

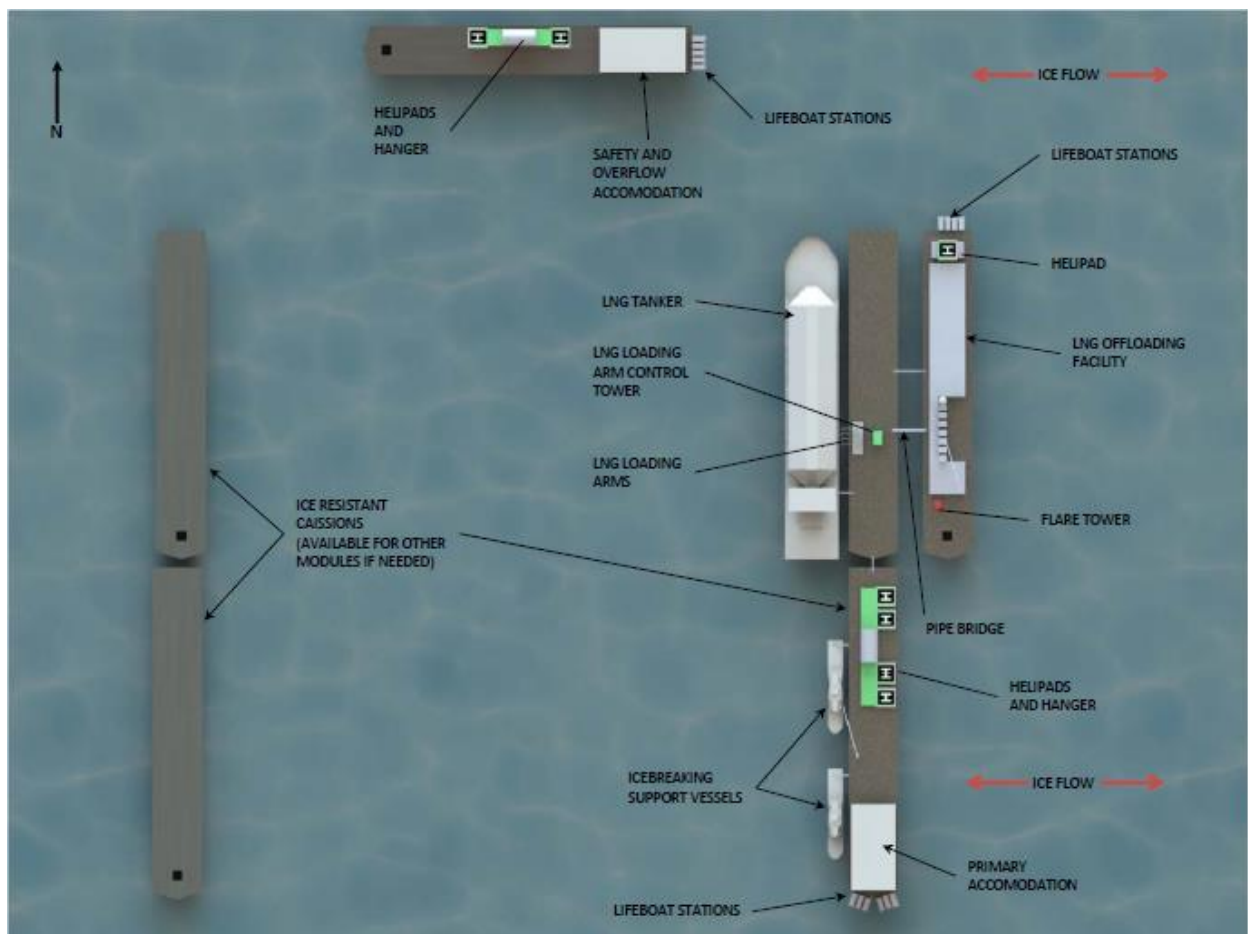
Dave Harbour

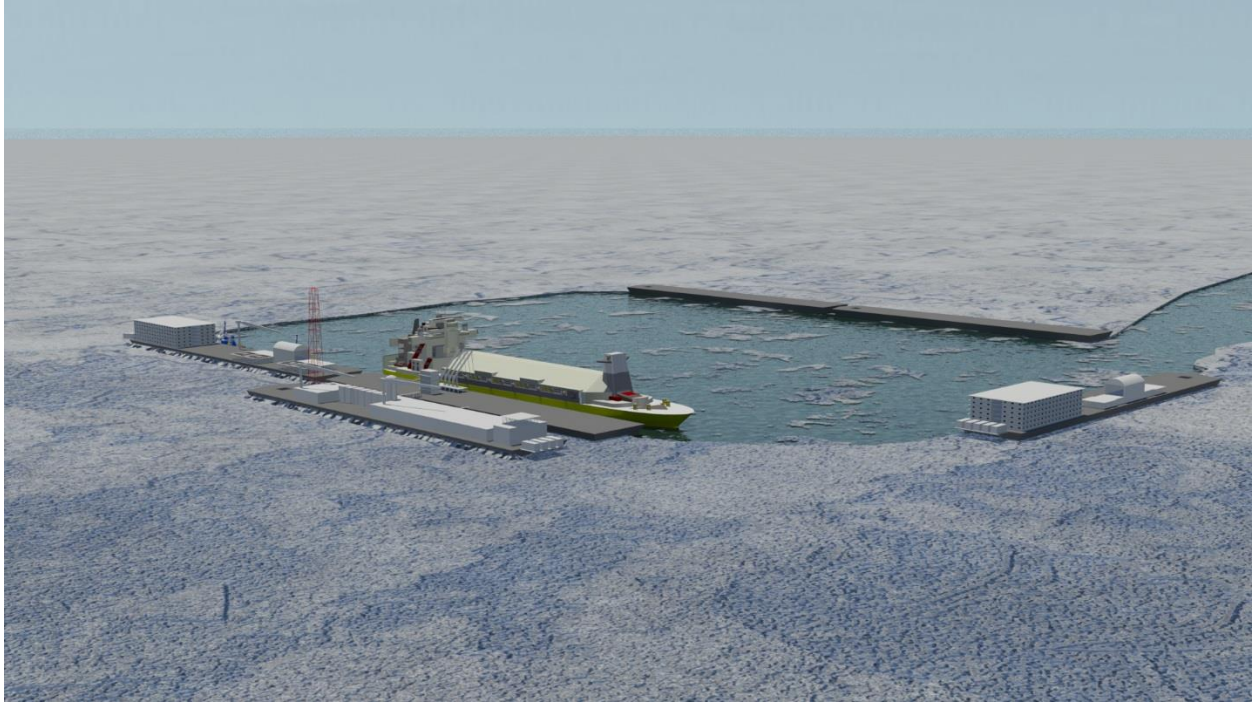
This note is to make you aware and those of your readers and listeners who care that there is a less costly way to get the Alaskan Arctic gas to market. The scenario was explored at the Arctic Technology Conference in Newfoundland this past week KBR-Kvaerner and Fluor presented a solution that would cost less and provide LNG to world markets at 50% +/- less than the now envisioned project.

The concept is a marine solution employing steel or concrete caissons as ice buffers forming a safe and stable port to load LNG. The plant would be offshore and the port formed could be used as safe harbor for other endeavors. The LNG would be transported in ice breaking LNG carriers much like the Yamal Project in Northern Russia. The carriers would be supported by a fleet of Ice breaking support vessels on the order of the Yamal Project

The plant capability can be expanded to suit the demand. Each Plant Caisson would can provide 6 M/T per year LNG and will be sized to meet the situation. The carriers would load off the ice caissons and the plant caissons will be on the outside of the port. The port would be located on 60ft of water and have little or no bottom preparation.

I have included a general plan of one of the concepts for your further use.





We have endeavored to explore this concept with the AK LNG project to no avail. Perhaps an oversight on their part but is a concept worth study. As a side note, at some future date the port could load oil out in the same type of vessel as being used in the Russian Arctic at Verandey. This would provide continued throughput once TAPS can no longer ship oil south.

As an aside a gas line could be built from the North Slope to Fairbanks to provide gas to the interior of Alaska. The cost of this line is included in the estimate and is of minimal cost compared.

The concept is sound and the equipment and methods are being employed by the Russians as we speak. The Alaska Gas project as now envisioned would load LNG out of Nikiski requiring carriers with a minimal ice strengthening. None of those costs are included in the project. As you can see, one must deal with the marine aspects no matter the route.

A project of the type proposed at ATC would provide for commercialization of the stranded gas on the Slope at half the cost of the present project. We can discuss this further if you are interested. I look forward to a continued conversation on this topic.

James Lewis

JCLA Consulting Ltd
James C. Lewis PE
[\(907\)317-3118](tel:9073173118)
lewisjs@sbcglobal.net