Diana Gordon

Thank you for the opportunity to comment on the PEIS for SAF - it is certainly a good opportunity to consider the scope and repercussions of SAF production before diving into various projects that might pop up using it.

One area of concern for me is the source of the feedstocks. As pointed out in the PEIS, used cooking oil is not available in this area to use for SAF. There is not enough forest waste around here for large scale production of SAF; bringing it in from any distance like Canada involves a carbon footprint that we are trying to avoid since it would be shipped in diesel trucks. Although forest waste may be a possible choice, no one should consider harvesting trees for wood to use for jet fuel. Trees are valuable in carbon capture, take a long time to re-grow, and require fossil fuel for transport and harvest. Crops like soybeans likewise leave a carbon footprint. Soybeans are raised on huge farms using chemical fertilizers and then would have to be shipped here via train using diesel.

The complete carbon footprint cost of any feedstock on its way to becoming SAF is highly important.

If magic happens and we find a local feedstock that is suitable for SAF manufacture, the technology currently in use is Hydroprocessed Esters and Fatty Acids or HEFA. HEFA uses hydrogen and high temperatures which will mean a high demand for both. The high temperature requirements should be sourced only from renewables. If we rely on natural gas, we lock ourselves into decades of pollution and methane-charged GHGs as well as pipeline (they leak methane and can explode) and other transport problems. I think that the energy sources should be carefully scrutinized.

Hydrogen is another important factor. Of the two major ways of producing hydrogen, steam-methane reforming and electrolysis, the former is the most commonly used in industry today. Unfortunately, this method is highly dependent on natural gas, both to supply the necessary high temperatures and pressures, and to provide methane for the chemical reactions to produce the hydrogen. Natural gas has a huge GHG impact. If we are serious about our climate goals we should not expand its use. And, with SAF we are still using petroleum since SAF is considered a drop-in fuel.

When I look at all the negative aspects of producing and transporting SAF - dubious feedstocks, methane pollution from various sources, transport of materials and finished SAF, new infrastructure for an industry that should be scaling down instead of up and so on - there just seems to be too much that is not clean, not renewable, not sustainable over the long haul. Of course, SAF would probably be billed as a bridge to battery-electric or hydrogen fuel cell aviation, but I fear that, once ramped up, it will be difficult to phase out in favor of cleaner ways to move aircraft. When you look at all the negatives, I'm not sure that SAF is much better than the fossil fuels, etc., we are using now. I think developing battery-electric or hydrogen fuel-cell electric propulsion for air craft is a much better path to follow and our efforts should be directed to developing those instead of SAF.

Personally, I think that SAF is not a real solution to our climate problems, that it is just pushing our climate problems along, but I also think it is a good idea to look very carefully at all aspects of SAF production.