



Clean Fuels
ALLIANCE AMERICA

CLEAN FUELS OUTLOOK

IRFA Conference – February 2025



Clean Fuels
ALLIANCE AMERICA

CLEAN FUELS' VISION

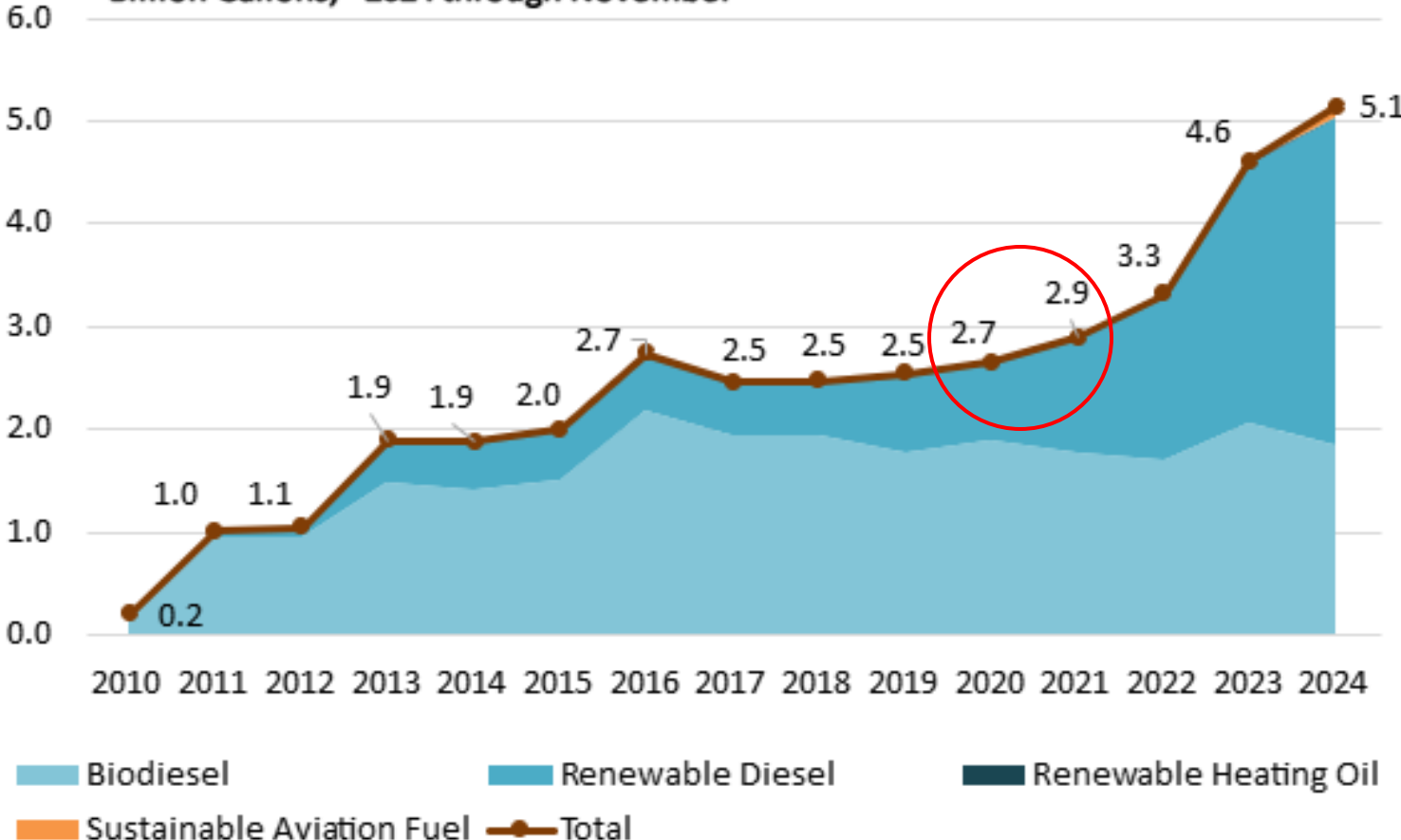
Biodiesel, renewable diesel, and sustainable aviation fuel will be recognized as mainstream low-carbon fuel options with superior performance and emission characteristics. In on-road, off-road, air transportation, electricity generation, and home heating applications, use *will exceed six billion gallons by 2030*, eliminating over 50 million metric tons of CO2 equivalent greenhouse gas emissions annually. With advancements in feedstock, use will reach 15 billion gallons by 2050.

Launched in 2020

BBD CONSUMPTION ON THE RISE

US Biomass-Based Diesel Consumption

Billion Gallons, *2024 through November



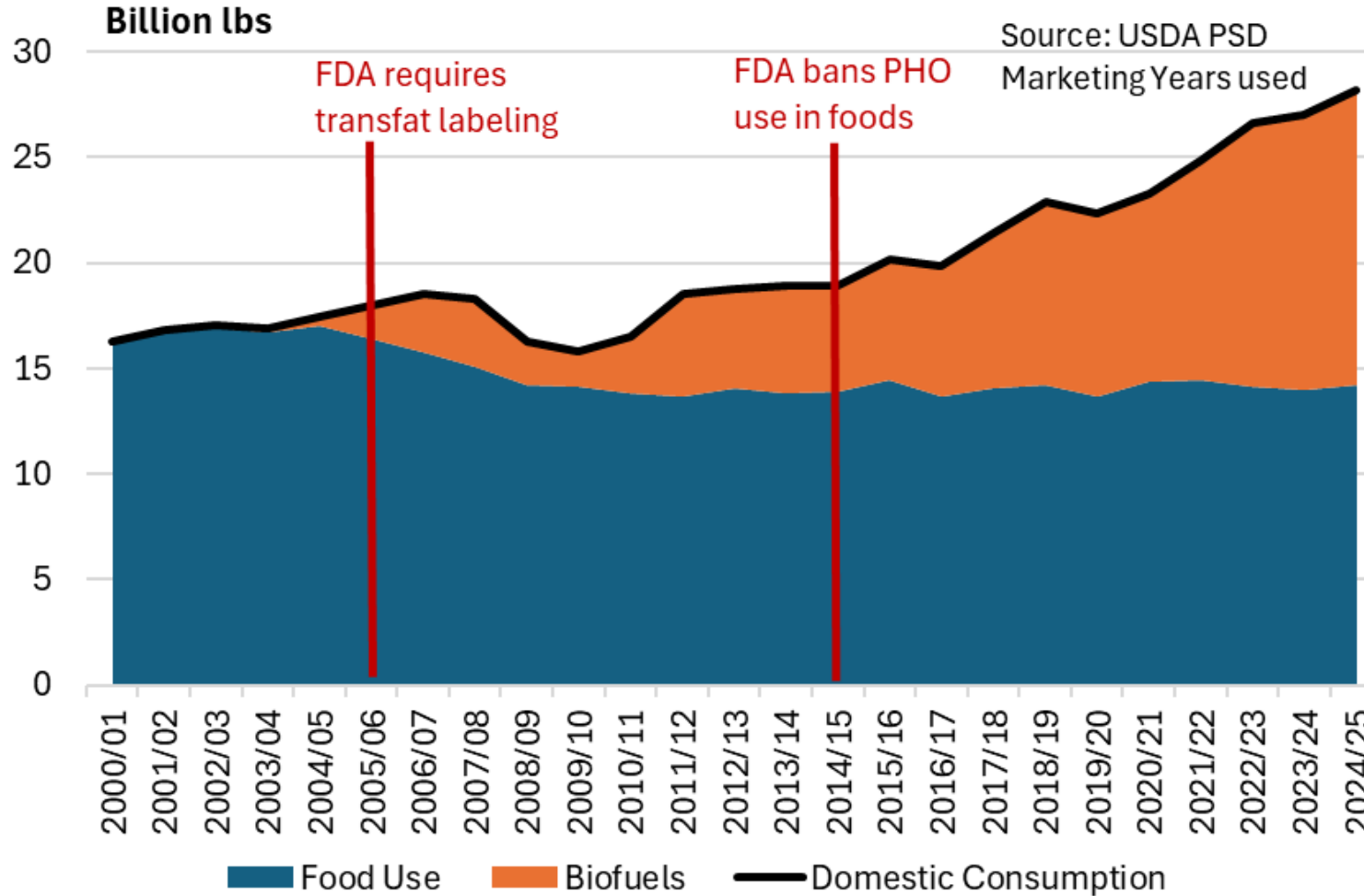
Growth between 2020 and 2021 equal to the entire industry in 2010



Clean Fuels
ALLIANCE AMERICA

DOMESTIC SBO CONSUMPTION WILL CONTINUE TO GROW DUE TO BIOFUELS

Domestic SBO Consumption Breakdown



U.S. Soybeans Supply and Demand

Item	2023/2024 estimate	2024/2025 forecast	Change from July 12	Change from 2023/2024
Planted area (million acres)	83.6	87.1	1.0	3.5
Harvested area (million acres)	82.4	86.3	1.0	3.9
Yield (bushels per acre)	50.6	53.2	1.2	2.6
----- Million bushels -----				
Beginning stocks	264	345	**	81
Production	4,165	4,589	154	425
Imports	20	15	--	-5
Total supply	4,449	4,949	154	500
Crush	2,290	2,425	--	135
Seed and Residual	114	114	4	**
Domestic use	2,404	2,539	4	135
Exports	1,700	1,850	25	150
Total use	4,104	4,389	29	285
Ending stocks	345	560	125	215
----- Percent -----				
Stocks to use ratio	8.4	12.8	2.8	4.4
----- Dollars per bushel -----				
Average market price	12.50	10.80	-0.30	-1.70

-- No change. ** Rounds to zero.

August 12, 2024

- Soybean acres and yields up YOY
- Crush running at record levels, near capacity (2.37 billion bu/yr, per Gordon Denny)
- Biofuels will take on additional soybean oil as crush expands, while keeping food consumption whole

BIOFUELS PULLING ALL AVAILABLE SBO

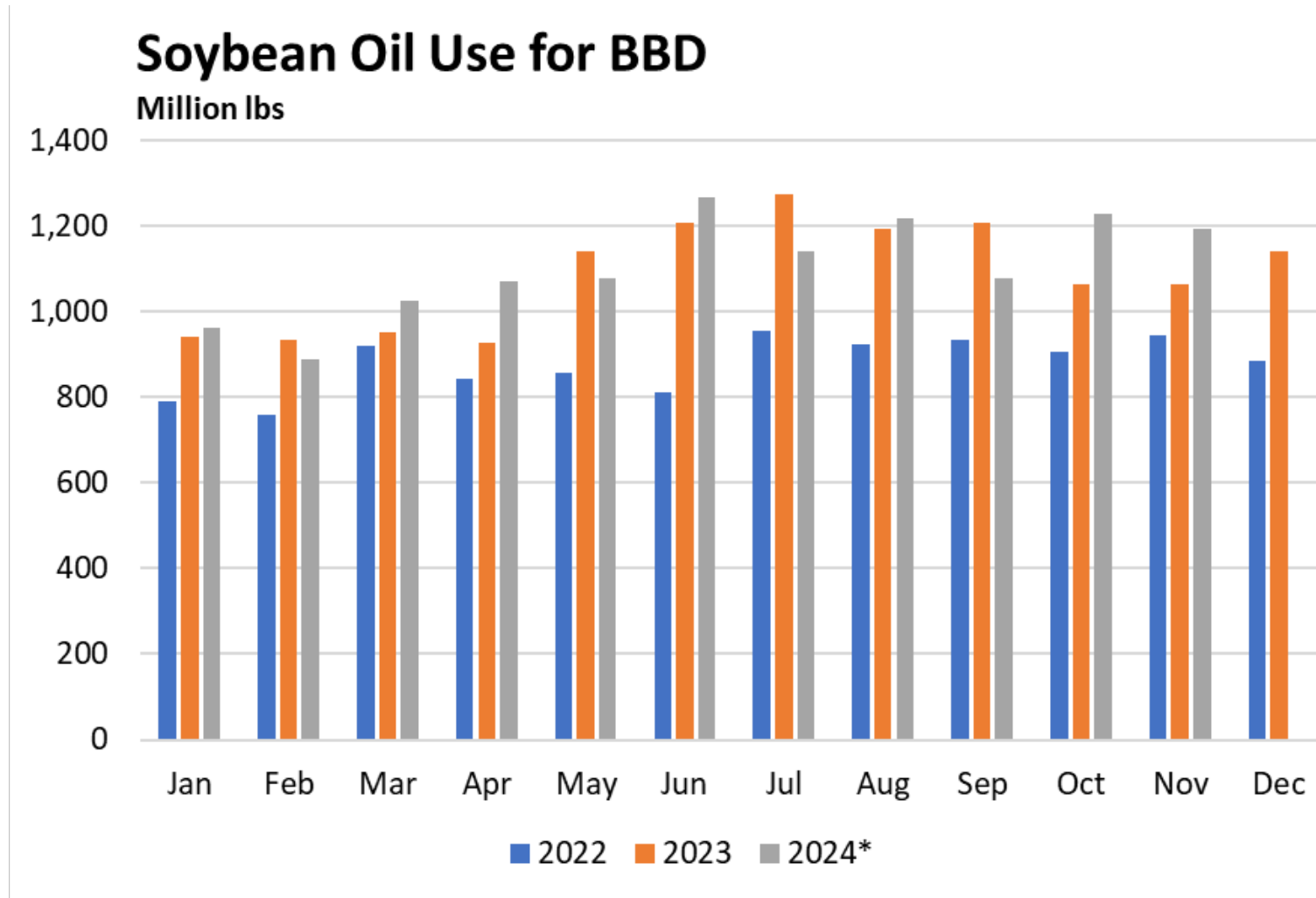
August 2024

WASDE - 651 - 15

U.S. Soybeans and Products Supply and Use (Domestic Measure) 1/

SOYBEAN OIL	2023/24 Est.	2024/25 Proj.	2024/25 Proj.
		Jul	Aug
<i>Million Pounds</i>			
Beginning Stocks	1607	1612	1612
Production 4/	26955	28515	28515
Imports	600	450	450
Supply, Total	29162	30577	30577
Domestic Disappearance	26900	28200	28200
Biofuel 3/	12900	14000	14000
Food, Feed & other Industrial	14000	14200	14200
Exports	650	600	600
Use, Total	27550	28800	28800
Ending stocks	1612	1777	1777
Avg. Price (c/lb) 2/	48	42	42

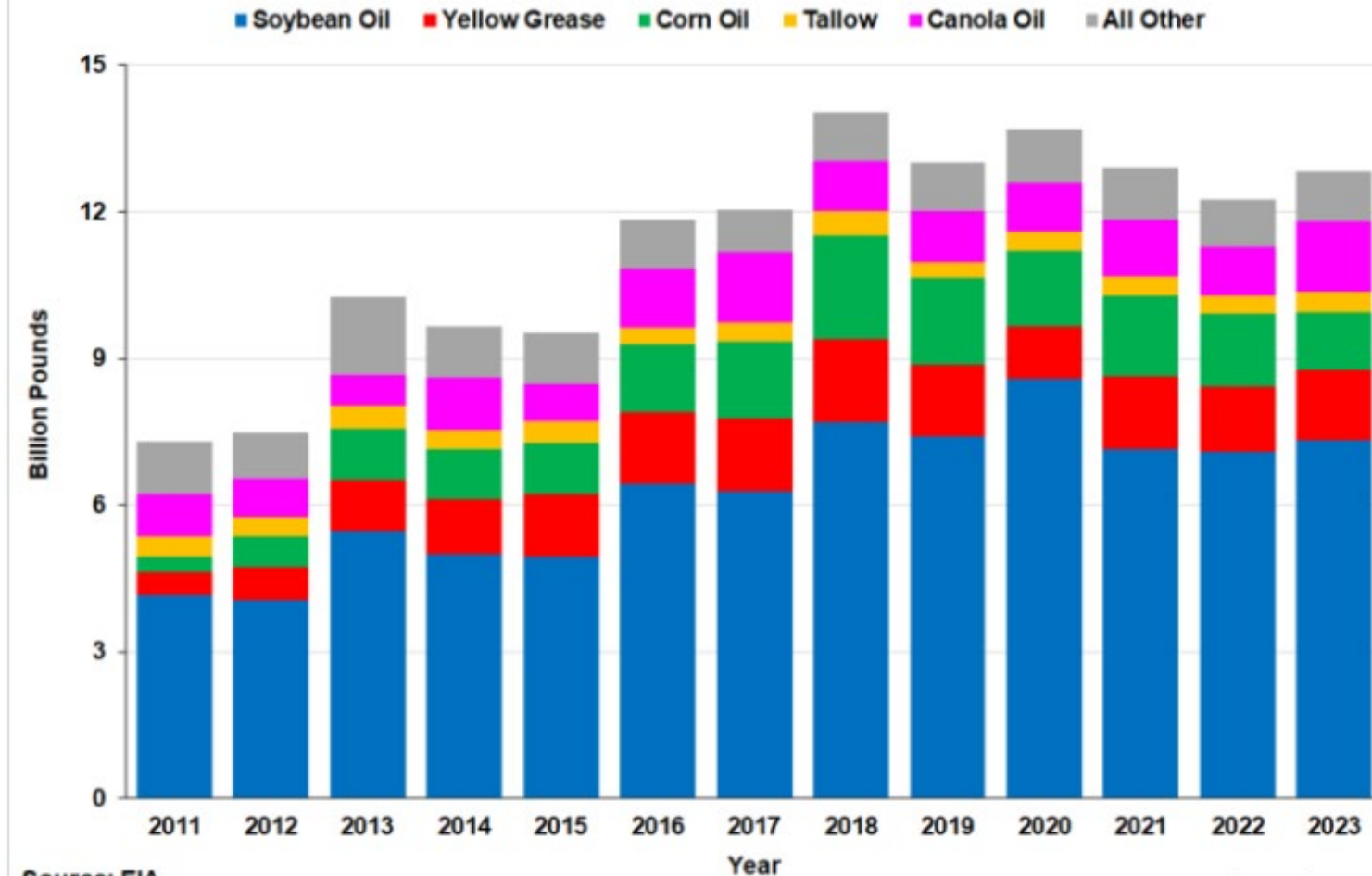
SBO USE IN BIOFUELS AT RECORD PACE TO CONTINUE THROUGH END OF YEAR





BIODIESEL BY FEEDSTOCK

Figure 1. Composition of Feedstock Usage for Annual Production of U.S. FAME Biodiesel by Volume and Major Feedstock Type, 2011 - 2023

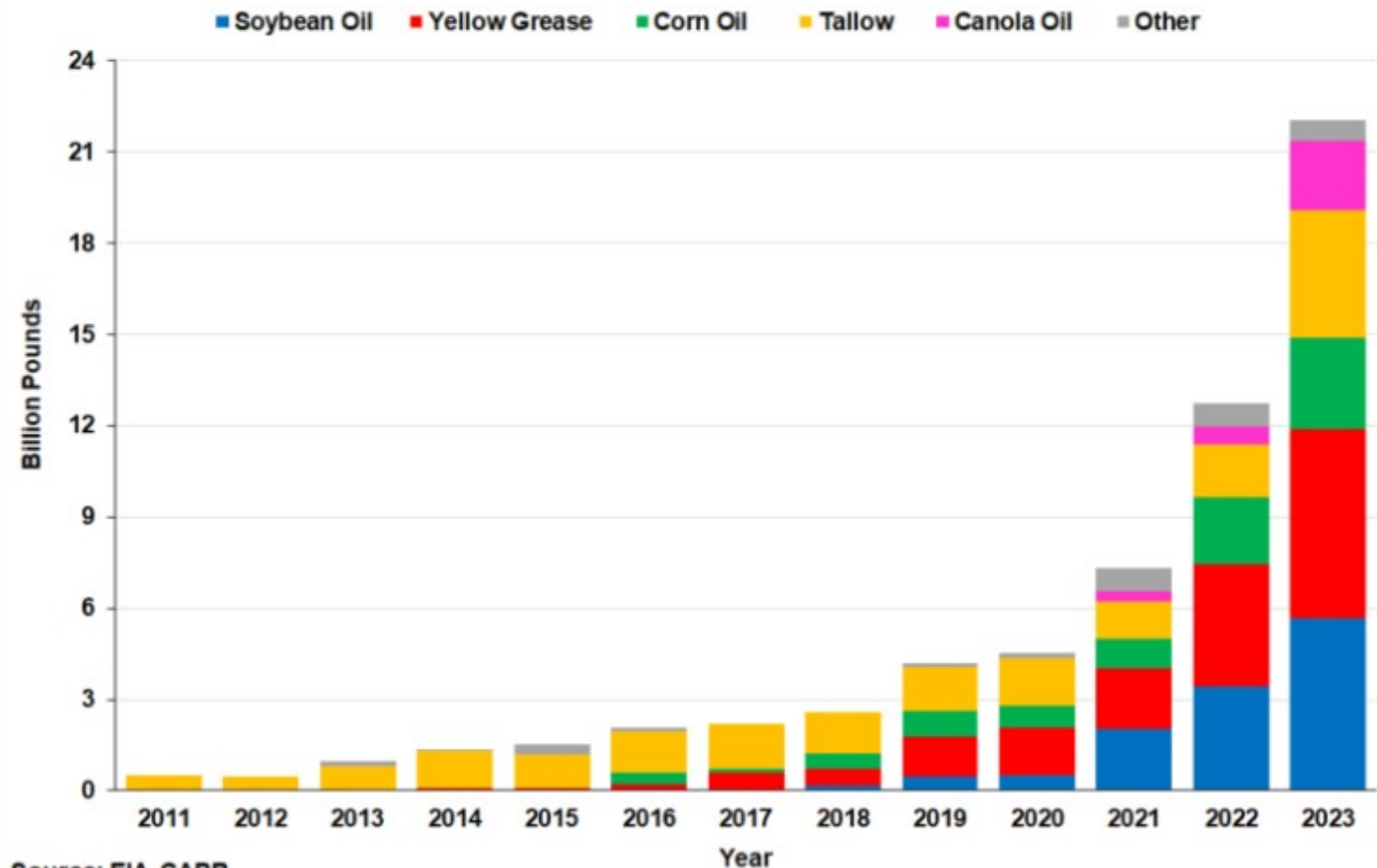


Source: EIA



RENEWABLE DIESEL BY FEEDSTOCK

Figure 3. Composition of Feedstock Usage for Annual Production of U.S. Renewable Diesel by Volume and Major Feedstock Type, 2011 - 2023

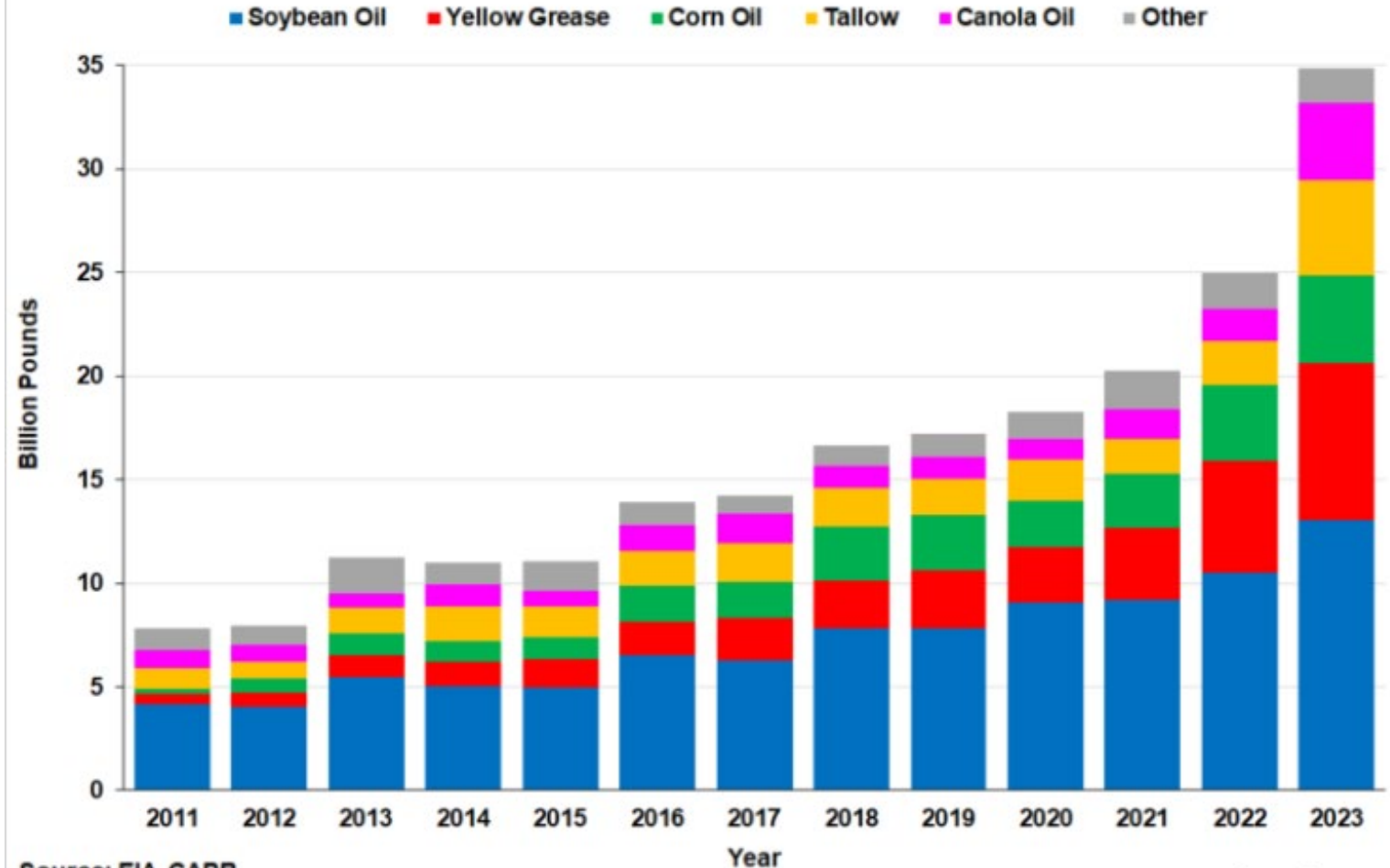


Source: EIA, CARB



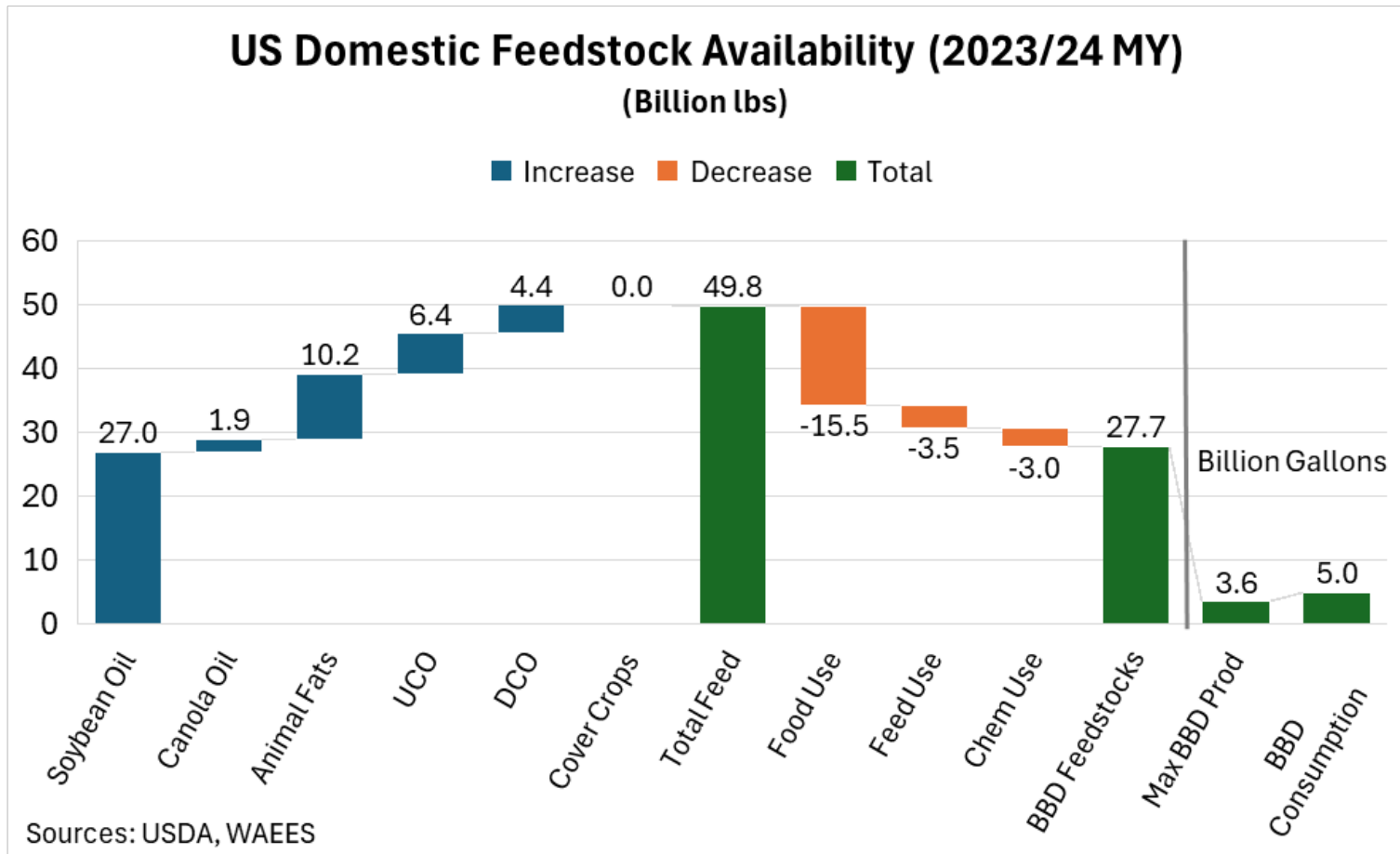
BIOMASS-BASED DIESEL BY FEEDSTOCK

Figure 5. Composition of Feedstock Usage for Annual Production of U.S. Biomass-Based Diesel by Volume and Major Feedstock Type, 2011 - 2023



Source: EIA, CARB

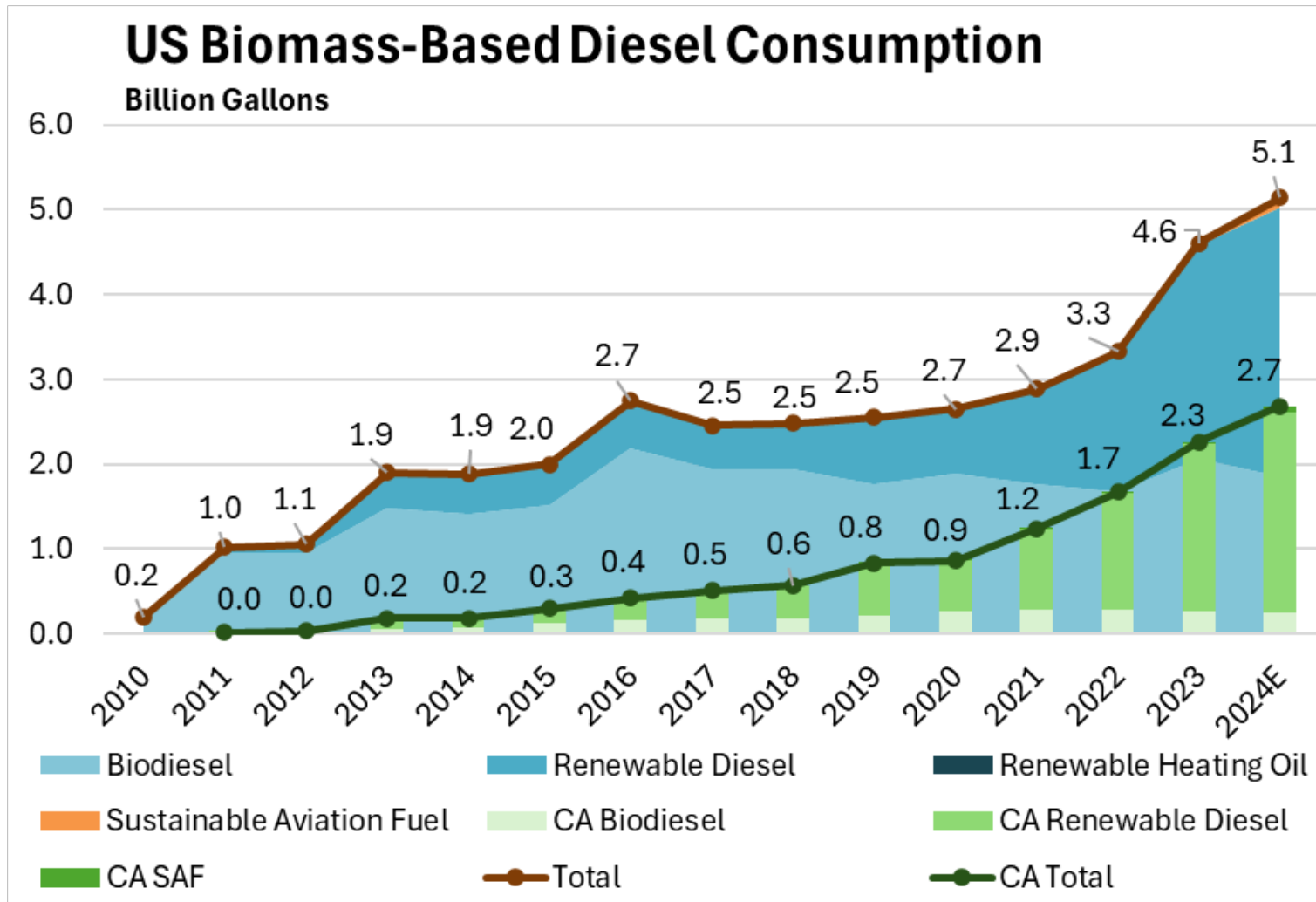
US DOMESTIC FEEDSTOCK DISCUSSION



- There are significant domestic feedstocks, but BBD does not want to take away from food and feed usage
- Current domestic supplies do not meet current domestic BBD demand



BBD CONSUMPTION ON THE RISE



- California plays a key part in BBD demand
- About half of domestic BBD demand since 2021 is in California



Clean Fuels
ALLIANCE AMERICA

CLEAN FUELS CONTINUES TO INVEST IN CI IMPROVEMENTS FOR SOY



- ▶ Provided detailed feedback to USDA on climate smart ag on how to reduce soy CI scores,
 - ▶ Rewards farmers for changing land management practices in different regions
- ▶ Helping NOPA gather the right data to lower soy CI scores in underlying models (GREET)
- ▶ Supporting research on soy's induced land use change (ILUC) modeling for more than 10 years
 - ▶ As a result, soy's ILUC score is **18 points lower** for 40B SAF GREET than LCFS
- ▶ Putting money into training and resources to make ILUC values better in current programs and suggesting new methods for future programs
- ▶ Directing USDA to update its CI research on soy biodiesel and renewable diesel – the first update in a decade (through the Farm Bill)

CARBON INTENSITY SCORES ARE BECOMING MORE IMPORTANT IN THE MARKET

- ▶ Lower CI scores have always created more value in LCFS markets moving the lowest CI fuels to the West Coast
 - ▶ Depending on credit price, waste oil BD can earn \$0.50-\$1.00/gallon more in LCFS markets
- ▶ Switch from BTC to § 45Z doubles down on valuing lower CI scores
 - ▶ Tax credit provides additional 2¢ per CI point reduction per gallon of non-aviation fuel and 3¢ per gallon for SAF
- ▶ We all must work together to improve, update, and defend soy's ability to reduce carbon emissions

Soy Indirect Land Use Change (ILUC) penalty costs 35-75¢ **per gallon** depending on credit price for LCFS and could cost 15-35¢ **per gallon** for the tax credits

These penalties add up for every gallon of fuel



Clean Fuels
ALLIANCE AMERICA

§45Z GUIDANCE STATUS

Treasury

- “Notice of Intent to Propose Rules.”
 - Rules are left to Trump administration.
- Eligible fuel table and credit calculation methodology.
 - Specific fuel and feedstock CI scores come from 45ZCF-GREET.
- Reliance – the notice is “informal guidance.”
 - Publication in Internal Revenue Bulletin would make it “formal” – reliable precedent.
 - For now, rely on advice from your tax counsel.

Dept. of Energy

- Maintains 45ZCF-GREET model.
 - Imported UCO, soy, and other feedstocks not included in 45ZCF-GREET.
 - Tallow and Canadian canola included.



Clean Fuels
ALLIANCE AMERICA

REPRESENTATIVE 45ZCF-GREET CI SCORE RANGES

Fuel\Feedstock	U.S. Soybean	U.S./ Canada Canola	Tallow	U.S. DCO	U.S. UCO	Winter Camelina	Winter Carinata	Winter Pennycress
Biodiesel	30.6	50.5	13.7	8.2	13.3	40.3	26.9	26.7
	33.7	53.5	20.6	11.2	20.3	43.3	29.9	29.7
Renewable Diesel	38.7	57.3	18.1	12.3	17.7	46.3	31.8	31.6
	41.2	59.8	20.6	14.8	20.2	48.8	34.3	34.1
Sustainable Aviation Fuel	40.3	59.3	18.1	12.2	17.7	48.1	33.4	33.1
	42.3	61.3	20.1	14.2	19.7	50.1	35.4	35.1



ESTIMATED \$45Z VALUES

Fuel/Feedstock	U.S. Soybean	U.S./ Canada Canola	Tallow	U.S. DCO	U.S. UCO	Winter Camelina	Winter Carinata	Winter Pennycress
Biodiesel	\$0.30 or \$0.40	DQ	\$0.60 or \$0.70	\$0.80	\$0.60 or \$0.70	\$0.10 or \$0.20	\$0.40 or \$0.50	\$0.40 or \$0.50
Renewable Diesel	\$0.20	DQ	\$0.60	\$0.70 or \$0.80	\$0.60	DQ or \$0.10	\$0.30 or \$0.40	\$0.30 or \$0.40
Sustainable Aviation Fuel	\$0.35	DQ	\$1.05	\$1.23 or \$1.40	\$1.05	DQ	\$0.53	\$0.53



WAYS & MEANS EXPLORING CHANGES TO §45Z

- Clean Fuels' key tax principles:
 - Certainty and availability equal to length of other tax incentives.
 - Maintain production tax credit.
 - Maintain exclusion of co-processing.
 - Any modifications should not expand disparity in values for on-road/aviation.
 - Eliminate or reduce disparity in treatment of feedstocks.
- Additional considerations:
 - GREET model updates – reexamine indirect land use change scores.



RENEWABLE FUEL STANDARD

- EIA: BBD and advanced volumes for 2023-2025 “were set significantly lower than production trends.”
- EPA: “advanced and total RIN generation for 2024 will exceed the required volumes by over 2.6 billion RINs and 2.0 billion RINs, respectively.”

Year	D4 RVO (billion gallons)	D5 RVO (billion RINs)	D4 Gallons Produced (billion gallons)	D4 RINs Available
2023	2.82	5.94	5.0	6.8
2024	3.04	6.54	5.7	8.2
2025	3.35	7.33		



Raising the RFS Volumes

- ▶ Petition for rulemaking or reconsideration re: 2024-2025 volumes.
- ▶ Notice of intent to sue for failure to issue timely 2026 RFS volumes.
- ▶ Letters from industry stakeholders – including railroads – as well as House and Senate champions.
- ▶ Support pathways for soy renewable diesel co-products – naphtha and LPG.
- ▶ Contracting WAEES to model 2026-2028 RFS volumes.
 - ▶ Include scenarios for 45Z credit and availability of foreign feedstocks.

United States Senate
WASHINGTON, DC 20510

June 11, 2024

The Honorable Michael S. Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, D.C. 20460



the success of the Renewable Fuel Standard (RFS), including 2023 standards set last June. As the Environmental Protection Agency for 2026, we encourage you to raise RFS volumes for 1 biofuels to levels that are consistent with production and valent increase in total volumes to preserve demand across all

gy security depend on the widespread production, availability, 1 particularly critical role in emissions reduction for ding aviation, shipping, rail, and trucking — while opening up an farmers. A strong RFS and broad availability of 1 bolster the domestic fuel supply and are critical for ensuring ade in decarbonizing our roads, seas, railways, and skies.

mass-based diesel and other advanced biofuels to reduce 1 practice, biomass-based diesel reduces lifecycle carbon on average. Increased production and availability of 1 ect benefit to consumers at the pump. It would also support 1e assistance to fall while the most cost of production fuel

The Hon. Michael S. Regan, Administrator
Environmental Protection Agency
Office of the Administrator 1101A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

April 29, 2024

Dear Administrator Regan,

Collectively, we represent hundreds of domestic businesses em; represent low-carbon fuel producers, feedstock providers, and c a broad spectrum. We thank you for your commitment to monit (RFS) program's implementation and ensuring its success.¹

Last year, many of our organizations expressed support for the E use of the RFS to drive production of ultra-low carbon advanced Bioheat® fuel, and sustainable aviation fuels. However, EPA set I we believe are unreasonably low. This decision is negatively imp economy's strength, the domestic renewable fuels industry's fut greenhouse gas emissions today.

¹ EPA Press Office, "EPA Finalizes New Renewable Fuel Standards to St Rural Economy, and Expand Production of Low-Carbon Fuels," June 21

Congress of the United States
Washington, DC 20515

July 10, 2024

The Honorable Michael S. Regan
Administrator
Environmental Protection Agency
Office of the Administrator
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear Administrator Regan,

We appreciate your efforts to support the integrity of the Renewable Fuel Standard (RFS), including the agency's decision to uphold standards set last June.¹ A strong RFS is critical to support clean energy policy and advance American energy security interests. As the Environmental Protection Agency considers Renewable Volume Obligations for 2026, we encourage you to support volumes for biomass-based diesel and advanced biofuels that fully account for availability and production capacity, while providing an equivalent increase for overall renewable fuel volumes.

Increasing the production, availability, and use of advanced biofuels is crucial to meeting America's decarbonization goals in the transportation sector and shoring up our domestic energy supply chain. Producing advanced biofuels in the United States promotes economic opportunities for communities across the country and increases market access for our nation's farmers. A strong RFS and availability of homegrown agricultural feedstocks are crucial to meeting the nation's goal for new advanced biofuels for sustainable aviation (SAF), maritime, rail, home heating, and off-road heavy-duty markets. To meet near-term decarbonization goals, these new markets rely on the RFS to drive growth and increase the availability of advanced biofuels.

The RFS volumes your agency set last June for 2023-2025 are the highest in history, but it is increasingly apparent that they should have been set significantly higher across the board to reflect our country's increased production capacity for biomass-based diesel and advanced biofuels. As the Energy Information Administration noted last fall, "the RVOs for biomass-based diesel and advanced biofuel were set significantly lower than production trends."² This triggered a collapse in the value of RFS credits, or Renewable Identification Numbers, that continues to stifle the growth of critical renewable fuels markets today.³

¹ EPA, Denial of AFPM Petition for Partial Waiver of 2023 Cellulosic Biofuel Standard, Appendix A, March 2022.

² Market prices for Renewable Fuel Standard credits are falling - U.S. Energy Information Administration (EIA), Oct. 24, 2023.

³ S&P Global, "US RIN's complex collapses in 2023/24, driven by oversupplied biomass-based diesel market," Feb. 1, 2024.



Clean Fuels
ALLIANCE AMERICA

Thank You!

February 2025