cent recycled content calculations.

Mass balance is an expression of the law of conservation of mass and is widely used in both engineering and environmental analysis. Mass balance is often used in carbon accounting systems to quantify the carbon reductions across a system or process, which then culminate as fungible carbon credits. Applying that same scientific principle to the conversion of reclaimed plastic into its building block, for recycling purposes, should result in the same fungibility. Furthermore, mass balance and chemistry can be used to determine the mass of the output linked to the feedstocks, as illustrated in Annex D, examples 1 and 2 where the mass and per cent recycled content has been determined. Therefore, the recycled content claims should also allow for the expression as a mass per cent, thereby allowing inclusion in regulatory mandated recycled content minimums.

While CIAC recognizes the scope of this standard is recycled plastic content certification, we are concerned by the language used throughout the document related to plastics circularity and a circular economy, which is not directly related to the calculation of recycled content and introduces bias. This commentary on circularity is outside of the scope of the standard and should be removed to prevent confusion or additional bias. Beyond the scope of the standard, it is crucial that stakeholders recognize a broader definition of circularity, as there is need for complimentary methods of recycling to achieve shared goals of circularity. Advanced recycling, and future technologies create valuable raw materials and products which add to the conservation of plastics as a resource.

Members of the CIAC are committed to working towards a circular economy for plastics, built on a framework that enhances recycling systems, supports innovation, and expands end markets. Overall, CIAC is supportive of the majority of the standard, however more work is needed to support recycling claims for advanced recycling processes using the mass balance approach.

Further to this feedback, CIAC has completed the electronic comment form to align with BNQ's submission preference. The table includes several language modifications to better align the standard to scientific reasoning and methodologies. In cases where the response did not fit the format of the form our recommendation as been incorporated in an Annex to this letter.

Thank you for the opportunity to participate in this public consultation.

Sincerely,

Christa Seaman,
Acting Vice-President, CIAC Plastics

Annex A

Recommendation: Update Annex E to better identify how products could be non-proportionally assigned where fuels are not assigned any output from recycled plastic input.

E.1 Annex E: Mass Credit Allocation

E.1.4 Free Allocation – ~~Fuel Free~~excluding products used or sold as fuels

~~Some~~ Advanced chemical recycling processes generate hydrocarbon products that may be used as a fuel ~~fuels as a product or a by-product~~or as an intermediate/feedstock for the production of polymers and are part of the circular economy~~, which is a commodity that is certainly not recognized as a recycled material because it is not part of the circular economy given, among other things, its potential for increasing greenhouse gases~~. ~~Therefore~~Therefore, ~~the allocation of these credits compromises the~~ to maintain the integrity of the recycled content calculation and crediting, any reclaimed feedstock allocated, through mass balance processes, to hydrocarbons sold or used as fuel will be deducted from the total units available for recycling credit ~~non-proportional allocation method and imposes a deduction for fuels. In this system, units for fuel cannot be accounted for in other products~~ since those recycled units are lost. ~~Whether the fuel is used on-site or sold as a product stream, the fuel product stream (e.g., diesel blend or fraction burned in a heating process) illustrated in Figure E.1 and the four recycled units would be lost from the system, and only six remaining units would be available for non-proportional allocation among the other product streams.~~

There will be circumstances where due to the feedstock blend entering the advanced chemical recycling process that a free allocation – excluding fuels used or sold as a fuel approach will allow, on a mass balance basis, all reclaimed units to be allocated to non-fuel products (monomers, polymers, chemical feedstocks, etc).

Figures E.3 through E.5 show various feedstock scenarios. In scenario 1 (Table E.3) the total recycled credits available to claim is 10 and no reclaimed feedstock was allocated to fuels, as allowed by mass balance. In scenario 2 (E.4) 30 units of the 90 reclaimed feedstock was allocated to a fuel output, therefore the total recycled credits available is 60. Finally in scenario 3 (E.5) 40 units of the 100 reclaimed feedstock was allocated to a fuel output, therefore the total recycled credits available is 60.

Recommendation: Add a figure E.3, E.4 and E.5 under Free Allocation – ~~Fuel Free~~excluding products used or sold as fuels to demonstrate different outcome based on feedstock scenarios.

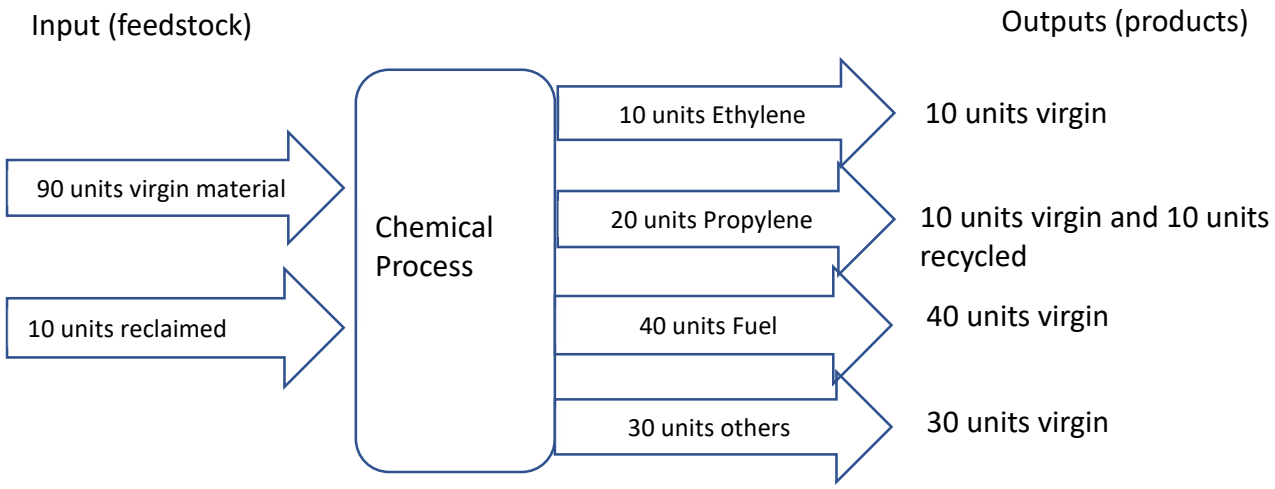

Figure E3: Representation of Free allocation – Fuel Free feedstock scenario 1

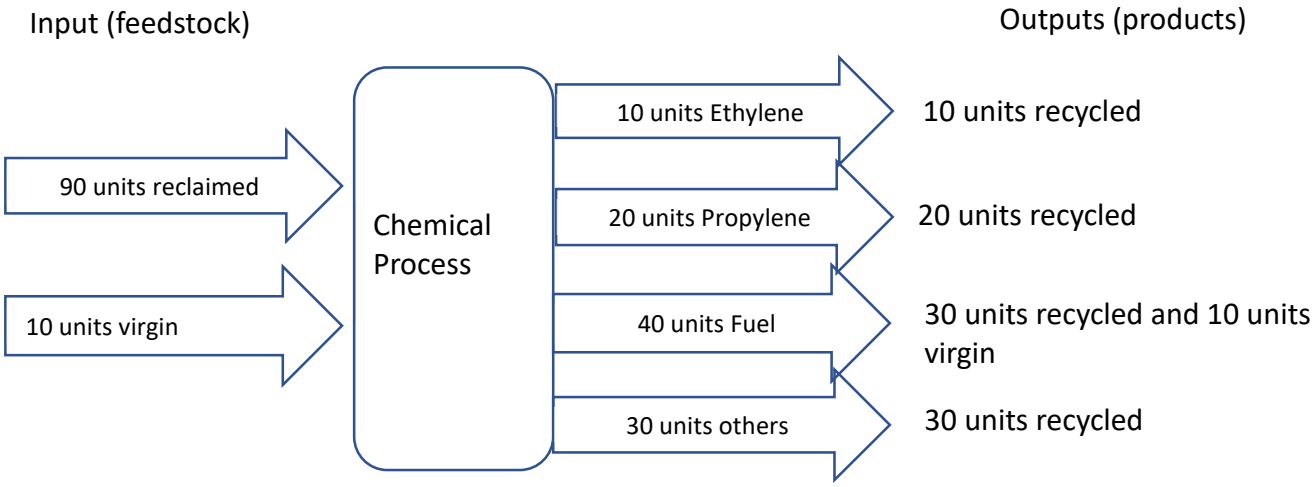

Figure E4: Representation of Free allocation – Fuel Free feedstock scenario 2

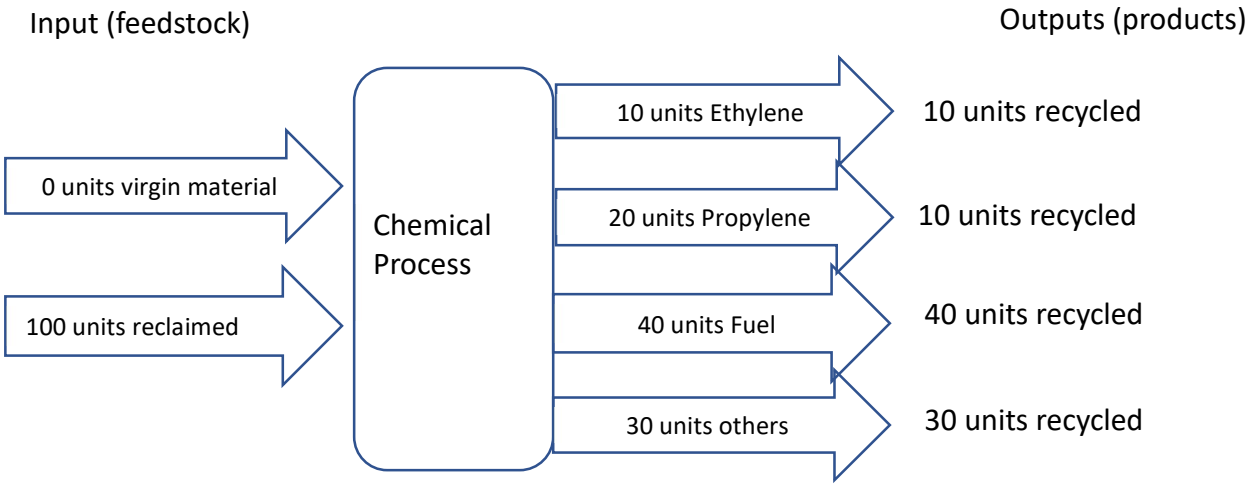

Figure E5: Representation of Free allocation – Fuel Free feedstock scenario 3

Recommendation: Update Table E.1 to reflect true free allocation in ~~Fuel Free~~Free allocation – excluding products used or sold as fuels and Polymer only sections of the table. Suggest removing Total Credit in Virgin Material row as it complicates the table and doesn't add value.

Table E.1 Range of Possible Allocation Methods

~~Credits by Product~~ Allocation of Feedstocks to end products	Proportional Allocation	Free allocation — Non-proportional	Free Allocation — excluding products used or sold as fuels~~Fuel-free~~	Free Allocation — Polymer Only
Ethylene	1	From 0 to 10	From 0 to 10	From 0 to 10
Propylene	2	From 0 to 10	From 0 to 10	From 0 to 10
Fuel	4	From 0 to 10	From 0 to 10	From 0 to 10
Others	3	From 0 to 10	From 0 to 10	From 0 to 10
Total credit recycled materials permit allocated	10	10	Ethylene + Propylene + other – fuels ≤10~~6~~	Ethylene + Propylene - other – fuels ≤10~~3~~
~~Total credit in virgin materials~~	~~90~~	~~90~~	~~94~~	~~97~~
NOTE — The use of the inscription from 0 to 10 indicates the possible range of credit allocation from zero up to a potential of ten credits, however, at any time, the total credits allocated cannot exceed the total credits allowed. For Free Allocation - excluding products used or sold as fuels and Polymer only the credits assigned must follow mass balance principles so credits assigned to non-fuel stream cannot exceed total non-fuels end products produced.				