

ALASKA STATE LEGISLATURE
SENATE SPECIAL COMMITTEE ON TAPS THROUGHPUT

January 24, 2013

3:30 p.m.

MEMBERS PRESENT

Senator Mike Dunleavy, Co-Chair
Senator Peter Micciche, Co-Chair
Senator Anna Fairclough
Senator Lesil McGuire
Senator Berta Gardner

MEMBERS ABSENT

All members present

OTHER LEGISLATORS PRESENT

Senator Cathy Giessel
Senator Hollis French
Senator Burt Stedman

COMMITTEE CALENDAR

SENATE BILL NO. 21

"An Act relating to appropriations from taxes paid under the Alaska Net Income Tax Act; relating to the oil and gas production tax rate; relating to gas used in the state; relating to monthly installment payments of the oil and gas production tax; relating to oil and gas production tax credits for certain losses and expenditures; relating to oil and gas production tax credit certificates; relating to nontransferable tax credits based on production; relating to the oil and gas tax credit fund; relating to annual statements by producers and explorers; relating to the determination of annual oil and gas production tax values including adjustments based on a percentage of gross value at the point of production from certain leases or properties; making conforming amendments; and providing for an effective date."

- HEARD & HELD

PREVIOUS COMMITTEE ACTION

BILL: SB 21

SHORT TITLE: OIL AND GAS PRODUCTION TAX

SPONSOR(s): RULES BY REQUEST OF THE GOVERNOR

01/16/13	(S)	READ THE FIRST TIME - REFERRALS
01/16/13	(S)	TTP, RES, FIN
01/22/13	(S)	TTP AT 3:30 PM BELTZ 105 (TSBldg)
01/22/13	(S)	Heard & Held
01/22/13	(S)	MINUTE(TTP)
01/24/13	(S)	TTP AT 3:30 PM BUTROVICH 205

WITNESS REGISTER

BARRY PULLIAM, Economist
Econ One Research, Inc.
Los Angeles, California

POSITION STATEMENT: Provided an analysis of Alaska's tax system, North Slope investment, and the administration's proposal.

ACTION NARRATIVE

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CO-CHAIR PETER MICCICHE called the Senate Special Committee on TAPS Throughput meeting to order at 3:30 p.m. Present at the call to order were Senators Gardner, McGuire, Co-Chair Dunleavy, and Co-Chair Micciche. Senator Fairclough arrived shortly thereafter.

CO-CHAIR MICCICHE announced that Senator Giessel was also present.

SB 21-OIL AND GAS PRODUCTION TAX

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CO-CHAIR MICCICHE stated that the purpose of the meeting is to continue a discussion on SB 21 with a presentation by Barry Pulliam from Econ One Research, Inc. He reminded the committee that it is looking at the bill to determine how it would affect TAPS throughput. He welcomed Senator Fairclough.

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BARRY PULLIAM, Economist, Econ One Research, Inc., began a presentation on the Analysis of Alaska's Tax System, North Slope Investment and the Administration's proposal. He related that he has been working for several months with the Department of Revenue (DOR) and the Department of Natural Resources (DNR), as

well as the administration, on Alaska's oil tax system. He listed the components of his presentation.

MR. PULLIAM reviewed Econ One's role in the research. He referred to those who have helped with the analysis. He related that he has provided information for the state on petroleum-related matters for over two decades. He said he worked for the legislature on tax and gas development issues between 2005 and 2008. He reported that he has done work for other states and industry, as well. He listed the key points he would cover in his presentation:

- North Slope Development, Production, and Resources
- Evolution of Alaska's Fiscal and Tax System
- Examination of North Slope Activity Over the Past Decade
- Benchmarking the North Slope Against Other Areas
- Examination of North Slope Investment Opportunities
- Examination of Proposed Changes to Tax System

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MR. PULLIAM discussed the petroleum industry in Alaska. He showed a chart that depicts the impact of petroleum on state revenues and total state revenues, excluding federal and investment revenues, from FY 02 until FY 12. The chart also shows how the production tax has changed over time. He pointed out that the petroleum industry is the largest contributor to the state's economy. The industry accounted for 92 percent of unrestricted revenues and 86 percent of restricted and unrestricted revenues over the past decade. Production taxes accounted for 61 percent of petroleum revenues in FY 12, up from 27 percent prior to FY 07 when ACES was introduced.

CO-CHAIR MICCICHE asked for clarification on what makes up petroleum revenues.

MR. PULLIAM explained that petroleum revenue consist of property taxes and corporate income tax.

MR. PULLIAM said that Alaska has produced approximately 16 billion barrels of crude oil on the North Slope since 1977. Most of that oil has come from two giant fields, Prudhoe Bay and Kuparuk, which account for about 90 percent of production. The production in these two fields is declining, though the decline has been partially offset by the addition of smaller discoveries.

He turned to opportunities that remain in Alaska. He noted that many North Slope fields are now at mature stages. However, less than half of its potential economic oil resources have been produced to date. The federal government estimates that there are about 40 billion barrels of additional recoverable resources that are economic at today's prices.

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SENATOR GARDNER asked if the 40 billion barrels includes the National Petroleum Reserve, Alaska (NPRA), Arctic National Wildlife Refuge (ANWR), and the Outer Continental Shelf (OCS).

MR. PULLIAM said that it does. He pointed out that the various colors on the graph pertain to different categories. For example, ANWR shows a little less than 10 billion barrels of recoverable resources. The category of undiscovered conventional resources includes the OCS, including the Chukchi and Beaufort Seas.

SENATOR GARDNER inquired about the percentage of unconventional resources on land, versus under water.

MR. PULLIAM offered that information in an upcoming slide.

SENATOR FAIRCLOUGH asked what price range makes that economical.

MR. PULLIAM said the data was based on \$90 per barrel (bbl).

He emphasized that there is a lot of oil left, but it remains challenging due to higher costs to access it.

MR. PULLIAM showed a chart that depicts the estimated amount of undiscovered onshore and offshore conventional oil resources on the North Slope. He pointed out that the Central North Slope (CNS) consists of onshore state land production. It is estimated that there are about 3 billion barrels left of economically recoverable oil at \$90/bbl in the CNS. He said that the oil sits in relatively small fields; 30 million to 60 million barrel fields.

He related that there are close to 6 billion barrels in the Beaufort Sea, 10 billion in the Chukchi Sea, half a billion in NPRA, and about 10 billion in ANWR. The total of conventional resources on the North Slope is just shy of 30 billion barrels.

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MR. PULLIAM noted that there are also undeveloped unconventional oil resources on the North Slope. Work is just beginning on Shale development. The USGS, in 2012, recently estimated that there are 1 billion bbls of technically recoverable barrels. He cautioned that the estimates are preliminary. He said there are about 25 billion bbls of in-place viscous and heavy oil in the North Slope, with an estimated 15 percent economically recoverable.

CO-CHAIR MICCICHE asked if the unconventional resources are part of the 40 billion recoverable resources.

MR. PULLIAM said yes.

CO-CHAIR MICCICHE noted the arrival of Senator French.

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MR. PULLIAM turned to the topic of current and potential ANS producers. He listed the majors, the explorers, and other producers. He said the three large producers account for more than 90 percent of the state's current production: BP, ConocoPhillips, and ExxonMobil. He related that the majors account for approximately 9.5 million BOED of production worldwide and for more than 90 percent of North Slope production - about 400,000 barrels a day net in Alaska.

He reported that BP is involved in developing resources from existing fields and in facility renewal. BP has suspended work in Liberty due to technical issues. ConocoPhillips is developing the Kuparuk and Colville River fields and is expanding to the West as soon as it gets permits to do so. It has recently received permits to develop CD5 which is thought to hold about 50 million bbls. ExxonMobil's major focus is on developing Point Thomson. None of the three major producers are actively exploring outside of these areas.

He also discussed production outside of Alaska by the big three who are focused on high margin areas.

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CO-CHAIR MICCICHE asked if there could be a discussion on high margins and where Alaska stands.

MR. PULLIAM offered to provide that information later in the presentation.

SENATOR GARDNER asked how many of the companies listed on page 15 were exploring in Alaska before 2006.

MR. PULLIAM responded that Armstrong, Anadarko, and Pioneer were exploring before 2006.

He addressed non-major current and potential ANS production. He listed activity by each company. Pioneer and ENI are developing Ooguruk and Nikaitchuq, respectively. Anadarko, the fourth largest producer, acquired additional foothill leases. Repsol has a multi-million budget and has drilled three exploration wells in 2012. Brooks Range is developing the Mustang field. Great Bear is exploring shale potential, Linc Energy is exploring Umiat in NPRA, and Savant is operating and developing Badami.

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MR. PULLIAM discussed offshore explorers by company. Shell has been the most active and acquired leases in the Chukchi and Beaufort Seas. ConocoPhillips also spent money to acquire leases in the Chukchi Sea. Statoil has spent money on offshore leases.

SENATOR FAIRCLOUGH asked what percentage the small producers produce.

MR. PULLIAN thought it might be less than 5 percent.

SENATOR FAIRCLOUGH suggested it was important that the legislature look at the larger producers regarding revenue impact to the state.

MR. PULLIAN agreed. He said that smaller players don't have much impact on state revenue. He stressed that it is important to make the environment attractive to the large companies, as well as to the small companies.

SENATOR GARDNER commented that the developments in the Chukchi and Beaufort Seas also have little impact on Alaska's treasury because they are federal leases.

CO-CHAIR MICCICHE suggested a discussion on tariff be done at a later date.

MR. PULLIAM pointed out that more oil in the pipeline would reduce tariff and would establish a footprint - a hub and spoke operation - in the offshore area, which would draw more attention to opportunities in the North Slope.

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CO-CHAIR MICCICHE asked if offshore development would help with tying in other state land potential discoveries, as well.

MR. PULLIAM said it could, particularly around the federal/state border. He pointed out that Northstar development is currently on both state and federal property. Pipelines are needed for offshore platforms and could allow tying in of smaller developments. He added that production in an area would attract the interest of other players. Even though there is not a direct tax benefit, offshore production is still important.

MR. PULLIAM turned to data on the historical volumes of oil by year. He pointed out that production peaked in 1988 and has been declining since. Since 2007 North Slope production has dropped by about 27 percent from about 700,000 barrels a day to about 500,000 barrels a day. The smaller areas have dropped significantly more. He stressed the need to arrest decline.

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He said the next graph shows the North Slope estimate ultimate oil recover (EUR) by discovery year (1969 - 2010). Most of the oil that has been discovered was done so prior to 1970 in the large fields. Since then the discoveries have tended to be in smaller fields.

SENATOR FAIRCLOUGH asked if there was more exploration prior to 1970 than after 1970.

MR. PULLIAM did not know.

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SENATOR McGUIRE requested more data from other jurisdictions with which to compare Alaska regarding how many wells per year are drilled. She recalled hearing that Texas drilled 115 wells compared to 4 in Alaska the same year.

MR. PULLIAM said that information was available later in the presentation.

SENATOR McGUIRE suggested that more drilling would increase the chances of discovery. She recalled that Shell's discovery of Prudhoe Bay was an accident. She opined that there is hope that another large field exists.

MR. PULLIAM turned to the topic of the history of Alaska's production tax system for the North Slope from 1977 to 2007. He related that when production first came on there was a gross tax system with a maximum rate of 12.25 percent. Most of the United States still operates on a gross tax system.

SENATOR GARDNER recalled the debate regarding the change to a gross tax when the legislature was persuaded that it was the "way of the future." She requested Mr. Pulliam's opinion whether Alaska would be better served today by a gross tax system.

MR. PULLIAM said he prefers the "net" system because it does a good job of aligning the economics between the producer and the state, making the system more efficient, although it is more difficult to administer. He noted that the rest of the world operates under a net tax system. Some states have not changed to a net system.

He discussed Alaska's Economic Limit Factor (ELF), which was introduced in 1977 to try and bring the gross tax rate down when fields became less economic. A challenge occurred in 2005 when ELF was reducing the tax rate to very low levels. Trying to address that concern was one reason Alaska changed to a net system. In 2006 the Petroleum Production Tax (PPT) was introduced, which set a base tax rate of 22.5 percent, included progressivity at 0.2 percent over a \$40 net price, and a 20 percent capital credit. It had a maximum rate of 50 percent.

In 2007 PPT was amended to the current system, Alaska's Clear & Equitable Share (ACES), and the base rate was increased to 25 percent, the trigger point at which progressivity starts was decreased from \$40 to \$30, progressivity was increased to 0.4 percent per \$1 over \$30 net, and to 0.1 percent per \$1 over \$92.50 net. The maximum rate was set at 75 percent, one of the highest ranges in the world.

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MR. PULLIAM reported that the ACES tax changes had significant effects on state revenue. He showed the estimated production tax revenue from 2007 to 2012 under ACES, as well as what was projected under PPT and under a gross tax system. The difference between what was collected under ACES and what would have been collected under a gross system was about \$20 billion.

CO-CHAIR MICCICHE noted oil price variations from 2008 to present.

MR. PULLIAM agreed that profit is price and volume related.

SENATOR GARDNER requested a graph that would depict production tax revenue under ACES, PPT, and gross at a stable oil price.

MR. PULLIAM said he could provide that information. He explained that the results would vary depending on the price that was chosen. He suggested using three different prices for comparison; low, middle, and high.

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MR. PULLIAM talked about Alaska North Slope production by unit from 2001 until 2012. He showed a graph broken down by mature units and new units that have come on line since 2003, primarily Ooguruk and Nikiatchuq.

He turned to a graph that showed reported capital spending over the last decade in the North Slope. Capital spending decreased in the mid-2000s, began to rise in 2005, and has been relatively flat the last five years. On the other hand, capital spending elsewhere in the world has exploded.

CO-CHAIR MICCICHE connected the tie between less production and more capital spending; compounded reduction in state revenue.

MR. PULLIAM added that per barrel spending has increased, which results in a lower tax rate and more credits. More capital spending or the same level of capital spending has to be covered by less production.

SENATOR GARDNER requested information about any new wells that came into production when the severance tax was very low in 2005.

MR. PULLIAM acknowledged that there were new wells at that time and he offered to provide more information later in the presentation.

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MR. PULLIAM showed a graph that depicts reported capital spending by North Slope producers, large and others. He showed another graph that broke down that information by mature units and new units. Most of the increase in capital spending has been for the new units. Spending for mature units has been relatively flat.

He discussed Alaska North Slope oil and gas industry employment. Employment was stable until about 2005 when it began to grow in '06 and '07. It has remained relatively flat since then. There were major incidents that occurred on the North Slope in 2006, such as corrosion in Prudhoe Bay, resulting in attention to facility renewal and increased employment.

SENATOR GARDNER asked what role tax credits played in investment decisions during that time.

MR. PULLIAM thought the tax credits, along with the tax rate, did play a role in making investment decisions.

CO-CHAIR MICCICHE asked if a percentage of the increased employment was part of the capital deductions.

MR. PULLIAM said they were operating expenses, but still a deduction. He added that he would provide more information regarding how Alaska fares as a result of changes in oil price and other economic conditions.

SENATOR FAIRCLOUGH inquired if credits buy exploration but not production under ACES.

MR. PULLIAM distinguished between exploration credits and capital credits.

SENATOR FAIRCLOUGH asked if there is information about the risk to Alaska if the state continues offering credits that are not being applied against actual production.

MR. PULLIAM offered to provide that data.

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MR. PULLIAM addressed declining drilling on the North Slope back to 2002. Alaska has been generally declining in drilling activity. In 2002 about 200 wells per year were drilled and that has since decreased to about 150 wells per year.

SENATOR GARDNER asked if the drilling was done by the major producers during the peak of 2004.

MR. PULLIAM replied that most of the drilling was development drilling done by the majors.

He turned to a chart that showed drilling activity in the North Slope by well-completed date. The majors do account for the

major portion of activity. More recently the drilling numbers increased for ENI and Pioneer.

SENATOR FAIRCLOUGH inquired if, due to technology, in the future something other than wells might be a measure of exploration.

MR. PULLIAM explained that productivity of the wells is key. He agreed that technology has advanced.

SENATOR FAIRCLOUGH clarified that she was thinking more along the lines of 3D technology and the ability to look at a reservoir without having to dig a well.

MR. PULLIAM agreed, "You can do a lot more of your work before you ever drill a well." He said technology increases the chance of finding oil.

SENATOR FAIRCLOUGH commented that since technology has advanced, it might be deceptive to compare the number of wells drilled in the past with future numbers.

MR. PULLIAM agreed.

SENATOR FAIRCLOUGH asked if the state has access to producer information about production credits for potential fields.

MR. PULLIAM thought that was a question for DNR.

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SENATOR GARDNER asked if the chart includes horizontal drilling and companies that produce shale oil, such as Great Bear.

MR. PULLIAM said it does include horizontal drilling, but not shale oil. Great Bear is in the "others" category.

MR. PULLIAM noted important points about the timeline of significant events on the North Slope since 2005. He related that in 2005 the ELF aggregation decision for Prudhoe Bay was made. At the same time ConocoPhillips applied for the CD-5 permit. He stressed that permitting is an issue: ConocoPhillips just received the CD-5 permit. He opined that the state is doing a good job in the permitting process, but the federal government is not. There have been federal permitting delays with offshore development, as well.

SENATOR GARDNER asked if there would be another opportunity to ask more questions.

CO-CHAIR MICCICHE said yes.

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MR. PULLIAM began a discussion of benchmarking North Slope activity against other areas. He showed profiles of crude oil production, capital spending, petroleum sector employment and drilling in Alaska's North Slope.

He compared profiles of crude oil production, capital spending, petroleum sector employment and drilling in the Northwest Europe area (North Sea) to Alaska. He then compared Alaska to the Lower 48 in the same areas, followed by a comparison with Canada.

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CO-CHAIR MICCICHE asked when the shale oil surge began in Texas.

MR. PULLIAM said 2010-11. He added that shale gas preceded shale oil in Texas.

CO-CHAIR MICCICHE asked about conventional oil spending in Texas.

MR. PULLIAM replied that, in addition to shale activity, Texas has spent a lot on looking for new pockets of oil in conventional fields. He added that there was not a lot of growth in California, but there was a lessening of the decline due to exploration for new pockets in existing fields.

He related that Canada has seen growth in production, capital spending, and in drilling. He said Australia's oil production has been declining, but LNG production has increased, as has spending.

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MR. PULLIAM turned to a graph that compared locations by indexing. He defined indexing as using a base year of 2002 and looking at production values and calibrating them to an index of 100 in order to see, over time, how production changes.

CO-CHAIR MICCICHE said it allows a comparison of "apples to apples".

MR. PULLIAM agreed.

SENATOR GARDNER thought the comparison should also include prospectivity measures and a measure of tax take.

MR. PULLIAM said those categories would be included later on in the presentation.

He continued with a look at comparing crude oil production in Alaska with Europe, Canada, Australia and the rest of the United States.

CO-CHAIR MICCICHE asked about the 25 percent increase in production in the Gulf of Mexico between 2008 - 2009.

MR. PULLIAM replied that the increase in the Gulf of Mexico was a result of an increase in oil price. The decrease in production which followed was because of the drilling moratorium due to the Horizon accident.

MR. PULLIAM compared capital spending in Alaska to the four areas, Northwest Europe, Canada, Australia, and the United States. In all four areas capital spending has increased.

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He showed a slide that compares capital spending for exploration and development of the North Slope with the United States and worldwide spending. It also shows the price of oil. He tracked spending increases elsewhere when it remains flat in Alaska.

SENATOR GARDNER asked if it was full dollar spending.

MR. PULLIAM said it was.

He showed employment comparisons of the North Slope to other areas. He noted that Alaska is doing fairly well in employment, even as production is declining.

CO-CHAIR MICCICHE asked how capital spending for exploration and development, increased spending for labor, and decreased production relate.

MR. PULLIAM said there were labor costs imbedded in capital activity.

He compared drilling and development activity to other areas. Alaska has not kept pace with the rest of the country or the world.

SENATOR GARDNER asked about Norway's high drilling activity in 2009, versus Alaska's much lower activity. She noted Norway's high tax and government take.

MR. PULLIAM replied that he could not explain that difference in numbers. He commented that Northwest Europe is currently very unhappy with its drilling numbers. He suggested keeping in mind that Statoil is the big player in oil in Norway and is government owned.

SENATOR GARDNER pointed out that Statoil is a new producer in Alaska.

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MR. PULLIAM moved into an analysis of the attractiveness of investment under ACES. He explained that crude oil prices need to be included in the analysis. He recalled the prices considered under the analysis of PPT.

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At ease.

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CO-CHAIR MICCICHE called the meeting back to order.

MR. PULLIAM showed a graph of oil prices over time. Prices peaked in 2008 and then dropped about \$100/barrel over six month. He opined that the price range Alaska should now consider for analysis is from \$80 to \$130 per barrel because it is likely to be long term and sustainable at that range. Sustained prices below \$80 make many projects uneconomic and reduce supplies. Sustained prices above \$130 start to attract more oil supply, reduce demand for petroleum products, and encourage substitutes. There is a self-correcting mechanism that keeps prices at the \$80 - \$130 range. He concluded that producers will stress test projects near the lower end of that range.

CO-CHAIR DUNLEAVY asked if there was a certain technology that the \$80 oil price would impact.

MR. PULLIAM said it would be the horizontal drilling for shale.

SENATOR GARDNER asked about the impact of contractual obligations on development and how they would be rated, such as profit, hurdle rate, and risk, in addition to oil price and tax rate.

MR. PULLIAM said those are all factors. The price of oil affects everyone. Profit is an important factor. The present value of the project, the discount rate, and margins are also important. The ability to throw off lots of cash is important, as is reinvestment. The stability of a producing area is very important. He could not say which is the most important factor; it depends on the project.

CO-CHAIR MICCICHE asked if it's correct to say that the stable political climate of Alaska has been rewarded, whereas other areas of the world without political stability have to pay a penalty.

MR. PULLIAM said yes. He noted he has used similarly stable areas when making comparisons to Alaska.

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MR. PULLIAM discussed a summary of production profiles examined for Alaska and benchmark developments. He showed a graph that depicts the percentage of oil expected to be produced in a given year from various developments. He used Eagle Ford in South Texas, Bakken, North Sea, and Canada as examples in comparison to Alaska. Opportunities in each area are different; Lower 48 areas are very attractive recently because a large amount of production comes on very quickly.

CO-CHAIR DUNLEAVY asked if it was shale production.

MR. PULLIAM said yes.

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MR. PULLIAM addressed the different factors companies look at when making investment decisions:

- Producer NPV-12 (Net present value at a 12 percent discount rate per barrel of oil - BOE)
- Internal Rate of Return (IRR)
- 5-year Cash Margins
- Profitability Index-12 (an index that looks at investment efficiency)
- Government Take
- State NPV-12 Per BOE

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MR. PULLIAM turned to a graph that depicted investment measures related to the development of conventional oil reserves. He

explained that gross royalty tax at both 20 percent and 30 percent and ACES, for incumbents and for new participants, are shown. He related that the old tax system under PPT was a gross system.

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MR. PULLIAM discussed NPV-12, IRR, cash margins, and government take across the different systems. The take away from the top left panel is that on an NPV basis the ACES system gets higher NPVs in the lower price range. The NPV drops at the higher price range because of progressivity.

CO-CHAIR MICCICHE clarified that it was "net present value back to the producer."

MR. PULLIAM said the producer is going to look at costs, how many wells will be drilled, how the oil will be produced, what profit will ensue, and what kind of cash flow the company will receive. The graph takes all cash flows across time to figure out the net present value at the time that decision is paid. He said the higher the NPV, the better.

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MR. PULLIAM discussed the internal rate of return (IRR). As the price increases, the IRR increases relative to the old system and to what a new participant would see. When a company invests under ACES, it receives a credit, and additional spending reduces the tax rate. As prices get higher, due to progressivity, the value of the reduction gets higher. Sometimes it gets so high that the state pays for the entire investment.

SENATOR GARDNER liked the breakout of data shown in the graphs. She inquired if the state agrees to eliminate credits, as proposed in SB 21, whether new participants would be disadvantaged.

MR. PULLIAM said the opposite would occur. New participants are disadvantaged in that they do not have the ability to "buy down" their tax rate, but they would have a slightly higher cash margin. The bigger issue is that the flip side of high IRR's is a relatively flat cash margin line under ACES. As prices rise, the state receives an increasing amount of that rise, resulting in lower margins with less cash available for reinvestment or to pay out to shareholders.

He talked about the graph on government take. Gross systems have a lower government take and they are declining over time

(regressive system). A net system with a single rate would be a neutral system. Royalties make it slightly regressive. He said ACES is a progressive system.

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CO-CHAIR MICCICHE asked if a new participant is disadvantaged in government take because of the buy-down compact available to larger companies only.

MR. PULLIAM said new participants can't buy down taxes on existing production, but they are subject to the production tax when production begins. He pointed out that all of the metrics are worse, except for a slightly higher cash margin, for a new participant under ACES.

MR. PULLIAM explained investment measures, comparing conventional oil production in Alaska to unconventional oil production in the Lower 48. He compared Bakken, Eagle Ford, ACES New Participant and the ACES incumbent in four categories: producer NPV-12/BOE, internal rate of return, cash margins and government take. He pointed out oddities with IRR and cautioned that it is not good to over focus on a single measure. He noted that IRR is a good comparison measurement.

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SENATOR GARDNER asked for information on the companies' IRR hurdle rates.

MR. PULLIAM did not think the companies would share that information. He thought they were higher than 12 percent.

CO-CHAIR MICCICHE asked if the larger, integrated companies or the smaller, independent companies generally require a larger return.

MR. PULLIAM did not know if there was a general rule on that. He spoke of the variety of opportunities and resources companies have.

SENATOR GARDNER inquired if there should be a comparison between unconventional oil production in Alaska with unconventional oil production elsewhere.

MR. PULLIAM maintained that comparing conventional oil development in Alaska with unconventional oil development elsewhere is better because that is where the investment dollars are going. West Texas is also attracting investment dollars.

SENATOR GARDNER asked how higher production costs in unconventional plays in a gross profit tax system were treated in the analysis.

MR. PULLIAM said those costs were factored into the analysis.

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MR. PULLIAM turned to the topic of investment metrics and a comparison of conventional oil development in Alaska with that in the North Sea (United Kingdom with Brownfield Allowance). He again used the four categories for comparison. He noted it was worth looking at the situation in the UK due to the Brownfield Allowance which was designed to attract investment and stem decline. Government take in the UK is lower than government take found under ACES. A significant amount of investment is being freed up with the Brownfield Allowance.

He highlighted the summary of investment measures using all metrics with three different price points. Also included in this comparison is the state NPV-12/BOE under the different systems. It compares how ACES stacks up with the other entities. He highlighted the pre-Brownfield and post-Brownfield allowance.

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MR. PULLIAM discussed the administration's proposed changes. He listed the key aspects:

- Establishes 25 percent flat net tax rate; no progressivity
- Eliminates the capital credit and state purchase of losses
- Establishes 20 percent gross revenue exclusion (GRE) to incent production of new oil
- Losses may be carried forward and applied against tax obligation when production occurs
- Extends new entrant credits through 2022
- No change outside of the North Slope.

He continued to say that the administration's proposal:

- Provides a balance between the state and producers
- Simplifies the tax system and provides clarity for planning
- Maintains alignment between state and producer incentives
- Provides incentives for development of new resources without taxing state treasury
- Sends an extremely positive message to potential investors

He pointed out that Alaska is viewed as an expensive place with a questionable tax system.

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MR. PULLIAM showed that under ACES, the government take was highly progressive. At \$70 oil, government take was at 60 percent and it reached close to 75 percent at \$140. In SB 21, the average government take moves from progressive to relatively neutral. The slight regressivity is caused by the gross royalty system. In the price range from \$80 oil to \$130 oil, government take is within a 3 percent band. It is more neutral than what is found in the Lower 48.

CO-CHAIR MICCICHE asked if there was a plan and a government take goal in the process of developing the bill.

MR. PULLIAM replied that government take was one of the statistics that was looked at. He said the goal was to have a competitive government take in the 60 percent to 65 percent range for Organization for Economic Cooperation and Development (OECD).

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MR. PULLIAM turned to a graph that showed annual state revenues and producer cash flows at \$100 West Coast ANS 50 million barrel conventional oil (MMBO) for an incumbent participant under ACES and under the proposed tax (SB 21). Under SB 21, as production starts in year 5, the proposed cash flows are higher for the producer than under ACES. Earlier on, investment outflows are bigger because the state is not subsidizing that portion as it does under ACES. For an incumbent, the cash flows under SB 21 would increase considerably and the NPV-12 would be about the same. The state would have lower cash flows under the new proposal, but the NPV-12 would be about the same as it was under ACES.

He explained that the next graph shows the same comparison data but for a new participant in Alaska. Under SB 21, both cash flows and NPV-12 increase, which brings the new participant up to the level of the incumbent regarding investment opportunity. The state's revenues and NPV-12 will both be lower.

[5:46:37 PM](#)

MR. PULLIAM showed a graph that depicts the results from the previous two graphs, but at different prices - \$80, \$100, and \$120 West Coast ANS price.

He explained that the next series of graphs show investment measures for the development of conventional oil reserves under the new tax proposal. There are increases in NPV-12 relative to ACES, IRR is increased for new participants, cash flows are significantly higher under the new proposal, and government take is significantly lower and remains in the 60 percent to 65 percent range.

MR. PULLIAM highlighted graphs that show investment measures in Alaska under SB 21 with respect to the Lower 48. It puts Alaska "in the game" on an NPV basis and cash flow basis, a significant improvement particularly to new participants. He noted when comparing the same investment measures in Alaska under SB 21 to the United Kingdom with Brownfield Allowance, Norway, and Canada, it is apparent that the NPV and cash margins are much more in line.

MR. PULLIAM showed a graph that was a summary of investment measures for a new participant in conventional oil development in Alaska under ACES and SB 21, in comparison with opportunities elsewhere in the world. He concluded that investment prospects under SB 21, relative to ACES, have improved. He suggested comparing margin increases under SB 21 with ACES. He said a \$40 per barrel increase in oil price yields an \$8 per barrel increase in margin.

CO-CHAIR MICCICHE asked if oil sands were bracketed.

MR. PULLIAM explained that the oil sands system is relatively complicated and includes some "plateauing." He offered to provide further information.

He referred again to the \$8 increase under the proposed tax and noted with gross revenue exclusion (GRE) the price increases to \$18 per barrel. He said as prices rise, investment opportunities are better for a producer, particularly a new producer. He concluded with the last graph that shows investment measures from the standpoint of the incumbent.

CO-CHAIR MICCICHE summarized the state's goal to get maximum value for Alaskans, while encouraging new development. He stated that the committee's task is to look at the most effective ways to stem decline. He requested that committee members submit decline-related questions for further discussion.

CO-CHAIR MICCICHE thanked Mr. Pulliam for his presentation.

CO-CHAIR MICCICHE held SB 21 in committee.

5:55:55 PM

There being no further business to come before the committee, Co-Chair Micciche adjourned the Senate Special Committee on TAPS Throughput at 5:55 p.m.