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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## CHALLENGES FOR LNG INFRASTRUCTURE DESIGN IN WESTERN CANADA

The province of British Colombia (BC) in western Canada has been a major target for LNG liquefaction projects over the last 15 years. Out of around 16 projects proposed only 2 have succeeded thus far. The province is ideally served by abundant gas and renewable electricity, leading to the ability to export very low carbon intensity LNG to the Pacific basin.

LNG liquefaction projects tend to have a predictable cost basis once the project gets out of the ground. Advances in modularization have to a considerable extent levelled the playing field in terms of global procurement and fabrication costs. This leaves location and associated infrastructure challenges as the key differentiators. This has certainly proved to be the case in BC.

In BC, infrastructure impacts multiple design and execution decisions, from marine facilities, through foundation selection, process cooling systems, materials for construction, labour and logistics.

This paper will address the design considerations for seismic/ geotechnical, environmental and social matters, which heavily influence the infrastructure decisions and hence the differentiated costs of projects. The challenging geomorphology in an area of considerable seismicity affects everything from marine/berthing structures to onshore facilities and storage. The effect of the remoteness of many of the proposed sites will also be discussed. Ultimately success will be dictated primarily by these non-process OSBL considerations.