

The National Defense Council Foundation

Issue Alert

ALASKA'S STRANDED GAS: A NATIONAL SECURITY ASSET

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THE PROBLEM

America's oil import dependence has reached crisis proportions. Today, imports comprise almost two-thirds of total supply, and worse, over 40 percent of our imports come from unreliable sources of supply such as Venezuela, Saudi Arabia and Nigeria.

At the same time, a quarter of our domestic production is located in the Gulf of Mexico and therefore vulnerable to seasonal disruptions from increasingly frequent hurricanes. As of October 13, more almost 69% of oil production in the Gulf remained shut-in due to hurricane damage as was nearly 57% of the region's natural gas output. As stock draw downs deplete domestic supplies, the prospect of regional shortages looms large on the horizon.

Further compounding the problem is increased competition in the world oil market from emerging economies such as China and India. Indeed, China, by itself, has accounted for roughly 40% of the TOTAL increase in world oil consumption over the past several years. Even before the effects of the hurricanes were felt, this competition had already pushed oil prices to record levels, more than doubling in the past two years. The cost to the U.S. economy has been enormous.

THE HIDDEN COST

In 2003, The National Defense Council Foundation (NDCF) produced an authoritative estimate of the external or "hidden" costs of our import dependence. At that time it was estimated that they were equal to \$3.67 on a gallon of gasoline. These figures have been revised to reflect current oil prices and they are staggering.

As of the most recent data available (October 7, 2005), the "hidden cost" of a gallon of imported oil is now between \$5.28 and \$5.55. When added to the nominal pump price of unleaded regular gasoline, this yields a total of between \$8.26 and \$8.53 per gallon. This equals between \$346.92 and \$358.26 per barrel. The total "hidden cost" of our oil import dependence now totals between \$524.9 billion and \$532.6 billion annually – over 2.5 times what we have spent on the war in Iraq.

Fortunately there is a solution to our import dilemma: Alaska's stranded gas.

THE ANSWER: ALASKA'S STRANDED GAS

Alaska currently has approximately 104 TCF of so-called "stranded" natural gas. It constitutes a resource equivalent to 16.6 billion barrels of oil. Of course, in order to be useful as an oil import reduction tool, it must be converted into motor fuel. Fortunately the technology to do so has been available for over 80 years.

Using the Fischer-Tropsch process, Alaska's stranded gas could be converted into ultra-clean motor fuel.

Existing reserves are sufficient to produce up to 1.6 million barrels per day for two decades. This is equal to our average imports from Saudi Arabia.

Moreover, because only two-thirds of a barrel of oil is in the form of useful motor fuels, it is the equivalent of adding 2.4 million barrels per day of refining capacity.

There are other advantages to using Alaska's stranded gas to produce motor fuel.

It will greatly extend the useful life of the TAPS pipeline. The TAPS pipeline requires a minimum of 325,000 b/d of throughput to operate. If the flow falls below this level, the high levels of paraffin in North Slope crude will solidify, rendering the pipeline inoperable. As a result, production at Prudhoe Bay would cease – effectively abandoning over one billion barrels of producible oil.

Current production is at around 900,000 b/d and falling, leaving the pipeline with at least 1.3 million b/d of surplus capacity. By carrying motor fuel produced from stranded gas, the appropriate flow level can be maintained, extending the useful life of the pipeline and of the Prudhoe Bay oil field as well.

Keeping the money that would otherwise be spent on imported oil at home will also create high-paying domestic jobs and retain capital for domestic investment.

State and federal coffers would also benefit from increased royalty and tax payments.

A Fischer-Tropsch facility could be built at Prudhoe Bay, where there are existing connections to the TAPS line and ongoing industrial activity with minimal additional environmental impacts. Moreover, since fuel produced from natural gas is ultra-clean, the environmental benefits obtained from its use would more than offset any environmental costs resulting from building and operating the plant.

Most important, such a facility could be in operation within five years – buying time to bring ANWR on line or build a gas pipeline to the lower 48 states.

In sum, using Alaska's stranded gas to help reduce domestic oil imports will enhance economic security, make the nation safer and benefit the environment. As such it is a project well worth undertaking.