



# **2025 MILESTONES**

The Methanol Industry in Focus

# TABLE OF CONTENTS

**4** CHAIRMAN'S REMARKS

6 MI MISSION & PURPOSE

7 MI MILESTONES & ACHIEVEMENTS

**8** MARINE FUEL

14 INTERNATIONAL MARITIME ORGANIZATION

**16** CHINA ROUNDUP

20 AMERICAS ROUNDUP 22 EUROPE ROUNDUP

**24** INDIA ROUNDUP

28 COMMUNICATION

**30** GENA SOLUTIONS

32 AMERICAN PUBLIC POLICY

**36** METHANOL PRICING & AVAILABILITY

**37** CURRENT MEMBERS **38** 2025 MEMBERSHIP STRUCTURE

39

WORKING GROUPS

**40** NEW MEMBERS

**42** GLOBAL TEAM MEMBERS

**43** NEW STAFF MEMBERS

**44** GLOBAL OFFICE LOCATIONS



Chair of the Board. Methanol Institute

# CHAIRMAN'S REMARKS

As we reflect on 2024, one thing is clear: methanol is no longer just an emerging solution, it's a proven and practical fuel for the energy transition.

This year has been marked by significant milestones, both at the Methanol Institute and within the broader industry, showing just how far methanol has come as a leading force in the energy transition.

One of the defining moments of the year was the Methanol Institute securing consultative status with the International Maritime Organization. This achievement gives us a stronger voice in global regulatory discussions, ensuring methanol remains front and center in the conversation about cleaner shipping fuels. With methanolpowered vessels already in operation and more on the way, the industry is proving that the shift to low-carbon and renewable fuels isn't just a vision, it's happening right now.

2024 will also go down in shipping's history books as the year when Ane Maersk, the first large methanol-enabled containership, entered service. At the same time, we saw major shipping players move to secure landmark methanol offtake agreements to fuel their growing dual-fuel fleets, reinforcing the industry's commitment to methanol as a long-term marine fuel solution.

Beyond shipping, methanol continues to gain ground as a fuel for on-road transport, industrial applications, and even household energy. In China alone, tens of thousands of methanol-powered vehicles are now on the roads, while industrial sectors are increasingly adopting methanol for boilers, cookstoves and kilns, gensets, fuel cells systems, and other energy-intensive processes. Meanwhile, the growing production of low-carbon and bio-methanol and e-methanol further reinforces methanol's role as a versatile, low-carbon fuel capable of reducing emissions across multiple industries.

At the Methanol Institute, we have been at the forefront of these developments -- advocating for supportive policies, fostering industry collaboration, and sharing knowledge to help businesses and regulators make informed decisions. Our mission remains clear: to accelerate the adoption of methanol as a safe, scalable, and sustainable fuel, while also maintaining methanol's traditional markets.

2024 was also a year of growth within our organization, with 30 new members joining from across the methanol value chain. The increasing diversity of our membership-from producers to endusers-fuels the momentum of our industry and strengthens our collective voice in shaping the energy transition.

As we move through 2025, the momentum behind methanol has never been stronger. By working together across sectors, regions, and industries, we can continue to unlock methanol's full potential and accelerate the shift to a more sustainable energy future.

Thank you for your support, commitment, and partnership.

# MI PURPOSE & MISSION

### **PROTECT • EXPAND • COMMUNICATE**

As the global trade association for the methanol industry, Methanol Institute (MI) represents the world's leading methanol producers, distributors, technology providers, and energy consumers. The mission of the Methanol Institute is to serve and provide cost-effective value to its membership by:

#### Protecting existing markets is a core function

- Supporting methanol chemical and derivative markets
- Promoting safe handling best practices across the global distribution chain
- Preventing product misuse

### » Serving as the voice of the global methanol industry

- Driving public policy initiatives an addressing regulatory changes
- Amplifying member messaging
- Building global stakeholder networks
- Expanding global social media presence and use of digital communications marketing
- Highlighting methanol's role in carbon transition

### Promoting the growth of emerging energy markets and methanol supply

• Ensuring the methanol industry maintains momentum in key market applications:

- Marine fuels
- Gasoline and diesel substitute for road transport and sustainable aviation fuels
- Heating/power applications: cookstove, industrial boilers, kilns, gensets, turbines
- Supporting low carbon, renewable and small-scale methanol production
- Developing fuel standards and GHG accounting methodologies

# 2024 MILESTONES & ACHIEVEMENTS





- MI continues to grow, hitting over 100 members
- MI professional staff presented at more than 60 global events
- MI gains consultative status at IMO
- Brussels office organizes series of "Methanol Talks" with key EU stakeholders
- MI joins Silk Alliance and Port of Rotterdam Port of Singapore Green Corridors of Shipping
- MI lobbied the Ministry of Law and Renewable Energy India on R&D Roadmap for Green Hydrogen Ecosystem in India that mentions methanol more than 50 times
- Methanol safety workshops for cookstoves



### held in China

- Member of Renewable and Low Carbon Value Chain Alliance (RLCVA), the expert group of the European Commission
- The eligibility of methanol under IRA Section 45Z included in US Treasury Department interim guidance
- MI launched a renewable methanol project navigator in collaboration with GENA Solutions
- MI joins the Clean Maritime Fuels Alliance
- MI joins in strategic partnership with Argus
- MI completes a joint study with ARAMCO on China M100 and MTG
- 35th Anniversary celebration in Brussels



# MARINE FUEL

2024 was another year of turning points, milestones and celebrations for shipowners, fuel producers, and engine OEMs engaged in the maritime energy transition.

Despite geopolitical shocks and trade disruption, the process is continuing to move forward.

Data reported at the start of 2025 illustrate the level of interest within the shipping industry for vessel designs that can contribute to greater efficiency and lower emissions.

According to Clarksons Research there are now 50 methanol dual-fuel vessels on the water and in service, mostly chemical tankers, and the start of a wave of container ships.

The current orderbook for newbuilding ships capable of running on methanol stands at 350, these are vessels that are compatible with methanol from the day they are launched. Other newbuild tonnage ordered as 'Ready' for the future use of methanol which means the ship has been constructed with extra space to accommodate engine and fuel system technology adds another nearly 700 methanol ready ships.

Taken together over the next five years, we will see more than 1,000 vessels entering service classed for methanol. And that's just

looking at the current orderbook, which continues to grow month to month.

Shipowners have continued to make significant investments to reshape their fleets to prepare for IMO and EU emissions reduction targets even before low-carbon and carbon-neutral fuels are widely available.

While methanol is now considered a mainstream fuel for shipping, vessel operators are continuing to pursue a multi-fuel strategy. Rather than converge around a single alternative fuel, owners and charterers are adopting propulsion technologies that best reflects their fleet profile.

# Despite the enthusiasm for new tonnage, the clean fuel supply chain is still developing. A lack of information around future fuel capacity has been cited by some in the industry as reason for delaying investment decisions.

Reflecting the need for transparent and robust data around production volumes, the Methanol Institute partnered with Finland's GENA Solutions to create a database to track the pipeline of biomethanol and e-methanol projects.

As of February 2025, the database is monitoring more than 200 announced renewable and lowcarbon methanol projects globally with a total potential capacity of 45.8 million metric tons by 2030. Keep in mind, this is announced capacity, given the challenges of bringing projects to production, we may only see 20-40% of these projects move forward, but that still represents 7-14 million metric tons of low-carbon and renewable methanol supply in just the next five years. To put this into perspective, total methanol supply in 2024 was 94 million metric tons, with just 400,000-500,000 tons of renewable product sold.

China holds half of the global bio-methanol and e-methanol project pipeline and is expected to be the main supplier of renewable methanol from 2025 to 2027 based on current project timelines. While many projects remain in feasibility stages, roughly 4 million metric tons of low-carbon or "blue" methanol, bio-methanol, and e-methanol facilities are either operational or under construction as of February 2025.

To construct a robust and viable database, GENA conducted studies on over 500 renewable and



# fossil fuel plants and projects globally. The analysis methodology involves a diligent examination of technologies, material balances, costs, emissions, schedules, commercial and financial strategies for every facility within the comprehensive database.

Having made a significant investment in methanol dual fuel ships, AP Moller-Maersk struck a long-term offtake agreement with LONGi Green Energy Technology Co - the world leading supplier of solar PV solutions - to provide hybrid bio- e-methanol for use within its growing fleet.

With the addition of the LONGi volumes, the first of which are expected in 2026, Maersk is making progress in securing enough methanol for its dual-fuel methanol fleet, of which seven vessels are already in operation.

Maersk also has an off-take agreement with Goldwind - a leading wind turbine manufacturer with 100 GW of installed capacity - who broke ground on a 500,000ton hybrid renewable methanol plant in April which is expected to start commercial production in Q3 2025.

The company's combined methanol offtake agreements now meet more than 50% of dual-fuel methanol fleet demand in 2027.

A further milestone saw Carbon Recycling International (CRI) sign a landmark agreement with China Tianying Group to leverage its methanol synthesis technology for a large-scale e-methanol production project in Liaoyuan, China. In September, CNTTNY signed a guaranteed off-take of 800,000-tons of renewable methanol with COSCO Shipping.

The renewable methanol plant's first phase will have the capacity to produce 170,000 tons per year, with an expected start-up date in 2025. The project will utilize green hydrogen from renewably-powered electrolysers and captured carbon of biogenic origin to produce e-methanol. The project embodies the vast potential for sustainable energy and represents a key milestone in

the global effort to reduce carbon emissions.

## Shipowners have also continued to make progress to reduce emissions from their existing fleets with projects to retrofit methanol dual fuel engine technology.

Maersk Line has completed the conversion of the first large containership, Maersk Halifax into a dual-fuel vessel capable of operating on methanol. The retrofit operation was conducted at China's Zhoushan Xinya Shipyard over 88 days with completion at the end of October 2024.

Following completion of sea-trials, Maersk Halifax returned to operation and is already in service on Maersk's Trans-Pacific trade.

The project was carried out by MAN Energy Solutions and addition to conversion of the engine, the retrofit operation included adding new fuel tanks, fuel preparation room and fuel supply system.

The hull was expanded to accommodate the fuel tanks, extending the length of the ship to 368 meters, increasing the capacity from around 15,000 to 15,690 TEU.

Meanwhile China's largest shipping company, COSCO Shipping has also embarked on a major programme to retrofit methanol dual fuel engines across its existing fleet, launching its first methanol retrofit container ship in October.

COSCO is using its own Shanghai shipyard facility for the EPCIC (Engineering, Procurement, Construction, Installation & Commissioning) project to retrofit four large vessels with MAN Energy

Solutions' ME Liquid Gas Injection Methanol (LGIM) main engines, with an option to retrofit nine more.

These ships, from COSCO's 13,800 TEU Camellia and 20,000 TEU Virgo class will be converted from single-fuel MAN engines with the Danish engine maker providing engineering, parts, project management, onsite technical assistance at the yard, sea-trial assistance and recertification service for the engine retrofits.

To support the contract, MAN undertook an R&D programme and invested in a testbed to develop the S90-LGIM retrofit system. The first vessel of the series is scheduled for retrofit in Q2 2025 and when complete, they will be the first vessels in COSCO's fleet capable of sailing on methanol.

2024 was also an important year for expanding the number of ports offering methanol bunkering. According to Clarksons, there are now 15 ports with active methanol bunkering and another 20 ports developing methanol bunker capability.

In May 2024, X-Press Feeders, Global Energy Trading, and PSA Singapore successfully completed the first simultaneous methanol bunkering and cargo operation with the support of the Maritime and Port Authority of Singapore.

In December, the Society for Gas as a Marine Fuel (SGMF) announced publication of extensive bunkering guidelines for methanol. MI Senior Advisor for Maritime Transport Kjeld Aabo participated in the SGMF task force that developed the guidelines addressing key safety factors to be considered when designing and bunkering a vessel of any type with methanol.

At the beginning of 2025, the Port of Shanghai announced that methanol bunkering is now available as a regular service. On New Year's Day, the Ane Maersk received methanol fuel from the dedicated methanol bunkering vessel Haigang Zhiyuan. The Port of Shanghai began ship-to-ship bunkering in April 2024 and expects to supply one million tons of green methanol each year by 2030.

Looking at 2025 and beyond, the Methanol Institute continues to observe the shipping industry facing significant challenges in navigating the energy transition but also making progress, with vessel orders, fuel supply, bunkering capability, engine

### technology and retrofit capacity all continuing to grow.

As orders continue to increase for methanol dual fuel vessels, we will see more first movers and fast followers take steps to secure their fuel supply chain. The industry has become comfortable with the safe handling and bunkering of methanol and its integration into vessel design presents no technical issues. The growing number of methanol bunker barges ordered in 2024 is testament to the confidence that the solution is embedded in the industry.

We also expect to see the volume of retrofits of existing vessels to increase as research and application of methanol-powered solutions continues to grow, with more vessel owners investing in long term fuel options.

We also continue to closely monitor the regulatory landscape impacting methanol producers, shipowners and OEMs.

2024 saw MI granted observer status at the International Maritime Organization, meaning we are able to play a bigger role in supporting lawmakers as they move towards broader adoption of alternative fuels.

Our dedicated team in Brussels will provide a similar level of engagement with the EU Commission and other stakeholders as the shipping industry enters a new era of FuelEU Maritime and the EU Emissions Trading System.



# INTERNATIONAL MARITIME ORGANIZATION (IMO)

MI received approval in August 2024 to join the International Maritime Organization as a nongovernmental organization with consultative status.

MI joins the current 90 other NGOs associated with the IMO. NGOs with consultative status at the IMO are chosen on their ability to contribute their considerable expertise within their field of competence to the work of the IMO. MI is unique in representing a specific fuel in the IMO's activities. The IMO is responsible for the safety and security of shipping around the world and strives to prevent marine and atmospheric pollution by ships. A major part of the IMO's activities is driven by the 2023 IMO Strategy on the Reduction of GHG Emissions from ships where alternative fuels and new technologies are central to the realization of this strategy. MI has extensive opportunities to support the work of the IMO regarding the lowering of GHG emissions and the technical and safety dimensions of alternative fuels.

With our engagement led via MI's IMO Working Group, led by Roger Strevens of Methanex, MI has been active on multiple fronts in terms of attending meetings, contributing to discussions, and building up effective

relationships with various IMO stakeholders. MI will continue to support the IMO's activities through the Marine Environment Protection Committee, the Maritime Safety Committee, and the Legal Committee, along with their respective sub-committees. MI will be active in its engagement with the IMO in the pursuit of regulatory outcomes that align the IMO's achievement of its climate targets with the interests of the broad range of stakeholders in the MI membership.

During 2024, MI participated in the following meetings:

- (ISWG-GHG 17)
- 82nd session of the Marine Environment Protection Committee (MEPC 82)
- 109th session of the Maritime Safety Committee (MSC 109)

Many more engagements with the IMO are occurring and planned for 2025.

• 17th session of the Intersessional Working Group on Greenhouse Gas Emissions from Ships



# CHINA ROUNDUP

2024 was a productive year for the Chinese methanol market, which remains the largest and most dynamic globally.

### STAKEHOLDER ENGAGEMENT

MI continues to act as a bridge between the Chinese methanol industry and our global members and stakeholders. For the first time ever, MI's Beijing office organized and managed the pavilion for member companies Geely, SunHydro, FiT, and Johnson Matthey to participate in the BRICS Exhibition on New Industrial Revolution 2024 in Xiamen, organized by Center for International Economic and Technological Cooperation, Ministry of Industry and Information Technology (MIIT).

## **MARKET DEVELOPMENT**

Several fuel applications are leading position of the methanol market in China, with methanol direct fuel consumption (gasoline blending, M100, cookstoves, kilns, boilers, gensets) reaches around 1.3 MMTs, the second largest downstream after olefin. As one of the supporting entities with Methanex Corporation and other Chinese companies, MI was actively involved in renewing GB16663. fundamental for methanol as cooking fuel -China National Standard of "Alcohol based Liquid Fuel (GB16663-1996) whose updating draft was reviewed in 2024 and expected to

## **ROAD AND AVIATION**

Methanol fueled road transport remains a growth sector with total methanol vehicles on the road now numbering over 34,000 with around 500 methanol fueling stations. On August 11, 2024, the central government of China issued guidelines to accelerate the green transition and green transport infrastructure, including the hydrogen (alcohol) fueling stations was highlighted.

Another potential market is to covert renewable methanol into gasoline; in 2024, the joint report entitled as 'Accelerating the Net-zero Transition: Assessing Potentials of E-fuels in China's Road Transport' co-authored by Strategic Transport Analysis expert from Aramco Asia was released in both MI's Beijing office and online with participants across the industry supply chain.



# be released in 2025. Also MI's Beijing office bridged the business communications between China and other countries in Aisa including India and Vietnam on methanol for cooking and kilns.

• Methanol Institute joined member company Geely in Harbin, China's famous "City of Ice," in TV and newspaper interviews. Geely also delivered the first 500 of 1,500 methanol-powered cars to the city during the 9th Asian Winter Games, marking a milestone in the city's green transport transition.



### **MARINE FUEL**

MI's Beijing office has been dedicated to sharing the latest developments around methanol as a marine fuel and bridging the gap between shippers and methanol producers.

The most important initiative in 2024 was to establish the Lin-Gang Green Shipping Alliance which aims to pave the way for collaboration across the industry supply chain to enhance the sustainability of the green shipping sector. The Lin-Gang Green Shipping Alliance was announced on March 1st, 2024 in Shanghai and was jointly initiated by China (SH) Pilot Free Trade Zone Special Area Management Committee, COSCO, State Power Investment Corporation (SPIC), Shanghai International Port Group (SIPG), China Classification Society (CCS) and MI.

Later in July 2024, MI's Beijing office was one of the main organizers for the Lin-Gang International Shipping Innovation conference in Shanghai. MI CEO Greg Dolan, participated and delivered the keynote speech.

MI also was actively involved in numerous high-level events, including the China-US green corridor conference ;"Sino-Danish Shipping Decarbonization Summit Energy Roundtable – Power to X"

for Roundtable; the 4th APEC Green Port Development Forum hosted by the Asia-Pacific Port Services Organization (APSN).

As for maritime safety administration and management, the Shanghai Maritime Safety Administration released Methanol Fuel Bunkering Operation on Water Safety Management Measures in January 2024, which is put in practice from March 1st, 2024. The measures fill the gaps in the management system of domestic marine methanol fuel bunkering operations and lay a solid institutional foundation for the construction of Shanghai port as a clean fuel bunkering center for international ships.

MI member company Maersk achieved a milestone as the large methanol-enabled vessel "Astrid Mærsk" berthed at Yangshan port in Shanghai on April 10, 2024 for the first green methanol bunkering by Shanghai International Port Group (SIPG)'s "Haigang Zhiyuan", China's first and the world's largest methanol-bunkering ship with simultaneous cargo and bunkering operations.



# AMERICAS ROUNDUP

### MI had another very active year in the Americas.

The association's primary focus was on the Inflation Reduction Act (IRA) in the United States, along with support for the inclusion of methanol in Canada's Clean Fuels Fund and work in Latin America to expand methanol's uptake as a marine fuel in the region.

In the U.S., MI worked with Tax and Law firm Bracewell's Policy Resolution Group (PRG) to secure a number of wins for the methanol industry. MI submitted comments and held a series of meetings with the Department of Treasury, Department of Energy, both houses of Congress and others to make the case for methanol vis a vis the IRA Section 45Z Clean Fuel Production Credit, and the IRA Section 45V Clean Hydrogen Production Tax Credit.

In January of 2025 interim guidance on IRA Section 45Z, the Clean Fuel Production Credit was released by the Treasury Department and incudes methanol as fuel eligible for the credit. The guidance is a major win for MI and the methanol industry. Additionally, on January 3rd, 2025 the Final Rules for the IRA Section 45V Clean Hydrogen Production Credit were released.

#### **Highlights include:**

MI advocated for the expansion of the

definition of the Section 45Z credit to include the use of methanol as a marine fuel: The guidance clarifies that actual use as a fuel in a highway vehicle or aircraft is not required to qualify for the credit. For example, a fuel that is otherwise suitable for use, but is used as marine diesel fuel or marine methanol, may satisfy the definition of transportation fuel.

MI also requested that for Section 45Z, in addition to the ASTM D5797 specification for blended methanol that was included in earlier draft language, the ASTM D1152 specification for neat methanol be included as well which would allow the lowest GHG methanol fuels to claim the credit and further the IRA's CO2 reduction aspirations. The released guidance included ASTM D1152 as well.

There was good news for methanol in the final regulations for the IRA Section 45V Clean Hydrogen Production Tax Credit as well. Those regulations maintain the controversial "three pillars" included in the proposed regulations issued in December 2023 (the Proposed Regulations) but relax the standards, providing hydrogen producers with additional flexibility to qualify for the credit. The final regulations also allow taxpayers to lock In the GREET model in place at the beginning of construction and future GREET model updates will incorporate project-specific upstream methane leakage rates Instead of national averages. Additionally, the final regulations contain a win for MI that addresses a point MI made in our comments to the Treasury Department, which argued that, like the 45Q tax credit, 45V's associated GREET model should include the capability of modeling the utilization of captured CO2 in addition to sequestration. The final regulations do make this change.

MI Staff also participated in numerous methanol industry and marine industry events throughout the United States in 2024, including the Argus Methanol Forum in Houston. Other activities included: In Canada, MI supported members by making a successful submission to Natural Resources Canada on methanol's inclusion in the Canada Clean Fuels Fund. The Canada Clean Fuels Fund aims to support Canada's domestic clean fuels industry. This effort led by MI members was successful in having methanol's included under the list of fuel types eligible for funding under the Clean Fuels Fund.

In Latin America, MI VP of External Affairs Larry Navin traveled to Panama to speak at TOC Americas, which focuses on port and container shipping supply chains. Larry spoke on the energy transition and the role for alternative marine fuels at the 3-day event which brought over 1000 maritime industry participants from Latin America and around the world together.



# EUROPE ROUNDUP

In 2024, activities regarding the EU took place in the context of the substantial institutional transitions taking place in Brussels.

First off, the European Parliament elections of June 2024 not only meant an important political shift away from green policies, it also indicated personnel changes in every European Parliament committee relevant to the Methanol Institute, most notably ITRE (Industry), TRAN (Transport), ENVI (Environment), INTA (Trade), and ECON (Economy). This meant reengagement with designated Chairs, Vice-Chairs, and new Committee members. This happened during many bilateral visits to the European Parliament, numerous events in Brussels, and attendance of the EP's Plenary Session in Strasbourg (October 2024).

This was followed by the change to a new College of Commissioners, again under the Presidency of Ursula von der Leyen. After a lengthy transition period, prolonged by President Von der Leyen's bout of pneumonia, the various Cabinets of the most relevant European Commissioners for the Methanol Industry (notably, Ribera, Séjourné, Hoekstra, Jørgensen, and Tzitzikostas) only fully established themselves by the end of January 2025. However, during the transition period in 2024, the Brussels Team managed to organize substantial informal outreach to officials designated to be in these Cabinets and convey the most important messages and concerns of the methanol industry.

In terms of formal activities, the Brussels team organizing MI's input into various public consultations relevant to the methanol industry, notably the Low Carbon Fuels Delegated Act, the Union Database for Biofuels (UDB), and Aviation fuels and emissions trading were among the most important work in terms of furthering MI members' interests. In addition, publication of a methanol-themed Op-Ed under the authorship of Dr. Richard Burchill in The Parliament Magazine in December 2024, both online and in paper, contributed greatly to our visibility in Brussels, getting the MI messages out to a wider public, and building a platform for future public engagement on behalf of the methanol industry. As a direct result of this Op-Ed, we spoke at multiple events, including as keynote speakers, such as the Sustainable Maritime Fuels Forum in Brussels in December 2024.

Much time has been dedicated in Brussels to coalition building, engaging with relevant industry organizations, and representing MI in European Commission-led platforms. Notable examples include, the European Sustainable Shipping Forum (ESSF)'s 18th Plenary meeting and the Renewable and Low-Carbon Fuels (RLCF) Value Chain Alliance. In addition, MI participated actively in -among others- the Low Carbon Fuels (Informal Coalition) (weekly), the Network for Sustainable Mobility (weekly), the eFuel Alliance Sherpa Meeting (bi-weekly), the RFNBO Coalition (bi-weekly), the Clean Maritime Fuels Platform (bi-weekly), and Petrochemicals Europe (intermittently).

With representatives of MI members in Brussels or passing through Brussels on a regular basis, one of the most important sources of information for MI's Brussels team is engaging with them directly and hearing about their interactions with EU institutions and any major concerns they have with regards to EU regulations. This information is of key importance in driving and directing MI's work in Brussels vis-à-vis the EU.

Lastly, the support and input from the wider MI team is indispensable for the Brussels office. In this respect, notably the role of Kjeld Aabo, MI's Senior Advisor for Maritime Transport, in delivering his technical input into our EU-focused conversations and output from Copenhagen.



# INDIA ROUNDUP

MI had a busy year in India, hosting and participating in a wide variety of industry events, webinars, conferences and meetings with officials, as methanol continues to gain an increasingly strong foothold in the subcontinent.

On October 17-18, 2024, NITI Aayog (Planning Commission of India), in collaboration with the Methanol Institute, hosted the International Methanol Seminar in New Delhi, India. India's efforts to establish itself as a key player in the methanol economy are gaining momentum, and this event served as a platform to advance research. development, and deployment of methanolbased technologies in the country.

Union Minister for Road Transport and Highways, Nitin Gadkari, inaugurated the seminar and exhibition, alongside key officials from the Department of Science and Technology, Ministry of Consumer Affairs, Ministry of New & Renewable Energy (MNRE), Ministry of State Science & Technology, Secretary of Shipping, Ports & Waterways, and NITI Aayog.

The event featured expert speakers from both India and around the world, including MI members Element 1 and Splitwaters, as well as representatives from Cochin Shipyard Limited, S&P Global, Assam Petrochemicals Ltd, Indian Institute of Technology (IIT)

MI CEO Greg Dolan delivered a virtual keynote on methanol production and emerging markets, while MI China Chief Representative Kai Zhao provided insights on China's methanol initiatives. Additionally, MI Senior Advisor for Maritime Transport Kjeld Aabo joined online from Copenhagen to discuss methanol marine engine technology.

Closing the seminar, MI India Chief Representative Prakriti Sethi presented on India's methanol policy landscape. The Methanol Institute also hosted a booth at the exhibition, attracting a large number of attendees.

MI participated as an advisor in the methanol standard's development at ISO's (the International Organization for Standardization) Technical Committee meeting that discusses the "Specifications" of alternative fuels for marine application" on 26 September in New Delhi. The meeting highlighted the launch of a standard for methanol's use as a fuel for maritime applications. MI Chief India Representative Prakriti Sethi presented the methanol policies in India how ISO's specifications could support the Indian maritime industry to adopt alternative fuels like methanol. Ms. Sethi along the sidelines of the ISO meeting was also invited as a guest speaker at the International Seminar on decarbonization of the maritime industry organized by the Bureau of Indian Standards (BIS). Subsequently, in November 2024 ISO released the Methanol as a Marine Fuel Standard for marine applications. In terms of scope, the standard defines the general requirements and specifications for methanol from all forms of production for use as fuel in marine applications.

The Royal Danish Embassy in New Delhi, in collaboration with the Federal Ministry for Economic Cooperation and Development, and TERI, organized a workshop on Maritime Green Corridors at RE-Invest in Gandhinagar. The PtX Green Shipping training was aimed at providing insights into the current debates and international policies for sustainable shipping. MI Chief India Representative Prakriti Sethi presented the opportunities and challenges for methanol as a marine fuel in India and highlighted the need to bring together relevant stakeholders from the maritime sector and the renewable energy to identify common solutions.

In a joint effort with the Danish Embassy in India, MI organized a webinar titled "Unleashing

Methanol Demand Opportunities" to highlight the opportunities for methanol applications and the role of methanol in the energy mix for economies. The webinar discussed the technologies and how methanol could be adopted for various demand market sectors. It featured speakers from MI member AP-Moller Maersk, Advent Technologies, and the Danish Technological Institute. The speakers highlighted that methanol as an alternative fuel is gaining traction in the market, with increased deployment in shipping, power generation, and transport sectors.

MI actively participated in a host of events in India and was invited as a guest speaker on eminent panels to highlight the role of the methanol industry in the country's energy landscape. MI's Prakriti Sethi was invited to speak at the Wärtsilä India Seminar titled "Navigating the Green Seas; Strategies for Maritime Decarbonization" on a panel looking at the decarbonization solutions for the maritime industry. The event hosted in Mumbai had the inaugural speech by Shri. Shyam Jagannathan, Director General of Shipping & Additional Secretary, Government of India. Prakriti discussed the importance of methanol as versatile fuel for the maritime industry which can help cut emissions up to 95% if produced through renewable feedstocks and support decarbonization goals.

MI participated at the ShipTek Marine Offshore Oil & Gas Conference 2024 in Mumbai which brought together the most prominent names and key players in the maritime industry from across the globe to discuss key market trends, maritime opportunities, challenges, and the way forward. MI Chief India Representative Prakriti Sethi, Mumbai, spoke on the topic "Navigating the Path to a Sustainable Maritime Future" that focused on pioneering strategies and innovations propelling the shift towards greener shipping practices.

MI was also invited be to part of the at the Net Zero Summit 2024 in Delhi organized by Arrucus Media to discuss the role of methanol as a viable alternative fuel. Ms. Sethi discussed how methanol can be a game changer for achieving decarbonization goals for the Transport and Oil & Gas sectors.

### Breathe Applied Sciences announced India's First CO2 to Green Methanol Plant

MI's India Methanol Economy Coalition (IMEC) member Breathe Applied Sciences along with Ohmium International, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) and



Spirare Energy announced India's first CO2-to-Green Methanol plant.

The project will combine green hydrogen generated by Ohmium PEM electrolyzers with CO2 captured from the Singareni Thermal Power Plant to produce green methanol.

The process to synthesize green methanol from CO2 emissions was developed by researchers at Breathe Applied Sciences and the Jawaharlal Nehru Centre for Advanced Scientific Research in India.

Spirare Energy partnered with Ohmium to procure the PEM electrolyzer solution, an important component of the overall project.

# COMMUNICATION



Shipping is a risk management business. Fuel choice is no different

The energy transition asks difficult questions of shipowners, their flexible approach is to be applauded, says Alexander Döll

16 August 2024 9:39 GMT UPDATED 16 August 2024 9:43 GM By Alexander Doll

Scaling up



Dr Richard Burchill is the director of research strategy and knowledge exchange at the

Methanol Institute. He is also an associate

research fellow at UNU-CRIS.

Op-ed: Low-carbon fuels are the shortcut the EU needs to hit its climate goals

Low-carbon fuels like methanol can cut emissions now and drive a renewable future – if the EU gets the regulations right.

# **Going mainstream**

From new engines to retrofit solutions, design approvals to vessel orders and bunkering agreements, methanol was everywhere in 2023, but the transition process continues, writes **Gregory Dolan**, CEO of The Methanol Institute

### Elevating Methanol's Profile: MI's Communications and Advocacy in 2024

Drawing on the findings of a new BNEF report, **Alexander** 

Döll of the Methanol Institute looks at how methanol can

help the shipping industry achieve next zero targets

In 2024, the Methanol Institute expanded its communications and advocacy efforts, ensuring methanol remained at the forefront of industry discussions on energy transition and decarbonization. Through strategic media engagement, we strengthened MI's voice and elevated methanol's visibility globally.

### Strengthening media engagement

MI secured media coverage in leading industry and mainstream outlets, positioning methanol as a key solution for shipping decarbonization and low-carbon fuels. Our press releases on regulatory developments, key reports and studies, and member initiatives reached a wide audience, reinforcing MI as the go-to source for industry insights. Additionally, we secured exclusive interviews and op-eds featuring MI leadership in publications such as TradeWinds, The Parliament Magazine, and Bunkerspot, and contributed expert insights to articles and breaking stories shaping the industry narrative.

### Driving thought leadership and digital advocacy

This year, MI expanded its thought leadership efforts, publishing op-eds and insights that underscored methanol's growing role in sustainable shipping and energy markets. We enhanced our LinkedIn presence, driving a 32.1% increase in engagement rate\* and consistently sharing industry updates, member achievements, and expert perspectives.

### Looking ahead

Building on this momentum, MI will further enhance its media outreach, stakeholder engagement, and digital storytelling in 2025. With a focus on targeted advocacy and fresh content formats, we will continue positioning methanol as the future-proof fuel for a low-carbon world.

\*The number of times users engaged with your content as a percentage of impressions. This indicates how engaged people are with your brand



# RENEWABLE & LOW-CARBON METHANOL PROJECT DATABASE

The Methanol Institute has partnered with Finland's GENA Solutions Oy on the development of a robust database of bio-methanol and e-methanol projects across the world.

As of February 2025, the database tracks 210 renewable methanol projects globally, with a total announced anticipated capacity of 35.7 Mt by 2030. The total projected capacity of all e-methanol projects is 19.4 Mt by 2030, while the total capacity of all bio-methanol projects is 16.3 Mt, respectively.

In addition to the announced renewable methanol projects, the database also tracks another 16 low-carbon or "blue" methanol production projects and totaling 10.1 Mt of capacity by 2030. Total renewable and low-carbon methanol project pipeline composes 45.8 Mt by 2030.

Considering barriers and challenges in project development, renewable methanol capacity will likely be in the range of 7-14 million tons by 2030 (20-40% of the project pipeline).

In the methanol industry, GENA has

conducted studies on over 500 renewable and fossil fuel plants and projects globally. The analysis methodology involves a diligent examination of technologies, material balances, costs, emissions, schedules, commercial, and financial strategies for every facility within the comprehensive database. The project statistics encompass projects from pre-feasibility to operational stages, excluding closed or frozen projects, as well as concept-stage projects.



# SPOTLIGHT ON BLUE METHANOL: INSIGHTS FROM ARGUS MEDIA

North America embraces blue methanol and its challenges Writes Cassidy Staggers, Senior Analyst, Argus Media

In the evolving world of methanol, there are several different pathways and technologies available to achieve a reduction in carbon intensity, including blue methanol, which is methanol produced from natural gas with the application of carbon capture and storage (CCS) technologies. For as many pathways and technologies as there are, there seems to be just as many emerging policies and regulations. Despite governmental direction from the EU and tax incentives from the US Inflation Reduction Act (IRA), the low-carbon methanol industry has yet to capture its full potential in product availability and end-use sectors.

The most viable end-use landing spot is the maritime industry, which has been exploring pathways to achieve net-carbon neutrality for several years. There is potential for lowcarbon methanol to help shippers reach the ambitious decarbonization goals of the FuelEU Maritime policy and high-level targets of the International Maritime Organization (IMO). However, this is not without lingering obstacles. Both FuelEU Maritime and Renewable Energy Directive (RED) policies are complex, and difficulties navigating them include competing interpretations of carbon intensity, opposing measurements on well-to-wake versus well-to-tank, and the varying certifications needed. Additionally, IMO has yet to release detailed guidelines, such as eligible fuels, to achieve their overall goals (although we are hopeful for guidance in 2025). Fortunately, IMO granted the Methanol Institute consultative status to provide expert insight into the regulator's impending framework around decarbonization and compliant low-carbon fuels. This means good news for low-carbon methanol producers, with potential implementation by mid-2027.

While the methanol industry and shipping sector are in a hopefully short-term holding pattern awaiting policy implications and navigating compliance, a viable product solution is emerging in North America: blue methanol. Which can achieve its full potential only if the policies will allow it. Blue methanol carries major momentum in two areas, economic feasibility and reduced carbon intensity. However, it does not possess all the carbon intensity advantages or RED-compliance support like biomethanol and e-methanol.

Blue methanol, or methanol produced using carbon capture or carbon recycling is quickly progressing in North America.

One plant is already producing blue methanol in the Gulf Coast and several other projects are planned throughout the region. These projects include: Fairway Methanol (the 50:50 joint venture between Celanese and Mitsui in Clear Lake, Texas), already producing 130,000 t/yr, Bia Energy's plant in Louisiana, planning to produce 550,000 t/yr of blue and bio-methanol, Lake Charles Methanol, with a planned 3.6mn t/yr capacity, Pacifico Mexinol's blue methanol project, planning to produce 1.8mn t of blue methanol (plus an additional 300,000t of green methanol), Nacero's plans for a 1.9mn t methanol production with the possibility of producing blue methanol, and Methanex's recent partnership with Entropy to add carbon capture technology to their Medicine Hat, Alberta facility.

If all these projects take hold, North America is looking at roughly 7 million metric tons of blue methanol capacity by the end of the decade. This volume is over half of North America's current gray methanol capacity and makes up nearly 100 percent of new capacity over the next five years. The blue methanol production pathway has emerged in other regions as well, with the Ibn Sina

unit (joint venture of SABIC, Celanese and Duke Energy) in the Middle East already in production.

The above projects send a strong signal of confidence to policy regulators that the economic feasibility of carbon-captured methanol is already there. New projects coming online are also aided by technological advancements. Blue methanol producers could enter the market with a much lower floor price than bio-methanol and potentially with a digestible premium for ship owners trying to meet compliance.

Maritime compliance is centered on carbon intensity calculations, specifically in the EU, while awaiting IMO's guidance on global waters. Current carbon capture technology has new blue methanol units aiming for a carbon intensity range of approximately 76-84 gCO2eq/MJ for well-to-wake emissions. Natural gas gray methanol has a reference carbon intensity of 100.4 gCo2eq/MJ. FuelEU Maritime policy has implemented increasing step-change declines through 2050, starting from a reference point of 91.16 gCO2eq/MJ, reaching limits of 85.7 gCO2eq/MJ in 2030 and 77.9 gCO2eq/MJ in 2035 with further increases out to 2050.

If acknowledged by RED and FuelEU Maritime, blue methanol could assist shippers in meeting compliance until 2030 or 2035, although they would still be subject to tank-to-wake emission tax under EU ETS guidelines, which has a penalty on 70% of emissions in 2025 and 100 percent of emissions starting in 2026.

The future of methanol is rapidly unfolding, with significant developments and changes each year; however, blue methanol producers can have a hopeful outlook.

Firstly, the International Sustainability and Carbon Certification (ISCC) has developed an alternative certification for blue methanol: ISCC Carbon Footprint Certification (ISCC CFC). This acknowledges the lower-carbon methanol pathways, even if they are fossil-fuel derived. This is a critical step as ISCC also holds the most coveted RED-compliant certification, ISCC EU. Fairway Methanol (Texas, USA), Mitsui (Texas, USA) National Methanol Company (Ibn Sina, Saudi Arabia), and Saudi Methanol Company (Ar-Razi, Saudi Arabia) are the only methanol units holding the ISCC CFC certification, but potentially many more will be added before the end of the decade.

With the Methanol Institute working with the IMO, there is bound to be great advocacy for all

variations of methanol consumption by ship owners. If IMO realizes the advantages of including fossil fuel-derived yet lower carbon intensity fuels into their regulations, this would be a major win for blue methanol.

While the production of e-methanol and bio-methanol continues to scale, blue methanol becomes a legitimate steppingstone toward global decarbonization goals. Even though blue methanol by itself is likely to be over the threshold for FuelEU Maritime by 2035, it makes for a very attractive blending fuel with other forms of methanol that will potentially be more readily available at that time.

However, many pieces will need to fall into place. Most critically, IMO's impending regulations on fossil-derived fuels with a lower carbon intensity would give blue methanol a coveted spot in the emerging low-carbon maritime sector. It is also plausible, EU's maritime policies recalibrate to align with overarching global regulations like IMO, especially considering the current decarbonization challenges.

Finally, the awaiting projects will need to reach completion in the coming years, hopefully with others to follow throughout multiple regions. From there, certifications, regional policies and even pricing dynamics will come into alignment over time. As the market and relevant industries await guidance and reassurance, the methanol market can be hopeful for significant change and meaningful impact to take place soon.



# METHANOL PRICING & AVAILABILITY

# **CURRENT MEMBERS**

**PRODUCERS/DISTRIBUTERS** 

#### **Global Methanol Industry Demand/Forecast**

Global methanol demand remained mostly flat from 2020 to 2023, weighed down by the COVID-19 pandemic, the Russia-Ukraine conflict, and broader economic challenges like inflation and recession fears. In 2024, however, demand began to recover, growing by 2-3% compared to the average of the previous four years. This upward trend reflects a gradual rebound in global economic activity. Looking ahead, slightly improved, but still cautious, GDP forecasts are expected to support continued growth in methanol demand, particularly through downstream uses in the chemical sector. In China, methanol-to-olefins (MTO) production is projected to pick up this year. However, this growth faces headwinds from ongoing economic uncertainty and weak prices for olefins and their derivatives. While current forecasts anticipate methanol

demand to grow by as much as 3 million tonnes over 2024 levels, this estimate may be revised downward if market conditions do not improve in the coming months.

#### **Global Methanol Industry Productionn/Forecast**

In a balanced market, global methanol production typically keeps pace with demand. For the first time in decades, however, forecasted demand is set to grow slightly faster than industry capacity. Despite this shift, the industry is still well-positioned to meet future demand. Most of the additional capacity-either already online or expected by 2025-is coming from North America, Southeast Asia, the Middle East, and China. As demand gradually overtakes the pace of new supply additions, global operating rates are expected to improve, signaling a healthier, more efficient market environment.











# 2025 MEMBERSHIP STRUCTURE

# **WORKING GROUPS**

### >> TIER 1 - MAJOR METHANOL PRODUCERS | \$250,000/YR

- Major producers of methanol (>1.5M mtpa)
- Two board seats with voting rights
- Board chairman, vice chairman & treasurer
- Standing committee chairmanship potential

### TIER 2 - METHANOL PRODUCERS | \$125,000/YR

- One board seat with voting rights
- Board secretary
- Standing committee chairmanship potential

### >> TIER 3 - ASSOCIATE MEMBERS | \$62,500/YR

- Minimum tier level for producers
- Board of directors meeting participation (non-voting)
- Standing committee chairmanship potential

### >> TIER 4 - ASSOCIATE MEMBERS | \$20,000/YR

- Board of directors meeting participation (non-voting)
- Participation in standing committees



\*Task Forces will be set up to manage urgent matters like current Restructuring and Communications needs



### New Committee & Working Group Structure: Strategic **Alignment & Integration**

# NEW MEMBERS





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EMVOLON

equinor 🧎

ETERNAL PCOWER

-fugro

ELEMENT FUELS

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EMVOLON INC.

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# **GLOBAL TEAM MEMBERS**



### **GREGORY A. DOLAN – CEO**

Greg leads the Methanol Institute's global operations, overseeing offices in Washington, Singapore, Brussels, Beijing, and Delhi, and directing international government relations, media, and outreach. He has worked in public information roles in New York State and has been with MI for over 25 years.



## LAWRENCE NAVIN – VP, EXTERNAL AFFAIRS

Lawrence manages MI's government and public affairs. He previously worked in U.S. government and business development organizations.



## **KJELD AABO – SENIOR ADVISOR**

Kjeld advises MI on methanol's role in maritime fuel following a 40-year career at MAN Energy Solutions.



# **KAI ZHAO – CHIEF REPRESENTATIVE CHINA**

Kai leads MI's public policy and member engagement efforts in China. He brings extensive experience working with trade associations and government agencies.



# PRAKRITI SETHI – CHIEF REPRESENTATIVE INDIA

Prakriti represents MI in India, supporting stakeholder engagement and government relations. Prior to this, she had worked with UNESCO, GIZ, and local government bodies.



### **BELINDA PUN – FINANCE MANAGER**

Belinda manages finance and operations for MI's Singapore office. She has experience in HR, administration, and project management.



### TONI ZHOU – OFFICE MANAGER

Toni oversees MI's Beijing office operations and supports member relations and events. She previously worked at Ogilvy Beijing.

# WELCOME TO OUR NEWEST **STAFF MEMBERS**

### ALEXANDER DÖLL – CHIEF OPERATING OFFICER



Alexander Döll joined MI in 2024 as COO. He drives strategy across MI's global offices, bringing leadership experience from Dow and OCI Global. A recognized voice in energy transition, Alexander has worked across multiple continents in public and private sector roles.

## **ARIA KOUTRA – GLOBAL COMMUNICATIONS MANAGER**



Aria Koutra joined MI in 2024 and leads its global communications. She works closely with MI's leadership, regional teams and members to support advocacy efforts. With prior roles at the European Commission and EurActiv, she brings experience in climate communication, journalism, and digital strategy.

# **TIM EESTERMANS – MANAGING DIRECTOR EUROPE**

Roberto Tim Eestermans joined MI in 2024 to lead the European office. A former diplomat and advisor, Tim brings extensive government affairs experience from roles at DLA Piper, MOFAIC, and the EU Council Secretariat.

## **RICHARD BURCHILL – DIRECTOR FOR RESEARCH STRATEGY & KNOWLEDGE EXCHANGE EUROPE**





Rik joined MI in 2024 and focuses on EU affairs and institutional strategy. He has over two decades of experience in public affairs and government relations.



**VALENTINA FALA – COMMUNICATIONS INTERN** 

Valentina Fala joined MI in 2024 as a communications intern in Washington, D.C., supporting social media and content development.



42

Dr. Richard Burchill joined MI in 2024 and supports its EU and IMO engagement. With 25+ years of global consulting and academic experience, he specializes in research-driven policy influence and is an Associate Fellow at UNU Bruges.

## **RIK SERVAIS – DIRECTOR FOR GOVERNMENT AFFAIRS & INSTITUTIONAL STRATEGY EUROPE**

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