

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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LARGE OR SMALL: WHICH IS BETTER?

In the first 40 years of the LNG industry, LNG train size followed an upwards trend. Capitalizing on the “Economies of scale” principle, LNG trains started at approximately 1 mtpa in the 1970s and increased by roughly 1 mtpa every 10 years until achieving 5 mtpa in the 2010s. After 2010, train sizes continued to increase, especially with the advent of Air Products’ AP-X® LNG Process technology with single train capacities of 8 mtpa. However, starting in 2010 there was also a trend to smaller train sizes with different liquefaction technologies such as N2 expander cycles, Dual Mixed Refrigerant and Single Mixed Refrigerant processes. In 2023, there are a variety of proven choices for liquefaction technology available to the LNG project developer and in a variety of single train sizes. This paper discusses the factors to consider for a specific project when answering the question “which strategy is better?”:

- Very large single train sizes to take advantage of economies of scale, or
- Many smaller sized trains to get benefits of standard modularization and speed to market, or
- Modularization of large LNG trains
- Something in the middle that captures the advantage of economies of scale, standardization, and modularization, while minimizing site construction activity and achieves the optimal speed to market.

Case studies will be used to illustrate how these factors influence the decision-making process on train size and execution strategy.

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