

Chart of the Week #2023-14

After Extensive Deliberation

The National Petroleum Reserve-Alaska (NPR-A)

Willow Project Is Set To Yield Revenue For Both

The State And The Federal Government



Utilizing the sizeable existing TAPS (Alyeska Pipeline) system, Willow offers an important platform to present the future production potential of the whole NPR-A resource of 15 billion barrels



Max Pyziur
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Source: ConocoPhillips
Willow Project
National Petroleum Reserve-Alaska

NPR-A Willow Project Crude Oil Potential

An NPV Assessment

<u>NPR-A Willow NET PRESENT VALUE AT FID in 2026</u>		
		in Billion\$
Gross		\$44.55
Costs		\$36.15
Net before Royalties/Taxes		\$8.40
Alaska State Royalties/Taxes	9.75%	\$0.82
Federal Royalties/Taxes	33.00%	\$2.77
Net after Royalties/Taxes		\$4.81
		EPRINC

<u>NPR-A Willow Project NPV ASSUMPTIONS</u>				Source:
Economically recoverable reserves	High Price	Low Price	Mean	
Crude Oil (Million Barrels)	880	340	600	EPRINC
Production period estimate - 30 years; 4 years to peak, 4 years to end-of-life, 22 years of peak				
Crude oil	2031-2060			EPRINC
Peak Production				
Crude Oil	1	BB/d		EPRINC
Development time to First Production (years)				
Crude oil	4			EPRINC
Price Estimates at port/hub				
Crude Oil	\$45.00 at Valdez Alaska			EPRINC
Costs				
Crude Oil (Capital - first four y	\$30.00 billion over first 4 years			EPRINC
Crude Oil (Operating - duratio	\$7.50 per bbl			EPRINC
Crude Oil (Freight to Valdez)	\$5.00 per bbl			EPRINC
Take-away capacity:				
Crude Oil	2 MBd of Trans-Alaska Pipeline System (TAPS) of which 1 to 1.5 will be available			
Discount Rate	10.0%			
				EPRINC

NPR-A Willow Project Crude Oil Potential

An NPV Assessment

- The North Slope of Alaska holds some of the largest crude oil reserves in the United States. So far, only a very small portion of the region, Prudhoe Bay consisting of approximately 215 thousand acres, has been developed, producing over 16 billion barrels of crude oil since 1980.
- The National Petroleum Reserve-Alaska (NPR-A), an adjacent area to the west of Prudhoe of almost 23 million acres, was identified in 1923 by President Warren Harding's administration as having “... *large seepages of petroleum ... favorable to the occurrence of valuable petroleum fields ...*”
- With twenty-four plays in the area, estimated total economically recoverable crude oil ranges from 6.7 to 15 billion barrels, with the mean being 10.6. Critically, the range is predicated on the level of global crude oil benchmark prices.
- On March 13, 2023, President Biden's administration approved the long-awaited ConocoPhillips Willow Project. Located on approximately 100,000 acres near the eastern edge of the NPR-A with easy access to the longstanding Alaska Pipeline System currently operating at approximately one quarter of its 2.1 million barrels per day capacity. The Pipeline System is operating at minimum throughput. Willow's expected volumes will be timely in keeping the System operating.
- With a production interval of 30 years and a peak plateau of 22, total production would be 600 million barrels with the NPV (net present value) of the Willow Project being \$44.6 billion in 2026, the earliest when an FID (final investment decision) would be made.
- Of the \$44.6 billion NPV, there would be a \$2.8 billion directed to Federal Royalties/Taxes, and \$820 million to Alaska State Royalties/Taxes.
- The expanded version of this slide deck is available at: <https://eprinc.org/chart-of-the-week/>
- For more information on this chart, please contact Max Pyziur, maxp@eprinc.org