

Comparative assessment of electrification strategies for aviation

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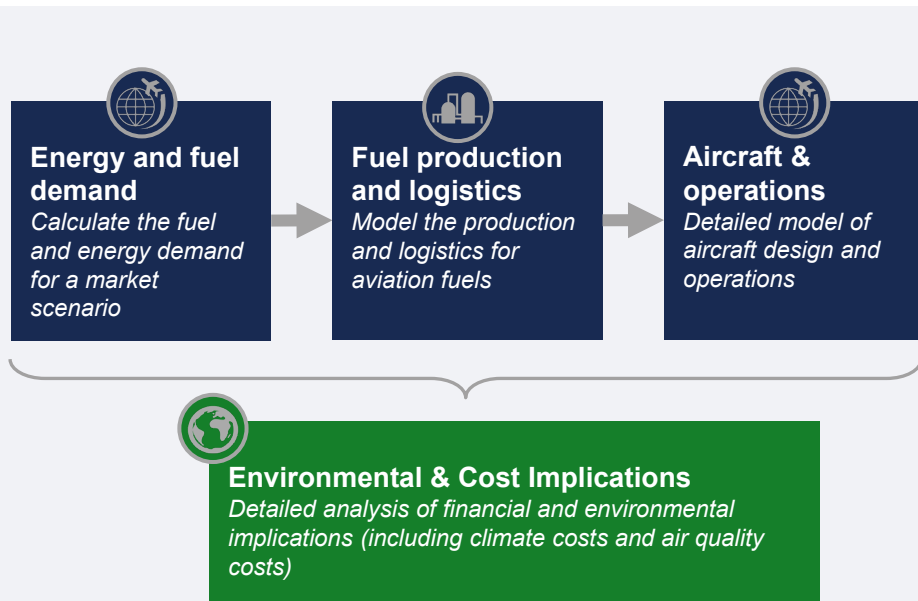
Objective:

To evaluate:

- (1) the operational and economic feasibility of electrification strategies, and
- (2) the life-cycle GHG emissions and their associated impacts, relative to conventional petroleum-powered aircraft.

Project Benefits:

Provide data and guidance on the most promising electrification approaches for aviation, considering how a green electron is used most efficiently and effectively to reduce emissions.



Major Accomplishments (to date):

- Compared aviation systems using LH₂ and PtL from environmental and cost perspective in an integrated systems model.
- Analyzed the parameters that drive the comparison between SAF and LH₂ systems.
- Global assessment of supply chains for scaled-up LH₂ and PtL production.
- PtL production in the presence of intermittency

Future Work / Schedule:

- Infrastructure considerations for battery-electric aircraft
- “Optimal aviation fuel” made from electricity?