

Webinar 13: SAF Feedstocks and Regulation

Open questions

1. Slide 6: Do we have information on Waste gases?

Answer: Please have a look at the numbers provided by the following document: https://www.icao.int/environmental-protection/CORSIA/Documents/CORSIA_Eligible_Fuels/ICAO%20document%2006%20-%20Default%20Life%20Cycle%20Emissions%20-%20June%202022.pdf. As those numbers are default life cycle emission values, please also have a look at methodology for calculation of actual (case-specific) emission values under https://www.icao.int/environmentalprotection/CORSIA/Documents/CORSIA_Eligible_Fuels/ICAO%20document%2007%20-%20Methodology%20for%20Actual%20Life%20Cycle%20Emissions%20-%20June%202022.pdf.

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2. It seems we have a controversy by the way. the Refuel EU objectives (6% in 2030) and the eligibility of the potential feedstock availability. What could be the options to reconcile (i.e. review the RED stringencies?)?

Answer: I think it is not yet obvious that we will have a mismatch of feedstock availability and ReFuelEU targets. Please consider especially that a) any reduction in demand from the road transport sector, e.g., due to increased deployment of electric mobility, could have a significant impact on the feedstock availability and b) any potential gap between the overall target (i.e., 6 %) and the quantity which is possible based on sustainable biomass feedstock can and shall be closed by e-SAF.

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3. Based on what you explained on slide 11, is that impacting the eligibility of feedstocks?

Answer: As of today, it is not yet explicitly impacting the eligibility of feedstock. A potential scenario, though, could be that feedstock which - without Carbon Capture and Sequestration (CCS) - don't provide sufficient GHG savings might meet or surpass the threshold requirement by application of CCS. This way, the concept would have in fact an impact on eligible feedstock.

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4. Could you please recommend a tool or website providing updates of the worldwide actual and announced SAF production capacity and/or giving the actual SAF use by airlines?

Answer: Please have a look for example at https://view.argusmedia.com/Global_SAF_Capacity_Map.html (you need to register but it is for free).

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5. If an airline company cultivates palm oil solely for biofuel and not for food purposes, is this palm oil still subject to ILUC? Some company also cultivate algae for biofuel.

Answer: A priori, all production of biofuels using land will cause a specific ILUC factor, independent on whether the feedstock is purposely grown for fuel application or not. The reason is that using land for fuel production means that respectively somewhere else land is needed for production of food or feed. So, production of feedstock for biofuels on land has an „indirect“ impact (see „I“ in ILUC) which is associated directly to the production of the palm oil in your case. The production of algae has no such ILUC factor since it typically doesn't take place on arable land (otherwise the lease of land would be too expensive).

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6. Question/Comment: agree with George, the policy is clear. However, we still concern about the feedstock. If we start to do or start up to demonstration project/pilot plant. Maybe it reduces our worry about how much the feedstock could be used for.

Answer: Fully agree. From a certain point on, policy makers are dependent on real experiences and learnings from the market participants to then in turn possibly adjust and improve regulation. From a different point of view, it is sometimes more effective to demonstrate feasibility or to elaborate potential issues practically and then advocate for changes in legislation than to argue based on theoretical concepts and concerns alone.

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7. Which feedstocks (potential and emission reduction wise) are best currently for producing renewable fuels? E.g. for SAF

Answer: As stated also by listed default emission values such as under Renewable Energy Directive or CORSIA, bio-based fuels from, e.g., agricultural or forest residues typically provide high GHG savings in the range of slightly below 90 % to somewhat above. Even higher GHG savings, up to 96 % or even higher can be achieved by e-SAF (e.g., using hydrogen which is produced from renewable electricity via electrolysis). Please keep in mind that actual, i.e., project-specific GHG savings can be higher than default values dependent on project-specific boundaries, even for other feedstock. Regarding (mass) potential, e-SAF is almost unlimited, yet, high costs need to be considered. Regarding mass potential for biomass enabling high GHG savings, there are no winners. Availability and costs are typically very region-specific. We always recommend to start development of projects considering a broad range of potential feedstock.

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8. Which feedstocks (currently) on the market are (emission wise and potential wise) best for SAF production ?

Answer: See previous answer (i.e., questions can be combined).