New LR-approved Babcock LGE system promises lower emissions and efficiency gains for gas carriers

Approval supports a new integrated reliquefication and fuel technology enabling liquefied gas carriers to extract greater value from energy available onboard.



Andy McKeran, Chief Growth Officer, Lloyd's Register (left) presents the AiP to Neale Campbell, Managing Director of Babcock LGE at Gastech 2026



Representatives from Lloyd's Register and Babcock LGE at the AiP signing ceremony at Gastech 2026

LONDON, UNITED KINGDOM, September 15, 2026 / EINPresswire.com/ -- Lloyd's Register (LR) has granted Approval in Principle (AiP) to Babcock LGE's ecoAPEX™ (Advanced Performance Extraction) cargo handling technology, which is designed to improve the efficiency of onboard reliquefaction and gas fuel systems for liquefied gas carriers.

The approval was presented during Gastech 2026 in Bangkok.

According to Babcock LGE, ecoAPEX™ has the potential to improve reliquefaction efficiency by up to 33%, can cut reliquefaction energy consumption by around 25% and reduce loading and cooldown times by 14%, delivering lower operating costs, lower emissions and improved operations.

Rather than introducing additional rotating machinery, ecoAPEX™ connects two existing onboard processes that traditionally operate independently: cooling boil-off gas through reliquefaction and heating fuel gas for engine consumption.

> We're excited to continue our long-term collaboration with Babcock LGE as they pioneer approaches to improving gas carrier performance, reducing costs and supporting lower emissions across the sector."
>
> *Andy Mckeran, LR's Chief Growth Officer*

By recovering value from energy already available onboard, the system offers a new approach to improving cargo handling efficiency without increasing system complexity.

The patent pending concept has potential applications across LPG, ammonia and ethane carriers, supporting industry efforts to improve vessel efficiency while preparing fleets for a rapidly evolving fuel and cargo landscape.

Andy McKeran, Chief Growth Officer, Lloyd's Register, said: "As the industry continues to focus on efficiency, there is growing recognition that significant gains can be achieved by improving the performance of onboard systems as well as through fuel and propulsion developments.
"We are excited and privileged to continue our long-term collaboration with Babcock LGE as they pioneer new approaches to improving gas carrier performance, reducing costs and supporting lower emissions across the sector."

Neale Campbell, Managing Director of Babcock LGE, said: "ecoAPEX™ demonstrates how Babcock LGE turns systems thinking into practical innovation. By viewing the vessel as a connected whole, we unlock efficiencies from energy already available onboard.

"On dual-fuel gas carriers, ecoAPEX™ enables two processes that traditionally operate separately to integrate effectively, reducing cargo handling energy demand without adding equipment, complexity, or operational burden.

"Successful innovation relies on both collaboration and scrutiny. Lloyd's Register has been a valued partner throughout the Approval in Principle process, providing technical expertise and independent challenge. Achieving AiP validates the Babcock LGE ecoAPEX™ technology concept and provides assurance to shipowners for commercial adoption."

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