

Project 01

Alternative jet fuel supply chain analysis

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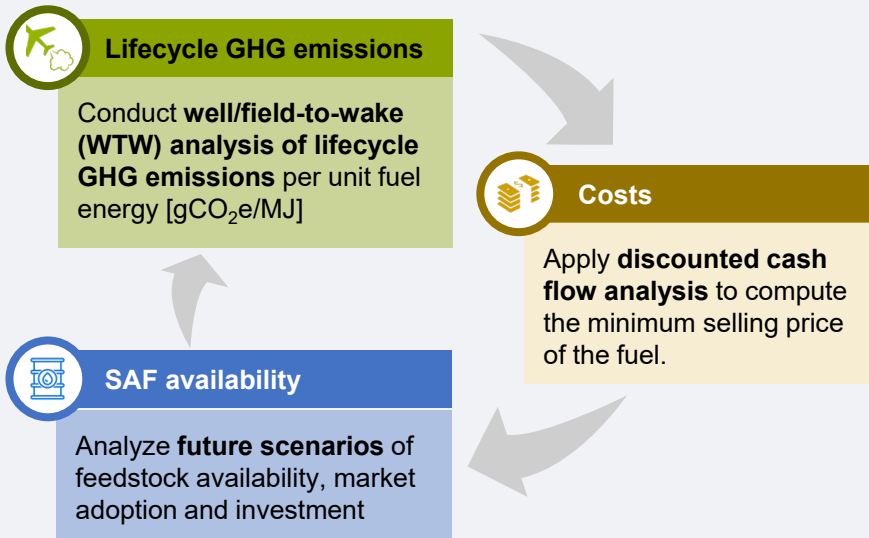
Objective:

Analyze lifecycle GHG emissions, costs, and availability of Sustainable Aviation Fuels (SAF), considering a wide range of production pathways and feedstocks. Research is conducted in support of efforts under ICAO CAEP.

Project Benefits:

1. Analysis of future GHG reduction potential from SAF and economic analysis of SAF
2. Analysis of potential SAF uptake scenarios over the coming decades
3. Provide expert support on SAF to the U.S. delegation to ICAO CAEP, esp. FTG

Research Approach:



Major Accomplishments (to date):

- Applied LCA to numerous SAF pathways and co-processing to obtain LCA values; recently: electricity-enhanced SAF production
- Developed methods for assessing lifecycle GHG emissions and economic viability of SAF
- Studied global SAF production scenarios and associated GHG emission reductions out to 2050, incl. current and future SAF pathways
- Analyzed US-based SAF production scenarios, incl. from double-cropping

Future Work / Schedule:

- LCA/TEA for add'l SAF pathways
- Future fuel scenario analysis