Revenue Sources Book
Spring 2017

State of Alaska
Department of Revenue

Spring 2017 Revenue Forecast

April 14, 2017

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Commissioner
Alaska Department of Revenue

FORECASTING METHODS: Introduction

- All data is based on the DOR Spring 2017 Forecast.
- This is a forecast. All figures and narratives in this document that are not based on events that have already occurred, constitute forecasts or "forward-looking statements." These numbers are projections based on assumptions regarding uncertain future events and the responses to those events. Such figures are, therefore, subject to uncertainties and actual results will differ, potentially materially, from those anticipated.
- This forecast supersedes all prior estimates or forecasts as the official forecast of the department. Therefore, all prior forecasts should be used only for comparison purposes.

Changes from Fall 2016 Petroleum Revenue Forecast



FORECAST CHANGE: Production Tax Revenue Highlights

- Oil price forecasts up by 7% for FY17. Post FY 2018 unchanged from fall forecast
  - Long-term prices (FY 2025+) expected to settle around $70-75 real

- Oil production forecasts up by 7% for FY17. FY18 forecast increased by 1%.
  - Long-term forecast decreased slightly (~ 2% per year)

- Unrestricted revenue forecast increased due to higher oil price and production forecasts

FORECAST CHANGE: Comparison from Fall 2016 Forecast for FY 2017

Fiscal Year 2017	Fall 2016 Forecast	Spring 2017 Forecast	Difference	Change
Oil Price (ANS West Coast per barrel)	$46.81	$50.05	$3.24	7%
ANS Oil Production (THS bbls/day)	490.3	523.7	33.4	7%
ANS Deductible Lease Expenditures ($ millions)	$4,867.6	$4,519.2	($348.4)	-7%
Transportation Costs ($/barrel)	$9.33	$9.26	($0.07)	-1%
Unrestricted GF Petroleum Revenue ($ millions)	$966.9	$1,158.5	$191.6	20%

Source: Department of Revenue - Revenue Sources Book Spring 2017 and Fall 2016

FORECAST CHANGE: Comparison from Fall 2016 Forecast for FY 2018

Fiscal Year 2018	Fall 2016 Forecast	Spring 2017 Forecast	Difference	Change
Oil Price (ANS West Coast per barrel)	$54.00	$54.00	$0.00	0%
ANS Oil Production (THS bbls/day)	455.6	459.9	4.3	1%
ANS Deductible Lease Expenditures ($ millions)	$4,931.2	$4,950.2	$19.0	0%
Transportation Costs ($/barrel)	$9.77	$9.79	$0.02	0%
Unrestricted GF Petroleum Revenue ($ millions)	$1,099.8	$1,279.0	$179.2	16%

Source: Department of Revenue - Revenue Sources Book Spring 2017 and Fall 2016

Spring 2017

Total Revenue Forecast



REVENUE FORECAST: 2016 to 2018 Unrestricted General Fund (UGF) Revenue

$ millions	History		Forecast			
Unrestricted Revenue Type	FY 2016	Percent	FY 2017	Percent	FY 2018	Percent
Non-Petroleum Revenue						
Non-Petroleum Corporate Income	90.2	5.9%	128.0	7.8%	154.9	8.5%
Mining License Tax	10.7	0.7%	31.1	1.9%	35.7	1.9%
Marijuana	0.0	0.0%	1.0	0.1%	5.3	0.3%
Tobacco	45.5	3.0%	43.2	2.6%	43.2	2.4%
Motor Fuel (Non Aviation)	37.7	2.5%	35.8	2.2%	36.1	2.0%
Motor Fuel (Conservation Surcharge)	6.5	0.4%	7.6	0.5%	7.7	0.4%
Other Taxes	56.9	3.7%	55.8	3.4%	59.0	3.2%
Subtotal Non-Petroleum Revenue	**247.5**	16.1%	**302.5**	18.4%	**341.9**	18.7%
Investment Revenue	**20.9**	1.4%	**17.9**	1.1%	**42.9**	2.3%
Other Revenue	**154.8**	10.1%	**167.4**	10.2%	**168.1**	9.2%
Total Non-Petroleum Revenue	**423.2**	27.6%	**487.8**	29.6%	**552.9**	30.2%
Unrestricted Petroleum Revenue	**1109.5**	72.4%	**1158.5**	70.4%	**1,279.0**	69.8%
Total Unrestricted General Fund Revenue	**1532.7**	**100%**	**1646.4**	**100%**	**1831.9**	**100%**

Source: Department of Revenue - Revenue Sources Book Spring 2017

REVENUE FORECAST: Revenue Available for Appropriation

- Useful for outside analysts not familiar with Alaska's budget conventions
- Better reflects ability of state to meet its obligations
  - Alaska has a budget framework that restricts certain revenue based on constitution, statute, or customary practice
  - The ability of the state to meet its obligations is not fully reflected by the UGF revenue category
- All revenue subject to appropriation for any purpose can be used by the legislature to fund government services or obligations, including:
  - Constitutional Budget Reserve Fund
  - Earnings Reserve of the Permanent Fund

REVENUE FORECAST: 2016 to 2018 Totals to Appropriate

$ millions	History	Forecast	
Revenue Type	**FY 2016**	**FY 2017**	**FY 2018**
Petroleum Revenue			
Unrestricted General Fund	1,109.5	1,158.5	1,279.0
Royalties to Alaska Permanent Fund beyond 25% dedication (1)	73.6	64.0	63.2
Tax and Royalty Settlements to CBRF	119.1	350.0	100.0
Subtotal Petroleum Revenue	**1,302.2**	**1,572.5**	**1,442.2**
Non-Petroleum Revenue			
Unrestricted General Fund	400.7	468.3	508.4
Designated General Fund	391.0	410.2	394.0
Royalties to Alaska Permanent Fund beyond 25% dedication (1)	2.1	2.2	2.2
Tax and Royalty Settlements to CBRF	3.7	1.4	1.4
Subtotal Non-Petroleum Revenue	**797.5**	**882.1**	**906.0**
Investment Revenue			
Unrestricted General Fund	22.5	19.5	44.5
Designated General Fund	14.3	42.2	41.8
Constitutional Budget Reserve Fund	138.3	77.5	61.5
Alaska Permanent Fund - Realized Earnings	2,216.3	2,757.7	3,322.7
Subtotal Investment Revenue	**2,391.4**	**2,896.9**	**3,470.5**
Total Revenue Subject to Appropriation	**4,491.2**	**5,351.4**	**5,818.7**

(1) Estimated based on deposit to Permanent Fund minus 25% of total royalties.

Source: Department of Revenue - Revenue Sources Book Spring 2017

Spring 2017
Production Forecast

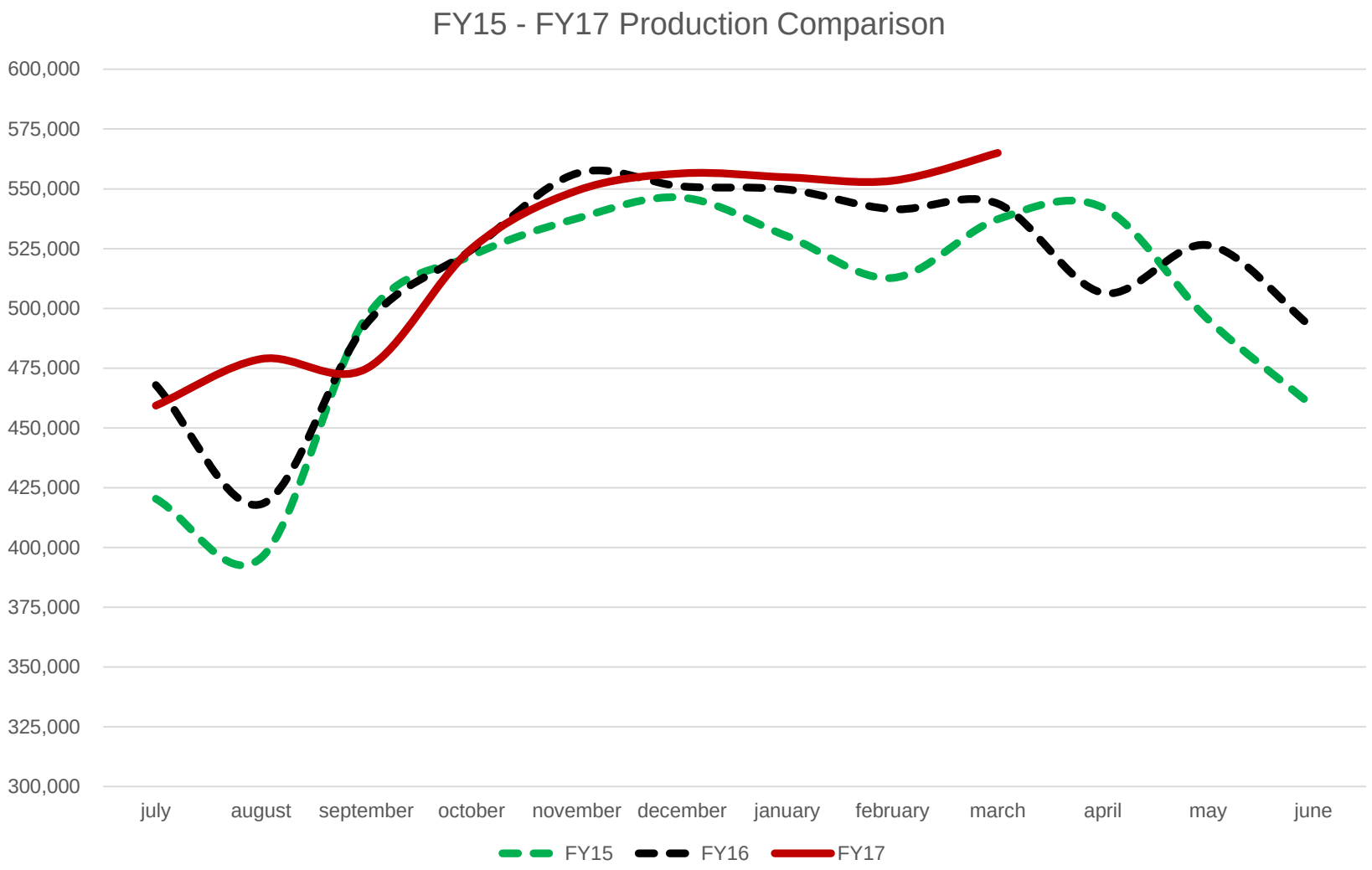


PRODUCTION FORECAST: ANS Details

Spring 2017 ANS Oil Production Forecast										
					(bbls / day)					
Fiscal Year	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
P90	522,540	445,079	417,494	395,322	376,698	356,055	335,958	317,375	299,458	283,923
Decline Rate	1%	-15%	-6%	-5%	-5%	-5%	-6%	-6%	-6%	-5%
Official Forecast	523,686	459,863	437,278	420,221	405,922	389,213	371,811	356,516	340,695	326,936
Decline Rate	2%	-12%	-5%	-4%	-3%	-4%	-4%	-4%	-4%	-4%
P10	524,813	475,346	456,957	444,786	434,801	421,644	406,565	394,142	379,599	367,386
Decline Rate	2%	-9%	-4%	-3%	-2%	-3%	-4%	-3%	-4%	-3%
GVR Eligible under Official Forecast	39,784	39,015	37,988	41,820	44,840	42,607	24,813	9,565	4,059	0
% GVR Eligible under Official Forecast	8%	8%	9%	10%	11%	11%	7%	3%	1%	0%

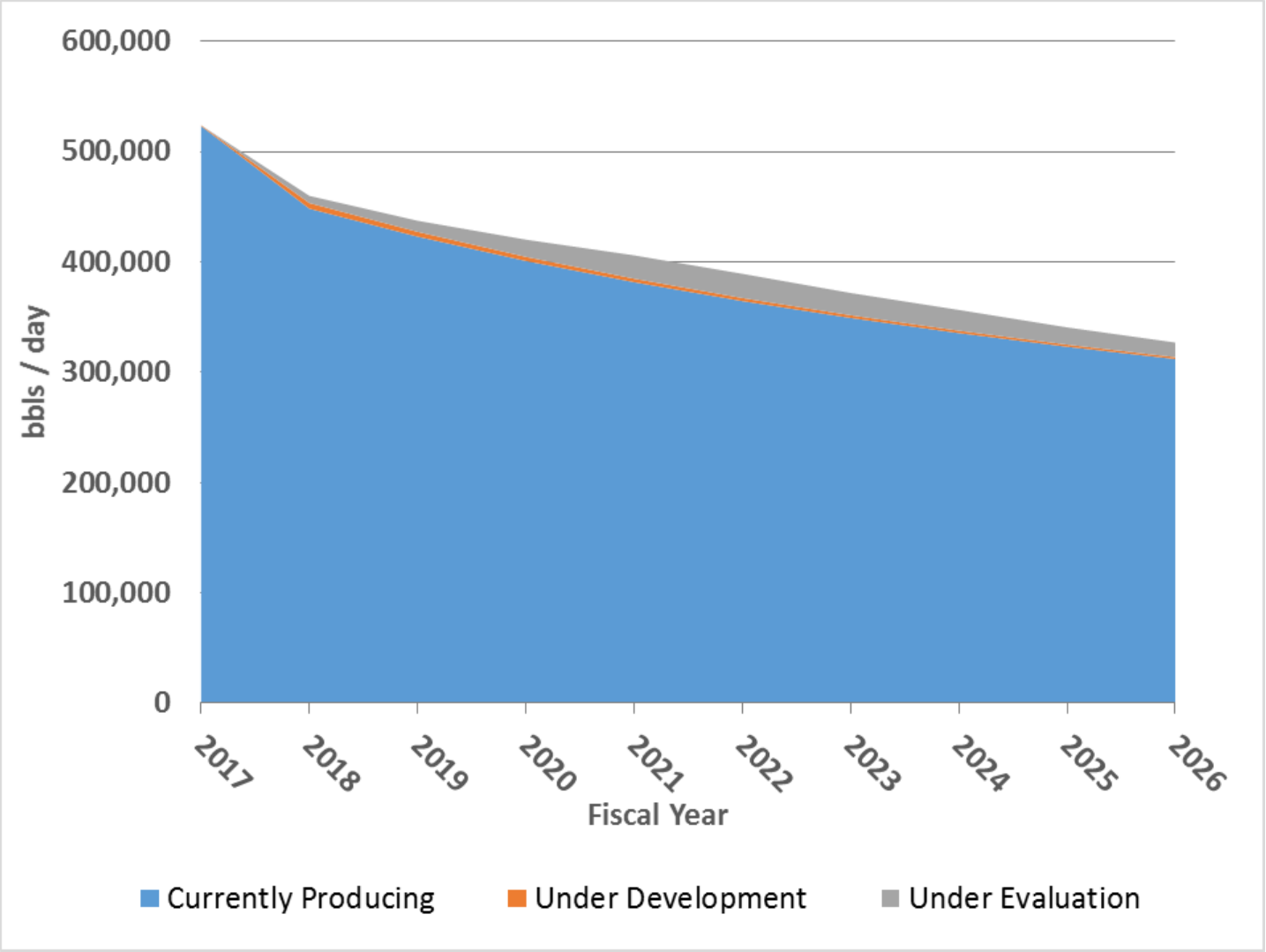
Source: Department of Revenue - Revenue Sources Book Spring 2017, DNR

PRODUCTION HISTORY



Source: Department of Revenue

PRODUCTION FORECAST: ANS



Source: Department of Revenue - Revenue Sources Book Spring 2017

PRODUCTION FORECAST: Excluded from Forecast

Characteristics:

- Unknown first-oil date/estimated greater than 5 years
- Discovery (contingent resource) or just prospects (prospective resource)
- Uncertain finances (e.g., sourcing for private equity)
- Facilities incomplete or nonexistent
- Projects in Appraisal
- Technological Uncertainty
- Environmental/Permitting Uncertainty
- Economic Uncertainty

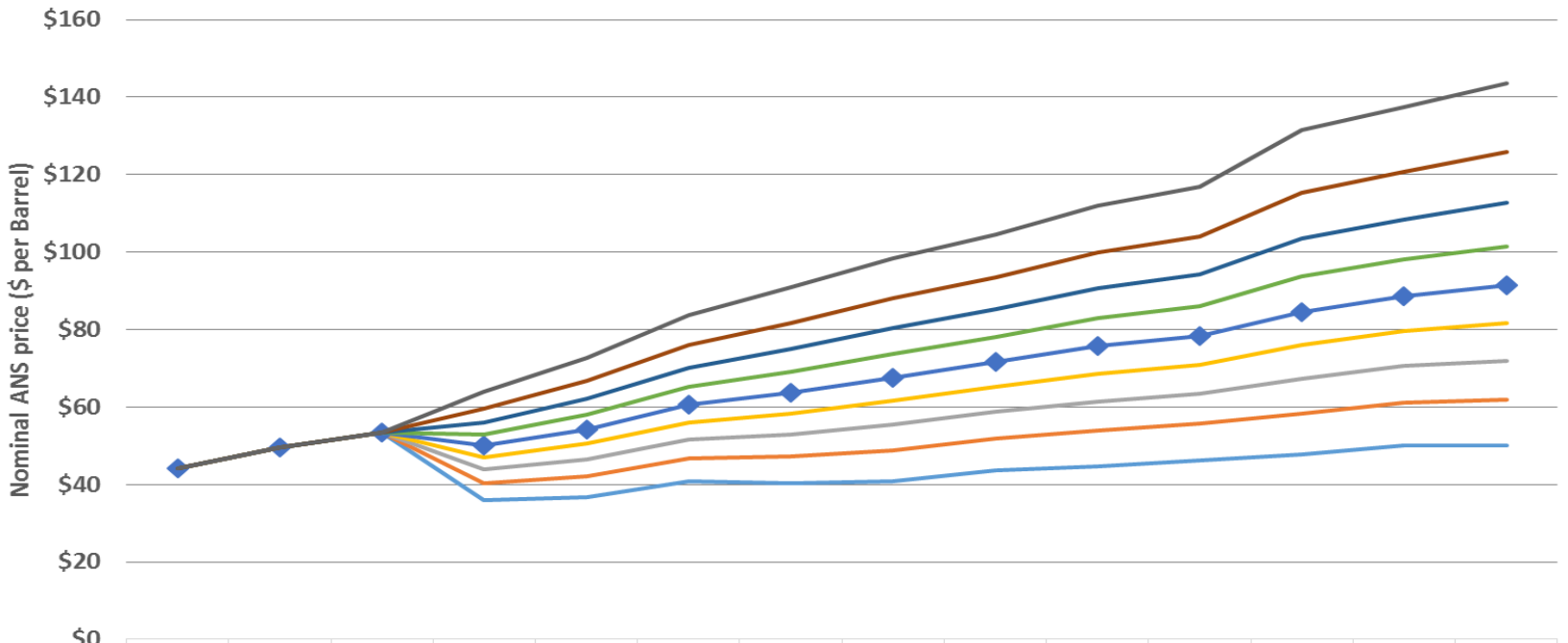
Examples: Pikka, Ugnu, Placer, Tofkat, Pt Thomson (MGS or full-cycling), Liberty, Fiord West, Smith Bay

Source: Department of Revenue - Revenue Sources Book Spring 2017, DNR

Spring 2017
Price Forecast



PRICE FORECAST: Nominal ANS Price Distribution



	FY 2017 Q1 Actual	FY 2017 Q2 Actual	FY 2017 Q3 Actual	FY 2017 Q4	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
10%	$44.25	$49.51	$53.48	$36.00	$36.80	$40.77	$40.36	$40.71	$43.58	$44.56	$46.15	$47.79	$50.08	$49.96
20%	$44.25	$49.51	$53.48	$40.42	$42.21	$46.65	$47.24	$48.75	$51.88	$53.81	$55.62	$58.32	$61.16	$61.84
30%	$44.25	$49.51	$53.48	$43.91	$46.55	$51.55	$52.99	$55.41	$58.81	$61.51	$63.56	$67.38	$70.65	$72.03
40%	$44.25	$49.51	$53.48	$47.03	$50.48	$56.09	$58.33	$61.56	$65.25	$68.65	$70.98	$75.97	$79.64	$81.68
50%	$44.25	$49.51	$53.48	$50.00	$54.25	$60.55	$63.59	$67.58	$71.59	$75.67	$78.32	$84.59	$88.65	$91.35
60%	$44.25	$49.51	$53.48	$52.97	$58.07	$65.16	$69.03	$73.77	$78.14	$82.93	$85.94	$93.63	$98.10	$101.47
70%	$44.25	$49.51	$53.48	$56.09	$62.11	$70.16	$74.92	$80.46	$85.26	$90.78	$94.25	$103.62	$108.51	$112.63
80%	$44.25	$49.51	$53.48	$59.58	$66.70	$75.96	$81.77	$88.19	$93.52	$99.91	$103.92	$115.42	$120.80	$125.81
90%	$44.25	$49.51	$53.48	$64.00	$72.60	$83.63	$90.86	$98.37	$104.50	$111.99	$116.84	$131.43	$137.42	$143.64

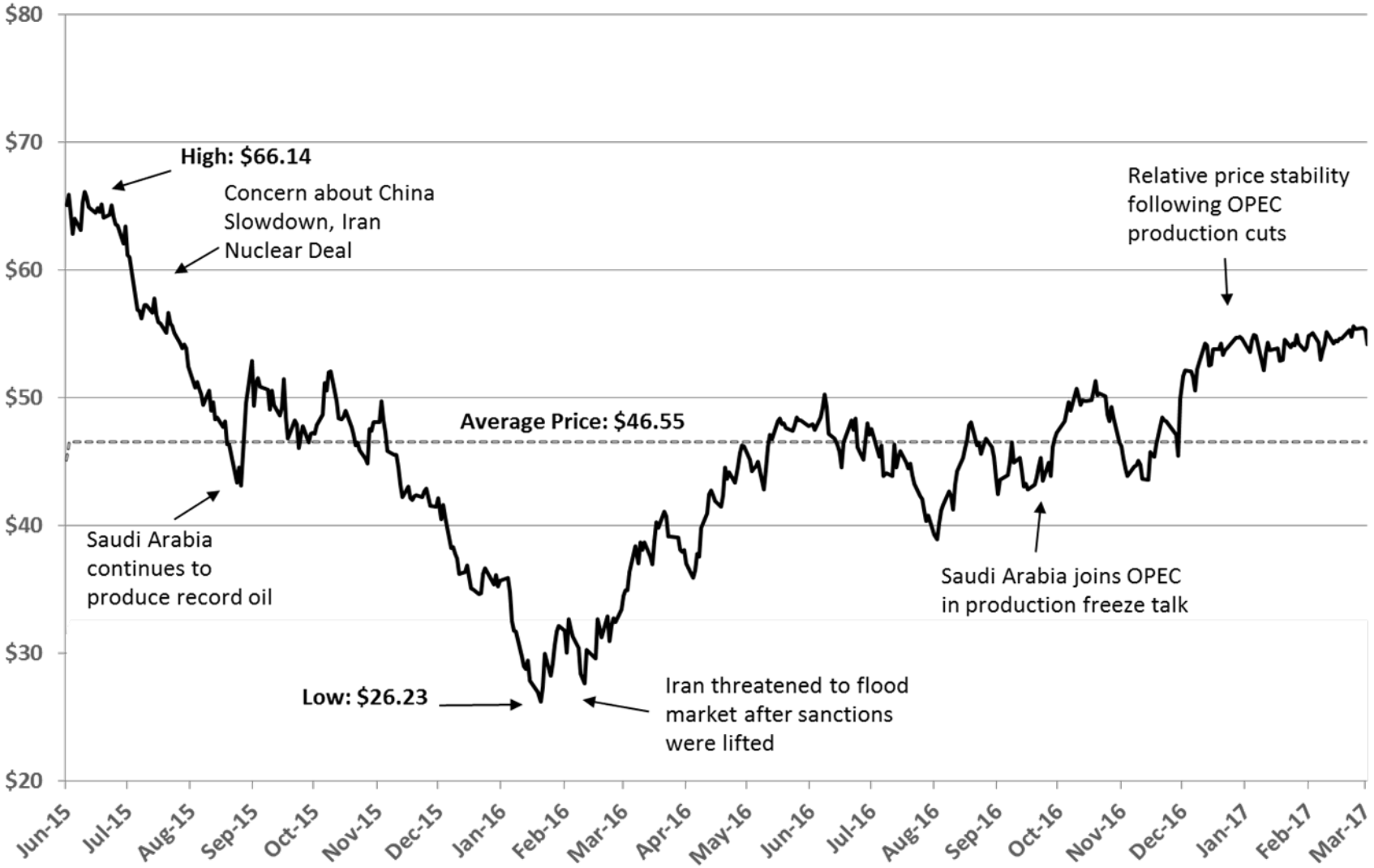
Note: Forecasted price has been rounded down to the nearest dollar

PRICE FORECAST: Impact of other prices in FY 2017

ANS Price Sensitivity									
"What if price is..	$ 70.00	$ 65.00	$ 60.00	$ 55.00	$ 50.00	$ 45.00	$ 40.00	$ 35.00	$ 30.00
7/1/2016	44.07	44.07	44.07	44.07	44.07	44.07	44.07	44.07	44.07
8/1/2016	44.17	44.17	44.17	44.17	44.17	44.17	44.17	44.17	44.17
9/1/2016	44.51	44.51	44.51	44.51	44.51	44.51	44.51	44.51	44.51
10/1/2016	49.43	49.43	49.43	49.43	49.43	49.43	49.43	49.43	49.43
11/1/2016	45.83	45.83	45.83	45.83	45.83	45.83	45.83	45.83	45.83
12/1/2016	53.26	53.26	53.26	53.26	53.26	53.26	53.26	53.26	53.26
1/1/2017	53.90	53.90	53.90	53.90	53.90	53.90	53.90	53.90	53.90
2/1/2017	*54.72*	54.72	54.72	54.72	54.72	54.72	54.72	54.72	54.72
3/1/2017	*51.81*	51.81	51.81	51.81	51.81	51.81	51.81	51.81	51.81
4/1/2017	*70.00*	*65.00*	*60.00*	*55.00*	*50.00*	*45.00*	*40.00*	*35.00*	*30.00*
5/1/2017	*70.00*	*65.00*	*60.00*	*55.00*	*50.00*	*45.00*	*40.00*	*35.00*	*30.00*
6/1/2017	*70.00*	*65.00*	*60.00*	*55.00*	*50.00*	*45.00*	*40.00*	*35.00*	*30.00*
Forecast Price	**$ 54.31**	**$ 53.06**	**$ 51.81**	**$ 50.56**	**$ 49.31**	**$ 48.06**	**$ 46.81**	**$ 45.56**	**$ 44.31**

Source for Actuals: Prevailing Values, DOR Tax Division website

PRICE FORECAST: Historical ANS West Coast Price 2015+

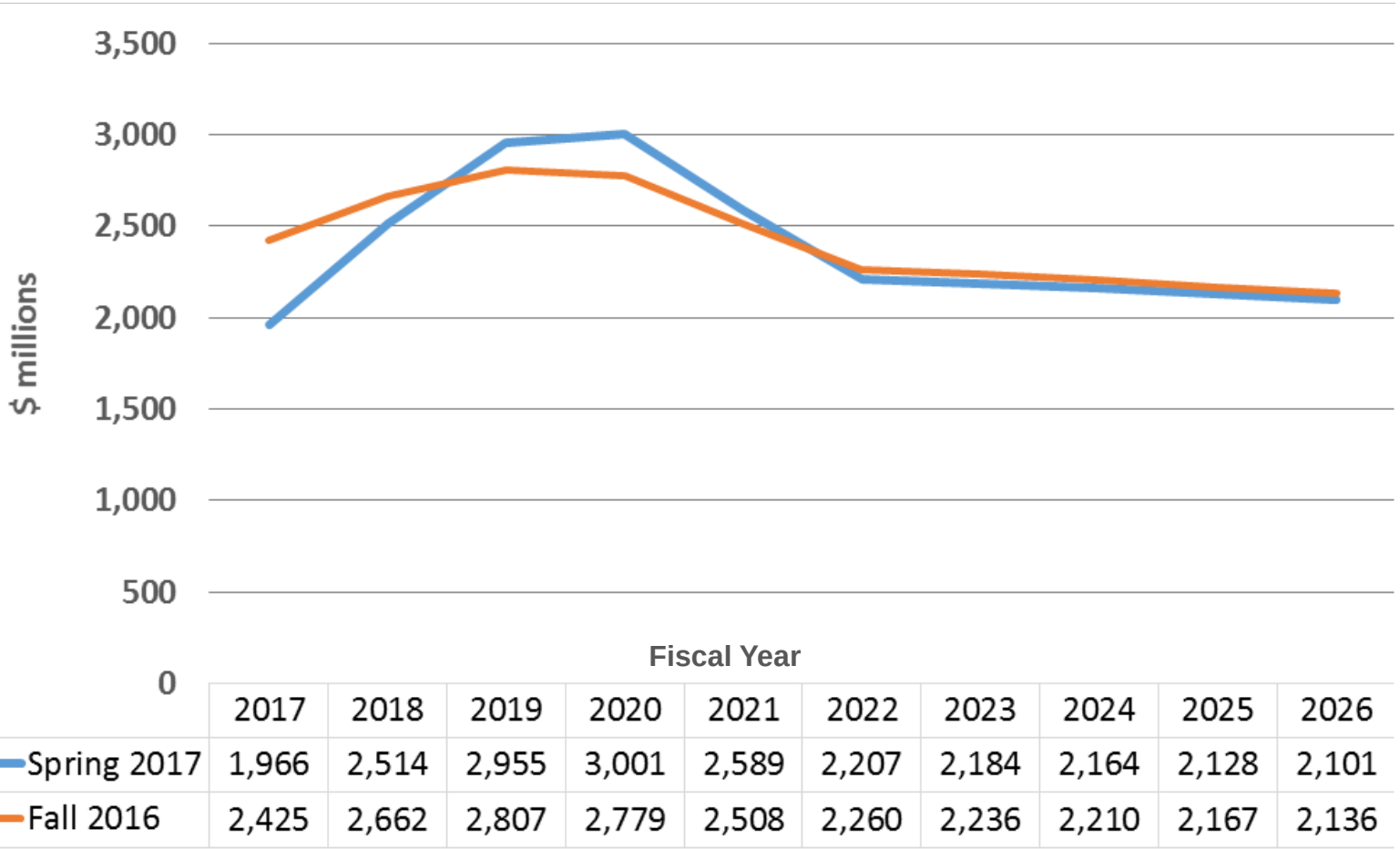


Source: Department of Revenue – Economic Research

Spring 2017
Cost Forecast



COST FORECAST: North Slope Capital Lease Expenditures

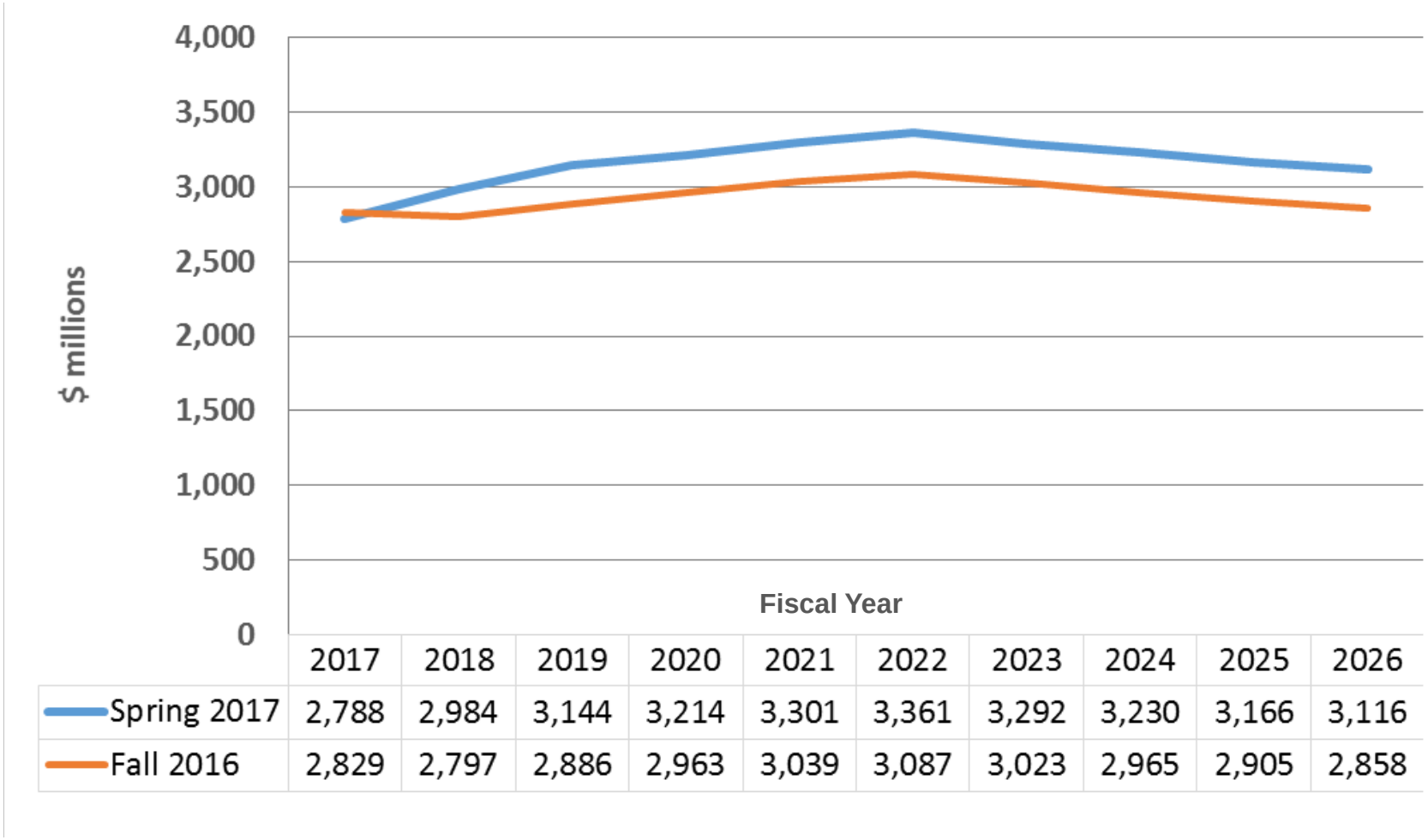


	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Spring 2017	1,966	2,514	2,955	3,001	2,589	2,207	2,184	2,164	2,128	2,101
Fall 2016	2,425	2,662	2,807	2,779	2,508	2,260	2,236	2,210	2,167	2,136

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

Source: Department of Revenue - Revenue Sources Book Spring 2017 and Fall 2016

COST FORECAST: North Slope Operating Lease Expenditures



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Spring 2017	2,788	2,984	3,144	3,214	3,301	3,361	3,292	3,230	3,166	3,116
Fall 2016	2,829	2,797	2,886	2,963	3,039	3,087	3,023	2,965	2,905	2,858

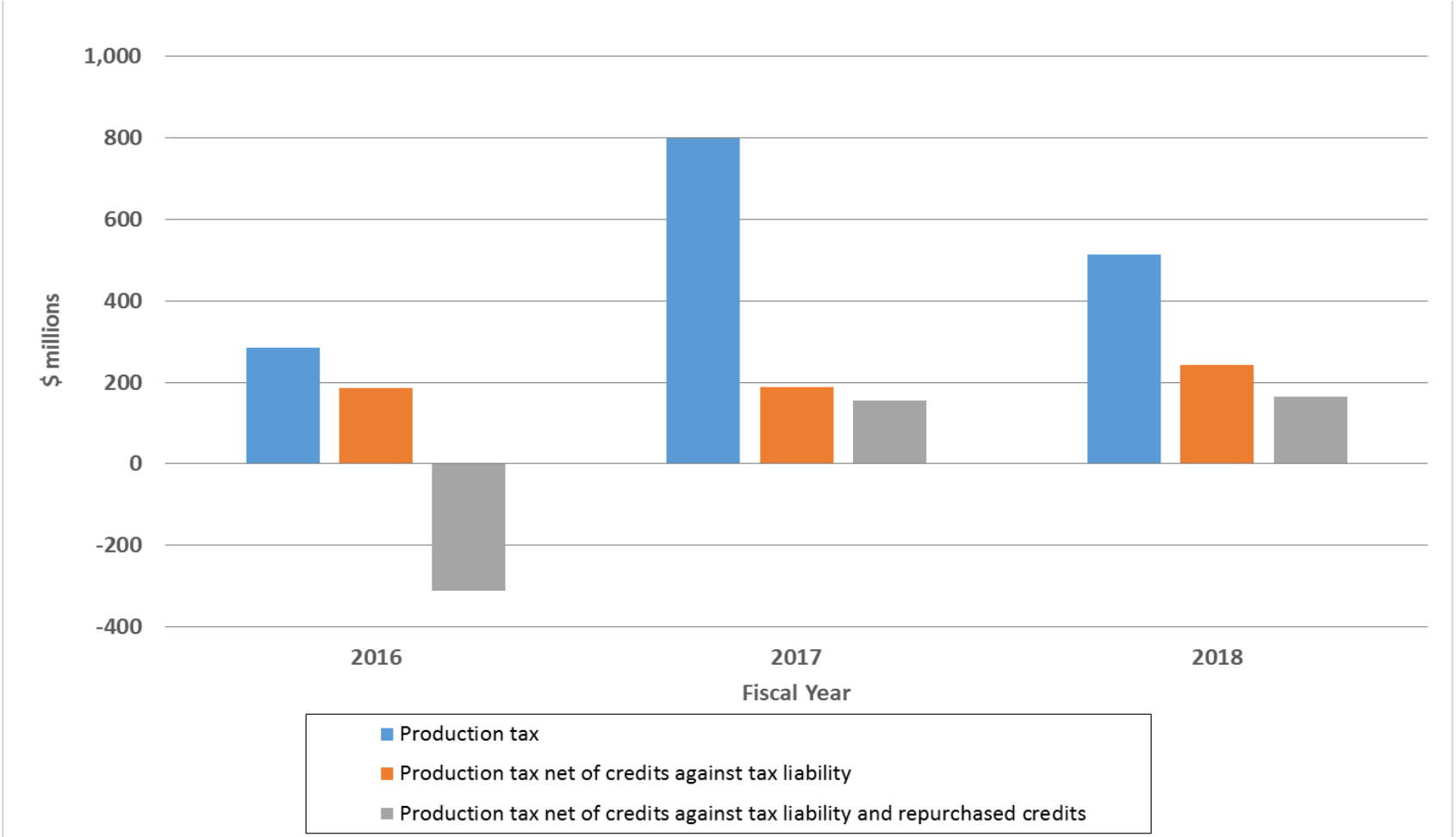
Note: These estimates include lease expenditures by companies that are not expected to have a tax liability.

Source: Department of Revenue - Revenue Sources Book Spring 2017 and Fall 2016

Spring 2017
Credits Forecast



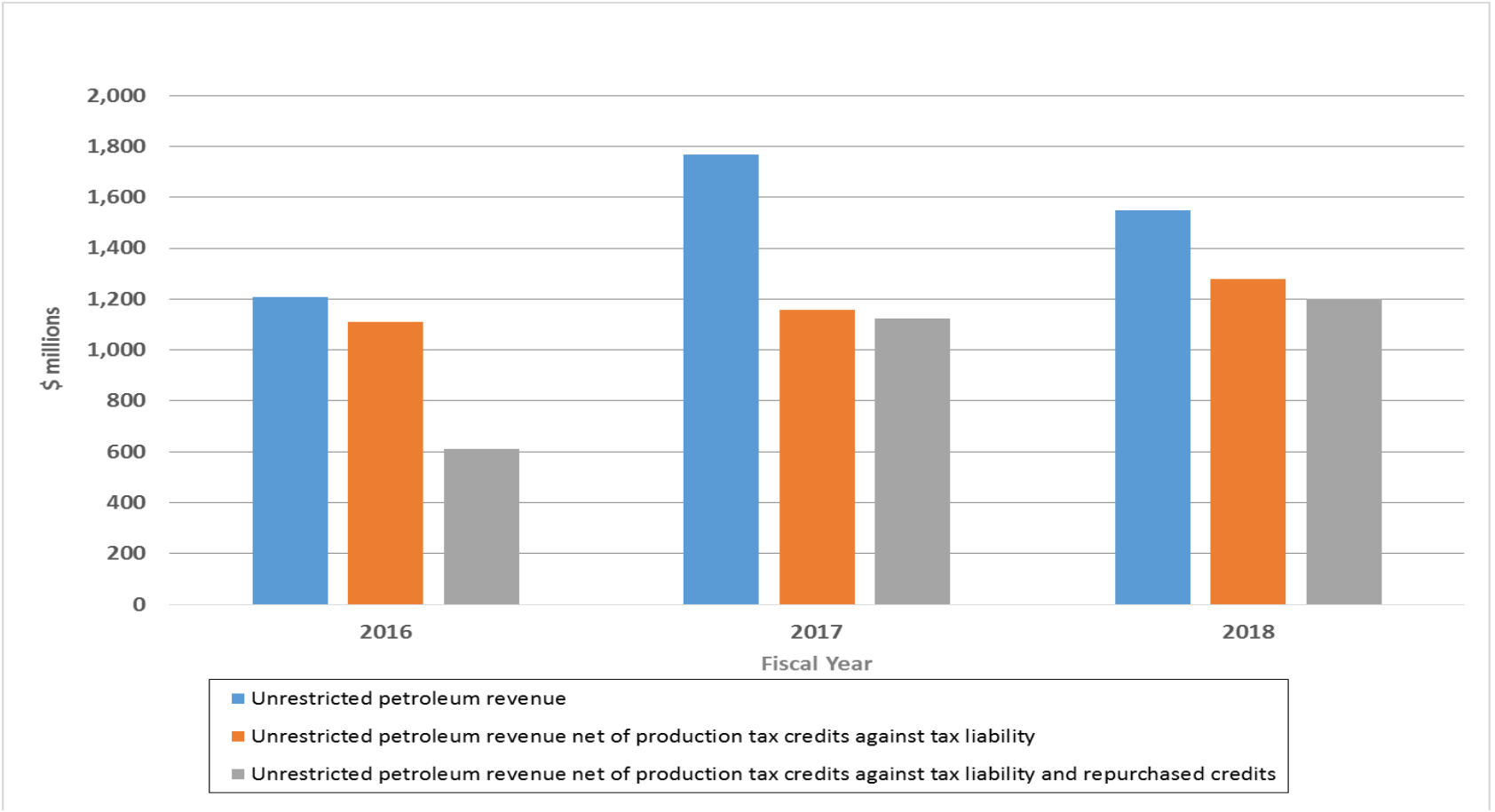
CREDITS FORECAST: Compared with Production Tax



Notes: Repurchased credits for FY 2016 and FY 2017 include only credits actually repurchased during those years.
Repurchased credits for FY 2018 represents the statutory appropriation of $76 million.
Under this scenario, estimated credits available for repurchase are $1.04 billion at the end of FY18.

Source: Department of Revenue - Revenue Sources Book Spring 2017

CREDITS FORECAST: Compared with Unrestricted Petroleum Revenue



Notes: Repurchased credits for FY 2016 and FY 2017 include only credits actually repurchased during those years.
Repurchased credits for FY 2018 represents the statutory appropriation of $76 million.
Under this scenario, estimated credits available for repurchase are $1.04 billion at the end of FY18.

Source: Department of Revenue - Revenue Sources Book Spring 2017

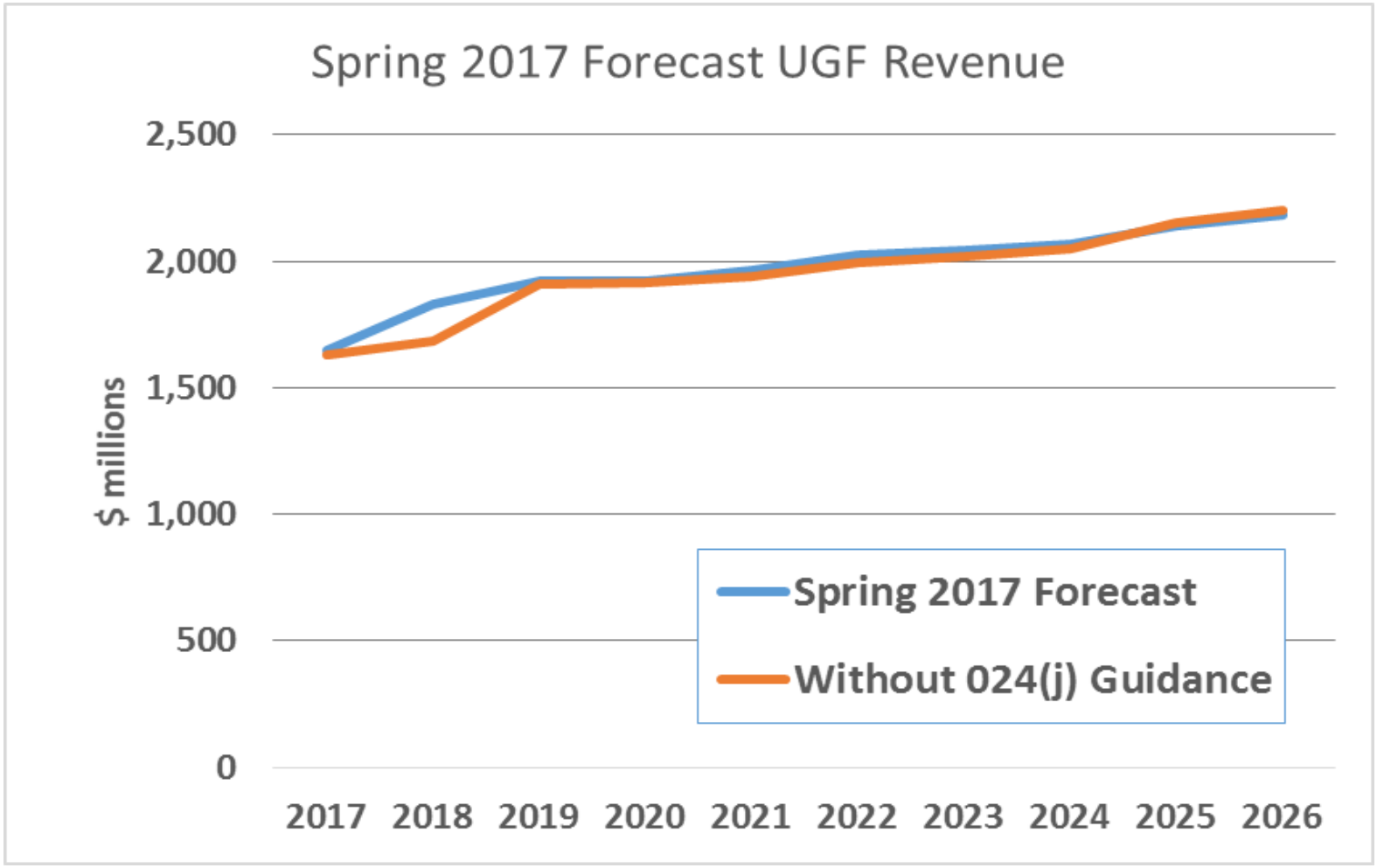
Spring 2017
Advisory Bulletin



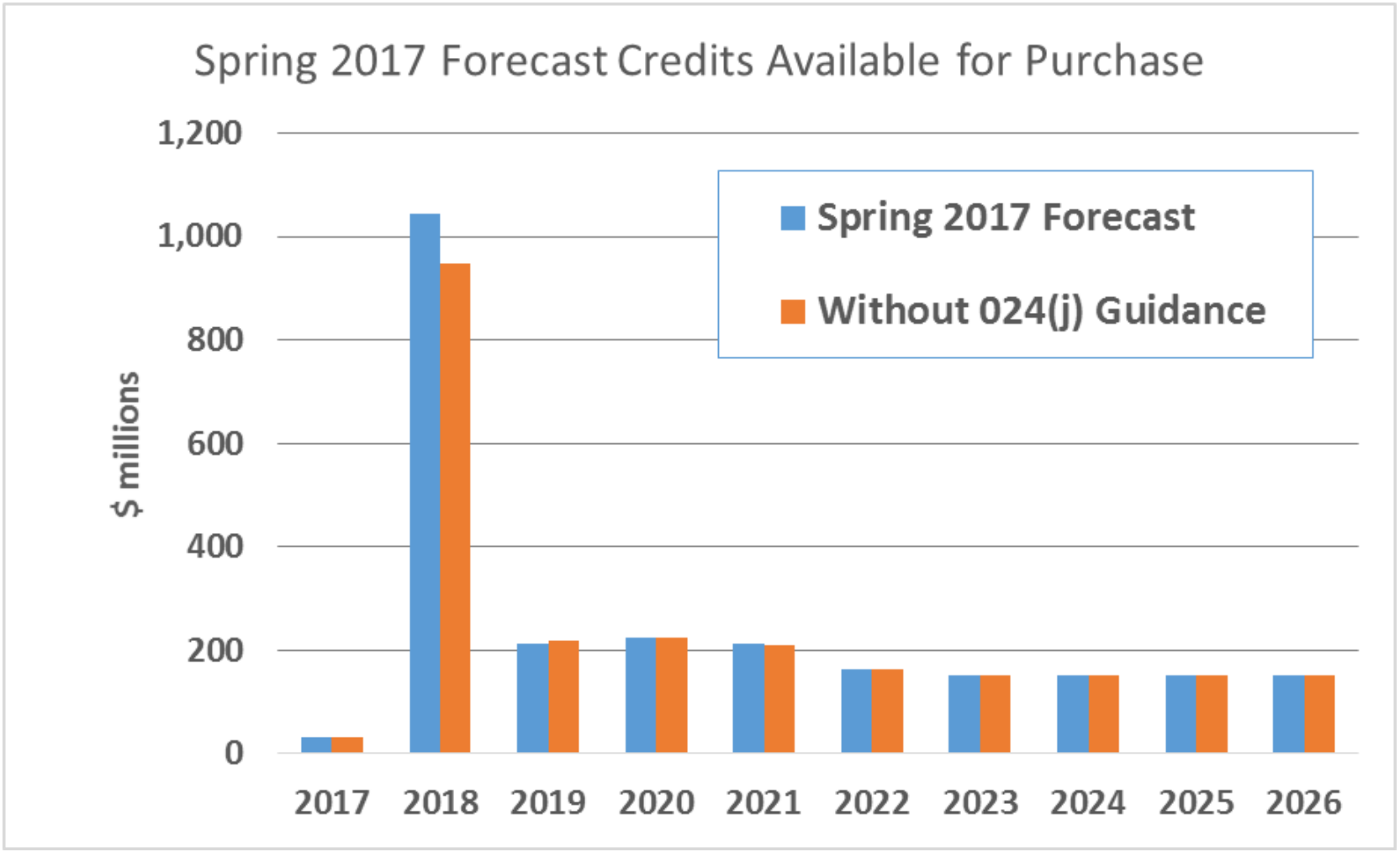
REVENUE FORECAST: Advisory Bulletin Impacts

- DOR Advisory Bulletin (2017-1)
  - Clarification of existing regulation regarding the application of per-taxable-barrel credits for non-GVR oil (024(j))
  - If a company applies 024(j) credits, they cannot use other credits to reduce below minimum tax
  - A company can forego their use of the 024(j) credits and use other credits to reduce below minimum tax (if allowed)
  - Estimated Impacts:
    - 2014 to 2016 Tax Years: ~ $50 - $100M tax due to the State
    - 2017 and 2018 small UGF increases
    - Credit transfers decrease in FY 2018, thus less are used against tax liability. This increases both tax revenue and balance of credits outstanding.

REVENUE FORECAST: Advisory Bulletin Impacts



REVENUE FORECAST: Advisory Bulletin Impacts



THANK YOU

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