



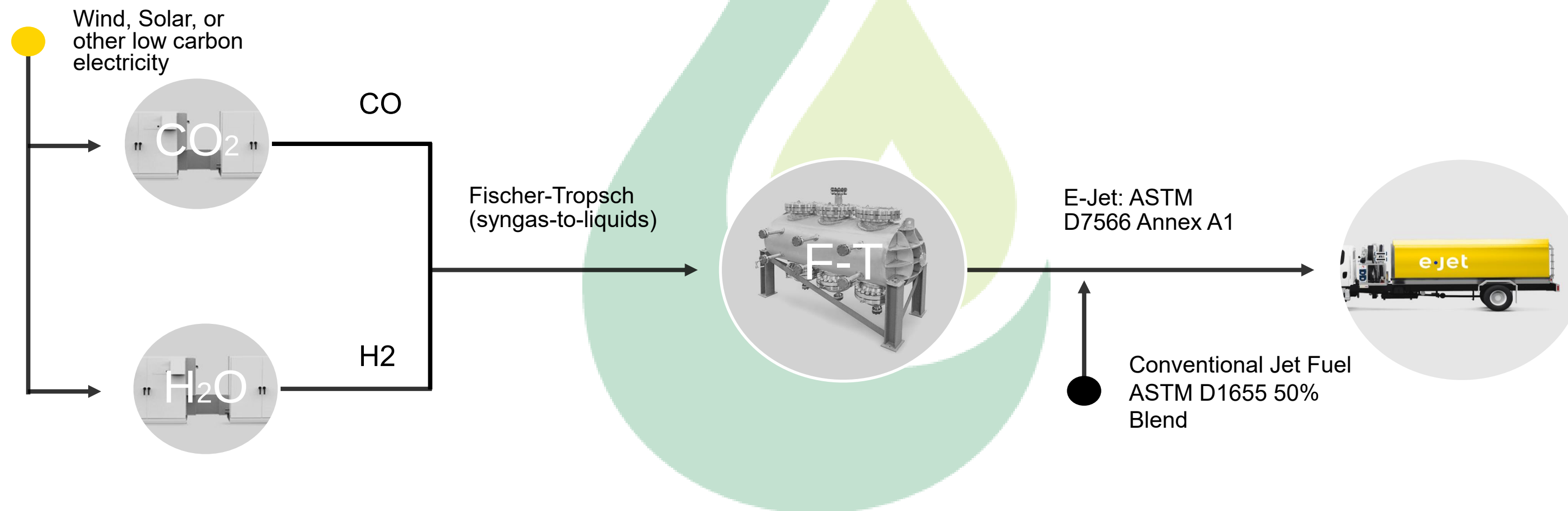
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Vice President, Business Development
Twelve

**Transforming CO₂ into SAF using the
Power-to-Liquids Pathway**

CO₂ as a feedstock

Twelve produces E-Jet® from CO₂, water and renewable electricity



1.

We use proprietary CO₂ electrolysis and H₂O electrolysis to produce syngas from captured CO₂ and water

2.

Syngas is used in commercial fuel production via Fischer-Tropsch process

3.

The synthetic fuel (meeting ASTM D7566 Annex A1) is blended 50%/50% with conventional fuel (ASTM D1655)

4.

The blended fuel (meeting ASTM D1655) is then delivered to fueling infrastructure at target airports.

Value Proposition

Key inputs unlocking the carbon transformation roadmap



Biogenic sources of carbon dioxide

Pulp and paper factories
Corn ethanol plants
Biogas facilities



Renewable sources of energy

Solar, Wind, Hydro & Nuclear

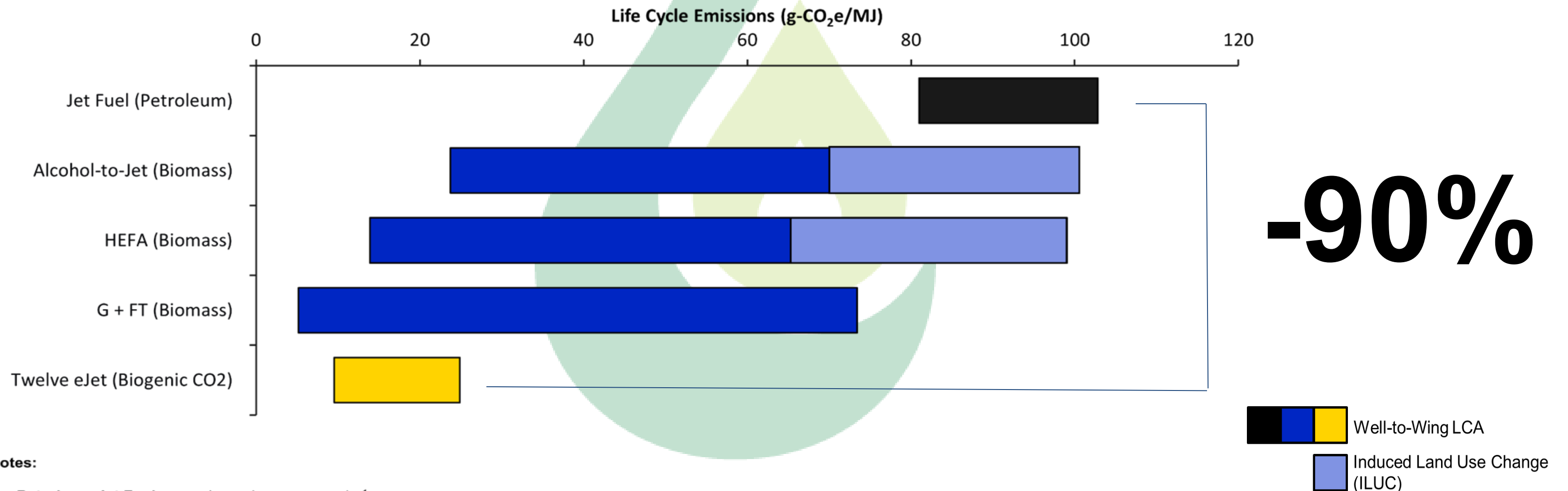


Green Hydrogen

Direct acquisition
Water electrolysis

Lifecycle Analysis

E-Jet has 90% lower lifecycle emissions than fossil jet fuel



Notes:

- **Petroleum Jet Fuel** range depends on geography¹
- **Biomass-Derived Jet Fuel** range depends on feedstock²
 (Alcohol-to-Jet low to high: Forestry Residues, Agricultural Residues, Sugarcane, Molasses, Herbaceous Energy Crops, Corn Grain)
 (HEFA low to high: Used Cooking Oil, Corn Oil, Palm Fatty Acid Distillate, Tallow, Brassica Carinata, Camelina, Soybean Oil, Rapeseed Oil, Palm Oil)
 (G + FT low to high: Agricultural Residues, Forestry Residues, Herbaceous Energy Crops, Short-Rotation Woody Crops, Municipal Solid Waste (40% non-biogenic component))
- **Twelve eJet** range depends on low-carbon electricity source (low to high: hydroelectric, nuclear, wind, solar)

Evolving Business Model



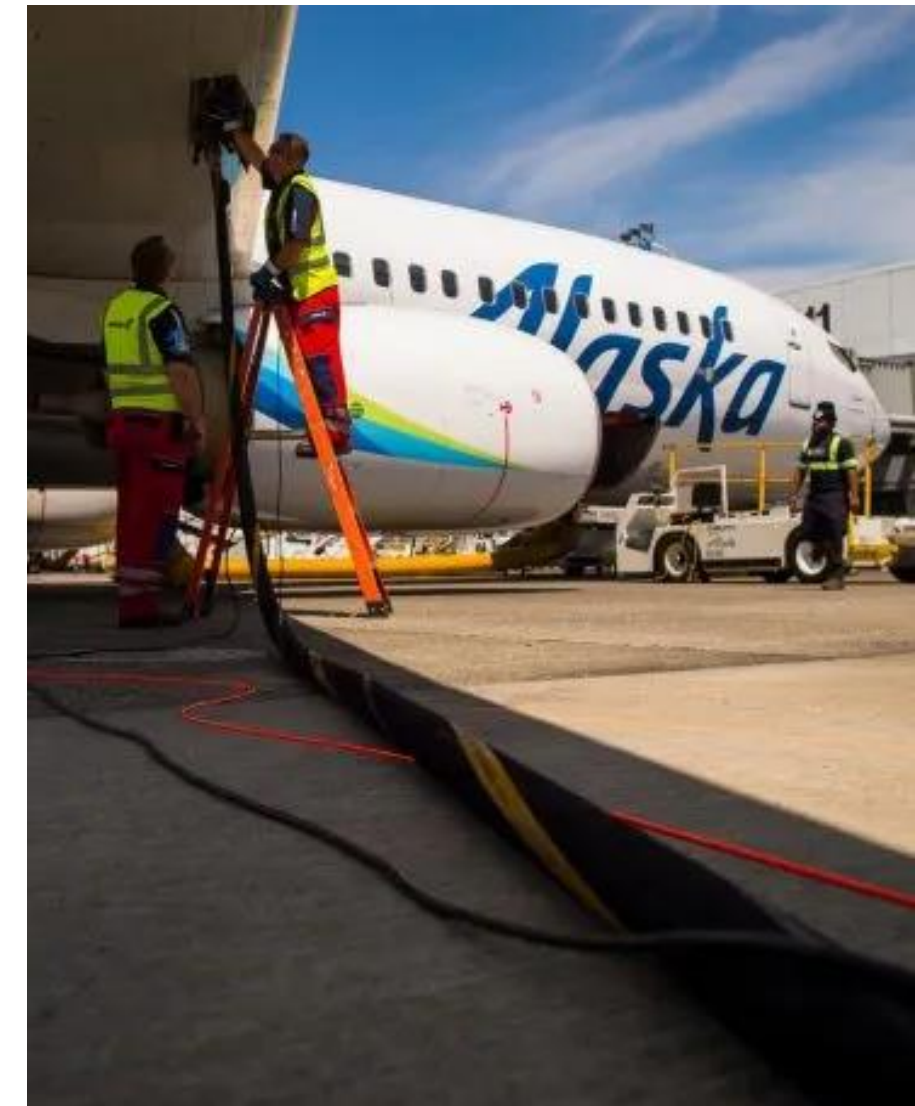
Scope 1

Physical SAF delivery
Blending & Logistics
Fuel Farm or Into-Wing



Scope 3

Fuel Attributes (traceable)
Net Carbon Reduction
Business Travel Offsets



Scope 1 & Scope 3

Physical SAF & Attributes
Tripartite Agreements
Mass-Balancing

E-Jet Supply Scale-Up

Production capacity
(gallons per year)

shopify

Scope 3 multi-year offtake with Shopify

First E-Jet Customer USAF

Microsoft

Partnership with Alaska Airlines and Microsoft

Alaska AIRLINES

ETIHAD AIRWAYS

e-Jet®
by twelve



First route

0.5M+

5M+

12M+

30M+

80M+

150M+

500M+

Key Drivers

Feedstock Availability
Net CO2 lifecycle emissions
Modular scaling
Land/Infrastructure footprint

2021

Delivered and Tested, ASTM compliant

2022

Commercial CO₂ electrolyzer online in 2022 in Alameda, CA

2023

Etihad MOU; First E-Jet plant under construction, Moses Lake, WA

2024

First flight, gigafactory online

2025

Second site in North America

2026

2027

2028

2029

2030

Multiple new sites and scale-up across North America

Thank You



ICAO

2023 STOCKTAKING