



State of Alaska Department of Revenue

Fall 2017 Revenue Forecast Presentation

Revenue Sources Book released December 12, 2017

Presentation to Senate Finance Committee, January 22, 2018

Commissioner Sheldon Fisher
Alaska Department of Revenue



FORECASTING METHODS: Timeline

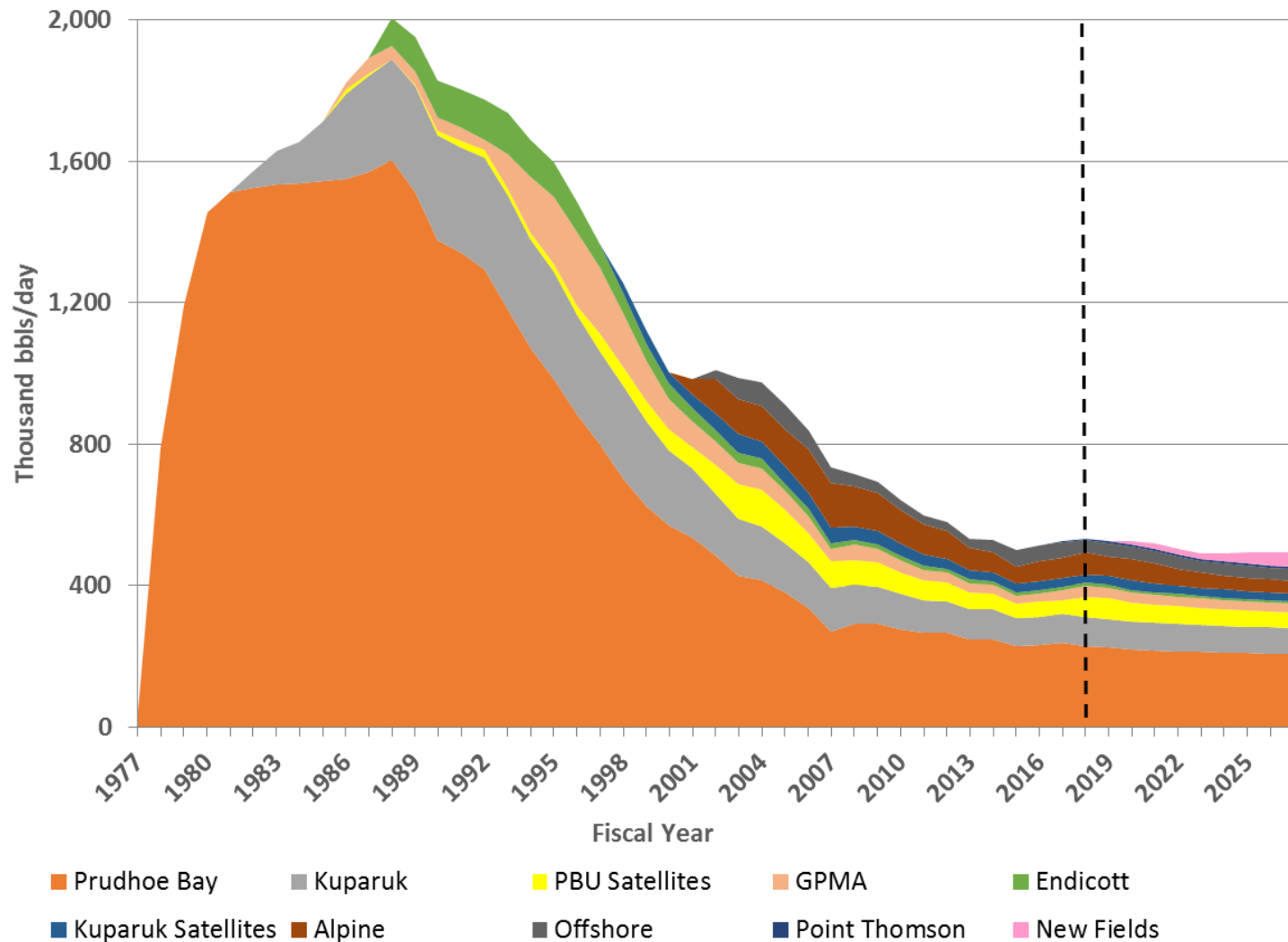
- December 2016: Fall 2016 Forecast and Revenue Sources Book
- Early April 2017: Spring 2017 Forecast
- Late April 2017: Spring 2017 Alternative Scenario
 - 4% Production Decline Scenario, Letter to Co-Chairs
 - Used in modeling by Department of Revenue, Office of Management and Budget, and Legislative Finance
- October 2017: Preliminary Fall 2017 Forecast
 - Non-standard, provided to assist special session
- December 2017: Final Fall 2017 Forecast and Revenue Sources Book
- March 2018: Spring 2018 Forecast

Fall 2017

Production Forecast



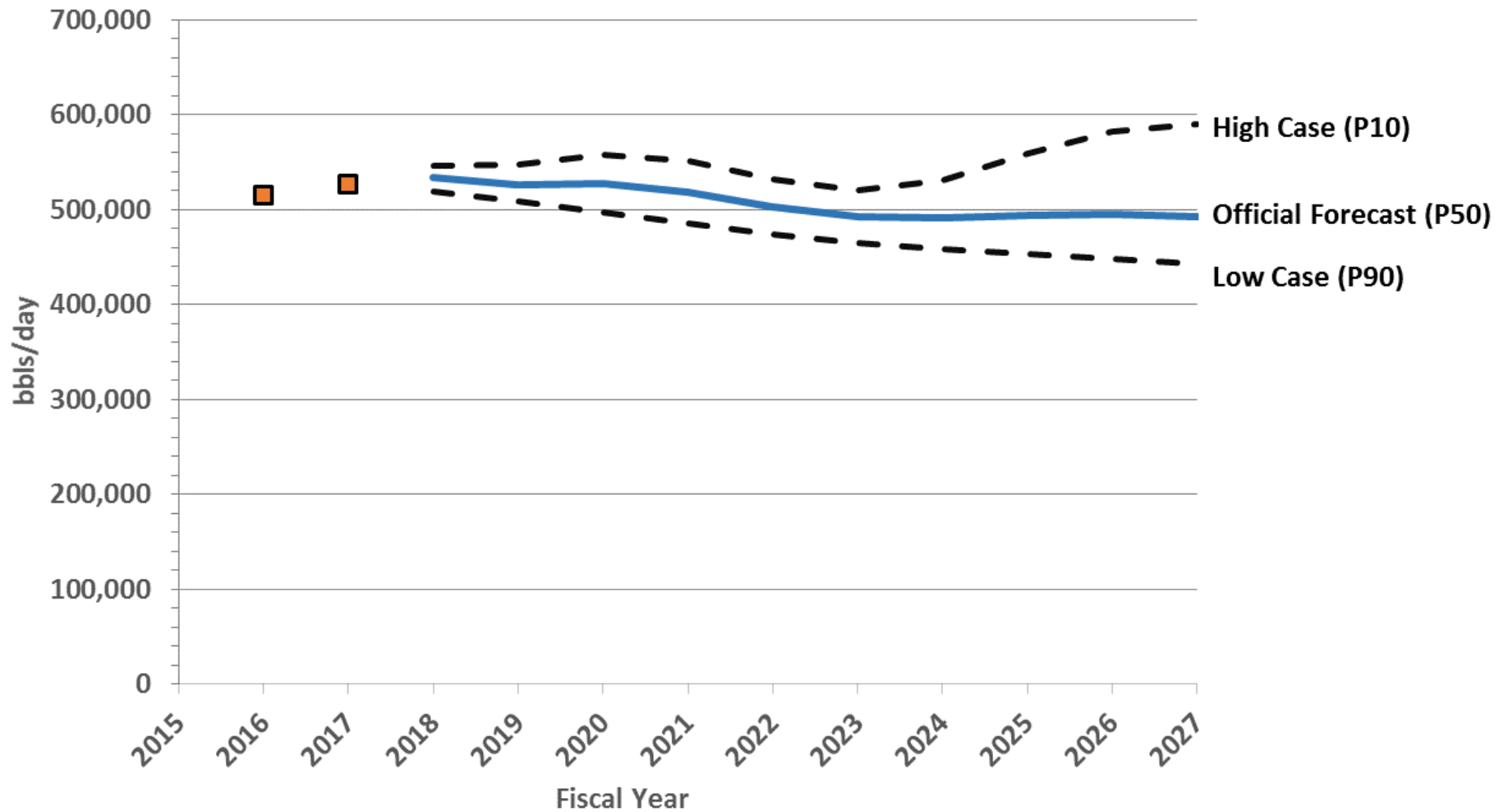
PRODUCTION FORECAST: ANS History and Forecast by Pool



Source: Department of Revenue and Department of Natural Resources

ANS = Alaska North Slope; PBU = Prudhoe Bay Unit; GPMA = Greater Point McIntyre Area

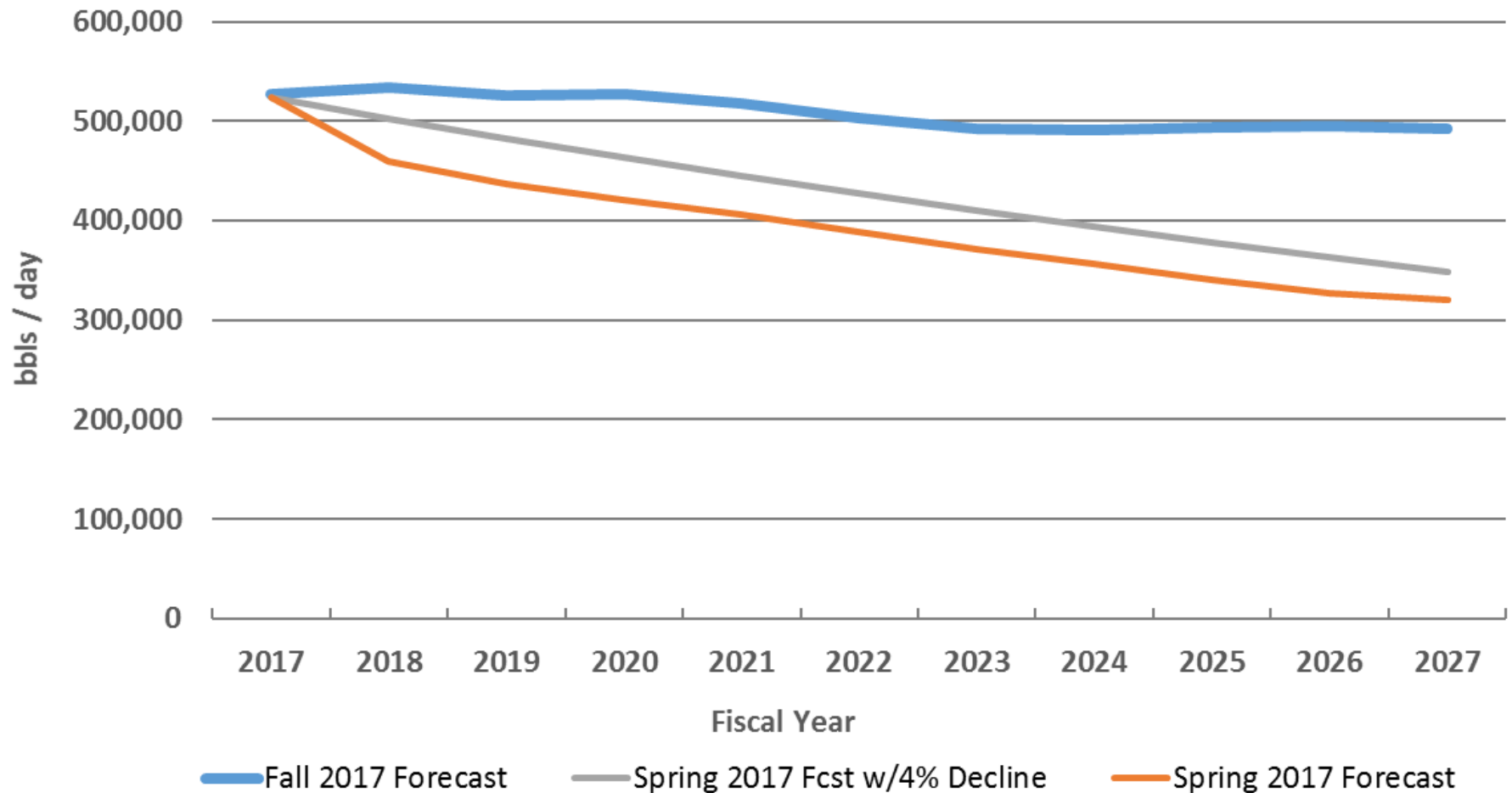
PRODUCTION FORECAST: ANS High and Low Case



Source: Department of Revenue and Department of Natural Resources

ANS = Alaska North Slope

PRODUCTION FORECAST: ANS Comparison to Prior Forecast

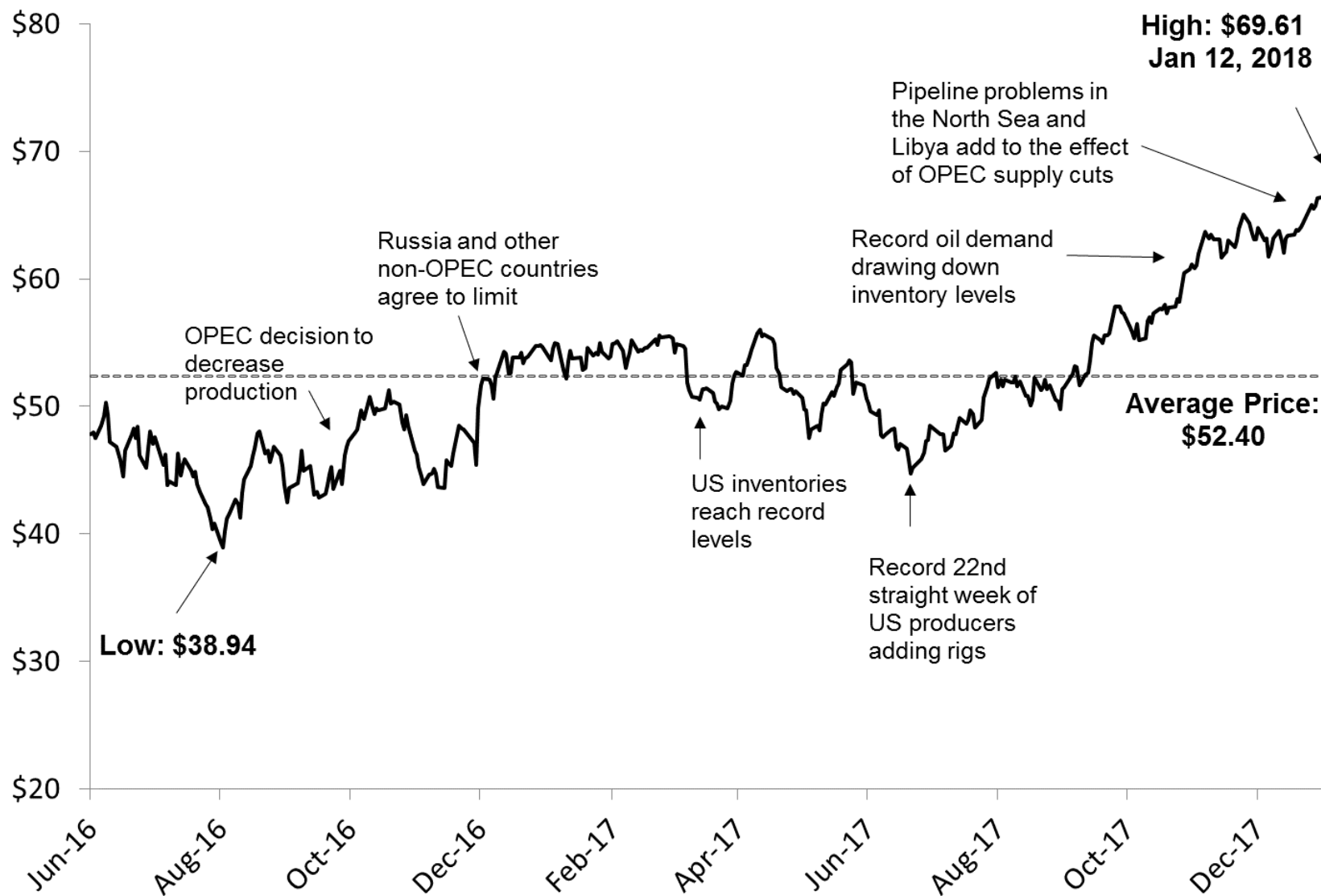


Source: Department of Revenue and Department of Natural Resources

Fall 2017 Price Forecast

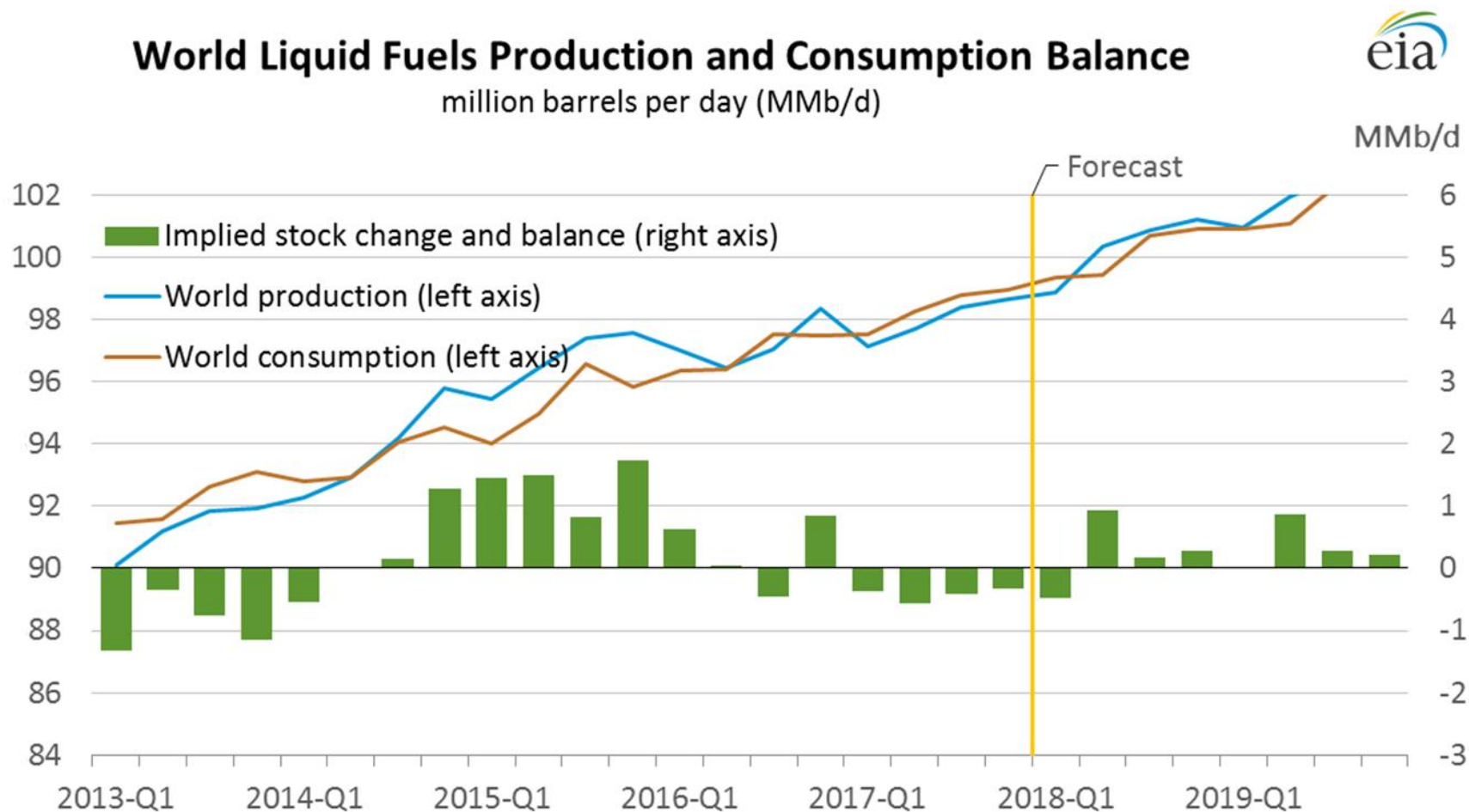


PRICE FORECAST: Historical ANS Price, June 2016+



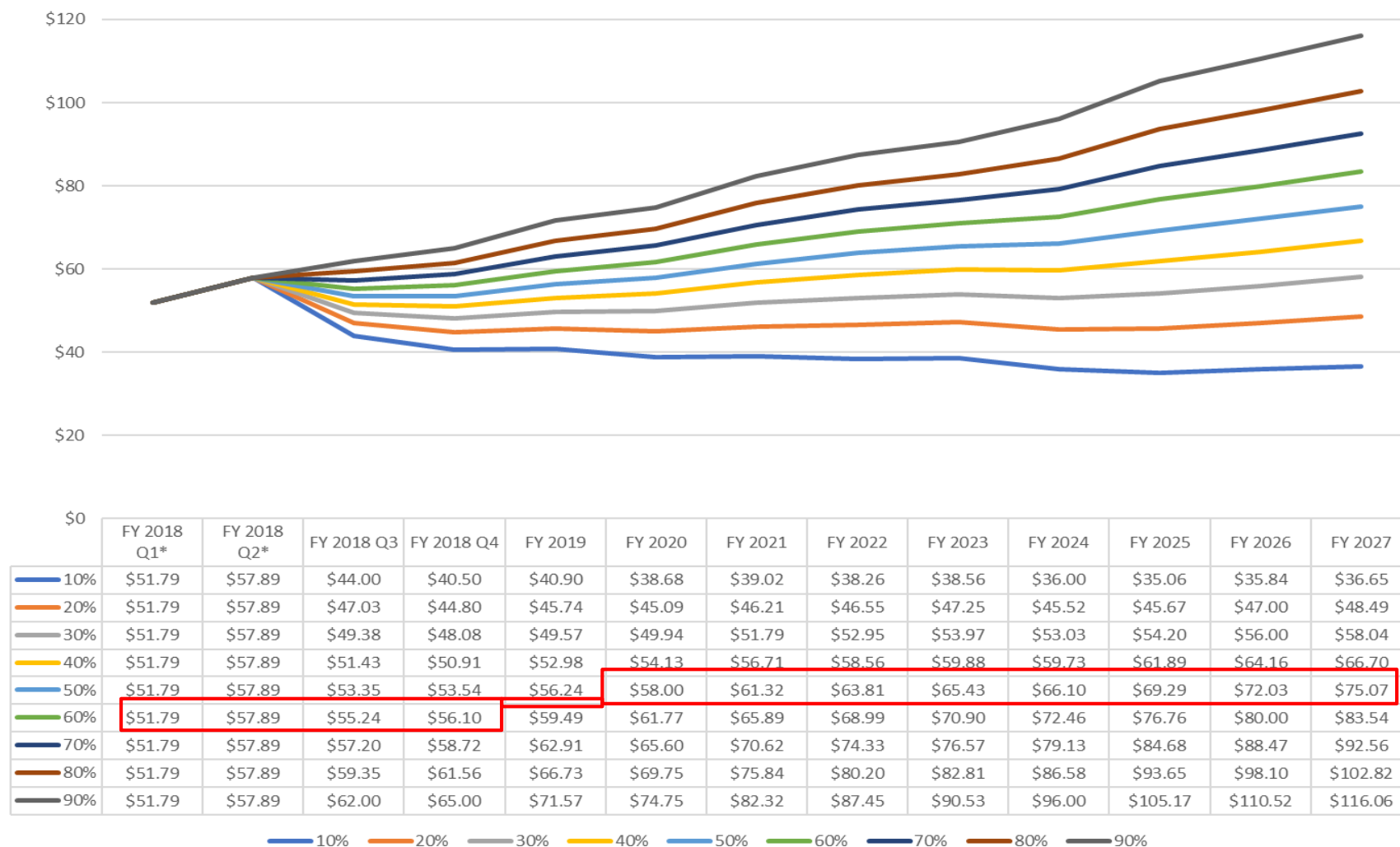
Source: Fall 2017 Revenue Sources Book figure 4-B

PRICE FORECAST: Impact of Spare Capacity



Source: Short-Term Energy Outlook, January 2018.

PRICE FORECAST: Nominal ANS Price Distribution

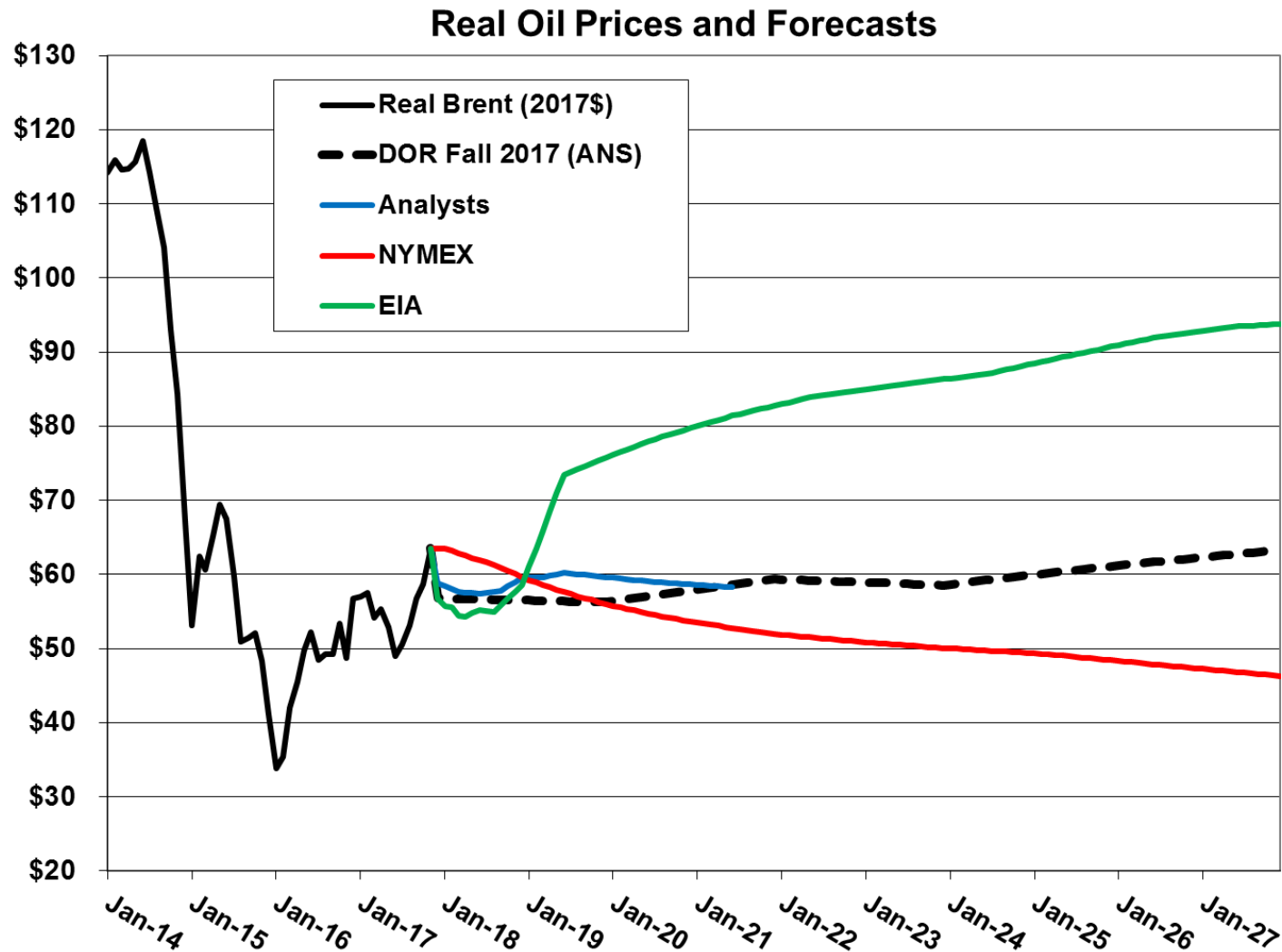


* Includes actual prices through December 2017.

Note: Forecasted prices have been rounded to the nearest dollar starting in FY 2021.

Source: Department of Revenue – Economic Research

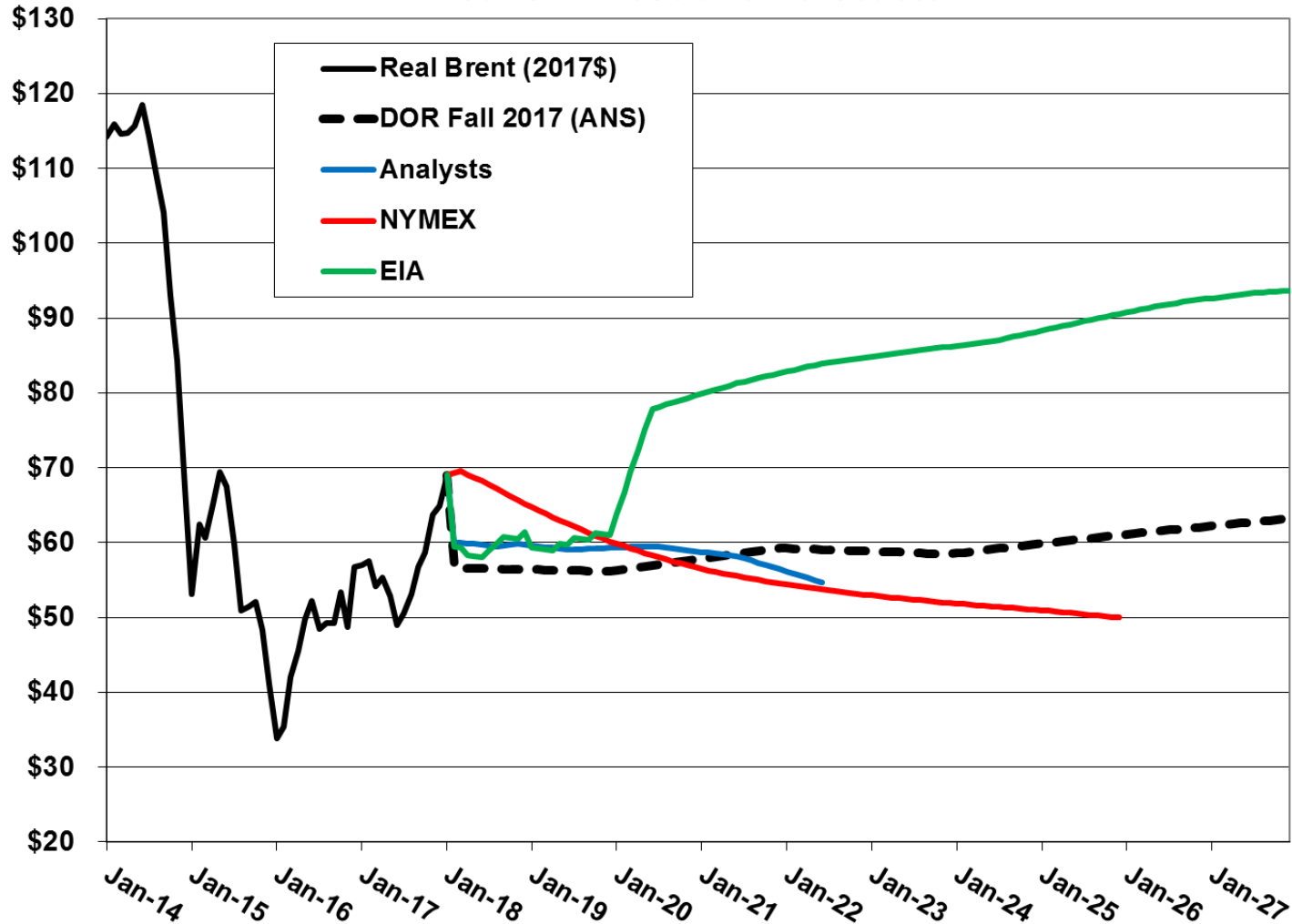
PRICE FORECAST: Brent Forecasts Comparison to DOR ANS Forecast: November 2017



Sources: Analyst forecast is an average of 12 firms from a Bloomberg survey as of Nov. 16, 2017. Futures prices are from the New York Mercantile Exchange (NYMEX) as of Nov. 20, 2017. The U.S. Energy Information Administration (EIA) forecast is a combination of November 2017 Short-Term Energy Outlook (through 2019) and 2017 Annual Energy Outlook (2020-2027). Forecasts are adjusted using Alaska Department of Revenue's 2.25% inflation assumption.

PRICE FORECAST: Brent Forecasts Comparison to DOR ANS Forecast: January 2018 (current)

Real Oil Prices and Forecasts



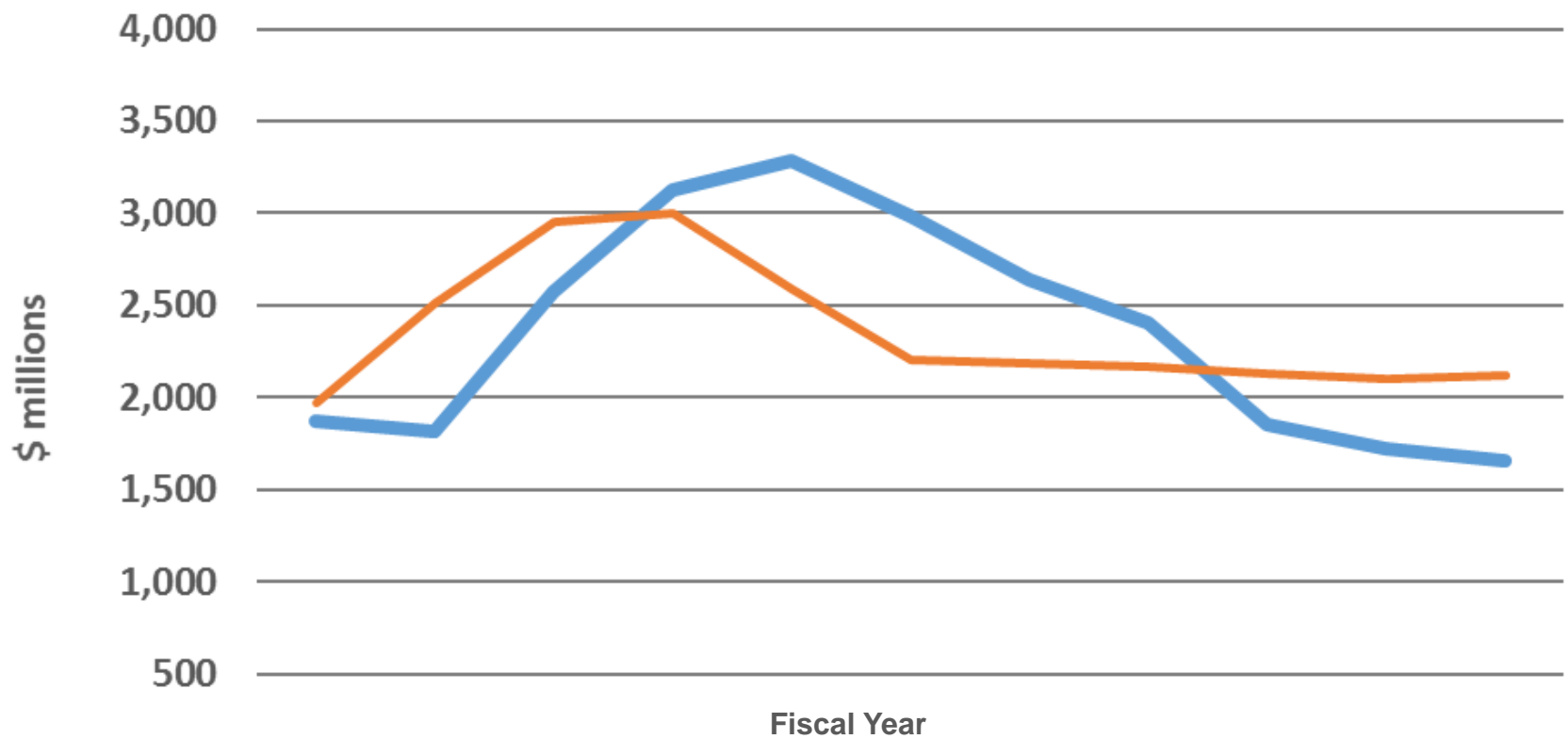
Sources: Analyst forecast is an average of 12 firms from a Bloomberg survey as of Jan. 16, 2018. Futures prices are from the New York Mercantile Exchange (NYMEX) as of Jan 16, 2018. The U.S. Energy Information Administration (EIA) forecast is a combination of January 2018 Short-Term Energy Outlook (through 2019) and 2017 Annual Energy Outlook (2020-2027). Forecasts are adjusted using Alaska Department of Revenue's 2.25% inflation assumption.

Fall 2017

Cost Forecast



COST FORECAST: North Slope Capital Lease Expenditures

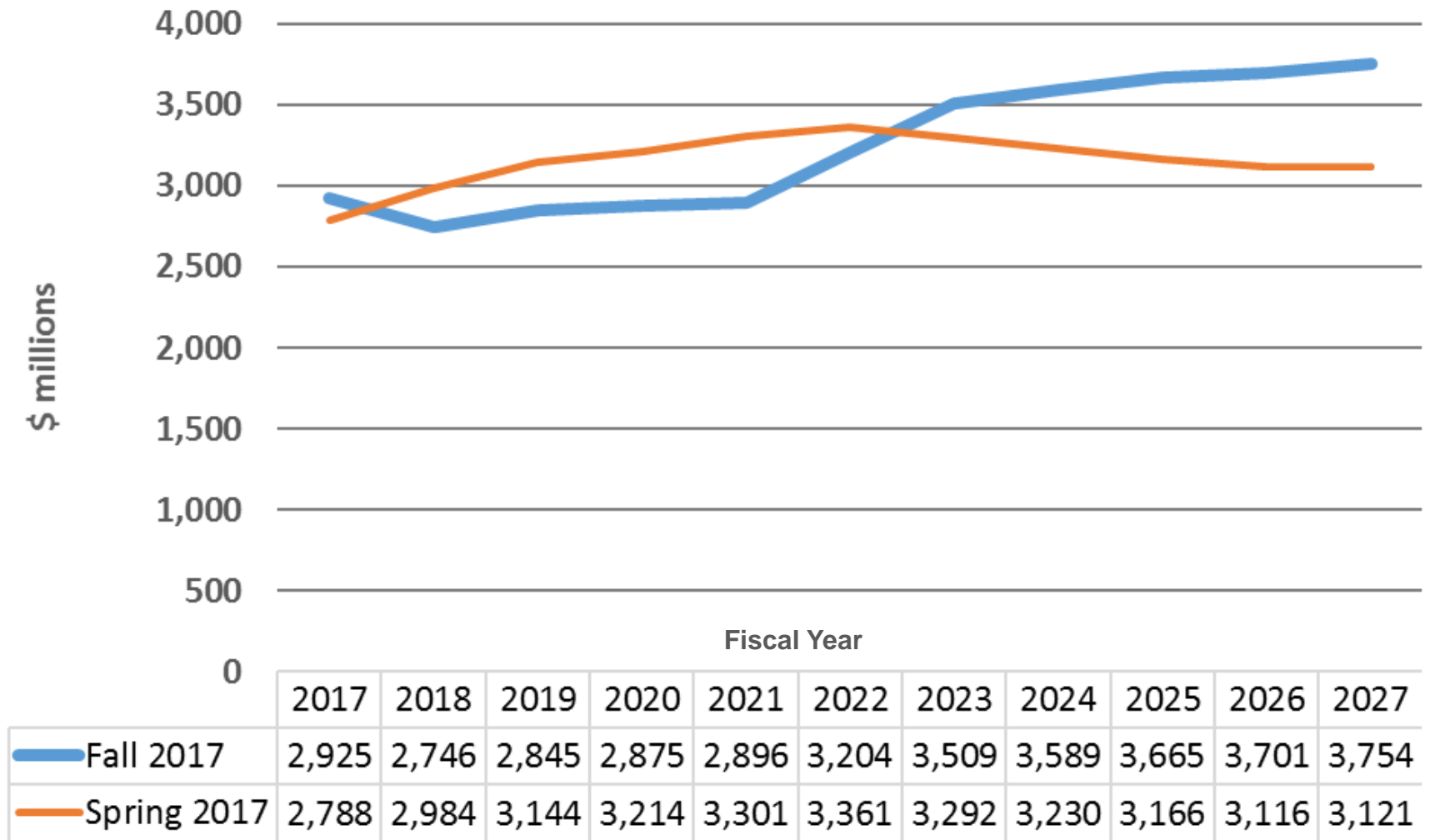


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
— Fall 2017	1,875	1,812	2,572	3,127	3,287	2,982	2,636	2,405	1,850	1,723	1,652
— Spring 2017	1,966	2,514	2,955	3,001	2,589	2,207	2,184	2,164	2,128	2,101	2,121

Note: These estimates include lease expenditures by companies that are not expected to have a tax liability.

Source: Department of Revenue – Economic Research

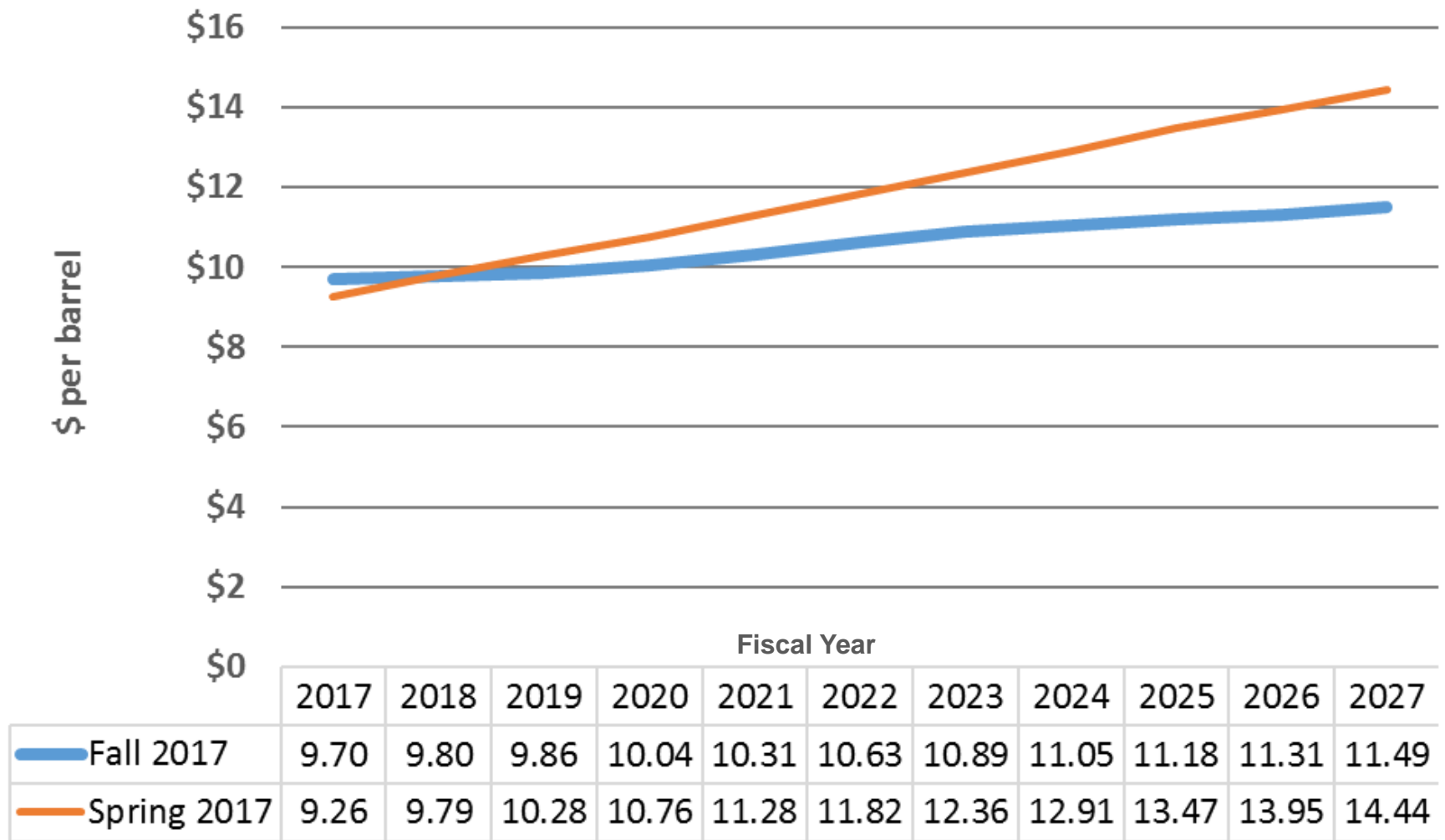
COST FORECAST: North Slope Operating Lease Expenditures



Note: These estimates include lease expenditures by companies that are not expected to have a tax liability.

Source: Department of Revenue – Economic Research

COST FORECAST: North Slope Transportation Costs



Source: Department of Revenue – Economic Research

Fall 2017


Credits Forecast



Illustration of Tax and Credit Calculations

FY 2019 production tax illustration – Spring 2017

~140 million taxable barrels


	Per taxable Barrel	Total(\$MM)	
Market Price	\$60.00	\$8,400	
<u>Transportation Cost</u>	<u>(\$10.28)</u>	<u>(\$1,400)</u>	
Gross Value	\$49.72	\$7,000	
<u>Lease Expenditures</u>	<u>(\$39.54)</u>	<u>(\$5,600)</u>	
Production Tax Value	\$10.18	\$1,400	
Tax @ 35%	\$3.56	\$490	10% x \$490 = \$49 Million
<u>Per-Barrel Credit</u>	<u>\$8.00</u>	<u>(\$490)</u>	
Net Payment	\$0.00	\$0	
Minimum Tax Gross x 4%	\$1.99	\$278	
<u>Higher Of (Actual Tax)</u>	<u>\$1.99</u>	<u>\$278</u>	

Note: Tax calculation simplified for illustration purposes

Illustration of Tax and Credit Calculations

FY 2019 production tax illustration – Final Fall 2017

~169 million taxable barrels

	Per taxable Barrel	Total(\$MM)	
Market Price	\$57.00	\$9,600	
<u>Transportation Cost</u>	<u>(\$9.86)</u>	<u>(\$1,600)</u>	
Gross Value	\$47.14	\$8,000	
<u>Lease Expenditures</u>	<u>(\$26.79)</u>	<u>(\$4,500)</u>	15% x \$1,250 = \$190 Million
Production Tax Value	\$20.35	\$3,500	
Tax @ 35%	\$7.12	\$1,250	
<u>Per-Barrel Credit</u>	<u>\$8.00</u>	<u>(\$1,250)</u>	
Net Payment	\$0.00	\$0	
Minimum Tax Gross x 4%	\$1.89	\$320	
<u>Higher Of (Actual Tax)</u>	<u>\$1.89</u>	<u>\$320</u>	

Note: Tax calculation simplified for illustration purposes

FY 2019 Statutory Credit Appropriation

Key Changes from Spring to Final Fall:

➤ Production forecast increased

- 29 million more taxable barrels
- \$1.0 billion more gross value

➤ Cost forecast decreased

- \$1.1 billion less deductible costs

➤ Tax before credits increased

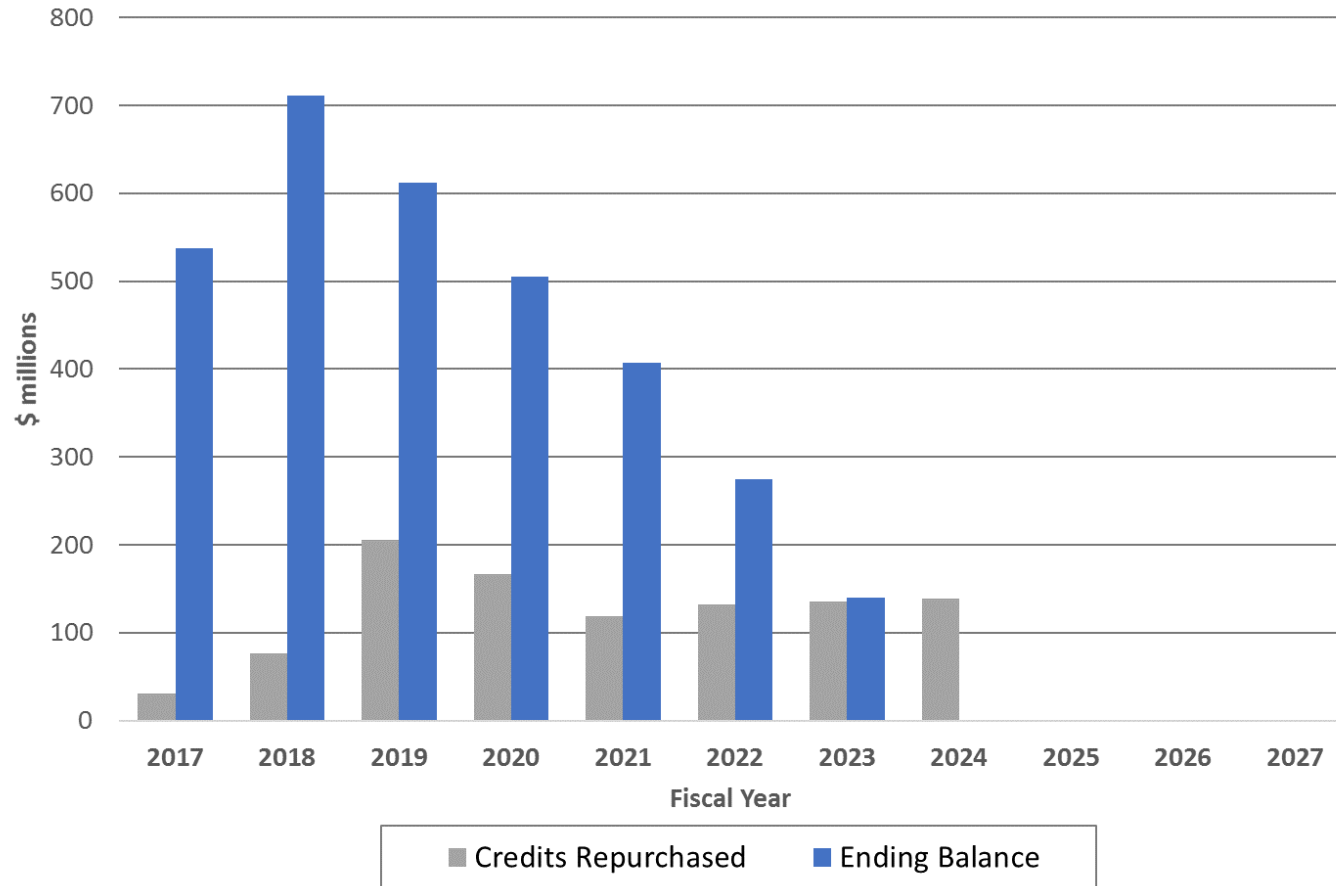
- \$2.1 billion more profit x 35% = \$750 million

➤ Different Statutory Appropriation Multiplier

- Appropriation is 15% of tax before credits when price forecast <\$60, 10% when price forecast is \$60+

CREDITS FORECAST: Outstanding Tax Credit Obligations

Ending balance of credits available for repurchase, assuming statutory appropriation for FY 2019+



Per AS 43.55.028, minimum appropriation is 10% of production tax levied, before credits, when ANS price forecast is \$60 or higher. Minimum appropriation is 15% of production tax levied, before credits, when ANS price forecast is below \$60. Does not include changes in company behavior or credit transfers beyond FY 2019 as a result of only making minimum appropriation.

Source: Department of Revenue – Economic Research

Changes from Prior Revenue Forecasts



FORECAST CHANGE: Production Tax Revenue

- Oil price forecasts decreased slightly from spring forecast
- Oil production long-term forecasts have stabilized versus spring forecast
- FY 2018 production tax revenue forecast increased from Preliminary Fall Forecast by \$173 million
 - Large unexpected prior-year production tax payments were received after the preliminary forecast was compiled.
 - Price forecast increased by \$2 per barrel.
- Lease expenditures expected to fluctuate over the forecast period due to forecasted new production. Companies have cut costs for existing fields but new fields will add costs, versus spring forecast
- Companies cited Alaska investment instability and uncertainty regarding the state fiscal system, as factors impacting decision making

FORECAST CHANGE: Comparison of Spring and Fall 2017 Forecasts for FY 2018

Fiscal Year 2018	Prelim Fall 2017 Fcst	Final Fall 2017 Fcst	Change	% Change		Spring 2017 Fcst (official)	Final Fall 2017 Fcst	Change	% Change
Oil Price (ANS West Coast per barrel)	\$54.00	\$56.00	\$2.00	4%		\$54.00	\$56.00	\$2.00	4%
ANS Oil Production (THS bbls/day)	533.3	533.4	0.1	0%		459.9	533.4	73.5	16%
ANS Deductible Lease Expenditures (\$ millions)	\$4,205	\$4,236	\$31	1%		\$4,950	\$4,236	(\$714)	-14%
Transportation Costs (\$/barrel)	\$9.80	\$9.80	\$0.00	0%		\$9.79	\$9.80	\$0.01	0%
GF Unrestricted Petroleum Revenue (\$ millions)	\$1,318	\$1,561	\$243	16%		\$1,279	\$1,561	\$282	22%

THS = Thousands; GF = General Fund; Fcst = Forecast

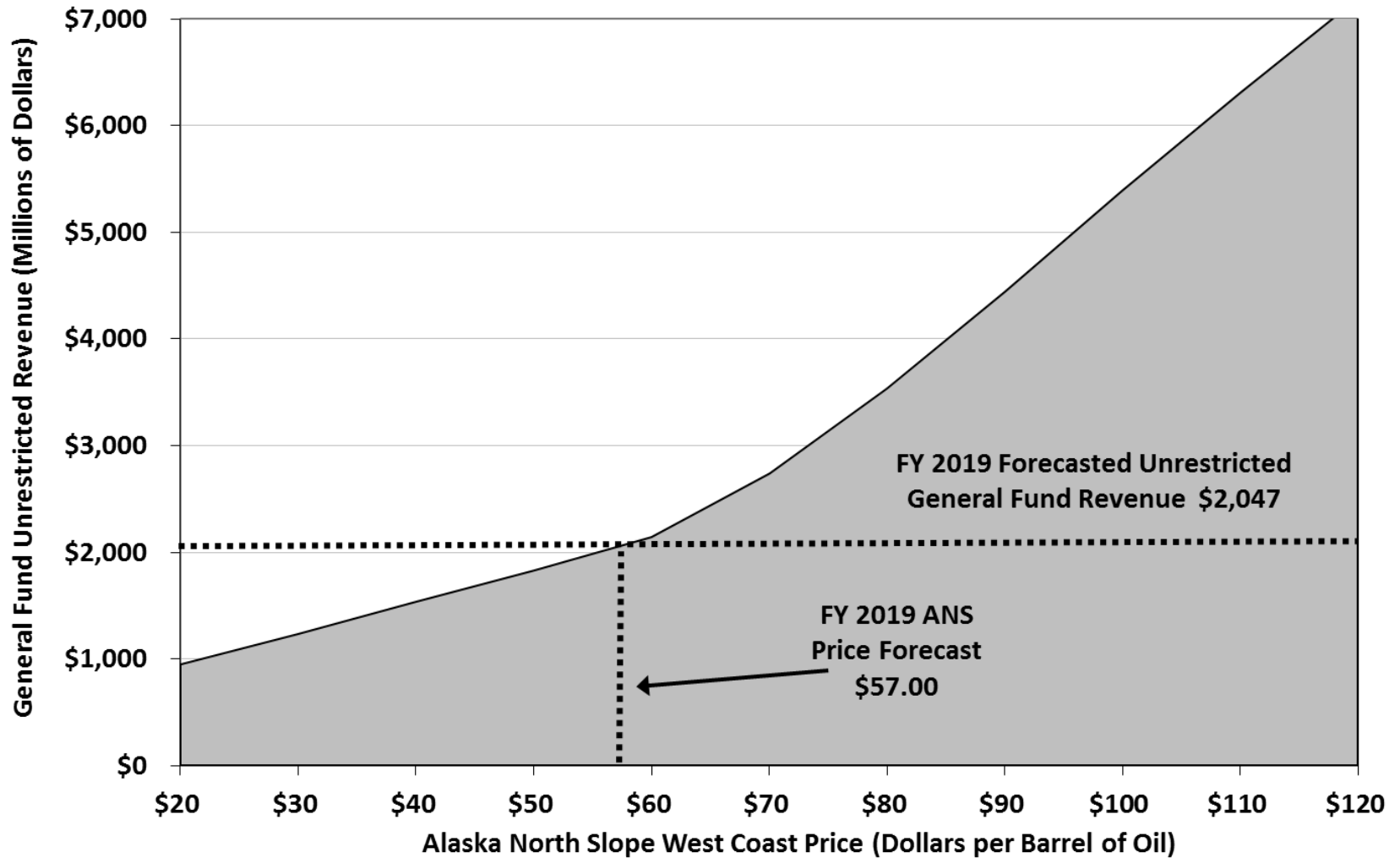
Source: Department of Revenue – Economic Research

FORECAST CHANGE: Comparison of Spring and Fall 2017 Forecasts for FY 2019

Fiscal Year 2019	Prelim Fall 2017 Fcst	Final Fall 2017 Fcst	Change	% Change		Spring 2017 Fcst (official)	Final Fall 2017 Fcst	Change	% Change
Oil Price (ANS West Coast per barrel)	\$56.00	\$57.00	\$1.00	2%		\$60.00	\$57.00	(\$3.00)	-5%
ANS Oil Production (THS bbls/day)	528.8	525.7	(3.1)	-1%		437.3	525.7	88.4	20%
ANS Deductible Lease Expenditures (\$ millions)	\$4,496	\$4,529	\$32	1%		\$5,545	\$4,529	(\$1,017)	-18%
Transportation Costs (\$/barrel)	\$9.86	\$9.86	\$0.00	0%		\$10.28	\$9.86	(\$0.42)	-4%
GF Unrestricted Petroleum Revenue (\$ millions)	\$1,406	\$1,437	\$31	2%		\$1,352	\$1,437	\$85	6%

THS = Thousands; GF = General Fund; Fcst = Forecast

GFUR Relative to Price per Barrel, FY 2019



Source: Department of Revenue – Economic Research

Fall 2017

Total Revenue Forecast



REVENUE FORECAST: 2017 to 2019 Totals

\$ millions	History	Forecast	
Revenue Type	FY 2017	FY 2018	FY 2019
Unrestricted General Fund			
Oil Revenue	876.4	1,561.1	1,436.8
Non-Oil Revenue ⁽¹⁾	456.9	497.3	562.3
Investment Revenue	17.3	23.2	48.0
Total Unrestricted Revenue	1,350.6	2,081.6	2,047.1
Designated General Fund			
Non-Oil Revenue ⁽¹⁾	395.0	415.9	365.5
Investment Revenue	59.4	44.5	36.7
Subtotal	454.4	460.4	402.2
Other Restricted Revenue			
Oil Revenue	822.4	393.0	451.4
Non-Oil Revenue ⁽¹⁾	301.1	254.3	258.0
Investment Revenue ⁽²⁾	6,773.4	3,383.7	3,982.6
Subtotal	7,896.8	4,031.0	4,692.0
Federal Revenue			
Oil Revenue	1.4	12.1	5.6
Federal Receipts ⁽³⁾	2,640.1	3,743.8	3,826.5
Subtotal	2,641.5	3,755.9	3,832.1
Total State Revenue	12,343.3	10,328.8	10,973.3

(1) Except Federal and Investment

(2) Investment revenue is primarily Alaska Permanent Fund, based on 6.5% median expected return

(3) Federal Receipt forecasts are based on total authorization, actual revenue typically comes in below forecast

Source: Department of Revenue – Economic Research

REVENUE FORECAST: 2017 to 2019 Unrestricted Petroleum Revenue

\$ millions	History		Forecast			
	FY 2017	Percent	FY 2018	Percent	FY 2019	Percent
Unrestricted General Fund Revenue						
Taxes						
Petroleum Property Tax	120.4	13.7%	117.2	7.5%	110.8	7.7%
Petroleum Corporate Income Tax	-59.4	-6.8%	130.0	8.3%	170.0	11.8%
Production Tax	134.4	15.3%	457.8	29.3%	338.8	23.6%
Subtotal Taxes	195.4	22.3%	705.0	45.2%	619.6	43.1%
Royalties						
Mineral Bonuses and Rents	15.5	1.8%	14.1	0.9%	14.1	1.0%
Oil and Gas Royalties	676.2	77.2%	837.8	53.7%	798.9	55.6%
Interest	-10.7	-1.2%	4.2	0.3%	4.2	0.3%
Subtotal Royalties	680.9	77.7%	856.1	54.8%	817.2	56.9%
Total Petroleum Revenue	876.4	100%	1,561.1	100%	1,436.8	100%

Source: Department of Revenue – Economic Research

REVENUE FORECAST: 2017 to 2019 Unrestricted

Non-Petroleum Revenue

\$ millions	History		Forecast			
	FY 2017	Percent	FY 2018	Percent	FY 2019	Percent
Unrestricted General Fund Revenue						
Taxes						
Non-Petroleum Corporate Income	86.5	18.2%	145.0	27.9%	145.0	23.8%
Mining License Tax	41.4	8.7%	45.8	8.8%	46.4	7.6%
Marijuana	0.9	0.2%	4.6	0.9%	9.0	1.5%
Tobacco	43.4	9.2%	40.8	7.8%	40.7	6.7%
Motor Fuel (Non Aviation)	34.7	7.3%	0.0	0.0%	0.0	0.0%
Motor Fuel (Conservation Surcharge)	6.6	1.4%	6.3	1.2%	6.3	1.0%
Insurance Premium Tax	0.0	0.0%	0.0	0.0%	56.7	9.3%
Other Taxes	52.7	11.1%	58.3	11.2%	59.5	9.7%
Subtotal Taxes	266.2	56.1%	300.8	57.8%	363.6	59.6%
Investments	15.7	3.3%	21.6	4.1%	46.4	7.6%
Other	192.3	40.6%	198.1	38.1%	200.3	32.8%
Total Non-Petroleum Revenue	474.2	100%	520.5	100%	610.3	100%

Source: Department of Revenue – Economic Research

WRAP-UP: Changes to 10-Year Unrestricted Revenue Outlook

ANS Production Changes from Prior Year

	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>
Final Fall 2017	1%	-1%	0%	-2%	-3%	-2%	0%	0%	0%	0%
Prelim Fall 2017	1%	-1%	0%	-2%	-3%	-2%	0%	0%	0%	0%
Spring 2017 (Official)	-12%	-5%	-4%	-3%	-4%	-4%	-4%	-4%	-4%	-2%

GF Unrestricted Revenue (\$ millions) – Final Fall 2017 vs Prelim Final 2017

	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>
Final Fall 2017	2,082	2,047	2,063	2,156	2,219	2,275	2,297	2,427	2,641	2,840
Prelim Fall 2017	1,834	2,019	2,070	2,165	2,215	2,231	2,252	2,400	2,631	2,806
change	248	28	-7	-9	4	44	45	27	10	34

GF Unrestricted Revenue (\$ millions) – Final Fall 2017 vs Official Spring 2017

	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>
Final Fall 2017	2,082	2,047	2,063	2,156	2,219	2,275	2,297	2,427	2,641	2,840
Spring 2017 (official)	1,832	1,920	1,923	1,963	2,028	2,046	2,066	2,144	2,181	2,180
change	250	127	140	193	191	229	231	283	460	660

Source: Department of Revenue – Economic Research

GF = General Fund

THANK YOU

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