

ALASKA STATE LEGISLATURE

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Senate

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Senate Joint Resolution 5

“Urging the United States Congress
Congress to reauthorize the Methane Hydrate
Research and Development Act.”

SPONSOR: Senator Gene Therriault

SPONSOR STATEMENT:

For many years—even decades—Alaskans have been waiting for a natural gas pipeline project to deliver our tremendous resource on the North Slope to market. The benefits of such a project will include access for in-state uses, jobs for Alaskans, and cash to the state treasury. However, if we want to maximize the benefits to Alaskans, we need to make sure that our focus doesn't narrow too tightly to exclude the very real possibilities that await us.

Current discussions and negotiations for an Alaska Natural Gas Pipeline envision a 4.5 billion cubic feet per day (bcfd) project based on proven commercial reserves of 35 trillion cubic feet (tcf). These reserves will provide a supply to the pipeline for 16-20 years. However, according to Department of Natural Resources projections, project life increases from about two decades to more than 3 ½ decades when the available reserves increase from the 30-35 tcf of known conventional gas associated with current oil fields to 60 tcf due to the discovery of new conventional reserves or commercialization of hydrates in place beneath existing infrastructure.

Gas hydrates are naturally occurring ice-like substances composed of water and gas, in which a solid water-lattice accommodates gas molecules in a cage-like structure. Gas hydrates are widespread in permafrost regions and beneath the sea in sediment of outer continental margins. While methane, propane, and other gases can be included in the hydrate structure, methane hydrates appear to be the most common in nature.

The amount of methane sequestered in gas hydrates is enormous, but estimates of the amounts are highly speculative. In 1995, the USGS conducted the first systematic assessment of the in-place natural gas hydrate resources of the United States. That assessment estimated that the permafrost-associated gas hydrates on the Alaska North Slope may contain as much as 590 trillion cubic feet of in-place gas. Of this total, 40-100 tcf are in-place in reservoirs beneath the current infrastructure of the central North Slope.

The most recent (2001) estimate by the Minerals Management Service (MMS) puts the off-shore estimate at more than 32,000 trillion cubic feet in the Beaufort and Chukchi Seas.

A growing body of evidence suggests that production of natural gas, stored as gas hydrates, may be technically feasible. However, numerous technical challenges must be resolved before this potential resource can be considered an economically producible reserve. To that end, Congress passed H.R. 1573 the Methane Hydrate Research and Development Act of 2000 to determine whether or not gas hydrates could become a significant source of natural gas in the future. That Act expires—along with federal funding—later this year.

Senate Joint Resolution 5 calls on Congress to re-authorize the Methane Hydrate Research and Development Act along with appropriations totaling \$70 million over 5 years. The relevance of the potential additional reserves present in the form of gas hydrates is important to the pipeline project currently under discussion and negotiation. The sizing of the pipeline, access points into the pipeline, financing costs, and ultimately tariff rates could all be positively impacted by a determination of the commercial viability of gas hydrates.