



THE ALASKA GASLINE PROJECT UPDATE

Alaska Gasline Team

Rotary Club of Fairbanks

Mark D. Myers, AGIA Coordinator, October 14, 2010

Getting North Slope Gas to Market

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North Slope
(35 Tcf of Nat. Gas)

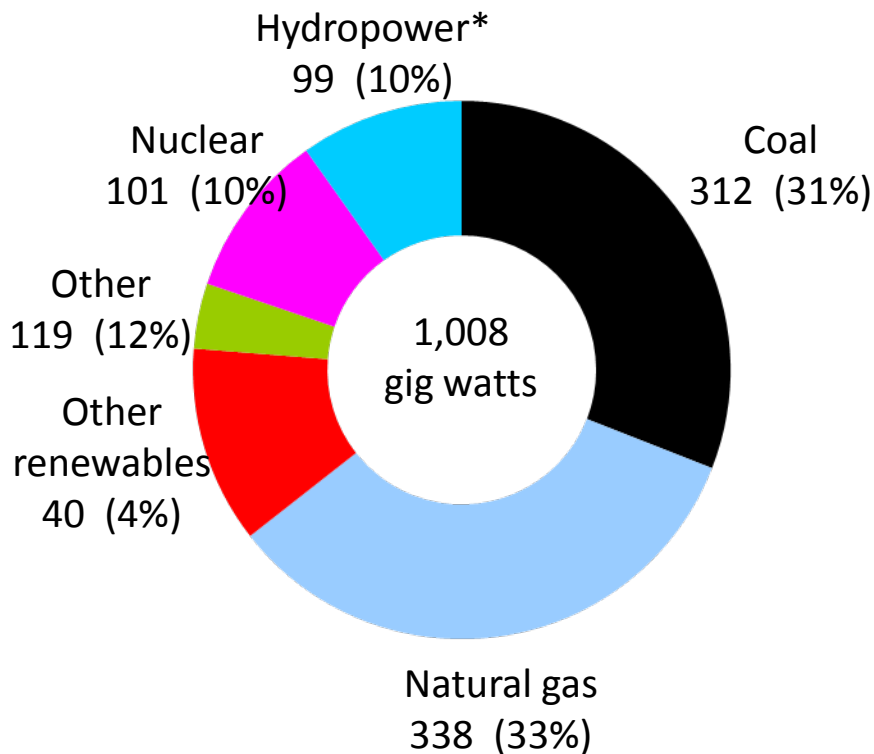


1. Alaska Pipeline Project (APP)
 - a) Overland Mainline Route
 - b) LNG Route
 - c) Alaska Off-take points, including spur line options
2. Denali Pipeline Project
 - a) Overland Mainline Route
 - b) Alaska off-take points, including spur line options
3. Bullet Line

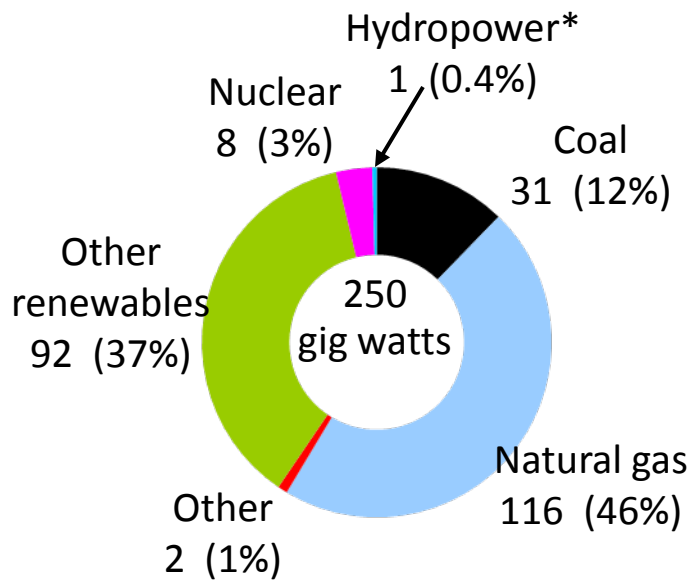
For US Electrical Generation Natural Gas and Renewables Account for the Majority of Capacity Additions from 2008 to 2035

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2008 capacity

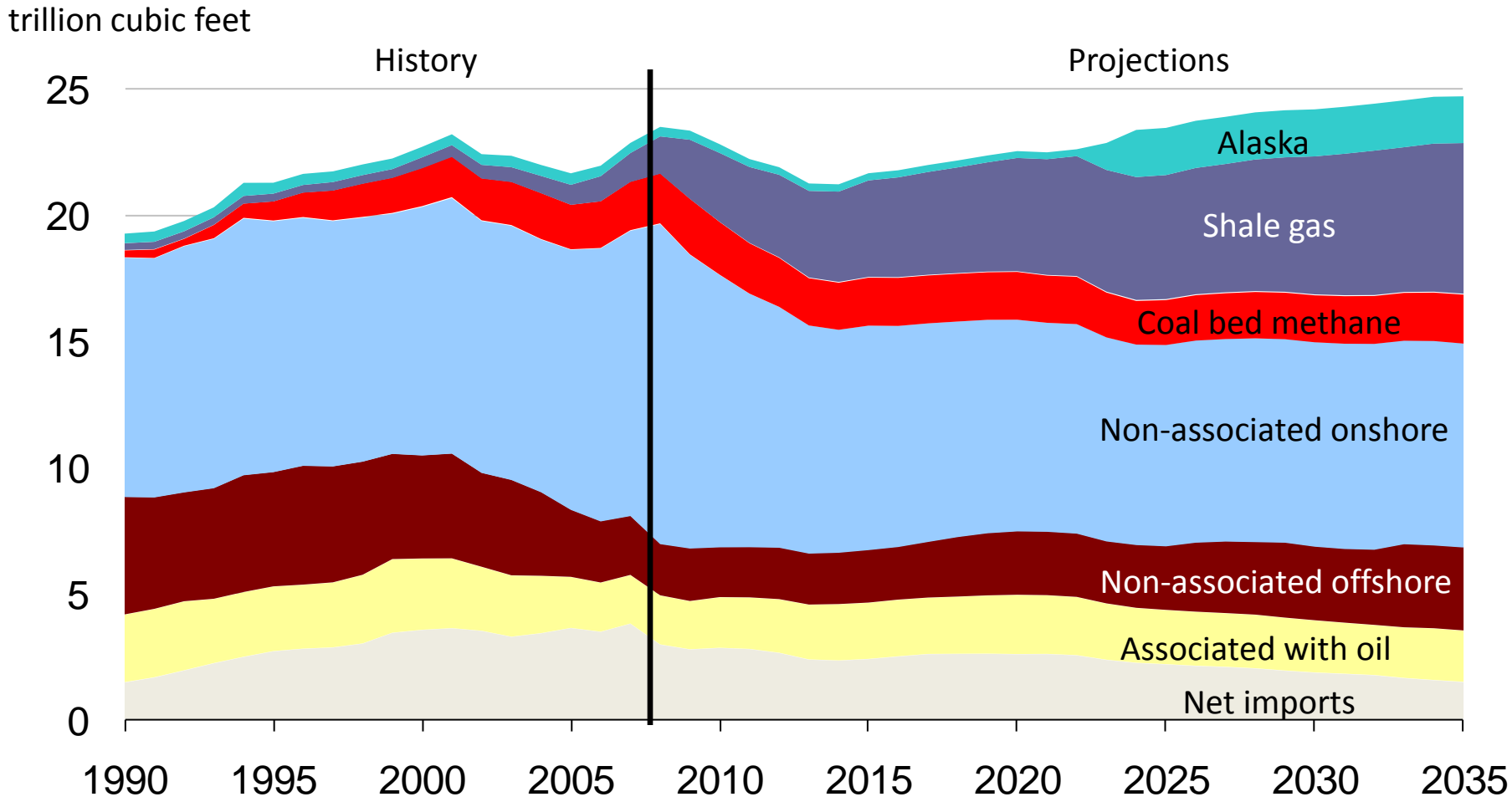


Capacity additions 2008 to 2035



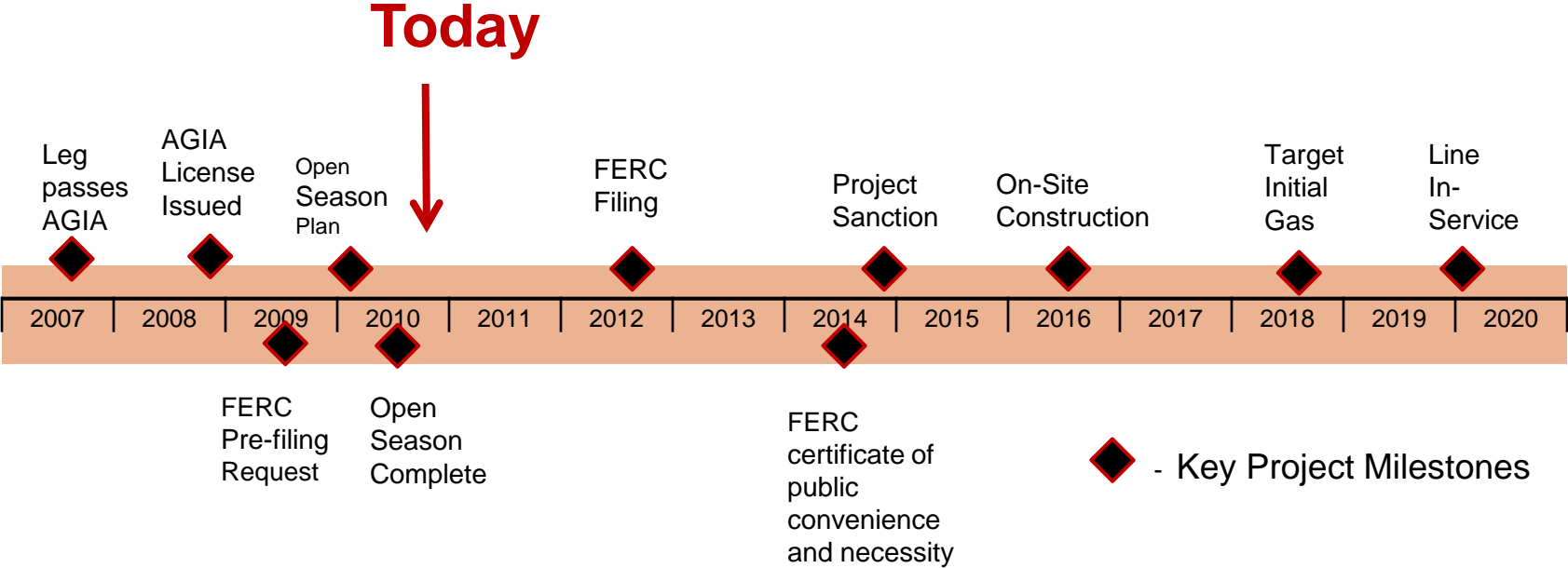
* Includes pumped storage

Shale Gas and Alaska Production Offset Declines in Supply to Meet Consumption Growth and Lower Import Needs



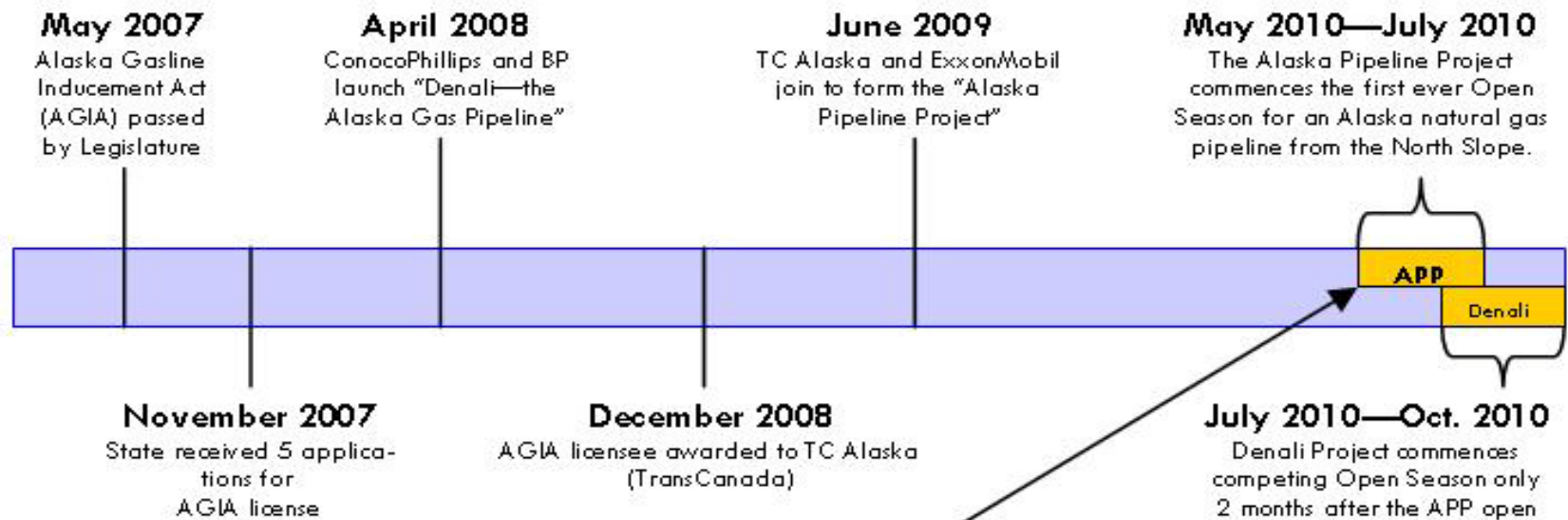
Project Timeline Showing Key Milestones

Project Will Take a Decade to Complete



Progress over the Last 3 Years

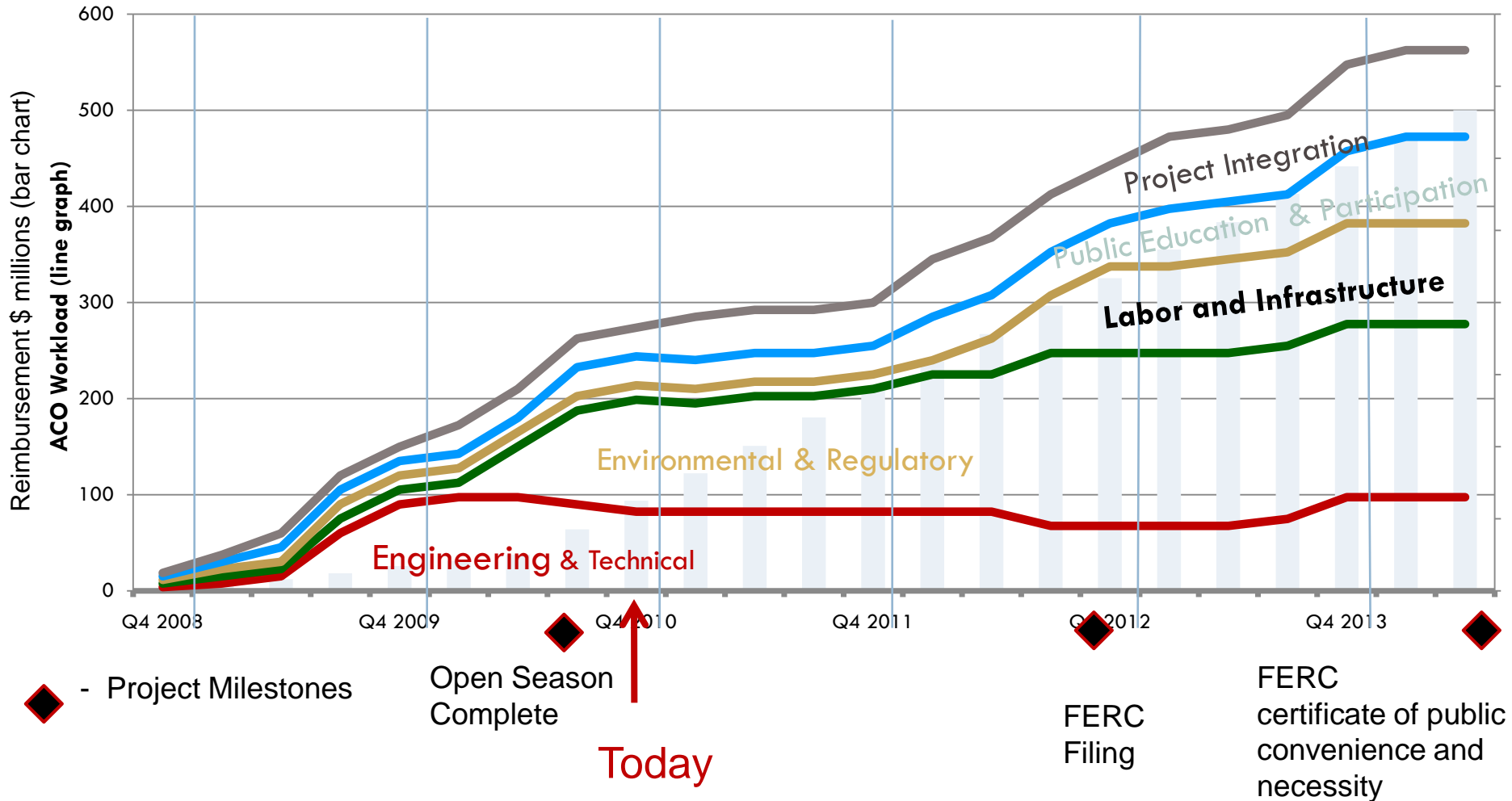
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Unprecedented progress to date!
AGIA ensures the pipeline project moves forward while other alignments are formed

Activity Increasing as Gasline Advances to Certificate

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APP Field Work Focus Areas 2008-2009

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- Aerial photography/Lidar/immersive video and other remote sensing
- High resolution terrain mapping
- Boreholes
- Geotechnical sampling including bulk soil samples
- Ground-based geophysics
- Ground-based reconnaissance



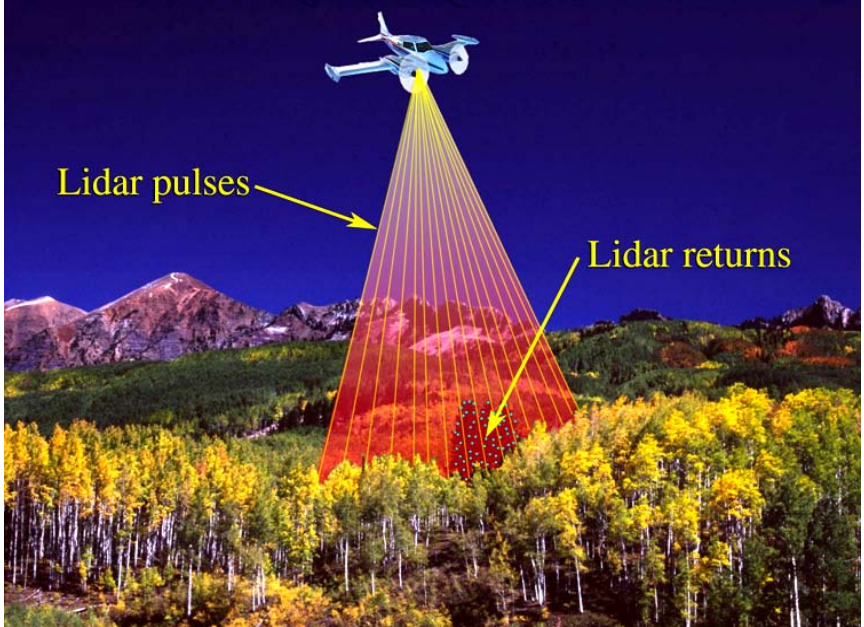
APP Field Work Focus Areas 2010

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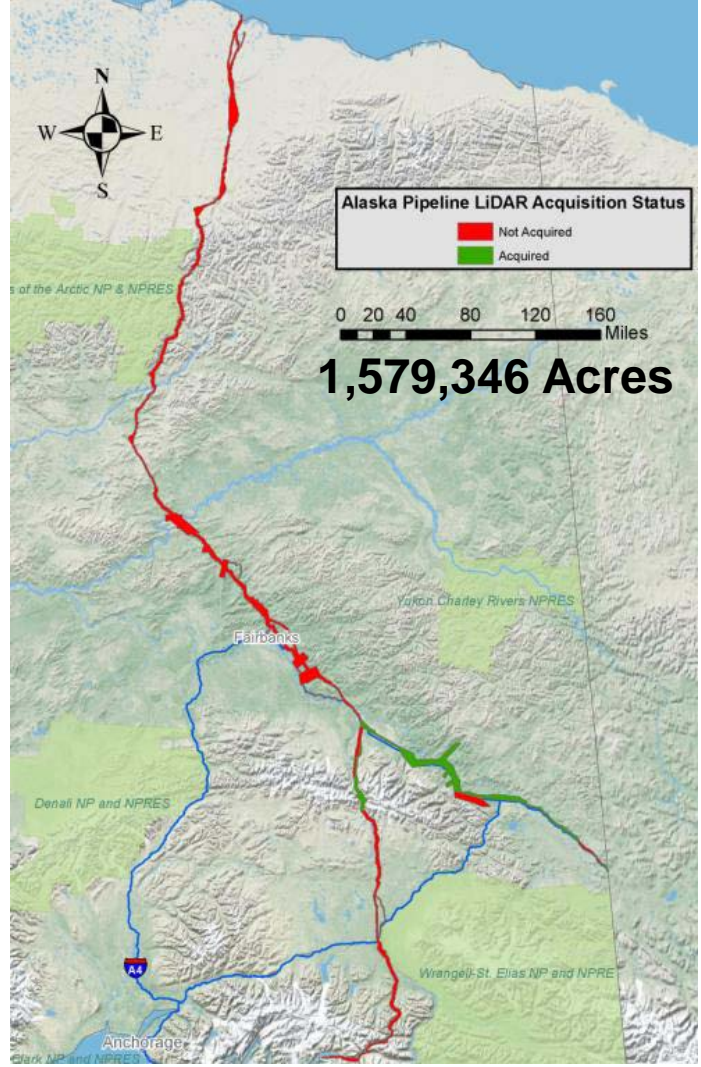
- **Aerial reconnaissance – Footprint Definition**
- **High resolution terrain mapping**
- **Boreholes**
- **Fault trenching, mapping and delineation**
- **Watercourse Assessment (stream crossing and ecology)**
- **Borrow sources identification (sand, gravel, and material resource assessment)**
- **Ground-based geophysics**
- **Ground-based reconnaissance**
- **Acid Rock Drainage Field Program**
- **Additional Lidar**
- **Wetlands delineation**

DNR/DGGS Is Acquiring Lidar with Support From OFC

Public data along infrastructure corridor serves many purposes for this and other projects



- Remote sensing technology
- Laser pulses determine the position and other characteristics of imaged features



Project Cost estimates / Indicative Tolls (2009 U.S. \$)

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- **Pipeline from North Slope to Alberta**
 - • Capital cost range: \$32B - \$41B
 - • Target in-service: 2020
 - • Tariff range (incl. fuel): \$2.80 - \$3.50/MMBtu (from GTP to Alberta Hub)

- **Pipeline from North Slope to Valdez**
 - • Capital cost range: \$20B - \$26B
 - • Target in-service: 2020
 - • Tariff range (incl. fuel): \$2.45 - \$3.15/MMBtu (from GTP to Valdez)

Factors Driving Project Cost

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Labor Costs

Natural gas prices

Cost of steel

Regulatory & permitting requirements

State, Federal, Producer and Shipper share



State of Alaska

Alaskans at work to date

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300 Alaskans employed on project

34 Alaska-based service providers working to make APP a reality





Alaska Needs Large Scale North Slope Oil and Gas Production

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- The economics of oil exploration, development and production are enhanced by gas production
- Natural gas is commonly associated with oil and condensate
- Enhanced oil recovery typically uses water, natural gas or CO₂ but ultimately the natural
- Overtime most oil basins evolve into a natural gas basin (Gulf of Mexico Shelf, Western Canadian Basin, Rocky Mountains region)
- Natural gas production helps mitigate risk of a single commodity economy
- Revenue stream to state on expected case is very significant

Figure 2-5. General Purpose Unrestricted Revenue, FY 2009 and Forecasted FY 2010-2011 (\$ million)

Oil Revenue	History	Forecast	
	FY 2009	FY 2010	FY 2011
Petroleum Property Tax	111.2	101.1	96.3
Petroleum Corporate Income Tax	492.2	470.0	580.0
Production Tax			
Oil & Gas Production	3,100.9	2,115.6	2,421.0
Oil & Gas Hazardous Release	11.1	10.5	9.9
Subtotal Production Tax	3,112.0	2,126.1	2,430.9
Royalties (including Bonuses, Rents, & Interest)			
Mineral Bonuses & Rents	12.4	18.3	14.1
Oil & Gas Royalties	1,451.2	1,447.0	1,521.3
Interest	2.0	5.0	5.0
Subtotal Royalties	1,465.6	1,470.3	1,540.4
Total Oil Revenue	5,181.0	4,167.5	4,647.7

Oil Production and Oil and Gas Potential

Figure 4-9. Alaska North Slope Production, FY 2000-2009 and Forecasted FY 2010-2019

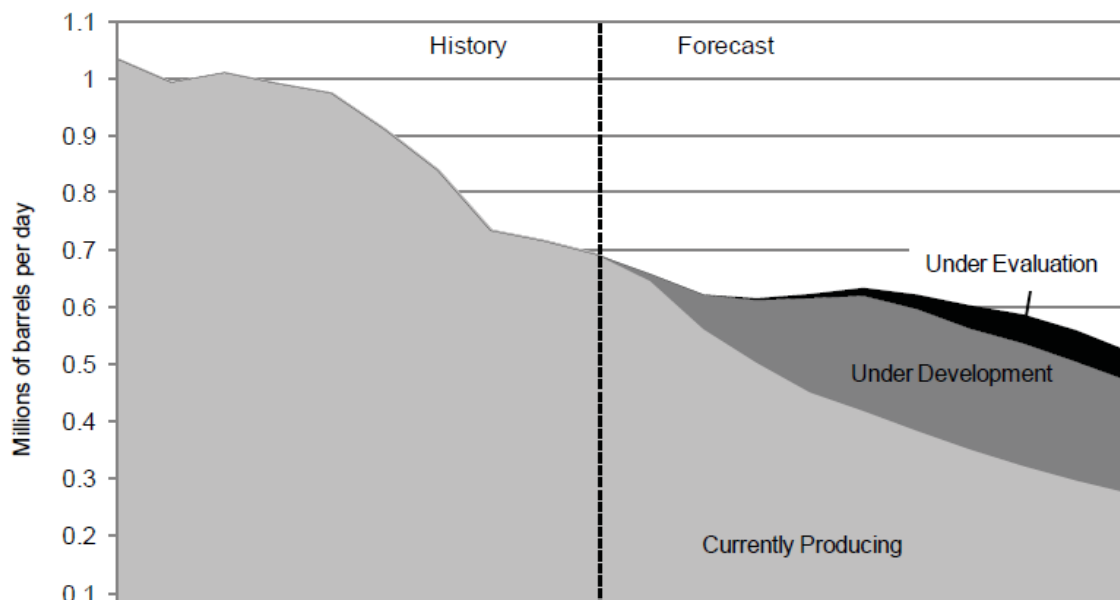


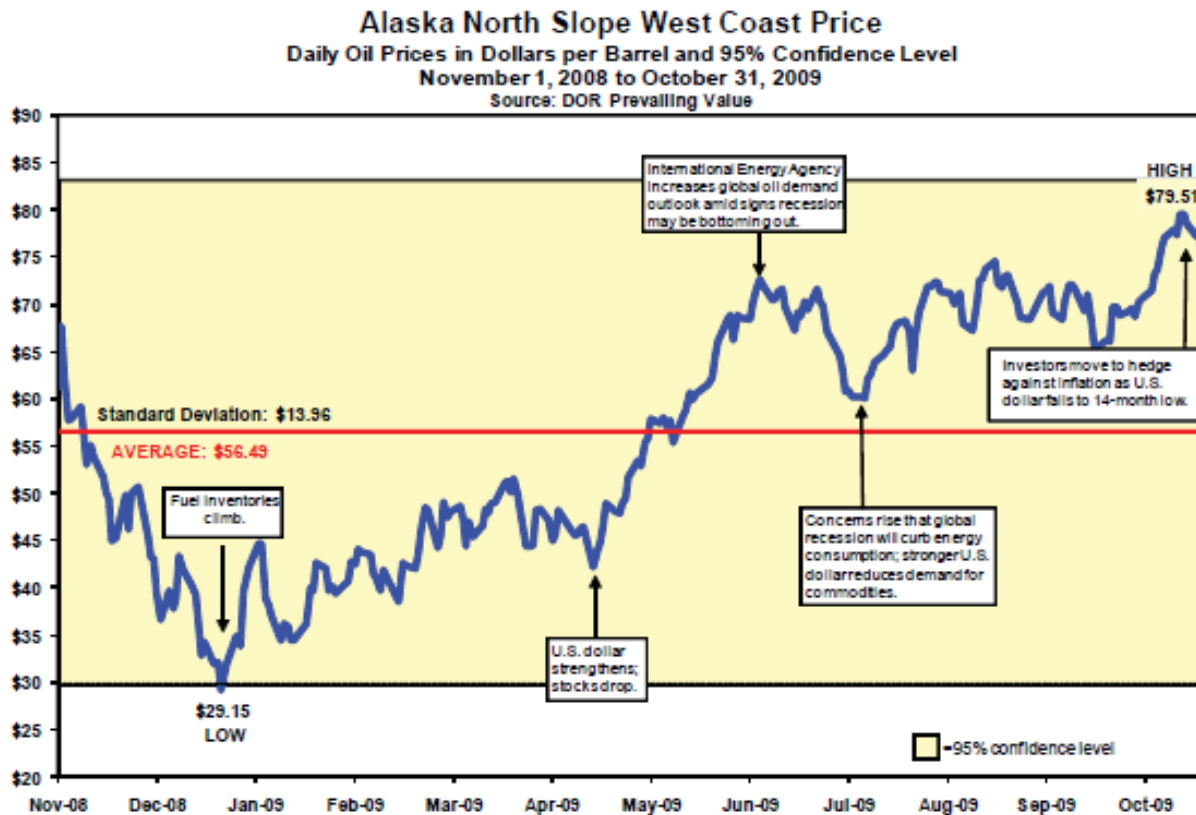
Figure 4-12. Technically Recoverable North Slope Oil and Gas Potential

Exploration Area	Mean Technically Recoverable Oil (BBO)	Mean Technically Recoverable Gas (TCF)
ANWR 1002 Area	10.3	3.8
Beaufort Sea OCS	6.9	32.1
Chukchi Sea OCS	15.5	60.1
Colville-Canning Area (& adjacent state waters)	4.5	37.5
NPR-A	10.6	61.4
TOTAL	47.8	194.9

Source: U.S. Department of Energy, August 2007; Addendum April 2009.

Single Commodity Dependency Creates Risk

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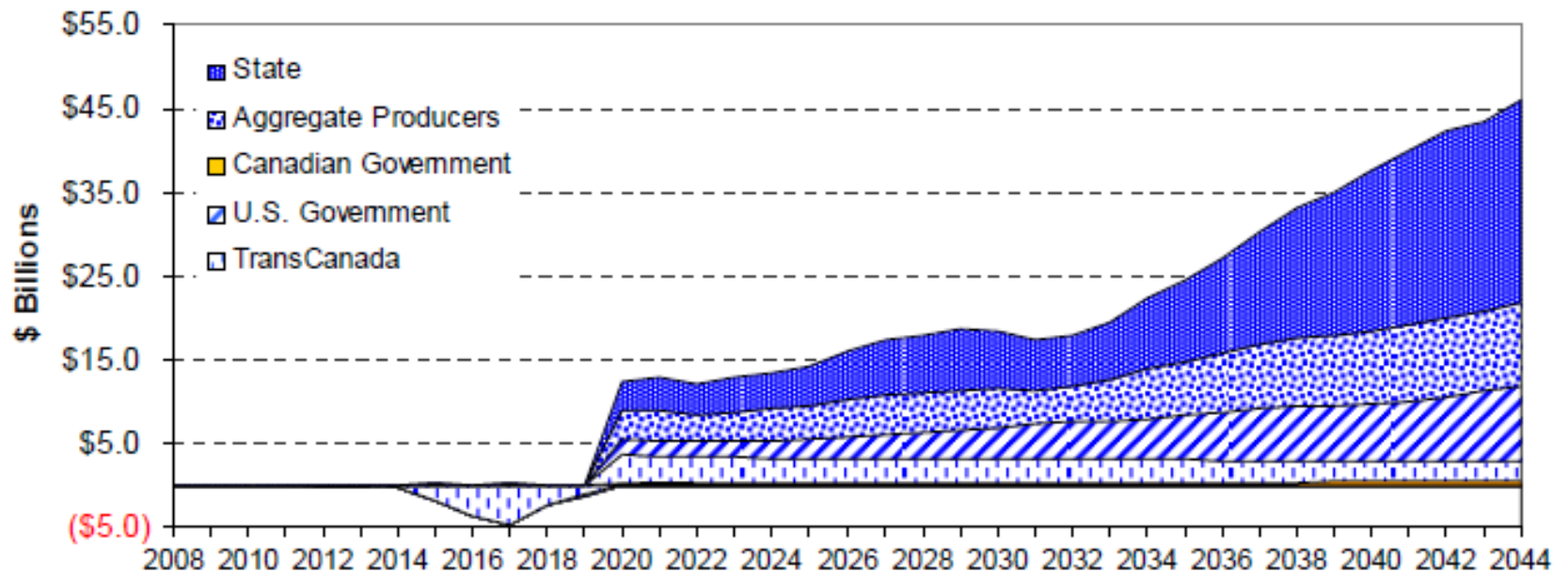
Note: 95% confidence level equals two standard deviations, or +/- \$27.92 from the average of \$56.49 per barrel

Fall 2009 Revenue Sources Book - 31

Cash Flow on Expected Case For the Gasline

AGIA NPV Analysis Report

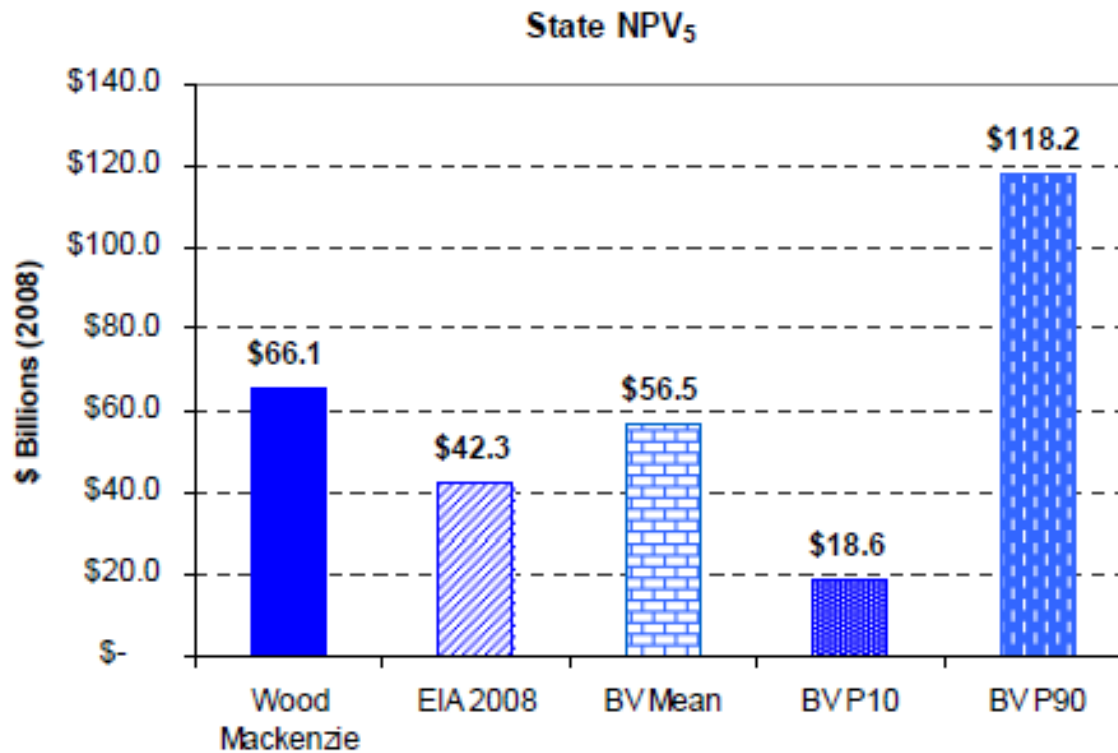
Figure 5-2: 4.5 Bcf/d Proposal Base Case Expected Cash Flows



Gasline Return to State Very Sensitive to Price

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Figure 3-28. State NPV₅ Sensitivity to Price



Source: Black and Veatch, Appendix G1, Section 6.6.1



Summary

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- Alaska Gasline Project has made ***unprecedented progress***
 - ▣ The first Open Season(s)
- Future challenges
 - ▣ Numerous issues will need to be resolved among the stakeholders (included the state) before project sanction
 - The project sanction decisions are expected in 2014
 - The North American and Global natural gas markets are volatile, and much will change before 2014
 - ▣ To protect the state's interests, the pipeline project development must continue to advance while alignments are resolved
 - ▣ Both oil and gas revenue streams are critical to the future of Alaska
 - ▣ Large export project provides best economics for instate use of natural gas

For more information go to:

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<http://www.gasline.alaska.gov/>