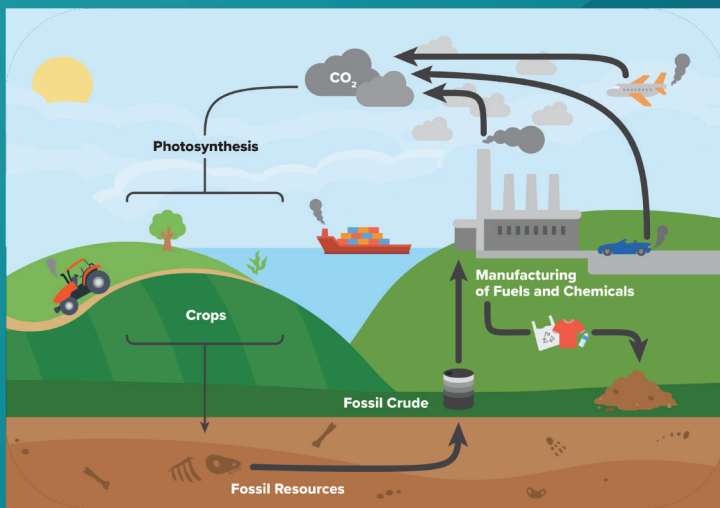


The Clean Fuels & Products Shot™ will make major progress in decarbonizing the transportation and industrial sectors through alternative sources of carbon.

## THE CHALLENGE

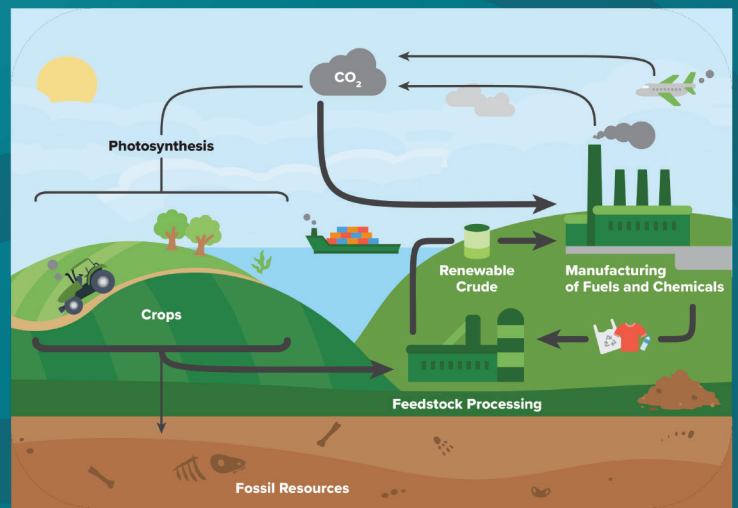
The carbon cycle is *imbalanced*



Portions of the transportation and industrial sectors will continue to rely on carbon-based resources even after extensive deployment of clean energy sources such as electrification and hydrogen.

## THE GOAL

Rebalance the carbon cycle for fuels and products



Develop cost-effective fuels and products from sustainable carbon sources that achieve >85% lower net GHG emissions by 2035.

### DID YOU KNOW...

the U.S. has 1 billion tons of sustainable biomass and waste feedstocks that can be harvested and collected to meet the growing demand for food?

Source: Billion Ton Report



>85% net reduction vs.  
 fossil-based sources



2035

# TARGETS BY SECTOR

By 2050, this Earthshot aims to meet significant U.S. fuel and product demand through using sustainable carbon sources for five major sectors.

**100%** Aviation fuel demand

**50%** Rail fuel demand

**50%** Hydrocarbon Chemicals

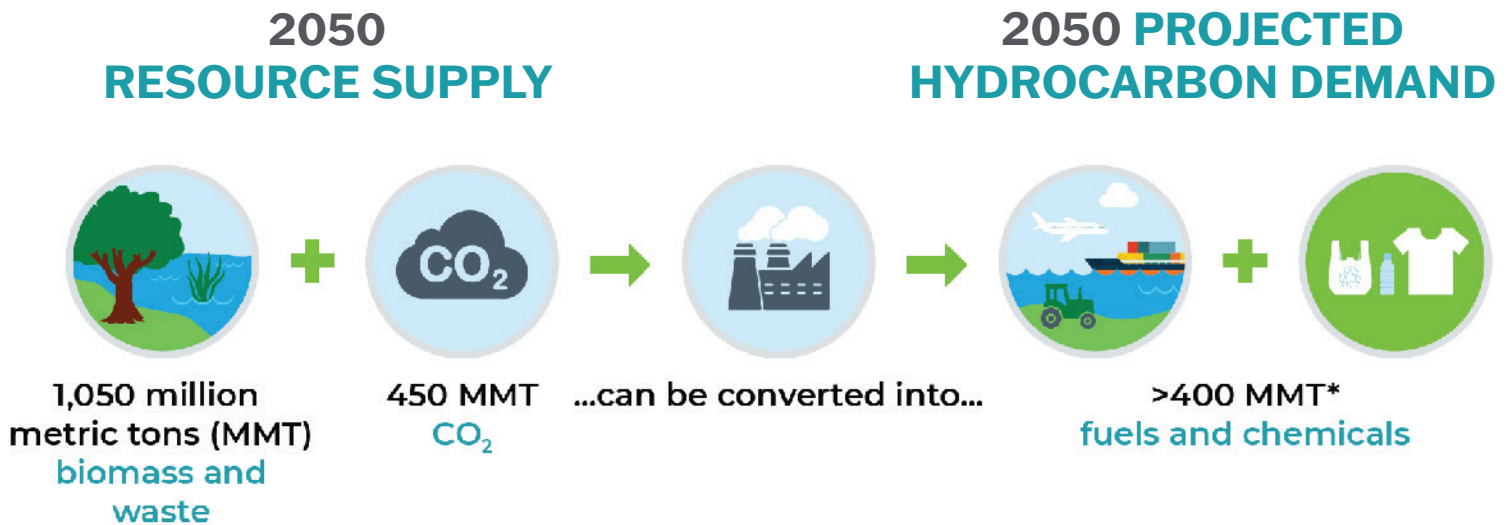
**50%** Marine fuel demand

**50%** Off-road demand

(i.e. chemicals used to produce everyday products like carpets, clothing, plastics)

(i.e. farming, construction equipment)

Using clean carbon sources and conversion technologies:



\*This Energy Earthshot assumes that 50% of marine, rail, off-road, hydrocarbon chemicals and 100% of aviation demand will be met by hydrocarbon fuels in 2050.

## THE IMPACT

If the Earthshot targets are met, the U.S. achieves:

- A 650 million metric ton reduction in greenhouse gas emissions (GHG) – that’s over 10% total 2019 U.S. GHG emissions.
- Revitalization of communities near refining and petrochemical facilities as well as expanded economic opportunities in rural areas with significant biomass and waste resources.
- Increased energy security through developing and safeguarding the domestic supply chain for needed fuels and products.