

# **Alaska Gasline Options and Challenges**

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# Structure of Tonight's Discussion

- Part 1 – History of Alaska Gasline Efforts 1974-2008
- Part 2 – Alaska Gasline Inducement Act “Must Haves”
- Part 3 – The Road Ahead

# History of Alaska Gasline efforts

- 1974 – Alaskan Arctic Gas Pipeline Co. proposes 48 inch, 3,700-mile pipeline from the North Slope to the Mackenzie River Delta and south to serve Midwest or Western America
- 1974 – El Paso Alaska Co. proposes 42 inch, 800 – mile pipeline to Valdez – LNG at Valdez
- 1976 – Congress passes the Alaska Natural Gas Transportation Act (ANGTA) providing an expedited procedural vehicle for governmental approval and construction of a natural gas transportation system
- 1977 – The Alcan Pipeline Co. and Northwest Pipeline Co. “Alcan Project” proposes a variable 36 to 48 inch, 4,800 mile pipeline North Slope to Fairbanks and along the Alaska Highway then east to Chicago and west to California
- 1977 - Alcan Project selected by President Carter and Congress. \$40 billion project to be privately financed – only Alberta to Chicago leg completed. Financing for Alaska leg of project never secured
- 1981 – Congressional waiver of financing regulations to allow Natural Gas producers to own gas pipeline and bill customers for pipeline costs prior to completion

# History of Alaska Gasline efforts

- 1982 - Construction on Alaska leg of project suspended indefinitely by FERC
- 1982 - Governor Hammond forms committee to study marketing of Alaska Gas - The committee examined an all-Alaska pipeline combined with an LNG terminal in Southcentral Alaska as the marketing point for the gas, known as the Trans-Alaska Gas System (TAGS). The Yukon Pacific Corporation acquired the pipeline right-of-way and other permits for the TAGS project but never moved forward with construction.
- 1980s – 1990s various proposals – lack of financing. 1980s gas price spike then decline.
- 1998 Alaska Legislature passes the Stranded Gas Development Act (SGDA)- legal basis for developing a fiscal contract between the state and pipeline project sponsors. SGDA provides the opportunity for a project sponsor to negotiate fiscal contracts with the State.
- 2000 – BP Amoco, ExxonMobile, and Phillips Petroleum agree to put \$75 million to begin study of a pipeline

# History of Alaska Gasline efforts

- 2001 – Governor Knowles creates the Alaska Natural Gas Policy Council to promote an Alaska Highway North Slope gas pipeline
- 2004 – Congress passes the Alaska Natural Gas Pipeline Act (ANGPA) clarifying elements of the 1976 statute and authorizing an \$18 billion federal loan guarantee for an Alaska gas line project
- 2004 - five groups submit pipeline proposals under the SGDA: BP, ConocoPhillips, and ExxonMobil; TransCanada Corporation; Alaska Gasline Port Authority; Enbridge, Inc.; and MidAmerican Energy Holdings Company
- 2006 – Governor Murkowski announces a deal has been struck with BP, ConocoPhillips, and Exxon to construct a gas line to Alberta. Presents a draft contract and Fiscal Interest Finding. Deal negotiated outside of the terms of the SGDA.
- 2006 – Murkowski Administration proposes amendments to SGDA to conform draft contract to the law

# History of Alaska Gasline efforts

- 2006 – Legislature rejects proposed SGDA amendments:
  1. Allowance for modification to oil and gas taxes to be part of a fiscal contract between the producers and Alaska
  2. “Fiscal certainty” a 30-year production, corporate income, and property tax freeze on oil, 45-year freeze on gas tax levels
  3. State to hold a 20% equity ownership of pipeline – State LLC to form under Delaware laws.
  4. Ability for the Commissioner of Revenue to modify taxes passed by citizens initiatives
  5. State to take all of its Royalty gas “In Kind”
- 2007 – Legislature Passes the Alaska Gasline Inducement Act (AGIA), establishing an RFP process for construction, operation of a gasline and providing incentives

# History of Alaska Gasline efforts

- 2007 – Applications filed by TransCanada, Little Susitna (Sinopec), Alaska Natural Gas Development Authority (ANGDA), Alaska Gasline Port Authority (AGPA), and AEnergia LLC. Conoco submits application outside of AGIA.
- 2008 – TransCanada is found to have filed the only complete application under AGIA guidelines
- 2008 - BP and ConocoPhillips announce the inception of the “Denali” gasline project
- 2008 – Legislature deliberates on approval or denial of AGIA license to TransCanada

# Alaska Gasline Inducement Act – “Must Haves”

1. Application must be completed within a timeframe established by Commissioners
2. Must provide a thorough description of project including: Route, Delivery Points, Economic viability of project, Pipeline Access and Tariff Terms that will be offered, Work-Plan, Timeline, Budget, plan for compliance with regulatory requirements including for CO2 emissions. Describe Tariff, Access, Ratemaking for Canada or Marine (LNG) options.

# AGIA – “Must Haves”

3. If under FERC jurisdiction (Interstate) commit to application for FERC certification by a date certain. Commit to hold a binding open season within 36 months after issuance of license
4. Regulatory Commission of Alaska jurisdiction (Intrastate) – binding open season 36 months after issuance of license

# AGIA – “Must Haves”

5. Applicant must assess market demand for additional pipeline capacity every two years
6. Commit to expansion of pipeline to encourage gas exploration/development
7. Applicant must propose and support rolled-in rates for recovery of expansion costs

# AGIA – “Must Haves”

8. Describe how the applicant will deal with a North Slope gas treatment plant (GTP). If owned by the applicant, must commit to FERC or RCA certification
9. Propose a percentage and total dollar amount for qualified reimbursement from the State’s up to \$500 million inducement match

# AGIA – “Must Haves”

10. Propose and support a capital structure for ratemaking purposes of not less than 70% debt and 30% equity

Debt	Equity	Tariff	State NPV (\$ billions)
<b>80%</b>	<b>20%</b>	<b>\$1.47</b>	<b>37.4</b>
<b>75%</b>	<b>25%</b>	<b>\$1.56</b>	<b>36.9</b>
<b>70%</b>	<b>30%</b>	<b>\$1.65</b>	<b>36.3</b>
<b>65%</b>	<b>35%</b>	<b>\$1.74</b>	<b>35.7</b>
<b>60%</b>	<b>40%</b>	<b>\$1.84</b>	<b>35.1</b>
<b>55%</b>	<b>45%</b>	<b>\$1.95</b>	<b>34.5</b>
<b>50%</b>	<b>50%</b>	<b>\$2.06</b>	<b>33.8</b>
<b>45%</b>	<b>55%</b>	<b>\$2.18</b>	<b>33.1</b>

- Division of Oil and Gas, DNR - Presentation to House Finance, 4/27/07

# AGIA “Must Haves”

11. Describe means of managing cost overruns and minimizing their effects on tariffs
12. Commit to providing five in-state gas delivery points
13. Provide “Firm Transportation” commitments to in-state points at “distance sensitive rates”

# AGIA – “Must Haves”

14. Commit to establish a local headquarters in-state
15. Commit to local hire to the maximum extent allowed by law
16. Waive the right to appeal rejection of application
17. Commit to negotiate a Project Labor Agreement before pipeline construction

# AGIA – “Must Haves”

18. Commit that the state reimbursement (up to \$500 million) will not be included in the rate-base (tariff), and will be used as a credit against pipeline cost of service
19. Provide a detailed description of applicant, partners, subsidiaries
20. Describe the applicant’s history of compliance with safety, health and environmental regulations, budgeting, and following a detailed work-plan

## The Road Ahead

*What do we get for \$500 million of Reimbursed Expenses?  
(matched at 50/50 before open season, 90/10 match up to FERC certification)*

- We earn in reduced tariff - \$700 million over 25 years
- Applicant agrees to terms of AGIA to receive match, so under the 70%/30% debt equity ration, we get \$3.1 billion more in NPV than under a 50%/50%ratio, equaling over \$7 billion in future cash flow
- Applicant agrees to expand pipeline whenever reasonable increments available – state gets more royalty and production tax
- We get a completed FERC certificate. If no action toward a pipeline for a few years, we can buy all of the data for net cost.

# Who is TransCanada?

- Owns and operates 36,000 miles of pipelines connecting North American gas producing basins to downstream markets
- Transported 15 billion cubic feet per day of natural gas in 2007
- 335 billion cubic feet of gas storage capacity
- Power generation assets in Canada and U.S., diverse portfolio of nuclear, natural gas, coal, hydro, and wind
- LNG import terminals in development in Quebec and New York State
- Currently has \$5.3 billion committed to pipeline projects in North America
- Plans to invest \$4.6 in energy projects

# Alaska Gas – proven and estimates

- **35 trillion cubic feet** proven reserves  
Alaska North Slope
- **14 trillion cubic feet** known  
accumulations - possible gas reserves
- **227.34 trillion cubic feet** mean estimate  
of undiscovered, conventional natural gas  
in Arctic Alaska including NPRA, Central  
North Slope, ANWR, Chukchi shelf,  
Beaufort shelf, Hope basin

Sources: OCS estimates from MMS; onshore & state waters estimates from USGS

# World Natural Gas Proven Reserves By Country

	<b>TCF</b>	<b>% of total</b>
<b>World</b> .....	<b>6,183</b>	<b>100.0</b>
<b>Top 20 Countries.</b> .....	<b>5,602</b>	<b>90.6</b>
Russia .....	1,680	27.2
Iran .....	974	15.8
Qatar .....	911	14.7
Saudi Arabia .....	240	3.9
United Arab Emirates .....	214	3.5
United States. ....	204	3.3
Nigeria. ....	182	2.9
Algeria .....	162	2.6
Venezuela .....	152	2.5
Iraq .....	112	1.8
Turkmenistan .....	100	1.6
Kazakhstan .....	100	1.6
Indonesia. ....	98	1.6
Norway .....	82	1.3
China. ....	80	1.3
Malaysia .....	75	1.2
Uzbekistan .....	65	1.1
Egypt .....	59	0.9
Canada .....	58	0.9
Kuwait .....	55	0.9
<b>Rest of World.</b> .....	<b>581</b>	<b>9.4</b>

Source: "Worldwide Look at Reserves and Production," Oil & Gas Journal, Vol. 104, No. 47 (December 18, 2006), pp. 22-23.

# Gas Consumption

- Total U.S. natural gas consumption increased by 6.2 percent in 2007 to **23.0 trillion cubic feet (tcf)** compared with 21.7 tcf in 2006. Significant increases occurred in all end-use sectors except the industrial sector, where consumption increased by a modest 2.1 percent. The residential sector consumed 8.2 percent more natural gas in 2007 than in 2006, while the electric power and commercial consumed 9.9 and 6.1 percent, respectively, more than in 2006.
- **Total World consumption projection in trillion cubic feet:**
  - 1990 - 73.4**
  - 2002 - 92.5**
  - 2003 - 95.5**
  - 2010 - 116.5**
  - 2015 - 134.3**
  - 2020 - 149.9**
  - 2025 - 165.5**
  - 2030 - 182.0**

Source: Energy Information Administration

# In-State Gas Use

- Current total Alaska gas use (non-industrial): 220 million cubic feet per day
- Allowance under AGIA for preferential treatment or investment in gas line with a capacity of up to 500 million cubic feet per day
- Increased in-state gas use with gas line construction
- Lower cost for Alaskans ensured through mandate for distance sensitive rates; recent changes to production tax structure on gas used in-state – capped at 5% net; and no progressivity
- Unable to market state gas at less than market value without changing the constitutional mandate that Alaskan resources be developed for the maximum benefit of all Alaskans

# Energy plan

- Legislative appropriations for renewable energy, weatherization. Legislature will be working on energy plan/energy cost relief this summer. Comprehensive energy plan due out in 2009.

# Administration's Consultant Analysis of TransCanada

- Bill Sparger – Energy Project Consultants, LLC, Eric Briel – Westney Consulting Group, Inc – Project Costs/Schedule and Tariffs  
*TransCanada project design will accommodate volumes between 3.5 and 6.5 bcf/d by using incremental compression for expansion*
- Black and Veach – Net Present Value Analysis  
*4.5 bcf/d TransCanada proposal has positive NPV benefits for all stakeholders*
- Goldman Sachs – Financial Review of TransCanada and Proposal  
*TransCanada has the financial strength to meet its AGIA obligations*
- Gas Strategies Consulting – Challenges in Building an Alaskan LNG chain  
*LNG to illiquid, long term contracted Asian markets-Pipeline to the liquid, short term contracted US market*
- Black and Veach – LNG NPV Analysis and Results  
*LNG projects have higher capital costs and therefore greater risk than a pipeline project*

# Administration's Consultant Analysis of TransCanada

- Spencer Hosie/Hosie McArthur LLP – Alan Van Fleet/Greenberg Traurig LLP – Legal Issues Affecting Producer Participation  
*Producers have a duty to produce gas under their lease contracts – state is in a high stakes negotiation with producers. AGIA circumvents complex lawsuits.*
- Greenberg Traurig LLP/Don Sheppler – FERC Issues  
*Alaska should not rely on Federal regulators to protect Alaska's vital Interests – “rebuttable presumption” in favor of using rolled-in pricing for expansions at FERC is not a guarantee, hence AGIA provision*
- Arcadis – Exploration & Development Employment  
*Exploration and Development jobs created sooner under an open access pipeline than a non-open access pipeline*

# Legislature's Consultant Analysis of TransCanada

- Muse Stancil – Financial Assessment of the Impact of the Alaska Gas Pipeline

*TransCanada has a large gas transmission and storage portfolio, is financially stable*

- Dan E. Dickinson CPA

*How does the state advance conversation with producers without bidding against itself. Do we ask TransCanada to be in the middle?*

- Econ One/Barry Pulliam

*TransCanada proposal lies within their core competencies*

# Links to Administration and Legislature gasline information

- <http://www.legis.state.ak.us/specdocs.asp>
- <http://www.gov.state.ak.us/agia/>