



Biofuels Value Chain Service (BVCS)

Comprehensive global biofuels, feedstocks and credit/ticket markets analysis and forecasting to inform strategic decisions

August 2020

Introduction to IHS Markit

Harnessing the deepest sources of information, analytics and expertise across industries that drive economies worldwide

New Intelligence: A comprehensive view of risk, opportunity and financial impact to drive future success.

IHS Markit provides leaders from multiple industries with the perspective and insights they need to make well-informed decisions with greater confidence and stay ahead of their competition.

Who we are:



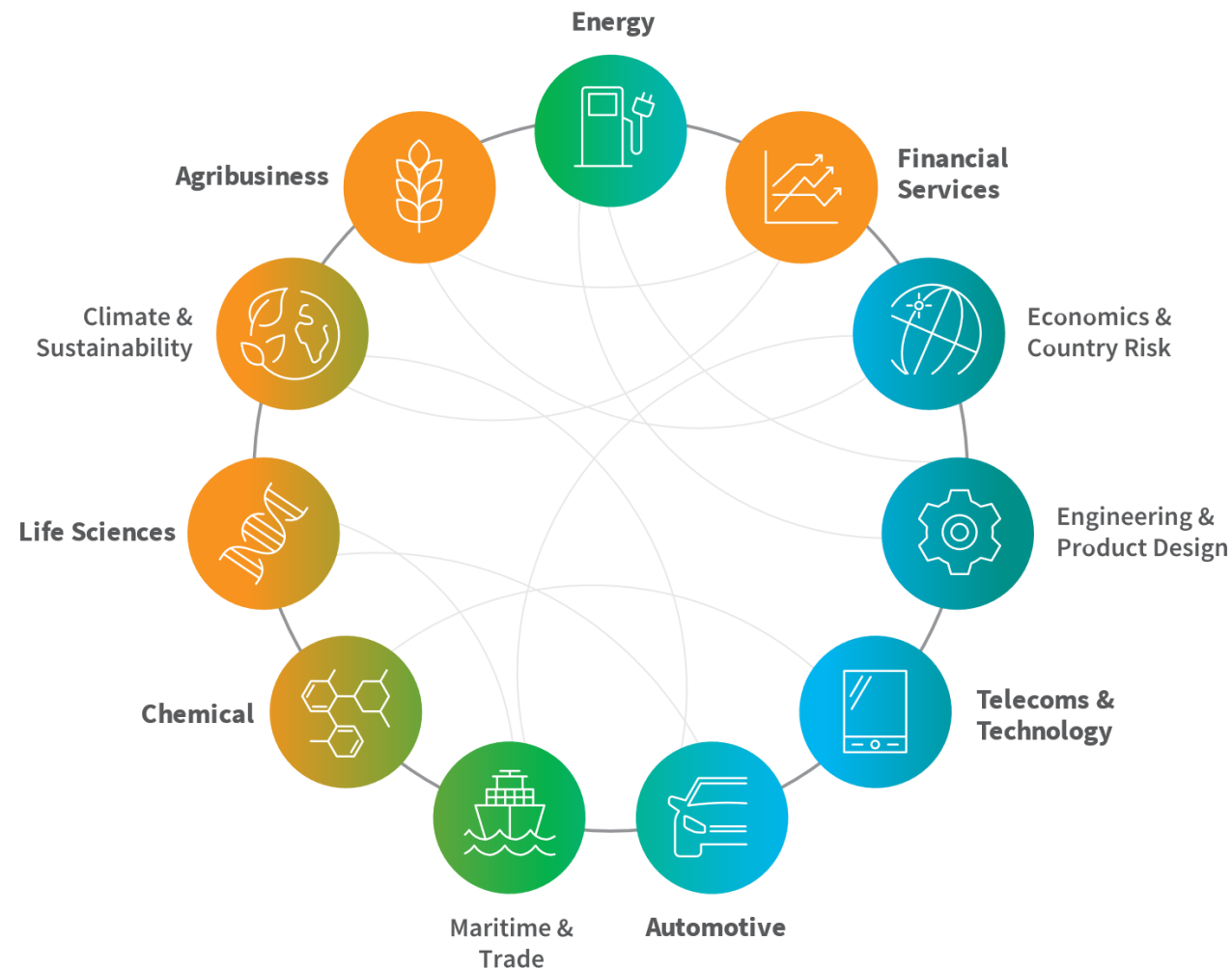
16,000
colleagues globally



120+
offices globally



25+
countries globally



IHS Markit Expertise



Energy

Strategic insights & advisory services across all regions & fuel types, from geopolitics & upstream exploration through downstream fuel (including biofuels) & end-use markets



Maritime & Trade

Live ship positions, merchant & military ship identification; & ship owners, operators & manager databases



Financial Markets & Data Services

Information, analytics & solutions for firms operating in financial markets



Agribusiness

Fertilizers, crop science, animal health, food & agricultural commodities, biofuels food & agricultural policy



Economics & Country Risk

Country & economic analysis, with long- range economic forecasts & robust country & sovereign risk models



Digital & Web Solutions

Markit Digital advances the industry with design, technology & data innovation - building world-class websites, mobile apps & report capabilities



Chemical

Chemical market insight, pricing & long-term forecasts, process evaluations, company, capacity & supply-demand data & analysis



Automotive

Project planning & development, manufacturing & purchasing, new vehicle sales & marketing analysis & advisory



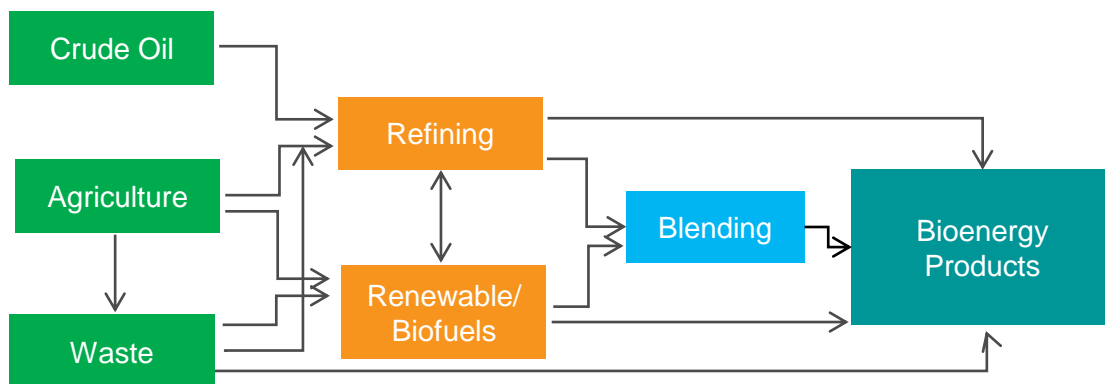
Product Design & Engineering

Standards, codes & specification; design tools & methods, & engineering & technical references

Biofuels Value Chain Service – Long-term clarity in a rapidly evolving sector

Maintain perspective and anticipate longer-term trends in the ever-changing biofuels markets

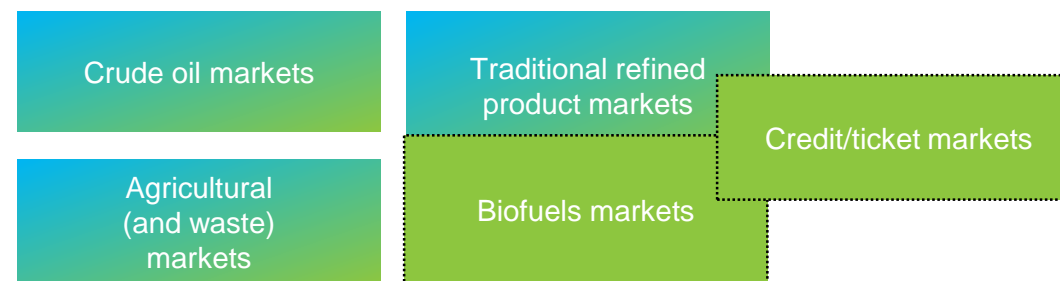
- Biofuels have been around for many years, but recent industry momentum has accelerated as decarbonization pressure and other trends have added support for expanding the sector.
- BVCS supports clients’ medium and long-term strategic decision-making regarding not only biofuels themselves, but also around their feedstocks and critically important supporting credit/ticket markets.
- The service enables new biofuels investment capacity planning and informs strategic sourcing and marketing decisions.
- BVCS looks beyond complimentary market news and short-term price discovery, to a more comprehensive, integrated view encompassing the entire biofuels value chain:



Extensive data supplemented with deep market expertise and analysis to give clients a unique biofuels picture

- > Fundamentals-based, medium to long-term analysis of biofuels markets and credit/ticket markets, with coverage of feedstocks markets as they apply to biofuels.
- > Supply/demand and price forecasts, with full accompanying analysis of market drivers and dynamics.
- > Bringing together interlocking analysis across the biofuels value chain:
 - **Upstream:** Feedstock markets directly related to biofuels
 - **Biofuels-Direct:** Biofuels supply/demand, and credit/ticket incentives
 - **Downstream:** Refined products demand markets, competitiveness versus oil and gas incumbents, regulatory mandates

Adjacent markets and **Biofuels Value Chain Service coverage:**



Fundamental insights to address market problems critical to biofuels and adjacent sectors:

Key Market Problems:

- How will structural biofuels policy and regulatory changes affect medium/long-term biofuels market fundamentals?
- Challenging to plan biofuels capacity investment in an uncertain demand and policy environment
- Managing risk and seizing opportunities in opaque credit/ticket markets, yet understanding their future evolution is of critical importance
- Developing medium/longer-term biofuels feedstock sourcing strategy in light of shifting demand trends, proliferating feedstocks, and challenged agricultural markets
- How can existing assets and infrastructure (including traditional oil refining assets) be most effectively employed—are there opportunities in the biofuels sector?
- How will biofuels sector development potentially affect related agricultural markets?
- What is the potential for new feedstocks, production technologies, and/or end uses to disrupt the biofuels or even wider transportation fuel markets?
- What are the future prospects for biofuels-related investment, where can I identify future investment opportunities in this constantly evolving sector?

Biofuels Value Chain Service solution:

- ➔ • BVCS helps clients understand evolving regulatory environments and analyses their impact on the key components across the value chain.
- ➔ • Develop strategies on how much biofuels production capacity to develop, based on the combination of biofuels demand forecasts, credit/ticket market opportunities, and regulatory compliance concerns.
- ➔ • Unique forward-looking coverage of biofuels credit/ticket markets, including long-term price forecasts and visibility on how they will influence biofuels markets in future.
- ➔ • Develop feedstocks sourcing strategies by understanding the most cost-effective feedstock mix sufficient for expected biofuels production.
- ➔ • Assess new trends such as leveraging/converting existing oil refining assets to biofuels production and build insight into planning for future demand/supply of biofuels and associated infrastructure.
- ➔ • Anticipate changes in magnitude of demand from biofuels sector that may impact the agricultural sector (agricultural prices, land use, transport rates).
- ➔ • Assess new trends such as the emergence of renewable diesel and its indirect impact on other biofuel products, or the emergence of niche feedstocks and end-use sectors.
- ➔ • BVCS end-to-end value chain coverage and integrated medium to long-term view fortified by adjacent IHS Markit services and expertise provides valuable insight to investors and financial professionals.

BVCS supports:



Strategic Planning



Procurement



Product Marketing



Investors

Biofuels Value Chain Service Deliverable Phases

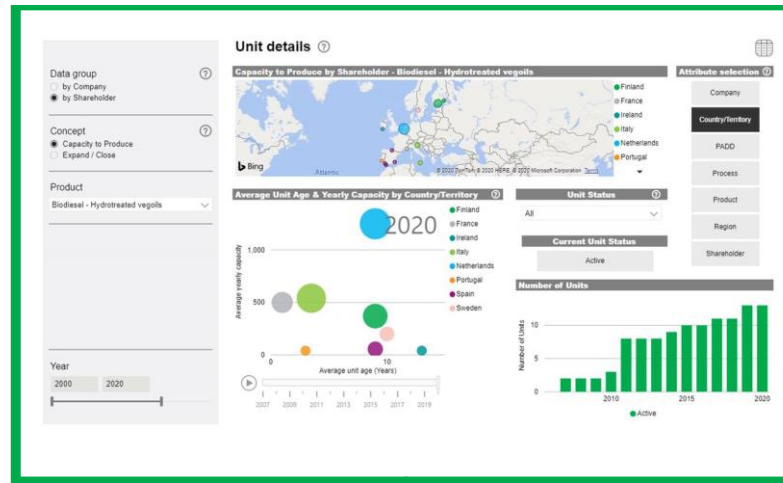
Deliverable	Update cadence	Description	Coverage	Periodicity	Data bounds	Launch phase
Biofuels Supply/Demand Outlook	Annually	Data publication with historical and forecast supply/demand outlook and price outlook deliverables	Ethanol, FAME Biodiesels, Renewable Diesel (HVO)	Years	2010-2050	Phase 1 (Aug 2020)
Biofuels Price Outlook	Quarterly					
Feedstocks Demand Outlook	Annually	Data publication with historical and forecast supply/demand outlook and price outlook deliverables	Sugar, Corn, Rapeseed/Canola Oil, Soybean Oil, Palm Oil, Used Cooking Oil, Animal Fats/Tallow	Years	2010-2050	
Feedstocks Price Outlook	Quarterly					
Mandate Tracker	Evergreen	Data publication with country-level detail on blend mandates by biofuel product and jurisdiction – with comparison against historical and forecast consumption	Announced/ forecasted blend mandates and level of compliance	Years	N/A	
Capacities Database and Analysis Tool	Evergreen	Interactive tool for analysis and interrogation of biofuels capacities data, enabling assessment of capacity by geography, feedstocks, facility level detail	Global biofuels-producing plants - fields include date of construction, capacity by type of biofuel produced and by feedstock used	N/A	N/A	
Credit/Ticket Market Outlook	Quarterly	Forecasts of prices by market, with written analysis of market dynamics and impact on biofuels market	North America (Europe to be developed at later date)	Years	2010-2050	Phase 2 (Jan 2021)
Regional Legislative Overviews	Evergreen	Description and analysis of key regulations driving biofuel market development	Europe, North America, Latin America, Asia	N/A	N/A	
Regional Profiles	Evergreen	Forward-looking written analysis of integrated biofuels, feedstocks, and credit/ ticket markets	Europe, North America, Latin America, Asia	N/A	N/A	
Strategic Insights	Ad Hoc	Short-form analytical pieces that dig into key key topics	Trends in biofuel types and feedstocks, legislative changes, company strategies, societal issues	N/A	N/A	
Feedstock Profiles	Quarterly	Individual publications by feedstock, with detailed discussion of the current and future biofuels-importance of each, and associated considerations	Sugar, Corn, Rapeseed/Canola Oil, Soybean Oil, Palm Oil, Used Cooking Oil, Animal Fats/Tallow	N/A	N/A	Phase 3 (Jun 2021)

Biofuels Value Chain Service Deliverables

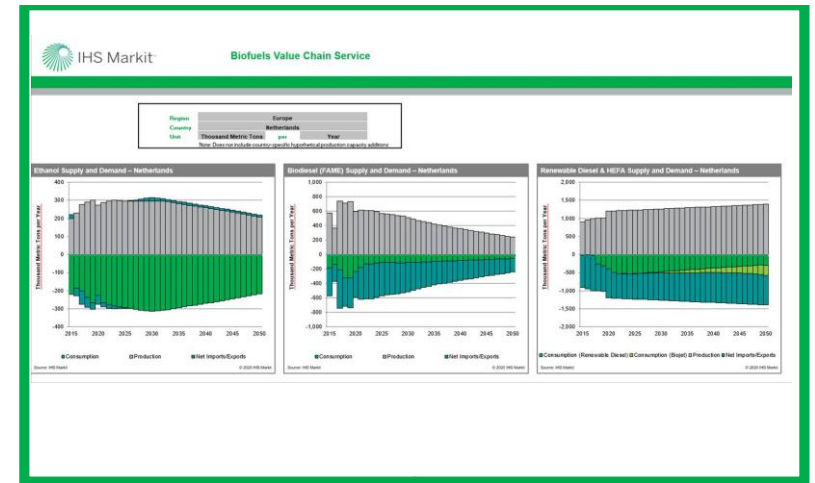
Mandate Tracker



Capacities Database



Biofuels Supply-Demand Outlook



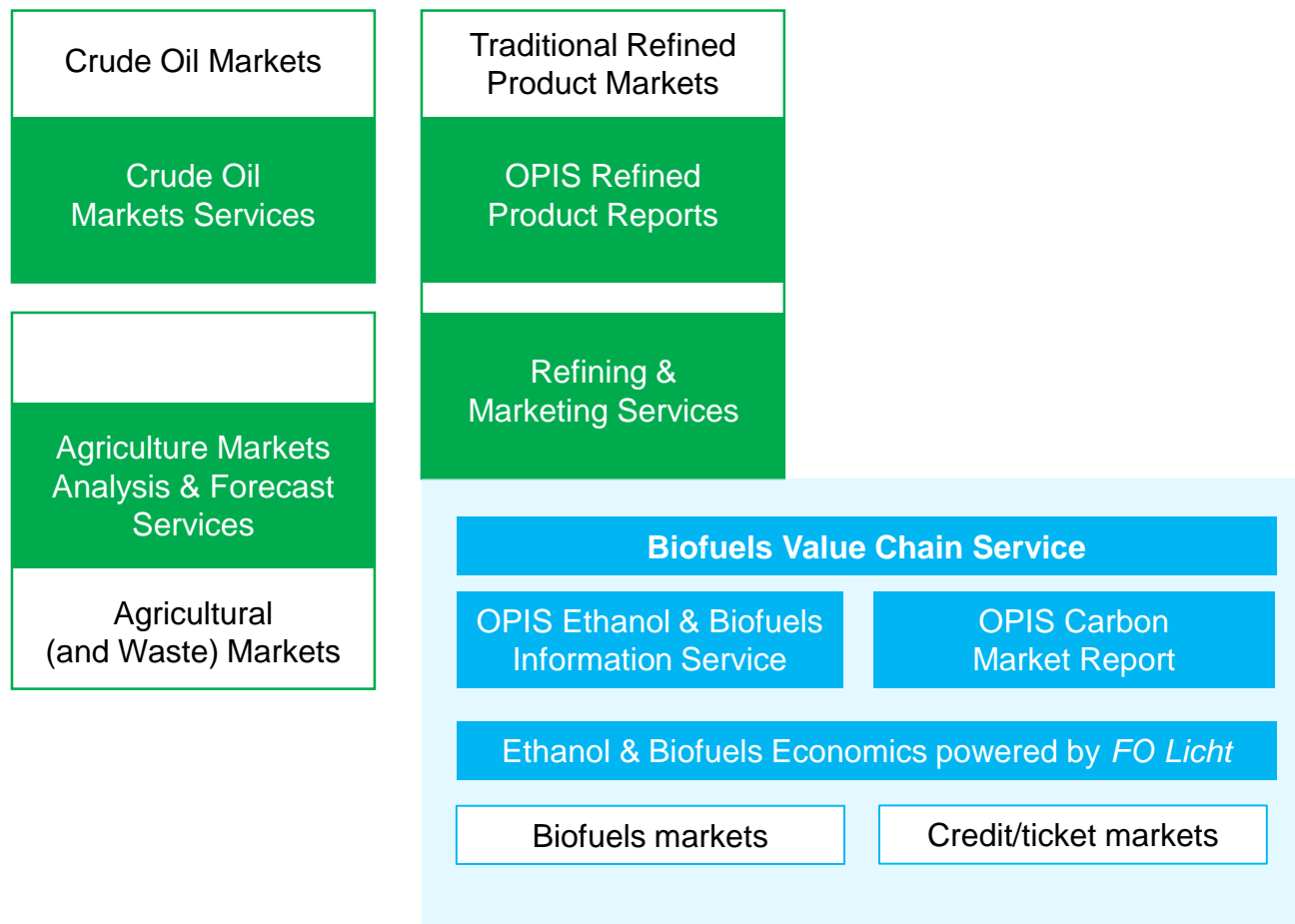
IHS Markit Biofuels Services Portfolio

Biofuels Value Chain Service completes IHS Markit's Biofuels Portfolio

IHS Markit services provide comprehensive market intelligence for the biofuels sector, enabling both decision-making relating to current procurement and short-term trading through market reporting and price discovery tools, and medium to long-term strategic planning via comprehensive analysis and fundamentals forecasts.

With the launch of BVCS, our end-to-end coverage of feedstocks, credit/ticket markets, and regional biofuel markets is unique to the market:

- Supply/demand and price forecasts, with full accompanying exposition of analysis and core industry drivers.
- Profiles for key feedstocks analyzing their current and future importance to biofuels.
- Unrivaled news, price discovery, and historical data on the biofuels and feedstock markets.
- Consulting services for bespoke client projects.



IHS Markit biofuels portfolio combined market coverage

Feedstock Markets

Market News/Developments

Daily, weekly and biweekly reporting and assessment along with ad-hoc strategic insight pieces on major developments

Profiles & Market Analysis

Regional profiles cover applicable feedstock markets

Prices

Daily, weekly, biweekly and quarterly current and historical pricing and forecast to 2050

Demand Outlook

Annual historical and forecast to 2050

Biofuels Markets

Market News/Developments

Daily, weekly and biweekly reporting and assessment along with ad-hoc strategic insight pieces on major developments

Regulatory/Policy Coverage

Daily, weekly and biweekly reporting and assessment plus mandate tracker and regional regulatory overviews

Prices

Daily, weekly, biweekly and quarterly current and historical pricing and forecast to 2050

Capacities Databases

Database and analysis tool

Supply/Demand Outlook

Annual historical and forecasts for 18-months (includes trade) and to 2050 (supply/demand only)

Profiles & Market Analysis

Country profiles, competitor profiles and regional profiles

Credit/ Ticket Markets

Market News/Developments

Daily and biweekly reporting and assessment along with ad-hoc strategic insight pieces on major developments

Profiles & Market Analysis

Regional profiles cover applicable credit/ticket markets

Prices

Daily and quarterly current and historical pricing and forecast to 2050

Market Outlook

Quarterly historical and forecast to 2050

IHS Markit biofuels portfolio feature comparison

Product Offering Name	Geographic Coverage	Publication/ Update Cadence	Feedstock Markets				Biofuels Markets						Credit/ Ticket Markets			
			Market News/ Developments	Prices	Demand Outlook	Profiles and Market Analysis	Market News/ Developments	Prices	Supply/ Demand Outlook	Regulatory/ Policy Coverage	Capacities Database	Profiles and Market Analysis	Market News/ Developments	Prices	Market Outlook	Profiles and Market Analysis
Carbon Market Report	Americas	Daily	-	-	-	-	-	-	-	-	-	-	Daily Reporting and Assessment	Daily Current + Historical	-	-
Ethanol and Biofuels Information Service	Americas	Daily	Daily Reporting and Assessment	Daily Current + Historical	-	-	Daily Reporting and Assessment	Daily Current + Historical	-	Daily Reporting and Assessment	-	-	-	-	-	-
Ethanol & Biofuels Economics	Global	Weekly/ Biweekly	Weekly/ Biweekly Reporting and Assessment	Weekly/ Biweekly Current + Historical	-	-	Weekly/Biweekly Reporting and Assessment	Weekly/ Biweekly Current + Historical	Monthly 18-month forecast	Biweekly Reporting and Assessment	Database	Country Profiles + Competitor Profiles	Biweekly Reporting and Assessment	-	-	-
Biofuels Value Chain Service	Global	Evergreen, Quarterly, Annual	Ad-Hoc Strategic Insight pieces on major developments	Quarterly Historical and Forecast to 2050	Annual Historical and Forecast to 2050	Global Feedstock Profiles	Ad-Hoc Strategic Insight pieces on major developments	Quarterly Historical and Forecast to 2050	Annual Historical and Forecast to 2050	Mandate Tracker + Regional Regulatory Overviews	Database + Analysis Tool	Regional Value Chain Profiles	Ad-Hoc Strategic Insight pieces on major developments	Quarterly Historical and Forecast to 2050	Quarterly Updates	Regional Value Chain Profiles

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