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# IOGP Europe recommendations on the Delegated Act specifying a methodology for assessing greenhouse gas emissions savings from low-carbon fuels and low-carbon hydrogen

Clear and consistent rules on assessing GHG emissions savings from low-carbon fuels and low-carbon hydrogen can help to ramp-up low-carbon hydrogen production, develop a European market for hydrogen and facilitate the integration of hydrogen from renewable sources.

IOGP Europe recommends that the methodology for assessing GHG emissions savings from low-carbon fuels and low-carbon hydrogen should:

- **Reward (use of) low-carbon fuels and hydrogen for their GHG emissions savings on the basis of a life-cycle analysis.** The methodology should enable and reward industry using low-carbon hydrogen as a pathway to decarbonization.

- **Be consistent in the methodology to assess GHG emissions across all types of fuels**.

  The methodology to assess GHG emissions savings for low-carbon fuels and low-carbon hydrogen should be consistent with the methodology for biofuels laid down in Directive 2018/2001 (part C of Annex V and part B of Annex VI) and the methodology for renewable fuels of non-biological origin and recycled carbon fuels specified in Delegated Act 2023/1185.

- **Recognize carbon capture and geological storage (CCS)** to produce low-carbon fuels and low-carbon hydrogen, including CCS outside of the EU.

  CCS outside of the EU should be reflected in the methodology to enable import of low-carbon hydrogen as well as EU produced low-carbon hydrogen where the CO2 is stored in neighboring countries, provided that rules equivalent to Directive 2009/31/EC apply to those CO2 storages.

- **Reward innovations that reduce carbon intensities in the natural gas supply chain** versus the fixed carbon intensity values in the table in part B of the Annex to DA 2023/1185.
  Actual carbon intensities over the whole supply chain should be used where natural gas supplies more than half of the energy to produce low-carbon hydrogen since this qualifies as an incorporated process. Where this is not the case, or when actual carbon intensities cannot be established in a qualified and certifiable manner, the carbon intensity values in the table B of the Annex to DA 2023/1185 shall be used.

- **Provide investors certainty that the minimum GHG savings threshold established in the Gas Directive will continue to apply** for the project lifetime.

  For investors in low-carbon production technology it is important to have certainty that the minimum GHG savings threshold will remain stable once an investment decision is made. The provisionally agreed Recast Gas Directive includes a provision by which the minimum GHG saving threshold for low carbon fuels could be increased in future. The minimum GHG savings threshold to qualify for low-carbon fuels and low-carbon hydrogen should continue to apply during the project lifetime, for installations that were built under this methodology. Any changes of threshold should apply only to projects for which investments decisions are made after the adoption of the changed threshold.

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# IOGP Europe proposed additional background information (Q&A) on recommendations on the Delegated Act specifying a methodology for assessing greenhouse gas emissions savings from low-carbon fuels and low-carbon hydrogen

4 March 2024

Clear and consistent rules on assessing GHG emissions savings from low-carbon fuels and low-carbon hydrogen can help to ramp-up low-carbon hydrogen production, develop a European market for hydrogen and facilitate the integration of hydrogen from renewable sources.

IOGP Europe recommends that the methodology for assessing GHG emissions savings from low-carbon fuels and low-carbon hydrogen should:

- **Reward (use of) low-carbon fuels and hydrogen for their GHG emissions savings on the basis of a life-cycle analysis.** The methodology should enable and reward industry using low-carbon hydrogen as a pathway to decarbonization.

Q: What is meant here?
A: There currently is no uniform system to recognize and distinguish low-carbon fuels and hydrogen from (non-abated) fossil fuels and (black, brown and grey) hydrogen. This Delegated Act will specify the methodology to assess GHG emissions savings from low-carbon fuels and hydrogen, and thereby will provide a basis for the certification of low-carbon fuels and hydrogen. According to Article 8 of the future (to be adopted) Hydrogen and Decarbonized Gas Market Directive, low-carbon fuels and hydrogen need to result in at least 70% GHG emissions savings versus the fossil fuel comparator on the basis of a life-cycle analysis. Their use in industry and other sectors can and should then be recognized and rewarded in EU policies as complementing rather than competing with renewable fuels.

- **Be consistent in the methodology to assess GHG emissions across all types of fuels**.

  The methodology to assess GHG emissions savings for low-carbon fuels and low-carbon hydrogen should be consistent with the methodology for biofuels laid down in Directive 2018/2001 (part C of Annex V and part B of Annex VI) and the methodology for renewable fuels of non-biological origin and recycled carbon fuels specified in Delegated Act 2023/1185.

Q: Why is this point raised?
A: There currently are different documents for different fuels describing the methodology to assess GHG emissions savings. There should in principle be consistency in the methodologies for biofuels, RFNBOs and low-carbon fuels, while different specificities in the production value chain of the different fuels need to be taken into account. According to Article 8 of the future Hydrogen and Decarbonized Gas Market Directive, '*The methodology shall be consistent with the methodology for assessing greenhouse gas emissions savings from renewable liquid and gaseous transport fuels of non-biological origin and from recycled carbon fuels including the treatment of emissions due to the leakage of hydrogen*'. We stress that to avoid (even implicit) discriminations, and distortions of the hydrogen market, and to ensure that the EU takes into consideration all low-carbon solutions to achieve climate neutrality by 2050 in a cost-efficient way, the two calculations should be at least based on the same methodological principles. Therefore, any deviations should be based on solid scientific and objectives reasons and the European Commission should ensure a consistent approach between the two methodologies.

- **Recognize carbon capture and geological storage (CCS)** to produce low-carbon fuels and low-carbon hydrogen, including CCS outside of the EU.

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CCS outside of the EU should be reflected in the methodology to enable import of low-carbon hydrogen as well as EU produced low-carbon hydrogen where the CO2 is stored in neighboring countries, provided that rules equivalent to Directive 2009/31/EC apply to those CO2 storages.

Q: How should CCS outside of the EU be handled?
A: For CCS outside the EU it is important that there is a carbon management system in place where the suitability of a storage site is determined, the amount of CO2 that is stored is validated and there is a system to monitor that stored CO2 remains in storage. In the EU and EEA countries, e.g. Norway, this is ensured by Directive 2009/31/EC. The EEA countries should therefore always be included.[1] For CCS outside the EU and EEA ('third countries'), the Commission should determine for which countries/storage sites there is an equivalent carbon management system in place that qualifies for CCS to be used in the methodology.

- **Reward innovations that reduce carbon intensities in the natural gas supply chain** versus the fixed carbon intensity values in the table in part B of the Annex to DA 2023/1185.
  Actual carbon intensities over the whole supply chain should be used where natural gas supplies more than half of the energy to produce low-carbon hydrogen since this qualifies as an incorporated process. Where this is not the case, or when actual carbon intensities cannot be established in a qualified and certifiable manner, the carbon intensity values in the table B of the Annex to DA 2023/1185 shall be used.

Q: What is the issue here?
A: Annex to DA 2023/1185 has a fixed carbon intensity value for upstream emissions for natural gas (9.7 gCO2eq/MJ). Other than for RFNBO and RCF, however, natural gas plays a key role as an input to the production of low-carbon hydrogen. It is therefore not appropriate to refer to a default value here. Furthermore, this fixed value does not reward efforts in the natural gas supply chain to reduce GHG emissions. There should be no requirement for a dedicated supply infrastructure as mentioned in the definition of an 'incorporated process' in order to claim a specific upstream carbon intensity. Otherwise, low-carbon hydrogen production would be limited to the immediate vicinity of natural gas sourcing. According to our understanding of the definition of 'incorporated process', actual values can (only) be used when natural gas supplies more than 50% of the energy to produce low-carbon fuels or hydrogen, using the definition of an incorporated process. We ask the European Commission to verify that our reading of the footnote regarding '*incorporated process*' is correct.

- **Provide investors certainty that the minimum GHG savings threshold established in the Gas Directive will continue to apply for the project lifetime**.

  For investors in low-carbon production technology it is important to have certainty that the minimum GHG savings threshold will remain stable once an investment decision is made. The provisionally agreed Recast Gas Directive includes a provision by which the minimum GHG saving threshold for low carbon fuels could be increased in future. The minimum GHG savings threshold to qualify for low-carbon fuels and low-carbon hydrogen should continue to apply during the project lifetime, for installations that were built under this methodology. Any changes of threshold should apply only to projects for which investments decisions are made after the adoption of the changed threshold.

Q: Can you elaborate on this point?
A: One point seems clarified in Article 85 of the Hydrogen and Decarbonized Gas Market Directive: any future changes to the GHG savings threshold shall apply only to new installations starting operation from 1/1/2031 and not retroactively apply to operational installations. However, the

[1] https://www.eftasurv.int/cms/sites/default/files/documents/gopro/CCS%20Implementation%20report%20-%20final.pdf

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lack of time between the planned review date and the applicability of any new threshold is not realistic given the development time needed for low- carbon fuels projects. The achievable GHG reduction threshold for installations starting operation from 1/1/2031 will be determined by design and contracting decisions years ahead of start of operation, hence it is critical that a longer lead time is provided between any decisions to change the threshold (or any other items in the methodology) and actual applicable implementation date for new installations. Using project FID date as the reference time for applicability of any new threshold rather than start of operations can also help reduce unnecessary investor risk. The review of the minimum GHG emission savings threshold will potentially affect facilities that begin operation from 1 January 2031. This implies a challenging time schedule for any new facility to produce low-carbon fuels or hydrogen. The risk that start-up of operation is delayed, outside of the control of the investor, and would move beyond January 2031 should be eliminated in order not to discourage new investments.