

Fuelling the Fleet: Utilizing Air Liquide's Advanced Methanol Technology to Deliver a CO₂-Based Next-Generation Marine Fuel

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Methanol is a powerful component for any CCUS strategy and can decarbonize energy intensive industries and transportation, thus accelerating the transition towards a low-carbon economy.

Air Liquide as a global leader in gases, technologies and services for the industry offers a unique energy transition technology portfolio comprising the world-class Lurgi™ Methanol and CO₂ capture technologies. The track record of more than 50 Methanol plants and 60 years of excellence and innovation in Methanol technology make Air Liquide Engineering & Construction a partner of choice that unlocks efficient and reliable Methanol production for its customers. Beyond the continuous optimization and innovation of its industrialized Methanol processes, Air Liquide's most recent R&D activities comprise the [M²ARE](#)* project which is unlocking a fully renewable value chain for cost-effective production of maritime Methanol tailored to the requirements of global shipping.

Air Liquide integrates syngas generation, CO₂ capture, Electrolysis and Methanol production into comprehensive low-carbon Methanol solutions. In all of these fields, Air Liquide leverages leading technologies including Lurgi LP Methanol™ and Lurgi MegaMethanol™ for large-scale production, as well as renewable Lurgi PowerMethanol™ and biogenic Methanol production. As a one-stop shop for Methanol plants, Air Liquide offers solutions that help achieve CO₂ reduction goals while producing Methanol from various feedstocks in a cost-effective way.

This presentation focuses on producing Methanol from CO₂ and renewable hydrogen. Air Liquide is unique in that it offers the entire technology chain, from CO₂ capture to electrolysis and finally, Methanol synthesis. This comprehensive approach culminates in fully integrated and flexible Lurgi PowerMethanol™ plants, essential for cost-effective e-Methanol production using fluctuating renewable energy sources.

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