

THE GLOBAL RACE FOR LIQUEFIED NATURAL GAS: Commercializing Alaska's Natural Gas

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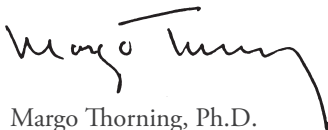
A NOTE FROM THE AUTHOR

The revolution taking place in the oil and gas industries, particularly, the dramatic expansion of opportunities for liquefied natural gas (LNG) has been a topic of particular interest for the American Council for Capital Formation (ACCF) in recent years. New technologies have alleviated concerns about U.S. dependency on foreign oil and gas and replaced old concerns about scarcity with the new challenge of managing abundance.

The U.S. Department of Energy (DOE) has approved dozens of LNG export projects to countries with which we have a Free Trade Agreement (FTA) as well as a few with non-FTA countries. DOE seems to be signaling that it expects that LNG exports will be an important component of U.S. energy and economic policy for years to come. Cognizant of the changing market dynamics and realizing the administration had not acted on any of the more than a dozen pending applications for exporting LNG in nearly two years, ACCF launched an education campaign to make the free-market case for expanded energy exports. In July of 2013, ACCF's *ActOnLNG* campaign was launched to make the case for timely approval of LNG export projects across the nation.

The campaign has become an essential platform for information on the issue and the effort continues to be one of the most trusted and reliable resources for decision makers, opinion leaders, and members of the media ever since it was launched as a non-partisan destination for fresh commentary, thoughtful analysis and independent research.

Signed,

A handwritten signature in black ink that reads "Margo Thorning". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

Margo Thorning, Ph.D.

CONTENTS

- A Note From the Author** 1
- I: Introduction** 3
- II: Economic Challenges for Alaska** 3
 - Job and Wage Growth and Unemployment Rates 3
 - Population Decline 4
 - Declining Oil Production 5
- III: First Movers Have the Advantage in Supplying LNG Markets** 5
 - Alaska’s Formidable Advantages and an Economic Crossroads for the State..... 5
 - Falling Prices, Fewer Projects Will Prevail 6
- IV: Boosting Alaska’s Economic Future** 7
 - Uncertainty Raises the Cost of Capital and Hurdle Rates for New Investment 8
- V: A Comparison of the Two LNG Projects** 9
 - AlaskaLNG 9
 - The Alaska Stand Alone Pipeline (ASAP)..... 9
 - Side-by-Side Comparisons Elusive 10
 - More is Known About AlaskaLNG 10
 - Comparison of AlaskaLNG and ASAP Plans..... 10
 - The AlaskaLNG Project is More Prepared to Move Ahead..... 11
 - Project Operators Have Expertise and Capability to Deliver a Project..... 11
 - The Financial Commitments Are Solid and Long-Term 11
 - A Favorable Ecosystem in Jeopardy..... 12
- VI: Conclusion** 13
- Endnotes** 14

I: INTRODUCTION

Alaska's prospect for short and long-term economic growth is in jeopardy, as efforts to unlock the full potential of the state's energy resources have been subjected to shifting priorities among state leaders in Juneau. The mixed messages coming out of the state capital have prompted concern among investors poised to play a role in the state's economic progress and raised serious questions about whether large scale investment in the state will be sustainable even in the short term. Indeed, Moody's Investor Service recently took the dramatic step of downgrading Alaska's credit rating to "Aaa", at a time when the state confronts multibillion-dollar deficits that analysts say reflect Alaska's weak economic outlook. In this uncertain and troubling climate, government leaders should be promoting an agenda that advances the political and economic stability valued by businesses and investors, starting with a coherent set of policies that center around the exploration and development of the state's abundant energy resources, in particular natural gas.

II: ECONOMIC CHALLENGES FOR ALASKA

The Alaskan economy faces several economic and demographic challenges which policymakers and the general public need to understand as they make decisions about how to develop and commercialize the state's natural resources. In Fiscal Year 2013, oil and gas revenues represented 92 percent of Alaska's unrestricted revenue; no other state even comes close to relying so extensively on the production of natural resources to meet its budget. Such a lack of diversification puts the Alaskan economy at risk due to fluctuations in supply, demand and prices for its natural resources. In fact, the sharp drop in crude oil prices in 2014 is a major factor in the state's projected \$3.5 billion dollar budget deficit this fiscal year.¹

Job and Wage Growth and Unemployment Rates

A recent government forecast shows that there will be no overall growth in jobs in Alaska in 2015 (see Figure 1). This is in sharp contrast to the gain of nearly 5,000 jobs per year between 2010 and 2012 when oil prices were high.²

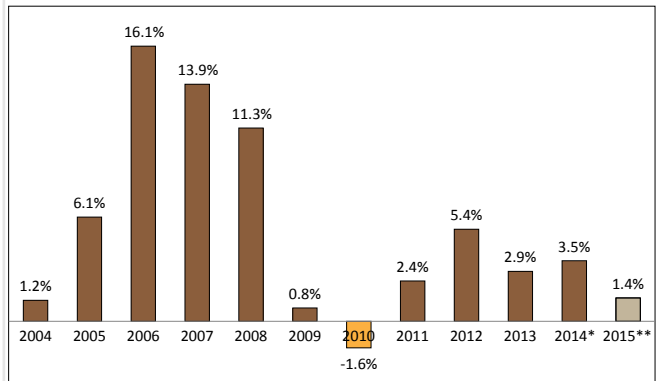
Figure 1. No Job Growth Forecasted for Alaska in 2015 (2004 to 2015)



*Preliminary **Forecast

Source: <http://labor.state.ak.us/trends/jan15.pdf>

Figure 2. Modest Growth for Oil and Gas Jobs (Statewide, 2004 to 2015)



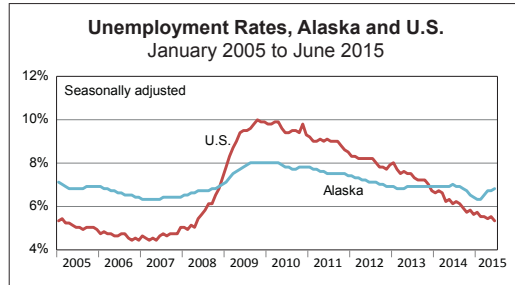
*Preliminary **Forecast

Source: <http://labor.state.ak.us/trends/jan15.pdf>

The oil and gas sector provides the only bright spot in Alaska's job growth for 2015 with a projected increase of 1.4% (see Figure 2). In addition, recent government data show that the average monthly wage in 2014 in Alaska for workers in the oil and gas industry was \$10,889 compared to an average of only \$4,404 for all workers in the state.³

Alaska's unemployment rate in June 2015 was 6.8%, noticeably higher than the U.S. average of 5.3% (See Figure 3).⁴ Without a significant increase in investment in the oil and gas sector in the state, it is unclear whether the Alaskan unemployment rate will improve.

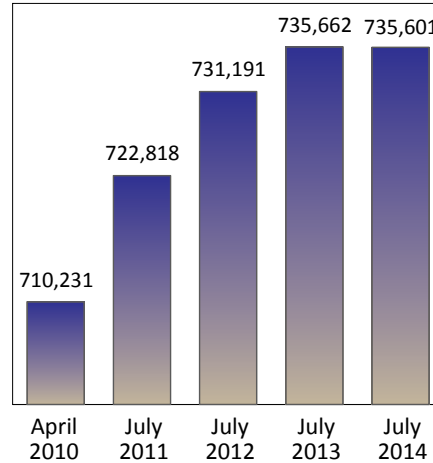
Figure 3. Unemployment Rate in Alaska



Unemployment Rates, Seasonally Adjusted			
	6/15	5/15	6/14
Alaska	6.8%	6.7%	7.0%
U.S.	5.3%	5.5%	6.1%

Source: [Alaska Department of Labor and Workforce Development, Research and Analysis Section](#); and [U.S. Bureau of Labor Statistics](#)

Figure 4. Population Growth (Alaska, 2010 to 2014)

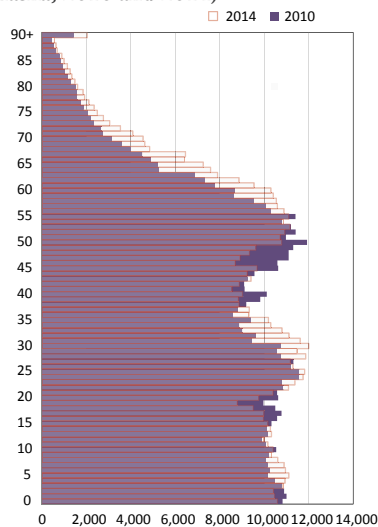


Source: [Alaska Department of Labor and Workforce Development, Research and Analysis Section](#); and [U.S. Census Bureau](#)

Population Decline

Another issue facing the state is the trend in population growth and the aging of its population. Recent official estimates put Alaska’s population at 735,601 in July 2014. That’s a loss of just 61 people from July 2013, but it’s notable because it was the first time in more than 25 years that Alaska’s population fell. A declining population means fewer workers contributing to the state’s GDP (see Figure 4).⁵

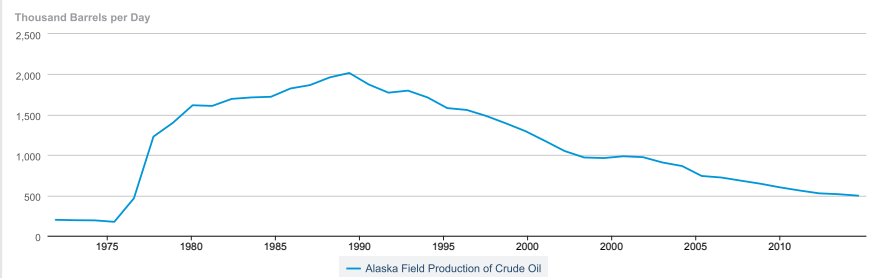
Figure 5. Age Profile Shift Upward (Alaska, 2010 and 2014)



Source: [Alaska Department of Labor and Workforce Development, Research and Analysis Section](#); and [U.S. Census Bureau](#)

Figure 6. Alaska Field Production of Crude Oil (Thousand Barrels)

Alaska Field Production of Crude Oil



Source: [Energy Information Administration, Alaska Field Production of Crude Oil](#)

An aging Alaskan population also presents challenges. As *Alaska Economic Trends* notes: “Aging affects education, employment, and consumption of goods and services as well as birth and death rates, and comparing the state’s 2014 and 2010 age profiles reveals significant shifts in recent years” (see Figure 5).⁶ In addition, the report states that the over-65 population in Alaska is growing faster than in any other state.

Declining Oil Production

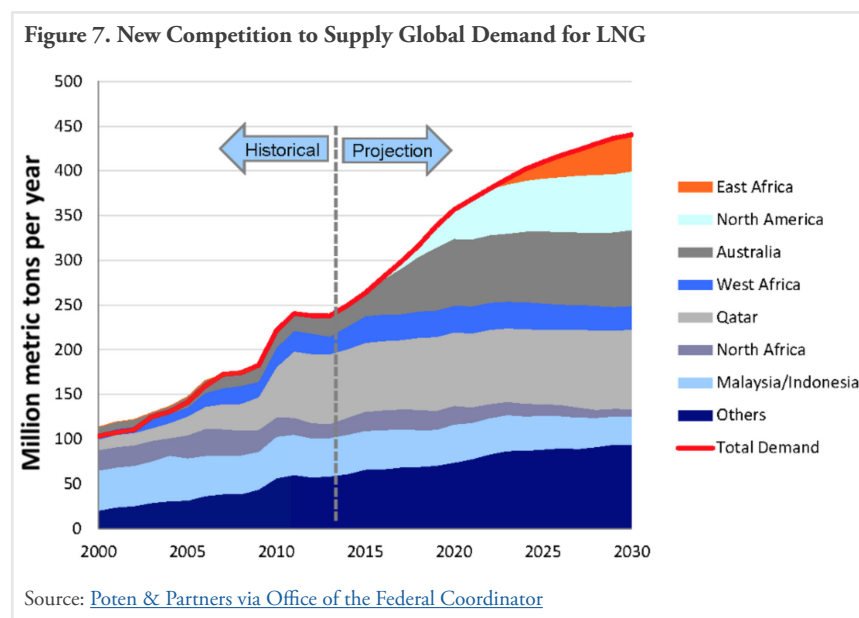
As noted in Figure 6, the decline in Alaskan oil production has had a significant impact on the state's budget. The decline in production, which began in 1988, presents a challenge to the state's economic future. Moody's Investor Service recently noted that with oil prices well below expectations, the state may have to substantially reduce its financial reserves. It gave the state a "negative outlook" and lowered the general obligation bond rating.⁷ Faced with declining revenue projections, the state's ample reserve fund of \$12 billion is expected to erode significantly over the next few years.

The U.S. Department of Energy's (DOE) Energy Information Administration (EIA) projects that Alaskan crude oil production will continue to decline by an average of 1.6% annually through 2040.⁸ In contrast, total U.S. oil production is projected to rise by an average of 0.9% annually over the same period.⁹

III: FIRST MOVERS HAVE THE ADVANTAGE IN SUPPLYING LNG MARKETS

Global demand for LNG is expected to increase significantly in the coming decades. Growing populations, expanding economies and rapid urbanization around the world, particularly in Asia, along with a widely-shared interest in adopting more environmentally-friendly fuel sources, have hastened efforts to explore and tap natural gas reserves.

Over the next five years, Australia and Qatar are expected to supply almost half of the world's LNG. But supplies from North America, East Africa, Russia and other regions could, if adequately developed, meet that demand thereafter (see Figure 7).



Alaska's Formidable Advantages and an Economic Crossroads for the State

In the global race to develop LNG, Alaska's capacity to compete is beyond dispute. According to a 2013 report from the Alaska State Department of Natural Resources, the state has an estimated 40 billion barrels of conventional oil and more than 200 trillion cubic feet of conventional natural gas. With new technologies, shale gas reserves could add to North Slope supplies.¹⁰

With expertise garnered from nearly a half century of exploration and extraction, Alaskan producers have the expertise to develop these resources. On top of this, Alaska is very well positioned to move LNG by tanker to the energy-hungry, growing markets of Asia through sea lanes far less vulnerable to political volatility and instability than the Middle East.

The emergence of a vast global market comes at a pivotal moment in the economic life of Alaska and against the backdrop of the state's potential role in the United States' long-term economic and energy security considerations. Since the discovery of oil and gas on the North Slope over 40 years ago, oil has provided good jobs and income for the state's citizens. While the oil reserves are still ample, they are finite. Extracting the remaining North Slope oil is likely to be more difficult and expensive in the coming years. As noted above, this raises questions about how long Alaska can rely on petroleum as a chief source of revenue. Ten years from now, it is possible that technologies, such as gas reinjection, could begin to reach the upper limits of their ability to extract oil from Prudhoe Bay. The field has already yielded far more oil than was expected when it was discovered in 1967.^{11 12}

This is the time for Alaska to make strategic investments that will not only tap the state's remaining oil resources but also harness the vast natural gas reserves that remain. At a recent LNG conference in Houston, Asish Mohanty, senior analyst for global LNG research at Wood Mackenzie, estimated that all the LNG projects under discussion around the globe could produce up to 555 million metric tons per year. This could be three times the forecasted demand. Speed and commitment will determine which projects are built.¹³

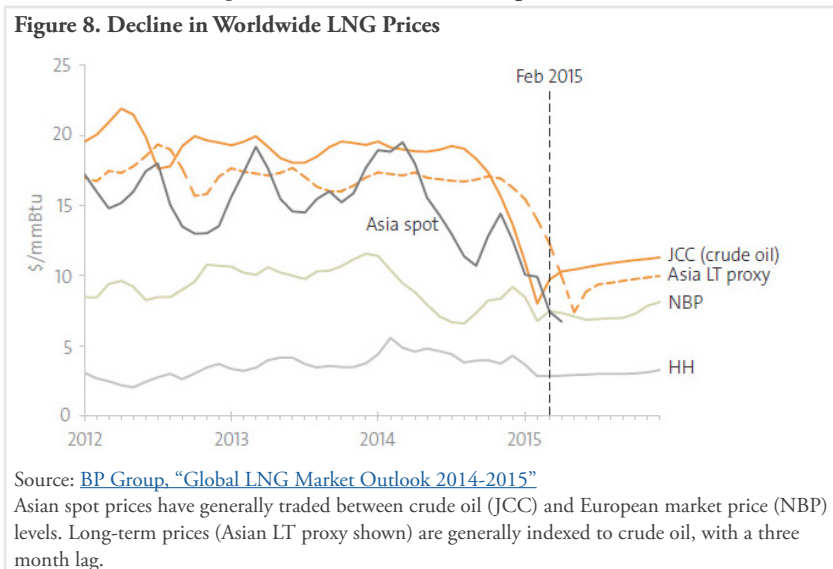
"In new supply areas such as Australia and the U.S., the winners are the early movers that already have their liquefaction projects under construction, have ready access to developed sources of natural gas supply and are assured a new source of cash flow longer term," a Moody's Investor Service report said.¹⁴

David Montgomery, a former vice president with NERA Economic Consulting, in an interview with Energy Wire, agreed the "first mover" advantage remains. But, he noted, the United States' current advantage will shrink if the United States has a process that runs two or three years longer than that of competitors like Canada, Australia, or Qatar.¹⁵

Canada, because of geography, politics and economic structure, provides the most compelling comparison that illustrates the need to act with speed and resolve. Earlier this year, Canadian Prime Minister Stephen Harper announced a package of tax incentives for proposed LNG projects in British Columbia. This underscores that other nations recognize they are competing in a global marketplace in contrast to the intra-state competition in Alaska.¹⁶

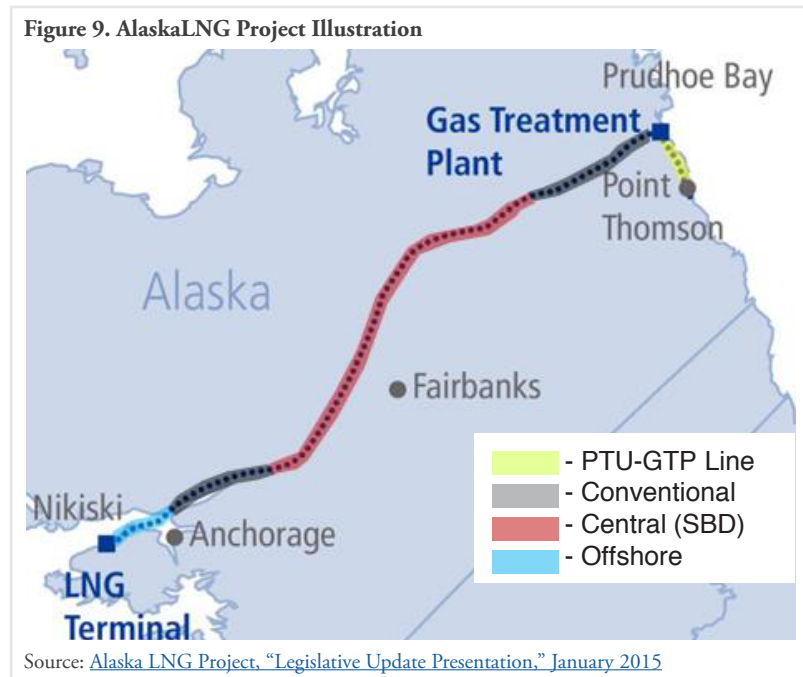
Falling Prices, Fewer Projects Will Prevail

While demand has risen dramatically and is expected to remain strong overall, the global marketplace remains volatile, especially over short-term periods, and prices can fluctuate due to factors from slower economic growth to milder winters in Asia. Last year, for example, factors such as these caused a drop off in demand for natural gas from China.



The result was LNG spot prices fell from a peak of over \$20/mmbtu in the early part of 2014 to half of that by the end of the year (see Figure 8).

This early-mover advantage was made clear in a report by Moody's Investor Service in April which observed that the dramatic drop in prices has caused a pull back in the capital budgets of many companies and the cancellation of the vast majority of nearly 30 liquefaction projects currently proposed in the United States, along with 18 in western Canada, and four in eastern Canada.¹⁷



The Moody's Investor Service report conceded that major projects on which construction is already under way are likely to proceed and larger producers are better able to absorb short-term price fluctuations. However, the report reinforced the need for even large producers to plan carefully in order to succeed amid the uncertainty in demand and prices.

Interestingly, a report by IHS CERA issued early in 2014 predicted the United States would become a net exporter of natural gas by 2019.¹⁸ In the end, the IHS CERA report doubted exports would impact domestic prices and noted that many of the projects contemplated would not be built due largely to the fact that the global market could not absorb that much supply capacity.

In the end, the IHS CERA report doubted exports would impact domestic prices and noted that many of the projects contemplated would not be built due largely to the fact that the global market could not absorb that much supply capacity. All of this underscores that no project is immune from uncertainty.

IV: BOOSTING ALASKA'S ECONOMIC FUTURE

There is broad consensus that the path to Alaska's economic progress runs through the state's remote North Slope, where there are vast reserves of natural gas along the shores of the Beaufort Sea. The Alaskan reserves are, in fact, the largest in the nation outside of the Barnett Shale natural gas deposits in Texas and the Marcellus Shale deposits in Pennsylvania. Tapping those reserves would, among other things, create tens of thousands of jobs in Alaska, expand the state's revenue base by billions of dollars annually and generally redefine the state's economy at a time when demand for natural gas is rising around the globe, including in Asian markets that Alaska is geographically well-positioned to serve.¹⁹

In recent years, the state has moved ahead with legislatively-endorsed plans to construct a major pipeline that would carry natural gas 800 miles from the North Slope to ports in the city of Nikiski, where the gas would be liquefied then shipped abroad (see Figure 9). The state has four private partners – BP Alaska, ConocoPhillips Alaska, ExxonMobil and TransCanada Corp. – that are considering making a substantial investment, estimated at \$45 to 65 billion in the project, known as the AlaskaLNG Project.

At that cost, the AlaskaLNG Project would be the largest infrastructure project in North America. Viewed another way, it would be almost seven times larger than the cost of building the Panama Canal in today's dollars.²⁰ For Alaskans, the project would represent twice the cost it took to build the existing Trans Alaska Pipeline System.²¹

But the plan for the AlaskaLNG Project has been thrown into doubt this year, much to the dismay of citizens, business leaders, and investors in and out of Alaska. The current state administration has proposed that the state consider building an alternative, new pipeline with the state assuming most of the risk of financing the project. Analysts believe the state's decision to pursue a competing pipeline may jeopardize progress on AlaskaLNG by increasing the uncertainty about whether and when the project will go forward.

Uncertainty Raises the Cost of Capital and Hurdle Rates for New Investment

It is well known that uncertainty, from whatever the cause, increases the risk of an investment and raises the “hurdle rate” that a project must earn.²² As noted in a recent article by Jon Tucker in QFinance, the “hurdle rate” is the required rate of return on investment, above which an investment project is worth pursuing. The starting point for the hurdle rate is, then, the company's cost of capital (its costs for the funds required for its investments) to which a company may then decide to make some adjustment for that project's specific risk, by adding a risk premium. As a general rule, the company should consider investing in projects that generate returns which are higher than the company's hurdle rate. Further, the hurdle rate should be higher for riskier projects than for safer projects. When evaluating a prospective investment, analysts typically add a risk premium to the cost of capital, ranging from 0 to 50% and higher.²³

Large projects are often scrutinized more carefully than smaller projects, given their more material impact on the investors' cash flows, and a premium for risk is added to the cost of the capital figure to arrive at an appropriate hurdle rate. Most companies or investor consortia add a premium over and above the domestic project hurdle rate for foreign investments. New projects are more risky than existing projects, and should therefore reflect a premium over and above the observed earnings yield of an existing project investment. Ventures such as mergers are more risky still, and thus their returns should exceed a much higher hurdle rate before being sanctioned. A recent survey of energy companies by AON Analytics found that regulatory uncertainty is one of the largest risk factors facing new capital investments.²⁴

A recent analysis prepared by MAPI and The Aspen Institute for ACCF highlights the negative impact that uncertainty has on new investment.²⁵ As the authors note, “There are uncertainties created by the economic outlook in the United States, polarization of the political parties, macroeconomic policy, regulatory policies (environmental and financial), the economic outlooks for our major trading partners, volatility of oil and exchange rates, and corporate tax policy.”²⁶ The MAPI/Aspen report also cites new research by Stanford University demonstrating that there is a strong negative correlation between uncertainty and capital investment by corporations.²⁷

In addition, the Stanford University research shows that the negative impact is more pronounced for “firms with a higher degree of investment irreversibility and for firms which are dependent on government spending.”²⁸ The term “irreversibility” generally applies to large capital projects with lengthy development times, such as building refineries, commercial aircraft, or new factories.

The AlaskaLNG Project is a prime example of capital investment which would be distinctly irreversible, thus increasing the uncertainty about the project and raising its hurdle rate. Since Alaska has to compete for investment in its energy sector with states in the lower 48, as well as with other countries, it is important that Alaskan officials avoid policy shifts that increase uncertainty and make the AlaskaLNG Project potentially less attractive for the private sector investors in the project.

As to the prospect of a competing pipeline, Nikos Tsafos of the energy consulting firm Enalytica recently warned during a presentation to the Alaska Senate Resources Committee, “a process where the state is appearing to pursue two projects at the same time could undermine both.”²⁹

V: A COMPARISON OF THE TWO LNG PROJECTS

AlaskaLNG

The AlaskaLNG Project consists of a gas treatment plant on the North Slope, an 800-mile pipeline and liquefaction plant in the Nikiski area on the Kenai Peninsula where tankers would transport LNG to markets, likely in Asia. It is to be anchored by the Prudhoe Bay and Point Thomson fields which are expected to deliver on average about 3.5 billion cubic feet of gas per day.

With a price tag of between \$45 and \$65 billion, the AlaskaLNG Project would be one of the largest in North American history and certainly the largest single project in Alaska history. The liquefaction plant alone would require 150,000 tons of steel and would occupy as many as 800 acres. The project's corporate partners, BP Alaska, ConocoPhillips Alaska, ExxonMobil Corp., and TransCanada Corp., have commissioned studies that estimate the project has the potential to create between 9,000 and 15,000 jobs during the design and construction phases, plus approximately 1,000 jobs for continued operations.³⁰

Longer term, the project is expected to generate billions of dollars in revenue for Alaska. State studies estimate the project would produce \$3 billion to \$4 billion per year in tax and royalty revenue, once the project is fully operational about a decade from now.³¹

Under legislation the Alaska legislature passed to enable the state's participation in the project, the state can elect to take both a royalty and a gross production tax on gas from Prudhoe Bay and Point Thompson, as gas instead of cash. This would be the basis for the state's 25% equity share in the total gas from the project.³²

Certainly, the price of gas will fluctuate over many years and it is impossible to model accurately how geopolitical events will shape market dynamics. However, an analysis by Analytica demonstrates that the projected \$4 billion in revenue for the state is a reasonable supposition. Analytica estimated that the state's revenues from the AlaskaLNG Project range from \$2.9 billion to \$4 billion annually under the base line assumptions of the producers. The firm also created a "stress case" scenario that takes into account a 25% increase in capital costs, sales prices at half those assumed in the base line and lower utilization of the project than anticipated. Even in this scenario, Alaska could expect to see revenues of \$479 million to \$1.64 billion annually.³³

The Alaska Stand Alone Pipeline (ASAP)

Faced with dwindling gas supplies and rising energy costs in 2009, the state legislature began exploring the feasibility of developing an in-state natural gas pipeline. The Alaska Stand Alone Pipeline (ASAP) would also originate at Prudhoe Bay, include a compression station and a 727-mile, low-pressure pipeline that will run to Point MacKenzie, with a 30-mile lateral line between the main pipeline and Fairbanks. As described in the July 2011 Project Plan, ASAP is to be owned by the state but a private ownership model is permitted. Currently, it is to be financed with a combination of debt and equity from the owners. Once operational, revenue will come from sales of the natural gas.³⁴

This year, the current administration proposed expanding the project so that it could be a backup plan should producer partners in the AlaskaLNG Project decide it was no longer feasible to stay engaged. The expansion would require additional compressors and include a liquefaction component. The 2012 estimated cost of \$7.62 billion has risen to as much as \$9.97 billion. Additional required engineering, design and construction changes would add even more to the final cost.³⁵

It is worth noting that ASAP, as envisioned, had no plans for moving gas resources from Point Thomson. It only provided for taking gas from Prudhoe Bay and sending it by pipeline for treatment at a facility at the North Slope. In addition, if ASAP is redesigned to move gas from both Prudhoe and Point Thomson, the gas treatment plant would need an expansion to treat the differences between the two gas resources. Currently, the state has no access to natural gas without North Slope oil and gas operators producing their own gas at the same time. As such, the ASAP project has no gas to sell to the global market, or to in-state consumers.³⁶

Side-by-Side Comparisons Elusive

Beyond the basic descriptions of the two projects, a critical consideration for the state is the stage of design and development of each. It is theoretically possible that modifications to ASAP would make it comparable to AlaskaLNG in terms of the amount of gas moved through the pipeline, liquefied, and shipped overseas. But until the expanded ASAP's early stage Front End Engineering and Design, or pre-FEED work, is complete, this is a hypothetical matter. At this juncture, however, only a side-by-side comparison of known variables can help policymakers make a decision about which project the state should embrace.

More is Known About AlaskaLNG

In 2014, Alaska and representatives of the companies that would undertake the project signed a comprehensive and highly-detailed document called the Heads of Agreement (HOA), designed to establish up front common understanding of terminology, rights, and obligations and a host of legal and financial issues to avoid potential delays once work was underway. The 36-page document spelled out the advantages of the project for the state and included items such as commitments to employ Alaskan citizens, to the extent possible.³⁷

For its part, the state would facilitate permitting, eminent domain matters and adopt legislation and regulations pursuant to the FEED process. A lot of the pre-FEED work is ongoing. The HOA stipulated detailed understandings on matters such as right-of-way, payment in lieu of taxes and royalties. After passage of legislation last year establishing the AlaskaLNG Project, the state legislature appropriated \$70 million for pre-FEED work. The corporate partners are paying for the remaining portion of that work, which is estimated to cost \$500 million.

The HOA anticipated that legislation would be submitted and acted upon in 2014 to fully establish terms for state participation and state gas share, develop a process to review contracts, and spell out terms on critical issues such as the state's share of gas – that is, royalty in kind and gas in lieu of production taxes. Other important matters awaiting action by the State of Alaska include property taxes, upstream costs and lease expenditures, in-state gas deliveries, ownership interests, operating agreements, gas treatment, transportation, liquefaction services agreements, state LNG or gas sales contracts, contract duration and durability, periodic project reporting, in addition to the companies' commitment to hire Alaskan citizens and use Alaskan companies.

In recent months, the ASAP alternative became the subject of a protracted dispute between Alaska's legislature and administration, diverting efforts to address the items slated for action in the HOA. Only the right of way bill has been passed. The remainder of state needs, such as property taxes for municipal governments and durable long-term fiscal terms, have not yet been enacted.

Comparison of AlaskaLNG and ASAP Plans

Specifications	AlaskaLNG	Alaska Stand Alone Pipeline (ASAP)	Administration's 2015 ASAP Proposal
Cost	\$45-65 billion	\$10 billion	Unclear
Funders	State of Alaska, ExxonMobil, BP, ConocoPhillips, TransCanada	State of Alaska	State of Alaska & TBD
State share	25%	100%	Unclear
Volume	3.5 bcf/d	500 mcf/d	1.4-2.6 bcf/d
Gas Resource	Prudhoe & Point Thomson gas leases	Unclear	No
Pipe Size	42-inch	36-inch	36-inch
Compression	TBD (Multiple)	1 (North Slope)	TBD ("Between 8 and 15")
Liquefaction & Export	Yes	No	Yes
Gas Treatment	Gas Treatment Plant on the North Slope	Gas Treatment Plant on the North Slope at Prudhoe Bay	Likely but no plans under development
Terminal	Nikiski	Enstar Natural Gas pipeline in Mat-Su	Unclear (The Governor has said "Tidewater")
Department of Energy (DOE) Export License	DOE conditional approval of export to non-Free Trade Agreement countries	N/A (not an export project)	No DOE export application filed

The original ASAP project is designed to move 500 million cubic feet per day. This would be enough to supply Alaska utilities in Interior and Southcentral Alaska for residential needs and have some left for industrial uses such as mining or engineering. With the drop in oil prices, state financing may no longer be realistic. However, within the vision to expand the project to move two billion cubic feet per day, or even more, the state would lure a private sector partner to develop the LNG plant, which would be needed if it is to be a comparable alternative to AlaskaLNG.³⁸

The need for additional compressor stations with an expanded ASAP project would also require additional permitting, environmental impact studies and regulatory hurdles that would add to the final cost and up to two years on the timeframe for the project. In short, the pre-FEED work on ASAP is far behind that of the AlaskaLNG.

The AlaskaLNG Project is More Prepared to Move Ahead

It would be wise to move decisively toward the highest value proposition for Alaska, based on the available information about each project and rapid evolving market dynamics. With so many potential competitors racing to complete LNG projects to supply growing international demand, especially in Asia, the risk of delay was underscored in mid-April with a presentation to the Alaska Senate Resources Committee by consultants with the firm Enalytica.

“The state and its commitment has become a major risk factor for the AlaskaLNG Project,” Nikos Tsafos, of Enalytica, told state lawmakers. “A process where the state is appearing to pursue two projects at the same time could undermine both.”³⁹

Tsafos and his partner at Enalytica, Janak Mayer, explained that the AlaskaLNG Project represents an excellent opportunity for the industry and the state based on five criteria: Is the gas supply reliable? Are the sponsors credible? Is there “stakeholder” buy-in and mechanisms to resolve differences? Is the “ecosystem” favorable, meaning the presence of infrastructure and people to build the project? Is the project commercially viable?

A discussion of these criteria makes a compelling case that AlaskaLNG may be the better course for the state and demonstrates the risk of delay in considering the alternative:

Project Operators Have Expertise and Capability to Deliver a Project

The Alaska LNG project has capable producers with a proven global record of expertise and the capability to deliver a complex, multi-billion dollar infrastructure project on schedule, even in remote and challenging environments.

One of the AlaskaLNG Project partners, ConocoPhillips, completed construction and began operation of the Darwin LNG project in Australia’s Northern Territory in just three years from 2003 and 2006. The project was built to process gas from the Bayu-Undan gas reserve offshore in the Timor Sea and is connected by undersea pipeline. The Darwin LNG plant at Wickham Point, estimated to cost \$1.8 billion, came online three months ahead of schedule.⁴⁰

ExxonMobil also began production in 2014 from its pioneering Papua New Guinea LNG project which was started in 2010. The PNG LNG project integrates gas production and processing throughout the country through 700 km of pipelines and a liquefaction and storage capacity of 6.9 million tonnes per annum (MMt/a). The project has experienced a myriad of achievements, constructing infrastructure in some of the most remote and culturally complex landscapes on Earth, investing in both communities and ecological protections. And the project was delivered on time despite being constructed amidst a global recession.⁴¹

It is clear is that building an LNG project, particularly of the size and scope as the AlaskaLNG project, is a massive undertaking. In Alaska, the alternative to a producer-driven project is the state leading a project’s operation and construction. However, the state has no track record of developing such a project.⁴²

The Financial Commitments Are Solid and Long-Term

The price dynamics of LNG apply to both AlaskaLNG and ASAP. Unlike oil, where price fluctuations can occur on a daily basis and affect buyers and sellers, LNG project sponsors generally negotiate 15-20-year contracts. Even if the prices vary somewhat over that period, prices are contract-specific. The price risk with long-term LNG contracts stems from a deep and unexpected price dip that prompts a request for a contract negotiation.⁴³

In contrast, it is impossible to even quantify the long-term revenue expectations with ASAP since its scope and partnership arrangements are not yet fully resolved. The state's budget situation raises questions about its capacity to pay its 25-percent share in the AlaskaLNG Project. It is hard to create a scenario in which it could assume 100 percent of the risk of the ASAP project, which can be expected to rise significantly with its proposed expansion.

A Favorable Ecosystem in Jeopardy

In the growing global competition for new markets a perceived lack of commitment by the state will weaken the negotiating position for the Alaska project sponsors.

The administration has announced plans to create a team to review the AlaskaLNG Project for 45 days. As of this report, the administration has not yet released any information about the review's conclusions. This has increased the odds that the state legislature would have to convene a special session in the fall to address the tug of war between the governor and many state lawmakers over critical needs for the project as laid out by the HOA and in legislation passed by the Alaska legislature in 2014.

Larry Persily, the former federal gas coordinator for Alaska who is now an oil and gas advisor to the Kenai Peninsula Borough, told the *Alaska Journal of Commerce* that he is concerned the 45-day review introduced uncertainties, commenting, "It's April now, so if we do this review he (the governor) would get the conclusions in mid-May. With that delay it's hard to imagine the negotiating teams wrapping things up in time for a special session in the fall."⁴⁴

VI: CONCLUSION

With its oil production declining and facing real economic challenges, Alaska's prosperity hinges on the state meeting the rapidly rising global demand for LNG, particularly in Asia. Alaska has abundant resources that can be harnessed and moved securely by ship to the energy-hungry, growing markets of Asia. The time has come for the state's leaders to decide on an LNG project that can meet this demand profitably and maximize benefits to Alaska and its people. The AlaskaLNG Project has the potential to help maintain solid economic growth and state budget revenues. Historically, Alaska's vast oil and gas reserves have insulated the state from having to compete globally with other resource development states. However, the state has an opportunity to refine its partnership with the major producers involved in the AlaskaLNG Project for mutual benefit and success in a high-stakes global competition. AlaskaLNG brings together four of the world's largest and most experienced energy producers. The gas supply is known and plentiful. Projections have been scrutinized and represent a clear opportunity for the state.

Global competition, fluctuations in the price of oil and unforeseen political developments conspire to limit the guarantee of success. However, among the greatest threats Alaska faces to missing this opportunity is by pursuing two projects in competition with each other while ignoring the global competition for LNG markets.

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