



Section 45Z Tax Credit

NGFA Board of Directors Meeting

September 9, 2024

Outline

- 1. Inflation Reduction Act**
- 2. Section 40B Tax Credits**
- 3. Section 45Z Tax Credits**
- 4. Board member discussion**

Inflation Reduction Act

- “Single largest investment in climate and energy in American history”
- Original cost estimate for energy and climate provisions - \$369 billion (Updated 2024 cost estimate for the 10-year budget outlook is \$786 billion)
- Energy/climate provisions include:
 - Tax credits for energy production and investments in wind, solar, and geothermal energies
 - Tax credits for investment in battery storage and biogas
 - Tax credits for investments in nuclear energy, hydrogen energy coming from clean sources, **biofuels**, and technology that captures carbon from fossil fuel power plants

Section 40B Tax Credit

- Incentivizes production of sustainable aviation fuels (SAF)
- Starts at \$1.25 per gallon for SAF that achieves a 50 percent lifecycle greenhouse gas (GHG) reduction compared to petroleum-based jet fuels
- Additional 1 cent per gallon available for each percentage point the reduction exceeds 50 percent – maximum \$1.75 per gallon
- Applies to SAF sold or used after December 31, 2022 and prior to January 1, 2025

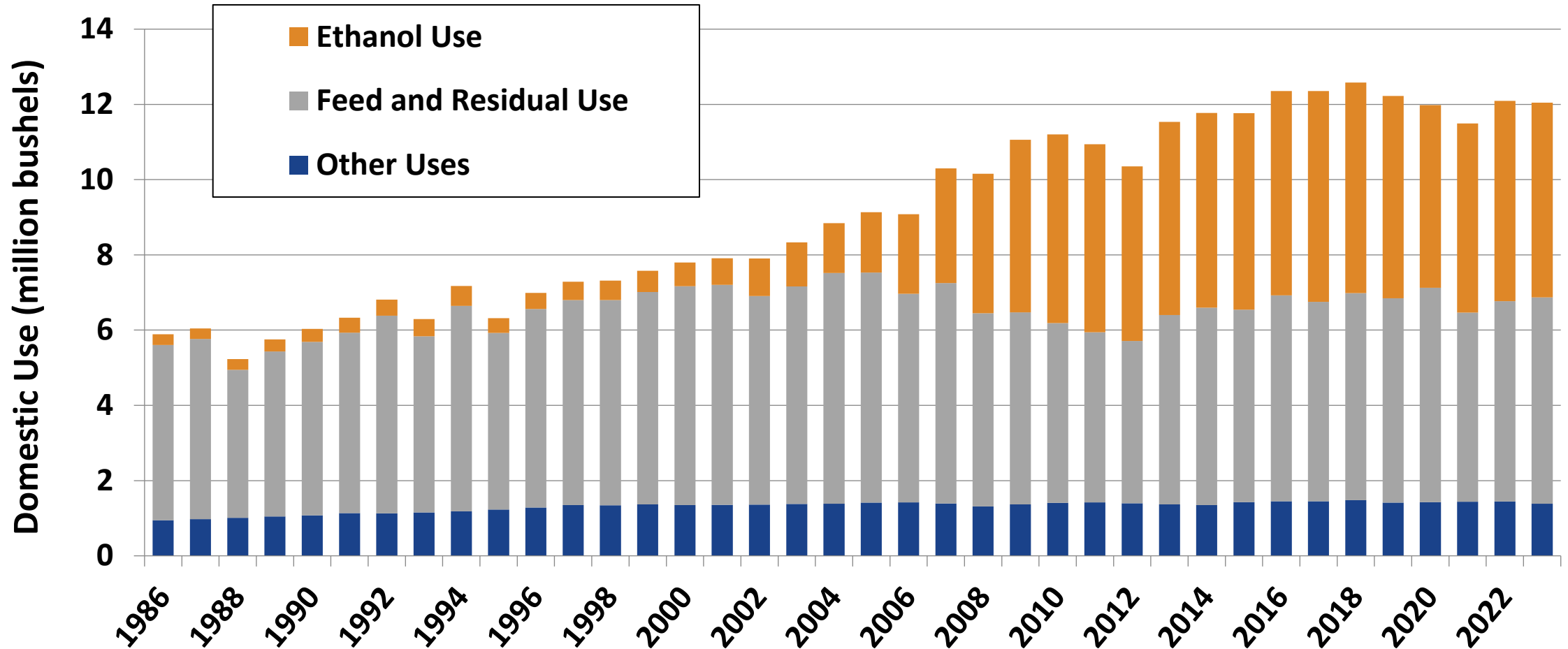
Section 40B Tax Credit Implementation

- The U.S. Department of the Treasury on April 30 issued guidance
 - Includes a new 40BSAF-GREET 2024 model for determining GHG emissions (GREET = Department of Energy Argonne National Lab's **G**reenhouse Gases, **R**egulated **E**missions, and **E**nergy Use in **T**ransportation model)
 - Incorporates a USDA pilot program to encourage use of certain climate-smart agriculture (CSA) practices for SAF feedstocks
 - For corn ethanol-to-jet, a GHG reduction credit of 10 carbon intensity (CI) points is allowed if a “bundle” of certain CSA practices are used (no-till, cover crop, and enhanced efficiency nitrogen fertilizer)
 - For soybean-to-jet, a reduction of 5 CI points is allowed if a “bundle” of applicable CSA practices are used (no-till and cover crop)
 - To qualify for the CSA reductions, SAF producers must contract directly with the farmer who cultivated corn or soybeans under the requirements of the USDA CSA Pilot Program
 - Provides for mass balance accounting of commodities through the feedstock supply chain

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- Replaces the 40B credit, which expires on Dec. 31, 2024, and provides a new tax credit starting on Jan.1, 2025 through Dec. 31, 2027
- Incentivizes production of “clean” transportation fuels - both SAF and non-SAF (including ethanol)
- “Clean” transportation fuel - fuel that has a CI of no more than 50
- Sliding scale: Maximum tax credit for non-SAF - \$1.00 per gallon
- Sliding scale: Maximum tax credit for SAF - \$1.75 per gallon

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- Methods to lower the CI of transportation fuel include:
 - Capture and storage of carbon dioxide
 - Use of renewable natural gas (biomass)
 - Combined heat and power (cogeneration) systems
 - Low carbon feedstocks (e.g., corn)
- About 50 percent of the CI of corn-based ethanol is attributed to corn, which has a CI of about 29

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- Potential tax credit value of low carbon corn to a corn ethanol producer
 - Fuel with CI of less than 50 qualifies, max tax credit is \$1.00 per gallon, or 2 cents per gallon per reduction of one CI point (2 cents X 50 CI points = \$1.00)
 - Ethanol yield per bushel of corn = about 2.7 gallons
 - If low carbon corn allows ethanol facility to produce fuel lower than 50 CI, then tax credit value of one bushel of corn is:
 - 2 cents per gallon per reduction of one CI point X 2.7 gallons per bushel = 5.4 cents per bushel per reduction of one CI point
 - Example: Use of low carbon corn results in ethanol with a CI of 40
 - 50 CI – 40 CI = 10 CI reduction
 - Tax credit value of corn: 10 CI x 2 cents per gallon x 2.7 gallons per bushel = 54 cents per bushel

Section 45Z Tax Credit Implementation

- IRA directs Treasury Department to issue regulations and guidance to implement tax credit by Jan. 1, 2025
 - Interagency effort involving Treasury, USDA, EPA, DOT, and DOE
- NGFA on July 25 submitted comments to USDA on how climate-smart farming practices should affect GHG emissions modeling of domestic agricultural commodities used as biofuel feedstocks. USDA intends to establish voluntary standards
 - NGFA recommended USDA within its standards:
 - Avoid arbitrary bundling of climate-smart practices when quantifying GHG emission outcomes
 - Allow farmers to market climate smart commodities to all entities within the value chain
 - Provide for mass balance accounting of commodities

Unknowns / Challenges / Opportunities

- Will Treasury issue final guidance in a timely manner?
- What will be in the final guidance?
 - New 45Z-GREET Model?
 - Carbon reductions for climate-smart agriculture practices with reduced recordkeeping?
- What's the most cost-effective way for clean fuel producers to lower carbon intensities?
 - Many options, including potential use of low-carbon corn
- Will farmers ultimately see a premium for low-carbon corn?

NGFA Sustainability Committee

Andrew Utterback – Ingredion Incorporated

Berit Foss – POET

Beth Stebbins – Scoular

Brad Morrison – Primient Grain

Chris Knutson – Green Plains Inc.

Colette Bersie – Bushel

Collin Ryan (CAP) – Ag Growth International

Cory Winstead – FS Grain LLC

Hugo Van Roessel (CAP) – ADM

Jay Burns – COFCO International

Jennifer Grote (CAP) – The Andersons Inc

Jill Wheeler – Truterra / Land O' Lakes

Joe Kapraun – GROWMARK Inc.

John Dettlinger (CAP) – CGB Enterprises Inc.

Joshua Ludington – JDH

Justin McAllister – Bunge North America Inc.

Kimberly Hawks – Louis Dreyfus Company, LLC

Martha Smith – Bayer Crop Science LP

Matt Woods – The DeLong Co. Inc.

Max Mobley – Berkley Agribusiness

Megan Rock – CHS Inc.

Megan Schmit – ADM

Ryan Jones – Indigo Ag Inc.

Scott Barkley – Mid Kansas Cooperative Association

Scott Strickland – CGB Enterprises Inc.

Timothy Ververloh – The Andersons Inc.

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Discussion