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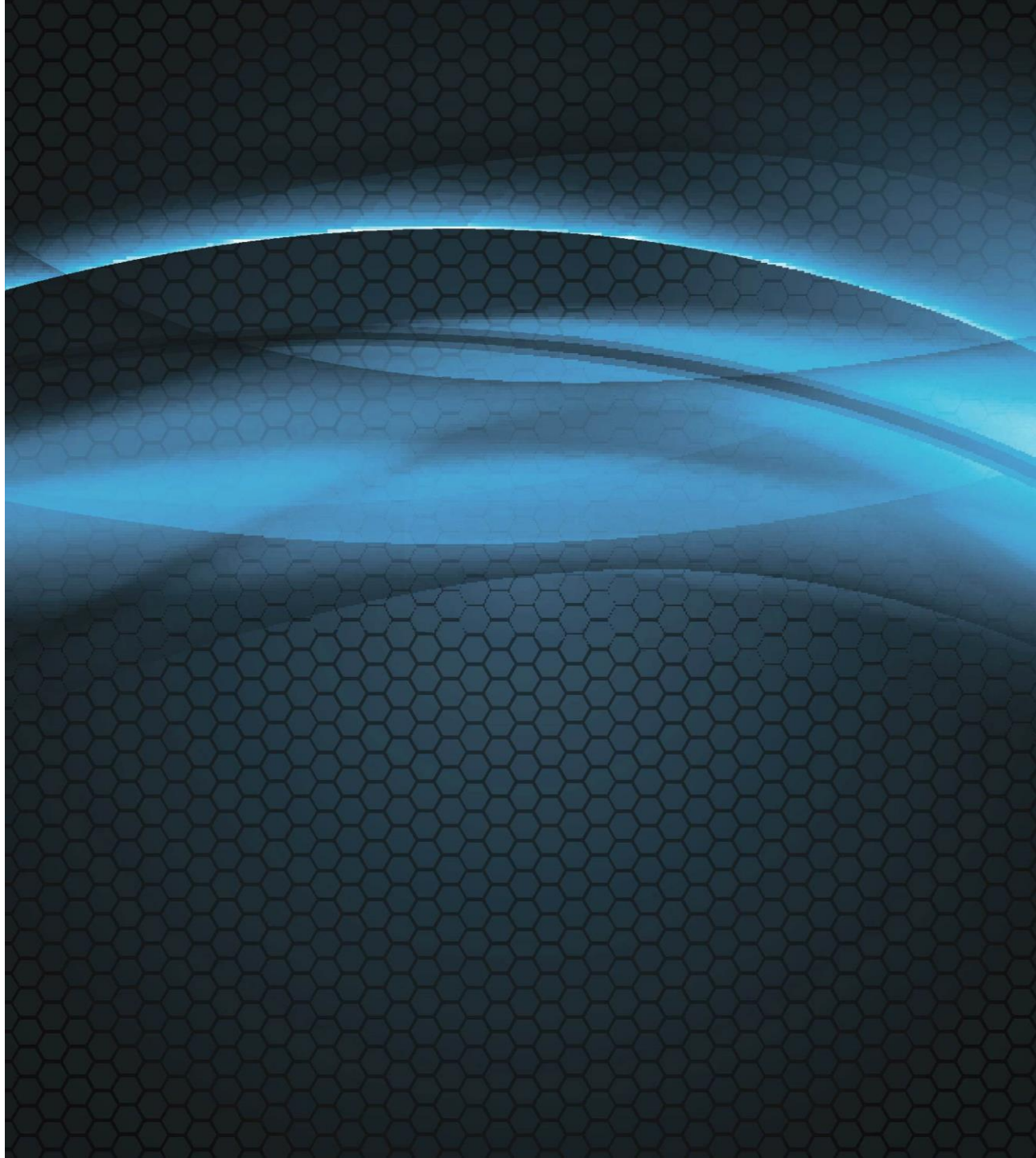
Lipid Feedstocks Outlook to 2030 & RVO Analysis

ABFA – Advanced Biofuels Association

July 2025



Rationale for the study

Initial report:

- With rapidly expanding capacity for biomass-based diesel (BBD) in the U.S. and globally, The Advanced Biofuels Association (ABFA) has commissioned GlobalData Agri (formerly LMC International) to consider a key question:
- **What is the outlook for lipid feedstocks and is there enough to meet the outlook for the U.S. BBD market?**
- Based on projections of U.S. capacity and utilization prepared for the ABFA, U.S. BBD output could range from 5 to 7 billion gallons in 2026-27 with potential to grow further to 2030.

Next steps:

- Given the proposed RVOs for 2026-27, how does the EPA's outlook compare and what will the impact be on the market?

GlobalData Agri (formerly LMC International) is a market intelligence and consulting business specializing in global economic and market analysis of agricultural feedstocks and their major end products, with a special focus on biofuels.

Key Conclusions – feedstock outlook

Global oils and fats supplies are forecast to rise from 294 million metric tons in 2024 to 329 million metric tons in 2027 and further to 354 million metric tons in 2030.

- This is equivalent to 93 billion gallons of renewable diesel in 2027.

In 2027, U.S. biomass-based diesel demand is projected to reach 7 billion gallons*, growing further to around 9.0 billion gallons in 2030.

Lipid feedstock supplies available for use in the U.S., after taking demand for food and feed into account, will be more than enough to meet this forecast demand by 2030.

*Based on the outlook for U.S. BBD production from Lipow Oil Associates.

Key Conclusions – RVO analysis

The EPA's outlook that 4.3 and 4.6 billion gallons of BBD can be produced domestically from domestic feedstocks in 2026 and 2027 respectively aligns with our outlook for U.S. feedstock availability.

The majority of growth in BBD supply can come from domestic feedstocks but imports will continue to be needed in this sector.

The gulf in value created by the proposed RIN system will push up prices to consumers and limit growth in the BBD market.

Lipid supply outlook to 2030

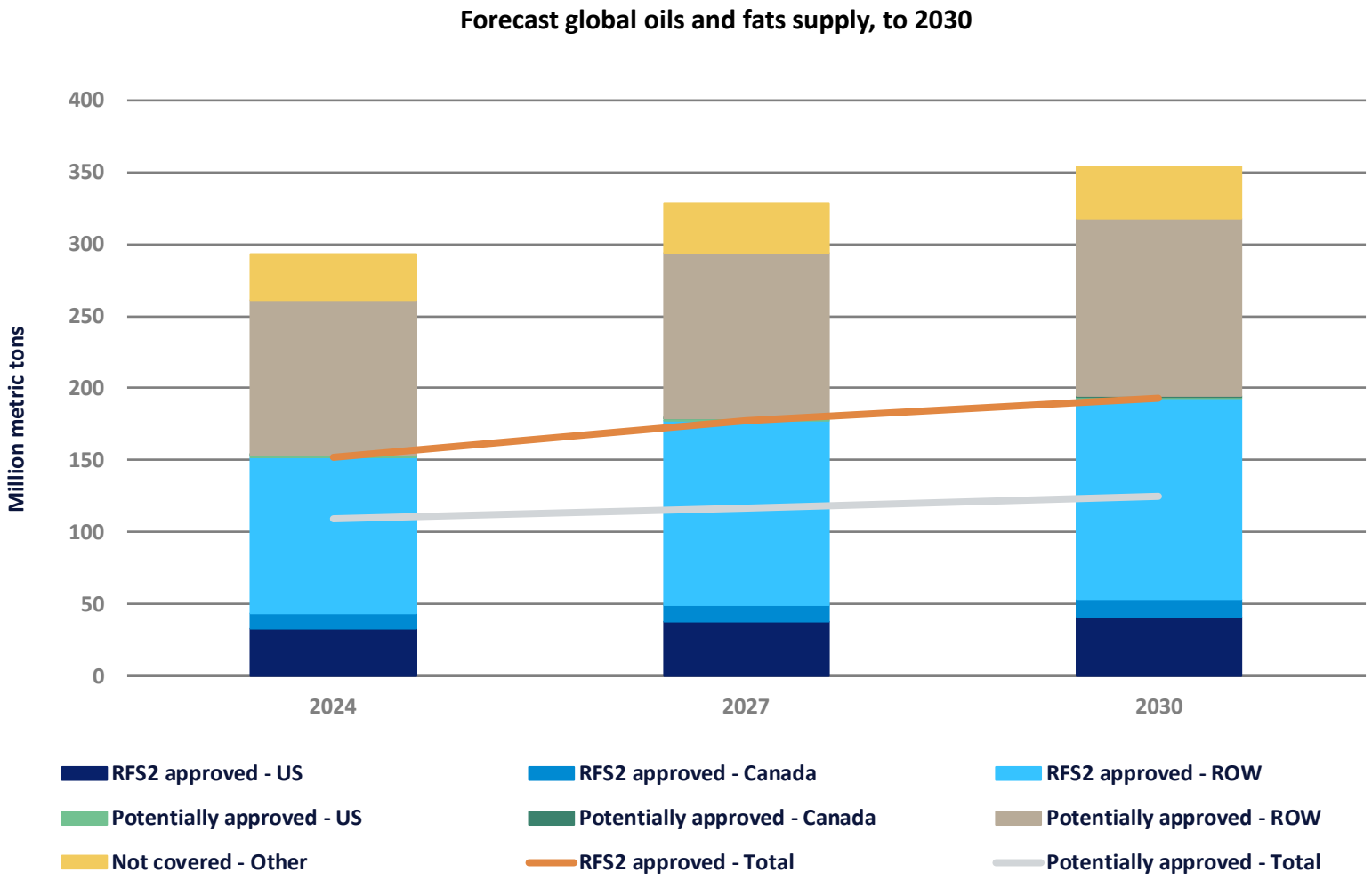
Global lipid supply outlook to 2030

GlobalData Agri forecasts global oils and fats supplies will rise from:

- 294 million metric tons in 2024 to
- 329 million metric tons in 2027 and
- 354 million metric tons in 2030

(including the major oils plus minor oils)

- **In 2027, this will be the equivalent of 93 billion gallons of renewable diesel if all global lipids are converted to RD (rising to 100 billion gallons in 2030.**



Global lipid supply outlook to 2030

Of the total supply, **RFS-approved feedstocks** are rising by 25 million metric tons to 177 million metric tons in 2027 and further to 193 million metric tons in 2030.
This is equivalent to **50 billion gallons** of RD in 2027.

Potentially approved feedstocks are rising by 7 million metric tons to 116 million metric tons in 2027 and to 125 million metric tons in 2030.
This is equivalent to **33 billion gallons** of RD in 2027.

Other oils are rising by 2 million metric tons to 34 million metric tons in 2027, reaching 34 million metric tons in 2030.
This is equivalent to **10 billion gallons** of RD in 2027.

We include all lipid sources in our analysis to form a full picture of the global market.

This includes oils such as palm that are not RFS-approved and are ruled out of several key biofuel policies, but that are a significant source of vegetable oil for a range of end uses around the world.

We also include more niche or specialty oils in our total, although they are not analyzed in detail.

Including both types of lipid sources is important, as our objective is to look at demand for lipids from all end uses from all countries. So, to exclude a source of supply would create a false deficit.

All vegetable oil supplies shown are presented on an oil-in-seed basis for both historical and forecast figures. This shows the volume of oil present in the seeds/beans in the country of growth. We do not look here at where crushing has occurred or will occur. As such, while not all soybeans will be crushed in the U.S., the proportion is expected to rise as crushing capacity continues to expand.

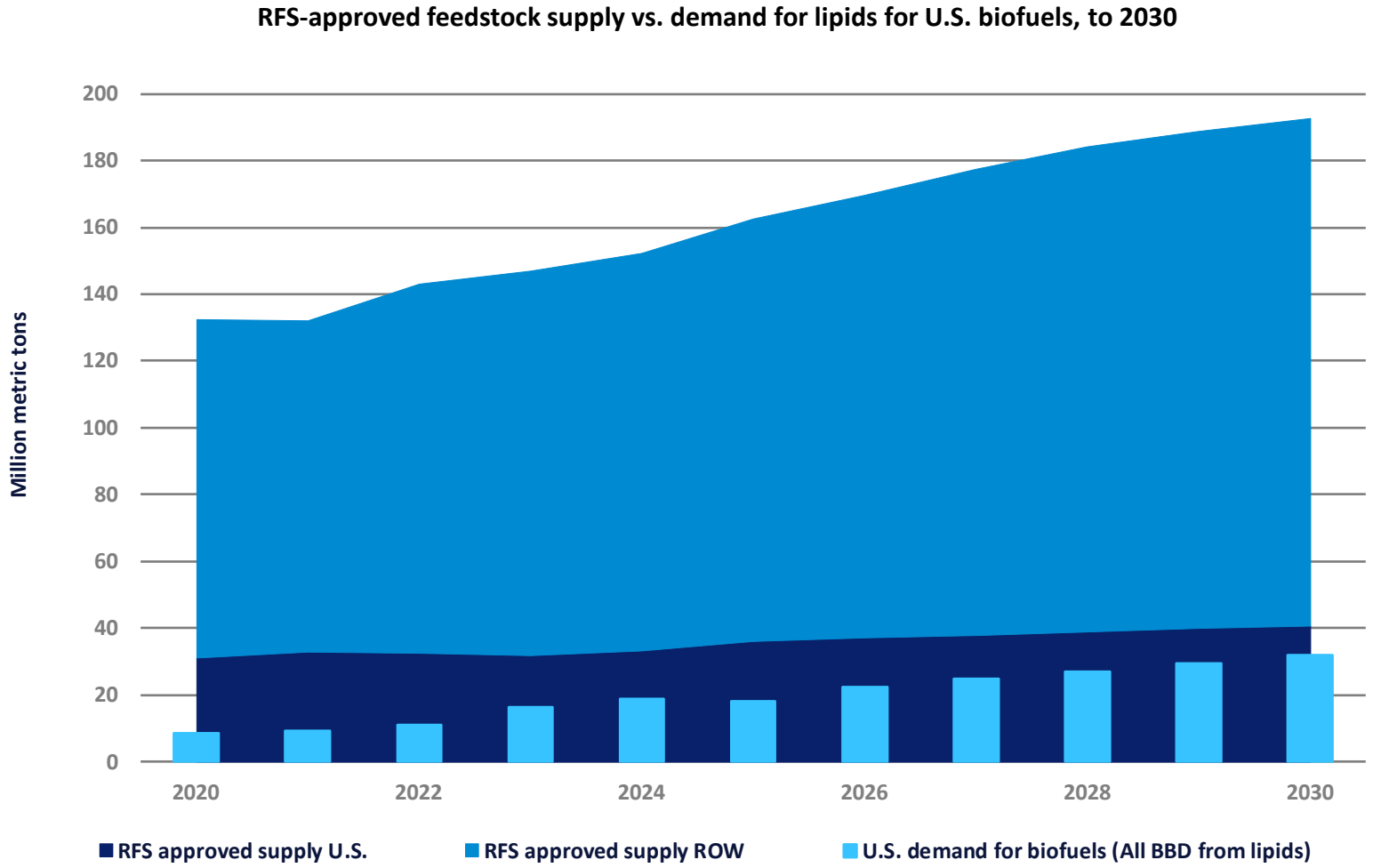

Lipid supply vs. demand to 2030

U.S. biofuel demand – *there is enough feedstock*

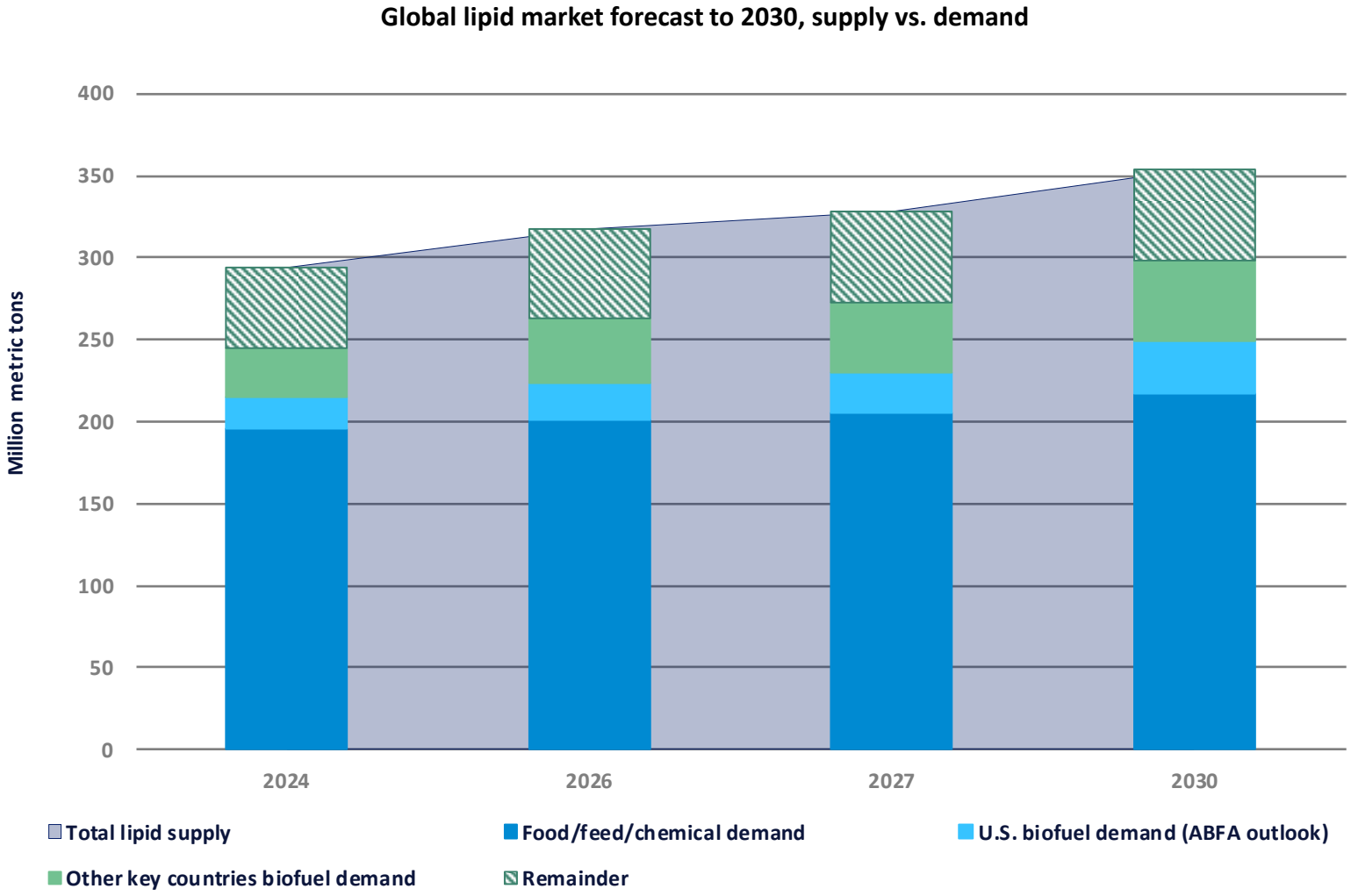
A U.S. market of 7 billion gallons of biomass-based diesel in 2027 will require 25 million metric tons of lipids if all this volume is produced from lipid feedstocks.

By 2027, projected U.S. biofuel demand will require around 66% of total U.S. RFS approved oils supply. This is just 14% of global supplies of RFS approved oils.

Some supplies of imported feedstock are expected to continue to enter the U.S.



Key demand can be met



To 2030, feedstock supplies available for use in the U.S. are more than enough to meet our forecast demand and could support even higher demand, after accounting for food.

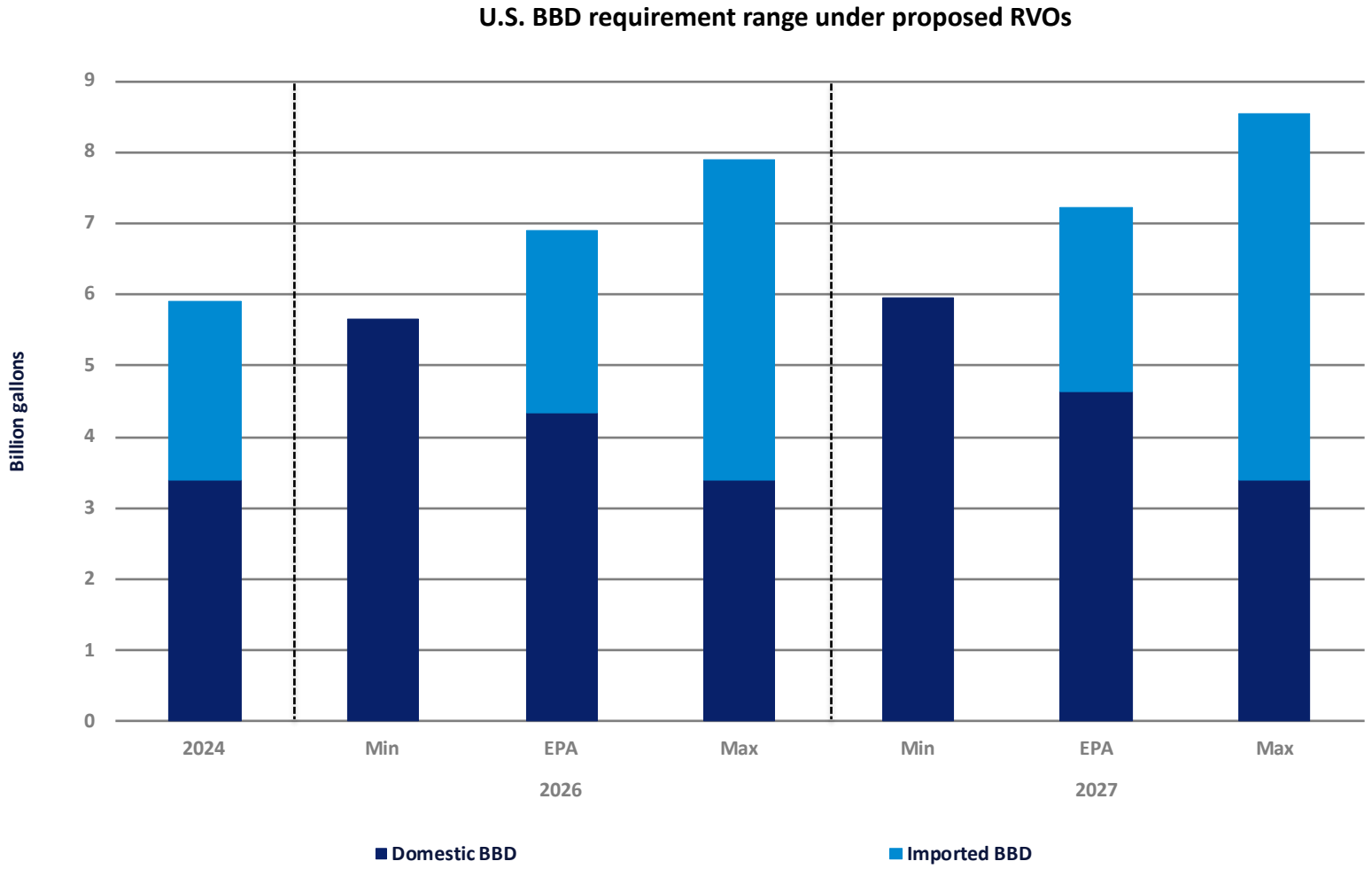
RVO analysis

Proposed RVOs represent a range of BBD requirements

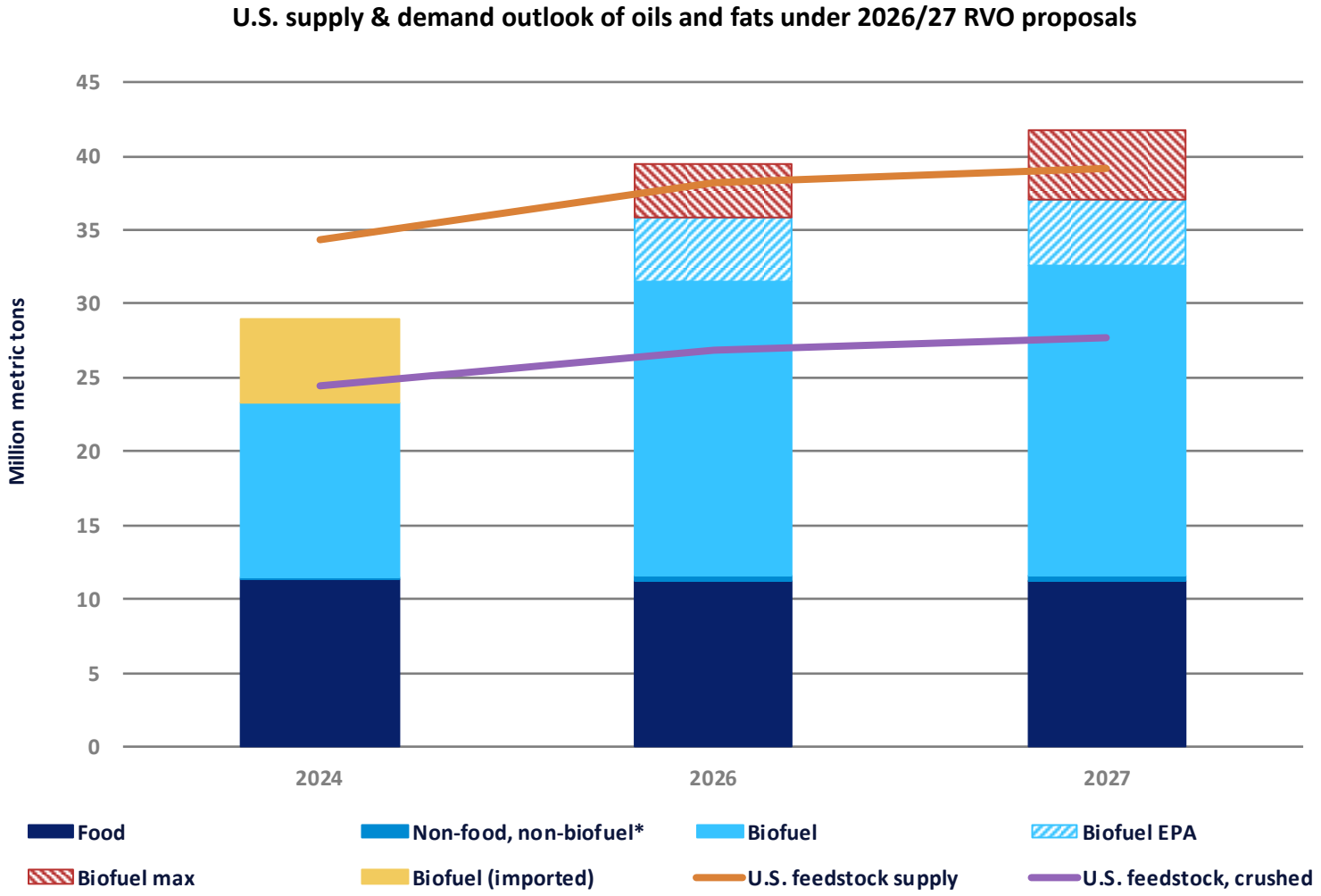
Under proposed RVOs, 8.75 bn RINs are needed in 2026 and 9.25 bn RINs in 2027.

If all RINs are from domestic BBD, 5.65 bn gals of BBD are needed in 2026, rising to 5.97 bn gals in 2027.

The mid range takes the ratio given by the EPA in the proposed rule and the maximum represents requirement if use of domestic feedstock remains at 2024 levels.



Imported oils and fats/BBD will be needed in 2026-27



The minimum scenarios require 19.9 and 21.0 million metric tons of feedstock in 2026 and 2027 respectively.

Domestic feedstock supplies could cover this volume, but the rate of crushing expansion is likely to mean that at least an additional 4.0-5.0 mn mt of imports will be required (on top of imports for non-biofuels uses).

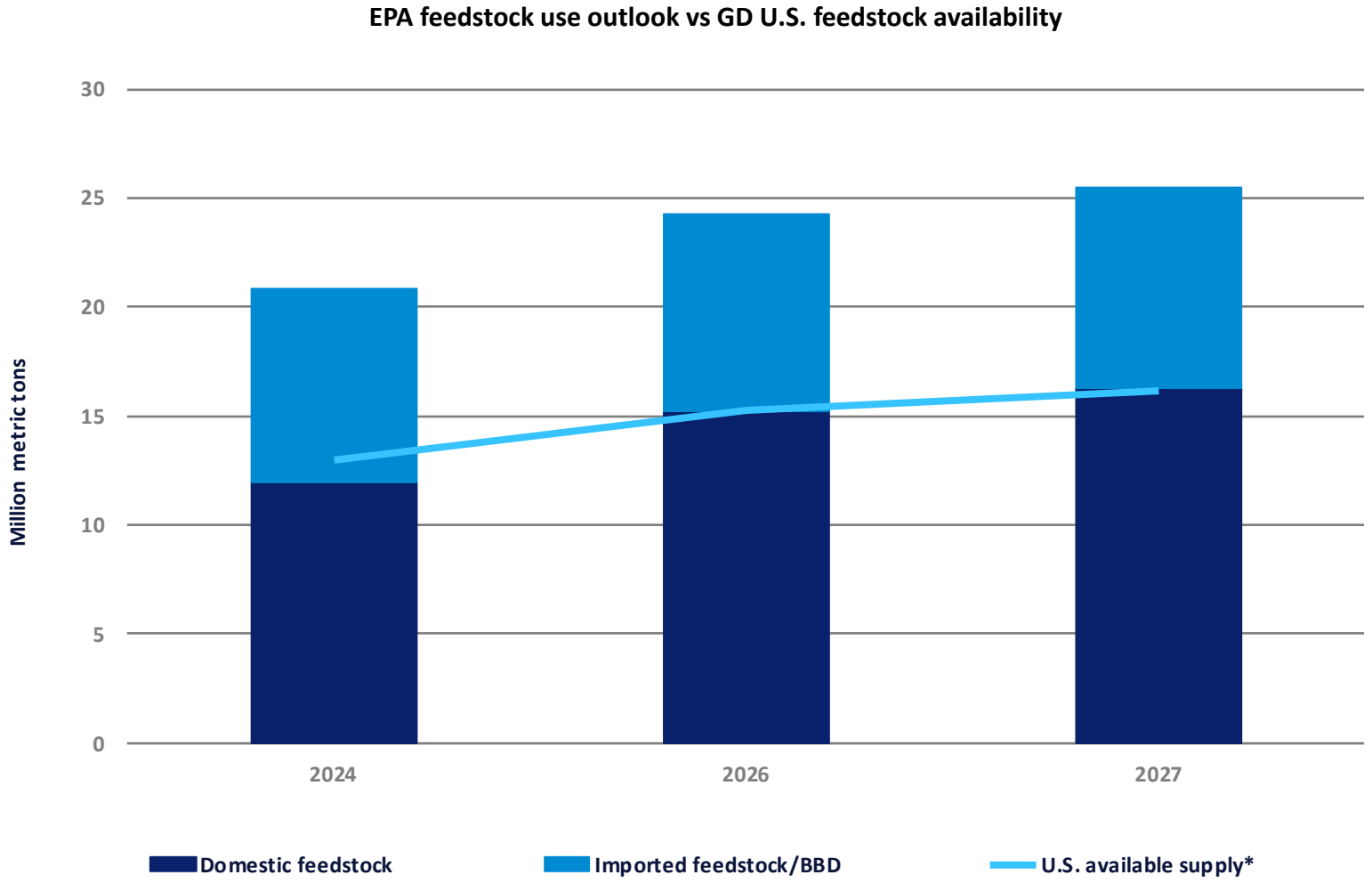
If no additional imports go into non-biofuel uses, BBD will be close to the EPA scenario, requiring around 8.7-9.3 mn mt of imports for biofuel use, similar to 2024 levels (inc. imported BBD).

EPA outlook in line with GD U.S. feedstock availability

Our forecast of U.S. crushed feedstock available after food and other use (assuming imports into these sectors remain flat) aligns closely with the EPA forecast of domestic feedstock used in BBD production.

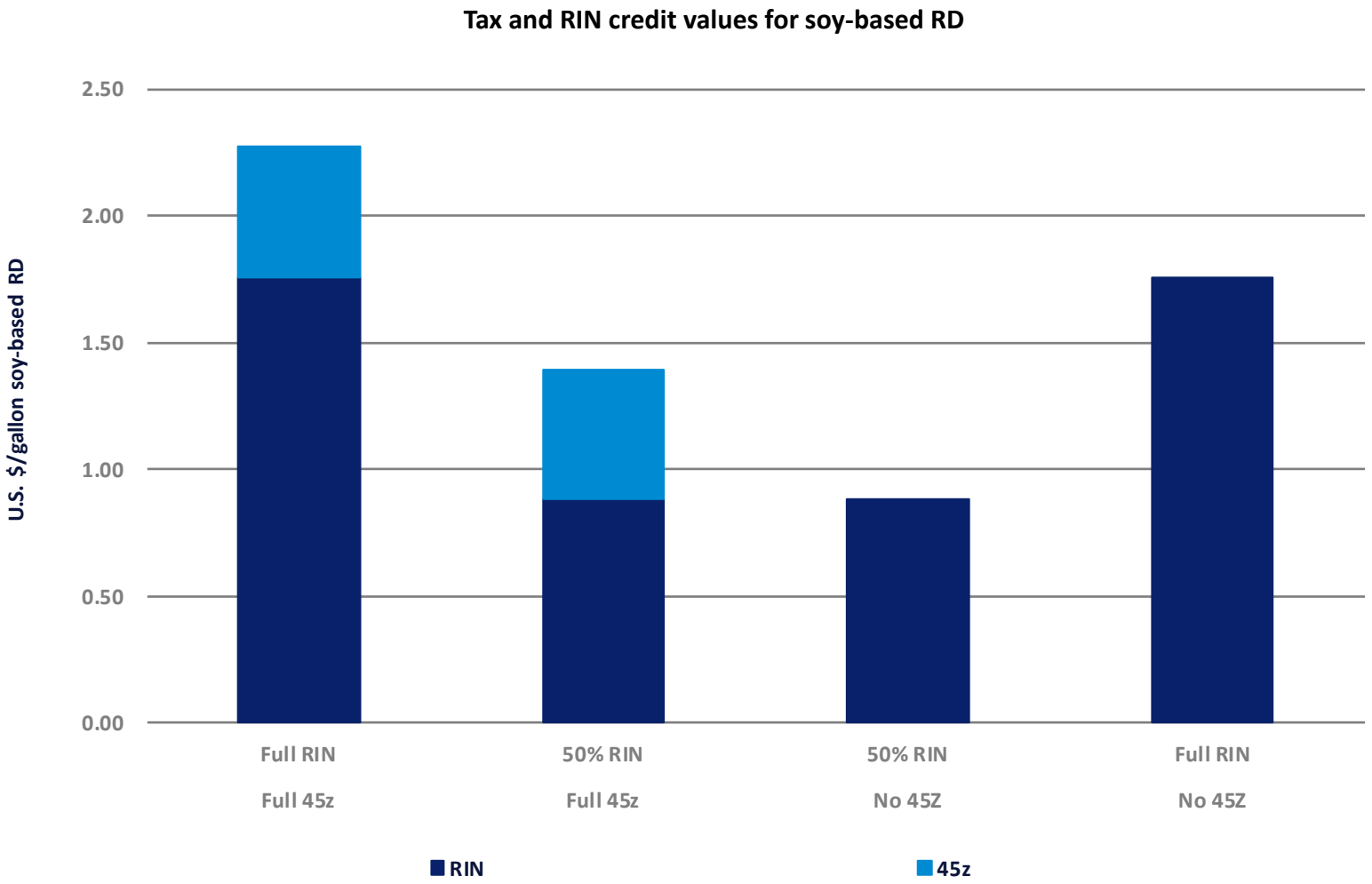
This sees fully domestic BBD supply rise from 3.4 bn gals in 2024 to 4.3 bn gals in 2026 and 4.6 bn gals in 2027.

Imported BBD/domestic BBD from imported feedstock would remain almost flat at 2.6 billion gallons.



RIN and tax credits could open price gap between domestic and imported feedstocks

45Z and RIN changes would create a gap in value between domestic and imported oils used in BBD production.



Just the 50% RIN value creates a premium of around $250/mt between domestic and imported soybean oil.

Compared to Canadian canola this increases to $335/mt

If the 45Z credit is also excluded, the gap would widen further to almost $400/mt of oil.

Under higher RIN prices, this gap would increase.

This will push prices up causing higher fuel, RIN and oil prices.

At current RIN values of $1.10/D4

Key Conclusions

The increased value of domestic feedstock will push up prices. We estimate that an increase of around $200/mt of vegetable oil will be sufficient to see imported vegetable oils used in non-biofuel end uses.

We estimate that a $200/mt increase in U.S. soybean oil will cause D4 RIN prices to rise by around $0.42/RIN.

This is lower than the value gap for BBD producers which will continue to favor domestic feedstocks at this premium.

There are some barriers to switching feedstock but these price signals suggest more domestic feedstock will be drawn out of non-biofuel uses. This will reduce the volume of BBD needed to meet RVO requirements, limiting growth in the sector.

Global supplies for oils and fats are more than sufficient to reach projected volumes under the RVOs without a significant impact on prices and even allow further growth beyond these targets.

The majority of growth in BBD supply can come from domestic feedstocks but imports will continue to be needed in this sector.

The gulf in value created by the proposed RIN system will push up prices to consumers and limit growth in the BBD market.

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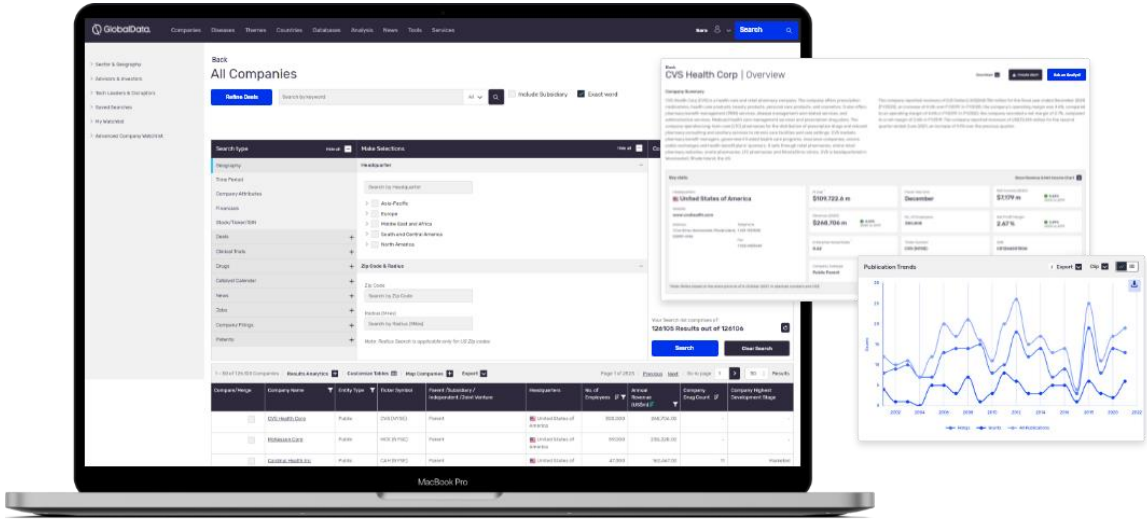

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