



ecoETHN®

Babcock's LGE business is a world-leading provider of cargo handling and fuel gas supply systems for the liquefied gas markets. Our environmentally-focused technologies improve efficiency and performance; delivering value to customers throughout the vessel's lifetime.

Efficient ethane transportation

ecoETHN® is Babcock's LGE business' patent-pending technology, designed for the growing Very Large Ethane Carrier (VLEC) and Ultra Large Ethane Carrier (ULEC) markets.

The ecoETHN® solution enables the carriage of higher methane content commercial ethane cargoes by integrating the vessel's reliquefaction system with the fuel gas supply system. ecoETHN® provides condensation of ethane/methane boil off gas (BOG) from the reliquefaction system to the fuel gas supply system, with up to 2.0 mol% methane in the liquid phase. By harnessing the methane component in the BOG specifically as an energy/fuel source, the methane content of the cargo is reduced during the voyage. Ethane cargoes can then be delivered at a higher purity with reduced methane content than the cargo originally loaded, reducing the volatile methane component by up to 1.0 mol%.

This not only decreases time spent processing the cargo on-shore at both the loading and unloading terminals but also increases the tradable cargoes available to the market, paving the way for producers to sell more volatile ethane cargoes. ecoETHN® thereby provides through-life benefits and OPEX savings to the entire ethane value chain.

In addition, on a typical voyage - carrying a single grade ethane cargo between the United States and China - ecoETHN® can reduce the reliquefaction requirements, allowing only a single reliquefaction unit to operate for significant portions of the voyage, a further OPEX saving.

ecoETHN® consists of three key components, each adding to the increased performance of the full system:

ecoETHN® Component	Features	Benefits
Fuel Gas Economiser	Transfers energy as heat from the cargo BOG to the fuel gas	<ul style="list-style-type: none">› Improves efficiency› Reduces external heating load
Liquid Fuel Injection	A portion of the re-condensed BOG can be injected into the ethane liquid fuel	<ul style="list-style-type: none">› Reduces methane build-up in the cargo tank vapour space› Reduces the methane content of the cargo› Minimal compromise to quality of ethane fuel to engines
Auxiliary Generators Fuel Gas	A side-stream can be extracted from the reliquefaction system to provide fuel to auxiliary engines	<ul style="list-style-type: none">› Even less methane rich BOG is returned to the cargo tanks, reducing methane content and methane accumulation› Fuel savings realised from operating the auxiliaries on BOG, rather than Low Sulphur Marine Gas Oil (LSMGO) or Low Sulphur Intermediate Fuel Oil (LSIFO).

ecoETHN® is a disruptive technology in the ethane trading market, providing tangible benefits across the full value chain.



Now more than ever, what we do matters: creating a safe and secure world, together.

Get in touch

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