

MI Board of Directors Meeting Agenda

Ben Iosefa, Chairman

Methanol Institute Board of Directors

14 June 2018 – Como, Italy

MI Board of Directors Agenda

- I. Call to Order/Announcements/Antitrust Guidelines
- II. Approval Minutes 23 March 2018 BOD Meeting
- III. MI Vision and Mission
- IV. Committee Reports
- V. Treasurer's Report
- VI. Membership Report
- VII. Current Business
 - Revenue Task Force
 - MI China Entity & China NGO Law Update
 - Very Connect Member Platform

VIII. New Business

November Board Meeting



Antitrust Guidelines

- 1. Do not engage in discussions or activities which may tend to:
 - A. Fix or otherwise restrict the prices charged by members;
 - B. Allocate markets, sales territories or customers between members:
 - C. Initiate or encourage boycotts of specific products or services, or refusals to deal with designated customers or suppliers;
 - D. Limit production levels of members and otherwise restrict the availability of products or services;
 - E. Purposely hinder or disparage the competitive efforts of non-members;

- F. Coerce or encourage members to refrain from competing;
- G. Limit impede or exclude anyone in the manufacture, production or sale of goods or services;
- H. Promulgate or encourage unfair or misleading practices involving advertising, merchandising of products or services; or
- I. Condition or tie the purpose of one product or service to the purchase of another product or service.
- 2. Do not discriminate against competitors when (a) developing standards or specifications for products or services; (b) setting ethical standards; or (c) dealing with customer credit information.
- 3. Do not exchange data concerning prices, production levels and costs, or customer credit; however, the exchange of past data (as distinguished from future data) does not in itself constitute a violation of antitrust laws if the past data reflects composite or average figures without identifying a company or if the past data is from public sources.
- 4. Do not participate in the dissemination of suggested price lists of members.
- 5. Do not participate in informal "rump sessions" outside of the formal sessions which disregard these guidelines. Otherwise, the precautions developed in connections with meetings would prove to be of no consequence.

The foregoing guidelines are not intended and should not be understood as a comprehensive summary of all antitrust problem areas. The complexity of the antitrust laws preclude easy abridgement. These guidelines are intended to familiarize members with the broad contours of antitrust prohibitions so that the antitrust compliance policies are achieved. If there is any question concerning the application of antitrust laws, an opinion should be obtained from legal counsel.



23 March 2018 MI BOD Minutes

 Click <u>here</u> to navigate to the Minutes of the 23 March 2018 MI Board of Directors Meeting held in Houston at the offices of Mitsui

Action: Review and Approve



2018 Vision and Mission

Our Vision: Protect – Expand – Communicate

Our Mission: As the global trade association for the methanol industry representing the world's leading methanol producers, distributors and technology companies, 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

- Meeting regulatory challenges and driving policy opportunities
- Leading product stewardship excellence
- Promoting best practices across the global distribution chain

Promoting the growth of emerging energy markets

- Marine fuels
- Diesel substitute for road transport
- Cook stoves and industrial boilers
- Low carbon and renewable methanol
- Methanol-to-Power

Serving as the voice of the global methanol industry

- Amplify member messaging
- Global stakeholder networks
- Web sites, social media, media relations, newsletters, conferences/webinars





Global Fuel Blending Committee Chairman's Report

Jason Chesko, Chairman Peter Duxson, Vice Chairman

MI Board of Directors Meeting 14 June 2018 – Como, Italy

23 May 2018 Minutes

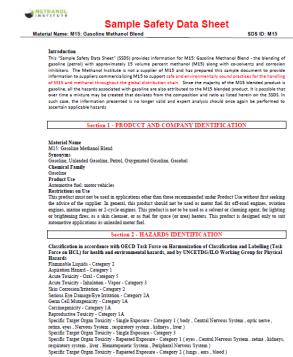
 Click <u>here</u> to navigate to the 23 May 2018 Global Fuel Blending Committee conference call minutes





M15 Sample Safety Data Sheet

- M15 Gasoline Methanol Blends are in commercial use or being considered in a number of markets (China, Egypt, Italy, India, etc.)
- Methanex led development of a draft Sample Safety Data Sheet that could be shared by the Methanol Institute to promote best practices
- Comments from SABIC and Ecofuel to be incorporated into revised draft
- Actions: Staff making revisions;
 Sample M85 SDS in development



Issue date: 2017-11-27 Revision 1.0

Page 1 of 20



Print date: 2018-02-12

Project Co-Optima

- MI participating in Co-Optima stakeholder group
- Concern program could be cut from DOE budget
- June 2017: DOE announced methanol did not "make the cut" from Tier 2 to Tier 3 evaluation
- August 2017: MI sent letter to DOE in challenging decision



- November 2017: MI held conference call with Co-Optima leadership in to express concerns
- April 11: MI submits Freedom of Information Act request seeking access to Co-Optima data on methanol assessment.



Project Co-Optima - 2

Related actions:

- April 18: MI submits comments to House Energy and Commerce Subcommittee on the Environment following hearings on High Octane Fuels and High Efficiency Vehicles (April 13) and Future of Transportation Fuels and Vehicles (March 7) urging consideration of methanol as high octane fuel component and sharing FOIA request
- April 24: MI submits comments to US EPA on petition by Butamax to register use of up to 16% isobutanol as gasoline blendstock under "Octamix" waiver with MI pointing to benefits of methanol as gasoline component



EU RED II

- May 2: MI issues position paper on EU's Renewable Energy Directive II now in trilogue procedure calling for:
- Fuel ethers Improve energy efficiency through high octane fuels
- Biodiesel Retain the 7% cap for sustainable 1st gen biofuels
- Annex IX part A Adopt a clear definition of advanced biofuels supported by a list of approved sustainable feedstocks
- Renewable Fuels of Non-Biological Origin Allow the use of PPA's for the production of e-fuels and focus on point sources of CO2 first
- Multipliers Cancel any form of multipliers for renewable energy



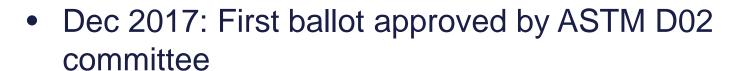
Methanol Fuel Blending Primer

- GFBC has noted that concerns expressed regarding methanol fuel blending in gasoline (ie. toxicity, corrosivity, fire safety, etc.) are often misleading and inaccurate
- October 2015 ACEA white paper on methanol was one of the more egregious examples
- There is a need for a simple white paper/primer that addresses these concerns
- Staff in discussions with Jamie Turner-Bath University and Sebastian Verhelst-Lund University and Mark Graves (tech comm expert) about preparing primer report, along with PPT and infographic
- Action: Prepare proposal/budget for primer and related tools, targeting September release



ASTM - D8076

- ASTM has adopted a new specification for High Octane Number Test Fuel that specifically prohibits any fuels containing methanol
- May 2017: MI participated in ASTM Task
 Force Conference call with agreement for new
 ballot removing methanol prohibition



 March 2018: Second ballot approved, awaiting final publication





ASTM - D5983

- MI staff determines that the standard for MTBE is currently in revision
- Dec 2017: Second ballot had negatives needing to be address, including requirements for color and washed gum content
- March 2018: MI contacts ASTM and is added to Task Force, and alerts MI GFBC/Leg-Reg
- May 17: MI's Greg Dolan and SABIC's Mohammed Ansari participate in Task Force conf call
- Action: Second conf call being scheduled, ASTM meeting June 24 in Phoenix needs industry reps



Standards Worldwide

ENI/FCA M15 for Italy

 21 November 2017: Eni and Fiat Chrysler Automobile announce development of 15% methanol and 5% bioethanol "A20" fuel blend

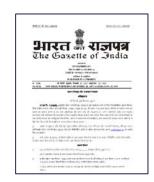


- New blend demonstrated in 5 FCA Fiat 500 vehicles in Eni's Enjoy car-sharing fleet
- March 1-2: At Ecofuel's invitation Greg Dolan visits Eni/FCA and MI asked to assist "common vision"
- Eni/FCA conducting "road show" seeking support, push for Italian standard then CEN standard
- Action: MI working with ENI/FCA



India Update

- Sept 2015: NITI Aayog formed Methanol Economy Expert Group
- Sept 2016: MI/NITI Aayog joint Methanol Economy International Seminar held in Delhi



- Dec 2017: Gazette notice of draft vehicle standards for M15, M100 and MD95
- April 2018: Draft M15 fuel specification proposed, MI comments from Bill Piel and Eni submitted in May
- May 2018: Final Gazette notice of vehicle standards for M15, M100 and MD95
- Action: Continue to engage with NITI Aayog/ARIA



China Update

- Sept 2017: China state media announced plans to require the use of E10 gasoline blends
- ACFA engaging, MI could promote GEM blends
- CICEIA would like to establish "Methanol Alliance" with global entities, and MI as General Secretary
- Consider China Methanol Policy Forum for Beijing in 2019
- MIIT/NDRC/MOST reported to State Council consideration of methanol policy formation







Israel Update

- M15 "operational" with Dor Chemicals reporting consumption of 1,000 metric tons/month
- Israel government not providing tax benefits needed, Dor pushing for same treatment as recent relaxation of taxes for CNG
- FCA pushing government to recognize CO2 benefits of methanol Fiat 500



- Dor looking at M100 light-duty truck conversion based on spark-ignition natural gas engine
- Dor supporting India M15 push



Worldwide Fuel Charter

- Sept 2013: Worldwide Fuel Charter 5th edition issued again noting: "Methanol is not permitted. Methanol is an aggressive material that can cause corrosion of metallic components of fuel systems and the degradation of plastics and elastomers."
- MI provided comments challenging WWFC prohibition on methanol that went unaddressed
- MI's Eelco Dekker reports that WWFC is now working on draft 6th edition
- MI has alerted FCA
- Action: Need to find "champions" in automotive industry to challenge methanol prohibition from inside





Legislative/Regulatory Affairs Committee Chairman's Report

Steffen Erler, Chairman Mari Veldekens, Vice Chair

MI Board of Directors Meeting June 14, 2018 – Como, Italy

Click HERE to navigate to the May 29th Legislative and Regulatory Committee Call minutes.



1. Canada Activities

- Health Canada and Environment Canada are conducting risk assessments of methanol.
- MI has helped Health Canada to access EU REACH registrations and stands ready to help with any questions they might have.
- After contacting two outside consultants to propose additional toxicology studies MI has selected Netherlandsbased Santoxar to conduct the PBPK modelling work.





2. EU Methanol Consumer Product Restriction

- EU proposed limiting amount of methanol in windshield wash fluid and denatured alcohol to 0.6% by volume.
- MI submitted official comments to the European Chemicals Agency (ECHA), the EU Commissioner for Better Regulation, and contacted EU REACH representatives at the member state level.
- The restriction has been published in the EU Register, and will take effect on May 9, 2019.
- MI considering petitioning the EU Ombudsman with concerns about the process used to enact the restriction.



3. AP/ME Activities

- Government & Regulatory Affairs matrix under development.
- Expected completion by June 25th



4. US EPA IRIS Methanol & Formaldehyde

- IRIS Methanol Assessment is not listed on EPA's current work plan.
- Formaldehyde Assessment being 'slow-walked' by EPA's political appointees, not expected to be released in near future.
- There is a robust debate surrounding EPA's proposed 'Secret Science' rule.





5. ASTM STANDARDS

- ASTM working to revise MTBE standard, D5983.
- Negatives need to be addressed.
- Both MI's Greg Dolan and Mohammed Ansari of SABIC have joined the Task Force.





6. India Engagement

- Dom spoke at ISFL Conference on April 15.
- Dom met with IOC, ARAI, and govt. stakeholders in India in April.
- Indian Chemical Council (ICC) and MI exploring and development of a methanol safety workshop.
- Trip report is available on MI's VeryConnect Platform.



7. Japan

- METI & MLIT focus on energy and environmental security.
- Hydrogen energy focus, including fuel cell vehicles and CO2-free hydrogen supply.
- April: Dom met with NEDO; Japan fuel cell industry cannot produce stacks; huge opportunities for foreign stack producers and M2H2 developments.
- Trip report is available on VeryConnect.



8. Philippines

- Reports circulated that the Philippines had shortlisted methanol on its Priority Chemical List (PCL).
- Such a designation could negatively impact methanol import and trade in the Philippines.
- MI staff contacted the relevant Philippine authorities who made clear that they have no intention to add methanol to their PCL.





Market Development Committee Chairman's Report

M. Zameer Zahur Hussain, Chairman Deepak Devendrappa, Vice Chairman

MI Board of Directors Meeting June 14, 2018 – Como, Italy

 Click here to navigate to the May 22 Market Development Committee Call minutes

Strategic Planning

 The Committee reviewed the MDC strategic plan which was incorporated into the agenda for the May 22 call.



MDC Focus Areas

Top Priority Engagement

Renewable Methanol

High Priority Engagement

- Industrial Boilers
- Small-scale Methanol Technology (SSMT)
- Methanol-to-Power

Lower Priority Engagement

- Cooking Applications
- Methanol Fuel Cells
- Wastewater Treatment (WWT)
- Methanol-to-Hydrogen



Renewable Methanol (RM)

- Demonstrating that there are viable pathways to renewable methanol as a low/no-carbon fuel is critical for expanding methanol into road, non-road and marine transport markets.
- MI white paper on REDII shared with EU Parliament, Commission, and Council.
- MDC approved MI working with ATA Insights on renewable methanol primer (US\$18,430) and webinar (US\$7,000).



Industrial Boilers & Cookstoves (IB/CS)

- MI-Peking University IB/CS Report
 - Report distributed to global media contacts on April 2; available for download <u>from MI's web site</u>.
- Industrial Boiler Standards
 - English translations of draft boiler standards on fuel and fuel storage completed; standards shared with MDC for review.
 - CAAEFA will share final drafts with CPCIF; final review to take place in June/July.
 - Standards should be available in 2018; interest in using these as broader guide for global/ISO/ASME standards.
 - India interest in methanol cookstoves; MI staff connected NITI Aayog with Chinese cookstove companies.



Small-scale Methanol Technology (SSMT)

- Johnson Matthey recently shared information on its <u>Compact</u> <u>Reforming Technology</u>.
- Greater public and regulatory awareness needed about SSMT.
- MI staff recently setup SSMT area on MI's web site.
- Further promotion to include sharing about SSMT during industry presentations, identifying new opportunities, and encouraging SSMT companies to join MI.
- MI's Greg Dolan to again moderate a special session with bse Engineering on SSMT at the World Methanol Conference in Vienna in October.



Methanol Fuel Cells

- US DOE recently issued US\$39 million RFP for fuel cell and hydrogen technologies.
- MI, Solar Fuels Institute and Catalytic Innovations working on potential project proposal for the RFP.
- Palcan launched first mini-fuel cell truck in Shanghai in April.
 They are looking to develop truck fleet of 50 vehicles in future.
- HYDROGEN is largest Chinese producer of fuel cells for telecom towers. 50 projects currently, and 1,000+ projects in pipeline.
- Opportunities for increased methanol fuel cell use in Hong Kong, Japan, and Korea.



MDC Chairman's Report

Methanol-to-Power (MTP)

- In Caribbean, regulations seeking to phase-out use of heavy oil for electric power generation. Some possible opportunities for MTP.
- MI Washington office had contacted Puerto Rican authorities to assess MTP opportunities there.
- MI will discuss with OEMs on whether there are more opportunities for MTP.
- In Europe, good opportunities for MTP in smaller genset units.
- Indian manufacturer introduced methanol fuelled 5.6 kW genset and has 2,000 orders to power telecom towers.
- MI member Billion Miles introduced methanol fuelled genset series.



MDC Chairman's Report

Wastewater Treatment (WWT)

- MI members increasingly utilizing WWT within their production facilities. This could be good area for potential growth.
- Limited interest in AP/ME due to lack of denitrification focus among most regulators. MI staff will continue to monitor on possible opportunities.

Methanol-to-Hydrogen (M2H2)

- M2H2 important feedstock in markets like Japan and Korea which are aggressively developing methanol economies.
- MI staff to develop short fact sheet (by July 1) on M2H2 in China and other markets, including checking with MGC on their technology.



MDC Chairman's Report

Committee Participation

- Interest in quarterly presentations by external speakers
 - June 26: Methanol fuel cells (Palcan) (TBC)
 - Aug 28: Methanol-to-hydrogen (SPG Corp) (TBC)
 - Oct 30: Industrial Boilers/Cookstoves (Confirmed)
- Possible in-person MDC strategic meeting:
 - Aug 22 in Kuala Lumpur (alongside APIC)
 - Nov 9 in Singapore (alongside IMPCA & MI's Board mtg)



MDC 2018 Budget

| MI-DICP MTO study (not doing) | US\$3,000 |
|--|-----------------|
| IB/CS Report: Translation & PR | \$3,000 |
| IB Boiler Standard: Translation & PR | \$5,000 |
| ATA Insights: Renewable Methanol Report | <i>\$18,430</i> |
| ATA Insights: Renewable webinar series | \$7,000 |

Total: US\$36,430





MARINE FUELS COMMITTEE CHAIRMAN'S REPORT

John Livorness, Chairman Fabian Tai, Vice Chairman

MI Board of Directors Meeting June 14, 2018 – Como, Italy

16 May 2018 Minutes

 Click <u>here</u> to navigate to the 16 May 2018 Marine Fuel Committee conference call minutes



<u>UPDATES</u> ON IGF CODE

IGF Codes

- Engagement is through IBIA with IMO Correspondence Group for low-flash point fuels
- MI IGF Code task force was created to allow for more direct participation in this initiative
- Currently all stakeholders largely aligned and in agreement on necessary amendments.
 Remaining items for discussion at CCC5 include:
 - ✓ ESD in engine room (necessary or not)
 - √ Fuel standard (IMPCA or other)
- There is still a risk of Germany pushing for fuel cells as a priority at CCC5, which could, as in CCC4, lead to lost time in discussing ethyl/methyl alcohols as a priority, with 8 vessels trading internationally and 4 more DF vessels on order for 2019 delivery
- Round 4 of 6 was recently completed and included all chapters:

Originally proposed time schedule:

| Round 1: | 23.10.2017 – 17.11.2017 | TOR 1 and 2 |
|----------|-------------------------|-------------|
| Round 2: | 01.12.2017 - 08.01.2018 | TOR 1 and 2 |
| Round 3: | 22.01.2018 – 21.02.2018 | TOR 1 and 2 |

Round 4: 05.03.2018 – 02.04.2018 TOR 1 and 2 Submitting June 4th

Round 5 (report): 30.04.2018 - 21.05.2018 TOR 3 - 5



UPDATE ON GUIDELINES & FUEL EVALUATOR

Guidelines

- Cooperating on creating <u>Guidelines for Safe Bunkering & Handling of Methanol as a Marine Fuel</u> was agreed with LR to be completed by year end, 2017
 - ✓ Delayed until after the Fuel Comparison Model is completed and launched
 - ✓ Perhaps it will actually be completed by CCS instead with LR contributing.
 - ✓ We may need to allocate resources for the Guidelines, to get it moving:
 - Form a Working Group of 3-4 people with a Project Manager
 - o Kick off to define goal, scope, timetable and division of work
 - Draft by the team
 - Seek comments from public
 - Final review and completion
 - Release with submission to IMO & Publish

Fuel Evaluator

- Fuel Comparison Model released in mid-May with very positive feedback
- Currently looking to set up webinars: closed MI and public
- \$25k in MI funding

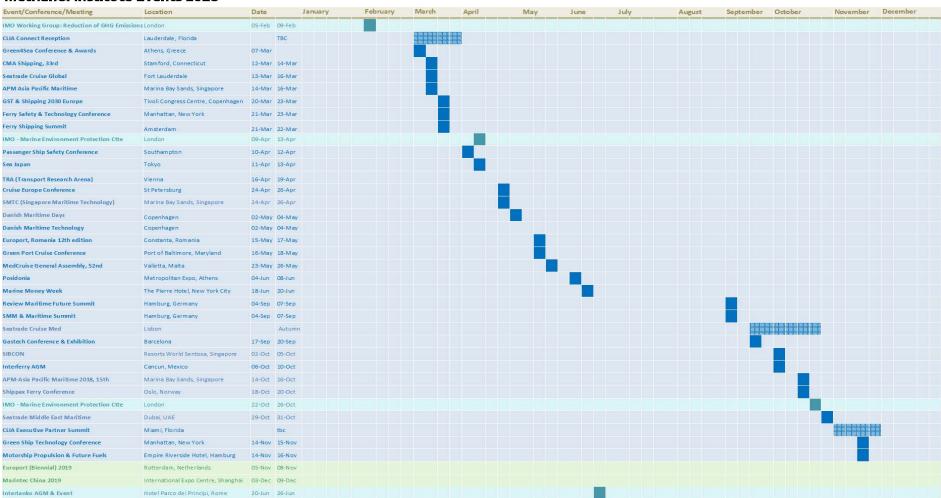
Availability Portal

 Discussing with DNV GL to cooperate on creating a fuel availability portal on the existing LNGi platform, to include methanol, LPG and later other fuels



COMMUNICATION INITIATIVES 1 of 2

Methanol Institute Events 2018





COMMUNICATION INITIATIVES 2 of 2

Recent coverage includes:

- Tradewinds 19 April http://www.tradewindsnews.com/tankers/1473715/methanol-offers-shipping-a-clean-quick-pathway-to-carbon-cuts
- Lloyd's List 6 April https://lloydslist.maritimeintelligence.informa.com/LL1122108/Methanols-role-in-the-future-marine-fuels-mix
- Splash 3 April http://splash247.com/methanol-will-take-place-marine-fuels-mix/
- World Maritime News https://worldmaritimenews.com/archives/249601/interview-methanol-is-ready-for-use-as-marine-fuel/?uid=56287
- Manifold Times https://www.manifoldtimes.com/news/d/methanol-offers-shipping-pathway-to-a-low-carbon-future
 https://www.manifoldtimes.com/news/d/beyond-2020-why-methanol-will-take-its-place-in-the-marine-fuels-mix

Awaiting publication:

Safety at Sea Q&A - TBA



S<u>UMMET</u>H

• SUMMETH (Sweden)

- 2015 support of USD\$68,000
- The research concluded that there are no obstacles to the efficient use of Methanol in a converted diesel engine and that smaller vessel conversion projects are feasible and cost-effective, with levels of safety that easily meet existing requirements
- Road ferry with an engine capacity of about 350 kW
- o Potential for Biomethanol to be progressively blended into the mix as more becomes available
- o http://summeth.marinemethanol.com/?p
 age=reports



| M/S Jupiter Vessel Particular | s |
|-------------------------------|---|
| Main Dimensions | |
| Length Overall (LOA) | 86 m |
| Breadth | 14 m |
| Depth | 3.45 m |
| Ramp Length | 11 m |
| GT | 737 tonnes |
| Design speed | 11.6 knots |
| Cargo | |
| Passengers | 397 |
| Passenger cars | 60 |
| Loading capacity | 340 tonnes |
| Main Engine | 4 x Volvo Penta D12D-C, 331 kW, total installed power is 1324 |
| | kW |
| Fuel Tank | 2 x 28 m³ (diesel) (total capacity 56 m³) |



METHASHIP: CRUISE & ROPAX

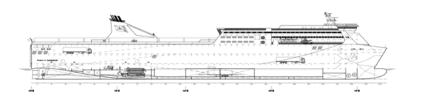
MethaShip (Germany)

- 2 designs cruise and ropax, with Lloyds, Meyer Werft, HELM, Flensburger Schiffbau-Gesellschaft
- MethaShip is a national research project funded by the BMWi (Federal Ministry for Economic Affairs and Energy)
- 45-month project, closed on May28, 2018
- Recently completed successful truck-to-ship bunkering
- Presented at IMO's most recent CCC4
- https://www.vsm.de/de/presseinfor mation/7818

| Main data | |
|------------|-------------------------------|
| Length | 238.0 m |
| Width | 32.2 m |
| Tonnage | 62 800 GT |
| Passengers | 2050 + 570 Crew |
| Engines | 4 x 9 MW medium speed engines |
| Main fuel | Methanol |



| Main data | |
|------------|---------------------------------|
| Length | 199.8 m |
| Width | 28.6 m |
| Draught | 6,5 m |
| Passengers | 600 + 50 Crew |
| Engines | Dual Fuel 2 x 9 MW medium speed |
| Main fuel | Methanol |





GREENPILOT

GreenPilot (Sweden)

- Funding from Methanol Institute and Swedish Maritime Administration
- WeChai 6-cyl, 365kW, M100 converted NG engine provided by FiT, in high-speed, rescue/pilot vessel
- Sea trials started on WeChai engine in March, which concluded year end, 2017
- WeChai-powered vessel and converted Scania engine on stand, both exhibited at Nor-shipping on May 30th, 2017
- o 2015 support of USD\$112,000
- Closing workshop was May 3rd, 2018
 Gothenburg



Converted WeChai engine is planned to be used in a Singapore pilot project together with Nanyang Technological University, 4th quarter, 2018



PILOT PROJECTS UPDATE 1 of 2

Eight methanol-fueled vessels in service:

- 7 dual-fuel product carriers (Waterfront)
 + 4 more on order for 2019 delivery
- 1 ropax ferry (Stena Germanica)



- Summeth Martec II (Finland/Sweden)
 - 1-cyl conversion from ethanol to methanol (VTT University)
 - 1-cyl covering a range of optimization tests (Lund University)
 - o Final reports pending



- 4-cyl M100 prototype, skidmounted, auxiliary power formally launched in 2018
- Main propulsion unit coming later in 2018









PILOT PROJECT ENGAGEMENT 2 of 2

- Other ongoing and potential methanol pilot projects:
 - Methanex
 - o Tianjin University and ZiChai (engine OEM) as partners
 - Converted 1,100kW marine engine with DMCC technology for commercial fishing vessel applications (Tianjin University)
 - FiT
 - o Mainland China
 - ✓ Fujian (140kW), fishing vessel (still discussing)
 - ✓ MoA multi-vessel, LNG to methanol conversion (still discussing)
 - PCG Product Supply Vessel Interest (still discussing)
 - Dual-fuel
 - Small product carrier (5,000 mt)
 - NTU's test bed facility (about to launch)
 - o 1st Phase
 - ✓ Test bed emissions and fuel consumption analysis
 - ✓ Converted WeChai engine with FiT, ScandiNAOS, LR, IBIA, CCS, Keppel
 - √ No vessel yet, but targeting single-engine, shore-to-ship crew transport vessel
 - ✓ Engine from GreenPilot will be demob'd from Sweden to Singapore



OTHER PILOT INITIATIVES

- Port of Rotterdam Inland Waterway Barge
 - o Initial workshop discussion hosted by Port on April 24th, 2017
 - Interreg application submitted
- Celeste (Sweden)
 - RISE to take over GreenPilot project as a pre-study platform from SMA
 - Plan is to build a new vessel after the pre-study, with a test bed installation carried out on GreenPilot before the new-build
 - Risk analysis will take into consideration batteries, methanol and hydrogen
 - Low-temperature PEM with on-board reforming
 - \$23k already funded internal RISE for pre-study seeking an additional
 \$23k (SEK equivalent)
- Mississippi/Great Lakes
- Hymeth Ship H2020
- E4Tech Report for Dutch Ministry: Biofuels for Shipping
- Other



PROGRAMS & BUDGET

USD

| TOTAL | \$112,280 |
|---|-----------|
| DGAC Membership | 3,000 |
| IBIA Membership | 1,280 |
| PR Consultant Resource | 27,000 |
| Technical Consultant Resource | 36,000 |
| • Pilots | 20,000 |
| Marine Exhibitions Events | 25,000 |





Product Stewardship Committee Chairman's Report

Sue Appleton, PSC Chairman Christian Meinecke, PSC Vice Chairman Shri Gugan Siva Subramaniam, BAPS Chairman

MI Board of Directors Meeting June 14, 2018 – Como, Italy

 Click <u>HERE</u> to navigate to the June 4th Product Stewardship Committee Call minutes



1. Safe Handling Video Update

- Total projected cost of US\$30,000 for Safe Handling Video update, \$16,500 submitted to Hadron Films from 2017 funds.
- MI staff coordinating with Methanex to set up shooting dates at their Geismar, LA production facility.
- Seeking to capture additional footage of one of Methanex's dual-fuel vessels to aid in promotion of methanol as a marine fuel.



2. Safety Snapshot Newsletter



- Issue Focusing on MI's full suite of safe handling materials (Methanol Safe Handling Manual's 4th Edition, technical bulletins, bootleg alcohol prevention information) released.
- Companion press release on safe handling materials released and promoted via MI's social media channels.



3. Government & Regulatory

- EU REACH restriction on windshield wiper fluid (WWF)
 - Two additional options, available to further contest the restrictions
 - MI staff to investigate lodging an appeal with EU Ombudsman
- Government & Regulatory Affairs Matrix (AP/ME)
 - Expected completion by end June '18



4. Bootleg Alcohol Prevention Subcommittee (BAPS)

- MI's Chris Chatterton and Dom LaVigne, along with OD's Dr. Knut Hovde, met with Apothecon Pharma in India in April
 - Meeting focussed on goals of securing cost-effective supply of Fomepizole & distribution into Indonesia & wider market areas
 - Apothecon believes that target price (US\$ 200/dose) can be met if wider market demand for Fomepizole can be assured
 - In 2017, MI invested US\$30,000 in OD in the form of a zerointerest loan





Treasurer's Report

Dennis Patrick, Board Treasurer Greg Dolan, CEO

Methanol Institute Board of Directors 14 June 2018 – Como, Italy

Cash Reserve

- 2017 Year-End Surplus = \$45,821
 - Total income: \$2,023,392 100% of dues target!
 - Total Expenses: \$1,977,180
- YE 2017 Cash Reserve = \$1,004,134
- Cash Reserve is 51% of projected 2017 operating expenses
- Meets Board desire for Cash Reserve target of 50% of annual operating expenses



2018 Revenue

- 2018 Actual Dues in as of 30 April: \$1,717,500
 - 31 of 39 members and 85% of 2018 budgeted dues
- 2018 as of June 4:
 - Enerkem and Salalah Paid \$1,782,500 or 88.5%,
 - MHTL H2 Dues \$1,882,500 or 93.4%
- 2018 New Member Dues: IGP Methanol \$7,500
- Dues at Risk: BP (\$50k) and Muntajat (\$15k)
- Anticipated: CRI (\$15k); Clariant (\$15k); Lebzi Halal (\$15k); Tricon (\$15k); and UCC (\$15k)



2018 Expenses

- Total Expenses: \$709,013 (35% Actual-to-Budget)
- Program Expenses: \$70,641 (16% A-to-B)
 - Additional funding safe handling video
 - New ATA Insights Renewable Methanol Primer/Webinar
 - Marine Fuel Model funded, reductions exhibition/tech resource
 - China Chief Rep/Support funding pending NGO registration/PKU contract renewal
- Operating Expenses: \$127,183 (37% A-to-B)
 - Include US and Singapore audits
- Payroll: \$461,503 (43% A-to-B)
 - Includes 2017 Performance Bonuses
- Travel: \$49,686 (32% A-to-B)
 - Dom LaVigne early travel ME/Japan/India



Full Detail Budget

- Click <u>here</u> for Cash Reserve analysis
- Click <u>here</u> for full detail budget





Membership Report

Greg Dolan

MI Board of Directors Meeting 14 June – Como, Italy

Dues Revenue

- 2017 Actual Dues Received: \$1,937,587
 - 95% of 2017 budgeted dues
- **2017 Revenue Loss:** BP, Lanxess, Oberon, Oorja, SCC Distribution and Vitol *-\$125,000*
- 2017 New Member Dues: Lebzi Halal, Muntajat, NFP, UCC – +\$41,250
- 2018 Actual as of 30 April: \$1,717,500
 - Dues received from 31 of 39 Members
 - 85% of 2018 budgeted revenue
 - Reminder notices sent
- 2018 New Member: IGP Methanol (Tier 4)



2018 Staff-Member Engagements

Greg Dolan

- USA: Mitsui; IGP Methanol; OCI; MOL; Proman; Mitsubishi Int; Atlantic Methanol;
- Sweden: Haldor Topsoe; Johnson Matthey; Clariant
- Denmark: Haldor Topsoe; Mitsubishi Corp; SABIC; Methanex; MOL; Helm;
- Italy: Ecofuel

Chris Chatterton

- China: NWIW, Clariant, Methanex, Johnson Matthey, IGP Methanol, FiT
- Russia: Clariant, Haldor Topsoe, Johnson Matthey, Metafrax, NFP

Dom LaVigne

- Japan: Methanex; MGC; MOL; Mitsubishi Int; Mitsui
- KSA: Sipchem
- Malaysia: PCG; Johnson Matthey; Lebzi Halal
- o Oman: OMC; SMC
- o Singapore: SABIC; Billion Miles
- UAE: Methanex



2018 Staff-Prospect Engagements

Vopak; OTI; US Methanol; South Louisiana Methanol; Flour; logen; Celanese; Serenergy; Horizon; BASF; bse Engineering; Stena; MAN; Casale; Toyo; thyssenkrupp; Mitsubishi Heavy Industries; Air Liquide; Koch; Enterprise; Innogy; NYK; Marinvest; Westfall-Larson; IINO; Eni; Fiat Chrysler; Geely; Saipem; Scania; SGS; Sinopec; Tauber; Yuhuang; Shell; Progress Energy; Pierce; Catalytic Innovations; NGT-Synthesis; Element 1; Equinor; Primus; Argonaut; Colonial; TPC





Current Business: Revenue Task Force

Methanol Institute Board of Directors 14 June 2018 – Como, Italy

Task Force Mission

- Based on Strategic objectives of the association determine unfunded program needs
- Consider total revenue targets for Proposed 2019
 Operating Budget
- Provide recommendations on revisions to MI dues structure which has not changed since 2007
- Any changes to dues structure should seek to minimize loss of existing members
- Identify opportunities for non-dues revenue
- Discuss ways to accelerate member recruitment



Task Force Members

- ExCo Members representing Tier 1 Ben Iosefa,
 Methanex and Olga Sessions, SABIC
- Tier 2 Members Mark Vassar, MGC and John Carley Mitsui
- Tier 3 Member Peter Roberts, Johnson Matthey
- Tier 4 Member Jan W. Spin, SCC
- Staff: CEO & COO Greg Dolan and Chris Chatterton



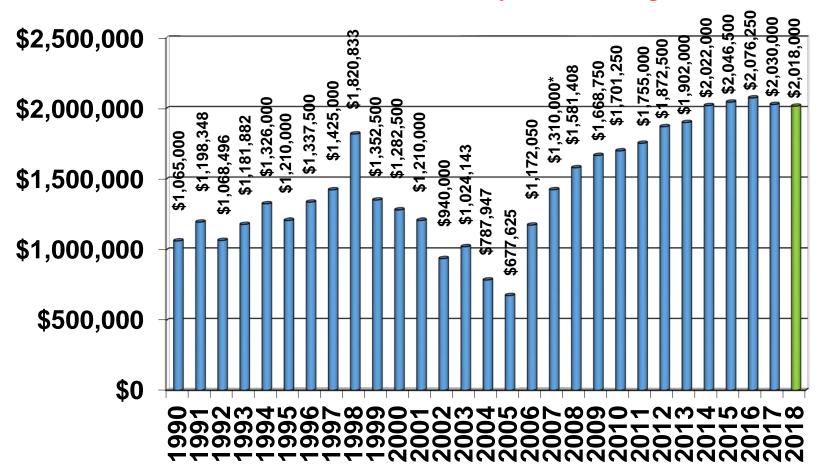
Task Force Timeline

- 7 June 2017 Hamburg Strategic Planning Workshop
- 26 October 2017 Task Force Request for Participation
- 10 November 2017 Singapore Board Meeting Discussion
- 1 February Conference Call Held
- 7 March Second Conference Call (not held)
- 23 March Houston Board Meeting Discussion
- May Member Survey
- 14 June Como Board Meeting Final Recommendations
- 9 November Extraordinary Members Meeting Adoption of Constitution/By-Laws Amendments
- 1 December Distribution of 2019 Dues Invoices



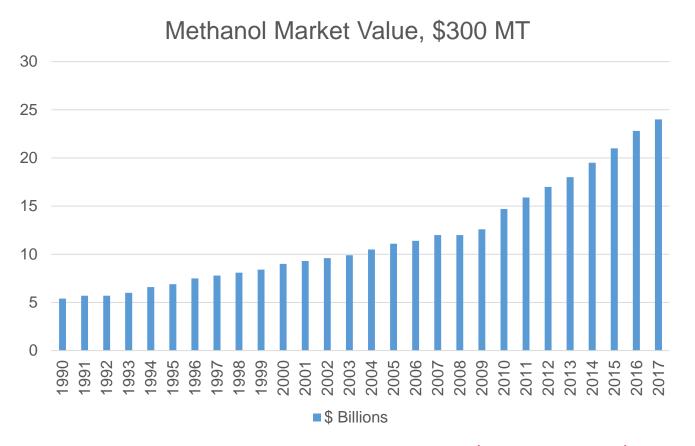
MI Dues Revenue History

Noted: Since 2007, inflation has increased by 25% eroding MI dues value





Market Value v. MI Dues Revenue



Since 1990, MI dues revenue increased from \$1 million to \$2 million, while industry market value increased from \$5.4 billion to \$24 billion Additional resource needed to "keep up" with methanol's expansion



Membership Structure

Tier 1

Major Methanol Producers

- Major producers of methanol (> 1.5M mtpa)
- Two Board Seats with voting rights
- Executive Committee participation
- Standing Committee Chairmanship potential
- 3 Member Companies = \$600,000 Dues

Annual Dues: \$200,000

Tier 2

Methanol Producers

- One Board Seat with voting rights
- Board Secretary participation
- Standing Committee Chairmanship potential
- 7 Member Companies = \$700,000 Dues

Annual Dues: \$100,000

Tier 3

Associate Members

- Minimum Tier level for producers
- Board of Directors meeting participation (non-voting)
- Standing Committee Chairmanship potential
- 8 Member Companies = \$400,000 Dues

Annual Dues: \$50,000

Tier 4

Affiliate Members (Non-Producers)

- Board of Directors meeting participation (non-voting)
- Participation in Standing Committees
- 20 Member Companies = \$300,000 Dues

Annual Dues: \$15,000



Producer Capacity by Tier

- Little distinction between production capacities for Tier 2 and 3
- Benefit of Tier 2 versus Tier 3 resides in seat on Board which provides effective means to influence direction of MI and ensuring their company receives maximum value for its member dues, including:
 - confirmed initiatives
 - budget allocations
 - staff resources
 - Tier 1 (-000- mtpa)
 - Methanex 9420
 - MHTL 5340
 - SABIC 3055
 - Tier 2
 - AMPCO 1000
 - MGC 1531
 - Mitsui 800
 - OCI 2375
 - OMC 1100
 - PCG 2490
 - QAFAC 980

- Tier 3
 - Ecofuel 850
 - G2X 950
 - Mitsubishi Int 893
 - Metafrax 1000
 - Salalah 1300
 - Sipchem 1165
- Tier 4
 - CRI 2
 - Coogee 70

Note: MMSA provided data



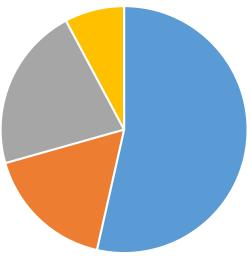
2018 Budget Summary

- "Conservative" budget
 - Income = \$2,018,000; Expenses = \$2,017,830
- Program Expenses: \$435,280
 - Committees Total = \$139,780: Leg/Reg = \$10,000;
 PSC = \$6,000; MDC = \$11,000; GFBC = \$0; Marine = \$112,280; Regional Representative Offices

(EU/China): \$247,000; Public Affairs: \$48,500

- Operating Expenses: \$344,750
 - Singapore, Washington and Beijing offices
- Payroll: \$1,080,300
 - 6 full-time employees in Singapore and Washington
- Travel: \$157,500
 - Continuing reductions in travel expenses

2018 Budget



Payroll • Operating • Program • Travel

Potential Activities

Global Fuel Blending

- Coryton Methanol/Gasoline Fuel Blend Testing = \$40,000
- FEV Diesel Substitution Feasibility Study = \$80,000

Legislative/Regulatory

- Hazard Assessment Canada Chemicals Management Plan = \$10,000
- Consulting Toxicologist = \$15,000

Marine Fuels

• Pilot Demonstration Programs = \$150,000

Product Stewardship

- Translation Services = \$25,000
- Webinars = \$30,000

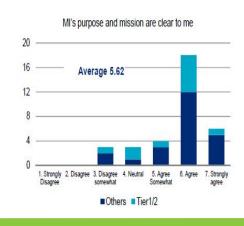
Committee Initiatives Total = \$500,000

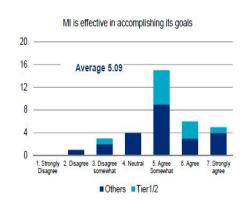
Market Development

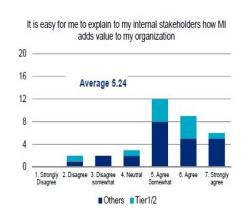
- Renewable Methanol Report = \$25,000
- Boiler Report and Standards = \$25,000
- Beijing Office Registration/Operation = \$100,000



2018 results (bottom) show improvements to 2017 Mercer survey







1 = Strongly Disagree, 2 = Disagree, 3 = Disagree Somewhat, 4 = Neutral, 5 = Agree Somewhat, 6 = Agree, 7 = Strongly Agree



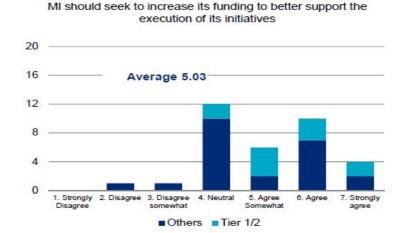
Hold the mouse over each color of the bar to see the number of respondents.

| Answer | | | | | | Number of Responses | The state of the s | |
|---|-----|-----|-----|---------|-----|------------------------|--|--|
| MI's purpose and mission are clear to me | 10% | | | 52% 36% | | 19 | 6.3 | |
| MI is effective in accomplishing its goals | | 16% | 22% | 38% | 22% | 18 | 5.7 | |
| It is easy for me to explain to my internal stakeholders how MI adds value to my organization | | 16% | 11% | 44% | 27% | 18 | 5.8 | |



2018 results (bottom) show improvements to 2017 Mercer survey





1 = Strongly Disagree, 2 = Disagree, 3 = Disagree Somewhat, 4 = Neutral, 5 = Agree Somewhat, 6 = Agree, 7 = Strongly Agree

1 2 3 4 5 6 7

Hold the mouse over each color of the bar to see the number of respondents.

| Answer | | | | | | Number of Responses | |
|---|----|-----|-----|-----|-----|------------------------|-----|
| My organization would wish to increase its involvement in MI's work | 5% | 33% | | 33% | 27% | 18 | 4.8 |
| MI should seek to increase its funding to better support the execution of its initiatives | 5% | 33% | 11% | 33% | 16% | 18 | 5.2 |



Additional 2018 Survey Responses





| Answer | | Number o Responses | |
|--|-----|-----------------------|-------|
| Do you feel that your organization is | | | |
| getting good value for your money from | 87% | 2% 1 | 6 1.1 |
| MI? | · · | | |

1 = Tier 1, 2 = Tier 2, 3 = Tier 3, 4 = Tier 4

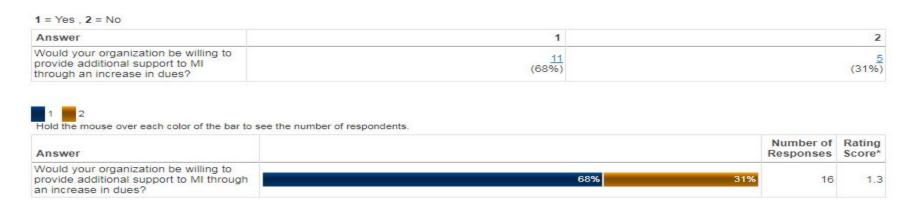
| Answer | 1 | 2 | 3 | 4 |
|---------------------------------------|-------|-------|-------|-------|
| What Tier level is your organization? | (53%) | (13%) | (13%) | (20%) |



| Answer | | | | | Number of Responses | |
|---------------------------------------|-----|-----|-----|-----|------------------------|-----|
| What Tier level is your organization? | 53% | 13% | 13% | 20% | 15 | 2.0 |



Additional 2018 Survey Responses



| Answer | 1 | | | 2 |
|--|-------------------------------------|-------------------|------------------------|------------------|
| Would your organization be willing to provide financial support for individual pilot projects managed by MI? | (37%) | | | (62% |
| 1 2 | | | | |
| | o see the number of respondents. | | Number of Responses | |
| Answer Would your organization be willing to provide financial support for individual pilot projects managed by MI? | see the number of respondents. 37% | 62% | Number of Responses | Rating Score* |
| Answer Would your organization be willing to provide financial support for individual | | 62% Respondent | Responses 16 | Score |



1 February Conference Call Notes

- Participants: Ben Iosefa, Olga Sessions, John Carley,
 Peter Roberts, Jan Spin and Greg Dolan
- The committee "wish list" demonstrates what could be done with an additional \$500k in revenue
- Would indicate need for 25% increase in revenue
- Members were supportive of a % dues increase, could also define minimal production capacity thresholds for Tier 1-3 (*Tier 1 now identified as Producers over 1.5 MMT capacity*)
- Methanol Foundation could be used to provide mechanism for members to support specific project activity, and for accessing government grants/funds



MI Revenue Option #1: % Increase

- Increase dues on a percentage basis across the board:
 - 10% Dues Increase = \$200,000
 - 15% Dues Increase = \$300,000
 - 20% Dues Increase = \$400,000
 - 25% Dues Increase = \$500,000
- During the Board discussion in Houston in March, members expressed support for a 25% dues increase for 2019



MI Revenue Option #2: Staggered

- Keeping the four tier dues structure, another option is a staggered adjustment of dues levels by tier, such as:
 - Tier 1 -- $$200,000 \rightarrow $250,000 (2019 3 members/$150,000)$
 - Tier 2 -- $$100,000 \rightarrow $125,000 (2019 7 members/$175,000)$
 - Tier 3 -- $\$50,000 \rightarrow \$62,500 (2019 8 \text{ members/}\$100,000)$
 - Tier 4 -- $$15,000 \rightarrow $18,750 (2020 20 \text{ members/} $75,000)$
- Task Force Recommendation:
 - Tier 1-3: 25% dues increase for 2019
 - Tier 4: 25% dues increase for 2020
 - Demonstrates clear leadership by producer members
- Requires Constitution/By-Law amendment to dues schedule



Additional Revenue Sources

A la carte Funding

- MI staff could identify specific project proposals, and then determine if specific member companies wish to provide support
- MI staff could still provide management for project activities

New Members

• Membership recruitment is a key component of any effort to increase revenue

Create new "Allied" dues category

- For start-ups at pre-revenue stage develop renewable methanol production or energy market applications (as well as government entities, class societies, industry consultants, service companies) @ \$2,500 for annual dues
- Would require amending Constitution/By-Laws





Current Business: China NGO Registration

Chris Chatterton, COO

Methanol Institute Board of Directors 14 June 2018 – Como, Italy

UPDATES ON MI CHINA REGISTRATION

- All translation work mostly completed
- Still discussing with MIIT on formal sponsorship, but on track for Aug/Sep
- Have broadly agreed with CPCIF on office space within their building
- If sponsorship supported and registration approved, the China entity will require an additional budget to support the expanded effort there, even though the new entity may only function for the 4th qtr of 2018 (ie; accounting, audit, office, etc)
- Due to the change in NGO law in mid-2016, which came into force in Jan 2017,
 PKU was not able to accept payment in 2017 per the agreement signed between
 MI and PKU in 2015:
 - No payments to PKU in 2017 or 2018 (to date)
 - If registration in 2018 is successful, will plan to pay 2018 fees per the PKU Agreement and pay down the arrears of \$71,520 from 2017 over 2019 and 2020 [2 x \$35,760]



MI CHINA BUDGET

| China | 2017 Budget | 2017 Actual | 2018 Budget | 2018 Actual | 2019 Budget | 2020 Budget |
|--|----------------|----------------|----------------|----------------|----------------|----------------|
| Programs | | | | | | |
| China Boiler Standard | | 14,700 | 5,000 | | | |
| China Cookstove Standard | | | | | 5,000 | 5,000 |
| Representative Office | | | | | | |
| Stakeholder Engagement | 10,000 | 10,943 | 12,000 | 6,000 | 12,000 | 12,000 |
| Chief Representative (Consulting Services per PKU Agreement) | 59,520 | | 59,520 | | 59,520 | 59,520 |
| Office Manager | | | | | 10,000 | 10,000 |
| PKU 2017 Arrears | | | | | 35,760 | 35,760 |
| Expense Report 2017 Arrears | | | | 15,000 | | |
| China Support (Rent per PKU Agreement) | 12,000 | | 12,000 | | 12,000 | 12,000 |
| Public Affairs | | | | | | |
| Industry Conferences | 1,500 | 920 | 3,000 | | 3,000 | 3,000 |
| Translation Services | , | | 5,000 | | 5,000 | 5,000 |
| Operating Expenses | | | | | | |
| Rent | | | | | 12,000 | 12,000 |
| Sponsorship | | | 2,500 | | 10,000 | 10,000 |
| Legal | | | 10,000 | 3,401 | 2,000 | 2,000 |
| Accounting | | | 12,000 | | 12,000 | 12,000 |
| Audit | | | 15,000 | | 15,000 | 15,000 |
| Printing | | | 2,000 | | 2,000 | 2,000 |
| Other Office Expenses | | | 1,000 | | 1,000 | 1,000 |
| Travel | | | | | | |
| Chief Representative | 10,000 | 13,374 | 7,000 | 1,022 | 3,000 | 3,000 |
| Entertainment | | | | | | |
| Chief Representative | 350 | 604 | | | 1,000 | 1,000 |
| Total | 93,370 | 40,541 | 146,020 | 25,423 | 200,280 | 200,280 |





Current Business: VeryConnect Update

Chris Chatterton, COO

MI Board of Directors Meeting 14 June 2018 – Como, Italy

ASSOCIATION MANAGEMENT SOFTWARE

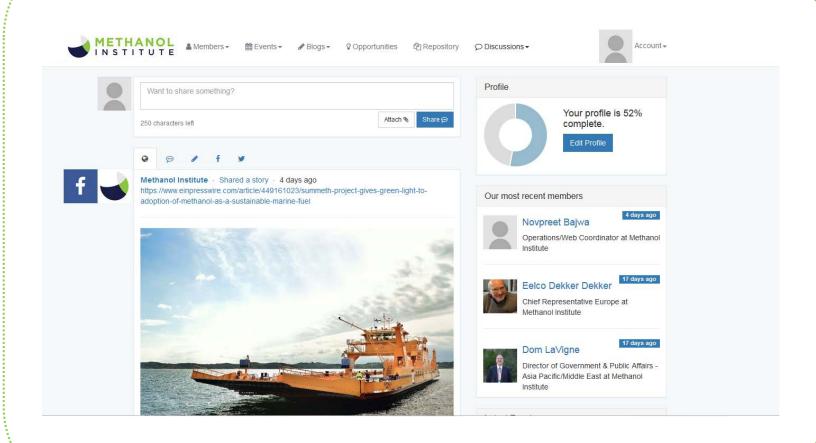
- Objective: More professional committee/Board member engagement by enhancing participation outside of quarterly calls/meetings
- Reliable SaaS technology, tailored to our needs and with easy navigation
- Designed to support the MI brand
- Connects with member social media platforms
- Will incorporate a repository of supporting documentation for each Committee so we do not have to rely on Dropbox (not accepted in China and many Corporate firewalls)
- Will also support many administrative functions such as announcements and tracking member reps
- User experience similar to LinkedIn & Facebook
- Launching in June
- Full member participation in July





CURRENT NEWS AND MAIN DROP-DOWNS

Homepage





ALLOWS EACH MEMBER TO UNIQUELY PARTICIPATE

Individual Profile

Account + Biography Greg Dolan has held a variety of senior management positions with the Methanol Institute over the past 22 years. In June 2014, he was appointed as permanent CEO of the global methanol industry trade association, after serving as Acting CEO for four years. Mr. Dolan manages MI's offices in Washington, Singapore, Brussels and Beijing, while directing international Greg Dolan greg.dolan.aah8V governmental relations, media relations, public education and outreach efforts. He has presented papers on methanol-related topics at more than 100 international conferences, Roles: Administrator, Member authored magazine articles, and written book chapters on the methanol industry. Mr. Dolan came to MI after spending a decade in a variety of public information positions in New York State, with the Department of Environmental Conservation, the Energy Research and Development Authority, and the Department of Transportation. Mr. Dolan holds a Bachelor of **** 1-202-421-5267 Arts degree in Political Science from Boston University, and did extensive post graduate work % http://methanol.org in Political Communication at the State University of New York-Albany. Interests Political Science, Boston University CEO. Methanol Institute Leadership Strategy Successful Boards Communication Government Relations Alexandria, VA, USA Member's address 1 225 Reinekers Lane, Suite 205 22314





New Business: November Board Meeting

Greg Dolan

Methanol Institute Board of Directors 14 June 2018 – Como, Italy

November Board Meeting

 The third and final MI Board of Directors meeting for 2018 will take place on Friday 9 November in Singapore immediately following the IMPCA Asian Methanol Conference



