

# Evaluation of HB 111

Roger Marks

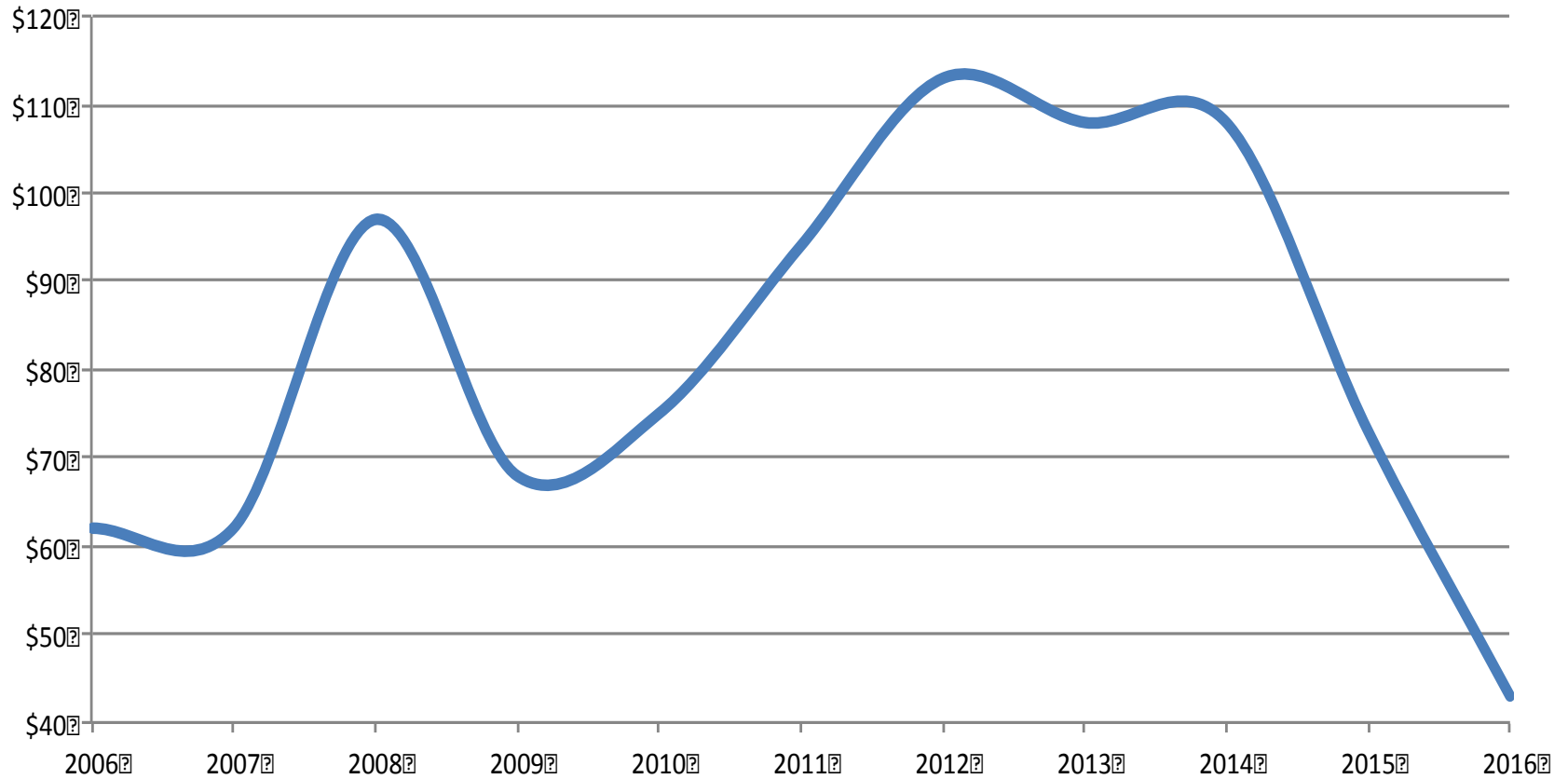
Senate Resource & Finance

April 15, 2017

## 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)

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

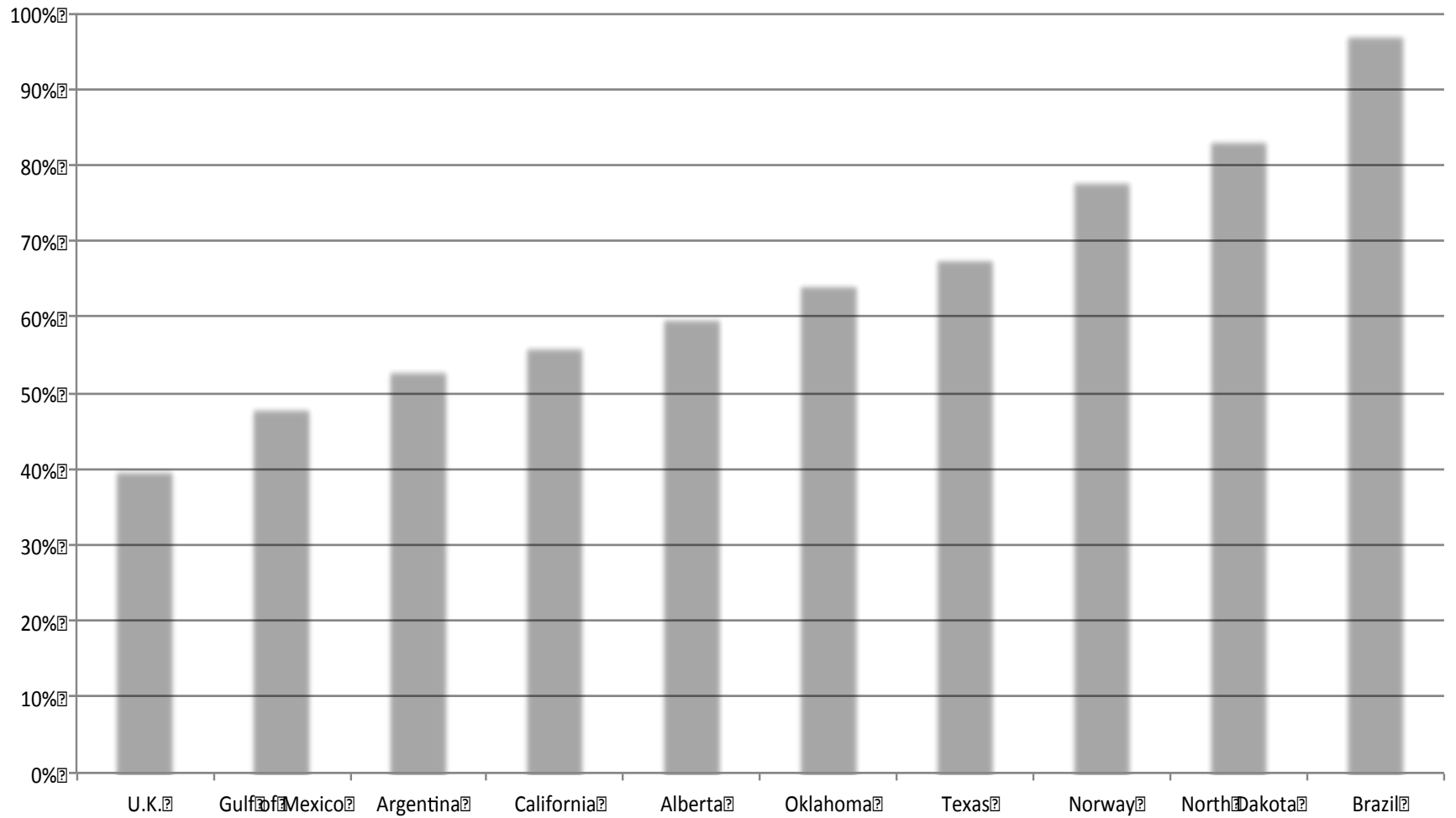
Look at tax on its own terms

Systematic comparison to other similar jurisdictions

Compare proposal to status quo

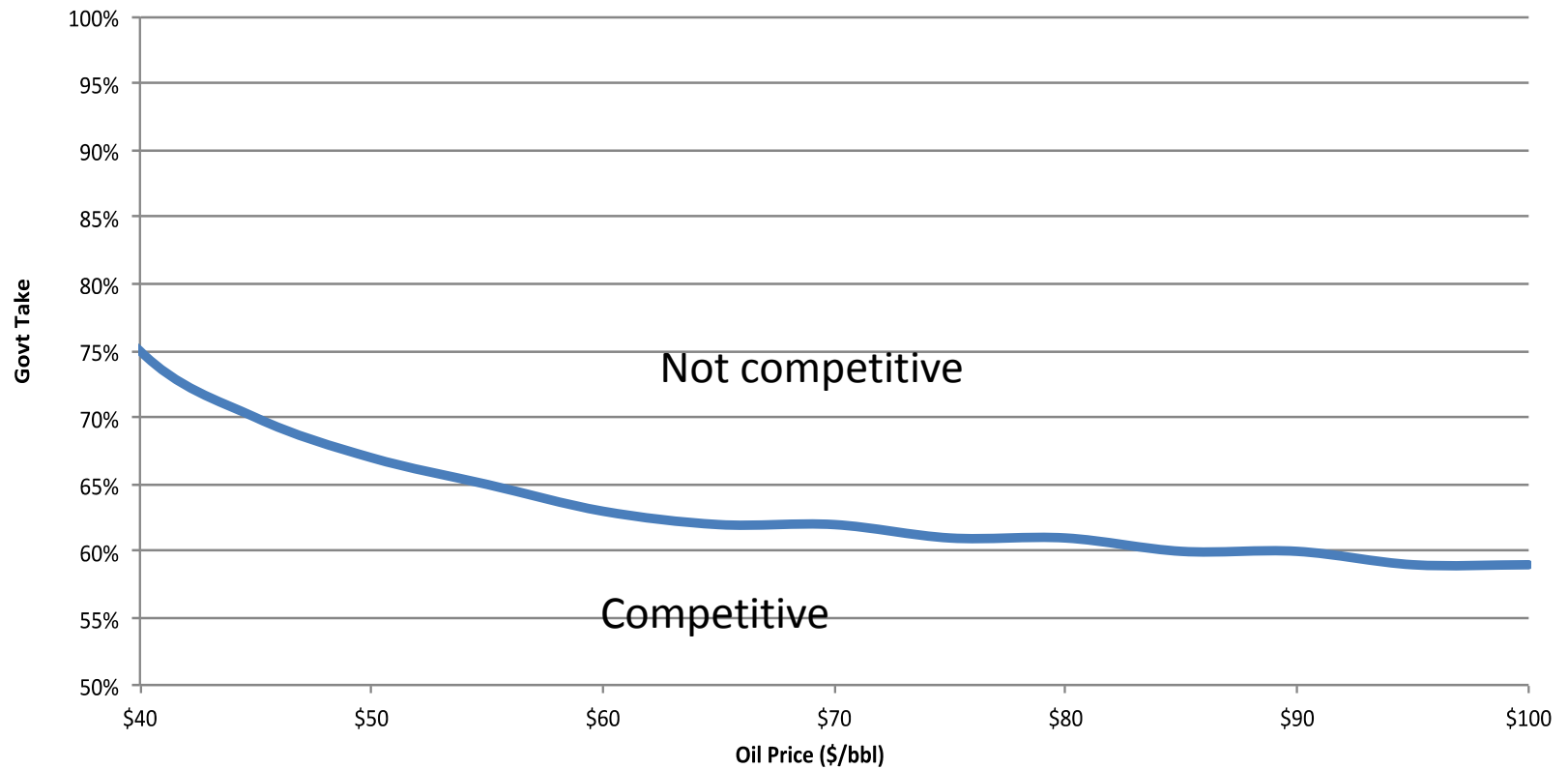
Looks at all taxes / royalties

## Government Take @ \$55/bbl Market Price

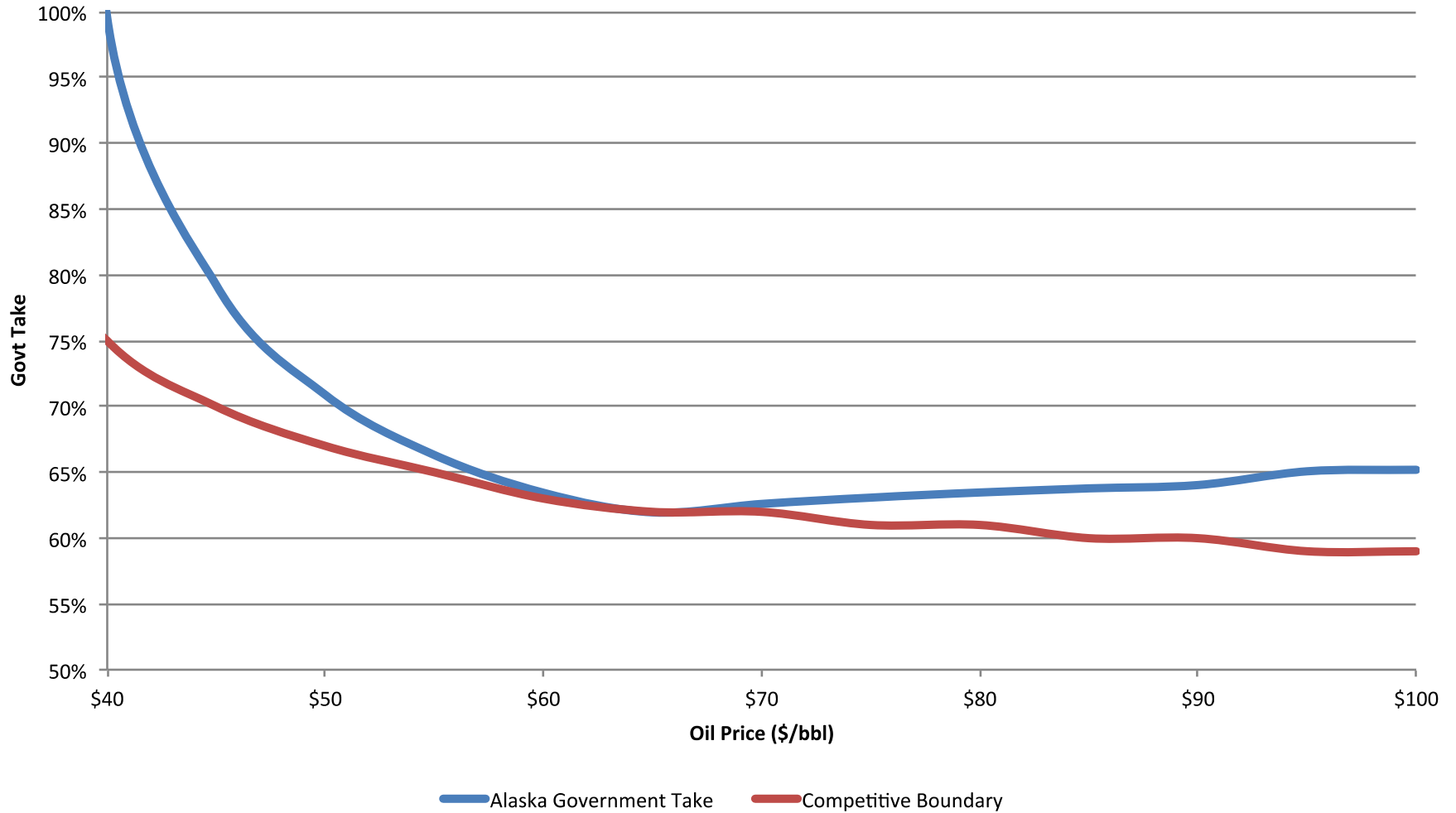




## Government Take Competitive Boundary



## 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

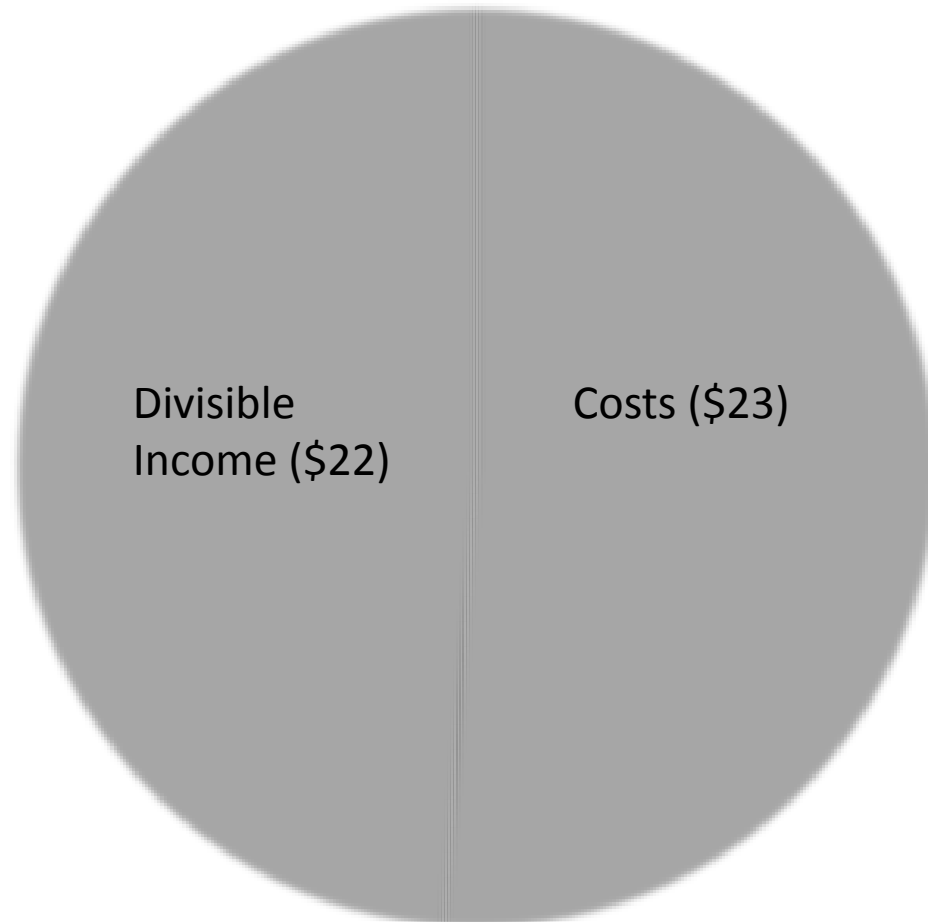
less sliding scale per barrel produced credit

# 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

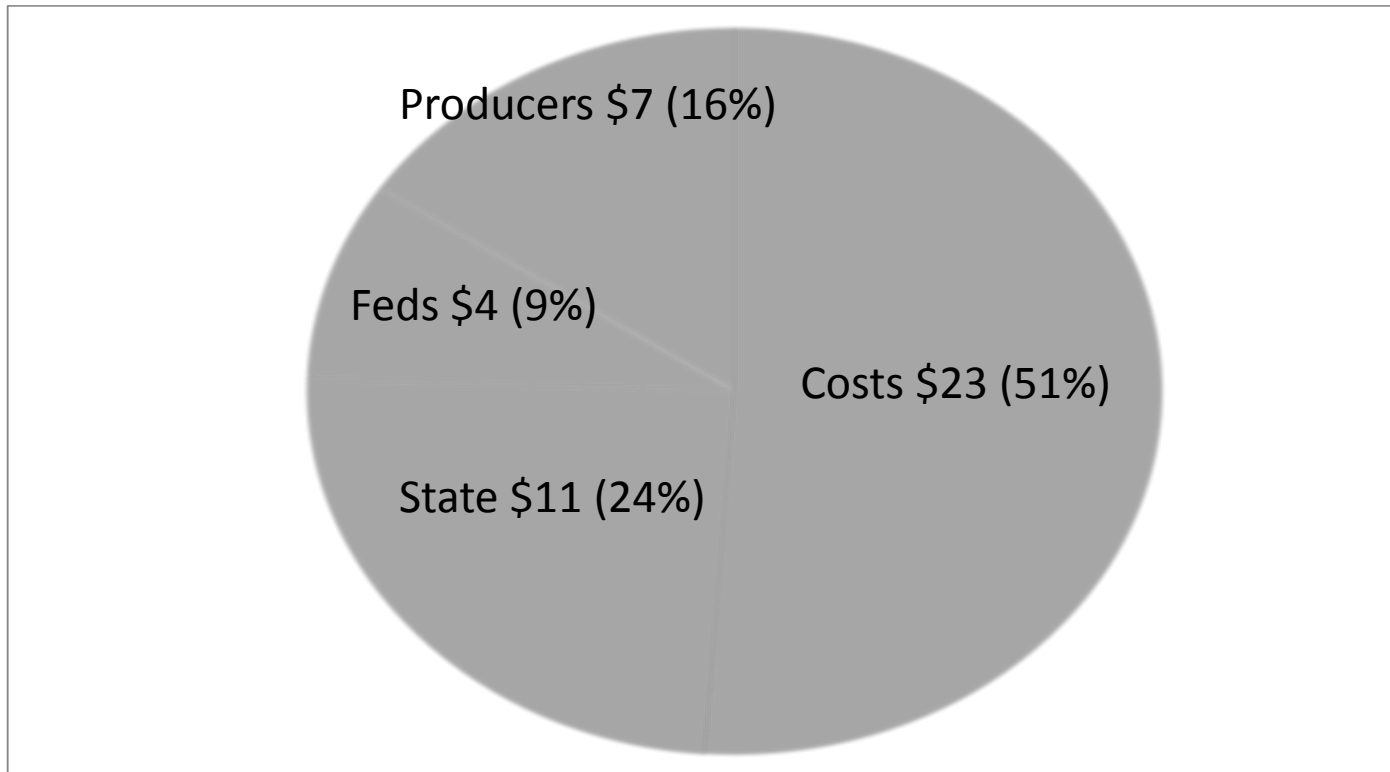
(\$55/bbl market price)



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%)

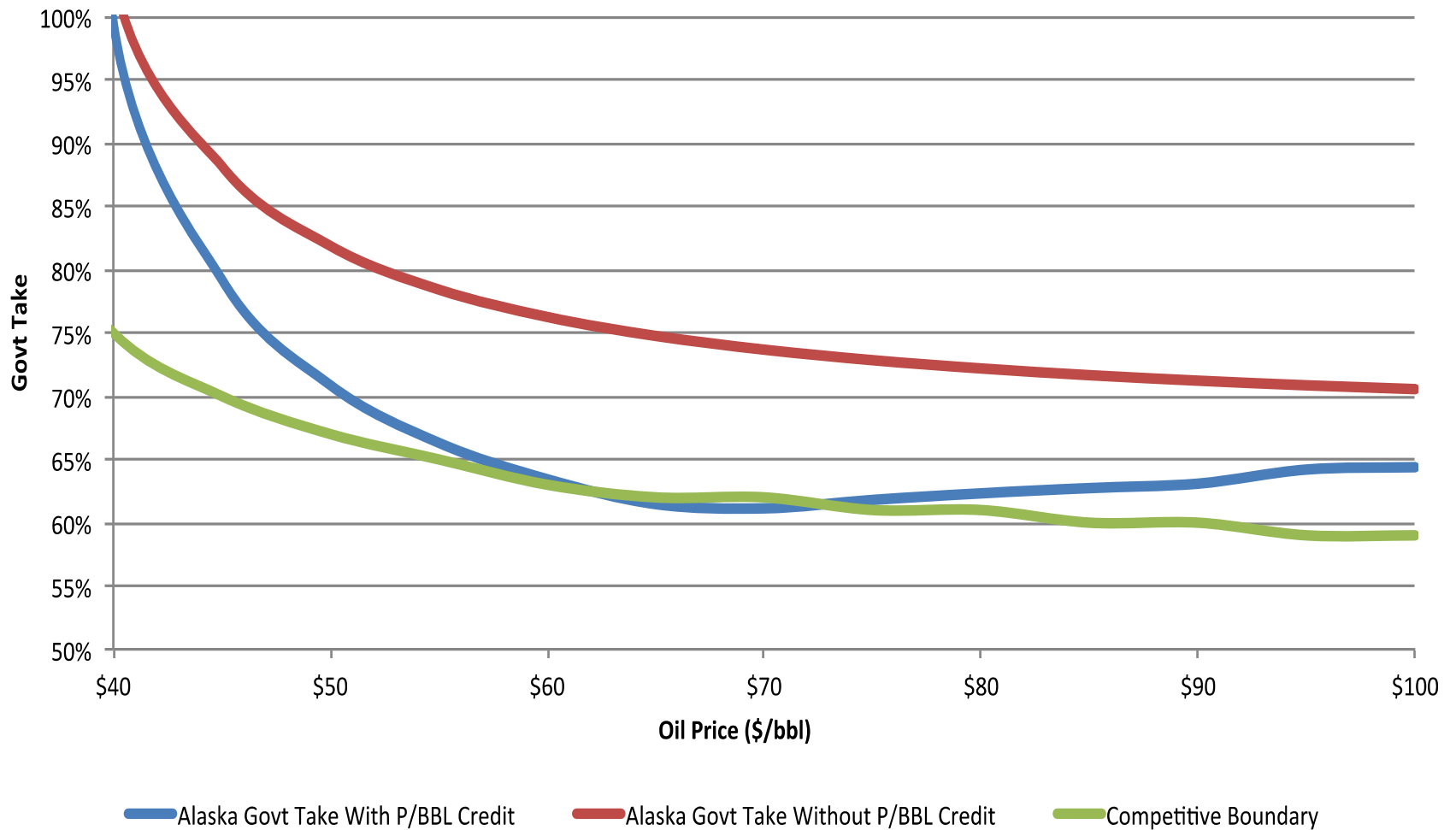
- Taxpayers pay 16% of \$20, plus property tax, while they are \$3 in the hole
- Government take is off the charts **(Slide 10)**



# 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



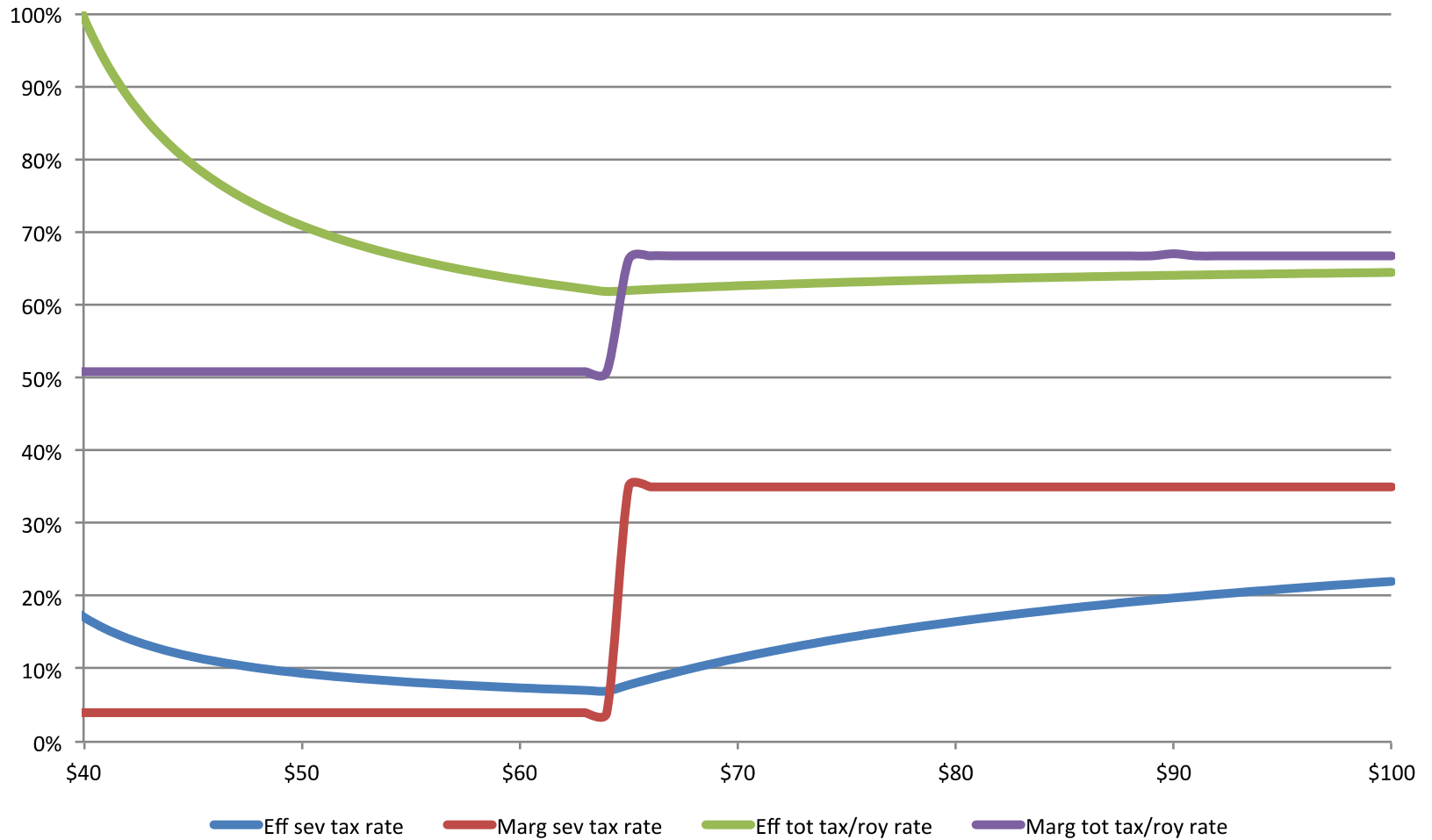
# Summary: Sliding Scale Per Barrel Produced Credit

- 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

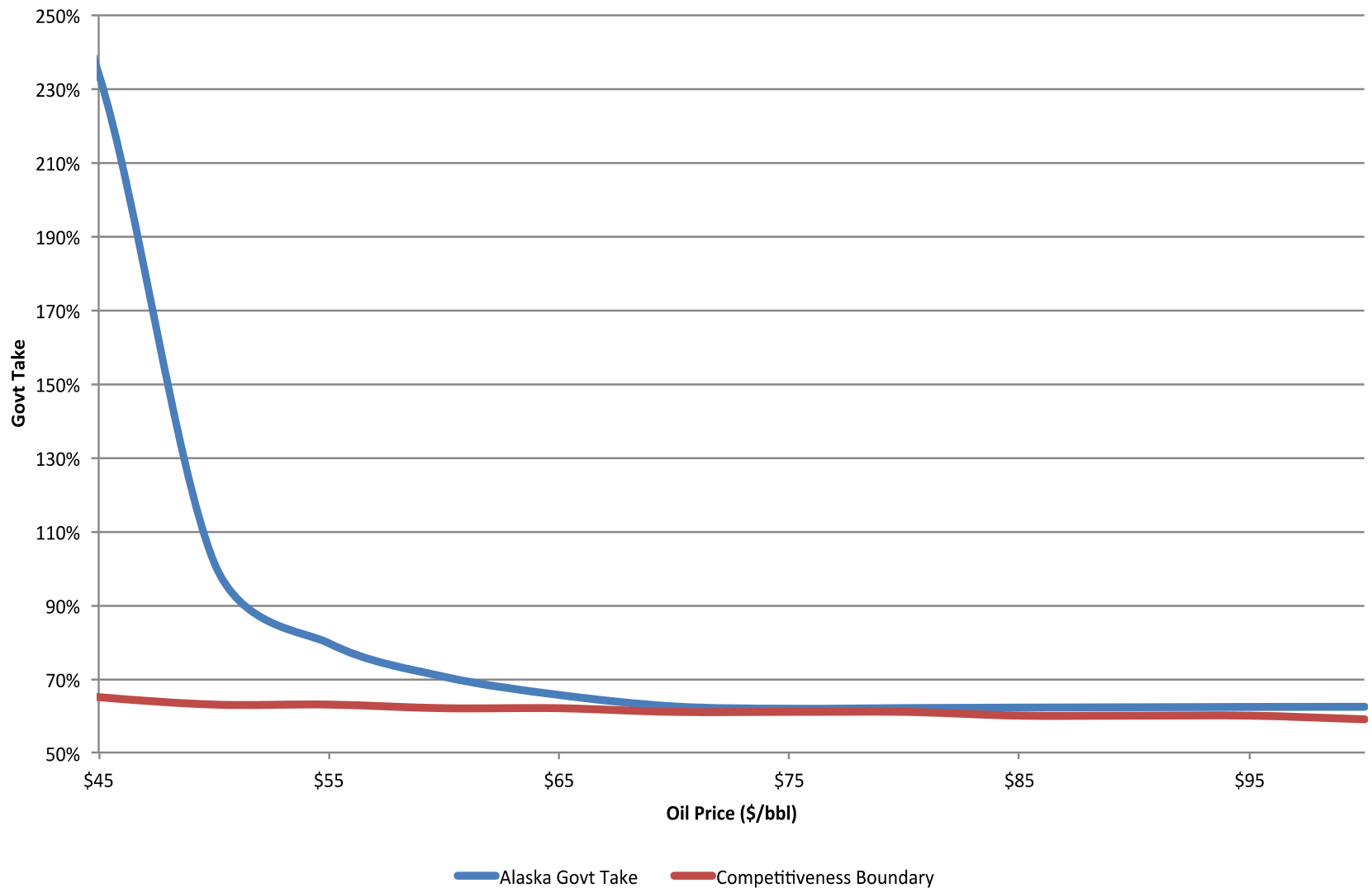
## Effective and Marginal Prod Tax & Total Tax/Roy Rates - SB 21



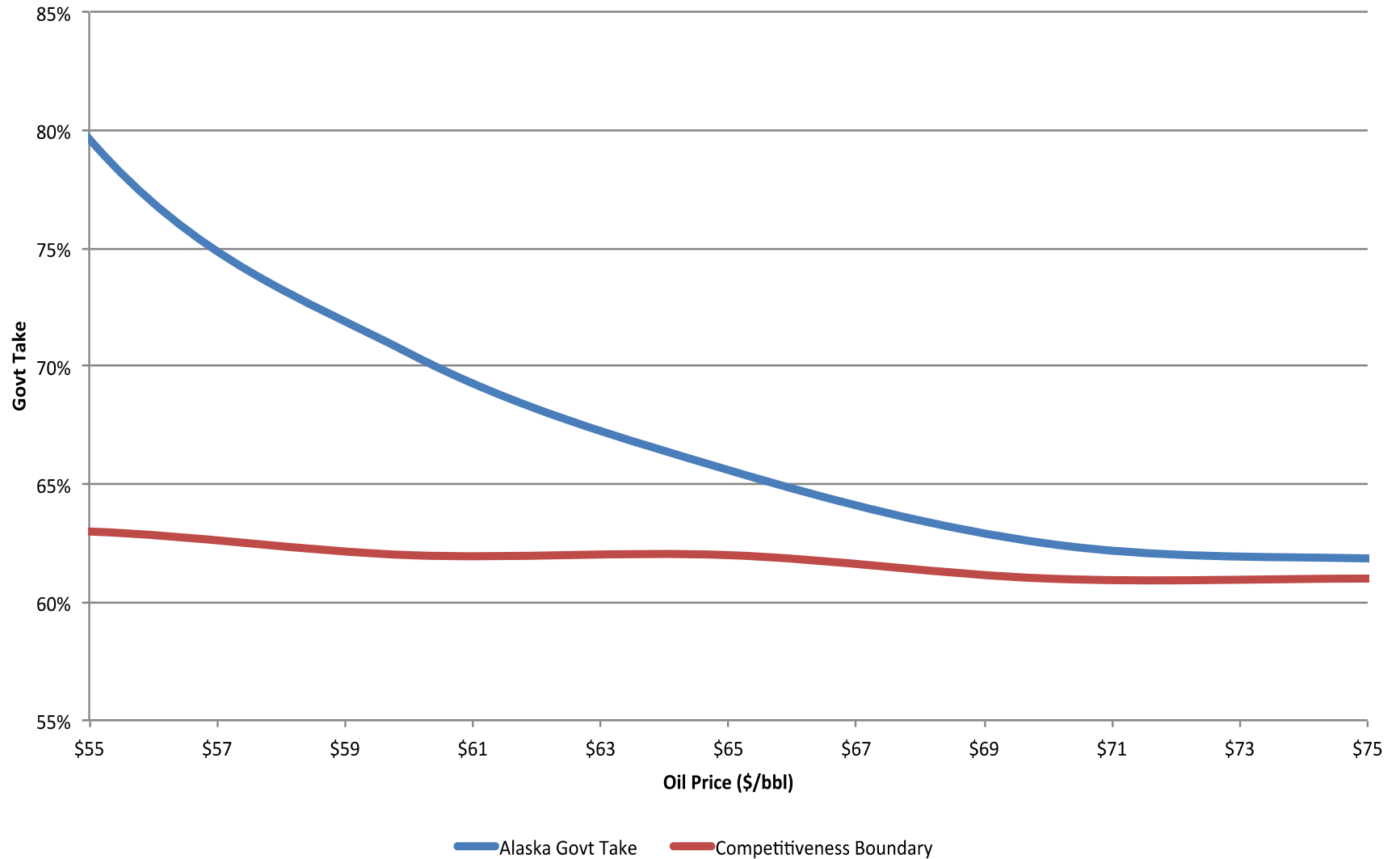
# New Oil

- 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



## 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 ptv 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

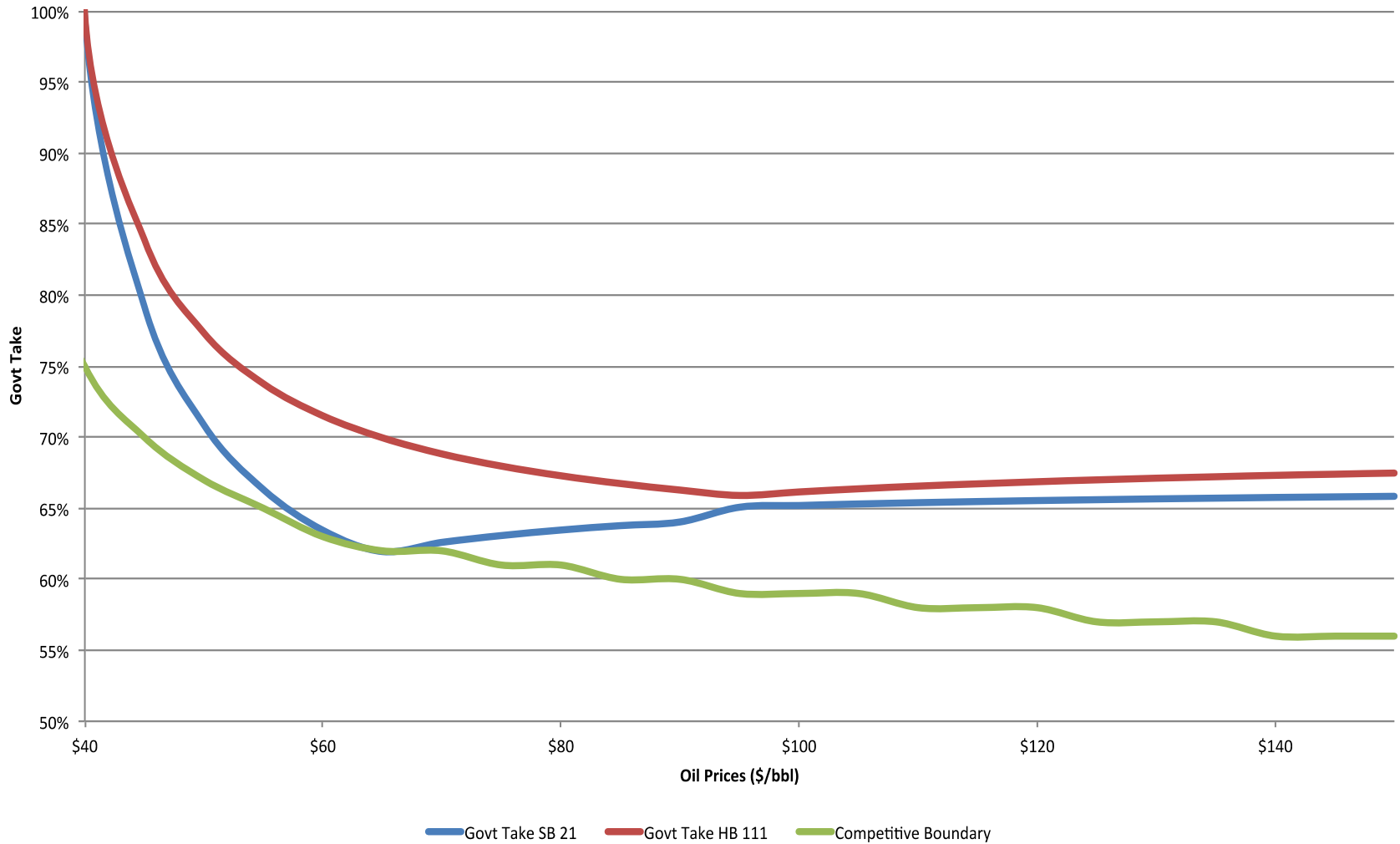
- Losing costs
  - Suppose gross value is \$21/bbl
  - Suppose upstream costs are \$25/bbl
  - So there is a \$4/bbl loss
    - There are two parts to the \$25/bbl cost:
      - Part that took income down to zero (\$21/bbl)
      - The other part that took income below zero (\$4/bbl). This is the loss.
  - 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

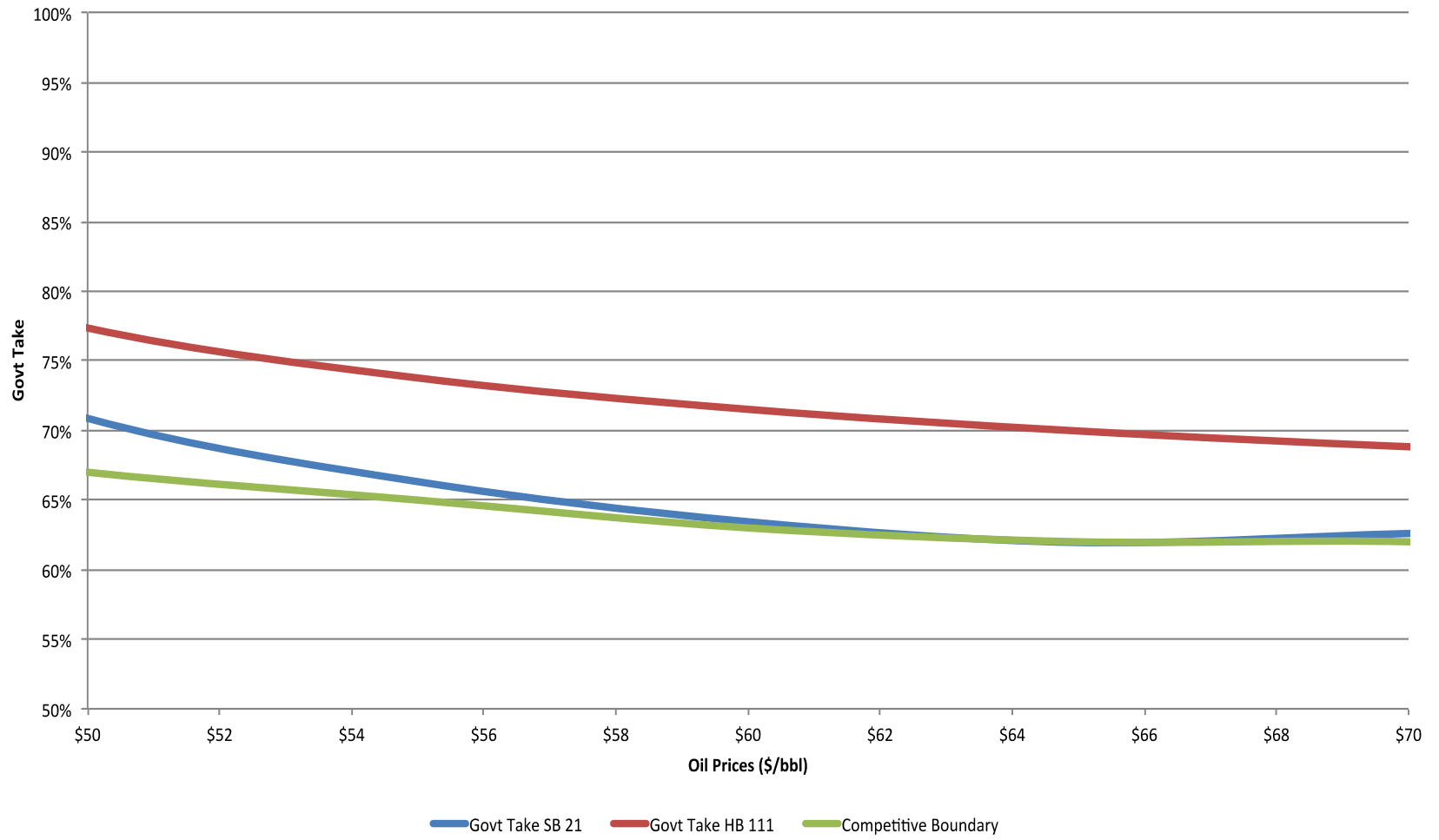
- High pipeline costs are not a trivial occurrence
  - Pt Thomson, Smith Bay, etc.
- In circumstances of high pipeline costs and low prices gross value could be less than zero
- Production tax value (ptv) is gross value less upstream costs
- Losses are negative production tax value
- If gross value has 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



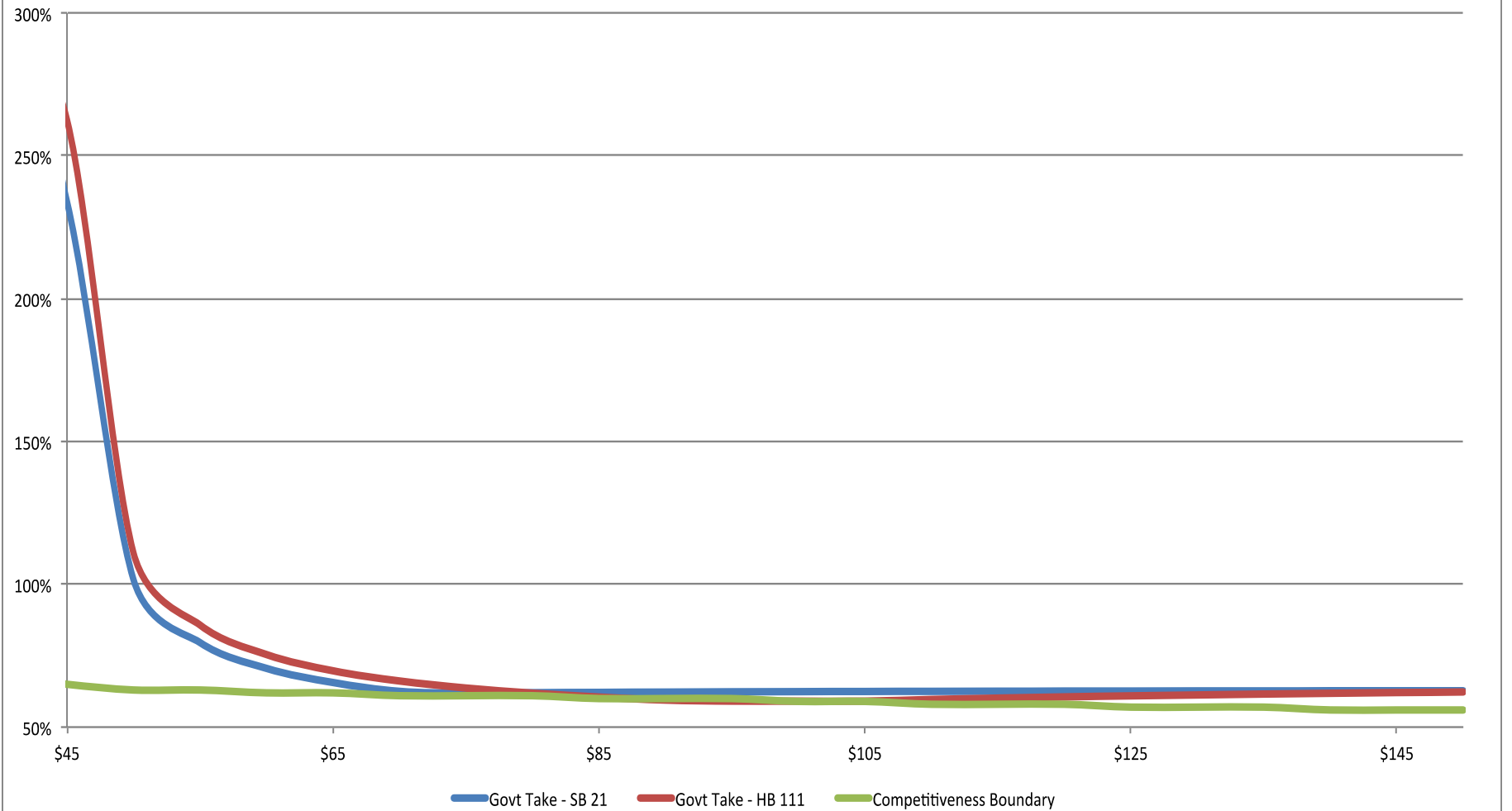
## Government Take - SB 21 vs. HB 111 - Legacy Fields Focus on \$50-\$70





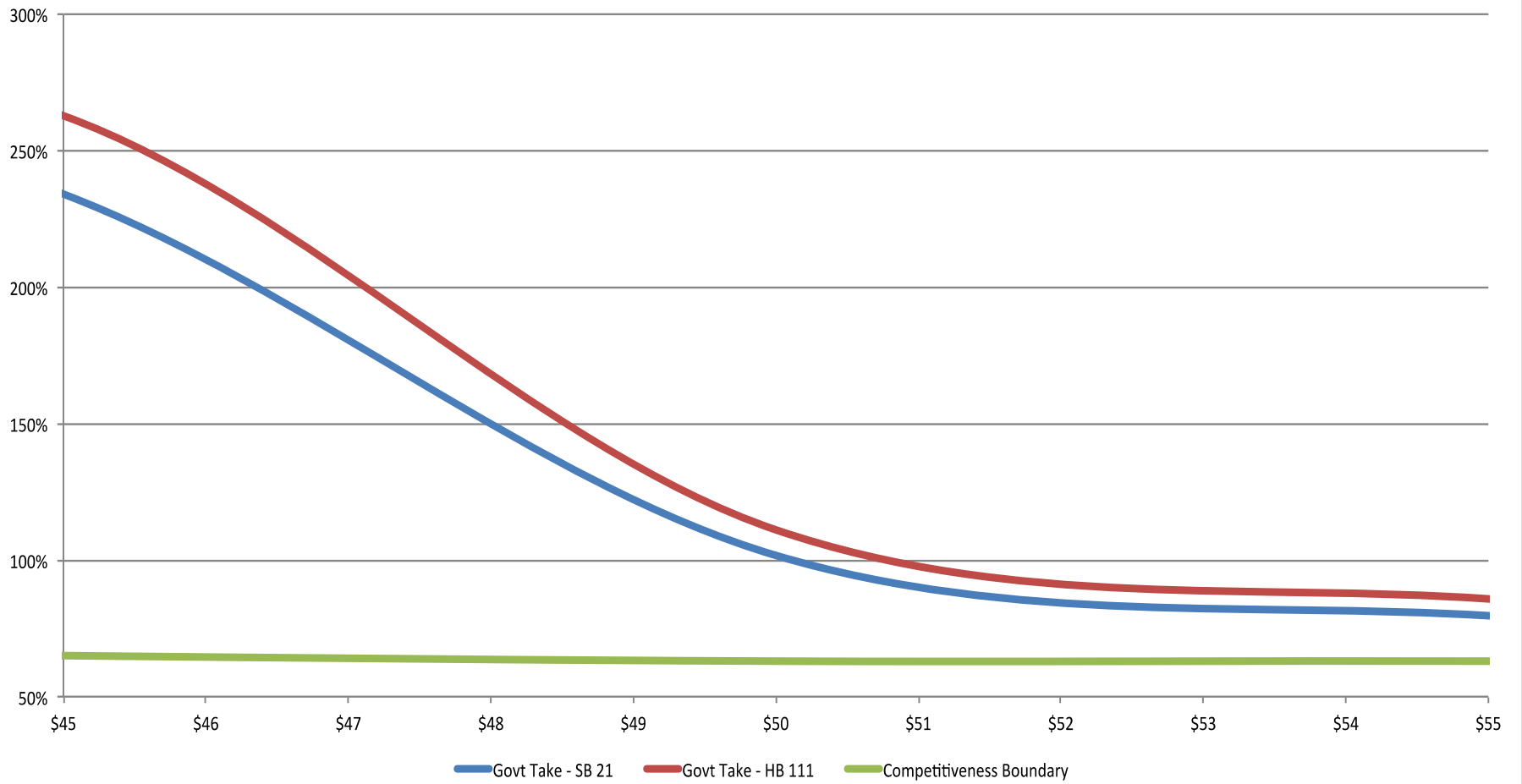
## Government Take: New (GVR) Oil

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



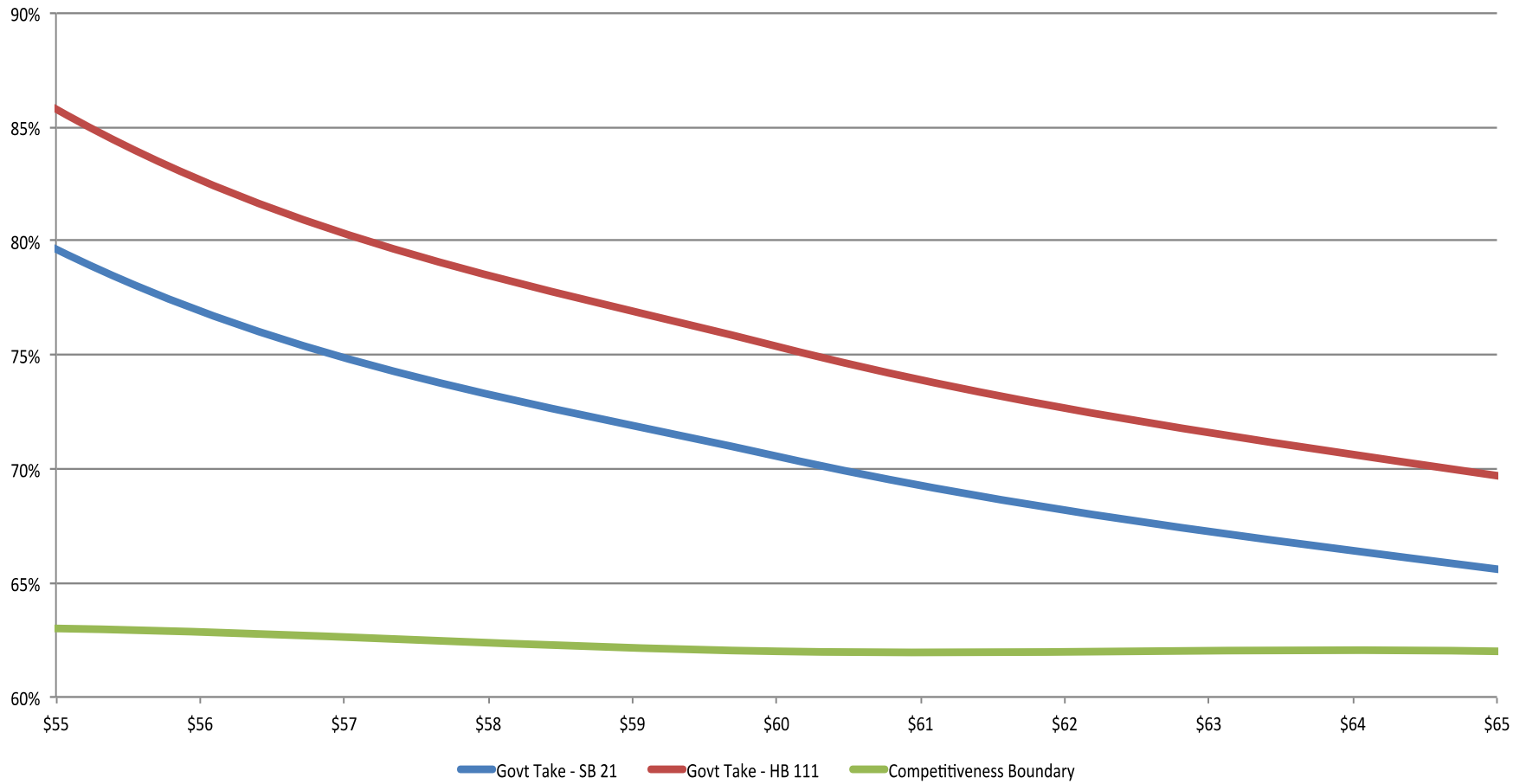
# Government Take - New (GVR) Oil - SB 21 vs. HB 111

## Focus on \$45-\$55



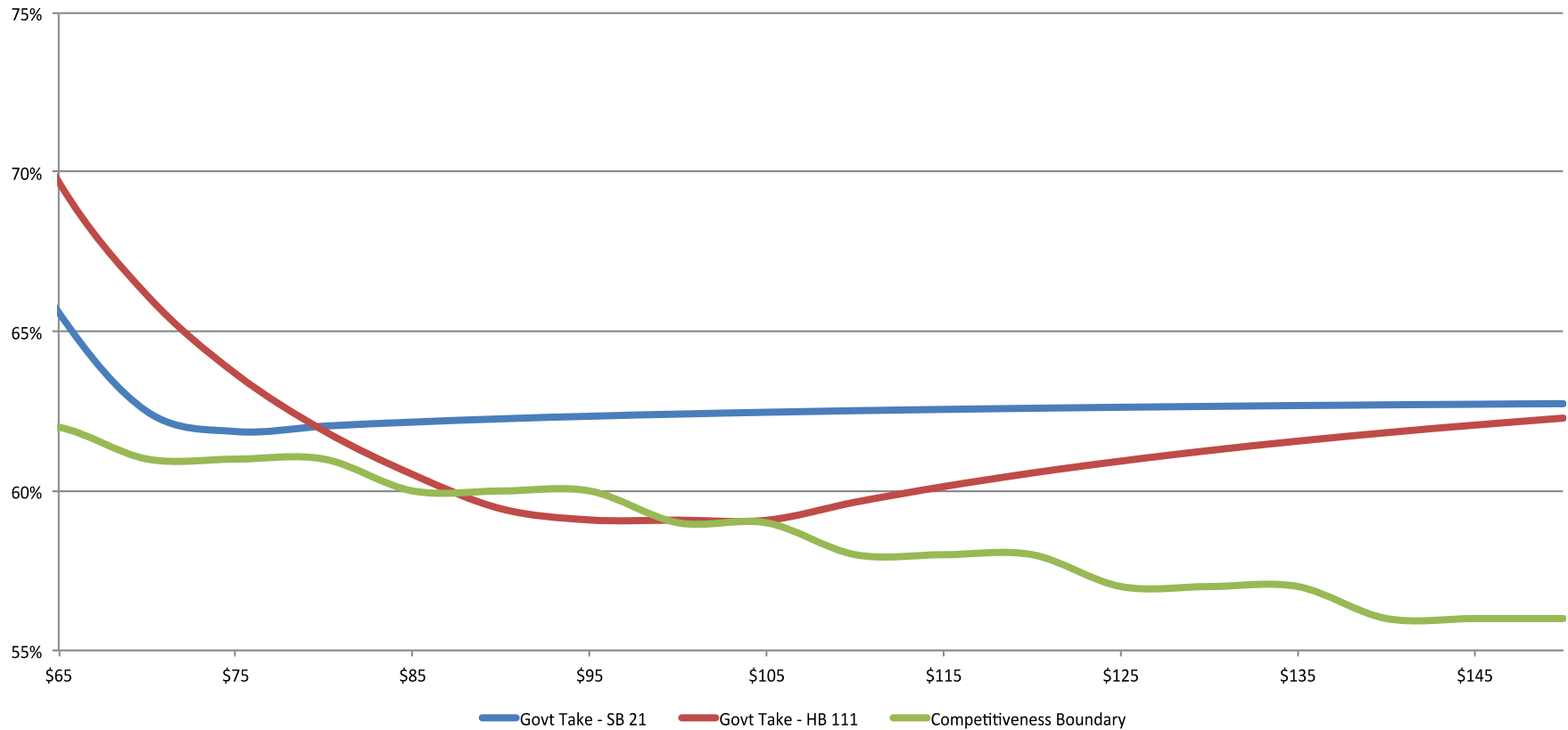
# Government Take - New (GVR) Oil - SB 21 vs. HB 111

## 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



[www.rmeconomics.com](http://www.rmeconomics.com)

[rmarks@rmeconomics.com](mailto:rmarks@rmeconomics.com)

907-250-1197