

2024 Illinois Farm Economics Summit

The Renewable Diesel Boom What Does the Future Look Like?

farmdoc

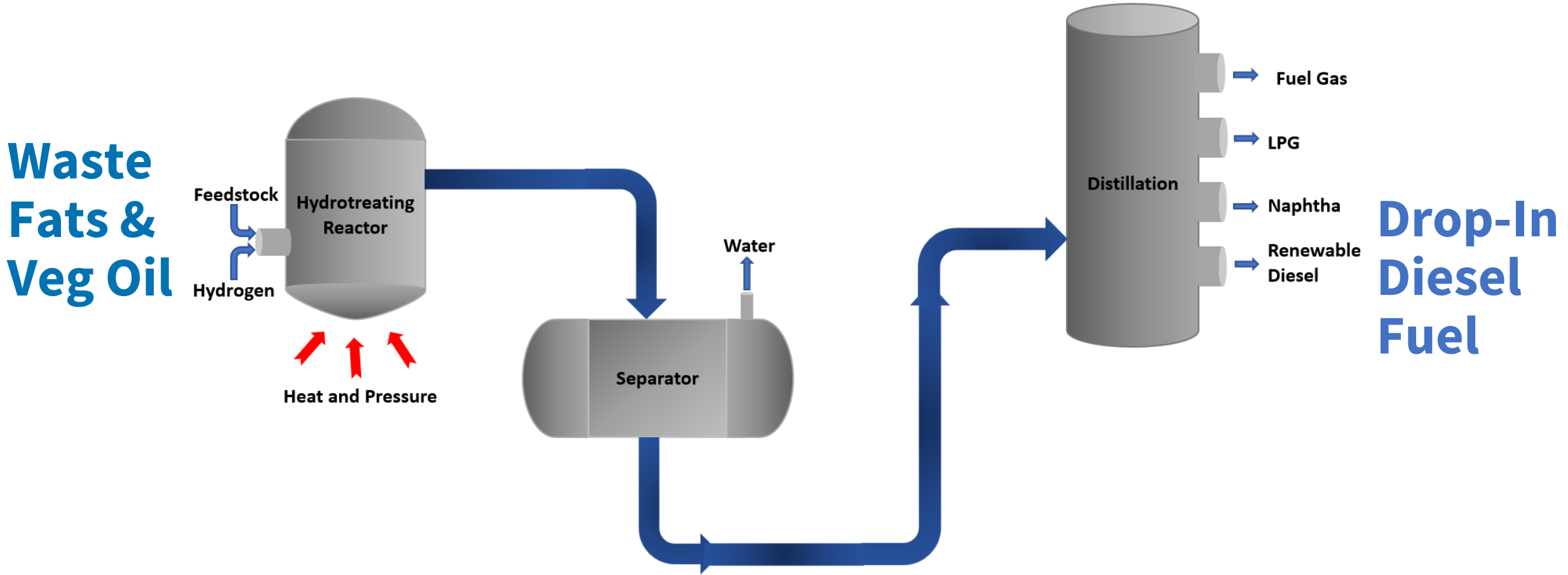


Scott
Irwin

What is Renewable Diesel?



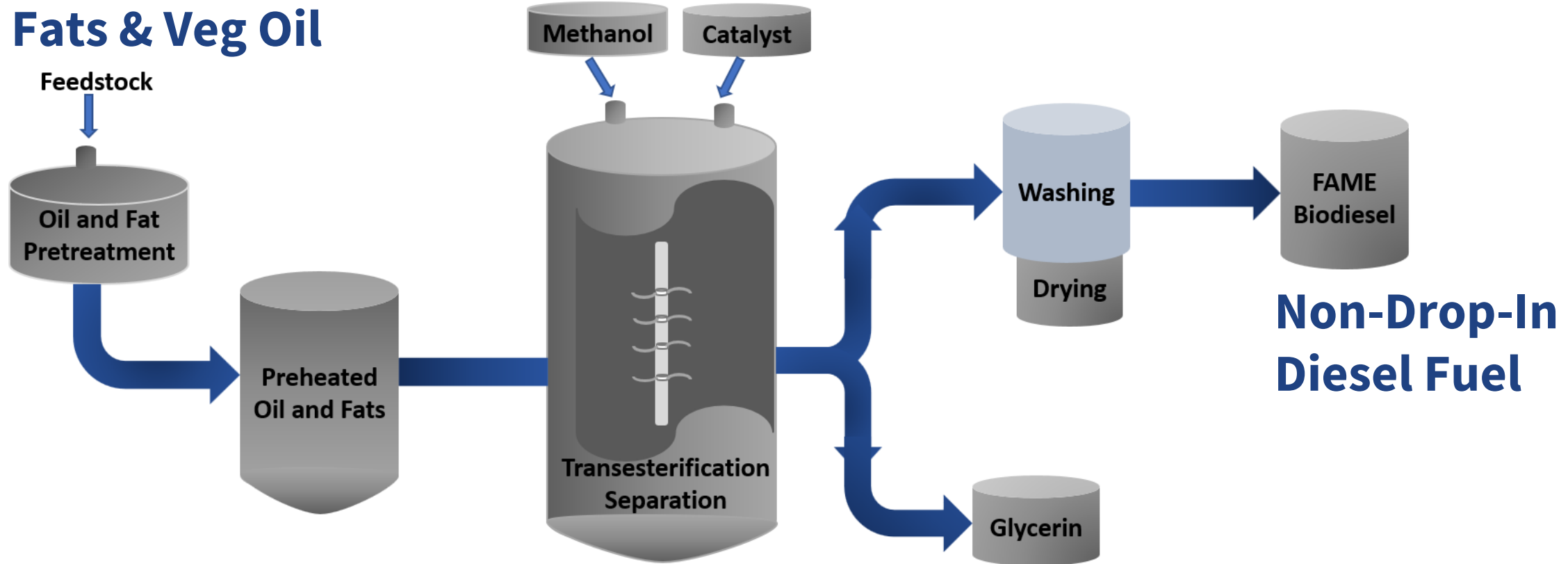
Renewable Diesel Production Process



Petroleum Refining Technology

FAME (Fatty Acid Methyl Ester) Biodiesel Production Process

Waste Fats & Veg Oil



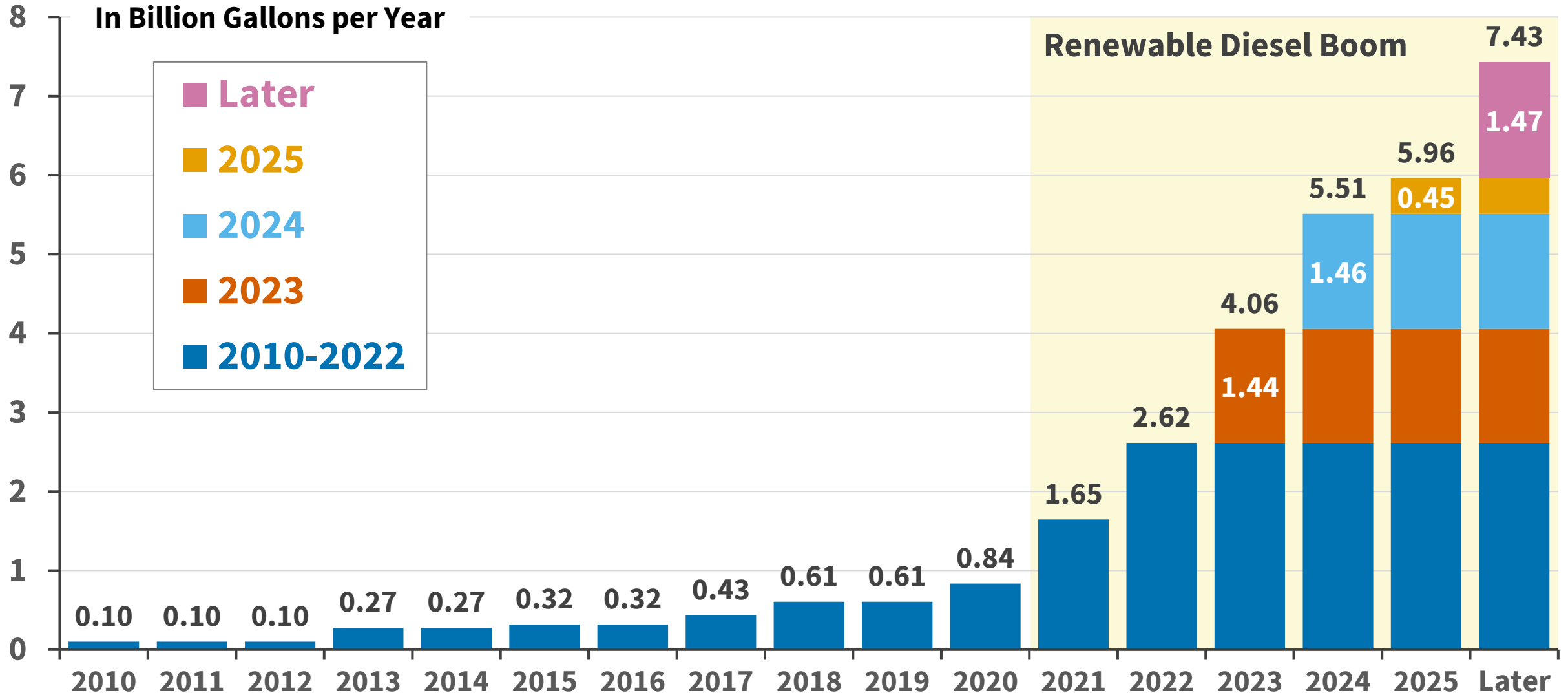
Polyester Production Technology



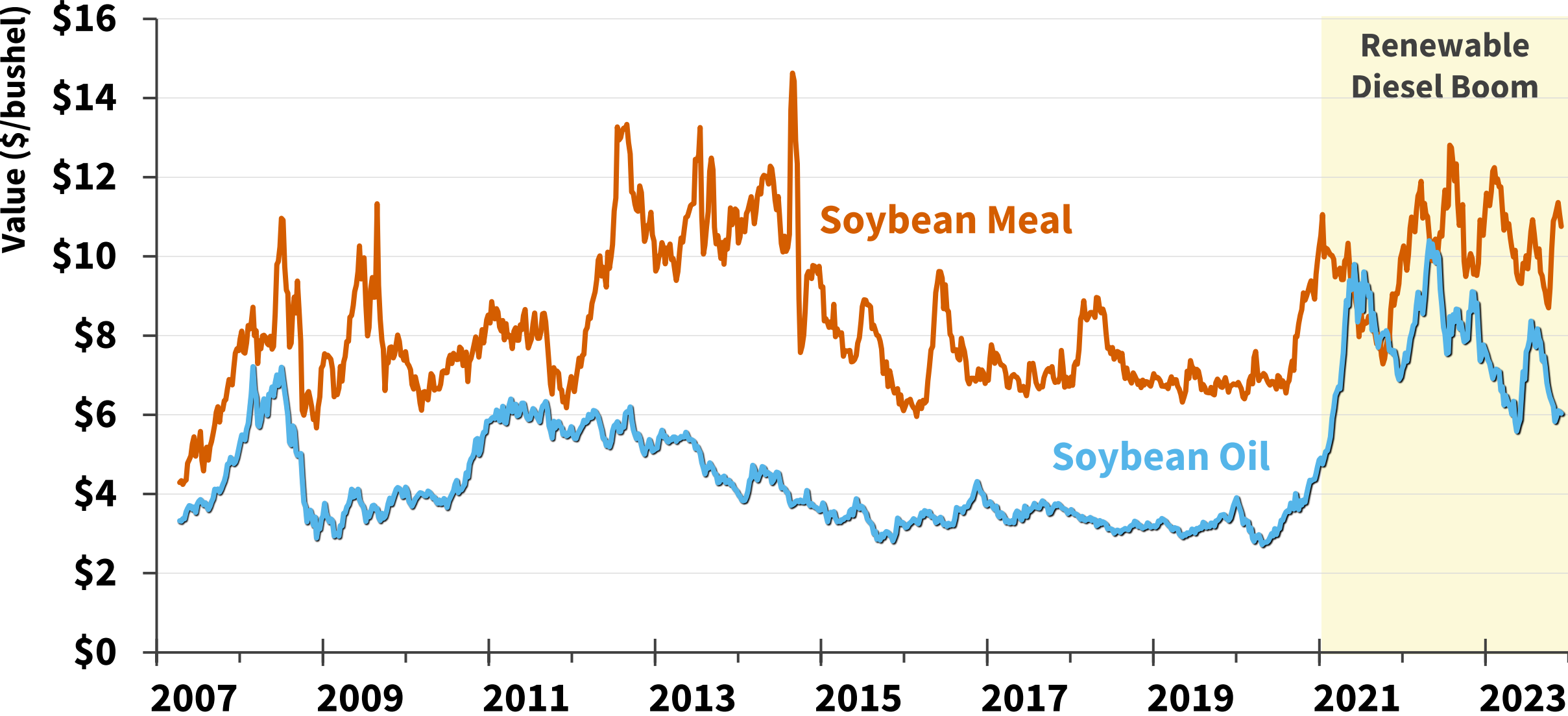
What Do We Know About the Renewable Diesel Boom?

Annual U.S. Renewable Diesel Nameplate Production Capacity

Actual for 2010 - 2022 and Projected for 2023 - 2025 and Later



Weekly (Friday) Crush Value of Soybean Meal and Soybean Oil at Iowa Plants, 01/26/2007 - 12/01/2023

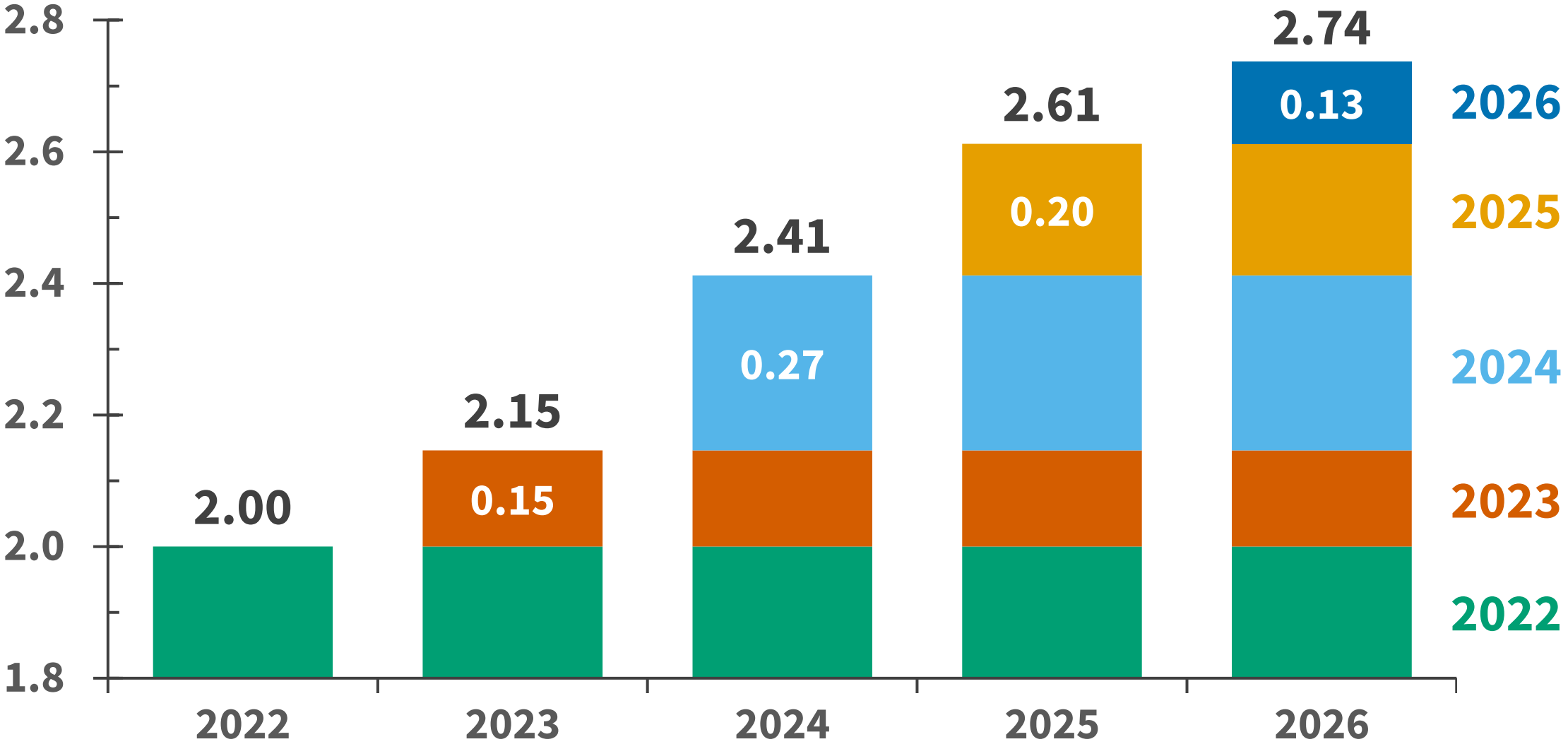


Weekly (Friday) Price of Soybeans at Iowa Plants

01/26/2007 - 12/01/2023

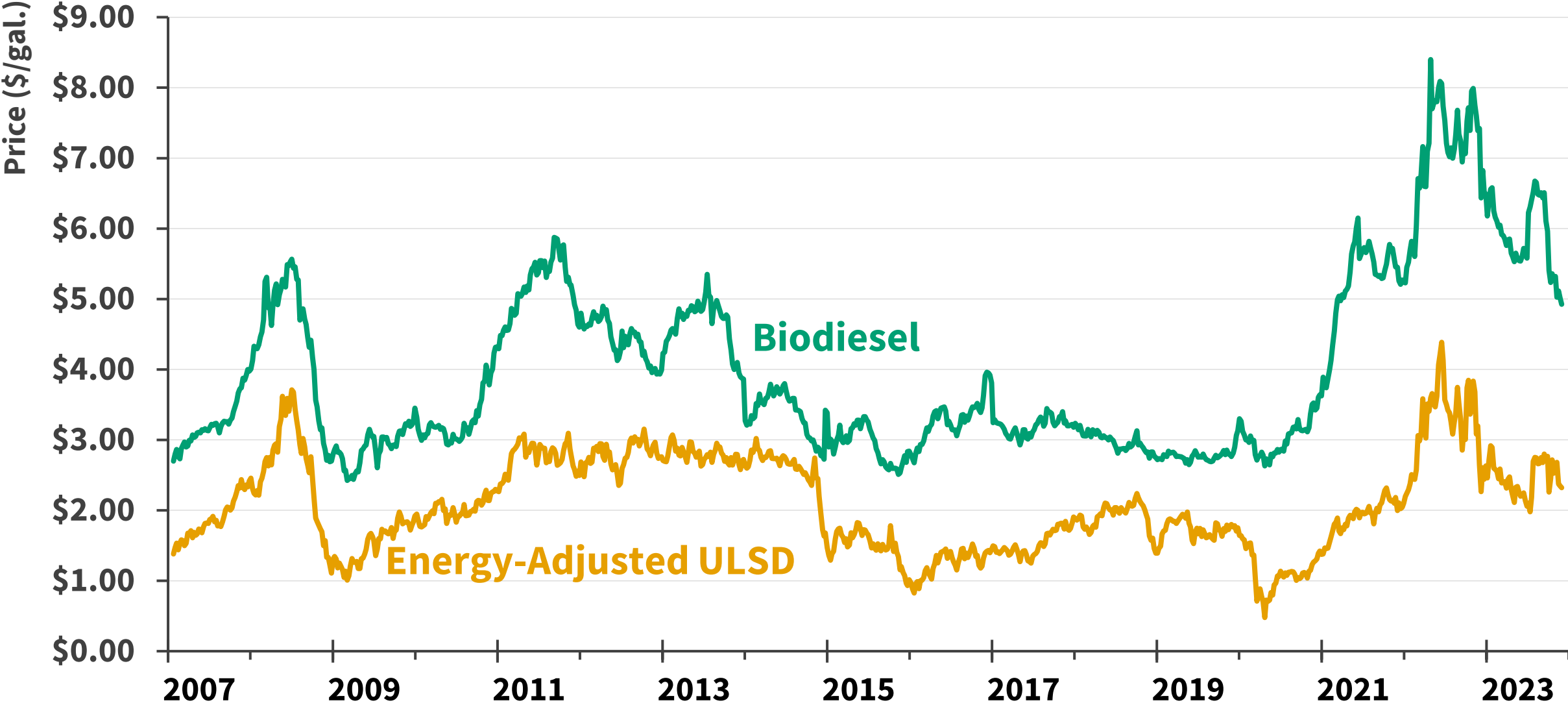


Current and Expected U.S. Soybean Crush Capacity *in billion bushels from 2022 - 2026*

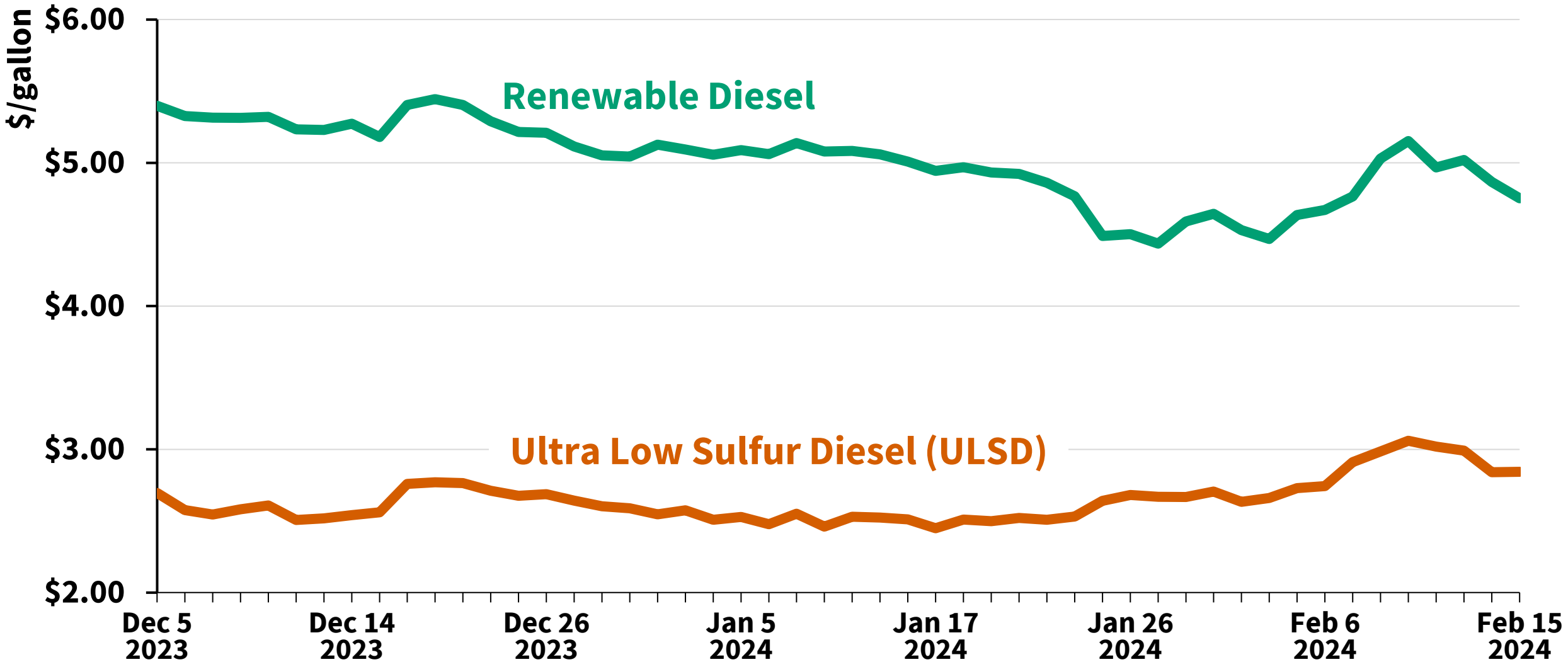


What is Driving the Renewable Diesel Boom?

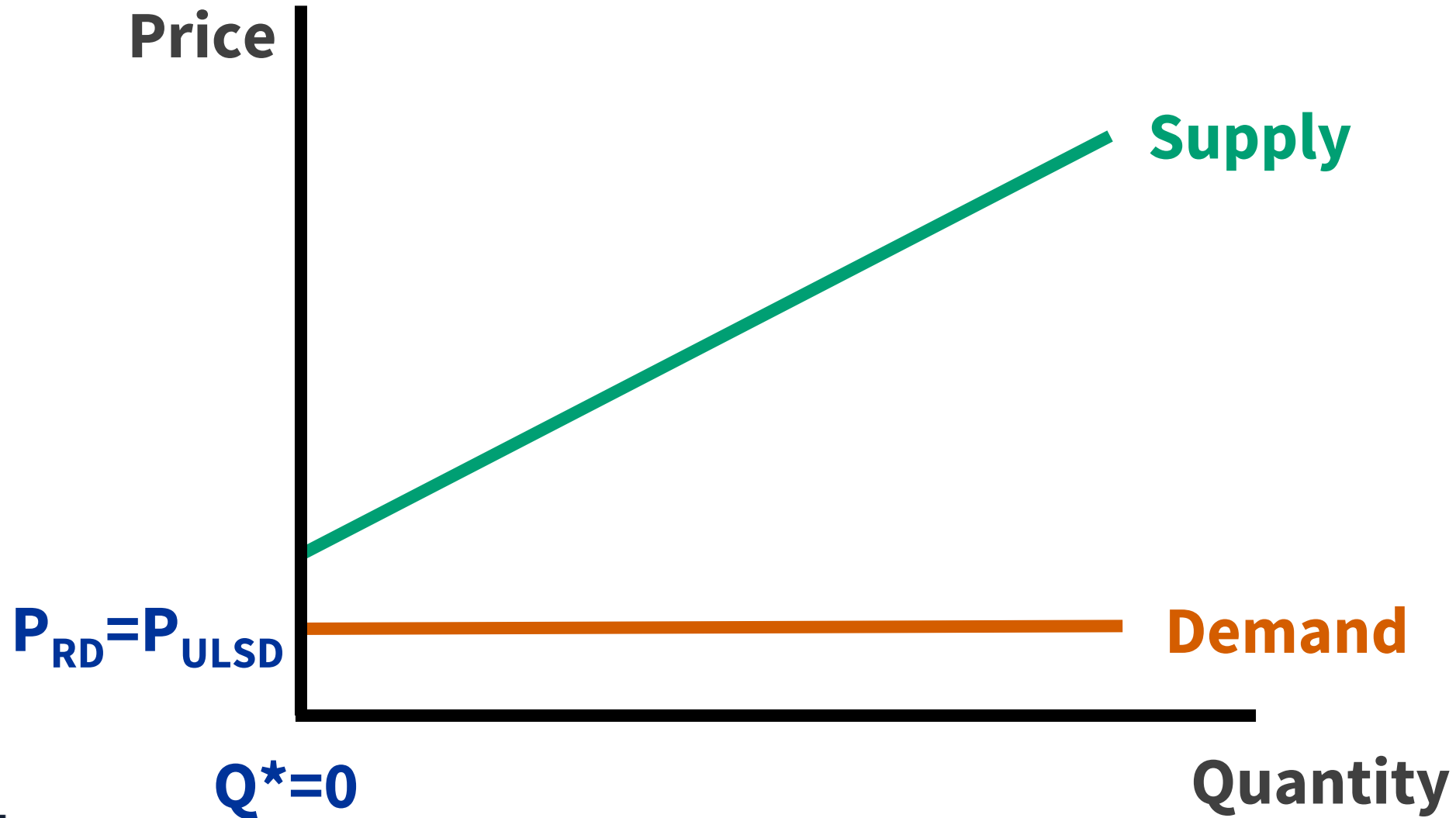
Weekly (Thursday) Wholesale Biodiesel and Energy-Adjusted Ultra Low Sulfur Diesel (ULSD) Price at Chicago, 01/25/2007 - 11/30/2023



Daily Renewable Diesel and Ultra Low Sulfur Diesel (ULSD) Prices in Los Angeles, 12/05/2023 - 02/15/2023



The Renewable Diesel Market



The Policy Stack for a Policy Market

1. U.S. Renewable Fuel Standard (RFS)

minimum volumetric mandates for biofuel use

2. U.S. Blenders Tax Credit (BTC)

\$1 per gallon credit for each gallon of renewable diesel and FAME biodiesel blended with diesel

3. U.S. Import Tariffs

duties on major U.S. import competitors of 54 to 70% per gallon of FAME biodiesel

The Policy Stack for a Policy Market

4. State FAME Biodiesel Blend Mandates

variety of programs

(e.g., Illinois, Minnesota, Iowa)

5. State Low Carbon Fuel Standards (LCFS)

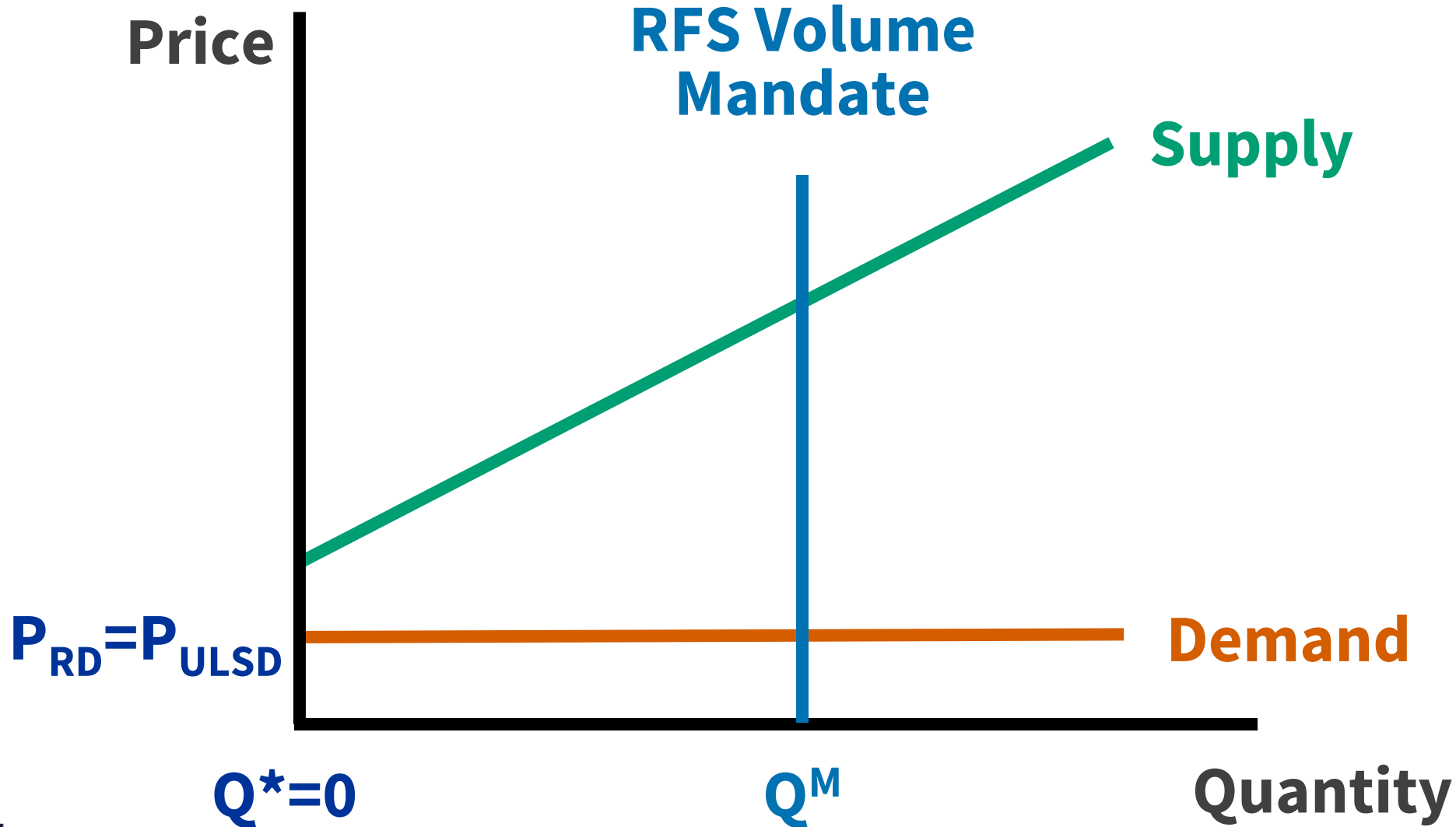
variable credits for supplying low carbon fuel

into fuel market (California, Oregon, Washington)

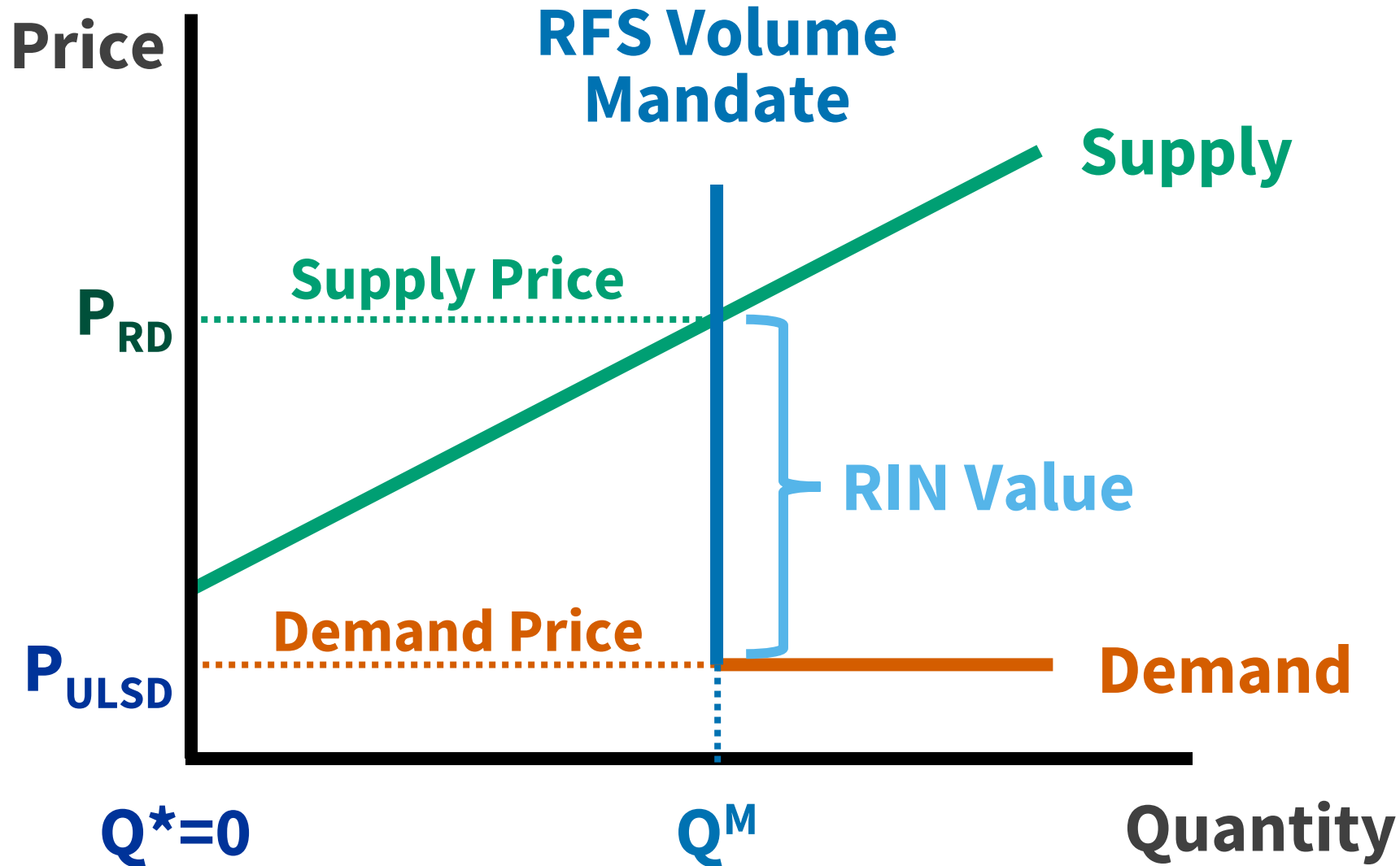


Where is the Renewable Diesel Boom Headed?

The Renewable Diesel Market with a Binding RFS Mandate



The Renewable Diesel Market with a Binding RFS Mandate

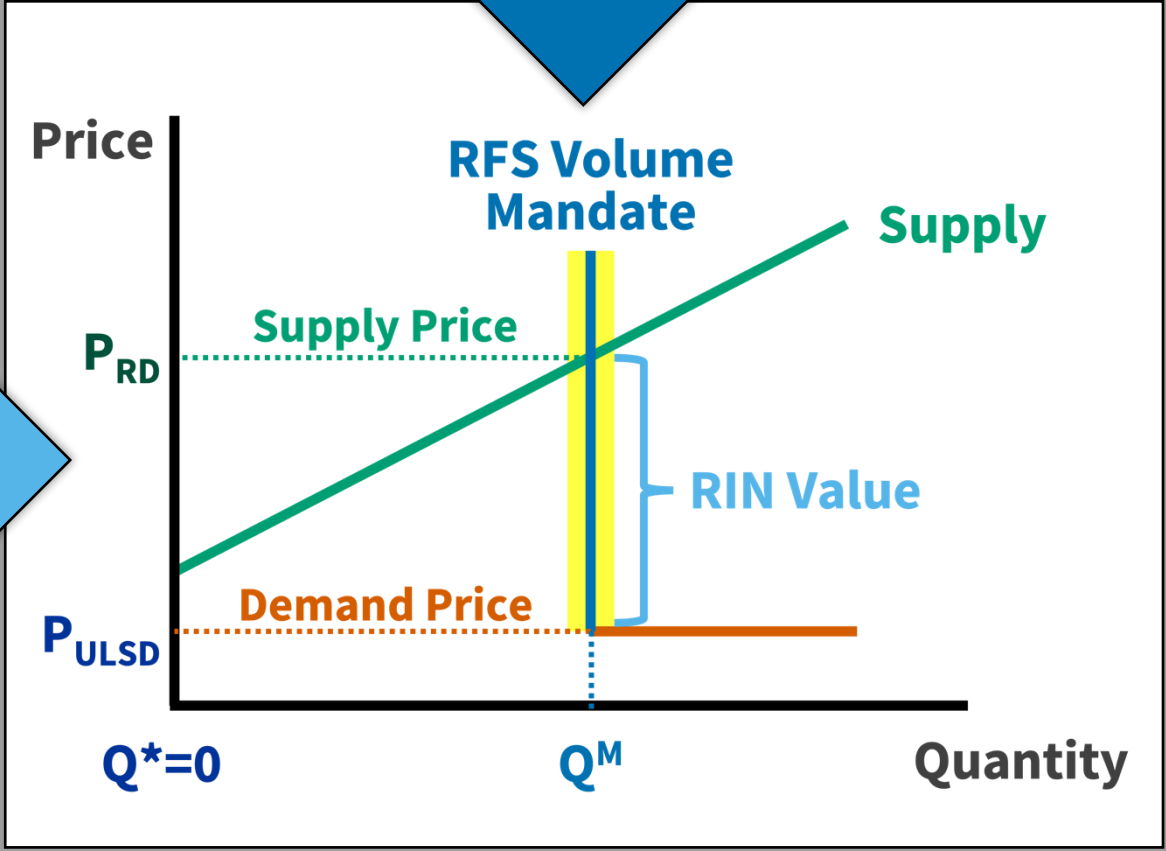
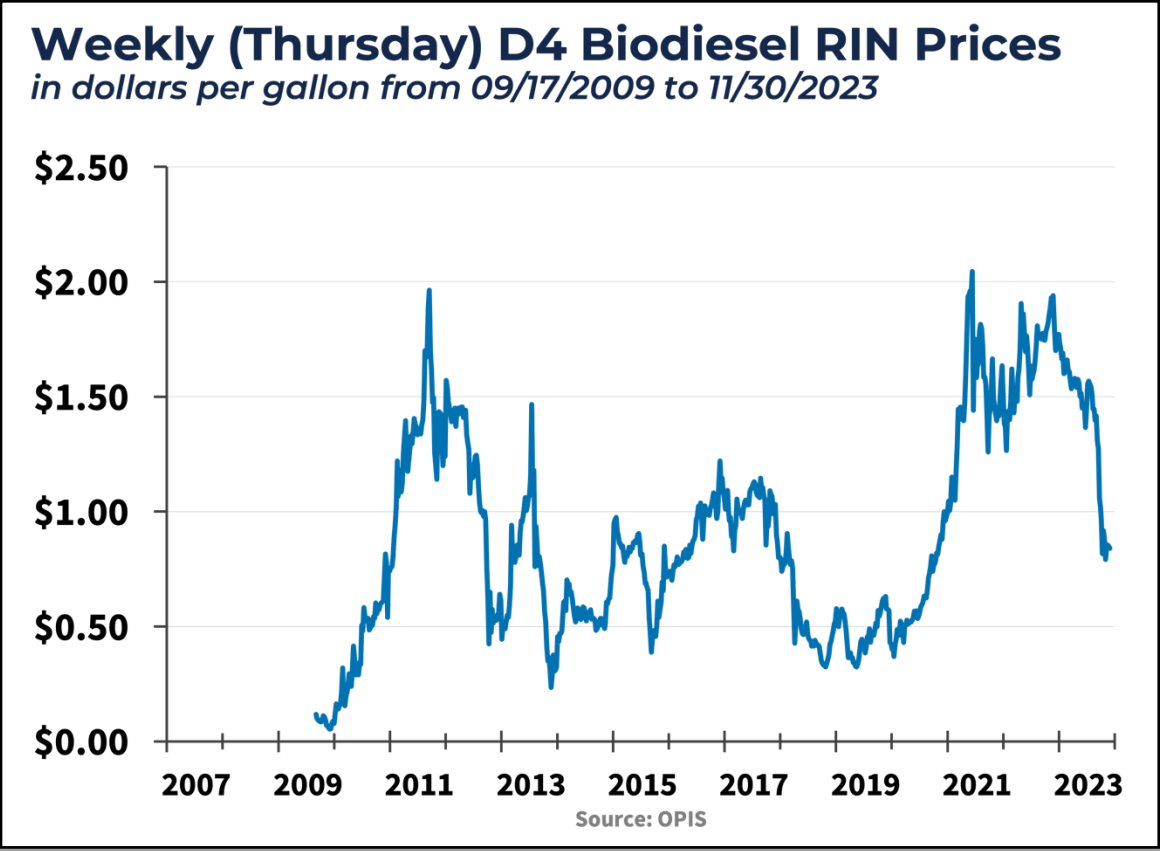


Weekly (Thursday) D4 Biodiesel RIN Prices

in dollars per gallon from 09/17/2009 to 11/30/2023



Market Floor AND Ceiling



Renewable Diesel and FAME Biodiesel Fill Three Buckets in the RFS



Biodiesel Mandate



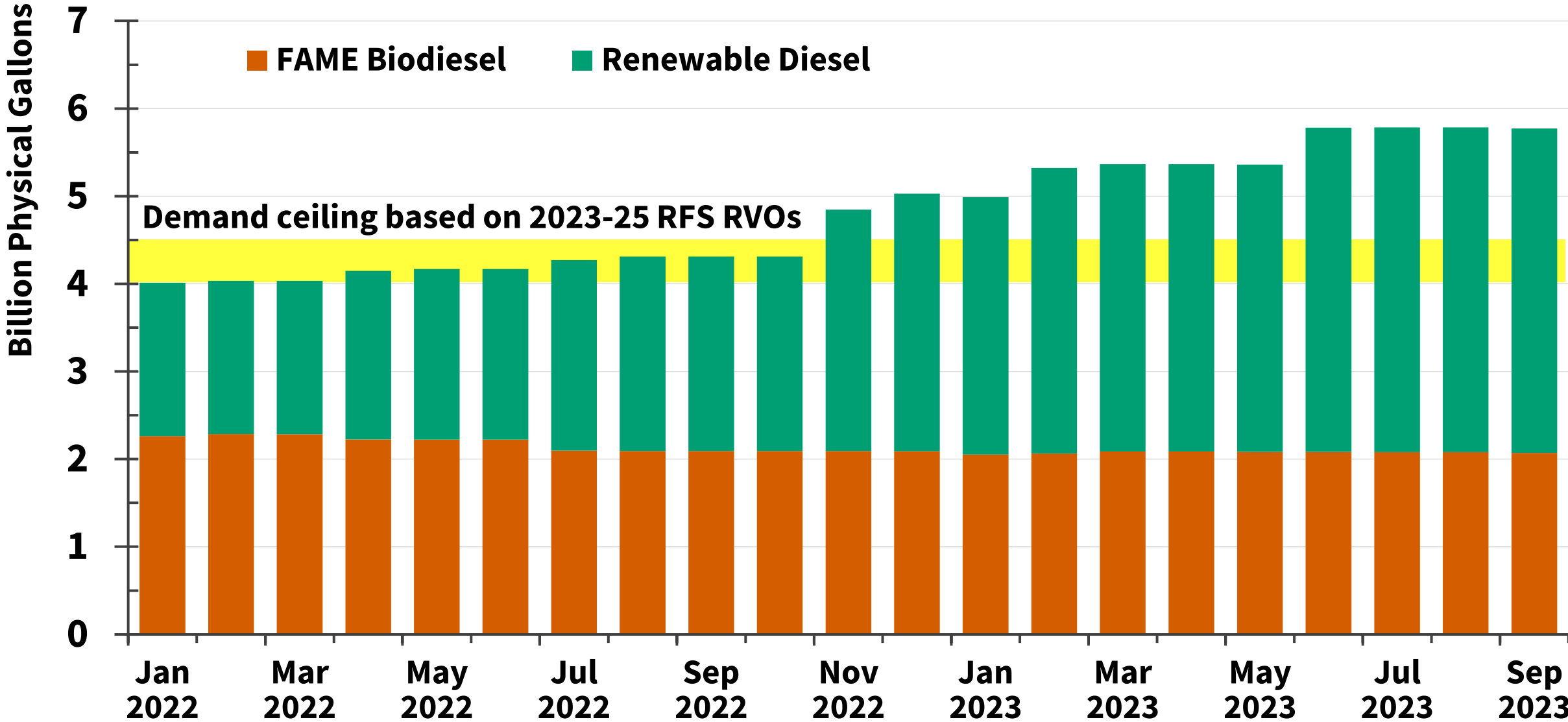
**Undifferentiated Advanced
Excess of the Advanced
Mandate above the
Biodiesel Mandate**



**Conventional Gap
Conventional Mandate
above E10 Blend Wall**

****2023-25 RFS renewable volume obligations (RVOs) imply these three buckets add up to a maximum demand for renewable diesel and FAME biodiesel of 4.0 to 4.5 billion gallons per year**

Operable FAME Biodiesel and Renewable Diesel Production Capacity in the U.S., January 2022 - September 2023



The Bearish Scenario

1. Plans for new renewable diesel plants shelved
2. Capacity utilization for existing renewable diesel and FAME biodiesel plants reduced
3. FAME biodiesel plants mothballed
4. Some combination of all three



A Potential Bullish Scenario

1. RVOs increased
2. RIN bank refilled
3. Reduction in renewable diesel and FAME biodiesel imports (conversion of blender tax credit to producer tax credit)
4. Renewable diesel exports increased (O Canada!)



Renewable Diesel Boom Archive

[2011](#) [2012](#) [2013](#) [2014](#) [2015](#) [2016](#) [2017](#) [2018](#) [2019](#) [2020](#) [2021](#) [2022](#) [2023](#) [View All](#)

[Biodiesel Feedstock Trends over 2011-2022](#)

December 11, 2023 Maria Gerveni, Todd Hubbs, and Scott Irwin

[The Biodiesel Profitability Squeeze that Wasn't](#)

November 13, 2023 Scott Irwin

[Is the U.S. Renewable Fuel Standard in Danger of Going Over a RIN Cliff?](#)

May 31, 2023 Maria Gerveni, Todd Hubbs, and Scott Irwin

[Overview of the RIN Compliance System and Pricing of RINs for the U.S. Renewable Fuel Standard](#)

May 24, 2023 Maria Gerveni, Todd Hubbs, and Scott Irwin

[Overview of the U.S. Renewable Fuel Standard](#)

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[The Biodiesel Profitability Squeeze](#)

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[Renewable Diesel and Biodiesel Feedstock Trends over 2011-2022](#)

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[Renewable Diesel and Biodiesel Usage Trends over 2011-2022](#)

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[Renewable Diesel and Biodiesel Supply Trends over 2011-2022](#)

April 12, 2023 Maria Gerveni, Todd Hubbs, and Scott Irwin

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Crop Risk Management for 2024 Webinar Series

Monday February 19
and Monday March 4

This two-part webinar series will provide an in-depth analysis of risk management decisions and strategies for the 2024 crop year. Lower commodity prices are expected for the 2024 crop and marketing years compared to the past 3 years, resulting in a much tighter margin environment and increased importance of risk management decisions.



go.illinois.edu/CropRisk2024



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Cultivating Caution

A Monthly Guide to Farm Safety & Health



A monthly webinar series
from farmdoc and the
UIUC Agricultural Safety
& Health Program.

Join University of Illinois experts monthly as they share the latest research and recommendations for staying safe and healthy while working in agriculture. Topics will cover machinery safety, infectious diseases, grain hazards, tractor safety, heat illness, and mental health. The webinar series provides practical tips and best practices for Illinois farmers, ranchers, and agricultural workers to protect themselves, their families, and their operations.

Register for this free webinar series at Go.Illinois.edu/SafeAg2024

The farmdoc Team, WILLAg.org, and University of Illinois Extension are proud to present the All Day Ag Outlook. This meeting has been an annual tradition in the month of March at the Beef House in Covington, Indiana since 1991.



The poster features a dark blue background with white and orange text. At the top left, it says 'Tuesday March 5, 2024'. At the top right is the Beef House RESTAURANT logo, which includes a circular image of a beef head. The main title 'All Day Ag Outlook' is in large white font. Below it, logos for Illinois Extension (University of Illinois Urbana-Champaign), willag.org, and farmdoc are displayed. At the bottom, the logo for the College of Agricultural, Consumer & Environmental Sciences (University of Illinois Urbana-Champaign) is shown.

Tuesday
March 5, 2024

Beef House
RESTAURANT

All Day Ag Outlook

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UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN willag.org farmdoc

I | College of Agricultural,
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This year's event is scheduled for Tuesday, March 5, 2024.

The **doors open at 7:30 a.m. central / 8:30 a.m. eastern time** and includes both coffee and rolls in the morning and a Beef House lunch.

TIAA

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