

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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## LNG PLANT NEW FRONTIERS IN THE AGE OF ENERGY TRANSITION: THE INTEGRATION OF BLUE HYDROGEN AS VIABLE POSSIBILITY TO PURSUE DECARBONIZATION

While LNG global demand grows, it emerges the growing need to provide a cleaner energy offer. Thus, LNG industry is entering into a new phase, where decarbonization is becoming a requirement which needs the joint effort of both Companies and Contractors to let the LNG demand growth become sustainable, ideally reaching zero emissions in the near future.

Multiple solutions are under development by Saipem, in several projects and initiatives, to achieve the LNG liquefaction plants decarbonization and reduce GHG emissions. These solutions vary depending on the plant selected liquefaction technology and on other constraints, but one of the most beneficial involves Gas Turbines, installed in the vast majority of LNG Plants, being one of the main contributors of carbon emissions: the use of hydrogen to replace, even partially, methane in fuel gas.

Strategies for the implementation of such solution are more and more required by Companies and need to be evaluated from the early phase of a project, in case of a Greenfield LNG Plant, or to be studied as a retrofit solution when applied to existing plants.

This paper presents a case study based on a large-scale LNG Plant in execution phase, showing Blue Hydrogen as potential solution to the decarbonization issue, also reporting challenges and associated costs.

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