

Essential Energy

State of the U.S. Ethanol Industry

Geoff Cooper
President and CEO

2021 National Ethanol Conference

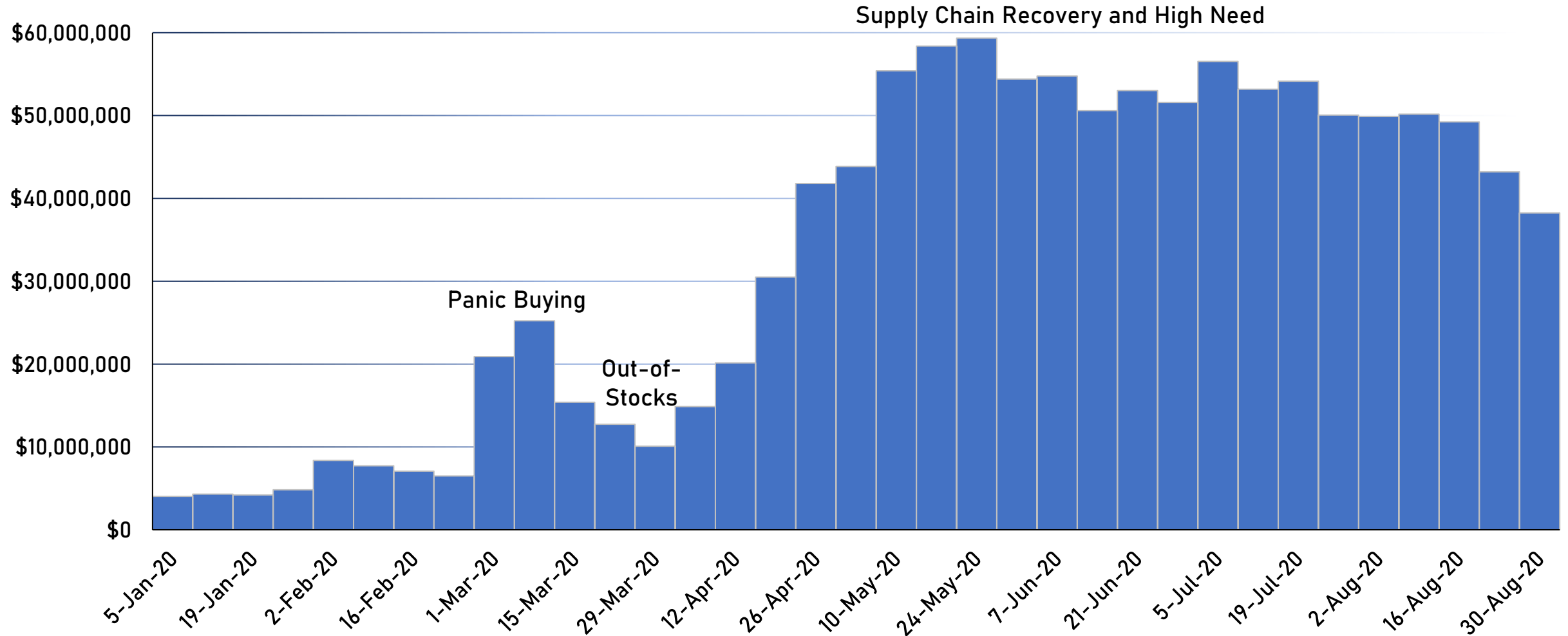








U.S. Weekly Retail Sales of Hand Sanitizer

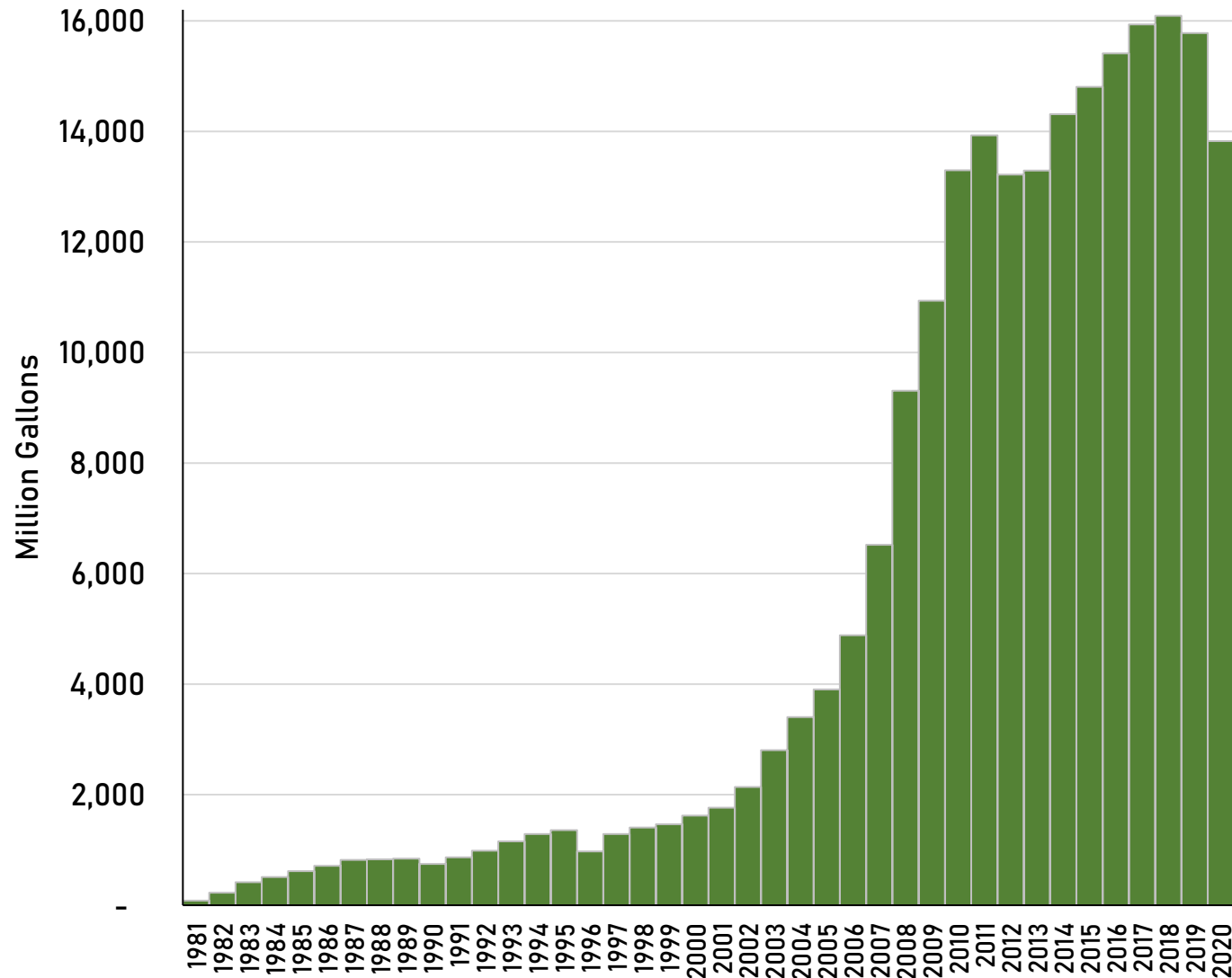


Source: Information Resources Inc.

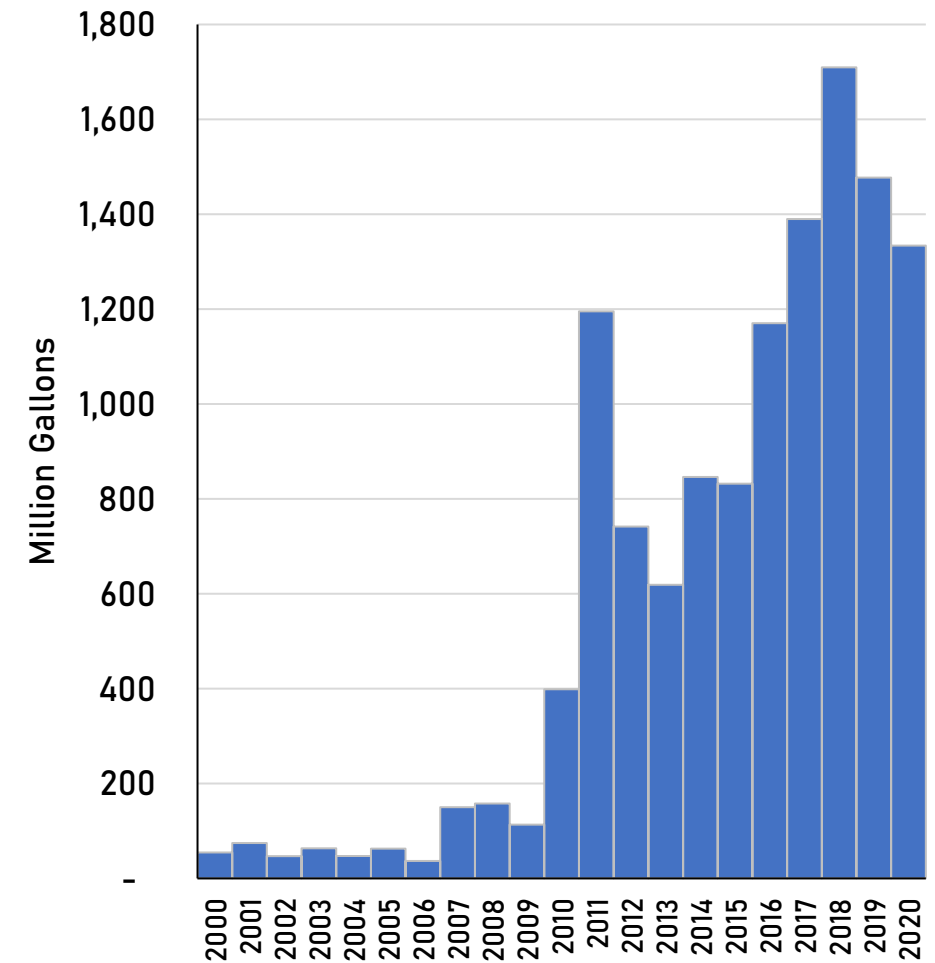


“Critical infrastructure describes the physical and cyber systems and assets that are so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.”

U.S. Ethanol Production



U.S. Ethanol Exports



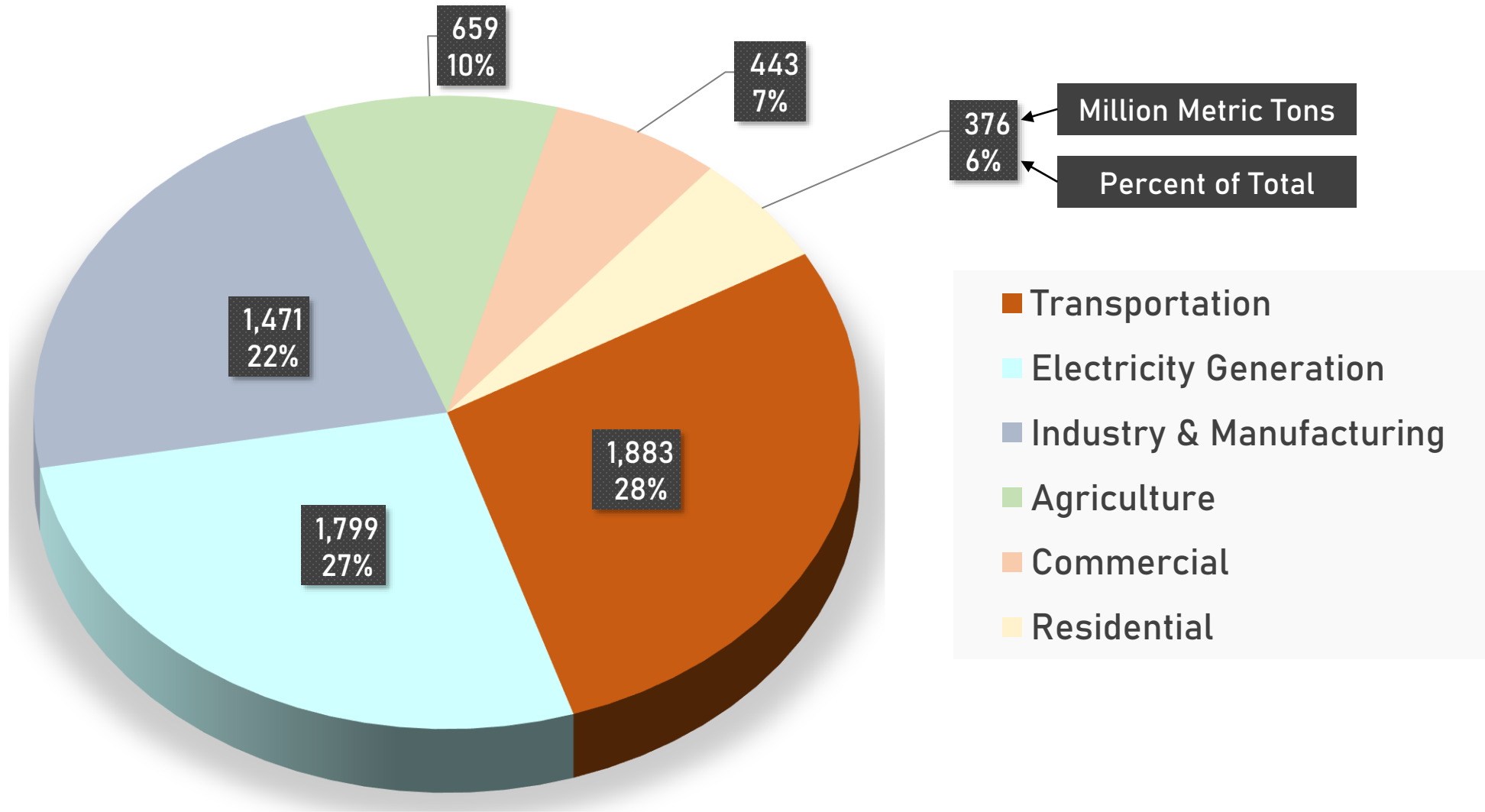
Sources: RFA, U.S. Energy Information Administration, U.S. Census Bureau, U.S. Department of Commerce



“We have to move
toward net zero
emissions. The
first place to do
that by the year
2035 is in energy
production...”

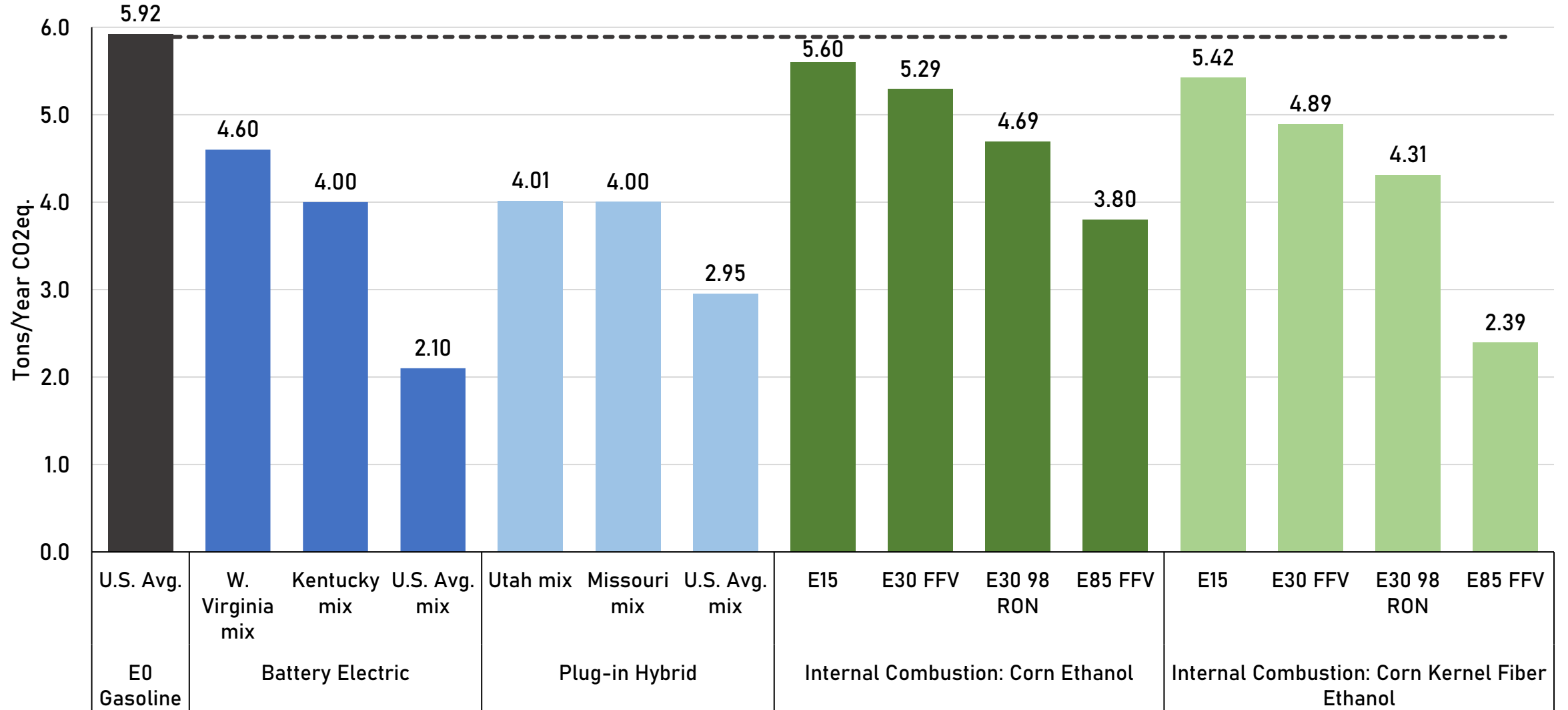
— President Joe Biden

Sources of U.S. Greenhouse Gas Emissions



Source: U.S. Environmental Protection Agency

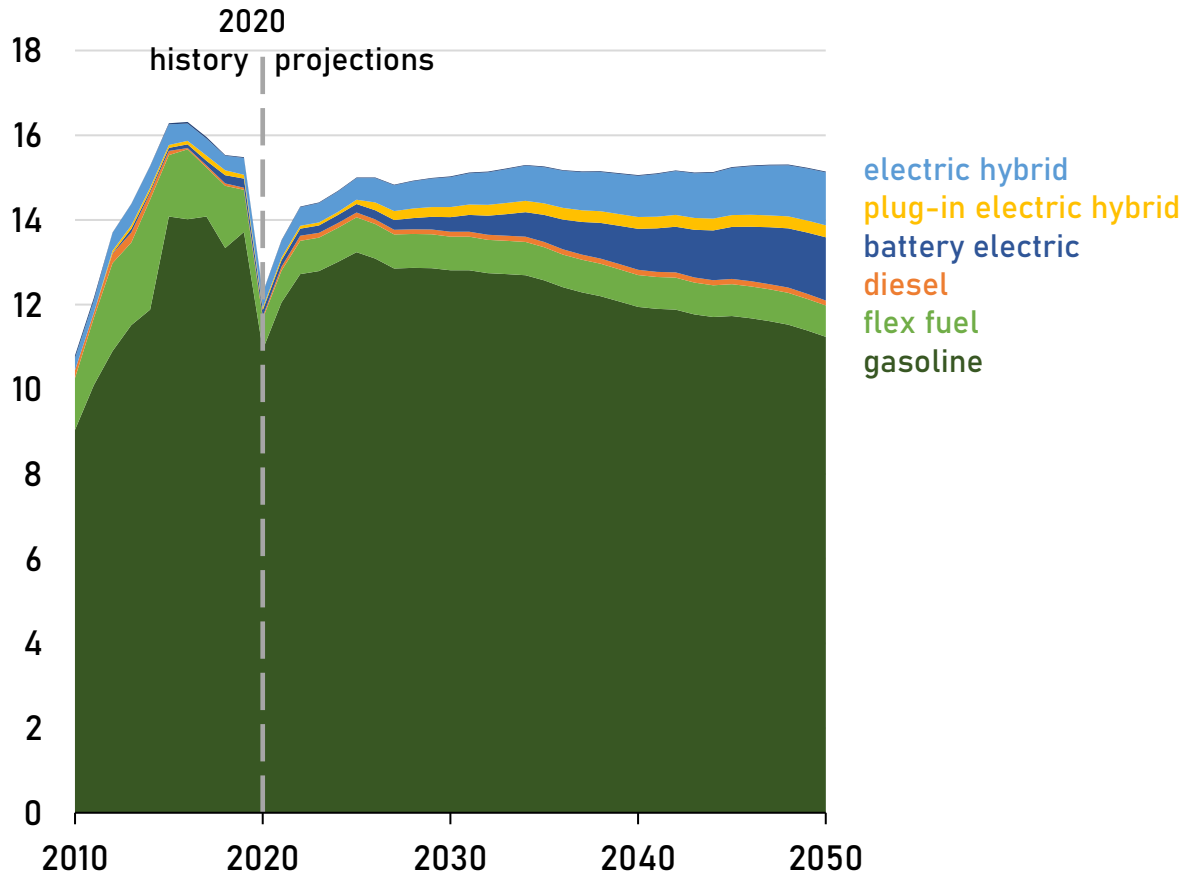
Annual GHG Emissions for Different Vehicle and Fuel Combinations



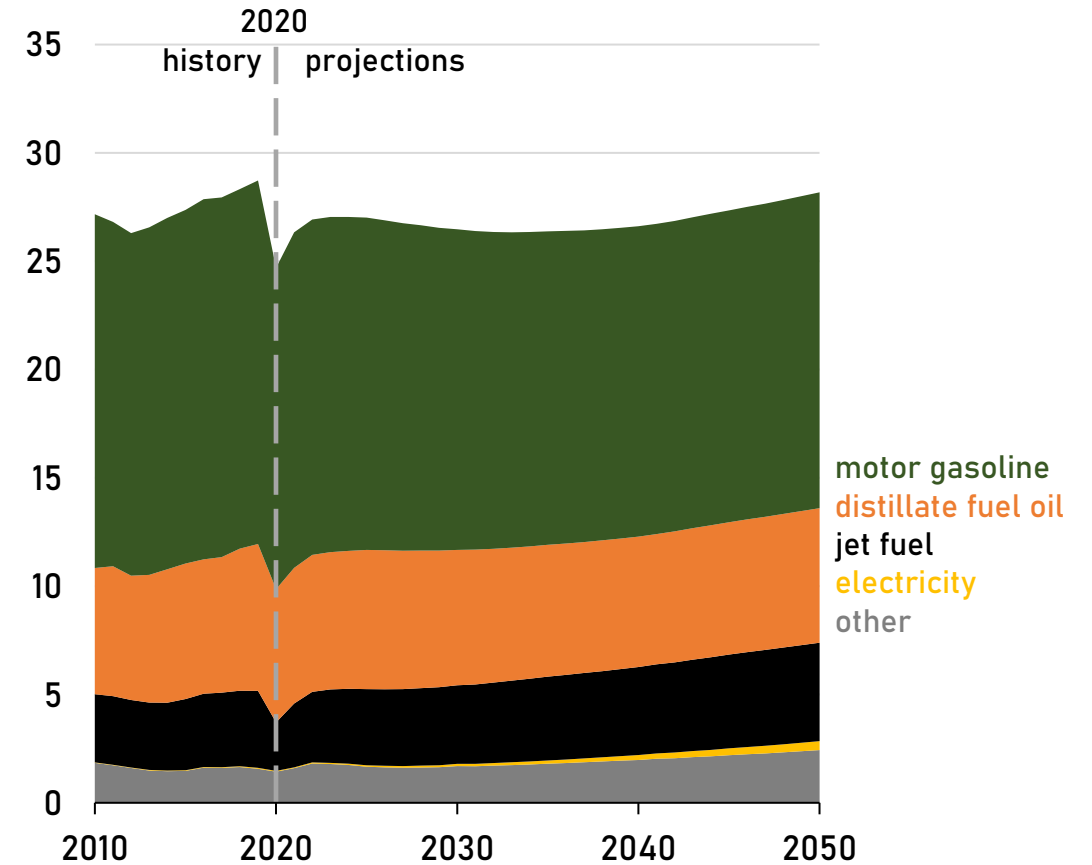
Source: RFA analysis using Department of Energy data;
based on annual vehicle miles traveled of 11,824 (AFDC)

EIA: Liquid fuels continue to dominate transportation sector through 2050

Light-duty vehicle sales by technology/fuel
millions of vehicles

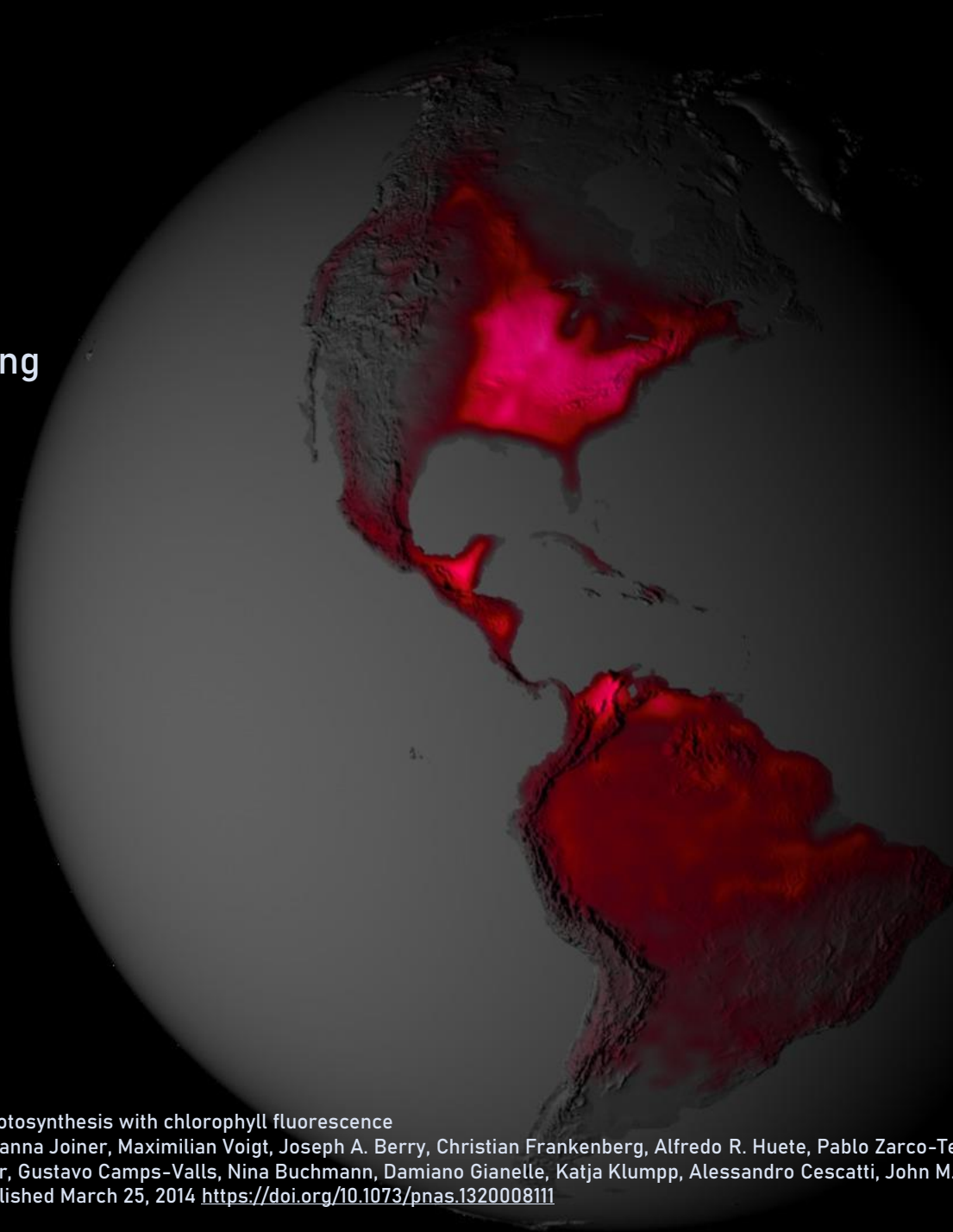


Transportation sector consumption by fuel
quadrillion British thermal units



Source: Energy Information Administration, 2021 Annual Energy Outlook

“Data from satellite sensors show that during the Northern Hemisphere's growing season, the Midwest region of the United States boasts more photosynthetic activity than any other spot on Earth.”




“Corn plants are very productive in terms of assimilating carbon dioxide from the atmosphere.”

Source:

Global and time-resolved monitoring of crop photosynthesis with chlorophyll fluorescence
Luis Guanter, Yongguang Zhang, Martin Jung, Joanna Joiner, Maximilian Voigt, Joseph A. Berry, Christian Frankenberg, Alfredo R. Huete, Pablo Zarco-Tejada, Jung-Eun Lee, M. Susan Moran, Guillermo Ponce-Campos, Christian Beer, Gustavo Camps-Valls, Nina Buchmann, Damiano Gianelle, Katja Klumpp, Alessandro Cescatti, John M. Baker, and Timothy J. Griffis
PNAS April 8, 2014 111 (14) E1327–E1333; first published March 25, 2014 <https://doi.org/10.1073/pnas.1320008111>



A photograph of Michael Regan, EPA Administrator Designee, speaking at a podium. He is wearing a dark suit, white shirt, and a bright blue tie. The background is a solid blue wall with a faint, circular seal of the United States Environmental Protection Agency (EPA) visible behind him. The seal features an eagle with wings spread, perched on a globe, with the words "UNITED STATES OF AMERICA" and "ENVIRONMENTAL PROTECTION AGENCY" around the perimeter.

“The RFS is definitely a priority for this administration.”

“President Biden has not been shy that agriculture will have a seat at the table as we tackle climate, and he’s been specifically focused on biofuels...”

— Michael Regan,
EPA Administrator
Designee

“We need to make sure we’re all driving good cars by increasing fuel efficiency and requiring that every car sold in the United States is a flexible fuel vehicle, or FFV, that can run on alternative fuel like E-85.”

**— Sen. Joe Biden (D-DE),
Foreign Relations Committee, 2006**

