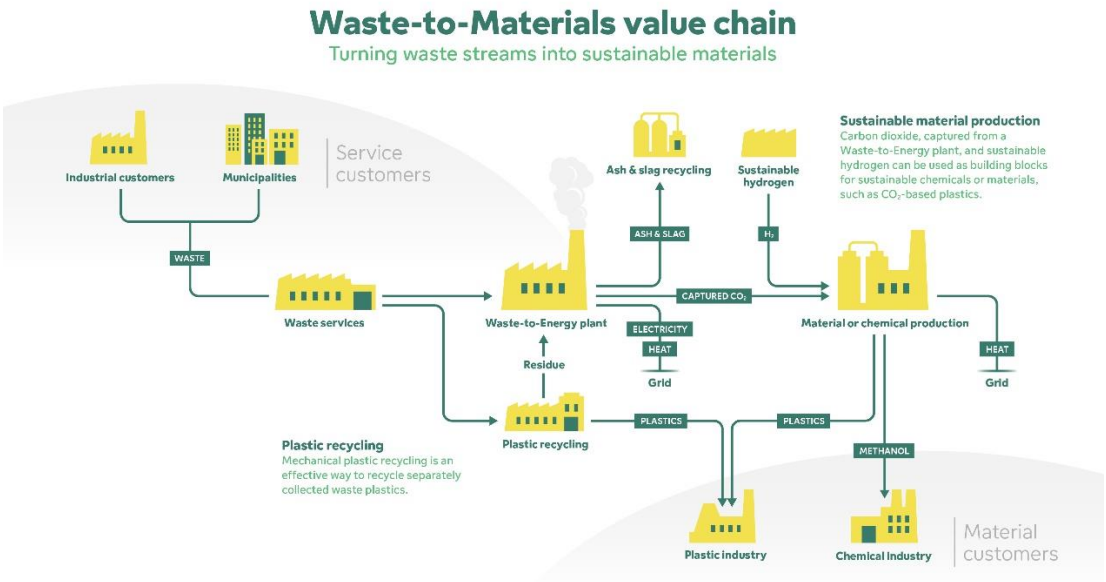
Tatu Hocksell & Janne Koivisto 7.2.2023

ESTABLISHING A UNION CERTIFICATION FRAMEWORK FOR CARBON REMOVALS

Introduction

Every year, Europeans generate nearly 100 million tonnes of unrecycled waste that is turned into energy. Incineration is an important part of the current waste management system. We at Fortum believe that all carbon belongs in circulation. This means that also emissions are turned into new raw materials. To do this at scale, we need to rethink CO2 in recycling.

According to our estimate, capturing carbon from a Waste-to-Energy plant and utilizing the waste-derived carbon to produce hydrocarbons, such as plastics, could help to improve the recycling rate of plastic packaging significantly. Simultaneously 90 % of the carbon dioxide released into the atmosphere can be captured and absorbed into products.



Picture 1: Fortum's Waste-to-Materials value chain. Increasing recycling rates of plastic packaging waste and municipal solid waste via implementing CCU in a Waste-to-Energy plant.

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Summary

Fortum welcomes the European Commission´s proposal *COM(2022) 672 final* for establishing a Union certification framework for carbon removals. Incentivizing carbon removals and harmonizing the methodology is essential to reach the EU climate objectives and to increase the credibility of carbon removals.

Equally, Fortum wants to emphasize that the framework should not aim for similar permanence with carbon storage in products, as is required from geological storage. Especially concerning industrial removals from point sources, carbon capture and utilization (CCU) is a rising solution, and the new framework should support different applications, which capture the carbon otherwise emitted, and bind it to products, thus replacing a fossil carbon source.

CCU can also be a future solution to achieve EU's recycling targets, when applied in Waste-to-Energy or hazardous waste incineration plants, and recycling the carbon fraction of waste origin, captured from the flue gases, via manufacturing new products. Carbon removals framework should recognize all industrial removals, which ultimately lead to less CO_2 in the atmosphere (fuel production excluded as the whole purpose of it is to combust the fuel and therefore emit CO_2 into the atmosphere). Narrowing the focus to fixed lifespan of the raw material or product the carbon is stored to, the framework would hinder the development and investments to new carbon removal and recycling technologies.

In addition, the framework should establish clear calculation and verification rules for removals of carbon from mixed fuel sources, such Waste-to-Energy plants or other combustions plants using both fossil and biogenic fuels.

Comments on individual Articles

Article 2, chapter 1.
a) definition should be amended as follows: 'carbon removal' means either the storage of atmospheric, waste-derived or biogenic carbon within geological carbon pools, biogenic carbon pools, long-lasting products and materials, and the marine environment, or the reduction of carbon release from a biogenic carbon pool to the atmosphere;

- Rationale: The definition should include removals of carbon originating from waste, e.g. from the flue gases of Waste-to-Energy (WtE) or plant or from hazardous waste incineration. The amendment would incentivize carbon capture and removal of WtE sector irrespective whether the carbon is from the biogenic or fossil share of the incinerated waste. As WtE sector (municipal waste incineration) nor hazardous

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waste incineration are not in the scope of EU ETS directive, the amendment would be well in line with the additionality principle (Article 5).[1]

- Similar amendments should be made to other articles referring to the definition of 'carbon removal'.

i) definition should be amended as follows: 'carbon storage in products' means a carbon removal activity that stores atmospheric, waste-derived and biogenic carbon in ~~long-lasting~~ products or materials;

- Rationale: Definition should not be limited to long-lasting products only. In principle, all products (with the exception of fuels), that store carbon should in principle be within the definition of 'carbon storage in products'.
- A CCU process can be used e.g. to manufacture hydrocarbons such as various plastics. It may be near impossible for the manufacturer of plastic raw materials for consumer or construction products to monitor in what type of application the plastic is used. It is possible to use the same type of plastic for very different applications, and equally the expected lifespan of the end-product can vary from week to decades.

Article 5: We propose that "Union and national statutory requirement" is clarified regarding the additionality. It should be made clear, if fiscal instruments such as EU ETS or national environmental taxes - which may incentivize or penalize certain behavior, but do not as such require to e.g. emit less - are considered "requirements" in the Article.

Article 6, Chapter 3. Instead of a monitoring period an emission reference value for typical applications should be used in carbon storage in products to determine, when the carbon is considered released to the atmosphere. This would better take into account the diversity of potential technological solutions and applications of industrial carbon removals. As we have stated above, the framework should recognize all industrial removals, which ultimately lead to less CO2 in the atmosphere. Monitoring of certain CCU solutions may prove to be overly complex.

Article 7, Chapter 3: There is a certain amount of ambiguity over the concept of "co-benefits". While we do not oppose reporting the co-benefits, it should be made clear, that the co-benefits are not a requisition to certify carbon removal units.

[1] Fortum considers that WTE should be included into the ETS to boost the decarbonization of residual waste treatment and push WTE sector's commitment for mitigating climate change. A waste incineration plant capturing the CO2 and utilizing it to produce e.g. plastics, should be excluded from the obligation to surrender allowances, in analogy with permanent geological storage of CO2.

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Don’t hesitate to contact us for more information about our views. Additional information;

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