

## **MARKETS AND PROFITABILITY**

# **Market Analytics: Methyl tert-butyl ether (MTBE) - 2024**

May 2024



This Report was prepared by NexantECA, the Energy and Chemicals Advisory company ("NexantECA"). Except where specifically stated in this Report, the information contained herein is prepared on the basis of information that is publicly available, and contains no confidential third party technical information to the best knowledge and belief of NexantECA. The information has not been independently verified or otherwise examined to determine its accuracy, completeness or financial feasibility. Neither NexantECA, Subscriber nor any person acting on behalf of either shall have any liabilities for any loss or damage arising from or connected to the use of any information contained in this Report. NexantECA does not represent or warrant that any assumed conditions will come to pass.

The Report is for Subscriber's internal use only and shall be kept strictly confidential. The Report should not be otherwise reproduced, distributed or used without first obtaining prior written consent by NexantECA. Each Subscriber agrees to use reasonable effort to protect the confidential nature of the Report.

Copyright © by NexantECA (BVI) Ltd. 2024. All rights reserved.



## Contents

|          |  |           |
|----------|--|-----------|
| <b>1</b> | <b>Executive Summary .....</b>               | <b>6</b>  |
| 1.1      | Methyl tert-Butyl Ethyl (MTBE).....          | 6         |
| <b>2</b> | <b>Introduction .....</b>                    | <b>11</b> |
| 2.1      | The Methanol Industry .....                  | 11        |
| 2.1.1    | Methanol Demand into Chemical End-Uses ..... | 11        |
| 2.1.1.1  | Formaldehyde .....                           | 11        |
| 2.1.1.2  | Acetic Acid .....                            | 12        |
| 2.1.1.3  | Olefins .....                                | 12        |
| 2.1.1.4  | Methyl Methacrylate .....                    | 12        |
| 2.1.1.5  | Dimethyl Terephthalate .....                 | 13        |
| 2.1.1.6  | Methylamines .....                           | 13        |
| 2.1.1.7  | Methyl Halides.....                          | 13        |
| 2.1.1.8  | Other Chemical Uses .....                    | 13        |
| 2.1.2    | Methanol Demand into Fuel End-Uses .....     | 14        |
| 2.1.2.1  | Gasoline Blending .....                      | 14        |
| 2.1.2.2  | Biodiesel.....                               | 14        |
| 2.1.2.3  | Methyl tert-Butyl Ether (MTBE) .....         | 14        |
| 2.1.2.4  | Dimethyl Ether (DME) .....                   | 15        |
| 2.1.2.5  | Methanol to Gasoline (MTG).....              | 16        |
| 2.1.2.6  | Bunker Fuel.....                             | 16        |
| 2.1.2.7  | Fuel Cells .....                             | 17        |
| 2.1.2.8  | Methanol to Power .....                      | 18        |
| 2.2      | Sustainable Methanol.....                    | 19        |
| 2.2.1    | Blue Methanol .....                          | 20        |
| 2.2.2    | Green-methanol .....                         | 21        |
| 2.2.3    | e-Methanol .....                             | 22        |
| 2.3      | Future Emerging Methanol Applications .....  | 23        |
| 2.3.1    | The Shipping Fuel Market .....               | 23        |
| 2.3.2    | Methanol as a Shipping Fuel.....             | 24        |
| 2.4      | Market Coverage.....                         | 27        |
| <b>3</b> | <b>Methyl tert-Butyl Ethyl (MTBE) .....</b>  | <b>28</b> |
| 3.1      | Global .....                                 | 28        |
| 3.1.1    | Key Developments .....                       | 28        |
| 3.1.2    | Demand.....                                  | 28        |
| 3.1.3    | Supply .....                                 | 31        |
| 3.1.4    | Supply, Demand and Trade .....               | 34        |
| 3.2      | North America .....                          | 36        |
| 3.2.1    | Demand.....                                  | 36        |
| 3.2.2    | Supply .....                                 | 37        |
| 3.2.3    | Supply, Demand and Trade .....               | 38        |
| 3.3      | South America.....                           | 41        |



|         |                                |    |
|---------|--------------------------------|----|
| 3.3.1   | Demand .....                   | 41 |
| 3.3.2   | Supply .....                   | 42 |
| 3.3.3   | Supply, Demand and Trade ..... | 42 |
| 3.4     | Western Europe .....           | 44 |
| 3.4.1   | Demand .....                   | 44 |
| 3.4.2   | Supply .....                   | 45 |
| 3.4.3   | Supply, Demand and Trade ..... | 45 |
| 3.5     | Central Europe .....           | 47 |
| 3.5.1   | Demand .....                   | 47 |
| 3.5.2   | Supply .....                   | 47 |
| 3.5.3   | Supply, Demand and Trade ..... | 48 |
| 3.6     | Eastern Europe .....           | 49 |
| 3.6.1   | Demand .....                   | 49 |
| 3.6.1.1 | Russia .....                   | 49 |
| 3.6.1.2 | Other Eastern Europe .....     | 50 |
| 3.6.2   | Supply .....                   | 50 |
| 3.6.2.1 | Russia .....                   | 50 |
| 3.6.2.2 | Other Eastern Europe .....     | 50 |
| 3.6.3   | Supply, Demand and Trade ..... | 51 |
| 3.6.3.1 | Russia .....                   | 51 |
| 3.6.3.2 | Other Eastern Europe .....     | 52 |
| 3.7     | Middle East .....              | 54 |
| 3.7.1   | Demand .....                   | 54 |
| 3.7.2   | Supply .....                   | 55 |
| 3.7.3   | Supply, Demand and Trade ..... | 56 |
| 3.8     | Africa .....                   | 58 |
| 3.8.1   | Demand .....                   | 58 |
| 3.8.2   | Supply .....                   | 58 |
| 3.8.3   | Supply, Demand and Trade ..... | 58 |
| 3.9     | Asia Pacific .....             | 59 |
| 3.9.1   | Demand .....                   | 59 |
| 3.9.1.1 | China .....                    | 59 |
| 3.9.1.2 | North-East Asia .....          | 61 |
| 3.9.1.3 | Australasia .....              | 62 |
| 3.9.2   | Supply .....                   | 63 |
| 3.9.3   | Supply, Demand and Trade ..... | 64 |

## Appendices

|          |   |           |
|----------|---|-----------|
| <b>A</b> | <b>Methodology .....</b>                      | <b>68</b> |
| A.1      | Market Dynamics Forecasting Methodology ..... | 68        |
| A.1.1    | Capacity Availability and Forecasting .....   | 68        |
| A.1.2    | End-Use Consumption Forecasting .....         | 68        |
| A.1.2.1  | End-Use Sector Growth .....                   | 69        |
| A.1.2.2  | Penetration (New Application Growth) .....    | 69        |



---

|          |  |           |
|----------|--|-----------|
| A.1.2.3  | Short-term Influences.....                     | 70        |
| A.1.3    | Monomer Consumption Forecasting .....          | 70        |
| A.1.4    | Production and Trade Forecasting.....          | 71        |
| <b>B</b> | <b>The Methanol Industry – Technology.....</b> | <b>72</b> |
| B.1      | Methanol.....                                  | 72        |
| B.2      | Formaldehyde .....                             | 73        |
| B.3      | MTBE .....                                     | 74        |
| B.4      | Acetic Acid.....                               | 75        |



## Figures

|           |   |    |
|-----------|---|----|
| Figure 1  | Bunker Fuel by Type, 2015-2050 .....  | 24 |
| Figure 2  | Forecast Methanol Demand in Western Europe – New Market Opportunity as a Marine Fuel..... | 26 |
| Figure 3  | Global GDP Growth vs. MTBE Consumption Growth .....                                       | 30 |
| Figure 4  | Global MTBE Consumption .....   | 30 |
| Figure 5  | Global MTBE Capacity Share by Marketer in 2023-e .....                                    | 32 |
| Figure 6  | Global MTBE Capacity Additions/(Closures).....  | 33 |
| Figure 7  | Global MTBE Capacity .....  | 33 |
| Figure 8  | Global MTBE Supply and Demand .....   | 35 |
| Figure 9  | Regional MTBE Exports/Imports .....   | 35 |
| Figure 10 | North America MTBE Supply, Demand and Trade .....   | 39 |
| Figure 11 | United States MTBE Supply, Demand and Trade.....  | 40 |
| Figure 12 | South America MTBE Supply, Demand and Trade.....  | 43 |
| Figure 13 | Western Europe MTBE Supply, Demand and Trade .....  | 46 |
| Figure 14 | Central Europe MTBE Supply, Demand and Trade .....  | 48 |
| Figure 15 | Russia MTBE Supply, Demand and Trade .....  | 51 |
| Figure 16 | Other Eastern Europe MTBE Supply, Demand and Trade .....                                  | 52 |
| Figure 17 | Total Eastern Europe MTBE Supply/Demand and Trade .....                                   | 53 |
| Figure 18 | Middle East MTBE Supply, Demand and Trade.....  | 57 |
| Figure 19 | Asia Pacific MTBE Supply, Demand and Trade.....   | 65 |
| Figure 20 | China MTBE Supply, Demand and Trade .....   | 66 |
| Figure 21 | End-Use Consumption Drivers .....   | 69 |
| Figure 22 | Monomer Consumption Drivers .....   | 70 |
| Figure 23 | Trade Considerations .....  | 71 |

## Tables

|          |  |    |
|----------|--|----|
| Table 1  | Proposed Bio-methanol Project Status .....                   | 21 |
| Table 2  | Energy Density of Current and Potential Shipping Fuels ..... | 25 |
| Table 3  | Global MTBE Consumption .....                                | 30 |
| Table 4  | Global MTBE Consumption by Region.....                       | 31 |
| Table 5  | Global MTBE Supply and Demand .....                          | 35 |
| Table 6  | North America MTBE Consumption .....                         | 37 |
| Table 7  | North America MTBE Consumption by Country.....               | 37 |
| Table 8  | North America MTBE Supply, Demand and Trade .....            | 39 |
| Table 9  | United States MTBE Supply, Demand and Trade.....             | 40 |
| Table 10 | South America MTBE Consumption.....                          | 42 |
| Table 11 | South America MTBE Consumption by Country .....              | 42 |
| Table 12 | South America MTBE Supply, Demand and Trade.....             | 43 |
| Table 13 | Western Europe MTBE Consumption .....                        | 45 |
| Table 14 | Western Europe MTBE Supply, Demand and Trade .....           | 46 |
| Table 15 | Central Europe MTBE Consumption .....                        | 47 |



---

|          |  |    |
|----------|--|----|
| Table 16 | Central Europe MTBE Supply, Demand and Trade .....       | 48 |
| Table 17 | Russia MTBE Consumption .....                            | 50 |
| Table 18 | Other Eastern Europe MTBE Consumption .....              | 50 |
| Table 19 | Russia MTBE Supply, Demand and Trade .....               | 51 |
| Table 20 | Other Eastern Europe MTBE Supply, Demand and Trade ..... | 52 |
| Table 21 | Total Eastern Europe MTBE Supply/Demand and Trade .....  | 53 |
| Table 22 | Middle East MTBE Consumption .....                       | 55 |
| Table 23 | Middle East Consumption by Country .....                 | 55 |
| Table 24 | Middle East MTBE Supply, Demand and Trade.....           | 57 |
| Table 25 | Asia Pacific MTBE Consumption.....                       | 62 |
| Table 26 | Asia Pacific MTBE Consumption by Country .....           | 62 |
| Table 27 | Asia Pacific MTBE Supply, Demand and Trade.....          | 65 |
| Table 28 | China MTBE Supply, Demand and Trade .....                | 66 |



NexantECA partners with clients to help them navigate the big global energy, chemicals and materials issues of tomorrow. We provide independent advice through our consulting, subscriptions and reports, and training businesses using expertise developed in markets, economics and technology through our fifty years of operation. We are entirely dedicated to supporting sustainable development of the industry and provide expert advice with efficiency, speed, and agility.

#### USA

Tel: +1 914 609 0300  
44 S Broadway,  
5<sup>th</sup> Floor White Plains  
NY 10601-4425  
USA

#### USA

Tel: +1 832 462 7176  
609 Main Street, Floor 25  
c/o WeWork  
Houston  
Texas 77002  
USA

#### Thailand

Tel: +662 793 4600  
22<sup>nd</sup> Floor, Rasa Tower I  
555 Phahonyothin Road  
Kwaeng Chatuchak  
Khet Chatuchak  
Bangkok 10900  
Thailand

#### Malaysia

Tel: +60 322 98 7212  
Level 28,  
The Gardens South Tower  
Mid Valley City  
Lingkaran Syed Putra  
Kuala Lumpur 59200  
Malaysia

#### UK

Tel: +44 20 7950 1600  
110 Cannon Street  
London  
EC4N 6EU  
United Kingdom

#### Bahrain

Tel: +973 1330 3038  
Level 49, Suite 4902  
West Tower  
Bahrain Financial  
Harbour  
PO Box 60686  
Bahrain

#### China

Tel: +86 21 6050 1119  
Room 02-15, 2F Block 1  
58 Yao Yuan Road  
Pudong, Shanghai, 200126  
China

#### Disclaimer

This Report was prepared by NexantECA, the Energy and Chemicals Advisory company. Except where specifically stated otherwise in this Report, the information contained here is prepared on the basis of information that is publicly available, and contains no confidential third-party technical information to the best knowledge of NexantECA. Aforesaid information has not been independently verified or otherwise examined to determine its accuracy, completeness or financial feasibility. Neither NexantECA, Client nor any person acting on behalf of either assumes any liabilities with respect to the use of or for damages resulting from the use of any information contained in this Report. NexantECA does not represent or warrant that any assumed conditions will come to pass.