METHANOL INSTITUTE

METHANOL INSTITUTE

2023 MILESTONES

the global trade association for
the Methanol Industry

2023 Milestones *Table Of Contents*

A WORD FROM OUR CHAIR
4-5

2022 ACHIEVEMENTS
6-7

CHINA ROUNDUP
8-9

INDIA ROUNDUP
10-11

EUROPE ROUNDUP
12-13

AMERICAN PUBLIC POLICY
14-15

INDUSTRY REPRESENTATION
16-17

METHANOL PRICING & AVAILABILITY
18-19

NO TURNING BACK: WHY METHANOL IS THE SOLUTION FOR SHIPPING'S ENERGY TRANSITION
20-21

ULTRA-LARGE CONTAINER SHIPS POWERED BY TWO-STROKE, METHANOL DUAL-FUEL ENGINES
22-23

PORTS PAVE THE WAY FOR METHANOL GREEN CORRIDORS OF SHIPPING
24-25

IMPORTANT PARTNERSHIP
26-27

SOCIAL MEDIA & WEB PRESENCE
28-29

CURRENT MEMBERS & STRATEGIC PARTNERS
30-31

NEW MEMBERS
32-35

MI GLOBAL OFFICE LOCATIONS
36-37

MI GLOBAL TEAM MEMBERS
38-41

MI & the industry's *activities over the course of 2022*

A VERY UNIQUE OPPORTUNITY

ANITA GAJADHAR
CHAIR OF THE BOARD
METHANOL INSTITUE

This edition of Methanol Milestones arrives as I begin my second year as Chair of the Methanol Institute's Board of Directors.

2022 was an extraordinary year, as the Covid pandemic finally began to recede, and the methanol industry moved to seize the unique opportunity presented by methanol's rise to prominence as a preferred marine fuel of the future. One of the highlights thus far at the start of 2023 was an article headline in the Wall Street Journal, which proclaimed, "*Methanol Takes Lead in Shipping's Quest for Green Fuel*," this further supports the lobbying efforts the Methanol Institute has been pursuing for the last 8 years to educate the shipping industry of methanol's use as a marine fuel.

Beyond shipping, we've seen tens of thousands of methanol taxis sold in China, along with hundreds of trucks, including new hybrid models. Methanol is now fueling cookstoves, industrial boilers, kilns, home heating, gensets, and fuel cell systems. We've also seen a wave of announcements for low carbon, ultra-low carbon, bio and e-methanol production. Amplifying these developments across MI's digital platforms has been a central focus for our staff team.

In this year's edition of Milestones, you will learn more about some of these initiatives as well as additional MI activities, and a look at our new members: Air Company, CMA-CGM, European Energy, Gidara, Hurtigruten Expeditions, Noble Drilling A/S, Norwegian Cruise Line Holdings, Ørsted, Rio Tinto, SunGas Renewables, and Swire Shipping.

This year, MI will continue to lead the way in the emergence of methanol as a global marine and on road transportation fuel; work to identify and open new markets and opportunities for methanol around the world; continue to promote our industry's interests before legislators and regulators across the globe; expand our reach via our social media and web platforms; promote methanol safety; and many other important initiatives.

The organization and members of the Methanol Institute are making significant contributions to the advancement of the global methanol industry. Together we are looking forward to an exciting 2023, and the Methanol Institute is well positioned to achieve continued growth and success for our industry and each of our member companies.

Over the course of the last year, MI has also welcomed **over 20 new members** to the association, and our total membership now stands at **70 companies and organizations**.

In addition to our continued growth in membership, MI accomplished a great deal across a wide range of activities in 2022. Some highlights include:

1
The launch of a new Policy Committee which will oversee our advocacy and public policy efforts in the EU, Americas, Asia Pacific and the Middle East, and beyond.

2
The expansion of our staff with the hiring of Rafik Ammar in Brussels, and Toni Zhou in Beijing.

3
The completion of a Lifecycle Carbon Assessment (LCA) of various methanol production feedstocks and processes.

4
Continued support for methanol fuel vehicle standards in China.

5
Growing partnership with Swiss technology start-up Alivion to develop lifesaving methanol breath detector device and place it in hospitals and clinics in Liberia.

6
Increased support of events including our successful marine exhibit at SMM Hamburg.

7
Participation in pilot projects & forums including: FASTWATER; Green Maritime Methanol; European Sustainable Shipping Forum; Blue Sky Maritime Coalition; the launch of the CoMeBust Project in Sweden; & more.

8
Increased collaboration with partner organizations such as eFuel Alliance, Renewable & Low Carbon Liquid Fuels Platform, and the American Chemistry Council.

A WORD FROM OUR CHAIR

Having been involved with MI for over a decade in a variety of roles, I am honored to lead the global trade association for the methanol industry and very proud of what we as an industry accomplished in 2022

2022 ACHIEVEMENTS

GLOBAL FUEL BLENDING

Global Stakeholder & Media Engagement to Promote the Use of Methanol as a Direct Fuel for Road Transport in Combustion Engines & Electric Platforms

Target Key Potential New Markets for Methanol Fuel Blending with Methanol Promotion Campaigns

Ensure a Supportive Public Policy Framework for Methanol Fuel Blending

MARKET DEVELOPMENT

Develop Chinese Industry Standards for Methanol Industrial Boilers, Cookstoves, Kilns and Home Heating

Dessiminate China Methanol Fuel Market Study

Promote Renewable Methanol and Small-Scale Methanol Technology Commercialization

Support Methanol Fuel Cell Commercial Introduction

Support Introduction of Methanol-to-Power

PRODUCT STEWARDSHIP

SAFE HANDLING

Disseminate Needs-Based Educational Materials for Customers Across the Global Distribution Chain

Promote Best Practices for Methanol Handling in Emerging Energy Applications

Our *members benefit* from our standing committees

which are *dedicated to serving our membership* in select goals

PRODUCT STEWARDSHIP

BOOTLEG ALCOHOL POISONING

Expand Global Network on Illicit Alcohol Poisoning Prevention

Education Through Social Media Campaigns

Availability for Pharmaceutical and Medical Technology Solutions (ie; Fomepizole & Medical Test Strips)

MARINE FUEL

Encourage and Support Pilot Demonstrations of Methanol Marine Fuels in Multiple Markets

Develop Methanol Maritime Technical Workshops

Lead Social Media Campaigns in Support of Methanol as a Marine Fuel

Provide Leadership for National/International Regulations of Marine Sector to Advocate for Methanol as an Alternative Fuel

CHINA KEEPS ITS ROLE AS THE WORLD'S BIGGEST METHANOL PRODUCER & CONSUMER

CHINA CONTINUES TO EXPAND IN THE FOLLOWING:

- Marine
- Road transportation
- Fuel cell & heating applications (in both boilers/kilns and cookstoves)

On February 10, 2022, after a lengthy process, MI's Beijing office NGO registration was successfully completed, marking the full functioning of the office under China's NGO Law. In August, MI's Beijing Office signed the Global Development Initiative (GDI) which was proposed by China's President Xi originally at the 2021 United Nations General Assembly for more public development cooperation narrative. The GDI is committed to accelerating the implementation of the 2030 Agenda for Sustainable Development and striving for stronger, greener and healthier global development.

Additionally, MI's Beijing office has hired a new member of staff, Toni Zhou. With 29 years of experience largely for Ogilvy Beijing, she will be leading social media engagements in China, in addition to office management and support of China Chief Representative Kai Zhao.

TONI ZHOU

KAI ZHAO

MASSIVE EXPANSION OF THE GLOBAL SHIPPING INDUSTRY

China's rise as an economic powerhouse has also contributed to a massive expansion of the global shipping industry in the past decades, and the need for decarbonization of the shipping industry presents a unique opportunity for methanol as marine fuel. In 2022, two giants of the Chinese shipping sector, China Ocean Shipping (Group) Company (COSCO) and China Merchant Shipping (CMS) both confirmed methanol fueled vessel orders. More discussions are underway on methanol green shipping corridors from Los Angeles-Shanghai and China-ASEAN countries. Chinese shipyards continue to take and deliver orders of methanol fueled vessels from both China and the world, including COSCO's 12 24,000 TEU container vessels, CMA CGM's 12 16,000 TEU container vessels, and CMS' 9000CEU PCTC (Pure Car and Truck Carrier).

2022 witnessed the delivery of 4 MR (Medium Range) tankers from GSI to MI member Proman/Stena with methanol bunkering occurring for the first time. Before each vessel was delivered, roughly 80 tons of methanol was bunkered for each vessel's sea trials by CSSC Hengyu Energy and Sinopec

STAKEHOLDER ENGAGEMENT

2022 also saw MI's ongoing stakeholder engagement in public policy: with support from MI partner China Waterborne Transport Research Institute (CWTRI), methanol was highlighted in a number of Ministry of Transport (MOT) policies on the marine sector: China Ministry of Industry and Information Technology (MIIT) and 4 additional ministries' "Guideline for Accelerating the Green and Smart Vessels'; China Ministry of Transport and other Administrations of Railway, Civil Aviation and State Post on its implementation policy "Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy".

INDUSTRY EVENTS

MI was also proactive in participating in more industry events, authoring journal articles and conducting interviews. MI joined the 2nd World Maritime Merchants Forum in Hong Kong, co-organized by China Merchants Group, the Transport and Logistics Bureau of the Government of Hong Kong, the Baltic and International Maritime Council (BIMCO), the International Chamber of Shipping (ICS) and the Hong Kong Shipowners Association (HKSOA) with participation in the Declaration "Call to Action on Green Marine Fuel", which features methanol. In the second day of the same event, a dedicated webinar on methanol as a marine fuel was jointly organized by China Shipowner Association, China Association of the National Shipbuilding Industry and Xinde Marine News.

ROAD TRANSPORTATION

The industry saw the ongoing development of public policy and continuing methanol vehicle growth over the past year; more companies are developing new models and more cities in China are issuing preferential policies for methanol fueled vehicles, including Jin Zhong City's announcing cash subsidies. Standards on both fuel and vehicles are being improved: The Methanol Gasoline M85 Standard was updated from its 2009 version, two M100 methanol fuel standards were completed in 2023. From 2021-2023, Chinese companies initiated 16 China Association of Automotive Manufacturers (CAAM) group standards on various methanol vehicle components with MI's support of both funds and expertise.

In terms of new market development, methanol's use continues to grow in fuel cells and heating applications. In 2022, MI member Sunhydro began to deliver methanol-hydrogen filling stations. Despite the growth of Chinese domestic boiler market, a methanol boiler produced by Korean company KD Navien, was also delivered to MI member Silent Power for testing in Switzerland.

METHANOL IN COOKING

MI also works to create demand for methanol as a cooking fuel. MI sponsored a workshop in Lu Zhou for the local chefs who use methanol cookstoves and color-coded methanol fuel storge cylinders were given out to prevent possibly confusion between methanol and ethanol which could lead to methanol poisoning accidents. A new methanol fuel market study was also jointly initiated in 2022, after similar work done in 2019, in partnership with MI member Methanex and the China Association of Alcohol and Ether Fuels and Automobiles (CAAEFA).

GEELY BECOMING A MAJOR METHANOL PLAYER

The Chinese automaker strengthened its commitment to methanol in 2022, with more development in both passenger cars and heavy-duty vehicles and promotional work. Geely Auto introduced a new model of electric-methanol ICE hybrid sedan, with exceptional fuel economy in the M100 vehicle of 13.6-9.2 L/100km (equivalent to 3.4L gasoline/100km), i.e. fuel cost less than 30cents RMB (4.3 US cents)/km. More Geely methanol trucks are also on the road, and in June of 2022, Geely Commercial Vehicles announced that the first methanol Heavy Duty (HD) truck rolled off the production line at its Jin Zhong manufacturing plant. The methanol HD truck is in its 2nd generation with a newly developed 13L methanol HD engine. In August, Geely announced its new energy truck target with plans for the methanol HD truck to achieve 50,000 units sold by 2026; as well as the latest model of its HD truck under development, Farizon, which is expected to be an EV HD truck with methanol rage extension for a total range of over 1,000km. Initial Farizon sales are planned to commence by the end of 2023.

MI SUPPORTS DEVELOPMENT OF INDIA'S NATIONAL HYDROGEN ENERGY MISSION

On the 75th Independence Day of India in 2021, Prime Minister Narendra Modi announced the launch of the country's National Hydrogen Mission.

The Prime Minister's address was delivered from the ramparts of the Red Fort which is a symbol of India's sovereignty as it was the place that India celebrated its independence and transition from British rule. The choice of location and occasion to announce the launch of the National Hydrogen Mission marks the significance of the Mission and the transitory phase that India is in as the country continues to diversify its energy portfolio in pursuit of continued economic development.

In 2022, MI engaged actively with government officials from the Ministry of New and Renewable Energy – the leading agency for the National Hydrogen Mission. MI staff drafted and published a white paper titled "*Methanol as Hydrogen Carrier*" together with MI members. The white paper was used in MI's advocacy effort with policy makers to create greater awareness about the crucial role that methanol can play in the country's hydrogen ambitions. Apart from participating in consultation meetings with policy makers, MI participated in multiple hydrogen industry events with partner organizations such as India Energy Storage Alliance and India Hydrogen Alliance to promote methanol as a hydrogen carrier that can expedite the adoption of hydrogen technologies. Noting the important role that academia will play in hydrogen research and development efforts, MI participated in a workshop organized by the Indian Institute of Technology Delhi and the Harvard Kennedy School. MI championed the need for effective public policy and government initiatives in the development of a successful hydrogen roadmap for the country.

MI's advocacy efforts were met with success when the Indian cabinet approved and published the National Green Hydrogen Mission which outlines the government's ambitions and plans to develop 5 MMT of hydrogen production capacity in the country. Methanol received seven mentions in the document and was identified as a potential hydrogen-derived fuel that can be utilized in multiple applications such as petrochemical production and as a maritime fuel.

MI SUPPORTS DEVELOPMENT OF STANDARDS FOR METHANOL COOK STOVES

In 2018, MI had supported NITI Aayog and Project Gaia on the development a pilot project in Assam, India, which saw the distribution of methanol cook stoves to more than 500 households in the Assam Petro Complex. The project was considered a success as many of the households that were surveyed highlighted the positive experience with methanol cook stoves. The Indian Institute of Technology (IIT) in Guwahati also conducted their own research on the methanol cook stoves, highlighting the benefits of utilizing methanol cook stoves.

In 2022, at the invitation of NITI Aayog, MI participated in the drafting of standards for methanol cook stoves with the Bureau of Indian Standards (BIS). The standards were drafted in preparation for the commercial introduction of methanol gensets in the Indian market for stationary power production. Some members of the standards drafting committee proposed the inclusion of stringent and superfluous safety requirements for methanol cook stove designs. There was also a proposal for methanol cook stoves to be allowed only in outdoor settings, which would hamper the ready adoption of methanol cook stoves by Indian households. NITI Aayog, IIT Guwahati, and MI opposed these proposals by providing supportive research demonstrating existing designs adequately guaranteed the safety of end users. BIS accepted the position of MI and its partners, and the BIS methanol cook stove standards will be published in the version as intended by MI and its partners.

MI PUBLISHES METHANOL GENSET AND COOK STOVE INFOGRAPHICS

Air quality in India's major cities worsens towards the end of the year during the onset of winter as there is an increased need for home heating which results in the burning of biomass and firing of brick kilns. The season also coincides with the end of the harvest season when farmers start burning stubble off fields to prepare for the next season. Pollution levels during this period of the year can reach five times above the World Health Organization's (WHO) recommended safe levels, resulting in serious health concerns for many living in urban areas.

MI launched methanol genset and cook stove infographics for the Indian market to promote the use of methanol as a clean-burning fuel that can mitigate air pollution. The infographics were published in synchronization with the growing interest to cover alternative fuels as a solution to air pollution in the India media. Infographics were shared uploaded on MI's social media platforms and distributed to multiple news outlets in India to ensure that methanol is featured in the news as an alternative fuel that can reduce the emission of pollutants in power generation and cooking.

THE EUROPEAN UNION AMBITIOUSLY PLOTS ITS PATH TOWARD NET-CARBON NEUTRALITY

CONTRIBUTION INCLUDES LEGISLATIVE PROGRAMS SUCH AS:

- EU Green Deal Industrial plan
- Fit for 55 Package
- Climate Target Plan

MI works to position methanol in the context of the energy transition of industry and mobility, capitalizing on the opportunities presented by its capacity to deliver immediate GHG reductions in hard-to-abate sectors. 2022 saw the MI EU team take pivotal steps to amplify its voice in Brussels. Over the course of the year, MI has consolidated its position as a key stakeholder in EU policy on climate, energy, transport and environment, liaising daily with members of the EU institutions. Such access has enabled the possibility of contributing the industry's perspective on EU policy at the highest level of EU decision-making. Strong advocacy and clear messaging have opened opportunities for MI staff to contribute directly to the work of the European Commission, with MI's Chief EU Representative Matthías Ólafsson having been nominated to participate in two important stakeholder fora, the European Sustainable Shipping Forum and the Renewable and Low Carbon Value Chain Alliance. The association has also sought to strengthen its strategic partnerships. In doing so, jointly it has signed and distributed letters to policymakers in association with multiple stakeholders on a range of subjects such as the rules that will govern production of eFuels, the ambition level laid out to regulate emissions from ships, and the GHG accounting methodology applied under the Emission Trading system (ETS) extension to maritime.

TAPPING OUR INTERNAL CAPACITY

In 2022, MI EU took steps to strengthen its internal operations for better results. The appointment of Manager of Government and Public Affairs -Europe, Rafik Ammar, who possess a strong background in EU policy and politics, has advanced the association's efforts to share its perspectives with policymakers from all of the EU legislative institutions. In addition, the formation of a Policy Committee as a standard member forum within the Methanol Institute has allowed the team to leverage the wealth of experience collectively found across the association's membership to support its advocacy efforts. The committee also serves as a forum for the MI EU team to effectively deliver high quality intelligence from the world of EU policy which may prove instrumental in internal decision making among the businesses that make up the membership. In support of its efforts to drive internal capacity, the membership was joined by strong EU-based entities this year, including BP, European Energy, CMA-CGM and Hurtigruten.

SPREADING THE WORD

As expert stakeholders, the MI EU team has had multiple opportunities to share its positions at events across the continent. In support of its objective to shape discourse on methanol on the context of the energy transition, EU staff contributed to the World Maritime Forum in Copenhagen, the Maritime Air Pollution Conference in Amsterdam, and the ACI Carbon Utilization Forum in Dusseldorf among others. The team also exhibited at the largest shipping event in Europe, the SMM conference in Hamburg, along with teammates from the US and Singapore offices. Committed to supporting innovation in the sector, the EU team also shared its expertise at events organized by EU funded research project Methasol, focused on direct photosynthesis of methanol, and FASTWATER, demonstrating methanol technology in waterbourne transport.

MONITOR AND ENGAGE

The MI EU Team has ramped up its efforts to analyze the implementation of policies, identifying potential knowledge gaps and outlining opportunities to intervene. The team systematically monitors all policy developments and shares the most important elements with members on a weekly basis. On multiple occasions over the course of 2022, the team has engaged policymakers at relevant times in the policy cycle with messaging of political or technical nature. Such efforts include technical meetings with the European Commission and Members of the European Parliament on amendment drafting to secure the role of low-carbon methanol in the near-term steps towards maritime decarbonization, and the association's formal consultation responses to upcoming delegated acts outlining the rules for eFuel production and carbon capture and utilization.

EUROPE ROUNDUP

NEW OPPORTUNITIES ARISE FOR METHANOL IN THE UNITED STATES

OVER THE PAST THREE YEARS

The aggressive clean energy agenda of the United States government coupled with advancements in clean technologies have positioned clean tech industries in general, and the methanol sector specifically, to become a major player in the new American energy economy. In particular, the opportunities created by the Bipartisan Infrastructure Bill (IIJA) and the Inflation Reduction Act (IRA) to encourage the decarbonization of the economy using aggressive energy and tax policy prescriptions, affords the industry a favorable gateway to entry into an increasingly profitable market for cleaner burning fuels. In order to take maximum advantage of these opportunities, it is critical for the methanol industry to continue its efforts to be a strong voice of education and advocacy as these federal policies are implemented.

Methanol produced with a lower GHG intensity can be a key part of the clean-energy transition. The large strides made by the industry to increase its presence in the maritime and other energy related markets have positioned methanol to be a key player not only in the future of the transportation sector but also for the energy and electricity sectors. Moreover, the technological advances made to produce low carbon methanol will position the U.S. methanol industry to become a major clean energy exporter, assisting with the mission of achieving global reductions in greenhouse gas emissions. By establishing the groundwork and infrastructure through the maritime sector, methanol is well-positioned to grow and expand its footprint significantly in the transportation sector. These opportunities will continue to grow given methanol's unique advantages over other fuel sources, including its low emissions profile, ability to be produced from a wide-range of feedstocks, and the ease of incorporating methanol into existing internal combustion engines and associated infrastructure. However, it will be critical for the policies of the federal government to align so that this growth can be realized.

ANALYSTS PREDICT RAPID GROWTH IN METHANOL MARKETS OVER THE NEXT FIVE PLUS YEARS; AND THIS GROWTH IS AN EXCITING PROSPECT FOR THE INDUSTRY

The industry needs to be focused on positioning itself beyond this projected growth and into the broader future. Methanol need only to look toward the new clean hydrogen sector to understand what the future could hold. We have seen a rapid expansion in the hydrogen industry in its work with hard to decarbonize sectors and the growth of national infrastructure to contribute to its viability as a fuel, a key to stabilization of the electrical grid, an energy storage facilitator, and as a carrier for important ammonia and methanol products. This growth in the hydrogen industry has been accompanied by aggressive advocacy by the sector both on Capitol Hill and with the Administration, with bipartisan agreement that innovative solutions will be needed to achieve climate targets. Bracewell believes that green methanol is similarly situated to experience a comparable boom.

RECENT EFFORTS

One such recent effort that demonstrates the opportunity and possible future for methanol is the Congress's enactment of the new section 45Z Clean Fuel Production Credit. This tax credit is designed to provide a tax subsidy to taxpayers who produce transportation fuels that fulfill certain emissions criteria. However, Congress, in writing the IRA, opted to use a "technology neutral" approach for the tax credit scheme - no specific fuels were identified, but rather the congressional tax-writers simply provided a credit calculation based on the environmental performance of the various fuels. This presents an opportunity, one that the Methanol Institute is taking in partnership with Bracewell. In a request for information and comments on potential guidance documents and forth-coming regulations, Treasury and the Internal Revenue Service have asked taxpayers to give their feedback. The methanol industry believes that based on historical treatment of methanol under both relevant federal statutes and regulations, methanol made using clean energy feedstocks should qualify as an eligible "transportation fuel" under the section 45Z credit.

Policy will be a critical lynchpin for the methanol industry as it finds itself in this period for potential growth. Qualifying for the 45Z tax credit is just the beginning; it is a critical entryway but the moment needs to be seized upon. As the Federal Government makes additional policy and regulatory decisions, it will be critical for the methanol industry to continue its engagement both on Capitol Hill and with the Administration to demonstrate the value of the industry, both for economic growth and achieving the administration's climate targets.

Methanol industry leaders should pay attention to the interplay of clean energy tax credits under the Inflation Reduction Act. For example, a "qualified facility" receiving the 45Z credit does not include "any facility for which" the 45V credit for clean hydrogen production or the 45Q credit for carbon oxide sequestration "is allowed." However, the interpretation of this section remains unclear and has been a major point of discussion in comments submitted to the IRS and Treasury. Although definitive guidance has yet to be released, some companies are investigating structuring agreements whereby separate entities would be eligible to claim tax credits for their own industrial processes (e.g., one company claiming a credit for capturing carbon while another company claims a credit for producing fuel). Similar opportunities may be available for the methanol sector, but will depend on continued and sustained engagement with the Administration as they promulgate regulations.

PRG TEAMS WITH THE METHANOL INDUSTRY

The Policy Resolution Group at Bracewell LLP (PRG) is pleased to work with the methanol industry to achieve these goals. PRG staff come from senior offices in Capitol Hill and the executive agencies, and meet with government officials every day helping clients explain their complex energy policy and tax policy issues. PRG offers advocacy, strategic communications and legal representation services to help clients navigate the complex federal landscape. As federal lawmakers move quickly to integrate biogas, hydrogen, ammonia, and methanol into the suite of energy solutions available to decarbonize the nation, PRG looks forward to helping the methanol sector become eligible for these programs.

PRG Policy Resolution Group

TIMOTHY J. URBAN

PRG PARTNER

JOSEPH A. BRAZAUSKAS

PRG SENIOR COUNSEL

MI STAFF REPRESENTED THE INDUSTRY AT A LARGE VARIETY OF EVENTS AROUND THE WORLD

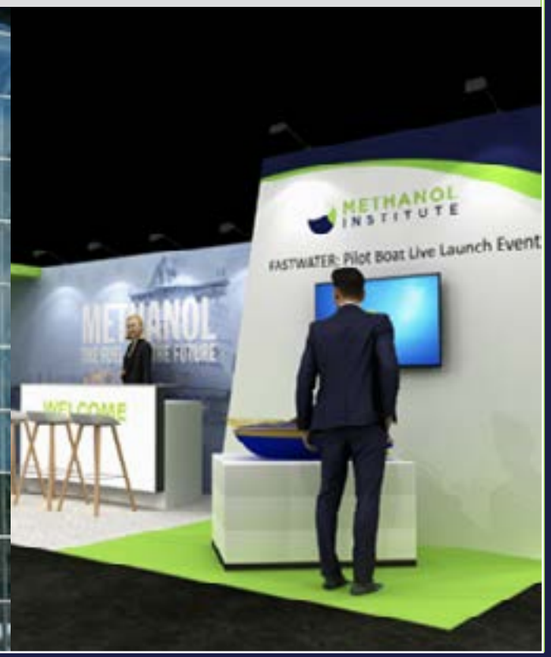
With the COVID Pandemic finally receding, and meetings and conferences moving back to in-person attendance, MI staff represented the industry at a large variety of events around the world.

Some highlights:

SMM – HAMBURG, GERMANY

MI participated in 2022's edition of SMM, which took place from September 6 – 9, 2022. SMM is a trade fair for Shipbuilding, Machinery, and Marine Technology which attracts international decision-makers from the marine industry to the city of Hamburg, Germany, biennially. The popular maritime trade fair attracts as many as 40,000 visitors and 2,000 exhibitors from at least 100 nations.

As interest in methanol as a marine fuel grows, MI participated as an exhibitor at SMM 2022 to represent the global methanol industry and promote its increasing role as a fuel provider for a future low-carbon marine industry. MI global staff and member company representatives staffed the MI stand, which also featured a methanol fuel cell unit from MI member e1 Marine.



ARGUS METHANOL FORUM – HOUSTON, TEXAS

In September, over 200 methanol industry decision-makers gathered to gain updates into market dynamics and trade flows and get the latest insights into new and evolving methanol applications that will shape the future of the sector.

MI CEO Greg Dolan both presented and moderated two panels at the event, and MI Senior Director of Government & Public Affairs Lawrence Navin also moderated a panel. A host of MI member companies also presented or spoke at the event, including MI Board Chair Anita Gajadhar of **Proman, Air Company, ControlRooms.ai, Kaizen Clean Energy, Methanex, Enerkem, Gidara Energy, Abel Energy, A.P. Moller-Maersk, Petronas, Topsoe and Maritime Partners**.

TRINIDAD & TOBAGO ENERGY CONFERENCE 2022

The Energy Chamber of Trinidad & Tobago held the T&T Energy Conference 2022 in June in Port of Spain.

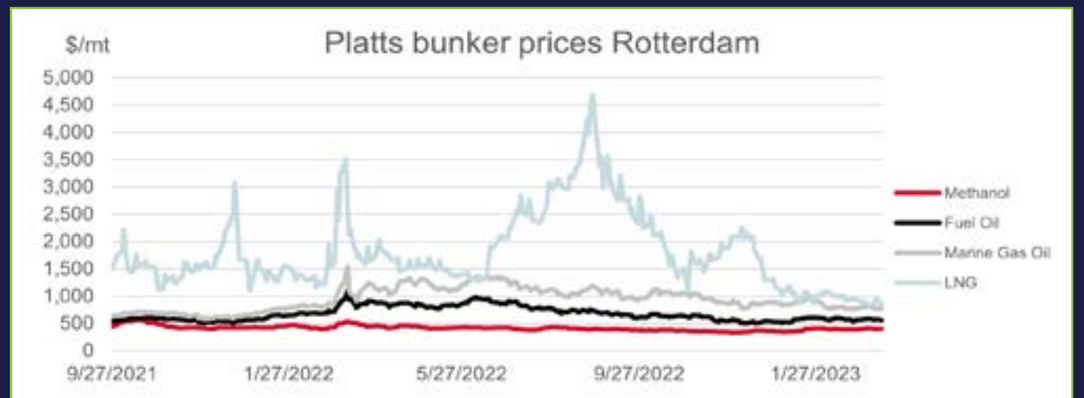
Hundreds of delegates from around the region and around the world attended the event which was sponsored in part by MI members **Proman** and **Methanex**.

The conference included a keynote address from T&T Prime Minister Dr. Keith Rowley, and also a panel discussion on *The Energy Transition* that featured MI Board Chair Anita Gajadhar of Proman and Sarah Boon of Methanex.

MI's Lawrence Navin participated in a panel on *Delivering Green and Blue Molecules* where he discussed the steadily increasing demand for methanol across the globe and the need for sound regulatory policy ensure continuing growth during the energy transition.

METHANOL TRADED AT LOWER PRICES ON A DOLLAR PER TON BASIS

According to S&P Global Commodity Insights figures, methanol traded at lower prices, on a dollar per ton basis, than MGO, HFO and LNG at the Rotterdam bunkering hub from November 2021 to March 2023 (See Figure 1).



SOURCE: S&P COMMODITY GLOBAL INSIGHTS

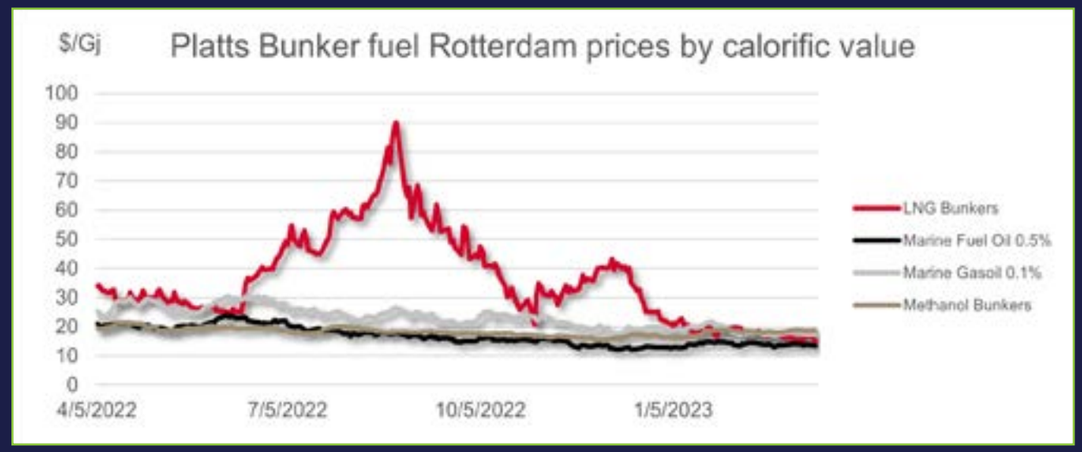
FIGURE 1: BUNKER PRICES OF METHANOL, HFO, LNG, AND MGO AT THE ROTTERDAM HUB ($/MT)

NATURAL GAS PRICES SPIKED TOWARDS THE END OF 2021

Amid supply tightness ahead of winter, more spikes emerged after the Russian invasion in Ukraine in February 2022. The surging natural gas price impacted the LNG price, but also had a placed upward pressure on methanol prices, as most methanol is made from natural gas.

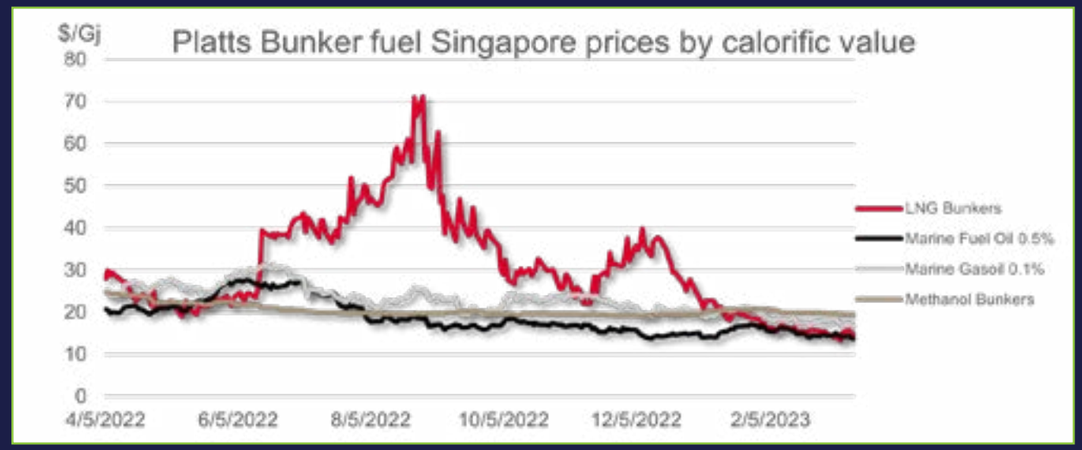
METHANOL APPEARS VERY ATTRACTIVELY PRICED, ESPECIALLY UNDER THE HIGH ENERGY PRICE ENVIRONMENT SEEN SINCE THE SECOND HALF OF 2021

However, when incorporating the relevant energy density factor to compare the different fuels on a like-for-like basis, HSFO typically becomes the cheapest, although methanol often traded at lower prices than LNG and MGO in the Rotterdam bunkering hub (Figure 2) as well as in Singapore (Figure 3).



SOURCE: S&P COMMODITY GLOBAL INSIGHTS

FIGURE 2: FUEL PRICES CONSIDERING CALORIFIC VALUE – ROTTERDAM BUNKER FUEL PRICES ($/GJ)



SOURCE: S&P COMMODITY GLOBAL INSIGHTS

FIGURE 3: FUEL PRICES CONSIDERING CALORIFIC VALUE – SINGAPORE BUNKER FUEL PRICES ($/GJ)

FUEL COST PROJECTIONS

According to the Methanol Institute, conventional methanol is available in more than 120 ports across the globe, while worldwide production capacity in 2020 was more than 131 million tons, according to data from S&P Global.

There has also been a surge in orders of methanol dual-fuel vessels. According to Platts Analytics, at least another 64 such vessels were in order books as of H1 2023 for delivery by 2028, added to the 23 already on the water.

NO TURNING BACK: WHY METHANOL IS THE SOLUTION FOR SHIPPING'S ENERGY TRANSITION

SHIPOWNERS SEEKING OPTIONS FOR DECARBONIZATION CAN LOOK TO METHANOL AS A POWERFUL SOLUTION FOR THE SHORT AND LONG TERM, WRITES CHRIS CHATTERTON, THE METHANOL INSTITUTE.

The shipping industry's energy transition is picking up speed, but it has still to achieve the required momentum. This marathon process has a long way to run but among the future fuel contenders, Methanol is emerging as a short-term choice with long term role to play.

The leadership shown by AP Moller-Maersk in ordering a series of Methanol dual-fuelled ships indicates that large owners are prepared to take the decarbonization challenge seriously. Since then, the trend line has continued upwards, recently taking a swing northward to the point that some 50 Methanol dual-fuelled vessels could be ordered before the end of 2022.

With liner shipping the ideal candidate for Methanol – regularly serving large ports at which supplies can be found in volume – it is not surprising that operators including CMA-CGM, X-Press Feeders and the biggest shipping company in the world COSCO, have either expressed interest or placed firm orders.

Companies including Waterfront Shipping, Stena/Proman, NYK and MOL have built a series of Methanol carriers that use a segregated portion of the cargo as fuel. With more bulk shipowners exploring Methanol as a fuel option, we are seeing Methanol-ready designs for bulk carriers and tankers coming to market. Main engine makers report full order books for new units and increasing interest in retrofits and conversions of existing engines.

NEW ORDER PIPELINE

The newbuilding order pipeline has been boosted by Maersk's tender for 13 container ships of 16,000 teu and the company has since added a further six 17,000 teu ships. Maersk is reported seeking to expand on its previous order for one feeder ship and has enquiries in place with yards for up to 18 Methanol-fuelled 2,600-teu ships.

Further orders have been announced by Oslo-listed boxship owner MPC Container Ships which has contracted two dual-fuel Methanol-powered 1,300 teu newbuilds at Chinese-based shipyard Taizhou Sanfu Ship Engineering.

Shipowners are recognising that Methanol provides them with huge flexibility in introducing a low-pollution, lower carbon fuel which is closest to a drop-in available in the market. This means a lower upfront capex cost, whereas choosing LNG as fuel attracts a considerable premium, largely due to the expensive cryogenic fuel tanks and gas handling systems.

Methanol is a product with a highly diversified consumer base, widely available and transparently traded. Choosing Methanol enables owners to hedge their bets on future fuels and gain short term experience on using it as bunkers with minimal adaption.

TECHNICAL ADVANTAGES

Methanol also has technical advantages compared to other fuels. The recent interest in Methanol for newbuildings reflects the fact that Ammonia, is viewed by many observers as far more difficult to implement safely and sustainably – and regulatory approval may still be many years away.

Methanol is a liquid fuel, able to be stored and transported without the need to cool or keep it under pressure. Easier to handle and more widely available than Ammonia, Methanol is simpler to bunker, with a variety of supply options and established best practices and guidelines for bunkering.

On an energy equivalent basis, Methanol has been competitive with marine gasoil for the past five years however, there is a need for stronger policy to encourage vessel owners and operators to adopt cleaner fuel in greater numbers.

Most of the currently available Methanol sourced from natural gas has a similar 'in service' carbon reduction to LNG as well as having no SOx emissions, very low PM and NOx emissions that can be abated with water treatment.

MARINE UPDATE: A COLLECTION OF OP-ED'S FROM THROUGHOUT THE YEAR

Blue methanol, produced in combination with carbon capture and storage, offers a lower emissions profile. Production of green methanol sourced from biomass or from captured CO2 and renewable electricity sources and green hydrogen is small but growing as producers recognise the demand signal being sent by the shipping industry.

In fact, the aggregated installed capacity of blue and green methanol in the EU alone is projected to reach over 3M mtpa by 2023 – this is up from just over 1M mtpa in 2020. This is much further ahead of IMO's 'targeted' emissions reduction percentages to 2030 if based on a combination of conventional and lower/zero carbon methanol. Remember too, that even small volumes of green methanol blended with grey would deliver significant short term greenhouse gas savings.

The distinction matters because of the way regulators measure emissions and how this is changing. On a tank-to-wake basis (the IMO's current measurement) Methanol's CO2 content is 5-7% less than MGO, about 10% less than LSFO and up to 15% less than HFO.

The IMO is moving towards measuring emissions from well-to-wake (lifecycle) basis, encouraging the development and take up of green, renewable fuels and this is partially true for the European Union too, but not the case across all its initiatives.

In the future there will be more emphasis on clean fuel characteristics, not just because of the lifecycle assessment model, but because for shipowners and their clients there will be carbon levies to pay for.

WELL-TO-WAKE

Renewable fuels may never be as cheap as the fossil fuels they will replace and once the EU's Emissions Trading Scheme begins to price shipping's carbon contribution, top line costs will rise. But for owners with a clear focus on a decarbonization, the opportunity is there to embrace carbon economics, using highly efficient vessels with much lower carbon emissions.

The first three to four years of the EU ETS will see owners make flat payments rather than trading carbon, but after this, inclusion in the carbon market might even provide an opportunity for assets that operate below the emissions cap to generate income beyond primary cargo carrying.

The integration of low carbon and net carbon neutral fuels at an accelerated rate is fundamental to attain the long and short term reduction targets laid out by the IMO. To effectively stimulate the uptake of fuels that will drive the maritime industry's energy transition, policymakers will need to move quickly to implement mechanisms that account for the GHG emissions of the fuel's entire lifecycle.

This is as true for the IMO's decarbonization goals as it is for the EU ETS especially since shipowners will have to comply with the first of the IMO's short term measures from the start of 2023. The comparatively low cost of Methanol main engine conversions is continuing to drive interest among tonnage owners in the container and car/truck carrier sectors as the deadline looms.

Operators in these segments say that compliance with the IMO's Carbon Intensity Indicator (CII) underpin their decisions, though interest is rising across the board according to MAN Energy Solutions.

The engine-maker expects to see a rapid rise in the number of dual-fuel engine conversions concluded in the near future, with enquiries for conversions particularly intense in consumer facing segments, such as containers and pure car and truck carriers.

While MAN ES is in conversation with owners, charterers and beneficial cargo owners in all the major segments, enquiries from the container segment are particularly active.

With IMO's 40% CO2 reduction target of 2030 fast approaching, shipping does not have the luxury of waiting for as yet unavailable fuel technologies to reach technical readiness, regulatory approval and availability. Cleaner Methanol is available now – for existing vessels as well as newbuilds and as shipowners are demonstrating, the increasing trend towards low carbon and renewable formats will only accelerate its adoption.

ULTRA-LARGE CONTAINER SHIPS POWERED BY TWO-STROKE, METHANOL DUAL-FUEL ENGINES

Last October, South Korean and Chinese shipyards signed orders to build 18 ultra-large container ships (ULCSs) that will be powered by two-stroke, methanol dual-fuel engines. These deals were inked by major liner companies including MI members **AP Møller-Maersk and COSCO** Shipping.

More recently, additional vessels have been ordered by other liner companies including MI member **CMA-CGM**.

Don't be so quick to dismiss these orders as outliers. Methanol is not just the flavour of the month; it is very much here to stay.

While box-ship owners account for the lion's share of 60 newbuild orders — 47 methanol dual-fuelled ships — other vessel types, ranging from tugs to tankers, are opting for methanol. By number of vessels, methanol dual-fuel orders accounted for almost 3% of newbuilds. Some 22 vessels are in operation, mostly chemical and product tankers that carried methanol as a cargo, according to DNV Alternative Fuel Insights. While representing a tiny fraction of the global fleet, the recent surge in newbuild orders represents a step-change for the market.

The latest to throw its hat in the ring is Disney. The 'House of Mouse' jumped on the methanol bandwagon as a pathway to more sustainable operations last November with its acquisition of the cruise liner Global One, which when completed at its German shipyard will be converted to operate on methanol.

"AMONG THE FUTURE FUEL CONTENDERS, METHANOL HAS EMERGED AS A SHORT-TERM CHOICE WITH A LONG-TERM ROLE TO PLAY," SAID METHANOL INSTITUTE CHIEF EXECUTIVE GREG DOLAN IN HIS KEYNOTE ADDRESS AT THE ABS METHANOL SUMMIT IN LONDON, HELD IN NOVEMBER.

Explained Mr Dolan: "Shipowners recognise that methanol provides them with huge flexibility in introducing a low-carbon, low-pollution liquid fuel, which is the closest to a drop-in that is available to the market today. This means lower upfront capex costs, whereas choosing LNG as a fuel attracts a considerable premium." Continued Mr Dolan: "The recent interest in methanol for newbuilds reflects the fact that ammonia is viewed by many observers as far more difficult to implement safely and sustainably and regulatory approval may still be many years away."

Two-stroke engine technology is well proven in the sector — MAN Energy Solutions has accumulated hundreds of thousands of running hours on its ME-LGIM engine platform over the last six years and four-stroke engine options are growing. The first application of methanol as a marine fuel was in 2015 on the ropax vessel Stena Germanica. The co-operative project involved the conversion of the vessel's four-stroke engines by Methanex Corp, Stena Line, Wärtsilä, Lloyd's Register, the Port of Gothenburg, and the Port of Kiel.

Among the key features making methanol attractive as a marine fuel is that it is liquid at ambient conditions, which simplifies fuel tank design and minimises capex, and is widely available now. Additionally, conventionally powered existing vessels can be more easily retrofit at a much lower capex to burn methanol than LNG. This will provide a pathway to lower CO_2 and greenhouse gas emissions for the existing global fleet.

MARINE UPDATE: A COLLECTION OF OP-ED'S FROM THROUGHOUT THE YEAR

PORTS PAVE THE WAY FOR METHANOL GREEN CORRIDORS OF SHIPPING

REGIONS AND MUNICIPALITIES HAVE IDENTIFIED THE OPPORTUNITY TO LEASE PORT AREAS TO PRODUCERS OF SUSTAINABLE METHANOL FUEL AND SECURE NEW INCOME STREAMS, WRITES GREG DOLAN, CHIEF EXECUTIVE OFFICER, THE METHANOL INSTITUTE.

Ports are vital to shipping's energy transition and their role in a net carbon neutral future is set to grow as more of the fuels needed to support a low carbon industry are produced in port locations. The much-touted 'green corridor' concept is founded on the availability of low and carbon-neutral fuels at set points in the global logistic chain, giving owners confidence that the fuels they need will be available to bunker their vessels.

The ability of the industry to achieve low carbon operations is a function of clean fuel production and much of the discussion reflects the chicken and egg status of fuel availability. Demand for fuels including Methanol is rapidly increasing as shipowners order more vessels compatible with the liquid alcohol fuel, the most recent being COSCO's order for 12 24,000 TEU methanol fuel container ships.

While conventional methanol produced from natural gas is widely available at more than 100 of the world's leading ports, the production of renewable products is currently low.

Ports hold the key to providing the locations, the facilities and in some cases the carbon sources that could be used to create a sustainable supply of marine fuel. With the right policy signals and investment from public and private sources, they could become hubs for decarbonisation beyond conventional diesel fuel bunkering. Ports need to achieve several goals; reduce emissions across their port complex, and develop critical services that meet new demand for cleaner fuels while creating long term employment and income.

Alongside cargo handling and distribution this will increasingly include production sites for renewable fuels using electricity produced from offshore wind and feedstock sources such as municipal solid waste to create clean fuel.

Such projects reflect and expand on the regional role that ports play in their local economies, providing employment into the logistics chain and in supporting the local workforce as well as related manufacturing and skills.

Projects like Bia Energy Operating Company's plans for a $550m blue methanol production plant at the Port of Caddo-Bossier in Shreveport, Louisiana would create 75 direct, high skilled jobs and would result in 390 indirect jobs, according to the local development agency. Nearly 350 construction jobs would be created at peak construction for the project.

At the other end of the scale, plans by a consortium including AP Moller-Maersk will see the construction of an industrial-scale production facility for sustainable road, maritime and jet fuels in the Copenhagen municipality to include e-methanol. Bringing together the demand and supply side of the equation the partners believe it could result in one of the world's largest electrolyser and sustainable fuel production facilities and in the process establish an entirely new local industry.

The model applies regardless of the location or application. Denmark's tiny Hanstholm Harbor plans to combine solar and wind energy plants with a Power-to-X facility for the production of 130,000 m2 of e-methanol and hydrogen in the port's hinterland.

Plans for the proposed plant include a production capability of 530,000 metric tons of methanol annually, using natural gas as a feedstock with carbon capture, reducing CO2 emissions by more than 90% compared to conventional methanol plants.

Danish renewable energy developer European Energy has signed with the Port of Aalborg to option a 25-hectare site as the location for a new 120 MW electrolysis and associated e-methanol plant. The plant will produce around 75,000 metric tons of e-methanol per year and will be approximately twice the size of the plant European Energy is currently in the process of establishing in Aabenraa in Southern Denmark.

Some of Europe's most strategic ports have identified the opportunity of creating Methanol from renewable electricity or waste sources.

Gothenburg Port Authority has published Methanol operating regulations for ship-to-ship bunkering and has ambitions to create a value chain that would make it the primary bunkering hub for renewable methanol in Northern Europe.

UK port operator Global Energy Group has partnered with Swiss energy company Proman to develop a renewable power to methanol plant in Scotland's Port of Nigg. The so-called Cromarty Clean Fuels Project will utilise local industrial sources of captured carbon dioxide and harness excess wind power to produce green Methanol. The port of Antwerp has joined a consortium including the investment company of the Flemish Government to produce sustainable Methanol, with a demonstration plant scheduled to start this year and produce 8,000 tonnes of sustainable Methanol annually.

Also in Belgium, North-C-Methanol is the first large scale demonstrator project of North-CCU-Hub, consisting of a 63 MW electrolyser plant drawing renewable energy from offshore wind to create green hydrogen, combined with captured CO2 to produce capacity 45,000 tonnes per annum of Methanol.

The Port of Rotterdam and GIDARA Energy have joined forces to create an advanced biofuels facility which will convert non-recyclable waste into sustainable Methanol, using a site provided by the port. The Methanol produced achieves the CO2 emission reductions outlined in the European Union's Renewable Energy Directive II and Fit-for-55 frameworks.

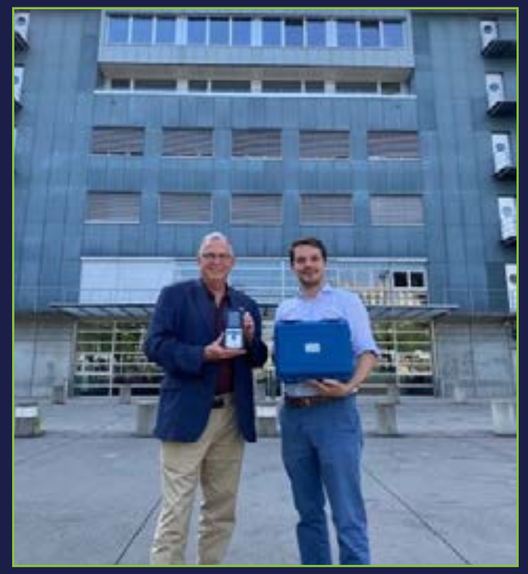
Many of these projects include member companies of the Methanol Institute, which serves as the trade association for the global methanol industry. Traditional methanol producers and new market players are partnering with ports to expand the availability of low carbon and net carbon neutral methanol for the maritime industry. These and other projects form the ends of a chain that will ultimately span the world's shipping lanes. Applying the Green Corridor concept for these new fuels will enable owners to make fleet renewal decisions based on fuel availability. It allows ports to plan for future investments and enables policymakers to send clear signals to the market. Ports are indispensable to shipping – and will play a pivotal role in its decarbonisation.

METHANOL BUNKERING CAPACITY GROWTH PICKS UP SPEED

The importance of port-based bunkering capacity to the energy transition has been underlined by two recent project announcements. In November, Swedish shipping company OljOla Stena Oil and Stena Teknik unveiled a joint venture to build a chemical tanker designed to become one of the first dedicated vessels for methanol bunkering. Stena Oil and OljOla Shipping will expand their fleet of three bunker tankers with the new vessel which is designed to meet the needs of the bunker supply market in the North European region. The vessel, which will be operated by Stena Oil has been designed by Naval Architects Kuzey and will be built by GENKA Shipbuilding in Tuzla, Turkey. The vessel is a twin screw oil and chemical tanker with two main engines and three diesel generators, all equipped with selective catalytic reduction technology for Tier III NOx regulation compliance. The companies say that the vessel design and specifications have been upgraded to match and exceed the operational requirements for the North European region. The bunker tanker employs diesel-electric propulsion and features a hull design that enables the vessel to move twice the amount of cargo on the same energy consumption compared to older vessels in the OljOla fleet. Meanwhile, in Ulsan, South Korea, classification society Korean Register and Ulsan Port Authority have signed an MOU to support methanol-fuelled shipping and establish the South Korean port as a low-carbon, eco-friendly energy hub. The partners say the agreement was made in response to the low-carbon energy transition underway in the shipping and port industries. It reflects the growing number of dual fuel methanol vessels being ordered by international shipping companies for construction in South Korea. In October 2022, South Korean shipping company KSS Marine took delivery of the country's first methanol powered vessel, the 50,000 dwt product tanker Savonetta Sun. Korean Register and Ulsan Port Authority will collaborate on regulatory reforms, regulation of methanol-fuelled ships and methanol bunkering, utilizing independent tank terminals in Ulsan as methanol storage facilities, testing methanol bunkering at Ulsan port and building methanol supply infrastructure in Korean ports. Meanwhile Singapore, the world's largest bunker hub, is also evaluating methanol as fuel, with Danish company Maersk Oil Trading planning to trial ship-to-ship methanol bunkering at the port during the first half of 2023, in a consortium with Japanese trading house Mitsui and classification society ABS.

METHANOL INSTITUTE & ALIVION AG PARTNERSHIP
ADVANCED NANOTECHNOLOGY

Adulterated alcoholic beverages and hand sanitizers contaminated with methanol can lead to blindness and even death. Thanks to MI partner and Swiss startup Alivion AG's groundbreaking developments in nanotechnology, a portable methanol breath detector has been developed, partly with funding provided by MI, for rapid screening of methanol poisoning by first responders, health professionals, and even laymen.



ALIVION DEVICES

In August, 5 Alivion devices were delivered, courtesy of funding from MI, to hospitals and health clinics in rural Liberia. These devices have helped to ensure that locally produced hand sanitizer does not contain unsafe levels of methanol.

With the initial project with Alivion having reached a successful conclusion, MI looks forward to continuing to work with Alivion, with our focus on getting additional devices into the field so that it can be used to address adulterated alcohol poisoning incidents and save lives, and to identify additional market for the device, such as onboard the growing number of methanol dual-fuel marine vessels coming into service.

A VIDEO HIGHLIGHTING THE DEVICE IS AVAILABLE TO VIEW HERE.

MULTIPLE AWARD-WINNING TECHNOLOGY

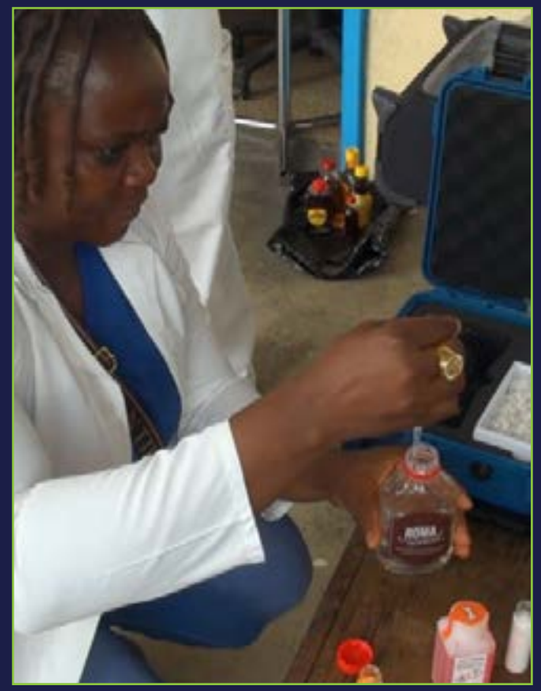
Alivion has already received several international awards with its groundbreaking technology.

SWISS TECHNOLOGY AWARD Finalist

W.A. DE VIGIER STIFTUNG

drinktec Startup Award

ROYAL SOCIETY OF CHEMISTRY



PROJECT MILESTONES ACHIEVED

BREATH SAMPLER MODULE

- Design of a disposable mouthpiece that can be mounted easily on that methanol detector.
- Implementation of a strategy to extract end-tidal breath reproducibly. End-tidal breath contains chemical information of blood methanol concentration.

PROJECT MILESTONES ACHIEVED

VALIDATION ON HUMANS

- Evaluation of methanol detector on humans after alcoholic beverage consumption.
- Non-toxic and toxic methanol concentratio (10–1000 ppm) added artificially to collect breath samples and analyzed.

MI CONTINUED TO EXPAND OUR SOCIAL MEDIA & WEB PRESENCE IN THE YEAR 2022

2022 STATS YEAR TOTALS:

+2,067		POSTS
+29,387		POST LINK CLICKS
+1,111,060		IMPRESSIONS
+1,111,060		ENGAGEMENTS
+5%	20.8% INCREASE	ENGAGEMENT RATE
+4,337	171.7% INCREASE	NET AUDIENCE GROWTH
+2,796		VIDEO VIEWS

KEY GOALS:

- Increasing MI's Brand Awareness
- Educating on Methanol as a Clean Fuel
- Amplifying Member Messaging
- Promoting Best Practices Across the Global Distribution Chain

Website Analytics

USERS: 110,695
NEW USERS: 111,211
BOUNCE RATE: 66.3%
SESSIONS: 159,510

TOP PAGES:
HOME: 71,570
RENEWABLE: 39,618
METHANOL-PRICE-SUPPLY-DEMAND: 31,393

2022 STATS BY PLATFORM:

+871	95.3% INCREASE	MI FACEBOOK - PUBLISHED POSTS
+64		MI FACEBOOK - NET PAGE LIKES
+6.5%	58.4% INCREASE	MI FACEBOOK - ENGAGEMENT RATE
+323		MI TWITTER - PUBLISHED POSTS
+220	685.7% INCREASE	MI TWITTER - NET FOLLOWER GROWTH
+4.4%	58% INCREASE	MI TWITTER - ENGAGEMENT RATE
+873		MI LINKEDIN - PUBLISHED POSTS
+4,152	83% INCREASE	MI LINKEDIN - NET FOLLOWER GROWTH
+4.5%		MI LINKEDIN - ENGAGEMENT RATE
+19,716		GREG DOLAN LINKEDIN - ENGAGEMENT RATE
+1,342,156		GREG DOLAN LINKEDIN - IMPRESSIONS

FACEBOOK TWITTER LINKEDIN

WORKING TOGETHER TO SPREAD THE WORD ABOUT THE IMPORTANCE OF METHANOL

With the work we do together, we can recruit more member companies to join us in our mission to see the advancement of methanol throughout the world! Our mission:

PROTECTING EXISTING MARKETS

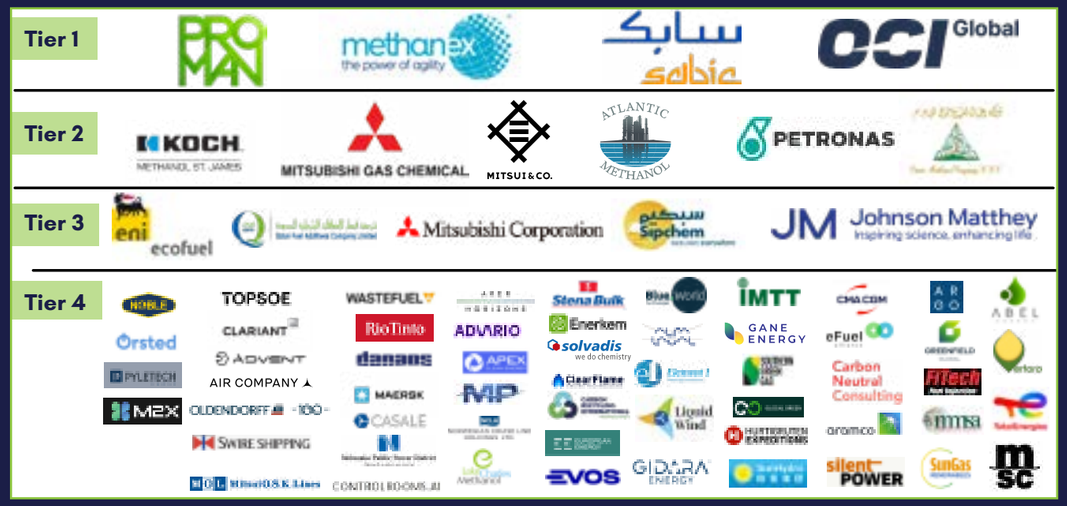
- Meeting Regulatory Challenges and Driving Policy Opportunities
- Promoting Best Practices Across the Global Distribution Chain
- Preventing Product Misuse

SERVING AS THE VOICE OF THE GLOBAL METHANOL INDUSTRY

- Supporting Members During Periods of Change and Amplifying Member Messaging
- Building Global Stakeholder Networks
- Expanding Social Media Presence and Use of Digital Communications/Marketing

PROMOTING THE GROWTH OF EMERGING ENERGY MARKETS

- Ensuring the Methanol Industry Maintains Momentum in Key Market Applications
- Marine Fuels
- Gasoline and Diesel Substitute for Road Transport
- Heating/Power Applications: Cookstove, Industrial Boilers, Kilns, Gensets, Turbines
- Low Carbon, Renewable and Small-scale Methanol



TIER 1

Major Producers of Methanol (>1.5m mtpa)

Two Board Seats with Voting Rights

Board Chairman, Vice Chairman and Treasurer

Standing Committee

Chairmanship Potential

TIER 2

One Board Seat with Voting Rights

Board Secretary

Standing Committee Chairmanship Potential

TIER 3

Minimum Tier Level for Producers

Board of Directors Meeting Participation (Non-Voting)

Standing Committee Chairmanship Potential

TIER 4

Board of Directors Meeting Participation (Non-Voting)

Participation in Standing Committees

NEW MEMBERS

THE CMA CGM GROUP

Led by Rodolphe Saadé, the CMA CGM Group, a global player in sea, land, air and logistics solutions, serves more than 420 ports around the world across 5 continents, with a fleet of 593 vessels. CMA CGM is constantly innovating to provide customers a comprehensive and increasingly efficient offering, thanks to new shipping, inland, air freight and logistics solutions. Present in 160 countries through its network of more than 400 offices and 750 warehouses, the Group employs 155,000 people worldwide, including nearly 4,000 in Marseille where its head office is located. Firmly committed to the energy transition in shipping and a pioneer in its use of alternative fuels, the CMA CGM Group has set a Net Zero-Carbon target for 2050.

AIR COMPANY

AIR COMPANY is the world's-leading carbon utilization company creating consumer and industrial products from carbon dioxide (CO_2). To curb emissions that affect climate change, AIR COMPANY has invented a power-to-liquids technology, a Carbon Conversion Reactor, that mimics the recipe of photosynthesis. Using only renewable energy, AIR COMPANY'S systems convert captured CO_2 into carbon-negative alcohols and fuels—with just oxygen and water as a byproduct. These CO_2-based chemicals are then applied to a variety of consumer and industrial products, helping to decarbonize entire economic ecosystems..

HURTIGRUTEN EXPEDITIONS

We're Leading the Travel Industry Towards A Greener Future. Committed to taking care of our guests, wildlife, nature, and the communities we visit, we're setting a new standard of sustainability for the travel industry. Our ambition is both bold and necessary. We strive to be the most sustainable travel operator in the world. And we aim to push the industry's boundaries for ESG.

Methanol Institute *Mission*

To serve and provide *cost-effective value* to its membership

GIDARA ENERGY

GIDARA Energy is focused on converting non-recyclable waste into advanced biofuels using patented technologies. Our High-Temperature Winkler (HTW®) technology can be utilized to produce valuable products such as advanced biofuels for use in the road transport, marine and aviation sectors, helping these sectors to reduce their carbon emissions and become more sustainable.

EUROPEAN ENERGY

European Energy develops, finances, constructs and operates wind and solar farms as well as large-scale Power-to-X (PtX) plants. Based in Copenhagen, Denmark, the company has a strong track record of developing projects in 26 countries. Founded in 2004, European Energy has a development pipeline of more than 40 GW of renewable energy projects and is currently constructing more than 1 GW of new energy capacity annually.

NEW MEMBERS

NOBLE

It all started in 1921 with a one rig operation. Since then Noble has grown over the last century into one of the largest offshore drilling contractors in the world. This growth and resilience is the end result of a long term commitment to our industry and customers. Our people make this happen. By instilling our core values, Noble has positioned itself to continuously deliver the highest quality service and performance.

NORWEGIAN CRUISE LINE HOLDINGS

Norwegian is a leading global cruise company which operates the Norwegian Cruise Line, Oceania Cruises and Regent Seven Seas Cruises brands. The company has a combined fleet of 29 ships which offer itineraries to approximately 500 destinations worldwide and a robust pipeline of eight additional ships on order through 2028. Norwegian has a long-term climate action strategy with a commitment to pursue net zero greenhouse gas emissions by 2050 through reducing carbon intensity, investing in technology including exploring alternative fuels and implementing a voluntary carbon offset program.

ORSTED

Ørsted transformed from one of the most fossil-fuel intensive utilities in Europe to a clean energy major, in little more than a decade. Today, Ørsted is the global leader in offshore wind energy and is playing a key role in future energy systems by expanding into onshore renewables and Power-to-X. Ørsted ranks consistently among the world's most sustainable energy companies.

RIO TINTO

Rio Tinto is a global mining and metals company operating in 35 countries around the world whose purpose is finding better ways to provide the materials the world needs. One of Rio Tinto's strategic priorities is to decarbonize the entire value chain, from supplier to mine to customer. For Rio Tinto's shipping operations, this involves exploring multiple options, from testing efficiency levers to utilizing and trialing new low carbon and net carbon neutral fuels. In this context, Rio Tinto believes that methanol holds significant potential.

SUNGAS RENEWABLES

SunGas Renewables is a clean energy and technology solutions company providing, developing, and operating proven technology systems that transform sustainably sourced renewable feedstocks into a wide range of clean fuels. SunGas recently partnered with Maersk to supply them 390,000 TPY of green methanol to accelerate decarbonization of their marine fleet.

SWIRE SHIPPING

Headquartered in Singapore, Swire Shipping is dedicated to facilitating & growing trade in regions where it operates. Connecting over 400 ports, Swire Shipping provides customers several high frequency liner shipping services in the Asia Pacific markets, transpacific services between North Asia & the Pacific Northwest, and specialist shipping services to the energy, resource & infrastructure sectors in the global project logistics market. It specialises in providing a wide range of specialist customer solutions for project, heavy lift, refrigerated, breakbulk & mini bulk cargoes. Swire Shipping maintains a worldwide agency network in addition to its own representative offices across the Asia-Pacific, Pacific Islands, North America & Europe, providing customers with dedicated service & expert market knowledge.

MI GLOBAL OFFICE LOCATIONS

WASHINGTON

225 Reinekers Lane
Suite 205
Alexandria, VA 22314, USA
+32 2 761 1600

BRUSSELS

Sq. de Meeûs 35
1000 Bruxelles
Belgium
+32 2 761 1600

DELHI

SINGAPORE

20 Anson Road
#11-01 Twenty Anson
Singapore 079912
+65 6303 5220

BEIJING

Level 26 Fortune Financial Center,
Chaoyang District No. 5,
Dongsanhuan Rd. Beijing 100020, China
+86 010 5775 0450

MI GLOBAL TEAM MEMBERS

GREGORY A. DOLAN

CEO

WASHINGTON, DC

Joined MI in 1996 and held a variety of senior management positions within MI before being named CEO in 2013. 10 years as a press officer for the State of New York & 2 years as legislative assistant in the US Senate.

GDOLAN@METHANOL.ORG

LAWRENCE NAVIN

SENIOR DIRECTOR OF GOVERNMENT & PUBLIC AFFAIRS

WASHINGTON, DC

Extensive multi-lateral experience to include US-India Business Council, US Dept of Commerce Int'l Trade Administration. Prior to joining MI, Mr Navin also held roles with the Overseas Private Investment Corporation (OPIC) and the US Senate.

LNAVIN@METHANOL.ORG

PRAKRITI SETHI

CHIEF REPRESENTATIVE INDIA

DELHI

Joined MI in 2020 with experience of having supported UNESCO Secretariat and assisted in preparing Plan during 2016-2021.

PSETHI@METHANOL.ORG

Serving our members *in every corner of the globe*

Singapore
Washington, D.C.
Brussels
Beijing
Delhi

KAI ZHAO

CHIEF REPRESENTATIVE CHINA

BEIJING

Joined MI in 2015 and serves concurrently as Director and project researcher at the Academic Board Office of the Centre for Global New Energy Strategy Studies (CGNESS) at Peking University, a position he has held for the last 8 years.

KZHAO@METHANOL.ORG

LONDON DOUGLAS

SOCIAL MEDIA & WEB MANAGER

WASHINGTON, DC

Joined MI in 2021 with a background in branding, social media and marketing.

LDOUGLAS@METHANOL.ORG

MI OFFICES & TEAM MEMBERS

TIM CHAN

ASST. DIR. OF GOVT. & PUBLIC AFFAIRS - ASIA & MIDDLE EAST

SINGAPORE

Joined MI full-time staff in 2018, after serving as an intern in 2016/2017. Has also worked for Singapore Ministry of Transport and GR firm Burson-Marsteller.

TCHAN@METHANOL.ORG

MATTHÍAS ÓLAFSSON

CHIEF REPRESENTATIVE

EUROPE

Former sales and marketing specialist at Carbon Recycling International, involved in sales, marketing, stakeholder relations and regulatory affairs in the Europoean market for renewable methanol. Background includes business development roles across different sectors as well as academic roles within the field of Political Science.

MOLAFSSON@METHANOL.ORG

BELINDA PUN

EXECUTIVE MANAGER

SINGAPORE

Joined MI in 2018 after 17 years of experience as Executive Assistant and Administration Manager. Previously worked as office manager for Siemens Postal, Parcel & Airport Logistics.

BPUN@METHANOL.ORG

TONI ZHOU

OFFICE MANAGER

BEIJING

Expertise in client services, corporate communications, business administration, and operations; effective interpersonal and cross-cultural communications.

TZHOU@METHANOL.ORG

CHRISTOPHER CHATTERTON

COO

SINGAPORE

Joined MI in 2015 with more than 20 years executive level experience in energy, oil & gas and petrochemicals. Led several successful energy and agriculture initial public offerings (IPOs) and cross-border private placements.

CCHATTERTON@METHANOL.ORG

RAFIK AMMAR

MANAGER OF GOVT. & PUBLIC AFFAIRS

EUROPE

Applies his expertise in the European legislative process to support the association's government relations strategy in Europe. Before joining MI, Mr. Ammar held several positions in EU institutions. He supported political work with a focus on transport in the European Parliament and as a coordinator for interinstitutional relations at the Secretariat General of the European Commission.

RAMMAR@METHANOL.ORG

METHANOL INSTITUTE

BRUSSELS

BEIJING

WWW.METHANOL.ORG

DELHI

WASHINGTON

SINGAPORE