

Overcoming Obstacles, Seizing Opportunities

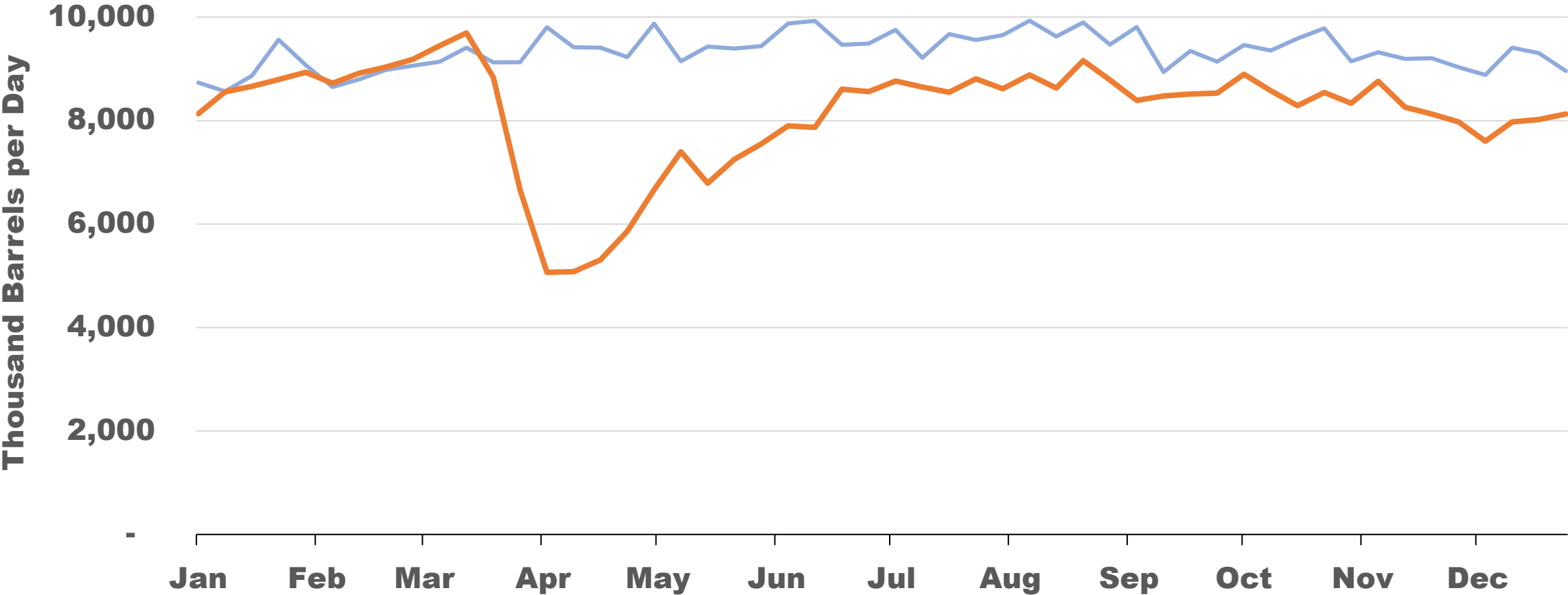
**Geoff Cooper
Renewable Fuels Association**

July 14, 2021



Weekly U.S. Gasoline Consumption

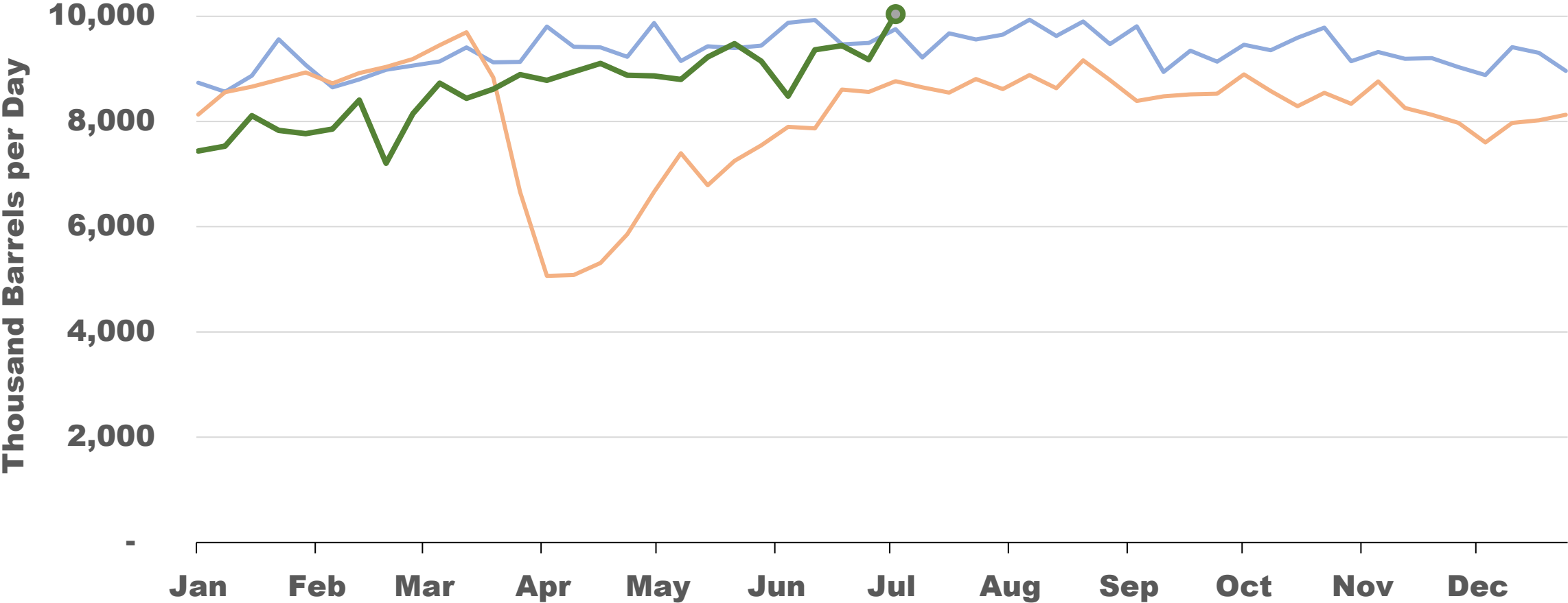
— 2019 — 2020



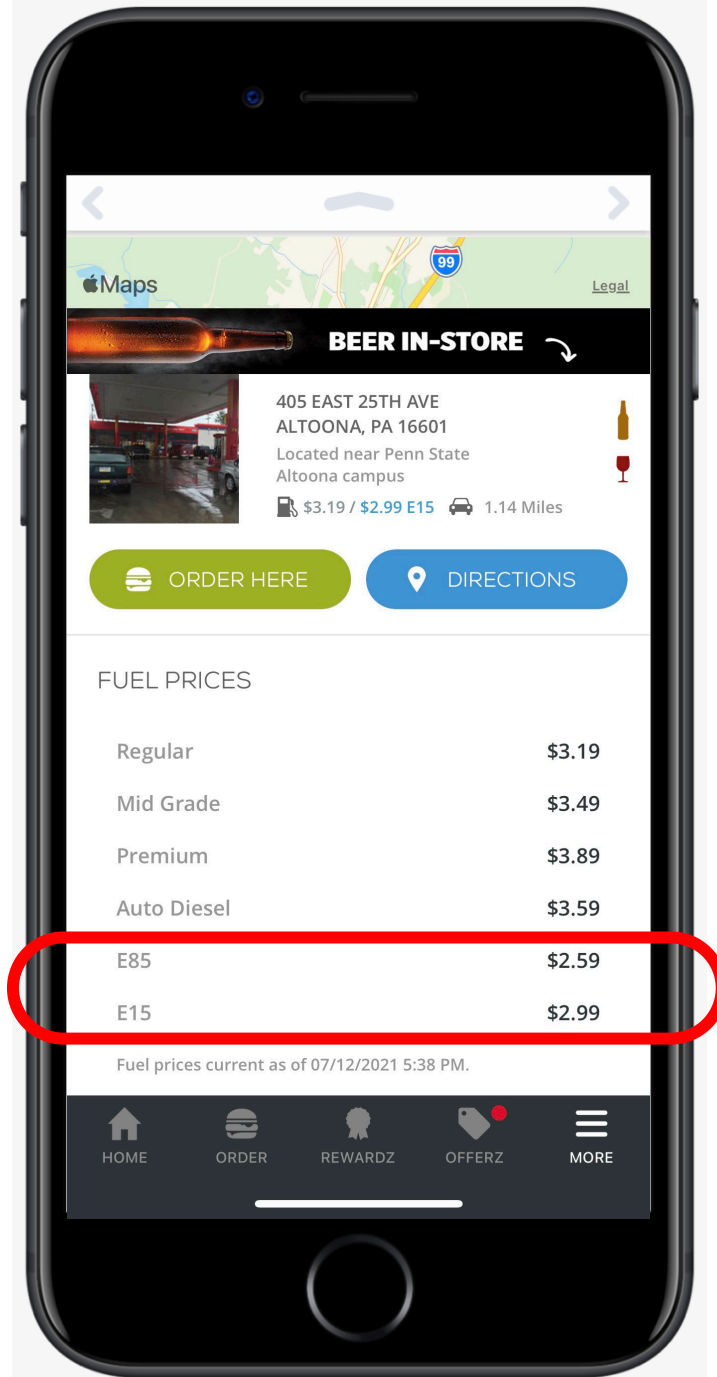
Source: Energy Information Administration

Weekly U.S. Gasoline Consumption

— 2019 — 2020 — 2021

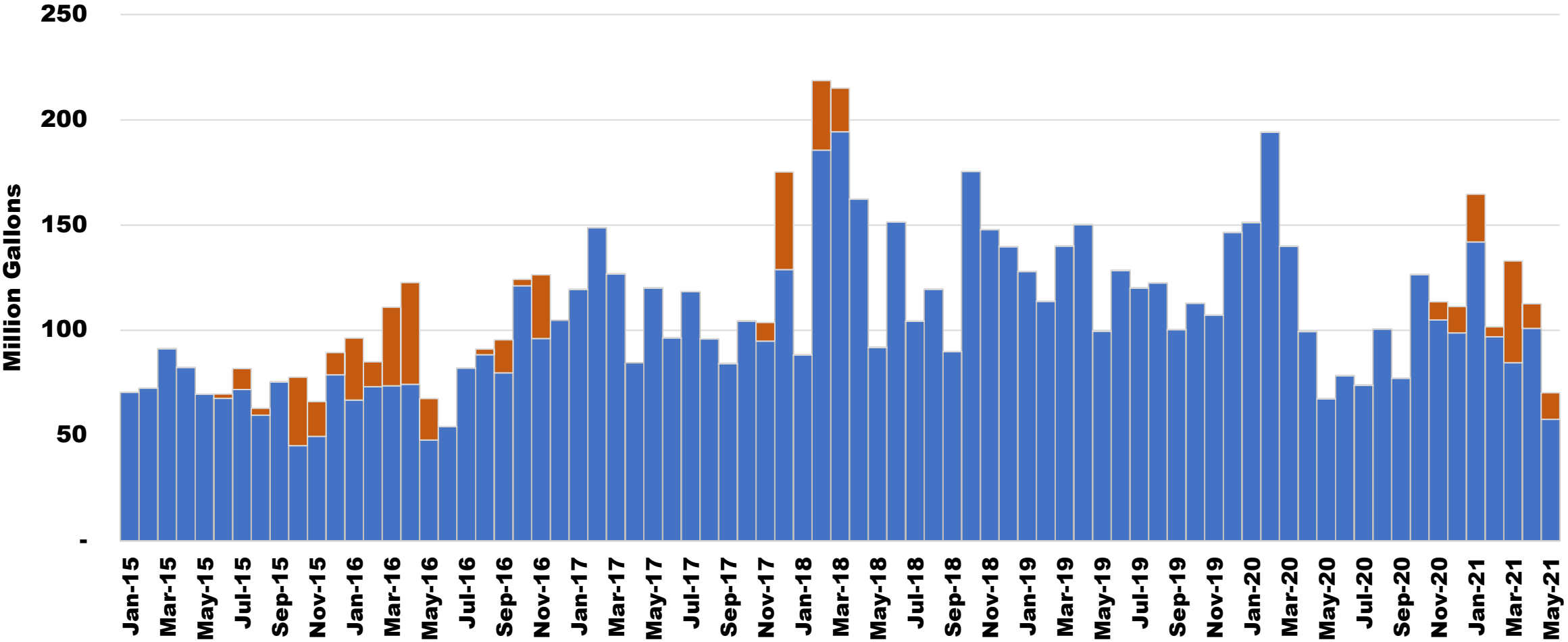


Source: Energy Information Administration



Monthly U.S. Ethanol Exports

Exports to Rest of World Exports to China



Source: U.S. Census Bureau



**President Biden said he will
“promote and advance
renewable energy, ethanol and
other biofuels.”**

**On SREs, Biden said,
“Those waivers are a gigantic
mistake. We should not be
exempting these major
companies.”**



Three “Pillars” of the Tenth Circuit Court Decision on SREs

- ~~EPA may only “extend” exemptions for small refineries that have been continuously exempted from RFS obligations~~ (overturned)
- EPA may only grant exemptions to small refineries if their claimed economic hardship is solely caused by the RFS
- EPA must reconcile its repeated findings that refiners of all sizes pass compliance costs through to wholesale customers

gasoline-powered equipment, it may cause damage and is prohibited by Federal law.

FLEXFUEL

FOR FLEX FUEL VEHICLES ONLY

E20
UP TO 20% Ethanol

2499

\$ Price per Gallon (including tax)

E20
20% Ethanol

PUSH HERE

FLEXFUEL

FOR FLEX FUEL VEHICLES ONLY

E30
UP TO 30% Ethanol

2399

\$ Price per Gallon (including tax)

E30
30% Ethanol

PUSH HERE

FLEXFUEL

FOR FLEX FUEL VEHICLES ONLY

E85
Min. 70% Ethanol

1659

\$ Price per Gallon (including tax)

E85
85% Ethanol

PUSH HERE

Contains up to 10% Ethanol

PLUS

2599

\$ Price per Gallon (including tax)

MINIMUM OCTANE RATING
(R+M)/2 METHOD

87

PUSH HERE

E15
UP TO 15% Ethanol

2549

\$ Price per Gallon (including tax)

MINIMUM OCTANE RATING
(R+M)/2 METHOD

89

PUSH HERE

**“We have to
move toward
net zero
emissions.”**

**— President Joe
Biden**



GHG Reduction Targets

- **50-52% GHG emissions reduction by 2030***
- **100% GHG emissions reduction by 2050**

*** Compared to 2005 levels**



**Cars, Vans, SUVs, and
Pickups on the Road**

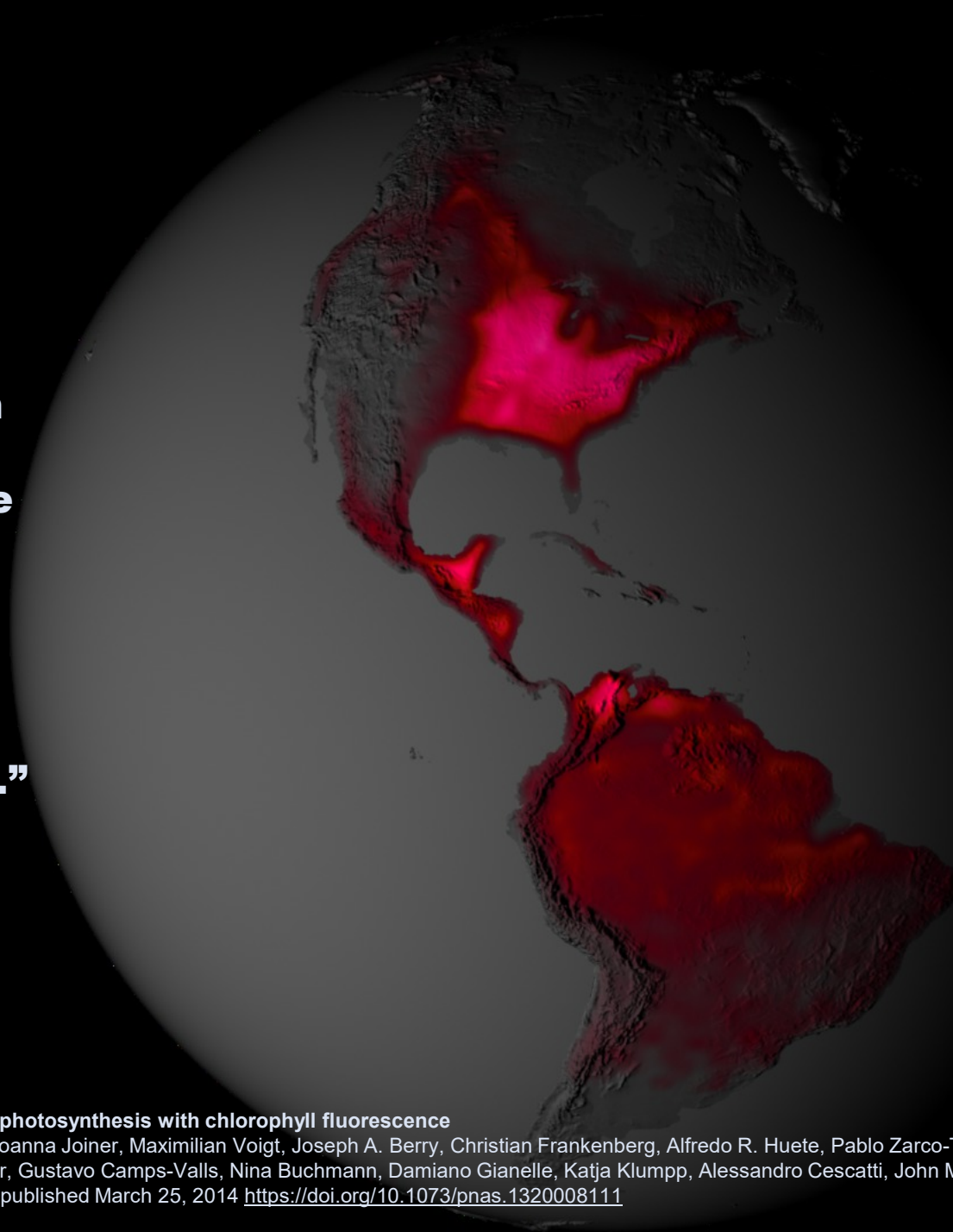
266,941,000

**Percentage that are Battery
or Plug-in Hybrid Electric**

0.6%

79% of New Cars Sold in U.S. in 2050 Will Run on Liquid Fuels

“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>



46%

Average Reduction in GHG Emissions Compared to Gasoline Today

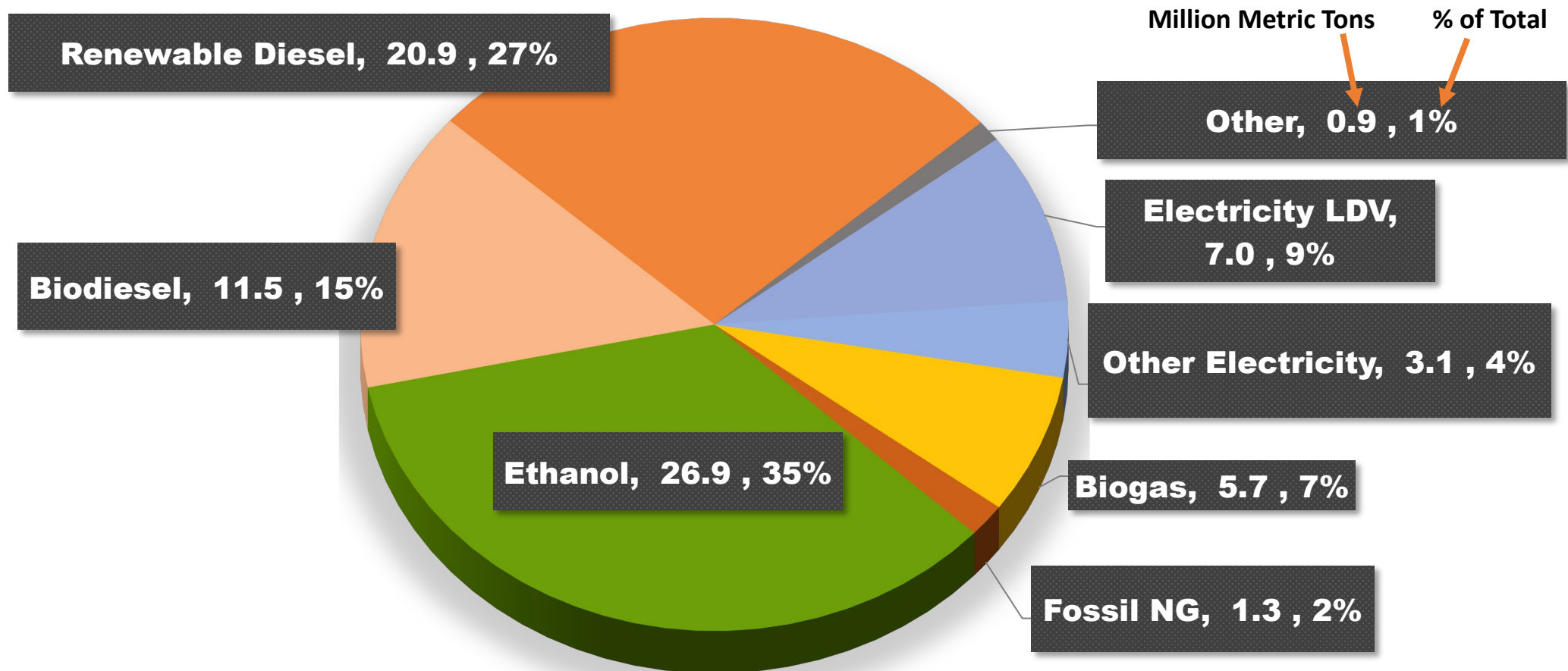
70%

Average GHG Reduction Expected by 2025

100%+

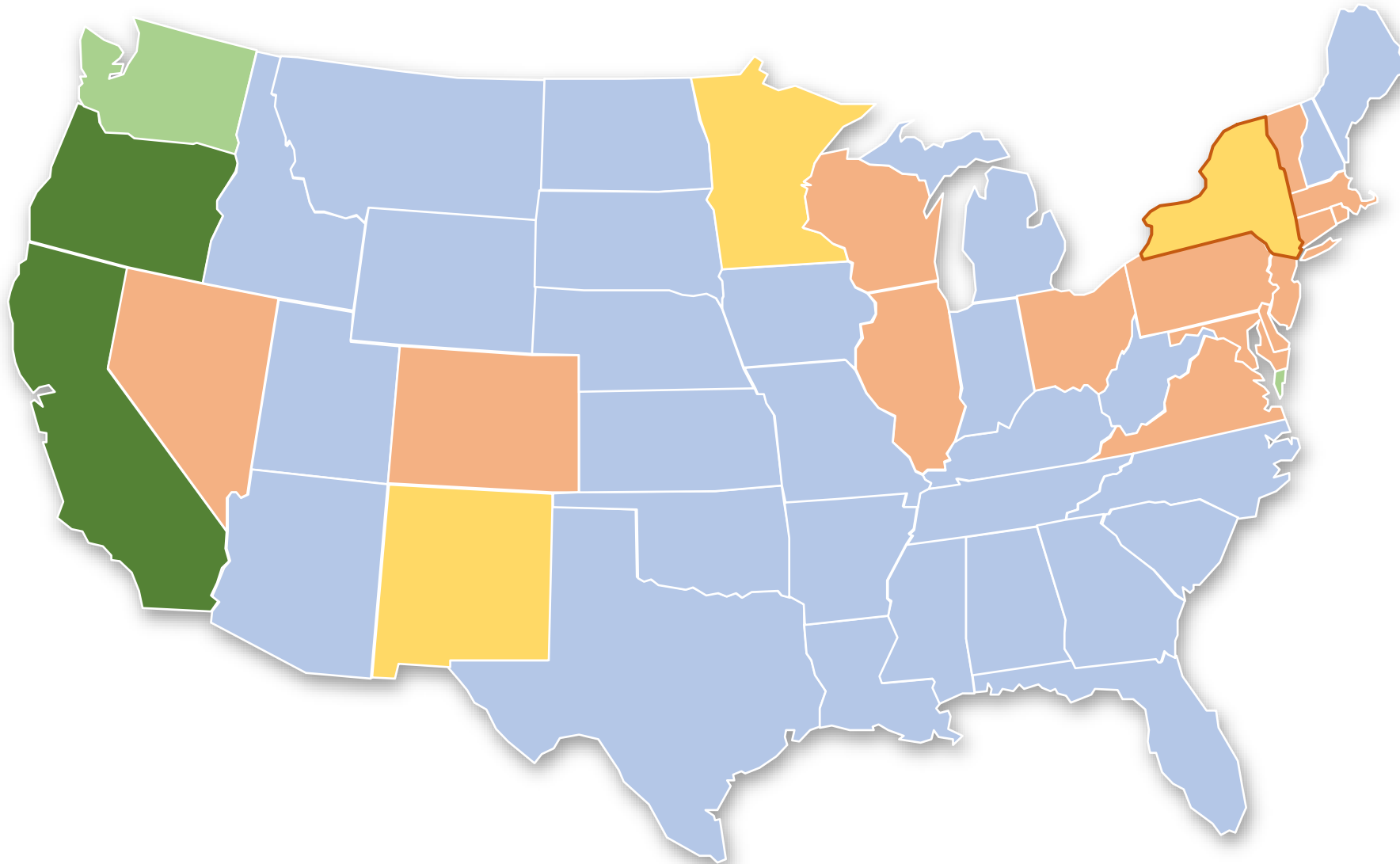
GHG Reduction Possible by 2030-2035 (“Net Zero”)

California LCFS GHG Reductions by Fuel Type, 2011-2020



State Activity on Low Carbon Fuel Standards/Clean Fuel Programs (LCFS/CFP)

■ Program implemented ■ CFP legislation passed ■ CFP legislation introduced ■ Active discussion on CFP development



Thank You!