
Analysis of Alaska's Tax System, North Slope Investment and The Administration's Proposal SB21 / SRES CS SB21

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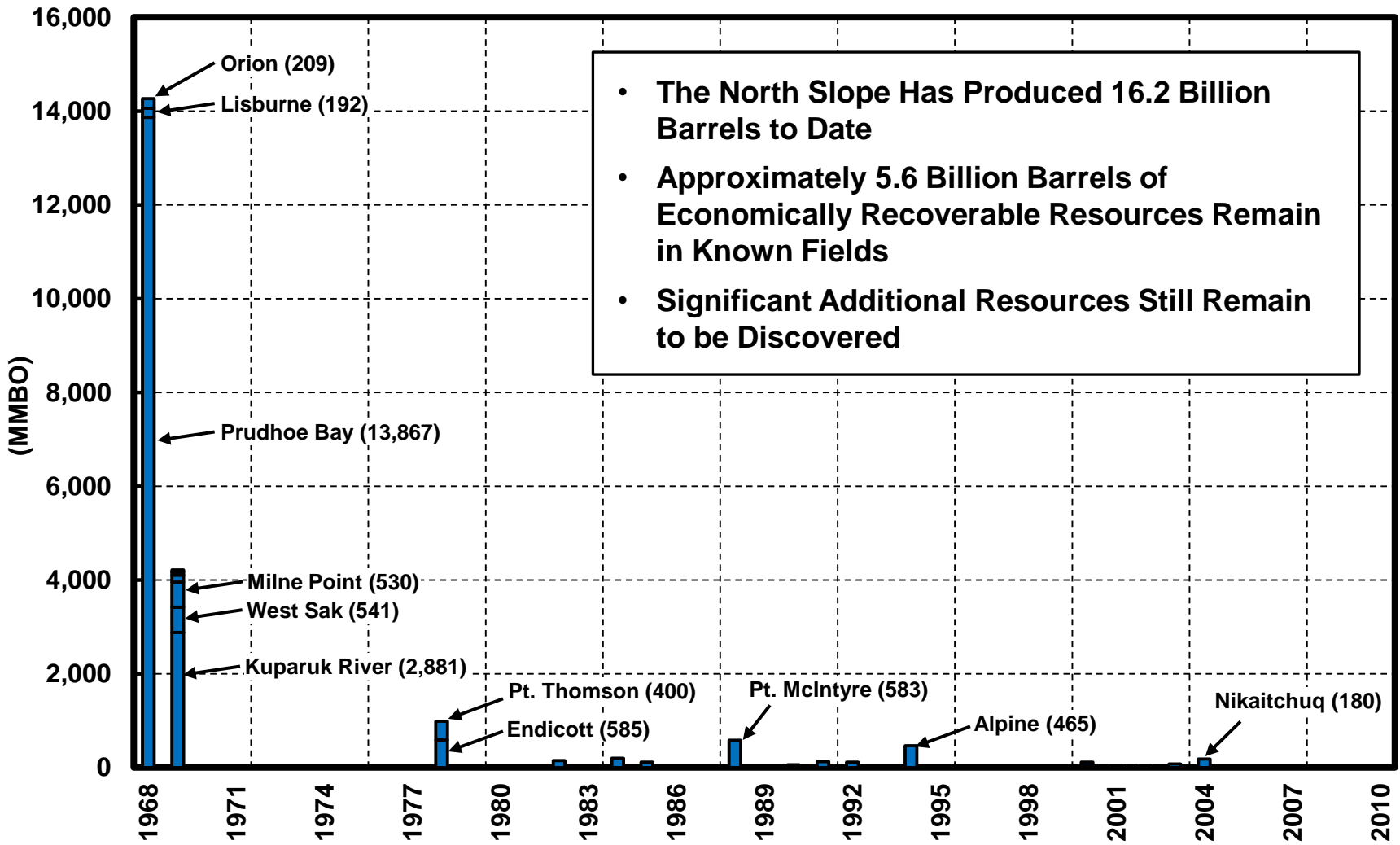
March 1, 2013

Econ One: Who We Are

- **Economic Research and Consulting Firm**
 - **We Provide Economic Analysis In Energy and Other Industries**
- **We Have Advised the State of Alaska on Petroleum Related Matters For Over Two Decades**
- **We Have Worked With the Cowper, Hickel, Knowles, Murkowski, Palin, and Parnell Administrations**
- **We Assisted the Legislature Between 2005 and 2008 on Tax and Gas Development Issues**
- **Our Energy-Related Work Outside Alaska**
 - **State Governments: Texas, Louisiana, New Mexico, Oklahoma, California**
 - **Federal Government Agencies: Department of Interior, Federal Trade Commission**
 - **Energy Companies: Producers, Refiners, Mid-Stream Services, Pipelines, Chemicals**

Background

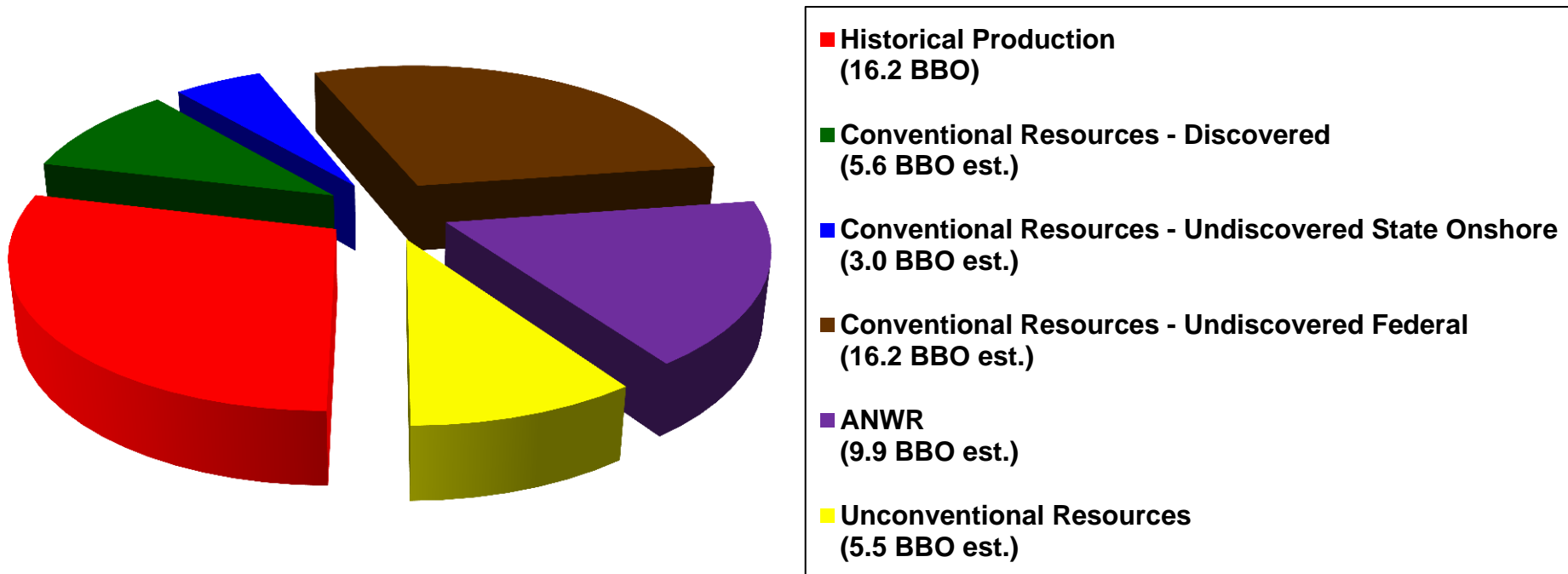
Alaska North Slope Discovered Resources by Discovery Year (1969 – 2010)



Source: DNR: The Historical Resource and Recovery Growth in Developed Fields, Arctic Slope of Alaska, 2004; DOE/NETL-2009/1385; AOGCC.

Alaska North Slope Production and Resources

- Many North Slope Fields are Now at Mature Stages. However, Less Than Half of its Potential Economic Oil Resources Have Been Produced to Date
- In Total, the North Slope Contains Approximately 40 Billion Barrels of Additional Estimated Economic Recoverable Resources at Today's Prices



Estimated Undiscovered Conventional Oil Resources on Alaska North Slope

	Technically Recoverable Resources			Economically Recoverable	Expected Typical
	P95	Mean	P5	@ \$90/bbl	Field Size
	(Million Barrels)				
	(1)	(2)	(3)	(4)	(5)
Central North Slope	2,800	3,400	3,900	3,000	32 - 64
Beaufort Sea	400	8,200	23,200	5,800	-
Chukchi Sea	2,300	15,400	40,100	9,900	-
NPRA	400	900	1,700	500	32 - 64
ANWR	5,900	10,400	15,200	9,900	64 - 128
Total		38,300		29,100	

Source:

USGS Reports 2011-1103 and 2009-1112;

BOEM, Assessment of undiscovered technically recoverable oil and gas resources of the nation's outer continental shelf.

Estimated Undeveloped Unconventional Oil Resources on Alaska North Slope

Shale **~ 1 Billion Bbls**
 (Mean Estimated Technically Recoverable Barrels)
(USGS, 2012)

Viscous and Heavy Oil
 (Includes All Schrader/West Sak and Ugnu Reservoirs in the Kuparuk River,
 Prudhoe Bay, Milne Point and Nikaitchuq Units, Not Just PAs or Areas
 Under Development)

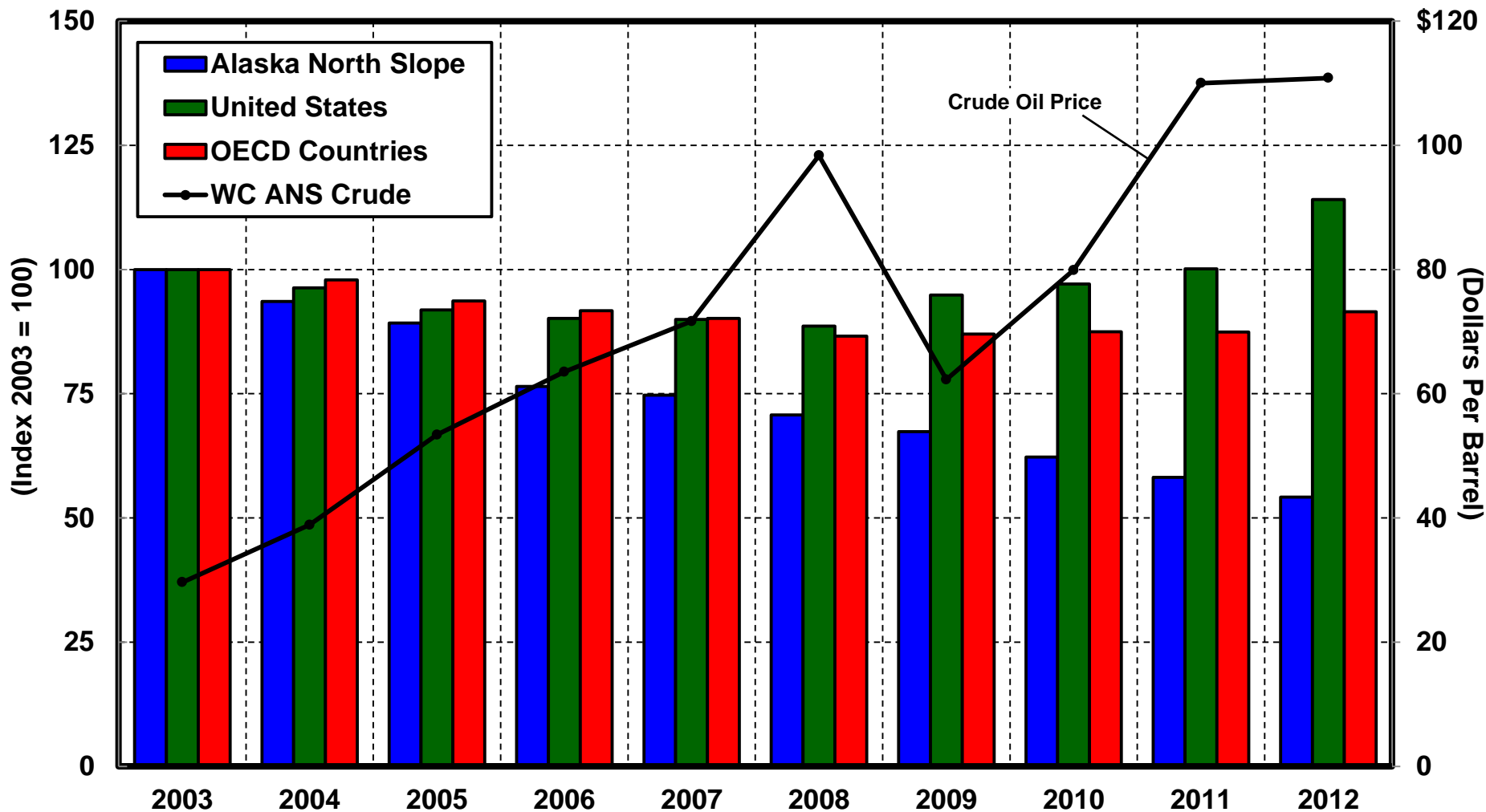
Total In-Place Resource **24 - 27 Billion Bbls**
(Hartz, et al., 2007; AOGCC)

Economically Recoverable **3.6 - 5.6 Billion Bbls**
(Assuming 15% Average Recovery)

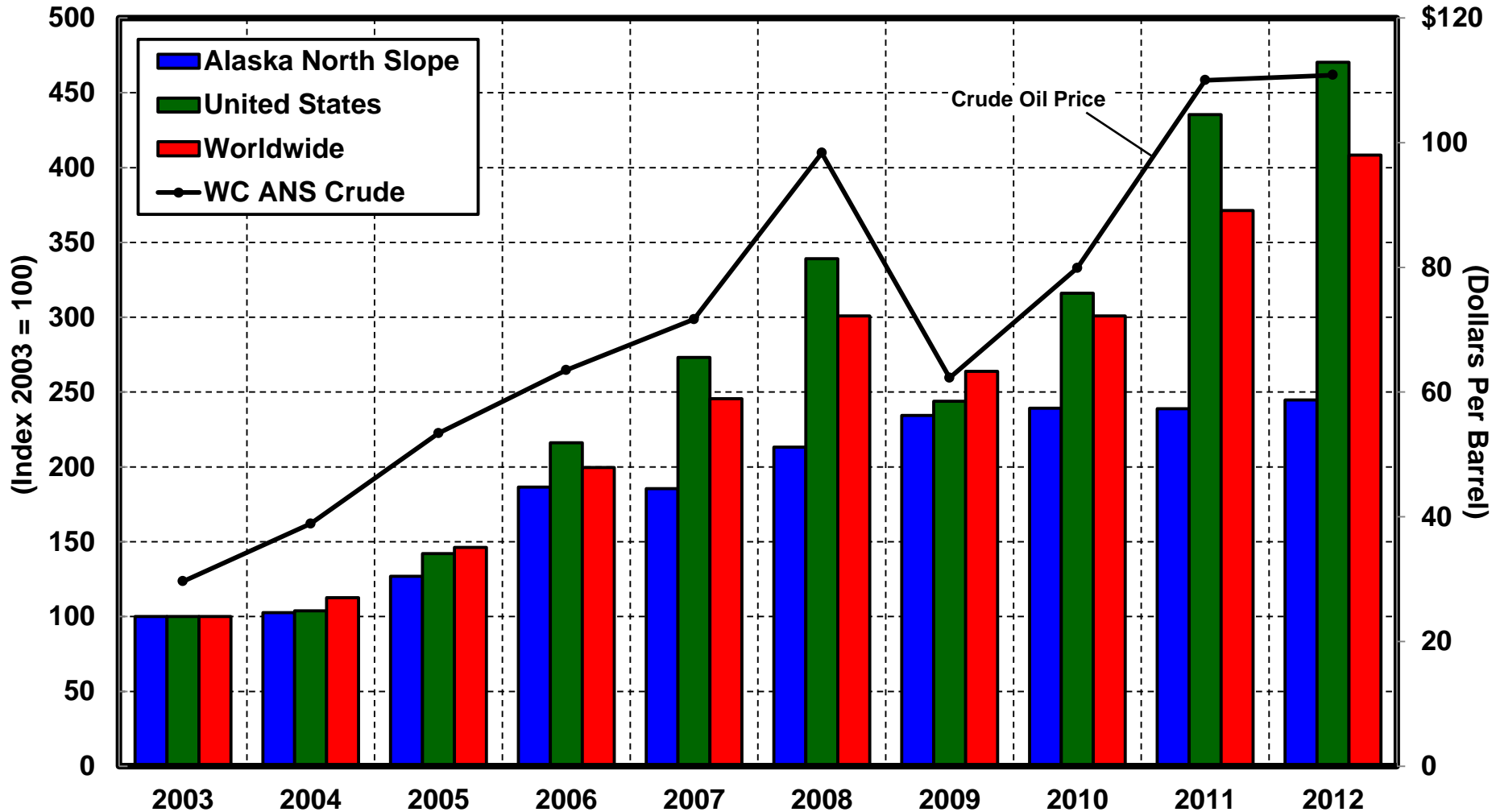
Crude Oil Production

Alaska North Slope vs. United States and OECD Countries

2003 - 2012



Estimated Capital Spending for Exploration and Development Alaska North Slope vs. United States and Worldwide Spending* 2003 - 2012



* North Slope based on tax return information; U.S. based on top 50 public companies; worldwide based on top 75 public companies

Fundamentals of Tax Calculation, Potential Development, and State Exposure Under ACES

How ACES Works

- **Tax is Calculated on “Net Value” of Taxable Production**
 - **Taxable Production is Total Production Less Royalties**
 - **Net Value is Gross Wellhead Value Less Cost of Production**
 - **Costs of Production are Capital Expenses, Operating Expenses and Property Tax Payments**
 - **Base Tax Rate of 25%**
 - **Progressive Tax Rate of 0.4% Per \$1/Barrel (4% Per \$10/Barrel) Increase Over \$30/Barrel Net Value and 0.1% Per \$1/Barrel (1% Per \$10/Barrel) Over \$92.50, Capped at 50% Total**
 - **Example: Taxable Value = \$100/Barrel “Production Tax Value”**
 - Base Rate = 25%**
 - Progressive Rate = $(\$92.50 - \$30) \times 0.4\% + (\$100 - \$92.50) \times 0.1\% = 25.75\%$**
 - Total Rate = $25\% + 25.75\% = 50.75\%$**
 - **Credit of 20% for Capital Expenditures (Taken Over 2 Years)**
 - **Small Producer Credit of \$12 Million Per Year (Phased Out for Production over 50 MBD)**
 - **State Purchases Credits and Net Operating Losses (NOLs) From Companies Without Tax Obligation**
 - **Equals 45% of Capital Expenditures and 25% of Operating Expenditures**
-

Calculation of ACES Taxes: Varying Prices

Annual Taxable Production (Bbls)	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000
West Coast ANS Price (\$/Bbl)	\$60.00	\$80.00	\$100.00	\$120.00	\$140.00
Transportation Costs (\$/Bbl)	- 10.00	10.00	10.00	10.00	10.00
Wellhead Value (\$/Bbl)	= \$50.00	\$70.00	\$90.00	\$110.00	\$130.00
Operating Costs (\$/Bbl)	- \$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Capital Expenditures (\$/Bbl)	- 15.00	15.00	15.00	15.00	15.00
Taxable Value (\$/Bbl)	= \$20.00	\$40.00	\$60.00	\$80.00	\$100.00
ACES Base Tax Rate (%)	25.0%	25.0%	25.0%	25.0%	25.0%
ACES Progressive Tax (%)	+ 0.0%	4.0%	12.0%	20.0%	25.8%
Total Tax Rate (%)	= 25.0%	29.0%	37.0%	45.0%	50.8%
Total Wellhead Value (\$)	\$2,500,000,000	\$3,500,000,000	\$4,500,000,000	\$5,500,000,000	\$6,500,000,000
Operating Expenditures (\$)	- 750,000,000	750,000,000	750,000,000	750,000,000	750,000,000
Capital Expenditures (\$)	- 750,000,000	750,000,000	750,000,000	750,000,000	750,000,000
Production Tax Value (\$)	= \$1,000,000,000	\$2,000,000,000	\$3,000,000,000	\$4,000,000,000	\$5,000,000,000
Production Tax Before Credits (PTV x Total Tax Rate) (\$)	\$250,000,000	\$580,000,000	\$1,110,000,000	\$1,800,000,000	\$2,537,500,000
Capital Credits (20% x Capital Expenditures) (\$)	- 150,000,000	150,000,000	150,000,000	150,000,000	150,000,000
Production Tax After Credits (\$)	= \$100,000,000	\$430,000,000	\$960,000,000	\$1,650,000,000	\$2,387,500,000
Effective Production Tax Rate After Credits (%)	10.0%	21.5%	32.0%	41.3%	47.8%

Calculation of ACES Tax: Varying Costs

\$100 West Coast ANS Price

Annual Taxable Production (Bbls)		50,000,000	50,000,000	50,000,000
West Coast ANS Price (\$/Bbl)		\$100.00	\$100.00	\$100.00
Transportation Costs (\$/Bbl)	-	10.00	10.00	10.00
Wellhead Value (\$/Bbl)	=	\$90.00	\$90.00	\$90.00
Operating Costs (\$/Bbl)	-	\$10.00	\$20.00	\$30.00
Capital Expenditures (\$/Bbl)	-	10.00	15.00	20.00
Taxable Value (\$/Bbl)	=	\$70.00	\$55.00	\$40.00
ACES Base Tax Rate (%)		25.0%	25.0%	25.0%
ACES Progressive Tax (%)	+	16.0%	10.0%	4.0%
Total Tax Rate (%)	=	41.0%	35.0%	29.0%
Total Wellhead Value (\$)		\$4,500,000,000	\$4,500,000,000	\$4,500,000,000
Operating Expenditures (\$)	-	500,000,000	1,000,000,000	1,500,000,000
Capital Expenditures (\$)	-	500,000,000	750,000,000	1,000,000,000
Production Tax Value (\$)	=	\$3,500,000,000	\$2,750,000,000	\$2,000,000,000
Production Tax Before Credits (PTV x Total Tax Rate) (\$)		\$1,435,000,000	\$962,500,000	\$580,000,000
Capital Credits (20% x Capital Expenditures) (\$)	-	100,000,000	150,000,000	200,000,000
Production Tax After Credits (\$)	=	\$1,335,000,000	\$812,500,000	\$380,000,000
Effective Tax Rate After Credits (%)		38.1%	29.5%	19.0%

Calculation of ACES Tax: Varying Costs

\$80 West Coast ANS Price

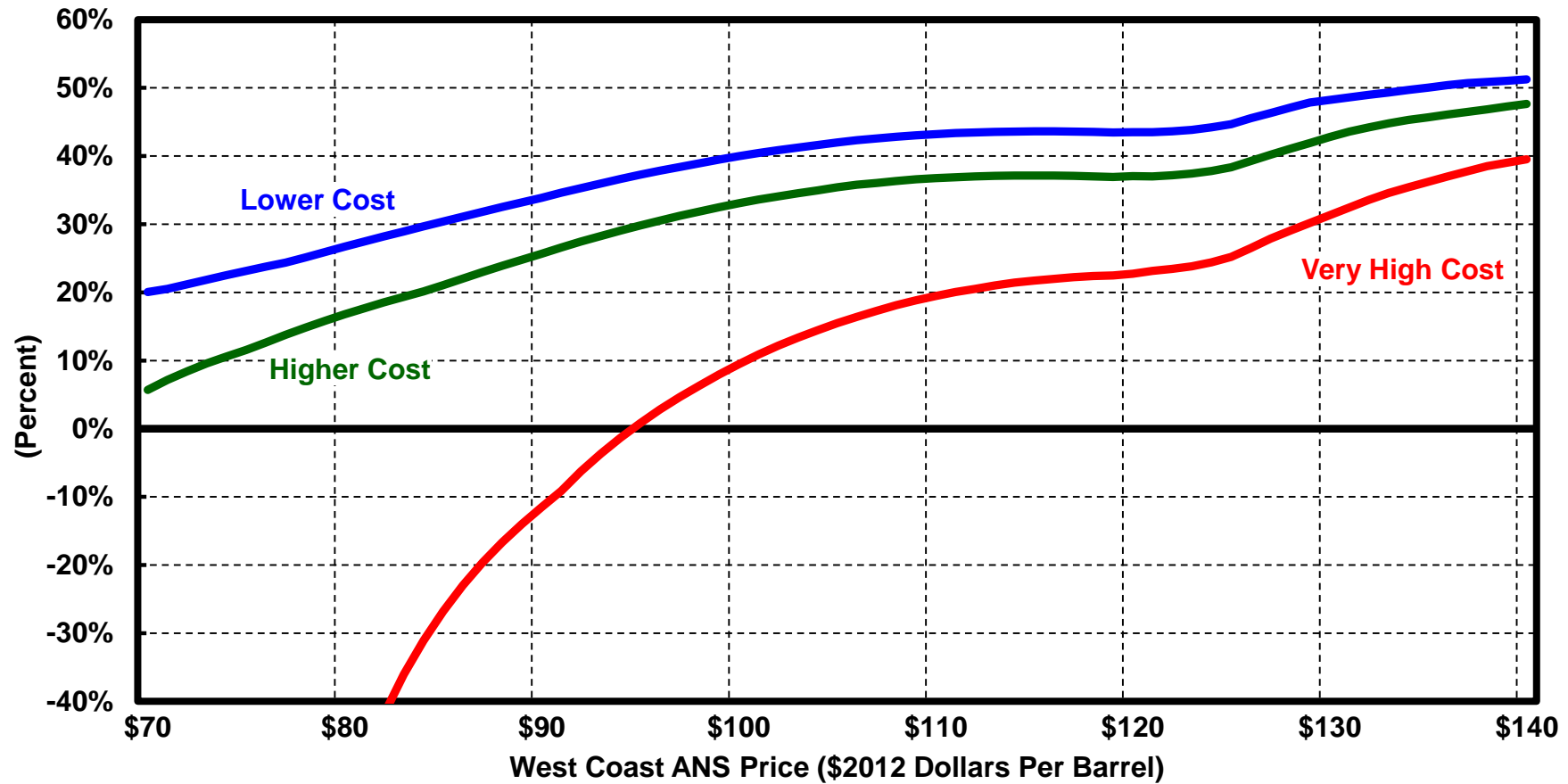
Annual Taxable Production (Bbls)		50,000,000	50,000,000	50,000,000
West Coast ANS Price (\$/Bbl)		\$80.00	\$80.00	\$80.00
Transportation Costs (\$/Bbl)	-	10.00	10.00	10.00
Wellhead Value (\$/Bbl)	=	\$70.00	\$70.00	\$70.00
Operating Costs (\$/Bbl)	-	\$10.00	\$20.00	\$30.00
Capital Expenditures (\$/Bbl)	-	10.00	15.00	20.00
Taxable Value (\$/Bbl)	=	\$50.00	\$35.00	\$20.00
ACES Base Tax Rate (%)		25.0%	25.0%	25.0%
ACES Progressive Tax (%)	+	8.0%	2.0%	0.0%
Total Tax Rate (%)	=	33.0%	27.0%	25.0%
Total Wellhead Value (\$)		\$3,500,000,000	\$3,500,000,000	\$3,500,000,000
Operating Expenditures (\$)	-	500,000,000	1,000,000,000	1,500,000,000
Capital Expenditures (\$)	-	500,000,000	750,000,000	1,000,000,000
Production Tax Value (\$)	=	\$2,500,000,000	\$1,750,000,000	\$1,000,000,000
Production Tax Before Credits (PTV x Total Tax Rate) (\$)		\$825,000,000	\$472,500,000	\$250,000,000
Capital Credits (20% x Capital Expenditures) (\$)	-	100,000,000	150,000,000	200,000,000
Production Tax After Credits (\$)	=	\$725,000,000	\$322,500,000	\$50,000,000
Effective Tax Rate After Credits (%)		29.0%	18.4%	5.0%

Calculation of ACES Tax: Additional Capital Spending

Annual Taxable Production (Bbls)		50,000,000	50,000,000	50,000,000	50,000,000	50,000,000
Initial Operational Expenditure (\$)		\$750,000,000	\$750,000,000	\$750,000,000	\$750,000,000	\$750,000,000
Initial Capital Expenditure (\$)	+	750,000,000	750,000,000	750,000,000	750,000,000	750,000,000
Additional Capital Expenditure (\$)	+	250,000,000	250,000,000	250,000,000	250,000,000	250,000,000
Total Lease Expenditure (\$)	=	\$1,750,000,000	\$1,750,000,000	\$1,750,000,000	\$1,750,000,000	\$1,750,000,000
WC ANS Price (\$/Bbl)		\$60.00	\$80.00	\$100.00	\$120.00	\$140.00
Tax Value Prior To Additional Expenditure (\$/Bbl)		\$20.00	\$40.00	\$60.00	\$80.00	\$100.00
Additional Capital Spending Per-Barrel of Existing Production (\$/Bbl) -		5.00	5.00	5.00	5.00	5.00
Tax Value After Additional Expenditure (\$/Bbl)	=	\$15.00	\$35.00	\$55.00	\$75.00	\$95.00
Taxes Before Additional Expenditure						
Tax Rate (%)		25.0%	29.0%	37.0%	45.0%	50.8%
Production Tax Before Credits (\$)		\$250,000,000	\$580,000,000	\$1,110,000,000	\$1,800,000,000	\$2,537,500,000
Capital Credits (20% x Capital Expenditures) (\$)	-	150,000,000	150,000,000	150,000,000	150,000,000	150,000,000
Production Tax After Credits (\$)	=	\$100,000,000	\$430,000,000	\$960,000,000	\$1,650,000,000	\$2,387,500,000
Taxes After Additional Expenditure						
Tax Rate (%)		25.0%	27.0%	35.0%	43.0%	50.3%
Production Tax Before Credits (\$)		\$187,500,000	\$472,500,000	\$962,500,000	\$1,612,500,000	\$2,386,875,000
Capital Credits (20% x Capital Expenditures) (\$)	-	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000
Production Tax After Credits (\$)	=	\$0	\$272,500,000	\$762,500,000	\$1,412,500,000	\$2,186,875,000
Reduction in Taxes From Additional Expenditure						
Before Credits (\$)		\$62,500,000	\$107,500,000	\$147,500,000	\$187,500,000	\$150,625,000
Additional Credits (\$)	+	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000
Total Reduction in Taxes After Credits (\$)	=	\$112,500,000	\$157,500,000	\$197,500,000	\$237,500,000	\$200,625,000
Reduction in Tax as % of Expenditure		45%	63%	79%	95%	80%
Due to Change in Taxes (Buy Down Effect)		25%	43%	59%	75%	60%
Due to Additional Credits		20%	20%	20%	20%	20%

Effective Tax Rates For New Development Under ACES

Additional Tax as % of Production Tax Value: Incumbent Producer



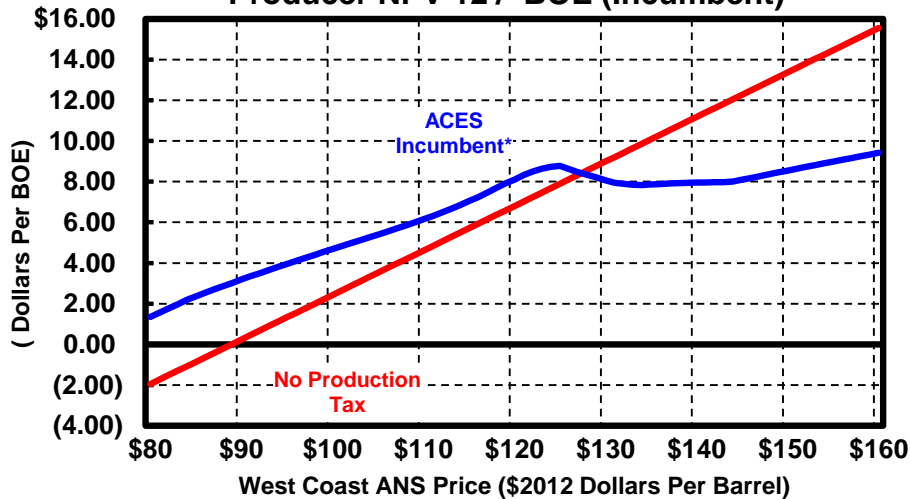
Lower Cost: \$16 Per Barrel Development Capex; \$14 Per Barrel Opex; 16.67% Royalty Rate; 50 MMBO New Development by Existing Owner With Initial Ongoing Production of Approximately 100 MBD and Costs Consistent with Prudhoe Bay/Kuparuk River Units

Higher Cost: \$25 Per Barrel Development Capex; \$14 Per Barrel Opex; 16.67% Royalty Rate; 50 MMBO New Development by Existing Owner With Initial Ongoing Production of Approximately 100 MBD and Costs Consistent with Prudhoe Bay/Kuparuk River Units

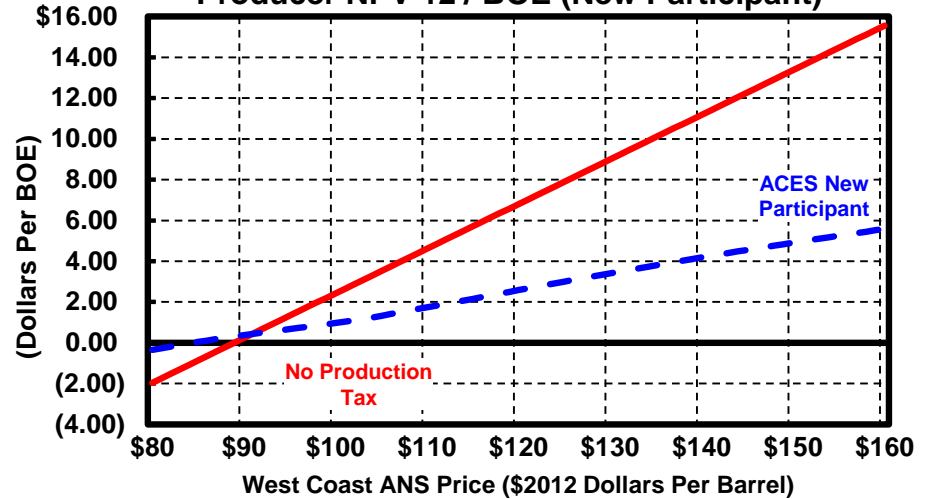
Very High Cost: \$34 Per Barrel Development Capex; \$21 Per Barrel Opex; 16.67% Royalty Rate; 50 MMBO New Development by Existing Owner With Initial Ongoing Production of Approximately 100 MBD and Costs Consistent with Prudhoe Bay/Kuparuk River Units

The Economics of Higher Cost Oil Development

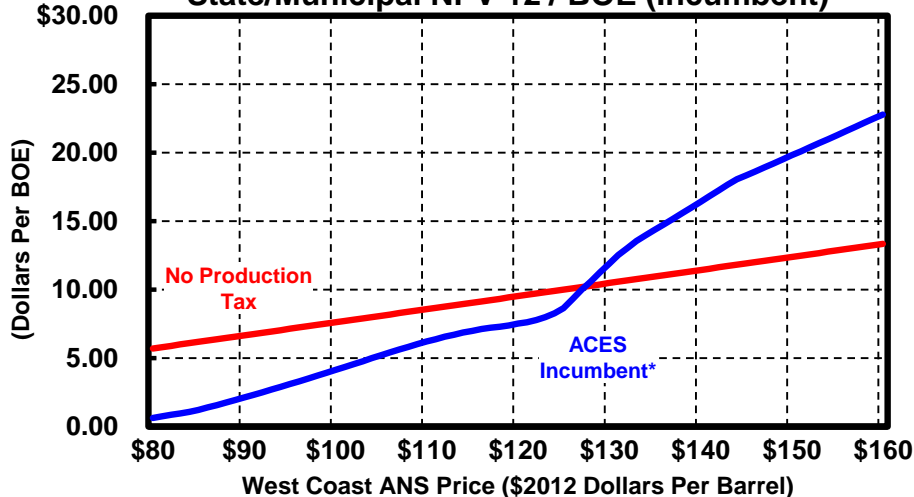
Producer NPV-12 / BOE (Incumbent)



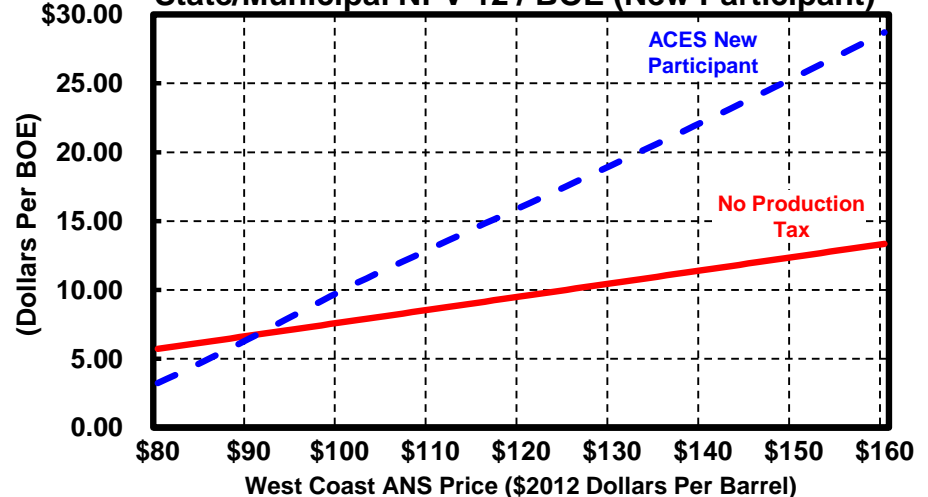
Producer NPV-12 / BOE (New Participant)



State/Municipal NPV-12 / BOE (Incumbent)



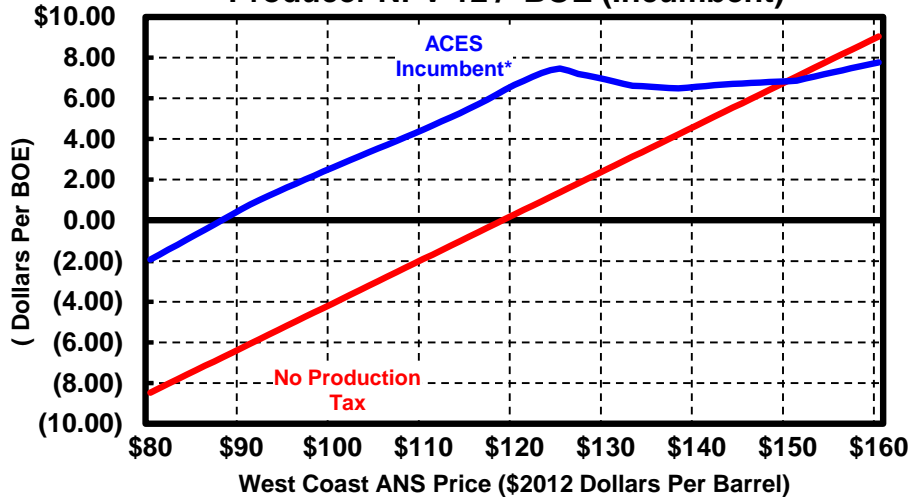
State/Municipal NPV-12 / BOE (New Participant)



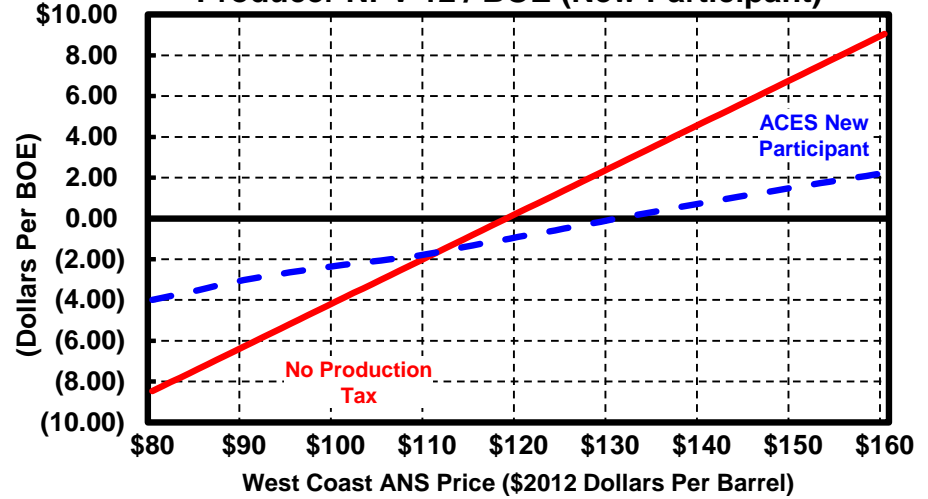
* Analysis of incumbent production includes "buy-down" impact for reduced taxes on existing production.
Higher Cost: \$25 Per Barrel Development Capex and \$14 Per Barrel Opex

The Economics of Very High Cost Oil Development

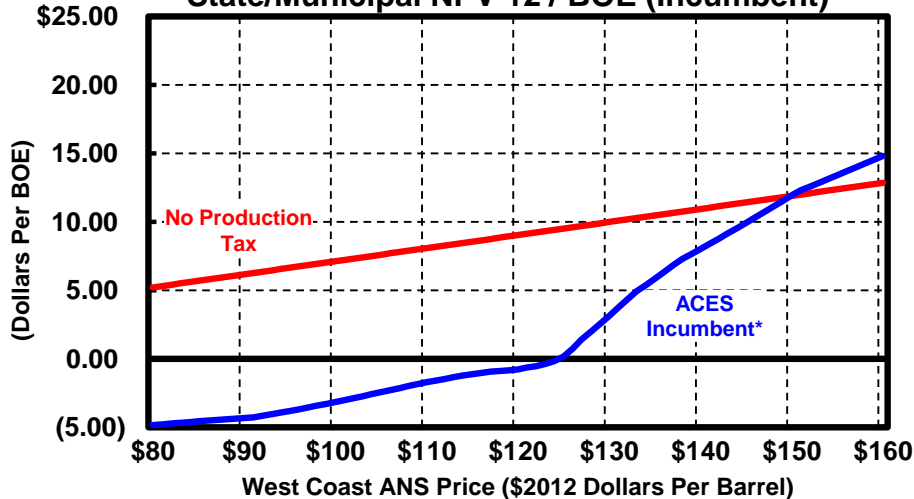
Producer NPV-12 / BOE (Incumbent)



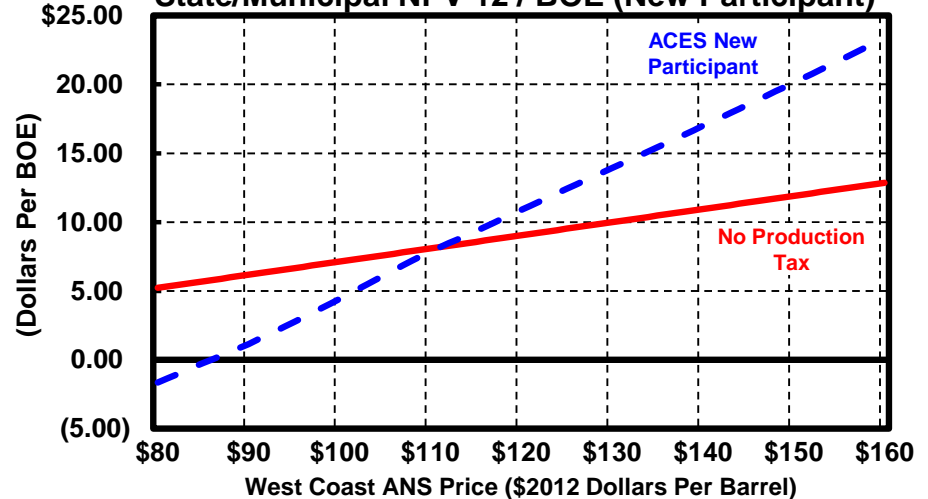
Producer NPV-12 / BOE (New Participant)



State/Municipal NPV-12 / BOE (Incumbent)

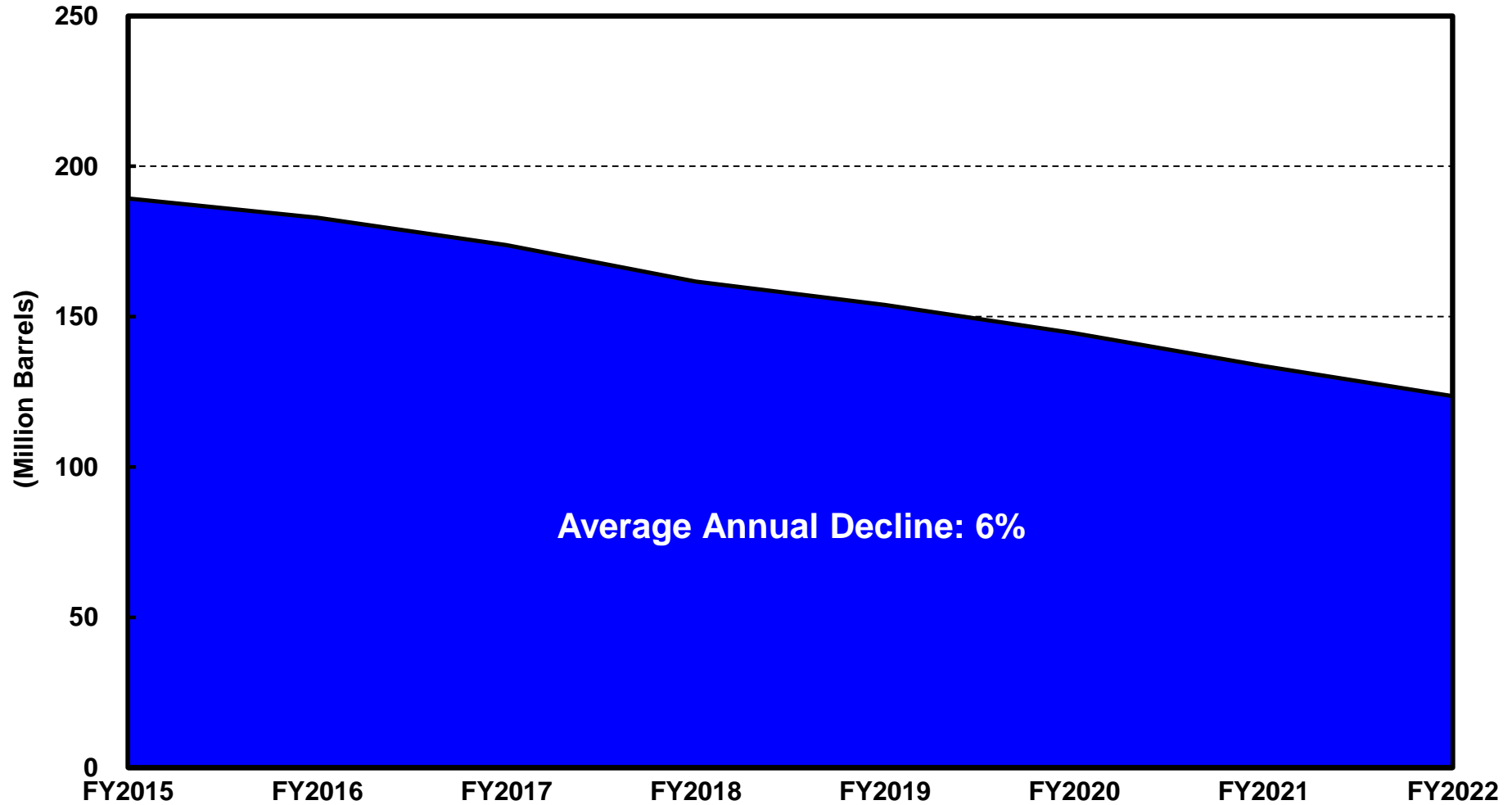


State/Municipal NPV-12 / BOE (New Participant)

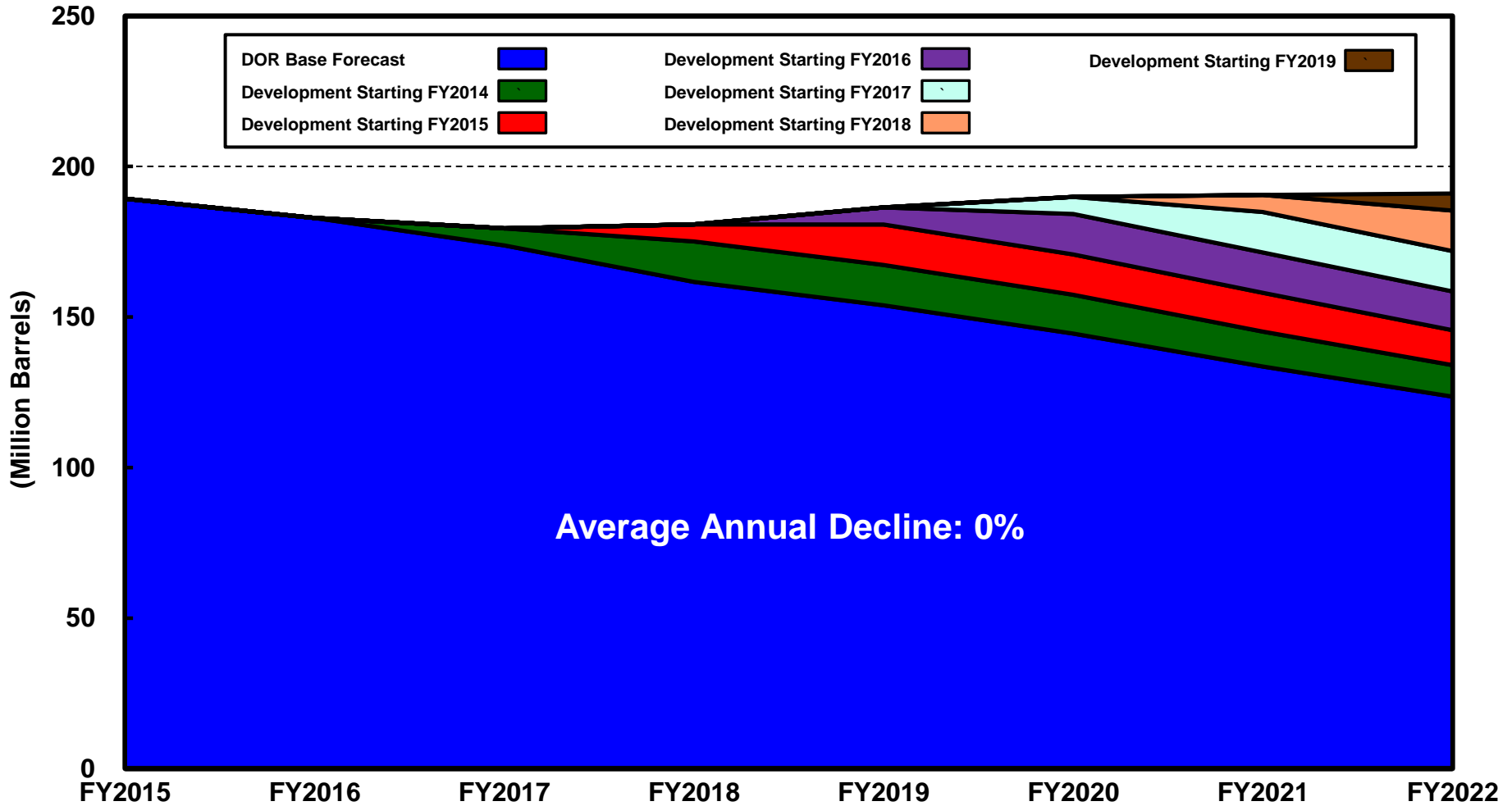


* Analysis of incumbent production includes "buy-down" impact for reduced taxes on existing production.
 Very High Cost: \$34 Per Barrel Development Capex and \$21 Per Barrel Opex

DOR Forecast Levels of Production FY2015 - FY2022

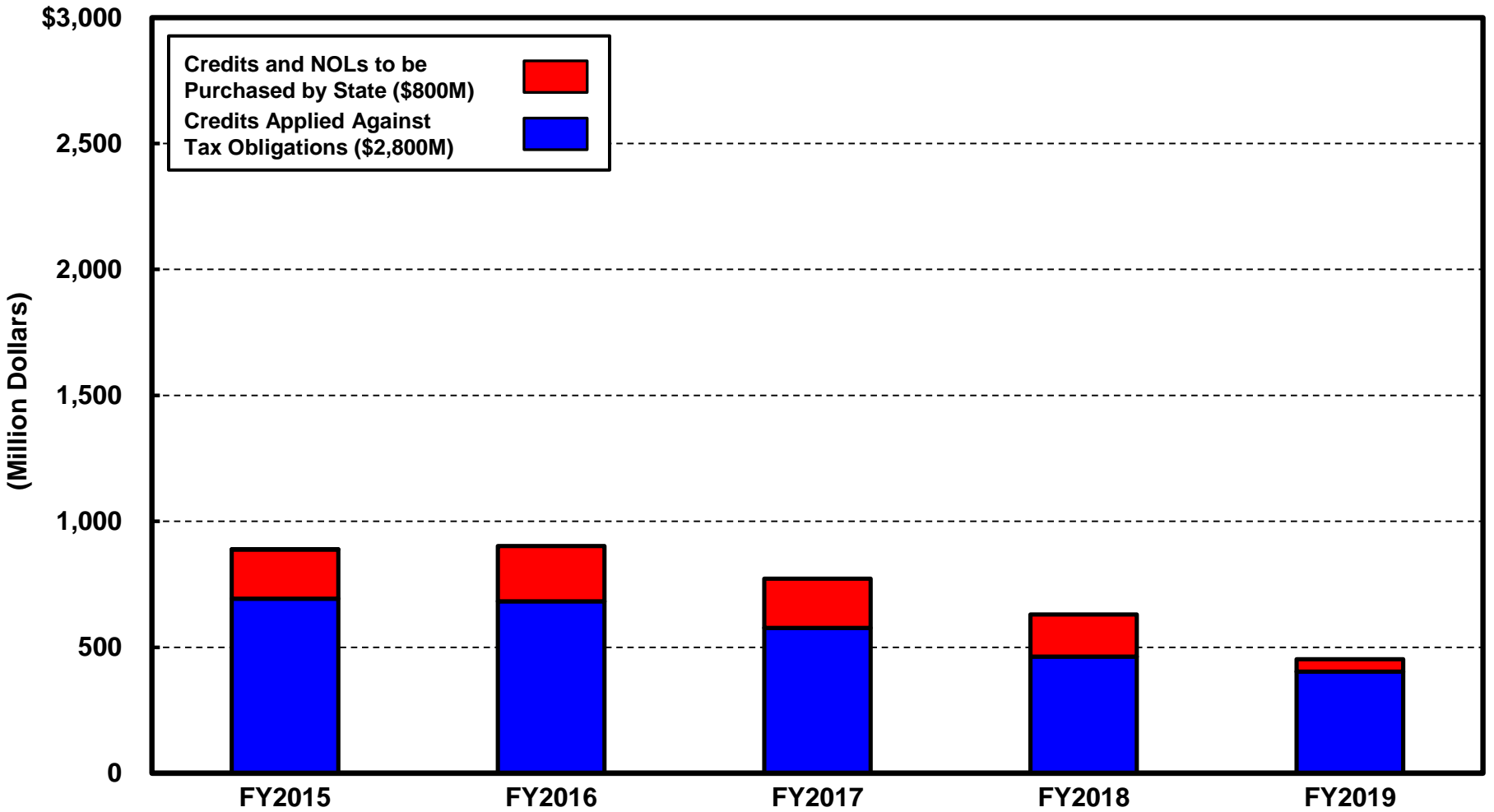


Production With Development of 150 MMB of Reserves Annually FY2015 - FY2022

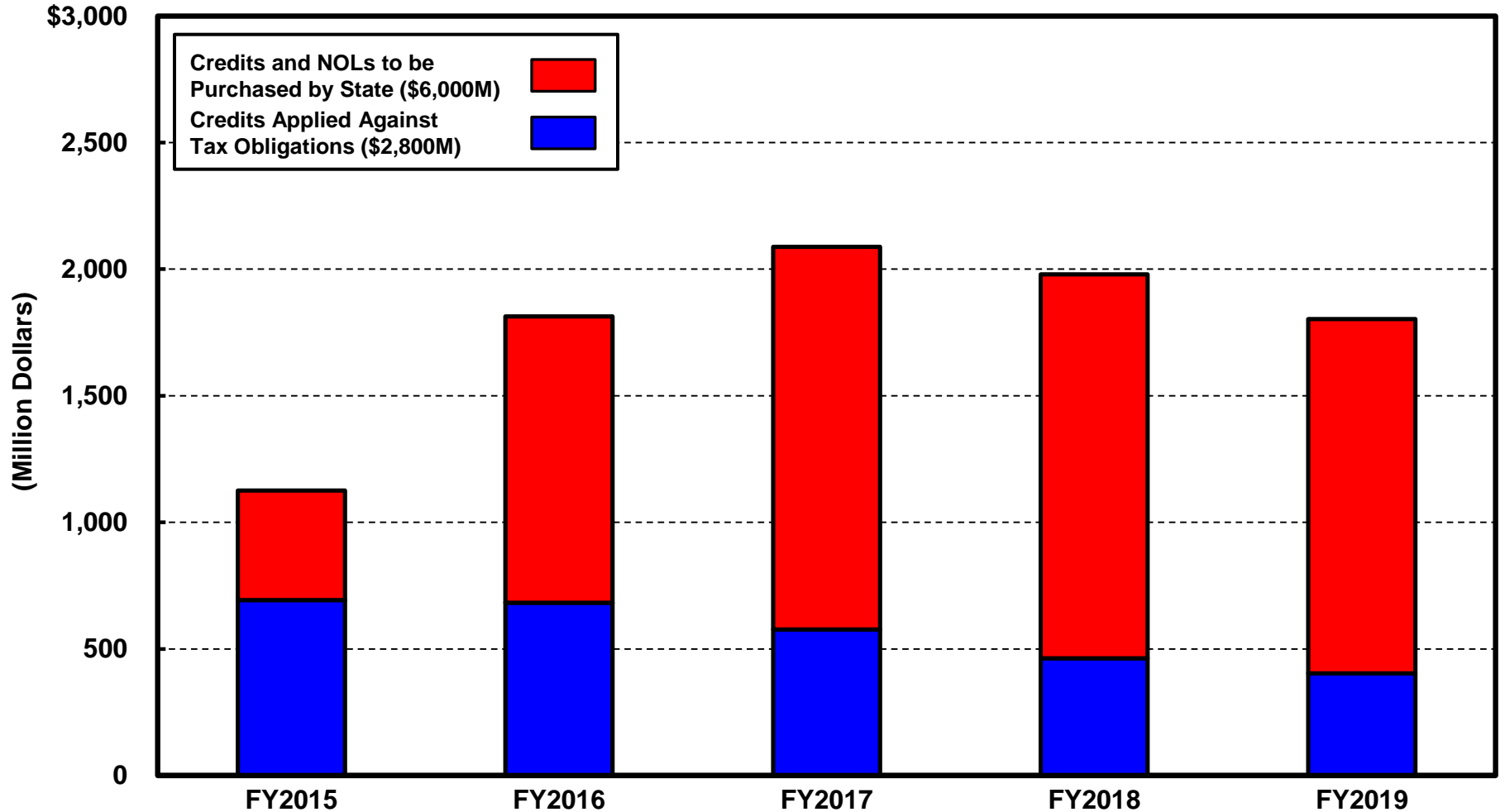


Note: Assumes 150 MMB of new production begins development each year starting in FY2014.

Forecast Levels of Capital Credits and NOLs FY2015 - FY2019

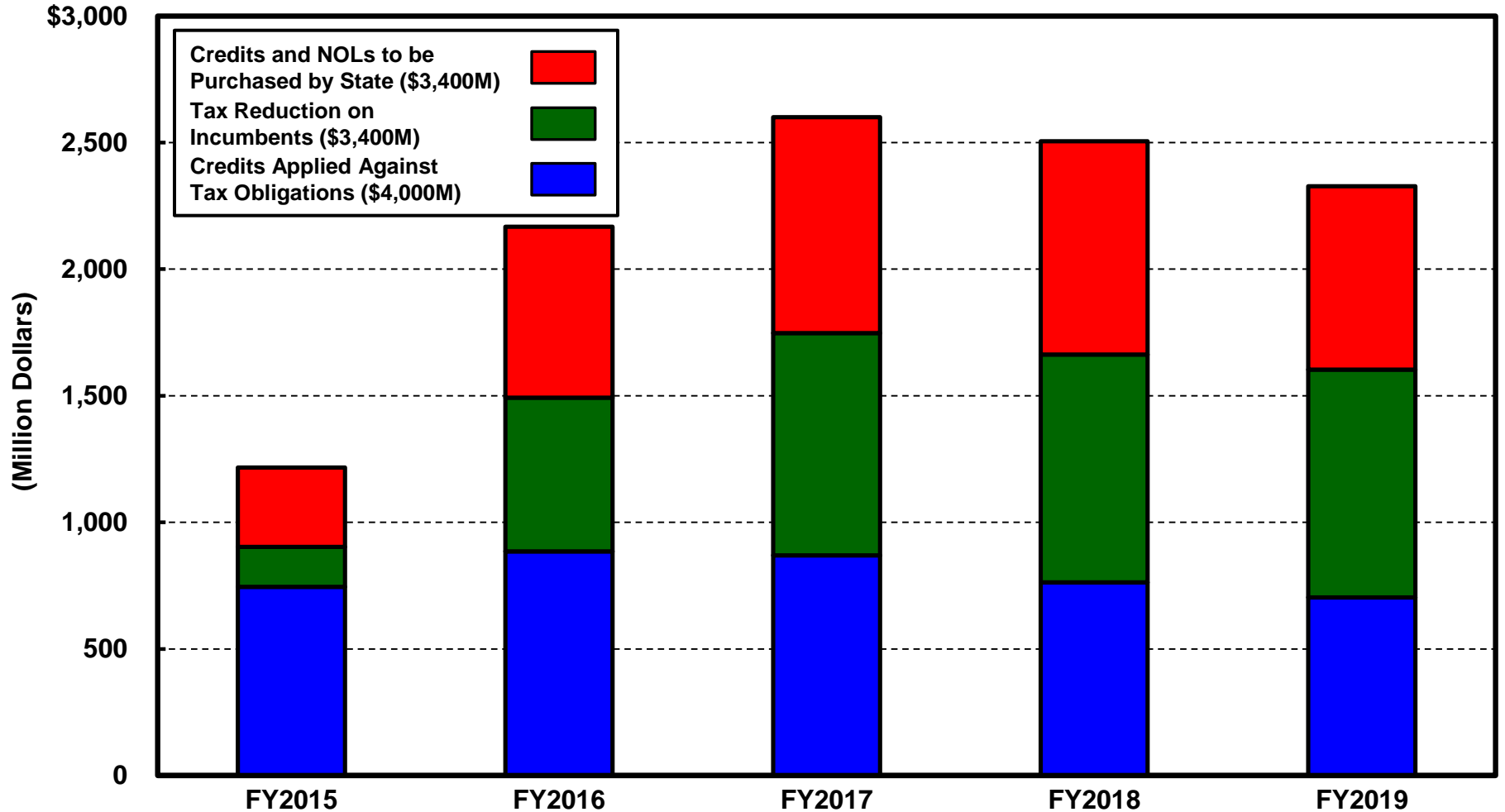


Capital Credits and NOLs Assuming Development of Additional 150 MMB of Oil Per Year Over Forecast By New Participant



Note: Assumes 150 MMB of new production begins development each year by new participants starting in FY2014. Total exploration and development costs assumed to be \$20/bbl.

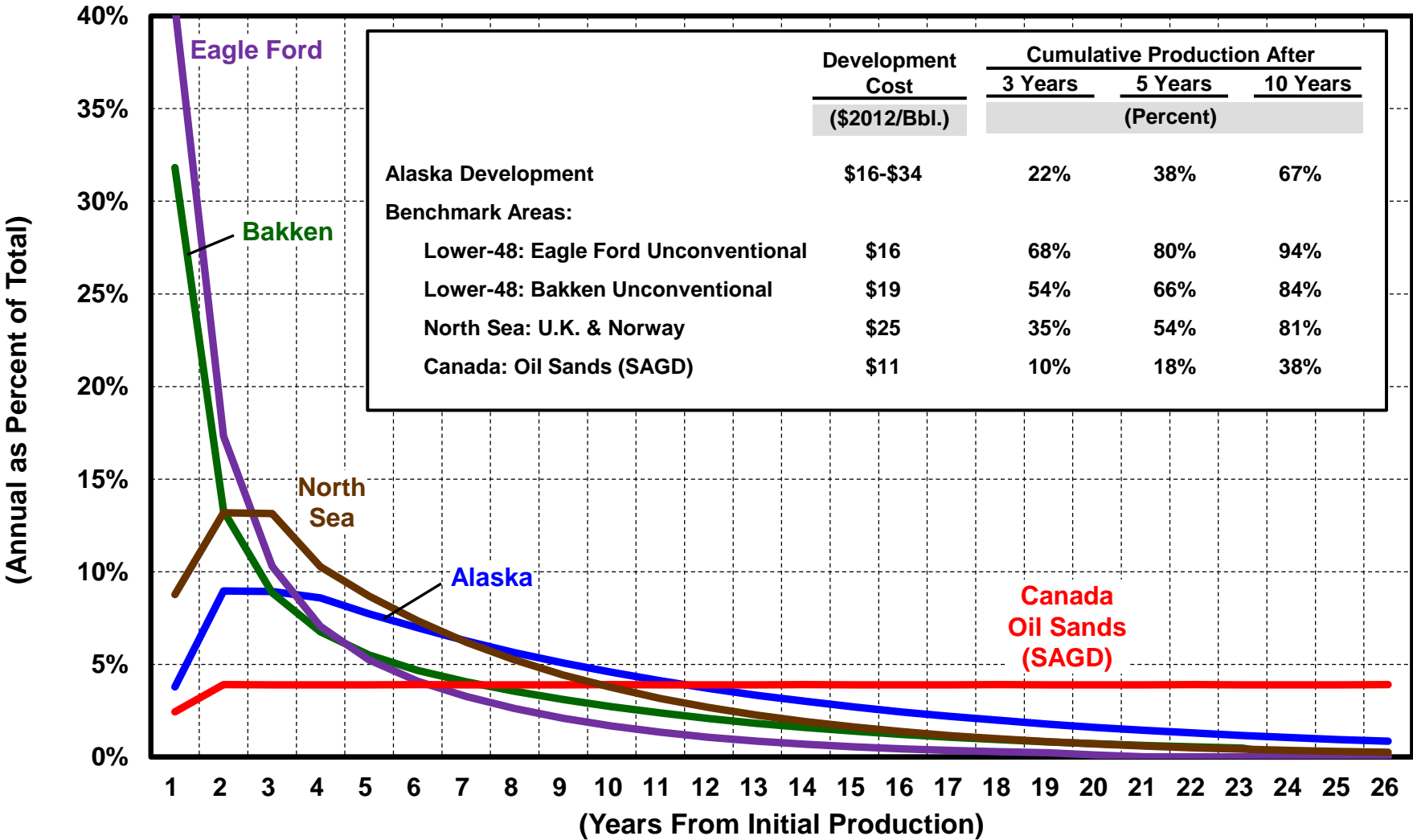
Capital Credits and NOLs Assuming Development of Additional 150 MMB of Oil Per Year Over Forecast 50% by New Participant and 50% by Incumbent



Note: Assumes 150 MMB of new production begins development each year by (50% new participants, 50% incumbents) starting in FY2014.
 Total exploration and development costs assumed to be \$20/bbl.
 For the incumbent, 20% credit and 60% of capital is shielded in the form of reduced taxes on existing production.

Analysis of Potential Investments In Alaska Under ACES Versus Other Areas

Summary of Production Profiles Examined For Alaska and Benchmark Developments



Summary of Investment Measures (New Participant)

Real \$2012 West Coast ANS Price	50 MMBO Alaska			Unconventional Lower-48		Canada	Norway	United Kingdom	
	Lower Cost	Higher Cost	Very High Cost	Eagle Ford	Bakken	Oil Sands SAGD		Pre-1993 w/ Brownfield Allowance*	Post-1993 w/ Brownfield Allowance*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Producer NPV-12 / BOE (Dollars Per BOE)									
\$80	\$2.55	(\$0.35)	(\$4.00)	\$3.61	\$0.67	(\$0.93)	\$0.24	\$4.81	\$4.62
\$100	\$3.85	\$0.97	(\$2.33)	\$6.75	\$4.29	\$0.46	\$2.34	\$7.09	\$8.25
\$120	\$5.48	\$2.58	(\$0.91)	\$11.17	\$9.16	\$2.01	\$4.44	\$9.09	\$11.88
Profitability Index-12									
\$80	1.19	0.98	0.86	1.25	1.04	0.88	1.01	1.22	1.21
\$100	1.29	1.05	0.92	1.47	1.28	1.06	1.14	1.33	1.38
\$120	1.41	1.12	0.97	1.78	1.60	1.26	1.27	1.42	1.55
IRR (Percent)									
\$80	19.7%	11.3%	5.3%	29.9%	13.6%	9.7%	12.4%	34.5%	24.7%
\$100	23.4%	14.0%	8.2%	46.3%	22.7%	13.1%	16.0%	45.2%	32.9%
\$120	27.6%	17.1%	10.6%	73.6%	37.0%	16.3%	19.3%	53.5%	40.2%
5-Year (2017-2021) Cash Margins (Dollars Per BOE)									
\$80	\$25.84	\$28.03	\$28.73	\$23.39	\$28.39	\$26.07	\$34.51	\$22.94	\$29.35
\$100	\$28.84	\$31.03	\$32.48	\$29.99	\$36.48	\$29.14	\$39.42	\$28.85	\$37.82
\$120	\$33.13	\$35.32	\$36.02	\$36.87	\$44.91	\$33.37	\$44.32	\$31.29	\$46.30
Government Take (Percent)									
\$80	70.8%	71.6%	72.4%	71.7%	77.1%	63.4%	67.8%	61.0%	52.0%
\$100	75.8%	76.9%	77.2%	67.9%	72.1%	63.5%	71.7%	68.6%	55.8%
\$120	77.2%	78.1%	79.5%	65.1%	68.7%	63.0%	73.4%	72.0%	57.5%
State/Municipal NPV-12/BOE (Dollars Per BOE)									
\$80	\$6.67	\$3.24	(\$1.66)	-	-	-	-	-	-
\$100	\$13.32	\$9.86	\$4.42	-	-	-	-	-	-
\$120	\$19.46	\$16.02	\$10.88	-	-	-	-	-	-

* Brownfield Allowance applied to 100 MMBOE development.

Lower Cost: \$16 Per Barrel Development Capex and \$14 Per Barrel Opex; Higher Cost: \$25 Per Barrel Development Capex and \$14 Per Barrel Opex; Very High Cost: \$34 Per Barrel Development Capex and \$21 Per Barrel Opex

Summary of Investment Measures (Incumbent Participant)

Real \$2012 West Coast ANS Price	50 MMBO Alaska			Unconventional Lower-48		Canada	Norway	United Kingdom	
	Lower	Higher	Very High	Eagle Ford	Bakken	Oil Sands		Pre-1993	Post-1993
	Cost	Cost	Cost			SAGD		w/ Brownfield	w/ Brownfield
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Producer NPV-12 / BOE (Dollars Per BOE)									
\$80	\$3.71	\$1.34	(\$1.93)	\$3.61	\$0.67	(\$0.93)	\$0.24	\$4.81	\$4.62
\$100	\$6.14	\$4.68	\$2.58	\$6.75	\$4.29	\$0.46	\$2.34	\$7.09	\$8.25
\$120	\$8.82	\$8.10	\$6.66	\$11.17	\$9.16	\$2.01	\$4.44	\$9.09	\$11.88
Profitability Index-12									
\$80	1.28	1.06	0.93	1.25	1.04	0.88	1.01	1.22	1.21
\$100	1.46	1.23	1.09	1.47	1.28	1.06	1.14	1.33	1.38
\$120	1.67	1.39	1.24	1.78	1.60	1.26	1.27	1.42	1.55
IRR (Percent)									
\$80	26.2%	15.4%	8.1%	29.9%	13.6%	9.7%	12.4%	34.5%	24.7%
\$100	41.1%	27.2%	18.5%	46.3%	22.7%	13.1%	16.0%	45.2%	32.9%
\$120	65.3%	46.0%	33.8%	73.6%	37.0%	16.3%	19.3%	53.5%	40.2%
5-Year (2017-2021) Cash Margins (Dollars Per BOE)									
\$80	\$24.26	\$26.45	\$26.79	\$23.39	\$28.39	\$26.07	\$34.51	\$22.94	\$29.35
\$100	\$27.22	\$29.41	\$30.52	\$29.99	\$36.48	\$29.14	\$39.42	\$28.85	\$37.82
\$120	\$31.18	\$33.37	\$33.98	\$36.87	\$44.91	\$33.37	\$44.32	\$31.29	\$46.30
Government Take (Percent)									
\$80	68.9%	67.8%	63.8%	71.7%	77.1%	63.4%	67.8%	61.0%	52.0%
\$100	73.0%	71.2%	66.7%	67.9%	72.1%	63.5%	71.7%	68.6%	55.8%
\$120	73.8%	71.6%	68.1%	65.1%	68.7%	63.0%	73.4%	72.0%	57.5%
State/Municipal NPV-12/BOE (Dollars Per BOE)									
\$80	\$4.88	\$0.64	(\$4.84)	-	-	-	-	-	-
\$100	\$9.79	\$4.15	(\$3.14)	-	-	-	-	-	-
\$120	\$14.31	\$7.53	(\$0.76)	-	-	-	-	-	-

Note: Analysis of incumbent production includes "buy-down" impact for reduced taxes on existing production.

* Brownfield Allowance applied to 100 MMBOE development.

Lower Cost: \$16 Per Barrel Development Capex and \$14 Per Barrel Opex; Higher Cost: \$25 Per Barrel Development Capex and \$14 Per Barrel Opex; Very High Cost: \$34 Per Barrel Development Capex and \$21 Per Barrel Opex

The Administration's Proposed Changes SB21 / SRES CS SB21

Key Aspects of Administration's Proposal (SB21)

- **Establishes 25% Flat Net Tax Rate; No Progressivity**
- **Eliminates Capital Credit and State Purchase of Losses**
- **Establishes 20% Gross Revenue Exclusion (GRE) to Incent Production of New Oil**
- **Losses May be Carried Forward and Applied Against Tax Obligation When Production Occurs**
- **Extends New Entrant Credits Through 2022**
- **No Change Outside of North Slope**

Key Aspects of Administration's Proposal (cont'd)

- **Provides Balance Between State and Producers**
 - **Reduction of Tax Rates at High Prices, Balanced with Elimination of Credits**
 - **State Continues to Receive Largest Percentage of Oil Production Revenues at Any Price**
- **Simplifies Tax System and Provides Clarity for Planning**
 - **Eliminates Question of Marginal Tax Rate / Take for Investment Planning**
 - **Eliminates Incentives for “Gold Plating” Caused by High Marginal Rates**
- **Maintains Alignment Between State and Producer Incentives**
 - **Net Tax Allows for Deduction of Costs Against Tax**
- **Provides Incentive for Development of New Resources Without Taxing State Treasury**
 - **GRE Provides Lower Effective Tax Rate for New Development**
 - **New Developers can Recover Costs of Development Once Production Begins**
 - **Does Not Require State to Fund Development Costs Through Potentially Expensive Credit Purchases**
- **Extremely Positive Message to Potential Investors**
 - **Will Encourage Broader Participation in Development of Alaska's North Slope**
 - **Economics of New Participants Closer to Incumbents'**

Key Changes to SB21 From Senate Resources CS

- **Base Tax Rate Increased from 25% to 35%**
- **\$5/Bbl Production Allowance (Credit)**
- **GRE Raised to 30%**
- **Allows Producers to Apply for GRE in Legacy Units for Targeted Development of New Oil**
- **Relaxes Current Restriction on Exploration Credits**

Key Attributes of Senate Resources CS SB21

- **Results in Slightly Progressive Government Take Overall Without Problems Associated with “Progressivity”**
- **Reduces Effective Tax Rate and Government Take at Low Prices, While Increasing Tax Rates and Government Take at Higher Prices**
- **Effect of Fixed \$/Bbl Allowance is to Provide Support at Low Prices Where Needed, Diminishing as Prices Rise**
- **Provides System in Competitive Range for Taxpayers/Investors**
- **Provides Simple, Straightforward and Understandable Tax Framework**
- **Allows DOR/DNR to Address Individual Circumstances as Needed**
- **Allows for Significant Investment on North Slope Without Taxing State Treasury**

Illustration of Tax Calculation Under Senate Resources CS for SB21

Taxable Barrels (Bbls)	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000
West Coast Price (\$/Bbl)	\$60.00	\$80.00	\$100.00	\$120.00	\$140.00	\$160.00
Transportation (\$/Bbl)	- 10.00	10.00	10.00	10.00	10.00	10.00
Gross Value (\$/Bbl)	= \$50.00	\$70.00	\$90.00	\$110.00	\$130.00	\$150.00
Lease Expenditures (\$/Bbl)	- 30.00	30.00	30.00	30.00	30.00	30.00
Per-Barrel Taxable Value (\$/Bbl)	= \$20.00	\$40.00	\$60.00	\$80.00	\$100.00	\$120.00
Total Production Tax Value (\$)	\$1,000,000,000	\$2,000,000,000	\$3,000,000,000	\$4,000,000,000	\$5,000,000,000	\$6,000,000,000
Production Tax Before Allowance @ 35%	\$350,000,000	\$700,000,000	\$1,050,000,000	\$1,400,000,000	\$1,750,000,000	\$2,100,000,000
Production Allowance @ \$5/Bbl	- 250,000,000	250,000,000	250,000,000	250,000,000	250,000,000	250,000,000
Production Tax After Allowance	= \$100,000,000	\$450,000,000	\$800,000,000	\$1,150,000,000	\$1,500,000,000	\$1,850,000,000
Nominal Tax Rate	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%
Reduction in Tax Rate From Allowance	25.0%	12.5%	8.3%	6.3%	5.0%	4.2%
Effective Tax Rate After Allowance	10.0%	22.5%	26.7%	28.8%	30.0%	30.8%
Allowance as % of Gross Value	10.0%	7.1%	5.6%	4.5%	3.8%	3.3%

State Outlays Prior to Production Associated With Development of 50 MMBO by Non-Taxpayer Under ACES and SRES CS SB21

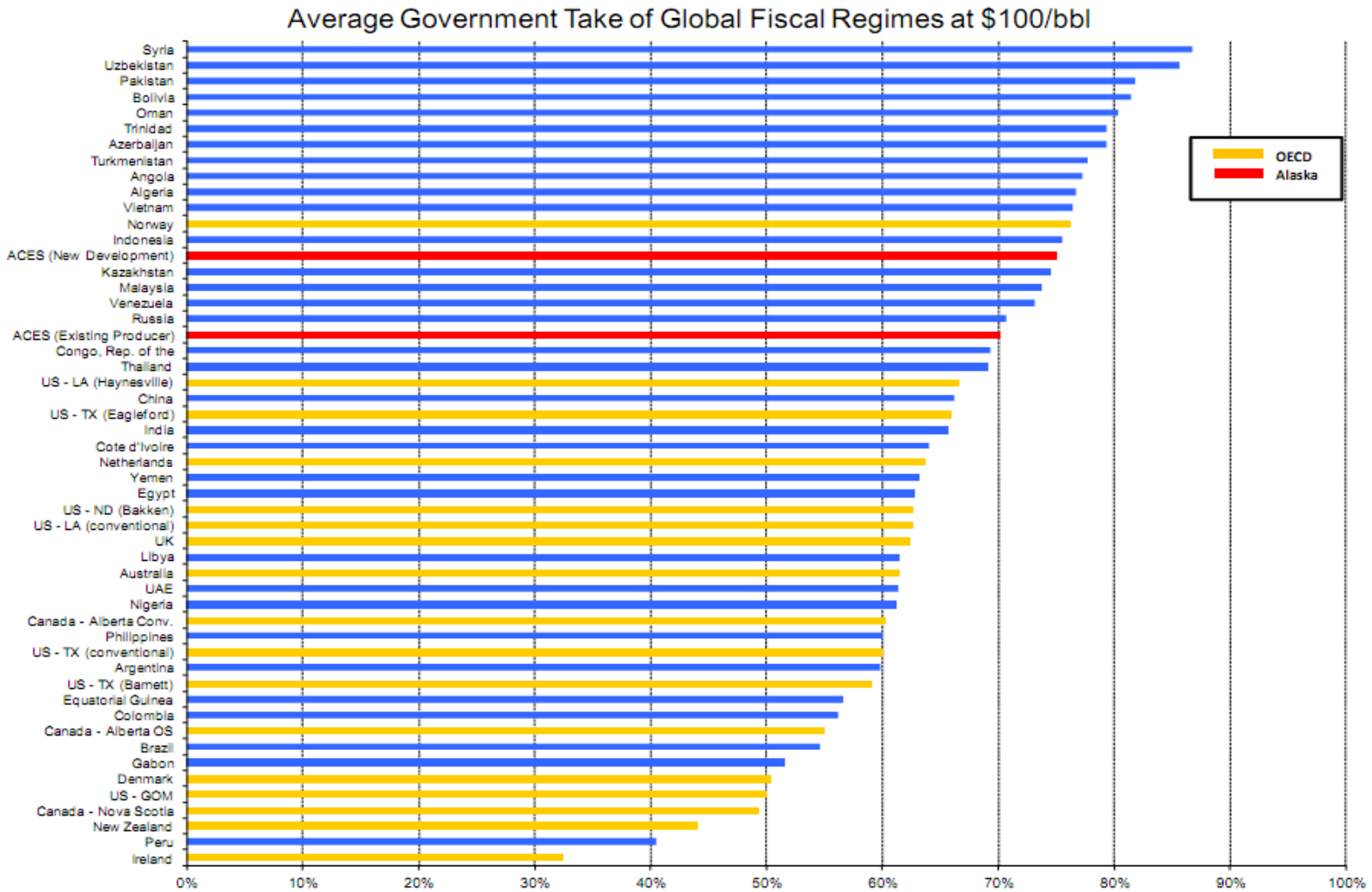
	<u>Lower Cost Field</u>	<u>Higher Cost Field</u>
Costs (\$M)		
Exploration	\$125	\$125
Development	+ 800	+ 1,250
Total	= \$925	= \$1,375
State Funding Prior to Production (\$M)		
ACES:		
QCE 20%	\$185	\$275
Purchased Losses 25%	+ 231	+ 344
Total	= \$416	= \$619
% of Costs	45%	45%
SRES CS SB21		
Exploration Credit 30%	\$38	\$38
% of Costs	4%	3%
Savings Under SRES CS SB21 (\$M)	\$379	\$581
% of Costs	41%	42%

Note: Assumes \$2.50/bbl exploration costs and \$16/bbl and \$25/bbl development costs for lower and higher cost field, respectively.

Expected Annual State Outlays Necessary to Replace Current Production by Non-Taxpayer Under ACES and SRES CS SB21

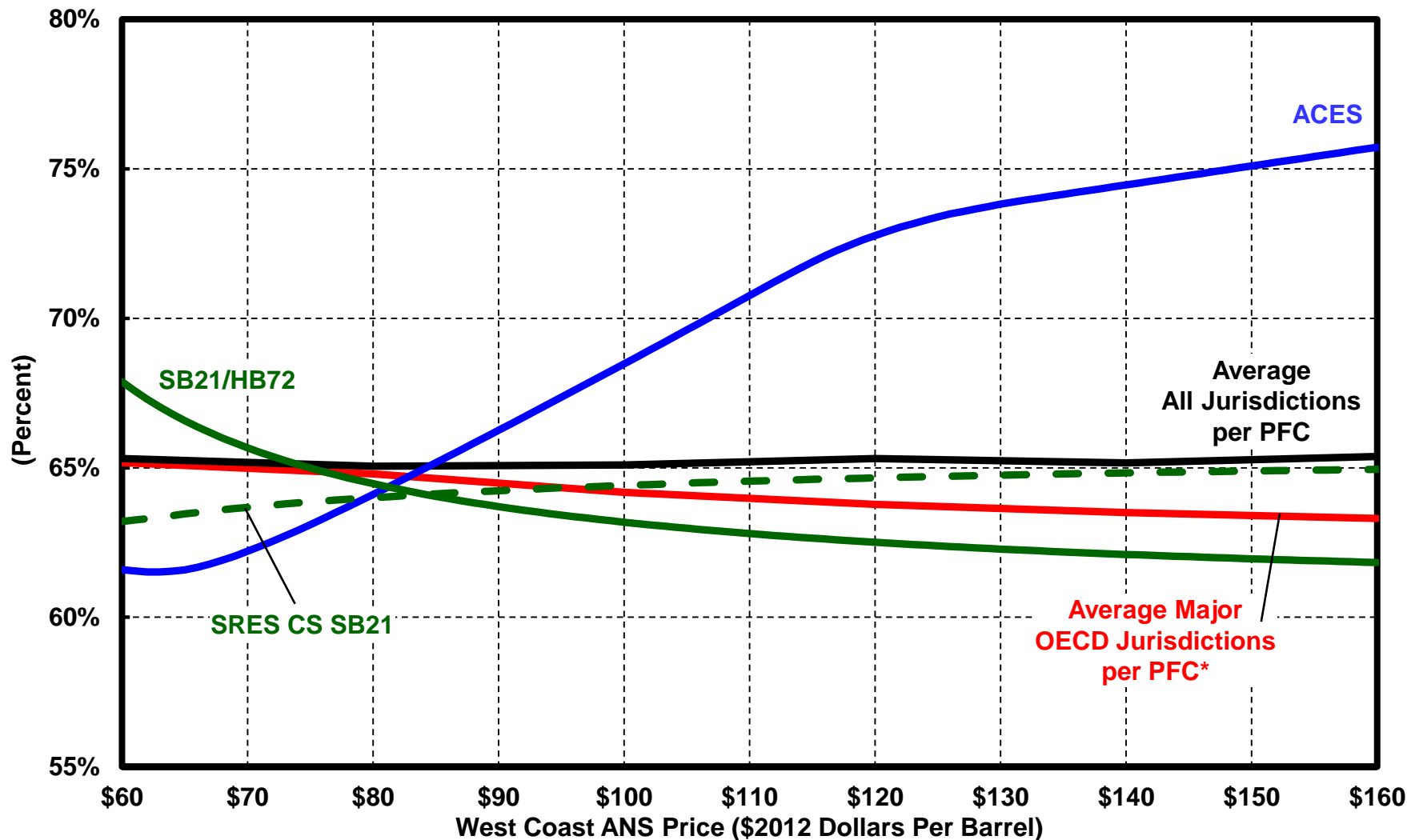
	<u>Lower Cost Field</u>	<u>Higher Cost Field</u>
Annual North Slope Production (MMBO)	150	150
Number of 50 MMBO Developments Required to Replace Annual Production	3	3
Exploration Costs (\$M)	\$375	\$375
Development Costs (\$M)	+ 2,400	+ 3,750
Total (\$M)	= \$2,775	= \$4,125
State Outlays Under ACES (\$M)	\$1,249	\$1,856
State Outlays Under SRES CS SB21 (\$M)	- 113	- 113
Savings Under SRES CS SB21 (\$M)	= \$1,136	= \$1,744

Average Government Take at \$100 Per Barrel Other Jurisdictions



Source: PFC Energy.

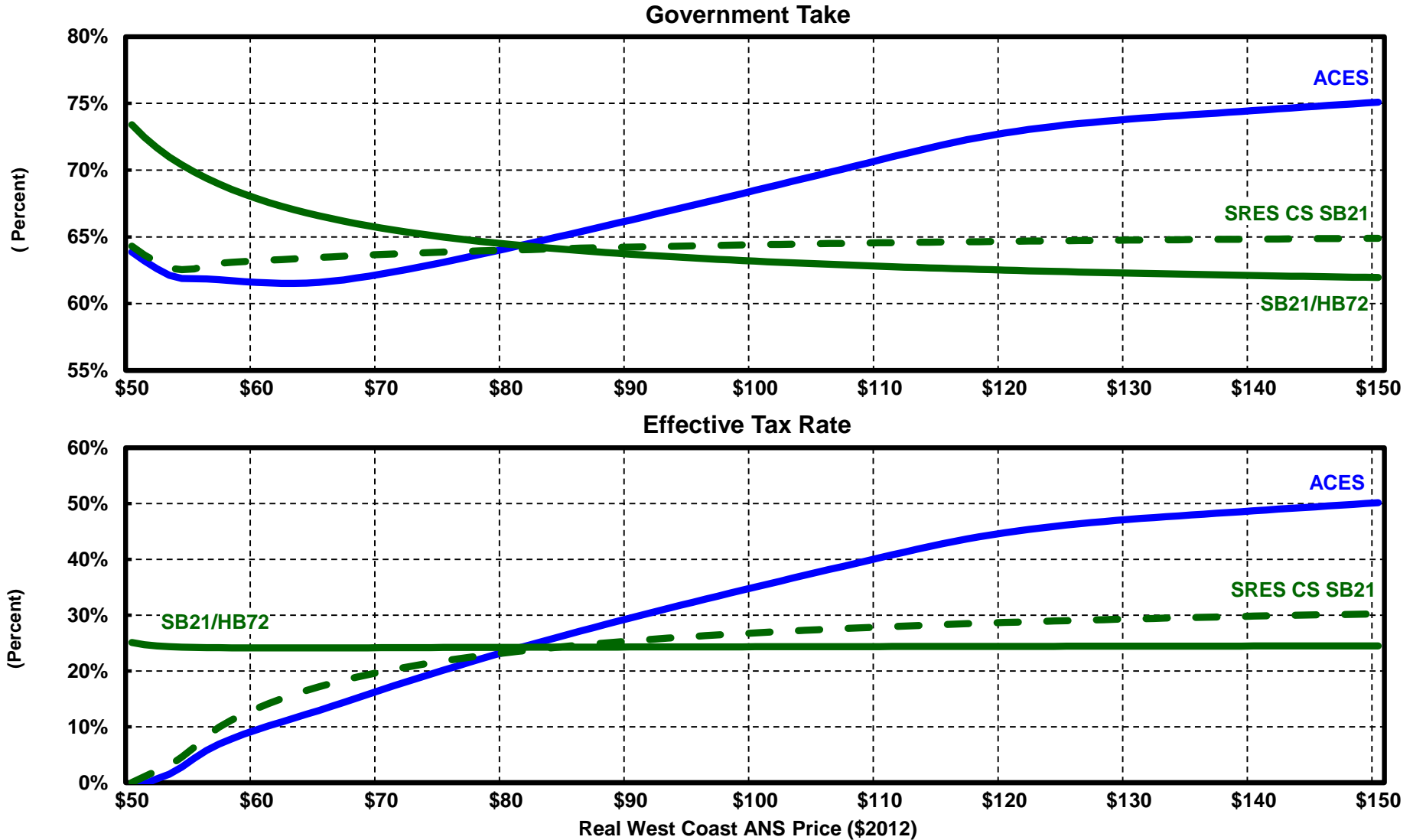
Average Government Take ACES v. SB21/HB72 and SRES CS SB21 for All Existing Producers (FY2015-FY2019) and Other Jurisdictions



* Australia, Canada (Alberta Conventional), Norway, United Kingdom and United States.

Average Government Take and Tax Rate

ACES v. SB21/HB72 and SRES CS SB21 for All Existing Producers (FY2015-FY2019)



Summary of Investment Measures for New Participant Lower Cost Alaska Oil Development ACES and SRES CS SB21 v. Benchmark Areas



Real \$2012 West Coast ANS Price	Lower Cost Alaska			Unconventional Lower-48		Canada Oil Sands	Norway	United Kingdom	
	ACES	SRES CS SB21		Eagle Ford	Bakken	SAGD		Pre-1993 w/ Brownfield Allowance*	Post-1993 w/ Brownfield Allowance*
		Without GRE	With GRE						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Producer NPV-12 / BOE (Dollars Per BOE)									
\$80	\$2.55	\$2.25	\$2.81	\$3.61	\$0.67	(\$0.93)	\$0.24	\$4.81	\$4.62
\$100	\$3.85	\$5.23	\$6.95	\$6.75	\$4.29	\$0.46	\$2.34	\$7.09	\$8.25
\$120	\$5.48	\$8.15	\$10.37	\$11.17	\$9.16	\$2.01	\$4.44	\$9.09	\$11.88
Profitability Index-12									
\$80	1.19	1.17	1.21	1.25	1.04	0.88	1.01	1.22	1.21
\$100	1.29	1.39	1.52	1.47	1.28	1.06	1.14	1.33	1.38
\$120	1.41	1.61	1.78	1.78	1.60	1.26	1.27	1.42	1.55
IRR (Percent)									
\$80	19.7%	16.7%	17.5%	29.9%	13.6%	9.7%	12.4%	34.5%	24.7%
\$100	23.4%	22.7%	24.9%	46.3%	22.7%	13.1%	16.0%	45.2%	32.9%
\$120	27.6%	28.0%	31.0%	73.6%	37.0%	16.3%	19.3%	53.5%	40.2%
5-Year (2017-2021) Cash Margins (Dollars Per BOE)									
\$80	\$25.84	\$36.94	\$36.94	\$23.39	\$28.39	\$26.07	\$34.51	\$22.94	\$29.35
\$100	\$28.84	\$42.79	\$48.99	\$29.99	\$36.48	\$29.14	\$39.42	\$28.85	\$37.82
\$120	\$33.13	\$49.19	\$57.96	\$36.87	\$44.91	\$33.37	\$44.32	\$31.29	\$46.30
Government Take (Percent)									
\$80	70.8%	64.9%	59.4%	71.7%	77.1%	63.4%	67.8%	61.0%	52.0%
\$100	75.8%	65.9%	58.0%	67.9%	72.1%	63.5%	71.7%	68.6%	55.8%
\$120	77.2%	66.3%	59.3%	65.1%	68.7%	63.0%	73.4%	72.0%	57.5%
State/Municipal NPV-12/BOE (Dollars Per BOE)									
\$80	\$6.67	\$7.13	\$6.27	-	-	-	-	-	-
\$100	\$13.32	\$11.19	\$8.55	-	-	-	-	-	-
\$120	\$19.46	\$15.34	\$11.93	-	-	-	-	-	-

* Brownfield Allowance applied to 100 MMBOE development.

Lower Cost: \$16 Per Barrel Development Capex and \$14 Per Barrel Opex

Summary of Investment Measures for Incumbent Lower Cost Alaska Oil Development ACES and SRES CS SB21 v. Benchmark Areas



Real \$2012 West Coast ANS Price	Lower Cost Alaska			Unconventional Lower-48		Canada Oil Sands SAGD	Norway	United Kingdom	
	ACES	SRES CS SB21		Eagle Ford	Bakken	Norway		Pre-1993 w/ Brownfield Allowance*	Post-1993 w/ Brownfield Allowance*
		Without GRE	With GRE					(8)	(9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Producer NPV-12 / BOE (Dollars Per BOE)									
\$80	\$3.71	\$2.54	\$4.00	\$3.61	\$0.67	(\$0.93)	\$0.24	\$4.81	\$4.62
\$100	\$6.14	\$5.38	\$7.27	\$6.75	\$4.29	\$0.46	\$2.34	\$7.09	\$8.25
\$120	\$8.82	\$8.23	\$10.55	\$11.17	\$9.16	\$2.01	\$4.44	\$9.09	\$11.88
Profitability Index-12									
\$80	1.28	1.19	1.30	1.25	1.04	0.88	1.01	1.22	1.21
\$100	1.46	1.41	1.55	1.47	1.28	1.06	1.14	1.33	1.38
\$120	1.67	1.62	1.80	1.78	1.60	1.26	1.27	1.42	1.55
IRR (Percent)									
\$80	26.2%	18.9%	22.3%	29.9%	13.6%	9.7%	12.4%	34.5%	24.7%
\$100	41.1%	25.6%	29.5%	46.3%	22.7%	13.1%	16.0%	45.2%	32.9%
\$120	65.3%	31.8%	36.1%	73.6%	37.0%	16.3%	19.3%	53.5%	40.2%
5-Year (2017-2021) Cash Margins (Dollars Per BOE)									
\$80	\$24.26	\$27.76	\$32.07	\$23.39	\$28.39	\$26.07	\$34.51	\$22.94	\$29.35
\$100	\$27.22	\$35.59	\$41.17	\$29.99	\$36.48	\$29.14	\$39.42	\$28.85	\$37.82
\$120	\$31.18	\$43.42	\$50.27	\$36.87	\$44.91	\$33.37	\$44.32	\$31.29	\$46.30
Government Take (Percent)									
\$80	68.9%	67.8%	59.3%	71.7%	77.1%	63.4%	67.8%	61.0%	52.0%
\$100	73.0%	67.6%	60.2%	67.9%	72.1%	63.5%	71.7%	68.6%	55.8%
\$120	73.8%	67.5%	60.6%	65.1%	68.7%	63.0%	73.4%	72.0%	57.5%
State/Municipal NPV-12/BOE (Dollars Per BOE)									
\$80	\$4.88	\$6.69	\$4.44	-	-	-	-	-	-
\$100	\$9.79	\$10.95	\$8.05	-	-	-	-	-	-
\$120	\$14.31	\$15.22	\$11.66	-	-	-	-	-	-

Note: Analysis of incumbent production includes “buy-down” impact for reduced taxes on existing production.

* Brownfield Allowance applied to 100 MMBOE development.

Lower Cost: \$16 Per Barrel Development Capex and \$14 Per Barrel Opex

Summary of Investment Measures for New Participant Higher Cost Alaska Oil Development ACES and SRES CS SB21 v. Benchmark Areas



Real \$2012 West Coast ANS Price	Higher Cost Alaska			Unconventional Lower-48		Canada Oil Sands	Norway	United Kingdom	
	ACES	SRES CS SB21		Eagle Ford	Bakken	SAGD		Pre-1993 w/ Brownfield Allowance*	Post-1993 w/ Brownfield Allowance*
		Without GRE	With GRE						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Producer NPV-12 / BOE (Dollars Per BOE)									
\$80	(\$0.35)	(\$2.32)	(\$2.11)	\$3.61	\$0.67	(\$0.93)	\$0.24	\$4.81	\$4.62
\$100	\$0.97	\$1.52	\$2.12	\$6.75	\$4.29	\$0.46	\$2.34	\$7.09	\$8.25
\$120	\$2.58	\$4.45	\$6.36	\$11.17	\$9.16	\$2.01	\$4.44	\$9.09	\$11.88
Profitability Index-12									
\$80	0.98	0.89	0.90	1.25	1.04	0.88	1.01	1.22	1.21
\$100	1.05	1.07	1.10	1.47	1.28	1.06	1.14	1.33	1.38
\$120	1.12	1.21	1.31	1.78	1.60	1.26	1.27	1.42	1.55
IRR (Percent)									
\$80	11.3%	8.8%	9.1%	29.9%	13.6%	9.7%	12.4%	34.5%	24.7%
\$100	14.0%	14.0%	14.7%	46.3%	22.7%	13.1%	16.0%	45.2%	32.9%
\$120	17.1%	17.9%	19.8%	73.6%	37.0%	16.3%	19.3%	53.5%	40.2%
5-Year (2017-2021) Cash Margins (Dollars Per BOE)									
\$80	\$28.03	\$39.10	\$39.10	\$23.39	\$28.39	\$26.07	\$34.51	\$22.94	\$29.35
\$100	\$31.03	\$51.15	\$51.15	\$29.99	\$36.48	\$29.14	\$39.42	\$28.85	\$37.82
\$120	\$35.32	\$57.98	\$63.19	\$36.87	\$44.91	\$33.37	\$44.32	\$31.29	\$46.30
Government Take (Percent)									
\$80	71.6%	67.4%	63.6%	71.7%	77.1%	63.4%	67.8%	61.0%	52.0%
\$100	76.9%	64.9%	60.0%	67.9%	72.1%	63.5%	71.7%	68.6%	55.8%
\$120	78.1%	66.2%	58.3%	65.1%	68.7%	63.0%	73.4%	72.0%	57.5%
State/Municipal NPV-12/BOE (Dollars Per BOE)									
\$80	\$3.24	\$6.27	\$5.96	-	-	-	-	-	-
\$100	\$9.86	\$9.01	\$8.08	-	-	-	-	-	-
\$120	\$16.02	\$13.14	\$10.21	-	-	-	-	-	-

* Brownfield Allowance applied to 100 MMBOE development.

Higher Cost: \$25 Per Barrel Development Capex and \$14 Per Barrel Opex

Summary of Investment Measures for Incumbent Higher Cost Alaska Oil Development ACES and SRES CS SB21 v. Benchmark Areas



Real \$2012 West Coast ANS Price	Higher Cost Alaska			Unconventional Lower-48		Canada Oil Sands SAGD	Norway	United Kingdom	
	ACES	SRES CS SB21		Eagle Ford	Bakken	SAGD		Pre-1993 w/ Brownfield Allowance*	Post-1993 w/ Brownfield Allowance*
		Without GRE	With GRE						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Producer NPV-12 / BOE (Dollars Per BOE)									
\$80	\$1.34	(\$0.80)	\$0.66	\$3.61	\$0.67	(\$0.93)	\$0.24	\$4.81	\$4.62
\$100	\$4.68	\$2.05	\$3.94	\$6.75	\$4.29	\$0.46	\$2.34	\$7.09	\$8.25
\$120	\$8.10	\$4.89	\$7.21	\$11.17	\$9.16	\$2.01	\$4.44	\$9.09	\$11.88
Profitability Index-12									
\$80	1.06	0.96	1.03	1.25	1.04	0.88	1.01	1.22	1.21
\$100	1.23	1.10	1.19	1.47	1.28	1.06	1.14	1.33	1.38
\$120	1.39	1.24	1.35	1.78	1.60	1.26	1.27	1.42	1.55
IRR (Percent)									
\$80	15.4%	10.5%	13.2%	29.9%	13.6%	9.7%	12.4%	34.5%	24.7%
\$100	27.2%	15.6%	18.6%	46.3%	22.7%	13.1%	16.0%	45.2%	32.9%
\$120	46.0%	20.2%	23.5%	73.6%	37.0%	16.3%	19.3%	53.5%	40.2%
5-Year (2017-2021) Cash Margins (Dollars Per BOE)									
\$80	\$26.45	\$29.92	\$34.23	\$23.39	\$28.39	\$26.07	\$34.51	\$22.94	\$29.35
\$100	\$29.41	\$37.75	\$43.33	\$29.99	\$36.48	\$29.14	\$39.42	\$28.85	\$37.82
\$120	\$33.37	\$45.58	\$52.42	\$36.87	\$44.91	\$33.37	\$44.32	\$31.29	\$46.30
Government Take (Percent)									
\$80	67.8%	69.4%	59.1%	71.7%	77.1%	63.4%	67.8%	61.0%	52.0%
\$100	71.2%	68.5%	60.1%	67.9%	72.1%	63.5%	71.7%	68.6%	55.8%
\$120	71.6%	68.1%	60.6%	65.1%	68.7%	63.0%	73.4%	72.0%	57.5%
State/Municipal NPV-12/BOE (Dollars Per BOE)									
\$80	\$0.64	\$3.93	\$1.69	-	-	-	-	-	-
\$100	\$4.15	\$8.20	\$5.29	-	-	-	-	-	-
\$120	\$7.53	\$12.46	\$8.90	-	-	-	-	-	-

Note: Analysis of incumbent production includes “buy-down” impact for reduced taxes on existing production.

* Brownfield Allowance applied to 100 MMBOE development.

Higher Cost: \$25 Per Barrel Development Capex and \$14 Per Barrel Opex

Summary of Investment Measures for New Participant Very High Cost Alaska Oil Development ACES and SRES CS SB21 v. Benchmark Areas



Real \$2012 West Coast ANS Price	Very High Cost Alaska			Unconventional Lower-48		Canada Oil Sands	Norway	United Kingdom	
	ACES	SRES CS SB21		Eagle Ford	Bakken	SAGD		Pre-1993 w/ Brownfield Allowance*	Post-1993 w/ Brownfield Allowance*
		Without GRE	With GRE						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Producer NPV-12 / BOE (Dollars Per BOE)									
\$80	(\$4.00)	(\$8.72)	(\$8.53)	\$3.61	\$0.67	(\$0.93)	\$0.24	\$4.81	\$4.62
\$100	(\$2.33)	(\$4.54)	(\$4.28)	\$6.75	\$4.29	\$0.46	\$2.34	\$7.09	\$8.25
\$120	(\$0.91)	(\$0.37)	(\$0.04)	\$11.17	\$9.16	\$2.01	\$4.44	\$9.09	\$11.88
Profitability Index-12									
\$80	0.86	0.69	0.70	1.25	1.04	0.88	1.01	1.22	1.21
\$100	0.92	0.84	0.85	1.47	1.28	1.06	1.14	1.33	1.38
\$120	0.97	0.99	1.00	1.78	1.60	1.26	1.27	1.42	1.55
IRR (Percent)									
\$80	5.3%	2.1%	2.6%	29.9%	13.6%	9.7%	12.4%	34.5%	24.7%
\$100	8.2%	7.2%	7.6%	46.3%	22.7%	13.1%	16.0%	45.2%	32.9%
\$120	10.6%	11.6%	12.0%	73.6%	37.0%	16.3%	19.3%	53.5%	40.2%
5-Year (2017-2021) Cash Margins (Dollars Per BOE)									
\$80	\$28.73	\$37.26	\$37.26	\$23.39	\$28.39	\$26.07	\$34.51	\$22.94	\$29.35
\$100	\$32.48	\$49.31	\$49.31	\$29.99	\$36.48	\$29.14	\$39.42	\$28.85	\$37.82
\$120	\$36.02	\$61.36	\$61.36	\$36.87	\$44.91	\$33.37	\$44.32	\$31.29	\$46.30
Government Take (Percent)									
\$80	72.4%	84.4%	78.7%	71.7%	77.1%	63.4%	67.8%	61.0%	52.0%
\$100	77.2%	69.8%	65.7%	67.9%	72.1%	63.5%	71.7%	68.6%	55.8%
\$120	79.5%	65.1%	61.7%	65.1%	68.7%	63.0%	73.4%	72.0%	57.5%
State/Municipal NPV-12/BOE (Dollars Per BOE)									
\$80	(\$1.66)	\$5.60	\$5.31	-	-	-	-	-	-
\$100	\$4.42	\$7.83	\$7.42	-	-	-	-	-	-
\$120	\$10.88	\$10.05	\$9.55	-	-	-	-	-	-

* Brownfield Allowance applied to 100 MMBOE development.

Very High Cost: \$34 Per Barrel Development Capex and \$21 Per Barrel Opex

Summary of Investment Measures for Incumbent Very High Cost Alaska Oil Development ACES and SRES CS SB21 v. Benchmark Areas



Real \$2012 West Coast ANS Price	Very High Cost Alaska			Unconventional Lower-48		Canada Oil Sands	Norway	United Kingdom	
	ACES	SRES CS SB21		Eagle Ford	Bakken	SAGD		Pre-1993 w/ Brownfield Allowance*	Post-1993 w/ Brownfield Allowance*
		Without GRE	With GRE					(8)	(9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Producer NPV-12 / BOE (Dollars Per BOE)									
\$80	(\$1.93)	(\$5.17)	(\$3.71)	\$3.61	\$0.67	(\$0.93)	\$0.24	\$4.81	\$4.62
\$100	\$2.58	(\$2.32)	(\$0.43)	\$6.75	\$4.29	\$0.46	\$2.34	\$7.09	\$8.25
\$120	\$6.66	\$0.52	\$2.84	\$11.17	\$9.16	\$2.01	\$4.44	\$9.09	\$11.88
Profitability Index-12									
\$80	0.93	0.82	0.87	1.25	1.04	0.88	1.01	1.22	1.21
\$100	1.09	0.92	0.98	1.47	1.28	1.06	1.14	1.33	1.38
\$120	1.24	1.02	1.10	1.78	1.60	1.26	1.27	1.42	1.55
IRR (Percent)									
\$80	8.1%	4.1%	6.6%	29.9%	13.6%	9.7%	12.4%	34.5%	24.7%
\$100	18.5%	8.7%	11.4%	46.3%	22.7%	13.1%	16.0%	45.2%	32.9%
\$120	33.8%	12.7%	15.6%	73.6%	37.0%	16.3%	19.3%	53.5%	40.2%
5-Year (2017-2021) Cash Margins (Dollars Per BOE)									
\$80	\$26.79	\$29.48	\$33.79	\$23.39	\$28.39	\$26.07	\$34.51	\$22.94	\$29.35
\$100	\$30.52	\$37.31	\$42.89	\$29.99	\$36.48	\$29.14	\$39.42	\$28.85	\$37.82
\$120	\$33.98	\$45.14	\$51.98	\$36.87	\$44.91	\$33.37	\$44.32	\$31.29	\$46.30
Government Take (Percent)									
\$80	63.8%	76.0%	58.1%	71.7%	77.1%	63.4%	67.8%	61.0%	52.0%
\$100	66.7%	71.5%	60.0%	67.9%	72.1%	63.5%	71.7%	68.6%	55.8%
\$120	68.1%	70.0%	60.7%	65.1%	68.7%	63.0%	73.4%	72.0%	57.5%
State/Municipal NPV-12/BOE (Dollars Per BOE)									
\$80	(\$4.84)	\$0.14	(\$2.10)	-	-	-	-	-	-
\$100	(\$3.14)	\$4.41	\$1.50	-	-	-	-	-	-
\$120	(\$0.76)	\$8.67	\$5.11	-	-	-	-	-	-

Note: Analysis of incumbent production includes “buy-down” impact for reduced taxes on existing production.

* Brownfield Allowance applied to 100 MMBOE development.

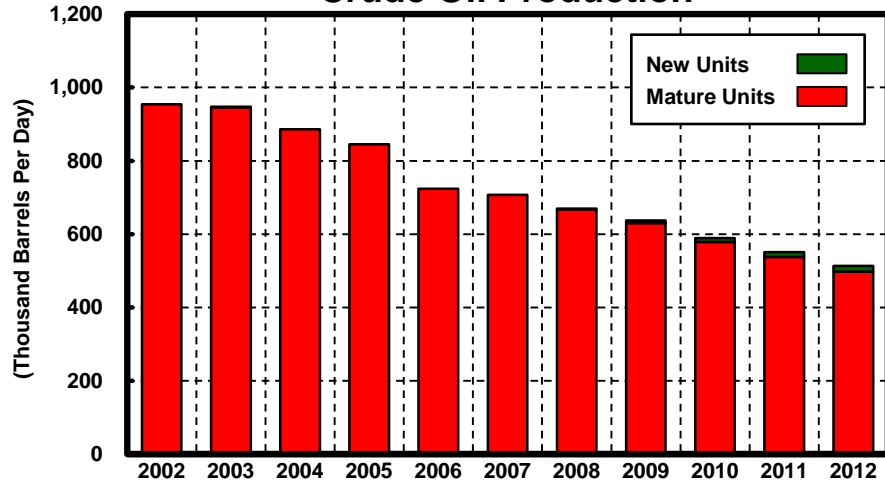
Very High Cost: \$34 Per Barrel Development Capex and \$21 Per Barrel Opex

Appendix

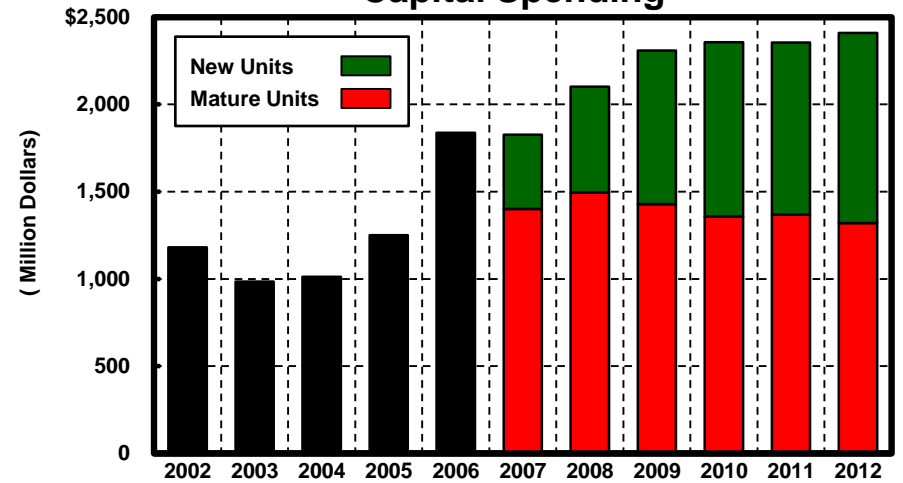
Country/Area Profile

Alaska North Slope

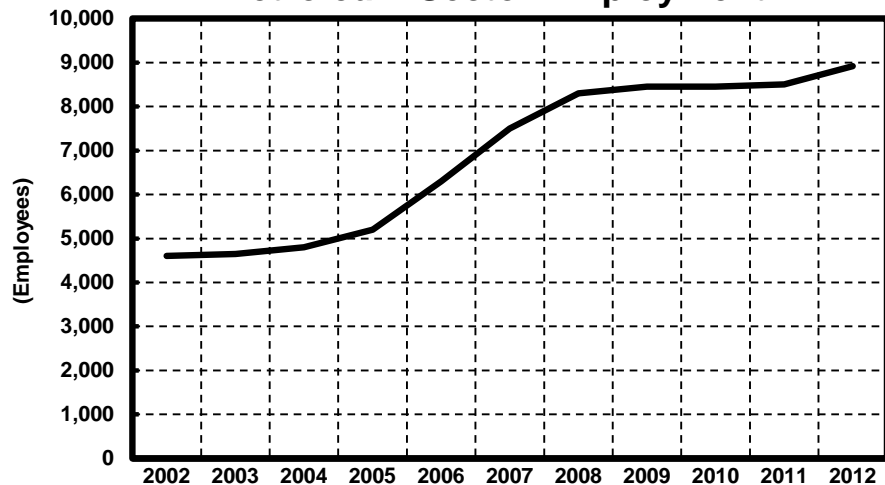
Crude Oil Production



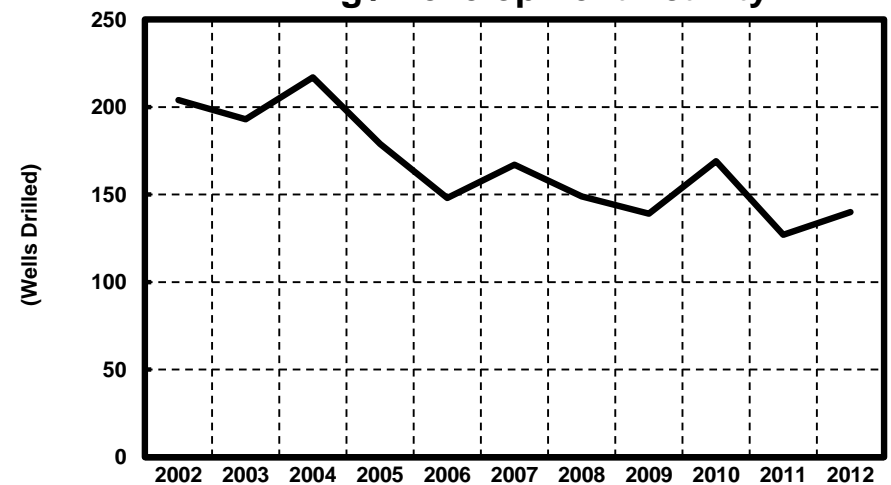
Capital Spending



Petroleum Sector Employment



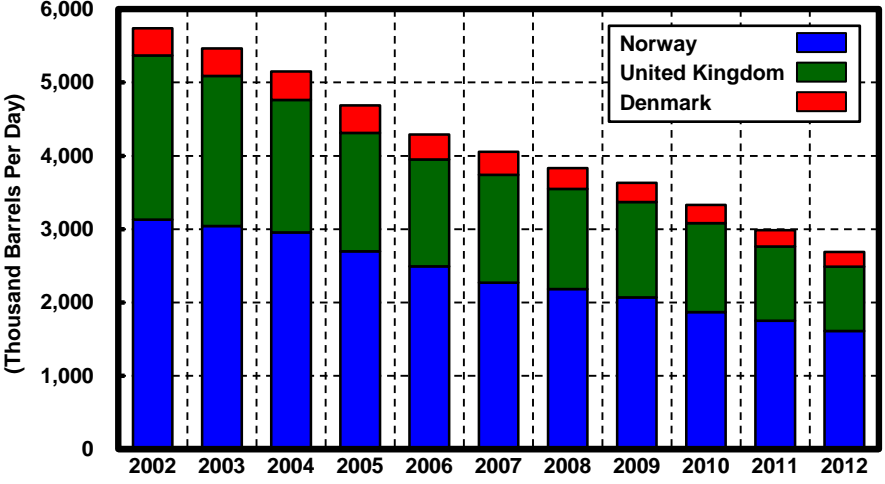
Drilling / Development Activity



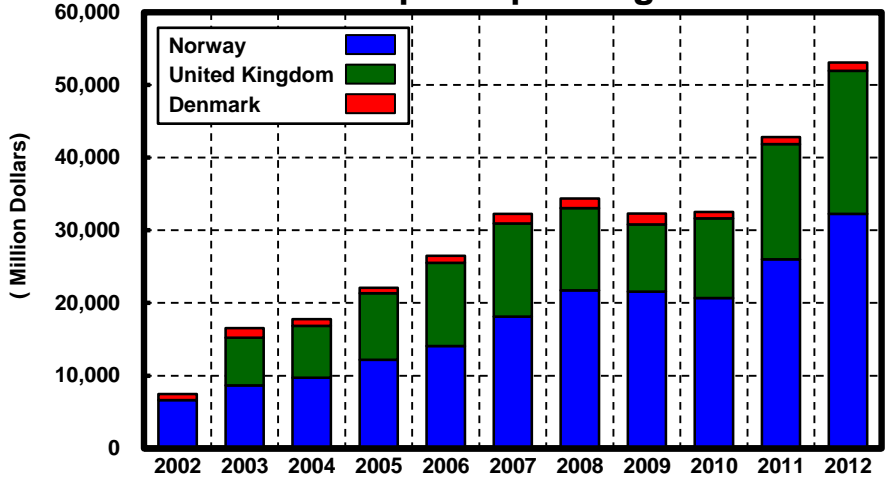
Country/Area Profile

Northwest Europe (North Sea)

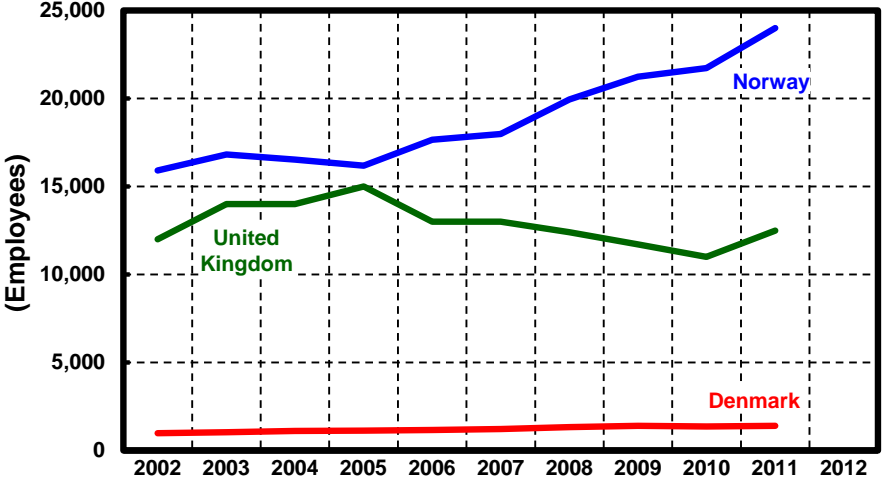
Crude Oil Production



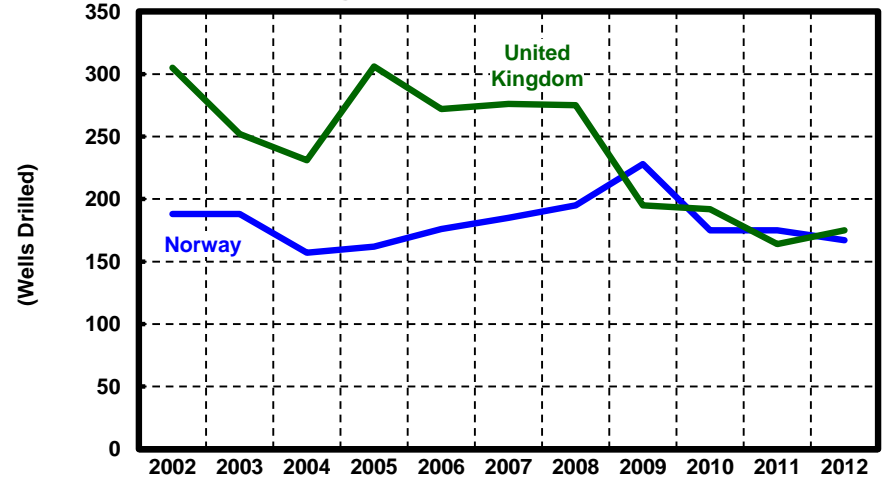
Capital Spending



Petroleum Sector Employment



Drilling / Development Activity

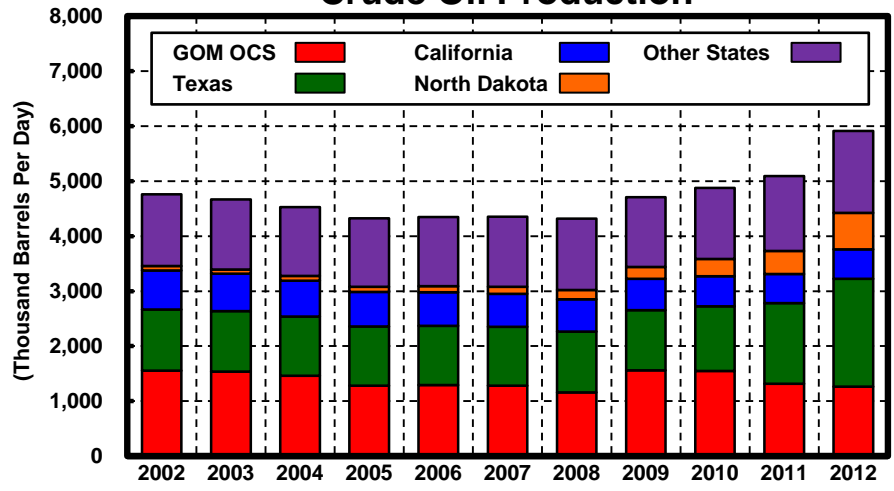


Note: 2012 figures are preliminary.

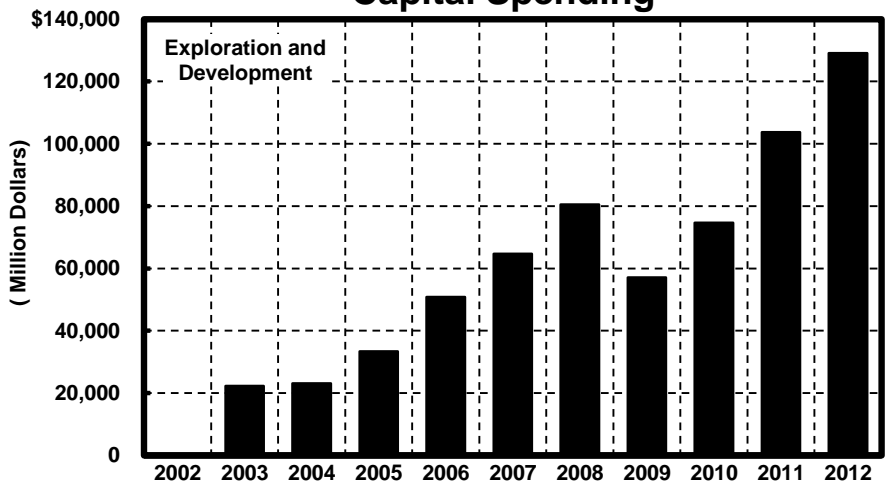
Country/Area Profile

United States Excluding Alaska North Slope

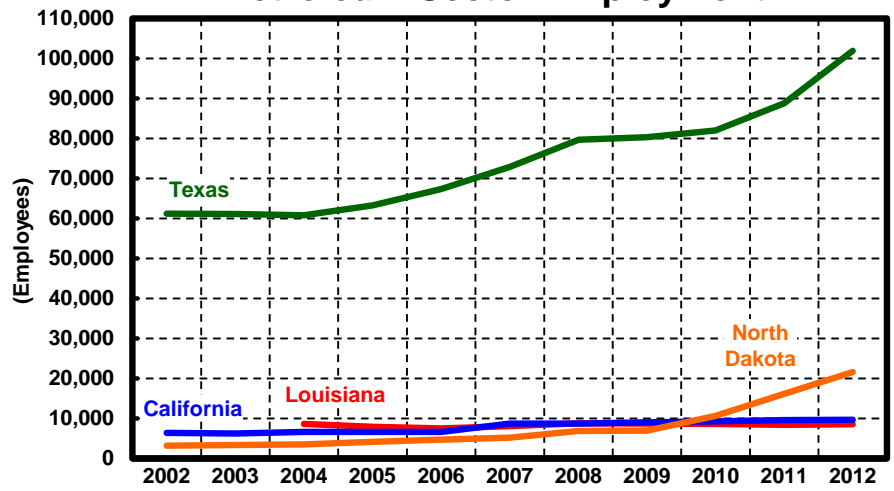
Crude Oil Production



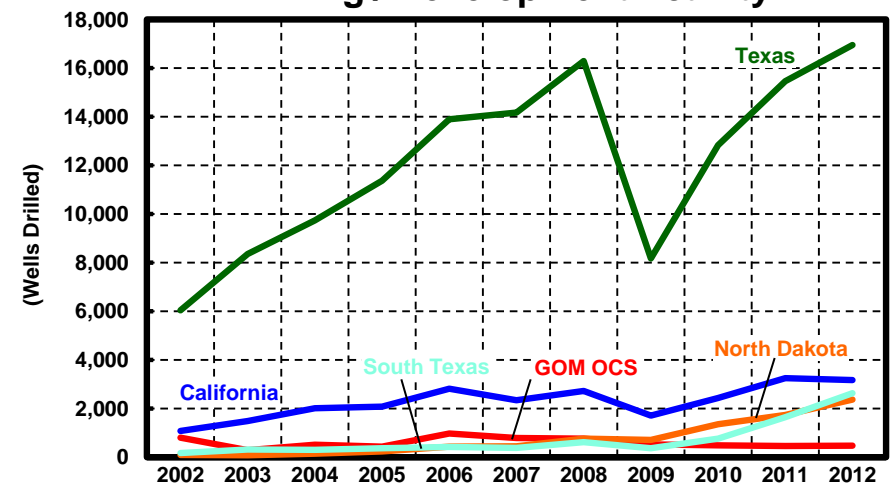
Capital Spending



Petroleum Sector Employment



Drilling / Development Activity

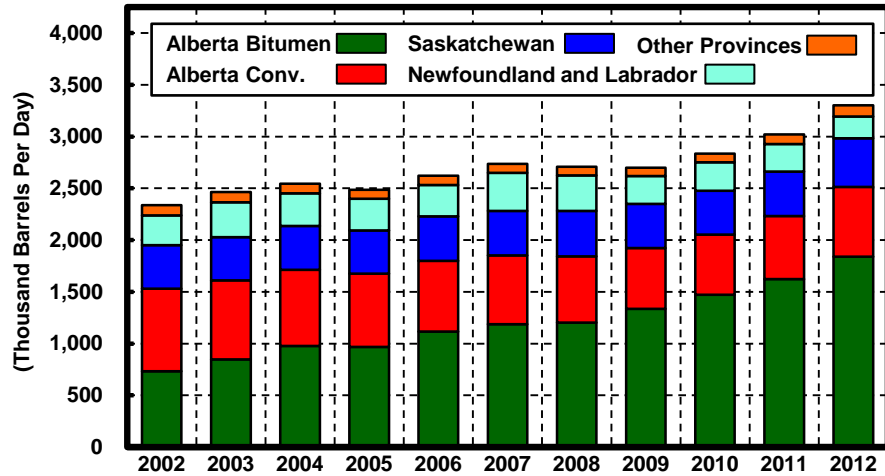


Note: 2012 figures are preliminary.

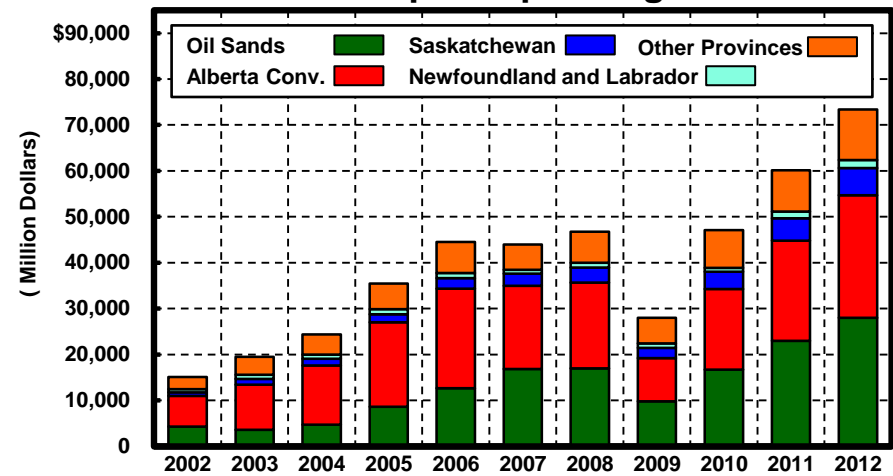
Country/Area Profile

Canada

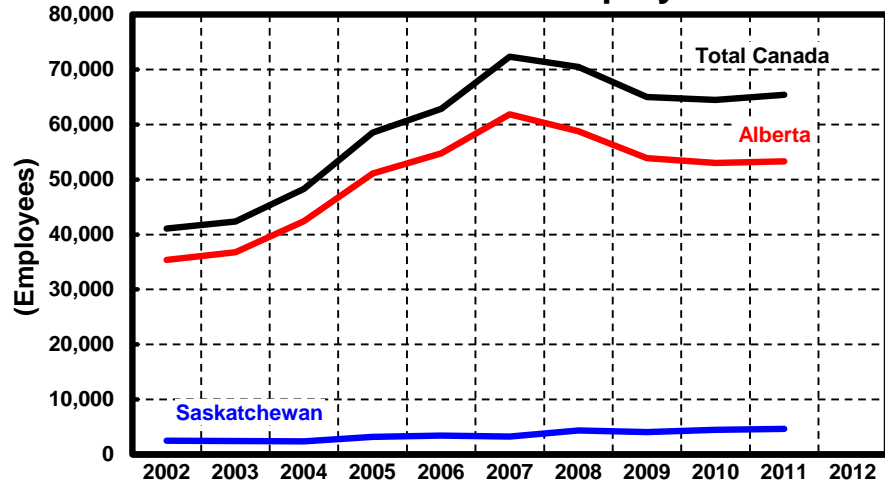
Crude Oil Production



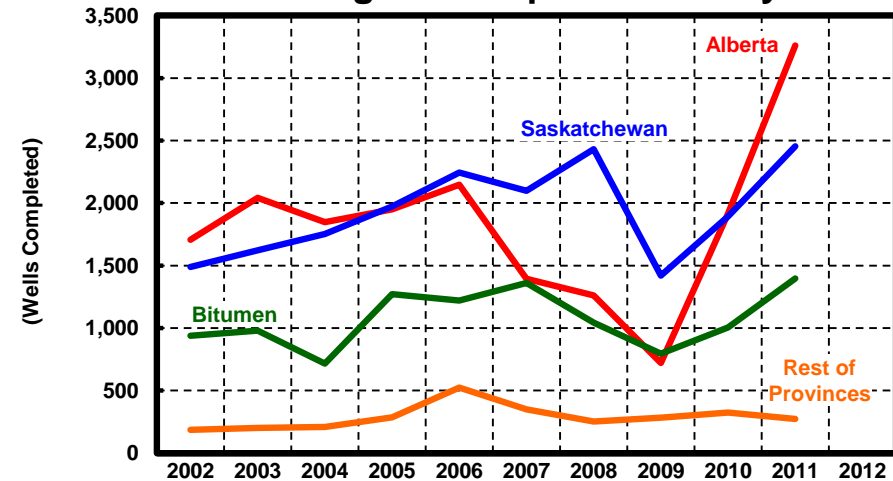
Capital Spending



Petroleum Sector Employment



Drilling / Development Activity

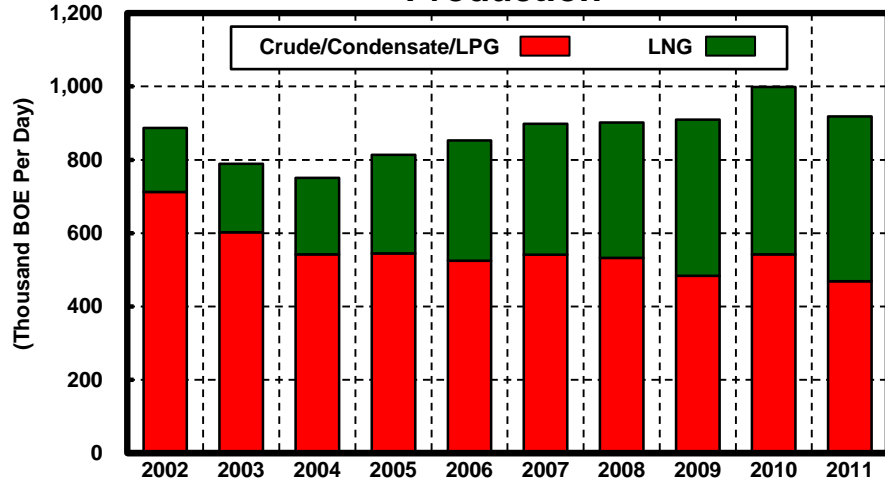


Note: 2012 figures are preliminary.

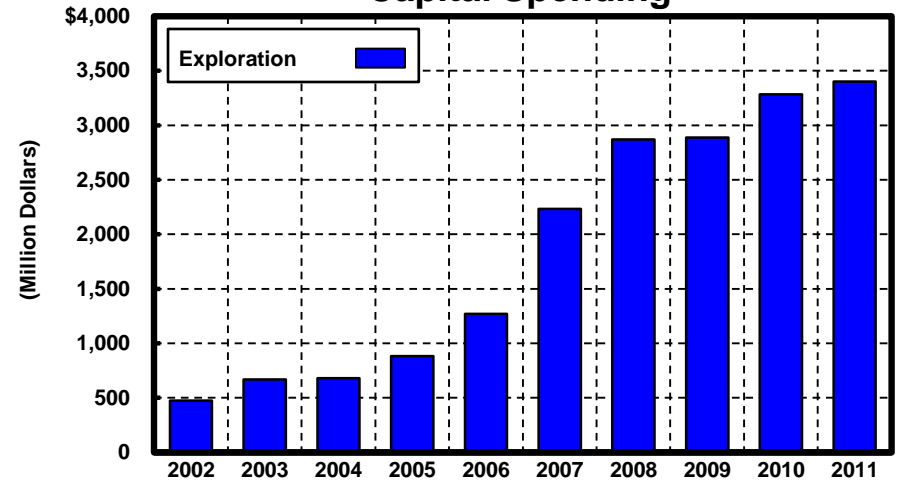
Country/Area Profile

Australia

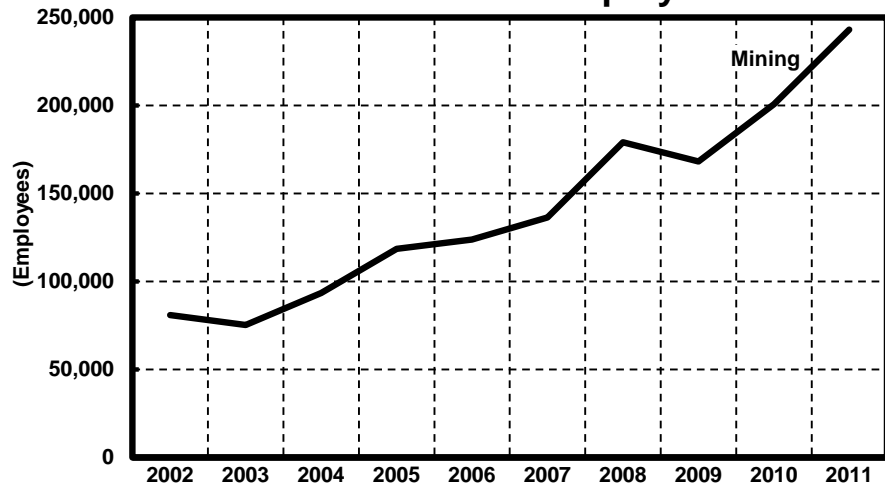
Production



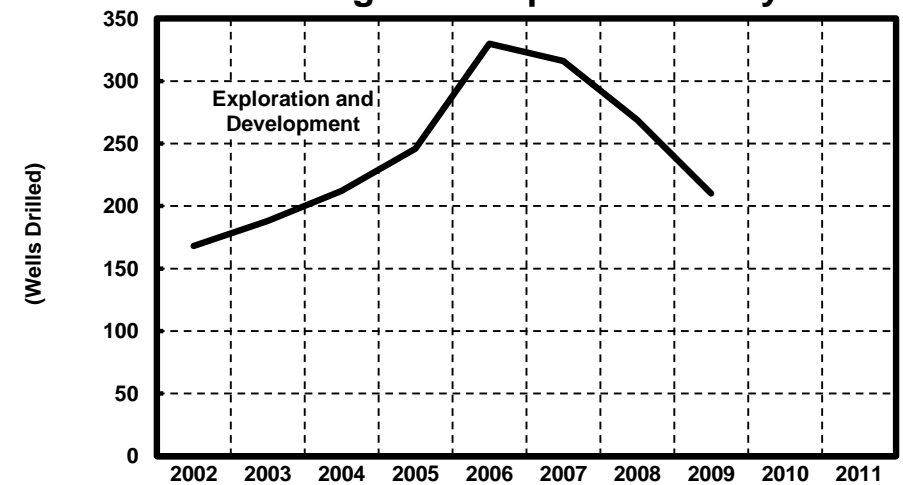
Capital Spending



Petroleum Sector Employment

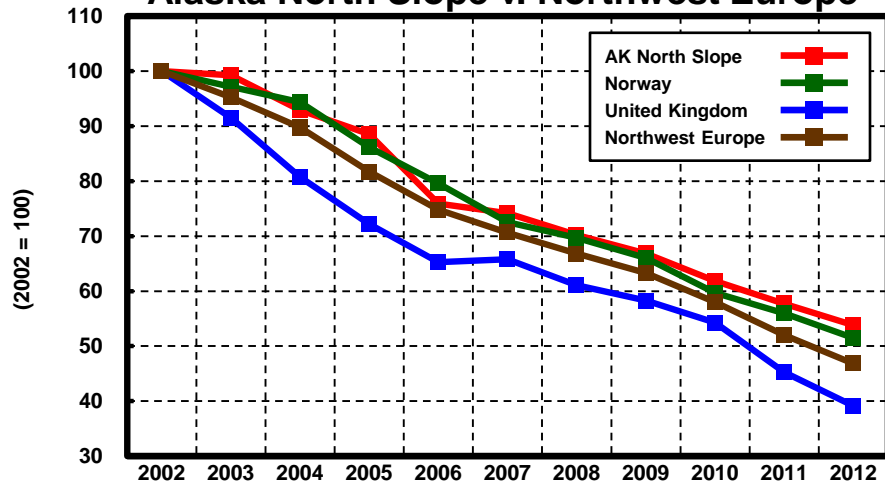


Drilling / Development Activity

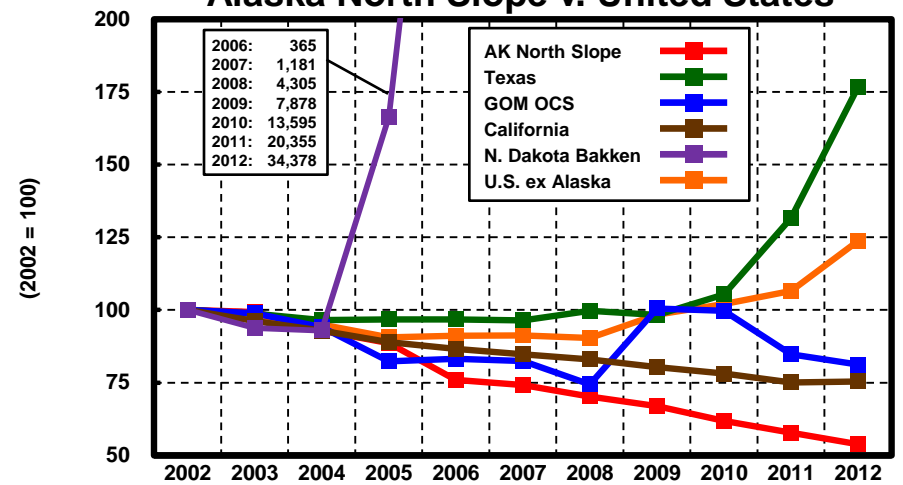


Crude Oil Production Comparisons to Alaska

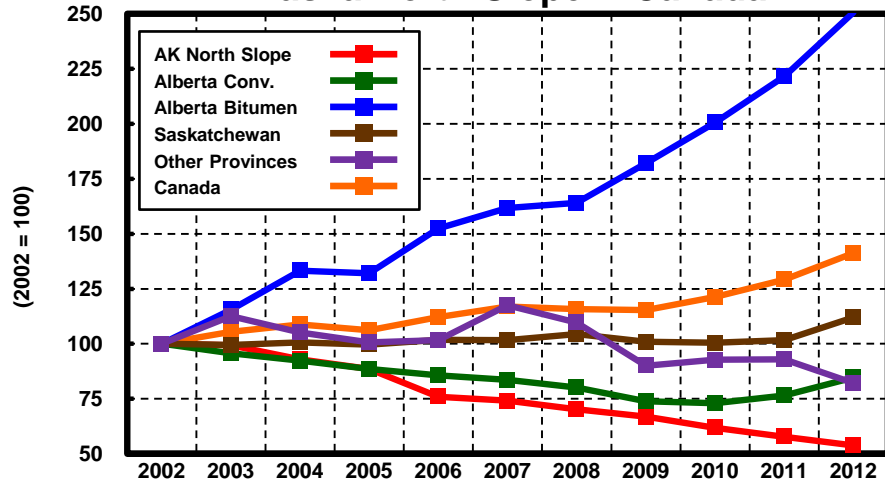
Alaska North Slope v. Northwest Europe



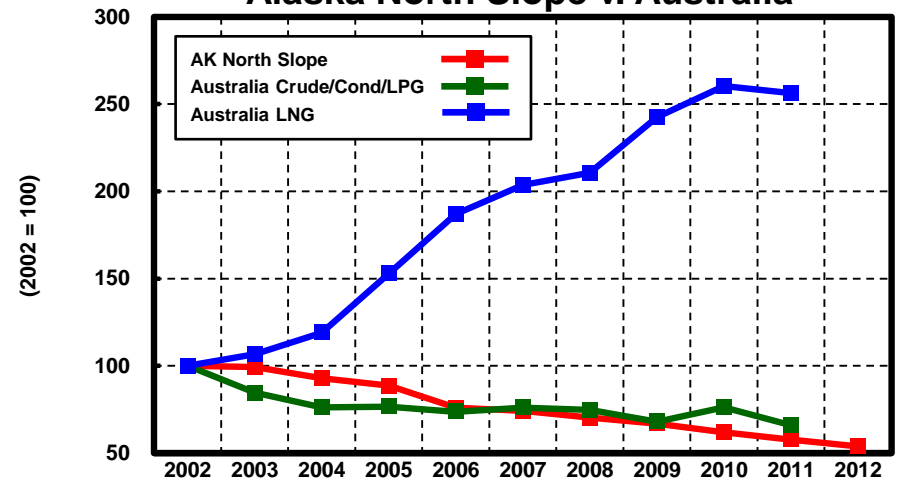
Alaska North Slope v. United States



Alaska North Slope v. Canada

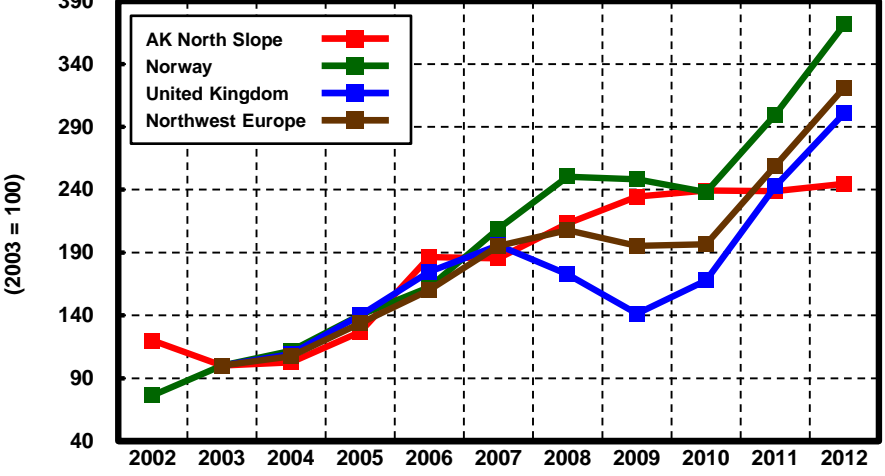


Alaska North Slope v. Australia

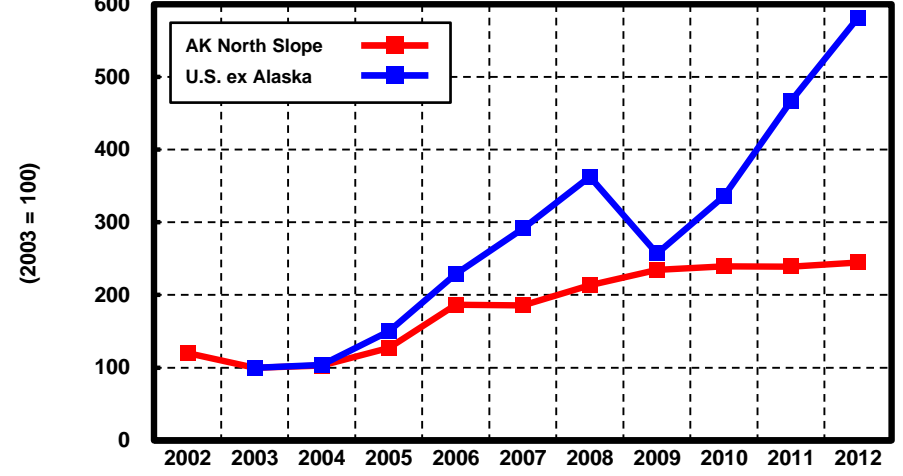


Capital Spending Comparisons to Alaska

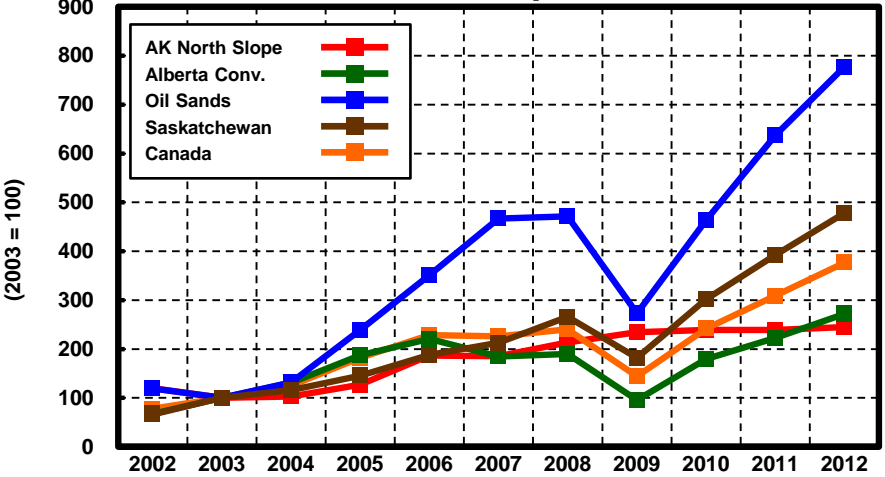
Alaska North Slope v. Northwest Europe



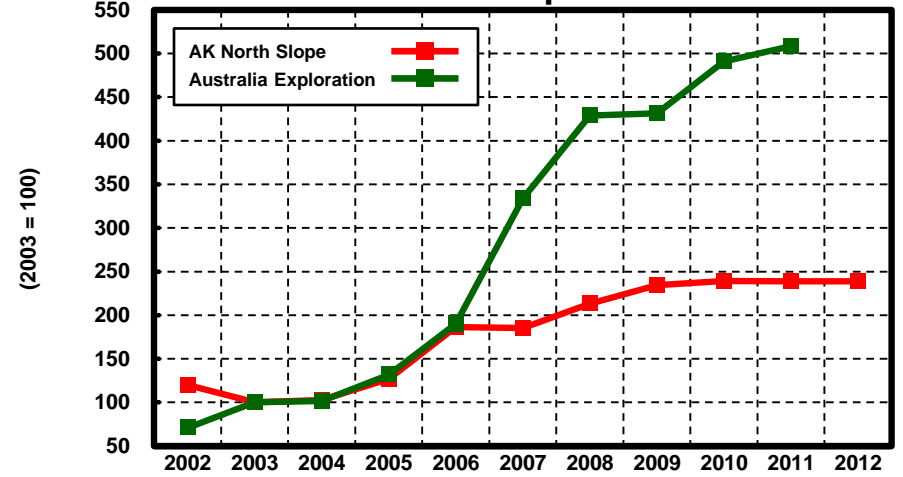
Alaska North Slope v. United States



Alaska North Slope v. Canada

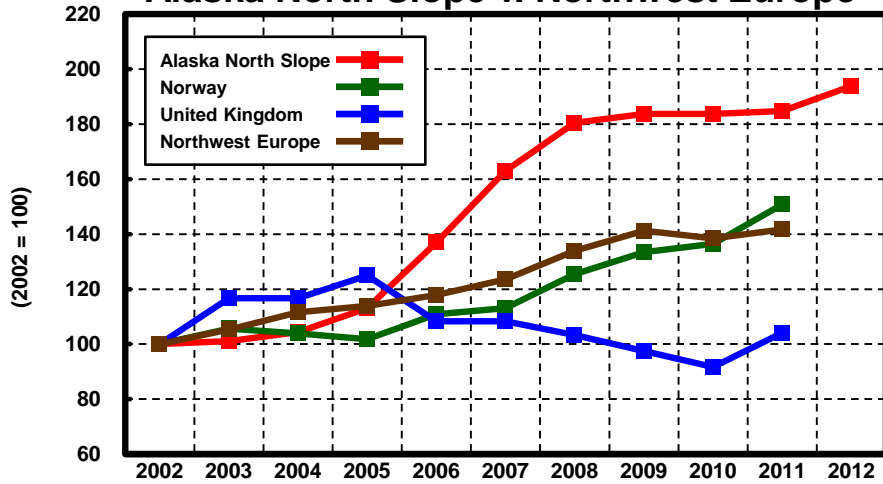


Alaska North Slope v. Australia

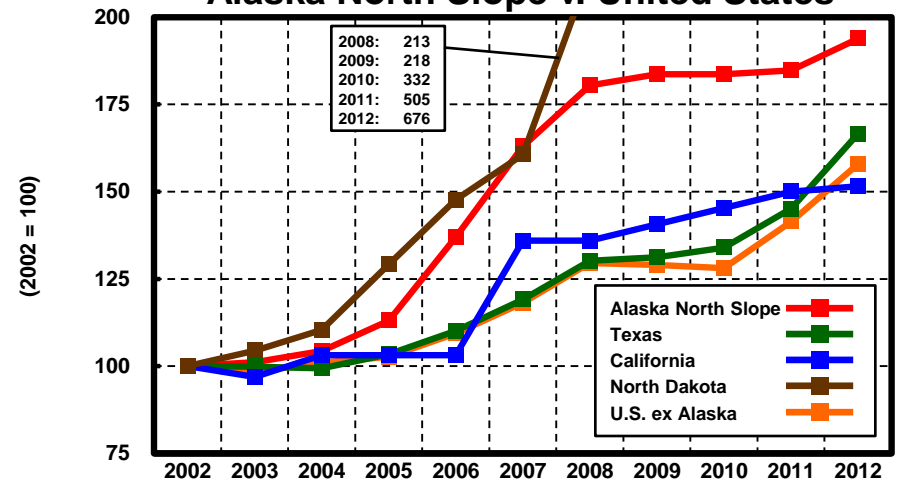


Employment Comparisons to Alaska

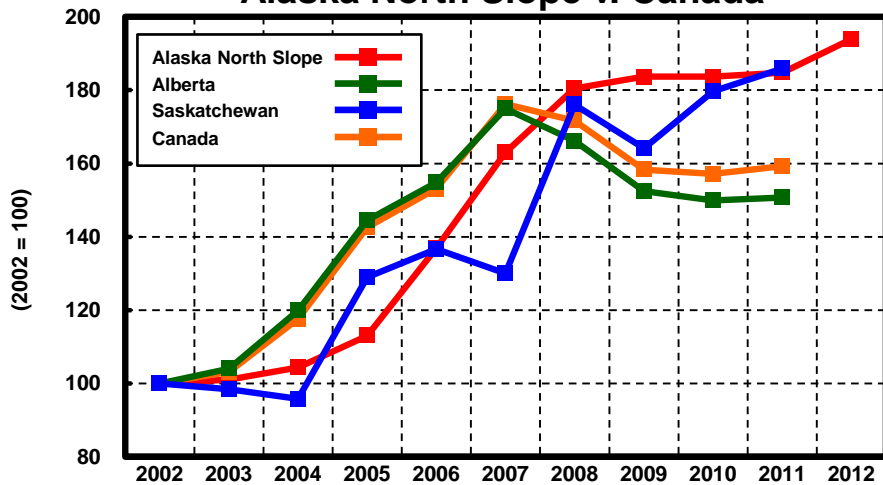
Alaska North Slope v. Northwest Europe



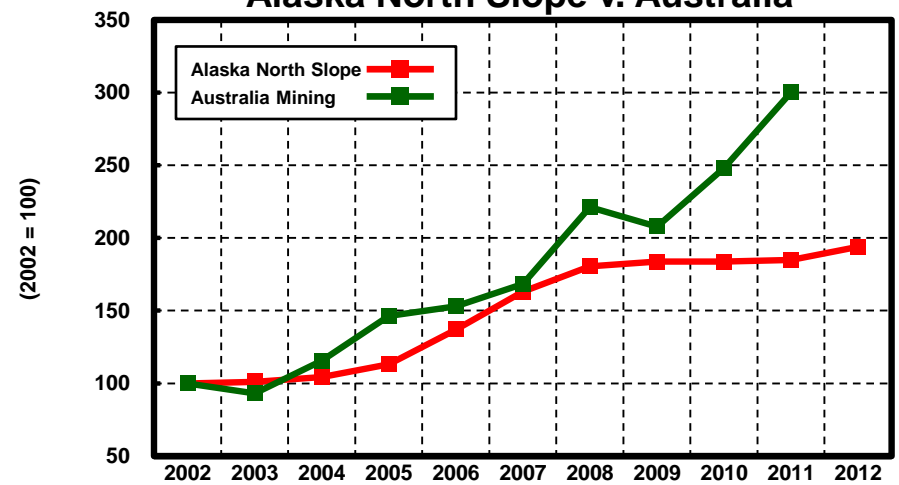
Alaska North Slope v. United States



Alaska North Slope v. Canada

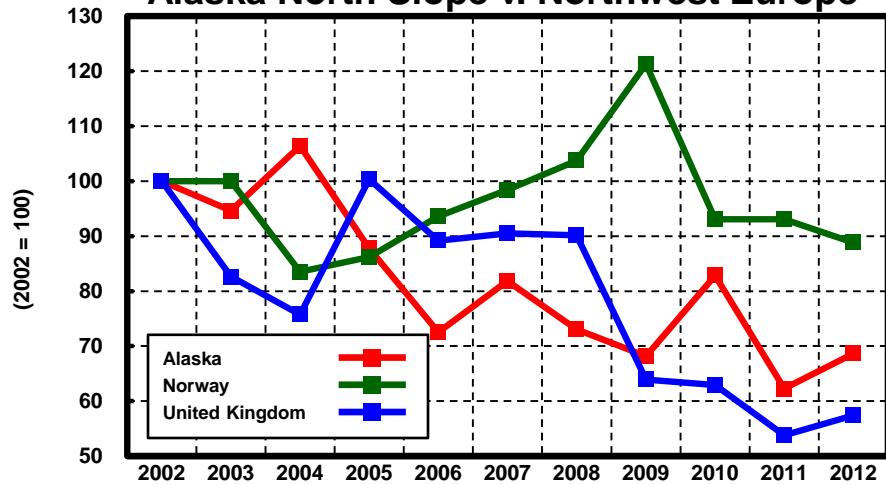


Alaska North Slope v. Australia

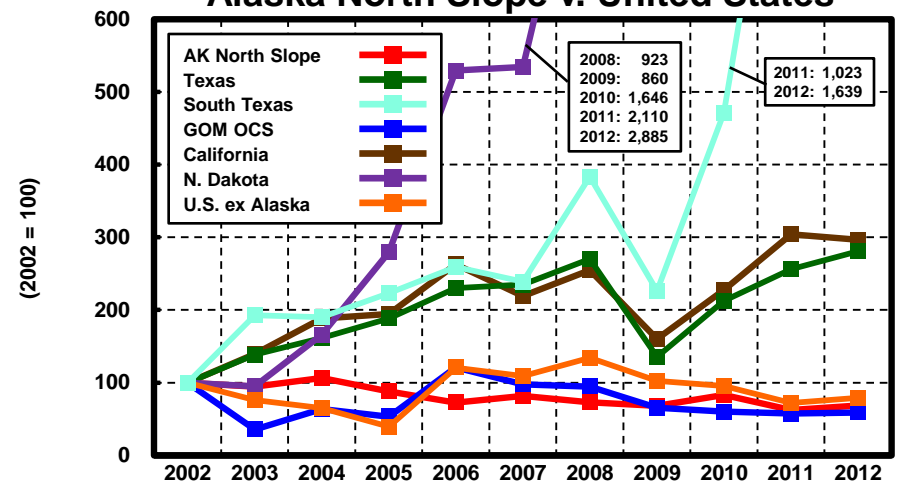


Drilling / Development Activity Comparisons to Alaska

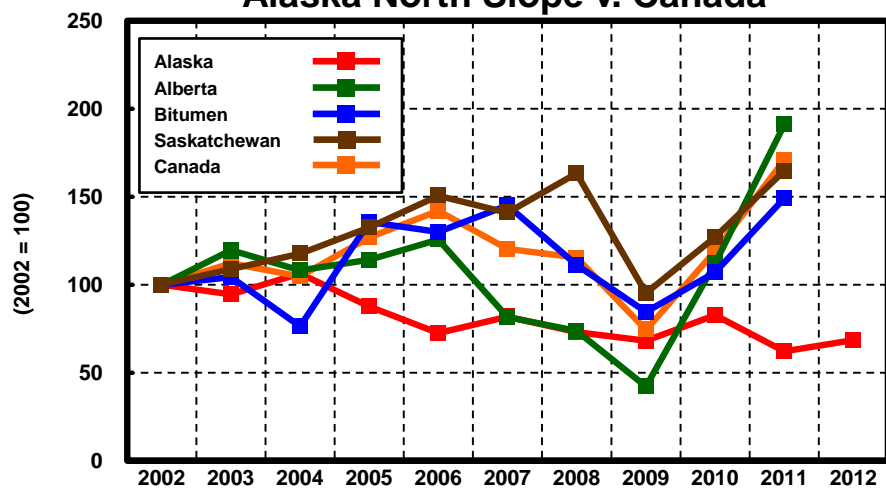
Alaska North Slope v. Northwest Europe



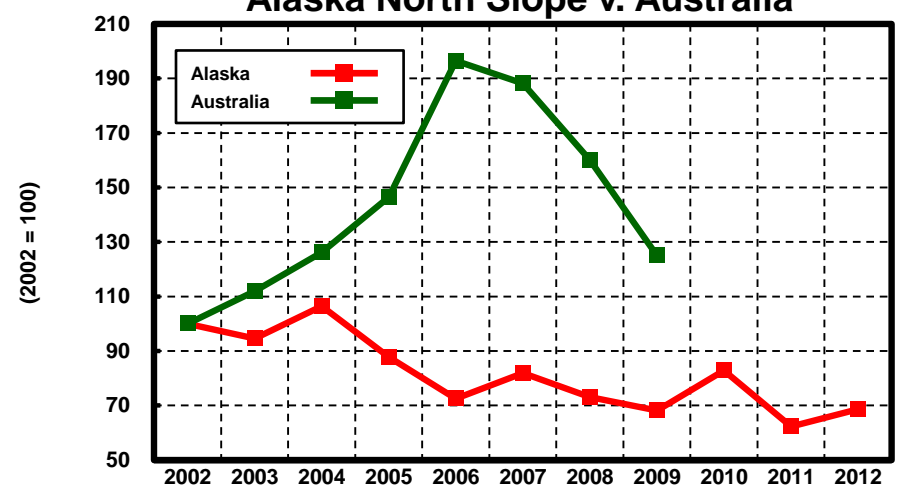
Alaska North Slope v. United States



Alaska North Slope v. Canada



Alaska North Slope v. Australia

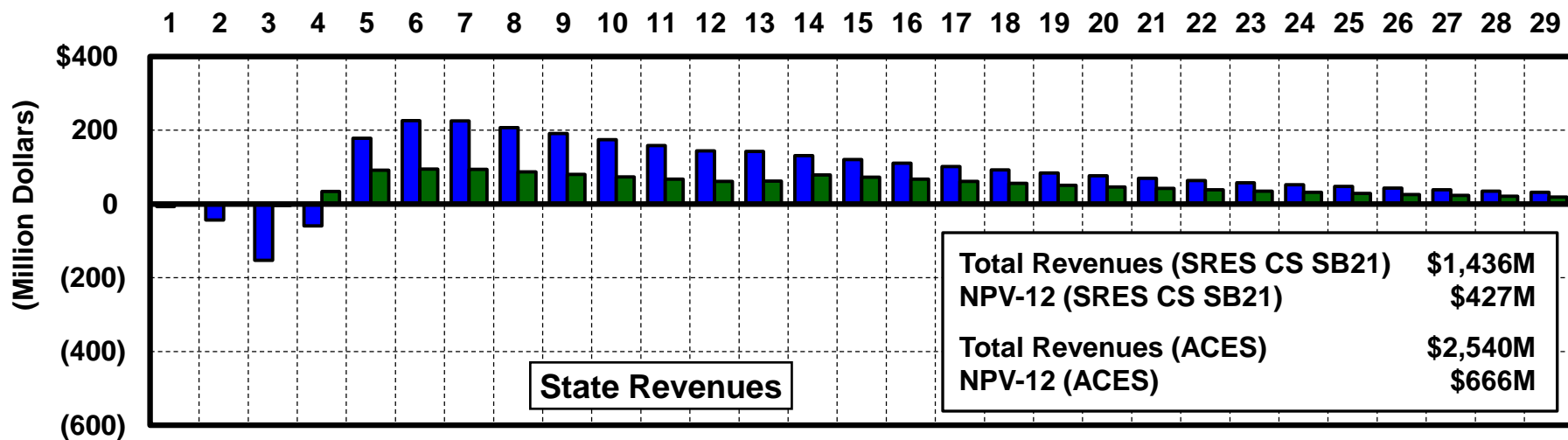
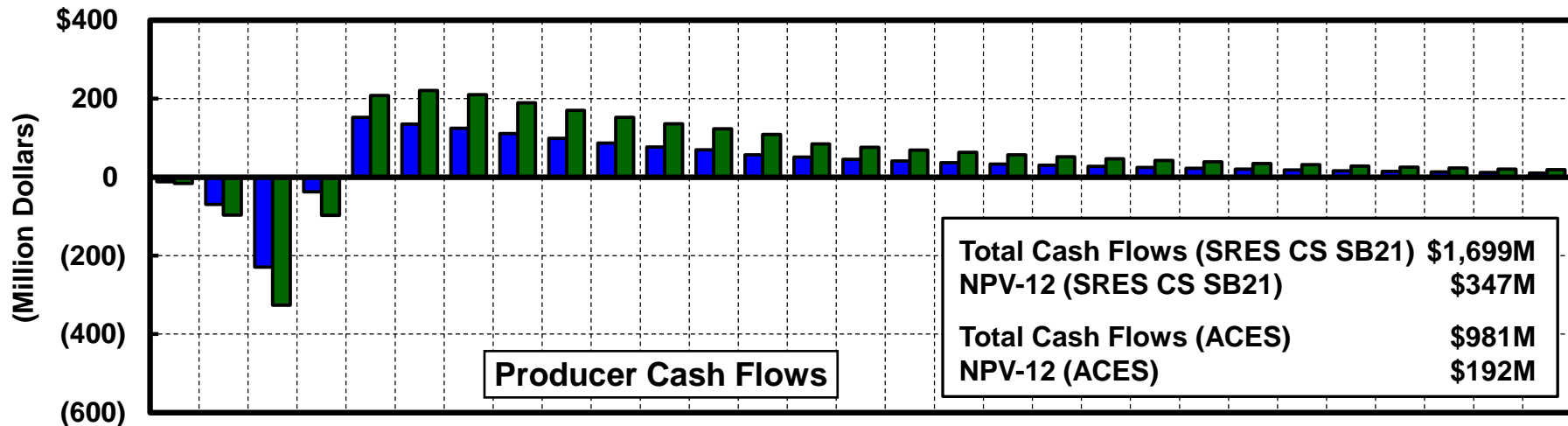


Annual State Revenues and Producer Cash Flows at \$100 West Coast ANS (\$2012)

Lower Cost Oil Alaska Development

New Participant in Alaska

ACES █ SRES CS SB21 █



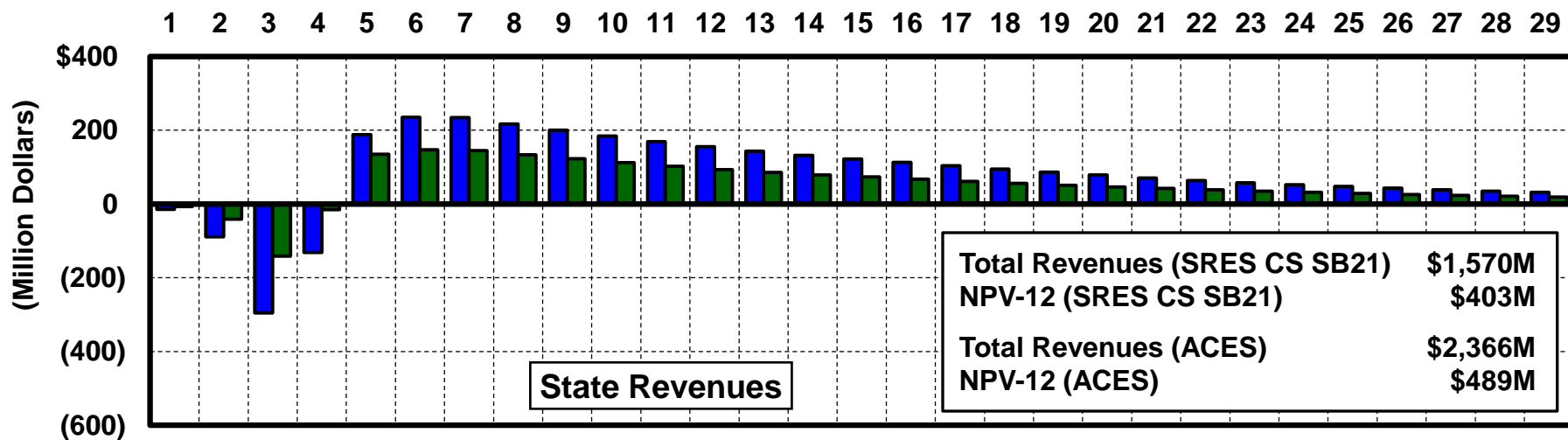
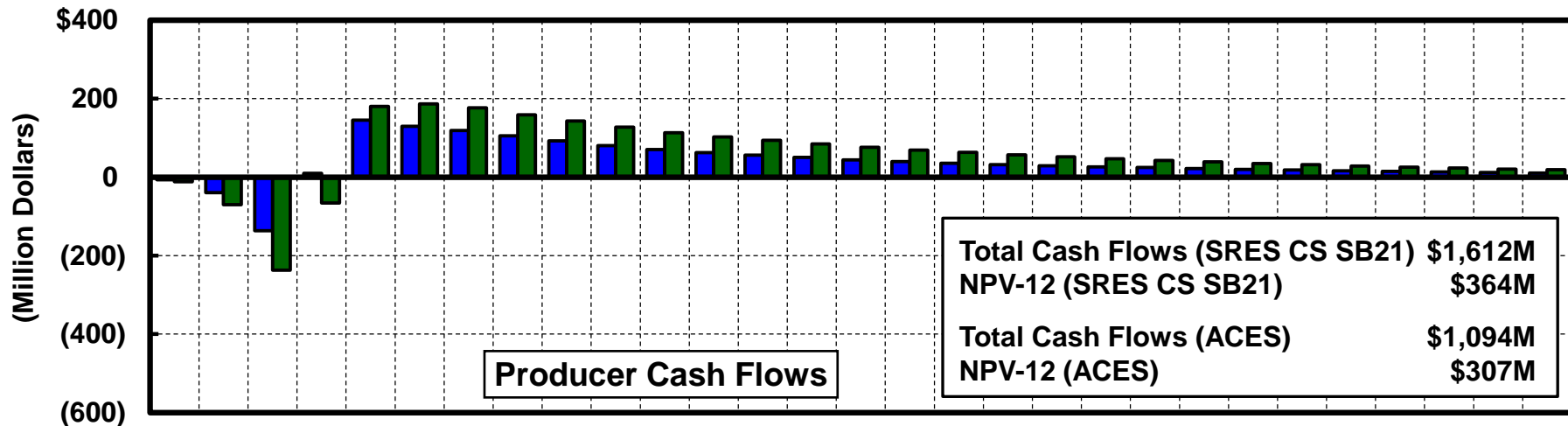
Lower Cost: \$16 Per Barrel Development Capex and \$14 Per Barrel Opex

Annual State Revenues and Producer Cash Flows at \$100 West Coast ANS (\$2012)

Lower Cost Oil Alaska Development

Incumbent Participant in Alaska

ACES █ SRES CS SB21 █



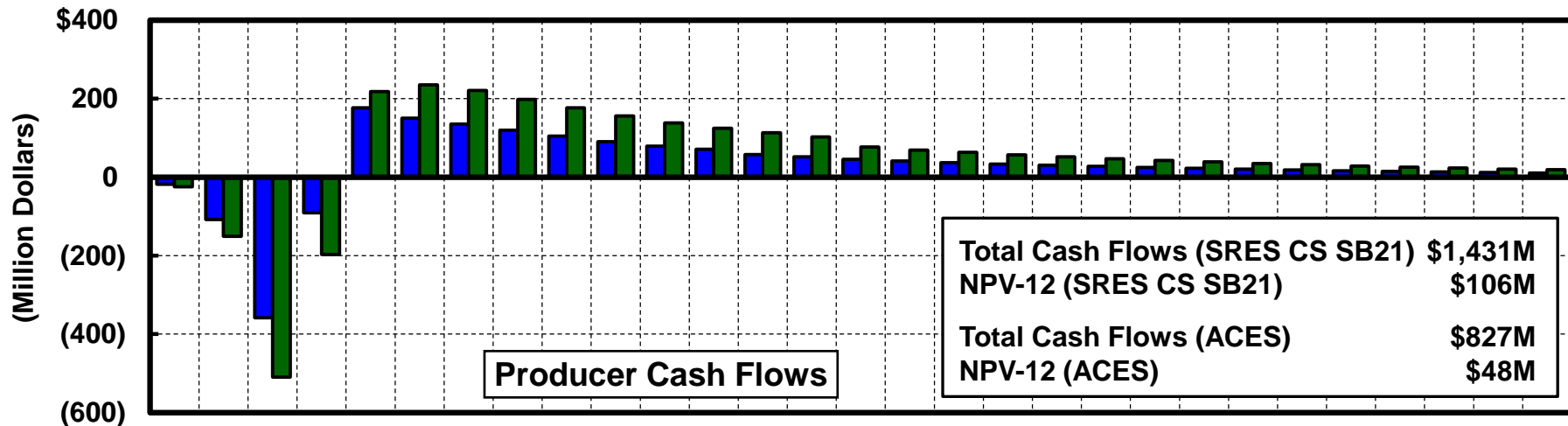
Lower Cost: \$16 Per Barrel Development Capex and \$14 Per Barrel Opex

Annual State Revenues and Producer Cash Flows at \$100 West Coast ANS (\$2012)

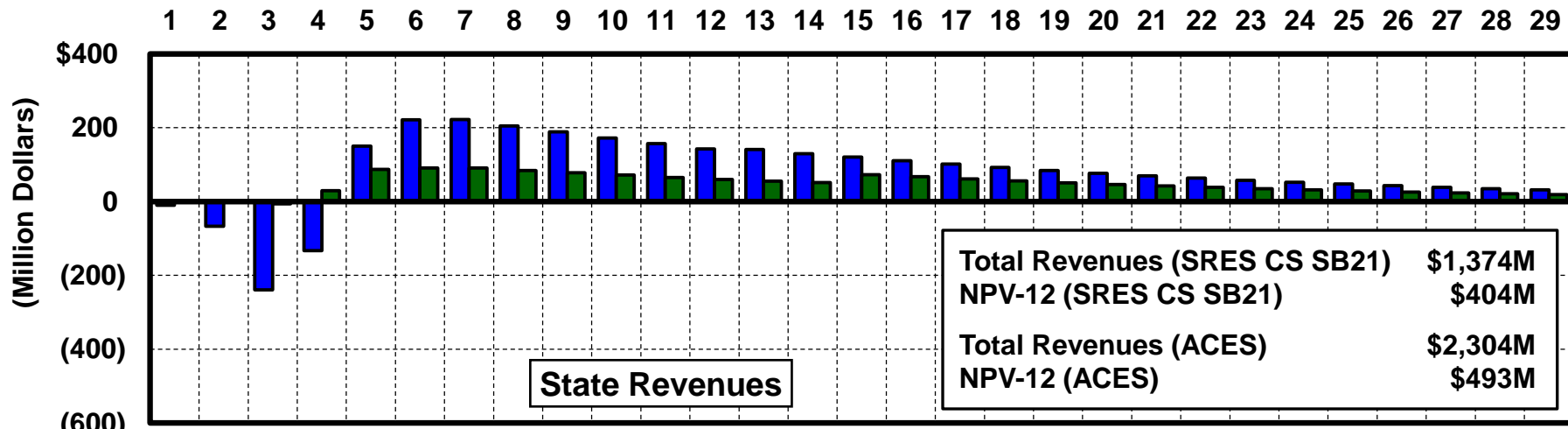
Higher Cost Oil Alaska Development

New Participant in Alaska

ACES █ SRES CS SB21 █



Producer Cash Flows



State Revenues

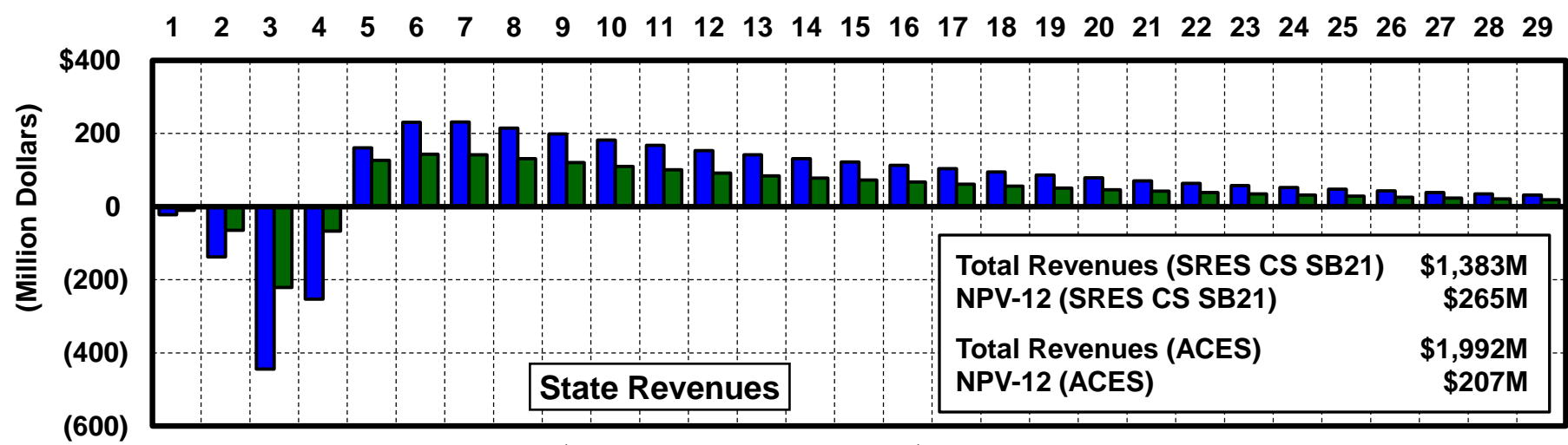
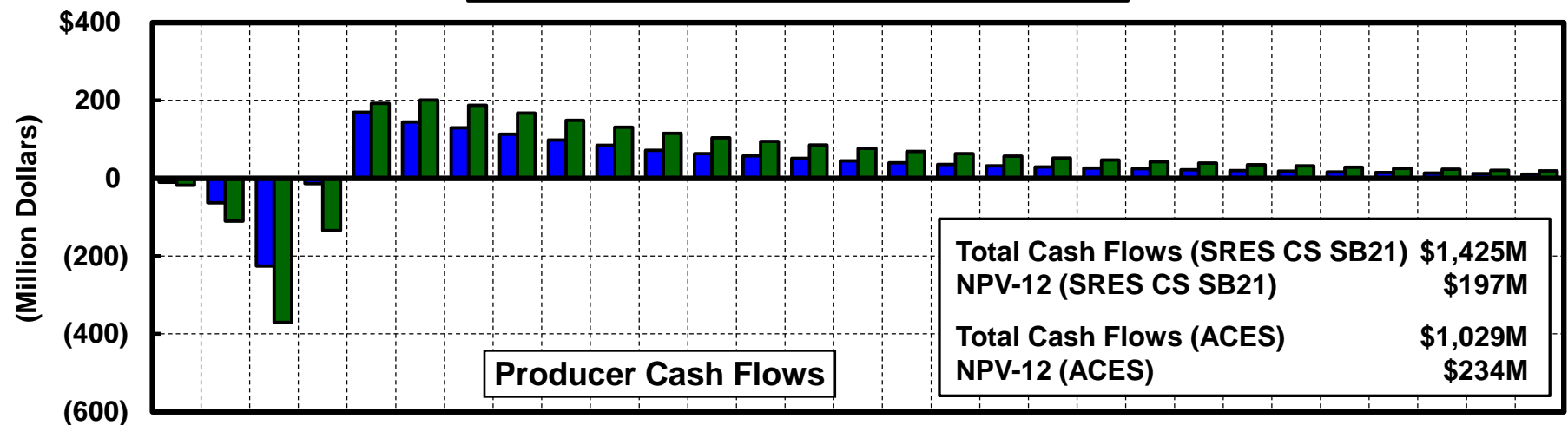
Higher Cost: \$25 Per Barrel Development Capex and \$14 Per Barrel Opex

Annual State Revenues and Producer Cash Flows at \$100 West Coast ANS (\$2012)

Higher Cost Oil Alaska Development

Incumbent Participant in Alaska

ACES █ SRES CS SB21 █



Higher Cost: \$25 Per Barrel Development Capex and \$14 Per Barrel Opex