



# 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

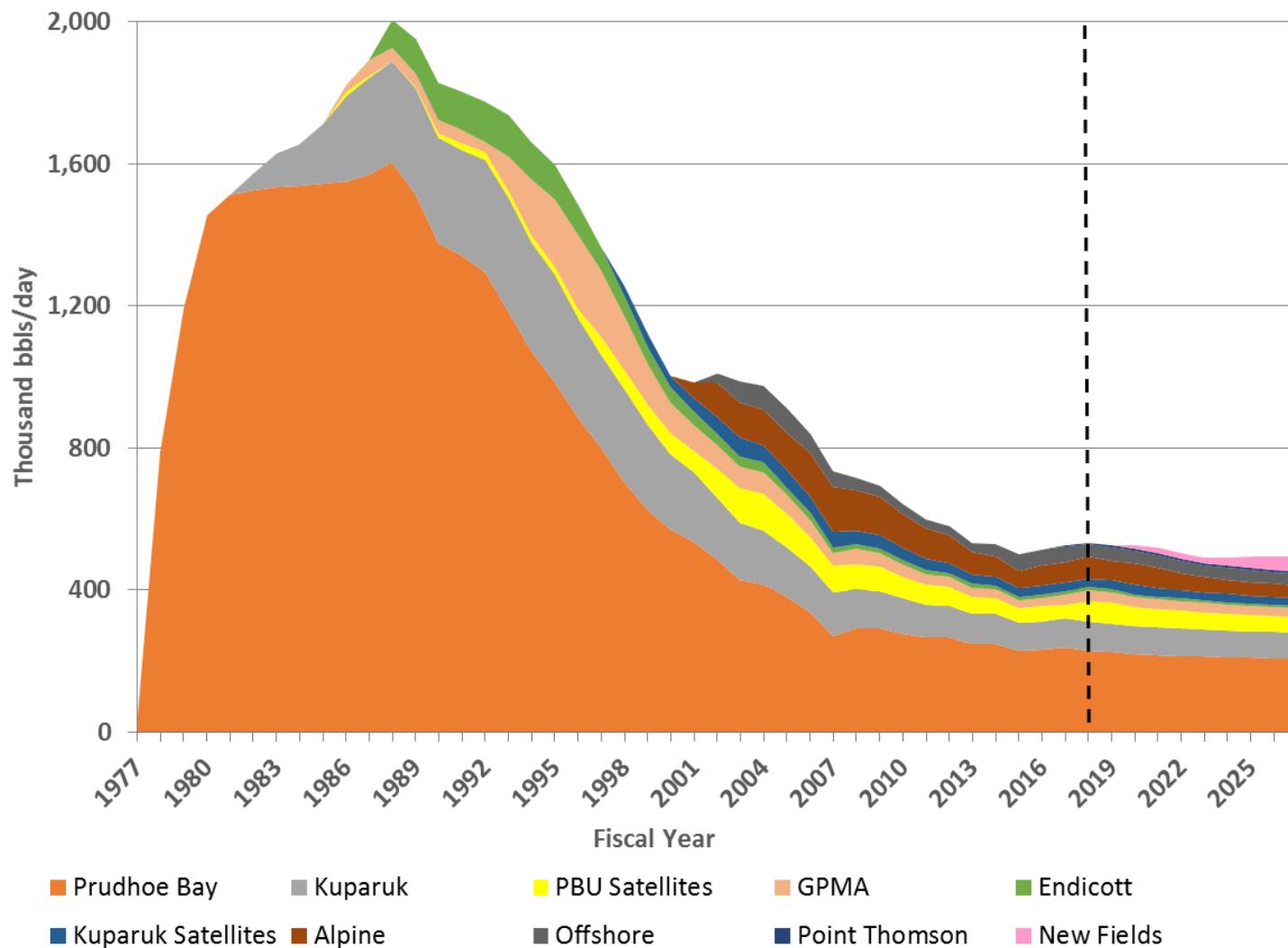
- December 2016: Fall 2016 Forecast and Revenue Sources Book
- Early April 2017: Spring 2017 Forecast
- Late April 2017: Spring 2017 Alternative Scenario
  - 4% Production Decline Scenario, Letter to Co-Chairs
  - Used in modeling by Department of Revenue, Office of Management and Budget, and Legislative 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



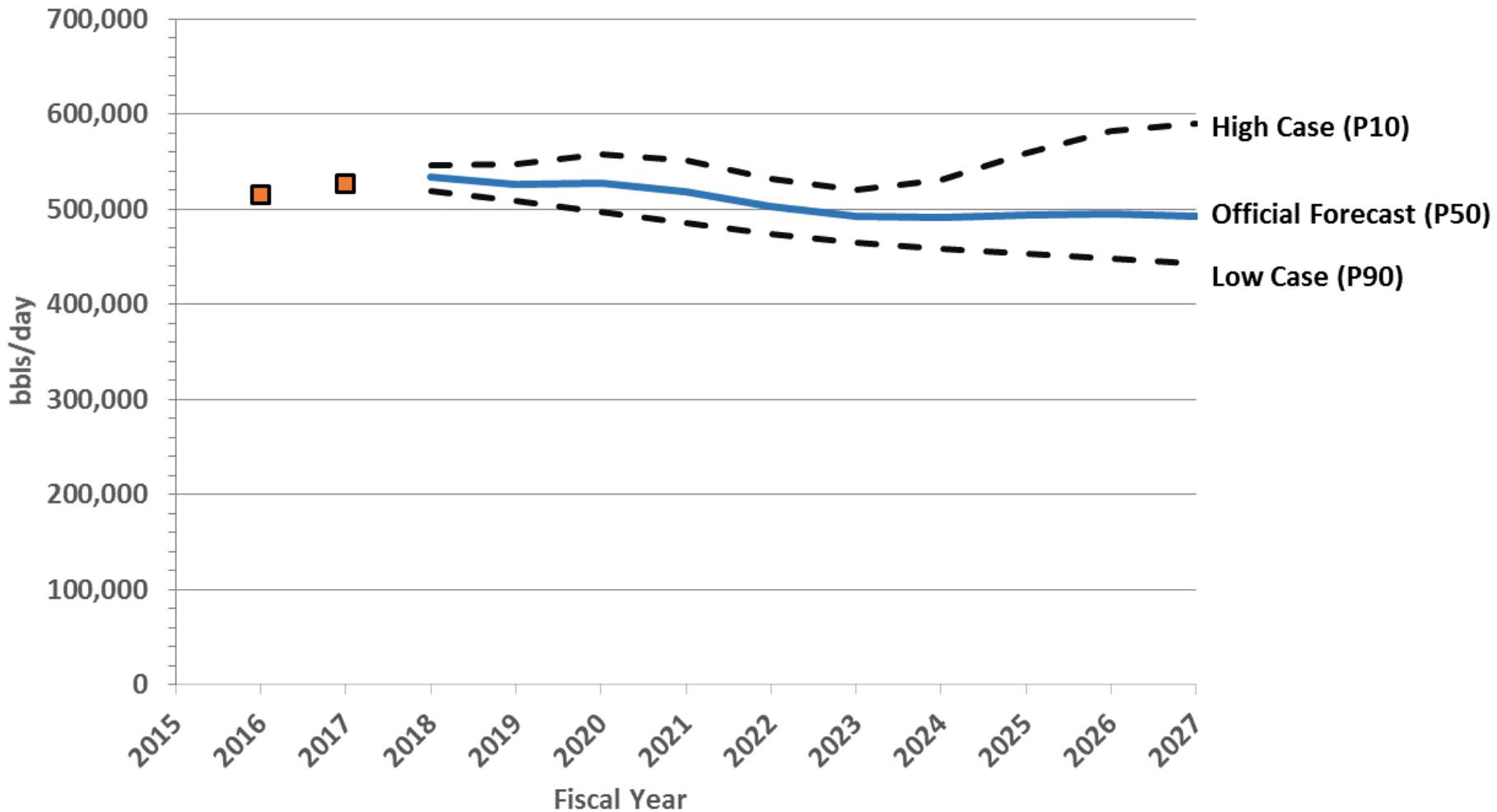
# PRODUCTION FORECAST: ANS History and Forecast by Pool



Source: Department of Revenue and Department of Natural Resources

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

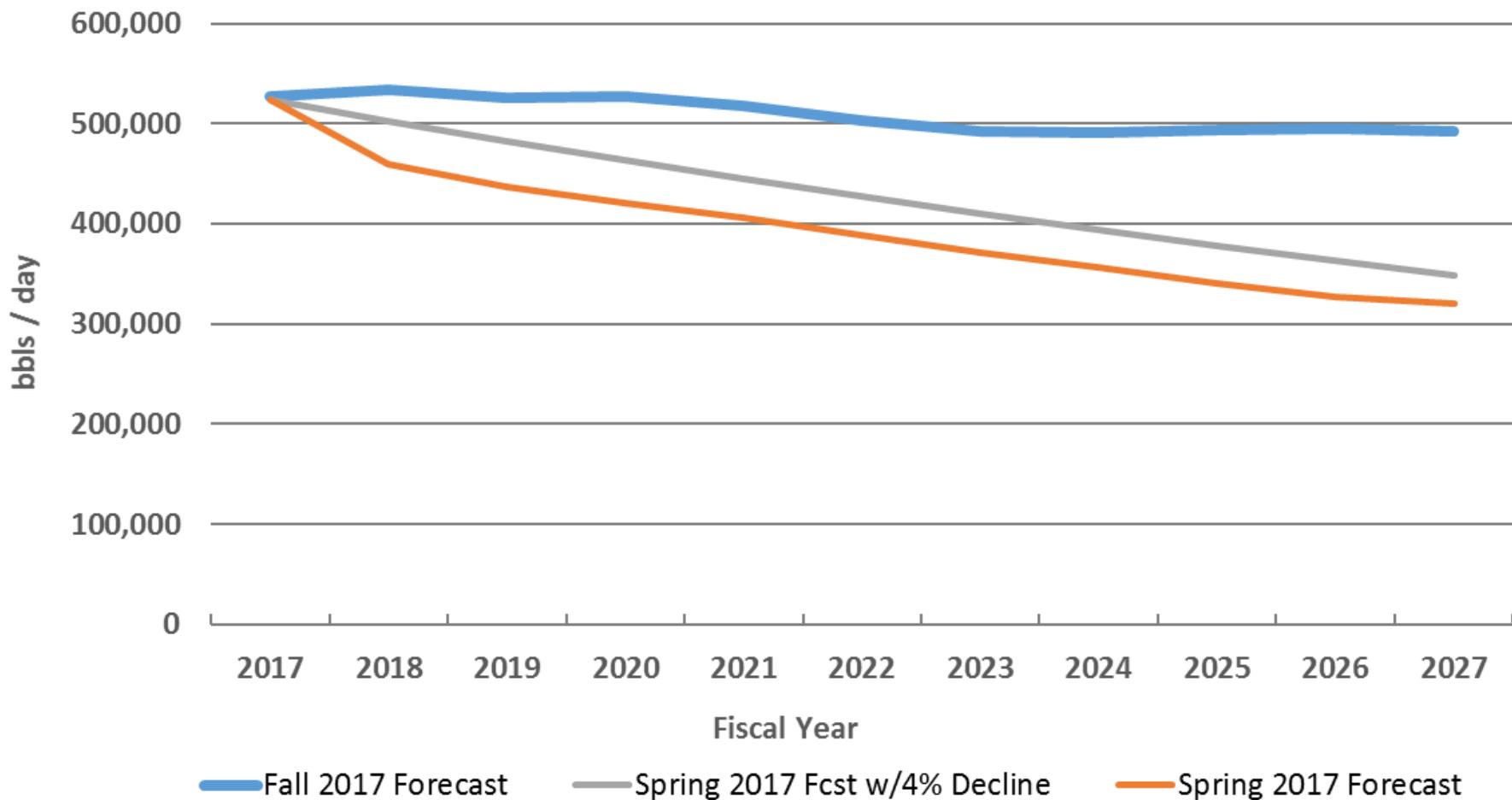
# PRODUCTION FORECAST: ANS High and Low Case



Source: Department of Revenue and Department of Natural Resources

ANS = Alaska North Slope

# PRODUCTION FORECAST: ANS Comparison to Prior Forecast



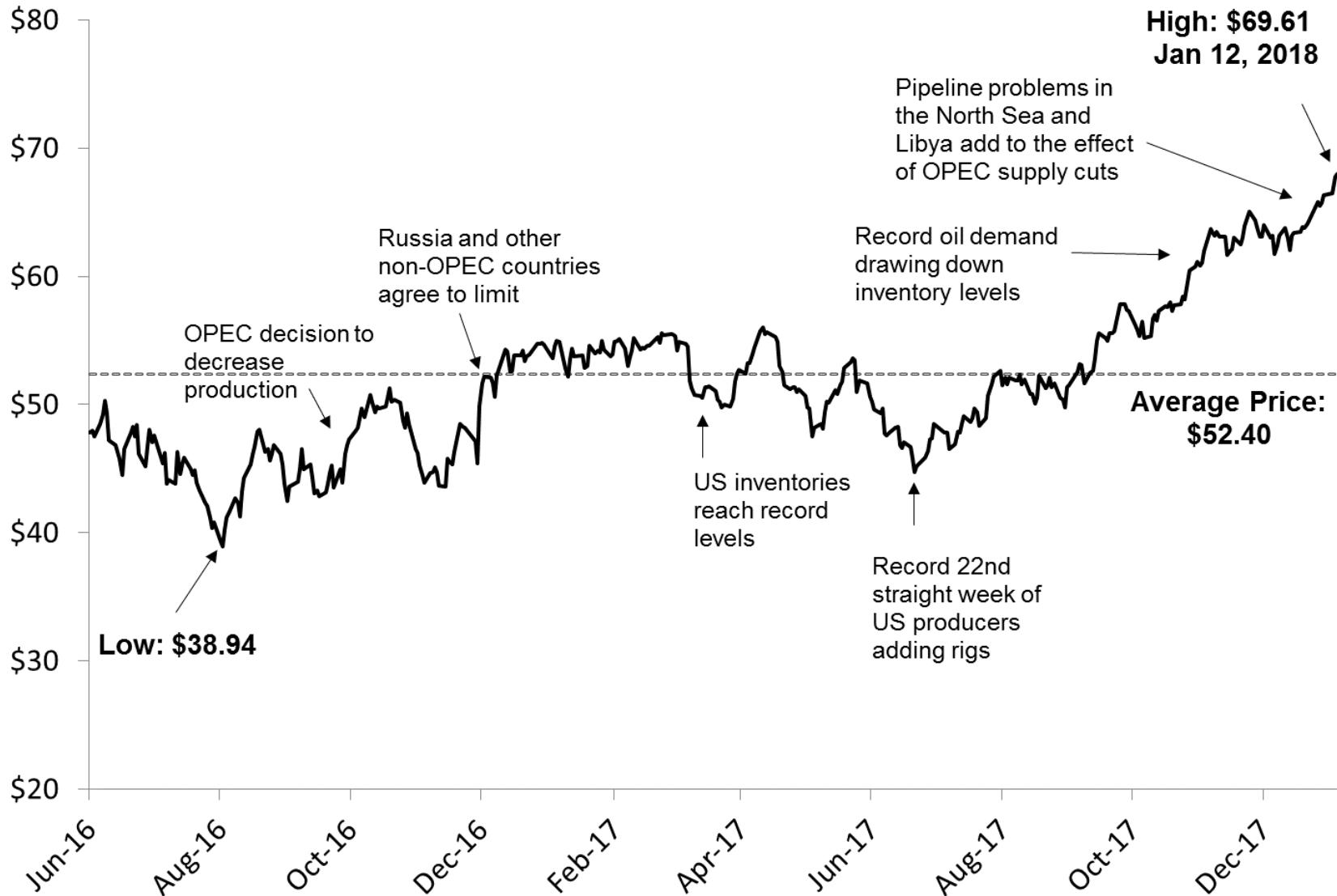
Source: Department of Revenue and Department of Natural Resources

# Fall 2017

# Price Forecast

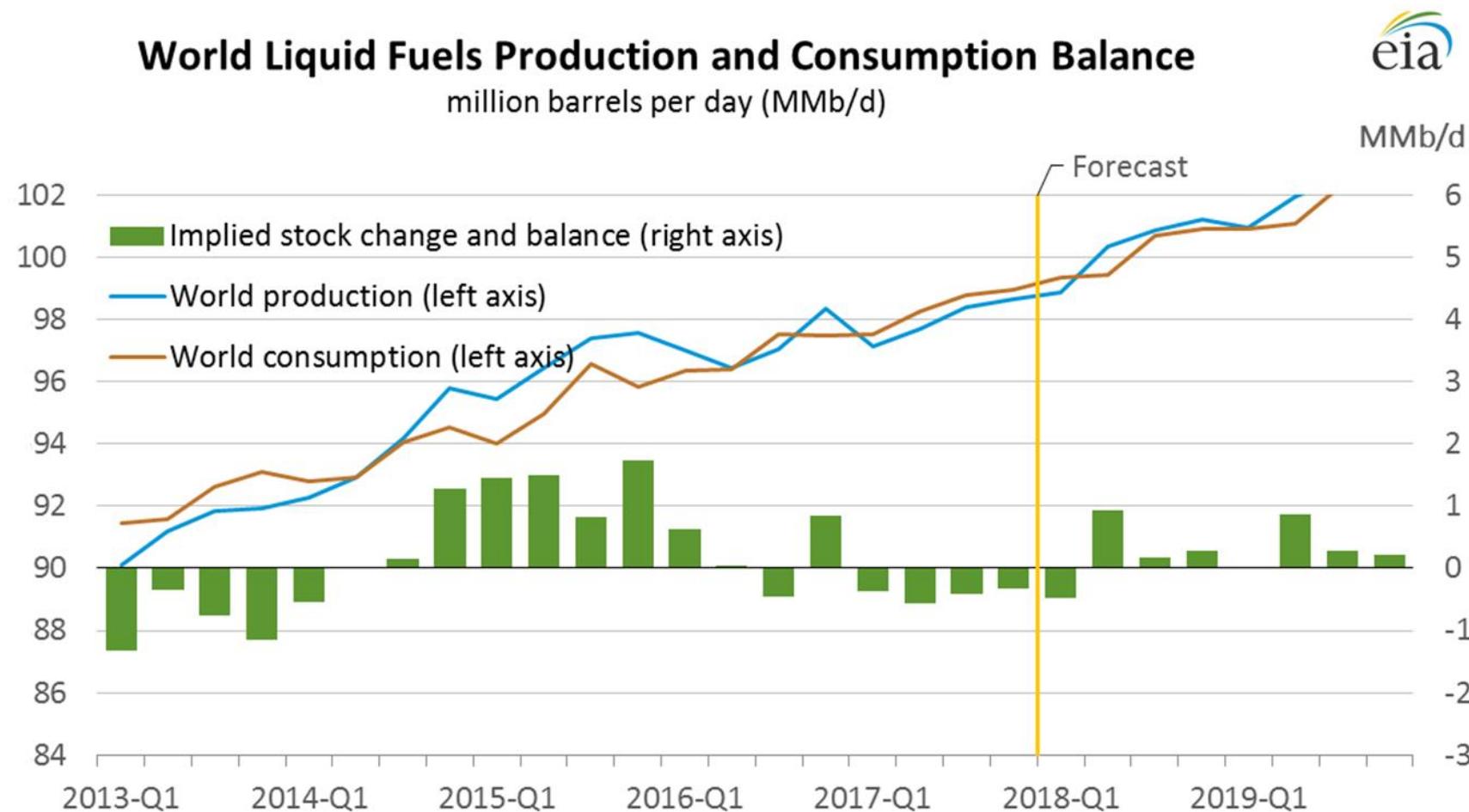


# PRICE FORECAST: Historical ANS Price, June 2016+



Source: Fall 2017 Revenue Sources Book figure 4-B

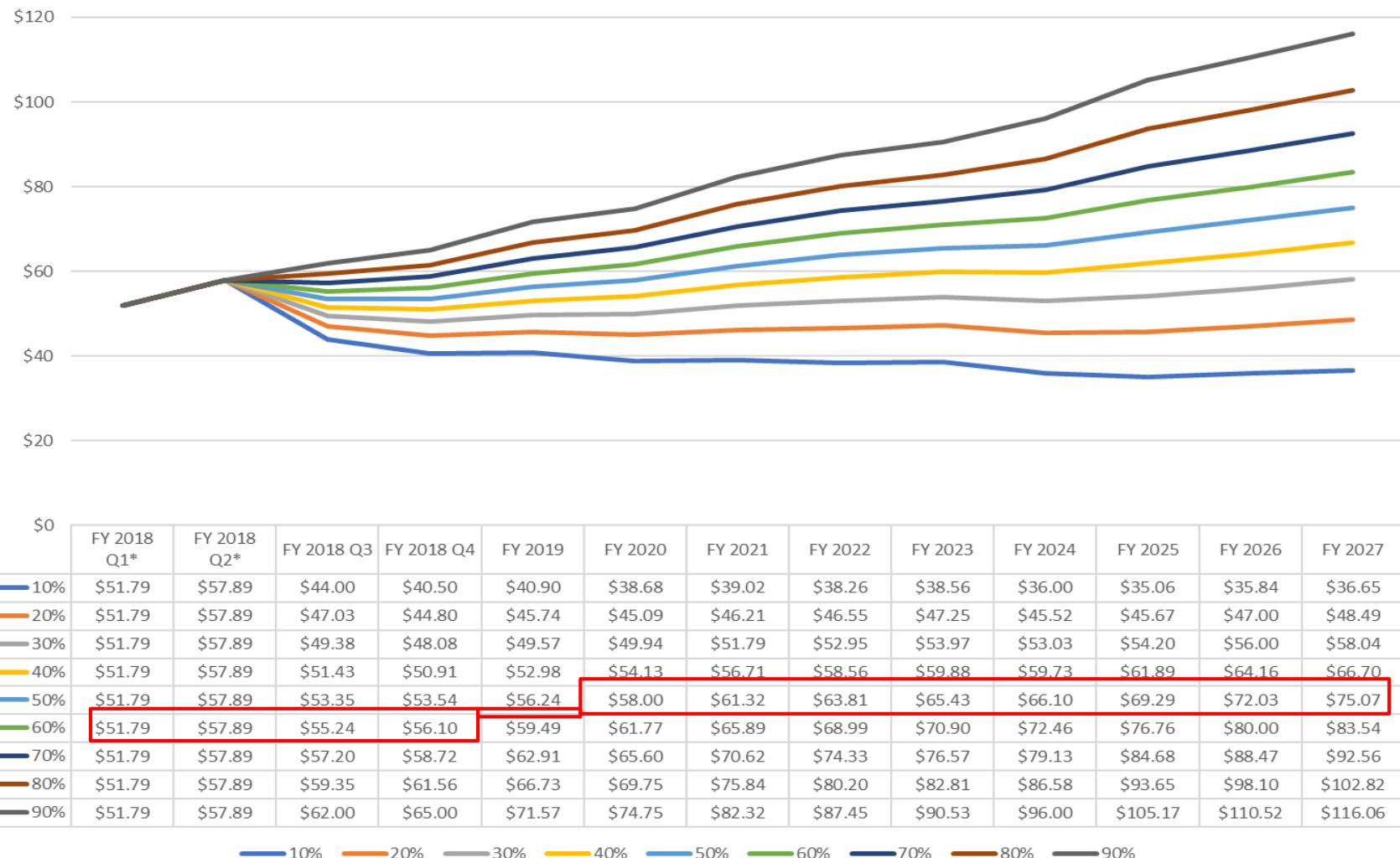
# PRICE FORECAST: Impact of Spare Capacity



Source: Short-Term Energy Outlook, January 2018.

Source: Energy Information Agency

# PRICE FORECAST: Nominal ANS Price Distribution

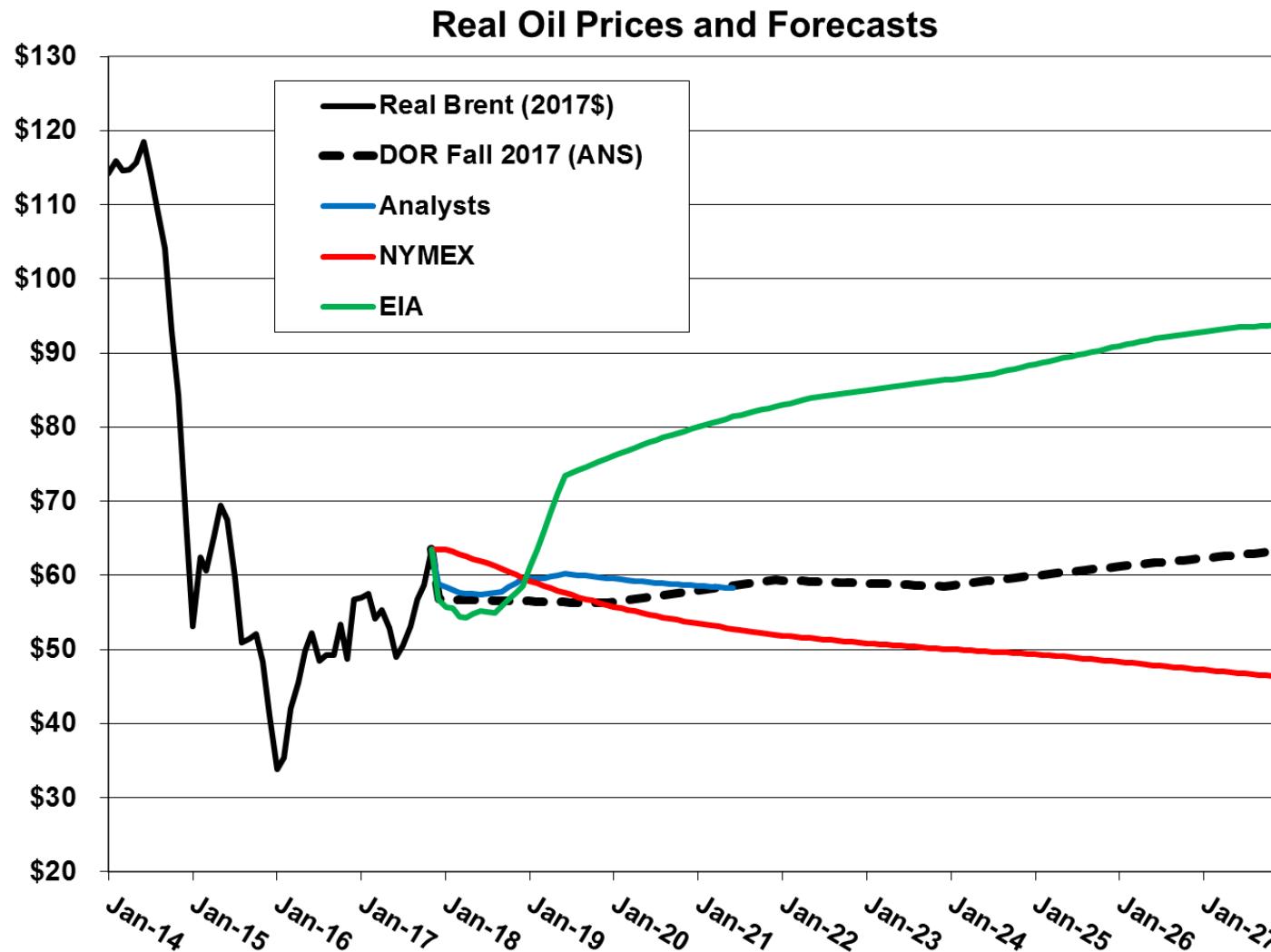


\* Includes actual prices through December 2017.

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

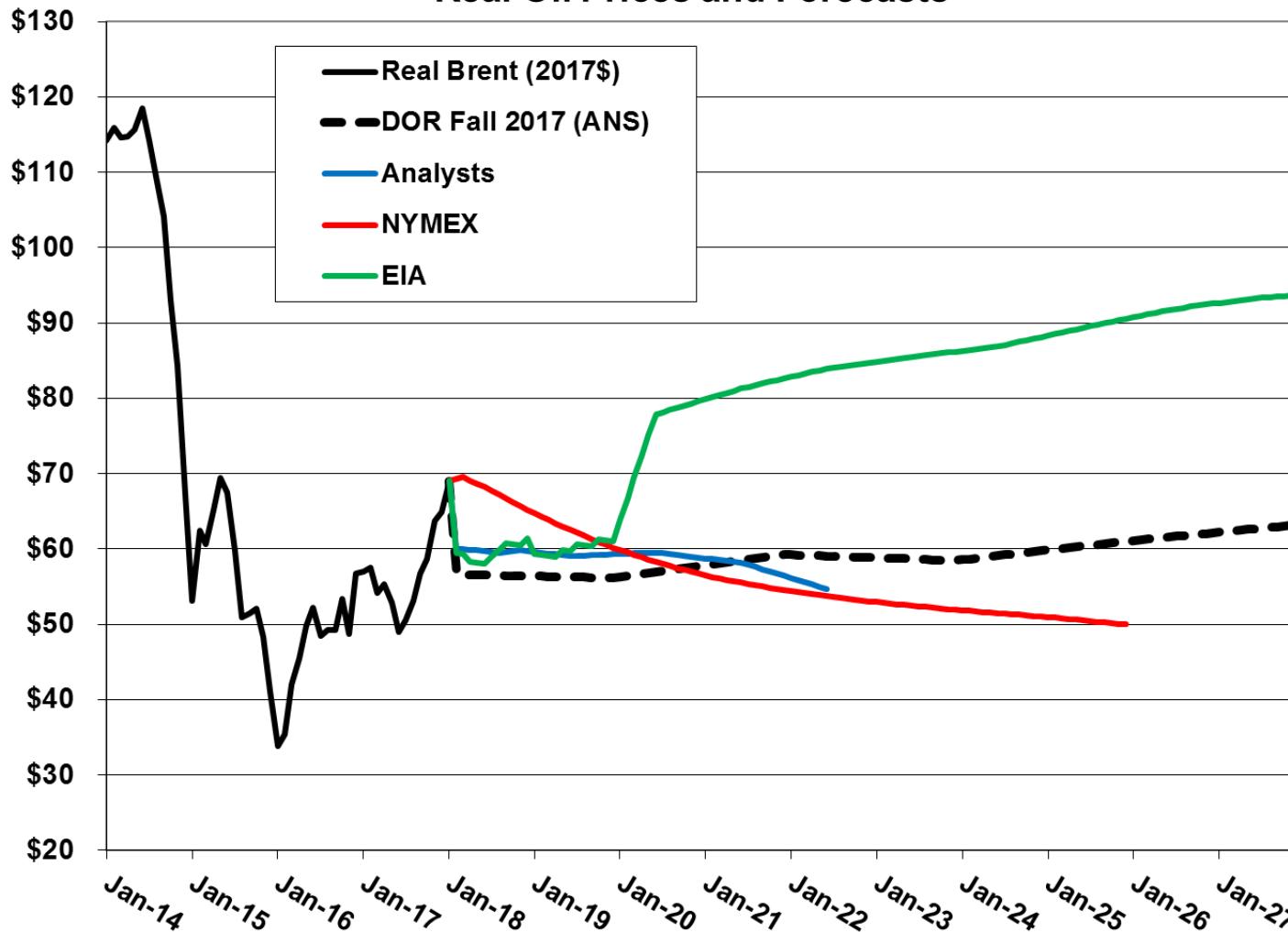


Sources: Analyst forecast is an average of 12 firms from a Bloomberg survey as of Nov. 16, 2017. Futures prices are from the New York Mercantile Exchange (NYMEX) as of Nov. 20, 2017. The U.S. Energy Information Administration (EIA) forecast is a combination of November 2017 Short-Term Energy Outlook (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



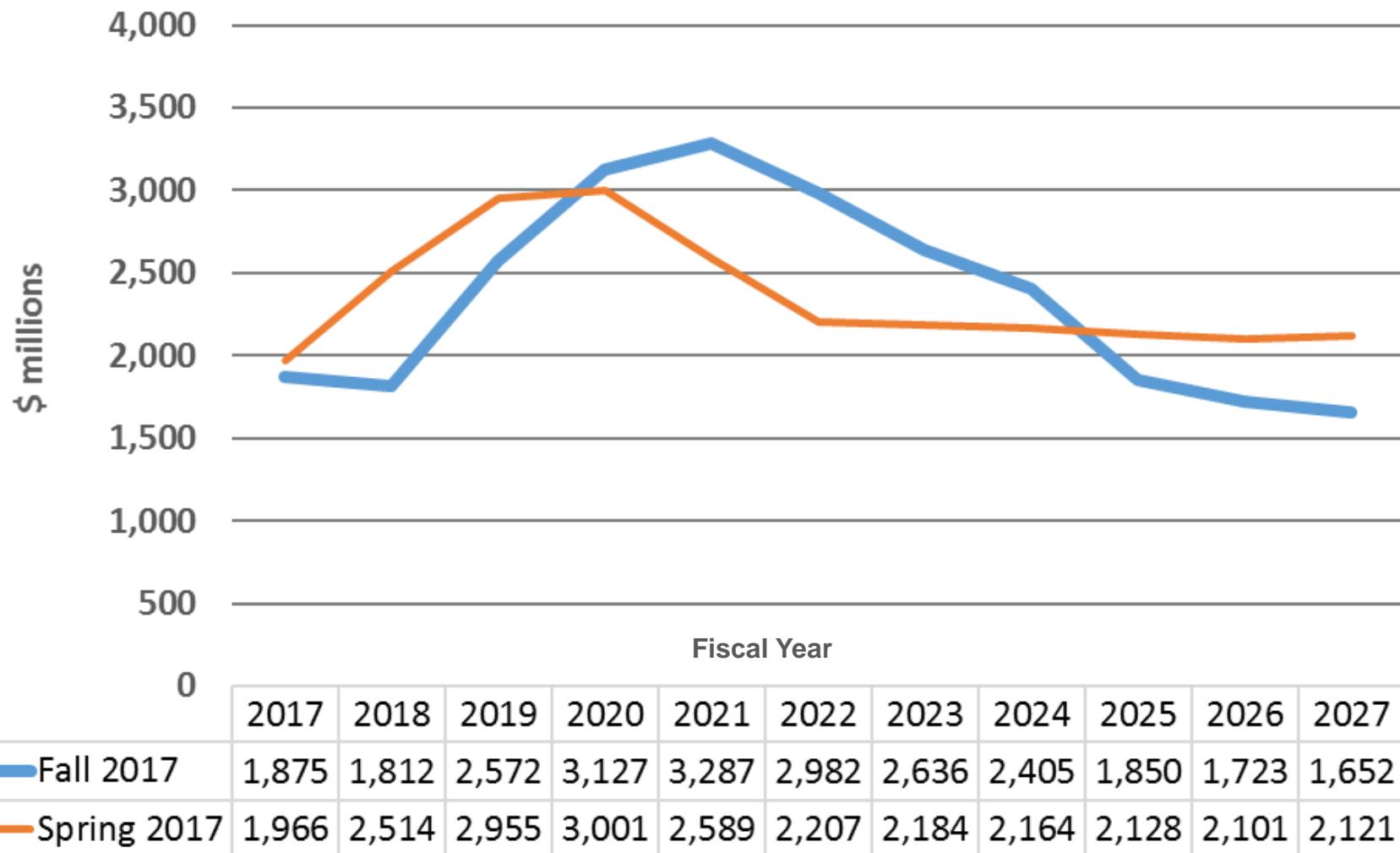
Sources: Analyst forecast is an average of 12 firms from a Bloomberg survey as of Jan. 16, 2018. Futures prices are from the New York Mercantile Exchange (NYMEX) as of Jan 16, 2018. The U.S. Energy Information Administration (EIA) forecast is a combination of January 2018 Short-Term Energy Outlook (through 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



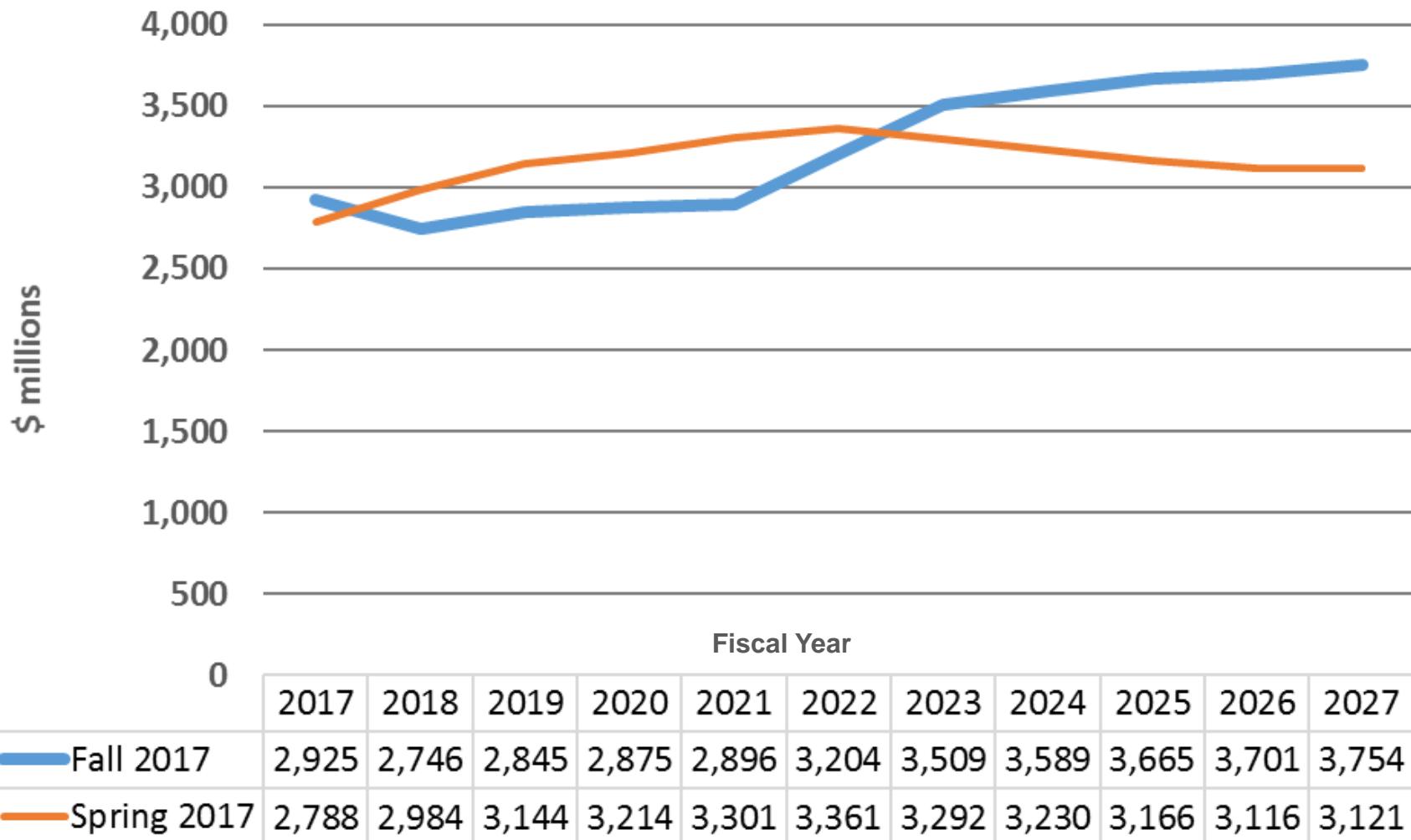
# COST FORECAST: North Slope Capital Lease Expenditures



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

Source: Department of Revenue – Economic Research

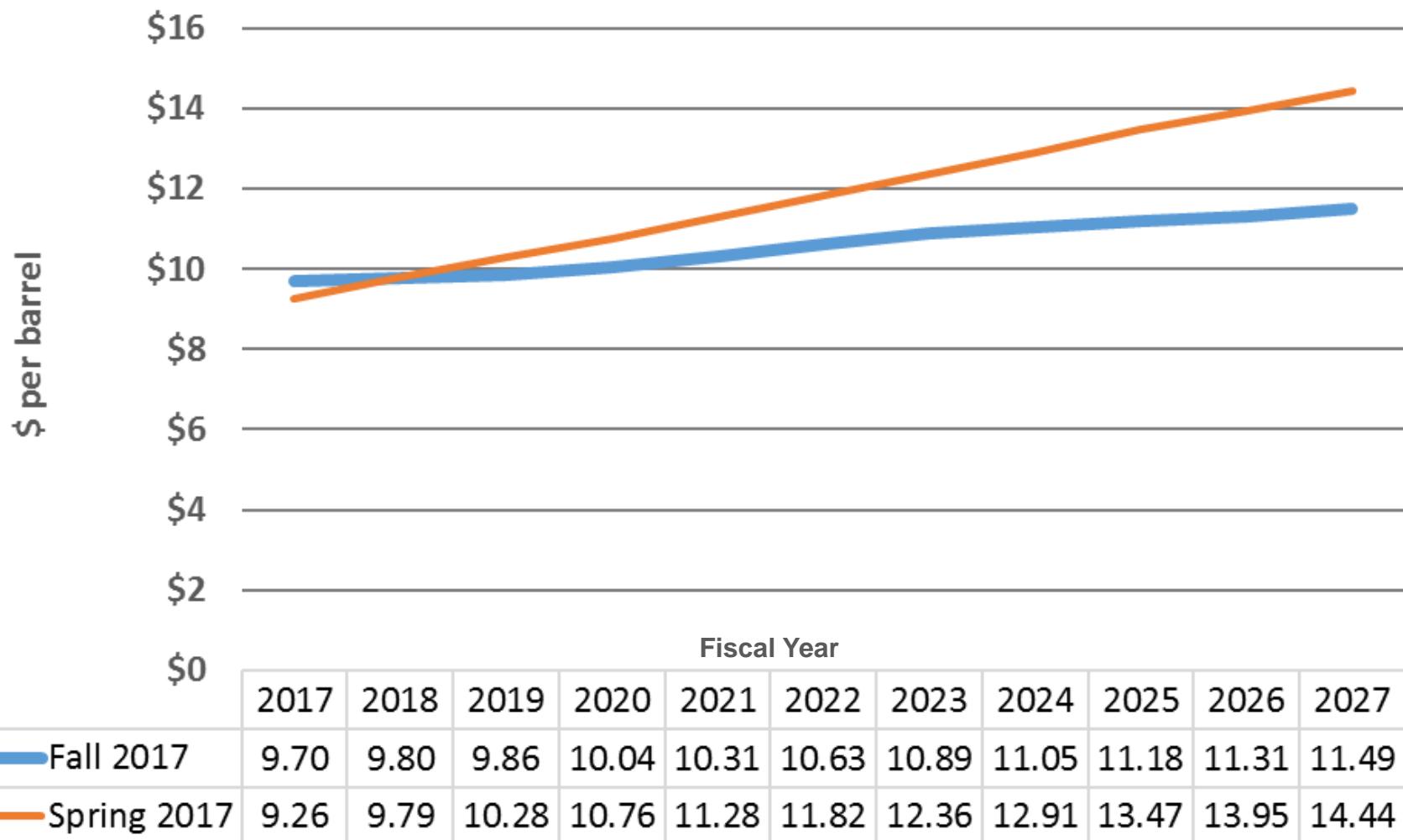
# COST FORECAST: North Slope Operating Lease Expenditures



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
<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
<b><u>Higher Of (Actual Tax)</u></b>	<b><u>\$1.99</u></b>	<b><u>\$278</u></b>

10% x \$490 =  
\$49 Million



# 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>
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
<b><u>Higher Of (Actual Tax)</u></b>	<b><u>\$1.89</u></b>	<b><u>\$320</u></b>

15% x \$1,250 =  
\$190 Million

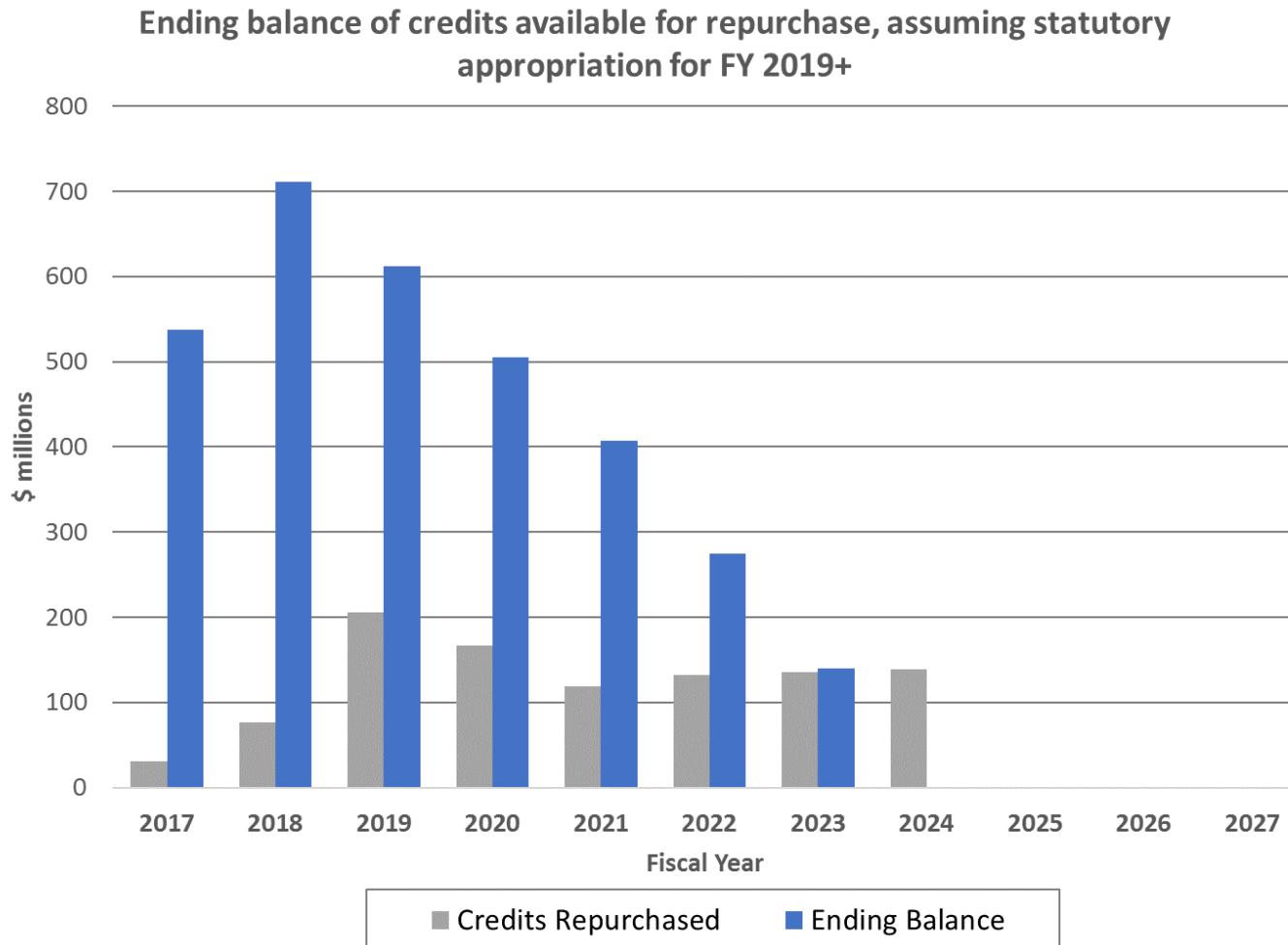


# FY 2019 Statutory Credit Appropriation

## 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
  - $\$2.1 \text{ billion more profit} \times 35\% = \$750 \text{ million}$
- 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



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.

# 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%

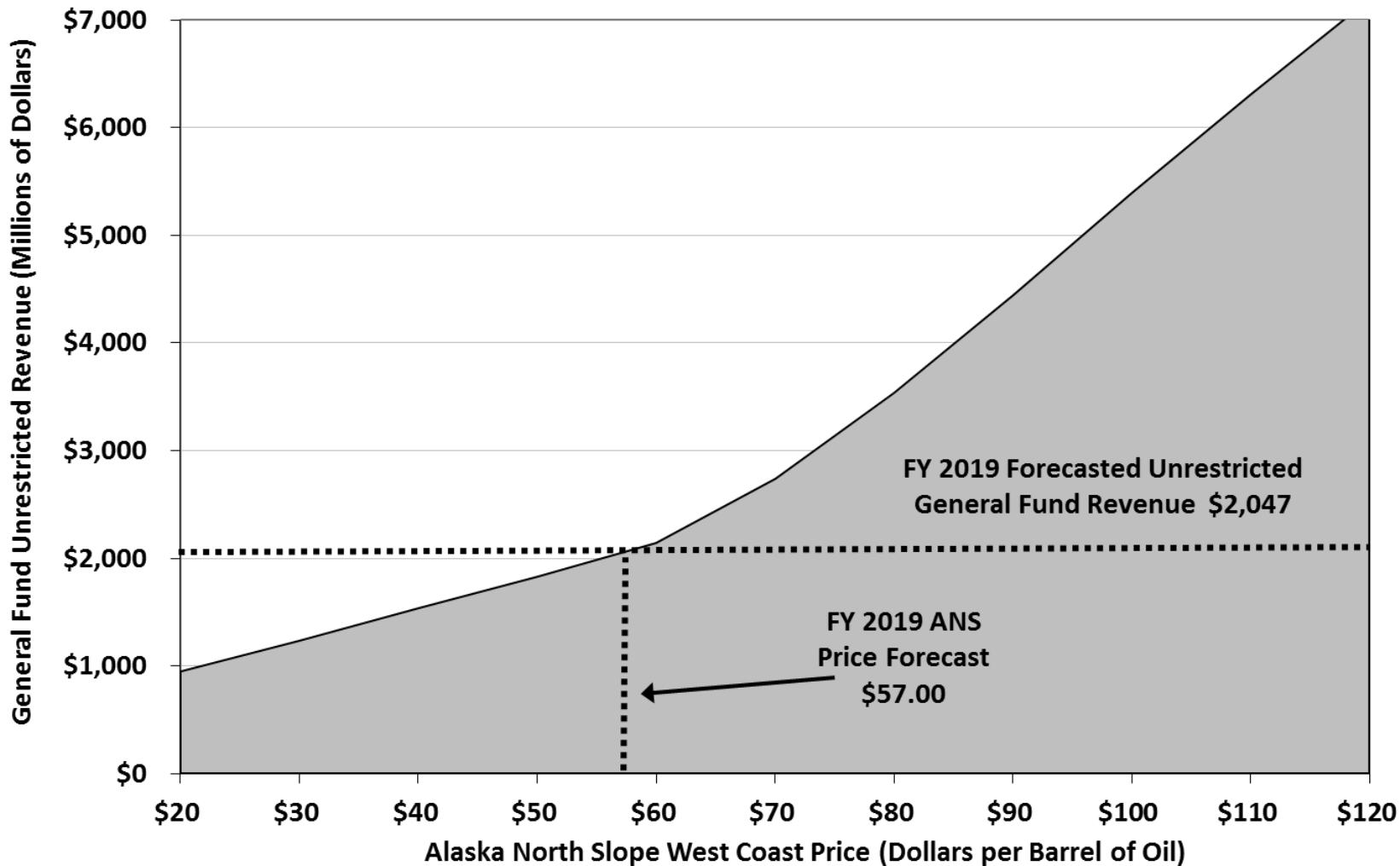
THS = Thousands; GF = General Fund; Fcst = Forecast

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

(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

# REVENUE FORECAST: 2017 to 2019 Unrestricted Petroleum Revenue

\$ millions	History		Forecast			
	FY 2017	Percent	FY 2018	Percent	FY 2019	Percent
<b>Unrestricted General Fund Revenue</b>						
<b>Taxes</b>						
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%
<b>Subtotal Taxes</b>	<b>195.4</b>	<b>22.3%</b>	<b>705.0</b>	<b>45.2%</b>	<b>619.6</b>	<b>43.1%</b>
<b>Royalties</b>						
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	<u>-10.7</u>	-1.2%	<u>4.2</u>	0.3%	<u>4.2</u>	0.3%
<b>Subtotal Royalties</b>	<b>680.9</b>	<b>77.7%</b>	<b>856.1</b>	<b>54.8%</b>	<b>817.2</b>	<b>56.9%</b>
<b>Total Petroleum Revenue</b>	<b>876.4</b>	<b>100%</b>	<b>1,561.1</b>	<b>100%</b>	<b>1,436.8</b>	<b>100%</b>

# REVENUE FORECAST: 2017 to 2019 Unrestricted Non-Petroleum Revenue

\$ millions	History		Forecast			
	FY 2017	Percent	FY 2018	Percent	FY 2019	Percent
<b>Unrestricted General Fund Revenue</b>						
<b>Taxes</b>						
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	<u>52.7</u>	11.1%	<u>58.3</u>	11.2%	<u>59.5</u>	9.7%
<b>Subtotal Taxes</b>	<b>266.2</b>	56.1%	<b>300.8</b>	57.8%	<b>363.6</b>	59.6%
<b>Investments</b>	<b>15.7</b>	3.3%	<b>21.6</b>	4.1%	<b>46.4</b>	7.6%
<b>Other</b>	<b>192.3</b>	40.6%	<b>198.1</b>	38.1%	<b>200.3</b>	32.8%
<b>Total Non-Petroleum Revenue</b>	<b>474.2</b>	100%	<b>520.5</b>	100%	<b>610.3</b>	100%

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

## ANS Production Changes from Prior Year

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

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

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

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

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

Source: Department of Revenue – Economic Research

GF = General Fund

# THANK YOU

Please find our contact information below:

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