

ABSTRACT

The rise in demand for liquefied natural gas (LNG) has led to the expansion of floating storage and regasification units (FSRUs). To reduce costs, several companies favor converting end-of-life LNG carriers into FSRUs.

To what extent does the conversion of LNG vessels into FSRUs represent a relevant solution from technical, economic, and environmental perspectives? And what challenges are associated with their global deployment?

This thesis provides an analysis of the technical, economic, and environmental relevance of converting LNG carriers into FSRUs, as well as the long-term viability of the FSRU model. The first phase of the study is based on a review of the LNG value chain — from production to storage — using recognized scientific sources. The second phase draws on feedback from an industry expert.

The findings show that, although the literature is generally relevant, certain operational challenges are poorly anticipated. While conversion is feasible, purpose-built units are often more suitable.

Whether converted or newly built, the FSRU appears to be a temporary, cost-effective solution, but one that remains insufficient to meet the long-term growth in global energy demand.