



Alaska's Competitiveness in Global Oil and Gas Markets

Prepared for American Petroleum Institute

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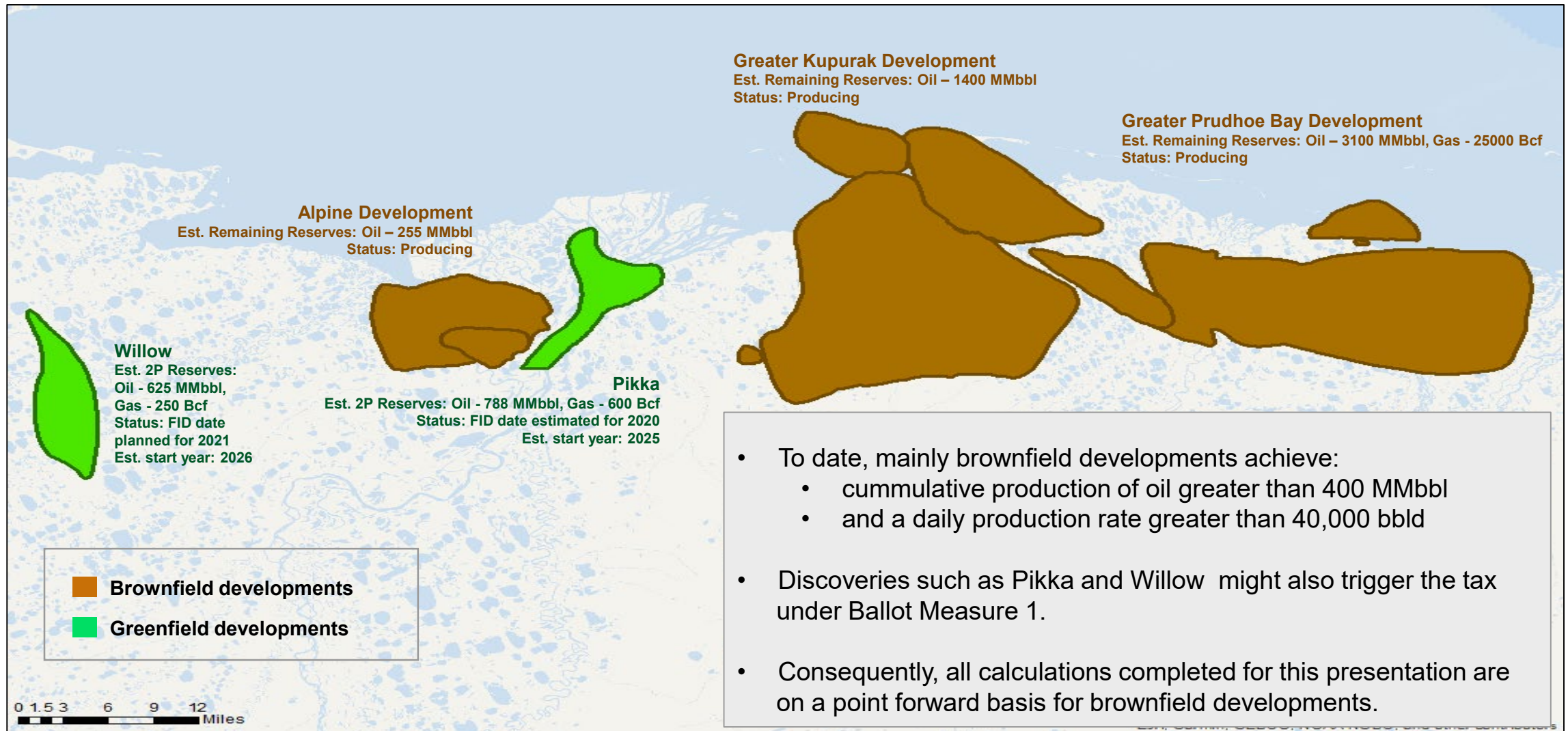
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Methodology

- Peer group selection
 - > Alaska's oil fields compete for investment in the domestic and international market
 - Deepwater offshore oil fields are considered comparable with Alaskan North Slope oil fields in terms of reserve size as well as cost of development and production
 - In the domestic market Alaska's North Slope competes with tight oil plays in the Lower 48
 - > A theoretical conventional oil field of 500 million barrels of oil is modeled onshore Alaska North Slope and compared to 500 million barrel oil fields in deepwater Angola, Brazil, Guyana, Norway, UK and the U.S. Gulf of Mexico. Brownfield developments have been used for this analysis.
 - The development concepts feature the actual cost of developing a 500 MMbbl oil field in the respective jurisdictions accounting for differences in water depth, total vertical depth, regional costs, distance from liquid markets, well output etc. 2020 costs have been used for this analysis.
 - > Comparison with investment opportunities in the lower 48 focuses on tight oil and shale plays in Colorado, New Mexico, North Dakota, Texas and Wyoming. Single well economic models have been used for this analysis representing average type curves for each play
- A 10% discount rate is used for this analysis under four oil price assumptions of \$25, \$35, \$60, \$85 in real terms throughout the project lifecycle.
 - > The \$60/bbl price represents the base case scenario pre COVID-19. The assumption is that \$60/bbl will ultimately be the base case scenario in post COVID-19 world.

North Slope brownfield developments with daily production greater than 40,000 bbl/d make up 84% of the current production in the state



Scope of Ballot Measure 1

This is a tax on oil only in addition to the current production tax for fields, reservoirs and units north of 68 degrees north

The tax only applies after 400MMbbl of oil have been produced and if the production rate was over 40kbbld in the prior 12 months

No credits or offsets are applicable and the tax cannot be reduced below the Alternative Minimum Tax

Pay the greater of:



Ballot Measure 1

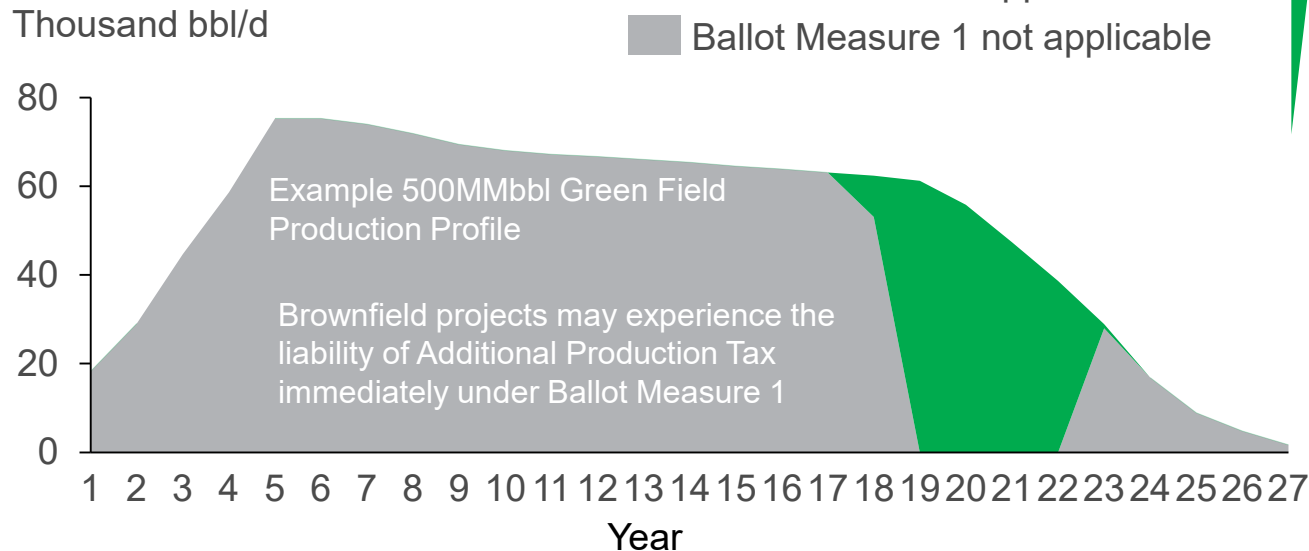
35% Production Tax + 15% of the difference between \$50/bbl and the Production Tax Value¹ of oil

or

Alternative Minimum Tax

10% to 15% of the percentage of the Gross Production Value² of oil.
The tax rate is 10% for ANS Prices under \$50. An additional 1% is paid for within each \$5/bbl increment beyond \$50/bbl up to \$70

 Ballot Measure 1 applicable
 Ballot Measure 1 not applicable



Note:

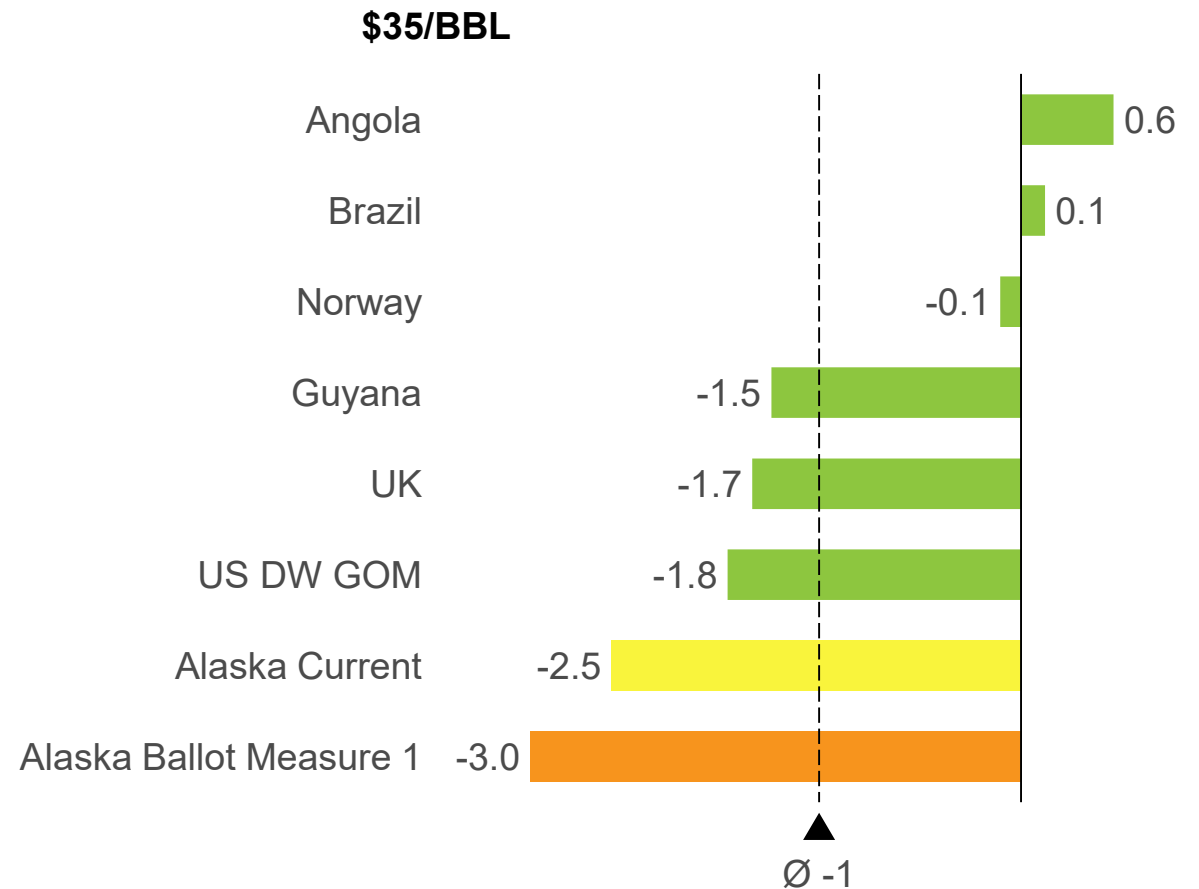
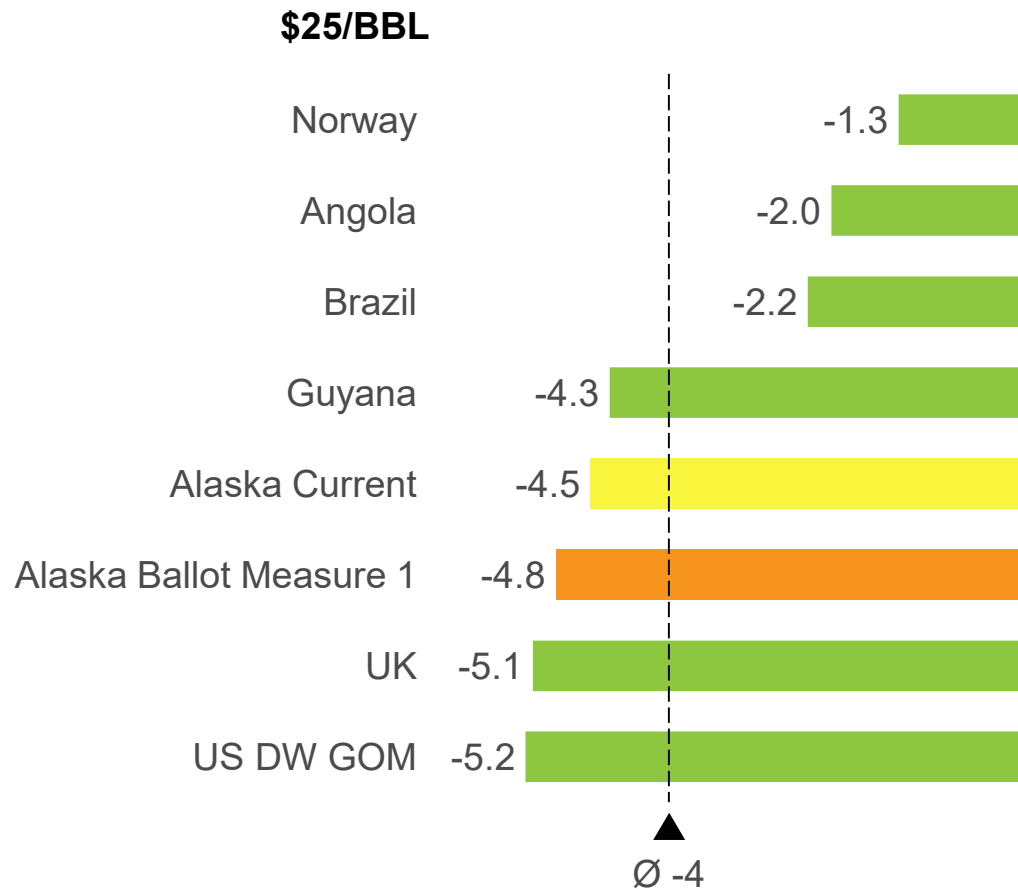
- ¹Production Tax Value is the same taxable base per unit that is calculated for the production tax. It is net of royalty and certain E&P cost. There is ring-fencing for Ballot Measure 1 purposes: i.e. use of excess lease expenses in non-targeted fields against targeted fields is now disallowed
- ²Gross Production Value is net of transportation costs and royalty

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Alaska's oil fields and most deepwater projects are uneconomic at oil prices of \$25 and \$35 per barrel. Alaska's competitiveness deteriorates under Ballot Measure 1 as commodity prices increase

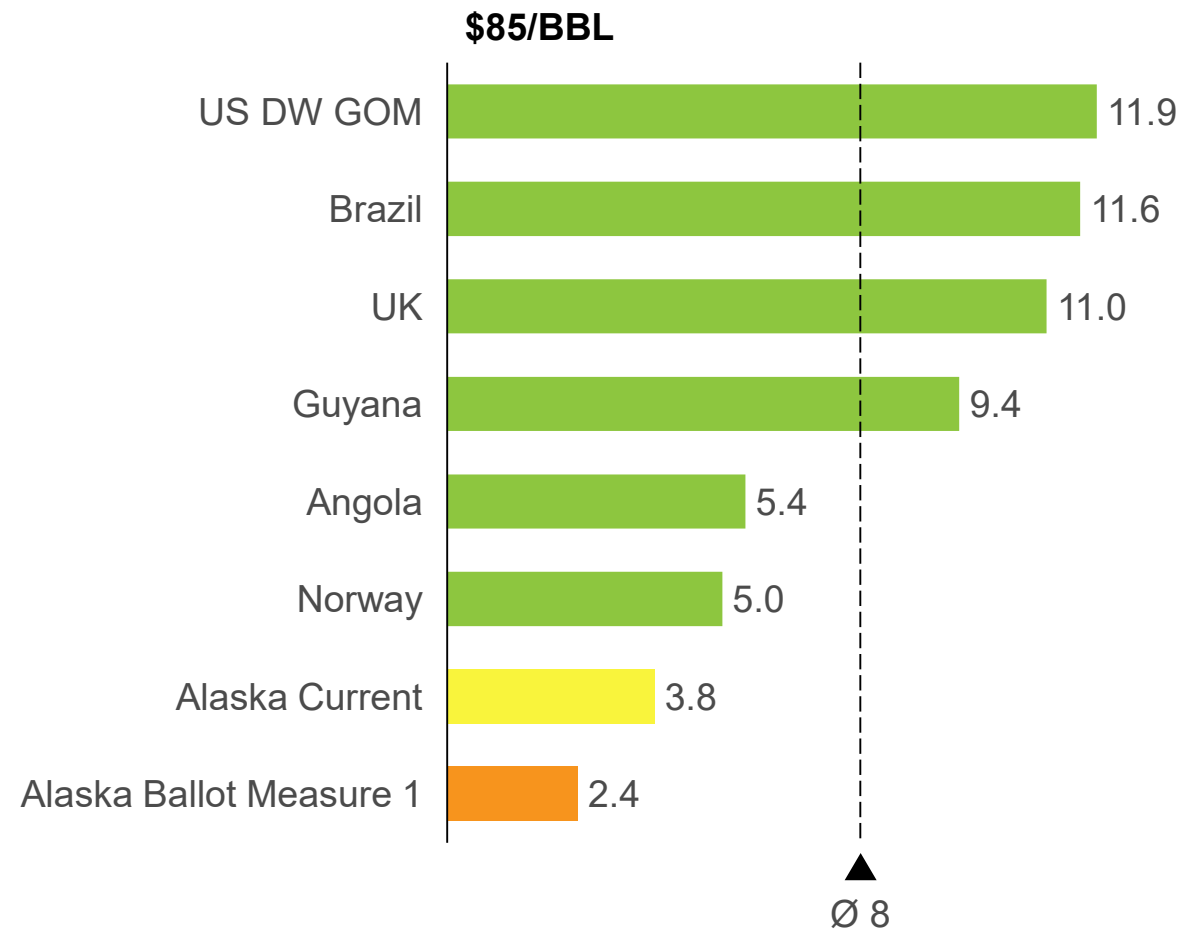
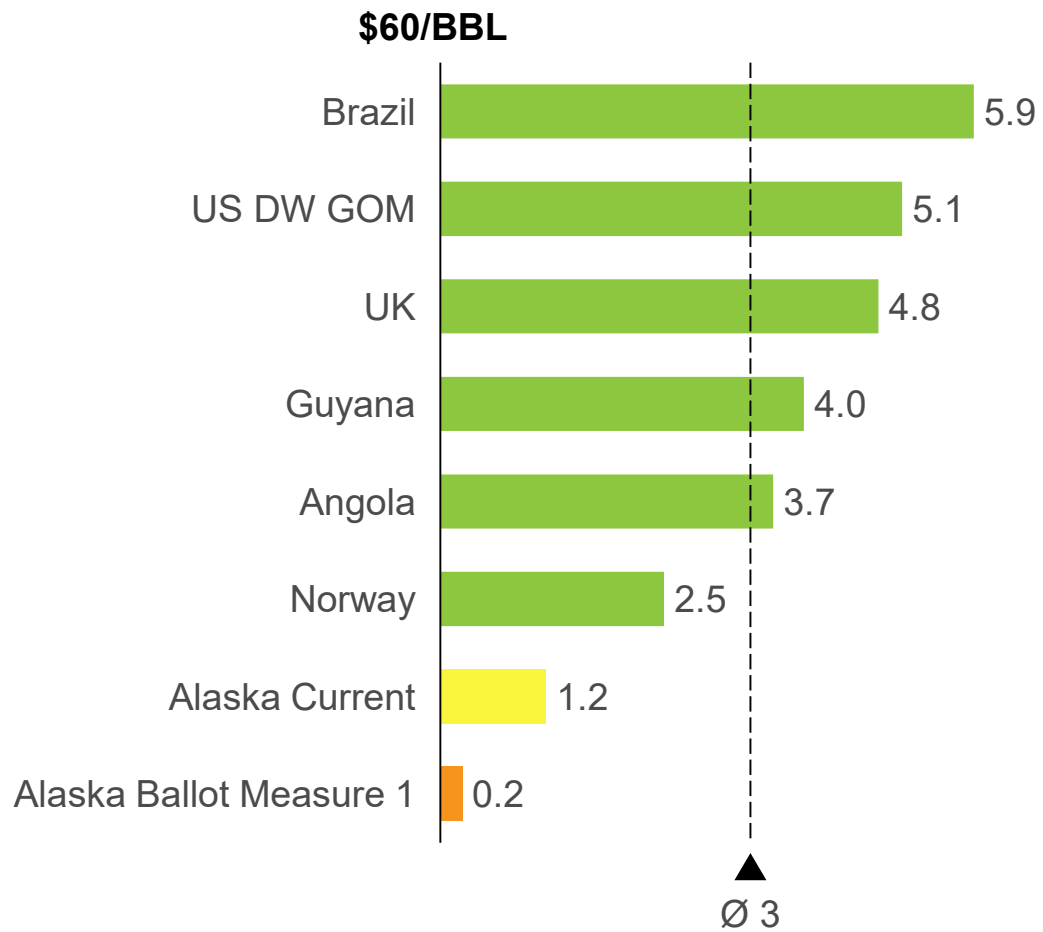
International Peer Group Development Forward NPV per BBL
USD / BBL



Source: IHS Markit

At prices above \$60/bbl Alaska's proposed fiscal system is the least competitive within the international peer group

International Peer Group Development NPV per BBL
USD / BBL

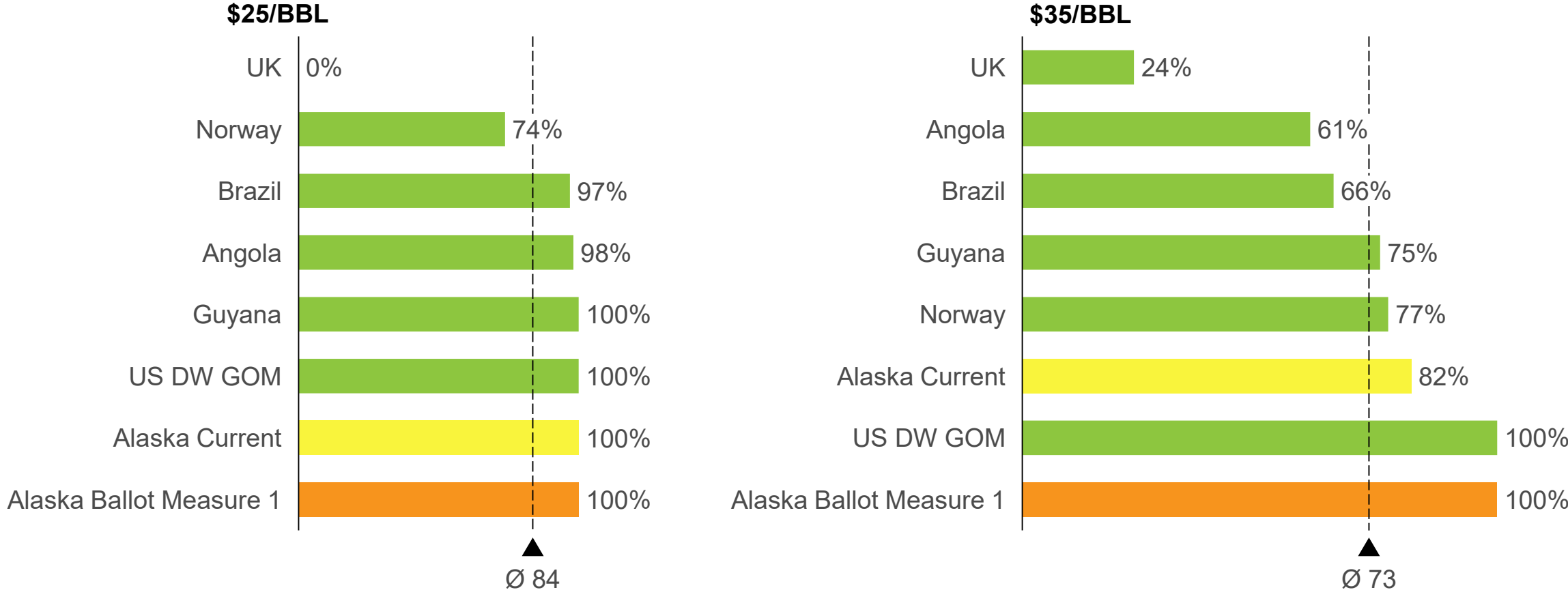


Source: IHS Markit

From a government take perspective Alaska ranks at the bottom of the pack in the low oil price environment

International Peer Group Development Forward Government Take

Percent of Contractor Divisible Income



Note: Government take has been capped at 100% for uneconomic projects for this presentation. Where investors are not able to recover capital and operating costs – the government take is generally greater than 100%.

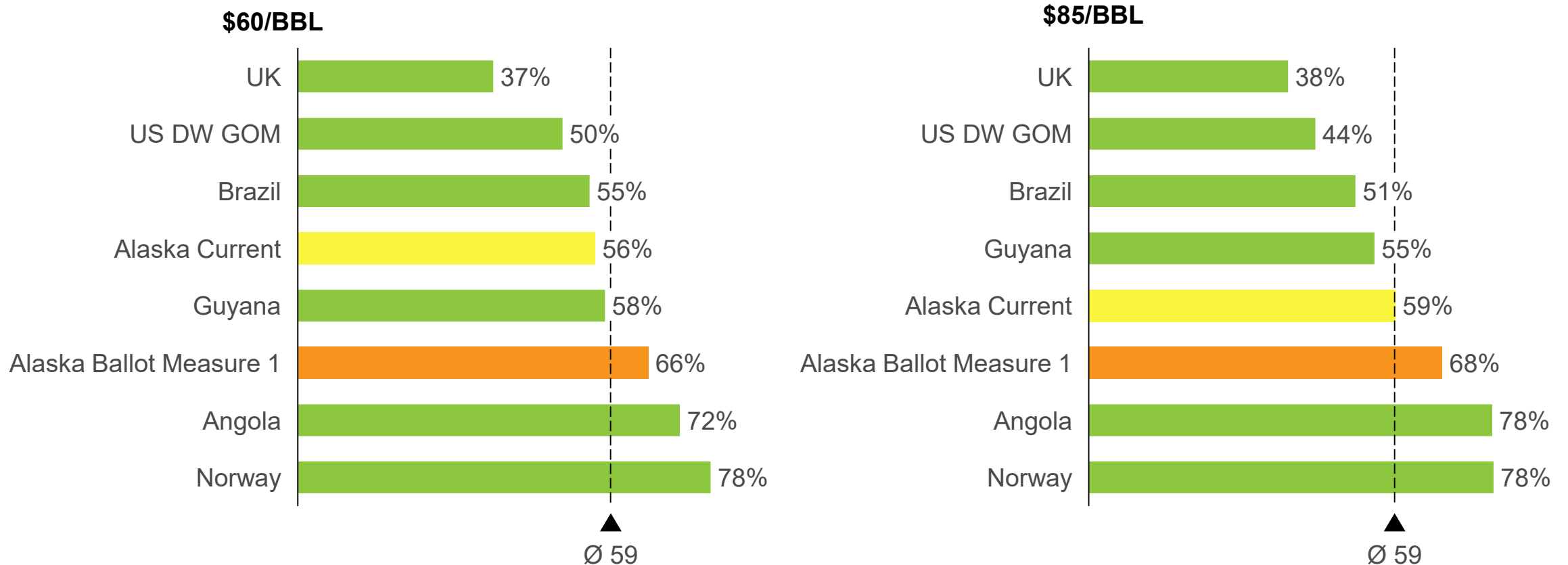
Source: IHS Markit

At or above \$60/bbl Alaska's government take slides towards the bottom of the peer group

Ballot Measure 1 increases government take by 9-11 percentage points, further eroding Alaska's competitive position

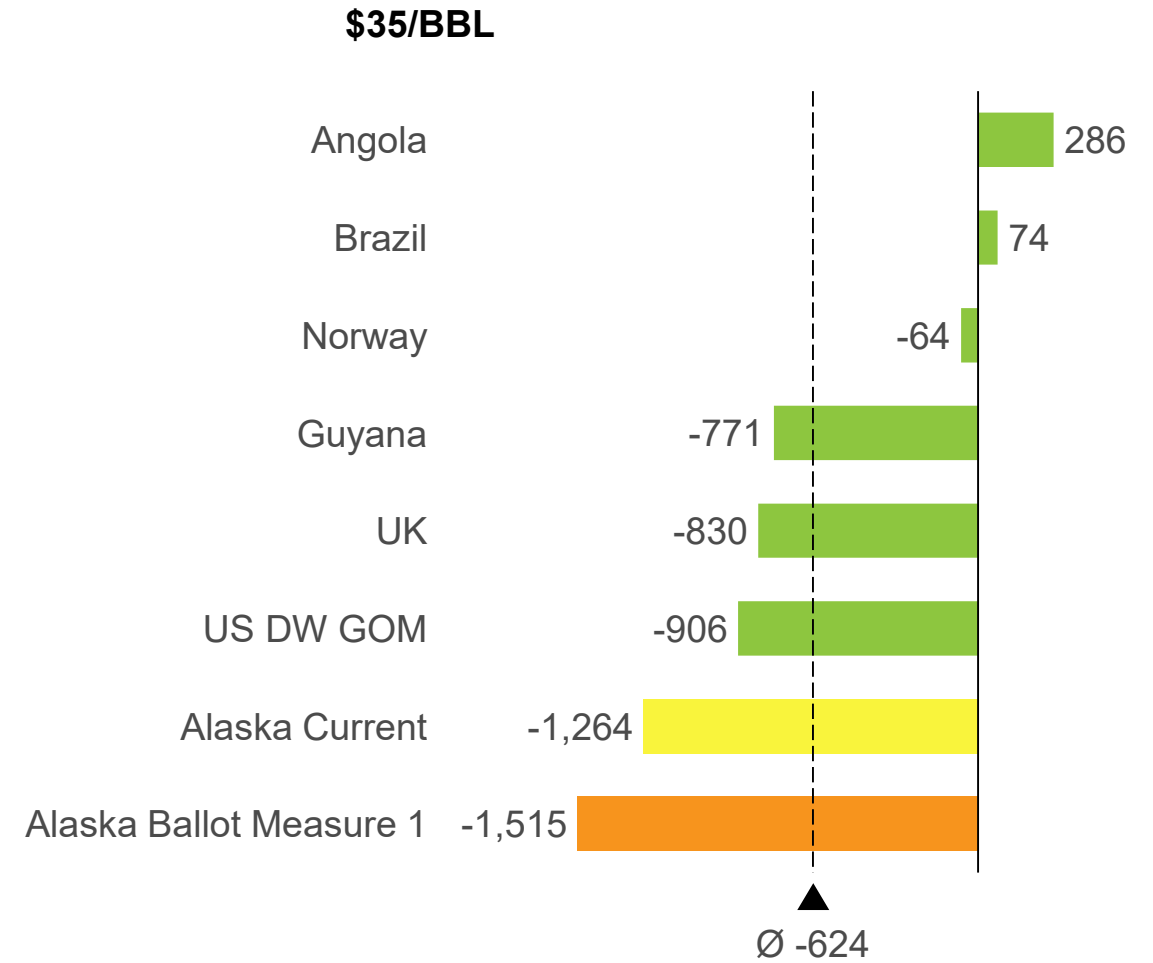
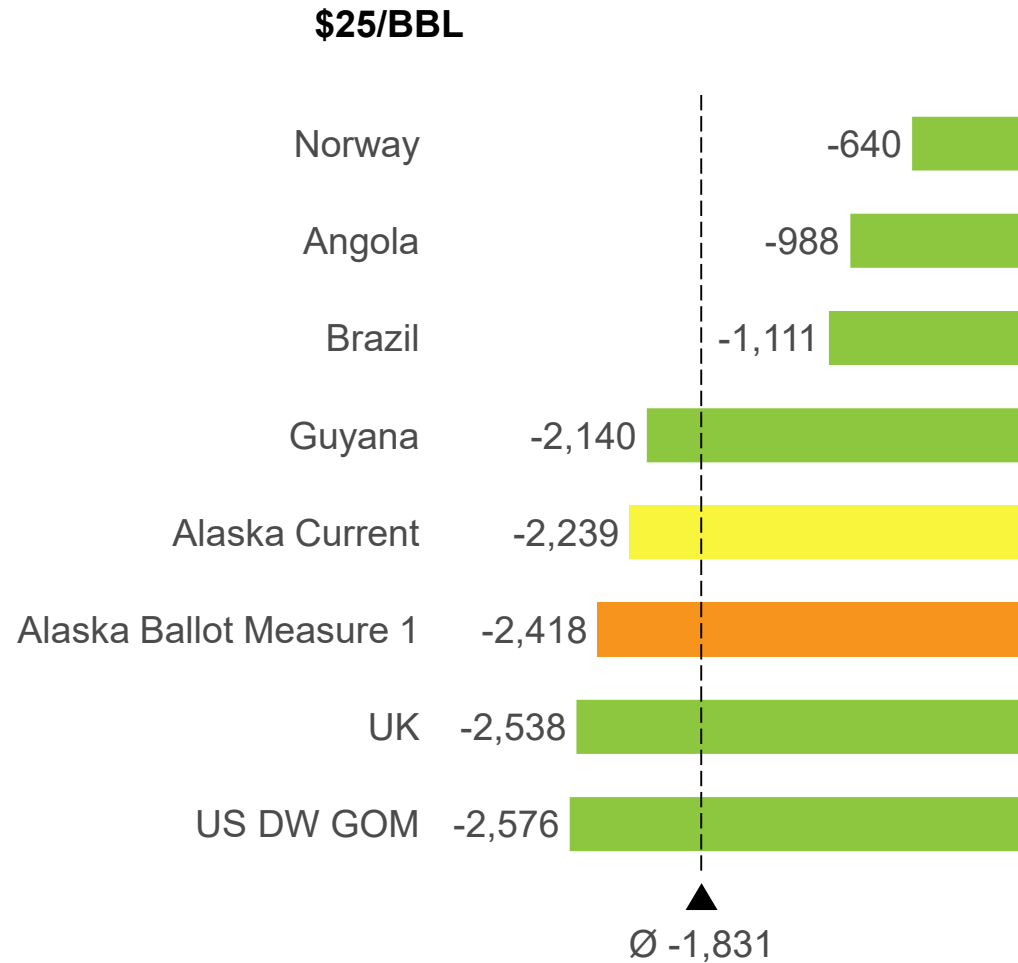
International Peer Group Development Forward Government Take

Percent of Contractor Divisible Income



Alaska's NPV erodes by about \$200 million per project in the low oil price environment

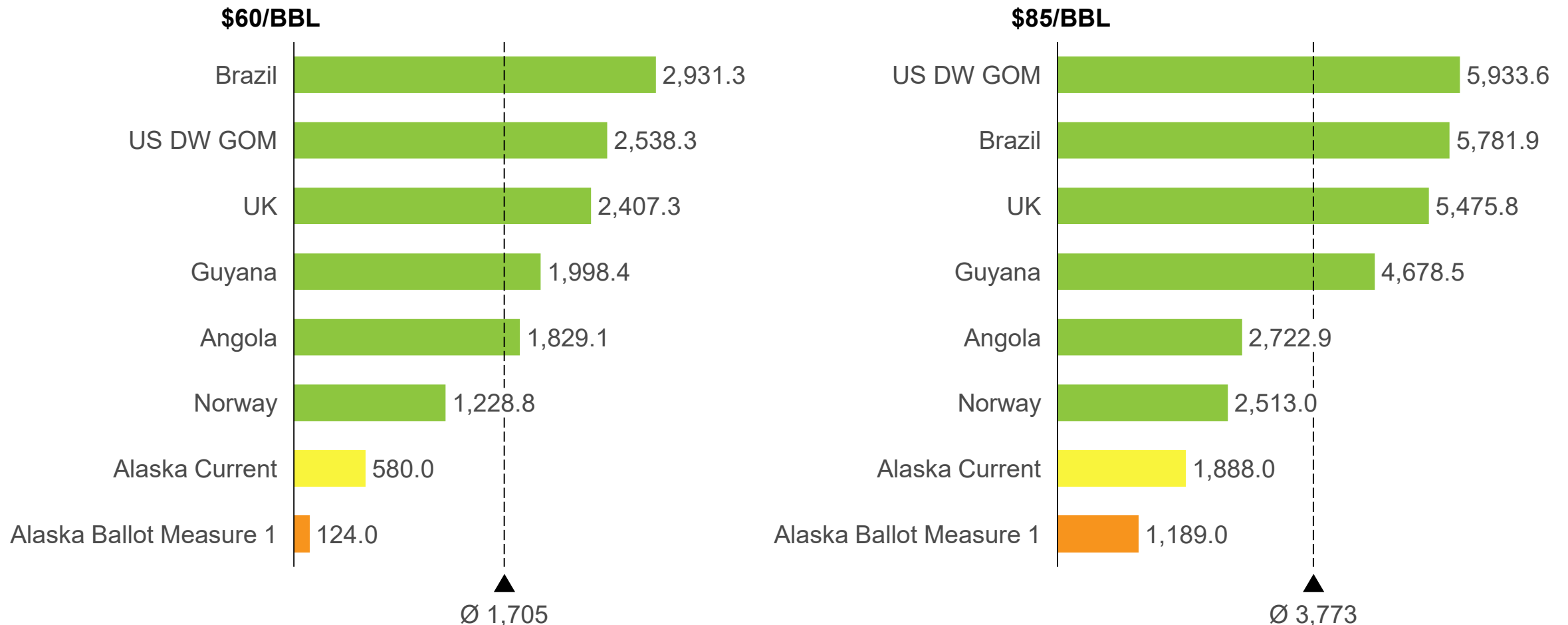
International Peer Group Development Forward NPV
Million USD



Source: IHS Markit

At prices above \$60/bbl the NPV of Alaskan projects suffers a loss of about \$450 - \$700 million per project

International Peer Group Development Forward NPV
Million USD



Source: IHS Markit

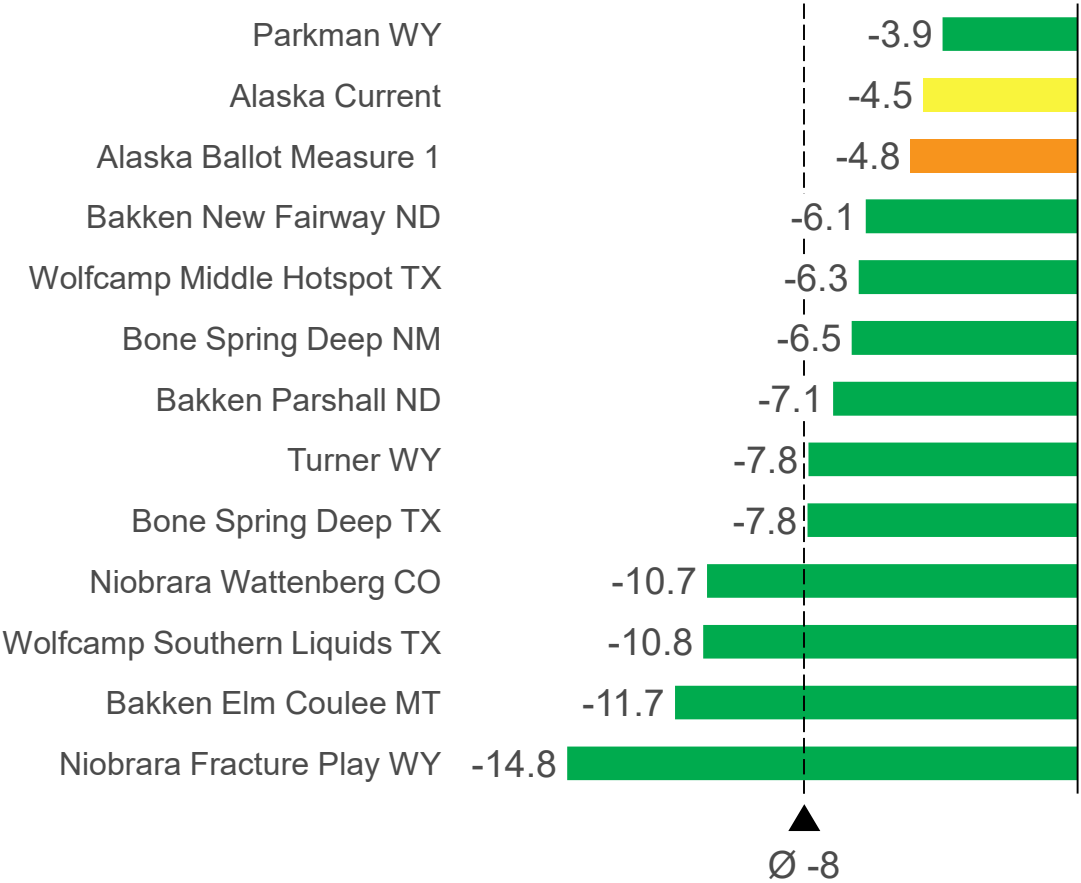
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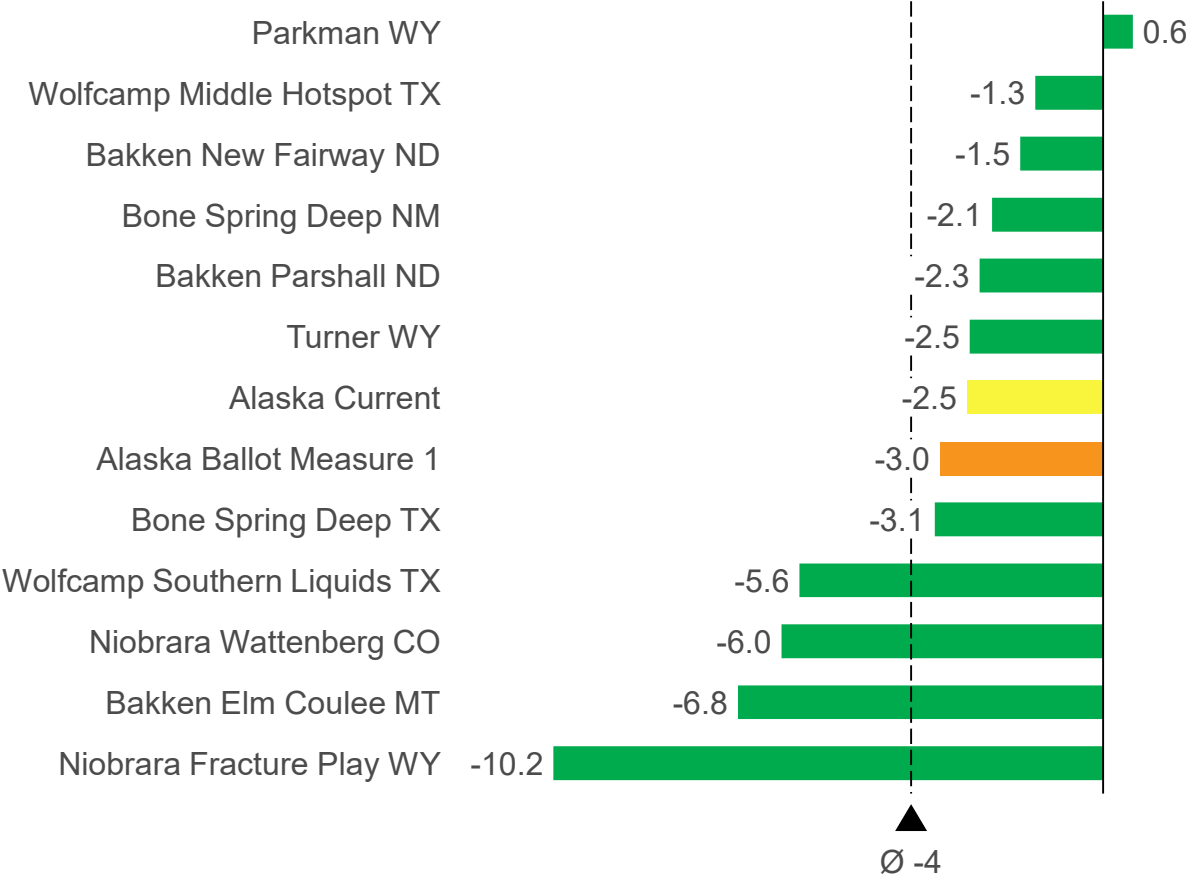
Low oil prices of \$25 to \$35 per barrel do not favor the development of most projects in the US

US Peer Group Development Forward NPV per BBL USD / BBL

\$25/BBL



\$35/BBL



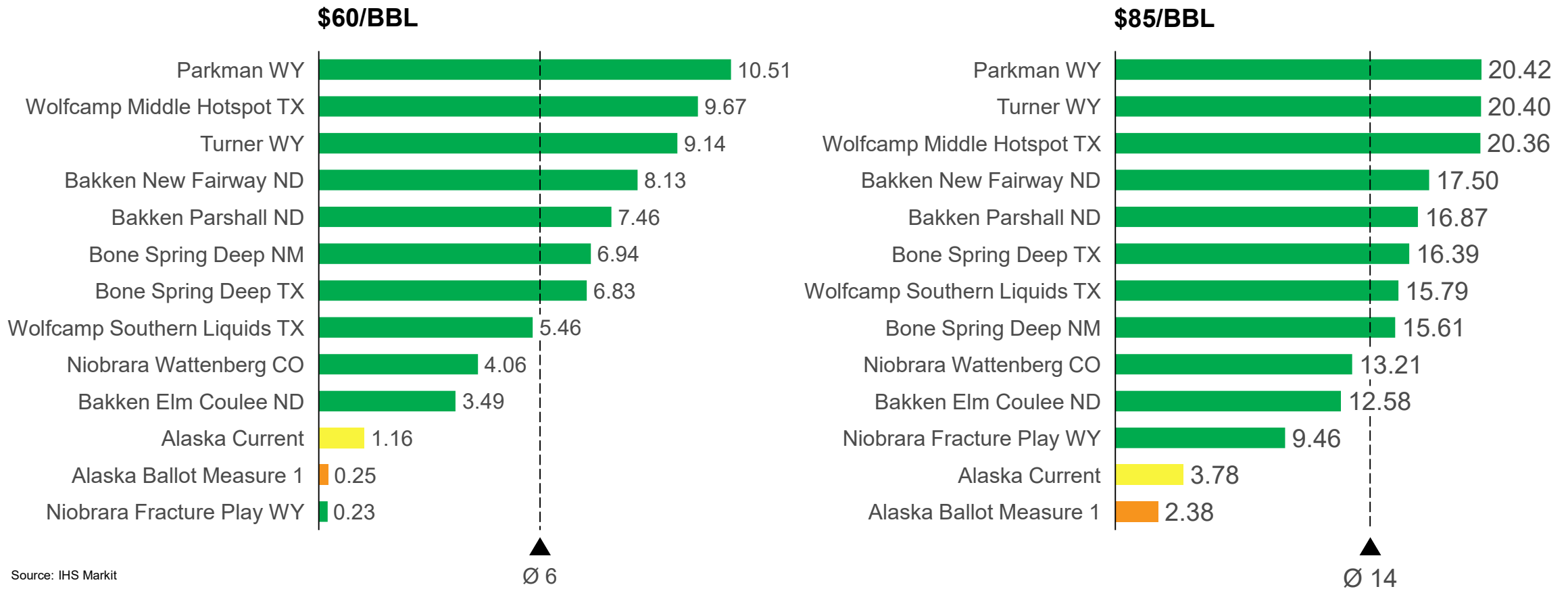
Source: IHS Markit

At and above \$60/bbl oil prices Alaska's fiscal systems generate significantly less value per barrel than Lower 48 tight oil plays

Ballot Measure 1 further erodes the weak competitive position of Alaskan oil fields

US Peer Group Development Forward NPV per BBL

USD / BBL



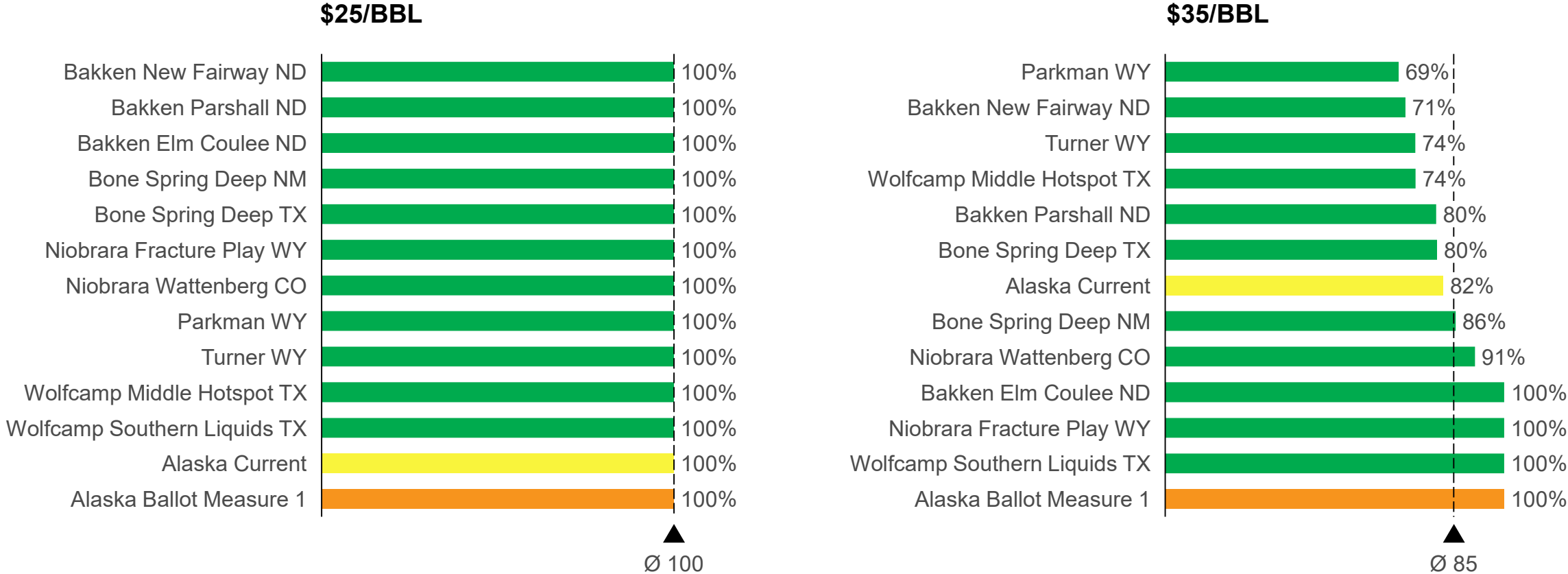
Source: IHS Markit

Note: the closeness of unit NPV for the Parkman, Turner and Wolfcamp projects is a mathematical coincidence. Type curves are different. Wells EURs are resp. 504Mbbbl, 361Mbbbl and 621Mbbbl. Wells resp. NPVs are 10.29MM\$, 7.36MM\$ and 12.64MM\$

The passage of Ballot Measure 1 would increase Alaskan government take by 18 percentage points in the low oil price environment, making it even less likely for project sanction

US Peer Group Development Forward Government Take

Percent of Contractor Divisible Income



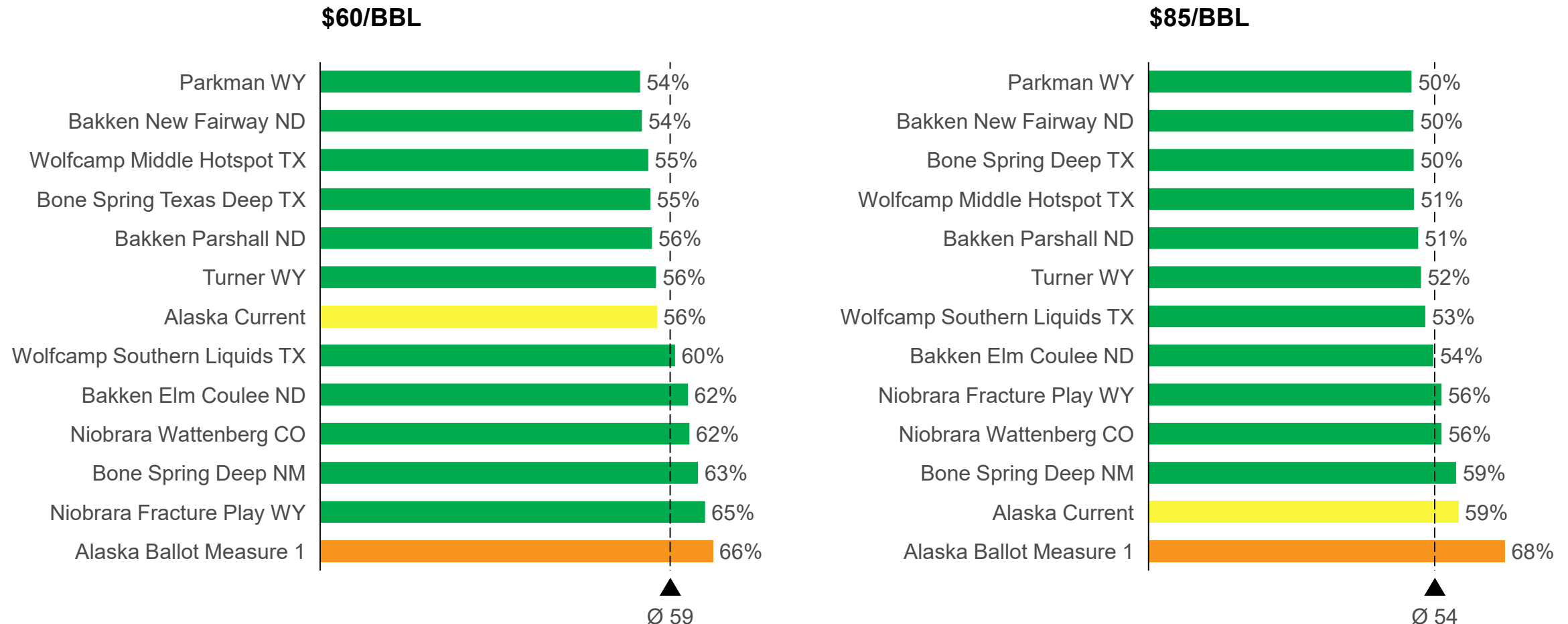
Note: Government take has been capped at 100% for uneconomic projects for this presentation. Where investors are not able to recover capital and operating costs – the government take is generally greater than 100%.

Source: IHS Markit

As prices increase Alaska's competitiveness with the US Lower 48 tight oil plays deteriorates to the least competitive in the peer group

Unconventional Peer Group Development Forward Government Take

Percent of Contractor Divisible Income



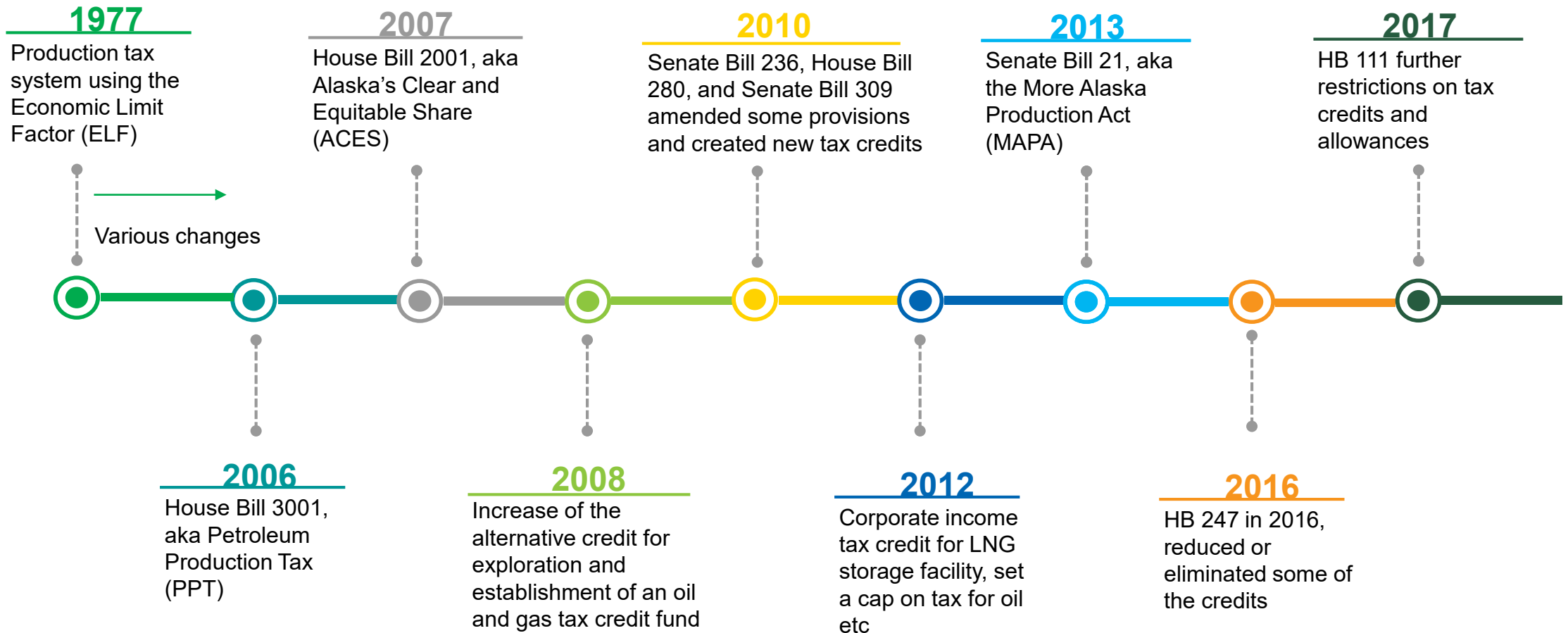
Source: IHS Markit

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Alaska has one of the most unstable oil and gas fiscal systems in the world

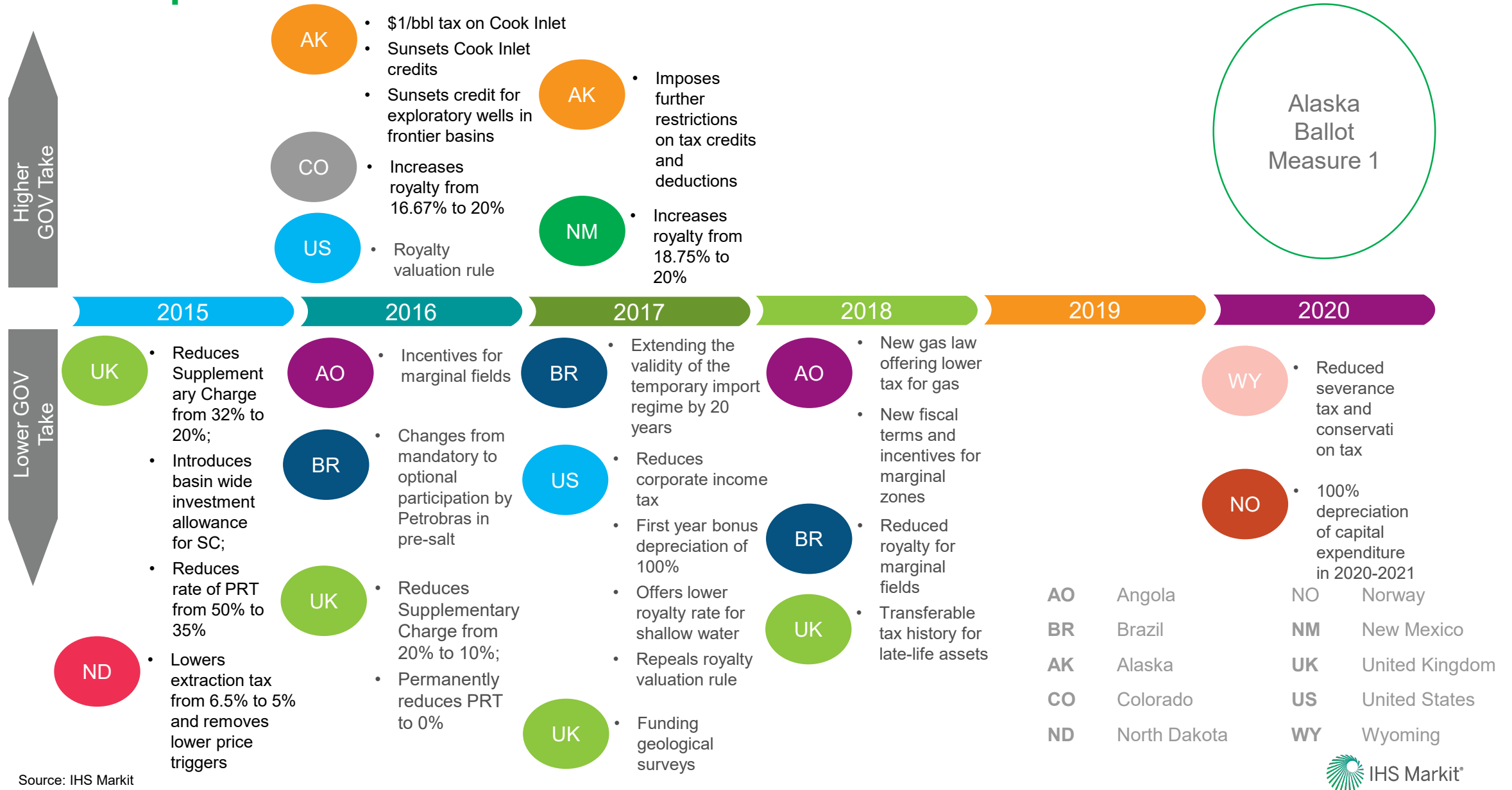
Alaska Production Tax—Legislative signposts (Focus since 2006)



Source: IHS Markit

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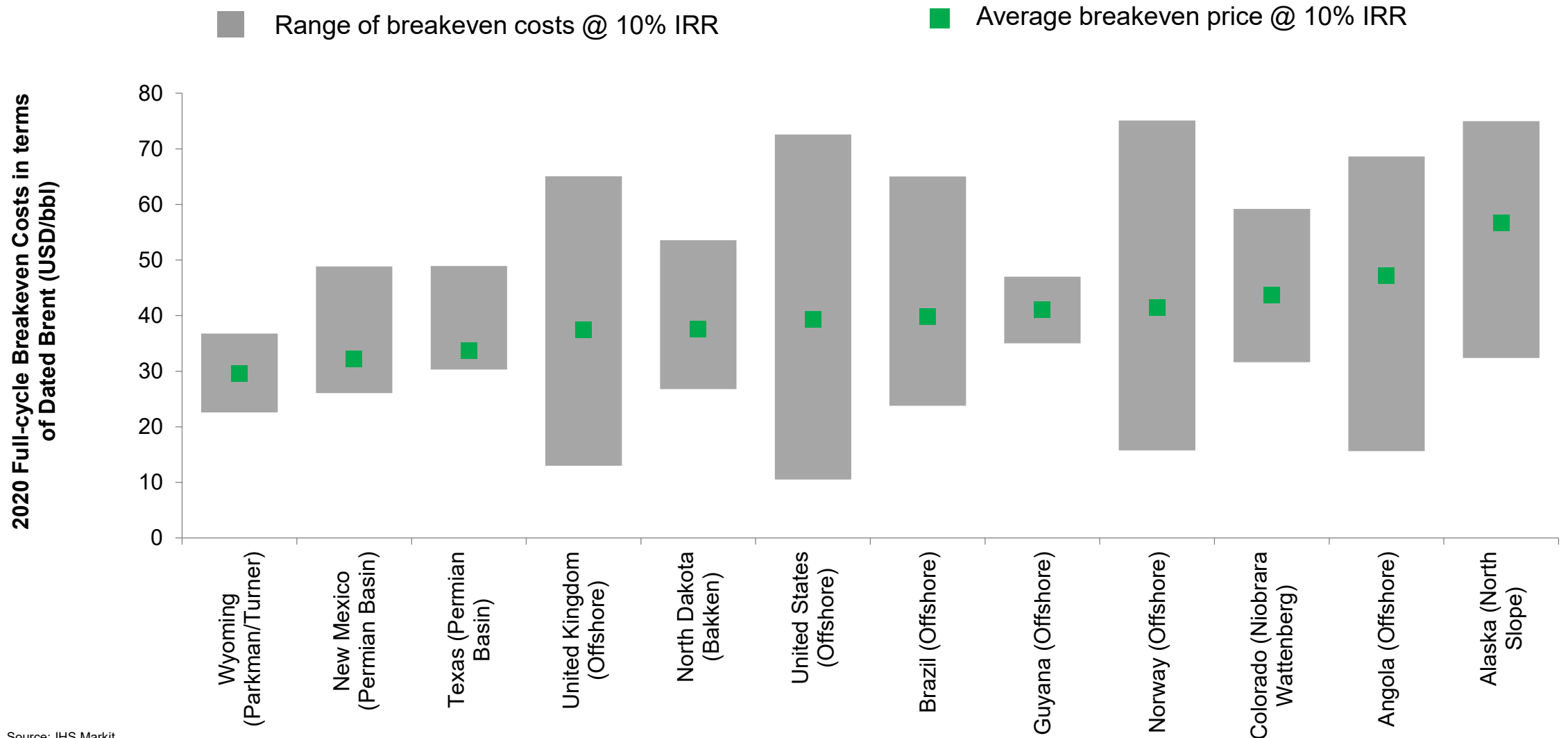
Most of the jurisdictions in the peer group improved fiscal terms since the 2014 oil price crash



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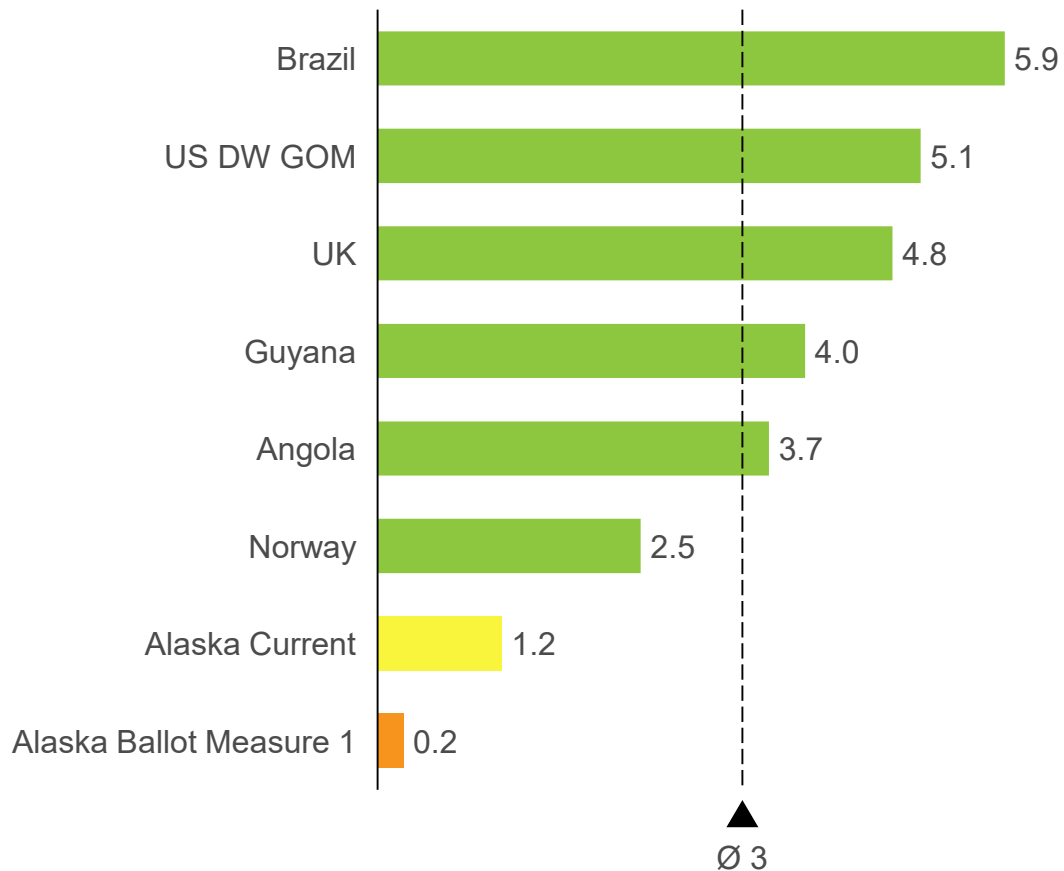
Alaska's North Slope higher unit costs require on average higher commodity prices for investments to break even at 10% investor rate of return



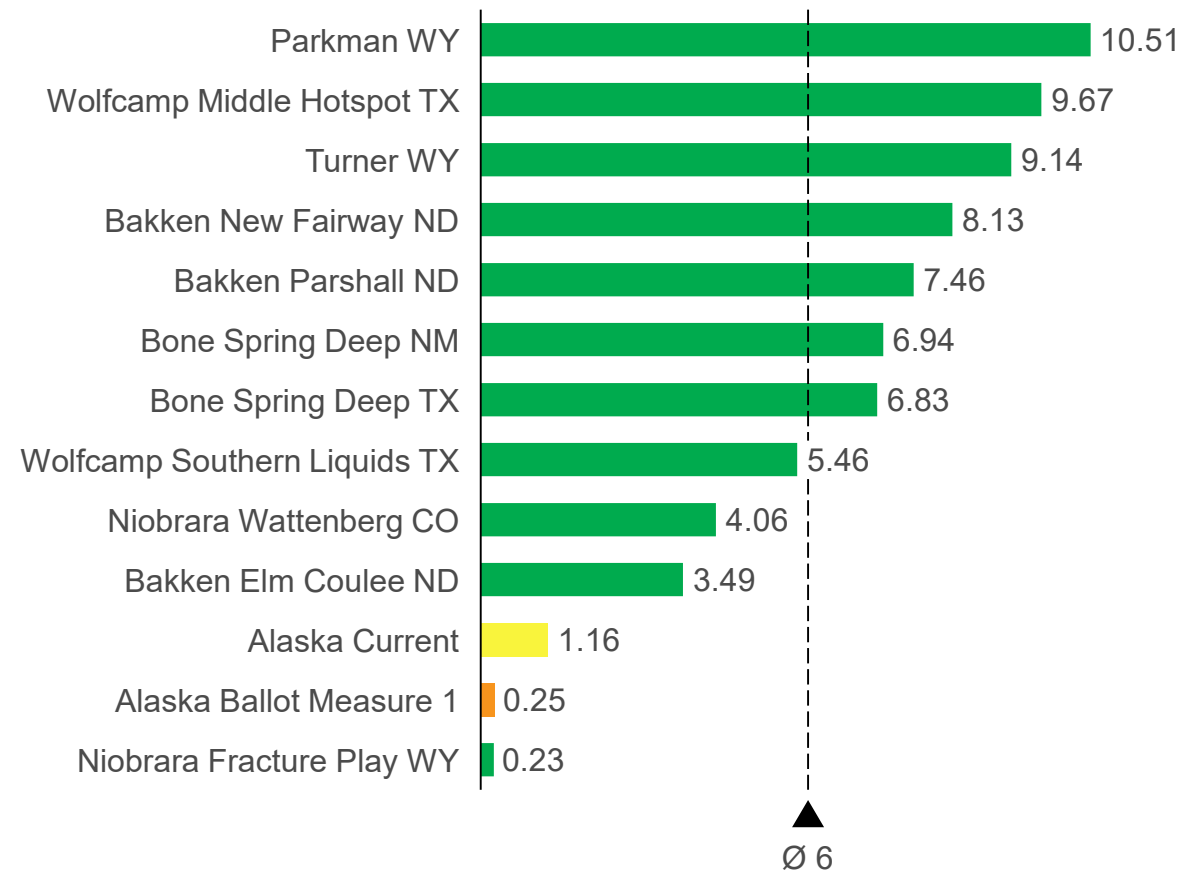
Source: IHS Markit

Alaska's current and proposed fiscal systems are the least competitive within the international and US peer groups in terms of \$/bbl present value

International Peer Group NPV per BBL—\$60/bbl



US Peer Group NPV per BBL—\$60/bbl

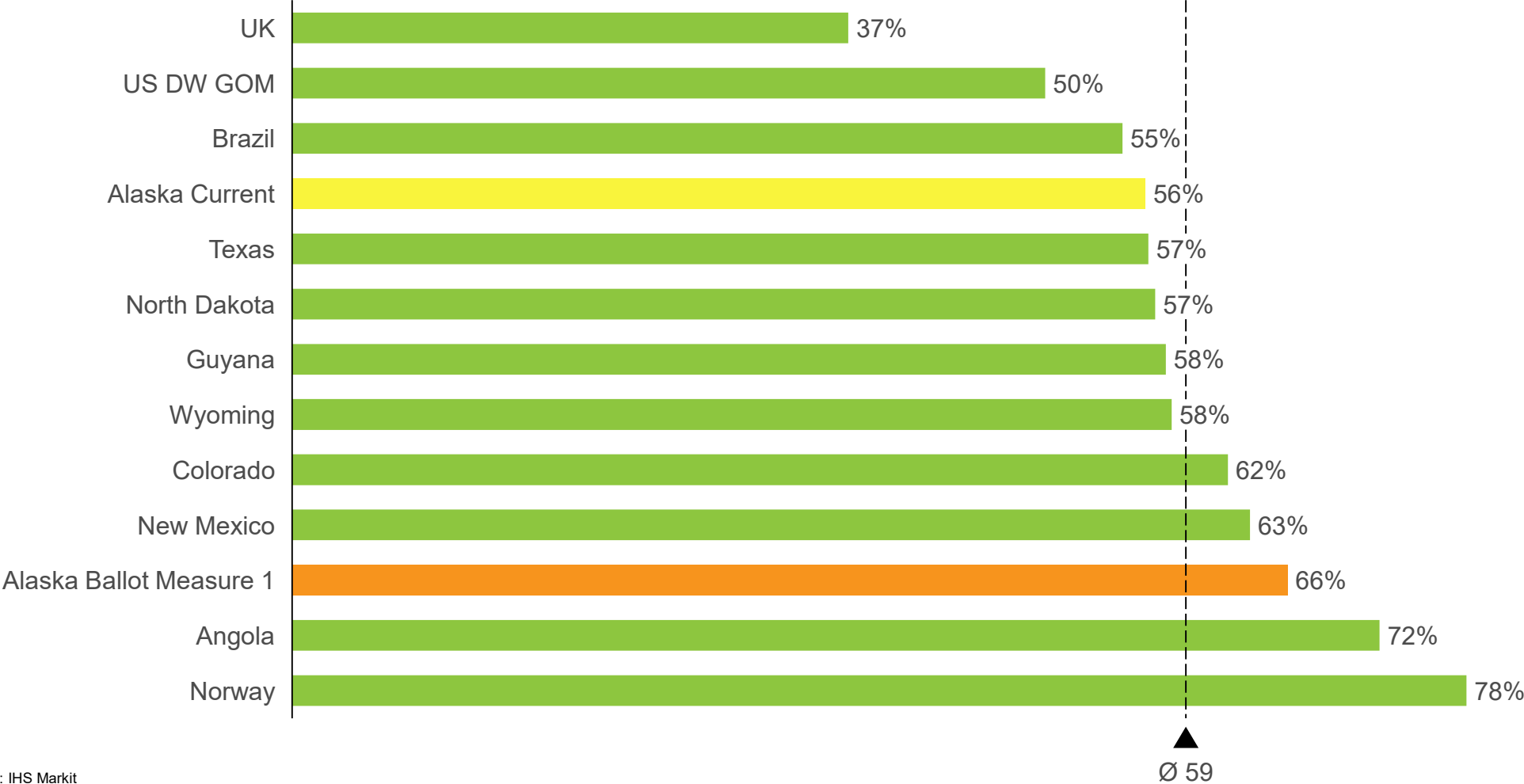


Source: IHS Markit

The Ballot Measure 1 erodes the competitiveness of Alaska's oil and gas investments in the US and internationally

Government Take—\$60/bbl

Average



Source: IHS Markit

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Conclusion

- The Ballot Measure 1 is introduced at a time when the oil industry faces twin crises—the COVID-19 and the oil price crash. While the measure is likely to have a devastating impact to oil and gas investment in the state in the current low oil price environment, the measure is not sustainable even under a long-term base case scenario of \$60/bbl.
- Alaska's current fiscal system is one of the least competitive ones within US and international peer groups in terms of \$/bbl present value accruing to investors. A combination of relatively higher unit costs needed to bring Alaskan North Slope crude oil on stream contribute to lower project profitability compared with Lower 48 and international jurisdictions. The provisions of the Ballot Measure 1 further deteriorate Alaska's competitive position. Ballot Measure 1 is expected to affect 84% of the current production in the state.
- The impact of Ballot Measure 1 exacerbates as commodity prices recover to the long-term base case scenario of \$60/bbl. At prices above \$60/bbl the NPV of Alaskan projects suffers a loss of \$450 - \$700 million per project.
- Alaska's fiscal system becomes one of the least competitive oil and gas fiscal systems in the US under Ballot Measure 1. Alaska's ranking within the international peer group erodes as well under the proposed measure.
- Since 2006 the Alaskan oil and gas fiscal system has undergone frequent changes, resulting in fiscal instability and loss of investor confidence in the state. The introduction of Ballot Measure 1 goes against a recent trend towards lowering the government take by the majority of the jurisdictions. Such a measure comes at a time when other states have either introduced or are considering measures to incentivize the industry.

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