



PUBLIC FORUM

North America natural gas supply and demand

Sponsored by the Office of the Federal Coordinator, Alaska Natural Gas Transportation Projects

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Alaskans hope to soon learn the results of open seasons held last year to gauge market interest in building a pipeline for moving North Slope natural gas to North America customers. Pipeline shipper commitments — worth an estimated \$100-plus billion — are essential to financing North America's largest private-sector construction project. Shippers will need to gamble on the market demand and price for gas 10, 20, 30 years into the future.

The Office of Federal Coordinator for Alaska Natural Gas Transportation Projects put together this public forum to help Alaskans understand the supply-and-demand variables that could affect shippers' decisions on the pipeline project. The intent is to explain the different market factors that could help, or hurt, the economic viability of the project.

No single forecast for gas demand and prices is right; there are too many variables to guarantee the future. Changing any number of assumptions in a supply-and-demand forecast can significantly alter the outlook for the Alaska pipeline. For example, the U.S. Energy Information Administration last month released its 2011 forecast predicting the Alaska line's in-service date would be delayed past 2035, based on current weak prices and abundant gas supplies. There is a big caveat to that forecast, however. The agency's forecast is based on the assumption that current laws and regulations — including Clean Air Act regulations — would remain unchanged throughout the term of its projections. The forecast also assumes that coal and natural gas shares of the U.S. energy market will remain essentially unchanged for the next 25 years.

However, we know that laws and regulations can change. For example, the Energy Information Administration did not account for the Environmental Protection Agency's new Clean Air Act regulations that took effect Jan. 2 and are likely to drive up the cost of burning coal to generate electricity. The EPA regulations require the nation's largest industrial facilities to obtain permits for greenhouse gas emissions. There are several other proposed EPA regulations, along with court cases and state regulations that could significantly alter the economics of coal vs. gas-fired power generation, changing the market dynamics for gas and affecting the economics of the Alaska project. This isn't a battle of gas trying to steal market share from cost-effective coal plants, but rather the probability that gas could gain customers by the attrition of older, dirtier coal plants at the end of their economic life.

Ziff Energy, Wood Mackenzie and other consulting firms see the future much differently than the federal energy agency; both Ziff and Wood Mackenzie forecast a reasonable potential for Alaska gas coming online in the 2020s. They and others see strong environmental cost pressures on utilities to switch from coal to gas. The more the nation turns to gas, the better the chances for an Alaska line.

Benefits and myths of an Alaska natural gas pipeline project

Most people agree that an Alaska gas pipeline would benefit the nation and the state through reduced dependence on imported energy, replacement of electricity generated by coal with cleaner-burning natural gas, accessibility to gas for Alaska's energy needs and economic growth, construction jobs, royalties and taxes.

One of the most important benefits for Alaska, however, is the increased exploration and production that a gas line would stimulate. The Alaska oil pipeline will be almost three-quarters empty by 2020, according to the Department of Revenue's December 2010 forecast. The line is 34 years old and needs billions of dollars of investment to keep it working decades longer. Tens of billions more in exploration and development dollars will be needed to find the oil that Alaska is counting on for future state budgets. Alaska will be more competitive in attracting that investment if producers can turn not only their oil into profits, but also any natural gas they find.

Regardless of all the potential benefits, the gas line is risky. Just the risk of making an investment decision and then waiting 10 years for gas to flow is reason enough to worry, not to mention that construction delays and cost overruns could ruin the project's economics. The unknowns of gas demand, regulations and market inroads by alternative energies all add to the investment risk of a \$40 billion construction project. Still, there is a potential for success, and that's one reason the Office of Federal Coordinator is presenting this public forum — to discuss a number of myths about the viability of the Alaska natural gas pipeline project.

Myth: Shale gas has destroyed the market for Alaska gas

Shale gas has its own troubles; much is technically recoverable but not necessarily economically recoverable. Concerns about hydraulic fracturing — injecting large volumes of water, mixed with sand and chemicals, deep underground to break open rock formations — have caused several local and state governments to consider restricting or, in a few cases, banning shale drilling. Water handling costs also is an issue. Shale production will continue to grow but maybe not as much as some expect, due to the environmental concerns and water issues.

Myth: The Lower 48 doesn't need Alaska gas

Production from older gas fields in the Lower 48 and Canada is declining, just like Prudhoe Bay oil production. Companies are drilling more and finding less — the number of U.S. gas and gas condensate wells between 1989 and 2008 increased 80%, while production increased just 20%. North America needs new production to meet the decline in conventional gas and expected growth in electrical utility demand. Shale may not fill the entire need.

Myth: Gas prices are too low to make a pipeline project economic

Today's prices don't matter; producers are looking at prices decades ahead. Today's gas oversupply may not last forever and, as in the past, prices will rise when supplies tighten. There could be a place in the market for Alaska gas if it is priced competitively, which will require a state tax structure attuned to the project's fiscal realities.

Myth: Coal will dominate the power generation market

It is going to become more costly for utilities to burn coal for power generation under stricter Clean Air Act regulations covering greenhouse gas, mercury and other emissions. Half of the nation's coal-fired generating capacity is more than 40 years old, and utilities are judging the cost of retrofitting older coal plants to meet stricter, future emissions standards vs. the permitting certainty of a cleaner-burning, gas-fired power plant.

Myth: It would be better to export Alaska's gas because prices are higher in Asia

Alaska's gas is at a cost disadvantage compared to other sources of liquefied natural gas after paying for 800 miles of expensive Arctic pipeline. There are \$200 billion in LNG projects under way or under development in Australia alone for the Asian market — all at or near tidewater. China, meanwhile, has shale gas that the U.S. is helping to develop, and also can import pipeline gas across the border from Russia.

For more information, please visit our website: www.arcticgas.gov