

Review of CS SB 21 (Res)

Presentation to Senate Finance

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March 4, 2013

Roger Marks - Background

- **Since 2008**: Private consulting practice in Anchorage specializing in petroleum economics and taxation
 - Clients include: State of Alaska Legislature, federal government, local municipalities, University of Alaska, independent oil and gas explorer/producers, pipeline companies
- **1983-2008**: Senior petroleum economist with State of Alaska Department of Revenue Tax Division
 - Fiscal development
 - Statutory and regulatory design
 - Petroleum economic and commercial valuation of exploration, development, production, transportation, refining, marketing, taxation
 - Analysis of international competitiveness
 - Oil and gas valuation
 - North Slope gas commercialization
 - Economic valuation
 - International competitiveness
 - Pipeline financing
 - Taxation
 - Tariff design
- **1977-1983**: Petroleum economist with United States Geological Survey
 - Resource evaluation of unleased acreage on Alaska federal Outer Continental Shelf
 - Design of bidding systems
- **Publications on Alaska petroleum taxation**: Journal of Petroleum Technology, OPEC Review, Journal of Energy Finance and Development, Oil & Gas Financial Journal, Journal of Economic Issues, Journal of Legal Issues and Cases in Business

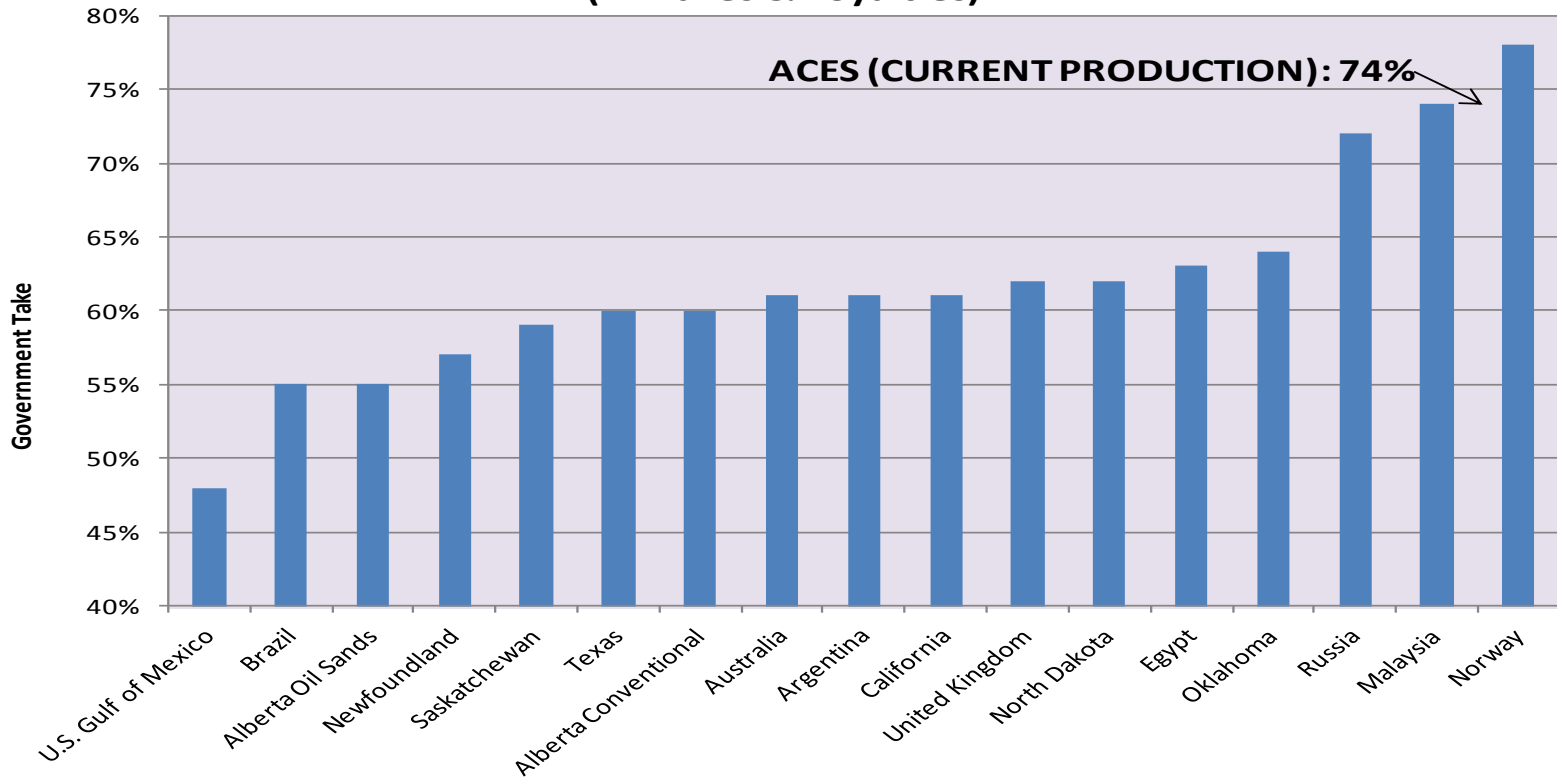
Approach for Evaluation

- The interest in evaluating the production tax stems from concern over the perception of slow investment and declining production levels on the North Slope
- The international investment climate is characterized by plenty of opportunities, fluid capital, but finite capital
- Investors allocate productive resources to their most highly valued uses
- Taxes are a significant part of the cost structure and under ACES they are relatively high
- Tax rates under ACES have made Alaska uncompetitive
- The goal is to make Alaska competitive

Defining Fair Share: Determining a Competitive Tax Structure

- Determine who the competition is
- Determine where Alaska should be in within that competition
- Design a system to achieve that target

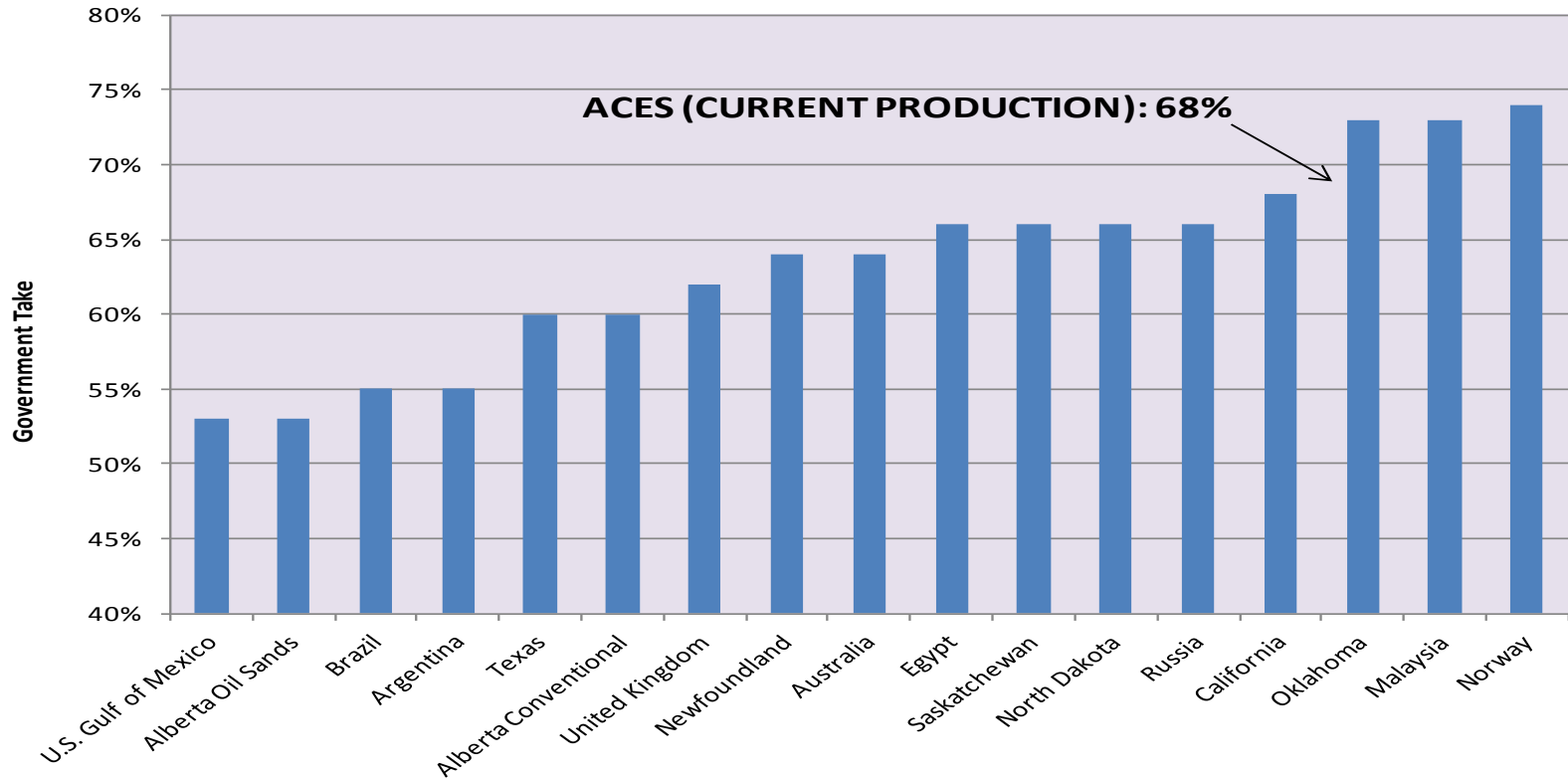
Alaska Peer Group*
Government Take at \$110/bbl Market Price
(Total Taxes as a Percentage of Net Value)
(All Taxes & Royalties)



* North America regimes (U.S. states & Canadian provinces with greater than 200,000 bbl/day prod)
 Tax & royalty regimes
 Arctic regimes
 Regimes with similar production and reserves (between 400,000-800,000 bbl/day prod and between 2-6 billion bbls proved reserves)

Source: PFC Energy except Newfoundland, Saskatchewan, California, Oklahoma

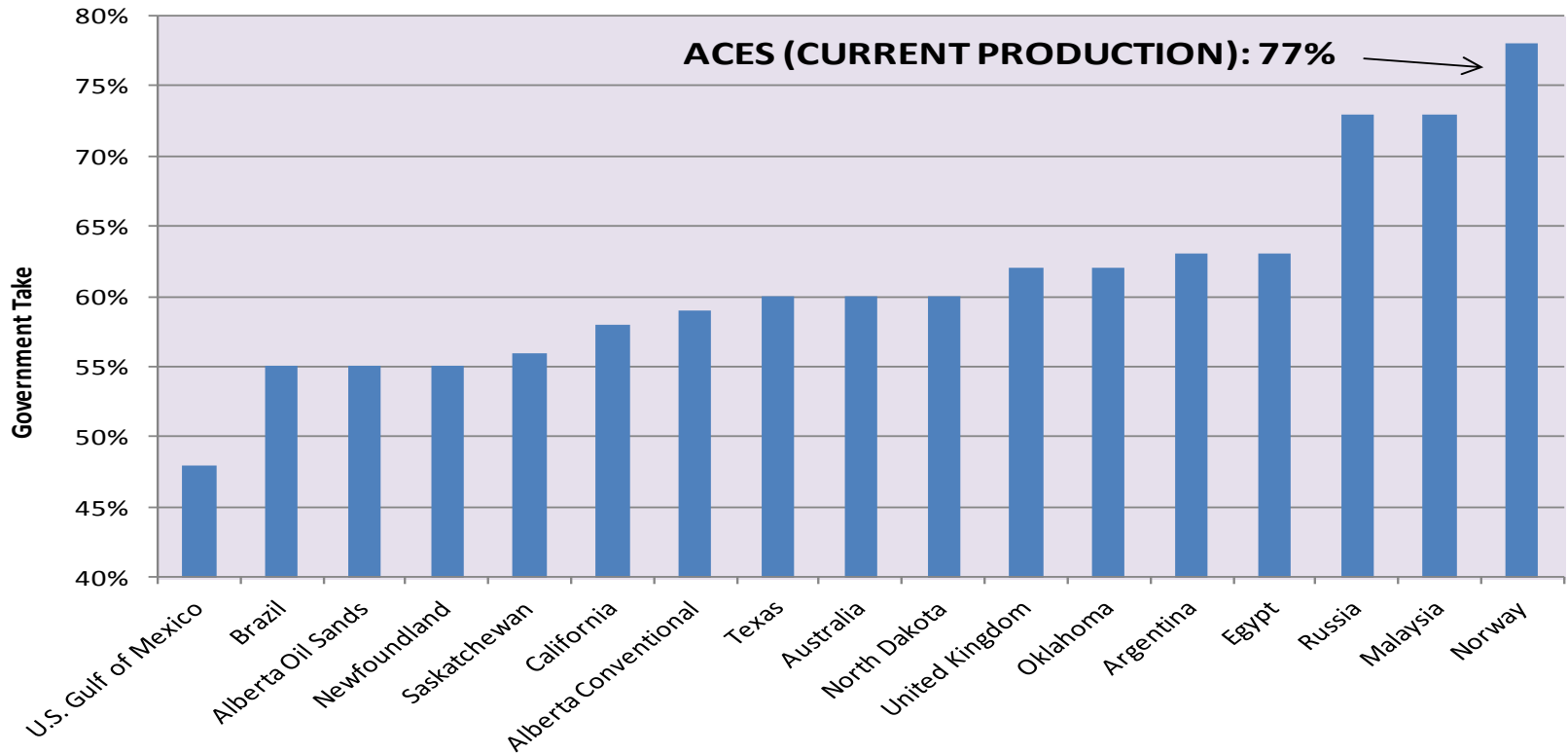
Alaska Peer Group*
Government Take at \$70/bbl Market Price
(Total Taxes as a Percentage of Net Value)
(All Taxes & Royalties)



* North America regimes (U.S. states & Canadian provinces with greater than 200,000 bbl/day prod)
 Tax & royalty regimes
 Arctic regimes
 Regimes with similar production and reserves (between 400,000-800,000 bbl/day prod and between 2-6 billion bbls proved reserves)

Source: PFC Energy except Newfoundland, Saskatchewan, California, Oklahoma

Alaska Peer Group*
Government Take at \$160/bbl Market Price
(Total Taxes as a Percentage of Net Value)
(All Taxes & Royalties)



* North America regimes (U.S. states & Canadian provinces with greater than 200,000 bbl/day prod)
 Tax & royalty regimes
 Arctic regimes
 Regimes with similar production and reserves (between 400,000-800,000 bbl/day prod and between 2-6 billion bbls proved reserves)

Source: PFC Energy except Newfoundland, Saskatchewan, California, Oklahoma

Proposed Target Government Take to be Competitive

- 65% take at \$70/bbl
- Level down to 62% take at current prices (\$110/bbl) and beyond
- A fairly neutral system

Each Percentage Point of Take is Worth a Lot of Money
At \$110/bbl Each Percentage Point in Government Take
Means \$142 Million Annually to Government/Producers

• Market Price	\$110/bbl	
– Costs	<u>\$29</u>	
• Net value		\$81/bbl
• Taxable percentage		.875
• Million bbls/yr (@550,000/day)		201
• One-percent		<u>.01</u>
• TOTAL		\$142 mm

Regressive Elements in Fiscal System

- Make for challenging economics at low prices, particularly for high cost fields
- Makes for challenge in designing production tax to offset effects
- Royalty
- Property Tax
- Minimum Tax

Cost Spectrum

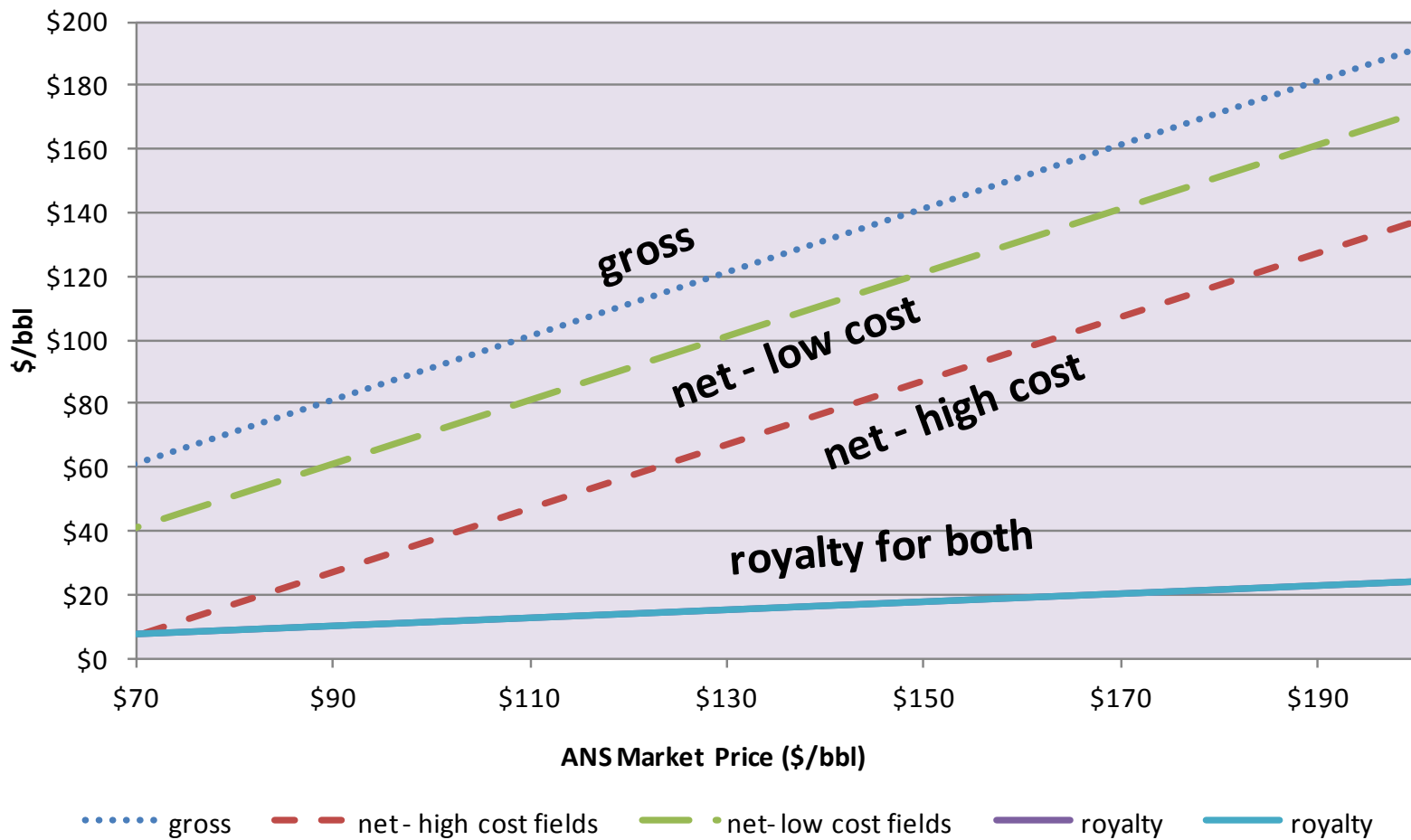
- Low cost fields (existing production)
 - \$7/bbl capital; \$13/bbl operating (\$20/bbl total)
- Medium cost fields (new production from existing fields)
 - \$20/bbl capital; \$17/bbl operating (\$37/bbl total)
- High cost fields (new fields and some heavy and viscous oil)
 - \$33/bbl capital; \$21/bbl operating (\$54/bbl total)

Example of Royalty Regressivity

ANS Market Price (\$/bbl)	\$70.00
Less: Transportation Costs (\$/bbl)	\$9.00
Gross Value (\$/bbl)	\$61.00
Less: Upstream Capital and Operating Costs (\$/bbl)	\$50.00
Net Value (\$/bbl)	\$11.00
Royalty (1/8 of Gross Value) (\$/bbl)	\$7.63

Royalty chews up 70% of profit before property, production and income taxes

Comparison of Gross, Net & Royalty Low & High Cost Fields



CS SB 21 (Res) Features

- 35% rate applied to net (production tax) value (ptv)
- 30% gross revenue exclusion (GRE) used in computing net
- \$5/bbl credit
- If ptv is negative, the loss can be carried forward to when ptv is positive as a credit at 35% of the loss

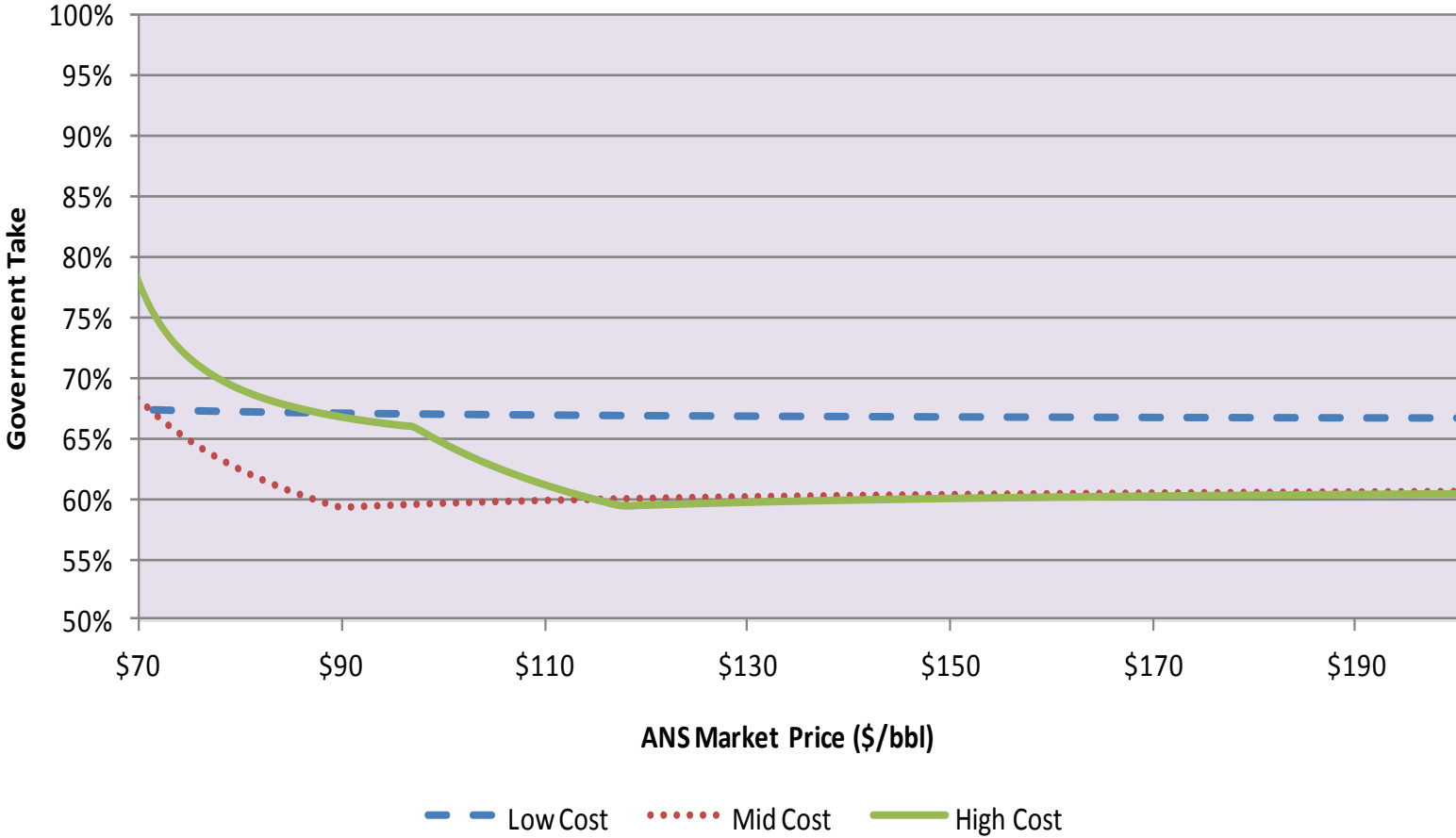
How Features Operate

- 1) GRE (CS increased from 20% to 30% for new fields)
 - Brings down tax rate more for high cost fields and more at lower prices
- 2) Per barrel credit (Introduced in CS)
 - Focuses on bringing tax rate down high cost fields at low prices
- 3) Rate (Increased from 25% to 35% in CS)
 - Moves entire curve for all fields up or down

Overview of How Features Interact

- Tax is higher of net and 4% of gross calculation
- There is a floor of zero on each
- The GRE is used to calculate the net; it is not used to calculate the gross minimum
- The loss carry-forward credit is applicable regardless of whether net or the gross minimum is invoked
- The \$5/bbl credit is applicable for both the net and gross minimum calculation. It can only take the tax down to zero. Any unused amounts are lost.

Government Take CS SB 21 (Res)



General Comments

Differences in Take Depending on Costs and Fields

- Given a target take at a given price, the system should come as close as possible to hitting the target over a spectrum of costs
- Treating Different Fields Differently (No GRE for Existing Participating Areas)
 - Both existing and new production benefit from existing and new investment.
 - Existing fields may contain costly isolated targets in existing participating areas.
 - The system is efficient when the highest valued resources get produced. The tax system should not distort this; it should not favor investing in certain cost fields over others.
 - Differential treatment could cause unwanted shifts in investment.

Specific Comments on Features

- Gross Revenue Exclusion and \$5/bbl Credit
 - Same for all cost structures – unconnected to actual production costs
 - Has different effects at low prices depending on cost structure
 - *Unaffected* by investment
 - \$5/bbl credit: Lose some of it at low prices if at \$0 tax floor
- 20% Capital Credit (**Revoked in Original Bill and CS**)
 - Explicitly related to actual costs
 - Automatic adjustment to different cost structures: low credit if low costs; high credit if high costs
 - *Affected* by investment
 - Do not lose it at low prices
 - Boost to net present value and rate of return

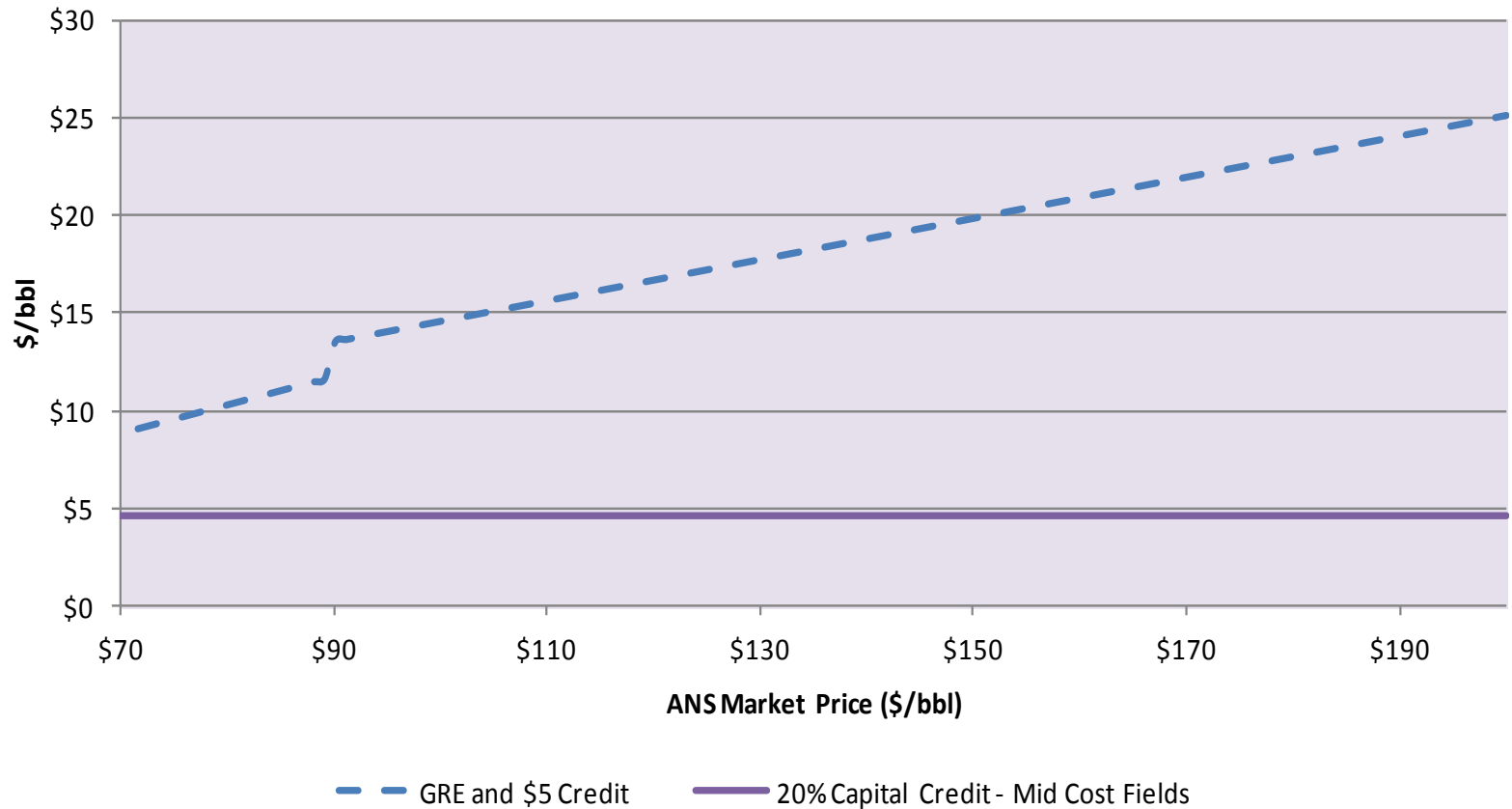
How Much of \$5 Credit Used



Cash Flow Comparison

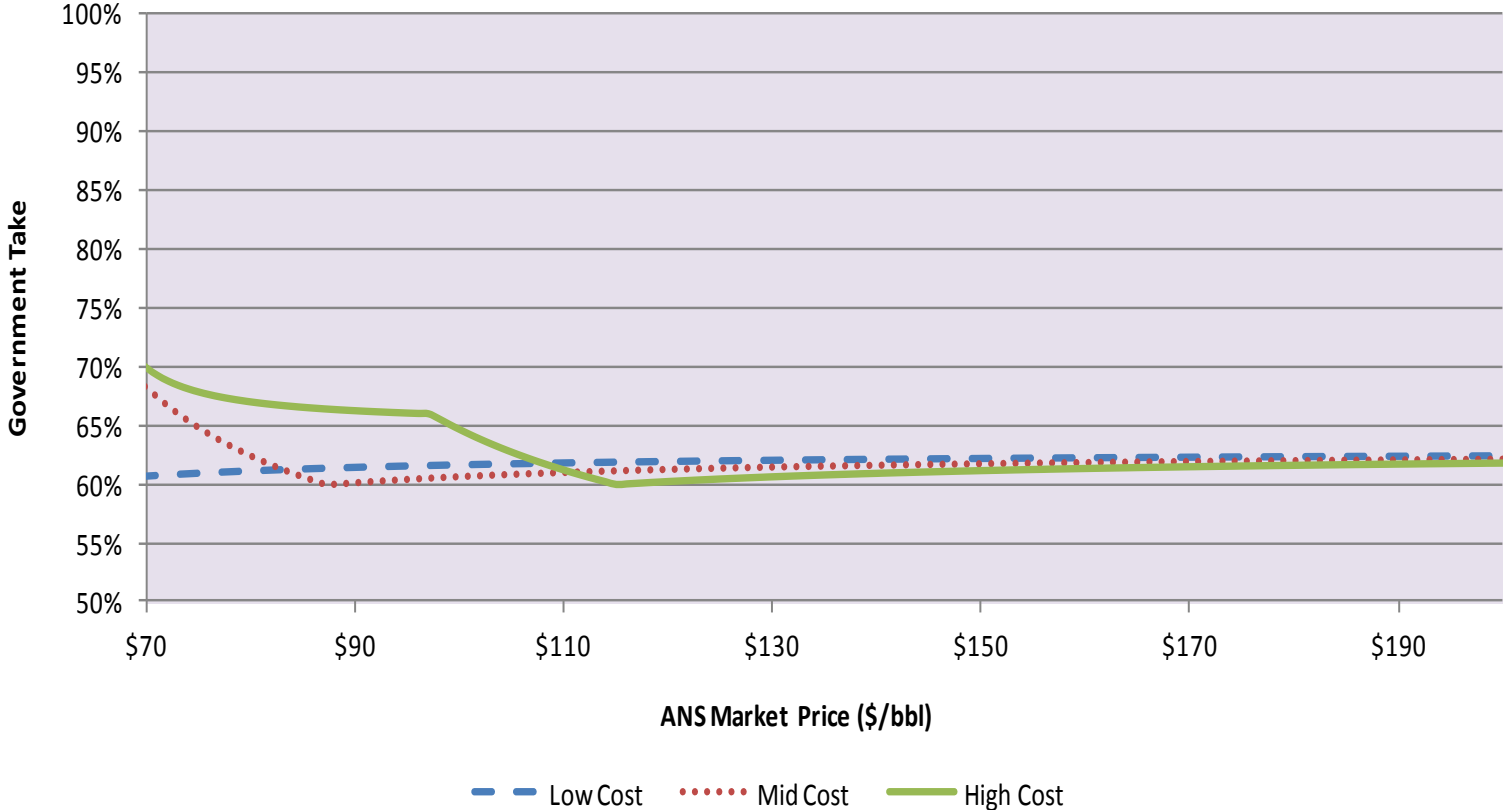
Value of 30% GRE & \$5 Credit vs. 20% Capital Credit

Mid Cost Fields



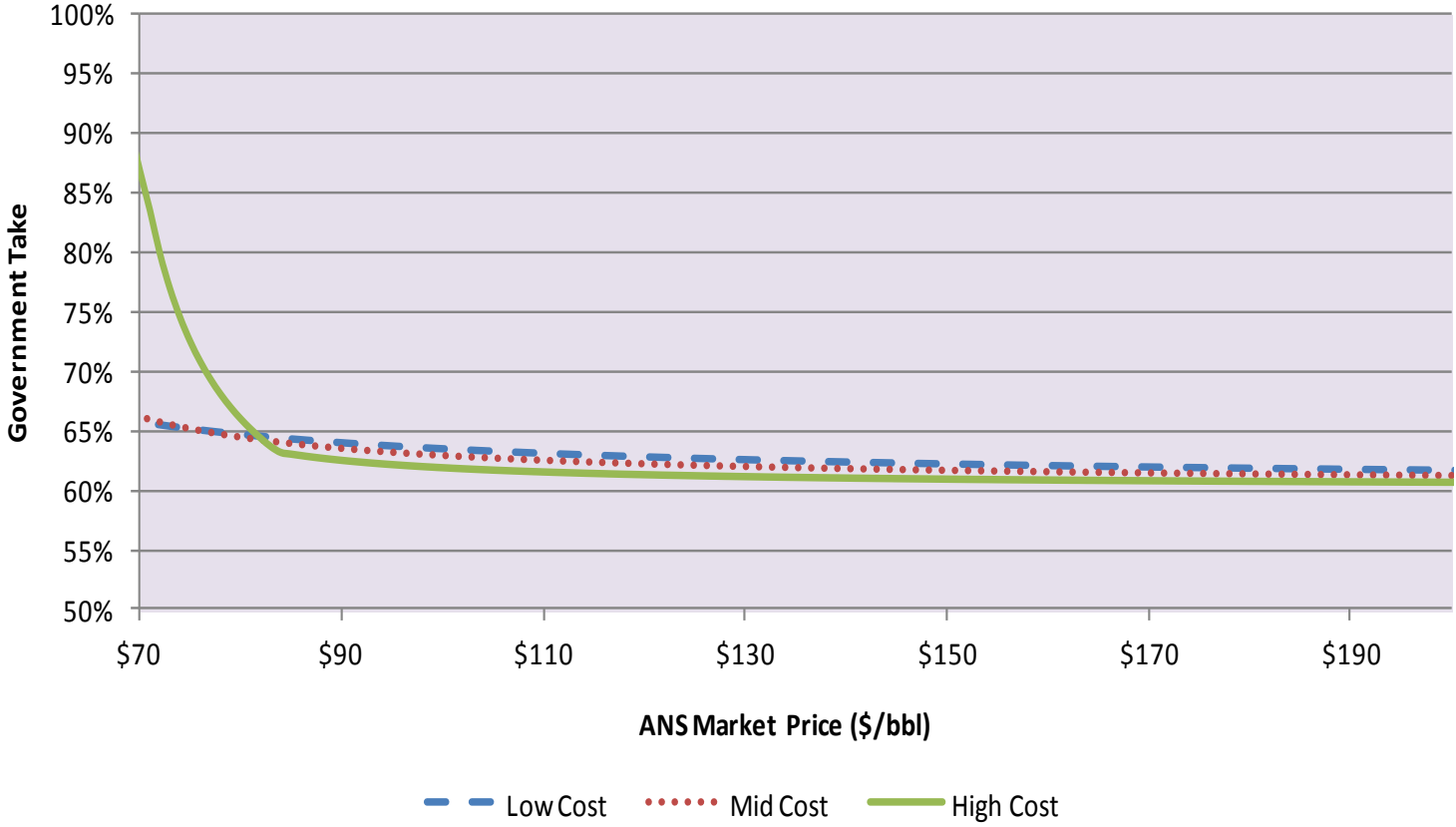
Government Take

40% Rate / 30% GRE All Fields / \$5/bbl Credit



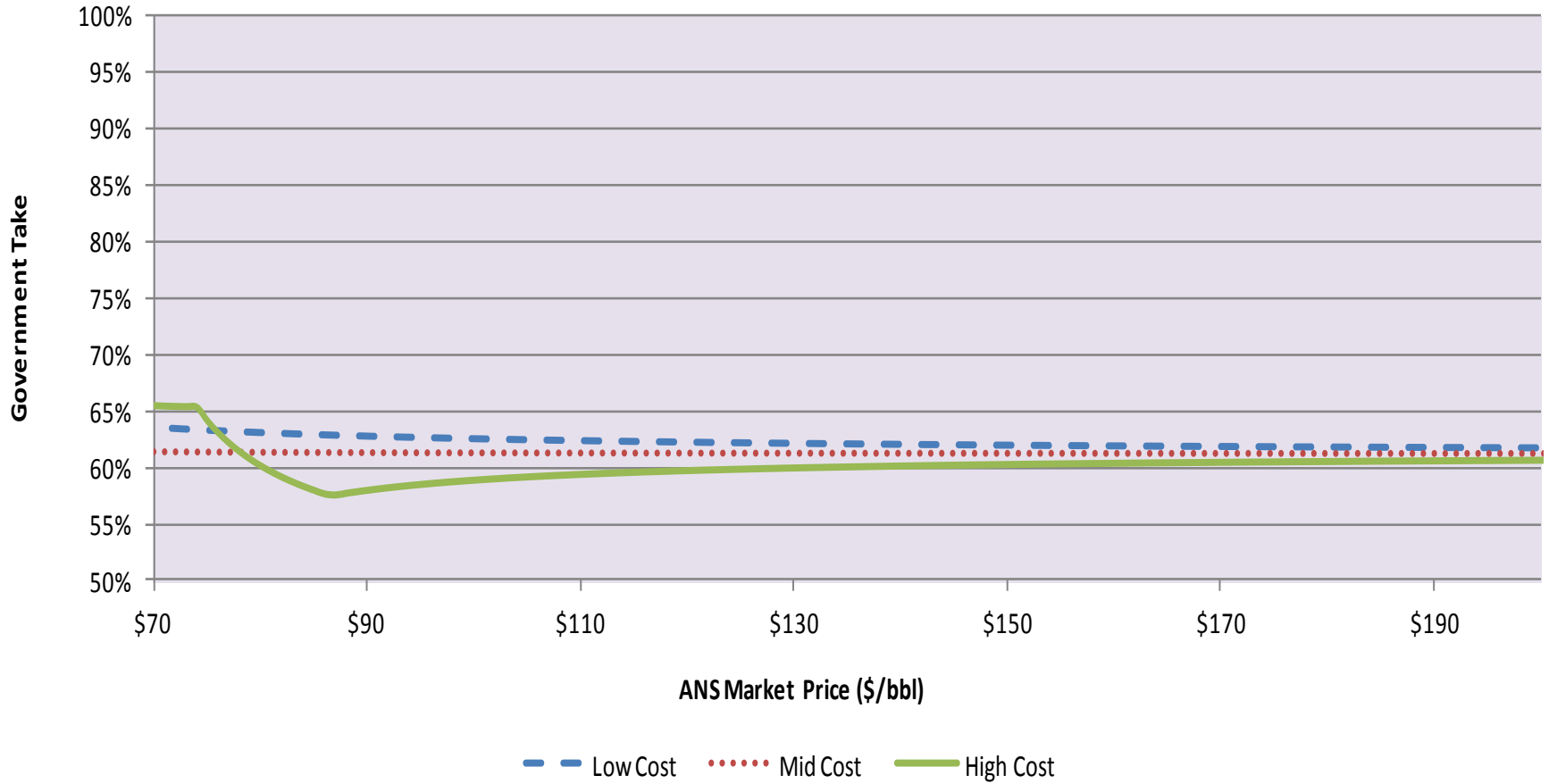
Government Take

23% Rate / 20% Capital Credit



Government Take

26% Rate / 20% Capital Credit / 5% GRE All Fields / \$2/bbl Credit



Progressivity?

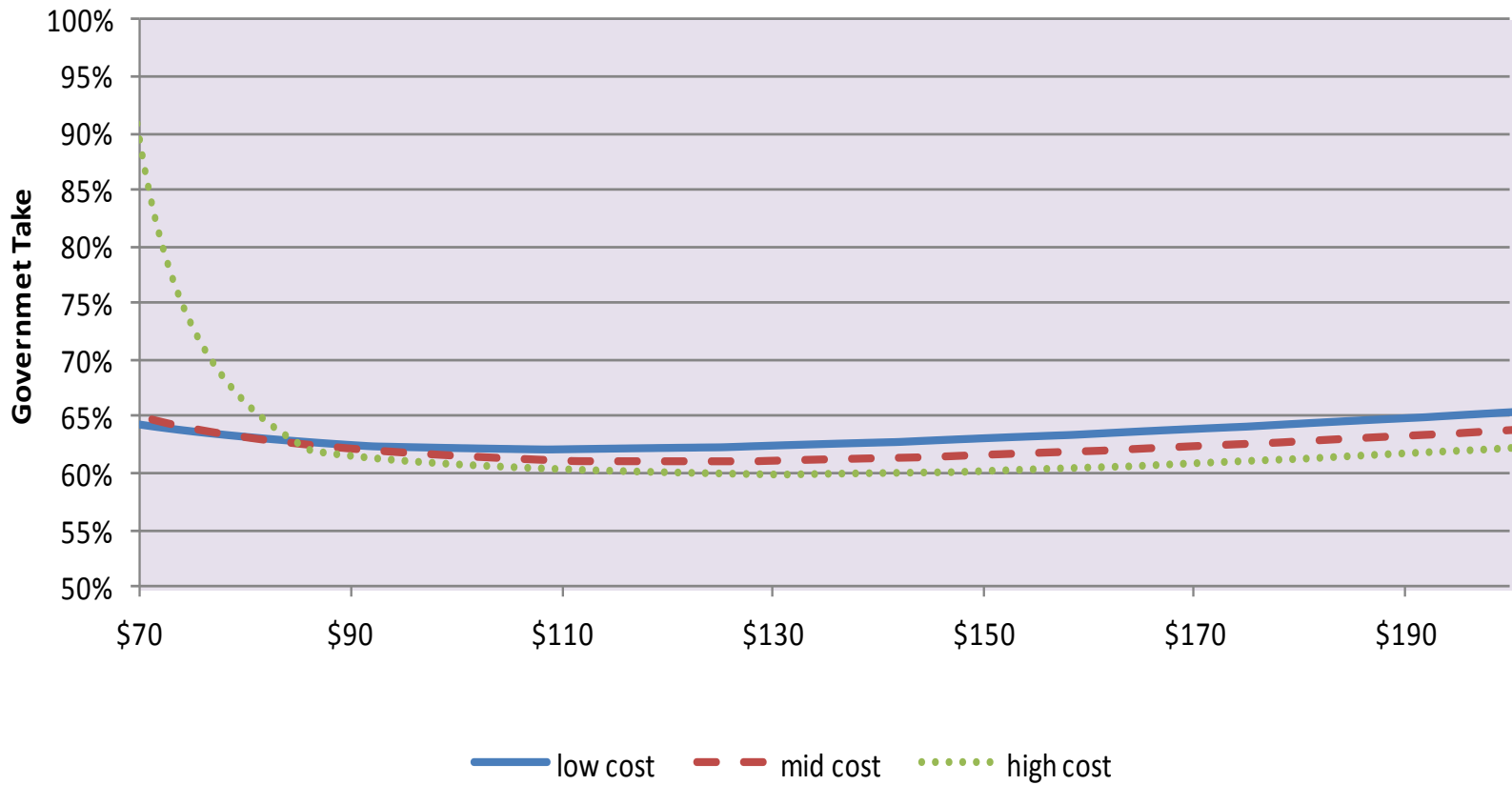
- Can use a progressive structure to flatten out the curve at both ends and make a neutral system, which aligns interests
- Or can make a progressive system
 - Pros (if not excessive)
 - Protects producers interests at low costs
 - Protects state's interests at high costs
 - May be necessary for fiscal stability
 - Cons
 - Only works if balanced at low and high prices
 - With inherent regressive elements may be difficult to achieve, or can only achieve modestly
 - Many jurisdictions in the peer group do not have progressivity

Example: Government Take under Bracketed Progressivity

Base Rate of 20% up to \$60 Net

Brackets up to 50% at \$160 Net

Includes 20% Capital Credit



Other Issues: Section 10

- Defers loss carry-forward credits until positive income
- Would eliminate loss carry-forward credit for unsuccessful explorer with no other nexus in state
- May discourage new entrants

Other Issues: Section 25

- Eliminates loss carry-forward credits for exploration expenses
- Explorers with offsetting income can still realize benefit of deduction; those without offsetting income will not
- Disparate treatment
- Also, suppose a producer has \$100 in gross value. Suppose exploration expenses are \$90. And suppose non-exploration expenses are \$80. If they deduct the exploration expenses first, they will have \$10. Then they can deduct the \$80 non-exploration expense from the \$10. This will give them \$70 in losses they can use for the loss carry-forward credit.

But, if they deduct the \$80 non-exploration first, they will have \$20. Under the amendment they would only be able to deduct \$20 of the exploration expense.

So there needs to be something about the order in which costs are deducted.