

Incentivizing Aviation Biofuel Production

A STAR ALLIANCE MEMBER 

UNITED 
eco-skies 

Fast facts

7 domestic hubs

~50 countries

~340 destinations

~1,260 aircraft

~4,500 daily departures

148 million passengers in 2017

4.0 billion gallons in 2017

What is Aviation Biofuel?

- **Aviation biofuel consists of a non-petroleum feedstock which is refined into jet fuel.**
- **Feedstock used now by United is from waste oils, animal fats, and tallow in Los Angeles.**
- **Feedstock likely used in the future is from landfill waste diverted and gasified to create jet fuel.**
- **Aviation biofuel is carbon neutral or carbon negative compared to petroleum fuel.**



Aviation Biofuel Production

- **There is currently not enough production of aviation biofuel to supply the needs of the airline industry.**
- **United has invested in one company, Fulcrum Bioenergy, but it will not start production for several years.**
- **Benefits include energy security and landfill waste reduction.**
- **If virgin feedstock used, must be cognizant of competition with food.**

How do we incentivize the production of jet biofuel?

- **Low Carbon Fuel Standard (LCFS) in California as a model?**
 - Goal was to reduce carbon intensity (CI) of transportation fuel pool by 10% by 2020 from a 2010 baseline.
 - Annual CI standards are set and reduce over time for fuel producers.
 - Credits must be retired each calendar year to account for amount over year's CI established by California.
- **Same tax incentive model as biodiesel has had in various states and federal government?**
 - US Biodiesel market grew from 100 million gallons in 2005 to 2.6 billion gallons in 2017 due to federal tax incentive.
- **Further investments in aviation biofuel by airlines?**
- **Other ideas?**

Problem Statement

- **The critical challenge I focus on regarding Mobility & Transportation related to Chicago's clean energy goals is: how to obtain enough production of jet biofuel to supply our fleet.**