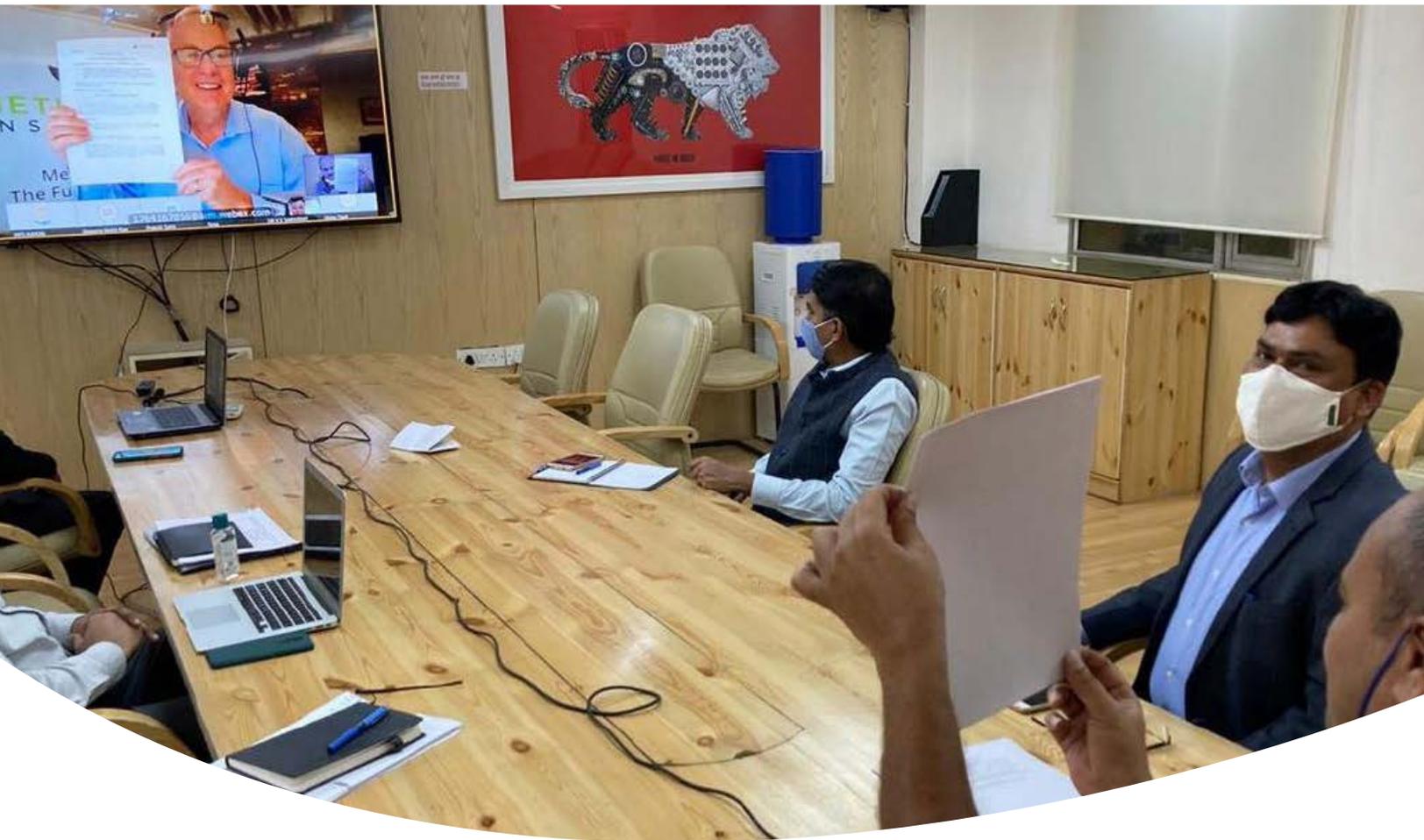


IMEC

INDIA METHANOL ECONOMY COALITION



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IMEC

The Methanol Institute (MI – www.methanol.org) cordially invites you to be one of the founding members of the India Methanol Economy Coalition (IMEC). IMEC will serve to unify Indian companies that have an interest in developing India's Methanol Economy, with the goal of providing them with a single, clear, and strong voice in India. Through collective advocacy, IMEC will work with its members to promote the adoption of methanol as an energy product that will bolstering sustainability and energy security in India.

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Methanol Institute

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ABOUT IMEC

Vision

Support a future where methanol plays a pivotal role in sustainability and energy security in India.

Mission

Promote the adoption of methanol as an energy product and chemical building block in India in alignment with Government of India's (GoI) targets of reducing India's reliance on imported energy while transitioning towards sustainability and a carbon neutral economy.

Introduction

The methanol economy is a suggested future in which methanol facilitates the transition to low carbon and net carbon-neutral economies. Methanol can be used as fuel for thermal energy, power generation and different modes of transport, as well as a feedstock for petrochemical products. This suggested future will rely on both conventional fossil and renewable feedstocks to produce methanol. Currently, natural gas is the dominant feedstock for methanol production. Due to climate action on both international and national levels, production of methanol from renewable sources is gaining increased attention and commercial introduction. Methanol produced from renewable pathways can be used as a net carbon-neutral fuel for transport and feedstock for producing sustainable downstream chemicals. When municipal solid waste (MSW) or agricultural waste are used as feedstock for methanol production, circular economies are created where waste is converted into a higher-valued fuel and petrochemical product. Methanol is also complementary with strategies to commercialize hydrogen as it is a highly efficient liquid carrier of hydrogen that is easy to store and transport.

India's methanol economy aspirations are largely driven by the country's desire to reduce its import dependence on energy products. In 2015, India imported approximately 77 per cent of its energy products. This number rose over the years to 82.9 per cent in 2019, despite Prime Minister Modi's goal of a 10 per cent reduction in import dependence of energy products by 2022 compared to 2014 – 2015 levels. The country has intentions to utilize its large coal reserves as feedstock for methanol and dimethyl ether (DME) production.



Domestically produced methanol and DME will go into fueling road & marine transport, power generation in gensets & fuel cells, cook stoves, and boilers for industrial applications. The secondary priority is to leverage methanol's clean burning properties as a fuel to improve air quality in Indian cities and lower the country's absolute greenhouse gas (GHG) emissions when methanol is produced from low carbon and renewable pathways. India also views methanol as a bridge that will act as a precursor to the country's transition to a hydrogen-based economy in the future.

With National Institution for Transforming India (NITI Aayog) leading the methanol movement in India to set up the taskforce for the Indian methanol economy, there has been constant support and interest from different ministries of the Government of India (GoI). Shri. Nitin Gadkari, Minister, Ministry of Road Transport and Highways (MoRTH) has constantly urged the use of methanol as a fuel and stressed on the urgency to promote methanol as an alternative fuel. As a response to Government's agenda to ensure energy security, carbon-neutrality and become self-reliant, we invite you to participate in the establishment of the India Methanol Economy Coalition (IMEC) to act as a single point of contact for all policy advocacy, knowledge exchange, research, and development along with consumer sensitization and demand creation for the methanol industry. It will serve as a body that will represent the entire value ecosystem of organizations that are interested in methanol economy such as stakeholders engaged in methanol production, fuel blending for marine and road transport, other technology providers as well as academia and trade organizations. IMEC will ensure an integrated approach for the development and pursuit of methanol economy sustainability to unite all the relevant stakeholders on a single platform for a seamless interaction with the government, policy makers and private sector entities in driving the Indian methanol economy.



PILLARS OF THE COALITION

The key pillars of the IMEC includes:

1. **POLICY ADVOCACY:** IMEC will effectively act as a catalyst to promote growth impetus for India's methanol economy and establish a representation for the advocacy of methanol as an energy product. It will bring together members and represent them with a single voice, with the common goal of developing the Indian methanol economy. IMEC single voice will amplify individual communication or advocacy strategies when engaging with their stakeholders. The coalition calls to step up policies, measures, and investments to transition towards a self-reliant and clean energy economy in India. IMEC will be an effective public policy advocate for the adoption of methanol as an energy product through the power of community. Strong and vibrant supporters from diverse walks of life will come under the IMEC banner to promote a legislative and regulatory climate favorable to methanol economy.

The following activities are parked as ad hoc, as they would depend on the interest and resources:

2. **RESEARCH & KNOWLEDGE EXCHANGE:** The coalition will aim to undertake regular research activities for the development and shared understanding of the methanol industry. White papers, policy briefs, industry reports, and guidelines will provide the necessary information and knowledge for making informed decisions to support the methanol economy. IMEC will monitor and address any issues relating to new feedstocks, applications, and technology that will impact the future of methanol. The coalition will disseminate this information and promote content through social media platforms, articles/op-ed on news and information sharing platforms.
3. **DEMAND CREATION:** Under the aegis of the IMEC there will be a dedicated approach to sensitize and generate demand for methanol in India. The coalition will constantly interact with diverse stakeholders to organize awareness sessions, hold technical seminars that will ensure a necessary momentum to create demand for methanol.
4. **PILOT PROJECTS AND COLLABORATION:** The IMEC will provide a platform and seek to promote collaboration among organizations that have keen interest in the promotion of the methanol economy. This could entail setting up demonstrations projects and pilot for scaling up and commercialization the energy product.



FOCUS AREAS

Production:

- **COAL TO METHANOL:** Methanol has diverse feedstocks; coal is abundant in India and can be used as a feedstock for domestically produced methanol.
- **NATURAL GAS-BASED PRODUCTION:** Natural gas is the feedstock used in most of the production of methanol and will play an important role in the augmenting the methanol economy specifically for industrial applications.
- **RENEWABLE METHANOL:** The coalition will also focus on driving methanol production from renewable feedstocks like green hydrogen and captured carbon dioxide (e-methanol), municipal solid waste, and agricultural waste (bio-methanol). This would entail international collaboration to bring technology to market.

Fuel Applications:

- **METHANOL FUEL BLENDING:** With India's consumption of gasoline and diesel being the highest in the world, and significant reliance on imported fuel there is strong motivation to reduce the import dependency by introducing methanol as a road transport and marine fuel. Methanol regulations for M15 has been set up by Bureau of Indian Standards (BIS) which the IMEC members can tap into the opportunity to expand the methanol market for fuel applications.
- **METHANOL COOKSTOVES:** Continuing the momentum set up by NITI Aayog, Assam Government and Assam Petrochemicals for roll out of 300 cookstoves, IMEC will leverage the groundwork set up and work to strengthen the use of methanol cookstoves in the country.
- **METHANOL INDUSTRIAL BOILERS:** The coalition can explore to understand and work around methanol industrial boilers can be extensively used to generate heat and steam for various applications in heating, agriculture, and manufacturing.
- **ENERGY STORAGE:** Power-to-liquid offers a promising solution to the intermittency of renewable energy, where electric power can be stored in the form of methanol. This methanol can be used as a source of energy for power plants, telecom towers, portable power packs etc.



Hydrogen carrier:

- As a liquid at ambient temperature, methanol can be easily stored, transported, and can be used to support hydrogen economies in the future as a hydrogen carrier. In this regard, the IMEC will focus on building the awareness to utilize methanol that can promote faster adoption of the hydrogen and adopting of advanced technologies such as fuel cells for remote areas.



MEMBERS

The potential members will comprise from the following list of sectors they belong to, these companies could include:

Methanol Production/Application	Type of Companies
Methanol Production	<ul style="list-style-type: none"> • Coal-based technology providers • Natural Gas-based technology providers • Engineering, Procurement and Construction (EPCs) service providers • Interested bio-methanol and e-methanol producers
Methanol as a Land Transport Fuel	<ul style="list-style-type: none"> • Automobile OEMs and suppliers • Internal Combustion Engine (ICE) manufacturers and engineers • Oil and Gas companies • Fuel retailers
Methanol as a Marine Fuel	<ul style="list-style-type: none"> • Naval architects • Ship builders • Marine engine manufacturers • Marine bunker companies • Vessel Owners
Other Technology Providers	<ul style="list-style-type: none"> • Methanol fuel cell developers • Methanol-to-hydrogen reforming technology providers • Cook stoves manufacturers • Industrial boilers companies
Research, academia, and trade associations	<ul style="list-style-type: none"> • Research institutes and academic institutions • Think tanks and development agencies • Energy related trade associations



HOW TO JOIN

The IMEC Coalition is open to any entity supporting the widespread adoption and sustainable use of methanol as an energy product. To become a member and learn more about the Coalition, contact the Methanol Institute India Representative, Prakriti Sethi at psethi@methanol.org and visit our web page www.methanol.org for information on the methanol industry.

The India Methanol Economy Coalition is facilitated by the Methanol Institute (MI). Once we receive the confirmation from the invited entities, IMEC will organize the ad-hoc meetings to understand the interest and their contribution to the coalition. This will be an open ended and an informal set up with the opportunity to augment the member's business and policy advocacy efforts and collectively as a clout on the methanol economy.





ABOUT METHANOL INSTITUTE

MI

The Methanol Institute (MI) serves as the global trade association for the methanol industry, representing the world's leading producers, distributors, and technology companies. Founded in 1989 in Washington DC, MI now represents its members from five offices worldwide in Washington DC, Beijing, Brussels, Delhi, and Singapore.

Since 2016, MI has been engaging with the Indian Government entities such as Ministry of Road Transport and Highways (MoRTH) and Ministry of Petroleum and Natural Gas (MoPNG) and NITI Aayog to set up the methanol economy. Aligned with India's policy for energy security, MI focuses on the promotion on methanol-utilizing applications that engender lower emissions and cleaner indoor and outdoor air quality.

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