

# ESSENTIAL FOR THE ECONOMY

**W**hile the COVID-19 pandemic significantly reduced ethanol production in 2020, the industry remains a major driver fueling the rural economy. Ethanol biorefineries continue to offer skilled jobs and good wages in rural communities where attractive employment opportunities are often hard to find. And the industry continues to serve as an essential cog in the agriculture sector’s economic engine, generating tens of billions of dollars in economic activity.

In 2020, more than 62,000 U.S. jobs were directly associated with the ethanol industry, which supported an additional 242,600 indirect and induced jobs across all sectors of the economy. The industry created \$18.6 billion in household income and contributed \$34.7 billion to the national Gross Domestic Product (GDP). Moreover, the ethanol industry spent \$21.4 billion on raw materials, inputs, and other goods and services.

The demographic breakdown of the renewable fuels workforce is significant, employing a higher percentage of female, older and unionized workers than the petroleum industry. In addition, one out of five ethanol workers are veterans of the U.S. military; veterans comprise only 6% of the national workforce.

With COVID-19 vaccinations now underway, and as the economy rebounds, the outlook for 2021 is growing clearer: We expect to see the industry’s economic impact and reach recover and pick up where we left off in 2019.

## Ethanol’s Value-Added Proposition

Based on average prices and product yields in 2020, a typical dry mill ethanol plant was adding approximately \$1.27 of additional value—or 37%—to every bushel of corn processed.

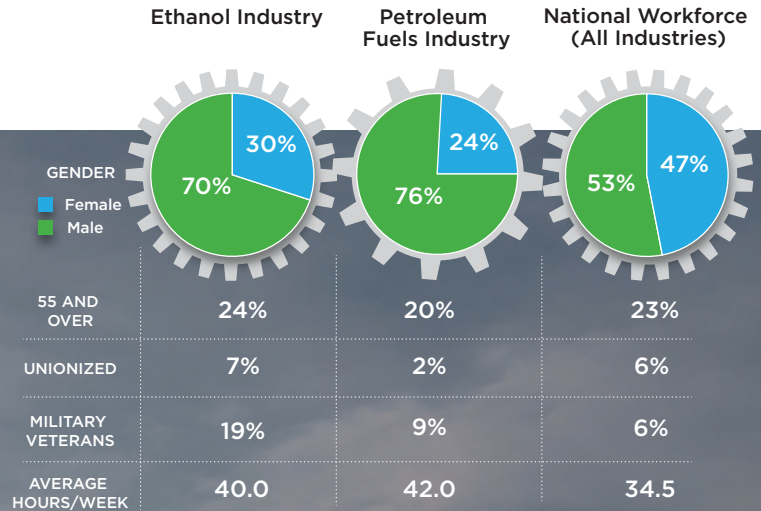
**CORN COST PER BUSHEL**  
**\$3.42**



VALUE OF OUTPUTS PER BUSHEL	
Ethanol.....	\$3.48
Distillers Grains.....	\$1.03
Corn Distillers Oil.....	\$0.18
<b>TOTAL</b>	<b>\$4.69</b>

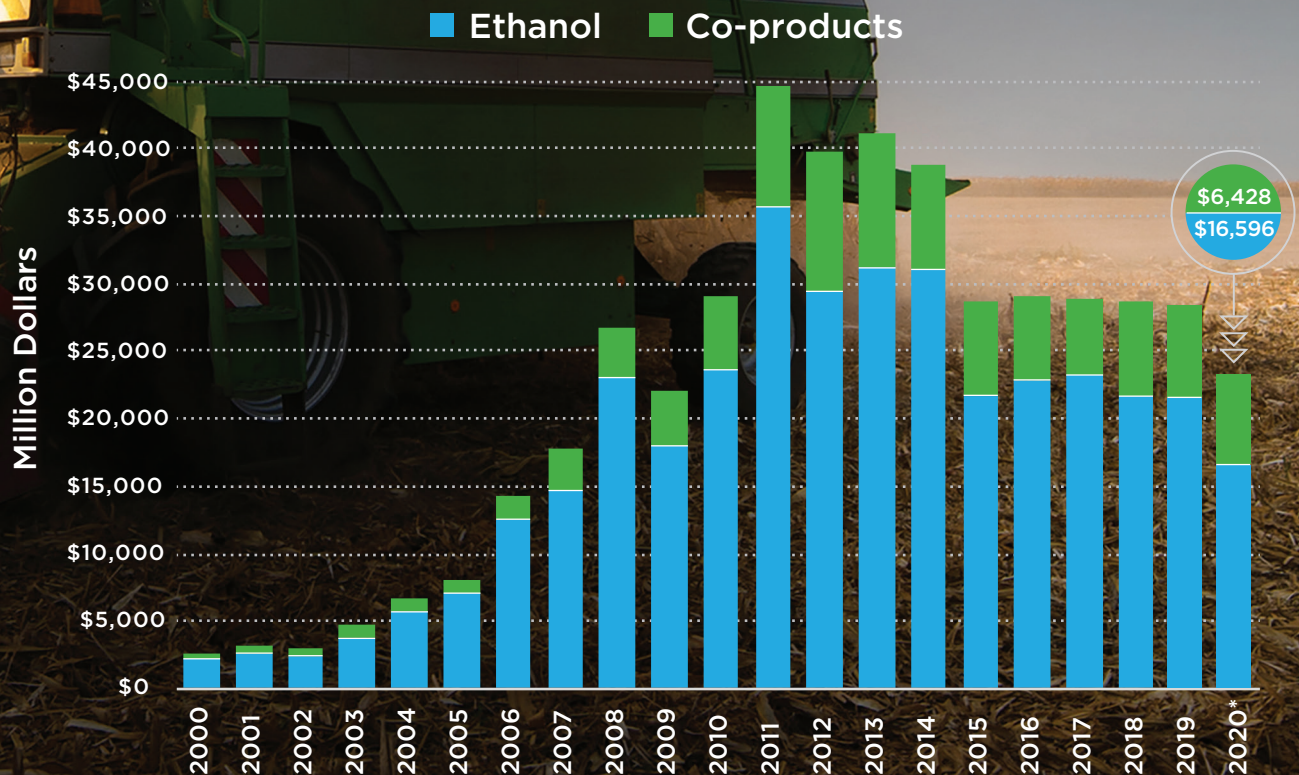
	2019	2020
Direct jobs	68,542	62,180
Indirect/Induced jobs	277,389	242,600
Household income	\$22.9 billion	\$18.6 billion
GDP contribution	\$42.8 billion	\$34.7 billion

# ETHANOL INDUSTRY WORKFORCE DEMOGRAPHICS



Sources: Energy Futures Initiative, National Association of State Energy Officials, U.S. Bureau of Labor Statistics

## GROSS VALUE OF U.S. ETHANOL INDUSTRY OUTPUT



Source: RFA based on U.S. Dept. of Agriculture data      \*Estimated