



Sustainability of Alternative Jet Fuels

A wide-angle photograph of a vast, flat green field under a bright blue sky with scattered white clouds. Three large brown bison are grazing in the field, positioned in the lower half of the frame. The horizon is flat and distant.

A World Where People and Nature Thrive



Opportunity

▶ Fossil fuels continue to dominate major sectors:

- ▶ ~99.9% aviation
- ▶ ~99.5% maritime
- ▶ ~70% US industrial

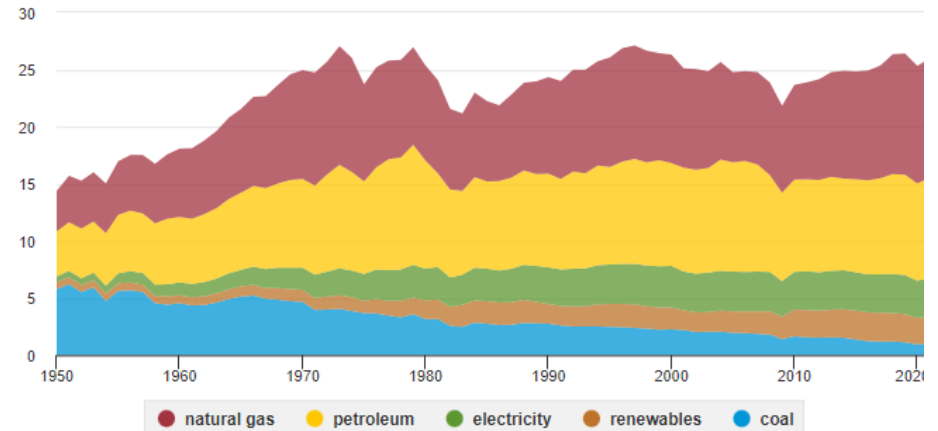
▶ Not everything can be electrified

▶ Sustainable liquid, solid, gaseous fuels required

▶ Displacing fossil fuels will cost many Trillions

U.S. industrial sector energy use by source, 1950-2021

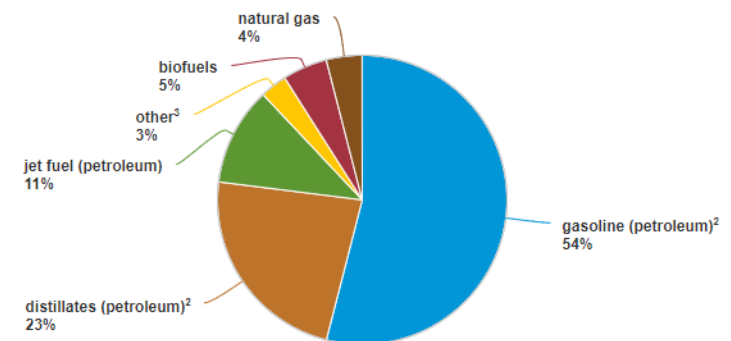
quadrillion British thermal units



Data source: U.S. Energy Information Administration, *Monthly Energy Review*, Table 2.4, April 2022, preliminary data for 2021

Note: Includes energy sources used as feedstocks in manufacturing products. Electricity is retail sales of electricity to the sector and excludes electric system energy losses associated with the retail sales.

U.S. transportation energy sources/fuels, 2021¹



1. Based on energy content.

2. Gasoline is motor gasoline and aviation gasoline excluding fuel ethanol. Distillates exclude biodiesel and renewable diesel fuel.

3. Includes residual fuel oil, lubricants, hydrocarbon gas liquids (propane), and electricity.

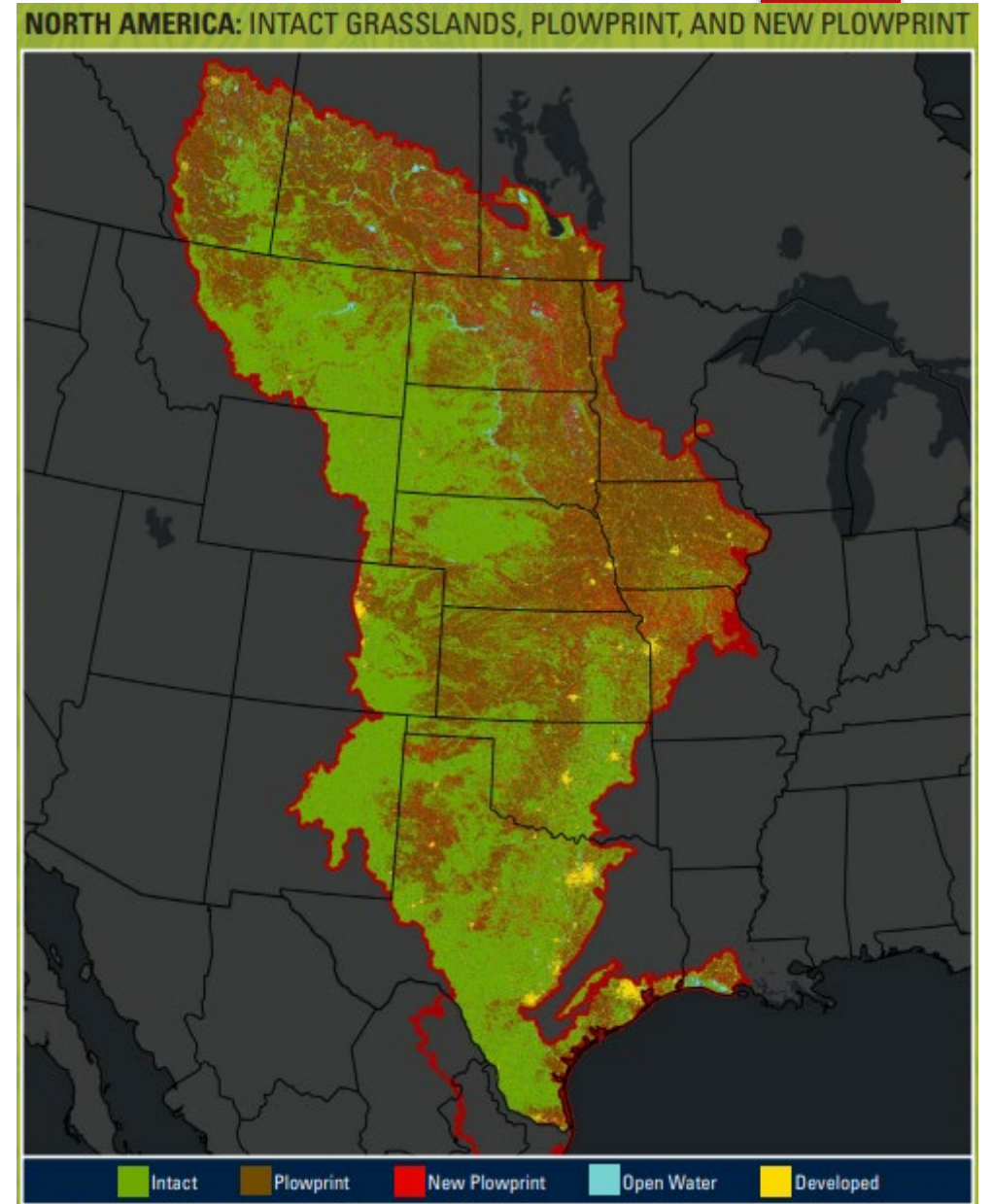
Data source: U.S. Energy Information Administration (EIA), *Monthly Energy Review*, Tables 2.5, 3.8c, and A1, April 2022, and EIA Petroleum Navigator, April 2022; preliminary data



Note: Sum of individual components may not equal 100% because of independent rounding.

Why sustainability requirements?

- ▶ There is a tension between scaling fast and scaling correctly – we must do both.
- ▶ A case study: 1.8 million acres of grasslands were destroyed across the US and Canadian Great Plains in 2020. Major consequences for pollinators, water, and air quality.
- ▶ Carbon intensity doesn't address biodiversity loss, water and soil health, and other ecological priorities.
- ▶ Climate and ecosystem health are inseparably linked.



WWF Plowprint Report (2022)

Aviation Fuel: Our approach

Informed policy advances climate mitigation

- International Civil Aviation Organization (ICAO)
 - International Coalition for Sustainable Aviation (ICSA) – civil society representation in ICAO
- US national/state policy
 - Inflation Reduction Act
 - Build Back Better
 - Authorizations
 - SAF Grand Challenge
 - State programs



Voluntary/corporate action

- *Ambition*: Science-based targets for civil aviation and business travelers
- *Implementation*: Corporate accounting, market-based mechanisms



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Science-Based Targets Initiative (SBTi)

SBTi was founded by WWF, UN Global Compact, WRI, and CDP to support companies by providing guidance, target setting methods and recognition for actions that align with Paris. [SBTi Webpage](#).

WWF led the development of the Science-Based Targets initiative's (SBTi) "well-below 2C" aviation pathway.

The pathway provides guidance on how airlines and users of aviation services should set targets aligned with a well-below 2°C ambition. A dozen airlines have made target setting commitments.

An interim 1.5C pathway is available with a full 1.5C revision to commence in the future.

SAF must be certified against ICAO Sustainability requirements



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION