

OIL & GAS 102

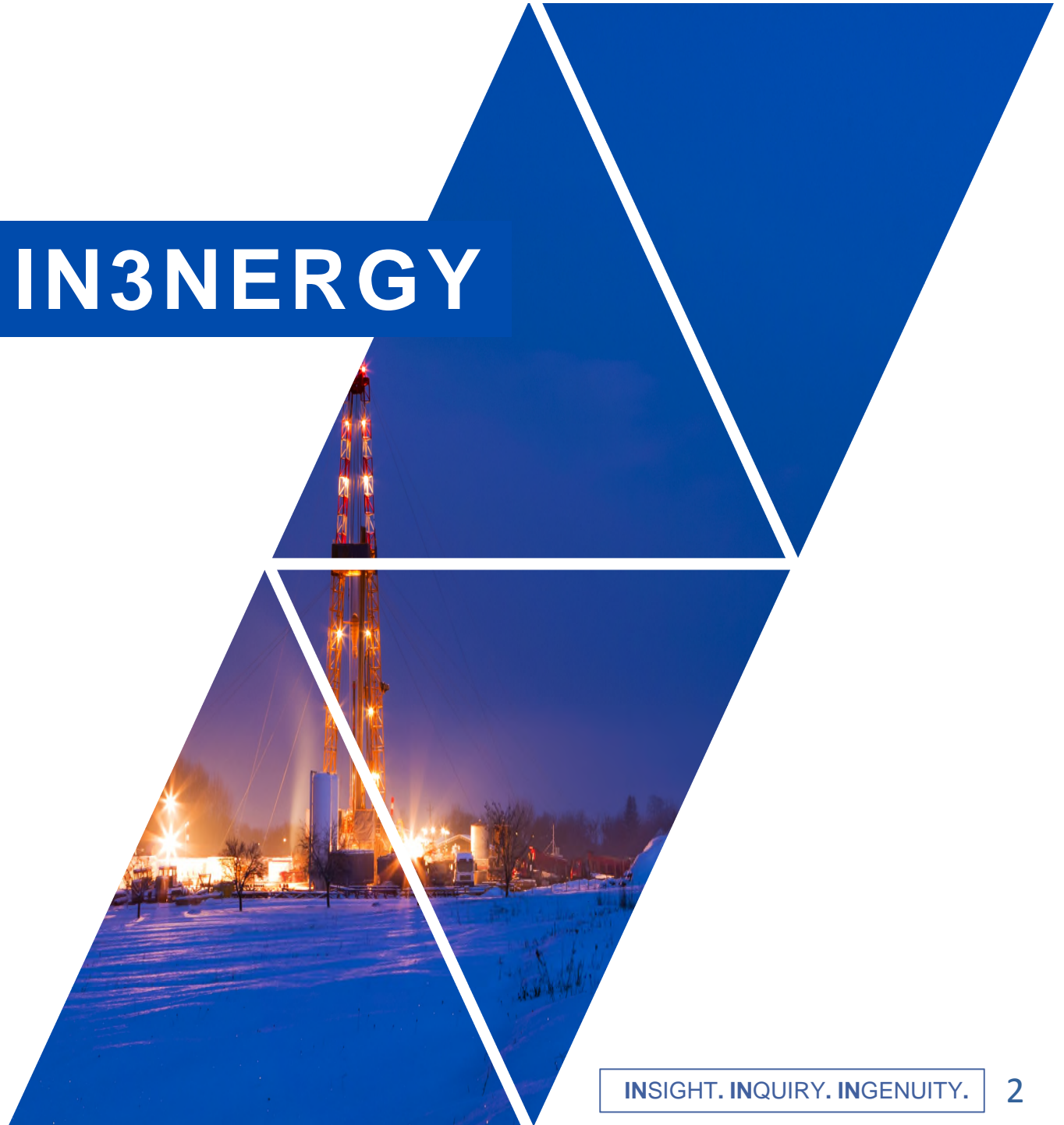
Alaska Legislature

January 31, 2018

February 1, 2018



ABOUT IN3ENERGY



INSIGHT. INQUIRY. INGENUITY.



INTRODUCTION

WHAT WE DO

We are an energy consultancy with hands-on practical experience that combines technical know how (geoscience & engineering) with commercial acumen (economics, policy, contracts) to provide solutions within the Business of Energy.

We help you to stay **in** the know.

ABOUT IN3ENERGY

OUR CLIENTS



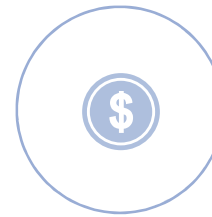
GOVERNMENTS, MINISTRIES & NOCs

in over 24 countries



ENERGY EXECUTIVES

from super majors to
entrepreneurial independents



FINANCIAL STAKEHOLDERS

Including banks, private
equity, hedge funds,
insurance companies



LAW FIRMS

and their clients as
litigation & bankruptcy
experts



ABOUT IN3ENERGY

OUR WORK



FISCAL
STRATEGY



BID/LICENSE
ROUNDS



ENERGY
MASTER PLANS



LEGISLATION



CONTRACTS



LNG



REGULATION



MODELING



TRAININGS
& WORKSHOPS



EXPERTISE

- On the ground practitioners that have worked directly for over two dozen foreign governments and analyzed in depth dozens more
- Have built simple and complex models to aid in the understanding of optionality, risk management and decision making
- Have negotiated multi-billion dollar contracts with and on behalf of multiple governments as well as producers of all sizes
- Background includes upstream and midstream, including LNG project development



EXPERIENCE

- **Multiple Perspectives** - We bring decades of US domestic and international experience from the 3 critical perspectives of the petroleum industry
 - Operator
 - Sovereign
 - Service Company
- **Fiscal Experience** - Designed or redesigned petroleum fiscal systems for multiple countries, e.g.
 - New countries like East Timor with no prior energy production or infrastructure,
 - Rebuilding countries like Iraq with extensive energy assets just emerging from years of war and conflict
 - Sophisticated countries like Saudi Arabia and Kuwait opening to foreign investors
 - Master energy plans and production sharing contract design for Middle East, AsiaPac and Latin America countries
 - Design and execution of multiple license rounds



INTRODUCTION



AGENDA

OIL & GAS: FISCAL DESIGN 102



1

INTRODUCTION

2

OIL AND GAS
INDUSTRY

3

FISCAL
SYSTEMS

4

ALASKA FISCAL
SYSTEM

FISCAL DESIGN 101

AVAILABLE FOR REVIEW

- Fiscal Design 101 was delivered as a one day workshop in October of 2017 in Anchorage
- The documents and video can be retrieved at:

<https://intranet.akleg.gov/misc/training.php>

EXPECTATIONS FOR THE DAY

FISCAL DESIGN 102

- This is a training and information sharing session
- Our intent is provide background and context on petroleum fiscal policy and **not to discuss specific bills or regulations**
- We will not be offering opinions on what to do – but can go over some of the pros and cons of certain actions or issues
- This is for your benefit as the better informed you are the better prepared you will be for whatever challenge on oil and gas taxation comes before you
- Please do not hesitate to ask questions throughout the presentation
- We are available Friday for individual or small group follow up sessions to answer questions or provide additional detail

WHAT DO YOU HOPE TO LEARN?

FISCAL DESIGN 102

- Petroleum Fiscal Policy involves many different concepts. We will be sharing of few of the key concepts and how they relate to Alaska's oil and gas industry
- In order to make this session most productive for you, what questions do you hope to have answered?

MENTOR'S 1976 WORDS MORE TRUE TODAY

GOOD FISCAL DESIGN STARTS WITH PROBING QUESTIONS

- **“Torture numbers and they will tell you whatever story you want to hear!”**
- You should always be thinking, “What is it that they are not telling me? What data or information do they hope I will not find?”
- For example:
 - What is said
“Alaska is non-competitive as it has a higher tax rate than over half the world”
 - What isn't said
“Over half the investment capital is spent in countries with a higher tax rate than Alaska. Here is why...”

EXPERTS PREDICTING THE FUTURE

FISCAL DESIGN 102

- Experts are great at understanding the history of a particular topic, but their track record on predicting the future is not that great. For example:
 - During AGIA both industry and independent experts testified to a very limited SE Asia growth market for LNG
 - Looking back 10 years later, the actual market growth was many times larger than the 2008 expert consensus
 - How? What happened?
- Remember if experts that offered pinpoint predictions of the future were usually right, they wouldn't be experts... they would be independently wealthy and living on their own island!
- Governments need to resist designing fiscal policy around one general view of the future

WHAT WE HOPE YOU TAKE AWAY

FISCAL DESIGN 102

- Do not automatically believe anything at face value, dig deeper
- If in your policy you are going to define action using a fixed term or value, make sure you understand how it was generated. For example:
 - **“The crossover point from net tax to gross tax is \$72/bbl”**
 - That is only a true statement for one specific set of upstream and downstream costs, a snapshot in time which may never be repeated
 - If any of those costs change, which they all will, the crossover point will then be very different
- Keep asking questions about a topic until you are sure that you have all data and understand how it is being used
- Be sure conclusions a speaker or expert presents are supported by all the data available, not just the data presented

THERE IS NO SINGLE IDEAL STRUCTURE

FISCAL DESIGN 102

- After a century of trying, and improving fiscal tools and terms, there is still **no single ideal or optimum petroleum fiscal structure**
- Why? Developing petroleum resources is unique to each state or country around the world as governments create structures to their specific goals, circumstances, needs and drivers
- Each government tries to use the best practices and the best tools (contract terms) but modifies them to meet their stewardship obligations. Some typical drivers of policy design include:
 - Short term revenue needs vs building multi-generational wealth
 - Short on reserves (drill) or long on reserves (produce)
 - Providing affordable/discounted domestic energy supply
 - Grow associated industries (e.g. Petrochemical, Power)
 - Create long term jobs for the country
 - Creation of government oil company
- Producers, in making decisions where and when to invest, will assess the risk of doing business based on the whole package

OIL & GAS INDUSTRY



OIL & GAS INDUSTRY

CHANGE IS THE ONLY CONSTANT

The Petroleum industry has continually undergone change, thus it's important to balance preparing for the future while addressing the present in a global market, where no single region, player, or component is isolated from another, and where governments design fiscal policy that is responsive to a complex and sophisticated business environment in a global competition for oil company investment dollars

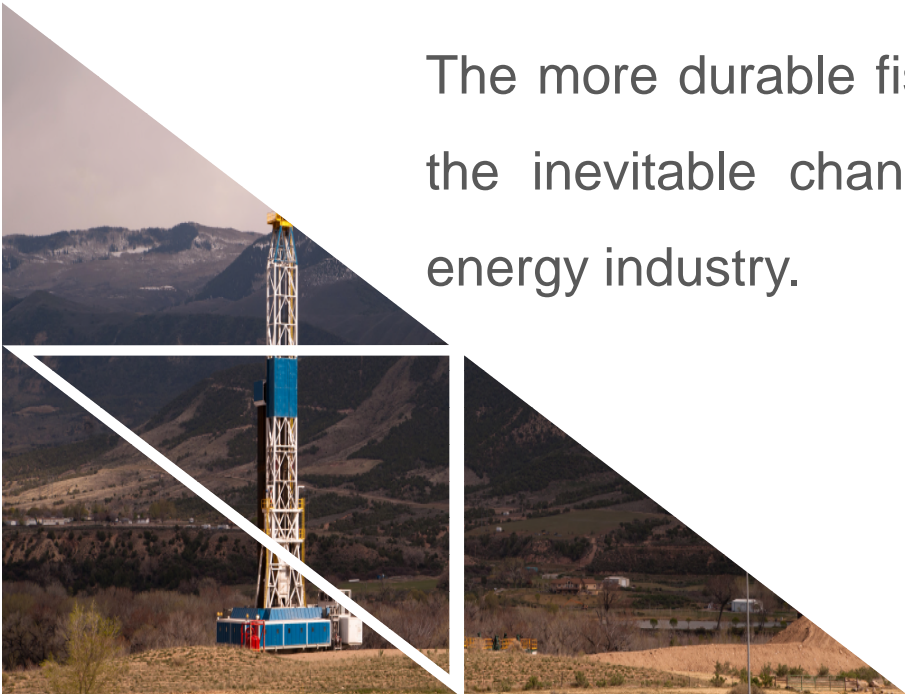


OIL & GAS INDUSTRY

CHANGE IS THE ONLY CONSTANT

In other words, when putting together petroleum fiscal policy you have to assume an unpredictable future that can range from much better than hoped to much worse than feared.

The more durable fiscal systems are set up to respond to the inevitable change and up and down cycles of the energy industry.



GOOD DESIGN ANTICIPATES CHANGE

CAUTION WHEN DESIGNING STRUCTURE

- The fiscal structures most in need of fixing or revamping are usually those that have been designed based on historical data relationships instead of building self correcting systems
- Those 'broken' structures share a common feature - setting legislation and regulation around a reference number which is relevant today, but may not be relevant and/or have the same meaning in the future
 - Example: setting specific price points for tax rate changes without taking into account the fact that cost structures and production levels will change with price over time as well thus changing the implied 'profit' at a given price
- **Good petroleum fiscal policy is one that learns from (not replicates or repeats) the past and is designed to succeed in the inevitable changing future**

COMPETING FOR CAPITAL AND MARKETS

ALASKA VERSUS THE WORLD

- Governments, who control the vast majority of mineral resources globally, generally lack the requisite resources to effectively and efficiently exploit their mineral riches
- The necessary investment **capital**, trained **personnel** and **technology** are largely held by the private sector
- Every year, sometimes multiple times throughout the year, in boardrooms across the globe they will discuss **the attractiveness of investing in Alaska versus the lower 48 and the rest of the petroleum world**
- **With LNG and the necessary associated long term contracts, Alaska now has to compete for markets as well**

ALASKA CONTINUES TO CHANGE AS WELL

OIL AND GAS INDUSTRY IN ALASKA

- Tax Credits brought in new players whose activity generated several possible large discoveries
- North Slope oil production reversed years of continual decline and increased over the last couple years
- The new federal tax bill brings new opportunity in areas like ANWR and NPRA, but fewer regulations and the opening of the US continental shelf to drilling brings more competition for the investment dollar
- Letters of Interest have been signed with potential partners for an Alaska gas pipeline and LNG export project
- Is Alaska's fiscal policy prepared to capture potential upside from these changes? Can Alaska adapt and respond quicker than competing states or countries?

FISCAL STRUCTURE

COMPONENTS



COMPONENTS OF A FISCAL REGIME

MORE THAN MEETS THE EYE



- Oil and Gas taxation, and the competitiveness of one regime versus another, is based on items that are not always well understood, discussed, or even made 'visible' in the debate
- There is much more to petroleum fiscal policy than the headline tax rate

MAJOR COMPONENTS OF COMPETITIVENESS

MORE THAN MEETS THE EYE



Headline Tax Rate

Other Fiscal Attractiveness Driver Examples:

- Lease Costs/Bonuses
- Investment Credits
- Cost Uplift
- Allowable Costs
- Cost Recovery
- IRR and ROI Metrics
- NOC participation
- Ring Fencing
- Risk offset

TIME RELATED ELEMENTS ARE KEY

MORE THAN MEETS THE EYE



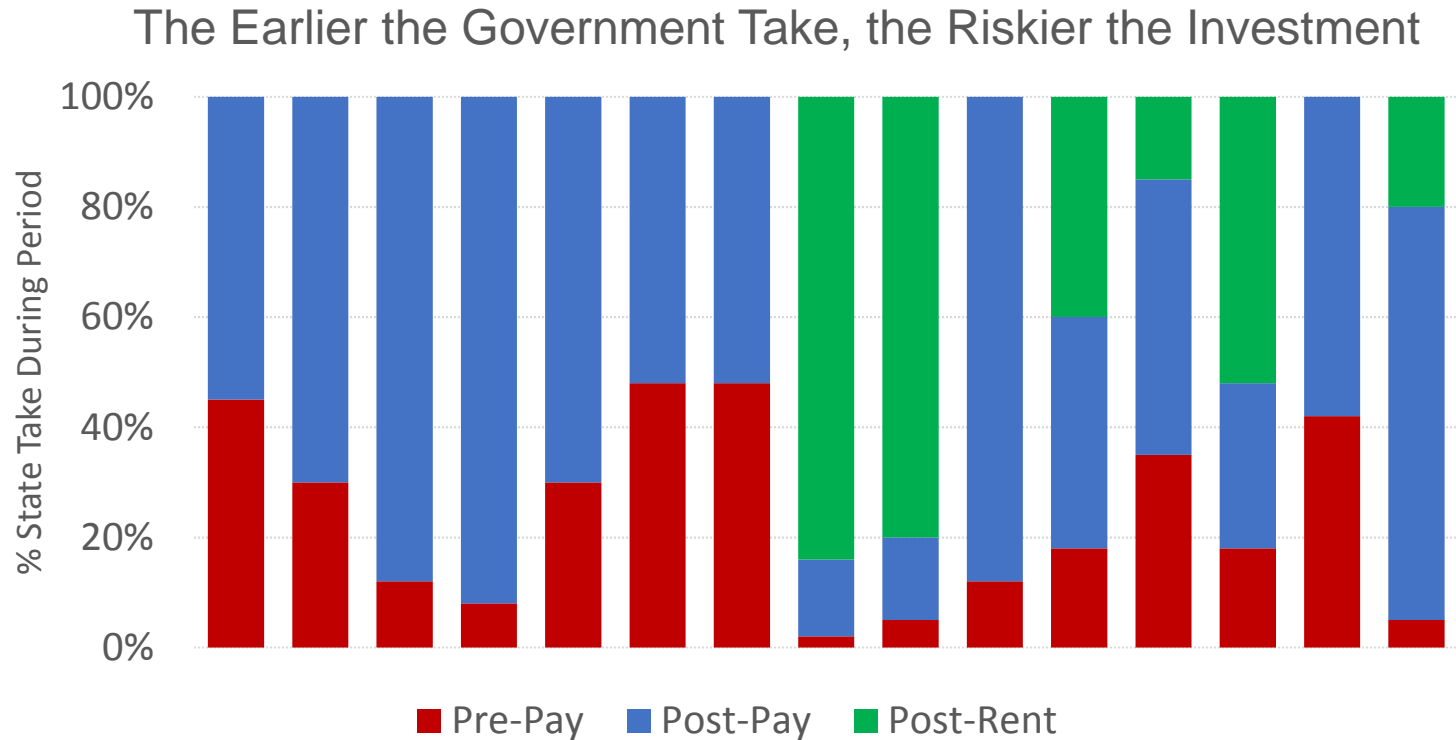
Headline Tax Rate

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- Lease Costs/Bonuses
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TIMING OF GOVERNMENT TAKE

THE RELATIONSHIP BETWEEN LEVEL OF RISK AND TIME



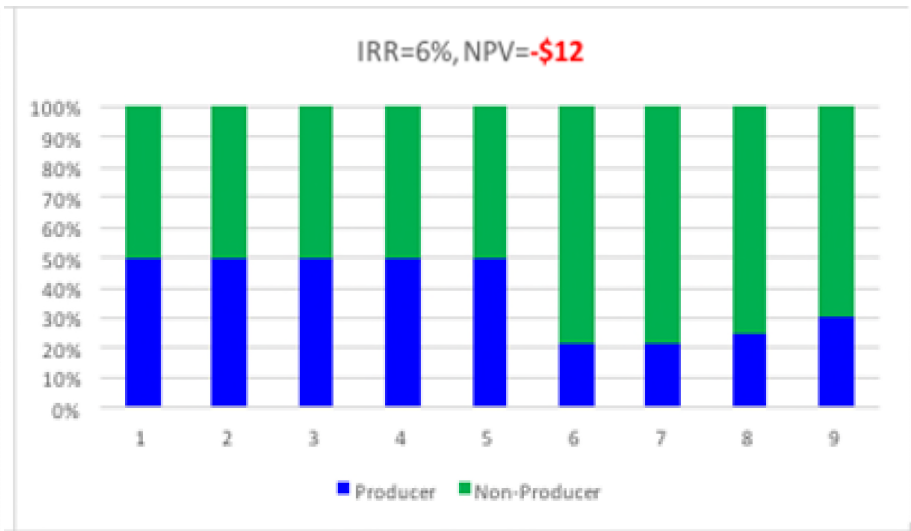
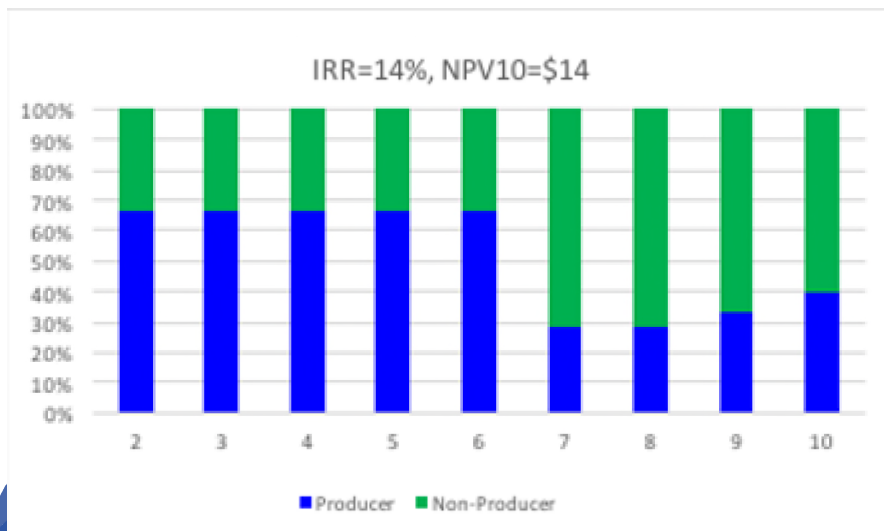
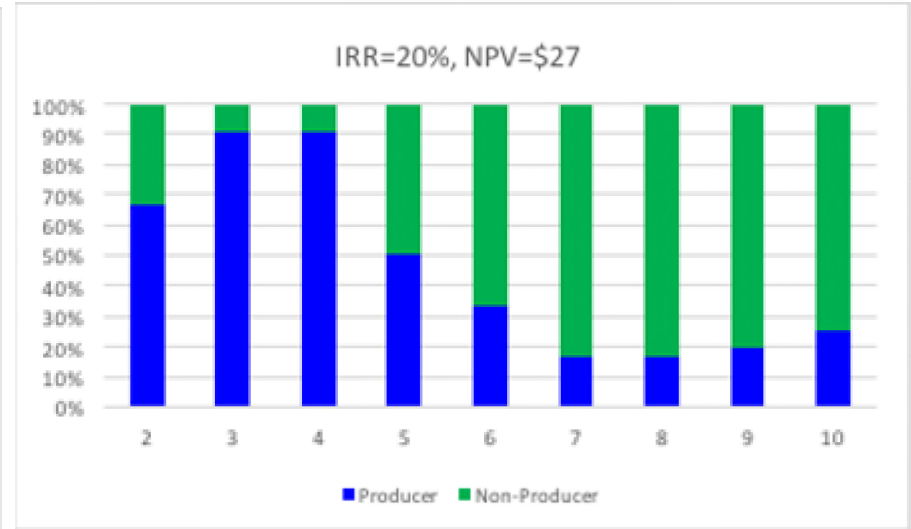
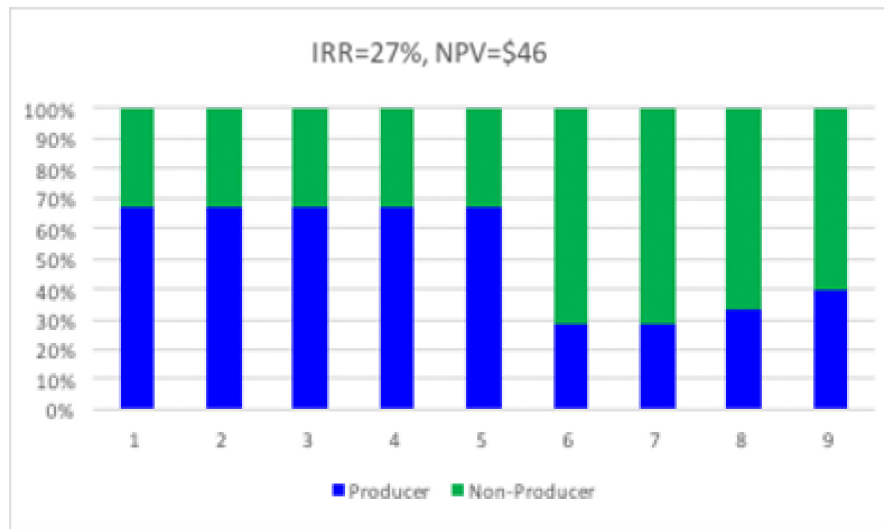
Pre-Pay: Before Investor has recovered his costs

Post-Pay: After cash payout but before a 15% return on capital

Post-Rent: After cash payout plus 15% return have been recovered by investor

TIMING IMPACT ON PROJECT ECONOMICS

SAME PROJECT, SAME REVENUE, SAME PRODUCER SHARE



TIME TO FIRST OIL

ALASKA VERSUS THE LOWER 48

- From the 1st investment dollar spent to 1st revenue dollar earned, producers in the Lower 48 begin to earn their money back materially sooner than producers in Alaska

L48 90 to 180 days

ALASKA

>5 years

- What creates the years of difference?
 - Exploration activities in Alaska are on large scale areas, more often without current activity and data
 - Seasonal activity limitations, timing of permitting and licensing
 - L48 can be well by well developments, whereas Alaska is full field
- What does the difference mean for investment?
 - The longer development time the greater the risk
 - L48, early well revenue can pay for future wells, whereas Alaska requires almost all capital upfront
 - Flipside, Alaska fields can lead to decades of revenue

COST RECOVERY

WHAT'S ALLOWED AND TIMING OF RECOVERY

- The concept of cost recovery is a globally accepted standard, applied various ways throughout fiscal systems. The most important parameters are:
 - Which costs can be deducted and/or recovered?
 - When can the deductions/recovery take place?
 - Before or after tax is due?
- Non-deductibility or exclusion of costs hurts economics and increases risk, thus creating a deterrence for producers
- Global standard is to deduct and recover the majority of costs, such as exploration, development, production, administration and services
- Usual exclusions are financing interest, excess corporate overhead, penalties, entertainment, and donations

COST RECOVERY GLOBAL VARIANCES

MULTIPLE METHODOLOGIES IN USE

- Major oil producing countries choose various fiscal structures, some regulating and participating in operations with their own national oil company, others only serving as administrative stewards of their resource

	Tax Regime	NOC
Angola	C, PSC, SC	Sonangol
Australia	C	
Colombia	C	Ecopetrol
Equatorial Guinea	PSC	
Brazil	PSC, SC, C	Petrobras
Norway	C	Statoil

C: Concession

PSC: Production Sharing Contracts

SC: Service Contract

FISCAL DESIGN GLOBAL VARIANCES

IN PRACTICE TODAY

- Setting aside headline tax rate, countries address their drivers, goals, and needs through a combination of mechanisms

A sampling of terms includes:

- Angola: Incentives for local companies, Cost Oil capped as a percentage of overall oil
- Australia: Losses carried forward indefinitely
- Colombia: Royalty rate determined by production level
- Equatorial Guinea: Uplift available on recoverable costs
- Brazil: NOC minimum equity participation, local content
- Norway: Full refund of tax value of exploration losses available to paid ~55 weeks after calendar year investment was made

ADMINISTRATION OF FISCAL SYSTEM

SOPHISTICATED TERMS GENERATE COMPLEXITY



“Headline” Tax Rate

During the fiscal design phase where capturing fair share is key, many times governments forget that more moving parts and a more complex system will result in:

- Greater costs to administer
- Greater need for regular auditing
- Greater likelihood to end up in some form of dispute

DEALING WITH UNINTENDED CONSEQUENCES

THE RISKS OF COMPLEX FISCAL SYSTEMS

- By creating, revising, or eliminating one aspect of a complicated tax system, there is a very likely risk that other areas of the tax system will be affected to the detriment of one or more parties
- These **unintended consequences** can undermine the intent of original efforts and are often difficult to see or anticipate
- Before making changes, a thorough analysis should be performed to make sure the level and degree of interdependency of certain taxation terms is understood and addressed



OIL & GAS INDUSTRY

GLOBAL FUNDAMENTALS
THAT DRIVE FISCAL POLICY



COMPETING IN A GLOBAL INDUSTRY

EXCELLENT PUBLIC DATA SOURCES

- There are many publically available sources of information about the global energy industry
 - Government Agencies
 - EIA, IEA, EITI
 - Oil Companies
 - BP annual statistical review
 - SLB (Schlumberger) oil field glossary
 - Annual reports, analyst presentations, 10Ks
 - Investment Companies/ Banks
 - Goldman Sachs, Citi Bank, Deutsche Bank, etc
- Alaska agencies should work together to create a depository of documents and websites for legislators and the public to be as informed as possible

TYPES OF INFORMATION AVAILABLE

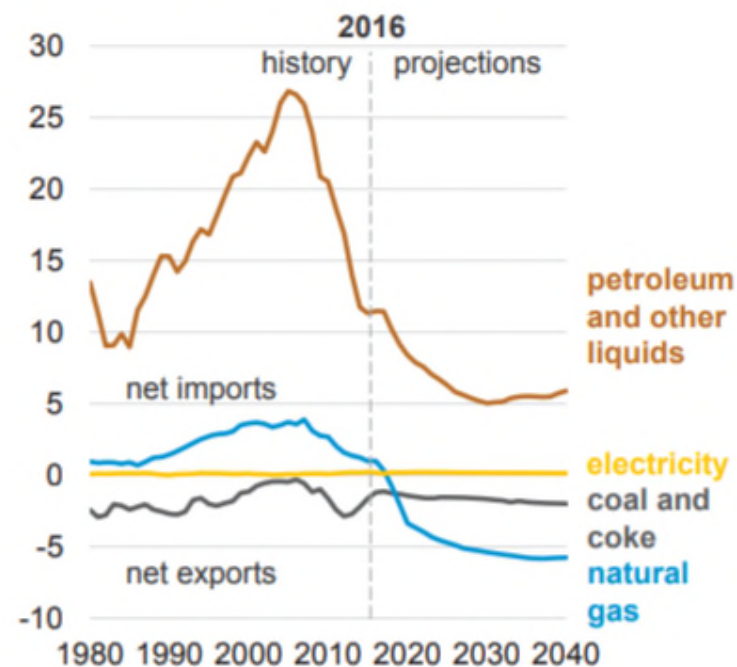
EIA ANNUAL LONG TERM OUTLOOK

The United States becomes a net energy exporter in the Reference case—

Energy trade (Reference case)
quadrillion British thermal units



Net energy trade (Reference case)
quadrillion British thermal units



U.S. Energy Information Administration

#AEO2017

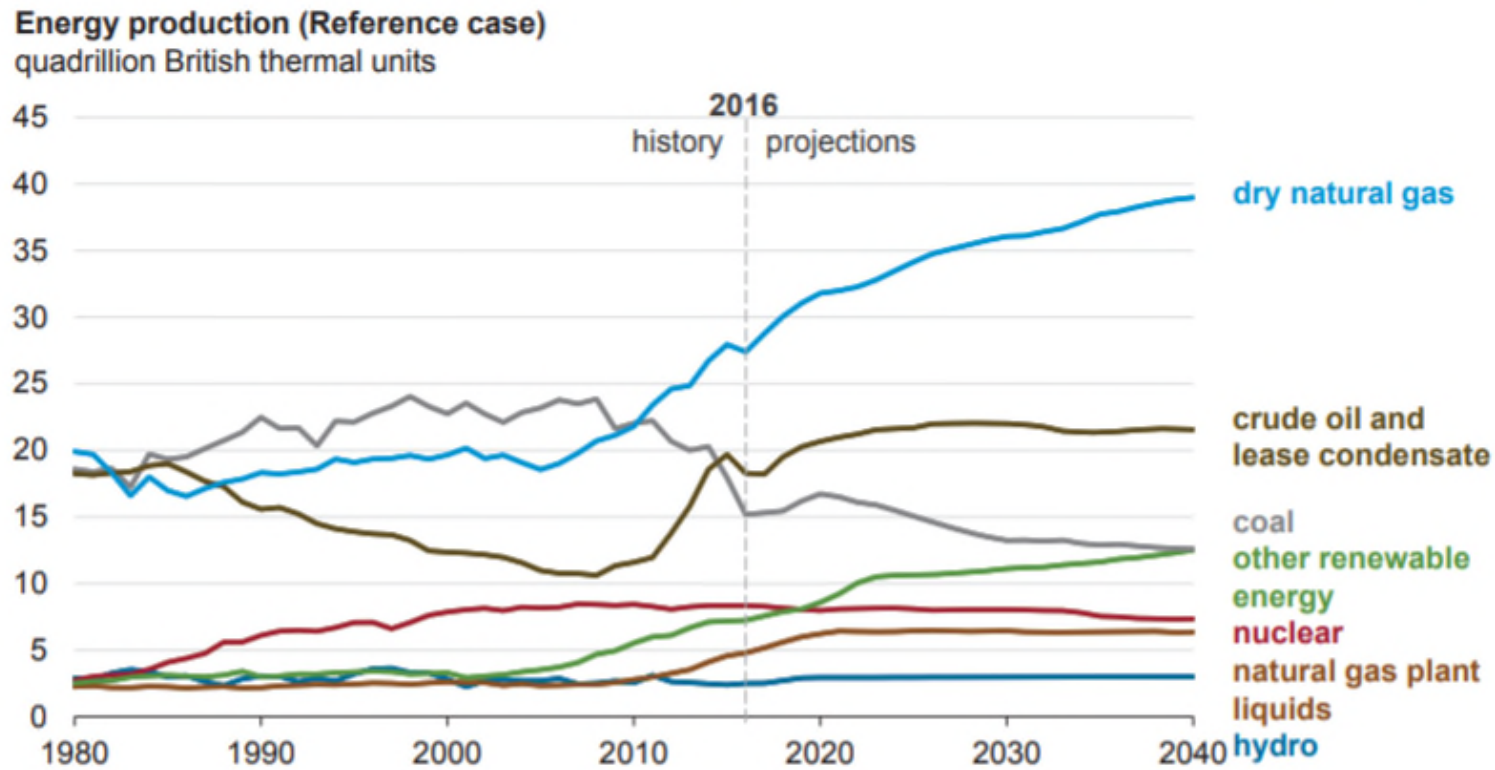
www.eia.gov/aeo

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TYPES OF INFORMATION AVAILABLE

EXCELLENT PUBLIC DATA SOURCES

U.S. energy production continues to increase in the Reference case—



U.S. Energy Information Administration

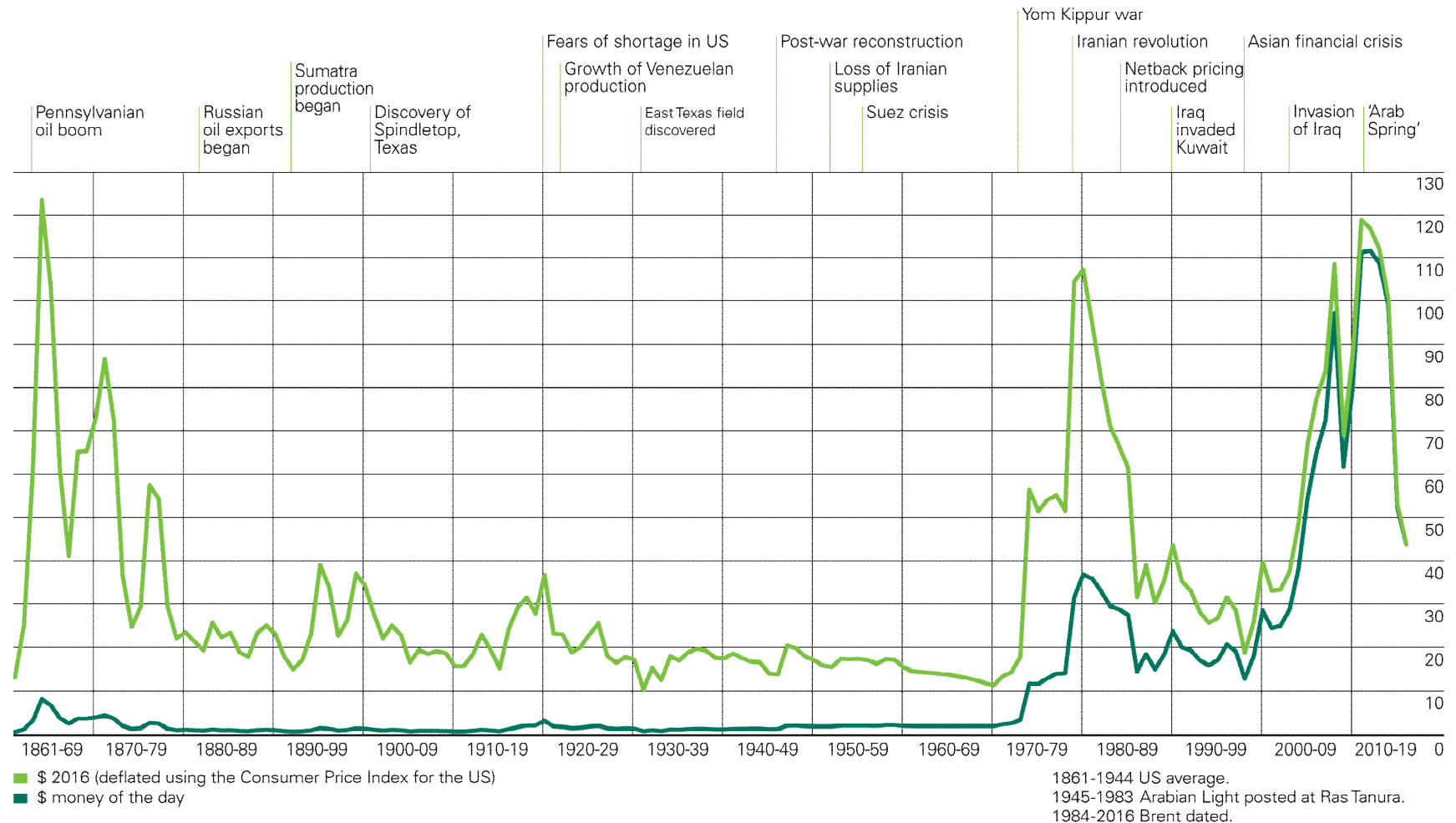
#AEO2017

www.eia.gov/aeo

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CRUDE OIL PRICES 1861-2016

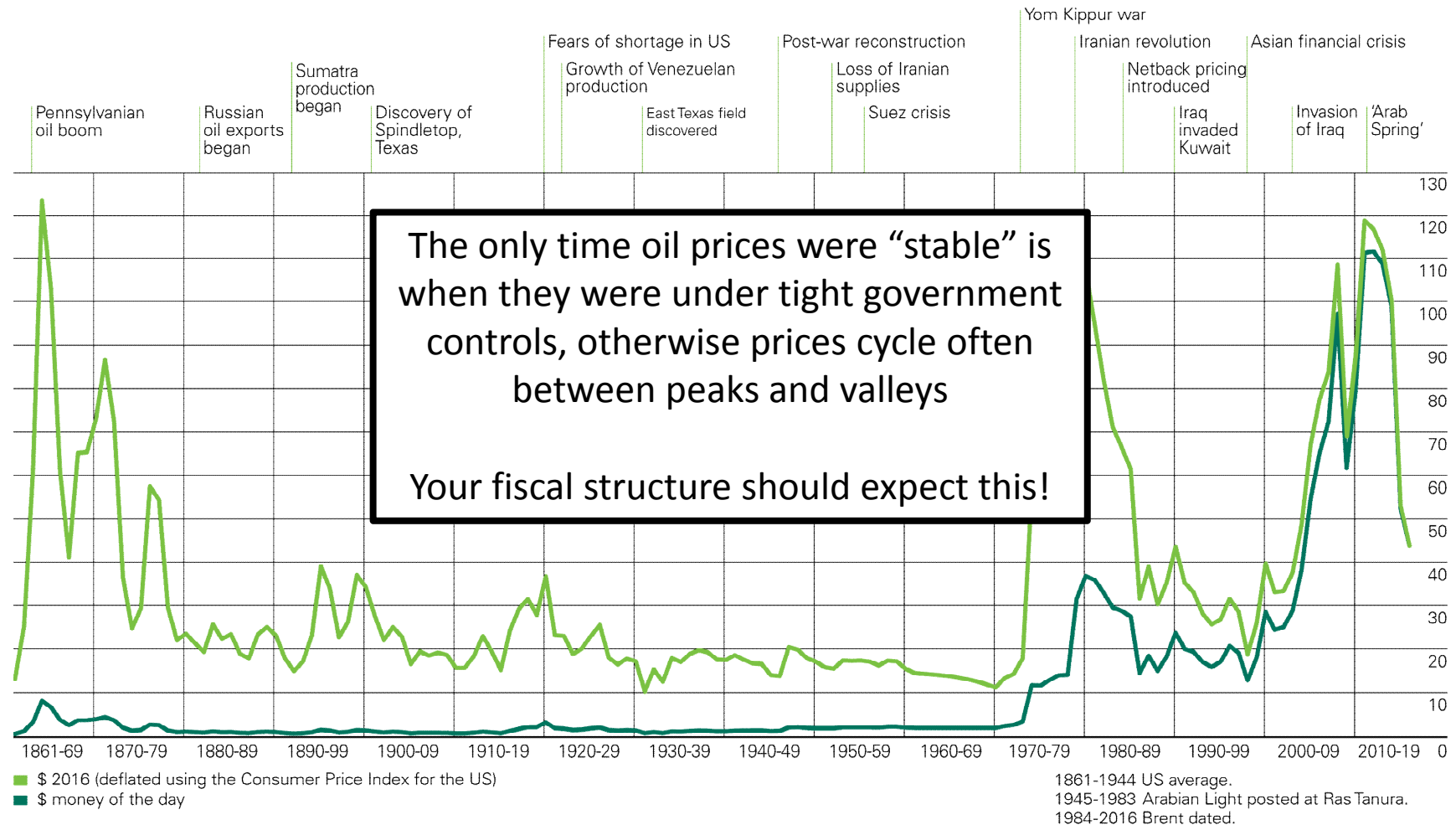
VOLATILITY IS THE NORM



BP Statistical Review of World Energy 2017

CRUDE OIL PRICES 1861-2016

VOLATILITY IS THE NORM



BP Statistical Review of World Energy 2017

FISCAL REGIMES

SYSTEM DESIGN
CONSIDERATIONS



INVESTMENT DECISION MAKING

DIFFERENT DECISION DRIVERS

- The goal of **sovereigns** is the ‘optimal’ development of its mineral resources
 - ‘Optimal’ is not the same for all governments and Alaska needs ensure its fiscal structure supports and an agreed set of goals
- The goal of **oil companies** is to make a profit and meet investor expectations
 - These vary somewhat from company to company
- The challenge is to find overlap between the two set of goals

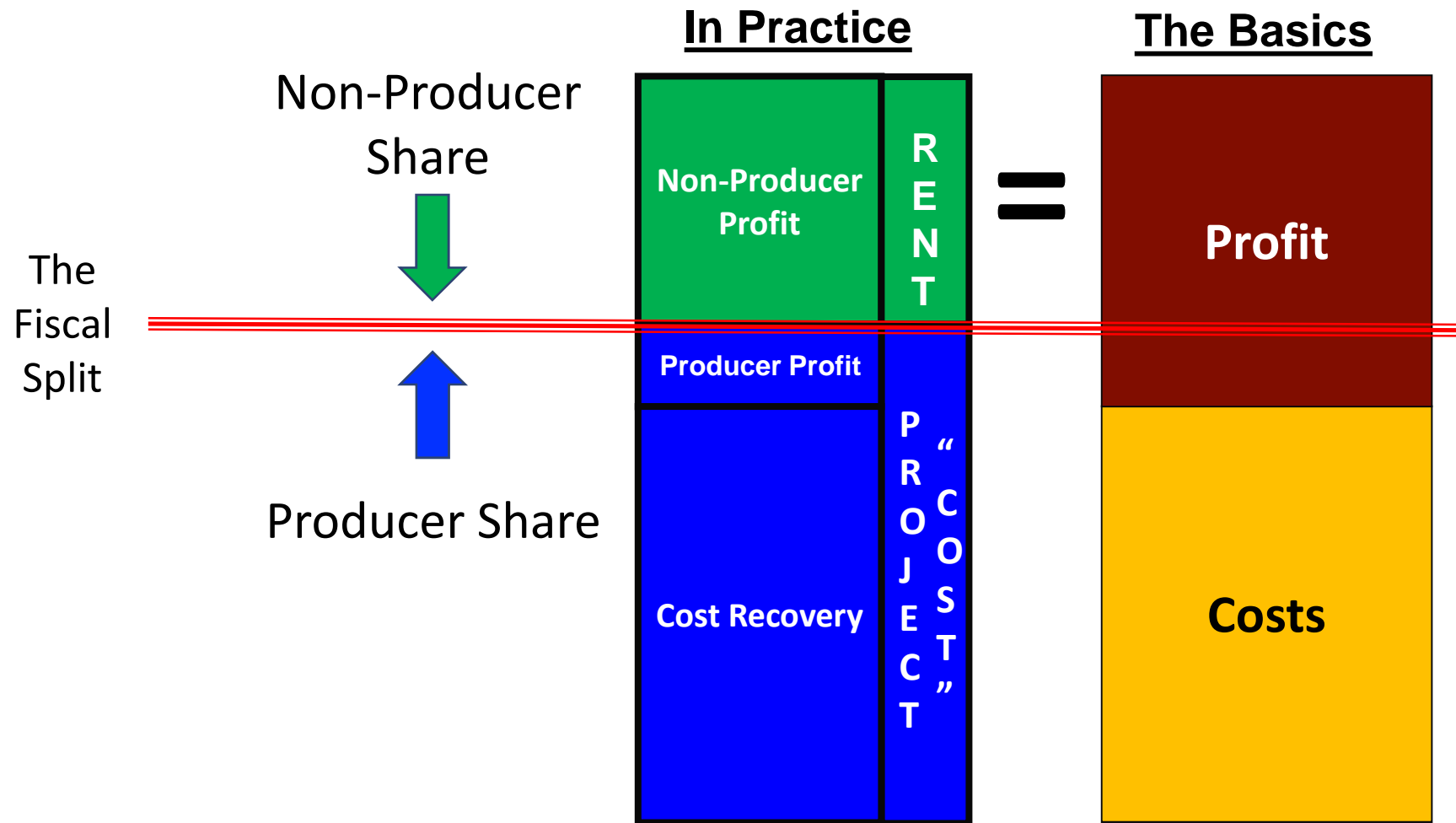
ALASKA PETROLEUM TAX DESIGN GOALS

UNIQUE FISCAL STRUCTURE DRIVERS

- TAPS is the life-blood of the North Slope. Keeping enough oil flowing through it is critical
- It is realistic to only think in terms of 1 or 2 new NS prospects coming on line each year
- Each of those prospects will have a > 5 year lead time
- Thus, there are only 5 to 10 potential new fields to look at for what may be possible in the next 5 years
- They should each be modeled independently and collectively to understand the impact of fiscal system parameters on their economics

FISCAL SYSTEM DESIGN

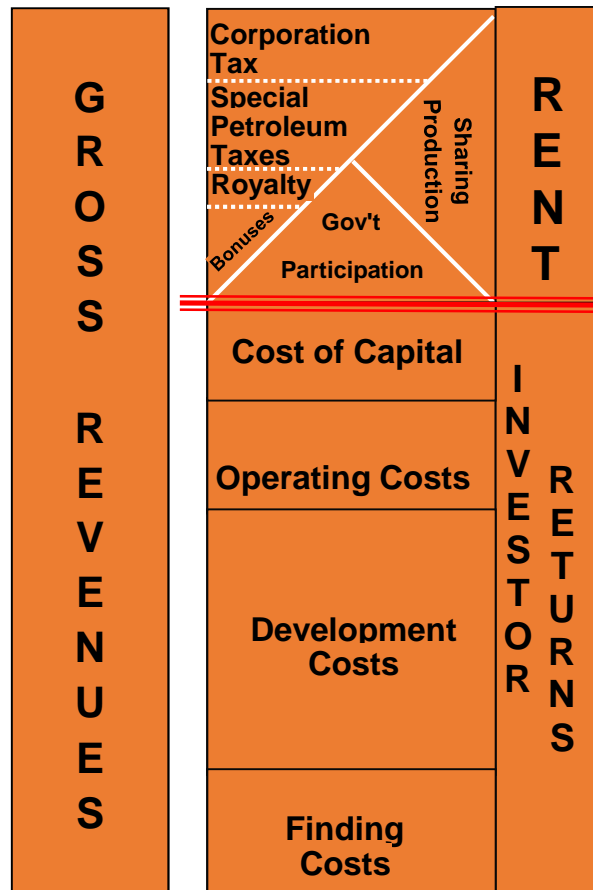
CREATING AND SHARING PROFIT



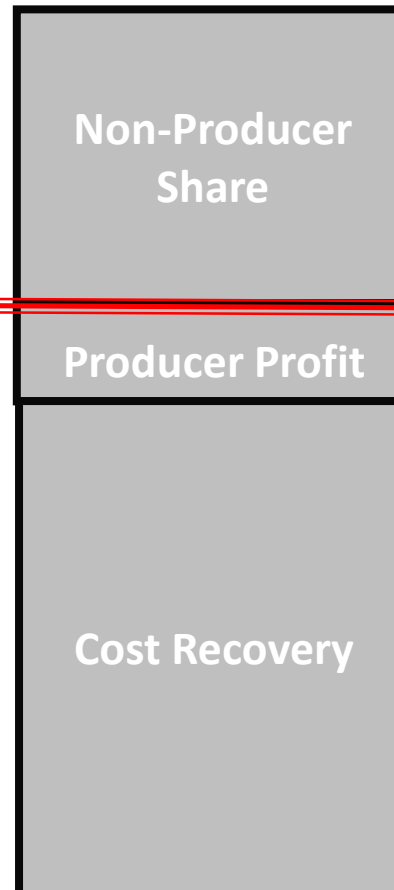
FISCAL SYSTEM DESIGN

MANY TOOLS AT A GOVERNMENT'S DISPOSAL

The Details



In Practice



The Basics



=

=

FISCAL SYSTEM DESIGN

NET VERSUS GROSS

<div> <div> Corporation Tax Special Petroleum Taxes Royalty Bonuses </div> <div> Gov't Participation </div> <div> Sharing Production </div> </div>	R E N T
Cost of Capital	I N V E S T O R S
Operating Costs	
Development Costs	
Finding Costs	

- Government take can be on a gross or a net basis
- Both systems have advantages and disadvantages which need to be considered
- Gross Tax
 - Regressive and a certain revenue stream
 - More transparent, less complex, easier to audit
 - Does not account for variances among operations and operators
- Net Tax
 - Neutral or progressive tax, uncertain if revenue will be received
 - Less transparent, more complex, more difficult to administer and audit
 - Higher chance of creating disputes
 - Evens the playing field between high and low cost operators

MOVING TO SELF-CORRECTING STRUCTURES

THE “FIXED” VERSUS “VARIABLE” DEBATE

- With so many options and so many moving parts, more governments are moving to flexible, self-correcting structures
 - Fiscal structures must be flexible to accommodate a wide range of possible future outcomes without the need for modification
- Good fiscal design strikes a balance between complexities to deal with any ‘what if’ scenarios and the associated stewardship costs
- Fiscal design needs to be within the administrative and audit capacity of the relevant governing institutions
- **Simpler systems usually prove to be more viable and durable than theoretically ideal but complex systems**

GOOD, COMPREHENSIVE DATA ARE KEY

DON'T RELY ON PAST TRUTHS OR ASSUMPTIONS

- There is an abundance of non-restricted data available **through the state which can be found and/or requested by the legislature**
 - AOGCC
 - DNR
- Data access – relying on DNR and AOGCC to inform the legislature on petroleum operations removes most of the confidentiality concerns regarding taxpayer data
- Confidentiality versus transparency
 - It is possible to be more transparent without breaching confidentiality
 - Making as much data available as possible enables better decision making, as well as aids in attracting additional producers

GOOD, COMPREHENSIVE DATA ARE KEY

NORTH DAKOTA DEPARTMENT OF MINERAL RESOURCES

Services
Rules & Regulations
Policies & Guidance
Forms
Hearing Dockets
Active Drilling Rigs
Daily Activity Reports
Information Center
Confidential Well List
General Statistics
Seismic
Well Search
Report a Spill/Incident
Gathering Pipelines
GIS Map Server
Publications
Surface Mineral Owner
Basic Services
Premium Services
Electronic Filing

- Single **user friendly** site makes available multiple information types
- Reports are in Excel for ease of use, as well as in PDF format
- Interactive map and database access can be requested, provides non-confidential well file data including:
 - General information
 - Completion data
 - Production tests
 - Production volumes
 - PDFs of well reports such as geological reports and core analysis

GOOD, COMPREHENSIVE DATA ARE KEY

NORTH DAKOTA DEPARTMENT OF MINERAL RESOURCES

- Monthly report of over 15,000 wells publically available

Monthly Production Report Index

Select a year to view available reports

Year:

All Monthly Production Reports are fully searchable PDF documents

January	PDF (1466 KB)	Excel (2227 KB)
February	PDF (1474 KB)	Excel (2236 KB)
March	PDF (1476 KB)	Excel (2249 KB)
April	PDF (1480 KB)	Excel (2255 KB)
May	PDF (1495 KB)	Excel (2270 KB)
June	PDF (1494 KB)	Excel (2278 KB)
July	PDF (1508 KB)	Excel (2294 KB)
August	PDF (1512 KB)	Excel (2387 KB)
September	PDF (1526 KB)	Excel (2400 KB)
October	PDF (1519 KB)	Excel (2422 KB)
November	PDF (1965 KB)	Excel (2428 KB)
December	Not Available	Not Available

NOTE: New reports are generally available approximately one Month and 15 days after the end of each reporting month.
For example: January reports will be published around the 15th of March.

Excel Files: Because of amendments, past excel documents will not match the PDF files, this is why no link to an excel document is available.

[\[DMR Home\]](#) [\[Disclaimer\]](#) [\[Privacy\]](#) [\[Security\]](#) [\[Feedback\]](#)

GOOD, COMPREHENSIVE DATA ARE KEY

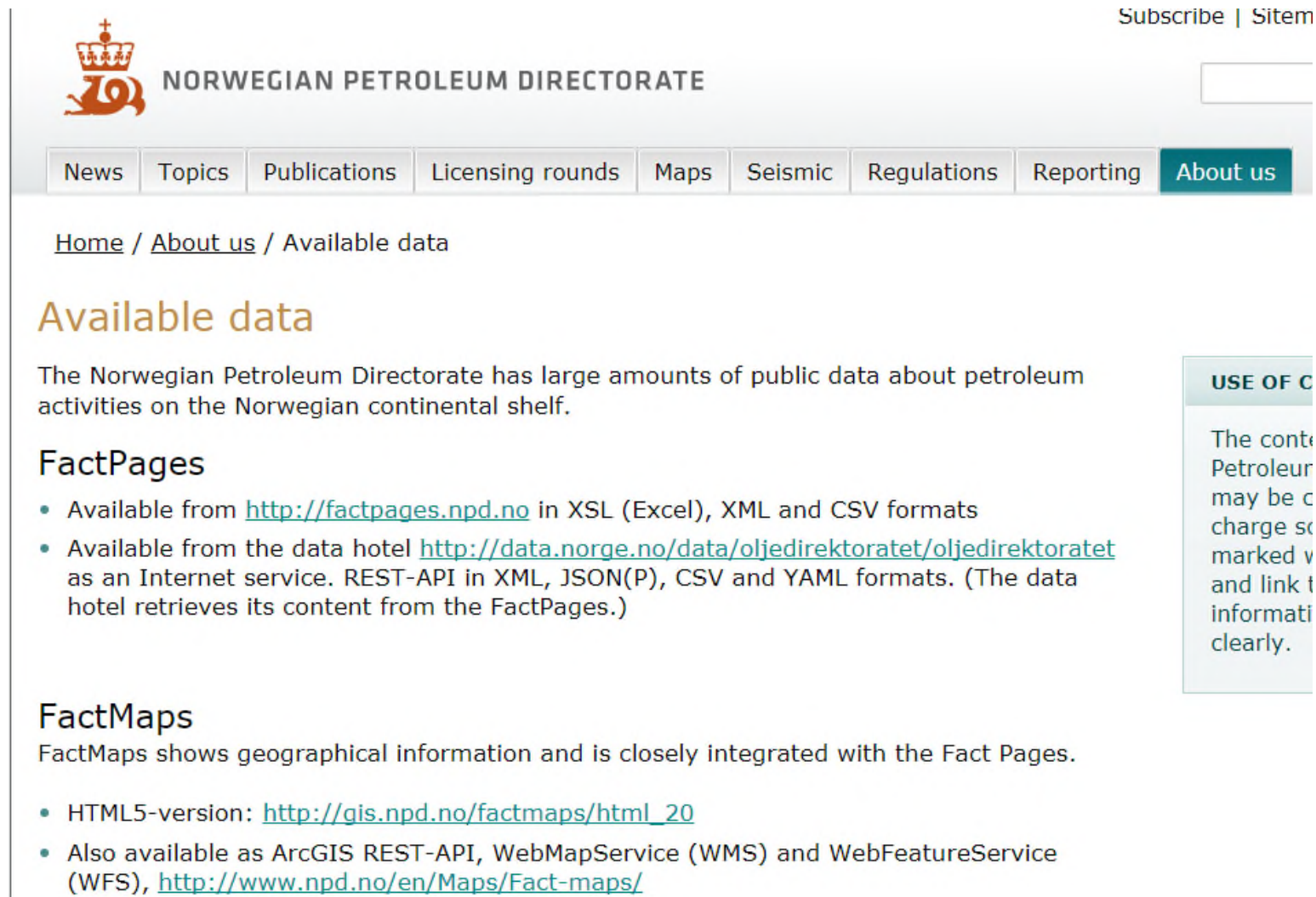
NORTH DAKOTA DEPARTMENT OF MINERAL RESOURCES

- Data source dates back to 2003
- Data fields: API Well number, File number, Company, Well Name, Location, Field Name, Reservoir Pool, Production of Oil, Water, Gas, amount of Gas Sold, amount of Gas Flared
- Monthly report January 2017 excerpt

ReportDate	API_WELLNO	FileNo	Company	WellName	Quarter	Section	Township	Range	County	FieldName	Pool	Oil	Wtr	Days	Runs	Gas	GasSold	Flared	Lat	Long
1/1/2017	33053043310000	23615	MUREX PETROLEUM CORP	AMBER ELIZABETH 36-25H	SESW	36	151	101	MCK	ALEXANDER	BAKKEN	1667	1485	31	2590	1614	1057	154	47.84914	-103.55334
1/1/2017	33053038990000	22021	STATOIL OIL & GAS LP	BILL 14-23 2TFH	SWSW	11	151	101	MCK	ALEXANDER	BAKKEN	1026	1309	31	1071	742	653	58	47.90743	-103.57990
1/1/2017	33053048330000	25091	STATOIL OIL & GAS LP	BILL 14-23 3H	NWNE	14	151	101	MCK	ALEXANDER	BAKKEN	1580	4925	31	1483	85	54	0	47.90455	-103.56915
1/1/2017	33053050010000	25645	STATOIL OIL & GAS LP	BILL 14-23 4TFH	NWNE	14	151	101	MCK	ALEXANDER	BAKKEN	0	0	31	0	1	0	0	47.90455	-103.56903
1/1/2017	33053048340000	25092	STATOIL OIL & GAS LP	BILL 14-23 5TFH	NWNE	14	151	101	MCK	ALEXANDER	BAKKEN	0	0	31	0	1	0	0	47.90455	-103.56928
1/1/2017	33053050000000	25644	STATOIL OIL & GAS LP	BILL 14-23 6H	NWNE	14	151	101	MCK	ALEXANDER	BAKKEN	3192	7216	31	3178	1513	1481	1	47.90455	-103.56891
1/1/2017	33053039010000	22023	STATOIL OIL & GAS LP	BILL 14-23 1H	SWSW	11	151	101	MCK	ALEXANDER	BAKKEN	1268	8963	31	1203	1072	1026	15	47.90748	-103.57985
1/1/2017	33053042390000	23319	STATOIL OIL & GAS LP	PORTER 35-26 #1TFH	SESW	35	151	101	MCK	ALEXANDER	BAKKEN	1089	2090	31	988	756	414	311	47.84919	-103.57680
1/1/2017	33053042400000	23320	STATOIL OIL & GAS LP	PORTER 35-26 #2H	SESW	35	151	101	MCK	ALEXANDER	BAKKEN	1398	2475	31	1255	1847	1198	618	47.84919	-103.57692
1/1/2017	33053042380000	23302	STATOIL OIL & GAS LP	TIMBER CREEK 13-24 1TFH	NENW	13	151	101	MCK	ALEXANDER	BAKKEN	1312	3116	31	1617	1352	1200	121	47.90519	-103.55131
1/1/2017	33053042370000	23301	STATOIL OIL & GAS LP	TIMBER CREEK 13-24 2H	NENW	13	151	101	MCK	ALEXANDER	BAKKEN	2715	3876	31	2816	2988	2685	303	47.90519	-103.55119
1/1/2017	33053014360000	9132	TAQA USA, INC.	SKEDSVOLD 23-6	SESW	23	151	101	MCK	ALEXANDER	DUPEROW	1331	78	25	1073	145	0	0	47.88669	-103.57491
1/1/2017	33053015410000	9617	TAQA USA, INC.	BOLKEN 24-12	NWSW	24	151	101	MCK	ALEXANDER	MADISON	0	0	0	0	0	0	0	47.88262	-103.55871
1/1/2017	33053012110000	8165	TAQA USA, INC.	SKEDSVOLD 1	SENE	23	151	101	MCK	ALEXANDER	MADISON	122	1107	25	178	106	0	0	47.88621	-103.56474
1/1/2017	33053016070000	9844	TAQA USA, INC.	SOVIG 25-2	NWNE	25	151	101	MCK	ALEXANDER	MADISON	0	0	0	0	0	0	0	47.87541	-103.54780
1/1/2017	33053026140000	15670	TAQA USA, INC.	HANSEN 2-23	W2SE	23	151	101	MCK	ALEXANDER	RED RIVER	0	0	0	0	0	0	0	47.88086	-103.56886
1/1/2017	33053012110000	8165	TAQA USA, INC.	SKEDSVOLD 1	SENE	23	151	101	MCK	ALEXANDER	RED RIVER	32	0	25	47	65	0	0	47.88621	-103.56474
1/1/2017	33023008590000	23323	HUNT OIL COMPANY	ALEXANDRIA 1-33-28HTF	LOT3	1	160	101	DIV	ALEXANDRIA	BAKKEN	911	1672	31	950	712	362	0	48.71889	-103.67797
1/1/2017	33023012220000	28507	HUNT OIL COMPANY	ALEXANDRIA 161-100-21-16H-1	SWSE	21	161	100	DIV	ALEXANDRIA	BAKKEN	2643	3813	31	3502	2363	1839	164	48.75011	-103.66831
1/1/2017	33023012200000	28501	HUNT OIL COMPANY	ALEXANDRIA 161-100-22-15H-1	SESW	22	161	100	DIV	ALEXANDRIA	BAKKEN	1130	1503	21	1165	688	232	0	48.75059	-103.65380


GOOD, COMPREHENSIVE DATA ARE KEY

GLOBAL: NORWEGIAN PETROLEUM DIRECTORATE



The screenshot shows the Norwegian Petroleum Directorate (NPD) website. At the top right, there are links for "Subscribe" and "Sitemap". The NPD logo, featuring a crown and a stylized 'N', is on the left. Below the logo is a navigation menu with tabs for "News", "Topics", "Publications", "Licensing rounds", "Maps", "Seismic", "Regulations", "Reporting", and "About us". The "About us" tab is highlighted. Below the navigation menu, there is a breadcrumb trail: "Home / About us / Available data". The main heading is "Available data". The text states: "The Norwegian Petroleum Directorate has large amounts of public data about petroleum activities on the Norwegian continental shelf." Below this, there is a section titled "FactPages" with two bullet points: "Available from <http://factpages.npd.no> in XSL (Excel), XML and CSV formats" and "Available from the data hotel <http://data.norge.no/data/oljedirektoratet/oljedirektoratet> as an Internet service. REST-API in XML, JSON(P), CSV and YAML formats. (The data hotel retrieves its content from the FactPages.)" Below this, there is a section titled "FactMaps" with the text: "FactMaps shows geographical information and is closely integrated with the Fact Pages." and two bullet points: "HTML5-version: http://gis.npd.no/factmaps/html_20" and "Also available as ArcGIS REST-API, WebMapService (WMS) and WebFeatureService (WFS), <http://www.npd.no/en/Maps/Fact-maps/>". On the right side of the screenshot, there is a sidebar with the heading "USE OF C" and some text that is partially cut off.

Subscribe | Sitemap

 NORWEGIAN PETROLEUM DIRECTORATE

News Topics Publications Licensing rounds Maps Seismic Regulations Reporting About us

[Home](#) / [About us](#) / Available data

Available data

The Norwegian Petroleum Directorate has large amounts of public data about petroleum activities on the Norwegian continental shelf.

FactPages

- Available from <http://factpages.npd.no> in XSL (Excel), XML and CSV formats
- Available from the data hotel <http://data.norge.no/data/oljedirektoratet/oljedirektoratet> as an Internet service. REST-API in XML, JSON(P), CSV and YAML formats. (The data hotel retrieves its content from the FactPages.)

FactMaps

FactMaps shows geographical information and is closely integrated with the Fact Pages.

- HTML5-version: http://gis.npd.no/factmaps/html_20
- Also available as ArcGIS REST-API, WebMapService (WMS) and WebFeatureService (WFS), <http://www.npd.no/en/Maps/Fact-maps/>

USE OF C

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GOOD, COMPREHENSIVE DATA ARE KEY

GLOBAL: NORWEGIAN PETROLEUM DIRECTORATE

FACTPAGES
NORWEGIAN PETROLEUM DIRECTORATE

Wellbore Licence BAA Field Discovery **Company** Survey Facility TUF Stratigraphy

☐ Attributes
☐ Page view
 ☒ **Operators**
 ☐ Licensees
 ☐ All
☐ Table view
 ☐ All
 ☐ Reserves

A/S Norske Shell
Aker BP ASA
Capricorn Norge AS
ConocoPhillips Skandinavia AS
DEA Norge AS
Edison Norge AS
ENGIE E&P Norge AS
Eni Norge AS
ExxonMobil Exploration and Production Norway AS
Faroe Petroleum Norge AS
INEOS E&P Norge AS
Lundin Norway AS
Maersk Oil Norway AS
MOL Norge AS
OKEA AS
OMV (Norge) AS
PGNIG Upstream Norway AS
Point Resources AS
Repsol Norge AS
Spirit Energy Norge AS
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General information

Name	ExxonMobil Exploration and Production Norway AS
Organisation number	914048990
Nation code	NO
NPDID company	2835212

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[Announcements from Brønnøysundregistrene](#)

Licensees - current

Production licence	Licensee valid from date	Interest [%]
001 CS	29.09.2017	100.000000
027 FS	29.09.2017	100.000000
028 C	02.11.2009	13.000000
029	31.12.2015	85.000000
037	22.12.2017	25.000000

- Search by:
 - Wellbore
 - License
 - Business Arrangement Area
 - Field
 - Discovery
 - Company
 - Survey
 - Facility
 - Transportation & Utilization Facilities
 - Stratigraphy

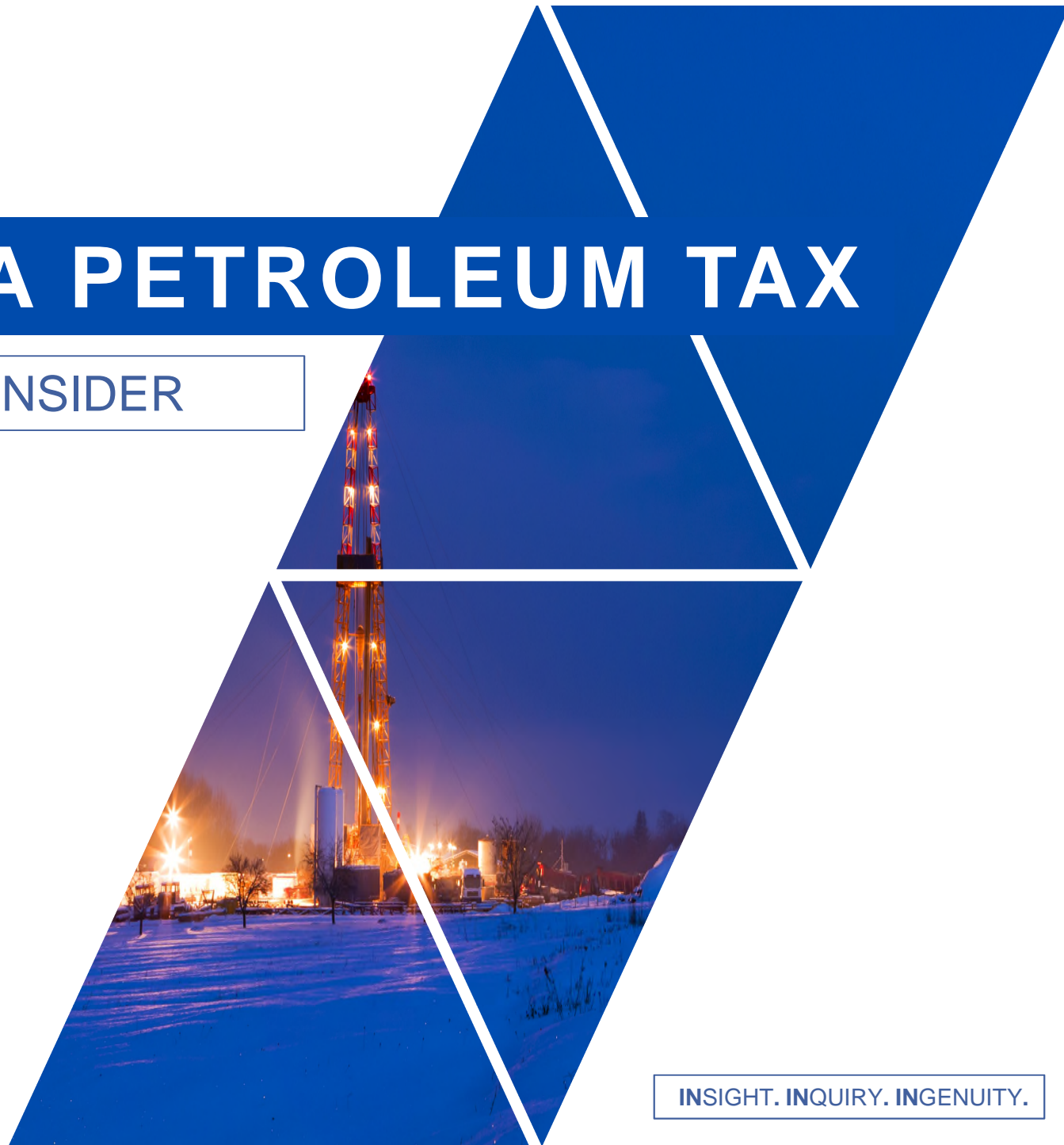
FISCAL SYSTEM DESIGN

SUMMARY

- First, ask to ensure you have the whole picture
 - More than simplistic comparative data tables
 - Understand all key aspects of competing fiscal systems
 - The 'obvious' aspects usually don't drive investment decisions
 - Understand the true differentiators and their impact on risk
 - Ask why IOCs in Alaska are spending billions in other countries with 'higher tax rates'
- Second, there is no 'ideal' structure for sharing the benefits of oil and gas development so understand your drivers
 - Multi-generational wealth creation
 - Fill the pipeline
- Third, review multiple options modelled against different future scenarios to improve chances of realizing goals
- Last, draw conclusions of competitiveness from a review of all aspects of your multifaceted system

ALASKA PETROLEUM TAX

THINGS TO CONSIDER



INSIGHT. INQUIRY. INGENUITY.

SHARING THE VALUE OF A BARREL

ORDER OF OPERATIONS

Tax Mechanism	Alaska NS	West Texas	New AK NS
WTI \$/bbl	60	60	60
- Less Basis Differential	-2	-	-2
ANSWC \$/bbl	58	60	58
- Marketing fees	*	*	*
- Shipping	*	-2	*
- TAPS	-10	0	-10
- Inter-field lines	0	0	-10
Gross Value at the Point of Production (GVPP)	48	58	38
- Royalty	-6 (12.5%)	-11 (20%)	-5 (16.67%)
- Gross Value Reduction (GVR)			
- Capital Expenditures (Capex)	-28 (Costs)	-12 (Costs)	-30 (Costs)
- Operating Expenditures (Opex)			
- Carry Forward Losses (NOLs)			
- Uplift			
Taxable Value	14	35	3

SHARING THE VALUE OF A BARREL

ORDER OF OPERATIONS

Tax Mechanism	Alaska NS	West Texas	New AK NS
Taxable Value	14	35	3
<ul style="list-style-type: none"> - Preliminary Tax - Carry Forward Credits - Per Barrel Credits - GVR credits 			
Provisional “Net” Petroleum Tax			
- [Calculate gross minimum tax, if hard floor take the greater for gross or net]	4%	7%	4%
Actual Tax Payable	-2	-4	-1.50
Producer Net before income tax	\$12	\$31	\$1.50

UNDERSTANDING DIFFERENCES

THE HIDDEN DRIVERS

- When someone offers up a regime as “comparable” to Alaska make sure you understand not only the similarities but most importantly the differences. For example:
 - Is there a government NOC? Are they carried or a heads up equity participant? Do they share risk?
 - Do they offer Uplift? If so, at what rate and for how long?
 - Is priority given to cost recovery versus profit taxes?
 - Is there ready access to existing infrastructure and affordable tariffs?
 - How much control do operators have?
- Understand why Texas, with new leases with a higher royalty rate and a higher gross severance tax rate, is significantly more profitable to a producer than Alaska

VARIED ALASKA ROYALTIES

CREATE VARIED ALASKA REVENUES

- Royalty is a fixed component of the fiscal system, a commitment producers must meet at the start of production, regardless of profitability
- Alaska has varied royalty structures by geography, in various categories of onshore, offshore, state, federal and private lands
- In addition to the varied royalty rates, where ownership is held by the federal government or private owners, the state does not receive 100% of the royalty payments made by operators and may or may not receive production tax revenue

VARIED ALASKA ROYALTIES

WHAT IS THE SAME BARREL WORTH IN EACH REGION

Regions

- Revenue to State from the same barrel of oil produced in different regions*

	UGF	Restricted	Total
State Land**	\$4.84	\$3.16	\$8.00
NPRA	\$1.75	\$3.13	\$4.88
ANWR	\$3.30	\$1.58	\$4.88
Other Federal Land	\$4.53	\$2.85	\$7.38
3-6 Miles Offshore	\$0.84	\$0.85	\$1.69
>6 Miles Offshore	\$0.00	\$0.00	\$0.00
Native Corp Land	\$2.06	\$0.00	\$2.06

*Assumes \$50 wellhead value at all locations, 12.5% royalty rate, paying the 4% gross minimum tax, and a lease newer than 1979. Numbers are greatly simplified and approximated to show scale, not to be used for any other purpose.

**Includes submerged lands up to 3 miles offshore

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Source: Ed King, DNR Presentation to Senate Resources, January 24th 2018

ALASKA DESIGN PARAMETERS

QUESTIONS SPECIFIC TO ALASKA?

- Any questions on how to understand Alaska in relation to what we have discussed?
- Unanswered questions from the beginning of the day



IN3ENERGY
be **in** the know

THANK YOU
QUESTIONS?

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