

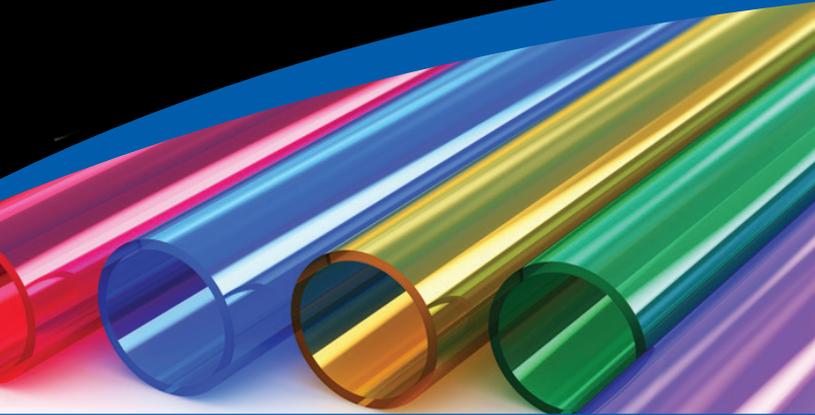


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Argus MTBE Annual 2018

(Insight from the Argus MTBE Analytics Service)

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Summary

The methyl tertiary butyl ether (MTBE) market is slowing down after seven years of rapid growth, which was led by cleaner fuel requirements and a lack of refinery infrastructure in some parts of the world.

Ethanol, which takes market share from MTBE, has been on the rise in many parts of the world, and more countries are expected to adopt ethanol in the future. Ethanol, like MTBE, is also an oxygenate. But both blend components are not mixed together because of unfavorable characteristics. Any ethanol mandates or renewable fuel program will come at the expense of MTBE, like it did in the US in 2006.

China, which is a +10mn t MTBE market, will mandate E10 gasoline nationwide by 2020. China's adoption of E10 will be the biggest influence on the MTBE market in the short and long term, and is a big focus of the Argus MTBE Annual 2018. China also cracked down on blending non-taxed blend components, which has mainly affected independent refiners and blenders.

Mexico, a large consumer of MTBE, is now allowing up to 10pc ethanol in its nationwide gasoline. But the main consuming MTBE cities in Mexico will continue to mandate MTBE. This study looks at the changing environment in Mexico and how the new president's administration will impact the fuels market.

Growing global MTBE capacity will alter trade flows, leaving exporters looking for alternative outlets. New capacity in southeast Asia may back out MTBE imports from the Middle East. Additions in the US should back out imports from Europe and Brazil. With China moving to E10 gasoline, it will be difficult to look to China as an outlet for MTBE. China could become a net exporter of MTBE if the country goes through with an ethanol mandate.

MTBE producers and marketers will look to emerging markets to offset demand losses in some parts of the world. West Africa and Latin America have been a big consumers of Europe's MTBE production, and this should continue in the future.

The US has benefited under the current environment, exporting gasoline and blending components to Latin America and the Caribbean while having access to cheap feedstocks because of shale gas. But as the world becomes oversupplied with MTBE, competition will be stronger and more exporters will be looking at the Latin America and the Caribbean markets.

MTBE markets in the other Asia-Pacific countries will be limited by the economics of blending and competitiveness of MTBE. In the next few years, Singapore will see a rise in imports as new capacity comes on line in Taiwan and South Korea, which are both looking to export MTBE.

Major findings

Key findings from the preparation of this issue of the MTBE Annual are as follows:

- China's switch to China V gasoline specifications has accelerated demand growth for MTBE and other blendstocks in the past few years. But a few factors change the landscape for MTBE. A new gasoline invoice system cracked down on independent refiners' use of mixed aromatics and MTBE, which depending on how/where it was blended, bypassed gasoline consumption taxes.
- China's nationwide E10 mandate will have the biggest impact on the MTBE industry. A full compliance means that a 10mn t MTBE market will disappear in the next couple of years. But the country will face many challenges in meeting its mandate and we believe China will not have the capacity and infrastructure to meet the deadline. A fierce trade war with the US, which has plenty of ethanol, will affect the availability to import ethanol.
- Mexico is expected to continue importing large amounts of MTBE throughout our forecast period, but the government is now allowing the use of up to 10pc ethanol nationwide. Ethanol will make a bigger impact in the northern states of Mexico. The biggest factor that could influence the MTBE industry is plans for Mexico to update all its refineries and build two new ones.
- Middle Eastern gasoline demand is growing, and MTBE exports out of the region should decline as internal use increases. Asia-Pacific countries will require less MTBE from the Middle East as capacity in the region increases.
- Western Europe will have slightly higher MTBE usage as a result of favorable blending economics, but declining regional gasoline consumption and increased ethanol use will limit the upside. In the long term, MTBE demand may re-emerge with the new Renewable Energy Directive (RED II) post 2021, but could be in the form of bio-MTBE.
- Ethyl tertiary butyl ether (ETBE) consumption in Japan will reach 1.5mn t/yr in 2018 as the country tries to meet its biofuel targets. The next five years will have flat growth as biofuel targets will be kept at the 2017 fiscal year target. But Japan will now allow corn for the production of ETBE. The allowance of corn will not alter ETBE trade flows, but it could affect Brazilian ethanol imports into the US.

Key components

In addition to providing additional details and background on these key findings, this annual covers the period from 2013 through 2022 and includes the following components:

- A history and forecast of the supply and demand balance for each country that produces or consumes MTBE/ETBE.
- Detailed country maps, which illustrate key locations of MTBE/ETBE production and consumption.
- A history and forecast of MTBE/ETBE imports and exports by country.
- Analysis of capacity and market changes and trends by country and region.
- A useful technical overview that explains the production of MTBE/ETBE and feedstock sources.

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Appendix C: Argus fuels and octane services

An Argus market service

- Argus experts analyze the global markets for fuel oxygenates and link them to international gasoline markets.
- The fuels and octane service provides timely market updates, comprehensive analysis of events and trends, including coverage of regional supply and demand fundamentals, as well as contract and spot pricing for fuels and octane.
- Argus also offers rolling 24-month MTBE price forecast.
- An annual study provides insight into the MTBE and ETBE supply and demand, as well as present and future capacities, trade flows and a five-year forecast of production and consumption. A 10-year forecast is available on Argus Direct.
- Argus' experts combine decades of experience and insight into the fuels and octane market to create trusted analysis.

Markets covered

- MTBE
- ETBE
- Biofuels
- Gasoline

Regions covered

- Americas
- Europe
- Middle East
- Asia-Pacific

Roel Salazar

Roel Salazar is the senior fuels and octane consultant for Argus. He is responsible for covering the US and Latin American MTBE markets and the weekly Argus Fuels and Octane report. He is also instrumental in preparing the global Fuels and Oxygenates Annual. Roel joined Argus in 2005 as an olefins analyst supporting the ethylene, propylene and butadiene services. He joined the fuels and octane team in 2011, and has steadily built key client relationships with US MTBE consumers, producers and traders, while helping them analyze the global MTBE and octane markets. Roel holds an undergraduate degree in Information Systems from the University of Houston.

Tony Devlin

Tony Devlin has over 30 years of commercial experience in the chemicals industry in Europe. He worked for Imperial Chemical Industries (ICI) UK for 20 years in a variety of roles covering logistics/purchasing and sales management within the fertilizer and petrochemicals business. He joined Methanex Corporation and worked for a decade within Methanex Europe as a sales manager and latterly as a procurement manager for Europe where he was responsible for purchasing methanol from the market to supplement production and fulfill sales commitments. Tony joined Argus in 2011 as consultant covering methanol and MTBE in Europe.

Yeo Yu Kin

Yeo Yu Kin oversees Argus' consulting practice in Asia, and leads refining modeling efforts. After graduating from the National University of Singapore, he started his career with KBC Singapore in 1990, where he carried out technical consulting activities in the refining sector. In 2003, Yeo joined Purvin & Gertz, where he focused on crude oil and oil products. He was elected as a partner in 2006, and as a senior partner in 2008. Yeo has carried out many refinery pre-feasibility and feasibility studies, technology licensor selection reports, and refinery cost analyses.

Vladimir Baranov

Vladimir Baranov is a reporter covering Argus Russian MTBE, specializing in the Russian market for MTBE and high octane components. He is responsible for writing analytic articles and market reports. Before joining Argus, Vladimir earned a degree in polymer chemistry and technology from Moscow State University of Fine Chemical Technology, and then went on to investigate rubber materials as an engineer.

About Argus

Argus Consulting Services offers you tailored research, independent data, benchmarking, modelling, strategic analysis and decision-making support. The focus is firmly on markets – their structure, outlook, logistics and economics – where Argus' experience and understanding of the global petrochemical and energy sectors provides you with a clear competitive advantage.

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