



Meet Alaska "Aligned Alaska" = Strong Oil and Gas Industry & Stronger Alaska for another 40 Years"

John L. Hendrix Chief Oil and Gas Advisor to the Governor January 13, 2017

Like it our not: We are an oil company (with constitutionally mandated social responsibilities)

· So we should act like one

- Know our Assets
- Maximize ultimate recovery in fields
- Manage Alaska's Reserve Replacement Ratio
- Manage Alaska's Wealth Replacement Ratio
- Encourage new technology
- Build an Opportunity Hopper
- Minimize the time from exploration to production
- Ensure assets are not stranded economically or barriers

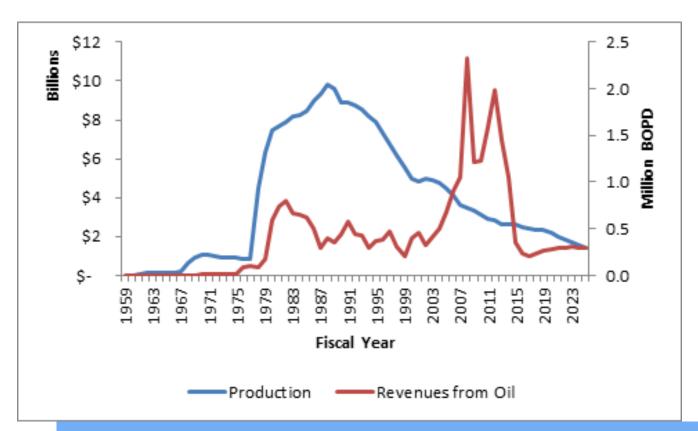


Alaska has vast opportunities

- Arctic Alaska is still underexplored, with approximately 40 billion barrels of oil and over 200 trillion cubic feet of gas remaining in undiscovered, technically recoverable resource
 - ~ 16 billion barrels + ~ 99 trillion cubic feet onshore & in state waters, including State lands, NPRA, and ANWR 1002
 - ~ 24 billion barrels + ~ 108 trillion cubic feet in Federal OCS Beaufort Sea and Chukchi Sea, though much of this is now unleasable
- Significant discoveries from Smith Bay to ANWR remaining to be developed
- In some scenarios, TAPS could shut down as early as 2026
 - All holders of leases must be active
 - We must be able to explore and move to production expeditiously
 - Depending on low-flow limit, discoveries currently pending development could sustain TAPS an additional 2-3 decades or more



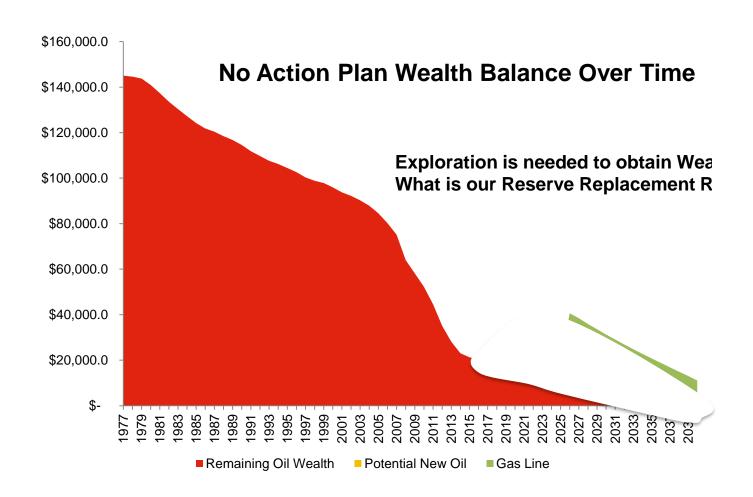
We Cannot Control Oil Prices



We can control exploration, development, production, stranded production and spending

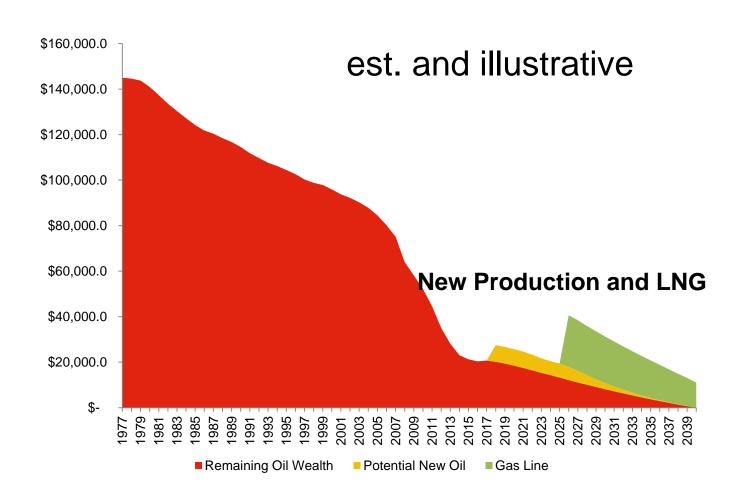


Forecasting Our Future



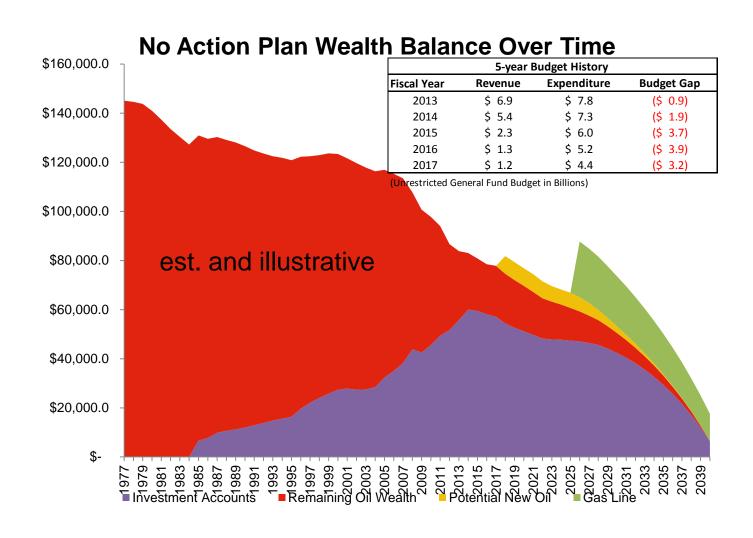


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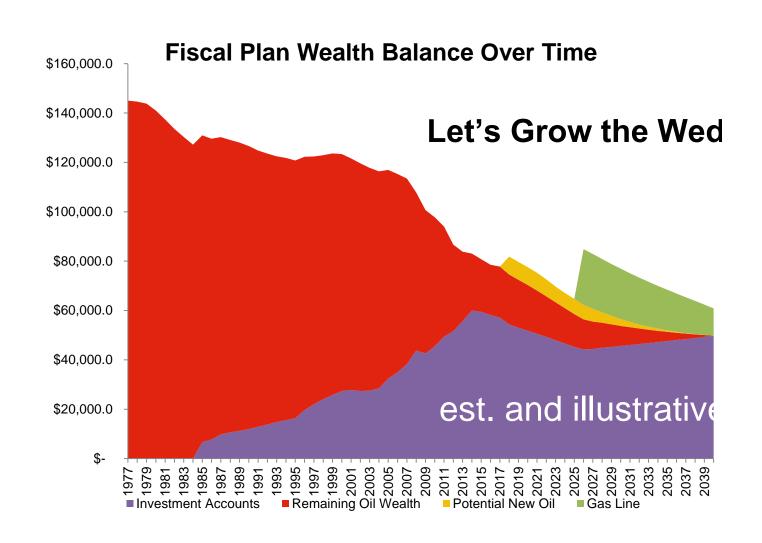


Understanding Our Options





Understanding Our Options

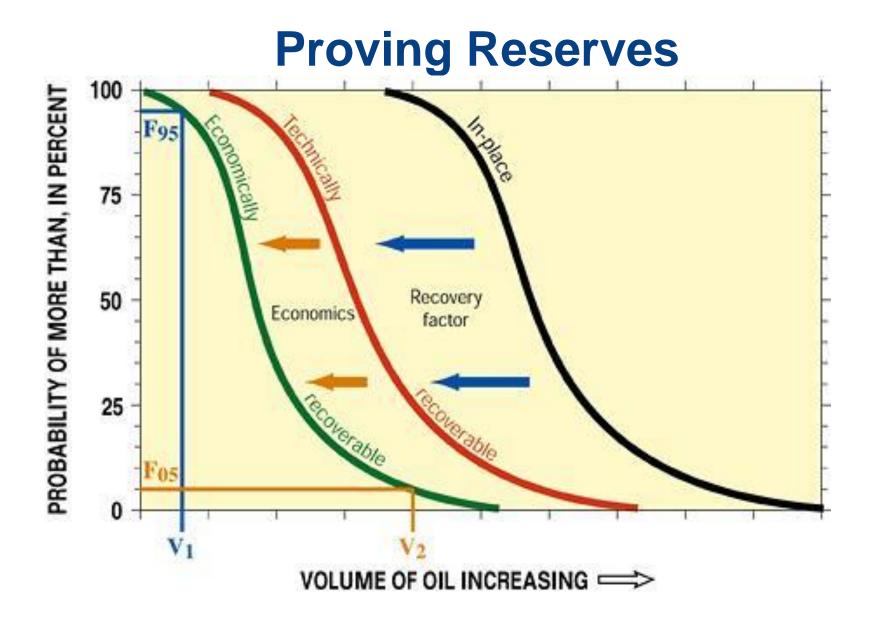




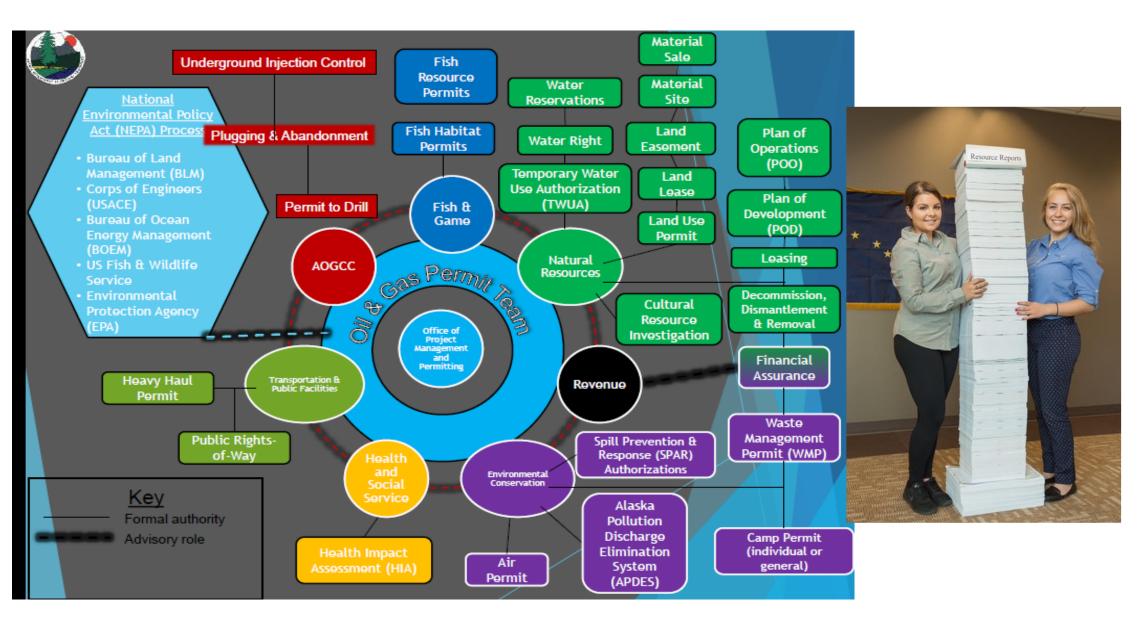
How do we Build Wedges?

- Technology Advancement and Exploration
- Prospective areas are explored
 - Study the rocks, offset well data, Seismic
 - · Wells Drilled, logged, cored and tested
 - · Discovery: unknown previously unrecognized accumulation of hydrocarbons
- Once oil or gas is discovered
 - Continue to appraise thru Delineation additional wells are drilled, logging, cored and tested
 - Establish Proved reserves, provides confidence, economics, & funding
 - Sanction Development
- If not economic now keep in the Hopper
- We must expedite Discoveries and move them to Production











Engagement and Alignment is Key!

- Pro industry government/residents
- O&G Competiveness Review Board
- Predictable, consistent, stable
- Financial
- Ready skilled workforce
- Long term development planning "We Live"





Alignment as "One Alaska" is Powerful

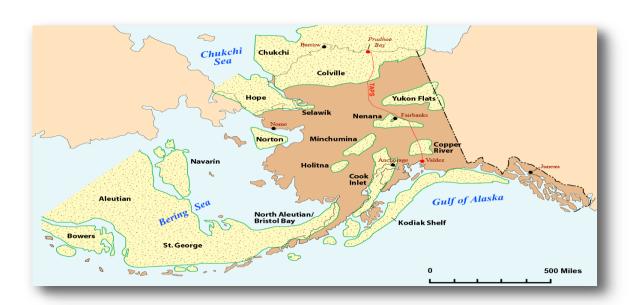
- Ask ourselves, "How Aligned are we as Alaskans regarding Oil and Gas?"
- Are we Alaskans aligned with the Federal Government?
 - If not, we are not managing Alaska properly
 - We are not managing our future
 - As Alaskan's we are not living to our potential!!
- If we are not, how much does this cost you as an Alaskan?
- Do we know which Option sets are best for Alaska? Fed take?
- What does the North Slope look like in 2050? Master Planning is an output of engagement and aligns.
- We should be doing this for every region in Alaska to maximize the Resource benefit to Alaskans.
- We Must Control Our Future... by being one we can do this!



Our Largest Known Stranded Resource: Natural Gas

Do You Know?

- We re-inject more boe everyday than N. Dakota produces
- Our 3.5 tcf gas is 580,000 boe which is more than TAPs production!
- USGS estimates Alaska N.S. gas at 35 tcf Proven and 200 Tcf conventional



Tcf = Trillion cubic feet



Alaska LNG Project Components

Integrated gas infrastructure project:

- ✓ Gas Treatment Plant:
 - 200 acre site at Prudhoe Bay.
 - Clean, dehydrate, chill and compress 3.5 Bcf/d.
- ✓ Pipeline:
 - 800-miles (1,287 km).
 - 42-inch pipe (1.1m).
 - In-state offtake points.
 - Deliver more than 3.3 Bcf/d.
- **✓ LNG Production Facility:**
 - Located in Nikiski, Alaska.
 - 600 acre site.

All components including gas supply are within Alaska.



Fully-integrated natural gas pipeline and liquefaction system



7 Major Project Advantages

- Vast Proven Gas Resources
- Proximity to Markets
- Climate
- Reliability
- History and Expertise
- Stable Government
- Quality of Project Research



Major Project Benefits for Alaska

- Gas for Alaskans
- Environmental Energy Improvements Clean fossil Fuel
- Diversify Revenue for State of Alaska
- Jobs and Workforce Development
- Economic Investment Incentive Add ons....



Summary

- Education and alignment is a long term-key: know our resource potential
- Federal permitting alignment a must
- Master Plan Development and Distribution needs to be done
- Build wealth through new exploration and unlocking stranded resources
- NS Gas is our largest known stranded asset we need to be in the game to make it economic and fill the future void
- Government and business relationships are Key
- Sharing of infrastructure is smart



Thank you!



Proximity to Markets

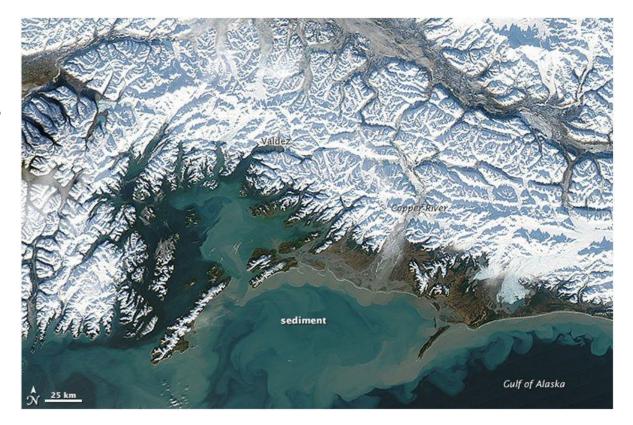




Arctic Climate Efficiencies

Cold and dry arctic climate can provide an energy efficiency up to 15% in the winter months

Over 60% of the pipeline is underground/subterranean





Reliability, History, and Expertise

Trans-Alaska Pipeline

- ✓ Prudhoe Bay to Valdez.
- ✓ In operation since 1977.
- √ 17+ billion barrels of oil produced.

North Slope Gas Resource

- √ 35 Tcf proven North Slope gas.
- ✓ 200 Tcf conventional.

LNG Production

- ✓ Pioneer in global LNG.
- √ 45 years of reliable LNG exports.
- ✓ First LNG plant to service Asia-Pacific market;

Tcf = Trillion Cubic Feet Alaska has never missed a cargo shipment to Asia.





Stable Government





Government to Government Relationships Key



Quality of Research

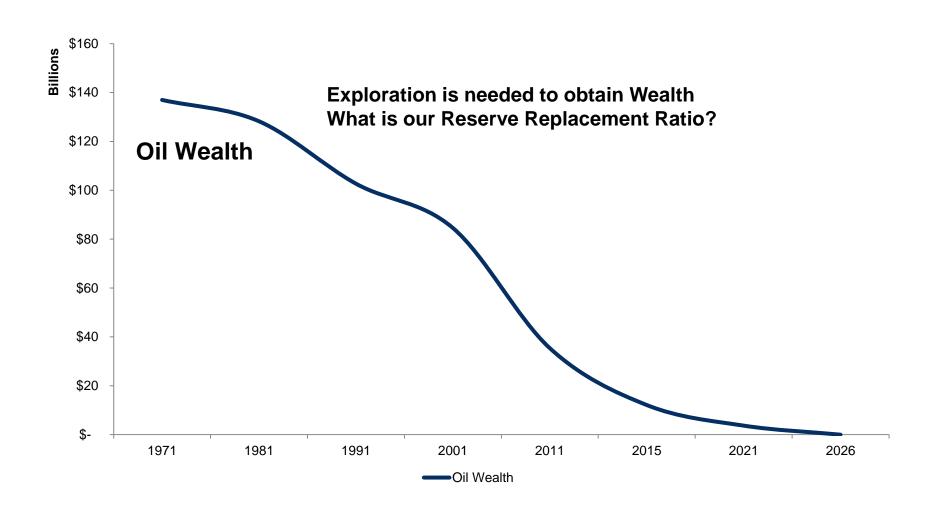
Project has been thoroughly studied and analyzed:

- √33,700 pages submitted to FERC.
- **✓** Over 1 million man hours invested through pre-FEED analysis.
- √193,000 acres mapped; 300 streams surveyed.
- √Thousands of boreholes (10-150 feet deep).
- ✓World-renown contractors involvement during the Pre-FEED process.
- **√\$500** million Pre-FEED reaching conclusion.



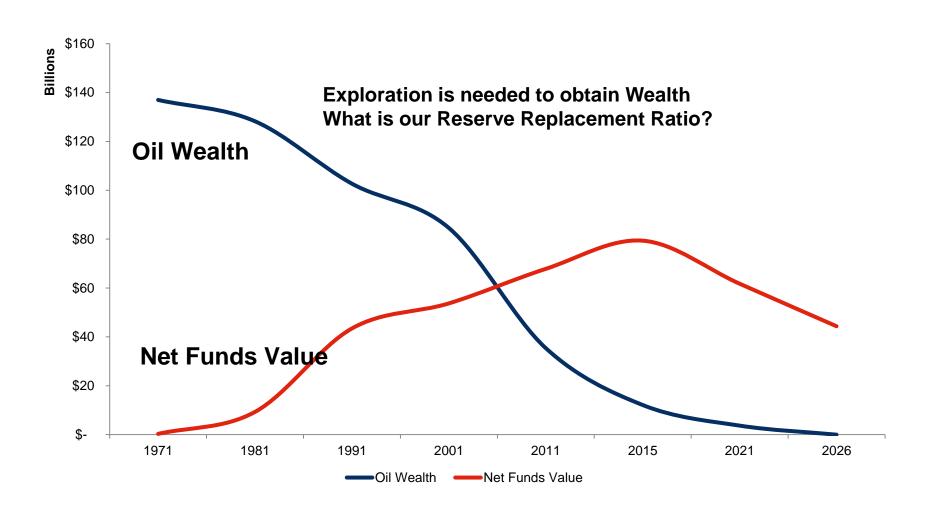
OP ALASIA

Understanding Our Performance





Understanding Our Performance





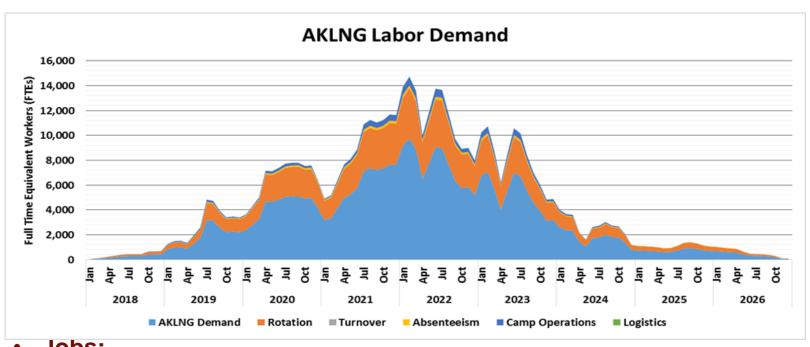
Gas for Alaskans

Alaskans have crippling energy costs throughout the state.





Jobs and Workforce Investment

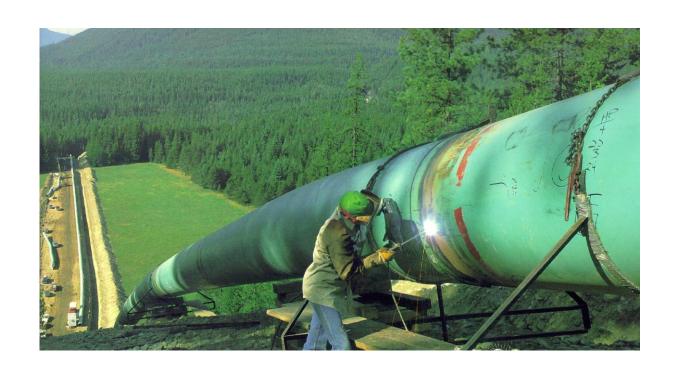


Jobs:

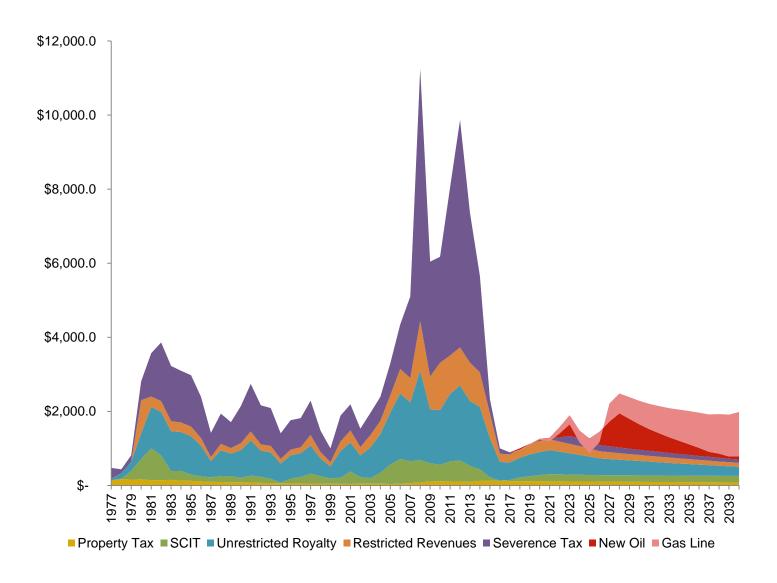
- ✓ Approximately 9,000-12,000 jobs during constructions
- ✓ Estimated 1,000 permanent operations and maintenance (O&M) jobs
- ✓ Teamsters, Operating Engineers, Laborers, and Pipeliners will be the four largest expected peak craft needs.



Additional Economic Development





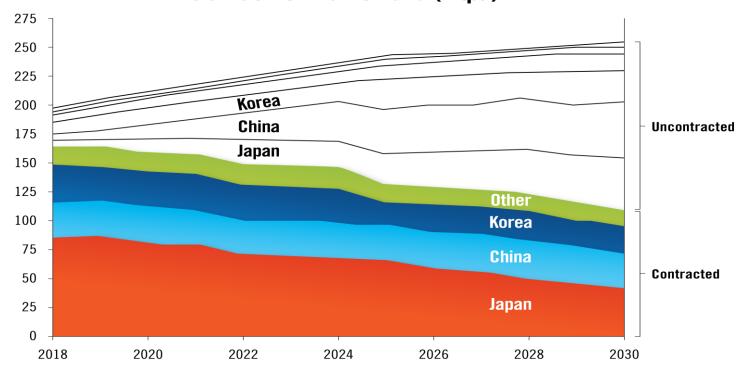




Current global surplus.

- Equilibrium by 2022; new supply needed 2021-2025.
- Many supply projects chasing demand.
- Sellers must compete on more than just price.

Asia Pacific LNG Demand (Mtpa)

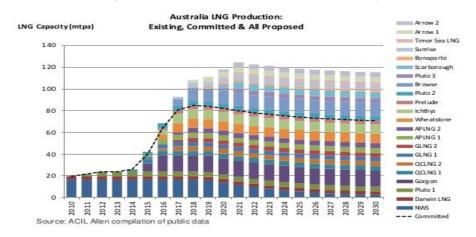


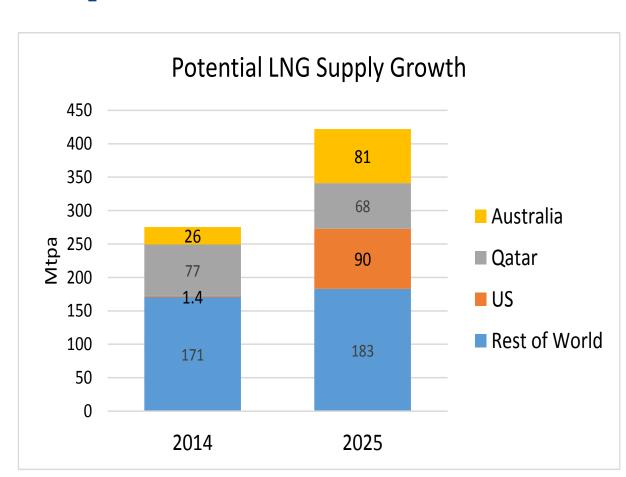
Mtps=Million tons per annum = about 50 Bo/yr.



The Competition

- Global competition comes from known sources.
- Alaska can compete, but has to get in the ring and fight.
- Alaska is in the best position to fight for Alaska's project.







The introduction of State ownership

- In addition to a third party toller, the State of Alaska (SoA) could further reduce the cost of supply with a potential tax exemption
- SOA-ownership shown as fully tax exempt



