



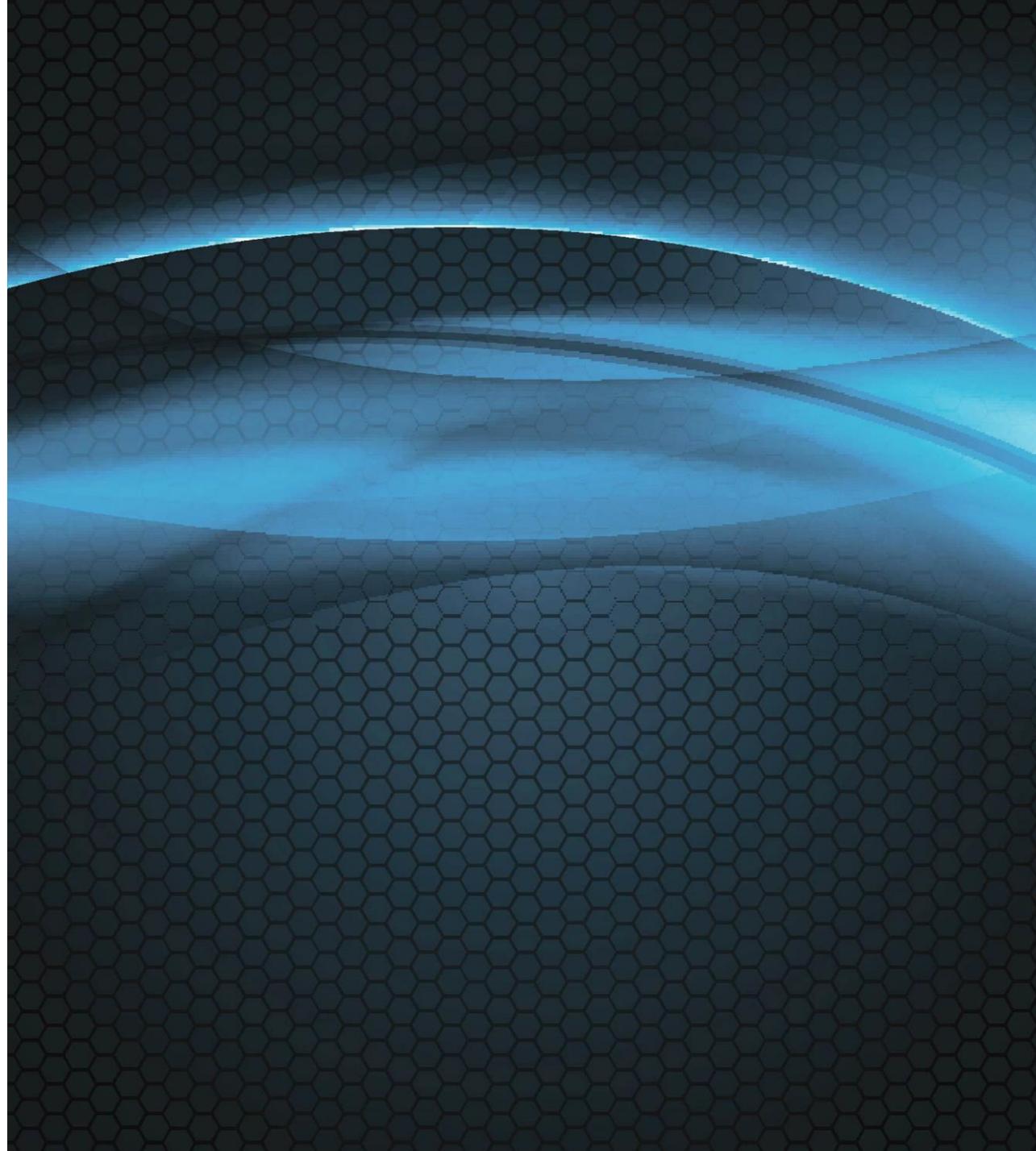
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Lipid Feedstocks Outlook to 2030

ABFA – Advanced Biofuels Association



May 2025



Rationale for the study



- With rapidly expanding capacity for biomass-based diesel 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 5-7 billion gallons in 2026-27 with potential to grow further to 2030.

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



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.

- 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.



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Lipid supply outlook to 2030

Global lipid supply outlook to 2030



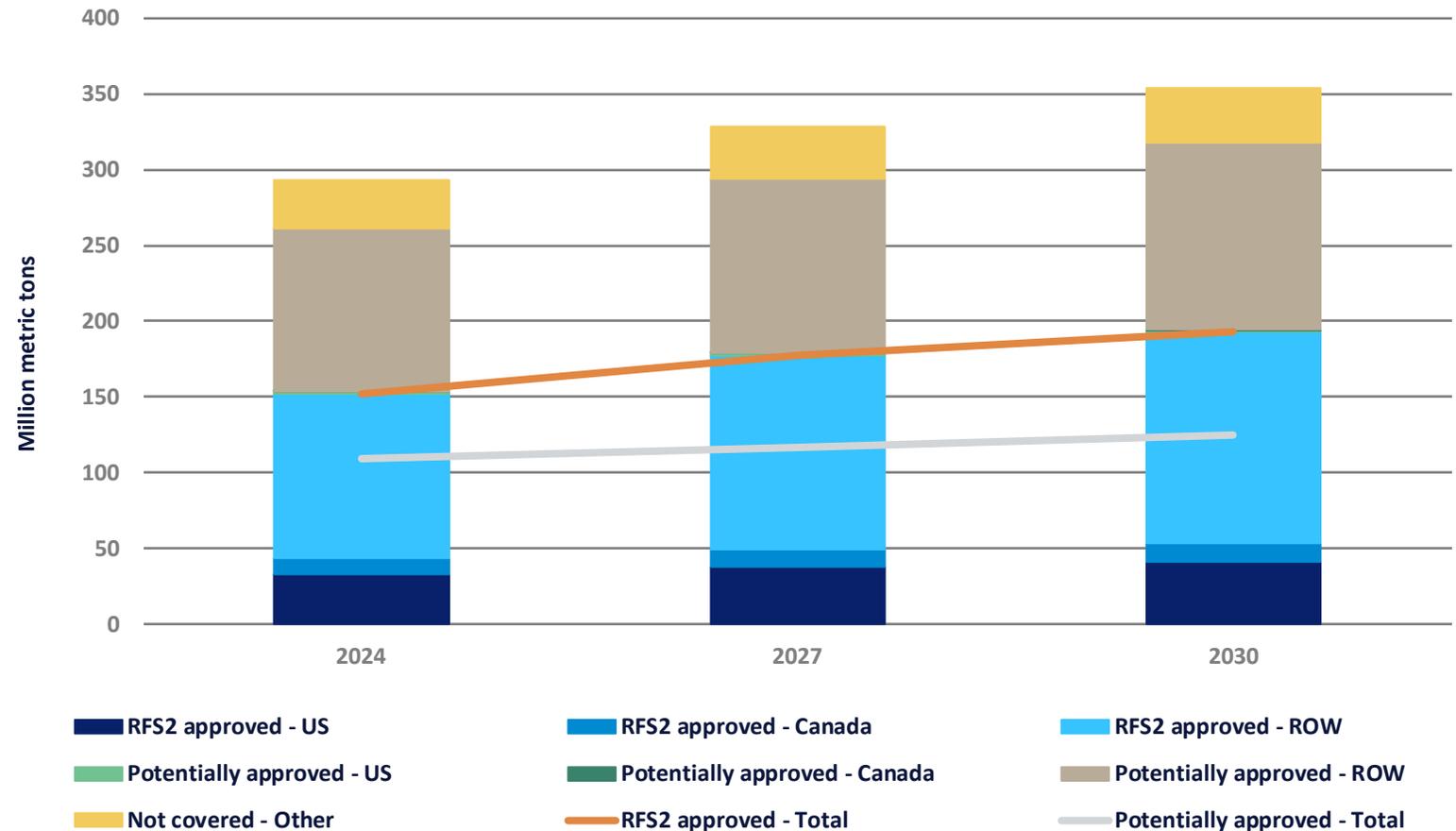
GlobalData Agri forecasts global oils and fats supplies will rise from:

- 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).**

Forecast global oils and fats supply, to 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.

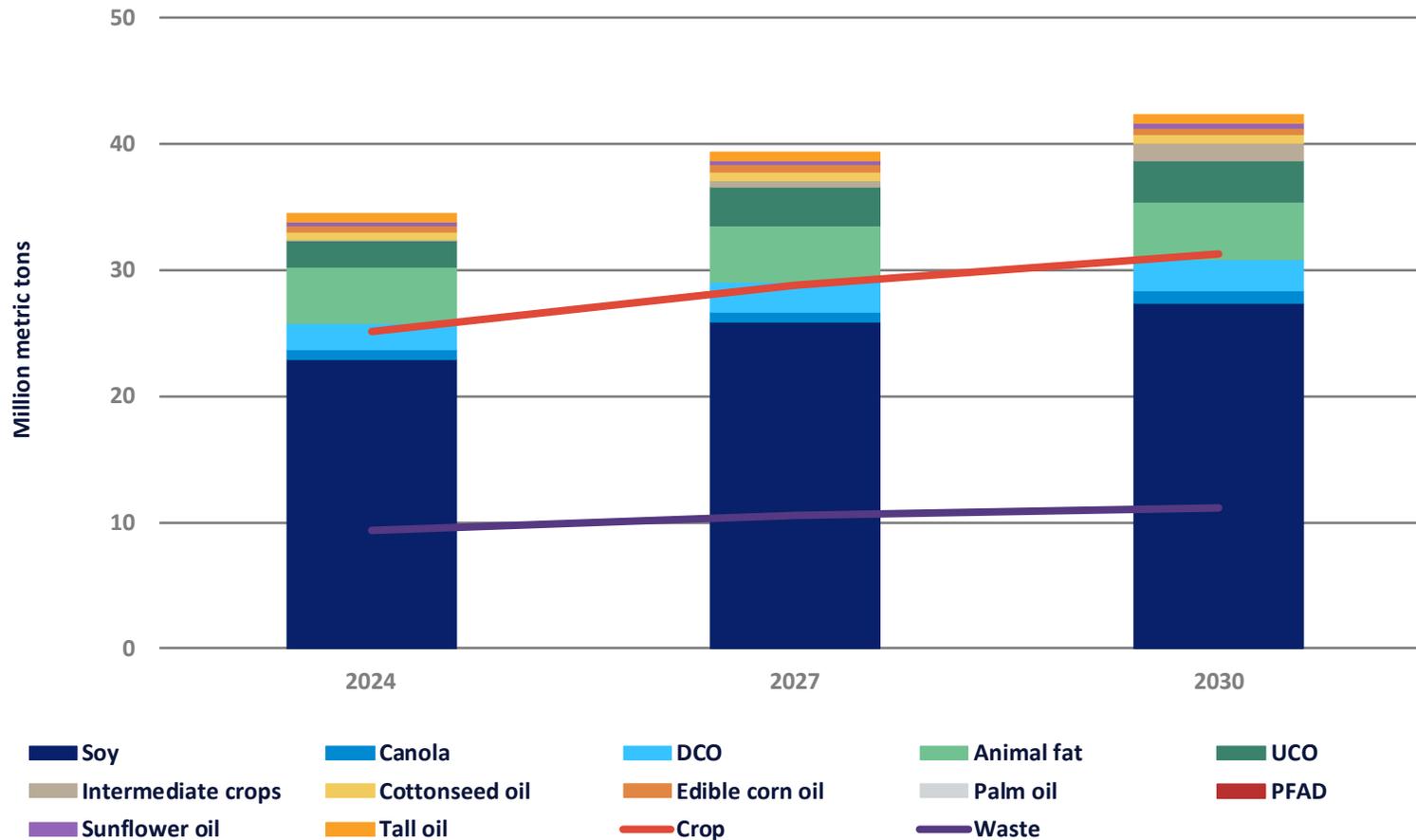
Including both types of lipid sources is important, as our objective is to look at demand for lipids from all end uses from all countries. So, to exclude a source of supply would create a false deficit.

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.

In the U.S. – lipids are dominated by soy oil



U.S. feedstock supply forecast by feedstock, to 2030



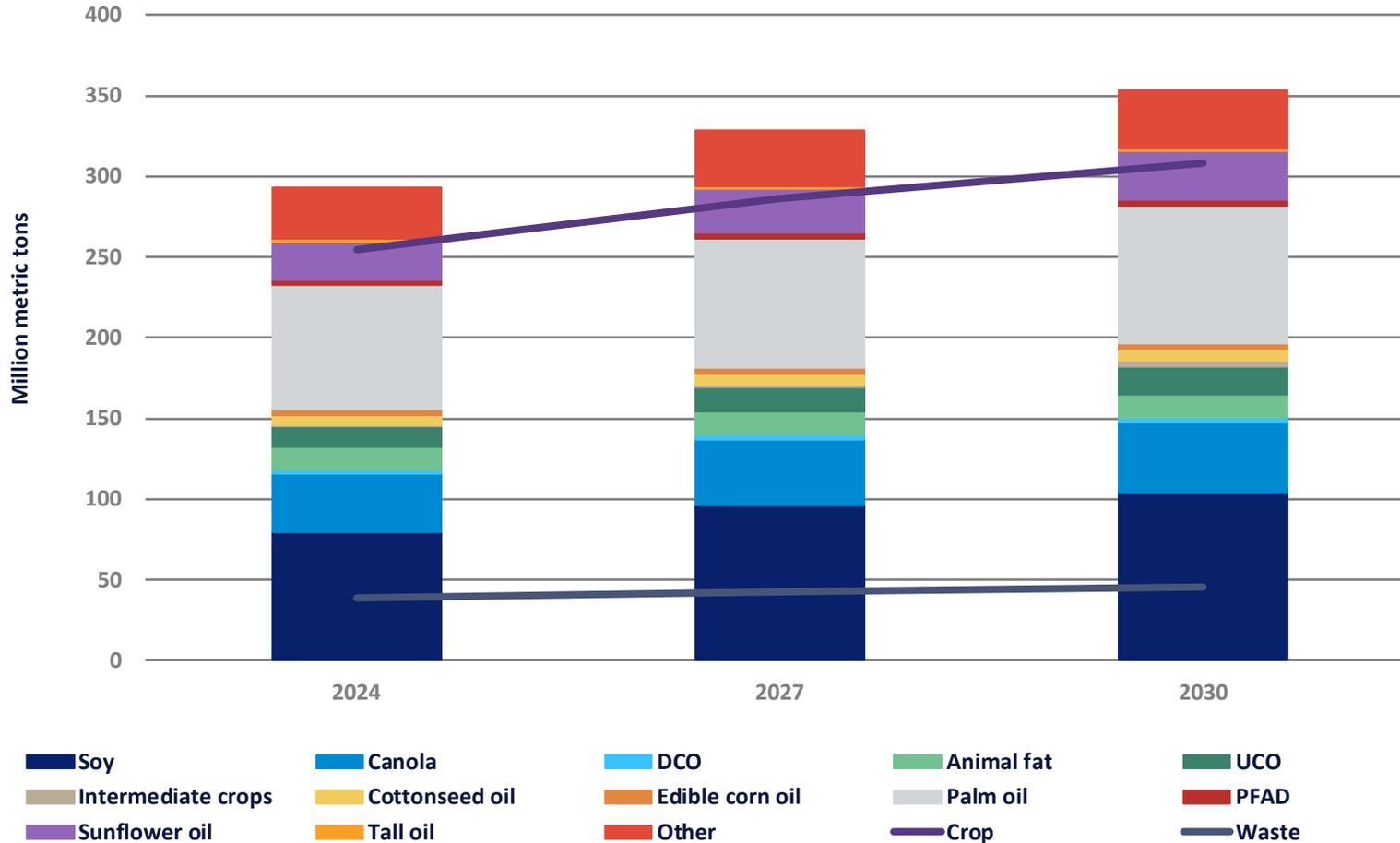
Soy oil has the most potential for growth in the U.S. We consider oil-in-seed. If more beans are crushed locally, that could increase available oil supplies compared to current U.S. production.

Waste oils have only limited potential for increased growth in the U.S., as collection and extraction rates are already high. However, a dip in UCO collection in 2023 & 24 is expected to reverse, allowing domestic supplies to recover in the next 2 years.

Globally – over half of feedstocks are RFS approved



Global feedstock supply forecast by feedstock, to 2030

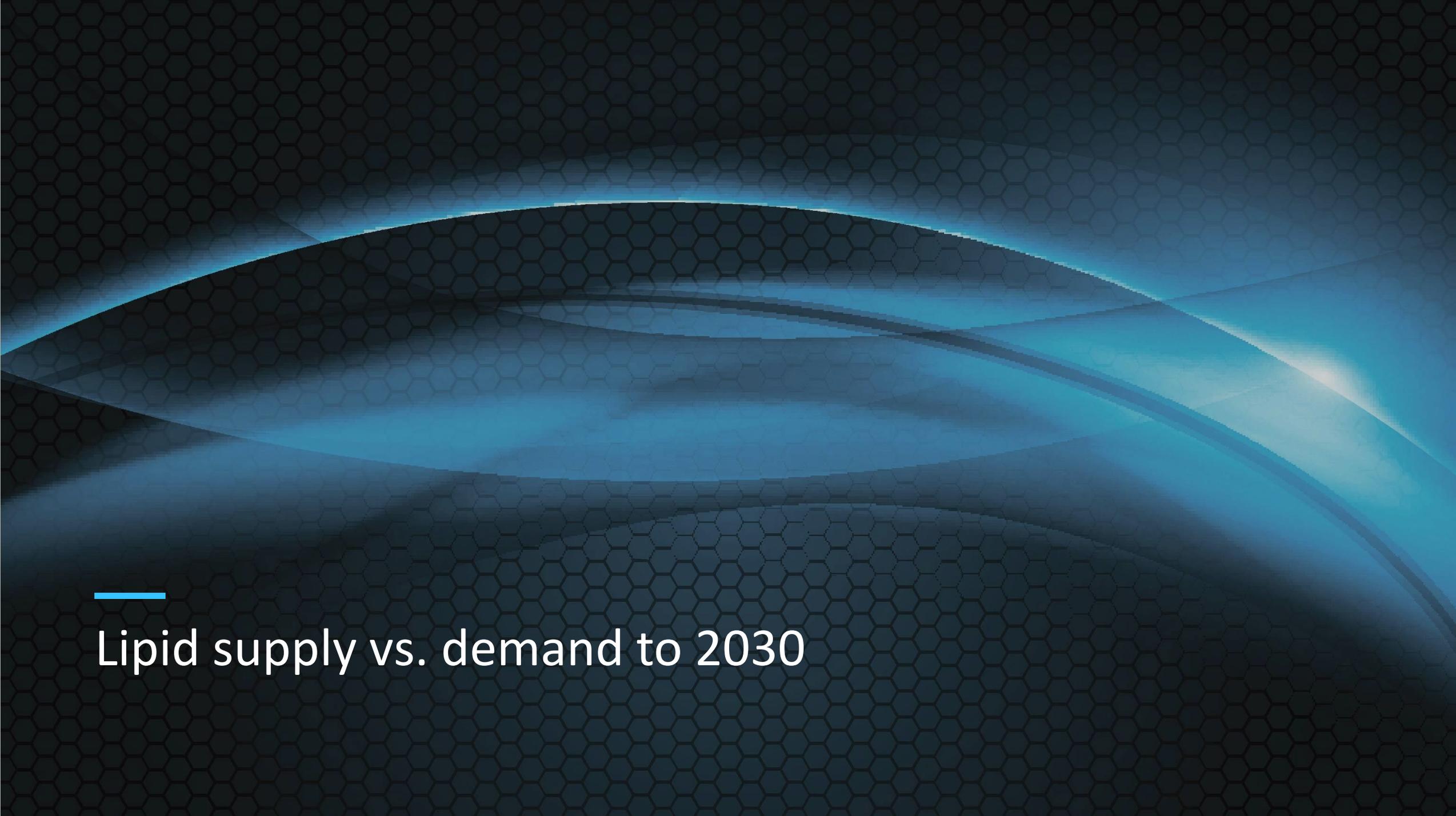


Outside North America

There is greater potential for growth in waste oils supply in countries with less developed collection networks. These supplies could be even higher than our base case supply forecast, if prices are high enough to incentivize collection/extraction.

There is significant potential for supplies of oil from intermediate oils if initial barriers to entry can be overcome.

Palm oil is a significant source of lipid supply to the world market. Growth in palm oil supplies is limited by land use restrictions, causing it to grow at a slower rate than total lipid supplies.



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Lipid supply vs. demand to 2030



To assess whether there are sufficient feedstocks to meet projected U.S. BBD demand, we take a tiered approach.

- First, we remove the supply needed to meet demand from non-biofuel end uses (food, feed and oleochemicals). These end uses are inelastic – the need for them is relatively fixed and is not impacted by price.

It is important to note that our analysis allows fully for food requirements before evaluating the feedstock supply for biofuels.

- Then, we remove the demand from biofuels in four other markets with strong biofuel policies. (This is arguably overly conservative in that the U.S. might well come 2nd in line for feedstocks, after the EU, not 5th. In addition, of course, if policies in the U.S. change, the relationship with other markets with biofuels policies could change.)
- The remaining volume is then compared to the required volume needed to meet ABFA's U.S. biofuel projection.

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

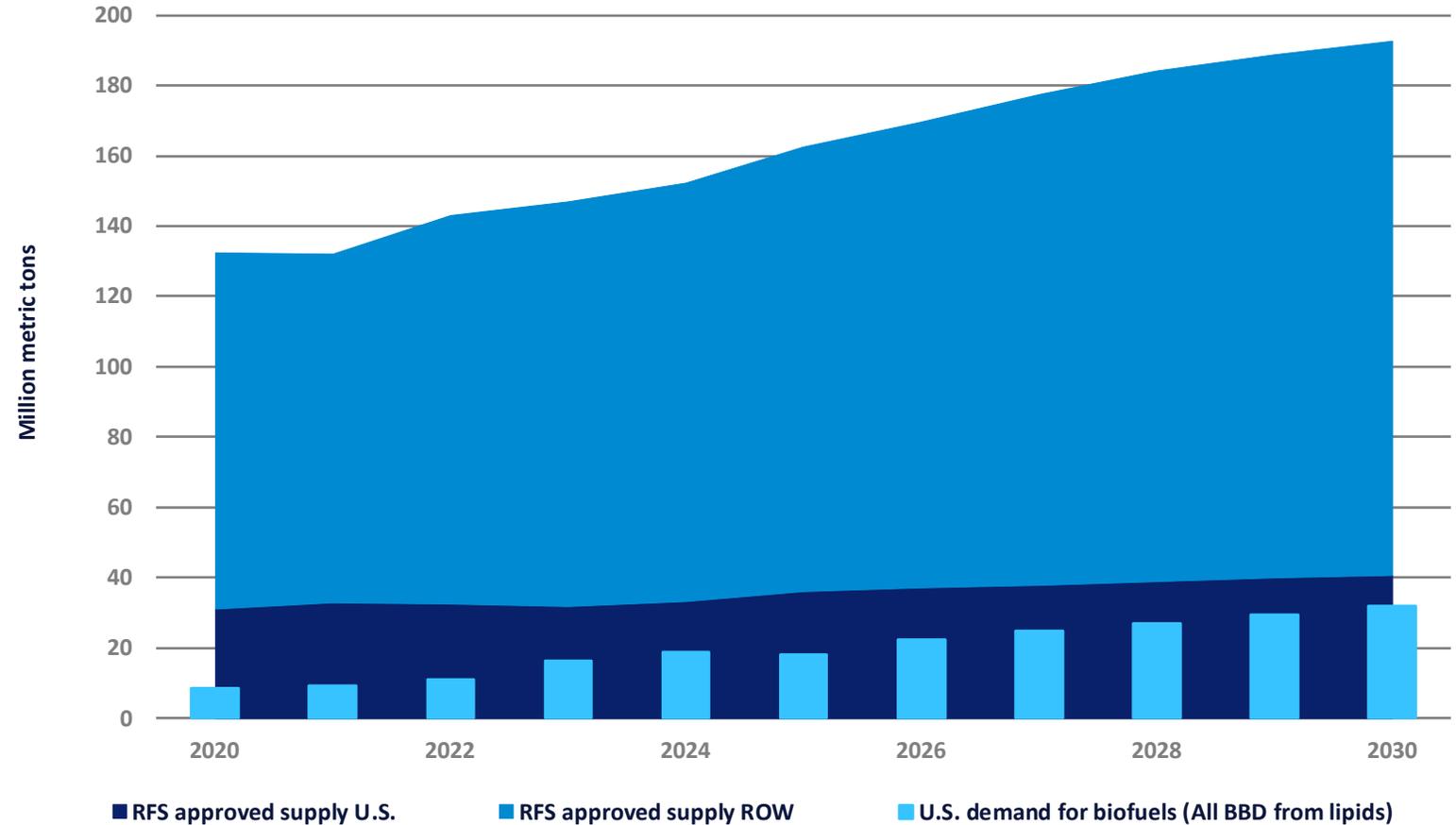


A U.S. market of 7 billion gallons of biomass-based diesel in 2027 will require 25 million metric tons of lipids if all this volume is produced from lipid feedstocks.

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.

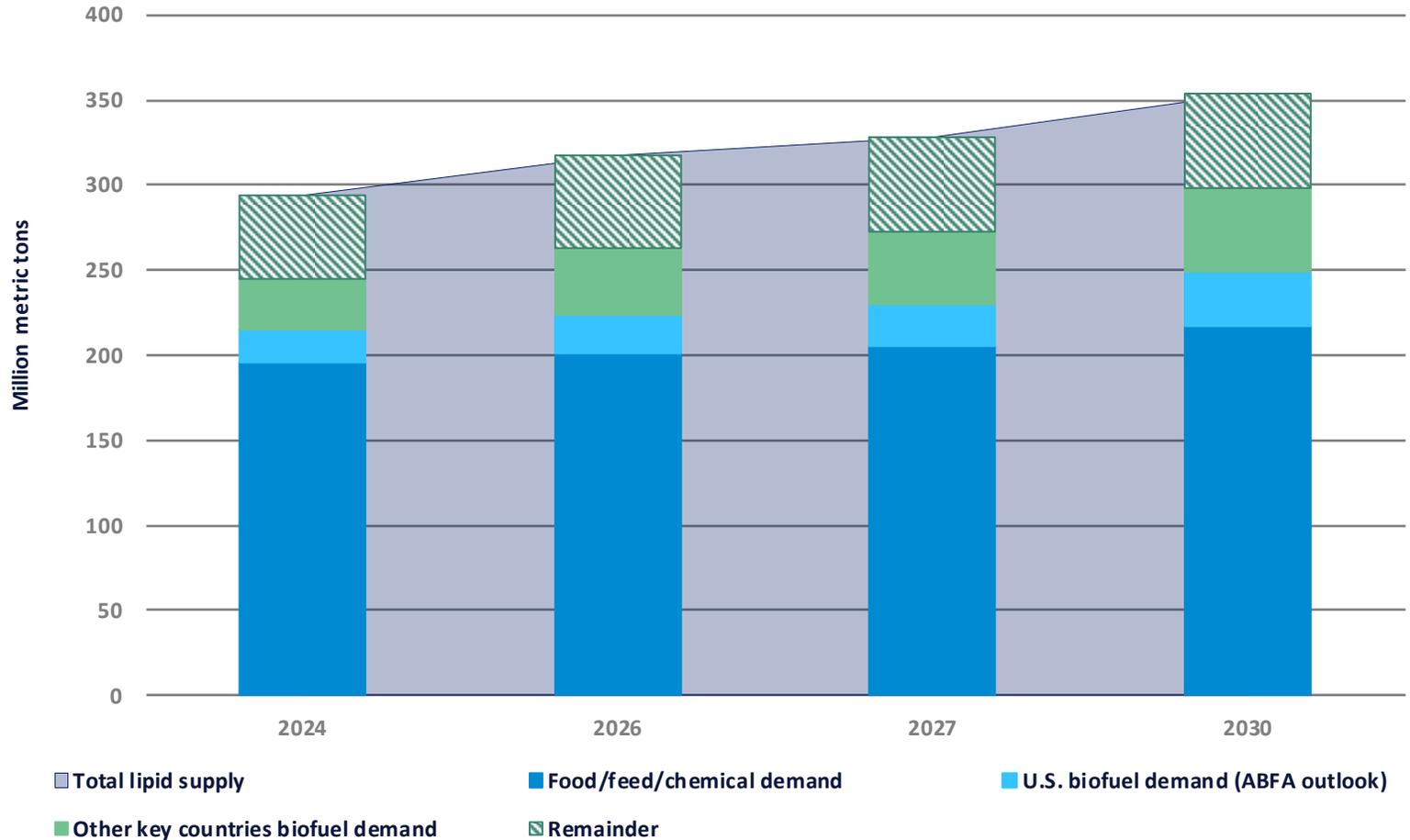
RFS-approved feedstock supply vs. demand for lipids for U.S. biofuels, to 2030



Key demand can be met



Global lipid market forecast to 2030, supply vs. demand

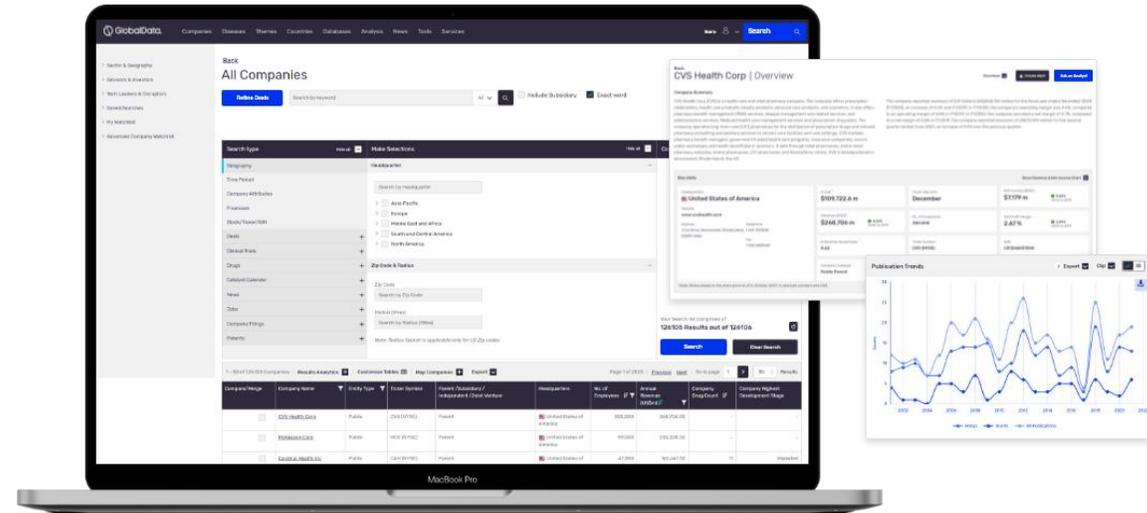


To 2030, feedstock supplies available for use in the U.S. are more than enough to meet our forecast demand and could support even higher demand, after accounting for food.



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