Alaska North Slope Gas Commercialization

Senate Finance Committee
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Joe Balash, Commissioner
Alaska Department of Natural Resources
www.dnr.alaska.gov

Alaska North Slope Gas Commercialization

Commercializing Alaska North Slope Gas:

- Where we have been
- Where we are
- Where we hope to be

Key principles for any project

- Gas to address Alaska's in-state needs for abundant supplies of low-cost energy and economic growth
- Gas that will maximize the value of the state's massive resource base through high-volume and export markets
- A project that incentivizes exploration and investment in continued oil and gas development

North Slope Gas Commercialization
- Benefits to the State -

- In-State Gas: opportunity for competitively priced, reliable in-state gas supply
- Commercialization of Alaska North Slope gas resources through sale of large quantities of natural gas beyond in-state needs

Photo: Getty Images courtesy of WSJ

- Additional revenues to the State
- Creates jobs for Alaskans in the exploration, development, production, and transportation of natural gas
- Increased opportunities for Alaskan based contractors and businesses
- Infrastructure for development of additional gas resources to enhance further oil and gas exploration/production opportunities

North Slope Gas Commercialization
- State Interests -

North Slope Resource Estimates

U.S. Geological Survey (USGS) estimates that Alaska's North Slope and Arctic Outer Continental Shelf have over 200 trillion cubic feet (TCF) of conventional natural gas.

- Prudhoe Bay: ~ 24.8 TCF
- Point Thomson & other undeveloped fields: ~ 8 TCF

Region and Assessment Segment		Gas, BCF (billion cubic feet)		
		Probabilty Distribution		
North Slope Onshore & State Waters[2]		**F95**	**Mean**	**F05**
Central North Slope	*Oil & Associated gas*	2,681	4,198	6,092
	NGL & Non-associated gas	23,939	33,318	44,873
Nat'l Petrol Reserve Alaska	*Oil & Associated gas*	--	--	--
	NGL & Non-associated gas	--	52,839	--
ANWR coastal plain[2]	*Oil & Associated gas*	--	4,764	--
	NGL & Non-associated gas	0	3,841	10,852
total - North Slope Onshore		--[3]	98,960	--[3]
Arctic Alaska Outer Continental Shelf (OCS)				
Chukchi Shelf	*Oil & all gas*	10,320	76,770	209,530
Beaufort Shelf	*Oil & all gas*	650	27,640	72,180
Hope Basin	*Oil & all gas*	0	3,770	14,980
total - Arctic OCS (offshore)		--[3]	108,180	--[3]
TOTAL - Arctic Alaska		--[3]	***207,140***	--[3]

Table compiled from multiple USGS and BOEM assessments; pld, Division of Oil & Gas

State interested in lowest reasonable tariffs, favorable expansion policy

Alaska has world-class unconventional resources, including tens of billions of barrels of heavy oil, shale oil, and viscous oil, and hundreds of trillions of cubic feet of shale gas, tight gas, and gas hydrates.

- The mean estimated onshore gas hydrate resource is 590 TCF of gas-in-place, with a mean of 85.4 TCF potentially recoverable with current technology (USGS, 2008).

Photo Courtesy of DOE

North Slope Gas Commercialization
- AGIA Background, Purpose, and Terms -

- Alaska Gasline Inducement Act (AGIA) resulted from the aftermath of the failed Stranded Gas Development Act (SGDA)
- Relied on private sector project sponsor
  - Utilized reimbursement to de-risk development costs
  - Also secured an option to purchase information/assets if project did not advance
- Established terms designed to maximize state benefits
  - Low tariffs – through high debt/equity capital structure
  - Favorable expansion policy
- Expectation was long lead time on development could proceed in parallel with commercial/fiscal negotiations

North Slope Gas Commercialization
- History & Timelines -

2007:

- AGIA process set out in statute
- Applications received December 1, 2007

2008:

- April: Denali announced by BP and COP
- July: Enstar-ANGDA Plan announced
- August: AGIA license approved by Legislature

2009:

- February: In-State Project Manager is named
  - Built on work started by Enstar and Anadarko
- June: ExxonMobil aligns with TC to form the Alaska Pipeline Project (APP)

North Slope Gas Commercialization
- History & Timelines -

2010:

- April: Legislature passes HB 369
- July: Open Season held for APP – conditioned bids received
- October: Open Season held for Denali – conditioned bids received

Shift to LNG in 2011:

- May: BP and Conoco abandon Denali
- July: AGDC/ASAP project plan released
- October: Governor Parnell calls on parties to move forward on large-diameter pipeline to tidewater in Alaska in an AGIA framework

North Slope Gas Commercialization
- 2012 State of the State and Benchmarks -

January 2012: Three CEOs meet with the Governor

> *"Currently, Alaska is pursuing parallel tracks to get a gasline. The State financially supports two different projects—one under the Alaska Gasline Inducement Act, and the other under the Alaska Gasline Development Corporation. While both are making progress, neither can finish the job alone."*
>
> - Gov. Sean Parnell, 2012 State of the State

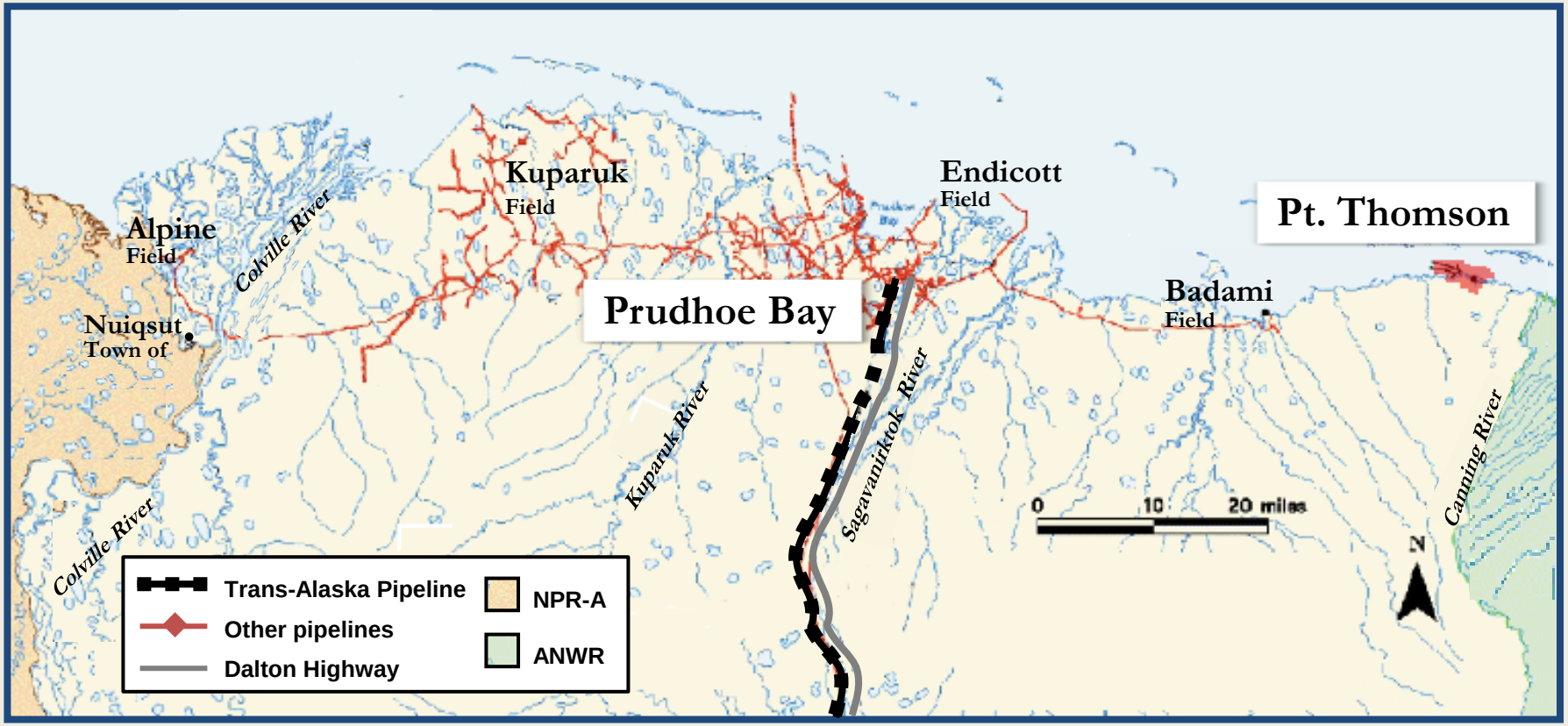
Governor's Roadmap to Gasline

1. Resolve Point Thomson
2. Align during the first quarter of 2012 under an AGIA framework on a large diameter gasline to tidewater
3. Two projects—under AGIA and AGDC—complete discussions by third quarter of 2012 determining what potential exists to consolidate projects
4. Harden numbers on an Alaska LNG project by the third quarter of 2012, and identify a pipeline project and associated work schedule
5. If milestones are met, the 2013 Legislature can take up gas tax legislation designed to move the project forward

North Slope Gas Commercialization
- Point Thomson Settlement -

March 30, 2012: Point Thomson Settlement Agreement filed with the Alaska Supreme Court

- Premised on requirement to perform work, start production
- Working Interest Owners must earn the acreage
- Sanction of Major Gas Sale pipeline project (in 2016 or 2019) secures entire unit



North Slope Gas Commercialization
- 2013 Milestones: Governor's State of the State -

Strengthen AGDC

"We need to boost AGDC's ability to build an All-Alaska gasline, or to participate with others in building one. Representative Hawker and the Speaker have filed legislation to add horsepower to AGDC's engine.

Without sacrificing accountability, we can unite around that legislation, and accelerate AGDC's work. We can accelerate a merger between the State's two parallel paths, and help avoid redundant costs between the projects.

Together, in the committee process, we will ensure that AGDC can commercialize Alaska's gas for the maximum benefit of all Alaskans."

APP 2013 Milestones

1. **By February 15, private parties involved in APP must select a concept on an all-Alaska project; they must describe and detail the project and pipeline specifications. To include:**
   - the size of the pipe and the daily volume of gas
   - the location of the gas treatment plant and detailing the number of compressor stations to move the gas along
   - the size and scope of the liquefaction plant and LNG storage tanks
   - the number of off-take points to ensure that Alaskans can utilize our gas for our needs
2. **Spring 2013: Companies finalize an agreement to advance to Pre-FEED** (front-end engineering design)
   - Pre-Feed – hundreds of millions of private-sector dollars
3. **Producers ensure a full summer field season** (Summer 2013)

North Slope Gas Commercialization
- 2013 Milestones -

April:

- HB 4 and More Alaska Production Act (MAPA/SB21) passed by Legislature

June:

- Last milestone of 2013 not met – no special session on gas tax legislation

October:

- Nikiski named as preferred location for pipeline terminus

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Governor Welcomes Continued Progress on Gasline

October 7, 2013, Anchorage, Alaska – Governor Sean Parnell today welcomed the news that TransCanada, BP, ConocoPhillips, and ExxonMobil have announced their selection of Nikiski as the lead site for a terminus of an all-Alaska natural gas pipeline. The companies have agreed to pursue the acquisition of property in the Nikiski area to site the liquefaction facilities associated with the Alaska LNG project.

"This is real progress toward our administration's goal of getting a natural gas pipeline to provide lower cost energy for Alaskans," Governor Parnell said. "This project is taking shape and the companies' commitment will help bring Alaska's gas to Alaskans and markets beyond. This presents a new opportunity for synergy and alignment among the producers and the project being pursued by the Alaska Gasline Development Corporation."

Governor Parnell will continue to aggressively pursue an all-Alaska gasline to fuel Alaskans' homes and businesses.

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North Slope Gas Commercialization
- Fiscal Discussions -

Early Breakthrough on Take vs. Stability

- Set take terms now, provide stability later
- Commensurate commitments by parties as project moves forward

Fundamental differences between SOA and Producers – stemming from our misalignment of interests

- State interests driven by lowest transportation charges/highest netback
- Lack of regulation at LNG plant/terminal (ownership of pipeline only does not solve the problem)
- Integrated companies are not driven by the capital structure/netback

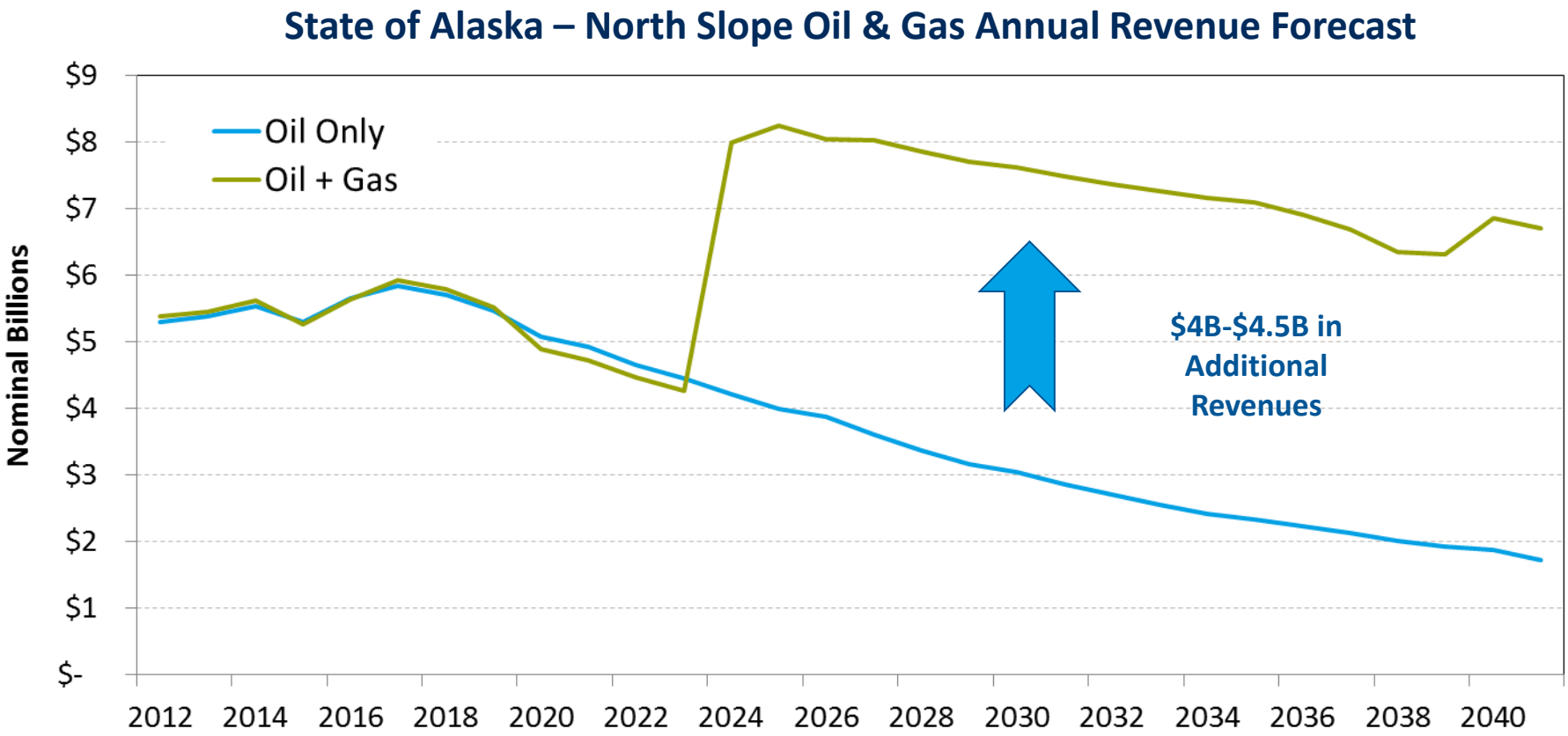
Key to Resolution: equity participation by SOA (project in a project)

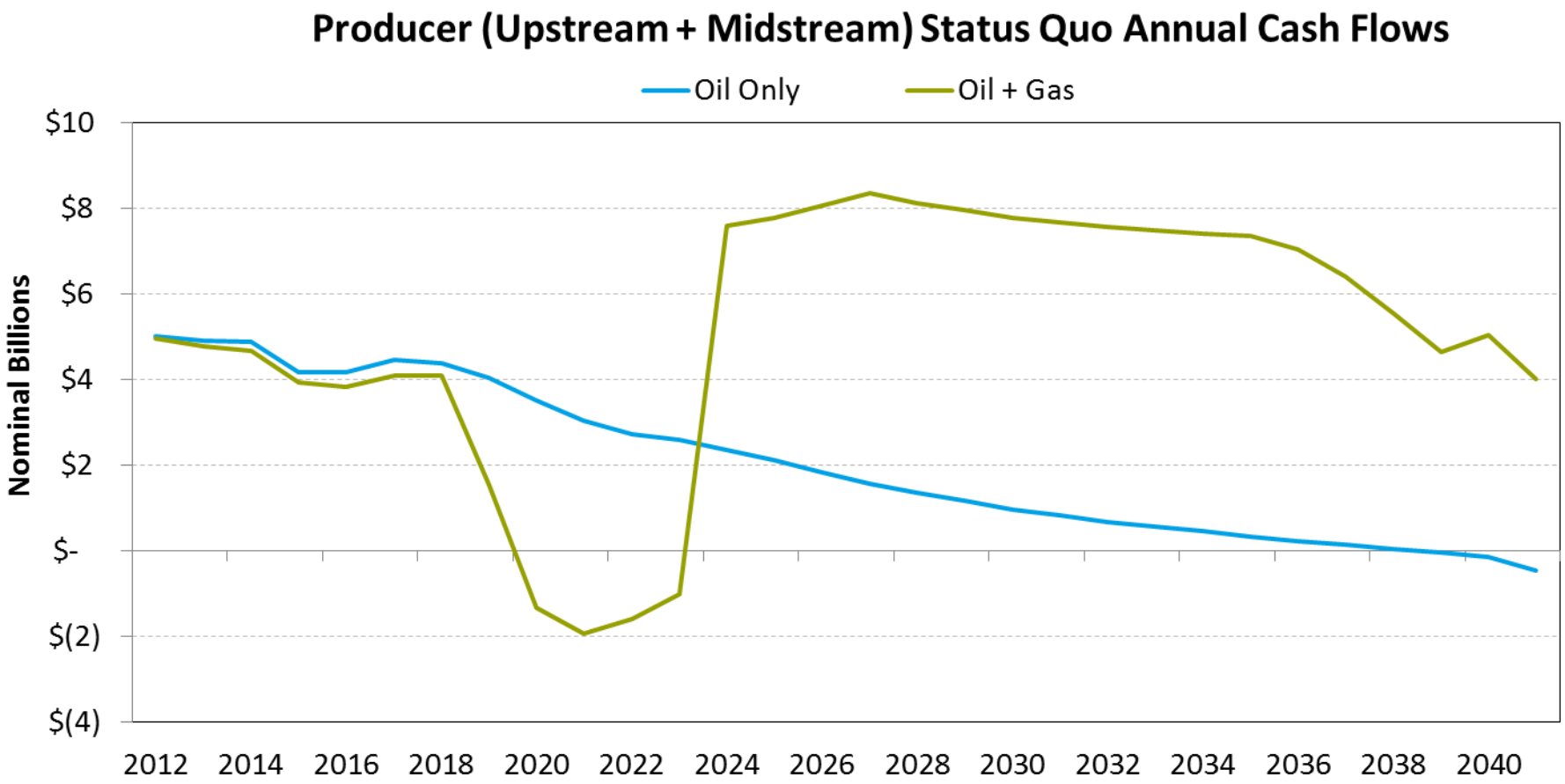
- Allows each party to structure their financing as they see fit
- Enables any party to initiate an expansion on a sole-risk/keep-whole basis

North Slope Gas Commercialization
- What's Different this Time? -

- Pt. Thomson resolved
- All the necessary parties have aligned to make an Alaska gasline project go – three producers, a pre-eminent pipeline builder, and AGDC
- Commercial issues being resolved by parties
- Gas-oil ratio (GOR) reaching a tipping point in 2020s
- Clear articulation of all parties' commitments
- Agencies asking the Legislature to provide term sheet-level approach
- Papering of Definitive Agreements only occurs after Legislature grants authority
- Definitive Agreements not binding unless/until Legislature ratifies – at next stage of commitment by Producers

LONG-TERM NORTH SLOPE OIL & GAS REVENUES ARE DRIVEN BY AKLNG PROJECT SUCCESS




Producer (Upstream + Midstream) Status Quo Annual Cash Flows
Oil Only
Oil + Gas
Nominal Billions
$10
$8
$6
$4
$2
$-
$(2)
$(4)
2012
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040