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A decisive time for LNG

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When we wanted healthier children and a cleaner environment, Congress passed the Clean Air Act in 1970 and then strengthened it with amendments in 1990.

When we wanted lower prices and more competition in our power industry, Congress passed the Energy Policy Act in 1992. While it mostly went unrecognized at the time, these new laws gave the green light to using more natural gas.

Natural gas is the cleanest burning of the fossil fuels that keep our nation humming, and is the easiest to store and transport. To generate electricity, natural gas plants using combined-cycle technology (capturing waste heat from the production process) are by far the simplest to finance, site and build. For these and other reasons, the federal government's Energy Information Administration predicts that our demand for natural gas will grow 38 percent by 2025.

Where LNG fits in

LNG is simply natural gas converted to a liquid state for transport by tanker to a delivery terminal. There it is converted back to natural gas and stored until needed or sent through the nation's pipeline system to industrial and residential customers. Our current imports total 3 percent. While that is a small number, it is a 600 percent increase from 1998. Many experts say that importing more LNG is the best way to meet our future demands for energy.

Right now, there are 38 LNG proposals – counting both new plants and expansions to existing facilities – before the Federal Energy Regulatory Commission or the Coast Guard and Maritime Administration (the nation's five existing LNG terminals were built between 1965 and 1975). Obviously, some will never be approved because of the risks they impose on the host community. Others will fall by the wayside when regulatory security or environmental concerns cannot be resolved. Some LNG applicants could even delay, indefinitely postpone or withdraw their proposals altogether.

If they build an LNG terminal, who would come?

We used to think that the world's LNG industry was a bit like a mom-and-pop operation. The same tanker companies regularly delivered gas to the same terminals. Long-term contracts were the norm. The "LNG supply chain" (producers, ship builders, crews, security guards, terminal owners, gas distribution companies, regulators) mostly knew one another. However, this somewhat insular world of LNG is changing, and not just because of 9/11.

The global competition for LNG imports (think China and India) is fierce. Short-term contracts and spot market trading that offer more flexibility (think more tankers making more deliveries) are slowly replacing long-standing agreements. Last week, the owners of a new LNG terminal in Canada that was expected to serve the northeastern U.S. announced a construction slowdown because of contract uncertainty. If that happens to an approved project in the U.S. investors in LNG may rethink their financing.

The basic problem is that the single largest use of natural gas is for electric generation. At current and foreseeable natural

gas prices, almost all other forms of electric generation are less costly than natural gas. These include baseload coal, windmills, cogeneration, and even photovoltaics (once we include distribution costs). Natural gas use also declines with high prices since the second largest use is for heating our homes: at current prices, we might expect that most consumers will replace their 1990s-vintage, 80-percent efficiency furnaces with 95-percent efficiency furnaces over the next few years. Logically, then, our demand for natural gas is likely to plateau or even decline as less costly options are taken in electric generation and home heating.

Timing our policy decision

It takes months for an LNG developer to receive all of the local, state, and federal approvals required. Therefore, we might consider using this timely blessing to consider our nation's next energy step. We have just begun to grasp the benefits that conservation can offer on a national scale. We hear that new nuclear plants might be in our future. Since 52 percent of our electricity is generated by burning coal, what should we know about clean coal and carbon sequestration?

LNG is like our dependence on oil. Both are similar in origin, amount of industrialization, risk, security and price. If we choose to walk further on that path, it should be a decision we make collectively and with a careful eye to the future.

Robert McCullough of McCullough Research of Portland is an energy consultant whose testimony before the U.S. Senate in 2002 launched the Federal Energy Regulatory Commission's investigation of Enron. He has a house at Arch Cape. Ann Stewart attended the U.S. Department of Energy's first LNG forum March 10 in Boston.

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