Willow Fiscal Analysis
Senate Finance Committee

Department of Revenue

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THE STATE of ALASKA
GOVERNOR MICHAEL J. DUNLEAVY

Acronyms

ANS – Alaska North Slope
Bbl – Barrel
CBRF – Constitutional Budget Reserve Fund
CIT – Corporate Income Tax
DNR – Department of Natural Resources
DOR – Department of Revenue
FY – Fiscal Year
GVPP – Gross Value at Point of Production
GVR – Gross Value Reduction
NPR-A – National Petroleum Reserve Alaska
NSB – North Slope Borough
PTV – Production Tax Value
SB21 – Senate Bill 21, passed in 2013
SEIS – Supplemental Environmental Impact Statement
TAPS – Trans Alaska Pipeline System
Ths - Thousands

Disclaimer

- Alaska’s severance tax is one of the most complex in the world and portions are subject to interpretation and dispute.
- These numbers are rough approximations based on public data, as presented in the Spring 2023 Revenue Sources Book and other revenue forecasts.
- This presentation is solely for illustrative general purposes.
    - Not an official statement as to any particular tax liability, interpretation, or treatment.
    - Not tax advice or guidance.
- Some numbers may differ due to rounding.

Foundational Discussion

- Order of Operations Refresher
- Increased Investment Example
- Gross Value Reduction (GVR) Discussion and Mechanics
- Lease Expenditure Deductions

Oil and Gas Revenue Sources

- Royalty – based on gross value of production
  - Plus bonuses, rents, and interest
  - Paid to Owner of the land: State, Federal, or Private
  - Usually 12.5% or 16.67% in Alaska, but rates vary
- Corporate Income Tax – based on net income
  - Paid to State (9.4% top rate)
  - Paid to Federal (21% top rate)
  - Only C-Corporations* pay this tax
- Property Tax – based on value of oil & gas property
  - Paid to State (2% of assessed value or “20 mills”)
  - Paid to Municipalities – credit offsets state tax paid
- Production Tax – based on “production tax value”
  - Paid to State – calculation to follow

* C-Corporation is a business term that is used to distinguish the type of business entity, as defined under subchapter C of the federal Internal Revenue Code.

Fiscal System: Overall Order of Operations

Royalties (State, Federal, or Private)

↓

Property Tax

↓

Production Tax

↓

State Corporate Income Tax

↓

Federal Corporate Income Tax

Production Tax “Order of Operations”: FY 2024

	Per Barrel	Barrels	Value ($ million)	
Avg ANS Oil Price ($/bbl) & Daily Production (ths bbls)	*$73.00*	*496.4*	*$36.2*	
Total Annual Production/Value	**$73.00**	**181,682**	**$13,262.8**	
Royalty, Federal, and Other Barrels		(23,576)	($1,721.0)	
Taxable Barrels	**$73.00**	**158,106**	**$11,541.8**	
Downstream (Transportation) Costs ($/bbl)	($9.61)		($1,519.0)	
Gross Value at Point of Production (GVPP)	**$63.39**	**158,106**	**$10,022.8**	
North Slope Lease Expenditures				
Deductible Operating Expenditures	($17.23)		($2,723.4)	
Deductible Capital Expenditures	($11.80)		($1,865.9)	
Total Lease Expenditures	($29.03)		($4,589.3)	
Production Tax Value (PTV)	**$34.37**	**158,106**	**$5,433.5**	
Production Tax			Min Tax Floor	Net Tax
Gross Value or Production Tax Value			$10,022.8	$5,433.5
Gross Value Reduction (GVR)			$0.0	($142.2)
GVPP or PTV after GVR			**$10,022.8**	**$5,291.3**
Tax rate			4%	35%
Tax before credits			**$400.9**	**$1,851.9**
Higher of minimum tax floor or net tax	**$11.71**	**158,106**	**$1,851.9**	
GVR Per-taxable-barrel credits	($1.73)	11,053	($19.1)	
Non-GVR Per-taxable-barrel credits	($7.61)	147,059	($1,119.2)	
Other credits against liability	($0.00)		($0.6)	
Total Tax after credits	**$4.51**	**158,106**	**$713.1**	
Other items / adjustments	$0.18		$28.7	
Total Tax paid to the state	**$4.69**	**158,106**	**$741.8**	
Net New Lease Expenditures Earned and Carried Forward			*$913.7*	

Source: DOR Spring 2023 Revenue Forecast

Production Tax “Order of Operations”: FY 2024

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Net New Lease Expenditures Earned and Carried Forward			*$913.7*	

1. Royalty and Taxable Barrels

Production Tax "Order of Operations": FY 2024

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Net New Lease Expenditures Earned and Carried Forward			*$913.7*	

2. Gross Value At Point of Production (GVPP)

Production Tax “Order of Operations”: FY 2024

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Net New Lease Expenditures Earned and Carried Forward			*$913.7*	

3. Lease Expenditures

Source: DOR Spring 2023 Revenue Forecast

Production Tax "Order of Operations": FY 2024

	Per Barrel	Barrels	Value ($ million)	
Avg ANS Oil Price ($/bbl) & Daily Production (ths bbls)	*$73.00*	*496.4*	*$36.2*	
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Net New Lease Expenditures Earned and Carried Forward			*$913.7*	

4. Production Tax Value (PTV)

Production Tax "Order of Operations": FY 2024

	Per Barrel	Barrels	Value ($ million)	
Avg ANS Oil Price ($/bbl) & Daily Production (ths bbls)	*$73.00*	*496.4*	*$36.2*	
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Other items / adjustments	$0.18		$28.7	
Total Tax paid to the state	**$4.69**	**158,106**	**$741.8**	
Net New Lease Expenditures Earned and Carried Forward			*$913.7*	

5. Gross Minimum Tax Floor

Source: DOR Spring 2023 Revenue Forecast

Production Tax "Order of Operations": FY 2024

	Per Barrel	Barrels	Value ($ million)	
Avg ANS Oil Price ($/bbl) & Daily Production (ths bbls)	*$73.00*	*496.4*	*$36.2*	
Total Annual Production/Value	**$73.00**	**181,682**	**$13,262.8**	
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Other items / adjustments	$0.18		$28.7	
Total Tax paid to the state	**$4.69**	**158,106**	**$741.8**	
Net New Lease Expenditures Earned and Carried Forward			*$913.7*	

6. Net Tax and Gross Value Reduction (GVR)

Source: DOR Spring 2023 Revenue Forecast

Production Tax "Order of Operations": FY 2024

	Per Barrel	Barrels	Value ($ million)	
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GVPP or PTV after GVR			**$10,022.8**	**$5,291.3**
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Total Tax paid to the state	**$4.69**	**158,106**	**$741.8**	
Net New Lease Expenditures Earned and Carried Forward			*$913.7*	

7. Tax Credits Against Liability

Production Tax "Order of Operations": FY 2024

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Production Tax			Min Tax Floor	Net Tax
Gross Value or Production Tax Value			$10,022.8	$5,433.5
Gross Value Reduction (GVR)			$0.0	($142.2)
GVPP or PTV after GVR			**$10,022.8**	**$5,291.3**
Tax rate			4%	35%
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Other credits against liability	($0.00)		($0.6)	
Total Tax after credits	**$4.51**	**158,106**	**$713.1**	
Other items / adjustments	$0.18		$28.7	
Total Tax paid to the state	**$4.69**	**158,106**	**$741.8**	
Net New Lease Expenditures Earned and Carried Forward			*$913.7*	

8. Adjustments and Total Tax Paid

Example: Company with 200,000 Barrels Per Day Taxable Production

	Per Barrel	Barrels	Value ($ million)	
Avg ANS Oil Price ($/bbl) & Daily Production (ths bbls)	*$73.00*	*229.8*	*$16.8*	
Total Annual Production/Value	**$73.00**	**84,115**	**$6,140.4**	
Royalty, Federal, and Other Barrels		(10,915)	($796.8)	
Taxable Barrels	**$73.00**	**73,200**	**$5,343.6**	
Downstream (Transportation) Costs ($/bbl)	($9.61)		($703.3)	
Gross Value at Point of Production (GVPP)	**$63.39**	**73,200**	**$4,640.3**	
North Slope Lease Expenditures				
Deductible Operating Expenditures	($17.23)		($1,260.9)	
Deductible Capital Expenditures	($11.80)		($863.9)	
Total Lease Expenditures	($29.03)		($2,124.8)	
Production Tax Value (PTV)	**$34.37**	**73,200**	**$2,515.6**	
Production Tax			Min Tax Floor	Net Tax
Gross Value or Production Tax Value			$4,640.3	$2,515.6
Gross Value Reduction (GVR)			$0.0	($65.8)
GVPP or PTV after GVR			**$4,640.3**	**$2,449.7**
Tax rate			4%	35%
Tax before credits			**$185.6**	**$857.4**
Higher of minimum tax floor or net tax	**$11.71**	**73,200**	**$857.4**	
GVR Per-taxable-barrel credits	($5.00)	5,117	($25.6)	
Non-GVR Per-taxable-barrel credits	($8.00)	68,085	($544.7)	
Other credits against liability	($0.00)		($0.3)	
Total Tax after credits	**$3.92**	**73,200**	**$286.9**	
Net New Lease Expenditures Earned and Carried Forward			*$0.0*	

All lease expenditures applied

Full value of per-taxable-barrel credits

35% benefit of lease expenditures

No carryforward

Example: $200 million additional Capital Expenditure

	Per Barrel	Barrels	Value ($ million)	
Avg ANS Oil Price ($/bbl) & Daily Production (ths bbls)	*$73.00*	*229.8*	*$16.8*	
Total Annual Production/Value	**$73.00**	**84,115**	**$6,140.4**	
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North Slope Lease Expenditures				
Deductible Operating Expenditures	($17.23)		($1,260.9)	
Deductible Capital Expenditures	($14.53)		($1,063.9)	
Total Lease Expenditures	($31.76)		($2,324.8)	
Production Tax Value (PTV)	**$31.63**	**73,200**	**$2,315.6**	
Production Tax			Min Tax Floor	Net Tax
Gross Value or Production Tax Value			$4,640.3	$2,315.6
Gross Value Reduction (GVR)			$0.0	($65.8)
GVPP or PTV after GVR			**$4,640.3**	**$2,249.7**
Tax rate			4%	35%
Tax before credits			**$185.6**	**$787.4**
Higher of minimum tax floor or net tax	**$10.76**	**73,200**	**$787.4**	
GVR Per-taxable-barrel credits	($5.00)	5,117	($25.6)	
Non-GVR Per-taxable-barrel credits	($8.00)	68,085	($544.7)	
Other credits against liability	($0.00)		($0.3)	
Total Tax after credits	**$2.96**	**73,200**	**$216.9**	
Net New Lease Expenditures Earned and Carried Forward			*$0.0*	

All lease expenditures applied

Full value of per-taxable-barrel credits

35% benefit of lease expenditures

No carryforward

Source: DOR Spring 2023 Revenue Forecast

Example: $1 billion additional Capital Expenditure

	Per Barrel	Barrels	Value ($ million)	
Avg ANS Oil Price ($/bbl) & Daily Production (ths bbls)	*$73.00*	*229.8*	*$16.8*	
Total Annual Production/Value	**$73.00**	**84,115**	**$6,140.4**	
Royalty, Federal, and Other Barrels		(10,915)	($796.8)	
Taxable Barrels	**$73.00**	**73,200**	**$5,343.6**	
Downstream (Transportation) Costs ($/bbl)	($9.61)		($703.3)	
Gross Value at Point of Production (GVPP)	**$63.39**	**73,200**	**$4,640.3**	
North Slope Lease Expenditures				
Deductible Operating Expenditures	($17.23)		($1,260.9)	
Deductible Capital Expenditures	($25.46)		($1,863.9)	
Total Lease Expenditures	($42.69)		($3,124.8)	
Production Tax Value (PTV)	**$20.70**	**73,200**	**$1,515.6**	
Production Tax			Min Tax Floor	Net Tax
Gross Value or Production Tax Value			$4,640.3	$1,515.6
Gross Value Reduction (GVR)			$0.0	($65.8)
GVPP or PTV after GVR			**$4,640.3**	**$1,449.7**
Tax rate			4%	35%
Tax before credits			**$185.6**	**$507.4**
Higher of minimum tax floor or net tax	**$6.93**	**73,200**	**$507.4**	
GVR Per-taxable-barrel credits	$0.00	5,117	$0.0	
Non-GVR Per-taxable-barrel credits	($4.73)	68,085	($321.8)	
Other credits against liability	$0.00		$0.0	
Total Tax after credits	**$2.54**	**73,200**	**$185.6**	
Net New Lease Expenditures Earned and Carried Forward			*$0.0*	

All lease expenditures applied

Per-taxable-barrel credits limited by minimum tax floor

10% benefit of lease expenditures

No carryforward

Example: $2 billion additional Capital Expenditure

	Per Barrel	Barrels	Value ($ million)	
Avg ANS Oil Price ($/bbl) & Daily Production (ths bbls)	*$73.00*	*229.8*	*$16.8*	
Total Annual Production/Value	**$73.00**	**84,115**	**$6,140.4**	
Royalty, Federal, and Other Barrels		(10,915)	($796.8)	
Taxable Barrels	**$73.00**	**73,200**	**$5,343.6**	
Downstream (Transportation) Costs ($/bbl)	($9.61)		($703.3)	
Gross Value at Point of Production (GVPP)	**$63.39**	**73,200**	**$4,640.3**	
North Slope Lease Expenditures				
Deductible Operating Expenditures	($17.23)		($1,260.9)	
Deductible Capital Expenditures	($39.12)		($2,863.9)	
Total Lease Expenditures	($56.35)		($4,124.8)	
Production Tax Value (PTV)	**$7.04**	**73,200**	**$515.6**	
Production Tax			Min Tax Floor	Net Tax
Gross Value or Production Tax Value			$4,640.3	$515.6
Gross Value Reduction (GVR)			$0.0	($65.8)
GVPP or PTV after GVR			**$4,640.3**	**$449.7**
Tax rate			4%	35%
Tax before credits			**$185.6**	**$157.4**
Higher of minimum tax floor or net tax	**$2.54**	**73,200**	**$185.6**	
GVR Per-taxable-barrel credits	($5.00)	5,117	($25.6)	
Non-GVR Per-taxable-barrel credits	$0.00	68,085	$0.0	
Other credits against liability	($0.00)		($0.3)	
Total Tax after credits	**$2.18**	**73,200**	**$159.8**	
Net New Lease Expenditures Earned and Carried Forward			*$0.0*	

All lease expenditures applied

Per-taxable-barrel credits limited by minimum tax floor

6% benefit of lease expenditures

No carryforward

Example: $3 billion additional Capital Expenditure

	Per Barrel	Barrels	Value ($ million)	
Avg ANS Oil Price ($/bbl) & Daily Production (ths bbls)	*$73.00*	*229.8*	*$16.8*	
Total Annual Production/Value	**$73.00**	**84,115**	**$6,140.4**	
Royalty, Federal, and Other Barrels		(10,915)	($796.8)	
Taxable Barrels	**$73.00**	**73,200**	**$5,343.6**	
Downstream (Transportation) Costs ($/bbl)	($9.61)		($703.3)	
Gross Value at Point of Production (GVPP)	**$63.39**	**73,200**	**$4,640.3**	
North Slope Lease Expenditures				
Deductible Operating Expenditures	($17.23)		($1,260.9)	
Deductible Capital Expenditures	($46.17)		($3,379.5)	
Total Lease Expenditures	($63.39)		($4,640.3)	
Production Tax Value (PTV)	**$0.00**	**73,200**	**$0.0**	
Production Tax			Min Tax Floor	Net Tax
Gross Value or Production Tax Value			$4,640.3	$0.0
Gross Value Reduction (GVR)			$0.0	$0.0
GVPP or PTV after GVR			**$4,640.3**	**$0.0**
Tax rate			4%	35%
Tax before credits			**$185.6**	**$0.0**
Higher of minimum tax floor or net tax	**$2.54**	**73,200**	**$185.6**	
GVR Per-taxable-barrel credits	($5.00)	5,117	($25.6)	
Non-GVR Per-taxable-barrel credits	$0.00	68,085	$0.0	
Other credits against liability	($0.00)		($0.3)	
Total Tax after credits	**$2.18**	**73,200**	**$159.8**	
Net New Lease Expenditures Earned and Carried Forward			*$484.4*	

Most lease expenditures applied

Per-taxable-barrel credits limited by minimum tax floor

4-10% benefit of lease expenditures

Carryforward of excess lease expenditures

Lease Expenditures Example: Takeaways

- If company is above minimum tax floor, modest increases in investment benefit at 35% marginal tax rate.
- Once company reaches minimum tax floor, the benefit of increased investment is much lower.
- Once company reaches a net operating loss, some benefit of increased investment returns, in the form of a carried-forward loss.
- Benefit of spending will also vary based on oil prices.
    - A low oil price scenario is very similar to a high investment scenario.
- The changing benefits are a source of uncertainty to company making investment decisions, and to state revenue forecasting.
- This analysis is relevant to discussions of Willow because the field would require massive additional investment.

Gross Value Reduction

- Gross Value Reduction (GVR) is an incentive program for new fields.
- Available for the first seven years of production and ends early if ANS prices average over $70 per barrel for any three years.
- Allows companies to exclude 20% or 30% of the gross value from the net production tax calculation.
- In lieu of sliding scale Non-GVR Per-Taxable Barrel Credit, qualifying production receives a flat $5 GVR Per-Taxable-Barrel Credit.
- The $5 GVR Per-Taxable-Barrel Credit can be applied to reduce tax liability below the minimum tax floor, assuming that the producer does not apply any sliding scale Non-GVR Per-Taxable Barrel Credits.
- GVR is relevant to discussions of Willow because the field would likely qualify for this benefit in early years of production.

Why Allow Lease Expenditure Deductions?

- Oil and gas exploration and development are high-risk, capital-intensive activities. There is no guarantee of success.
- Cost recovery is critical for company investment decisions.
- Deductions that allow companies to continue work even when unsuccessful, make exploration and development much less risky.
- Alaska’s net tax system balances lower state take early in field life, with higher state take later in field life.
- Cost recovery is an integral part of a net tax system.
- Slope-wide “ring fence” encourages reinvestment of profits in Alaska.
- Lease expenditure deductions and GVR were designed to help companies recover costs quickly, improving project economics.
- Gross minimum tax floor ensures a minimum level of state revenue regardless of investments or oil price.

Willow Project Analysis

- Analysis Updates
- Description and Assumptions
- Revenue Analysis
- Uncertainty
- Spring Forecast Comparison
- Conclusions
- Appendix:
  1. Sensitivity Analyses
  2. Local Cash Flows

Typical Oil Field Development

Finding and developing an oil or gas field is heavily capital intensive:

- Very large up-front costs before any revenue received
- Reaching first production can take decades
- Especially true on Alaska's North Slope

1999**	($10s millions)*	2016**	($100s millions)*	2023**	($billions)*	2029** (estimated)	+$billions*

Exploration	Appraisal	Development	Production
Lease Acquisition Seismic Data Exploration Well(s)	Development Planning More Wells	Major Construction Even More Wells	Oil Production Begins

* Ranges for comparable fields ** Dates for Willow

Analysis Description

- Goal is to demonstrate fiscal impact of Willow Field development.
- Department of Revenue (DOR) Lifecycle Model allows detailed financial analysis of a single oil development project.
  - Forecasts revenue to state, municipality, impacted communities, federal government, and producer
  - Results in nominal dollars
  - Deterministic analysis, not probabilistic, using a single set of assumptions
- Uses publicly available data only, no taxpayer confidential data.
  - Willow federal Supplemental Environmental Impact Statement (SEIS) (February 2023)
  - Spring 2023 Forecast by DOR (March 2023)
  - Use of confidential data could materially change analysis results

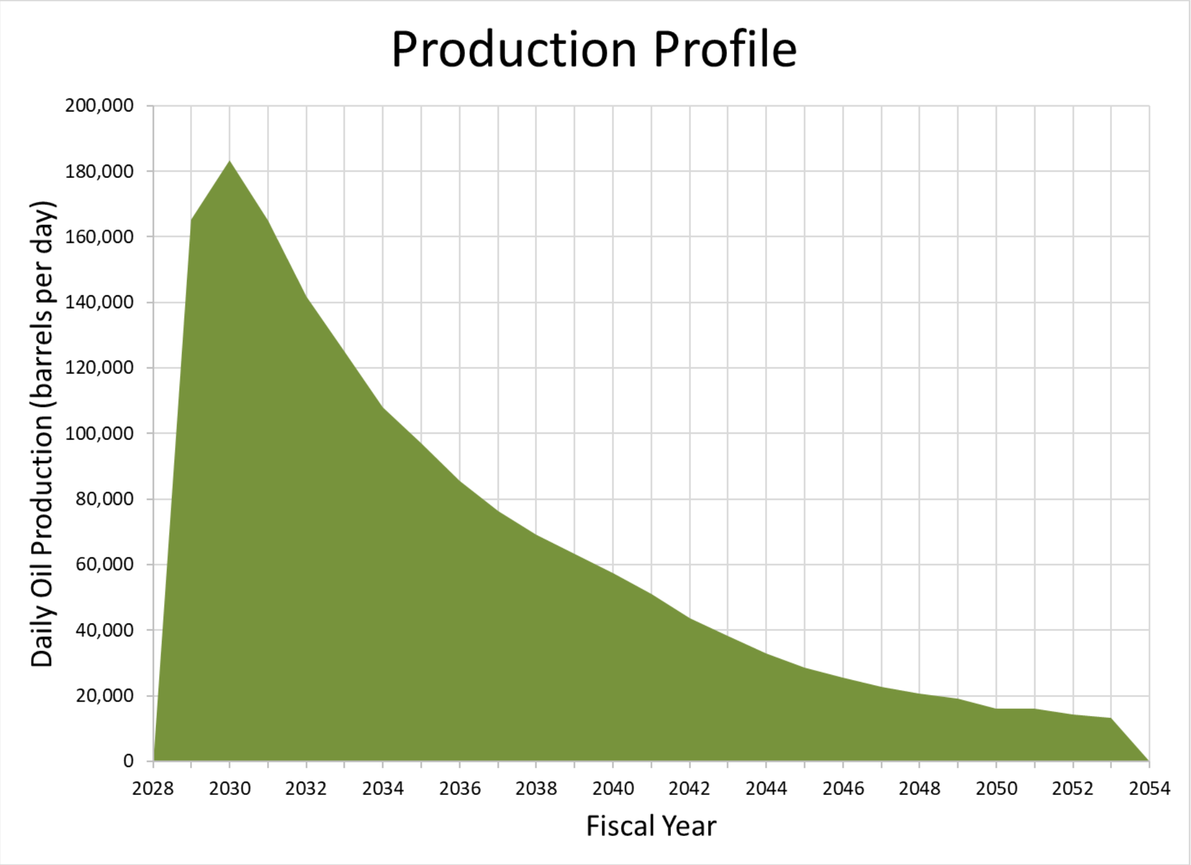
Analysis Updates

Four component updates from February 2023 analysis:

1. Spring 2023 forecast for oil prices and transportation costs
   - Previously used Fall 2022 forecast
2. Producer receives benefit of lease expenditure deductions only as far as minimum tax floor
   - Previously producer received benefit of all lease expenditure deductions
3. Zero impact on State Corporate Income Tax prior to production
   - Previously included negative impact on state corporate income
4. North Slope-wide state benefit from pipeline tariff now also includes feeder pipelines (Alpine and Kuparuk)
   - Previously only included Trans-Alaska Pipeline (TAPS)

Oil Production

- Unrisked oil production profile for 3-drill pad development
  - Profile supplied by ConocoPhillips for SEIS
  - As approved by Record of Decision from US Department of Interior, Mar 2023
  - Assume first oil FY 2029
  - 613 million barrels total production to FY 2053
  - Peak production 183,000 barrels per day in FY 2030
- Represents a normal oil field production profile
  - High early production, with gradual decline as reservoir pressure decreases and/or water production rate increases
  - Further drilling during production could reduce decline, but general shape would remain



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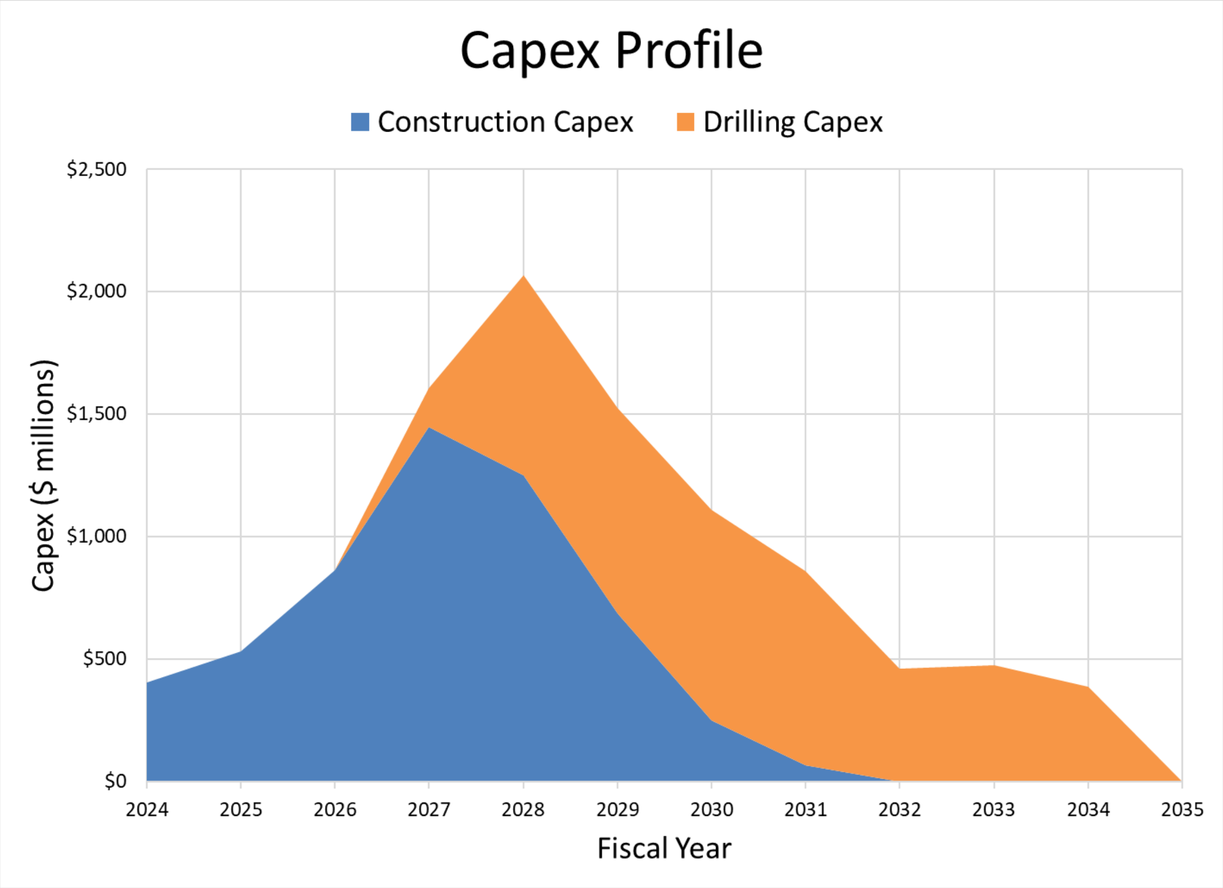
Lease Expenditures

- Composed of capital expenditures and operating expenditures
- Capital Expenditures estimated from ConocoPhillips public statements
  - $10.3 billion total, timing fitted to expected employment
- Operating Expenditures from SEIS estimate (by Northern Economics)
  - $6.1 billion total



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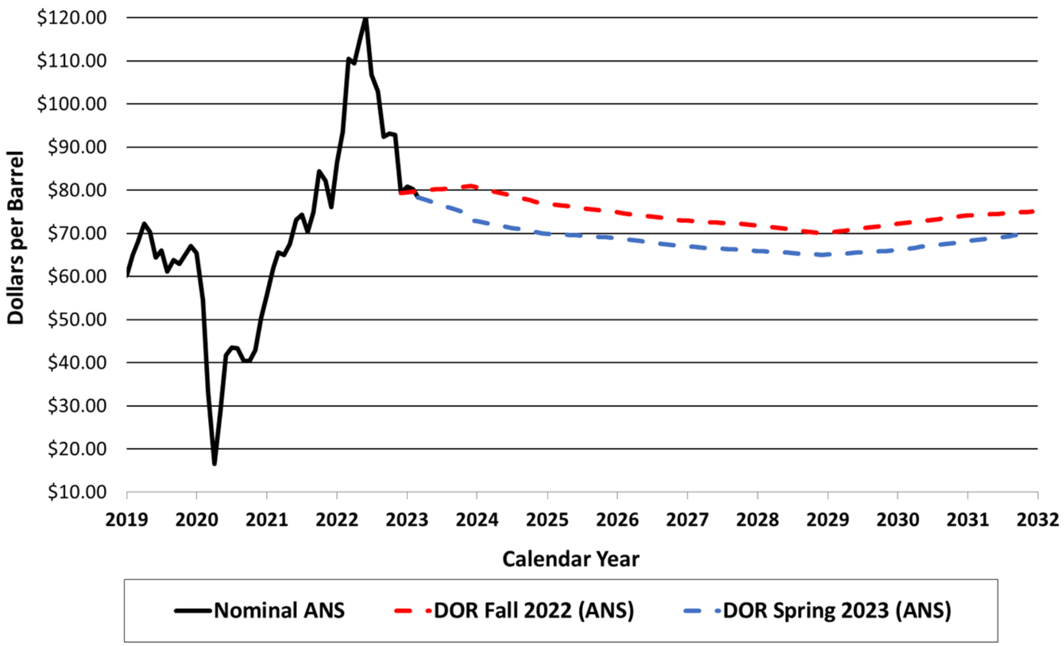
Oil Prices

- Department of Revenue Spring 2023 Oil Price Forecast
  - Derived from oil futures market, increasing with inflation for years where futures unavailable
  - Update from February 2023 white paper, which used Fall 2022 forecast
  - Spring 2023 price forecast lower than Fall 2022 by $5 to $8 per barrel



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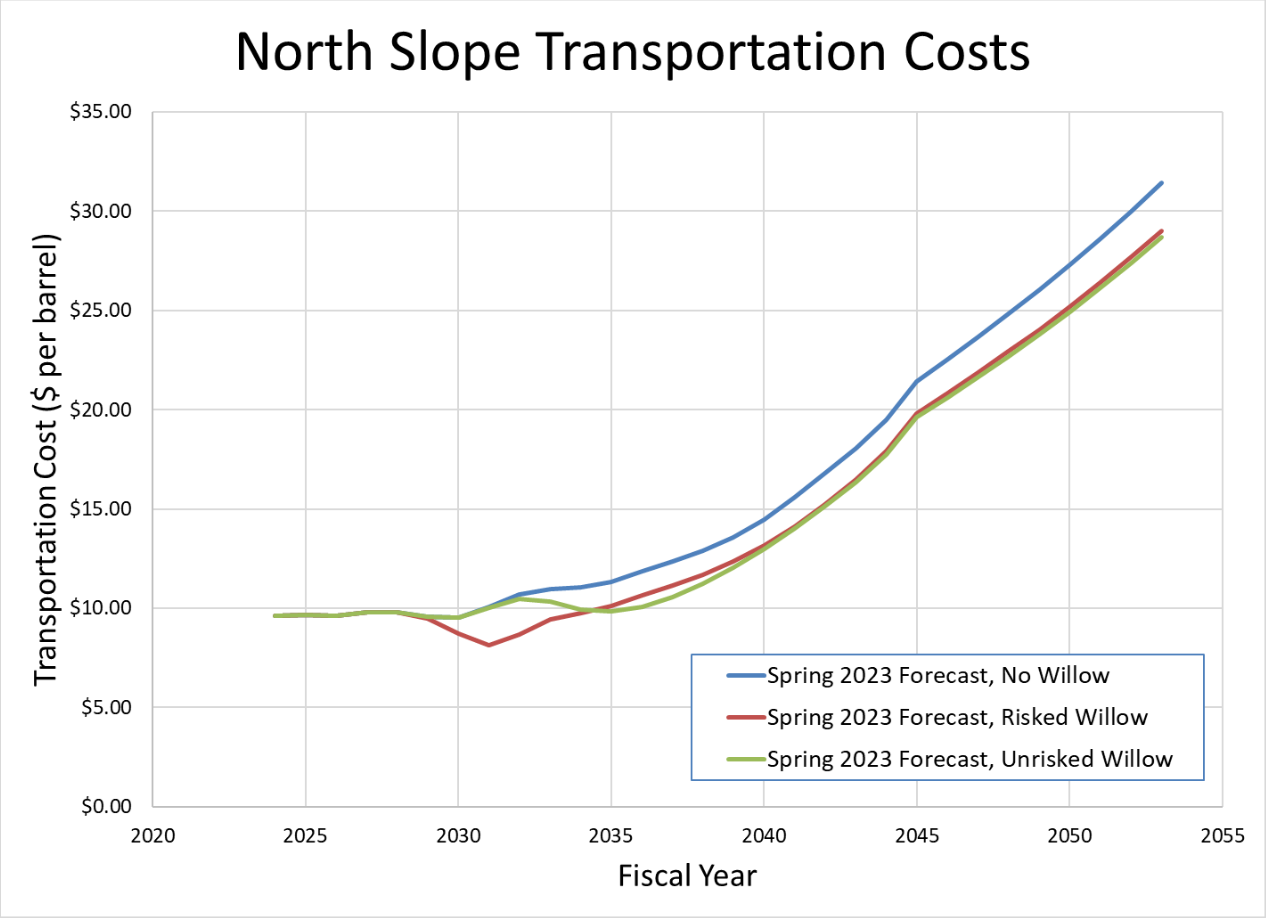
Transportation (Netback) Costs

- Increased flow through Trans-Alaska Pipeline (TAPS) and feeder pipelines (Alpine and Kuparuk) expected to reduce pipeline tariffs
- Reduced pipeline tariff would benefit all North Slope fields
  - Analysis includes resulting increase in state production tax and state royalty
  - Does not include secondary benefit of lower costs increasing investment elsewhere on North Slope



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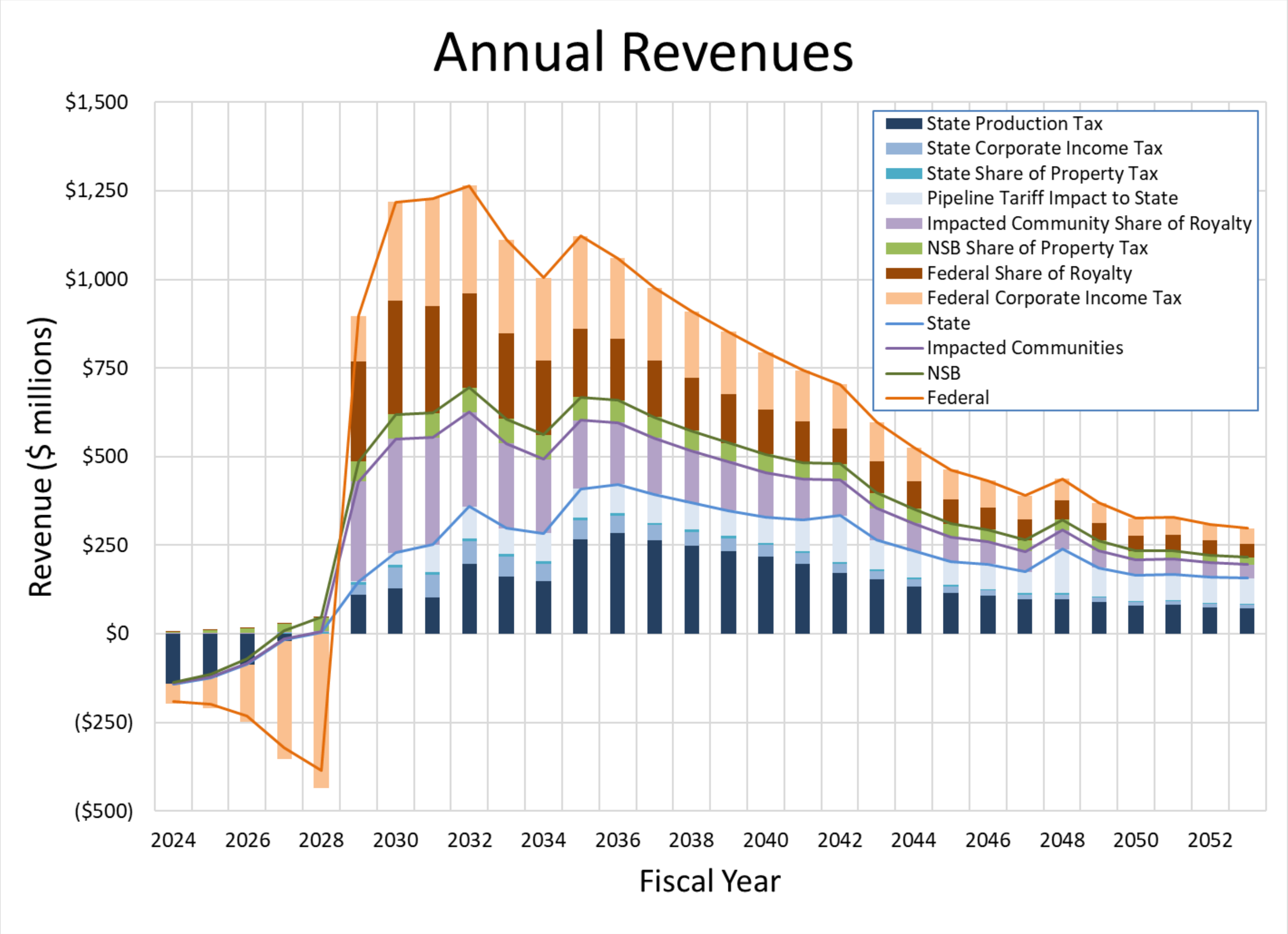
Fiscal Assumptions

- Current state and federal tax laws (March 2023)
- Gross Value Reduction (GVR) at 20%, with no producing area qualifying separately for GVR later in field life
- State Corporate Income Tax rate 4.25% (typical North Slope producer)
  - Impact only after start of production
- Producer able to deduct lease expenditures incurred at Willow against production elsewhere on North Slope, but benefit of those expenditures is limited by the minimum tax floor, until entering a net operating loss
  - Assume producer’s North Slope production of 228,000 barrels per day (200,000 barrels per day after royalty) and at constant level in future
  - Assume lease expenditures of $24.50 per barrel (real) for producer’s other fields on North Slope, based on value for typical North Slope producer
  - Use of taxpayer confidential data could materially change analysis results

Revenue Categories

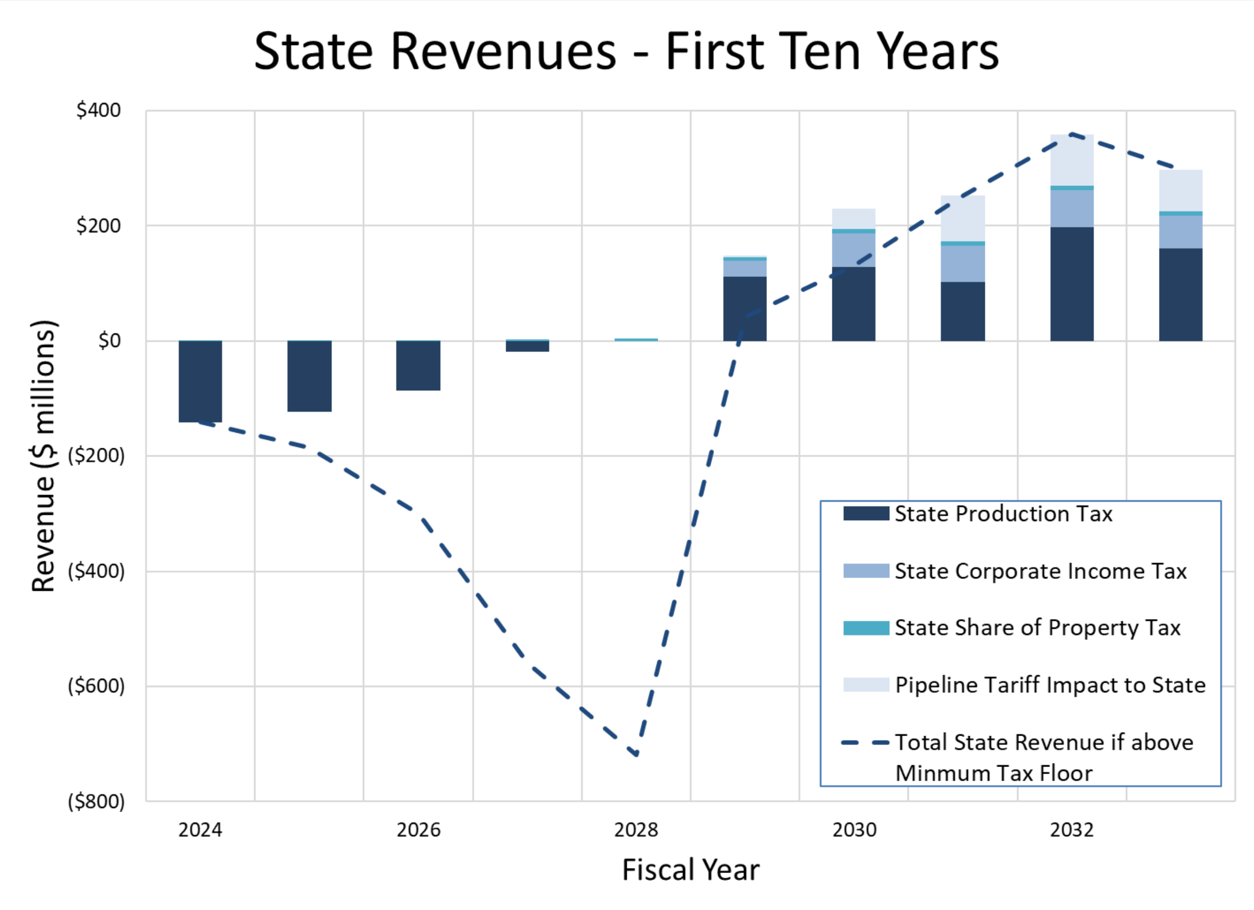
- State Revenue
  - Production Tax
  - State Corporate Income Tax
  - State Share of Property Tax
  - Pipeline benefit to State
- Impacted Community Revenue
  - Royalty share to Impacted Communities (50%)
- North Slope Borough (NSB) Revenue
  - NSB Share of Property Tax
- Federal Revenue
  - Federal Share of Royalty (50%)
  - Federal Corporate Income Tax
- Producer Revenue
  - Company Profit

Annual Revenue by Category



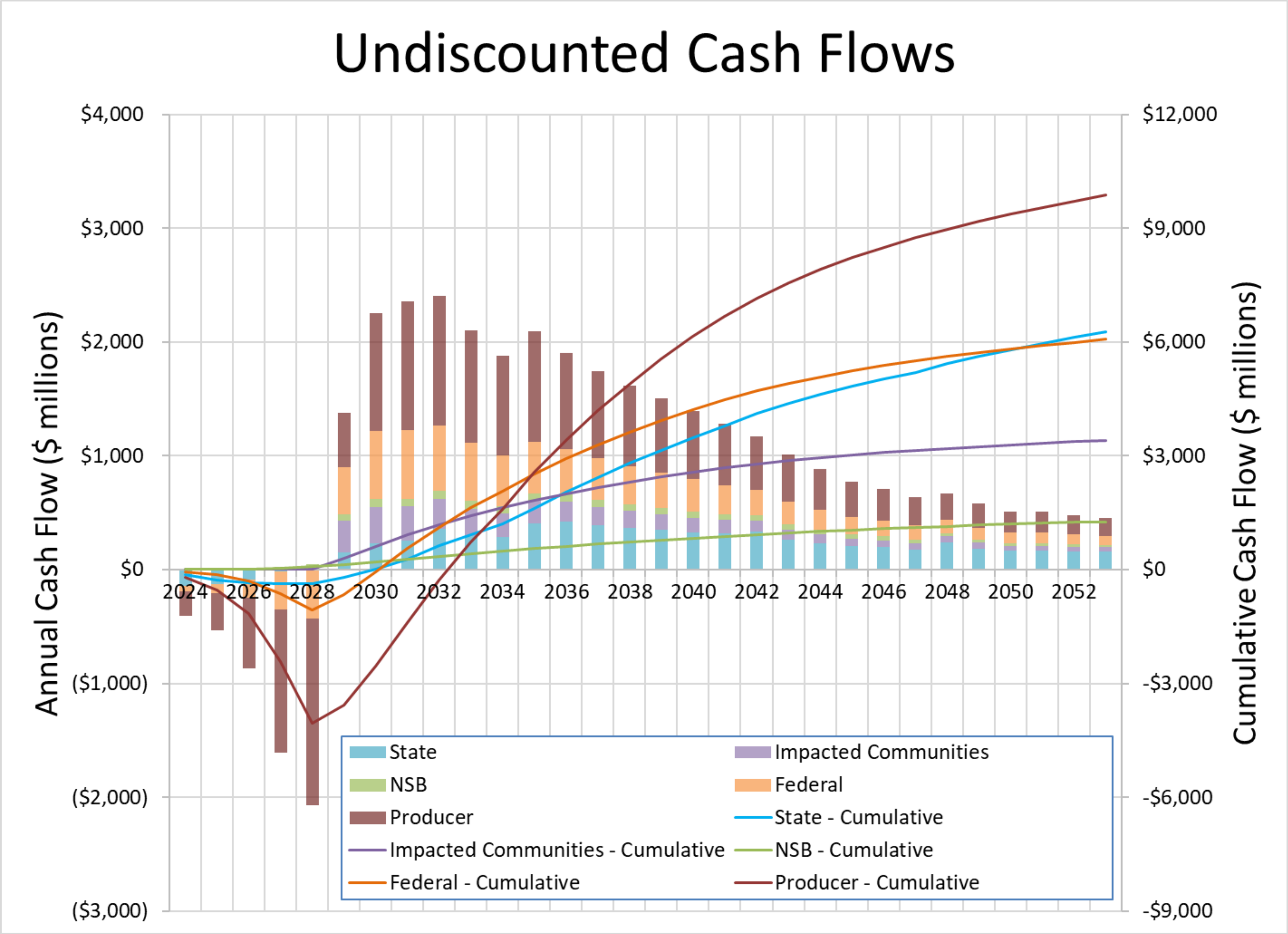
State Revenue – First Ten Years

- Producer benefit of Lease Expenditures is limited by the minimum tax floor
  - Average annual pre-production state revenue ($72) million
  - ($381) million if not limited by minimum tax floor (dashed line)
- Minimum tax floor reduces impact of pre-production Lease Expenditures on state revenue by more than 80% and reduction continues until 2030



($ Millions)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Production Tax	$ (142)	$ (124)	$ (86)	$ (19)	$ -	$ 111	$ 128	$ 102	$ 198	$ 161
State Corporate Income Tax	$ -	$ -	$ -	$ -	$ -	$ 27	$ 58	$ 64	$ 64	$ 56
State Share of Property Tax	$ 0	$ 1	$ 1	$ 3	$ 4	$ 6	$ 8	$ 8	$ 8	$ 8
Pipeline Tariff Benefit to State	$ -	$ -	$ -	$ -	$ -	$ 3	$ 35	$ 79	$ 89	$ 72
Total State Revenue	$ (141)	$ (123)	$ (85)	$ (17)	$ 4	$ 149	$ 229	$ 252	$ 359	$ 297

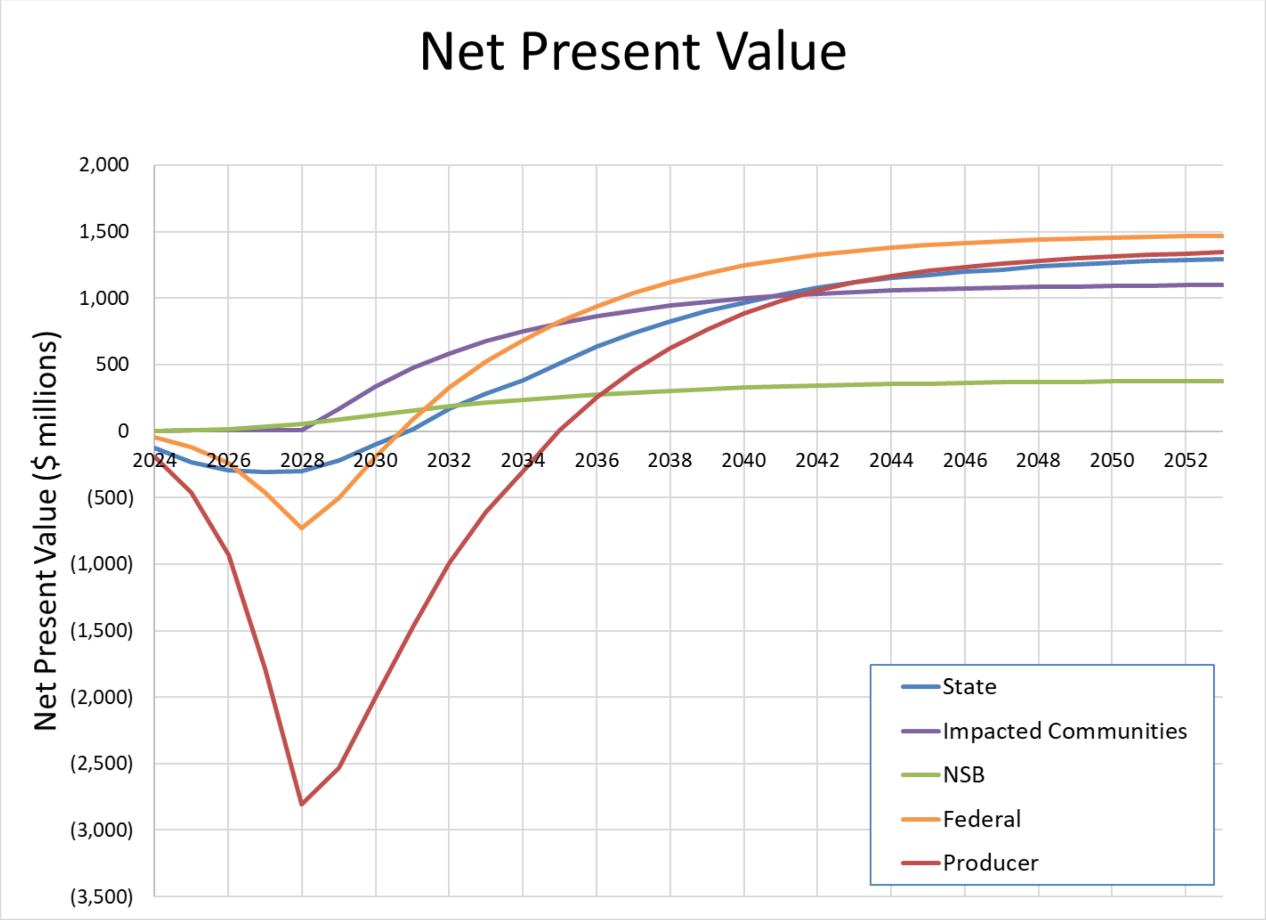
Annual and Cumulative Cash Flow



Net Present Value

- Net Present Value includes the time value of money
- State revenue 30-year net present value over $1 billion, going NPV positive in FY 2031

Cumulative To Year	State	Impacted Communities	NSB	Federal	Producer
2033	$ 283	$ 680	$ 213	$ 526	$ (609)
2043	$ 1,119	$ 1,048	$ 349	$ 1,357	$ 1,119
2053	$ 1,297	$ 1,100	$ 378	$ 1,470	$ 1,346
NPV Positive	*FY 2031*	*FY 2024*	*FY 2024*	*FY 2031*	*FY 2035*



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Uncertainty

- Significant uncertainty in assumptions, elevated above typical levels:
  - Project risk and timing – environmental groups currently suing to prevent field development
  - Oil and gas industry costs – inflation, supply chain disruption, labor disruption, and increasing industry development activity
  - Oil price – higher volatility from Russian invasion of Ukraine and Covid-19 pandemic, greater impact on production tax from oil prices near to $70 (threshold for 3 years or 7 years of Gross Value Reduction (GVR) eligibility)
  - Oil production rates and reserves – more uncertain prior to development
- Available benefit of lease expenditure deductions depends on oil prices, and on production rates and producer's lease expenditures elsewhere on the North Slope
  - Additional project uncertainty from producer's other fields

Conclusions

- Willow project development as modeled would lead to billions of dollars of revenue to:
  - State of Alaska
  - Impacted Communities
  - North Slope Borough
  - Federal Government
  - Producer
- Benefit to state of increased employment not modeled but also expected to be significant and material

THANK YOU

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Appendix:
Sensitivity Analyses

Department of Revenue

March 23, 2023

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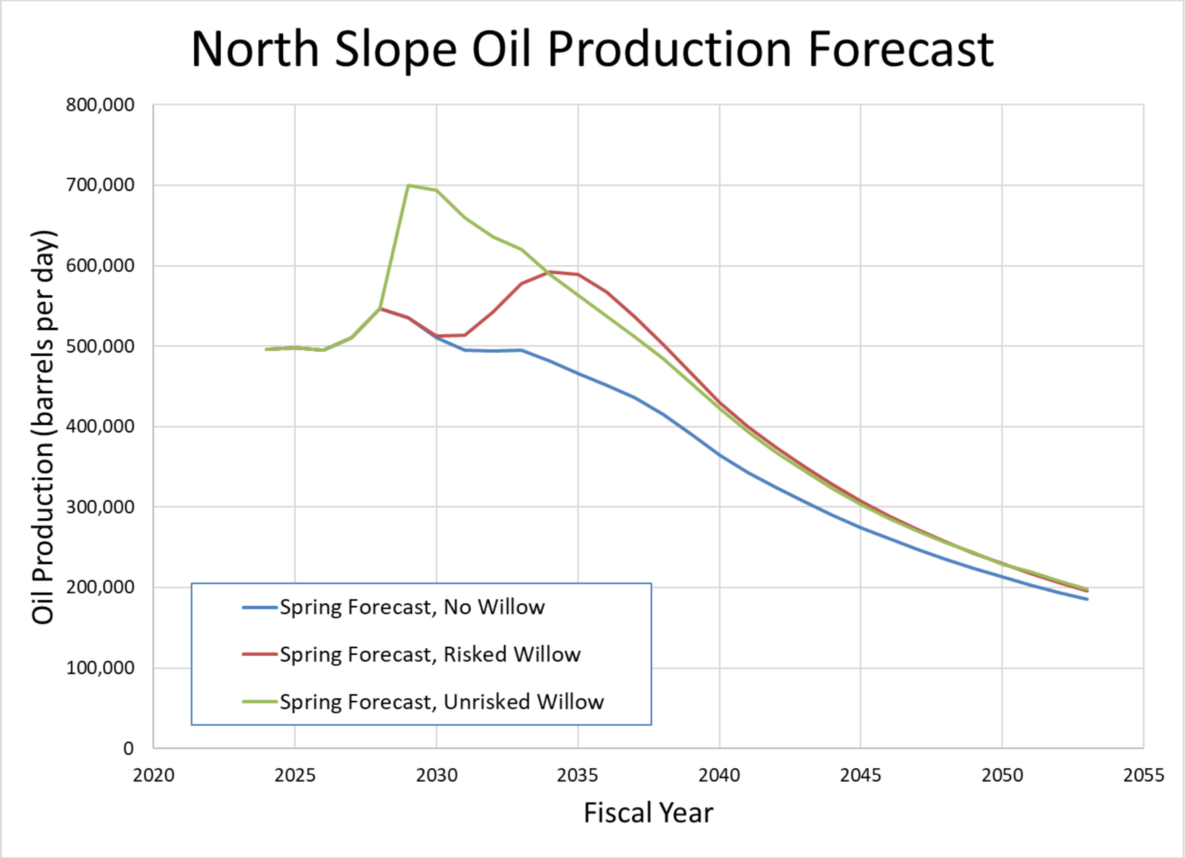
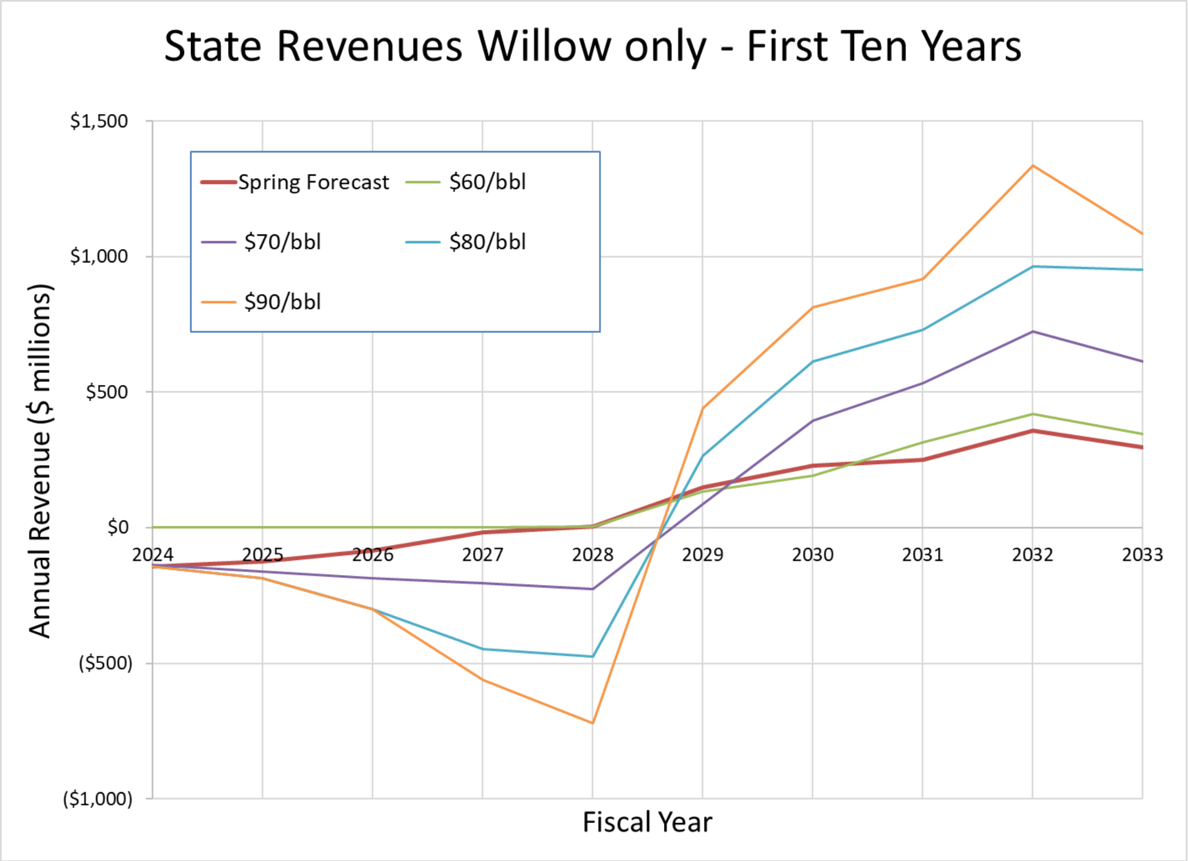
Spring Forecast Comparison

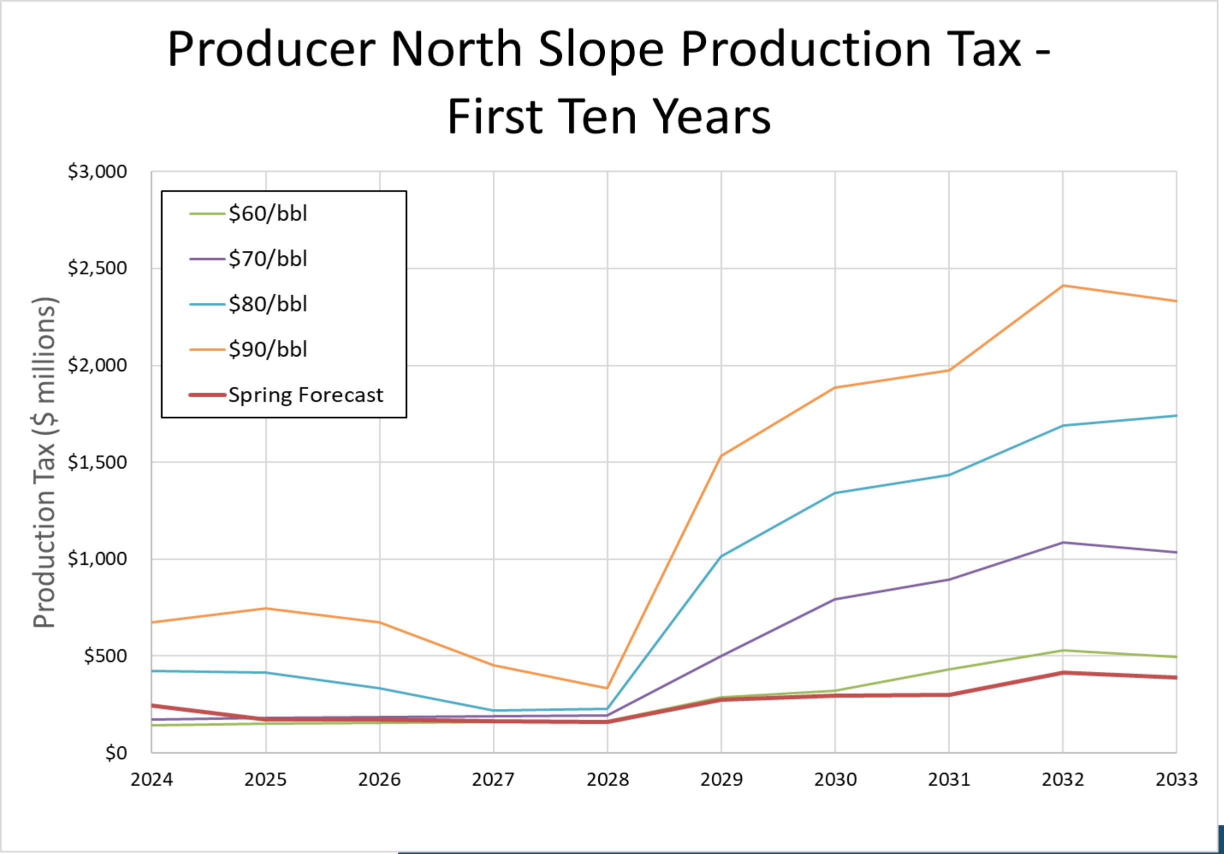
- Spring Production Forecast with Three Cases:
  1. Willow (Risked) – current Spring 2023 forecast
     - Risks chance of occurrence, reducing forecast productio
     - Risks project timing, delaying forecast production
     - Peak production lower, and outside 10-year forecast window
  2. Willow (Unrisked)
     - Single deterministic case, assuming project as presentec in this analysis
     - Peak production of 183,000 barrels per day in FY 2030
  3. No Willow
- Base Production Data from State Forecast
  - 2023 to 2032 Official forecast, provided by DNR
  - 2033 to 2042 Continued for an additional 10 years by DNR
  - 2043 to 2053 Long-term forecast – extrapolation by DOR, for illustrative purposes only



Oil Price Sensitivities

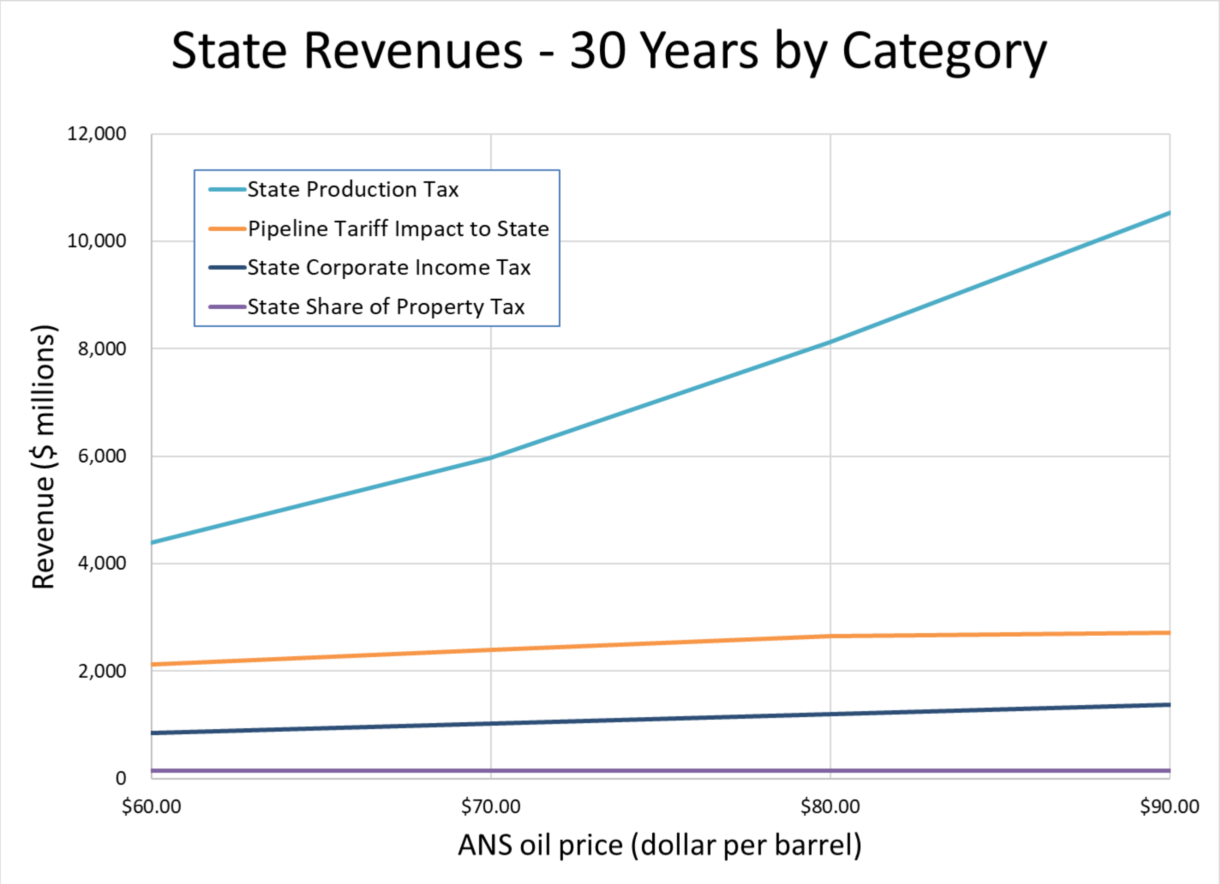
- Compared DOR Spring Forecast oil price to range
  - $60 / $70 / $80 / $90 in FY 2024, increasing with inflation (2.5%)
- Minimum tax floor materially impacts fiscal analysis during construction period





Oil Price Sensitivities

- Production Tax and State Corporate Income Tax vary strongly with oil price
- Property tax and pipeline tariff benefit show less variation
- Total undiscounted state revenue and Net Present Value to State remain material at all modeled oil prices



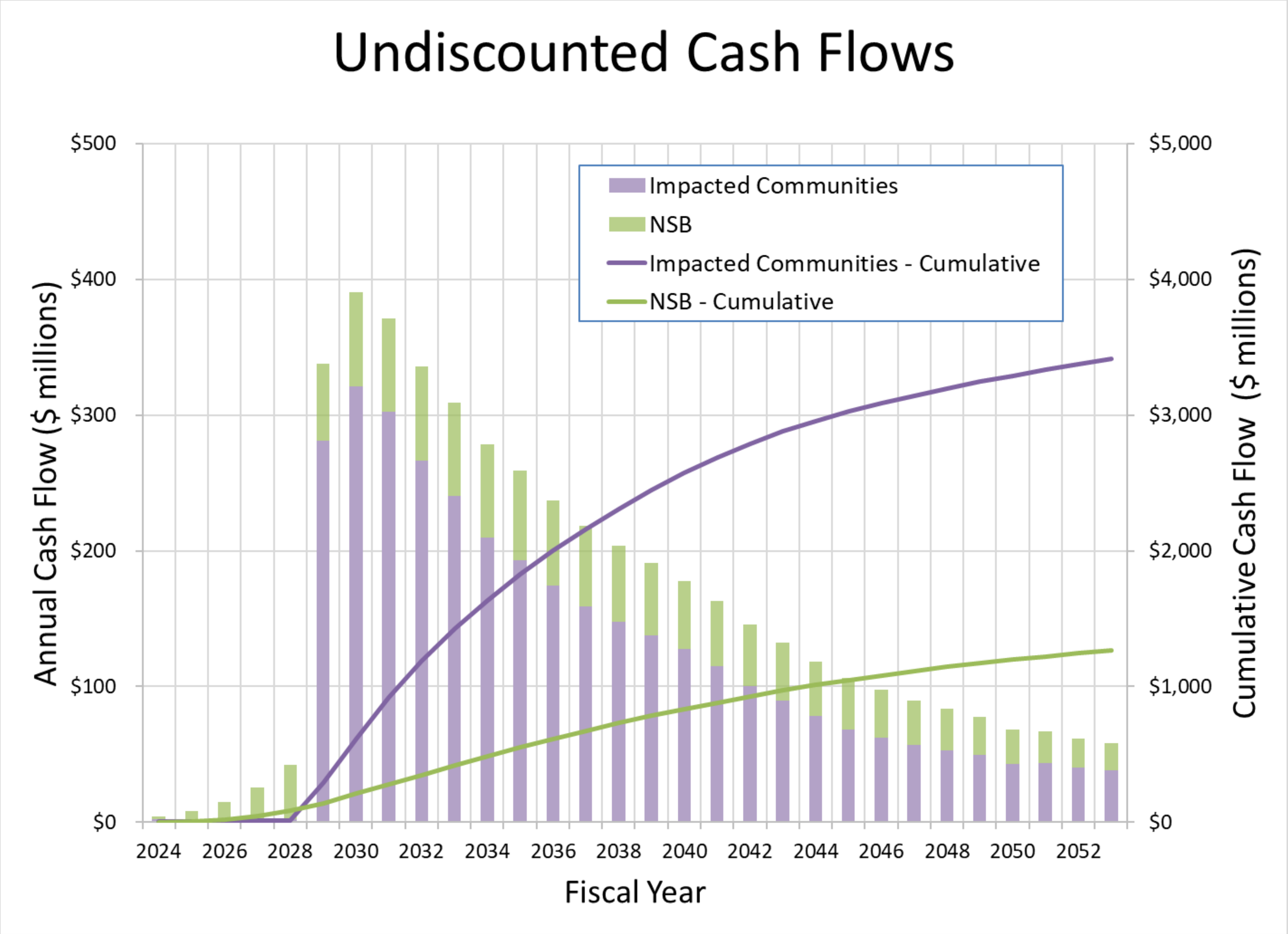
Oil Price (dollar per barrel)	$60.00	$70.00	$80.00	$90.00
NPV10 ($ millions)	$ 1,811	$ 1,957	$ 2,502	$ 3,183

Appendix:
Local Cash Flows

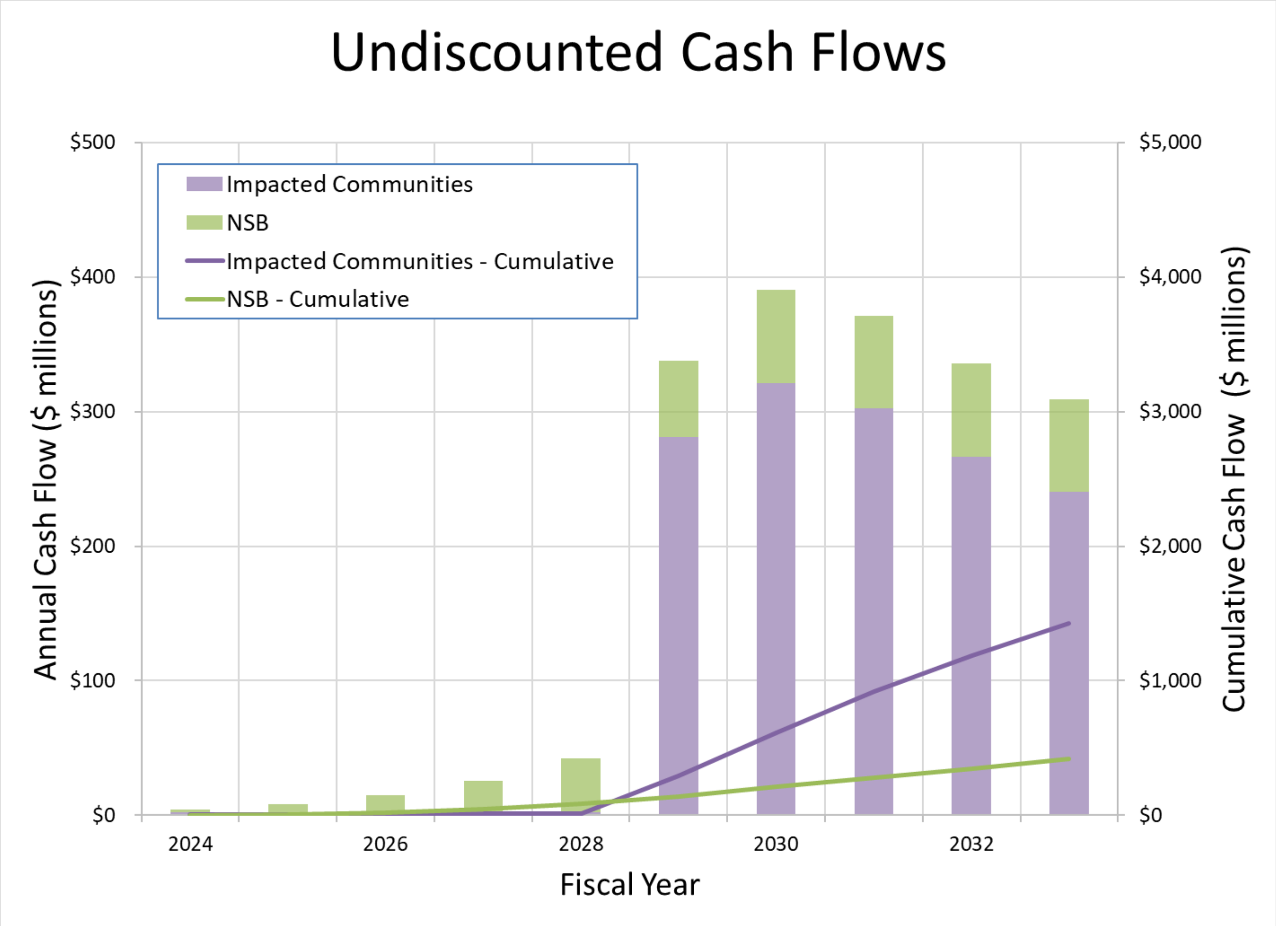
Department of Revenue

March 23, 2023

Annual and Cumulative Cash Flow – Local Only



Local Annual and Cumulative Cash Flow – First Ten Years



($ Millions)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Impacted Communities	$ 2.5	$ 2.5	$ 2.5	$ 2.5	$ 2.5	$ 281.0	$ 321.4	$ 302.2	$ 266.4	$ 240.2
North Slope Borough	$ 1.8	$ 6.0	$ 12.3	$ 23.4	$ 39.9	$ 57.1	$ 69.3	$ 69.2	$ 69.6	$ 69.0