

# 2021 ICAO STOCKTAKING



## PRE-STOCKTAKING WEBINARS

TECHNOLOGY · OPERATIONS · SUSTAINABLE AVIATION FUELS

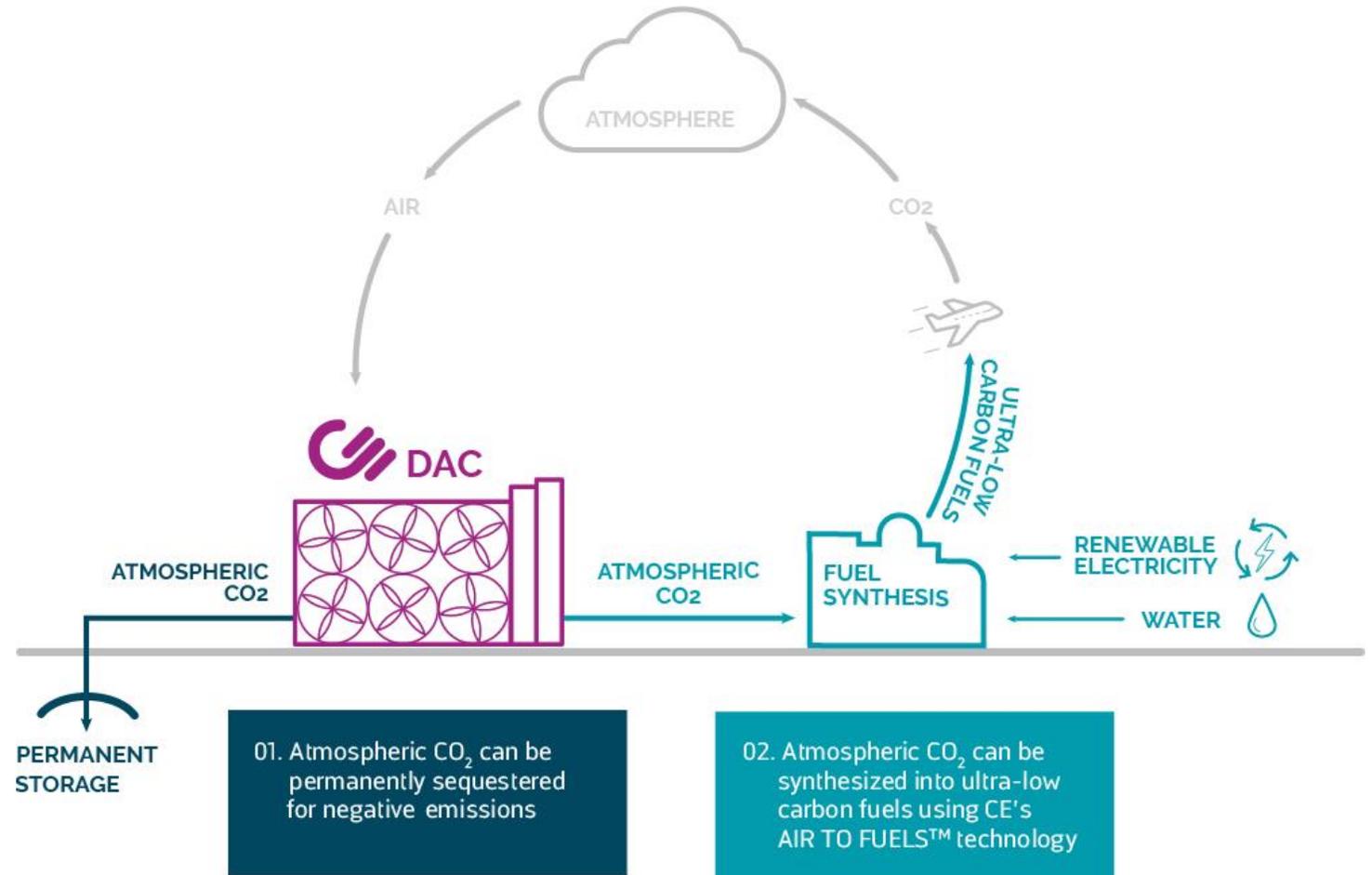




**Anna Stukas, P.Eng**  
VP Business Development  
Carbon Engineering Ltd.

# Carbon Engineering Brings Direct Air Capture (DAC) and AIR TO FUELS™ Technologies at Climate-Relevant Scale

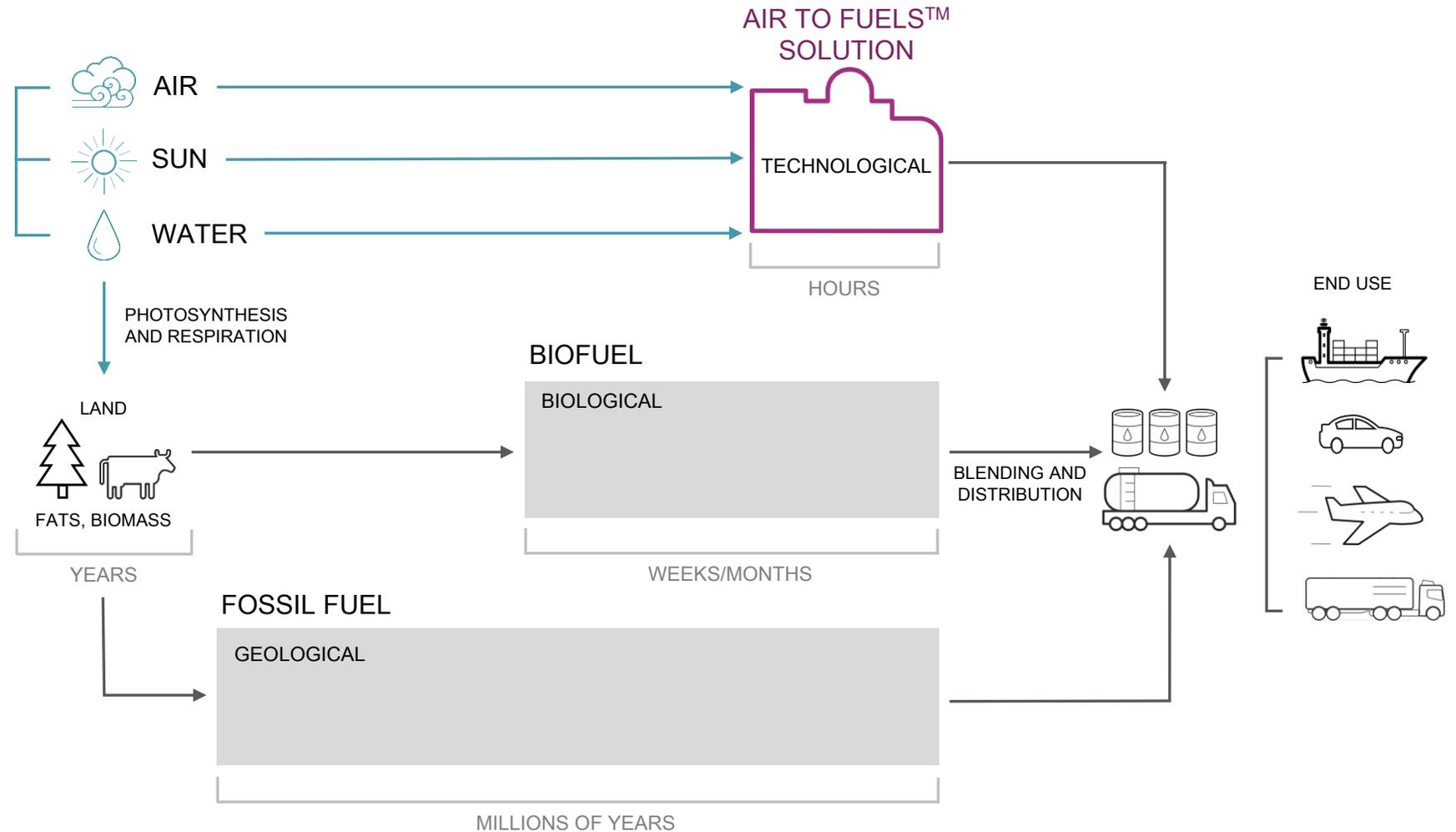
- ▶ Permanent carbon removal by removing CO<sub>2</sub> from the atmosphere and safely sequestering it in the geosphere or durable carbon products
- ▶ Drop-in compatible synthetic fuels that reduce the carbon intensity of transportation fuels by recycling atmospheric carbon



ELIMINATION OF ANY EMISSION, OF ANY TYPE, FROM ANYWHERE AND ANY TIME

# AIR TO FUELS™ Pathway Compared to Biofuels and Fossil Fuels

- ▶ All fuels begin with a common set of ingredients – air, sun and water.
- ▶ CE's AIR TO FUELS™ solution is a technological, rather than biological or geological, approach to creating hydrocarbon fuels.



CE'S AIR TO FUELS™ PROCESS CAN DO WITHIN HOURS WHAT TOOK THE EARTH MILLIONS OF YEARS

# AIR TO FUELS™ Products

- ▶ Use of recycled atmospheric CO<sub>2</sub> and renewable electricity produces a near carbon neutral fuel
- ▶ Refined into diesel, jet fuel or gasoline
- ▶ No conflict with other feedstock needs
- ▶ No sulfur, very low particulate matter and aromatic hydrocarbons
- ▶ Wholly compatible with all existing vehicles, ships and airplanes without modification
- ▶ ASTM-approved pathway for SAF via FT-SPK

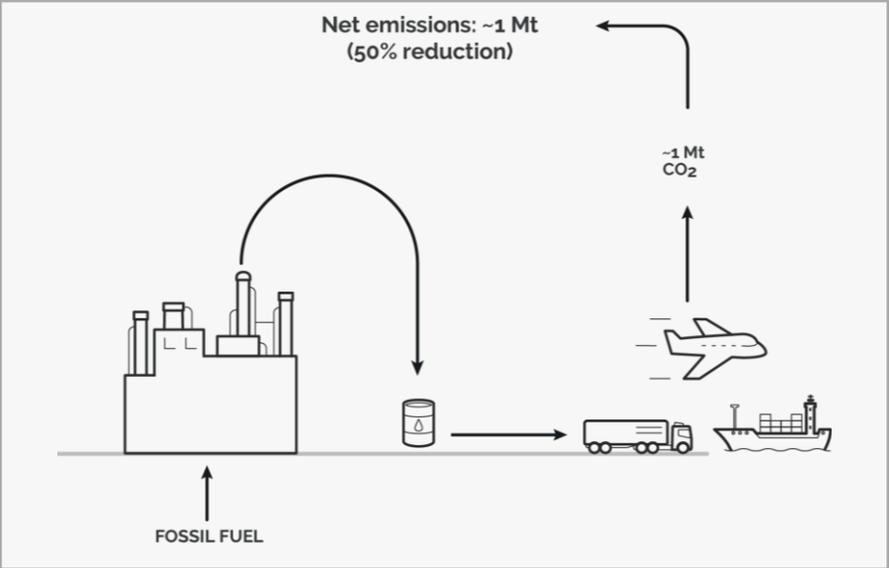
LOW CARBON,  
CLEAN BURNING



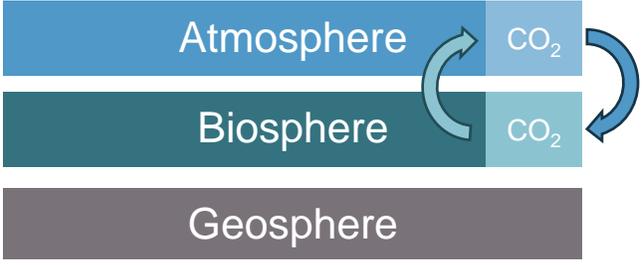
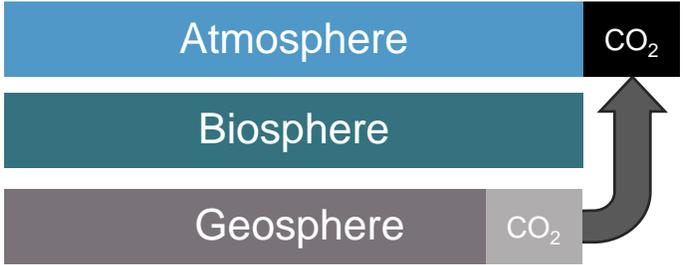
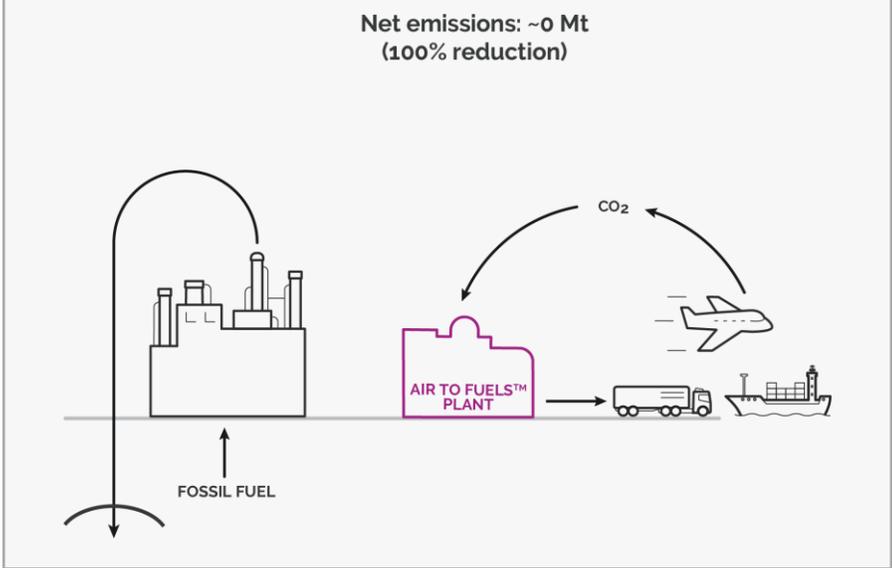
CE's fuel (right)  
compared to  
conventional  
diesel (left)

# Why make SAF from Atmospheric Carbon?

## Recycled, reduction pathway



## Renewable, net zero aligned

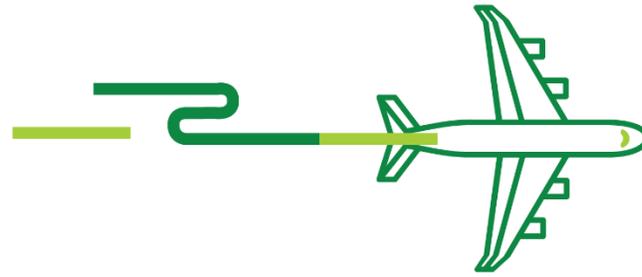
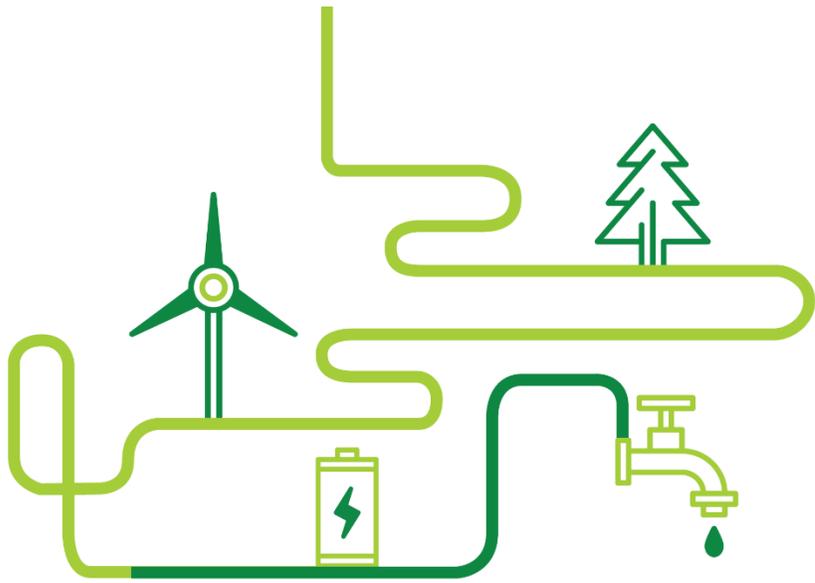


ATMOSPHERIC CARBON PROVIDES A PATHWAY FOR NET-ZERO ALIGNED SAF

---

# Thank You





# 2021 ICAO STOCKTAKING



## PRE-STOCKTAKING WEBINARS

TECHNOLOGY · OPERATIONS · SUSTAINABLE AVIATION FUELS

