Alaska’s North Slope Gas Potential

Known, Undiscovered, and Emerging Supplies

Commissioner Andrew Mack
Alaska Department of Natural Resources
Alaska’s North Slope has vast natural gas development potential

With more than 17 billion barrels of oil discovered and produced to date, the North Slope remains a proven, extremely prolific world-class petroleum province

- More than 45 TCF of combined contingent gas resource and reserves discovered on the North Slope to date, including Prudhoe Bay, Point Thomson, existing oil fields, Burger Field, and Foothills gas accumulations
- North Slope gas potential is largely under-explored due to lack of existing outlets to world gas markets
- Recent assessments by USGS estimate over 200 TCF (mean) of undiscovered, technically recoverable conventional gas resources in Arctic Alaska
- Methane hydrates and shale gas could potentially add 100s of TCF in future North Slope gas resource
Sedimentary Basins in Alaska

Alaska’s North Slope
Known oil accumulations in green, gas accumulations in red. Black dots are exploration wells. Red outlines are state areawide lease sale boundaries. Green areas south of Foothills are protected federal lands.
15+ TCF of known, undeveloped gas resources beyond Prudhoe Bay and Point Thomson Units

Oil accumulations in green, gas accumulations in red. Black dots are exploration wells. Red outlines are state areawide lease sale boundaries. Green areas are protected federal lands.
Alaska’s Portion of Circum-Arctic Undiscovered Gas

- Arctic Alaska Gas:
  ~200 TCF mean conventional

- W. Siberian Basin, 39%
- E. Barents Basin, 19%
- Arctic Alaska, 13%

GASUSGS, 2008

UNDISCOVERED GAS
(trillion cubic feet)

- >100
- 6–100
- <6
- Area not quantitatively assessed
- Area of low petroleum potential
Alaska Offers Investment Potential In Upstream Portion of the Full Value Chain

• Annual North Slope oil and gas lease sales conducted to facilitate new field exploration investment

• Additional opportunities for partnering with North Slope operators in current and future oil and gas development projects

• Highly specialized North Slope contracting community to support exploration and development projects

• Proactive and innovative regulatory process in Alaska
Alaska’s North Slope has vast natural gas potential

Alaska’s North Slope is a world-class natural gas province

- The North Slope of Alaska may contain one of the largest natural gas resources in the world
- More than 45 TCF of combined contingent gas resource and reserves
- Estimates of over 200 TCF of undiscovered, technically recoverable conventional gas resource and potentially 100s of TCF in unconventional shale, tight sands and methane hydrates resource
- Existing infrastructure, currently handling 8 BCFG per day, with large-scale production facilities and skilled workforce on North Slope to support additional gas development and production
- The Alaska LNG Project will underpin the commercialization of this vast natural gas resource base and provide stable, long-term LNG to world markets
Alaska’s North Slope Oil Resources

- The USGS estimates that Alaska’s North Slope has more oil than any other Arctic nation - Est. 40 billion barrels of conventional oil (USGS & BOEMRE)
- The Trans-Alaska Pipeline System (TAPS) has available capacity of approximately 1.5 million barrels of oil per day
- 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
- Compared to most basins, Alaska is relatively underexplored, with 500 exploration wells on the North Slope, compared to Wyoming’s 19,000.