

State fiscal options to help move Alaska gas

The goal of this paper is to ask: What could the state do to help the economics of a large-volume natural gas pipeline from the North Slope to out-of-state markets, combined with a smaller in-state line to serve Alaska's energy needs? And should the state do anything? We identify several fiscal options, but do not suggest these are the only ones that might help put a gas pipeline into Alaska's future.

The rewards of state financial involvement with any Alaska gas delivery system could be large: Public revenue from selling the state's stranded gas resources, jobs for Alaskans, and long-lasting low natural gas prices for Alaska homeowners, businesses and utilities thanks to the economies of scale that will greatly reduce transportation costs to in-state markets.¹ Moreover, entry to the worldwide market for North Slope gas promises to improve oil and gas exploration economics and prolong the life of the trans-Alaska oil pipeline.

Certainly, stability of gas supply for Alaskans is essential for any project, especially one with state dollars invested. Southcentral residents and businesses worry that Cook Inlet production could fall short of meeting local needs in the years ahead, and Fairbanks would love to see affordable gas break the economic stranglehold that costly diesel has on its economy. Those concerns have prompted renewed interest in a smaller in-state line to meet local needs if a big pipeline is not going to happen.

While the Alaska Gasline Inducement Act (AGIA) of 2007, which is helping to partially fund development expenses for the larger pipeline to out-of-state markets, requires off-take points along the line for Alaska deliveries, it does not create or fund any mechanism to build and operate a spur line(s) for in-state distribution. The Alaska Gasline Development Corp. (AGDC), created by House Bill 369 in 2010 and partially funded for its initial project development costs, could fill that role if the Legislature and governor so choose.

There would be benefits to planning an out-of-state line and in-state spur to coincide with the same

ALASKA GAS PIPELINE PROJECTS



¹The July 2011 report by the Alaska Gasline Development Corp. analyzing an in-state pipeline estimated the gas treatment plant and pipeline tariff at \$5.63 per million Btu, assuming there are customers for 100 percent of the gas. Because of economies of scale, the tariff on the much larger TransCanada/ExxonMobil project, for example, would be less than half that amount to pipe gas to Fairbanks. The bigger project would require a spur line to serve Southcentral, so the tariff to move gas to Anchorage would be higher than the cost to the Fairbanks area, but likely still less than \$5.63.

in-service date. Construction and mobilization efforts could be coordinated, along with scheduling and labor needs. Perhaps more importantly, decisions on the two lines are linked politically and economically for the state.

But could coordinated state assistance get both a large gas line and an in-state delivery system built? A detailed examination of economics, markets and financing strategies would be useful if the state wants to seriously consider its options.

However, there are risks to state financial participation. This background paper identifies some of the risks associated with selected approaches the state could take to help move North Slope gas to Alaska consumers *and* key out-of-state markets, but it does not identify every risk or every potential reward. Markets create their own uncertainties. For example, companies spent almost \$10 billion in the past decade building or expanding liquefied natural gas import terminals at U.S. ports because they thought the nation was running short of gas. They guessed wrong.

Federal encouragements

If the state of Alaska decides to provide further assistance with a gas pipeline, it will find itself aligned with federal policy.

Congress, through passage of the Alaska Natural Gas Pipeline Act of 2004 and other legislation, committed the federal government to assist an Alaska gas line project. The 2004 legislation created the Office of Federal Coordinator to oversee federal agency permitting, and also set out an expedited schedule for the Federal Energy Regulatory Commission to prepare the project's environmental impact statement.

In addition, Congress has:

- Authorized a federal loan guarantee to cover much of the project debt (up to \$21 billion, as of 2011), which would reduce the cost of borrowing for construction, thereby reducing the debt service payments and pipeline tariff. A lower tariff means a higher "netback" value for the gas as it leaves the ground at North Slope fields, providing more revenue for the producers and the state.
- Provided for accelerated tax depreciation for the pipeline in Alaska, allowing the owners a faster

payback on their huge upfront construction cost. Based on current cost estimates for the more than 700 miles of pipe in Alaska, the tax break could reduce the pipeline tariff by an estimated 6 cents per thousand cubic feet (mcf).

- Granted a tax credit for the Prudhoe Bay gas treatment plant, projected by TransCanada/ExxonMobil to cost as much as \$12 billion. The credit could reduce the estimated tariff by 11 cents per mcf.

Assuming the accelerated depreciation and gas treatment plant tax credit reduce the tariff by 17 cents, and adding in the potential savings from a \$21 billion federal loan guarantee (estimated at 10 cents to 15 cents per mcf), the reduction in shipping costs from the federal incentives could total \$450 million to \$550 million a year (close to a 10 percent savings on shipping costs). The tax incentives and loan guarantee, however, are available only for a project that serves U.S. Lower 48 markets.

Alaska paradox: Robust finances, precarious economy

If Alaska wasn't so wealthy, the resources to invest in or assist with a gas line wouldn't be available, and this discussion would be of little more than academic interest.

No state in the union, and only a few sovereign nations, can boast the per-capita financial assets accumulated by Alaska. As of June 30, 2011, the state held \$55.5 billion (over \$78,000 for every resident) in the Alaska Permanent Fund, Constitutional Budget Reserve Fund and other savings accounts. If Alaska truly wants a gas line(s) to become a reality, it likely has the means to help make it so.

Living on the economic edge

A recent study by Scott Goldsmith of the University of Alaska Anchorage Institute of Social and Economic Research found that half of all Alaska jobs are due to a single industry — petroleum — either directly from that industry or through state outlays financed by petroleum royalties and taxes.² North Slope oil

² Scott Goldsmith, "Alaska's Petroleum Industry: Transformative, But is it Sustainable?" Presentation sponsored by Northrim Bank, Anchorage, April 2011.

production peaked at 2 million barrels per day in fiscal year 1988 and since then has declined every year but one. Between FY 2009 and 2010, output dropped 7 percent. There is little evidence to suggest the trend will soon reverse.

The state has been protected from the economic effects of this decline by rising oil prices, which as of Oct. 12 stood at \$110 per barrel for North Slope crude. However, many Alaskans remember that as recently as December 1998 Alaska oil briefly sold below \$9 per barrel. The unbalanced and precarious oil-dependent state of Alaska’s economy lends urgency to the discussion of what the state might do to sustain the economy, monetize the stranded gas assets on the North Slope and help lower energy costs for a significant share of residents.

Finding the right balance

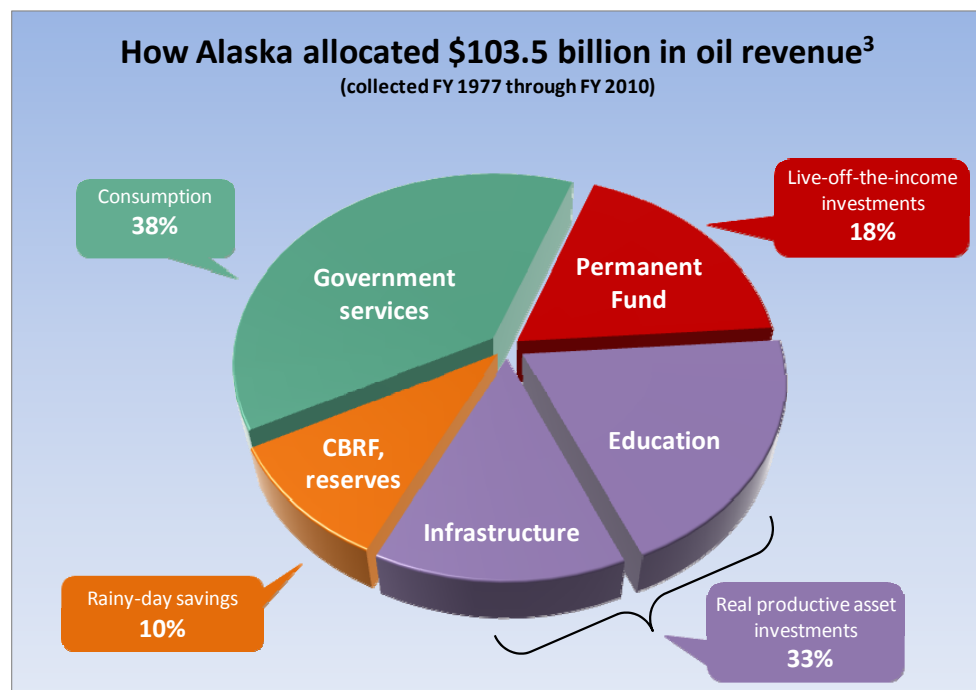
There are three distinct ways any individual or organization can use savings to help secure its economic future:

- Live-off-the-income: Put the savings in financial investments with the goal of eventually living wholly or partially off the earnings.
- Rainy-day savings: Place the money in safe, short-term investments to cover emergencies or budget shortfalls.
- Invest in real productive assets: Put the savings in non-financial investments that increase future productivity. For Alaska, these include transportation (roads, ports, harbors and airports), energy projects, other infrastructure, education and job training.

The first two kinds of investments usually go out of state. The third generates real assets in Alaska.

How to deploy the state’s billions in financial assets has been a continuing issue for Alaskans. Since 1977, when North Slope crude first flowed down the trans-Alaska pipeline, the state has collected \$103.5 billion in oil revenue. About 62 percent has been saved or invested. But as the chart shows, only 33 percent

(\$34.5 billion) was invested in productive assets including infrastructure and education. Thirty-eight percent was neither saved nor invested; it has been consumed in the form of government services. Eighteen percent has been channeled into the Alaska Permanent Fund, where it supports the state’s unique and hugely popular live-off-the-income program, the Permanent Fund dividend. And 10 percent has been allocated to three “rainy-day” accounts, including \$10.3 billion in the Constitutional Budget Reserve Fund.



³ This chart was prepared by Gregg Erickson based on published data from the Alaska Department of Revenue (DOR), Legislative Finance Division (LFD) and the Alaska Permanent Fund Corp. (APFC). Small discrepancies in additive subtotals are due to rounding.

DOR data shows the state received \$103.5 billion from oil. The infrastructure investment total (\$14.2 billion) is from LFD’s historical general fund capital budget data series, plus an estimated \$3 billion appropriated to capitalize the Alaska Housing Finance Corp., Alaska Industrial Development and Export Authority and other smaller endowments. Permanent Fund investment income and other investment earnings on oil revenue are not included.

Education investment of \$20.4 billion was calculated as a percentage of total general fund operating spending as compiled by LFD to approximate spending through the Department of Education and University of Alaska.

Options for state fiscal assistance to a gas line

The options discussed here were chosen to illustrate broad categories of approaches the state could take to financially assist with a gas pipeline project(s). No development means no revenue and no public benefits for Alaska, so state financial assistance leading to a pipeline that otherwise wouldn't be built is a plus.

1. Provide direct subsidies

The direct-subsidy model familiar to Alaskans is the 2007 Alaska Gasline Inducement Act (AGIA). Under AGIA, the state established a list of “must-have” conditions for a pipeline developer. These included the licensee’s acceptance of financing and rate-setting methodologies to produce lower tariffs, a commitment to expand pipeline capacity as needed, adoption of local-hire policies, the opportunity for in-state delivery of gas at reasonable costs, and acceptance of a timeline for submitting a project application to the Federal Energy Regulatory Commission (FERC).

In return, the state agreed to provide the AGIA licensee up to \$500 million to help offset the developer’s initial design and permitting costs. The state awarded the license to TransCanada in 2008. As part of the deal, TransCanada agreed to submit a project application to FERC by October 2012. If FERC determines that the application is complete, federal law requires a decision by the commission late summer 2014.

By making the subsidy available early in the development process, when risks are highest and potential payouts are the most distant, the state’s \$500 million provides a clear benefit to project economics. Another advantage is that the state knows from the outset the maximum size of its financial commitment.

This design and permitting subsidy, while moving the project ahead in the risky, early years when it lacks contracted customers, is only one piece of the puzzle to lock in a gas line. The AGIA subsidy will get you a building permit for the pipeline, but without customers and financing there will be no pipeline.

ExxonMobil in 2009 signed up as a partner on the project, and in 2010 TransCanada/ExxonMobil held an open season to solicit bids from potential customers. Though the developer received several bids, it has yet

to announce any signed shipping deals on a pipeline to move 4.5 billion cubic feet of gas per day into North America markets.

It appears the AGIA subsidy, by itself, is insufficient to make the gas line a reality. The project is high-centered, waiting for a push from the market and maybe the state to move it forward.

The state could build on the AGIA model by offering a substantial direct subsidy in return for further commitments by the licensee, including commitments to proceed to actual construction. But this could prove very costly to the state, in that it’s likely any pipeline developer would require significant sums of state dollars to start ordering steel pipe for a project lacking enough shippers to pay the mortgage. And though a bold move, a direct state cash subsidy cannot change market economics or guarantee the state a positive return on its money.

2. Make equity investment

The state agency created and directed by the Legislature in 2010 to develop a plan for a smaller in-state gas line recommended in its July 2011 report that state ownership of the project would produce the lowest tariffs for moving gas down the line. The Alaska Gasline Development Corp. ran the numbers assuming the state would borrow 100 percent of the estimated \$7.5 billion needed for construction. The cost of borrowing money using the state’s solid credit rating would be less than what a private owner would expect for a return on its equity investment in the project. Lower cost of capital means a lower tariff. The AGDC analysis calculated that state borrowing to pay the entire in-state pipeline project cost could drop the tariff at least 25 percent from the cost of private ownership — and maybe more if the Internal Revenue Service agreed to let the Alaska Railroad Corp. issue tax-exempt bonds for the project.

But there are risks to the state. Adding the gas line debt to the state’s existing debt “would make Alaska’s percentage of debt compared to gross domestic product three times any other state,” the AGDC report said.⁴ State financing of the project “may result in a downgrade of the state’s (credit) ratings, depending on the rating agencies’ views of the risks and reliability” that pipeline revenues could cover the bond payments, the report added. A downgrade would boost the cost of

⁴ Alaska Gasline Development Corp., “Alaska Stand-Alone Gas Pipeline Project Plan,” July 1, 2011, pages 4-10.

future borrowing not just for the state, but for school districts and municipalities, too. And borrowing so much money could hinder the state's ability to borrow for other needs in the years ahead, such as for schools or roads. AGDC in its report acknowledged those risks and said it would strive to convince rating agencies that the state could handle the debt.

Another risk would be if tariff revenues were insufficient to cover the pipeline debt payments and operating expenses. If that happened, the state would be liable to cover any shortfall.

The costs of such a potential subsidy are significant. If the state is ready to take such a \$7-billion-plus financing risk for the small pipeline, it is worth considering the potential of incurring the same size risk to assist a much larger line to serve out-of-state markets *and* the smaller spur line moving what is needed to meet Alaska's needs. The public benefits of marrying large-pipeline economies of scale and a spur pipeline supplying in-state needs would be gas delivered to Alaskans at the lowest cost while also producing much greater tax and royalty revenue. Under the state's existing tax and royalty structure, public revenues would be **seven times higher** under such a combination than from a stand-alone, smaller in-state gas line.

There also are questions with even partial state ownership of a gas line: Is it a conflict for the state to be both an owner and a regulator? Would politics interfere with pipeline business decisions? Worth asking and worthy of debate.

3. *Defer or amend property taxes*

The most straightforward of pipeline incentives, and one often discussed in the past, would be to defer or eliminate the substantial property taxes assessed on the project during construction. Property taxes are estimated at \$1.1 billion (2010 dollars) during the years of construction, before the pipeline generates any revenue. In addition, under the current property tax structure, construction cost overruns will add to the tax bill — adding up to more cash outflow for shippers.

Past proposals were designed to help project economics by eliminating the heavy front-end loading effect of the state's property tax structure. Because property taxes are paid through the pipeline tariff, any

State options

1. Provide direct subsidies
2. Make equity investment
3. Defer or amend property taxes
4. Defer production taxes
5. Modify rules on royalty switching
6. Add to federal loan guarantee
7. Finance construction overruns
8. Take share of shipping commitments

property tax relief will benefit shippers and boost the value of the gas. That's a plus for the project, which needs to attract shippers. Most property tax revenue goes to municipalities, however, so the state likely would need to consider providing offsetting aid to municipalities to cover their actual costs of public services during construction.⁵

In addition to considering tax deferrals during construction, the state could look for a solution to annual battles over what is the taxable value of the pipeline — battles that have consumed millions of dollars and decades of legal fights over the taxable value of the trans-Alaska oil pipeline. For example, rather than assessing the replacement cost or depreciated value of the gas line each year, the state could look at assessing property taxes on the basis of flow down the line. Less flow, less value, less in taxes; or, as long as the line stays full, the taxes stay full, too (perhaps with an inflation escalator). Under the current system, even if the line stays full it would drop in value over the years, knocking down municipal property tax revenues.

4. *Defer production taxes*

Besides taxing the actual pipeline's value, the state levies taxes on gas production. The state take from its current profits-based production tax on natural gas is expected to be lower than its tax revenue from oil — natural gas is less profitable per Btu than crude oil, after deducting transportation costs. But the

⁵ See Information Insights Inc., "Stranded Gas Development Act Municipal Impact Analysis." Prepared for the Alaska Department of Revenue, November 2004.

production tax on gas still would be significant for a 4.5 bcf/day pipeline (hundreds of millions of dollars a year, or even a billion-plus, depending on gas prices) and, in fact, would exceed the state's royalty take from gas production. The major North Slope producers, even if they do not own the pipeline, would provide the financing through the tariff they would pay for moving their gas down the line. Any deferral of production taxes during the early years of the project would allow the producers quicker recovery of their investment, thereby lessening their risk if gas prices are depressed at the outset of deliveries. Less risk makes a project more attractive to them. Similarly, back-end loading of tax rates would allow the companies to recover their investment in the early years, with the state waiting for its bigger payday in later years. If the state expects to be cash rich with oil dollars when the gas line starts flowing, Alaska may be in a good position to defer its gas production tax receipts until later.

5. Modify rules on royalty switching

Royalty rates and terms are set by contract when a company and the state sign an oil and gas lease. One term that producers have expressed concerns about is the state's ability to switch frequently and with short notice between taking its royalty share of production in kind (actual ownership of the gas) or in value (letting the producer sell the gas and send a check to the state). The producers believe that could create problems if pipeline capacity does not accompany the switch. They worry that they, as pipeline capacity holders, might not have gas to move when a switch occurs or, alternatively, that they could have state royalty gas to move but lack sufficient capacity rights to transport the gas. This is addressed, in part, in the Alaska Gasline Inducement Act, but may require further consideration to reduce the misalignment risk to producers, which could mean the state taking on some of the risk — trying to lessen the risk to investors to entice them to commit to the project.

6. Add to federal loan guarantee

Congress in 2004 authorized an \$18 billion loan guarantee for an out-of-state line. Indexed for inflation to 2011, that guarantee could backstop almost \$21 billion of debt.⁶ Back in 2004, the amount looked

adequate to cover the entire amount a pipeline owner would borrow for construction. That no longer is the case. The pipeline's estimated cost has escalated, and now the guarantee might cover just two-thirds of the debt.

An additional loan guarantee by the state could raise the total to cover the higher construction cost estimate. Whether that would make *the* difference, given the unfavorable gas market, is not clear. But it would further lessen the risk to investors and lower the pipeline tariff, making the project more attractive to shippers and the gas more valuable to the state.

7. Finance construction overruns

Cost-overrun financing by the state (such as a "soft-second" mortgage) is another option.

The risk of construction overruns on such a massive project is real, and the threat to project economics is just as real. The profit left for producers after paying transportation costs could be thin, especially in the early years. Adding the cost of construction overruns to the initial tariff would hurt, and that worries the companies that must sign 20-year binding contracts to ship gas down the line regardless of market conditions.

The problem of paying for potential overruns has hung over a North Slope gas line for decades. One option would be for the state to step in and offer financing to cover some or all of any overruns, structuring the debt to be repaid only after the first lenders are paid (much like a soft-second mortgage on a home gets repaid only after the homeowner pays off the first mortgage, thereby avoiding two payments at the same time). While such a financing plan would stretch out debt payments on the project, that may be preferable to crushing debt payments in the early years. The state could lend money directly for the construction costs, or guarantee the debt taken on by other lenders.

8. Take share of shipping commitments

Signing a firm transportation shipping commitment is another option for the state.

Open seasons, like the one held last year by TransCanada/ExxonMobil, are designed to elicit interest from potential gas shippers that would later commit to firm transportation shipping contracts.

⁶ Bill White, "Federal loan guarantee helps pipeline finances," Office of the Federal Coordinator, May 22, 2011. <http://www.arcticgas.gov/federal-loan-guarantee-helps-pipeline-finances>

Under the contracts, the shipper commits to pay the tariff regardless whether it ships the gas or can sell it downstream for enough to cover the tariff and other costs. The shipping contract is a key element in assuring lenders that their money will be paid back even if market conditions or gas supplies don't materialize as expected.

As a royalty owner of approximately one-eighth of North Slope gas, and as the recipient of production tax revenue, the state could consider taking its royalty gas in kind and also taking its production tax in kind (instead of a check from the producers) and signing shipping commitments equal to its share of the gas flow. This would clearly transfer risk (commodity price and project cost-overrun risk) from the producers to the state. How big a risk would the state be taking if it did that, and could such a commitment make a difference in getting a line built? The answers are unknown at this time, but it would boost the producers' expected rate of return by lowering their liability for having to cover all of the shipping costs. That could help tip the balance on a pipeline.

**ALASKA
PipelineProject**

 **TransCanada**  **ExxonMobil**

**ALASKA
GASLINE
DEVELOPMENT CORP.**
GAS FOR ALASKANS

**Alaska
Gasline**
PORT AUTHORITY

Issues of risk

Given the longstanding concern over the state's unbalanced and unsustainable economy, why hasn't Alaska chosen to invest more of its oil revenue in long-term, productive assets to take up the slack when the state feels the pinch from declining oil? The question is important because the risks of shifting resources to infrastructure and the historical impediments to making such a shift are likely to come up as Alaskans consider whether to provide state assistance to a gas line.

Competition for state funds

A decision to assist a gas line will mean less money is available for other state spending. But many constituencies that depend on state funding worry that throttled-down state spending is imminent anyway, caused by declining oil production. Other big infrastructure projects also could compete with a gas line for state financial assistance. For example, supporters of state assistance for the proposed Kink Arm crossing want the state to guarantee funding that would enable private investors to meet bond payments even if toll revenues fall short of expectations.

Some recipients of state money are likely to view even a highly contingent, potential future commitment of state gas line assistance as a potential threat to their funding — the state has only so much cash and credit to go around.

Doubts about success

Is there any assurance that state assistance will achieve its intended result? Critics of the state's promise to provide assistance to TransCanada under AGIA say the project is uneconomic and assert that reimbursing TransCanada for the remainder of the state's \$500 million obligation won't be enough to get the project built. Why throw more money at the project when there is no hope, they say.

The honest answer is that no such assurance is possible. This concern can be allayed if the assistance is structured so that potential costs to the state come late in the project, after major risks are past. Unfortunately, state assistance is likely to have the greatest leverage on a project if it comes early, when risks are greatest.

Doubts about need

Underlying the doubts about success are doubts about need. The current abundance of shale gas in North American markets and the significant build-up of new liquefaction projects to serve the Asia-Pacific LNG market suggest that conditions in 2011 are not favorable for an immediate project commitment on a \$30 billion to \$50 billion capital investment. However, any number of plausible developments could quickly and substantially improve the economic prospects for a gas line project.

Doubts about the need for assistance can be allayed, however, if the state financial involvement — be it a loan, loan guarantee, equity investment or tax deferral

— includes contingent provisions to recapture the value of state assistance. The owners profit, the state profits, and everyone should try to live happily ever after.

Regional balance

State assistance, if successful in getting the project(s) built, would add a stream of natural gas revenue to the state treasury, improve the prospect for finding additional oil and gas resources, and likely prolong the life of the trans-Alaska oil pipeline. These outcomes benefit every state resident more or less equally, but other benefits, including reduced energy costs and construction employment, would be concentrated in areas along the pipeline route. Achieving political and popular consensus on state assistance may require inducements, such as investments for regions distant from the pipeline project.

Bill Egan, the state's first governor, proposed creation of a state ferry system principally to serve the Southeast Panhandle, but he was careful to build support for this idea by linking it to a proposal for a smaller ferry system to serve Southcentral ports and, most importantly, for the state's first four-lane, limited-access freeways to reduce traffic congestion in Anchorage and Fairbanks.

Why is it important?

Alaska is in the envious position of having the cash and solid credit rating that other states — and the federal government — lack. Congress likely has done all it will do to help the gas line, and it's not surprising that even global oil and gas companies are hesitant about signing binding contracts that put them on the collective hook to pay \$150 billion or more to ship gas 10, 20, 30 years into the future when natural gas prices are unpredictable.

Accepting the premise that a large out-of-state natural gas pipeline and an in-state line would be good for Alaska, the question is: Can the state help make it happen and, if so, what could the state do to help?

The best answer would be state financial participation that tips the scale toward construction of a large gas line out of state along with an in-state delivery system to help meet Alaskans' energy needs for decades to come.



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

Contact information:

Larry Persily, Federal Coordinator
(202) 478-9755
lpersily@arcticgas.gov

General Questions:

info@arcticgas.gov

Locations:

OFC Washington, DC
1717 H St. NW, Suite 801
Washington, DC 20006
(202) 478-9750

OFC Alaska
188 W. Northern Lights Blvd., Suite 600
Anchorage, AK 99503
(907) 271-5209