

**HB 247
CONSULTANT
PRESENTA-
TIONS,
FEBRUARY-
MARCH 2016
(FILE 3)**

<TARGET><BILL>HB 247</BILL><SUBJECT>HB 247 CONSULTANT
PRESENTATIONS, FEBRUARY-MARCH 2016 (FILE
3)</SUBJECT><COMM>HRES29</COMM></TARGET>

Gary Zepp

To: Gunnar Knapp (personal e-mail)
Subject: RE: I will call in at 1:00; our study did NOT address impacts of changes to oil tax credits

From: Gunnar Knapp (personal e-mail) [mailto:gunnar.knapp@gmail.com]
Sent: Friday, February 12, 2016 11:56 AM
To: Gary Zepp <Gary.Zepp@akleg.gov>
Subject: I will call in at 1:00; our study did NOT address impacts of changes to oil tax credits

Hi Gary:

Thank you for your email message as well as the voice mail message on my cell phone. Yes, I will call in at 1:00.

I should note (and I would appreciate it if you could convey this to the chairs) that while I am glad to try to answer any questions the committee may have, ISER has not studied HB 247's impact to Alaska by deferring and/or eliminating oil & gas tax credits, and I do not have any special expertise on this topic.

Slides 5 to 8 of my presentation (text copied below) summarize the questions that we addressed and didn't address in our study of "Economic Impacts of Alaska Fiscal Options" (I've copied the text of those slides below). As noted in Slide 8, "we did not analyze fiscal options with complex effects which are difficult to predict (including . . .) potential changes to oil tax credits."

Analyzing the complex effects of changes to tax credits was well beyond the scope and funding level of our study. I apologize if I mistakenly conveyed the impression to anyone that we were studying them.

--Gunnar

SLIDE 5

The study addresses four broad questions

- **Comparative impacts:** How would the short-term economic impacts of different fiscal options on jobs and income compare per \$100 million of deficit reduction?
- **Distribution of impacts:** How would the total and relative economic impacts of different options vary for different groups of Alaskans?
- **Total impacts over time:** How would the total economic impacts over time be affected by how fast or slow the deficit is reduced?
- **Other impacts:** What are other potential economic impacts of fiscal options over time?

- Many of these are complex and uncertain.
- We describe them but do not attempt to measure them.

SLIDE 6

Alaska fiscal options are anything the state might do to reduce the general fund deficit. We analyzed options which are:

- Representative of the range of options being discussed by Alaskans
- Significant (could reduce the deficit by at least \$20M)
- Short-run (could be implemented within 2 years)
- Sustainable (not one-time draws from savings)

SLIDE 7

We focused our quantitative analysis on the economic impacts of:

- Spending cuts
 - State worker cuts
 - Broad-based cuts
 - Capital spending cuts
- New revenues
 - Income tax
 - Sales tax
 - Other tax increases on households (alcohol, motor fuel, etc.)
 - Selected tax increases on industries (fishing, mining)
- Dividend reductions (and redirecting the money to fund government)
- Saving less (and redirecting the money to fund government)
 - Reducing inflation-proofing transfers to PF principal
 - Reducing growth in the PF earnings reserve

SLIDE 8

We did not analyze fiscal options with complex effects which are difficult to predict

- Potential changes to oil taxes
- Potential changes to oil tax credits
- Potential cuts to specific state programs
 - There are hundreds of programs for which cuts might have widely varying potential economic impacts
- Potential changes to how the state delivers services
 - UA organization, Medicaid, etc.

Economic Impacts of Alaska Fiscal Options

Preliminary Conclusions

Gunnar Knapp
Director and Professor of Economics
Institute of Social and Economic Research
University of Alaska Anchorage
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February 12, 2016

Note: This presentation is a summary of preliminary conclusions of ISER's research for this project. We are still working on this research, including systematically reviewing numerous assumptions and checking numerous complex calculations. While we expect to make relatively few changes, all of the results shown in this presentation are potentially subject to revision.



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and Economic Research
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Outline

- Study design (slides 2- 9)
- Comparative impacts (slides 10-18)
- Distribution of impacts (slides 19-23)
- Total impacts over time (slides 24-28)
- Other impacts (slides 29-30)

Study design

Overview of the study objectives & design

ISER's study of economic impacts of Alaska fiscal options

- ISER is doing a study of economic impacts of Alaska fiscal options
- The study is funded by the Alaska Department of Revenue (\$30K) and the Office of Management and Budget (\$30K)
- The study was due in January, but we are behind schedule
 - We will complete a draft report by February 15
 - We will invite review of the draft report
 - We will complete the final report by February 29
- This presentation summarizes selected preliminary conclusions of the study

The study addresses four broad questions

- Comparative impacts: How would the short-term economic impacts of different fiscal options on jobs and income compare per \$100 million of deficit reduction?
- Distribution of impacts: How would the total and relative economic impacts of different options vary for different groups of Alaskans?
- Total impacts over time: How would the total economic impacts over time be affected by how fast or slow the deficit is reduced?
- Other impacts: What are other potential economic impacts of fiscal options over time?
 - Many of these are complex and uncertain.
 - We describe them but do not attempt to measure them.

Alaska fiscal options are anything the state might do to reduce the general fund deficit

We analyzed options which are:

- Representative of the range of options being discussed by Alaskans
- Significant (could reduce the deficit by at least \$20M)
- Short-run (could be implemented within 2 years)
- Sustainable (not one-time draws from savings)

We are not advocating for or against any option.

We focused our quantitative analysis
on the economic impacts of:

- Spending cuts
 - State worker cuts
 - Broad-based cuts
 - Capital spending cuts
- New revenues
 - Income tax
 - Sales tax
 - Other tax increases on households (alcohol, motor fuel, etc.)
 - Selected tax increases on industries (fishing, mining)
- Dividend reductions (and redirecting the money to fund government)
- Saving less (and redirecting the money to fund government)
 - Reducing inflation-proofing transfers to PF principal
 - Reducing growth in the PF earnings reserve

We did not analyze fiscal options with complex effects
which are difficult to predict

- Potential changes to oil taxes
- Potential changes to oil tax credits
- Potential cuts to specific state programs
 - There are hundreds of programs for which cuts might have widely varying potential economic impacts
- Potential changes to how the state delivers services
 - UA organization, Medicaid, etc.

We did not analyze impacts of proposals to “re-plumb” state finances (SB114, SB128, etc.).

- These economic impacts of these proposals would reflect the varying extents to which they result in:
 - Spending cuts
 - Dividend reductions
 - Saving less

Comparative impacts

How would the short-term economic impacts of different fiscal options on jobs and income compare per \$100 million of deficit reduction?

We used standard “economic impact analysis” methods to compare the economic impacts of different fiscal options per \$100 million of deficit reduction

- We made assumptions about:
 - the “direct” income and job impacts caused by each fiscal option
 - How these direct impacts would cause changes in household and business spending
- We used the IMPLAN input-output model to calculate the “multiplier” income and job impacts as the changes in household and business spending cause ripple effects on spending, income and jobs throughout the economy.

We estimated these types of **direct**, **multiplier** and **total** economic impacts.

Typology of Short-Run Economic Impacts

Direct earned income impacts	Changes in wage & salary payments to state and local government employees or contractor employees
Direct other income impacts	Changes in other state government payments to or from Alaska residents (dividends and taxes)
Total direct income impacts	Total short-run direct earned income and other income impacts
Multiplier income impacts	Other changes in income earned in Alaska resulting from short-run direct impacts due to cumulative effects of changes in spending by households and businesses
Total income impacts	Total of short-run direct income impacts and multiplier income impacts
Direct job impacts	Changes in full-time equivalent employment associated with direct earned income impacts
Multiplier jobs impacts	Changes in full-time equivalent employment associated with multiplier income impacts
Total job impacts	Total changes in full-time equivalent employment

This table compares the estimated short-run economic impacts of several fiscal options per \$100 million of deficit reduction (the report will include impacts of additional options)

Estimated Short-Run Economic Impacts of Selected Options for Reducing the Deficit by \$100 Million

Option	Income Impacts (millions of \$ of income)				Employment Impacts (FTE jobs in Alaska)		
	Direct earned	Direct other	Multiplier	Total	Direct	Multiplier	Total
Spending cut: government workforce reduction	95.0	0.0	42.8	137.8	962	715	1677
Spending cut: across the board	67.5	0.0	47.7	115.2	505	755	1260
Spending cut: capital budget	41.7	0.0	22.3	63.9	506	425	931
Spending cut: government worker pay reduction	100.0	0.0	50.4	150.4	0	897	897
Revenue increase: income tax	0.0	92.9	46.2	139.2	0	832	832
Revenue increase: sales tax	0.0	92.5	46.8	139.3	0	832	832
Dividend reduction	0.0	100.0	49.6	149.6	0	917	917
Savings reduction: reduce inflation-proofing	0.0	0.0	0.0	0.0	0	0	0
Savings reduction: reduce PF earnings reserve growth	0.0	0.0	0.0	0.0	0	0	0

Note: Estimates reflect numerous assumptions about how the fiscal options affect direct payments to workers and businesses and their resulting changes in spending. Changing these assumptions would change the estimated economic impacts.

In general, cutting spending has the biggest total job impacts.
The scale of the impacts depends on how spending is cut.

Cutting government worker pay and dividend reductions have the biggest total income impacts, followed by **income and sales taxes**.

Why are total job impacts biggest for cutting government workers?

- It's because the job losses include both:
- the losses of the government jobs
 - the multiplier losses of private jobs because the former government workers spend less.

**Estimated Short-Run Economic Impacts of Selected Options
for Reducing the Deficit by \$100 Million**

Option	Income Impacts (millions of \$ of income)				Employment Impacts (FTE jobs in Alaska)		
	Direct earned	Direct other	Multi- plier	Total	Direct	Multi- plier	Total
Spending cut: government workforce reduction	95.0	0.0	42.8	137.8	962	715	1677
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Savings reduction: reduce PF earnings reserve growth	0.0	0.0	0.0	0.0	0	0	0

Note: Estimates reflect numerous assumptions about how the fiscal options affect direct payments to workers and businesses and their resulting changes in spending. Changing these assumptions would change the estimated economic impacts.

Taxing Alaskans or reducing their dividends has only multiplier impacts on jobs: with less income, Alaskans spend less, which causes multiplier job losses.

The short-run economic impacts of cutting government spending depend critically on what is cut

- You can't generalize about the economic impacts of cuts.
- The economic impacts of cuts depend partly on how the cuts affect:
 - Jobs and income of government workers
 - Profits of private businesses providing services to government and the jobs and income of their workers
- They also depend on the economic impacts of resulting reductions in state services, such as:
 - Infrastructure development and maintenance
 - Resource management
 - Transportation (Marine Highway service, road plowing, etc.)
 - Quality of social services (schools, health care, parks, etc.)

Saving less (and redirecting the money to fund government) would have no short-run economic impacts.

- Options for **saving less** include:
 - Reducing inflation-proofing transfers to PF principal
 - Reducing growth in the PF earnings reserve
- **Saving less** would not:
 - take *any* money out of the economy
 - have *any* short-run impacts on jobs or income
- But it would reduce:
 - our future investment earnings
 - how much savings we leave for future Alaskans

All our other fiscal options—
cutting spending, cutting dividends, and increasing revenues—
would have significant short-run economic impacts—
of similar magnitudes.

They would *all* take significant amounts of money out of the economy.
They would *all* have significant multiplier effects.

But they would do so in different ways, with different impacts on
different Alaskans and on the relative scale of
public and private sector employment.

Limitations and qualifications to our estimates of short-run economic impacts . . .

- Based on uncertain assumptions about:
 - “direct” income and job impacts associated with the fiscal option
 - changes in household and business spending caused by the direct income impacts
- Don’t account for indirect ways they may affect the economy
 - Labor markets and wages
 - Housing markets and housing prices
 - Migration to or from Alaska
- Input-output model limitations
 - Doesn’t account for regional difference in spending flows
 - Estimates are for jobs and income in Alaska (not necessarily jobs and income of Alaska residents)
 - Not adjusted for changes in federal tax obligations paid in following year

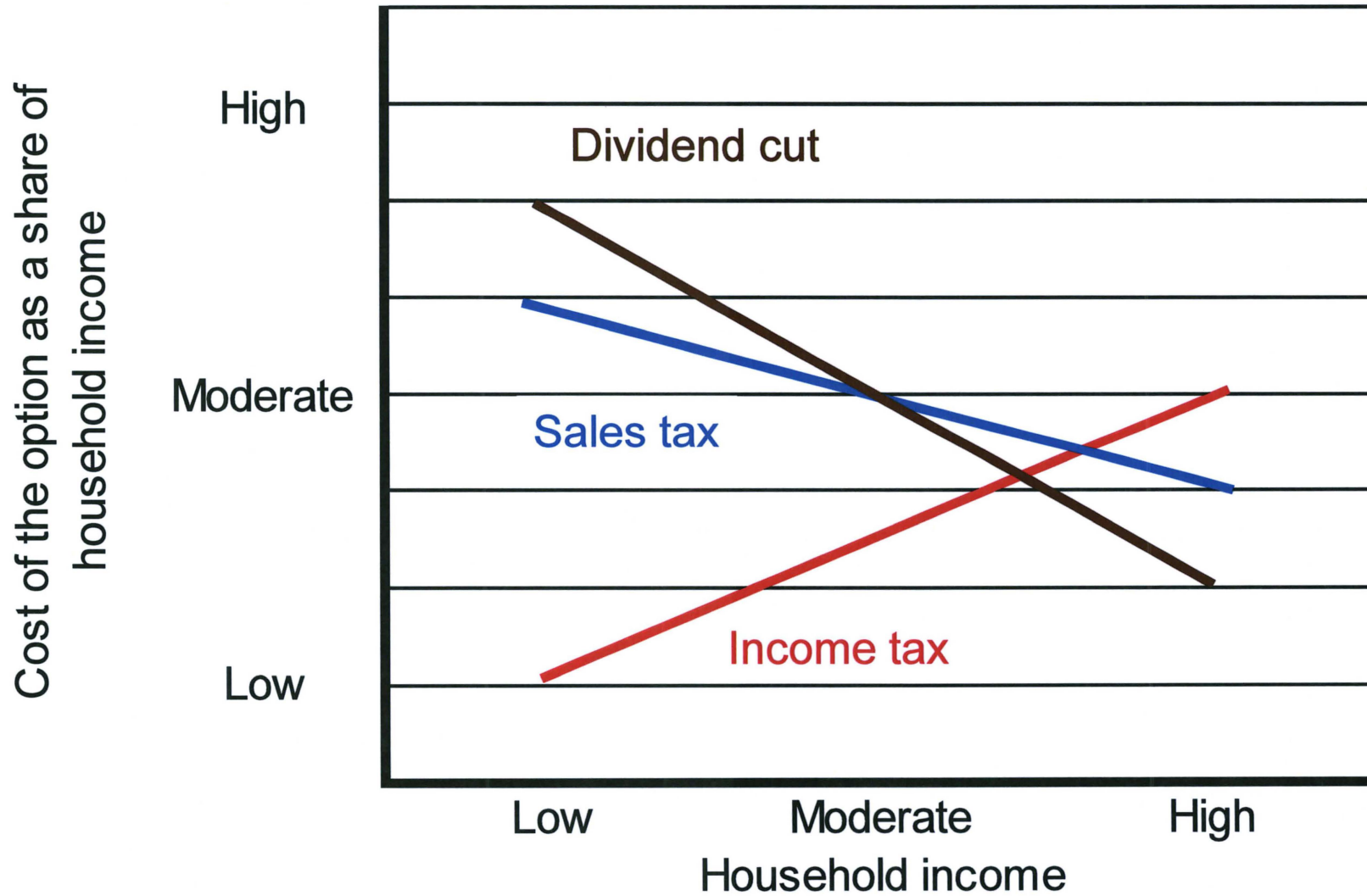
Distribution of impacts

How would the total and relative economic impacts on jobs and income of different fiscal options vary for different groups of Alaska?

Our fiscal options vary significantly in who would be most affected

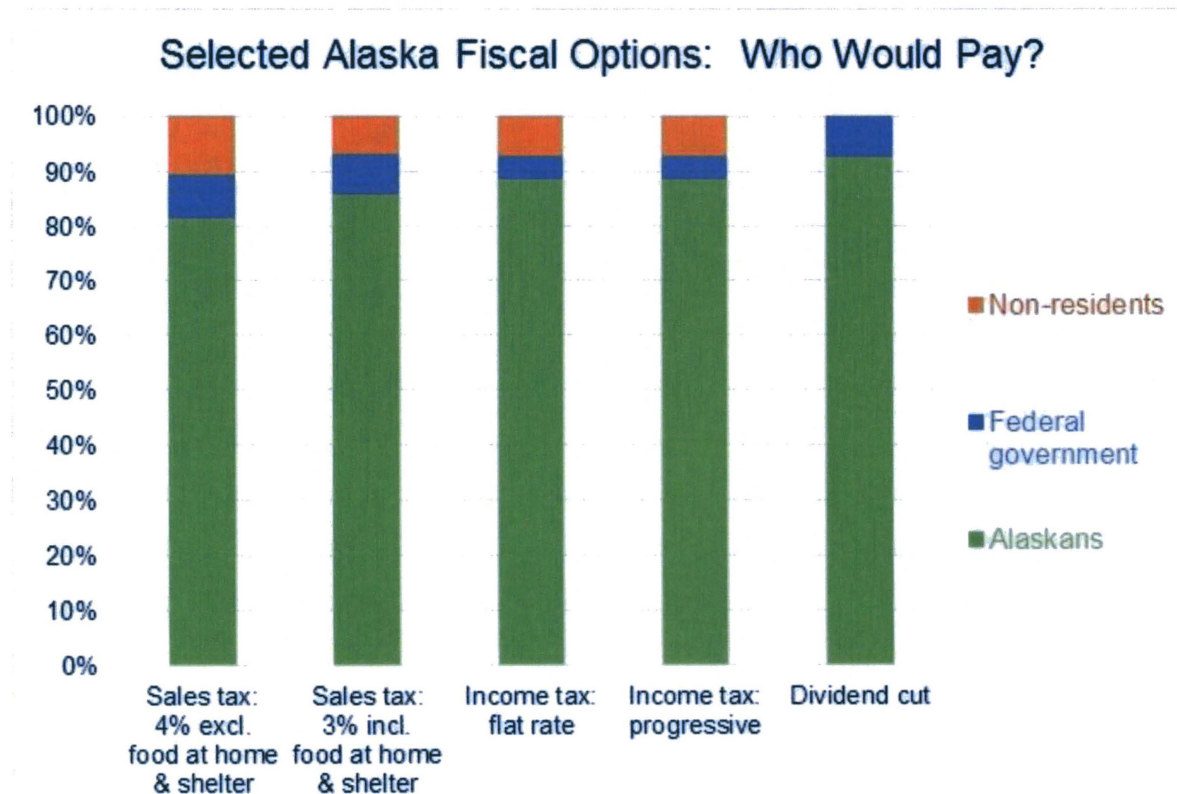
- Cutting government spending would most affect:
 - government and contractor workers
 - regions with high government employment
 - Alaskans who depend on the government services that are cut.
- Cutting dividends would most affect poorer Alaskans and larger families
- **Income taxes** would most affect wealthier Alaskans
- **Saving less** would most affect future generations of Alaskans

Stylized relative impacts of fiscal options on household income



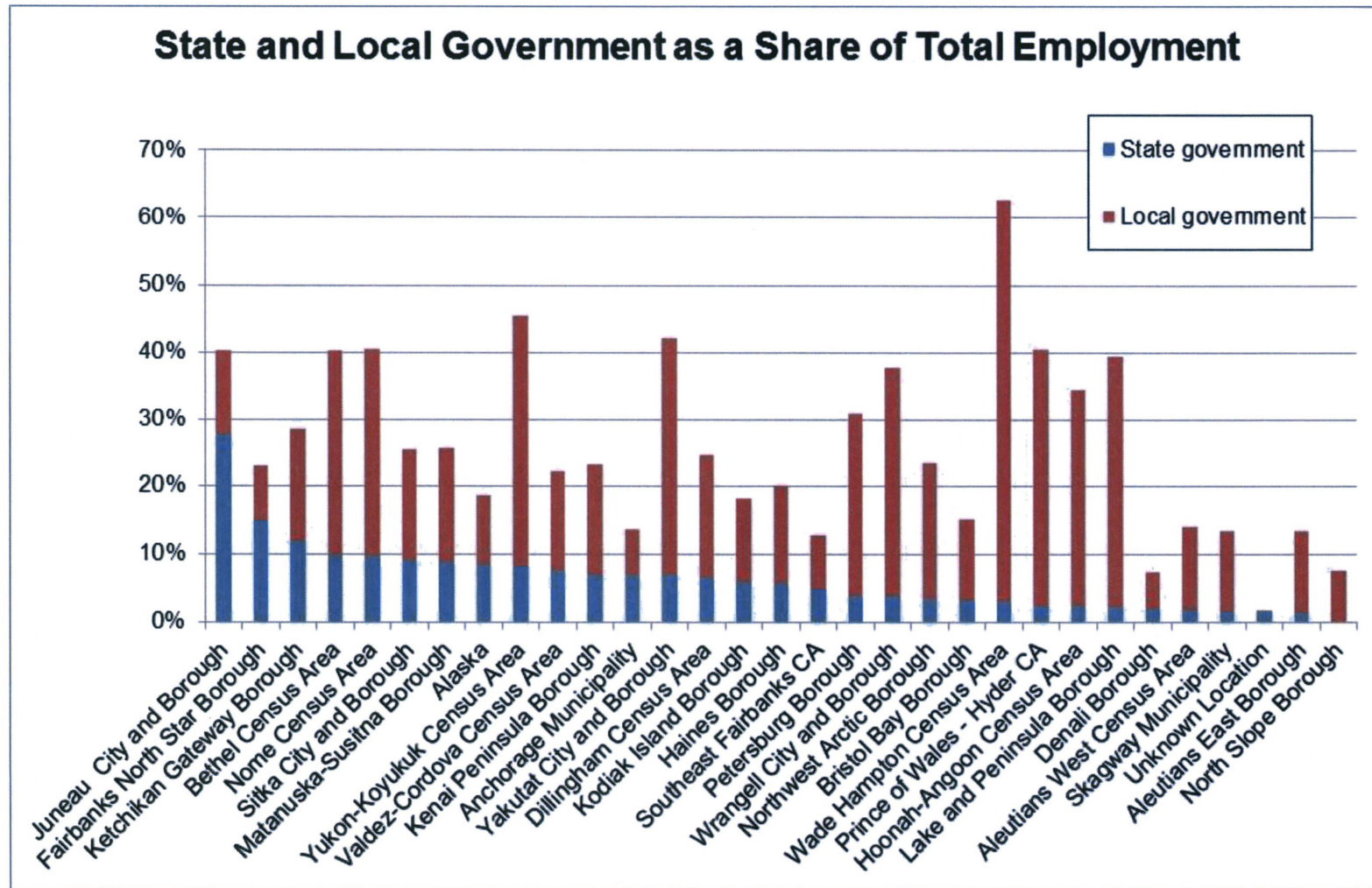
The federal government and non-residents can help us reduce the deficit.

- Lower federal taxes would help to offset the impacts of taxes and dividends
 - dividend cuts would reduce taxable income
 - income and sales taxes would be deductible
 - wealthier people who pay higher tax rates would benefit most
- Non-resident workers and visitors would help pay sales & income taxes



Note: Our estimates of the share of taxes which would be paid by non-residents are less reliable for sales taxes than for income taxes, because we have less information about non-residents' share of total Alaska purchases than we have about non-residents' share of total wages & salaries.

Regional economic impacts of spending cuts would depend on how important government jobs and income are in the regional economy. Some regions are much more dependent than others.



Total impacts over time

How would the total economic impacts over time be affected by how fast or slow the deficit is reduced?

There is no way to close our \$3.5 billion deficit without significant economic impacts on Alaska's economy.

- Because our savings are limited, we will have to significantly reduce the deficit within a few years.
- Our only option that would not have impacts would be to **save less** by reducing inflation proofing or growth in the PF earnings reserve
 - But we could only close part of the deficit by **saving less**.
- All our other options would impact the economy—but in different ways:
 - Cutting spending
 - **Increasing revenues**
 - Reducing dividends
- To close the deficit, we may eventually need to use all of these options
- The real choices are between:
 - The relative extent to which we use each option
 - The relative economic impacts on different groups of Alaskans
 - When we implement these options and experience their impacts

Fully closing the deficit this year would have a very large impact on an already-weakened economy.

- Regardless of what we do to address the deficit, we will experience economic impacts of:
 - Reduced state capital spending as “money in the spending pipeline” from past large capital budgets dries up
 - Oil industry employment and investment cutbacks
- Simultaneously adding large spending cuts, new revenues and/or dividend reductions would significantly add to the economic impacts we will be experiencing
- Reducing the deficit by \$1 billion could result in a loss of 7,000-17,000 jobs, depending on the mix of spending cuts, new revenues and dividend reductions by which it is achieved.

But not making significant progress on reducing the deficit this year could also significantly affect Alaska's economy

- Downgrading of Alaska's credit rating
- Business and household uncertainty about when and how we will reduce the deficit, resulting in:
 - Reduced business and consumer confidence
 - Reduced investment
- Other implications of not making significant progress include:
 - Significant lag between when new taxes are adopted and when they generate new revenues
 - Lower future investment earnings

We will have a smoother economic transition if we make significant progress on reducing the deficit this year—and planning for future reductions—than if we:

- Fully close the deficit this year, or
- Don't make significant progress this year towards:
 - Reducing the deficit
 - Planning for future deficit reductions
 - Demonstrating that we will be able to solve the deficit challenge

Other impacts

What are other potential economic impacts of fiscal options and when we adopt them?

Over time our fiscal choices will impact Alaska's economy and society in many ways beyond the short-term economic impacts on jobs and income which we estimated for this study.

- We did not attempt to quantify these other potential impacts
- We briefly discuss some of them.
- Many are uncertain and difficult to quantify but potentially very important.

Examples of other potential economic impacts of fiscal options include impacts on:

- local government finances and local taxes
- user fees which agencies may impose in response to budget cuts
 - university tuition, marine highway fares, park fees, etc.
- state receipts of federal funds and impacts on spending
- government services affecting the economy
 - effects of marine highway service and fares on tourism
 - effects of ADFG research on fisheries management & catches, etc.
 - effects of snow-plowing and road maintenance on transportation costs
 - etc.
- labor markets
- costs of living and doing business in Alaska
- what kinds of people choose to live and work in Alaska
- Alaska's infrastructure and future resource development

**Alaska's fiscal choices will significantly affect
Alaska's future economy and society.**

**We should think not only about their short-term economic impacts
but also about their longer-term economic and social impacts.**

IMPACT OF HB 247: NORTH SLOPE ASSESSMENT

Presentation to House Resources Committee
Juneau, Alaska > Thursday, February 25, 2016

Janak Mayer, Chairman & Chief Technologist > janak.mayer@enalytica.com
(via teleconference) Nikos Tsafos, President & Chief Analyst > nikos.tsafos@enalytica.com

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KEY QUESTIONS RAISED BY HB 247 RE NORTH SLOPE

HB 247 is not a tax overhaul but it includes major changes along several key parameters

The bill targets legitimate concerns but also introduces a series of incremental tax hikes

Impact of changes will be highly variable depending on company's position and investment profile

But most companies will see substantial adverse effects

Retroactivity and effective date present additional challenges for ongoing operations

Stability is the most important element in any fiscal system

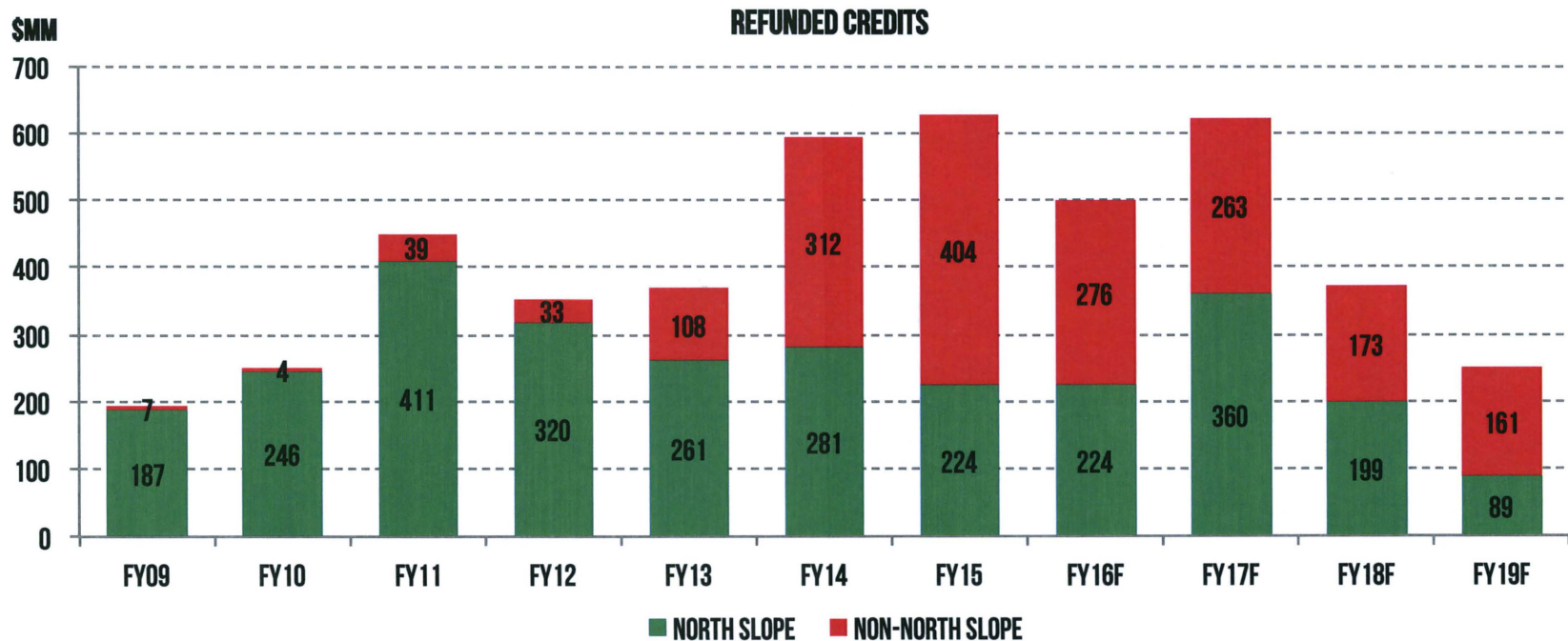
The biggest change is not in any single of the proposed changes—rather it is the fear of slippery slope

REFUNDED CREDITS REACHED **NEW HIGH IN FY 2015**

Refundable credits in FY 2015 reached \$628 mm, the highest point ever

In both 2014 and 2015, the majority of these credits went to non-North Slope producers

Under DOR's current forecast, credits will exceed \$1.1 billion in FY 2016 and FY 2017



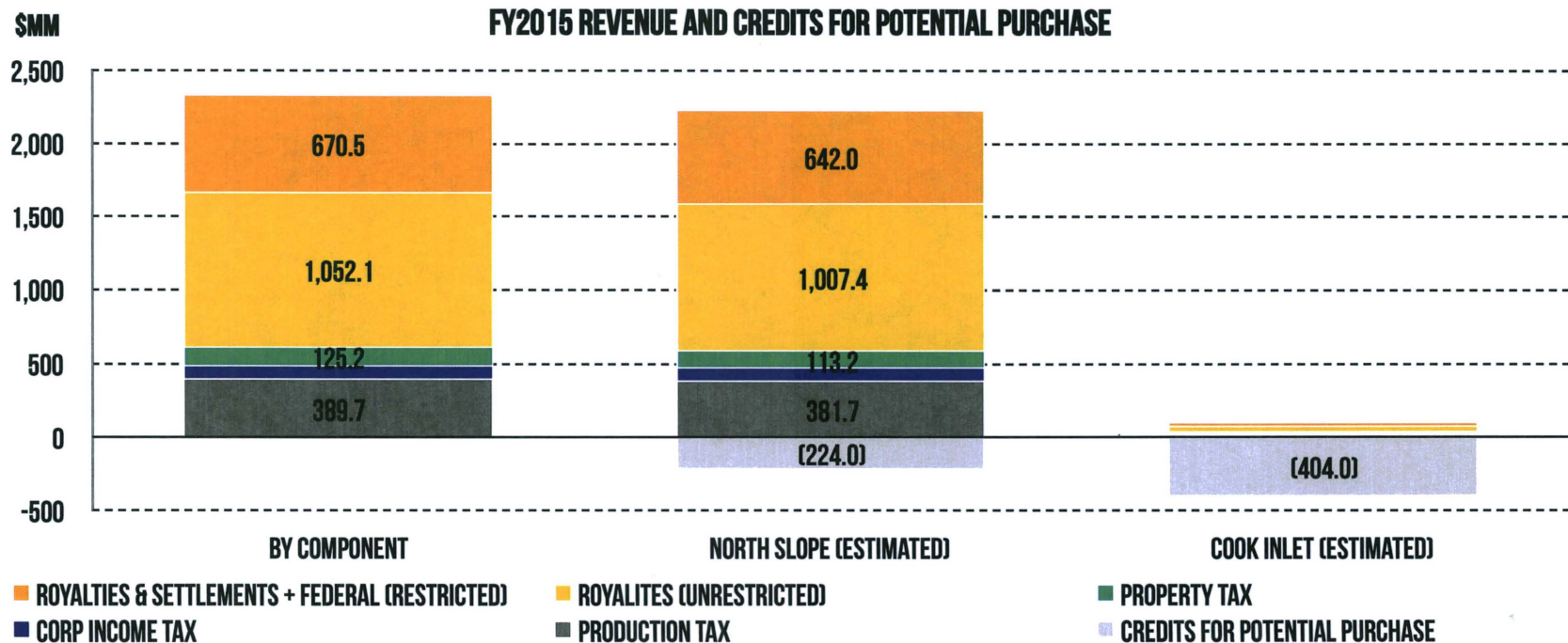
SOURCE: ALASKA DEPARTMENT OF REVENUE, TAX DIVISION

BIG DIFFERENCE BETWEEN NORTH SLOPE AND COOK INLET

The majority of refundable credits go to Cook Inlet producers

Cook Inlet production, however, generates limited direct revenue for the state

Credits on the North Slope are more limited but also a far smaller fraction of total value generated



SOURCE: ALASKA DEPARTMENT OF REVENUE, REVENUE SOURCES BOOK; TAX DIVISION; ANALYTICA ESTIMATES

ALASKA'S HYBRID SYSTEM: LOTS OF BIRDS, FEW STONES

Jurisdictions typically either gross or net profit systems; but **Alaska has both gross and net** pieces

Gross includes royalties (12.5 to 16.7%), minimum production tax of 4% and property tax

Net includes production taxes and corporate taxes

Net systems aim to **minimize distortions** and **maximize returns** across the commodity cycle

But net profit systems are suited for large, **diversified economies** that can **manage revenue volatility**

Royalties and gross minimum ensure **substantial petroleum revenues** even when **commodity prices low**

But gross taxes **discourage investment** when prices low or costs high

Difficult to balance regressive royalty (very high 'take' when prices low) with progressive net tax

Competing priorities - protect state in low prices, obtain 'fair share' when prices high

All successful fiscal regimes are a **balance of risk and reward** - tradeoffs are essential

It's hard to be **both Norway and North Dakota** at the same time

GROSS VS. NET TAX: TWO VERY DIFFERENT APPROACHES

Gross taxes

- Less volatile, shift risk to private sector
- Simple and easy to administer
- High/low government take at low/high prices
- Disadvantages marginal investment

Net taxes

- More volatile revenues for government
- Harder to administer
- Efficient—do not distort decision-making
- Enable investment across commodity cycle

SIMPLE, 10% GROSS TAX (VALUES IN \$/BBL OR PERCENT)

	DIFFERENT PRICES			DIFFERENT CAPEX		
ANS WC	30	60	90	60	60	60
TRANSPORT	10	10	10	10	10	10
GVPP	20	50	80	50	50	50
OPEX	18	18	18	18	18	18
CAPEX	18	18	18	30	20	10
PTV/BBL	-16	14	44	2	12	22
GROSS TAX	2	5	8	5	5	5
% GROSS	10%	10%	10%	10%	10%	10%
% NET	N/A	36%	18%	250%	42%	23%

SIMPLE, 25% NET TAX (VALUES IN \$/BBL OR PERCENT)

	DIFFERENT PRICES			DIFFERENT CAPEX		
ANS WC	30	60	90	60	60	60
TRANSPORT	10	10	10	10	10	10
GVPP	20	50	80	50	50	50
OPEX	18	18	18	18	18	18
CAPEX	18	18	18	30	20	10
PTV/BBL	-16	14	44	2	12	22
NET TAX	-4	3.5	11	0.5	3	5.5
% GROSS	-20%	7%	14%	1%	6%	11%
% NET	25%	25%	25%	25%	25%	25%

CASHFLOW TAXES: MORE EFFICIENT, MORE VOLATILE

Purpose of net tax is to **minimize distorting impact** on investment

Best achieved by making the state's fiscal cost/benefit as close as possible to **equity investor**

Results in **outflows** during development, **receipts** during production

HIGHLY SIMPLIFIED CASHFLOW AND INCOME EXAMPLE

YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PRODUCTION (THOUSAND BBLs)	-	-	-	1,000	1,000	900	810	729	656	590
ANS WC	60	60	60	60	60	60	60	60	60	60
TRANSPORT	10	10	10	10	10	10	10	10	10	10
GVPP/BBL	50	50	50	50	50	50	50	50	50	50
GVPP (\$THOUSANDS)	-	-	-	50,000	50,000	45,000	40,500	36,450	32,805	29,525
OPEX	-	-	-	18,000	18,000	16,200	14,580	13,122	11,810	10,629
CAPEX	20,286	60,857	33,809	20,286	-	-	-	-	-	-
PRE-TAX CASHFLOW	(20,286)	(60,857)	(33,809)	11,714	32,000	28,800	25,920	23,328	20,995	18,896
ASSET VALUE	-	-	-	135,238	108,190	86,552	69,242	55,393	44,315	35,452
DEPRECIATION	-	-	-	27,048	21,638	17,310	13,848	11,079	8,863	7,090
NET INCOME	-	-	-	4,952	10,362	11,490	12,072	12,249	12,132	11,805
25% CASHFLOW TAX	(5,071)	(15,214)	(8,452)	2,929	8,000	7,200	6,480	5,832	5,249	4,724
25% INCOME TAX	-	-	-	1,238	2,590	2,872	3,018	3,062	3,033	2,951

ALASKA'S PRODUCTION TAX: ORIGINS IN 2006 PROPOSAL

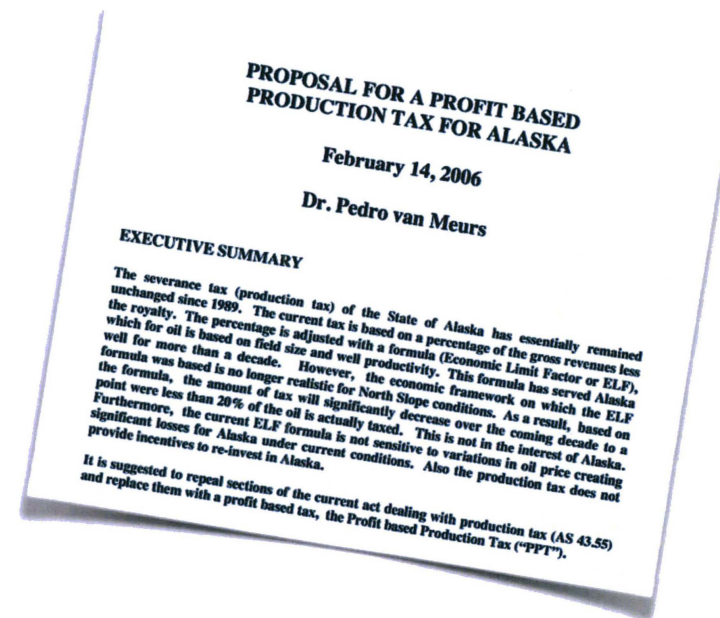
PPT as proposed by Dr Pedro van Meurs useful to understand core of system and evolution to date

25% flat cashflow tax, 25% credit for net operating losses (NOLs), 20% capital credit

45% government support for spending for new and incumbent players alike

Statewide floor of zero (credits tradable rather than reimbursable)

		DIFFERENT PRICES	
ANS WC	30	60	90
TRANSPORT	10	10	10
GVPP	20	50	80
OPEX	18	18	18
CAPEX	18	18	18
PTV/BBL	(16.0)	14.0	44.0
25% NET TAX	(4.0)	3.5	11.0
CAPITAL CREDIT	3.6	3.6	3.6
TAX AFTER CREDITS	(7.6)	(0.1)	7.4
% GROSS	-38%	0%	9%
% NET	#N/A	-1%	17%



ACES: STEEP PROGRESSIVITY, HIGH SPENDING SUPPORT

Tax rate 25% to 75% (variable with PTV/bbl), 20% capital credit, 40% exploration credit, 25% NOL credit

High progressivity: **high marginal tax rates** (up to 86%, higher at yet-unseen prices)

High marginal rates + credits = **very high state support for spending** (from 45% to over 100%)

With **high prices and low spending**, brought **huge revenue**; low prices and high spending **major risks**

	DIFFERENT PRICES			DIFFERENT CAPEX		
ANS WC	30	60	90	60	60	60
TRANSPORT	10	10	10	10	10	10
GVPP	20	50	80	50	50	50
OPEX	18	18	18	18	18	18
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PTV/BBL	(16.0)	14.0	44.0	2.0	12.0	22.0
NET TAX RATE	25%	25%	31%	25%	25%	25%
NET TAX CALC	-	3.5	13.5	0.5	3.0	5.5
4% GROSS FLOOR	0.8	2.0	3.2	2.0	2.0	2.0
TAX BEFORE CREDITS	0.8	3.5	13.5	2.0	3.0	5.5
NOL CREDIT	4.0	-	-	-	-	-
CAPITAL CREDIT	3.6	3.6	3.6	6.0	4.0	2.0
TAX AFTER CREDITS	(6.8)	(0.1)	9.9	(4.0)	(1.0)	3.5
% GROSS	-34%	0%	12%	-8%	-2%	7%
% NET	#N/A	-1%	22%	-200%	-8%	16%

SB21: PROTECT ON THE LOW END, GIVE BACK AT THE HIGH

Tax rate 35%, \$0 to \$8 per-bbl credit, hardened gross floor, 35% NOL credit

Key aim was to **reduce state support for spending** and make predictable: **35% for everyone**

Reduced rates at high prices for competitiveness, but **4% gross floor binding** to protect at low end

Significantly reduced the risks brought by low prices and high spending

	DIFFERENT PRICES			DIFFERENT CAPEX		
ANS WC	30	60	90	60	60	60
TRANSPORT	10	10	10	10	10	10
GVPP	20	50	80	50	50	50
OPEX	18	18	18	18	18	18
CAPEX	18	18	18	30	20	10
PTV/BBL	(16.0)	14.0	44.0	2.0	12.0	22.0
NET TAX RATE	35%	35%	35%	35%	35%	35%
NET TAX PRE \$/BBL	-	4.9	15.4	0.7	4.2	7.7
\$/BBL CREDIT	8.0	8.0	7.0	8.0	8.0	8.0
NET TAX CALC	(8.0)	(3.1)	8.4	(7.3)	(3.8)	(0.3)
4% GROSS FLOOR	0.8	2.0	3.2	2.0	2.0	2.0
TAX BEFORE NOL	0.8	2.0	8.4	2.0	2.0	2.0
NOL CREDIT	5.6	-	-	-	-	-
TAX AFTER CREDITS	(4.8)	2.0	8.4	2.0	2.0	2.0
% GROSS	-24%	4%	11%	4%	4%	4%
% NET	#N/A	14%	19%	100%	17%	9%

SB21: SPECIAL INCENTIVES FOR “NEW OIL”

Gross Value Reduction (GVR) - reduce GVPP by 20% or 10% for certain units / participating areas

Purpose of GVR - **reduce effective tax rates** for particular fields **without ring-fencing** costs

GVR-eligible production receives **fixed \$5/bbl credit**, not variable \$0-\$8/bbl, **no hard floor**

	DIFFERENT PRICES			DIFFERENT CAPEX		
ANS WC	30	60	90	60	60	60
TRANSPORT	10	10	10	10	10	10
GVPP BEFORE GVR	20	50	80	50	50	50
GVPP AFTER GVR	16	40	64	40	40	40
OPEX	18	18	18	18	18	18
CAPEX	18	18	18	30	20	10
PTV/BBL BEFORE	(16.0)	14.0	44.0	2.0	12.0	22.0
PTV/BBL	(20.0)	4.0	28.0	(8.0)	2.0	12.0
NET TAX RATE	35%	35%	35%	35%	35%	35%
NET TAX	-	1.4	9.8	-	0.7	4.2
4% GROSS FLOOR	0.6	1.6	2.6	1.6	1.6	1.6
\$/BBL CREDIT	5.0	5.0	5.0	5.0	5.0	5.0
TAX BEFORE NOL	(4.4)	(3.4)	4.8	(3.4)	(3.4)	(0.8)
NOL CREDIT	7.0	-	-	2.8	-	-
TAX AFTER	(11.4)	(3.4)	4.8	(6.2)	(3.4)	(0.8)
% GROSS	-57%	-7%	6%	-12%	-7%	-2%
% NET	#N/A	-24%	11%	-310%	-28%	-4%

Fiscal System Feature	Status Quo	HB 247 Proposed Change	Impact
Per-Barrel Credit and Gross Minimum Tax	Tax liabilities assessed annually, smoothing impact of price volatility.	Calculate \$/bbl credit and Gross Minimum Tax interaction monthly.	State would have netted ~\$100mm additional in 2014 under this system.
Gross Value Reduction and Net Operating Loss Credit	Gross Value Reduction artificially reduces Production Tax Value, and NOL credit is based on PTV, so 35% NOL credit can be given on loss greater than actual loss - effectively more than 35% support for spending.	Assess NOL credit on actual loss (not including GVR), so NOL is for 35% of actual loss, and all producers have 35% support for spending.	Net impact is to reduce state support for all spending to 35%. Questions exist about whether >35% spending support for GVR oil was deliberate incentive or unintended consequence under SB21.
Gross Minimum Tax	4% rate, binding for legacy output if net value is positive. If net value is negative, NOL can reduce taxes below floor. "New," GVR-eligible production can take to zero due to \$5/bbl and small producer credit	Harden floor for all production: NOL credits can't take below floor for legacy, and NOL, small Producer and \$5/bbl can't take below floor for GVR-eligible production. Increase rate from 4% to 5%	State revenues rise at low oil prices. For many new fields, taxes rise from 0 to 5% at current prices. For legacy production, taxes rise at time when value is negative.
Net Operating Loss credit reimbursement	Producers with >50 mb/d production must carry NOL forward, others can be reimbursed by the state	\$25mm per company annual limit on reimbursement. Companies with annual revenues > \$10bn must carry forward, regardless of production level.	Limit substantially increases capital needs for new developments; and if effective July 2016 would have major negative impact on developments underway. Raises hurdle/break-even price for projects by \$5 to \$15/bbl.

MONTHLY GROSS MIN CALCULATION: NEUTRAL OR TAX HIKE

Under volatility, **gross minimum** tax may apply to some months, while annual remains **net profit**-based

In 2014, gross minimum would have applied Nov & Dec, but not full-year⁺

Enforcing monthly gross minimum would have netted additional ~\$100mm⁺

	ANS WC	TRANSPORT	OPEX	CAPEX	PTV/BBL	35%*PTV/BBL	LESS \$8/BBL	4% OF GVPP	PROD TAX / BBL	LIABILITY \$MM
ANNUAL										
2014	97.74	10.42	19.30	20.29	47.73	16.71	8.71	3.49	8.71	1,440.32
MONTHLY										
JAN-2014	103.82	10.42	19.30	20.29	53.81	18.83	10.83	3.74	10.83	
FEB-2014	106.30	10.42	19.30	20.29	56.29	19.70	11.70	3.84	11.70	
MAR-2014	107.91	10.42	19.30	20.29	57.90	20.26	12.26	3.90	12.26	
APR-2014	107.36	10.42	19.30	20.29	57.35	20.07	12.07	3.88	12.07	
MAY-2014	108.06	10.42	19.30	20.29	58.05	20.32	12.32	3.91	12.32	
JUN-2014	110.76	10.42	19.30	20.29	60.75	21.26	13.26	4.01	13.26	
JUL-2014	107.63	10.42	19.30	20.29	57.62	20.17	12.17	3.89	12.17	
AUG-2014	101.78	10.42	19.30	20.29	51.77	18.12	10.12	3.65	10.12	
SEP-2014	96.05	10.42	19.30	20.29	46.04	16.12	8.12	3.43	8.12	
OCT-2014	84.91	10.42	19.30	20.29	34.90	12.21	4.21	2.98	4.21	
NOV-2014	77.41	10.42	19.30	20.29	27.40	9.59	1.59	2.68	2.68	
DEC-2014	60.90	10.42	19.30	20.29	10.89	3.81	(4.19)	2.02	2.02	
									9.31	1,540.94
INCREASE									0.61	100.62

⁺single-taxpayer, taxable-barrel-based approximation, FY2014 DOR RSB costs, assumes no taxable production GVR-eligible

GVR RAISES NOL CREDIT ABOVE 35% OF ACTUAL LOSS

The purpose of the Gross Value Reduction (GVR) is to **lower the effective tax rate** on new production

The GVR mechanism was chosen because it enables this without requiring ring-fencing of costs

One surprising and counter-intuitive effect is to **raise the effective rate of the NOL** credit

Reasonable to see this as either **unintended consequence**, or part of **incentive offered**

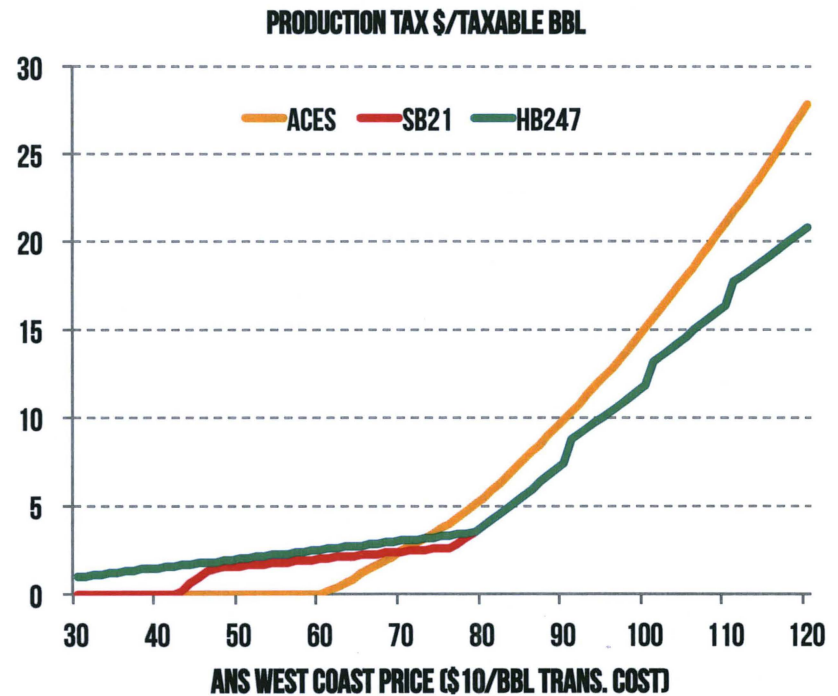
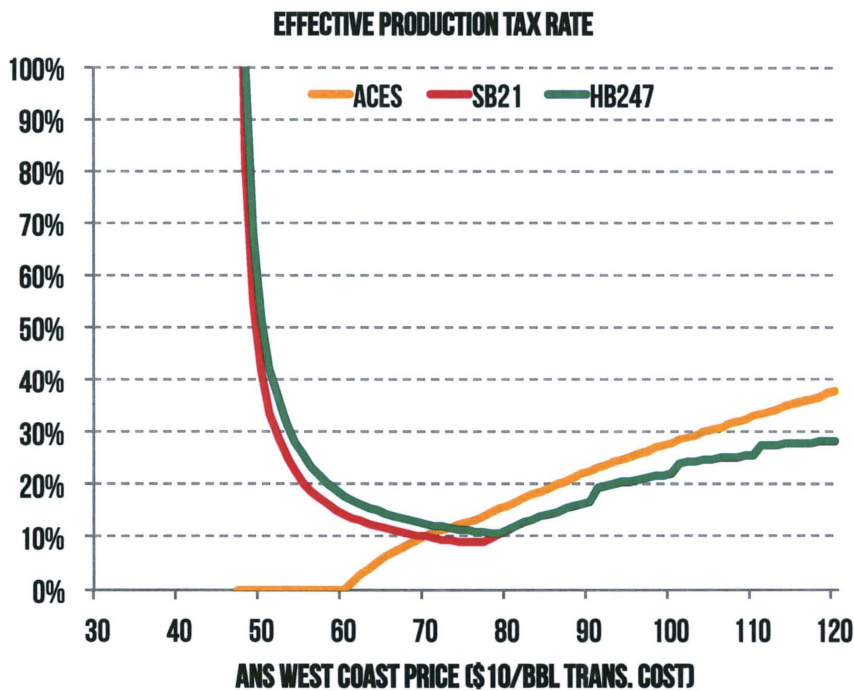
	SB 21 GVR	HB 247
ANS WC	30	30
TRANSPORT	10	10
GVPP BEFORE GVR	20	20
GVPP AFTER GVR	16	16
OPEX	18	18
CAPEX	18	18
PTV/BBL BEFORE GVR	(16)	(16)
PTV/BBL	(20)	(20)
NET TAX RATE	35%	35%
NET TAX	-	-
4% GROSS FLOOR	0.6	0.6
S/BBL CREDIT	5.0	5.0
TAX BEFORE NOL	(4.4)	(4.4)
NOL CREDIT	7.0	5.6
TAX AFTER CREDITS	(11.4)	(10.0)
CREDIT % PTV (BEFORE GVR)	-44%	-35%

HARDER, HIGHER FLOOR RAISES TAXES ON LOSSES

Effective tax rate under ACES could fall to zero because capital credits were applied after gross floor
 SB21 applied a **hard gross floor** under \$/bbl credits - meaning skyrocketing net tax rate at low prices

Concern to **protect state at low prices** always valid

Competitive regimes **balance risk and reward** at low and high end

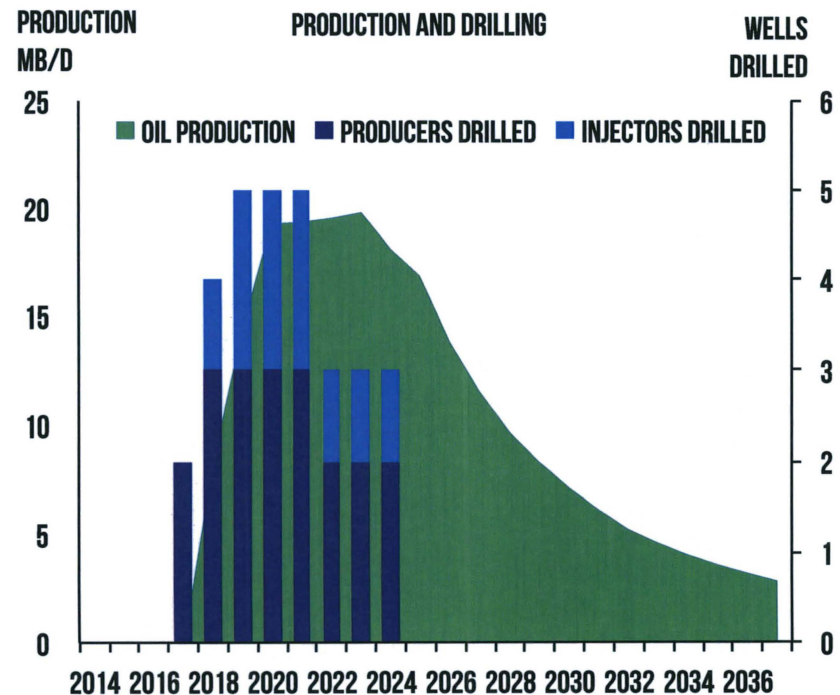
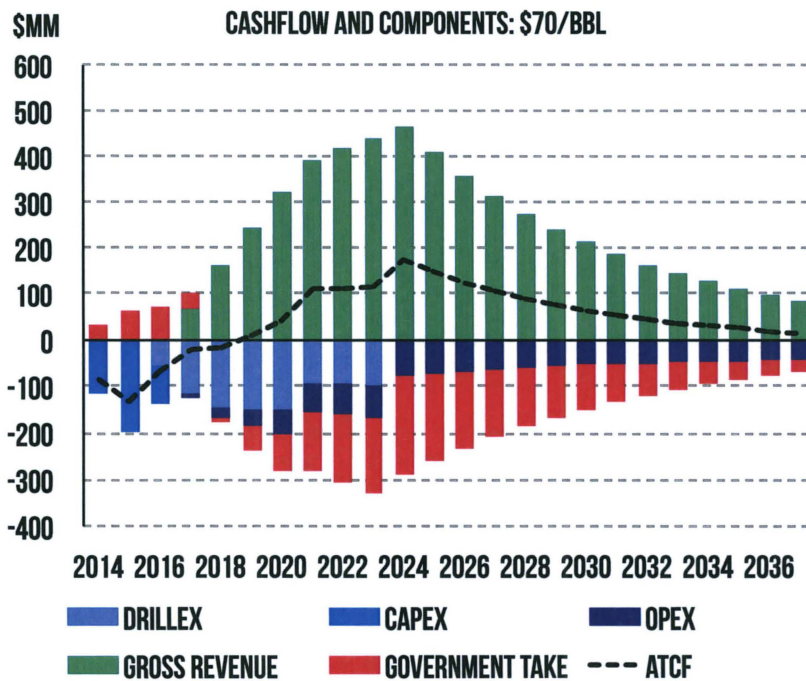


HOW DO CHANGES IMPACT NEW FIELD DEVELOPMENT?

To understand the cumulative impact of the proposed changes, we look at a **sample NS investment**

Cumulative CAPEX and drillex of \$1.3 billion; average annual OPEX of about \$15/bbl

Peak production of 20 mb/d; 30 wells (production and injection) drilled over 8 years



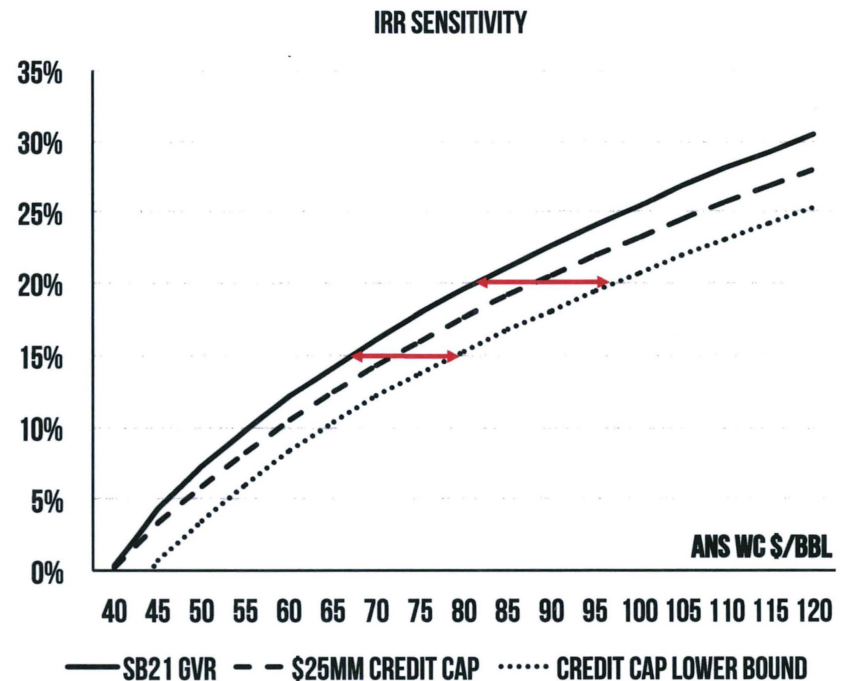
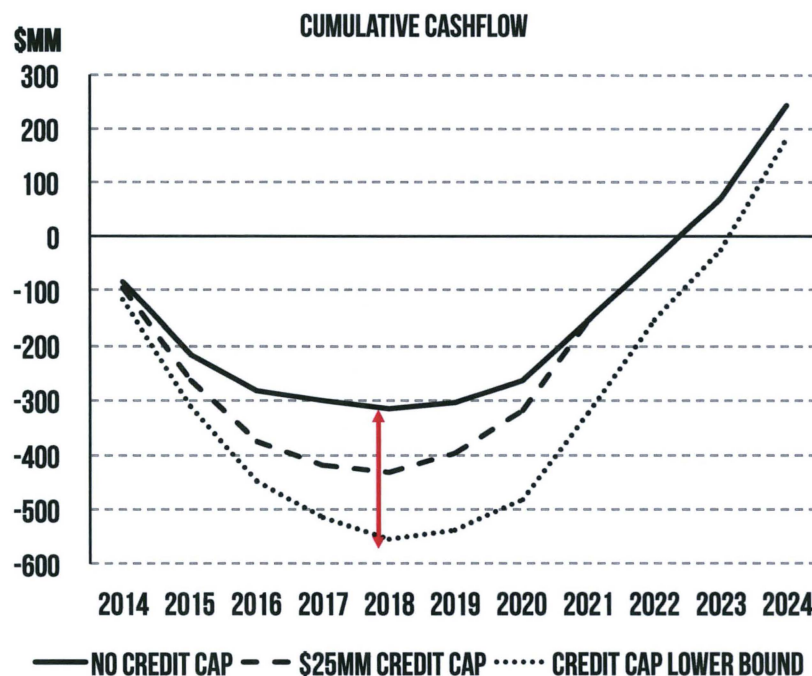
CHANGES BOOST CAPITAL NEEDS AND LOWER IRR

Refundable credit limit would **increase capital needs** by 33% to 50% (from \$300mm to \$400–\$550mm)

For projects currently under development, July effective date would have **major adverse impacts**

Investment impact of refundable credit limit is to lower IRR / raise target price to meet hurdle IRR

Concern over future liability highly valid - but **is this the best solution?**

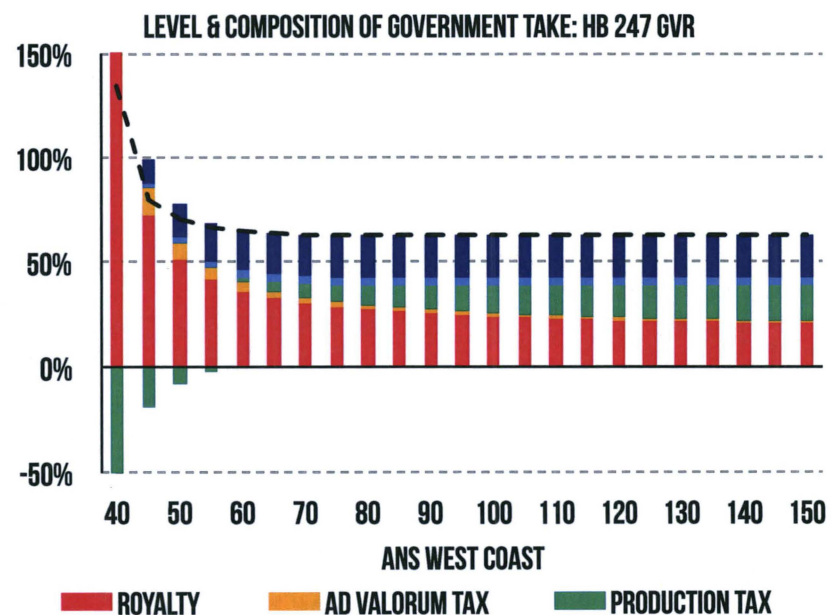
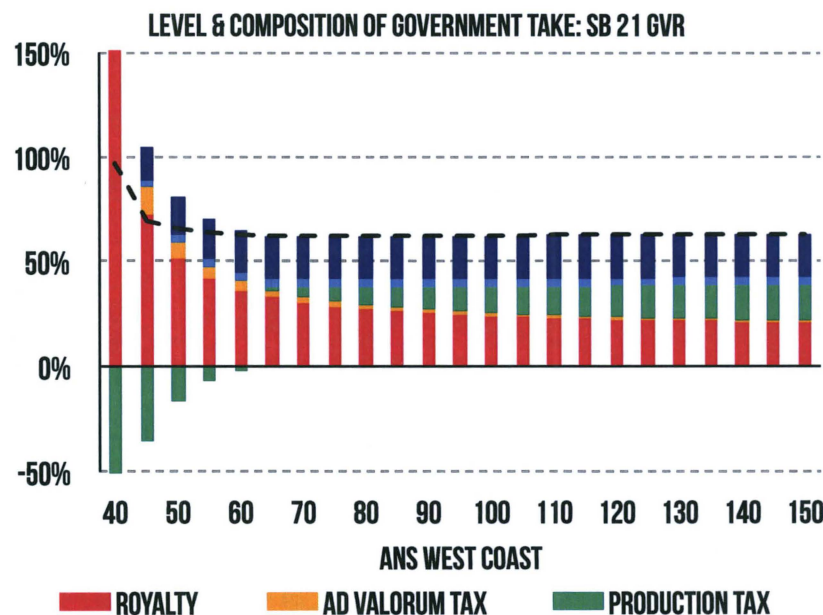


CHANGES MAKE REGRESSIVE SYSTEM EVEN MORE SO

State of Alaska making negative production tax in today's prices; but overall gov't take is still high

Cumulative impact of proposed changes would be to shift up government take in lower oil prices

In times of high investment / low prices (as in 2016), **effective government take exceeds 100%**



KEY QUESTIONS RAISED BY HB 247 **RE NORTH SLOPE**

HB 247 is not a tax overhaul but it includes major changes along several key parameters

The bill targets legitimate concerns but also introduces a series of incremental tax hikes

Impact of changes will be highly variable depending on company's position and investment profile

But most companies will see substantial adverse effects

Retroactivity and effective date present additional challenges for ongoing operations

Stability is the most important element in any legal system

The biggest change is not in any single of the proposed changes—rather it is the fear of slippery slope

IMPACT OF HB 247: COOK INLET ASSESSMENT

Presentation to House Resources Committee
Juneau, Alaska > Friday, February 26, 2016

Janak Mayer, Chairman & Chief Technologist > janak.mayer@enalytica.com
(via teleconference) Nikos Tsafos, President & Chief Analyst > nikos.tsafos@enalytica.com

<http://enalytica.com>

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THE COOK INLET OIL AND GAS MARKET: A SCORECARD

What has happened to oil and gas production and activity in the Cook Inlet in recent years?

Oil production has risen from 7.5 mb/d in 2009 to almost 18 mb/d

Gas production has stabilized after years of steadier decline

How has the gas market adjusted in recent years?

Cook Inlet has undergone major transition in supply, demand, prices, competition and expectations

Some of these changes are typical in mature basins—others are unique to Cook Inlet

What's the outlook and how sensitive is the outlook to changes in oil/gas fiscal system?

DNR: 1,183 bcf in remaining 2P reserves; 1,600 bcf w/ Cosmopolitan and Kitchen Lights (ballpark)

Continued drilling at old fields plus Cosmopolitan and Kitchen Lights: current market well supplied

At current (gas) price levels, brownfield investment should be profitable under stricter fiscal regime

Credits more important for developing new resources, especially with demand constraints

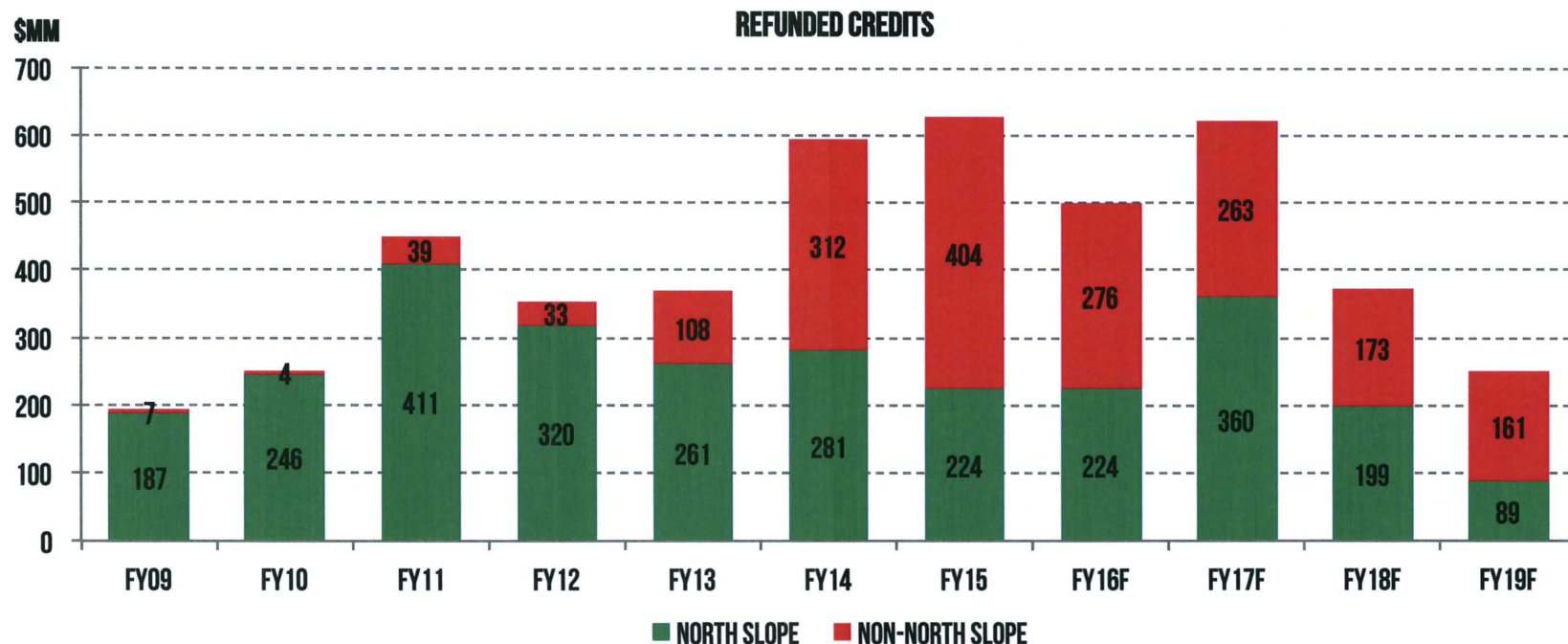
Currently much uncertainty over future regime - setting a stable, sustainable system is paramount

REFUNDED CREDITS REACHED **NEW HIGH IN FY 2015**

Refundable credits in FY 2015 reached \$628 mm, the highest point ever

In both 2014 and 2015, the majority of these credits went to non-North Slope companies

Under DOR's current forecast, credits will exceed \$1.1 billion in FY 2016 and FY 2017



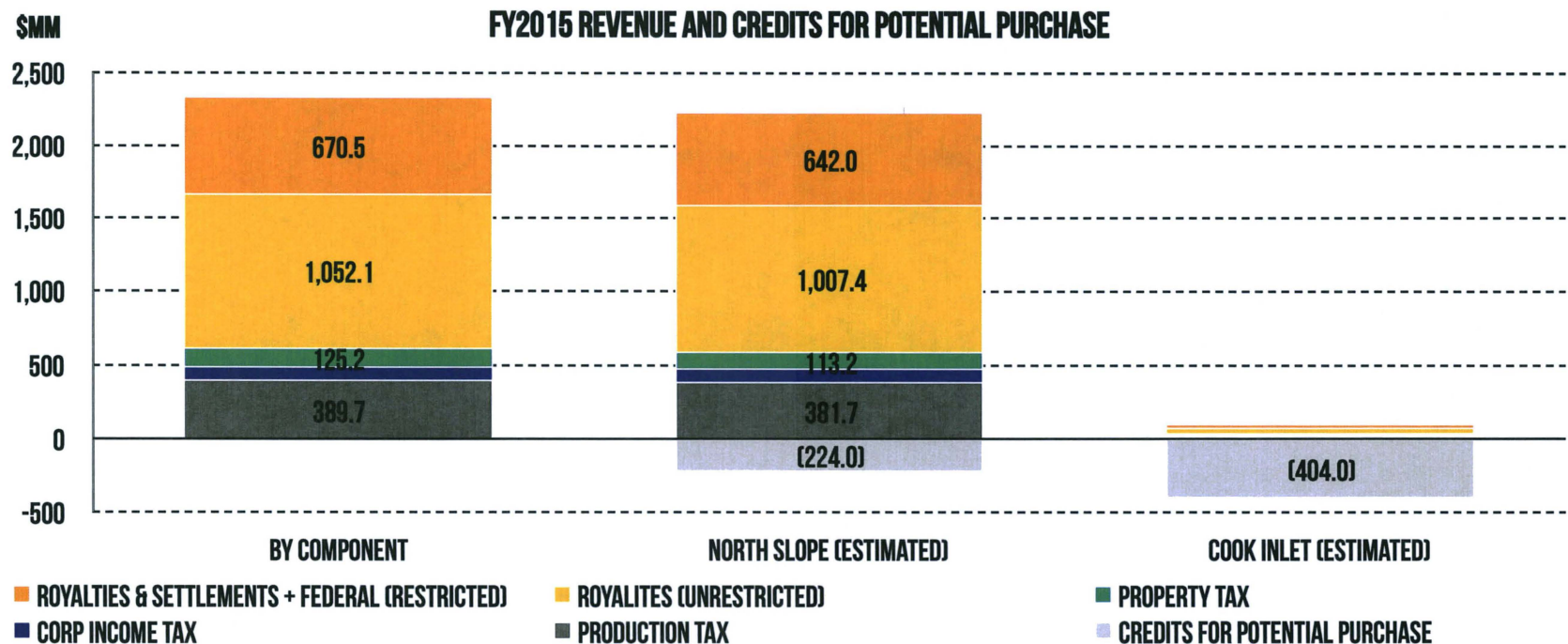
SOURCE: ALASKA DEPARTMENT OF REVENUE, TAX DIVISION

BIG DIFFERENCE BETWEEN NORTH SLOPE AND COOK INLET

The majority of refundable credits go to Cook Inlet companies

Cook Inlet production, however, generates limited direct revenue for the state

Credits on the North Slope are more limited but also a far smaller fraction of total value generated



SOURCE: ALASKA DEPARTMENT OF REVENUE, REVENUE SOURCES BOOK; TAX DIVISION; ANALYTICA ESTIMATES

ACTIVITY HAS RESPONDED IN RECENT YEARS

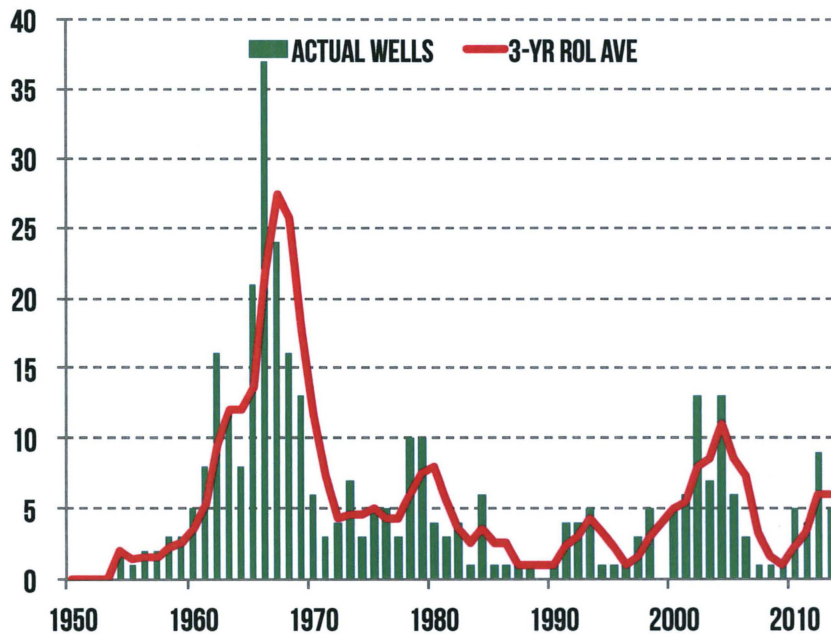
Exploration drilling in Cook Inlet has gone through several cycles since 1950s

Recent exploration activity (post 2010) on par with previous exploration peaks

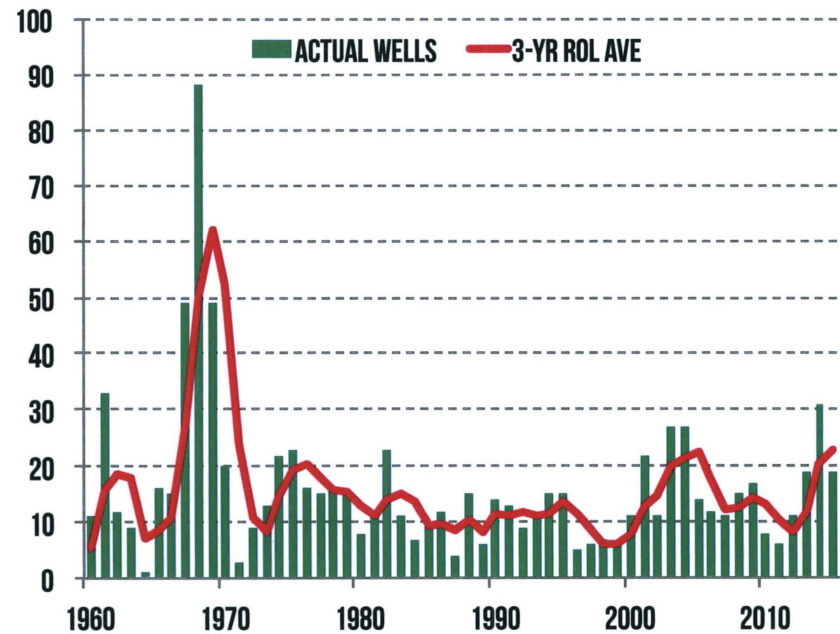
Development drilling has been more stable over the years

Recent growth placing three-year rolling average among highest in state's history

COOK INLET: EXPLORATORY WELLS SPUDDED



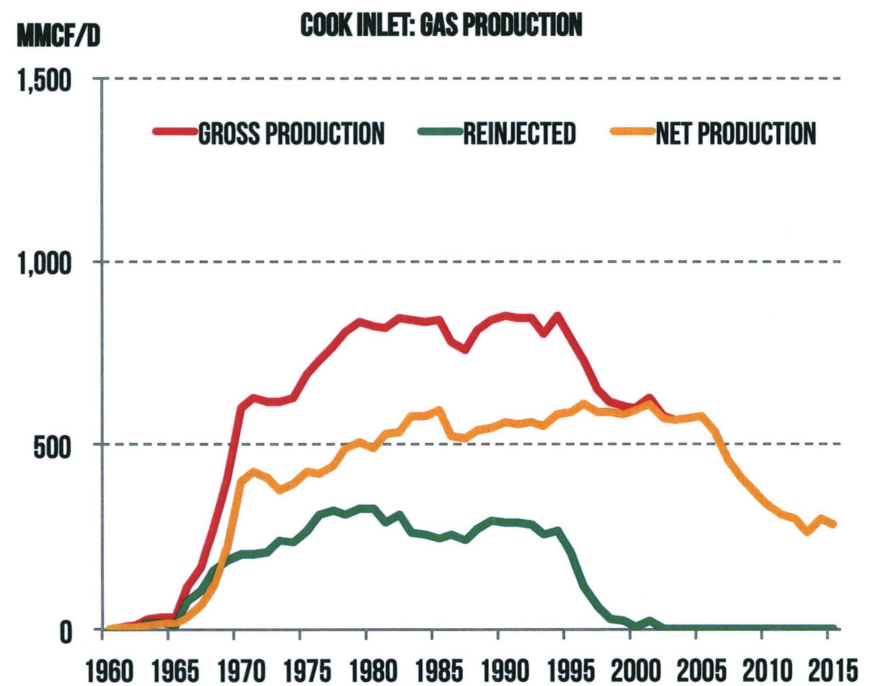
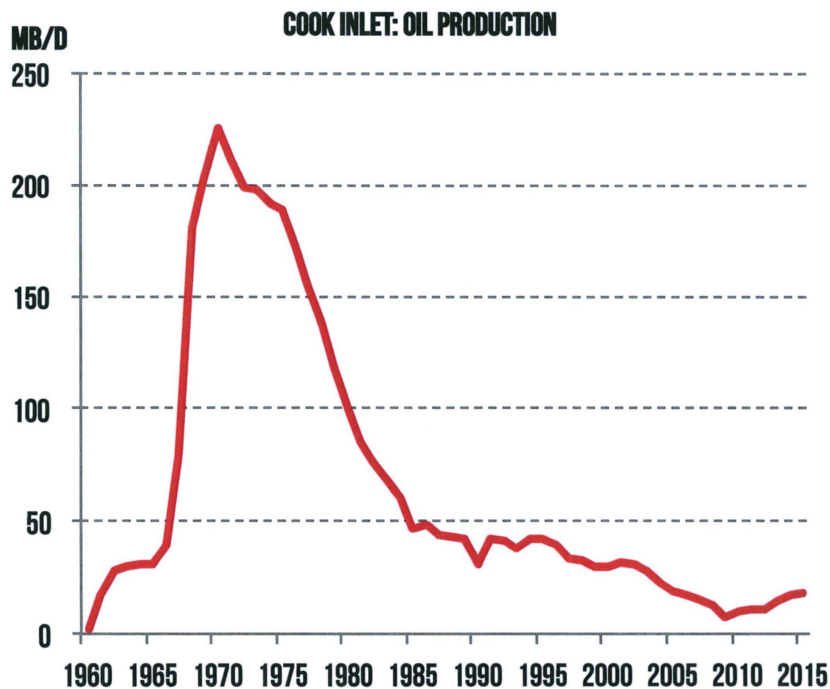
COOK INLET: WELLS BY YEAR OF FIRST OIL/GAS



SOURCE: ALASKA OIL AND GAS CONSERVATION COMMISSION, OIL AND GAS DATA WEB APPLICATION (DATA THROUGH DECEMBER 2015)

COOK INLET OIL AND GAS PRODUCTION: **BASIC FACTS**

- Oil** Peak in 1970 at 226 mb/d; trough in 2009 at 7.5 mb/d; upturn post 2010 (+10.5 mb/d)
- Gross Gas** Peak in 1990 at 853 mmcf/d; big drops in 1994–1998 and 2005–2013; stable in 2014–15
- Net Gas** Peak in 1996; 1990s plateau from blowdown at Swanson River; fall post 2005, then stable



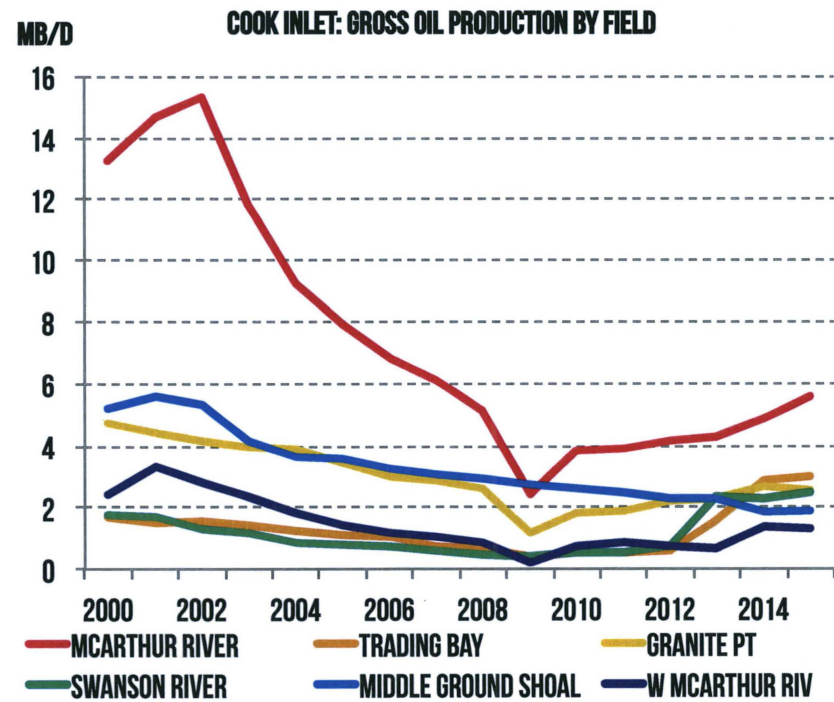
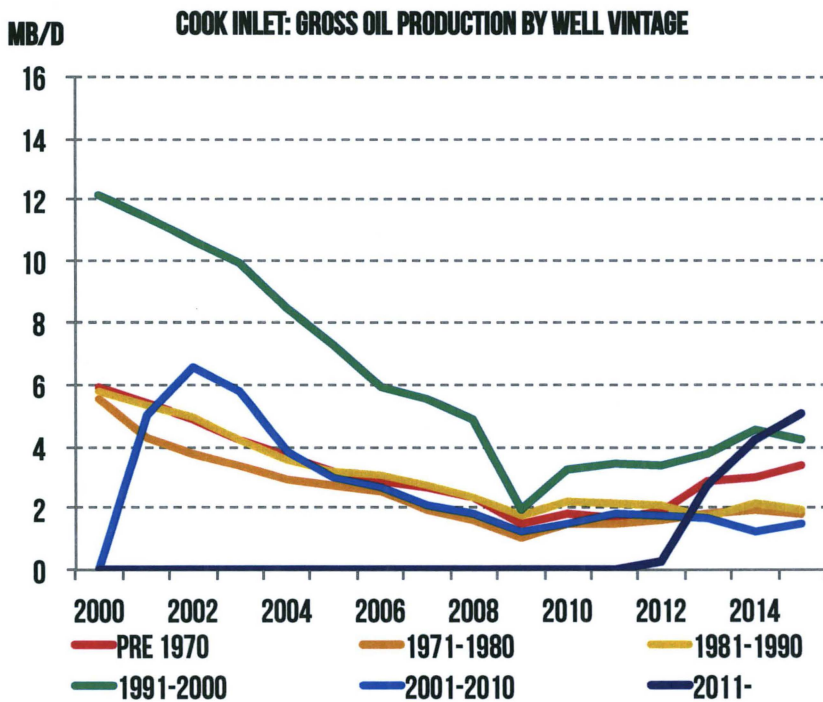
SOURCE: ALASKA OIL AND GAS CONSERVATION COMMISSION, OIL AND GAS DATA WEB APPLICATION (DATA THROUGH DECEMBER 2015)

OIL UP FROM WORKOVERS, NEW WELLS IN EXISTING FIELDS

Production from old wells has risen, especially from wells drilled before 1970 and in 1990s

New wells drilled after 2011 have also added about 5 mb/d of production

Production is up in most fields; biggest gains from McArthur River field



SOURCE: ALASKA OIL AND GAS CONSERVATION COMMISSION, OIL AND GAS DATA WEB APPLICATION (DATA THROUGH DECEMBER 2015)

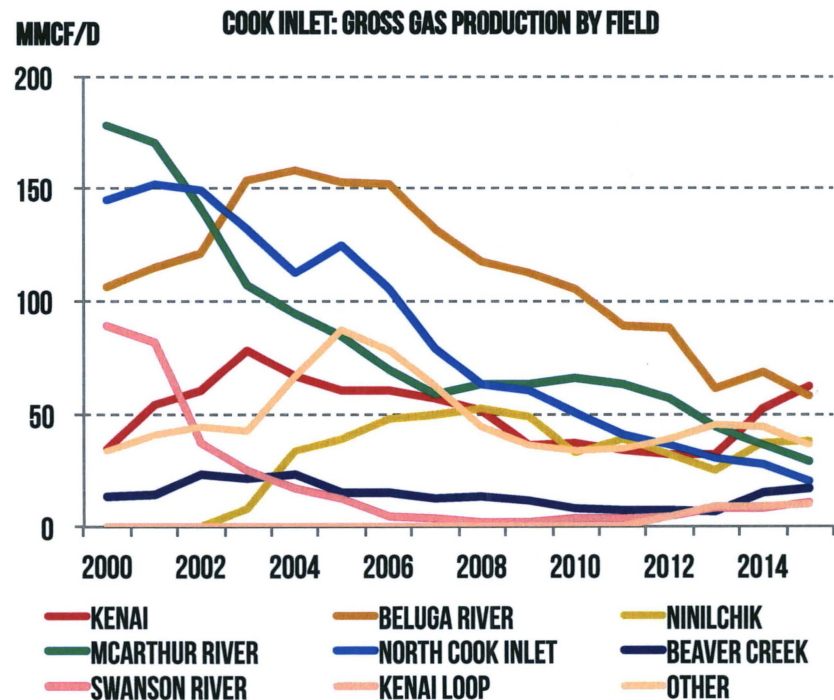
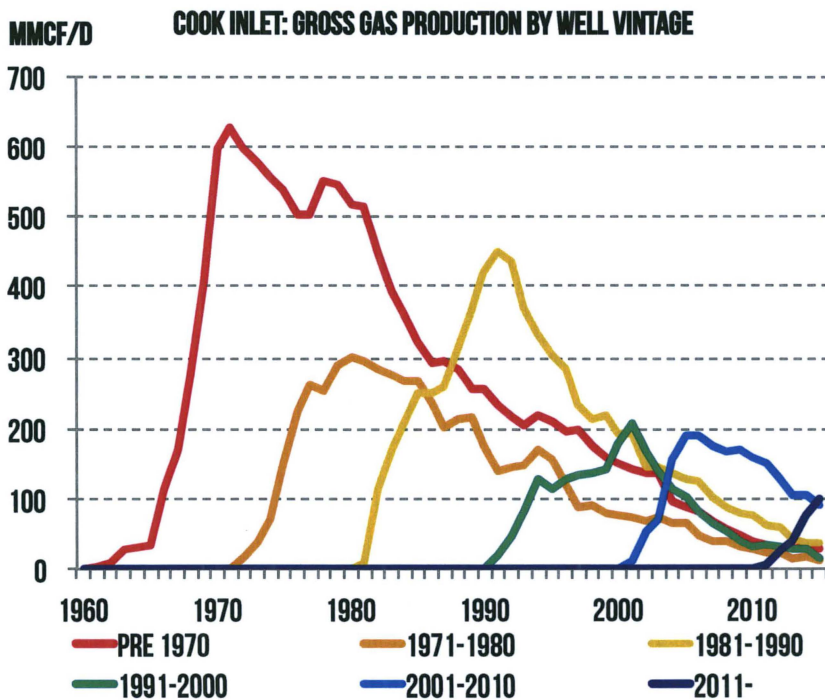
GAS FLATTENING FROM NEW WELLS IN EXISTING FIELDS

Wells drilled after 2011 have added about 100 mmcf/d of new production

Production from Beluga River, Ninilchik, and North Cook Inlet declined by 85.7 mmcf/d in 2011–2015

Growth from Kenai (+28 mmcf/d), Beaver Creek (+10), Kenai Loop (+9.7), and Swanson River (+7.3)

Only Kenai Loop is (major) new field (first gas in 2012); other growth from workovers and new wells



SOURCE: ALASKA OIL AND GAS CONSERVATION COMMISSION, OIL AND GAS DATA WEB APPLICATION (DATA THROUGH DECEMBER 2015)

COOK INLET GAS HAS GONE THROUGH **MAJOR TRANSITION**

Old Cook Inlet Gas Market

Surplus gas exported (via LNG and Agrium)

Low wellhead prices

Market view is that gas is long

Gas produced by large, international players

Secure local supply via long-term contracts

Producers offered high seasonal flex

Seasonal flex coming largely from supply

New Cook Inlet Gas Market

Limited surplus; gas absorbed in local market

High wellhead prices

Market view is that gas is short

Gas produced by smaller, focused players

Shorter term sales contracts b/w producers, utilities

Mature fields have much more limited seasonal flex

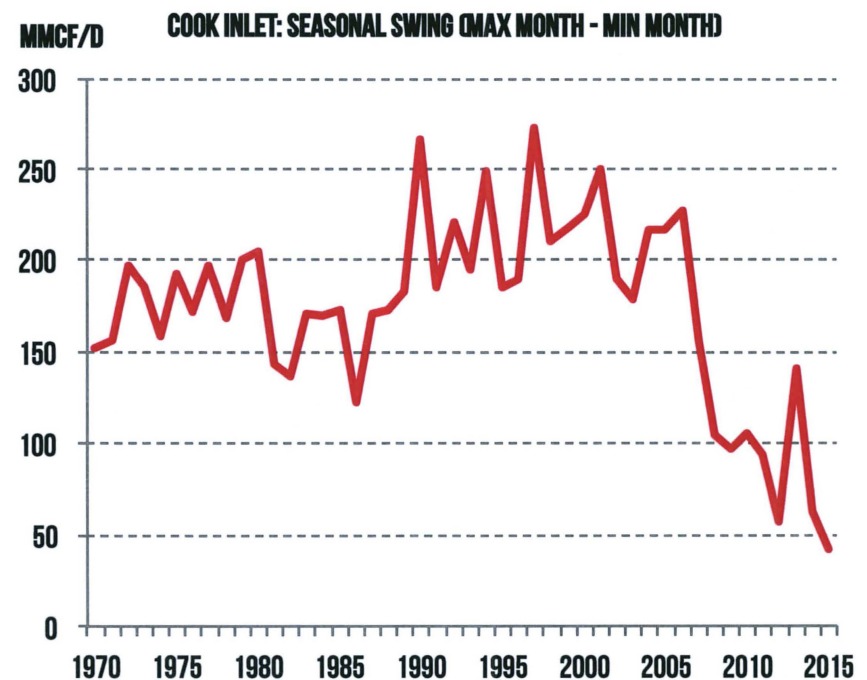
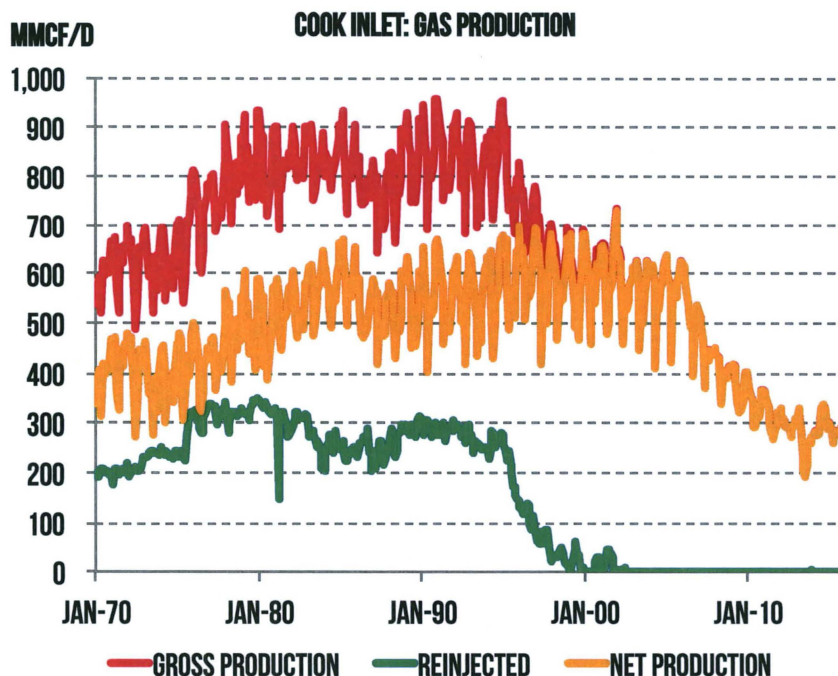
Seasonal flex largely from storage and demand

MATURE BASIN HAS LIMITED SEASONAL PRODUCTION FLEX

Historically, gas production in Cook Inlet has provided seasonal flex

As production has matured, that seasonality has gone away

Since 2006, we have seen the seasonal swing (max-min month) drop to below 100 mmcf/d



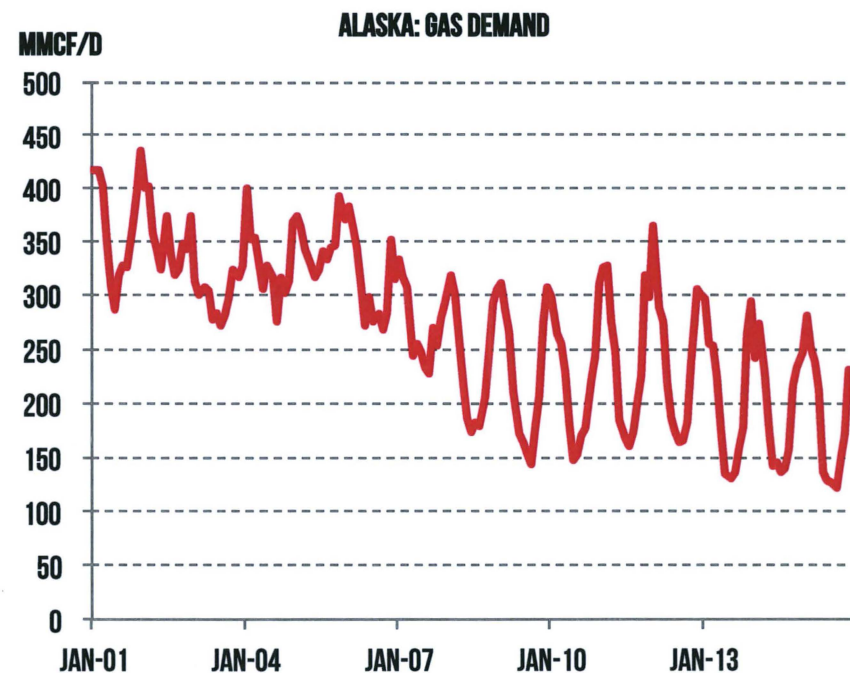
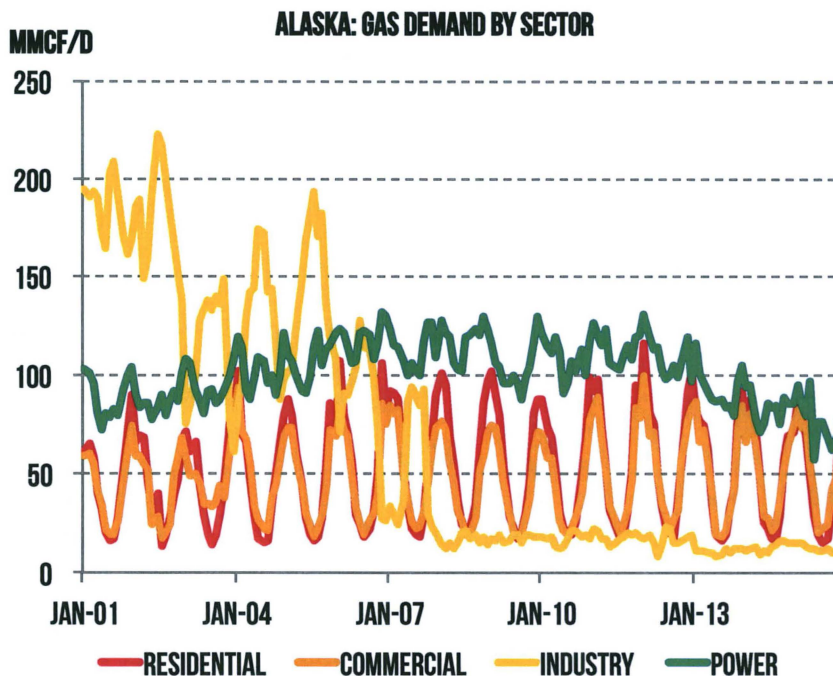
SOURCE: ALASKA OIL AND GAS CONSERVATION COMMISSION, OIL AND GAS DATA WEB APPLICATION (DATA THROUGH DECEMBER 2015)

DEMAND HAS, MEANWHILE, BECOME MORE SEASONAL

Historically, gas production was either exported or consumed in industry (nitrogen)

Lower consumption in industry has made the demand profile more seasonal (lack of “base-load” demand)

In 2003–2005, industry consumption was flexible enough to serve a seasonal purpose



SOURCE: ENERGY INFORMATION ADMINISTRATION, ALASKA NATURAL GAS CONSUMPTION BY END USE

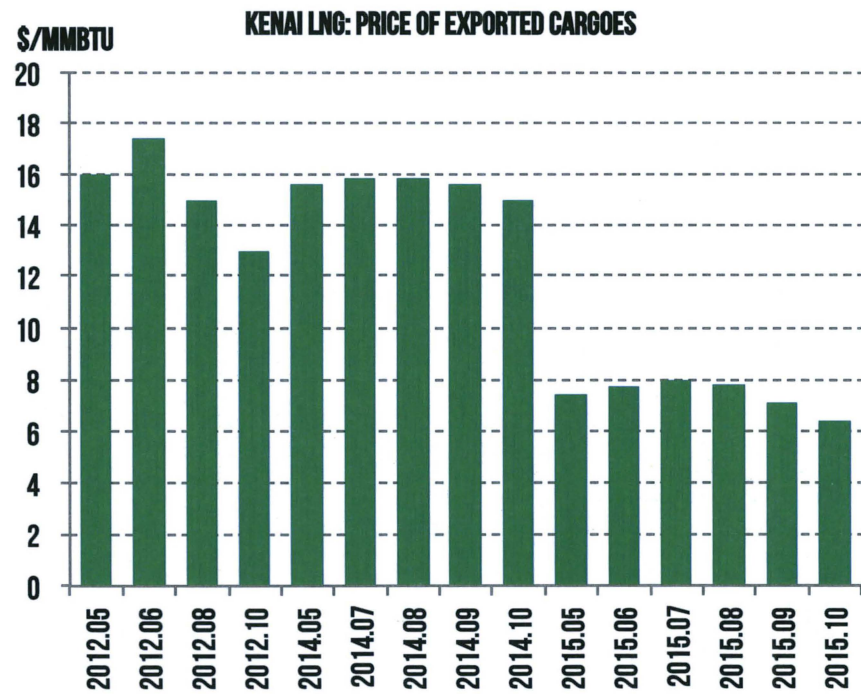
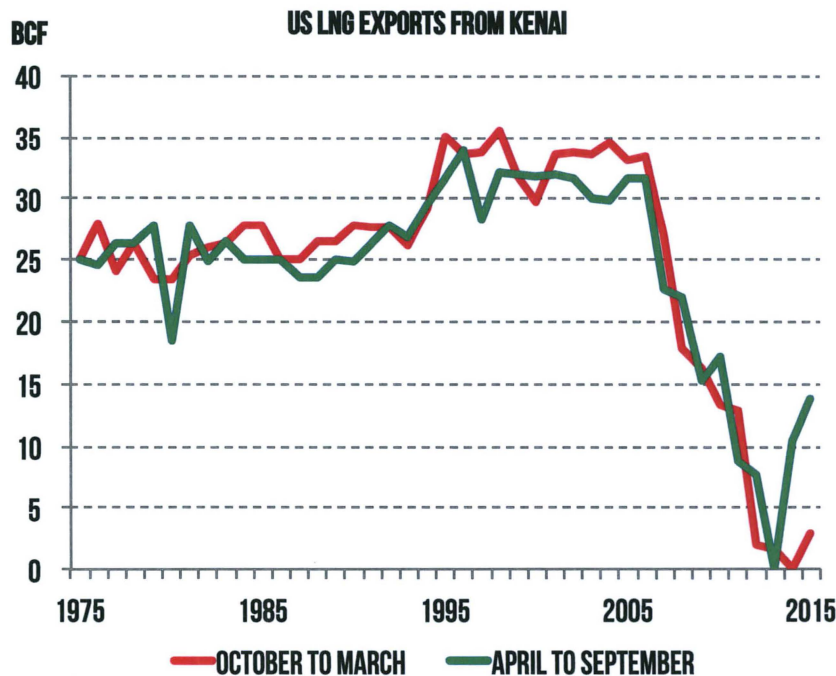
RECENTLY, EXPORTS HAVE OFFERED A SEASONAL OUTLET

Historically, LNG exports were not particularly seasonal: exports in winter and summer were similar

Since 2012, LNG exports have taken place largely in the summer

In 2014 and 2015, Kenai exported 13 and 16 bcf respectively, helping to support seasonal flexibility

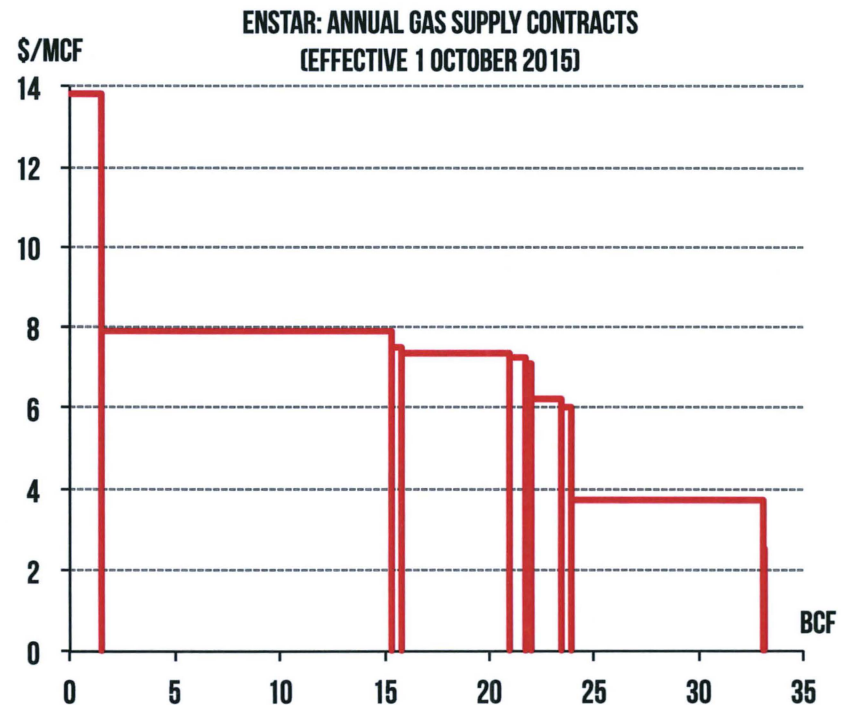
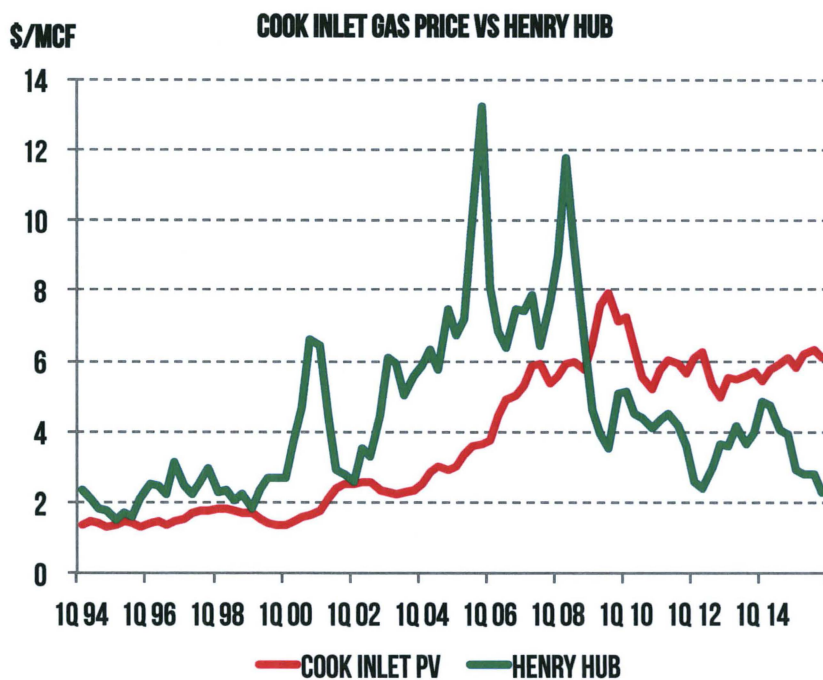
How will lower prices and ConocoPhillips' divestment of upstream in Cook Inlet impact this outlet?



SOURCE: ENERGY INFORMATION ADMINISTRATION

GAS PRICES HAVE RISEN CONSIDERABLY POST 2004

Historically, gas prices in Cook Inlet have been equal to or (more often) below Henry Hub
 Since 2004, there has been a steady rise in gas prices; since 2010, prices were between \$5 and \$6/mcf
 But there is considerable supply trading above this level, at \$8+ (and rising depending on contract)
 Other jurisdictions have found \$5-\$7/mcf is sufficient to produce most expensive gas (shale, deepwater)



SOURCE: ALASKA DEPARTMENT OF REVENUE, TAX DIVISION (COOK INLET PV); ENERGY INFORMATION ADMINISTRATION (HENRY HUB); ENSTAR, DETERMINATION OF GAS COST ADJUSTMENT

GAS SUPPLY AND DEMAND DYNAMICS IN COOK INLET

Supply and resources

2015 production: 103 bcf

Estimated 2P reserves: 1,600 bcf (DNR, 2015)

Legacy fields: 1,183 bcf

Kitchen Lights/Cosmo: 417 bcf (ballpark)

Yet to find estimates are much higher

Existing + new fields should be enough for current demand 10+ years; demand upside needs more gas

Demand

2015 consumption around 100 bcf

In-state demand: 80-85 bcf/yr

Exports: 13–16 bcf (2014–2015)

AGDC 2030 forecast: 115 to 130 bcf/yr (ex. nitrogen)

Nitrogen demand upside: 28 bcf/yr per train (2 trains)

State support due to gas “shortage,” yet developers say they lack markets to develop new fields; why?

Maybe issue is timing (market covered by existing contracts, window opens later)

Or a natural negotiation process (buyers and sellers looking for the “right” pricing point)

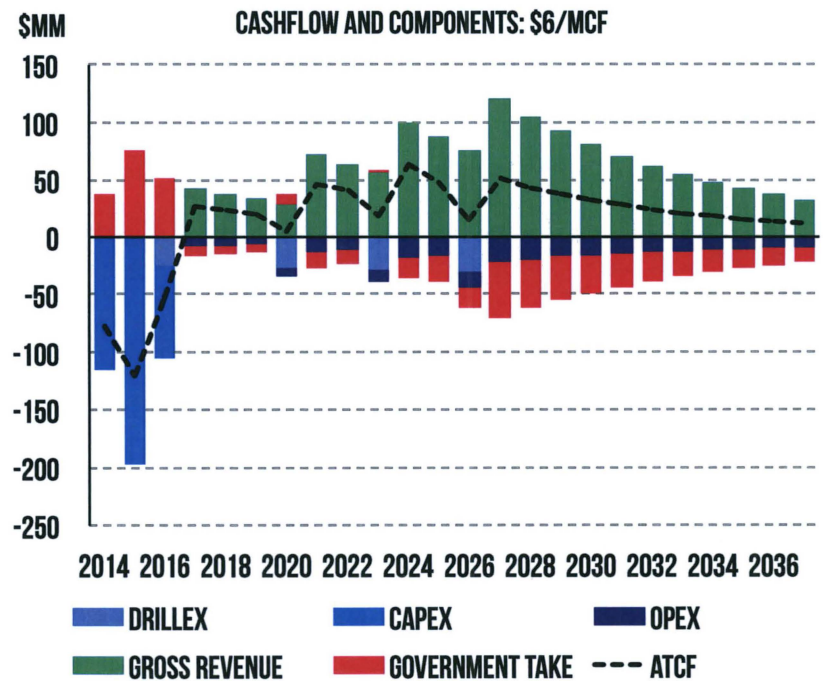
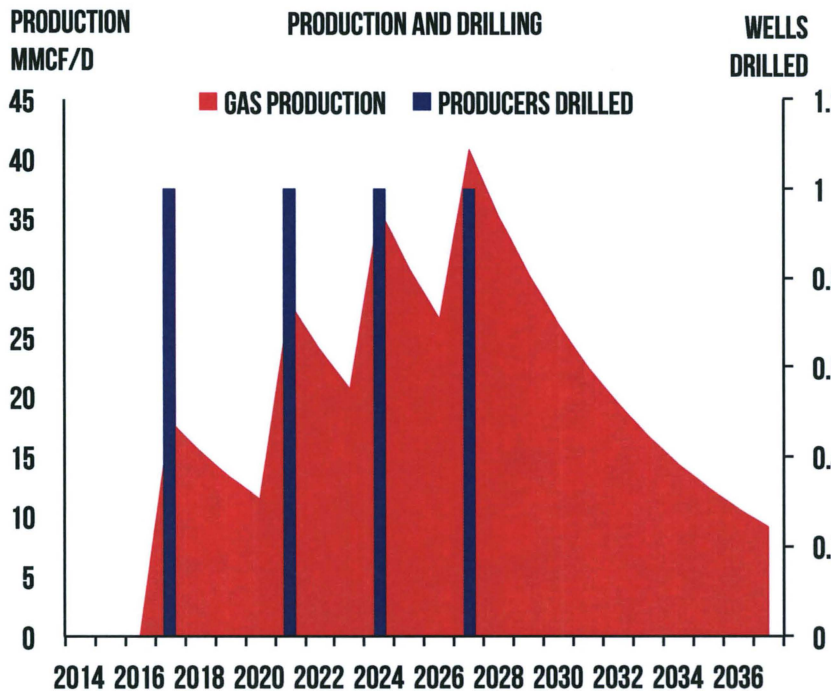
Or different views about resource certainty, especially for developing new demand (Agrium)

SOURCE: DEPARTMENT OF NATURAL RESOURCES; ALASKA OIL AND GAS CONSERVATION COMMISSION; ALASKA GASLINE DEVELOPMENT CORPORATION; MCDOWELL GROUP (NITROGEN DEMAND)

PROJECT #1: MARKET CONSTRAINED (ASSUMPTIONS)

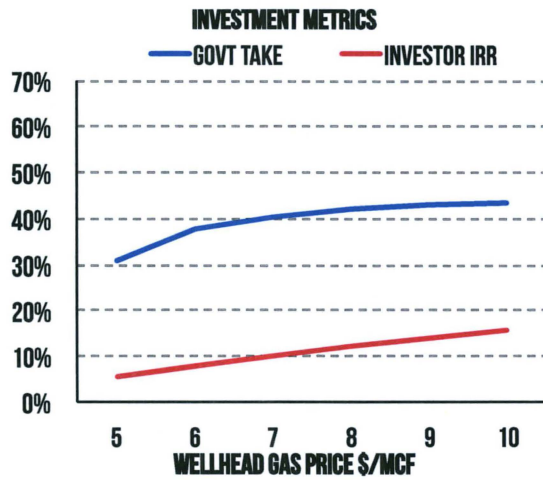
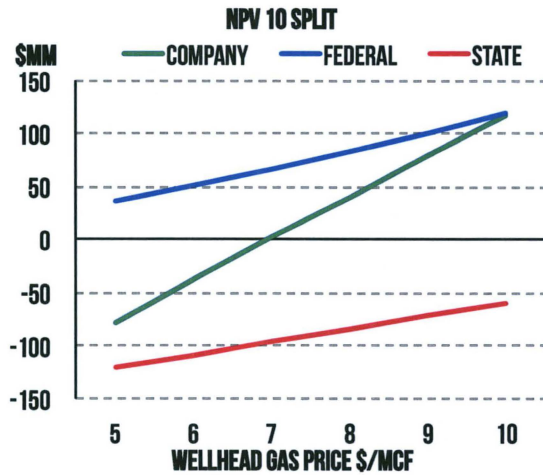
Large upfront investment but constrained gas market

Limited ability to sell gas: can only drill a well every few years

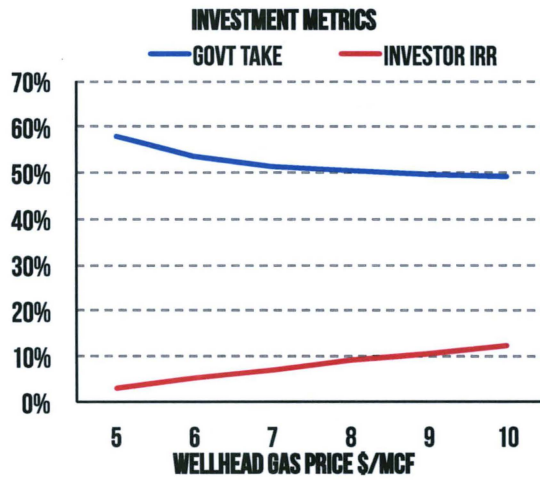
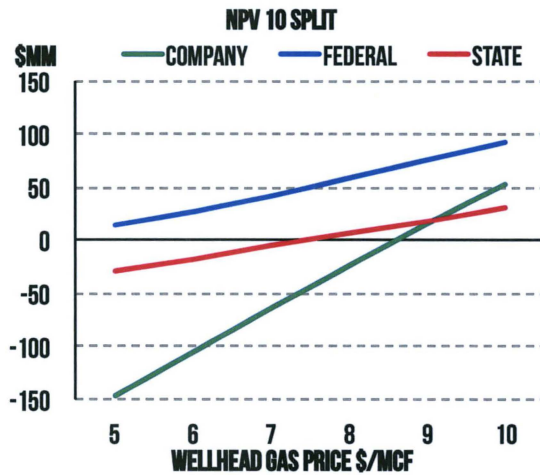


PROJECT #1: MARKET CONSTRAINED (RESULTS)

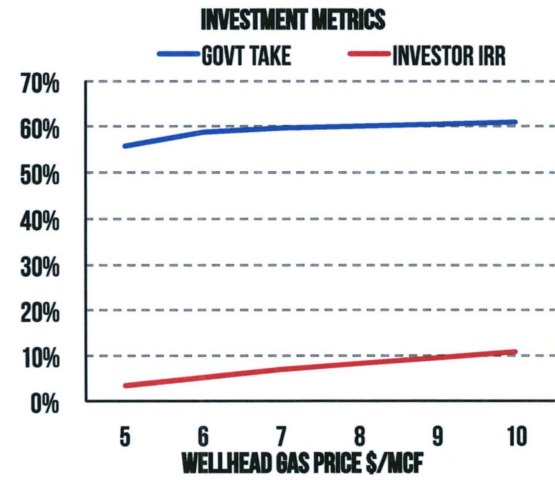
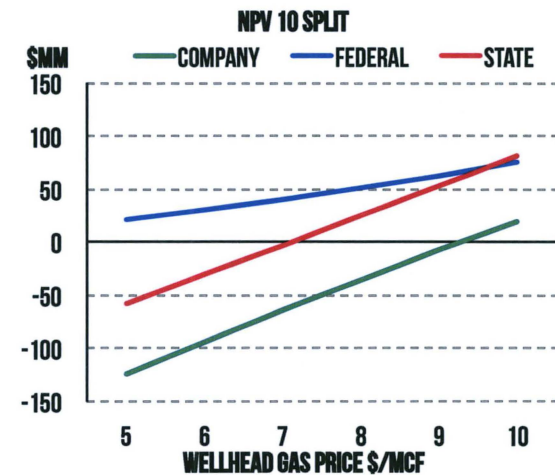
STATUS QUO



HB 247: NOL ONLY



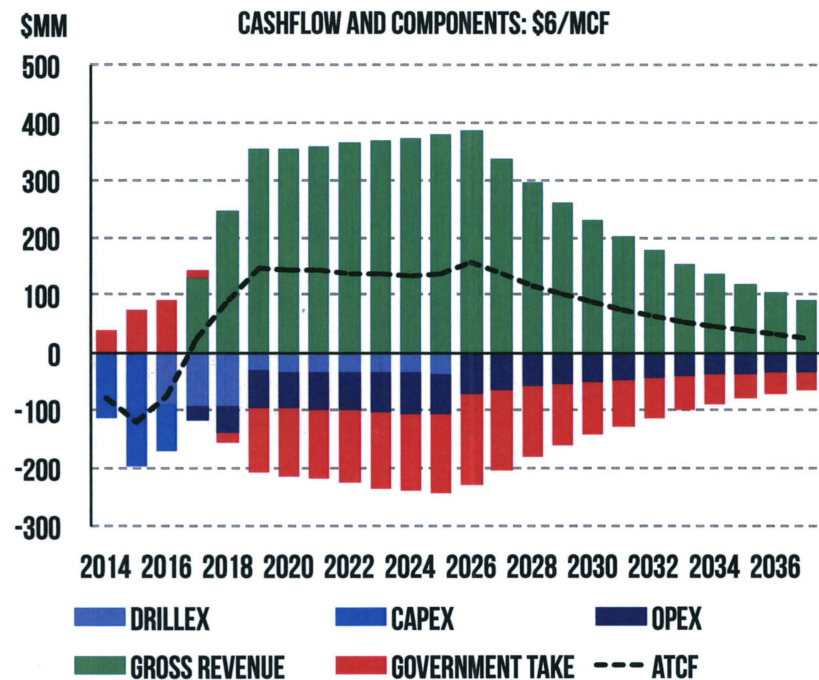
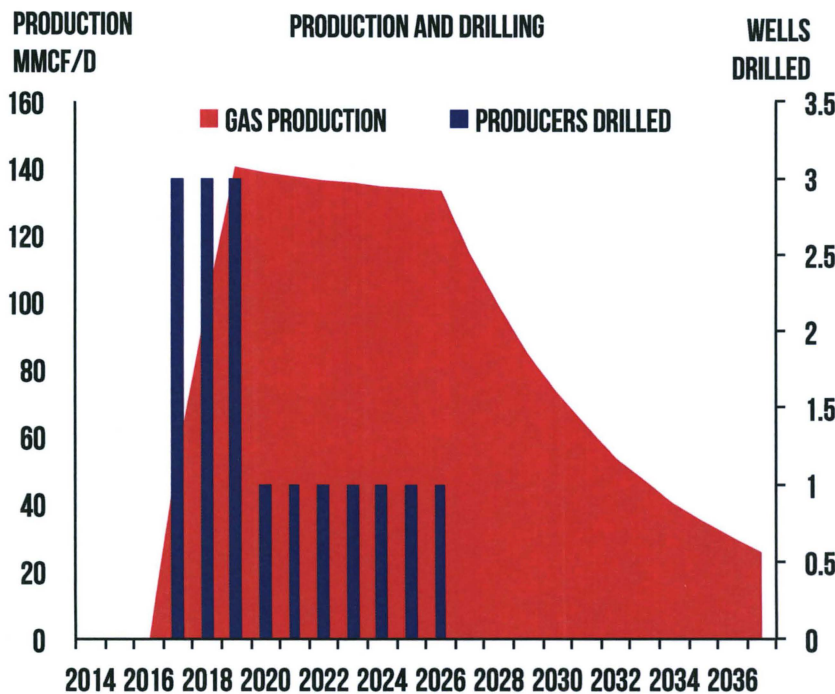
SB 21 GVR



PROJECT #2: MARKET UN-CONSTRAINED (ASSUMPTIONS)

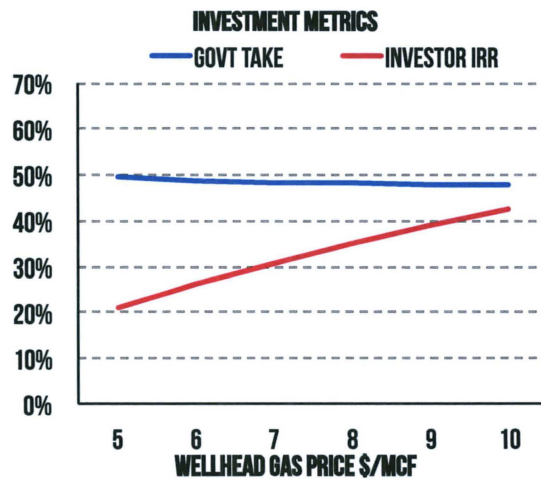
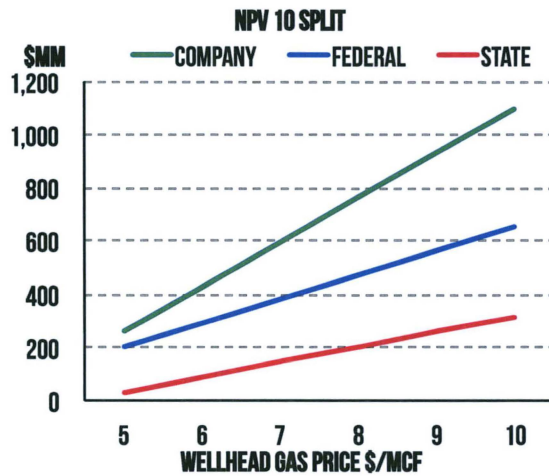
Large upfront investment but un-constrained gas market

Continued drilling lead to a plateau of 130 mmcf/d

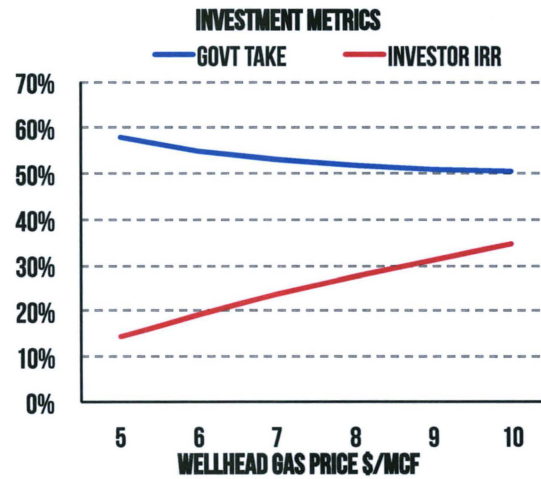
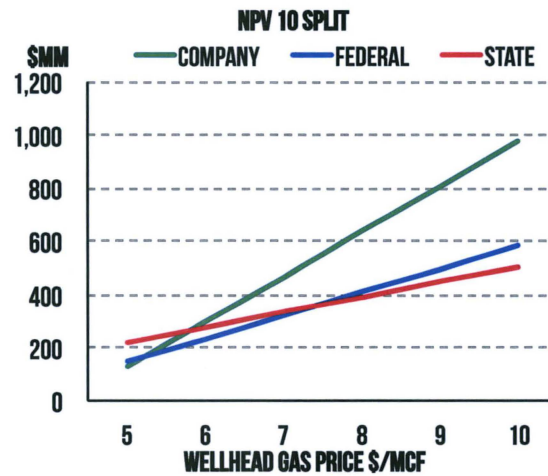


PROJECT #2: MARKET UN-CONSTRAINED (RESULTS)

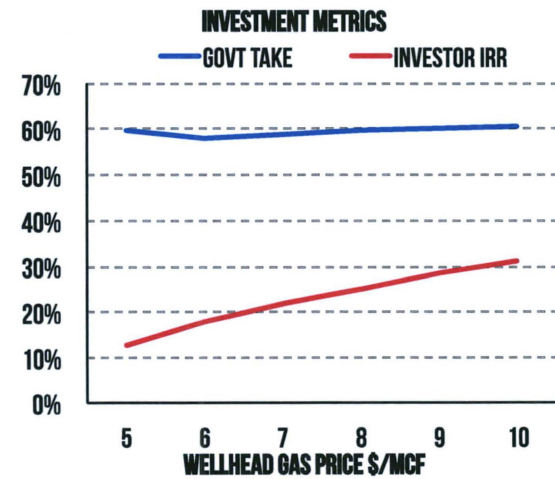
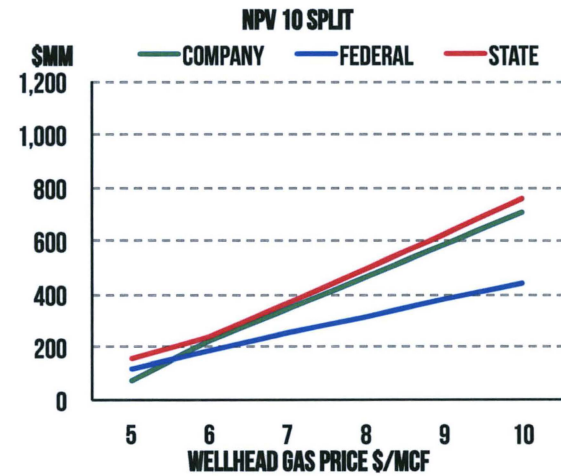
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HB 247: NOL ONLY



SB 21 GVR

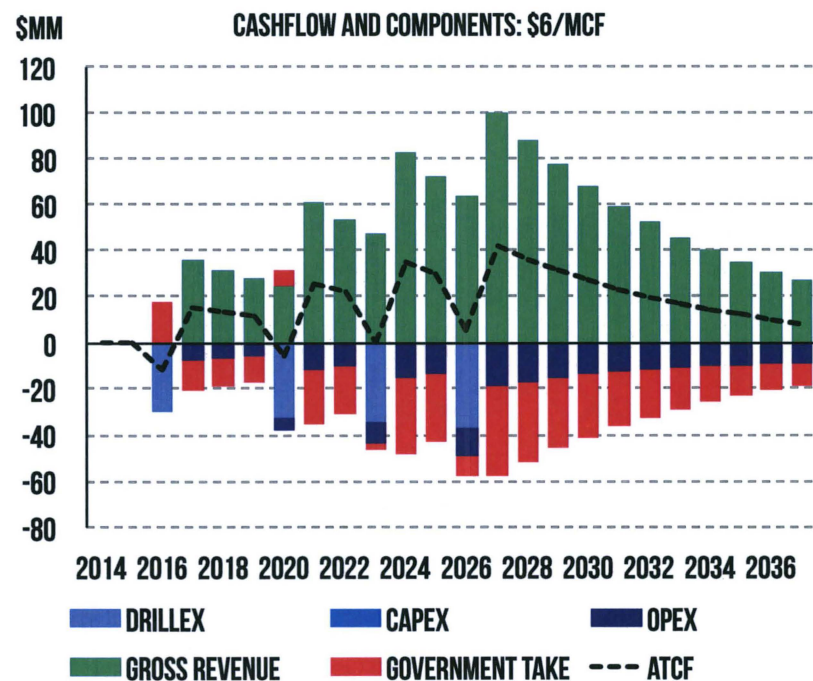
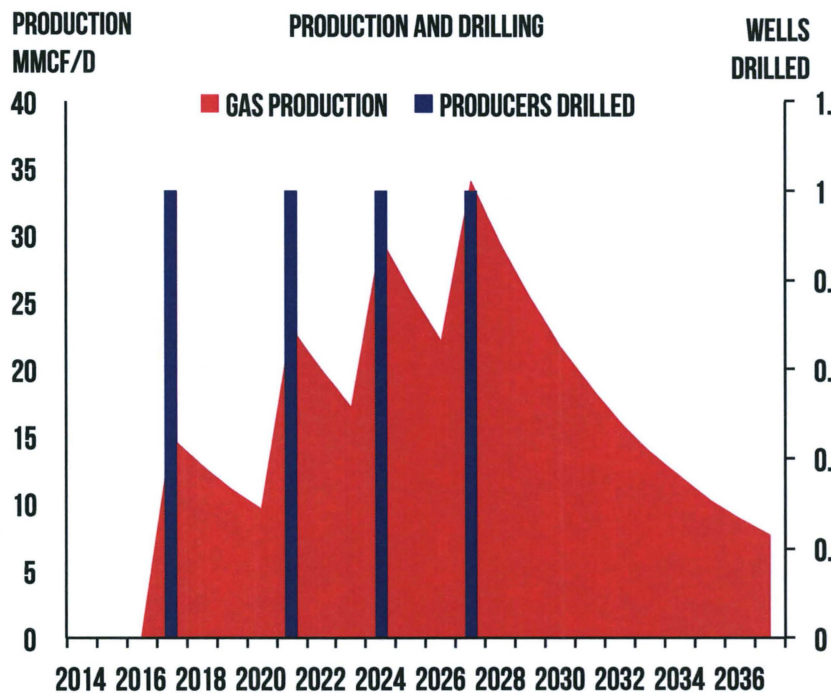


PROJECT #3: DRILLING IN EXISTING FIELD (ASSUMPTIONS)

Drilling expenditures at existing production—smaller upfront investment

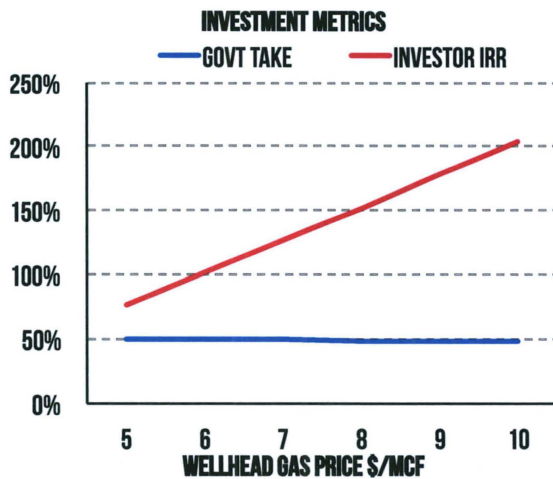
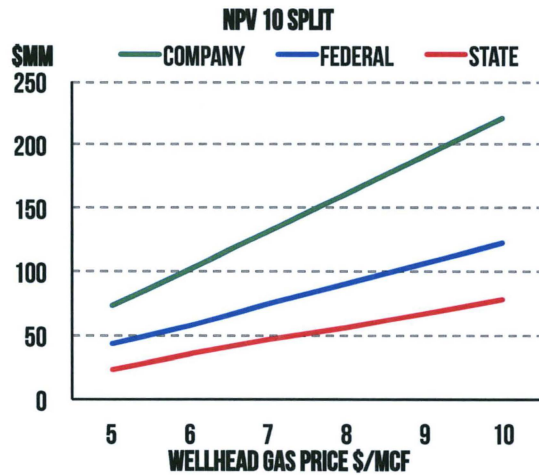
No market constrains assumed

This is a point-forward analysis—it ignores sunk, entry or acquisition costs

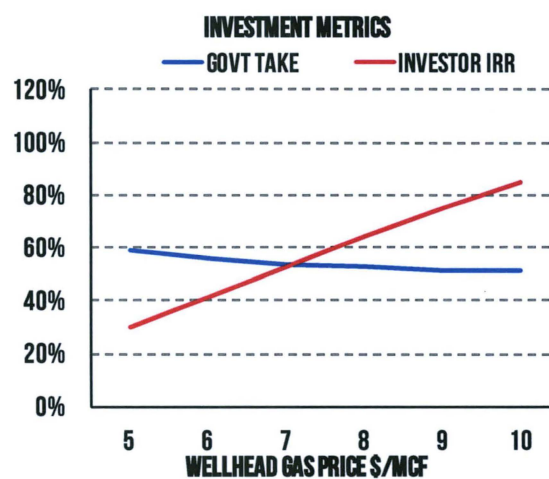
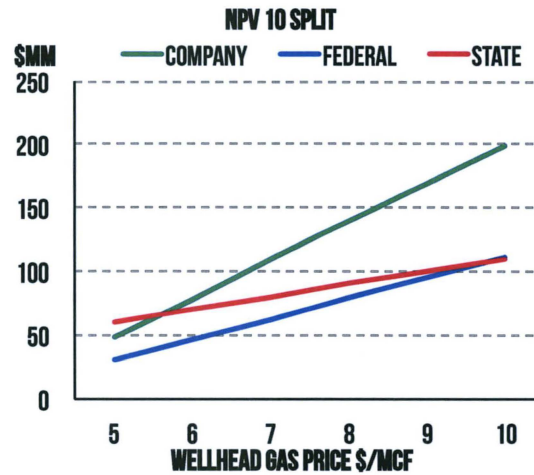


PROJECT #3: DRILLING IN EXISTING FIELD (ASSUMPTIONS)

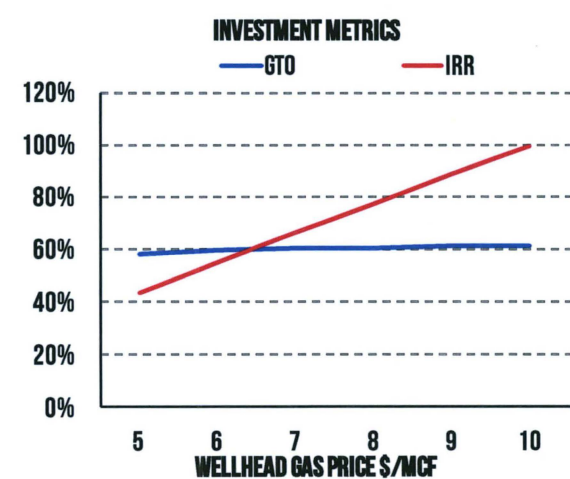
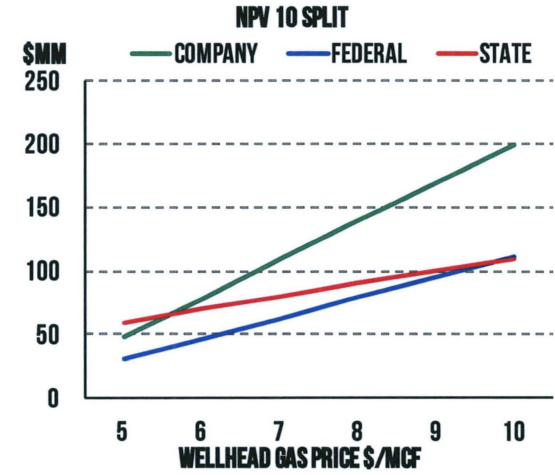
STATUS QUO



HB 247: NO CREDITS



SB 21 GVR



THE COOK INLET OIL AND GAS MARKET: A SCORECARD

What has happened to oil and gas production and activity in the Cook Inlet in recent years?

Oil production has risen from 7.5 mb/d in 2009 to almost 18 mb/d

Gas production has stabilized after years of steadier decline

How has the gas market adjusted in recent years?

Cook Inlet has undergone major transition in supply, demand, prices, competition and expectations

Some of these changes are typical in mature basins—others are unique to Cook Inlet

What's the outlook and how sensitive is the outlook to changes in oil/gas fiscal system?

DNR: 1,183 bcf in remaining 2P reserves; 1,600 bcf w/ Cosmopolitan and Kitchen Lights (ballpark)

Continued drilling at old fields plus Cosmopolitan and Kitchen Lights: current market well supplied

At current (gas) price levels, brownfield investment should be profitable under stricter fiscal regime

Credits more important for developing new resources, especially with demand constraints

Currently much uncertainty over future regime - setting a stable, sustainable system is paramount

DIFFERENT WAYS TO LOOK AT TAX CREDITS

House Resources Committee

Larry Persily, Kenai Peninsula Borough – March 9, 2016

Return on state investment

2

- ❑ For Cook Inlet, probably not a general fund gain
- ❑ No oil production tax, minimal gas production tax
- ❑ Payback from royalties, property tax, income tax
- ❑ Not enough volume to fully recover tax credit cash
- ❑ Not enough future revenue for net gain to treasury
- ❑ North Slope investment could be different because of production taxes and higher volumes

Local benefits count

3

- ❑ Assessed value of oil and gas property in the Kenai Peninsula Borough totals over \$1.4 billion in 2016, more than double the value of 2006
- ❑ Nine of Top 10 property taxpayers oil and gas
- ❑ Sales tax revenues are back above FY2009 peak
- ❑ Per-capita income and jobs are up, and unemployment rate is down from 2010 to 2014
- ❑ New oil and gas spending circulates in the economy

More oil, more gas

4

- Cook Inlet oil production has doubled since 2010
- Avg. 18,000 barrels/day in 2015, best since 2006
- Close to 20,000 barrels/day in April 2015
- Natural gas production ahead of 2013 numbers
- Latest utility gas supply contract runs to 2023
- Potential for even more gas **if there is a market**

It's been more than just credits

5

- Higher oil prices helped a lot – that is, until 2014
- RCA approval of gas contracts reassured producers
- Storage provided year-round market for gas
- Continuation of ConocoPhillips LNG exports
- And, of course, state tax credits a big incentive
- Credits reduced capital risk, provided financing

Why credits worked

6

- ❑ High oil & gas prices generated explorer interest in new opportunities; Alaska helped with financing
- ❑ Low interest rates created investor demand for new opportunities to earn higher returns
- ❑ Financial confidence for investors; no uncertainty of best-interest finding, subjective analysis by state
- ❑ The state could afford to help bankroll investment
- ❑ New entrants in Alaska helped build public support

Looking ahead

7

- Regardless of credits, producers need sufficient market for gas to recover investment, earn a profit
- Hard to justify exploration and production spending for new gas that isn't needed until the next decade
- Just as Cook Inlet needed large customers in 1960s to develop resources, it needs demand growth in 2020s to justify new large-scale gas production
- And the state cannot afford to write as many checks

What industry/investors need

8

- Certainty of payback; when will the check arrive
- Investor needs to know the 1-year loan will not be stretched into a 10-year payback
- Longer payback could attract different investors
- Phase-in of any changes should reflect lead time for multiyear investment spending before production
- Investors want to see that Alaska is 'tax stable'

The elusive best answer

9

- Don't damage investments already under way
- And don't discourage future investments too much
- But don't promise more than the state can afford
- Acknowledge that tax credits have a cost and that many of the benefits are in jobs and gas and oil — not necessarily a cash profit to state treasury
- Balance credits against other public needs and the reality that Alaska is oil and gas dependent

10

For more information

Larry Persily

Assistant to Kenai Peninsula Borough Mayor Mike Navarre

lpersily@kpb.us

Cell 907-351-8276

Alaska State Legislature: HB 247

Testimony to House Resources Committee

Richard Ennis & Thomas Ryan

March 9, 2016

thinkforward



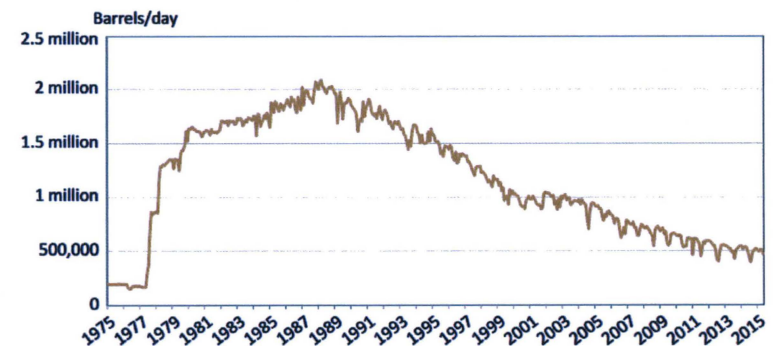


Tax Credit Program Overview

Overview of Alaska State Tax Credit Program

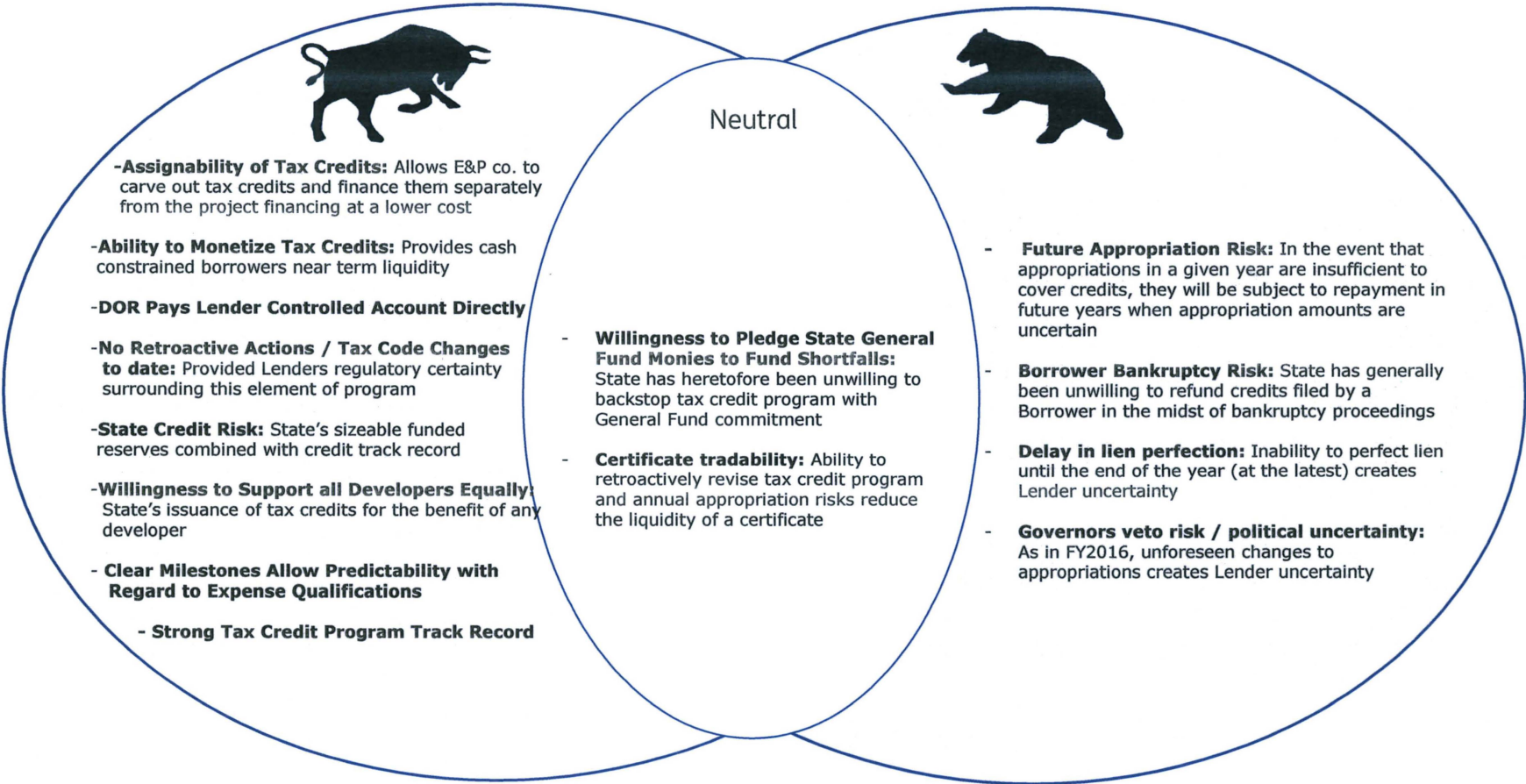
- The State of Alaska has adopted several exploration and development incentive programs to encourage active exploration and the timely development of the State's oil and gas reserves for export purposes and to meet in-state demand;
- Incentives are mostly available through the State's oil and gas production tax code and vary by production region, project size and project stage;
- Any explorer or developer is eligible for incentives; some incentives under the Alternative Credit for Exploration program require preapproval of projects by the State. Expenditures underlying tax credits are subject to approval and exploration data must be provided to the state for some credits;
- In order to incentivize and facilitate smaller E&P companies without a large capital base and/or a tax liability, the State, has given companies producing less than 50,000 bbl/day, with no tax liability, the option of exchanging generated tax credits with the State for cash;
- The tax credit program is subject to annual appropriation by the
For FY 2016, the Governor's veto capped funds Available at \$500 million;
- Furthermore, E&Ps have the ability to assign credits to 3rd parties, opening up various options for leveraging these receivables;
- Continued investment in the oil and gas sector is necessary to sustain volumes, which have been in secular decline since the 1980s;
- The tax credit program has recently come under scrutiny due to budget constraints, as a result of the sustained low commodity price environment;
- All parties are interested to know what changes may be necessary to continue, and the Governor's office has put forward HB 247 as a proposed solution.

ALASKA CRUDE OIL, 1975 TO 2015



Source: U.S. Energy Information Agency

Lender Feedback on Tax Credit Program as Currently Structured





Tax Credit Program – Proposed Changes

Tax Credit Amendment

- ING as a lender acknowledges that current market conditions in combination with the size of the existing tax credit program make it a target for potential reform.
- As a prudent lender ING would welcome some prospective amendments, effective after 2016, that would make the program more sustainable over the longer term but also make the functioning of the program more predictable.
- In summary HB 247 does make the program more sustainable and the proposed changes are prospective which is promising however it also makes it more risky for lenders to lend against credits specifically and also to projects in general. In its current form the legislation would mean that ING would be unlikely to lend to the smaller exploration and development companies who are most in need of third party capital.
- The specific provisions that are the most problematic are the hiring requirement to qualify for refund, the low annual cap for credit refunds, the expiration of loss credits, failure to improve the bankruptcy risk, and the failure to permanently solve the appropriation risk.
- ING, as secured lender earning very low interest, is in general reasonably agnostic as to the levels of credits available, however the precipitous drop in the amount of credits will mean that the overall risk of borrowers defaulting, failing to complete projects, going into bankruptcy, or failing to meet necessary milestones to qualify for credits is increased exponentially. This in turn increases the overall risk associated with financing the tax credits and so could materially effect ING willingness to lend.

Key Risk Factors and Considerations – Lender Perspective

	Lender Consideration	HB 247	Possible Solutions
Borrower Liquidity	<ul style="list-style-type: none"> - Borrower requires sufficient liquidity to continue to finance exploration and/or extraction activities over the medium term. 	<ul style="list-style-type: none"> - Tax credit refund cap of \$25mm significantly increases the risk of a bankruptcy before all credits are paid out. . 	<ul style="list-style-type: none"> - Ensure that credits become the property of the secured lender and lender can continue to exchange for cash after a bankruptcy or change of ownership
Tax Credit Qualification Risk	<ul style="list-style-type: none"> - The risk of expenditures not qualifying under State guidelines for credits - The risk of expenditures and invoices not being genuine. 	<ul style="list-style-type: none"> - Employment requirement significantly increases the risk that borrowers will not ultimately qualify for the refund. 	<ul style="list-style-type: none"> - Eliminate the employment requirement or define it such that lenders could satisfy it or financially compensate the state in the absence or failure of borrower to do so.
Lien Perfection Risk	<ul style="list-style-type: none"> - Lender exposure to the pre-perfection risk due to bankruptcy before applications are filed or perfected 	<ul style="list-style-type: none"> - No Change 	<ul style="list-style-type: none"> - Would like to see any legislation strengthen the lender's senior claim in such a situation.
Intercreditor Risk	<ul style="list-style-type: none"> - Interface risk between a Tax Credit Lender and the Project Finance / Borrowing Base Lender 	<ul style="list-style-type: none"> - Lower tax credits increases the need and cost of capital for projects. This worsens the bargaining power of the tax credit financing party and increases financing costs materially 	<ul style="list-style-type: none"> - Increase annual refund cap for smaller explorers and developers who don't have access to cheap alternative funding sources and eliminate expiration of credits

How has 247 effected risks – Lender Perspective

	Current Risk	HB 247	Potential fixes
Appropriation Risk	<ul style="list-style-type: none"> - Risk that the legislature don't approve or governor vetoes an appropriation to pay cash refunds for tax credits. 	<ul style="list-style-type: none"> - Creates Certainty for current credits prior to law change. - Increases appropriation risk for future years as term extended. 	<ul style="list-style-type: none"> - Create either a legislative or permanent funding fix to ensure that funding is adequate and stable to pay future refunds.
Construction / Project Operating Risk	<ul style="list-style-type: none"> - Project completion or exploration risk. 	<ul style="list-style-type: none"> - Completion risk for companies that need the credits most will increase significantly due to excessive risk and cost of operating in Alaska. 	<ul style="list-style-type: none"> - Increase annual cap for smaller explorers and developers who don't have access to cheap alternative funding sources.
Interest Rate Risk	<ul style="list-style-type: none"> - Interest on Loans will be subject to accrual and repaid in full at maturity / upon repayment of draws with proceeds from tax credit payments. - Each advance will be a separate loan with an expected maturity. 	<ul style="list-style-type: none"> - Marginal increase in risk due to longer term but this can be managed with small additional cost to borrower. 	<ul style="list-style-type: none"> - Shorten term by increasing refund cap.
Change in Law Risk	<ul style="list-style-type: none"> - Risk that retroactive tax credit program changes will adversely affect outstanding tax credit claims. 	<ul style="list-style-type: none"> - Current proposal is prospective although very soon. 	<ul style="list-style-type: none"> - Ensure that all future amendments are also prospective and push back effective date to end of 2016.



ING Credentials

A Leader in Alaska State Tax Credit Financings

May 2015

Caracol Petroleum LLC

North Slope Exploration Project

US\$30.0 million

Senior Secured Revolving Credit Facility

Sole Arranger, Administrative Agent, Collateral Agent



ING Capital LLC

July 2015

Cornucopia Oil and Gas Company LLC

Cook Inlet Exploration Project

US\$150.0 million

Senior Secured Revolving Credit Facility

Sole Arranger, Administrative Agent, Collateral Agent




ING Capital LLC


ING Has not closed a new transaction since Q3 of 2015 and has not advanced funds against 2016 expenditure in existing deals; in both cases due to uncertainty over the anticipated changes to the tax credit program.

Natural Resources League Tables – US & Canada

2014

Position	MLA	Deal Value (US\$m)	No.	% Share
1	Mitsubishi UFJ	1,774.37	5	11.24
2	Sumitomo Mitsui	1,672.23	6	10.60
3	Mizuho	1,242.82	5	7.87
4	JPMorgan	1,037.50	2	6.57
5	ING 	1,002.26	6	6.35
6	Citigroup	962.50	1	6.10
7	HSBC	649.79	3	4.12
8	Societe Generale	599.18	4	3.80
9	Credit Agricole	517.99	4	3.28
10	Sumitomo Mitsui Trust	476.59	2	3.02
Subtotal		9,935.23	38	62.95
Total		15,782.17	97	100.00

2015

Position	MLA	Deal Value (US\$m)	No.	% Share
1	ING 	947.38	5	5.26
2	IFM Investors	925.00	1	5.14
3	Societe Generale	905.38	5	5.03
4	Scotiabank	904.88	4	5.02
5	Sumitomo Mitsui	878.18	3	4.88
6	Bank of America	875.05	4	4.86
7	Mitsubishi UFJ	855.36	3	4.75
8	HSBC	835.30	3	4.64
9	Mizuho	832.38	3	4.62
10	Intesa San Paolo	832.38	3	4.62
Subtotal		8,791.29	34	48.82
Total		18,012.43	83	100.00


Source: IJ Global

ING Structured Finance Oil & Gas


... with teams worldwide focusing on Oil & Gas structured finance (>70 professionals)




Selected Oil & Gas transaction accolades

Awards 2014 

Americas Deal of the Year
Freeport LNG (Trains 1&2)
US\$8.4bn
 Senior Secured Project Finance Facilities




	Project Finance International
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Awards 2014 


Americas Petrochemical Deal of the Year
Sasol
US\$4.0bn
 Senior Secured Project Finance Facilities





	Project Finance International
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Awards 2013 


Americas Oil & Gas Deal of the Year
Sabine Pass LNG
US\$4.4bn
 Construction / Term Loan




	Project Finance International
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Awards 2012 

Latin America Oil & Gas Deal of the Year
Tarahumara Pipeline
US\$378m
 Credit Facility



	Project Finance Magazine
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Team Overview

Alaska Tax Credit Financings Coverage Team



Richard Ennis
Managing Director and Head of Natural Resources
Group

Richard Ennis manages ING Natural Resource Structured Finance in the Americas, which comprises 21 banking professionals operating out of two offices, in New York and in Houston. Mr. Ennis has over 30 years' experience in the oil and gas, mining and project finance business and has been with ING for 11 years. Prior to joining ING in 2004, Mr. Ennis served as Director at Rothschild LLC, with responsibility for Oil and Gas Mergers and Acquisitions. He previously held project finance positions at UBS, New York and Sanwa Bank. Mr. Ennis is a member of the CFA and NYSSA. Mr. Ennis has served as Chairman of the Society of Petroleum Engineers, New York Chapter from 1986 to 1989. Mr. Ennis holds a BS in Petroleum Engineering from Marietta College in Marietta, Ohio. Mr. Ennis also is a CFA, and holds Series 7, 63 and 24.



Thomas Ryan
Managing Director and Head of Structured
Solutions Group

Thomas Ryan manages the Structured Solutions Group in the Americas which has responsibility for tax credit financing both for ING's clients and ING's own account. Thomas has been with ING for 20 years and prior to that worked for NCB stockbrokers in Dublin, Ireland. Thomas holds a bachelors degree in business (economics and law) from university of Limerick (Ireland), a masters in Economics and Math from Tilburg university (the Netherlands) and an MBA from Columbia University.



Yury Marasonov
Vice President

Yury Marasonov is responsible for managing existing portfolio and executing new transactions for Structured Solutions Group in the Americas. Mr. Marasonov has over 8 years of experience in banking, and has been with ING for over 4 years. Prior to joining ING in 2011, Yury previously worked as a consultant at Financial Services Office of Ernst & Young providing services to large financial institutions in areas of due diligence, modeling, and Dodd-Frank reform. Yury is a member of New York Society of Security Analysts and CFA Institute. Yury graduated Summa Cum Laude from Quinnipiac University with dual degrees in Finance and Accounting. Yury holds the CFA designation, and the Series 79 and 63 licenses.



Shan Arunachalam
Vice President

Mr. Arunachalam joined ING in 2015 and is focused on structuring, negotiating, and executing project financings within the midstream oil and gas sector. Mr. Arunachalam has 9 years of experience in advisory and project finance in the oil and gas, power and infrastructure sectors. Prior to ING, Mr. Arunachalam spent 5 years at the Rabobank International in New York as a Vice President in the power project finance group. Mr. Arunachalam began his career at Citigroup in New York, within the capital markets division. Mr. Arunachalam graduated with a Bachelors Degree, High Honors, in Finance from Carnegie Mellon University. Mr. Arunachalam also holds a Series 79 license.

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