



House Resources Committee

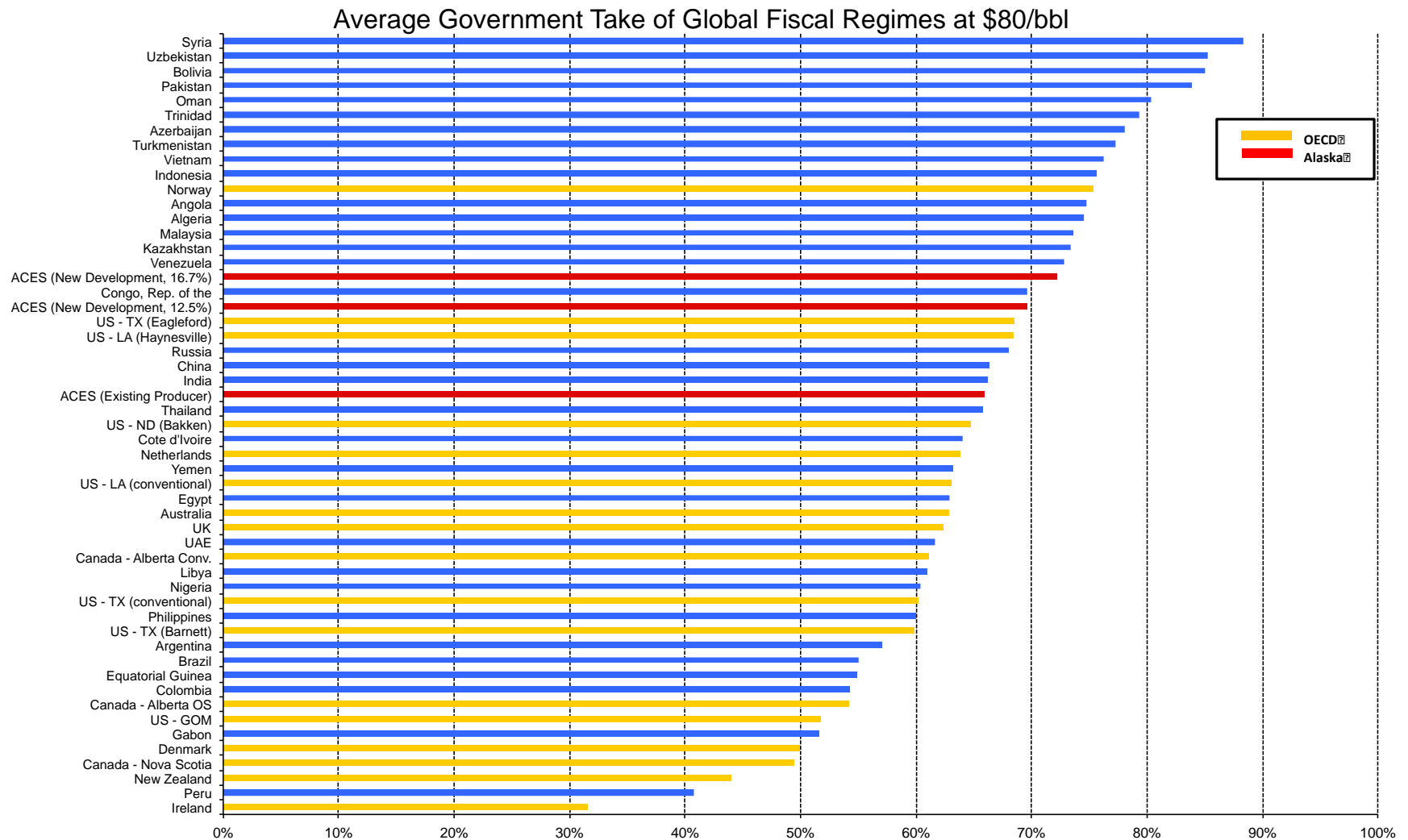
Alaska Fiscal System Discussion Slides

April 6 2013
Janak Mayer
Manager, Upstream
PFC Energy

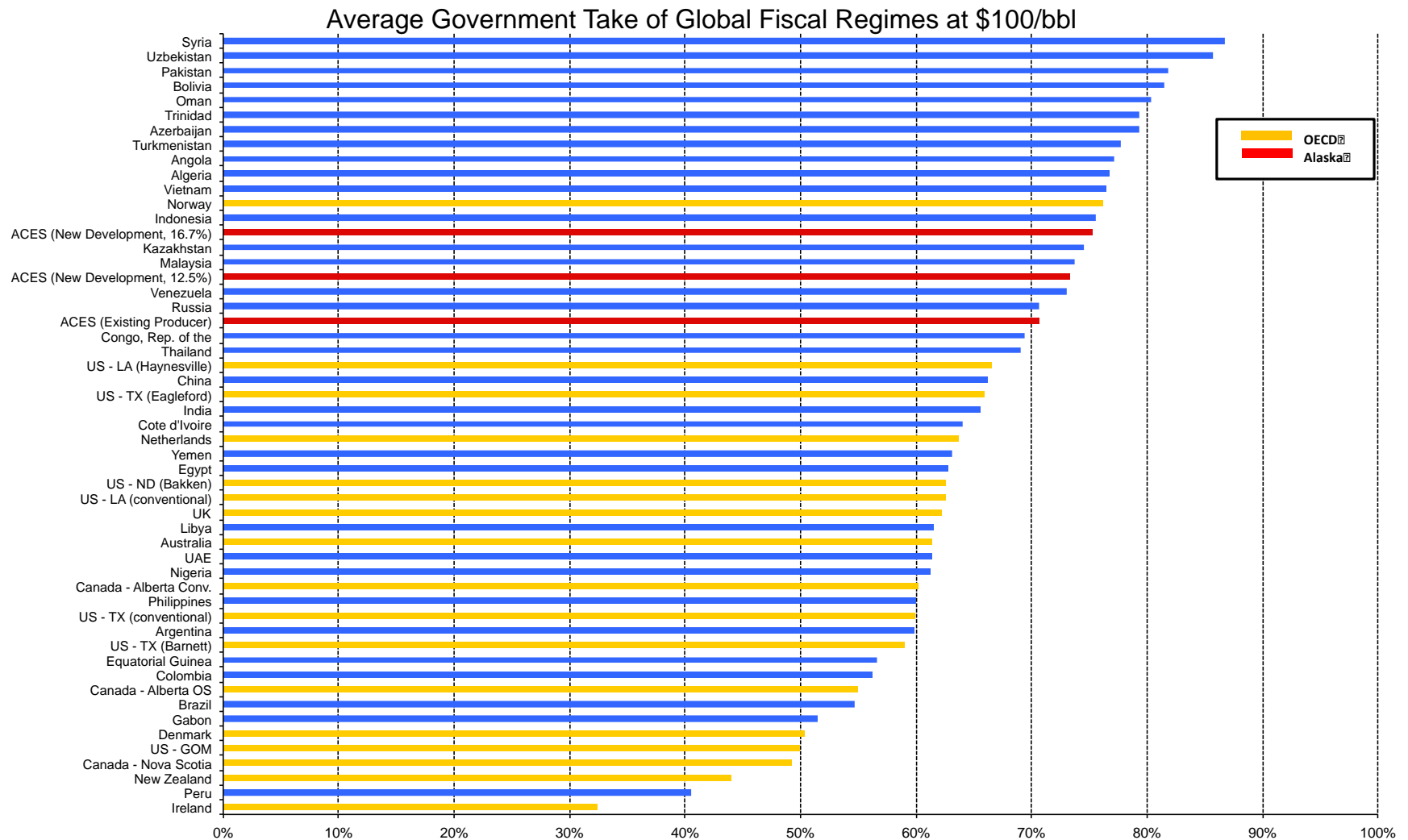
ACES – Key Issues

- **High Government Take and high degree of progressivity means uncompetitive for investment at current prices**
- High marginal rates mean little incentive for producer efficiency
- “Buydown” effect means incremental and standalone economics very different – with very different impacts for incumbent vs new producer
- Credits create significant downside exposure to state in low price environments, for high cost projects, and projects not on state lands
- Large scale gas sales would reduce taxes on oil
- Complex system, with often counter-intuitive effects

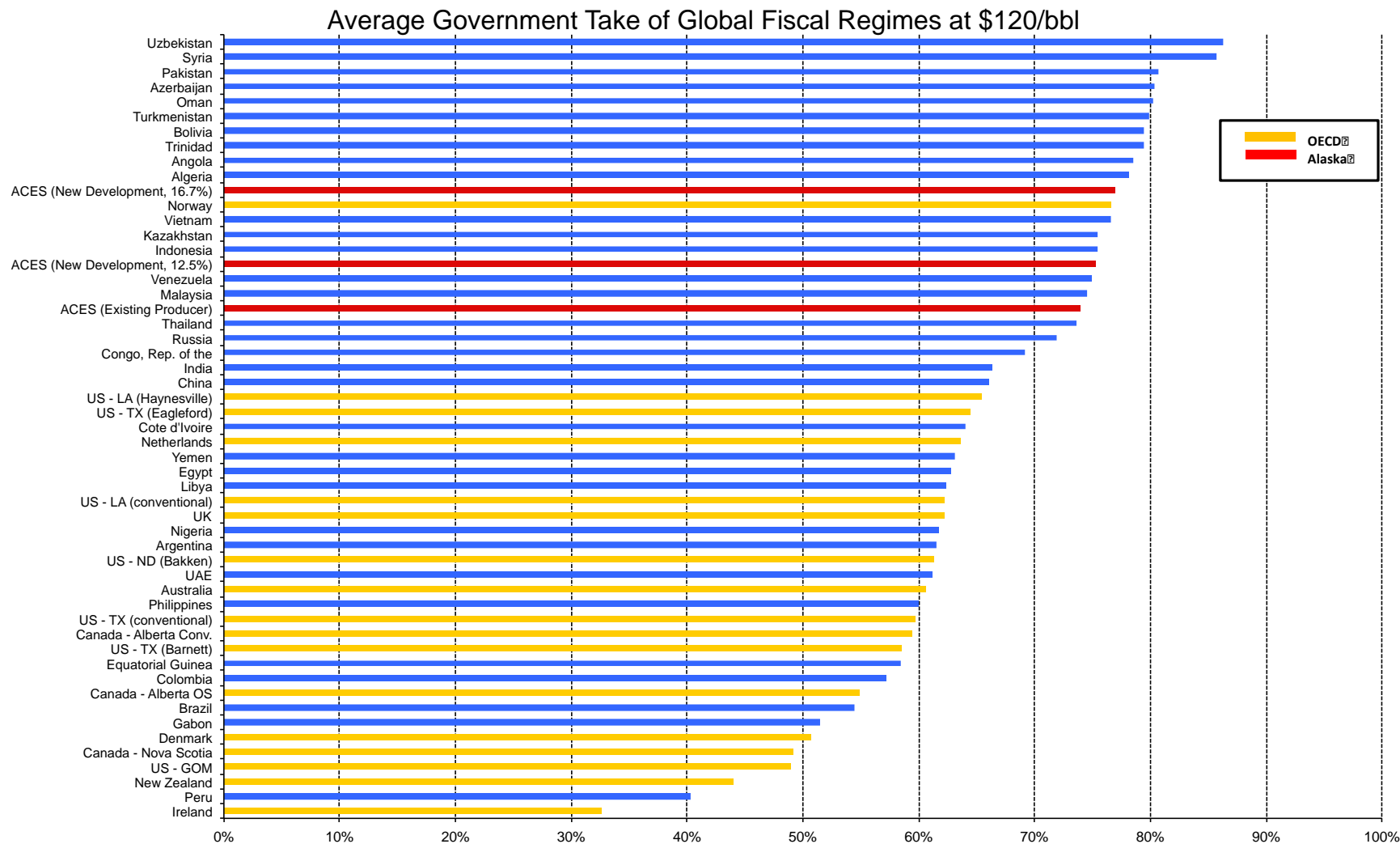
Regime Competitiveness - \$80/bbl



Regime Competitiveness - \$100/bbl

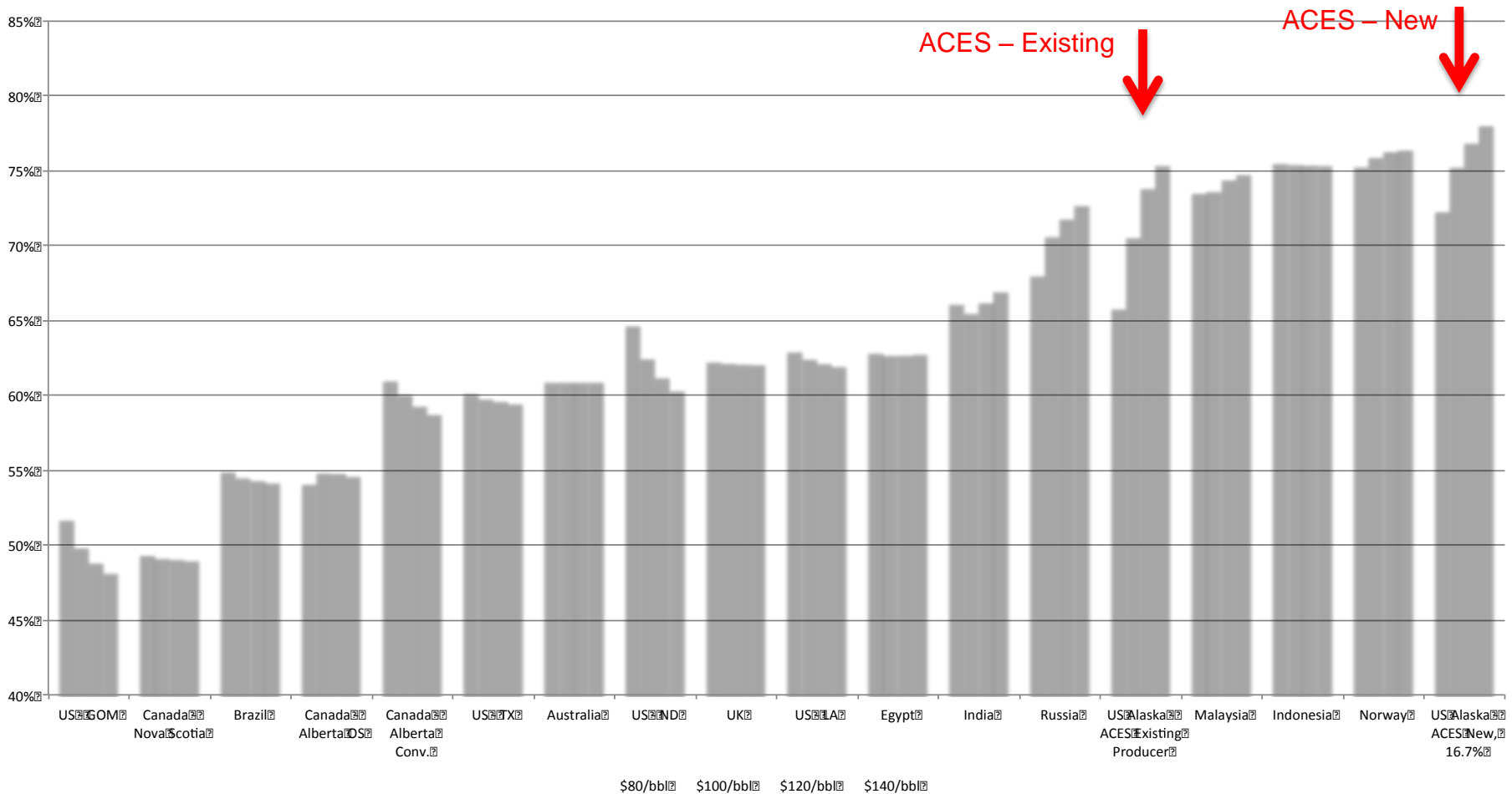


Regime Competitiveness - \$120/bbl



Government Take Competitiveness – Most Relevant Competitor Regimes

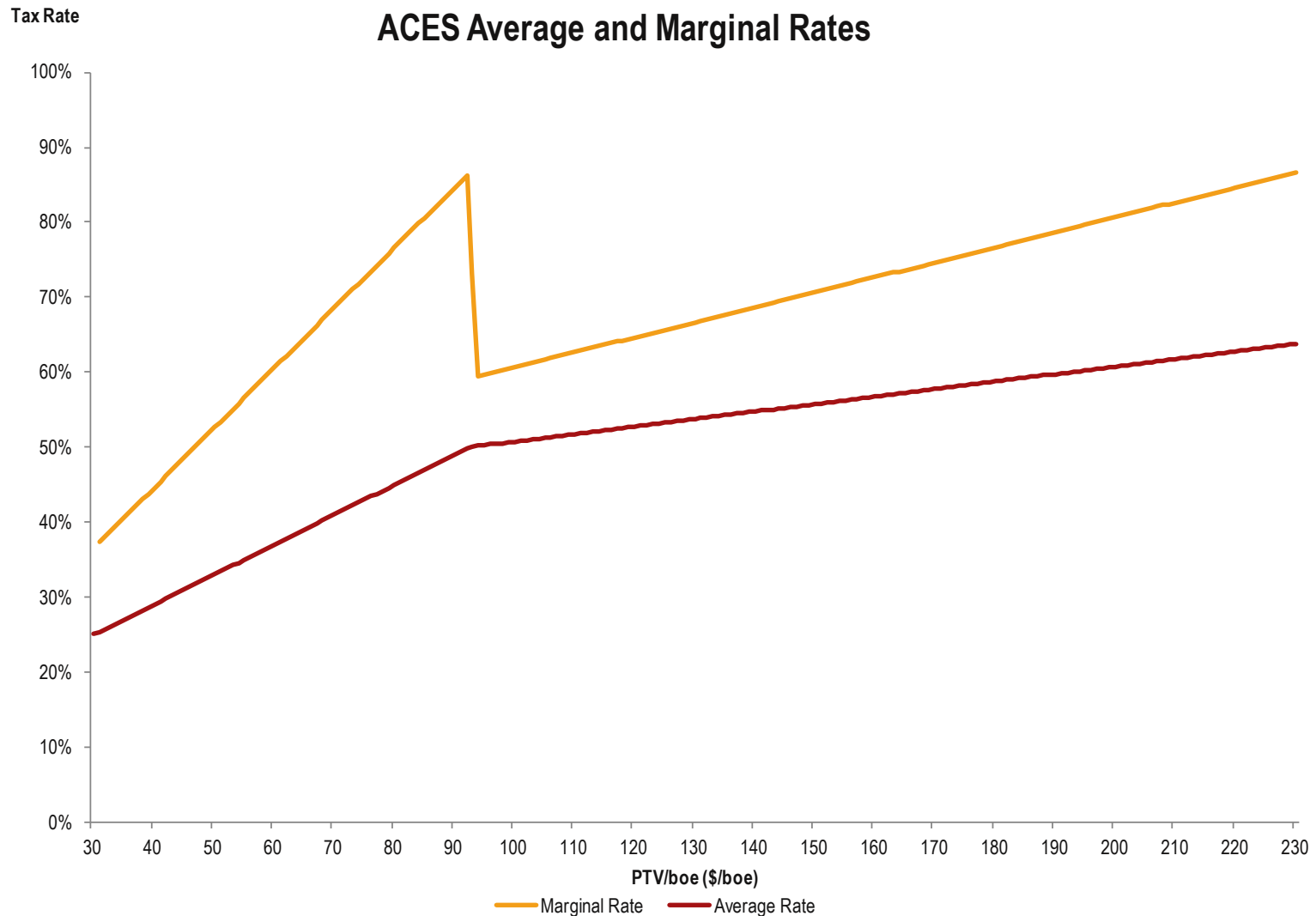
Alaska Government Take Competitiveness – Comparable Regimes



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ACES: Average and Marginal Production Tax Rates



Impact of Spending Under High Marginal Rates



Calculation of ACES Tax: Additional Capital Spending

Annual Taxable Production (Bbls)		50,000,000	50,000,000	50,000,000
Initial Expenditure (\$)		\$1,500,000,000	\$1,500,000,000	\$1,500,000,000
Additional Expenditure (\$)	+	250,000,000	250,000,000	250,000,000
Total Lease Expenditure (\$)		\$1,750,000,000	\$1,750,000,000	\$1,750,000,000
WC ANS Price (\$/Bbl)		\$80.00	\$100.00	\$120.00
Tax Value Prior To Additional Expenditure (\$/Bbl)		\$40.00	\$60.00	\$80.00
Additional Capital Spending Per-Barrel of Existing Production (\$/Bbl)	-	5.00	5.00	5.00
Tax Value After Additional Expenditure (\$/Bbl)	=	\$35.00	\$55.00	\$75.00
Taxes Before Additional Expenditure				
Tax Rate (%)		29.0%	37.0%	45.0%
Production Tax Before Credits (\$)		\$580,000,000	\$1,110,000,000	\$1,800,000,000
Capital Credits (20% x Capital Expenditures) (\$)	-	300,000,000	300,000,000	300,000,000
Production Tax After Credits (\$)	=	\$280,000,000	\$810,000,000	\$1,500,000,000
Taxes After Additional Expenditure				
Tax Rate (%)		27.0%	35.0%	43.0%
Production Tax Before Credits (\$)		\$472,500,000	\$962,500,000	\$1,612,500,000
Capital Credits (20% x Capital Expenditures) (\$)	-	350,000,000	350,000,000	350,000,000
Production Tax After Credits (\$)	=	\$122,500,000	\$612,500,000	\$1,262,500,000
Reduction in Taxes From Additional Expenditure				
Before Credits		\$107,500,000	\$147,500,000	\$187,500,000
Additional Credits	+	50,000,000	50,000,000	50,000,000
Total Reduction in Taxes After Credits	=	\$157,500,000	\$197,500,000	\$237,500,000
Reduction in Tax as % of Expenditure		63%	79%	95%
Due to Change in Taxes (Buy Down Effect)		43%	59%	75%
Due to Additional Credits		20%	20%	20%

Econ One Research

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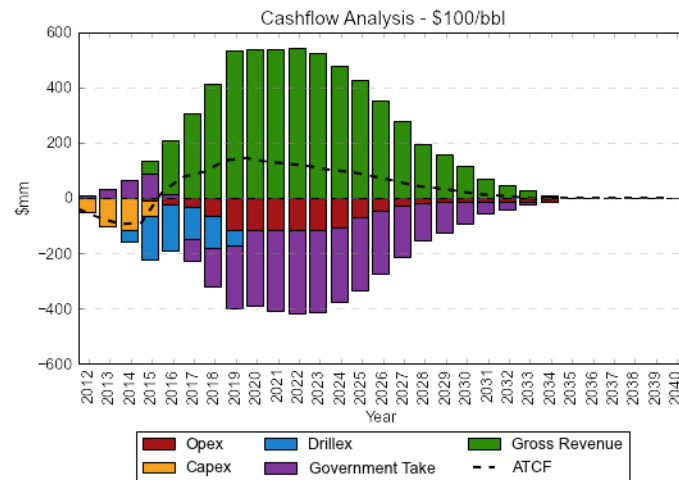
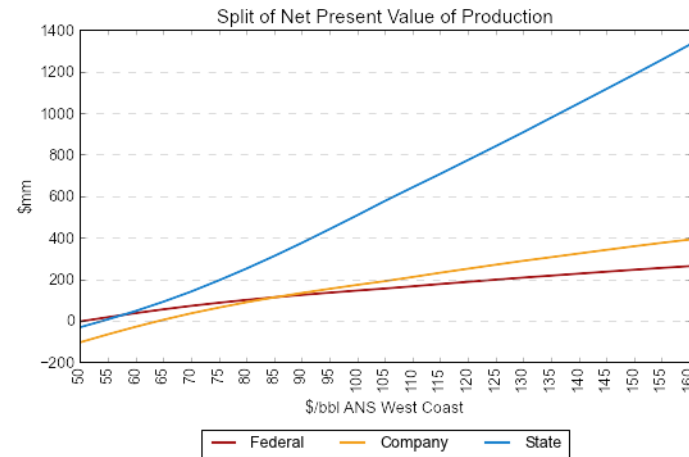
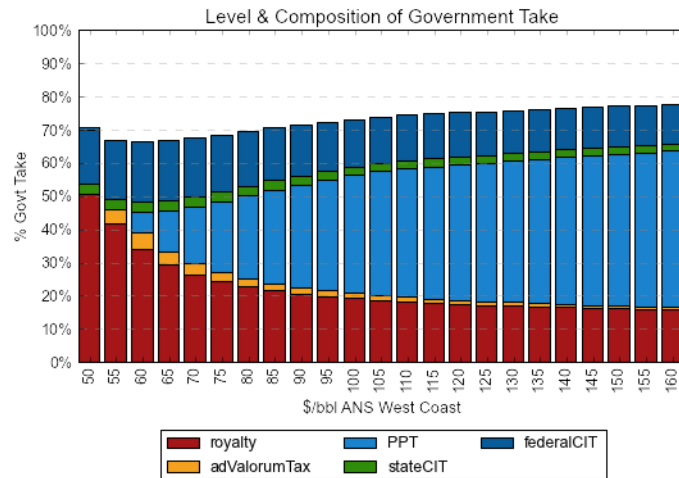
Source: Econ One Presentation, February 13 2013

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ACES - \$18/bbl Capex New Development, Standalone

ACES, 12.5% Royalty, \$18/bbl New Development, Standalone

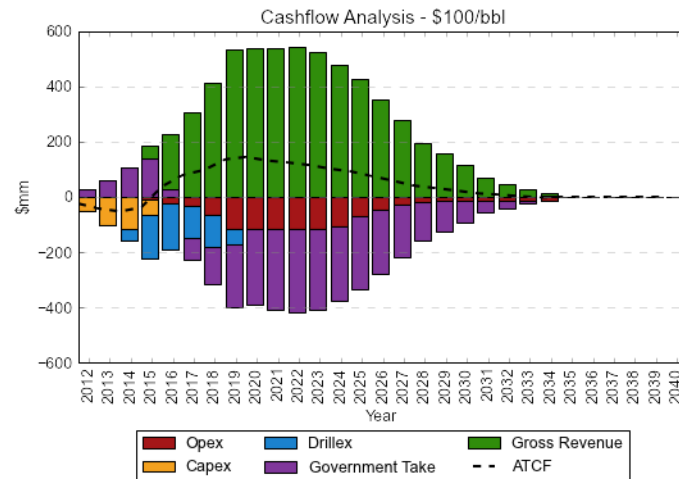
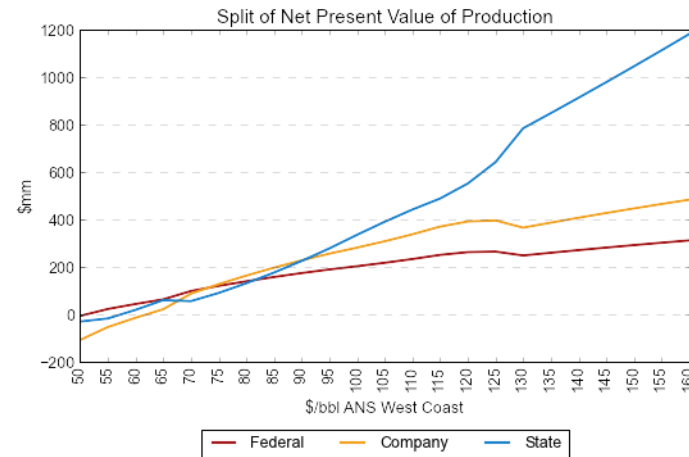
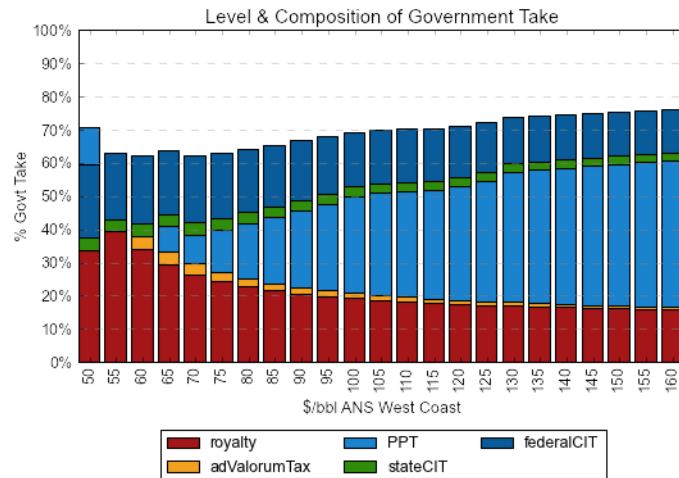


Economic Summary

	GT0	NPV/boe	IRR	Cash Margin
\$80/bbl	69.59%	1.76	17.21%	21.76
\$100/bbl	73.31%	3.44	21.74%	26.81
\$120/bbl	75.25%	4.99	25.54%	30.93
\$140/bbl	76.63%	6.46	28.80%	35.16

ACES - \$18/bbl Capex New Development, Incremental to Incumbent

ACES, 12.5% Royalty, \$18/bbl New Development, Standalone



Economic Summary

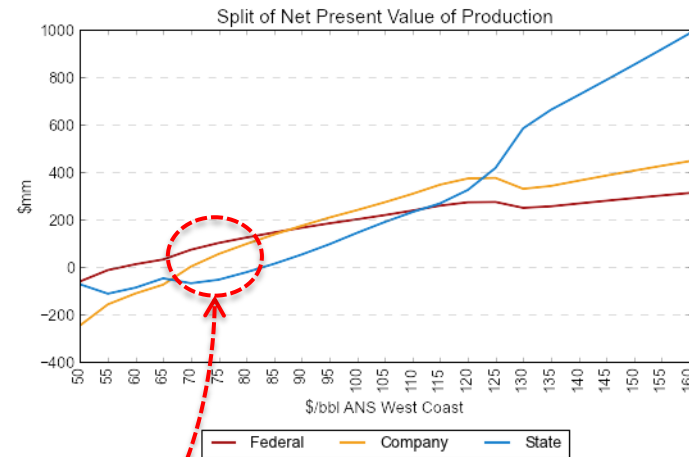
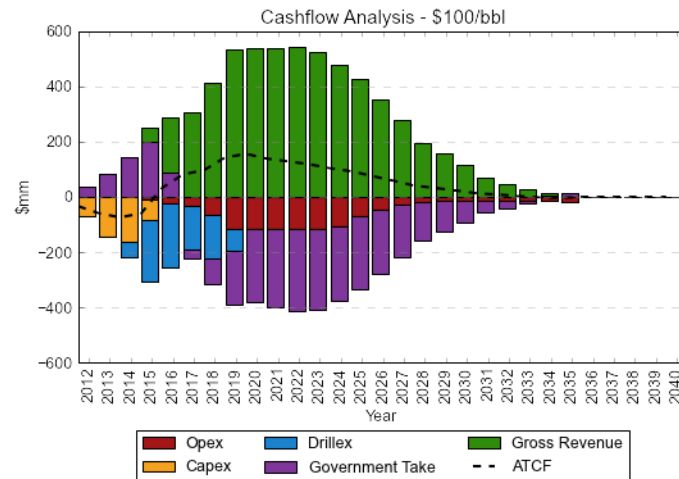
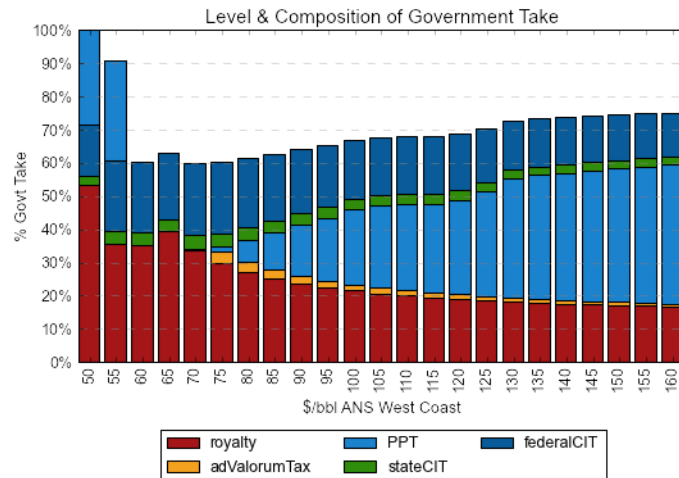
	GT0	NPV/boe	IRR	Cash Margin
\$80/bbl	64.37%	3.29	23.91%	22.05
\$100/bbl	69.43%	5.65	35.22%	27.14
\$120/bbl	71.19%	7.86	48.48%	30.67
\$140/bbl	74.70%	8.18	40.57%	35.21

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ACES - \$25/bbl Capex New Development, Incremental to Incumbent

ACES, 12.5% Royalty, \$18/bbl New Development, Standalone



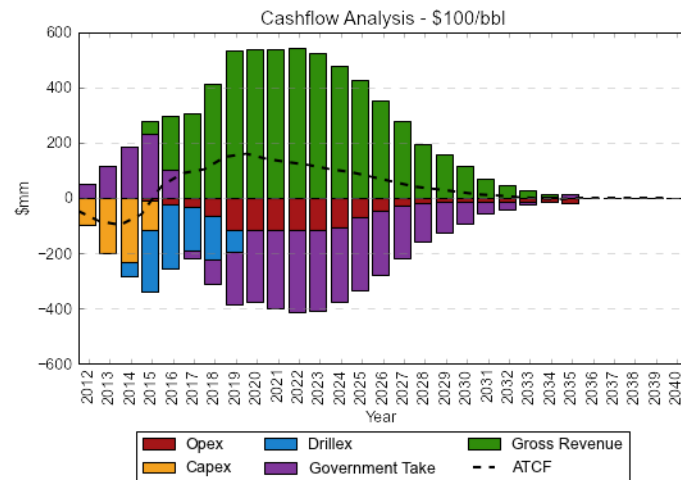
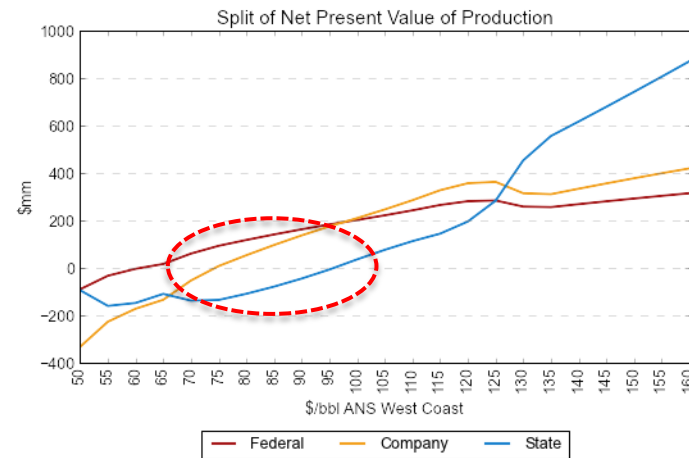
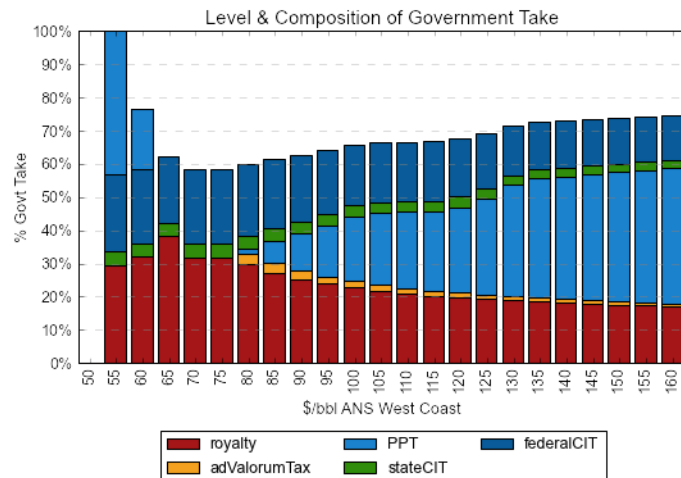
Economic Summary

	GT0	NPV/boe	IRR	Cash Margin
\$80/bbl	61.48%	1.96	17.63%	22.72
\$100/bbl	67.05%	4.82	27.86%	28.29
\$120/bbl	68.82%	7.49	40.27%	32.15
\$140/bbl	73.74%	7.3	32.69%	36.25

At \$75/bbl oil, the NPV of state spending on credits is higher than the NPV of all state government take for the project. However, the project still generates positive NPV for the company – a major concern for liability to the state.

ACES - \$35/bbl Capex New Development, Incremental to Incumbent

ACES, 12.5% Royalty, \$18/bbl New Development, Standalone



Economic Summary

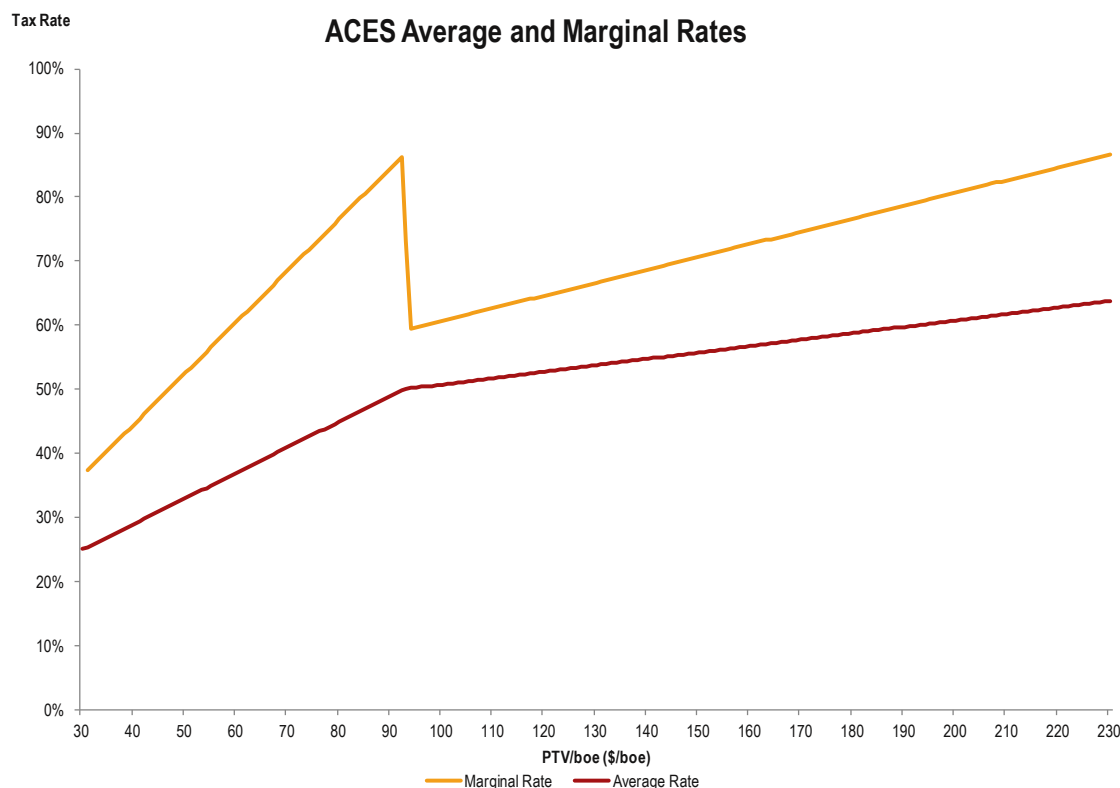
	GT0	NPV/boe	IRR	Cash Margin
\$80/bbl	59.89%	1.09	14.67%	23.79
\$100/bbl	65.84%	4.23	23.81%	29.36
\$120/bbl	67.62%	7.17	34.96%	33.22
\$140/bbl	73.28%	6.71	28.24%	37.32

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Impact of Large-Scale Gas Sales on Tax Rates

- Under ACES, production tax value is assessed on a combined BTU-equivalent basis for both oil and gas production
 - So long as no major gas export project is under development, this has no impact
 - In the event of the development of a major gas export project, however, when gas prices are significantly lower than oil prices, this could lead to significant reductions in Government Take



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ACES and SB21: Issues and Aims

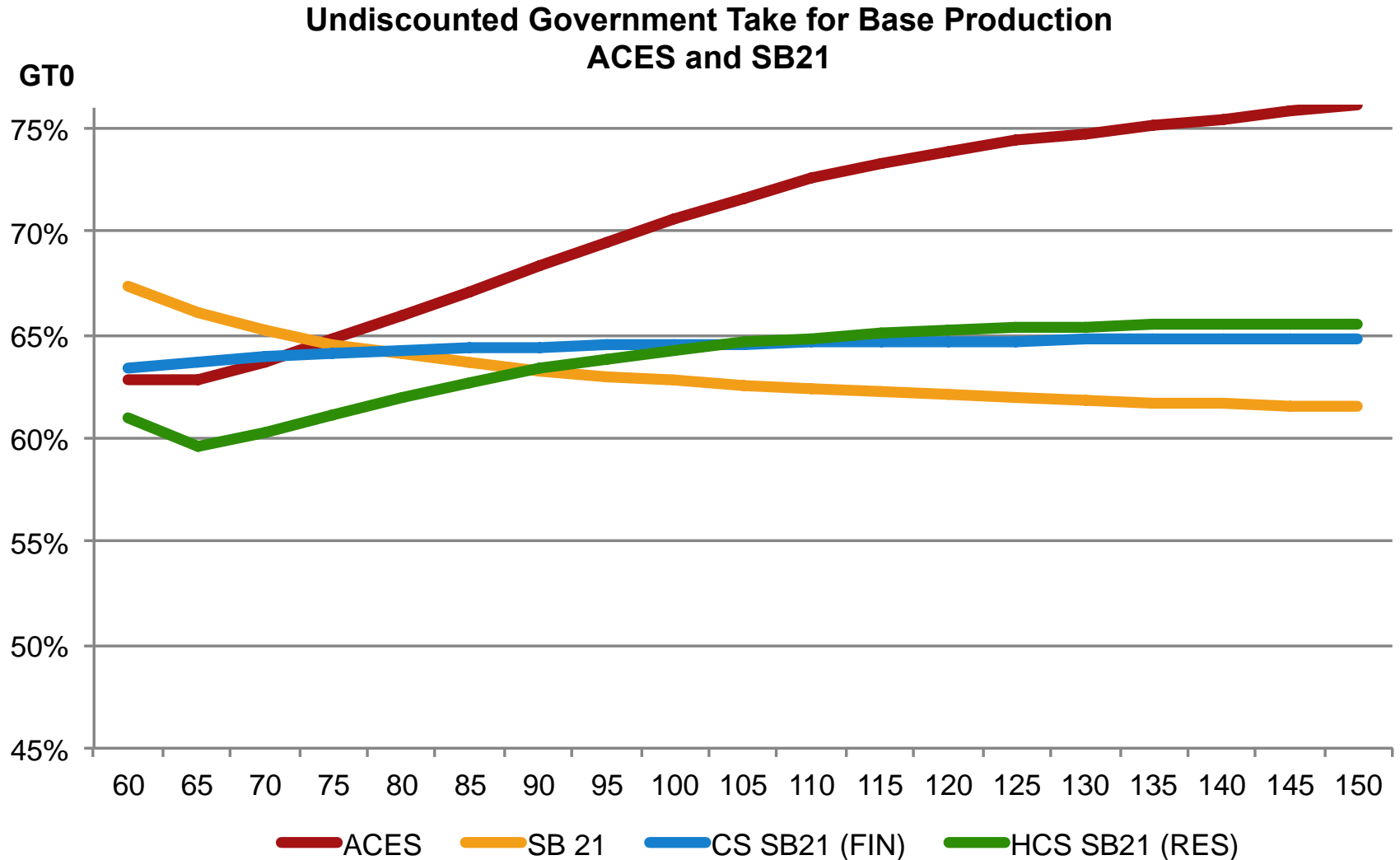
ACES - Issues	SB21 - Aims
<ul style="list-style-type: none">• High Government Take and high degree of progressivity means uncompetitive for investment at current prices	<ul style="list-style-type: none">• Relatively neutral at a competitive level of Government Take, while further improving competitiveness for new projects
<ul style="list-style-type: none">• Credits create significant downside exposure to state in low price environments, for high cost projects, and projects not on state lands	<ul style="list-style-type: none">• Limit downside risk to state from credits
<ul style="list-style-type: none">• “Buydown” effect means incremental and standalone economics very different – with very different impacts for incumbent vs new producer	<ul style="list-style-type: none">• Balance system with even impacts for incumbent vs new producer
<ul style="list-style-type: none">• High marginal rates mean little incentive for producer efficiency	<ul style="list-style-type: none">• More neutral regime creates low, constant marginal rates – strong incentive for producer efficiency
<ul style="list-style-type: none">• Complex system, with often counter-intuitive effects	<ul style="list-style-type: none">• Simplify the fiscal system

ACES and SB21: Key Changes

	ACES	HCS SB21 (RES)
Base Tax Rate	25%	33%
Progressivity	0.4 % per dollar of per barrel-PTV from \$30 to \$92.50; 0.1% per dollar of per barrel-PTV above \$92.50	None – although \$/bbl credit creates an implicit ‘reverse’ progressivity that counteracts regressive nature of royalty, leading to overall neutrality – or slight progressivity in case of varying credit
Maximum Tax Rate	75%	33%
Incentives for New Production	None	Gross Revenue Exclusion (GRE): In calculating the PTV, a producer’s 20% of gross revenues from eligible production are excluded. Oil is from new unit, new PA, PA expansions.
\$/bbl Credit	None	\$5 if eligible for GRE, else variable from \$8 to \$0 depending on price
Capital Credit	20% of all qualified capital expenditures	Eliminated after Dec 31 for North Slope
NOL Credit	25% for Carry-Forward Annual Loss Credit, monetizable for small producer over 2 years	35% for Carry-Forward Annual Loss Credit, monetizable for small producer over one year
Small Producer Credit	Expires 2016	Extended to 2022
Exploration Credit	Expires 2016	Expires 2016

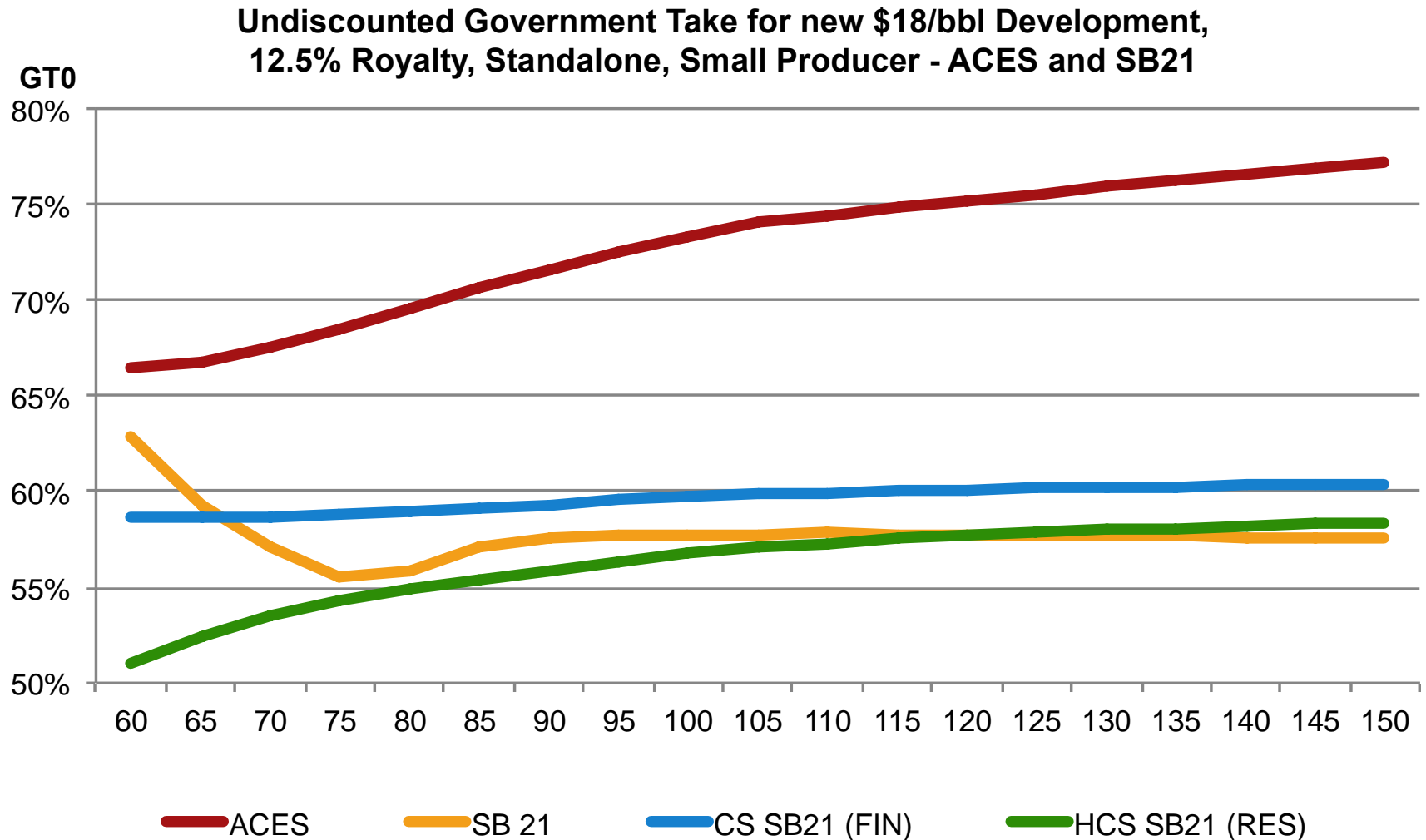
ACES and SB21: Government Take Comparison

Base Production



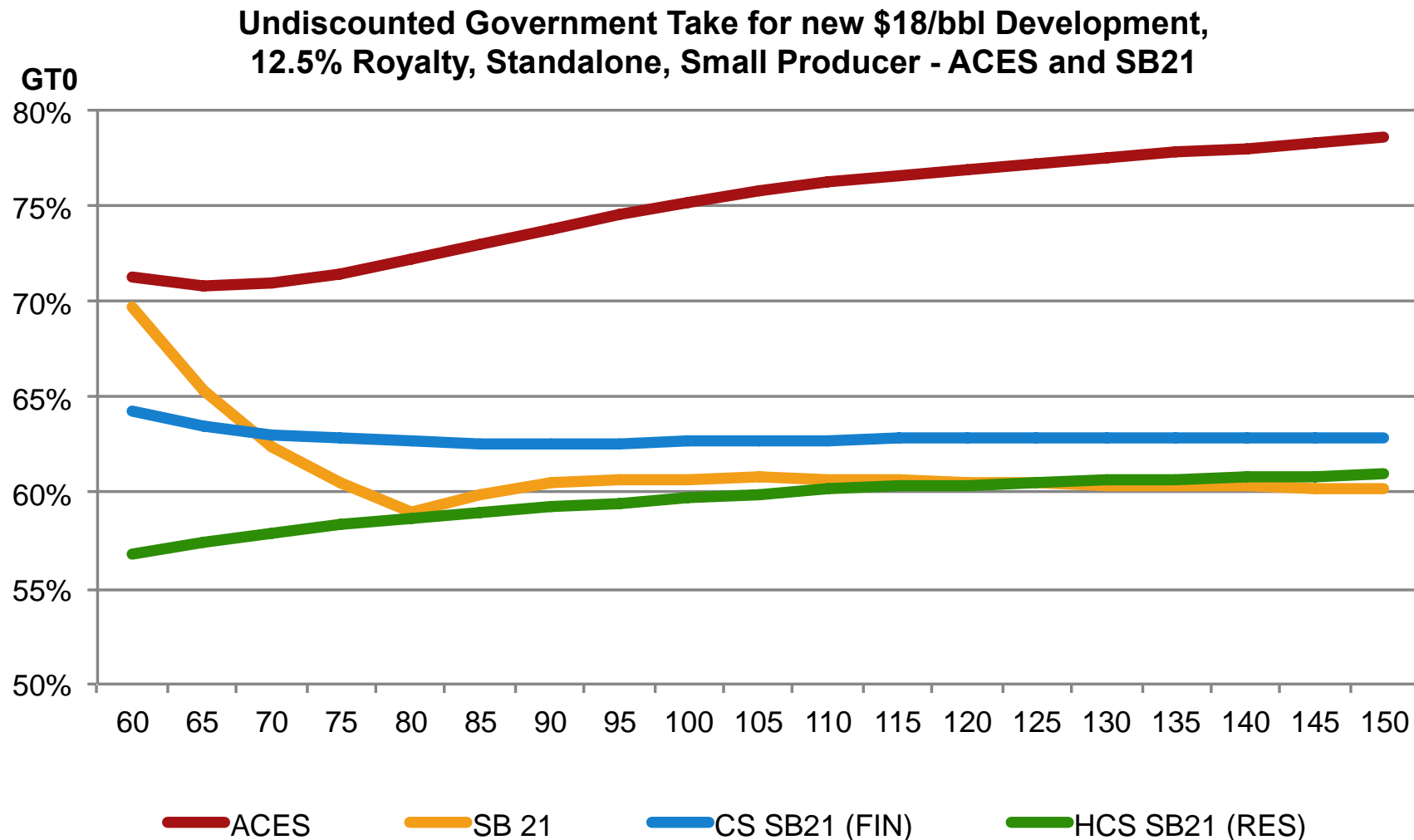
ACES and SB21: Government Take Comparison

\$18/bbl New Development, Standalone



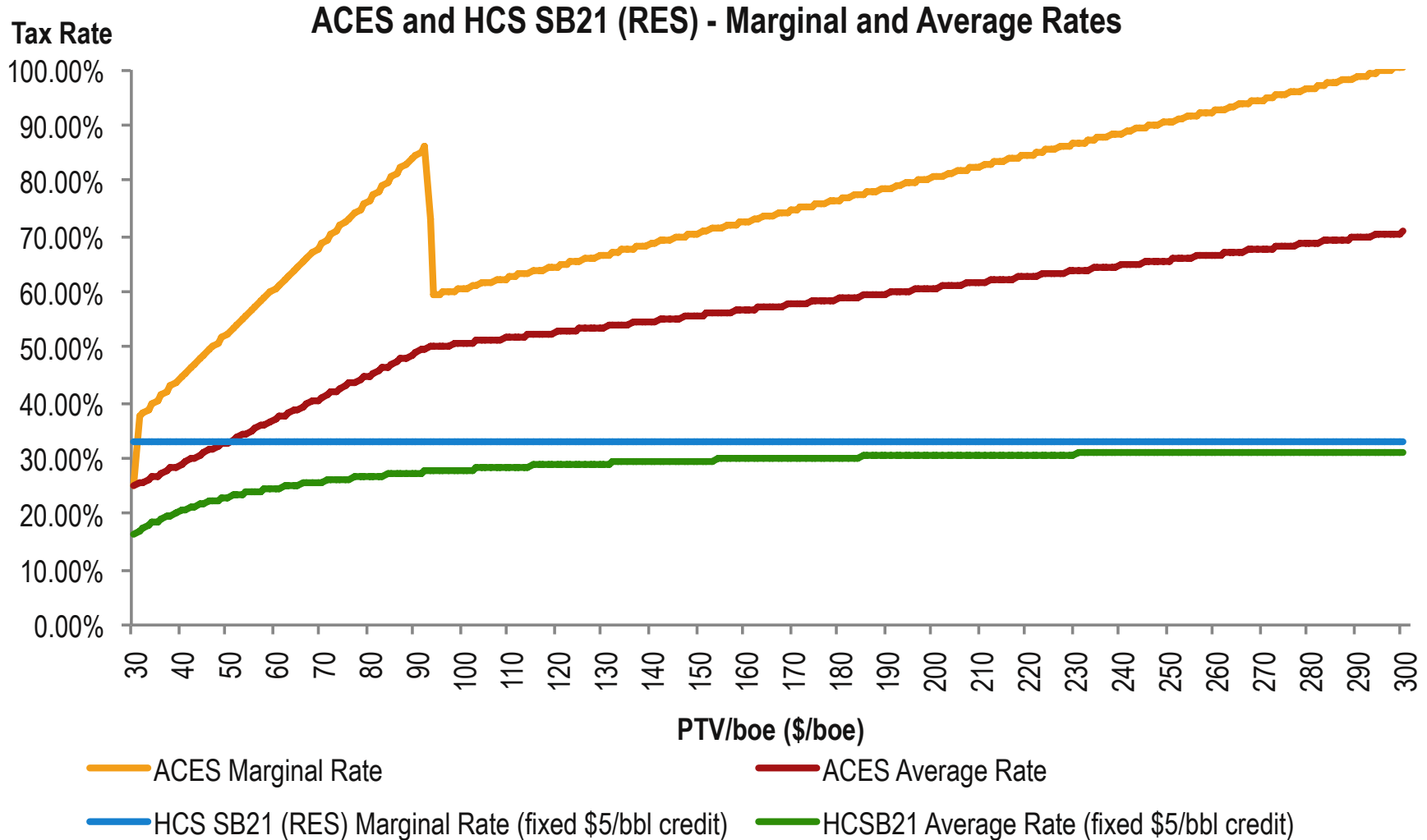
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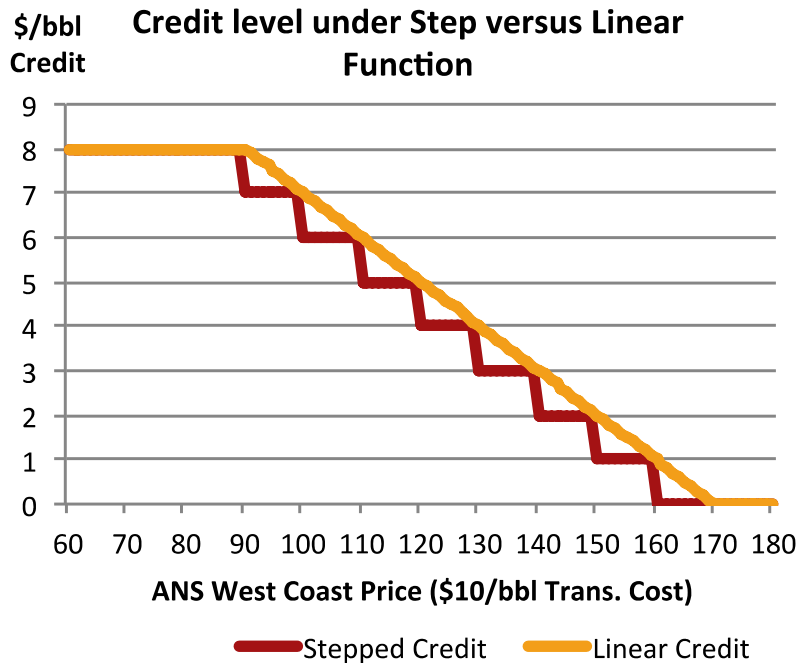


ACES and SB21: Government Take Comparison

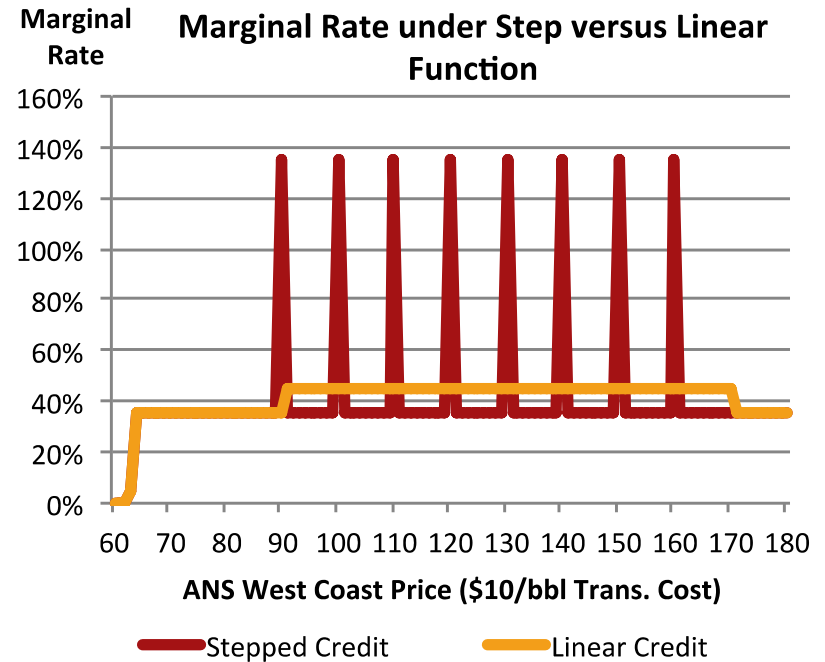
\$18/bbl New Development, Standalone



Linear Function for Credit may be preferable to Step Function



GVPP Below	Stepped Credit
\$80	\$8
\$90	\$7
\$100	\$6
\$110	\$5
\$120	\$4
\$130	\$3
\$140	\$2
\$150	\$1
\$160	\$0



Linear Credit Function

$$\text{Credit} = \text{Max}(0, \text{Min}(8, 16 - (\text{GVPP}/10)))$$

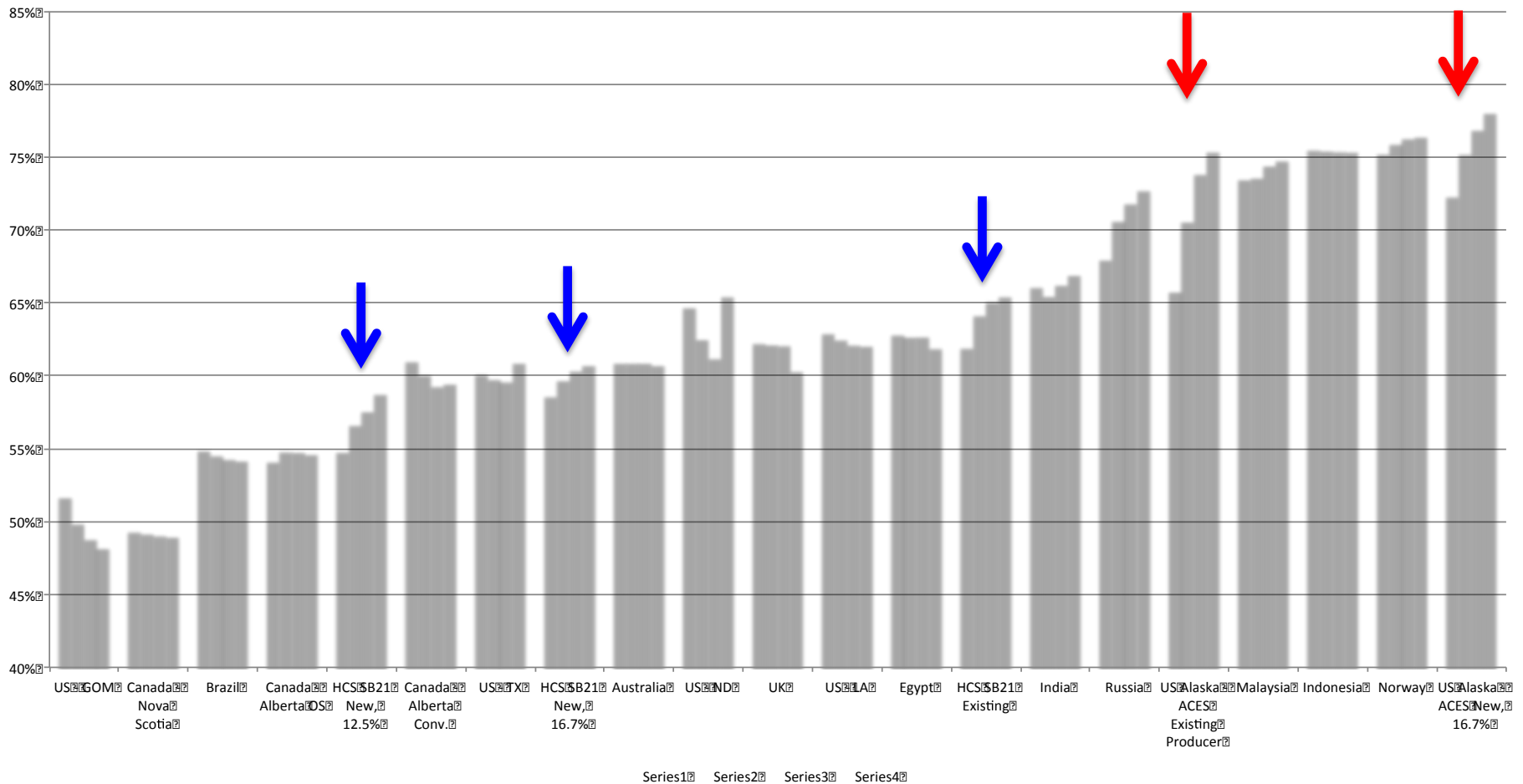
\$16 minus one tenth of the Gross Value of Production; not to exceed \$8 or be below \$0

Credits – NOL, Exploration & Small Producer

- Impact of ACES on project economics is very different for an incumbent vs a new producer
 - At current prices, incumbent experiences impact of ‘buydown’ effect, with new spending reducing tax rate from levels above 25% (plus also impact of capital credit)
 - New producer receives only impact of 25% NOL credit (plus capital credit)
- Fully monetizable NOL credit for small producers evens this playing field
 - All producers receive effective 33% government support for spending, whether new or incumbent
 - Flat, low marginal rate maintains strong incentive for efficiencies and cost control
 - No undue exposure to the state from higher cost projects at low prices
- Aim is to even the playing field and limit the level of support for exploration as well as other forms of spending
 - Allowing the Exploration credit to sunset, but having the fully monetizable 33% NOL credit means 33% government support for exploration spending
 - Again, even impact between incumbent vs new producer
- When the impacts of the system are even between incumbent vs new producer, strong argument that extending ‘small producer’ credit is less warranted
- Overall impact is to significantly simplify the system

Government Take Competitiveness

Alaska Government Take Competitiveness Compared to Comparable Regimes



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