

# **Panel Discussion: Large Scale Demonstrations and Commercial Plants for Advanced Biofuels**

# Our Panel

- **Moderator:** Terry Marker, GTI Energy
- **Panelist:** Gerhard Muggen, BTG
- **Panelist:** Vikrant Chopra, LanzaJet
- **Panelist:** Robert Graham, Ensyn
- **Panelist:** Stephane Marie-Rose, Enerkem

# Gerhard Muggen- Managing Director BTG Bioliquids



- Gerhard Muggen is managing director and shareholder of BTG Bioliquids since 2008. As managing director, he is responsible for the strategy of BTG Bioliquids, the business development and the worldwide marketing and sales of the pyrolysis technology. Before BTG Bioliquids Gerhard has been working for Stork, Wartsila Diesel and Holec for more than 10 years in several positions in project management and international sales management.
- Gerhard has a passion for export and sustainable energy

# Vikrant Chopra, Technology Development Manager, LanzaJet



- Vikrant Chopra is a seasoned energy sector professional with over two decades of experience in technology development and evaluation, process optimization, and project execution. In his current role at LanzaJet, Vikrant leads initiatives to improve the company's proprietary Alcohol to Sustainable Aviation Fuel technology by reducing capital costs and thereby accelerating its commercialization.
- His expertise spans from initial ideation to the implementation of opportunities, with a deep understanding of technology value engineering and risk mitigation.
- Previously at Shell, Vikrant held various roles that involved developing innovative technology solutions for complex business problems, supporting technology strategy, and providing strategy implementation support. His expertise includes catalyst sales, organizational design, and business improvement.

# Robert G Graham – Founder of Ensyn

- 2024 Don Klass Award Recipient
- Dr. Robert Graham, Non-Executive Chairman of Ensyn Corporation, is Ensyn's founder and has led Ensyn's commercial and technical development since the first Ensyn company was established in 1984.
- In March 2020, Bob stepped down as CEO but continues to be actively engaged as an advisor to Ensyn's senior management team. Bob is Canada's pre-eminent authority in the production of value-added products via fast thermal conversion of carbon-based feedstocks. Bob's early work from first principles led to development of Ensyn's core RTP™ conversion technology and early commercial applications for the production of specialty chemicals and heating fuels from wood residues.
- Dr. Graham has published over 60 works in technical and trade journals, and has been granted more than 30 patents relating to the conversion of wood and other biomass to chemicals and fuels as well as the upgrading of petroleum.

# Stephane Marie-Rose – Director, R&D, Enerkem

- Stéphane Marie-Rose is at the forefront of Enerkem's research and development, spearheading innovative advancements in catalytic chemistry. He drives the cutting-edge research on transforming syngas into valuable fuels and chemicals derived from urban biomass and municipal solid waste.
- Since joining Enerkem's research team in 2009, Stéphane has been instrumental in pioneering catalytic processes for methanol production and refining Enerkem's ethanol technology. His expertise was crucial in securing the Sky's the Limit Challenge award between 2019 and 2022, where Enerkem, in collaboration with CRB, developed a breakthrough sustainable aviation fuel from urban and forestry biomass residues.
- Beyond Enerkem, Stéphane has been collaborating with the National Renewable Energy Laboratory (NREL) since 2016, focusing on synthesizing high-octane biofuels from biomethanol. His work extends across borders, involving research partnerships with groups in Canada and the EU on the valorization of synthesis gas.

# Questions for Discussion

**1 What insights can you share about the success that resulted from the first commercial plant or demo ?**

**2 Why do you think biofuel development and deployment is coming from small independent companies rather than Oil Majors?**

**3 What were the major operational issues, or pain points, your company faced in the first year after start up of their first commercial plants or demos.**