



Market Insights: Hydrotreated Vegetable Oils (HVO) – 2023

Market Insights: Hydrotreated Vegetable Oils - 2023 is one in a series of reports published as part of NexantECA's **Markets & Profitability** program.

NexantECA's updated Market Insights report provides a comprehensive review of the global market for drop-in fuels from the Hydrotreated Vegetable Oil process, including for Renewable Diesel, Sustainable Aviation Fuel, and Renewable Naphtha and Renewable LPG. The report covers the following scope:

- Discussion of key market drivers and constraints for each region including up-to-date analysis of major regulatory programs in Europe and the United States
- Supply and demand history and projections for nine regions: North America, South America, Western Europe, Central Europe, Eastern Europe, Middle East, Africa, Asia Pacific (excluding China) and China
- Plant-level tracking of existing, expected and forecast production capacity
- Discussion of HVO's role in the broader group of drop-in fuels (gasification, alcohol-to-jet and e-fuels).
- Competitiveness analysis, including competitive landscape, major suppliers and cost competitiveness
- Price forecasts with commentary regarding latest trends
- Historic data from 2010 onwards, forecast data to 2040

Along with the written report, data is provided in Excel including global capacity listings

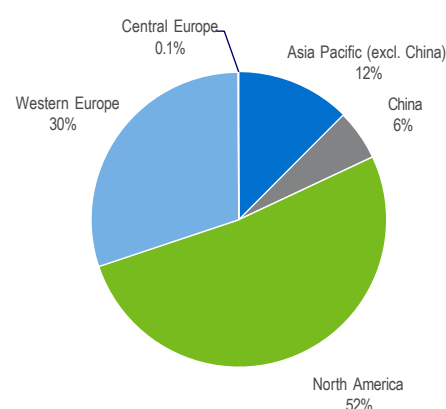
Report Abstract:

The last decade has seen the development of advanced production processes for biomass-derived alternatives to conventional refined products, driven by more stringent regulatory requirements on emissions, feedstock origin and the need to raise the proportion of bio-content in fuels beyond the "blend walls" associated with first generation biofuels. Commercial development has been led by the hydrotreating of vegetable and animal-based feedstocks, the output of which is collectively known as Hydrotreated Vegetable Oil (HVO) or Hydroprocessed Esters and Fatty Acids (HEFA). HVO processes are currently used to produce bio-based diesel fuel (commonly known as Renewable Diesel) but are increasingly being directed to the production of bio-based Sustainable Aviation Fuel (SAF). HVO processes can also produce bio-based naphtha and LPG, although in the absence of regulatory support, demand for these outputs is less significant.

In the two years since the publication of our first Market Insights report on Hydrotreated Vegetable Oil (HVO), the major drivers for growth in this sector have continued to accelerate. Most notably, key governments have firmed up and scaled up major emissions reduction policy packages that were only in development in 2021, including the EU's Fit for 55/Green Deal program, and the United States' economy-wide Inflation Reduction Act. Meanwhile, the aviation sector's CORSIA initiative is in the final year of its initial pilot phase before entering its voluntary first phase from 2024, while the shipping industry has recently announced the scaling up of its targets from a 50 percent emissions cut to net zero by 2050. Both of these industries – but in particular the aviation sector – will require very large volumes of low or zero carbon liquid fuels to be able to achieve their current goals, as will the targets put in place by the U.S. and Europe. Against this background, the short-term growth in HVO production capacity has come to pass, while expected long-term growth is significantly higher.

The 2023 report addresses in depth the key developments driving this changing outlook. Notably, the report identifies a clear gap between the long-term scale-up of SAF production and the massive erosion of petroleum jet fuel use that will be required to decarbonise the aviation sector along the planned lines, suggesting that the market will remain supply-constrained through the forecast period.

HVO production by region – 2023





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Each region section in Chapter 3 includes:

- Market Overview
- Market Drivers
- Market Constraints
- Competitive Landscape
- Supply and Demand

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