



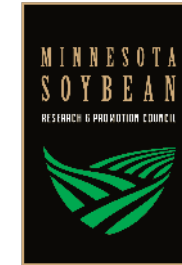
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Donnell Rehagen

CEO, Clean Fuels Alliance America

CLEAN FUELS APPRECIATES THE SUPPORT OF OUR FARMERS AND THEIR CHECKOFFS



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CLEAN FUELS' VISION

(FORMALLY, THE NATIONAL BIODIESEL BOARD)

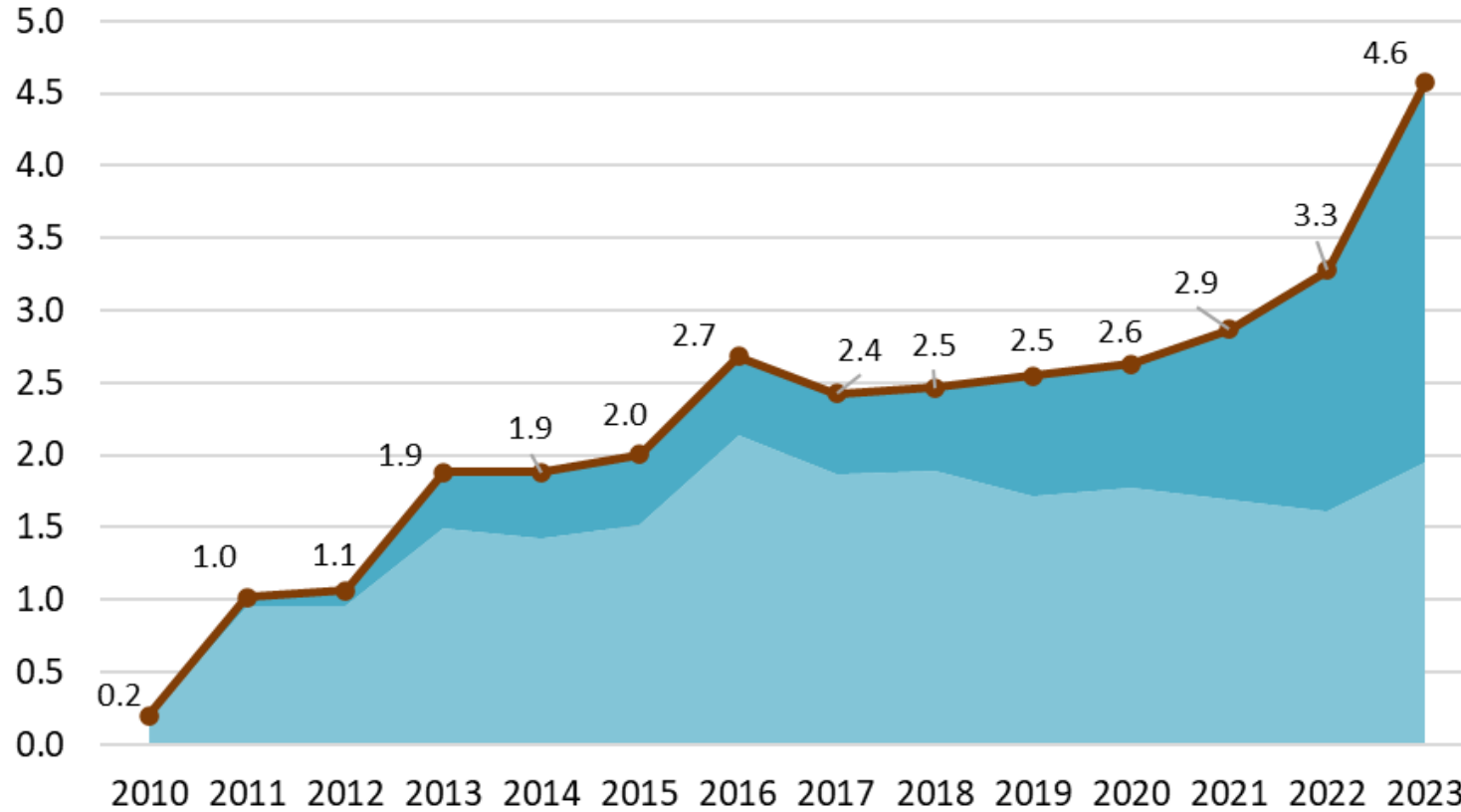
Biodiesel, renewable diesel, and sustainable aviation fuel will be recognized as mainstream low-carbon fuel options with superior performance and emission characteristics. In on-road, off-road, air transportation, electricity generation, and home heating applications, use ***will exceed six billion gallons 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.



CLEAN FUELS' DEMAND SKYROCKETING

US Biomass-Based Diesel Consumption

Billion Gallons



Biodiesel

Renewable Diesel

Renewable Heating Oil

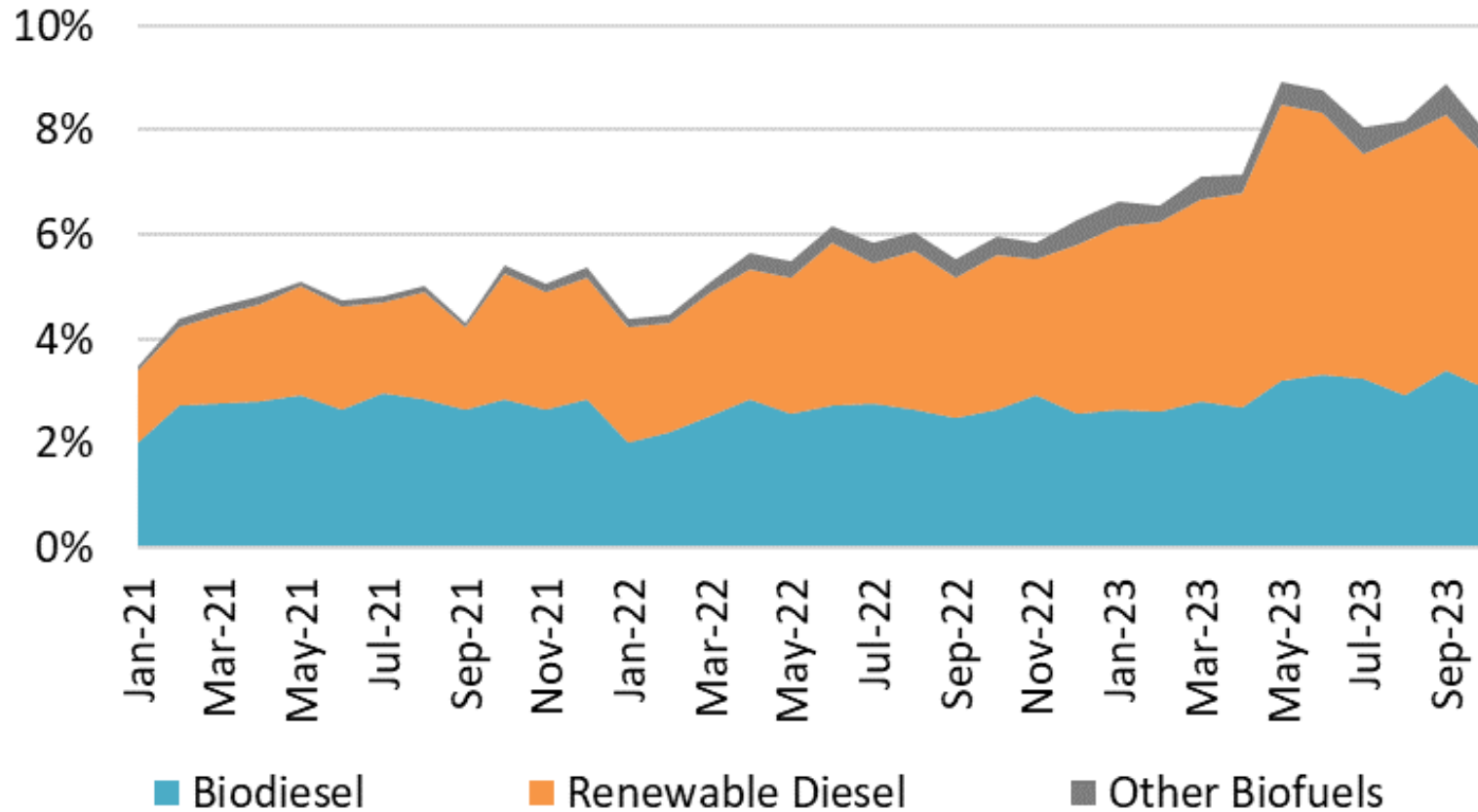
Sustainable Aviation Fuel

Total



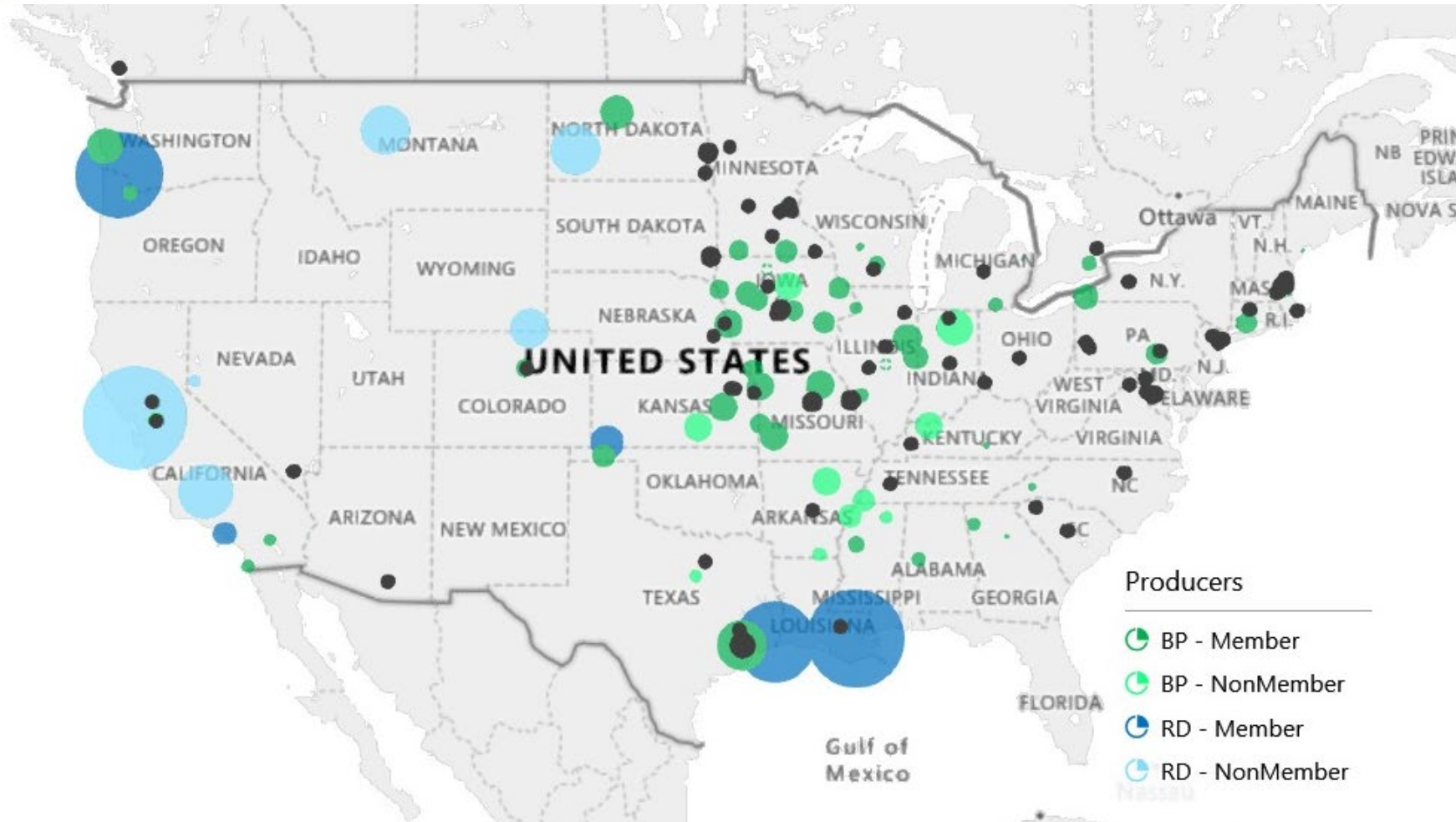
CLEAN FUELS' DEMAND SKYROCKETING

Biofuels Penetration in Distillate Pool





CLEAN FUELS INDUSTRY



RENEWABLE DIESEL PROJECTS



Graphic Source: Ocean Park

- Ocean Park
 - 4.3 B by 2024
- StoneX
 - 2.650 B by 2024
 - 3.6 B by 2025
- MARC-IV
 - 4.6 B by end of 2025



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FEEDSTOCK OPTIONS FOR BIOMASS-BASED DIESEL

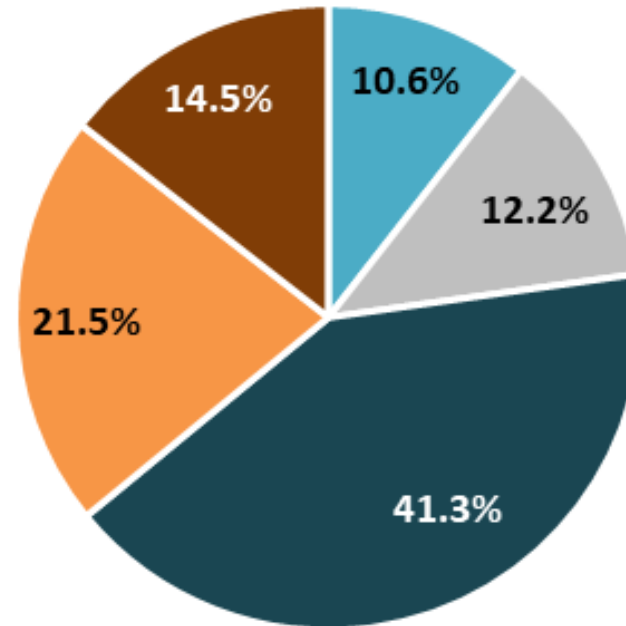
EPA APPROVED PATHWAYS





CLEAN FUELS' FEEDSTOCK POOL

BBD Feedstock Breakdown 2023 through Nov, wt%



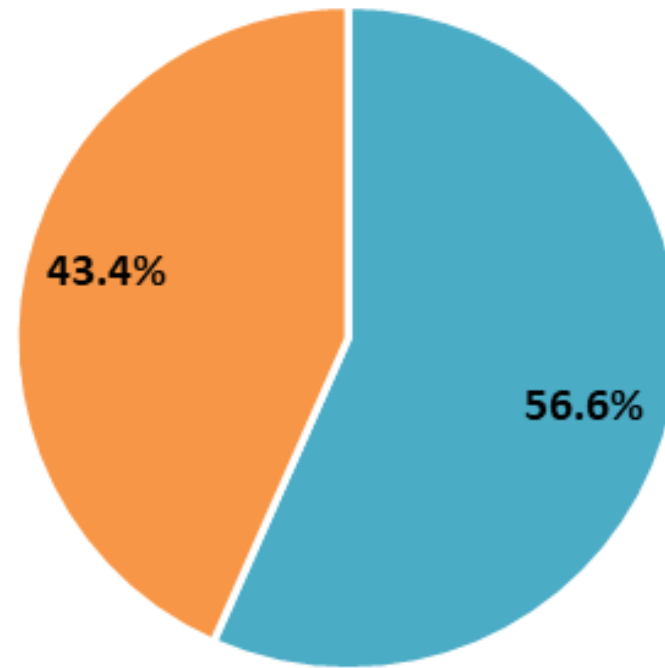
■ Canola Oil ■ DCO ■ Soybean Oil ■ UCO ■ Animal Fats



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CLEAN FUELS' FEEDSTOCK POOL

Soy Oil Breakdown 2023 through Nov



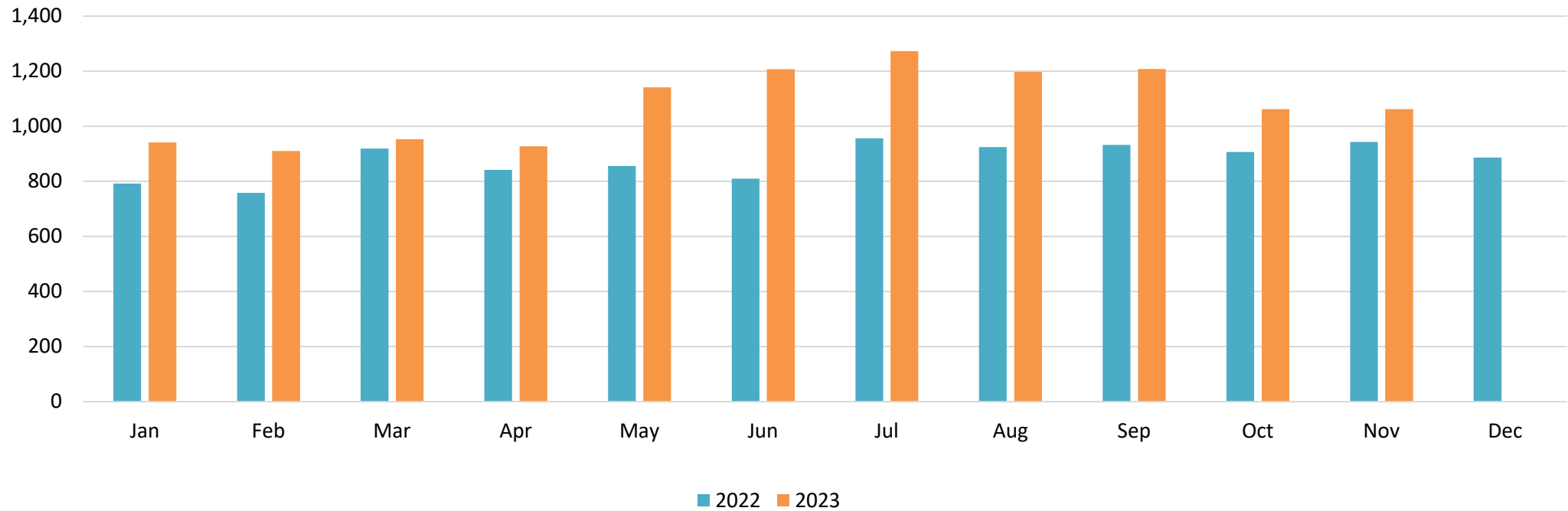
■ BD ■ RD



CLEAN FUELS' FEEDSTOCK POOL

Soybean Oil Use for BBD

Million lbs

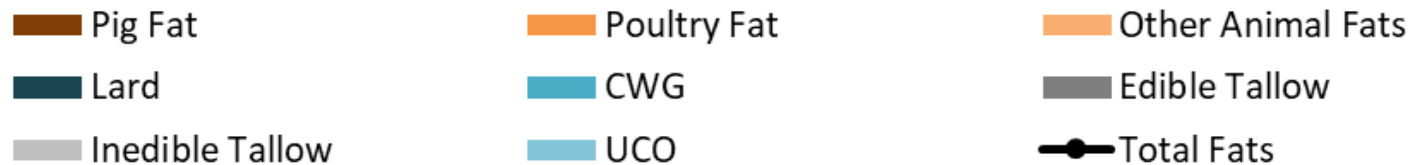
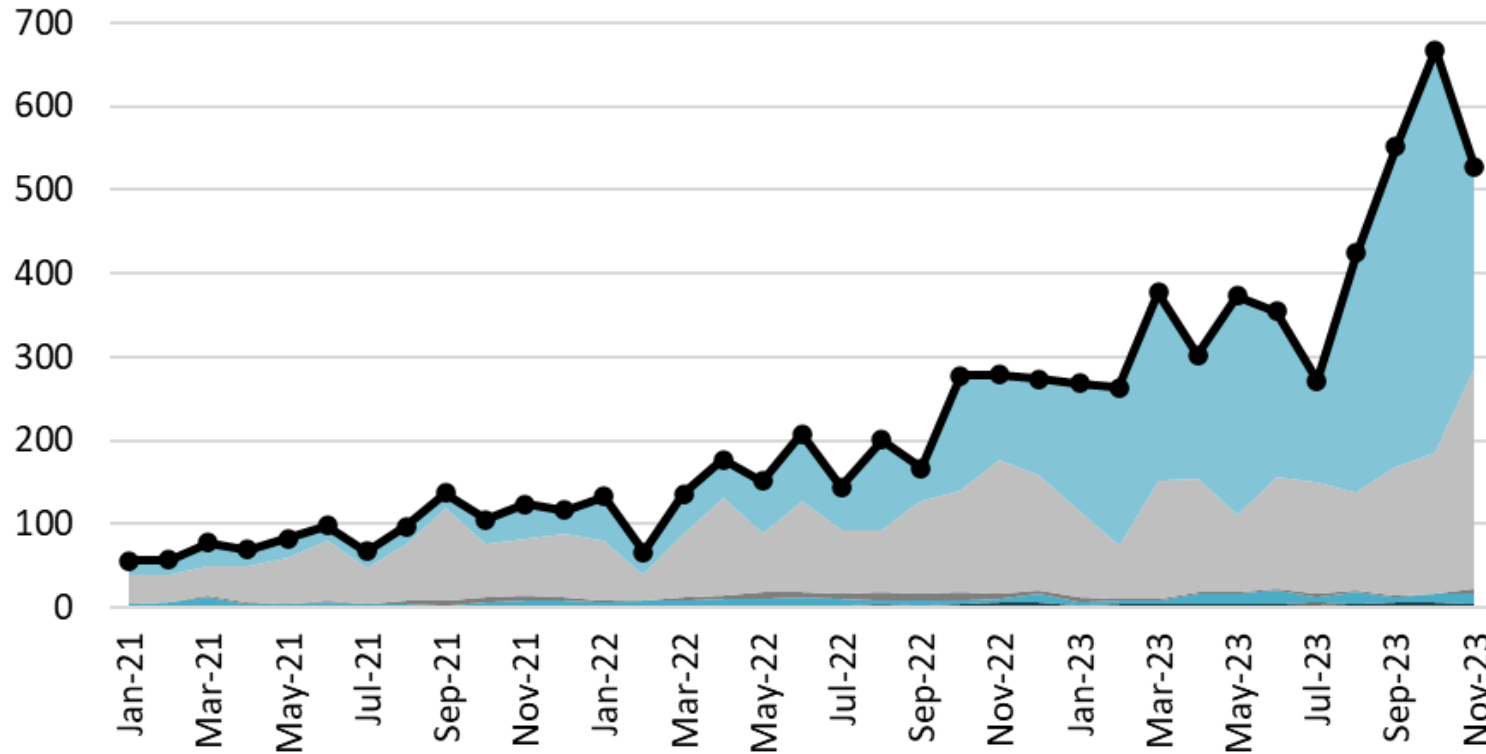




CLEAN FUELS' FEEDSTOCK POOL

Total Animal Fats and Greases Imports

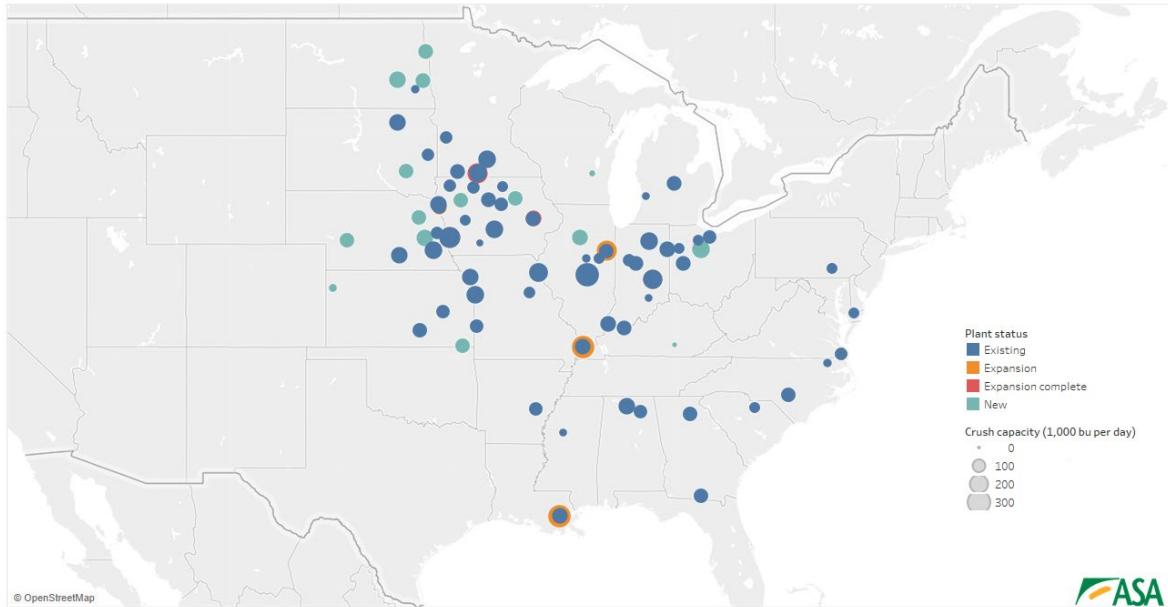
Million lbs



UNITED STATES CRUSH EXPANSION

US Soybean Crush

U.S. Soybean Crush Plants



© OpenStreetMap

Source: Gordon Denny and American Soybean Association



US CRUSH EXPANSION

Additional Oilseed Processing Summary

		Annual (mil bu)	Location	est. completion	type
United States					
Shell Rock	soy	38.5	Shell Rock, IA	2022	new
CHS	soy	17	Fairmont, MN	2022	expansion
Continental Refining Co	soy	4	Somersets, KY	2022	new
Cargill	soy	3.5	Cedar Rapids, IA	2022	expansion
ADM	soy	52.5	Spiritwood, ND	2023	new
Cargill	soy	21	Sydney, OH	2023	expansion
AgProcessing	soy	8	Sergant Bluff, IA	2023	expansion
Platinum Crush, LLC	soy	38.5	Alta, IA	2024	new
Bartlett	soy	38.5	Montgomery Co, KS	2024	new
CGB and MSP Joint Venture	soy	42.5	Casselton, ND	2024	new
Norfolk Crush	soy	38.5	Norfolk, NE	2024	new
Scoular	soy/canola	11	Goodland, KS	2024	recommissioning
Bunge	soy	73.5	Destrehan, LA/Cairo, IL	2025	expansion
Marquis Energy	soy	38.5	Hennepin, IL	2025	new
AgProcessing	soy	50	David City, NE	2025	new
SD Soy Processors	soy	35	Mitchell, SD	2025	new
Incobrasa (1st of 2 phases)	soy	20	Gilman, IL	2025	expansion
Epitome Energy	soy	40	Grand Forks, ND	2026	new
CHS	soy	70	Evansville, WI	2026	new
United Cooperative	soy	7.5	Waupin, WI	2026	new
Louis Dreyfus	soy	60	Upper Sandusky, OH	2026	new
Bunge	soy	4.5	Morristown, IN	2026	expansion

Source: M4 Consulting

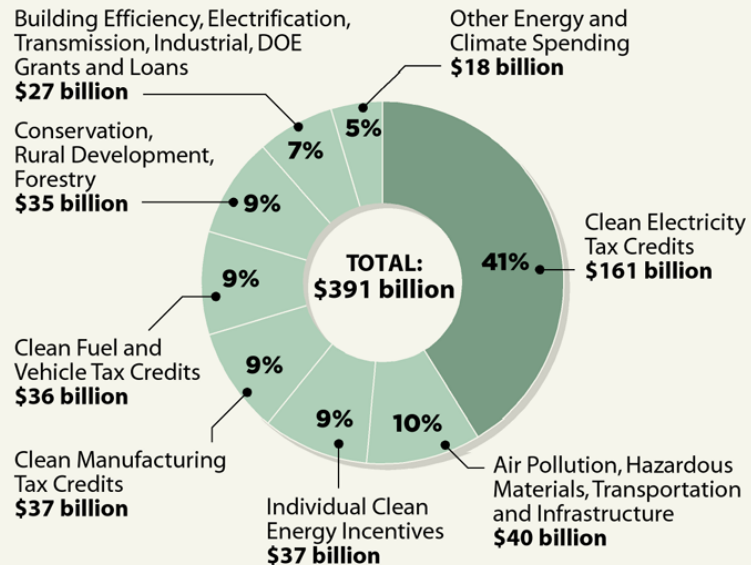
CARBON INTENSITY IMPORTANT PARAMETER OF MULTIPLE PROGRAMS

40B and 45Z Tax Credits

Low Carbon Fuel Standards (LCFS)

What's in the Inflation Reduction Act?

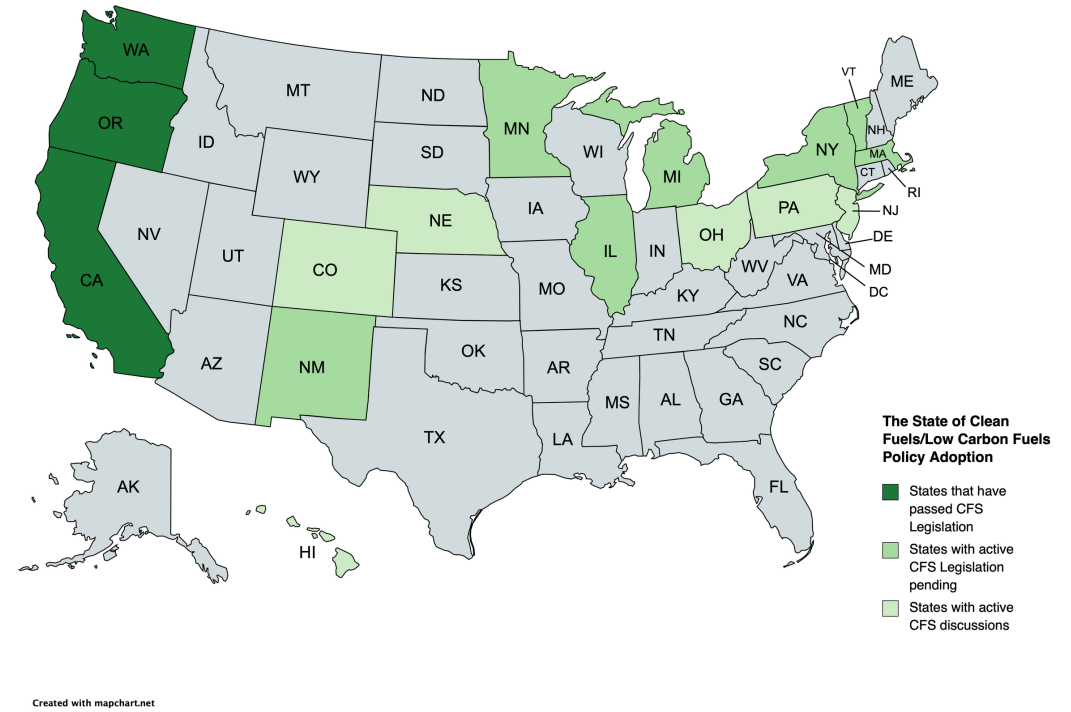
The Congressional Budget Office has estimated that the energy and climate programs in the Inflation Reduction Act will cost \$391 billion. This number is probably incorrect because of uncertainty about spending on tax credits and other factors. Here are the parts that add up to the CBO's total:



NOTE: Percentages do not equal 100% due to rounding.

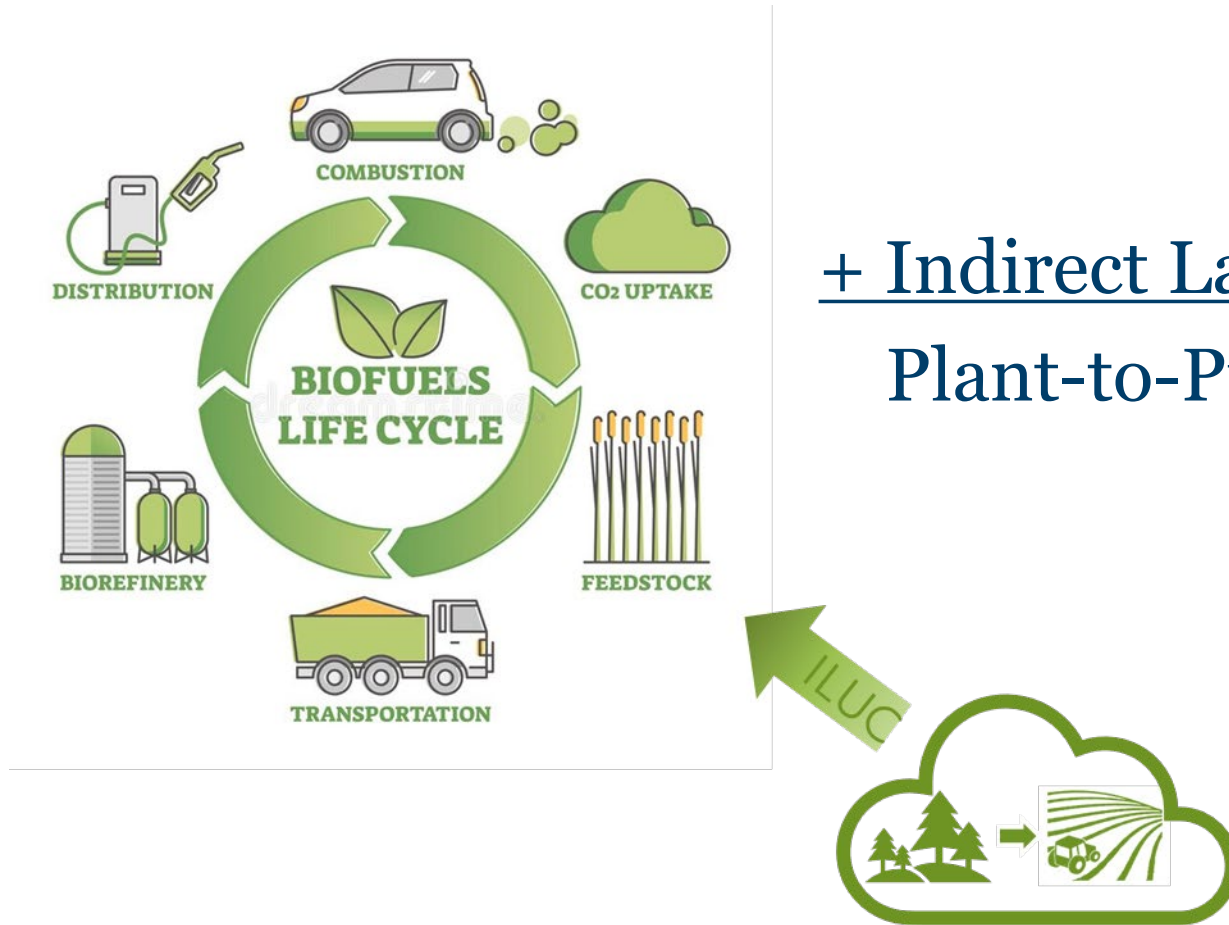
SOURCE: CBO

PAUL HORN / Inside Climate News



LIFE CYCLE EMISSIONS

CARBON INTENSITY OF BIOFUELS



Direct Emissions
+ Indirect Land Use Change Emissions
Plant-to-Pump (aka Well-to-Wheels)

What about
increasing carbon
stocks in soil (SOC)?

HOW CAN BREEDING IMPACT THE CI (CARBON INTENSITY) OF BIOFUELS FROM SOYBEAN OIL?

- Increased Yield—Yield technology
- Increased Oil Content—Breaking the oil/protein inverse relationship
- Decreased Inputs—Maximize yield potential through pest and disease resistance
- Systems Approach—Adding another crop in the rotation
- Increased SOC—Roots and/or improved cover crops lines to increase carbon stocks



HOW CAN WE IMPACT THE CI OF BIOFUELS?



Direct Emissions Associated with Biofuels Production

Climate Smart Practices

Planting



Storage



Transport



Oilseed Crushing



Transport



Fuel Production



Transport





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Thank You!