

Evaluation of HB 111

Roger Marks

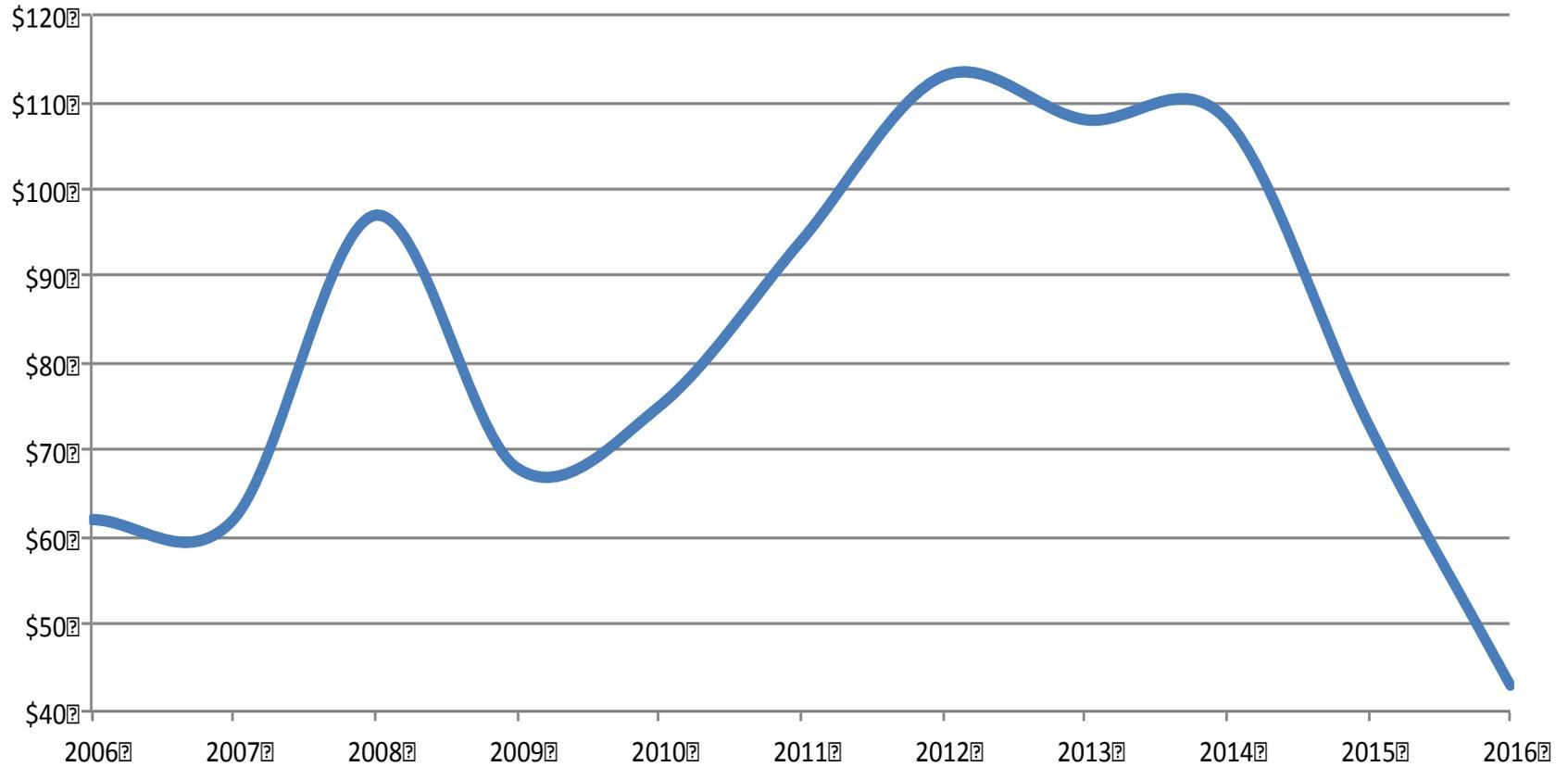
Senate Resource & Finance

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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, oil and gas explorer/producers, pipeline companies, commercial/investment banks, private equity firms
- **1983-2008**: Senior petroleum economist with State of Alaska Department of Revenue Tax Division
 - Statutory and regulatory design
 - Economic and commercial valuation of exploration, development, production, transportation, refining, marketing, taxation
 - Analysis of international competitiveness
 - North Slope gas commercialization

North Slope Oil Price (\$/bbl) The Alignment of Misery



Two Themes

1. The alignment of misery:

- The state's budget woes from lower oil taxes are matched by the taxpayers' having less income to pay them

2. How is the misery of low prices allocated between State and taxpayers under SB 21 and HB 111?

Fair Share:

Understanding Impacts to All Parties

- State
 - Development of resources for maximum benefit of its people
- Taxpayers
 - Investor demands
 - Competitive opportunities
 - Cash flow constraints

Current North Slope Income Legacy Fields (Old Oil)

| | | |
|---|------|-----------------|
| • <u>ANS Market Price (\$/bbl)</u> | \$55 | |
| • Less Transportation | | <u>(\$10)</u> |
| • <u>GROSS Revenue</u> | \$45 | |
| • Less Upstream costs | | <u>(\$23) *</u> |
| • <u>DIVISIBLE Income</u> | \$22 | |
| • Less State Taxes & Royalties | | (\$11) |
| • Less Federal Income Tax | | <u>(\$4)</u> |
| • <u>PRODUCER after-tax net income</u> | \$7 | |

* DOR **average** estimate based on reported and audited costs. Including transportation, Alaska about \$5-\$15/bbl higher than average Lower 48 costs. Newer oil upwards of \$10-\$20/bbl more expensive.

Economic Barometer on Fair Share: “Government Take”

Defined: Percentage of divisible income that goes to government

Allows:

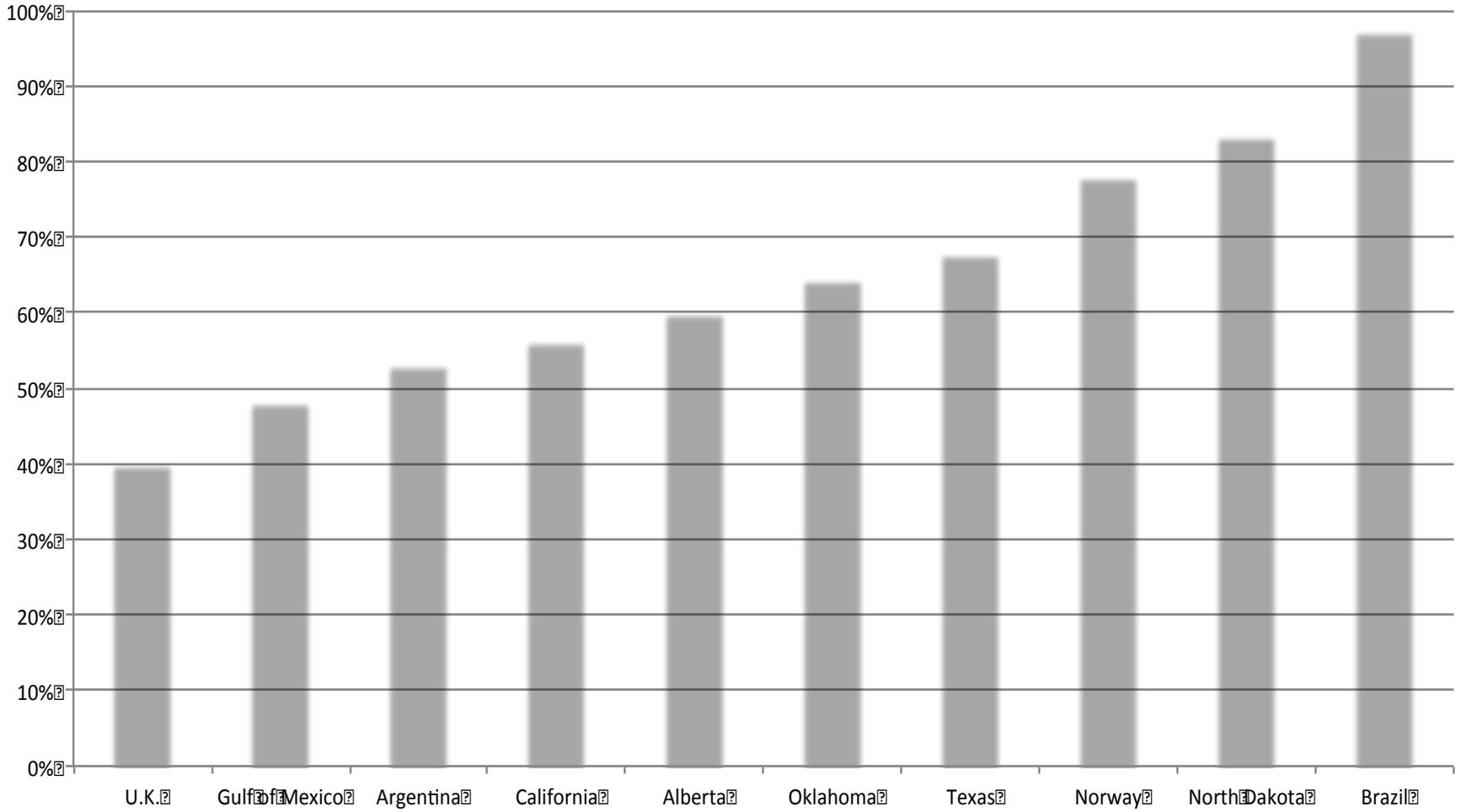
Look at tax on its own terms

Systematic comparison to other similar jurisdictions

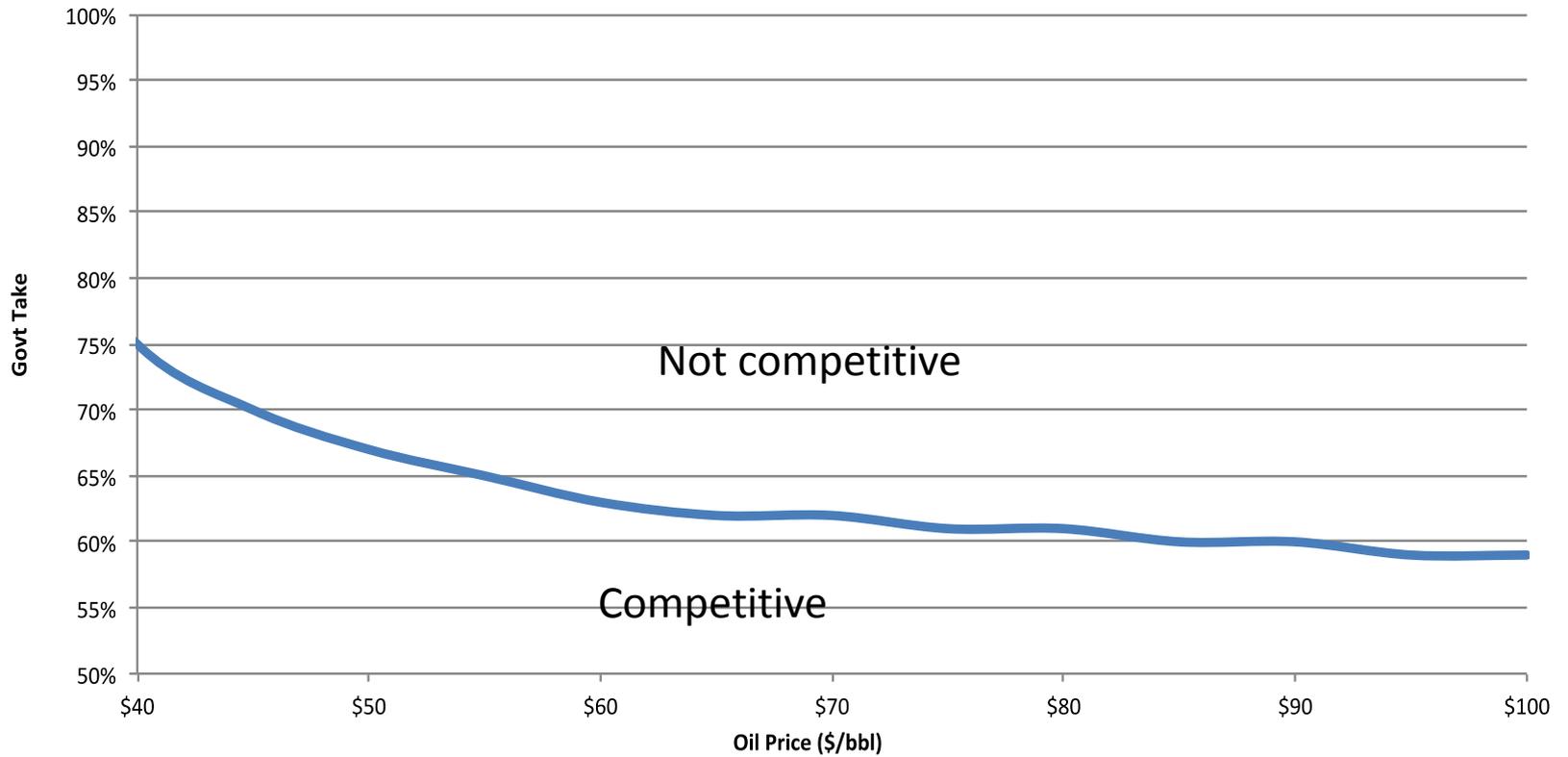
Compare proposal to status quo

Looks at all taxes / royalties

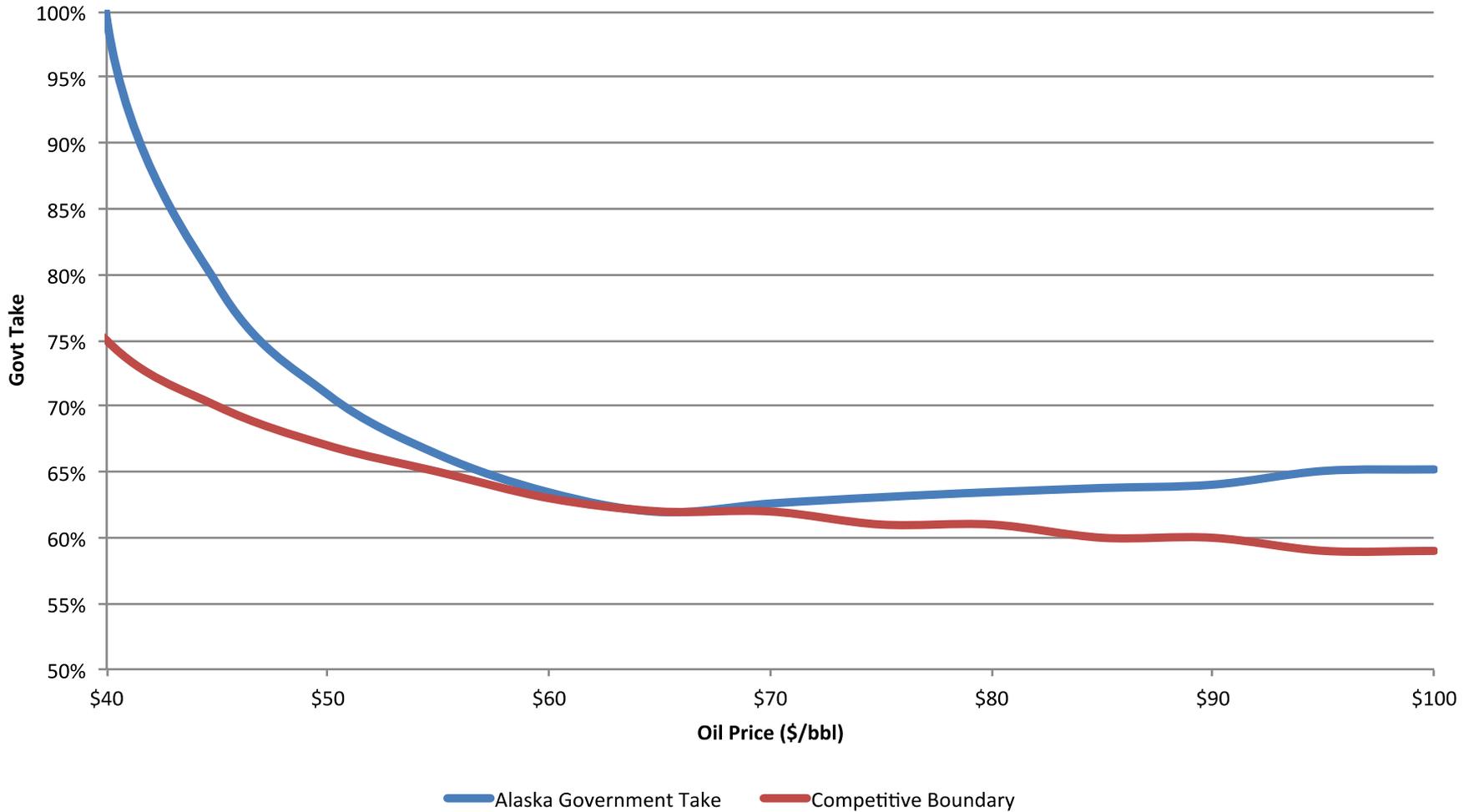
Government Take @ \$55/bbl Market Price



Government Take Competitive Boundary



Government Take SB 21 (Legacy Fields)



At \$55/bbl every 1% change in take is worth about 40 cents/bbl in producer after-tax income

Calculation of SB 21 Tax

Higher of

- Net calculation

OR

- Gross Minimum Tax (market price less transportation):
4% of gross*

Can use loss carryforward credits to bring tax below gross minimum

* Legacy fields are on gross minimum tax until about \$65/bbl

Basic Net Calculation for North Slope Legacy Fields (Old Oil)

Net calculation:

35% X Net Value

less sliding scale per barrel produced credit

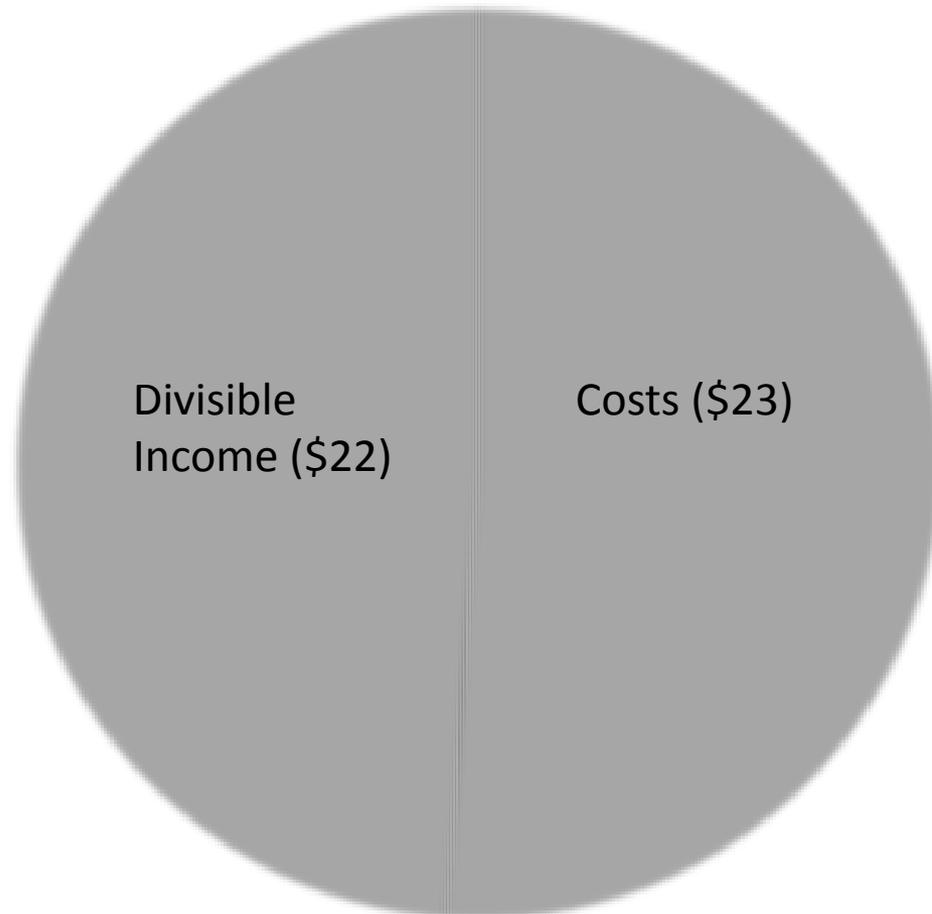
Sliding Scale Credit Per Barrel

Produced Calculation : Legacy Fields

- Gross value less than \$80/bbl: \$8/bbl
- \$80-\$90/bbl: \$7/bbl
- \$90-\$100/bbl: \$6/bbl
- \$100-\$110/bbl: \$5/bbl
- \$110-\$120/bbl: \$4/bbl
- \$120-\$130/bbl: \$3/bbl
- \$130-\$140/bbl: \$2/bbl
- \$140-\$150/bbl: \$1/bbl
- Over \$150/bbl: \$0/bbl
- For old oil cannot use credit to bring tax below gross minimum tax

The \$45/bbl Gross Pie

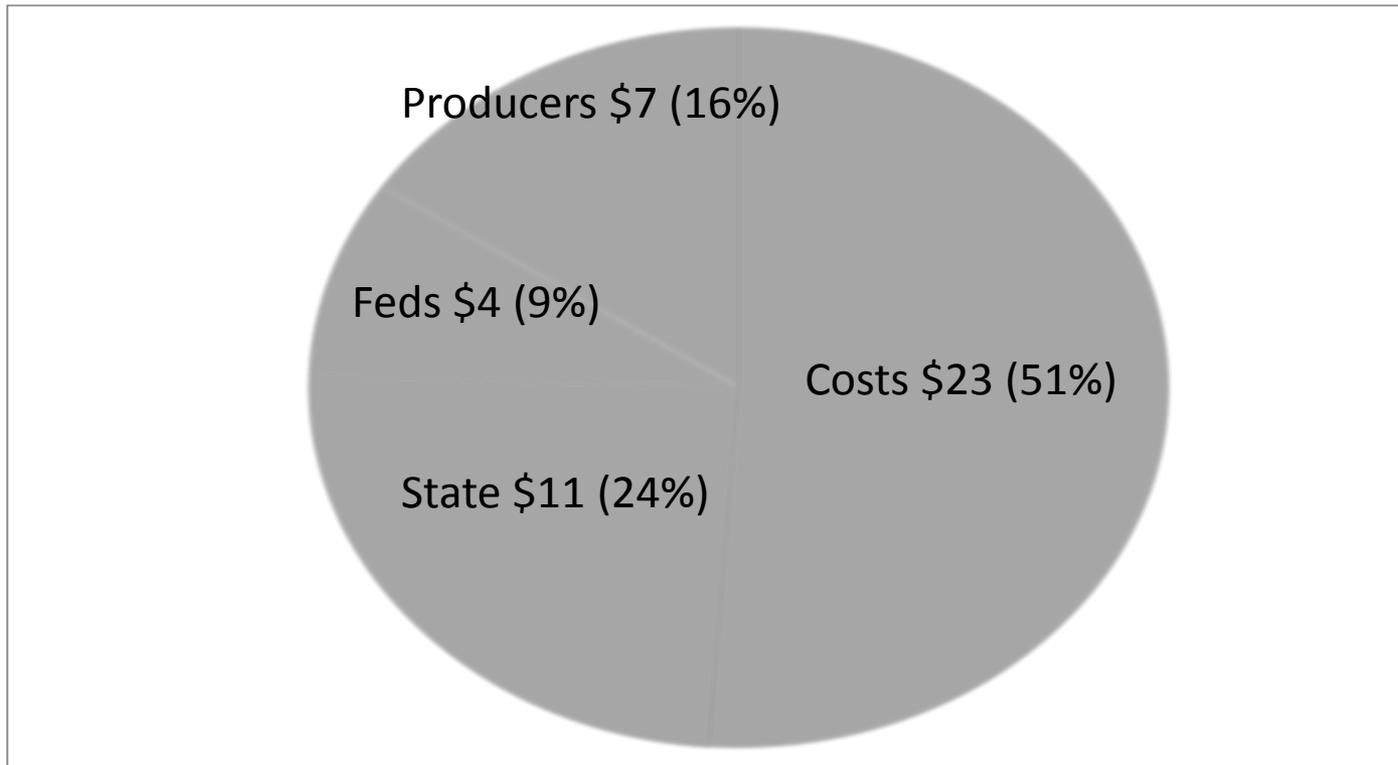
(\$55/bbl market price)



With gross as the basis, half of the royalty is a payment on cost

The \$45/bbl Gross Pie

(\$55/bbl market price)



January 2016: The \$20/bbl Gross Pie

(\$30/bbl market price)

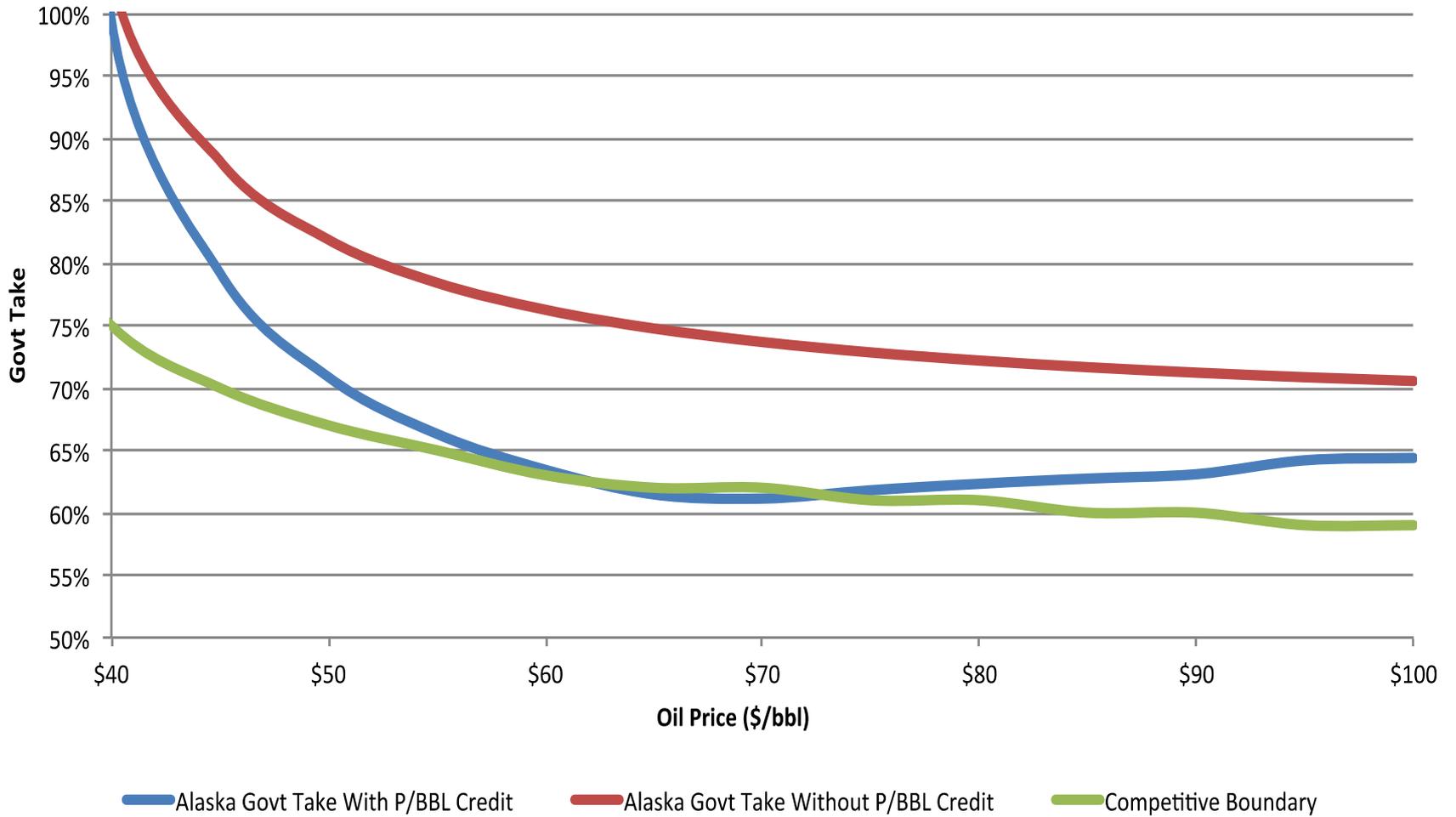
| | | |
|-----------|----------|--------|
| Costs | \$23/bbl | (115%) |
| State | \$4/bbl | (20%) |
| Feds | -\$2/bbl | (-10%) |
| Producers | -\$5/bbl | (-25%) |

- Taxpayers pay 16% of \$20, plus property tax, while they are \$3 in the hole
- Government take is off the charts **(Slide 10)**

Disadvantage of Taxes & Royalties Based on Gross (vs. Net)

- Ever increasing gross/net value divide
- Net more reflective of actual economics
 - Under gross a field with \$20/bbl costs is taxed the same as a field with \$50/bbl costs
 - A net system automatically adjusts
- Some other jurisdictions do tax on gross
 - Alaska's high costs exacerbate the problem
- At prices under \$65/bbl Alaska essentially operating on a gross system

Govt Take With & Without Per Barrel Credit - SB 21 Legacy Fields



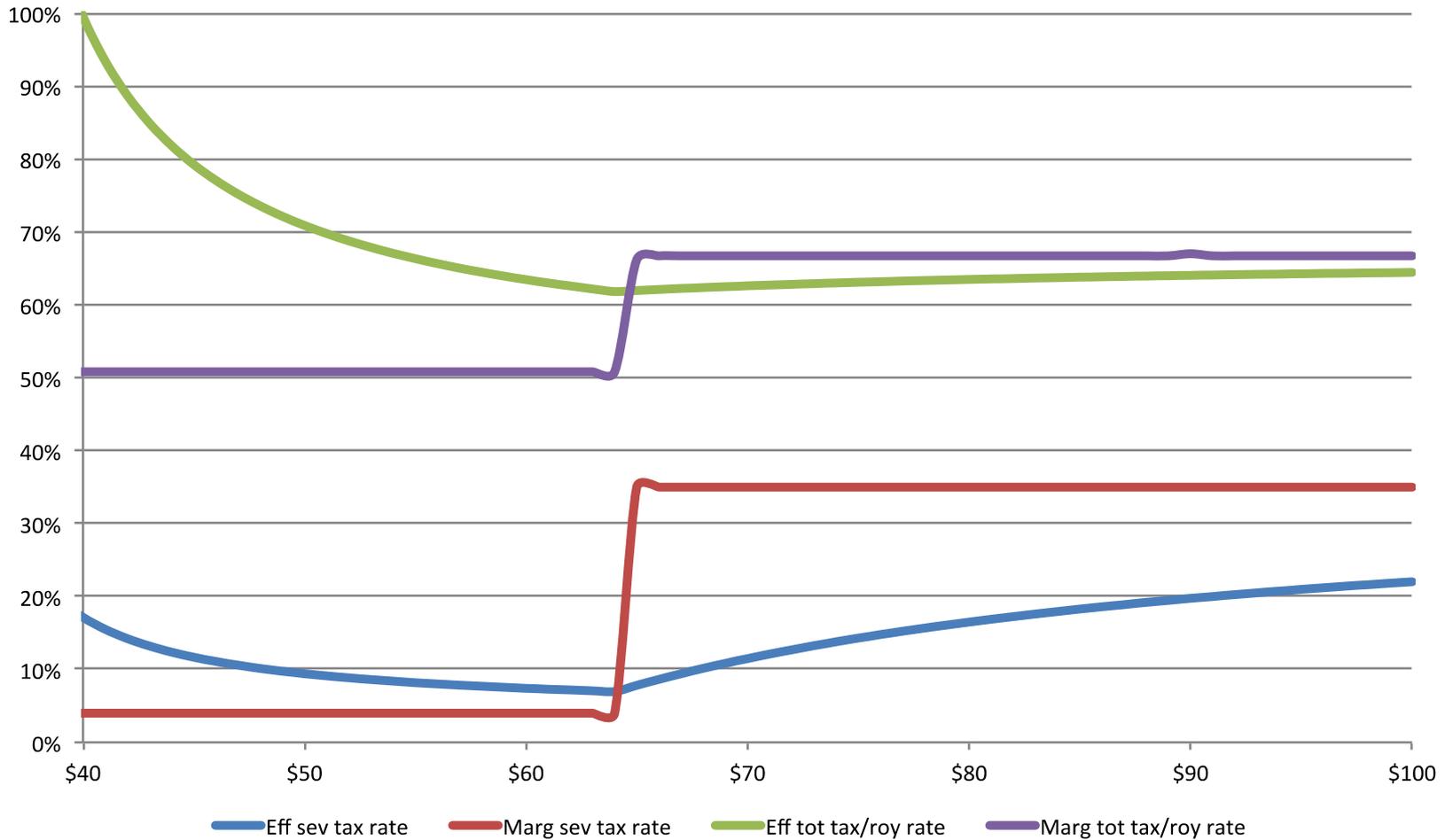
Summary: Sliding Scale Per Barrel Produced Credit

- Adjustment of effective tax rate to offset high royalty at low prices
- Economically should not be considered a credit or called a credit
- An important feature

Tax Rate Vocabulary

- Statutory Rate:
 - Nominal rate in tax code applied to some base that may be increased or decreased by other factors
- Effective Rate:
 - Tax as percentage of pre-tax income (divisible income)
- Marginal Rate:
 - How much additional tax is when price goes up \$1
- Can look at the production tax in isolation or all taxes and royalties as a whole
- Investor economics depend on the total payments to government without regard to specific sources

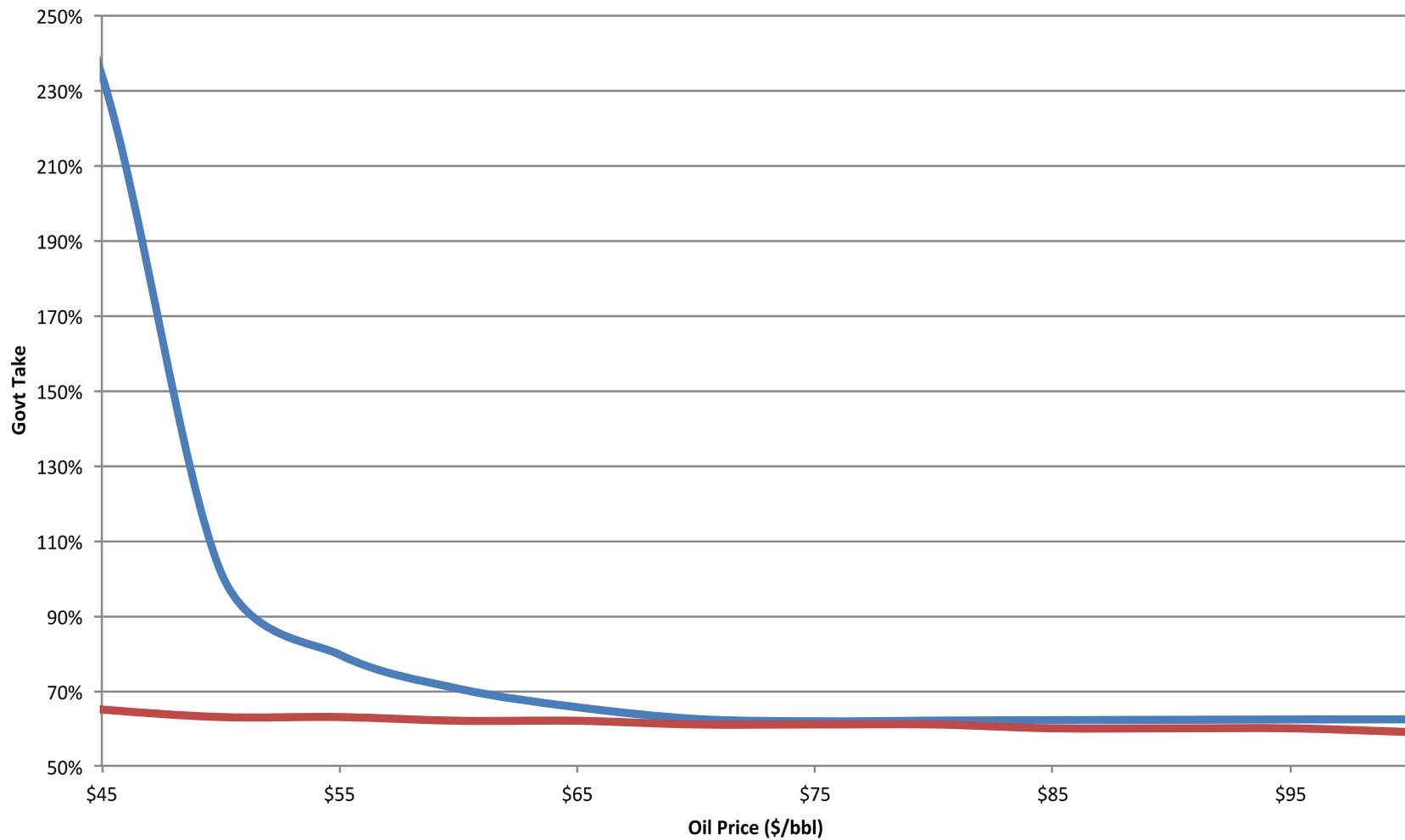
Effective and Marginal Prod Tax & Total Tax/Roy Rates - SB 21



New Oil

- Defined
 - Units created after 2002
 - Fields in older units created after 2011
 - Extensions of existing fields
 - About 5%-10% of total oil
- Can cost \$10-\$20/bbl more than legacy fields
- Differential tax provisions
 - Gross reduced by 20% in calculating production tax value
 - (Reduced by 30% for high royalty fields)
 - Per barrel credit set at \$5/bbl at all prices
 - Can use per barrel credits and loss carryforward credits to bring tax below gross minimum tax

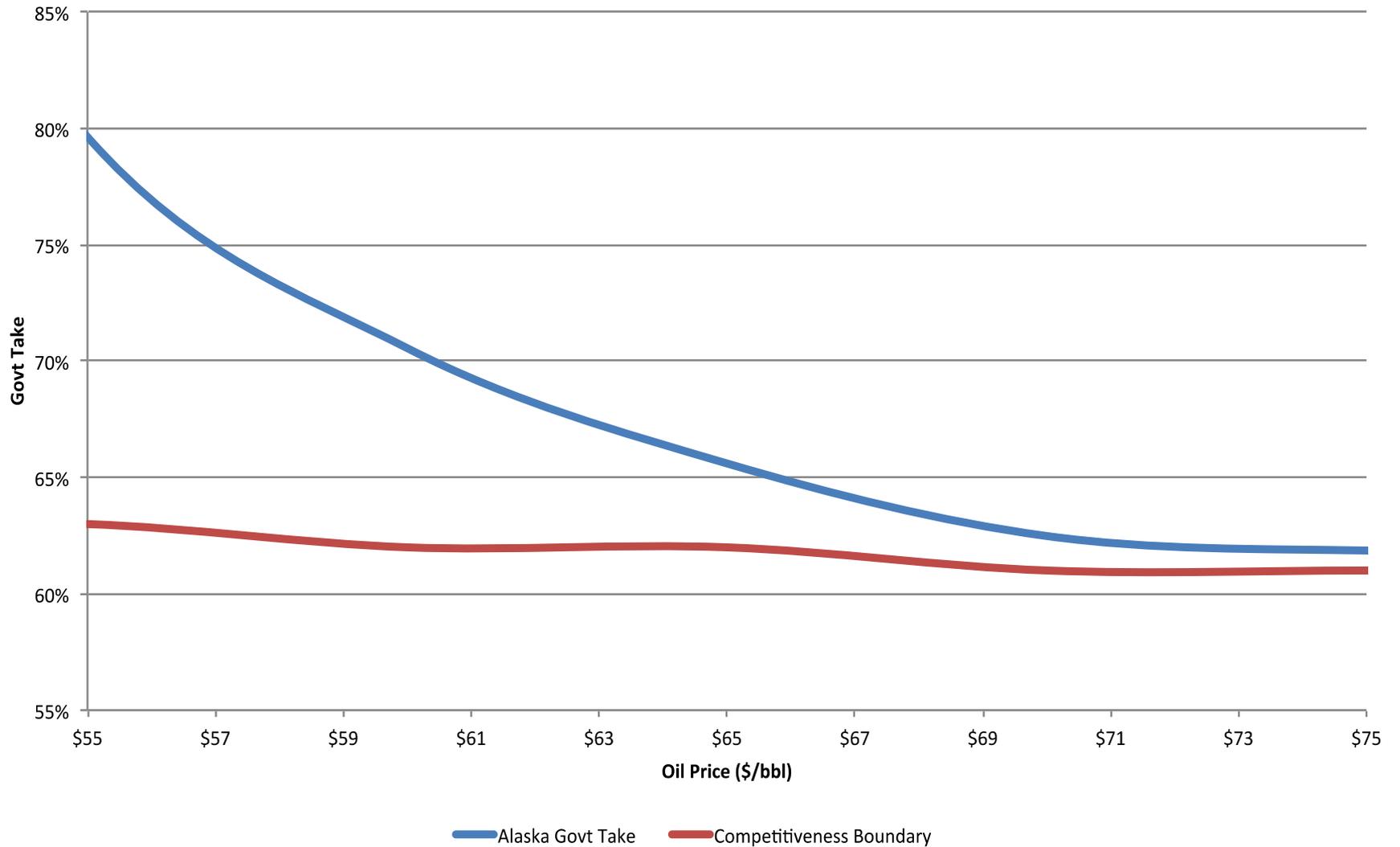
Govt Take for New (GVR) Oil - SB 21



— Alaska Govt Take — Competitiveness Boundary

Govt Take for New (GVR) Oil - SB 21

Focus on \$55-\$75



Major Economic Provisions of HB 111

North Slope

- Floor hardened to gross minimum tax
- No per barrel credits for legacy fields
- Base rate on net reduced from 35% to 25%
- Progressivity after pty exceeds \$60
- Fields are ring-fenced for exploration/development
- Elimination of refundable credits
- After 7 years losses carried forward lose 10%

Ring Fencing / Refundable Credits

- PPT was set up in 2006 to ring fence a company's operations North Slope-wide
 - A company with production could offset its exploration / development costs
 - This provided a very significant net present value benefit
- Refundable credits were originally designed to put explorers/developers on an even basis with producers
 - A company with no offsetting income could realize the tax value of expenditures in the same timely manner
- By ring fencing exploration / development separately and eliminating the refundable credits, the net present value of exploration / development costs are significantly diminished to **everyone**
- The state's cash affordability of refundable credits is an issue
- The way most of the rest of the world does it:
 - In many places company operation's are ring-fenced jurisdiction-wide on income-based taxes
 - Explorers / developers carry their losses forward without refundable credits until they have offsetting income

Reduction of Carried Forward Losses After 7 Years

- If losses are incurred and not deducted:
 - Production tax value artificially elevated
 - Application of the nominal tax rate will result in an artificially elevated tax
- Punishes taxpayers for delays not of their doing

Hardening the Floor

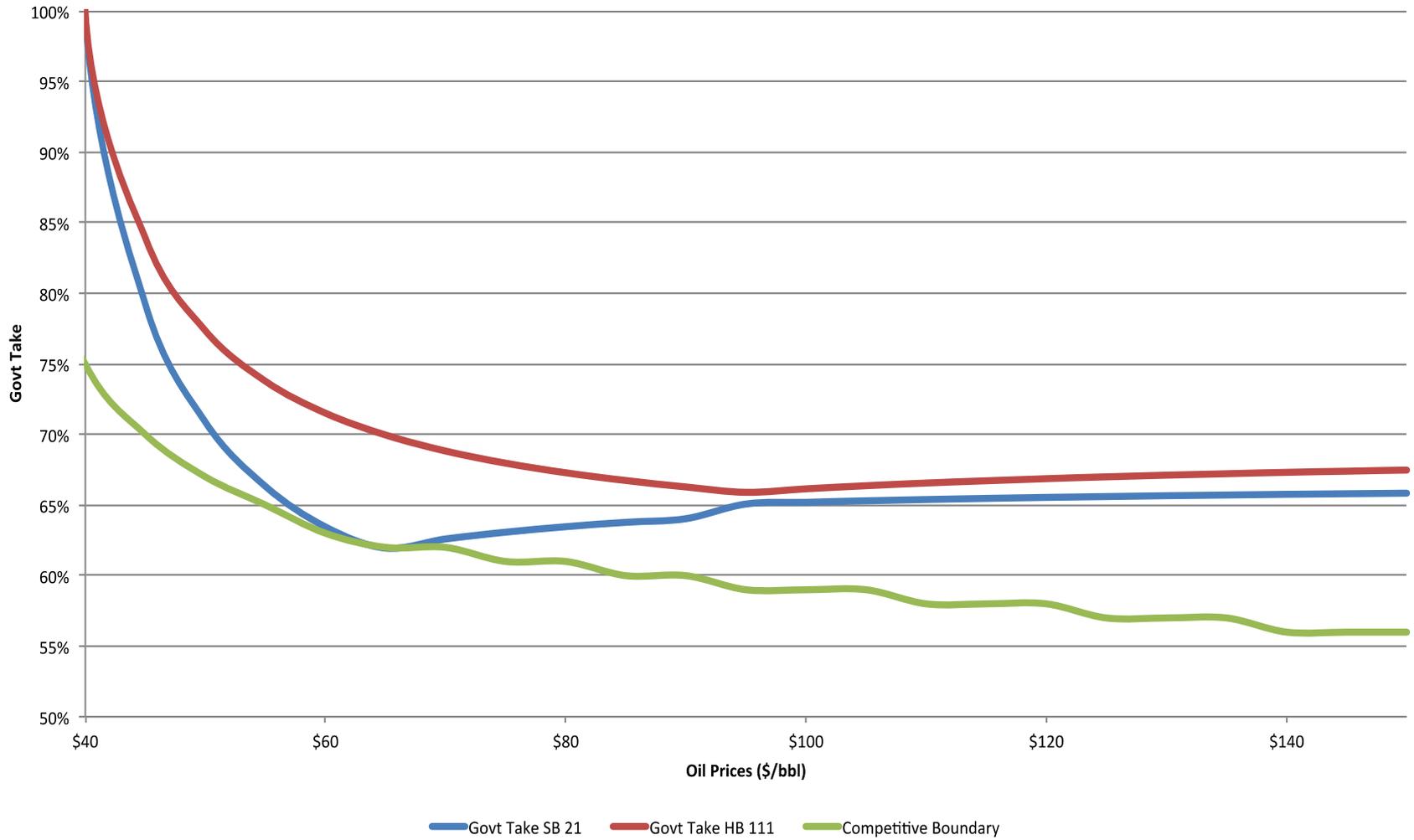
- Losing costs
 - Suppose gross value is \$21/bbl
 - Suppose upstream costs are \$25/bbl
 - So there is a \$4/bbl loss
 - There are two parts to the \$25/bbl cost:
 - Part that took income down to zero (\$21/bbl)
 - The other part that took income below zero (\$4/bbl). This is the loss.
 - When paying on the gross minimum tax, by hardening the floor, and carrying the losses forward, only those latter costs get recovered. The former never do.
- January 2016 Situation (**Slide 16**):
 - With the hard floor, taxpayers would have been \$3 in the hole, then paid royalties and property tax, and then paid production tax.

Section 21: Gross Value May Not Be Less Than Zero

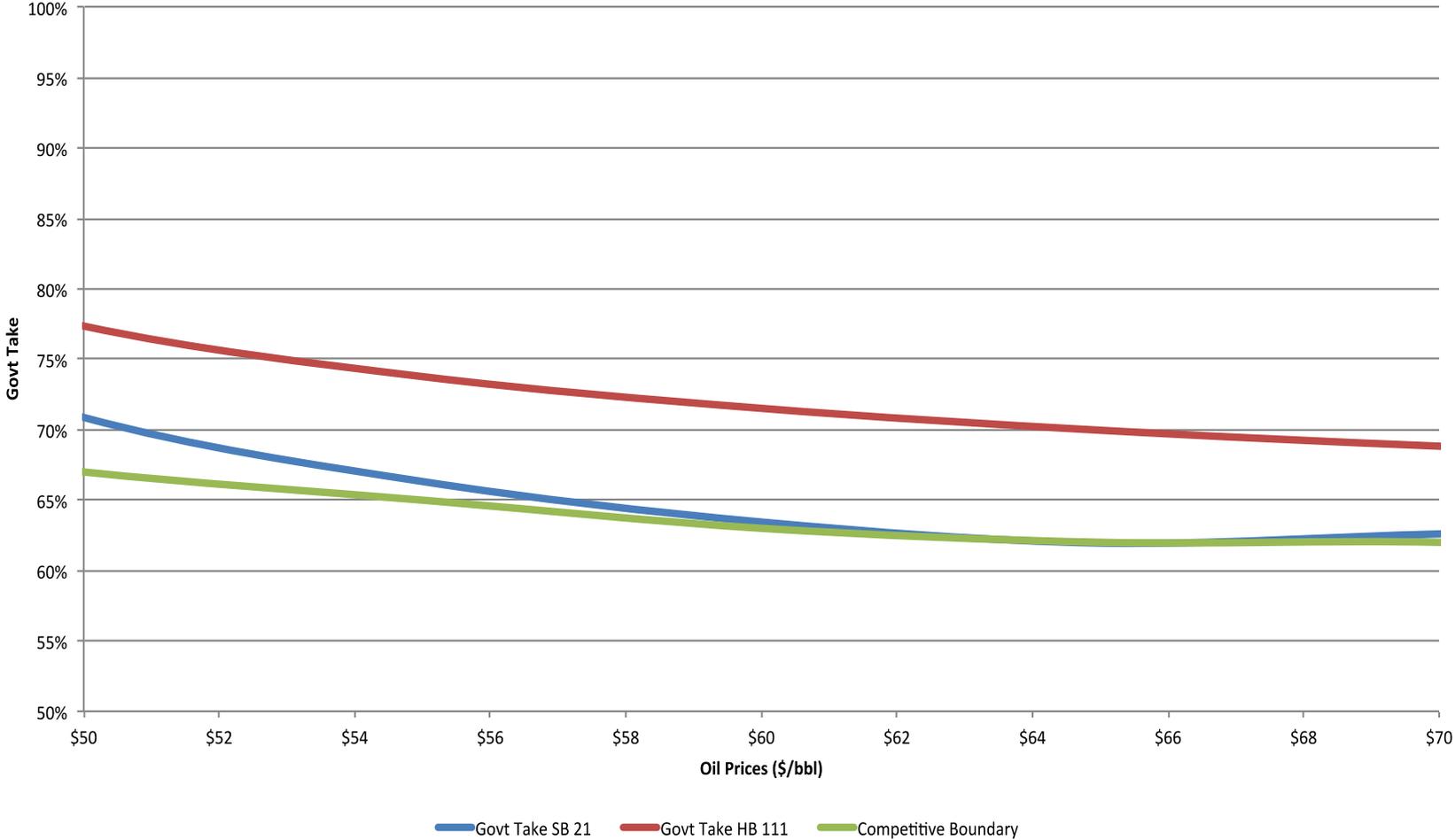
- High pipeline costs are not a trivial occurrence
 - Pt Thomson, Smith Bay, etc.
- In circumstances of high pipeline costs and low prices gross value could be less than zero
- Production tax value (ptv) is gross value less upstream costs
- Losses are negative production tax value
- If gross value has a floor of zero, those costs that brought ptv below zero are never recovered

Government Take: Legacy Fields

Government Take - SB 21 vs. HB 111 - Legacy Fields

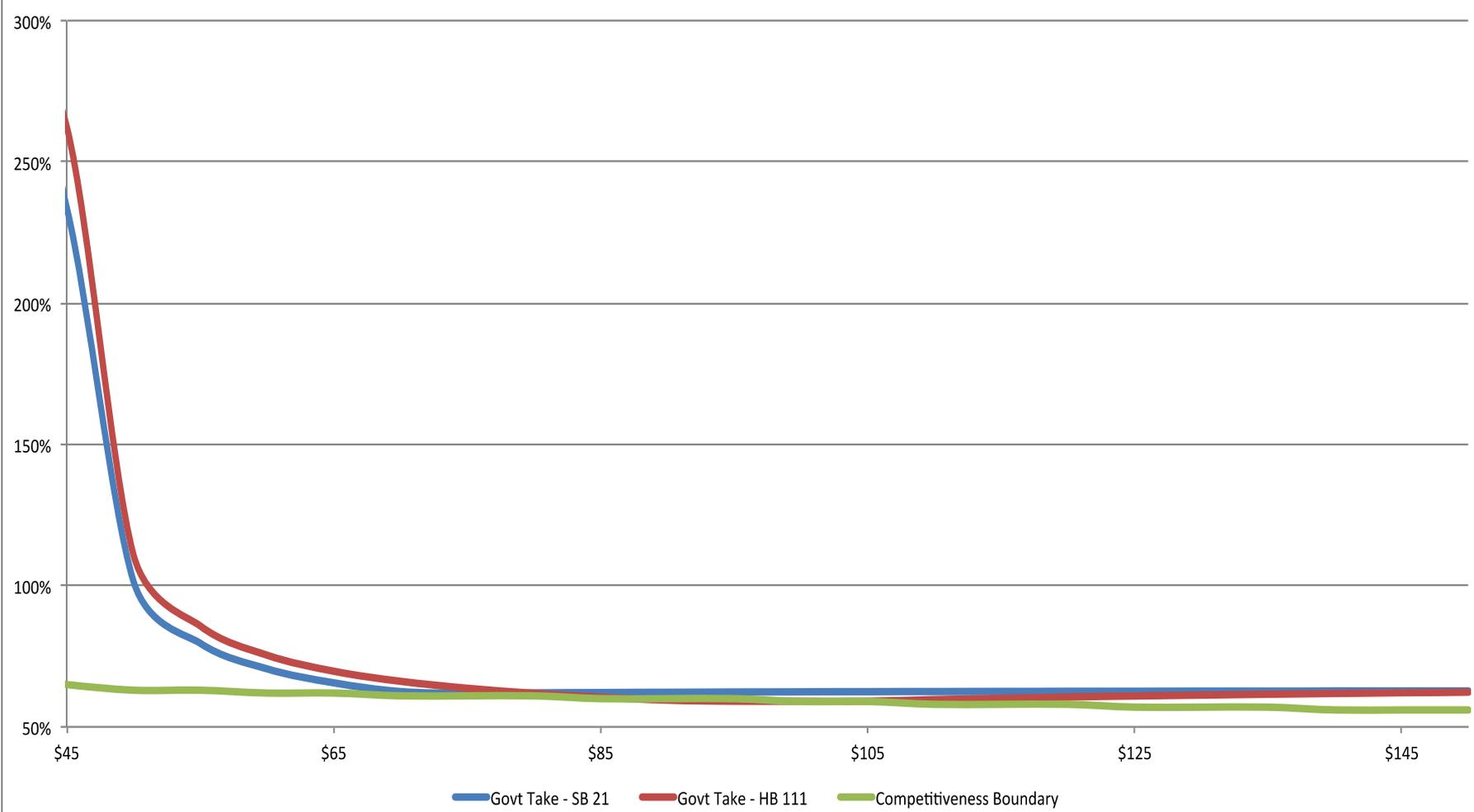


Government Take - SB 21 vs. HB 111 - Legacy Fields Focus on \$50-\$70

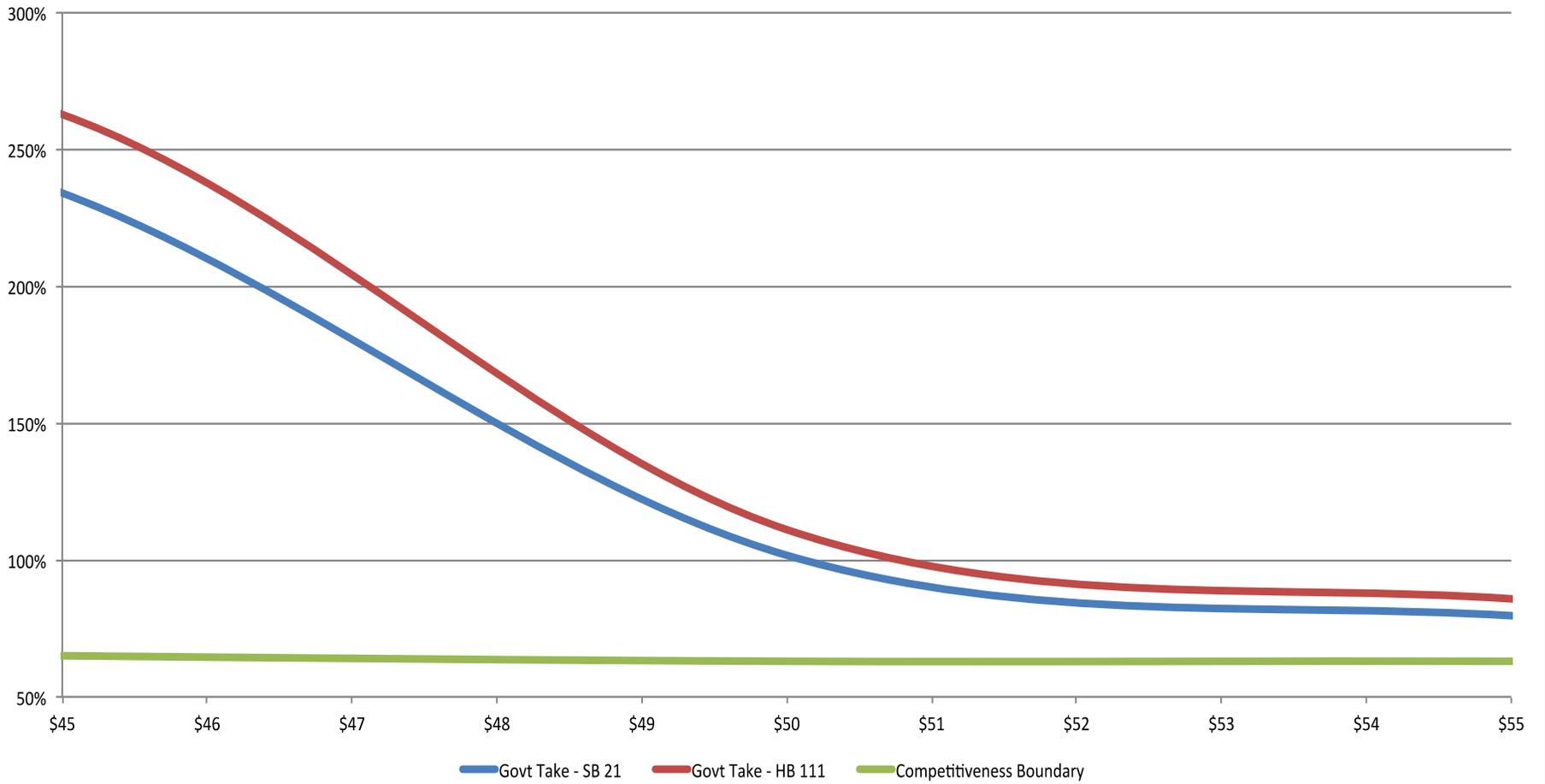


Government Take: New (GVR) Oil

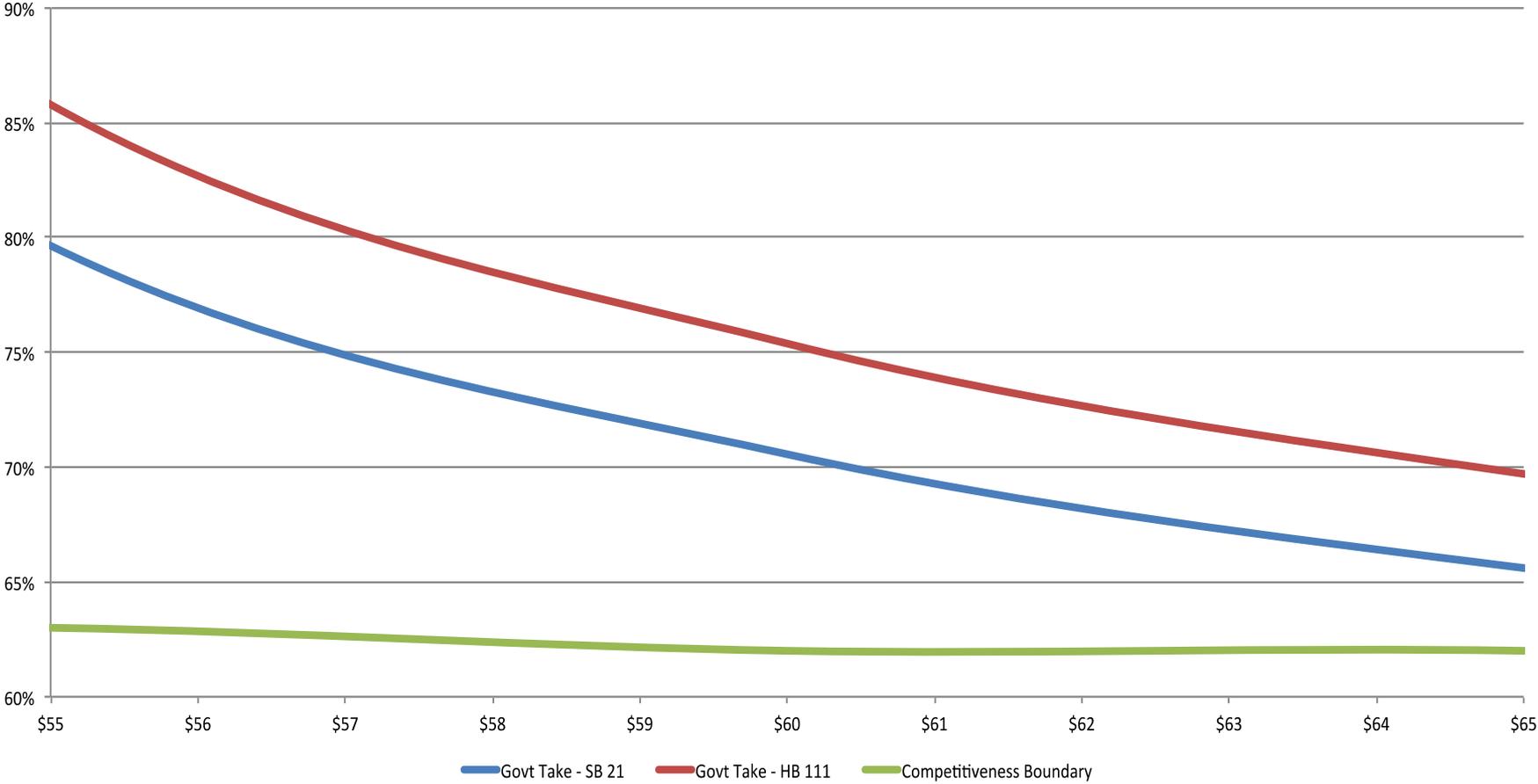
Government Take - New (GVR) Oil - SB 21 vs. HB 111



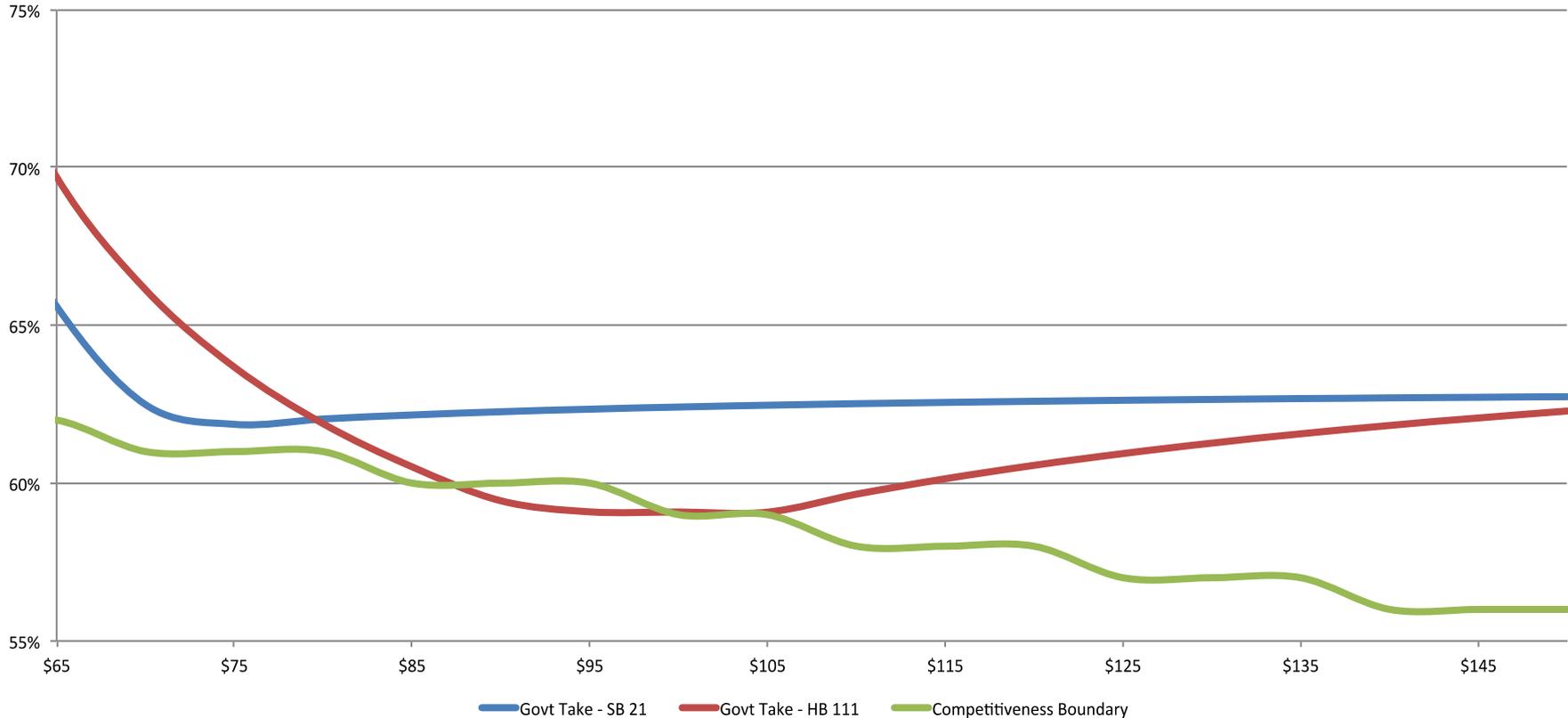
Government Take - New (GVR) Oil - SB 21 vs. HB 111 Focus on \$45-\$55



Government Take - New (GVR) Oil - SB 21 vs. HB 111 Focus on \$55-\$65



Government Take - New (GVR) Oil - SB 21 vs. HB 111 Focus on \$65-\$150



Observations on Gross & Net Taxation

- Gross value is higher than net value
- Gross tax rates will generally be lower than net tax rates
- At low prices net value will be small and gross taxes will generally be higher than net taxes
- As prices increase, and costs become an increasingly smaller share of gross value, net taxes will generally be higher than gross taxes

Conclusion

- Notwithstanding the havoc low prices have played with the state budget
- How is the misery of low prices allocated between State and taxpayer?
- Generally there is a basic risk/reward symmetry in the world between how investors and governments share downside risk and upside potential **(Slide 30)**
- Alaska appears at odds with the general pattern



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