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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GOING GREENER WITH LOWER CARBON FOOTPRINT LNG STORAGE : WORLD FIRST AND LARGEST EVER MEMBRANE FULL CONTAINMENT LNG TANK

The LNG market has experienced significant supply/demand expansion in recent years. International commitments also drive greener energy and stimulate LNG market. This market response will be greatly beneficial if the investment cost and project schedule for cryogenic storages are reduced through greater competitiveness in the design and construction.

Beijing Gas is currently building its first LNG terminal in Tianjin, and aims to take the leading role toward more sustainable LNG infrastructure. To do so, Beijing Gas made a comprehensive technical and economic analysis of the technology available for the storage systems. The two main options are 9% Nickel Full Containment and Membrane Full Containment. Following several evaluations, BGG adopted Membrane Full Containment technology for 8 out of the 10 LNG storage tanks.

In this paper, the authors present a comparison of the two technologies. The paper demonstrates that the Membrane Full Containment tank is not only comparable with the 9%Ni Full Containment; in many respects, it offers significant advantages: Achieving reduction in cost and schedule, as well as improving carbon footprint by significantly reducing steel weight.

Finally, the paper will provide a review of the new breakthrough innovation project in China with world largest Membrane Full Containment tanks (8 x 220 000 m3), currently under construction in BGG Tianjin LNG Terminal, and planned to commission and start commercial operations in 2022.