

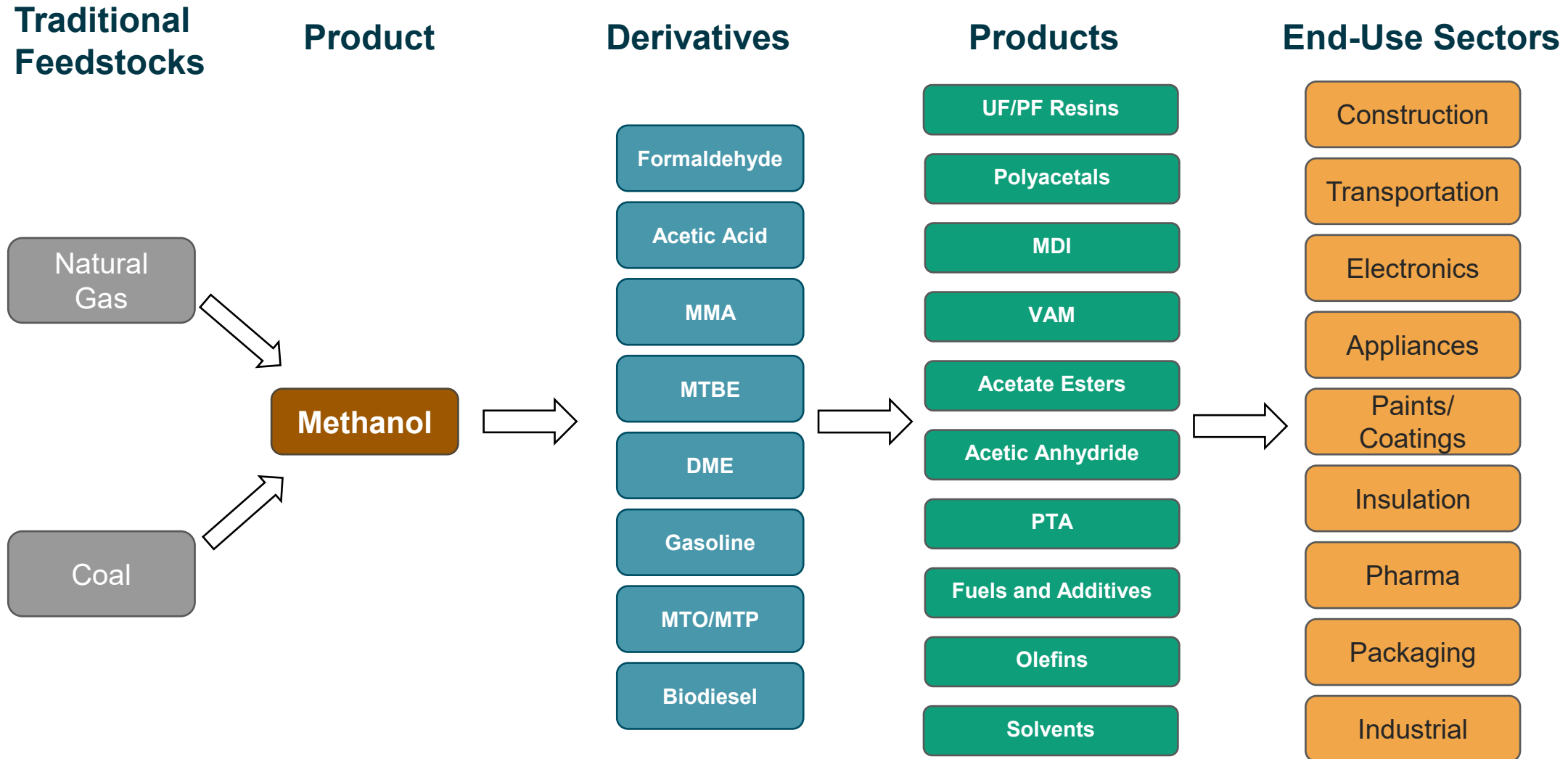
Methanol – An Evolutionary Path Towards a Sustainable, Low-Carbon Future

Chemical Strategic Report Brochure

September 2023

S&P Global
Commodity Insights

Although not always visible to end consumers, methanol has multiple contact points with the industry and, ultimately, with the society.



Low carbon methanol is one of the major products emerging as critical enablers and catalysts for hydrogen and net-zero economies and emissions reduction targets. Non-traditional uses of methanol, such as bunker fuel and hydrogen carrier, will play a key role.

Mega-trends driving the interest in low-carbon* methanol



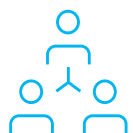
Decarbonization



Energy Transition



Hydrogen Economies



Sustainability and Emissions

Low carbon offers a wide range of opportunities and solutions

- If based on hydrogen produced with renewable energy and water, and more sustainable sources of CO₂, methanol offers unique opportunities across multiple traditional and new end-user applications to enable decarbonization of multiple applications in diverse industries.

- Major shift towards renewable energy and existing electrolysis technology trigger green product project developments globally.
- Major targets to reduce emissions in the maritime and power generation sectors facilitate the role of methanol in enabling the global energy transition.

- Methanol is one of the high-volume chemical products being seriously considered as potential means of carrying hydrogen.
- Challenges to expand into a wider hydrogen-energy supply chain facing other products with a traditional pivotal role in the food supply system, such as ammonia, do not apply to methanol.

- Evolving ETS, carbon credit schemes, and border adjustment mechanisms may put pressure on current methanol producers and create new opportunities.
- Climate agenda drives the urgent need to address emissions from the production of methanol and their derivative products.

R
E
G
U
L
A
T
I
O
N
S

*The term “low carbon” is used here in a broad sense, and includes carbon free pathways

Technology licensors, producers, and consumers are already actively evaluating the true benefits and feasibility of low carbon methanol. Meanwhile, projects have been announced, and even initiated. The answers to a few pivotal questions may hold the key to success.



Will sufficient low carbon methanol be available?



Will there be enough demand?

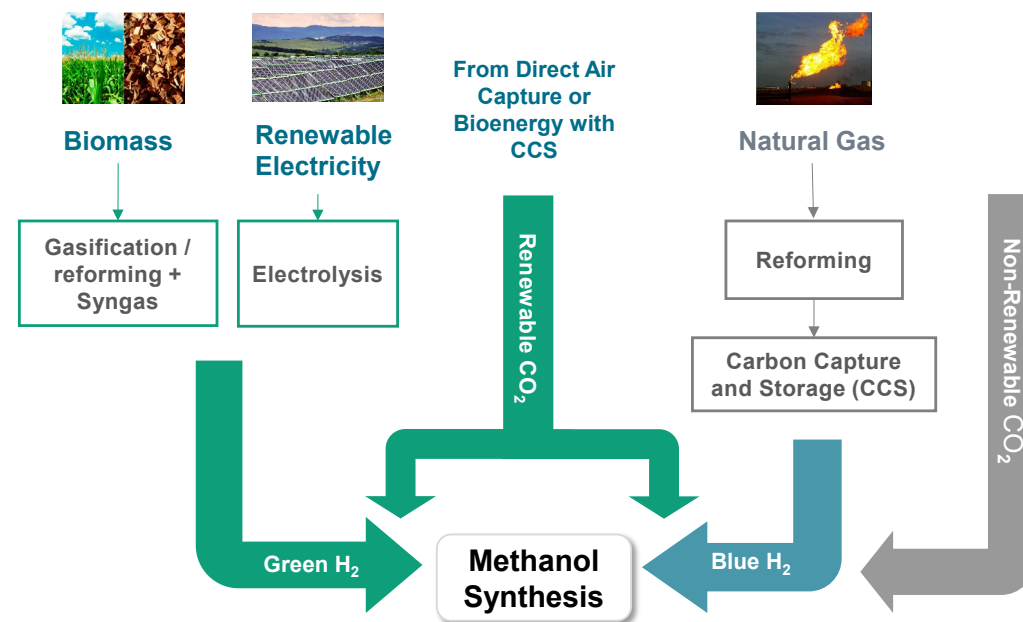


What premiums will be required? Who will pay?



What are the drivers, hurdles and inflection points?

Methanol can be produced through multiple pathways. This translates into a wide range of cost of production levels, carbon intensity, challenges, and success factors.



This comprehensive study will address the pivotal questions of low carbon methanol and will leverage the rich in-house expertise pool and information sources.

Tentative Table of Contents

1

About this Study

2

Why Low Carbon Methanol?

3

Current State of the Methanol Market

4

Driving the Transition: Regulatory Framework and Policies

5

The Question of Cost Competitiveness and Pricing

6

Outlook for Low Carbon Methanol Supply to 2050

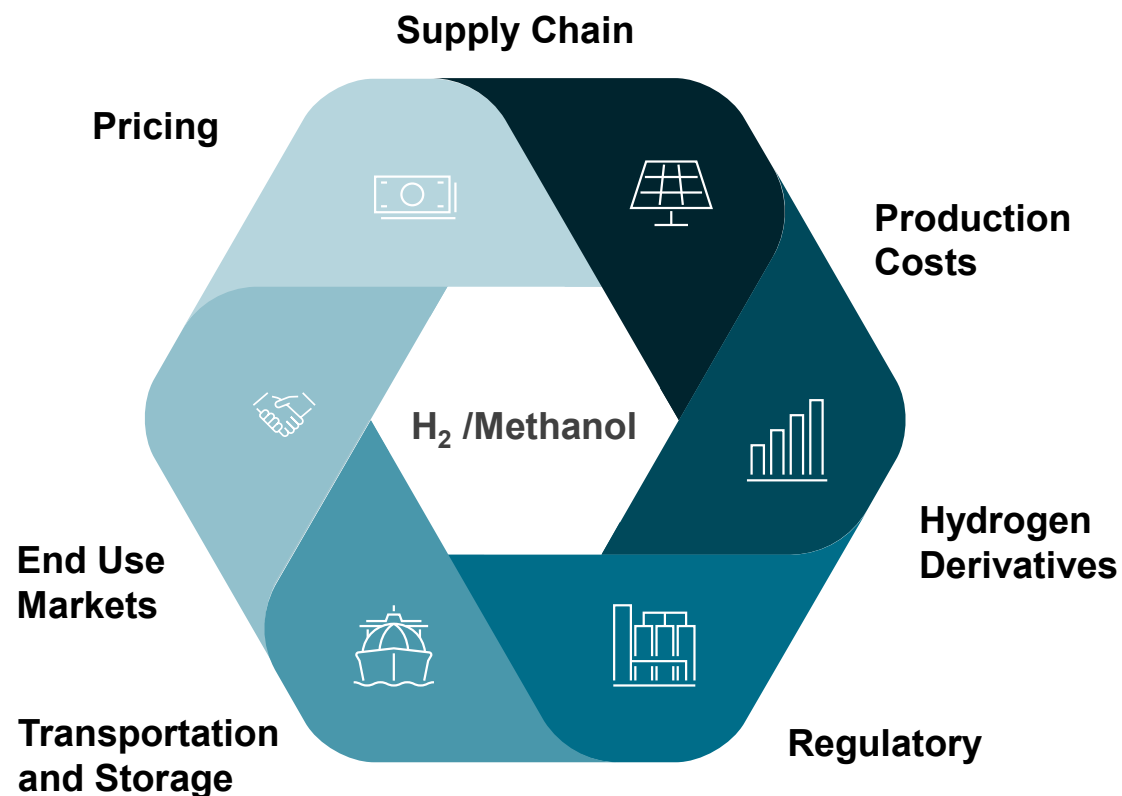
7

Outlook for Low Carbon Methanol Demand to 2050

8

Study Conclusions

S&P Global Commodity Insights enjoys privileged in-house access to expertise and analytics across multiple relevant sectors of the industry and the economy in general.



Contacts

Tanya Duggal (North America)

Tanya.Duggal@spglobal.com

Marisabel Dolan (Latin America)

Marisabel.Dolan@spglobal.com

Ryan Monis (Europe)

Ryan.Monis@spglobal.com

Mohit Sood (Middle East)

Mohit.Sood@spglobal.com

Aman Arora (India)

Aman.Arora@spglobal.com

Juan Song (China)

Juan.Song@spglobal.com

Kitiya Atthayuwat (Asia excl. China)

Kitiya.Atthayuwat@spglobal.com

S&P Global

Commodity Insights



Disclaimer

S&P Global Commodity Insights (“SPGCI”) divisional independence. SPGCI is a business division of S&P Global Inc. (“S&P Global”). S&P Global also has the following divisions: S&P Dow Jones Indices, S&P Global Market Intelligence, S&P Global Mobility, and S&P Global Ratings, each of which provides different products and services. S&P Global keeps the activities of its business divisions separate from each other in order to preserve the independence and objectivity of their activities in accordance with the S&P Global Divisional Independence and Objectivity Policy. Client’s receipt of SPGCI reports, data and information under this Agreement may also affect Client’s ability to receive services and products from other S&P Global divisions in the future.

S&P Global Commodity Insights publishes commodity information, including price assessments and indices. S&P Global Commodity Insights maintains clear structural and operational separation between its price assessment activities and the other activities carried out by S&P Global Commodity Insights and the other business divisions of S&P Global to safeguard the quality, independence and integrity of its price assessments and indices and ensure they are free from any actual or perceived conflicts of interest.

Limitation of Advice and Reliance. The Deliverables should not be construed as financial, investment, legal, or tax advice or any advice regarding Client’s corporate or legal structure, assets or, liabilities, financial capital or debt structure, current or potential credit rating or advice directed at improving Client’s creditworthiness nor should they be regarded as an offer, recommendation, or as a solicitation of an offer to buy, sell or otherwise deal in any investment or securities or make any other investment decisions. The Deliverables should not be relied on by Client in making any investment or other decision. Client may not use the Deliverables to transmit, undertake or encourage any unauthorized investment advice or financial promotions, or to generate any advice, recommendations, guidance, publications or alerts made available to its own customers or any other third-parties. Nothing in the Deliverables constitutes a solicitation by SPGCI or its affiliates of the purchase or sale of any loans, securities or investments. SPGCI personnel are not providing legal advice or acting in the capacity of lawyers under any jurisdiction in the performance of Services or delivery of Deliverables.