

Feedback on Commission draft implementing regulation amending and correcting Implementing Regulation (EU) 2018/2066 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council

Monitoring of Biomass Waste Derived Fuels

The European cement industry is a large user of waste and by-products utilizing approximately 35 million tonnes per year. In the EU in 2017, the sector substituted on average 46% of its fossil fuel consumption with non-recyclable waste derived fuels, 16% of which were biomass waste derived fuels. Within a cement kiln waste fuels are co-processed utilising the heat value from the waste fuel to substitute fossil fuels and incorporating the ash as a partial replacement of the raw materials, leaving no waste residue. In addition to providing sound solutions for the waste streams and strengthening the circular economy, this use of waste fuels and waste biomass fuels are also key for the cement industry to reduce its CO₂ emissions and support our vision for a carbon neutral Europe for 2050 (please see our CEMBUREAU carbon neutrality roadmap for more information).

The use of waste biomass is highly important to the cement industry and increasingly so as the sector aims to become climate neutral by 2050. The sector is also providing a safe and affordable disposal route for national authorities and other industries by transforming the waste and by-products into alternative resources for cement production. The biomass and non-biomass waste fuels are derived from intermediary waste treatment processes which collect and process different waste streams to develop the final fuel to the specifications agreed by the authorities which can be used by the cement kilns.

Importantly, it is not possible to determine the initial sources of the biomass for these waste products as highlighted in the following two examples and therefore it would not be possible to comply with the sustainability criteria as proposed in the draft MRR. Likewise, it would also not be possible for the same reason to determine the green house gas (GHG) savings as the source of the biomass in the waste would need to be known.

- **Animal Meal** – is a biomass waste fuel which is the residue from the slaughter houses processing of animal carcasses which for health reasons has to be incinerated. The process and use is carefully regulated by national authorities. Due to the nature of the process it would be impossible to determine the source of animals attributed to the animal meal resulting from the process.
- **Tyres** – biomass containing waste derived from used vehicle tyres that contain natural rubber comes from many different sources depending on the manufacturer and where they are located. Waste tyres are collected from numerous garages across Europe and processed. At the end of the life cycle of a tyre it is impossible to determine the exact conditions under which the raw materials for its production were sourced.

CEMBUREAU's proposed changes to Implementing Regulation (EU) 2018/2066 (**MRR**) relate to the changes of Directive (**RED II**) on requirements for sustainability and green house gas (GHG) savings of biomass fuels. CEMBUREAU proposes the following amendments related to the sustainability and GHG criteria to be included in the MRR.

Article 1 (4) (b) on Article 38 (2) MRR: Include exemptions for biomass waste fuels

Article 38 paragraph 2 of (EU) 2018/2066 (**MRR**) should reference Article 2 paragraph 44 of (EU) 2018/2001 (**RED II**).

'agricultural, aquaculture, fisheries and forestry residues' means residues that are directly generated by agriculture, aquaculture, fisheries and forestry and that do not include residues from related industries or processing;

Article 38 paragraph 2 of (EU) 2018/2066 (**MRR**) should also reference Article 29 paragraphs 1 to 7 (sustainability criteria) and 10 (GHG saving criteria) of (EU) 2018/2001 (**RED II**). Article 29 (1) of RED II contains the following exemptions for wastes and residues which also need to be included in Article 38 paragraph 2 of **MRR**:

„However, biofuels, bioliquids and biomass fuels produced from waste and residues, other than agricultural, aquaculture, fisheries and forestry residues, are required to fulfil only the greenhouse gas emissions saving criteria laid down in paragraph 10 in order to be taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph. This subparagraph shall also apply to waste and residues that are first processed into a product before being further processed into biofuels, bioliquids and biomass fuels.

Electricity, heating and cooling produced from municipal solid waste shall not be subject to the greenhouse gas emissions saving criteria laid down in paragraph 10.“

The emission factor for the biomass share of waste fuels should be zero without the need to fulfil the conditions set in Art. 29 (2) to (7) of RED II. Otherwise the use of waste fuels would be heavily discouraged all across European cement industry and a significant means of reducing fossil fuel emissions would be lost.

Carbon Capture and Use

The recently published Innovation Fund call¹ stipulates that environmentally safe carbon capture and utilisation (CCU) is part of the technologies that can substantially contribute to mitigating climate change. It also stipulates that CCU can be funded if the capture of CO₂ occurs within one of the activities under the ETS directive, or if the utilisation of CO₂ results in products substituting carbon intensive ones from the ETS sectors, even if carbon is captured outside the activities of Annex I. Such projects require large-scale industrial cooperation to develop the necessary business case in order for such projects to emerge and scale-up. The “WestKüste100” project in Germany or ‘Carbon2ProductAustria’ (C2PAT) project in Austria are examples of such cross-industry cooperation on carbon capture and use that would enable decarbonisation on a large industrial and regional scale.

Yet, the proposed MRR (Article 49) does not provide the required incentive for such CCU schemes in terms of carbon disclosure. Indeed, the MRR stipulates that CO₂ can be deducted from ETS reporting only if the captured CO₂ is to be used for geological storage or to produce precipitated calcium carbonate. This means that under other carbon utilisation schemes, the captured CO₂ cannot be subtracted from the emissions of the capturing plants, even though the carbon is not emitted. This would be in direct contradiction with the principle of direct emissions that underpins the good functioning of the EU ETS.

¹ Regulation (EU) 2018/2066 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC

² Innovation Fund Large-scale Projects, InnovFund-LSC-2020-two-stage, Version 1.0, 3 July 2020

The business case of large-scale CCU projects relies on the ability of the plant that captures the CO₂ to account for it, regardless of the downstream use of the carbon (incl. for permanent geological storage, for mineralization (such as precipitated calcium carbonate) as well as other uses (e.g. production of chemical products or e-fuels). The investments and operational costs of such capture technology (that are a key enabler of the hydrogen economy) are born at the industrial site capturing the CO₂ and must be accounted for at the same site.

Mineralisation & CO₂ Transport

CEMBUREAU requests that CO₂ from an ETS installation which is permanently stored through mineralisation is recognised as not having been emitted according to ETS (see Annex 2) and discounted from the installation's surrendering obligations (see Annex 3). Put another way, if CO₂ from an ETS installation is ultimately not released in the atmosphere, either because it is transferred for geological storage or through mineralisation, that amount should be subtracted from the emissions of the originating ETS installation. This is already recognised for a mineralisation product: precipitated calcium carbonate (PCC) following the case initiated by Schaefer Kalk (C-460/15, EU:C:2017:29).

It should also be recognised that other forms of CO₂ transport in addition to pipelines (as already mentioned in the MRR) will be needed from capture sites to the ultimate storage or use on site. These will include road tankers, barges and shipping. To account for both mineralisation and different transport methods for CO₂, Article 3 of (EU) 2018/2066 (**MRR**) should be amended as proposed below.

CEMBUREAU's Proposed Amendments

Draft MRR	Proposed amendment
Article 3	
<p>(54) 'CO₂ capture' means the activity of capturing from gas streams CO₂ that would otherwise be emitted, for the purposes of transport and geological storage in a storage site permitted under Directive 2009/31/EC;</p> <p>(55) 'CO₂ transport' means the transport of CO₂ by pipelines for geological storage in a storage site permitted under Directive 2009/31/EC; <i>Article 30</i></p>	<p>(54) 'CO₂ capture' means the activity of capturing from gas streams CO₂ that would otherwise be emitted, for the purposes of transport, utilisation or geological storage in a storage site permitted under Directive 2009/31/EC;</p> <p>(55) 'CO₂ transport' means the transport of CO₂ by pipelines for utilisation or geological storage in a storage site permitted under Directive 2009/31/EC;</p> <p>New:</p> <p>(64): 'CO₂ utilisation' means the use of CO₂ for e.g. the production of energy carriers (e-fuels), chemicals and carbon-based materials [, as well as the use as a technological fluid.]</p> <p>(65) e-fuels include gaseous or liquid fuels produced from water, renewable electricity and captured CO₂.</p>
Article 49 - Transferred CO₂	
<p>1. The operator shall subtract from the emissions of the installation any amount of CO₂ originating from fossil carbon in activities covered by Annex I to Directive 2003/87/EC that is not emitted from the installation, but:</p> <p>(a) transferred out of the installation to any</p>	<p>1. The operator shall subtract from the emissions of the installation any amount of CO₂ originating from fossil carbon in activities covered by Annex I to Directive 2003/87/EC that is not emitted from the installation, but:</p>

of the following:
 [...]

(b) transferred out of the installation and used to produce precipitated calcium carbonate, in which the used CO₂ is chemically bound.
 [...]

4. For determining the quantity of CO₂ chemically bound in precipitated calcium carbonate, the operator shall use data sources representing highest achievable accuracy.

Annex IV

21. Determination of greenhouse gas emissions from CO₂ capture activities for the purposes of transport and geological storage in a storage site permitted under Directive 2009/31/EC

A. SCOPE

[...] All parts of the installation related to CO₂ capture, intermediate storage, transfer to a CO₂ transport network or to a site for geological storage of CO₂ greenhouse gas emissions shall be included in the greenhouse gas emissions permit and accounted for in the associated monitoring plan. [...]

T_{for storage} = Amount of CO₂ transferred to a transport network or a storage site, determined in accordance with Article 40 to 46 and Article 49.[...]

22. DETERMINATION OF GREENHOUSE GAS EMISSIONS FROM THE TRANSPORT OF CO₂ BY PIPELINES FOR GEOLOGICAL STORAGE IN A STORAGE SITE PERMITTED UNDER DIRECTIVE 2009/31/EC

A. SCOPE

The boundaries for monitoring and reporting emissions from CO₂ transport by pipeline shall be laid down in the transport network's greenhouse gas emissions permit, including all ancillary plant

(a) transferred out of the installation to any of the following:
 [...]

(b) transferred out of the installation and used to produce **a stable product through mineralisation** (such as precipitated calcium carbonate), in which the used CO₂ is chemically bound.
 [...]

(C) transferred out of the installation for uses in products substituting more carbon intensive ones, incl. in sectors listed in Annex I to Directive 2003/87/EC.

4. For determining the quantity of CO₂ chemically bound in **mineralisation products such as** precipitated calcium carbonate, the operator shall use data sources representing highest achievable accuracy.

Annex IV

*21. Determination of greenhouse gas emissions from CO₂ capture activities for the purposes of transport and **storage via mineralisation or geological storage** in a storage site permitted under Directive 2009/31/EC*

A. SCOPE

[...] All parts of the installation related to CO₂ capture, intermediate storage, transfer to a CO₂ transport network or to a site for **the mineralisation or geological storage** of CO₂ greenhouse gas emissions shall be included in the greenhouse gas emissions permit and accounted for in the associated monitoring plan. [...]

T_{for storage} = Amount of CO₂ transferred to a transport network, **a mineralisation site** or a storage site, determined in accordance with Article 40 to 46 and Article 49. [...]

*22. DETERMINATION OF GREENHOUSE GAS EMISSIONS FROM THE TRANSPORT OF CO₂ BY ~~PIPELINES~~ FOR **STORAGE VIA MINERALISATION OR** GEOLOGICAL STORAGE IN A STORAGE SITE PERMITTED UNDER DIRECTIVE 2009/31/EC*

A. Scope

The boundaries for monitoring and reporting emissions from CO₂ transport by pipeline shall be laid down in the transport network's greenhouse gas emissions permit, including all ancillary plant functionally connected to the transport network,

functionally connected to the transport network, including booster stations and heaters. Each transport network shall have a minimum of one start point and one end point, each connected to other installations carrying out one or more of the activities: capture, transport or geological storage of CO₂.

Annex IX

Operators and aircraft operators shall retain at least the following:

[...]

2. SPECIFIC ELEMENTS FOR STATIONARY SOURCE INSTALLATIONS:

[...]

(7) For CO₂ capture, transport and geological storage activities, where applicable, the following additional elements:

- (a) documentation of the amount of CO₂ injected into the storage complex by installations carrying out geological storage of CO₂;
- (b) representatively aggregated pressure and temperature data from a transport network;
- (c) a copy of the storage permit, including the approved monitoring plan, pursuant to Article 9 of Directive 2009/31/EC;
- (d) the reports submitted in accordance with Article 14 of Directive 2009/31/EC; (e) reports on the results of the inspections carried out in accordance with Article 15 of Directive 2009/31/EC;
- (f) documentation on corrective measures taken in accordance with Article 16 of Directive 2009/31/EC.

including booster stations and heaters. Each transport network shall have a minimum of one start point and one end point, each connected to other installations carrying out one or more of the activities: capture, transport, **storage via mineralisation** or geological storage of CO₂.

Annex IX

Operators and aircraft operators shall retain at least the following:

[...]

2. SPECIFIC ELEMENTS FOR STATIONARY SOURCE INSTALLATIONS:

[...]

(7) For CO₂ capture, transport and **mineralisation or**

geological storage activities, where applicable, the following additional elements:

- (a) documentation of the amount of **CO₂ permanently bound by installations carrying out mineralisation, or** CO₂ injected into the storage complex by installations carrying out geological storage of CO₂;
- (b) representatively aggregated pressure and temperature data from a transport network;
- (c) a copy of the storage permit, including the approved monitoring plan, pursuant to Article 9 of Directive 2009/31/EC;
- (d) the reports submitted in accordance with Article 14 of Directive 2009/31/EC;
- (e) reports on the results of the inspections carried out in accordance with Article 15 of Directive 2009/31/EC;
- (f) documentation on corrective measures taken in accordance with Article 16 of Directive 2009/31/EC.