

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 HYBRIDIZATION FOR CARBON FOOTPRINT REDUCTION

LNG will continue playing a key role in the next decades to fulfil the growing worldwide energy demand while supporting the transition towards carbon neutrality. As a global leader in LNG, TotalEnergies also aspires at being a front runner of low-carbon LNG and hence is working at reducing its LNG assets energy intensity by the introduction of renewable energies coupled with more conventional decarbonization initiatives. In this perspective, combinations of technical solutions can be considered and they include more efficient Gas Turbine (GT) selection, Heat recovery on GT exhaust, Battery Energy Storage System and photovoltaic power plant. The introduction of green electricity is allowing significant reduction of fuel gas consumption as the number of GT in operation can be reduced and the remaining ones are running at their best efficiency point, hence reducing the overall GHG emissions. This paper will present an overall approach that could be applied on any LNG plants, either in a Brownfield or Greenfield environment for reducing GHG emissions. A case study will present the substantial GHG savings (up to 20%) associated to the implementation of several combinations of above-mentioned technical solutions in the context of a typical LNG plant in tropical environment. Study purpose was to select a scenario with net technical cost lower than 40\$/tCO₂e and maximized CO₂ saving without jeopardizing LNG production reliability due to the intermittent nature of the solar energy.

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