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 AS A FUEL FOR A CLEANER MARITIME TRANSPORT

Maritime transport which currently runs on heavy fuel oil or diesel accounts for more than 3% of global CO2 emissions worldwide. Recently, LNG has been increasingly valued by maritime transportation actors as an alternative fuel to reduce emissions and complies with IMO and forthcoming EU regulations To be used as a fuel, LNG is stored in small scale tanks inside the ships. During a trip, pressure tends to increase inside the tanks due to heat inputs which impacts the quality of LNG as a fuel. In this sense, ENGIE Lab CRIGEN has conducted technical studies and succeeded to develop accurate thermodynamic models and digital tools to predict pressure increase and thus LNG quality throughout the trip to optimize fuel management by ship operators. ENGIE's tools allow to estimate in real time the LNG and Boil-off-Gas composition inside LNG tank, as well as key parameters, such as Gross Heating Values (GHV) and Methane Number (MN). The latest represents the quality of LNG as a fuel which is a concern for manufactures and users of gas fueled engine since it directly impacts the engine efficiency. The tests performed by ENGIE's team showed that the prediction of MN is key to ensure a good fuel management and thus reduce overall emissions.