Government Ownership of Energy Infrastructure: The Case of Alaska

By Douglas B. Reynolds*

Alaska's North Slope holds one of the largest oil and gas plays in the world. The biggest oil field there is Prudhoe Bay. But while the vast oil reserves of the North Slope have been developed, there is still a huge natural gas potential that has not yet been developed but could be. Both Prudhoe Bay and the Point Thompson gas fields have substantial natural gas reserves that could produce four or more billion cubic feet (BCF) per day of gas for consumption in the Pacific Rim or more probably in the Lower 48 of the United States. The problem is getting the reserves to market. A gas pipeline is needed. In my book *Alaska and North Slope Natural Gas*, I look at all the options to get just such a gas line for the state.

Over the years, it has been the dream of many if not most Alaskans that the state of Alaska should own its own natural gas pipeline to do just that. Alaskans not only want to get their natural gas to market but they want to have some control over the way it gets to market to insure that Alaska maximizes its own economic welfare. I believe this dream is also characteristic of many oil and gas producing countries. Energy producers want equity ownership. Thus while the situation in the State of Alaska is different to that of other countries, the similarities are also many, especially the desire to own oil and gas capital assets.

One of the reasons Alaska wants to own a natural gas pipeline is because of the bad experience it had with the construction and regulation of the Trans-Alaska oil pipeline. See Fineburg (1990) and Scott (1990). I believe the Alaskan experience with its oil industry development is similar to bad experiences other countries have had with the multi-national oil companies, and the Alaskan experience also makes for an interesting case study for how governments and multi-national oil companies interact. The case study for the Trans-Alaska pipeline starts with the discovery of Prudhoe Bay which was actually not found by a multi-national oil company but rather by a leading independent oil company named Atlantic Richfield Company (ARCO). ARCO has since been bought out by BP. After the oil was found, and after much financial wrangling, the trans-Alaska oil pipeline was built to get the oil to market, although at a higher than expected cost. Alas, this took money. The majors came through with the financing and Alaska benefited greatly from the project, but the final regulated pipeline tariffs to pay for the pipeline was much too high and it came to haunt Alaska after the pipeline was built.

The trouble began with the Federal Energy Regulatory Commission (FERC) which regulated tariffs. For a number of reasons FERC allowed the tariff to be six dollars per barrel even though about two or three dollars would have been adequate to pay for the pipeline. Since the tariff on the pipeline was so high it greatly reduced royalties to the state of Alaska thereby reducing state revenues and increasing the profitability of the oil to the majors. So Alaska felt gypped. This made many Alaskans distrust the majors and call for state ownership of the natural gas pipeline in order to insure that this kind of tariff problem never happens again. Next time, we thought, we will get all the profits for ourselves.

So one reason to own a natural gas pipeline is for the state to control natural gas pipeline tariffs and, therefore, increase state revenues. Another advantage of Alaskan ownership of the natural gas pipeline is that as a state, and under certain circumstances, Alaska can have the right to not pay any federal taxes on the project. That would give Alaska higher state revenues at the expense of the U.S. Federal tax revenues, which is good for Alaska, but bad for everyone else in America. Unfortunately the loss in federal taxes while it can create more revenue for the state of Alaska can actually reduce profitability of developing the natural gas fields for the natural gas lease holders themselves due to accounting considerations.

Well, while all this Alaskan ownership sounds like the best thing since sliced bread, there is one problem: risk. In order to build such a massive project such as an Alaskan North Slope natural gas pipeline, a lot of money must by invested while the returns on that investment are subject to market vagaries. For example, Alaska actually has a permanent fund that is worth some twenty or more billion dollars which could be used to build a natural gas pipeline. Currently the dividends from the fund are given directly to residents of Alaska and can also be used for state government revenue in lieu of taxes.

When I ask Alaskans if they would like to use the twenty billion plus fund to build a pipeline they almost always say no, it is too risky. The problem with a natural gas pipeline is that the costs of construction could be higher than expected, and the price of the natural gas, where it is sold, could be lower than expected, causing the project to lose money or at least to give a lower pay back than our current investments. Simply stated people don't like risk. They want a safe secure return on their investments. One idea to reduce that risk has always been to sell LNG to Japan, Korea, and China and obtain twenty year contracts at a set price. However, even LNG markets these days are subject to sharp market swings and buyers can get the upper hand on suppliers to either force very low prices on long run contracts or to take the lowest cost suppliers on the competitive spot market.

Usually Alaskans say that we can simply sell bonds on the bond market to raise 70% or more of the financing of a project. But if all those bond holders give their money and there are cost over runs, price fluctuations, or demand destruction with fewer buyers, then who will be responsible for paying the bond holders their return if the project is losing money? What if the project sells LNG to China and China suddenly decides it cannot pay for the gas any more? What if the project has severe cost overruns? Who will pay for losses on the project? What if the project goes to the lower

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48 and prices plummet and again we can't pay the bond holders? Well, the bond holders will realize this ahead of time and force Alaska to sell bonds at very high interest rates if there is little or no equity investment from Alaska, or else bond buyers will simply not buy the bonds and not finance the project.

In theory it is a great idea. Alaska can put none of its own money into a risky project and then just reap all of the benefits and profits and leave the bond holders or possibly the major oil companies to pay for any losses. In practice it's unworkable. The majors need a healthy return, although how healthy is certainly a debatable issue, in order to take the risks to build such a project. Alaska is basically only willing to buy into a risk free project. But risk free doesn't exist. In essence the only way to make money on any investment whether it is in oil and gas or in the high tech industry is if you take a risk. If there was absolutely no risk to making a profit on any given investment then somebody would have already done it and made a lot of money. If Alaska wants to make money on building a natural gas pipeline then it must put its money where its mouth is and take the risk and use its own permanent fund to finance the project. No one is willing to do that so chances are Alaska will not own the natural gas pipeline. Rather Alaskans will sit back and let the majors risk building it and owning it while Alaska receives royalties, severance taxes and property taxes like all the other states.

There is then one interesting parallel that Alaska has with many OPEC countries. One of the dimensions of OPEC, that I believe is not widely enough used in energy analyses, is how each OPEC country itself is risk averse to expanding its own oil production capacity. Either OPEC countries are risk averse to investing their own money into their own national companies to expand new fields, or they are risk averse to allowing a healthy return to multinationals to expand production for them. Either way, production stays stagnant. Thus OPEC countries do not have significantly greater capacities to expand production largely due to risk factors.

This idea of risk averse factors is widely acknowledged by the economics profession at large. For example, Rubin and Thaler (2001) show that the marginal utility to gains becomes increasingly more elastic while the marginal utility to losses becomes increasingly more inelastic causing very risk averse behavior indeed. Even the 2002 Noble prize winner, Daniel Kahneman, with help from Amos Tversky, (1997) looked closely at risk and behavior. Using these same types of risk analyses Banks (2002) and Reynolds (2000a) show that energy supplies may be constrained. Risk factors could also affect Russian oil and gas supplies and reduce the supply increase there should Russia decide to take over control and ownership of its petroleum industry. That actually looks like a possibility now that Russia has arrested its leading oil and gas oligarch Mikhail B. Khodorkovsky. The arrest could signal realignment. If Russian oil production were to then stagnate, a readjustment of world oil prices to real 1980 levels or beyond is a possibility.

Alternatively there may be a new round of risk factors now that LNG trade is going world wide. Currently LNG looks very competitive with natural gas producing countries bending over backwards to give what ever it takes to get new projects on line. But that can change. As LNG matures, there is a possibility that risk aversion will creep into the market and make LNG exporters become risk averse to new natural gas projects and project expansions. Exporters will become wary of multinationals starting new projects and obtaining more profits than the multinationals deserve. That could create tougher negotiations, less projects, and a stagnant LNG supply. Assets could be nationalized. Yet in the mean time, countries will not themselves invest in their own national oil company LNG projects due to being risk averse. It will be OPEC all over again.

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