

This abstract will be presented during LNG2023 conference on 10-13 July in Vancouver, Canada among many other innovative projects, ideas and outlooks. LNG2023 will provide a unique platform for the global LNG industry and key stakeholders to discuss, debate, and showcase the latest industry developments and opportunities.



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ENVIRONMENTALLY FRIENDLY, STANDARDIZED, REPLICABLE MODULAR LIQUEFACTION & POWER GEN LNG SOLUTION

Baker Hughes has developed an optimized concept of pre-engineered modular e-drive refrigeration and liquefaction system coupled with combined heat and power (CHP) power island based on LM9000 aeroderivative gas turbine (73+MW) following a “building blocks” architecture. Pre-engineered, standardized modular solution can shorten 2-3 years the period from the inception to the commercial operation date compared to a traditional customized stick-built project. The solution will ensure cost effectiveness, avoid project cost overrun, easy integration with feed gas pre-treatment unit thanks to the heat extraction from the CHP and reduction of carbon emissions up to 30% compared to a traditional LNG plant based on large size train with Heavy Duty gas turbines. The utilization of highly efficient aeroderivative gas turbines allows perfect integration with variable renewable energy sources thanks to the possibility of frequent shut-down and start-up, with no impact on maintenance interval, resulting in 99% availability. In addition, the use of Battery energy storage (BES) in the configuration reduces the number of units with consequent CAPEX saving and reduces spinning reserve operating LM9000s at best efficiency point. A specific case study has been developed, applying electric driven modularized mid-scale solution coupled with CHP island based on LM9000 on a typical 10MTPA LNG plant located in Gulf of Mexico.

To view the full conference agenda, visit <https://www.lng2023.org/lng-programme-overview>