FUTURE FUELS 101 – BIOMETHANE

Biomethane, sometimes referred to as renewable natural gas, is manufactured either by upgrading biogas to remove CO2 and other contaminants or through the thermal gasification of solid biomass followed by methanation. It can be produced from a wide variety of organic feedstocks including animal manure, crop residues, sewage and food waste.

Biomethane has tremendous potential as a future fuel to meet current and future maritime emission reduction targets since, depending on the feedstock used to produce it, the CO2 emissions it generates are either extremely low or even negative from a well-to-wake perspective. Furthermore, it requires no modifications to established LNG fuel handling, storage and engine technologies.

Pros

+ **Can be produced using a wide range of feedstocks**
+ **Potential to be carbon-neutral depending on feedstock**
+ **Can utilise established LNG supply and storage infrastructure**
+ **Easy to store and handle onboard vessels**
+ **Can be burned in existing gas engines without the need for modifications**
+ **Blends well with fossil LNG**

Cons

– **Lack of availability as a maritime fuel**

"Biomethane fuel qualities derived from sources like energy crops, manure, organic waste and sewage have great potential as carbon-neutral or even carbon-negative energy sources. They can be made in a variety of forms that can be burned in marine engines, either as drop-in fuel or as fuel blends. As biomethane fuel is compatible with existing engine, fuel supply and storage technologies it offers a simple and cost-efficient pathway to maritime decarbonisation."

Mikael Wideskog, Director, Sustainable Fuels & Decarbonisation, Wärtsilä Marine Power