

**01/23/15
OVERVIEW:
OFFICE OF THE
FEDERAL
COORDINATOR FOR
ALASKA NATURAL
GAS
TRANSPORTATION
PROJECTS**

<TARGET><BILL></BILL><SUBJECT>01-23-15 OVERVIEW OFFICE
OF THE FEDERAL COORDINATOR FOR ALASKA NATURAL GAS
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PROJECTS</SUBJECT><COMM>SRES29</COMM></TARGET>

WE'RE NOT THERE YET

BUT A GAS PROJECT
IS GETTING CLOSER

Senate and House Resources Committees – Jan. 23, 2015

Presentation by Larry Persily, Federal Coordinator for Alaska Gas Line Projects

FERC efforts during 2015

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- ❑ FERC expects project sponsors to submit first draft environmental resource reports next month
- ❑ FERC to issue formal Notice of Intent for an EIS as required by National Environmental Policy Act
- ❑ Contractor on board to assist with EIS
- ❑ FERC will lead workshops in Alaska for federal agencies participating in EIS process
- ❑ Public 'scoping' meetings will be held statewide

Export authorization status

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- ❑ Exports to free-trade nations approved Dec. 21
- ❑ Exports to non-free-trade nations pending
- ❑ Just one challenge filed with Energy Department
- ❑ All other comments were supportive
- ❑ Energy Secretary in October said the department would decide Alaska as 'expeditiously as possible'
- ❑ Export approval will be conditional on FERC EIS

Federal Coordinator shutdown

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- No funding in FY15 budget; shutdown March 1
- Congress did not expand agency's 2004 authority to allow coordinating work on LNG export project
- Agency will preserve reports and research under 'The Pipe Files' digital library at ARLIS / UAA
- Discussions under way with federal officials to possibly find new home for information services
- The need to share information does not disappear

Make-or-break factors for Alaska

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- Global economic growth, LNG market demand
- Japan, China, Europe, Middle East, South America
- Price and politics of burning gas instead of coal
- If LNG demand fails to meet expectations, investors will build fewer new LNG export plants
- Whether Alaska wins? It's project cost and price
- Alaskans should not expect oil wealth from LNG

It's all about risk and price

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- Dozens of proposed, potential, possible projects are making pitches to the same buyers as Alaska
- No global shortage of gas
- Project cost and price rules in competitive market
- But certainty, dependability have value, too
- Reducing risks for buyers and investors is crucial
- No LNG project has lost money long-term, but some will earn a lot less profit than sponsors had planned

What are the odds for Alaska

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- Best it's been in 40 years
- The timing this time is good for Alaska
- Natural gas increasingly the fuel of choice
- LNG demand growing, just a question of how much
- Turning North Slope gas into cash would extend life of oil operations — crucial for Alaska's future
- By 2020s and beyond, gas sales could begin without ruining North Slope oil production numbers

Staying on schedule

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- Draft resource reports to FERC early 2015
- Pre-FEED field work summer 2015
- FEED decision early 2016
- Full application to FERC summer 2016
- Draft EIS 2017; final EIS 2018; FID 2019
- Each decision point is about partners agreeing to spend increasingly larger amounts of money

Alaska's competition: Canada

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- ❑ High costs make it hard to sign up customers
- ❑ Petronas delayed FID, saying it needs to cut costs
- ❑ None of the 18 projects have gone to FID
- ❑ First Nations negotiations taking more time
- ❑ Environmental issues for coastal LNG plants
- ❑ Project sponsors pushed for lower taxes in B.C.; now seek faster depreciation on federal taxes

Competition: U.S. Gulf Coast

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- First project to start up end of 2015; two more under construction on Gulf and one on East Coast
- All others are waiting for permits and FID
- Industry will not want to risk cost overruns from building too many projects all at the same time
- All are 'tolling model' projects, where plant owners don't take gas price risk — they're paid regardless
- Likely a lot of the LNG could stay in Atlantic Basin

Competition: Russia

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- Yamal LNG under development, but under duress
- Western sanctions over Ukraine hinder financing
- Russian government helps from 'Wellbeing Fund'
- Russia is building port, airport and icebreakers
- Chinese has offered financing, but no bargain rate
- Sanctions block technology, equipment, expertise
- Many expect Yamal will miss 2018 start-up target

Global pricing debate

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- Asian buyers, led by Japan, have been pushing to delink LNG pricing from oil since at least 2012
- High oil prices, growing LNG demand, lack of new supply pushed prices to \$17 - \$20 per million Btu
- That was then, this is now: \$10 per million Btu
- New supply coming online; demand growth softens
- And plummeting oil price makes LNG cheaper
- Buyers signing shorter contracts until market settles

Future pricing unknown

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- ❑ Lower prices will lessen push for new price formula
- ❑ But most LNG still will be sold on long-term deals
- ❑ Today's price is not the deciding factor for Alaska
- ❑ Price and contract terms for 2020 and beyond will determine success or failure of Alaska gas project
- ❑ Alaska has to compete at future prices, not today's
- ❑ Terms will vary as buyers seek diversified portfolio

Confidentiality

- Debate is unavoidable with state ownership
- Confidentiality a financial and political conflict when public entity is a partner with private business
- Issue must be resolved to satisfaction of all partners
- Balance that works for public and private interests
- No LNG project would allow disclosure of design, technology, contract terms, strategy, rates of return
- State will need to separate business from politics

For more information

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C. List of Selected Key Terms

Below is a list of key terms and definitions used throughout this Report. Where a term is defined or otherwise explained in further detail in this Report, the relevant section is indicated in parentheses.

- **AAPP:** Arctic Alaska Petroleum Province; location of the majority of Alaska's petroleum reserves (Section III.B.1.a)
- **AFUDC:** Allowance for Funds Used During Construction; a return-on-capital calculation for construction financing (Section IV.F)
- **AGDC:** Alaska Gasline Development Corporation (Section III.C and Section IV.C)
- **AGIA:** Alaska Gasline Inducement Act; 2007 State statute providing, among other things, for reimbursement of natural gas developers' expenses to promote development of a natural gas pipeline (Section III.D)
- **ANGDA:** Alaska Natural Gas Development Authority (Section III.C)
- **ANGTA:** Alaska Natural Gas Transportation Act; 1976 Federal statute promoting expedited development of a pipeline to deliver natural gas from Alaska to the Lower 48 (Section III.C)
- **ANWR:** Arctic National Wildlife Refuge; Federal area within Alaska's North Slope with significant undiscovered oil (Section III.B.1.a)
- **ARMB:** Alaska Retirement Management Board; entity controlling seven State retirement systems (Section VI and Section VI.B)
- **ASAP:** Alaska Stand Alone Pipeline; proposed 727-mile pipeline southward from the North Slope to an existing pipeline system in the Matanuska-Susitna Borough (Section III.C)
- **BBL:** Billion barrels (unit of *oil* volume)
- **Bcf:** Billion cubic feet (unit of *natural gas* volume)
- **CAPM:** Capital asset pricing model; framework for calculating cost of equity (Section VII)
- **CBRF:** Constitutional Budget Reserve Fund (Section V.A.1 and Section V.B.2)
- **Cook Inlet:** Area in Southcentral Alaska, location of substantial oil and gas reserves (Section III.B.2.b.ii)
- **DOE:** U.S. Department of Energy
- **EIA:** U.S. Energy Information Administration
- **EPC:** Engineering, Procurement and Construction; final phase of Project before operations, encompasses final engineering and preparation, and expected to cost approximately \$52.8 billion (midpoint) (Section IV.D and Section IV.G.1)
- **FEED:** Front-End Engineering and Design; final phase of Project before major construction, encompasses contract preparation and financing arrangements, and expected to cost approximately \$1.8 billion (midpoint) (Section IV.D and Section IV.G.1)
- **FERC:** Federal Energy Regulatory Commission
- **FID:** Final Investment Decision; last Project milestone before EPC phase (Section IV.D and Section IV.F – IV.G.1)

- **FTSA:** Firm Transportation and Services Agreement; agreement describing the tariff that the State of Alaska pays TransCanada under the Memorandum of Understanding (Section IV.C and IV.F)
- **Fuel Use Act:** Powerplant and Industrial Fuel Use Act; 1978 Federal statute restricting construction of new power plants and boilers (Section III.C – III.D)
- **FY:** the State of Alaska’s Fiscal Year starts on July 1 and ends on June 30 (e.g., Fiscal Year 2014 ended on June 30, 2014)
- **GeFONSI:** General Fund and Other Non-segregated Investments; includes the State’s general operating fund (Section V.B.2)
- **GTP:** the Project’s gas treatment plant (Section IV.B)
- **GW:** Gigawatt (unit of power equivalent to one billion watts)
- **Heads of Agreement:** agreement that establishes non-binding guiding principles and partner roles for the Project as well as important commercial and operating arrangements among each of the key Project parties (Section IV.A and Section IV.C)
- **IPO:** Initial public offering; method of issuing shares to public investors (Section VII.B.1)
- **ISD:** In-service date; date upon which a project becomes available for operations
- **JBIC:** Japan Bank for International Cooperation (Section VI.B)
- **KOGAS:** Korea Gas Corporation; state-owned South Korean utility (Section III.A.2)
- **LIBOR or L:** London Interbank Offered Rate; benchmark rate that banks charge each other for short-term loans (Section VII and Section XI.A.2)
- **LNG:** Liquefied natural gas
- **LNG Plant:** the Project’s liquefaction facility (Section IV.B)
- **Lower 48:** Contiguous U.S. states, consisting of 48 states and Washington, D.C.
- **Mcf:** Thousand cubic feet (unit of *natural gas* volume)
- **MMBD:** Millions of barrels per day (unit of *oil* volume)
- **MMBtu:** Million British thermal units (unit of energy)
- **MOU:** Memorandum of Understanding; agreement between the State and TransCanada (Section IV.F)
- **MTPA:** Metric tons per annum (unit of *LNG* volume)
- **North Slope:** Region in northern Alaska bound by the Brooks Range and Arctic Ocean (Section III.B.1 – III.B.2)
- **NPRA:** National Petroleum Reserve-Alaska; area within Alaska’s North Slope with significant undiscovered oil (Section III.B.1.a)
- **NPV:** Net present value; the present value of a series of future cash flows (Section IV.G.5)
- **OMB:** State of Alaska Office of Management and Budget; prepares and manages the State’s budget on behalf of the Governor (Section V.A.1)

- **PCE Endowment Fund:** Power Cost Equalization Endowment Fund; State fund created to provide affordable electricity for rural Alaska regions (Section V.B.2)
- **Pipeline:** the Project's natural gas pipeline (Section IV.B)
- **Point Thomson:** Area located in Alaska's North Slope; location of an existing oil and gas field (Section IV.B)
- **Pre-FEED:** Pre-Front End Engineering and Design; initial phase of Project, encompasses preliminary engineering and planning, and expected to cost approximately \$400 million (midpoint) (Section IV.D and Section IV.G.1)
- **Project:** the Alaska LNG Project
- **Prudhoe Bay:** Area located in Alaska's North Slope; location of an existing oil and gas field (Section III.B.2.b.i)
- **SB 138:** Senate Bill 138; 2014 State statute facilitating Alaska individuals' and entities' participation in ownership of a North Slope natural gas pipeline (Section I)
- **SBRF:** Statutory Budget Reserve Fund (Section V.A.1 and Section V.B.2)
- **SPA:** Sale and Purchase Agreement
- **Stranded Gas Act:** Alaska Stranded Gas Development Act; 1998 State statute enabling State negotiation of terms for oil producers dealing with stranded gas (Section III.C)
- **TAPS:** Trans-Alaska Pipeline System; 800-mile pipeline constructed in the 1970s to allow for the transportation of natural gas from Prudhoe Bay to Valdez (Section III.B.2.b.i)
- **Train:** Refers to an LNG plant's liquefaction and purification facility (Section XI.B)
- **Tcf:** Trillion cubic feet (unit of *natural gas* volume)
- **USGS:** U.S. Geological Survey; scientific agency of the U.S. Government
- **WACC:** Weighted average cost of capital; blended cost of financing that takes into consideration the amount of debt and equity in an entity's capital structure, and the respective costs (Section VII)
- **WTI:** West Texas Intermediate; a type of crude oil, the price of which is often used as a benchmark for oil prices (Section III.A.1)