ALASKA STATE LEGISLATURE
HOUSE RESOURCES STANDING COMMITTEE
March 25, 2013
1:05 p.m.

MEMBERS PRESENT

Representative Eric Feige, Co-Chair
Representative Dan Saddler, Co-Chair
Representative Peggy Wilson, Vice Chair
Representative Mike Hawker
Representative Craig Johnson
Representative Kurt Olson
Representative Paul Seaton
Representative Geran Tarr
Representative Chris Tuck

MEMBERS ABSENT

All members present

OTHER LEGISLATORS PRESENT

Representative Bob Herron
Representative Shelley Hughes

COMMITTEE CALENDAR

COMMITTEE SUBSTITUTE FOR SENATE BILL NO. 21(FIN) AM(EFD FLD)
"An Act relating to the interest rate applicable to certain amounts due for fees, taxes, and payments made and property delivered to the Department of Revenue; providing a tax credit against the corporation income tax for qualified oil and gas service industry expenditures; 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; establishing the Oil and Gas Competitiveness Review Board; and making conforming amendments."

- 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
01/24/13	(S)	Heard & Held
01/24/13	(S)	MINUTE(TTP)
01/29/13	(S)	TTP AT 3:30 PM BELTZ 105 (TSBldg)
01/29/13	(S)	Heard & Held
01/29/13	(S)	MINUTE(TTP)
01/31/13	(S)	TTP AT 1:00 PM BUTROVICH 205
01/31/13	(S)	Heard & Held
01/31/13	(S)	MINUTE(TTP)
02/05/13	(S)	TTP AT 3:30 PM BUTROVICH 205
02/05/13	(S)	Heard & Held
02/05/13	(S)	MINUTE(TTP)
02/07/13	(S)	TTP AT 3:30 PM BUTROVICH 205
02/07/13	(S)	Moved SB 21 Out of Committee
02/07/13	(S)	MINUTE(TTP)
02/08/13	(S)	TTP RPT 1NR 4AM
02/08/13	(S)	NR: DUNLEAVY
02/08/13	(S)	AM: MICCICHE, GARDNER, FAIRCLOUGH, MCGUIRE
02/08/13	(S)	LETTER OF INTENT WITH TTP REPORT
02/09/13	(S)	TTP AT 10:00 AM BUTROVICH 205
02/09/13	(S)	-- MEETING CANCELED --
02/11/13	(S)	RES AT 3:30 PM BUTROVICH 205
02/11/13	(S)	Heard & Held
02/11/13	(S)	MINUTE(RES)
02/13/13	(S)	RES AT 3:30 PM BUTROVICH 205
02/13/13	(S)	Heard & Held
02/13/13	(S)	MINUTE(RES)
02/15/13	(S)	RES AT 3:30 PM BUTROVICH 205
02/15/13	(S)	Heard & Held
02/15/13	(S)	MINUTE(RES)
02/18/13	(S)	RES AT 3:30 PM BUTROVICH 205
02/18/13	(S)	Heard & Held
02/18/13	(S)	MINUTE(RES)
02/20/13	(S)	RES AT 3:30 PM BUTROVICH 205
02/20/13	(S)	Heard & Held
02/20/13	(S)	MINUTE(RES)

02/22/13	(S)	RES AT 3:30 PM BUTROVICH 205
02/22/13	(S)	Heard & Held
02/22/13	(S)	MINUTE(RES)
02/25/13	(S)	RES AT 3:30 PM BUTROVICH 205
02/25/13	(S)	Heard & Held
02/25/13	(S)	MINUTE(RES)
02/27/13	(S)	RES AT 3:30 PM BUTROVICH 205
02/27/13	(S)	Moved CSSB 21(RES) Out of Committee
02/27/13	(S)	MINUTE(RES)
02/28/13	(S)	RES RPT CS 3DP 1DNP 2NR 1AM NEW TITLE
02/28/13	(S)	LETTER OF INTENT WITH RES REPORT
02/28/13	(S)	DP: GIESSEL, MCGUIRE, DYSON
02/28/13	(S)	DNP: FRENCH
02/28/13	(S)	NR: MICCICHE, BISHOP
02/28/13	(S)	AM: FAIRCLOUGH
02/28/13	(S)	FIN AT 9:00 AM SENATE FINANCE 532
02/28/13	(S)	Heard & Held
02/28/13	(S)	MINUTE(FIN)
03/01/13	(S)	FIN AT 9:00 AM SENATE FINANCE 532
03/01/13	(S)	Heard & Held
03/01/13	(S)	MINUTE(FIN)
03/01/13	(S)	RES AT 3:30 PM BUTROVICH 205
03/01/13	(S)	-- MEETING CANCELED --
03/02/13	(S)	RES AT 10:00 AM BUTROVICH 205
03/02/13	(S)	-- MEETING CANCELED --
03/04/13	(S)	FIN AT 9:00 AM SENATE FINANCE 532
03/04/13	(S)	Heard & Held
03/04/13	(S)	MINUTE(FIN)
03/04/13	(S)	FIN AT 1:30 PM SENATE FINANCE 532
03/04/13	(S)	Heard & Held
03/04/13	(S)	MINUTE(FIN)
03/05/13	(S)	FIN AT 9:00 AM SENATE FINANCE 532
03/05/13	(S)	Heard & Held
03/05/13	(S)	MINUTE(FIN)
03/05/13	(S)	FIN AT 1:30 PM SENATE FINANCE 532
03/05/13	(S)	Heard & Held
03/05/13	(S)	MINUTE(FIN)
03/06/13	(S)	FIN AT 9:00 AM SENATE FINANCE 532
03/06/13	(S)	Heard & Held
03/06/13	(S)	MINUTE(FIN)
03/06/13	(S)	FIN AT 1:30 PM SENATE FINANCE 532
03/06/13	(S)	Heard & Held
03/06/13	(S)	MINUTE(FIN)
03/06/13	(S)	FIN AT 3:00 PM SENATE FINANCE 532
03/06/13	(S)	-- Public Testimony --
03/11/13	(S)	FIN AT 9:00 AM SENATE FINANCE 532

03/11/13	(S)	-- MEETING CANCELED --
03/11/13	(S)	FIN AT 1:30 PM SENATE FINANCE 532
03/11/13	(S)	-- MEETING CANCELED --
03/12/13	(S)	FIN AT 9:00 AM SENATE FINANCE 532
03/12/13	(S)	Bills Previously Heard/Scheduled
03/12/13	(S)	FIN AT 1:30 PM SENATE FINANCE 532
03/12/13	(S)	Heard & Held
03/12/13	(S)	MINUTE(FIN)
03/12/13	(S)	FIN AT 4:00 PM SENATE FINANCE 532
03/12/13	(S)	Heard & Held
03/12/13	(S)	MINUTE(FIN)
03/13/13	(S)	FIN AT 9:00 AM SENATE FINANCE 532
03/13/13	(S)	Heard & Held
03/13/13	(S)	MINUTE(FIN)
03/13/13	(S)	FIN AT 1:30 PM SENATE FINANCE 532
03/13/13	(S)	Heard & Held
03/13/13	(S)	MINUTE(FIN)
03/14/13	(S)	FIN AT 9:00 AM SENATE FINANCE 532
03/14/13	(S)	Moved CSSB 21(FIN) Out of Committee
03/14/13	(S)	MINUTE(FIN)
03/18/13	(S)	FIN RPT CS 2DP 1DNP 1NR 3AM NEW TITLE
03/18/13	(S)	DP: KELLY, MEYER
03/18/13	(S)	DNP: HOFFMAN
03/18/13	(S)	NR: FAIRCLOUGH
03/18/13	(S)	AM: DUNLEAVY, BISHOP, OLSON
03/18/13	(H)	RES AT 1:00 PM BARNES 124
03/18/13	(H)	Scheduled But Not Heard
03/19/13	(S)	RLS AT 9:00 AM FAHRENKAMP 203
03/19/13	(S)	-- MEETING CANCELED --
03/20/13	(H)	RES AT 1:00 PM BARNES 124
03/20/13	(H)	Scheduled But Not Heard
03/21/13	(S)	TRANSMITTED TO (H)
03/21/13	(S)	VERSION: CSSB 21(FIN) AM(EFD FLD)
03/22/13	(H)	READ THE FIRST TIME - REFERRALS
03/22/13	(H)	RES, FIN
03/22/13	(H)	RES AT 1:00 PM BARNES 124
03/22/13	(H)	Heard & Held
03/22/13	(H)	MINUTE(RES)
03/25/13	(H)	RES AT 1:00 PM BARNES 124

WITNESS REGISTER

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

POSITION STATEMENT: As consultant to the administration, provided a PowerPoint presentation comparing CSSB 21(FIN) am(efd fld) to SB 21/HB 72, and Alaska's Clear and Equitable Share (ACES).

JANAK MAYER, Manager, Upstream and Gas
PFC Energy
Washington, DC
POSITION STATEMENT: As consultant to the legislature, provided a PowerPoint presentation comparing CSSB 21(FIN) am(efd fld) to Alaska's Clear and Equitable Share (ACES).

ACTION NARRATIVE

1:05:23 PM

CO-CHAIR ERIC FEIGE called the House Resources Standing Committee meeting to order at 1:05 p.m. Representatives Hawker, Seaton, Olson, P. Wilson, Saddler, and Feige were present at the call to order. Representatives Johnson, Tarr, and Tuck arrived as the meeting was in progress. Representative Hughes was also present.

SB 21-OIL AND GAS PRODUCTION TAX

1:05:42 PM

CO-CHAIR FEIGE announced that the only order of business is CS FOR SENATE BILL NO. 21(FIN) am(efd fld), "An Act relating to the interest rate applicable to certain amounts due for fees, taxes, and payments made and property delivered to the Department of Revenue; providing a tax credit against the corporation income tax for qualified oil and gas service industry expenditures; 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; establishing the Oil and Gas Competitiveness Review Board; and making conforming amendments."

1:06:03 PM

BARRY PULLIAM, Economist & Managing Director, Econ One Research, Inc., Los Angeles, California, as consultant to the administration, provided a PowerPoint presentation comparing the differences between CSSB 21(FIN) am(efd fld), SB 21/HB 72, and Alaska's Clear and Equitable Share (ACES). He first compared the differences in the key features of the aforementioned [slide 2], saying the base tax rate in SB 21/HB 72 of 25 percent was changed to 35 percent in CSSB 21 (FIN) am(efd fld). No credits were included in SB 21/HB 72, but a credit of $5 per barrel was added in CSSB 21(FIN) am(efd fld). Under SB 21/HB 72, a producer without tax liability could carry forward its net operating losses (NOLs) at a 15 percent increase and then take the NOLs once the producer did have tax liability. However, CSSB 21(FIN) am(efd fld) allows for monetization of NOLs so producers that do not have tax liability as they are developing new projects will receive a boost to their economics.

1:08:42 PM

MR. PULLIAM, continuing his comparison of the key features, said SB 21/HB 72 provided a gross revenue exclusion (GRE) at the rate of 20 percent applicable to units formed after 2003 or new participating areas (PAs) [formed after 2012]. Under CSSB 21(FIN) am(efd fld), this provision remains the same but the applicability is expanded to also include certified new oil from existing fields. Under SB 21/HB 72, the small producer credit of $12 million per year was extended to the year 2022, but under CSSB 21(FIN) am(efd fld) this credit expires in 2016.

1:10:28 PM

REPRESENTATIVE SEATON, referring to certified new oil from existing fields under CSSB 21(FIN) am(efd fld), inquired whether Mr. Pulliam is just presenting the provisions of CSSB 21(FIN) am(efd fld) as currently written or will be offering recommendations on whether these changes make sense.

MR. PULLIAM replied his intention with slide 2 is just to highlight the differences between the original bill, SB 21/HB 72, and CSSB 21(FIN) am(efd fld), the bill that came out of the Senate. As he goes along he will be talking about the impacts on investment generally.

REPRESENTATIVE SEATON reserved his question on the expansion of the GRE until such time as Mr. Pulliam discusses it.

1:11:26 PM

MR. PULLIAM returned to his presentation and compared the government take and effective tax rates of ACES, SB 21/HB 72, and CSSB 21(FIN) am(efd fld) for all existing producers for fiscal years 2015-2019 [slide 3]. He pointed out that at a [($2012) West Coast Alaska North Slope (ANS)] price of $80 per barrel the government take under all three systems is the same [about 64 percent]. As prices rise, the government take under CSSB 21(FIN) am(efd fld) approaches 65 percent [versus about 62 percent under SB 21/HB 72 and 75 percent under ACES].

1:12:34 PM

REPRESENTATIVE HAWKER, noting Mr. Pulliam is engaged in this effort by the administration, inquired whether Mr. Pulliam has reconciled his modeling with the existing producers so there are no "dueling modeling" questions.

MR. PULLIAM responded he has had considerable back and forth with the producers and believes he is on the same page as far as the models go. One difference, however, is that producers may present numbers during this time period in nominal dollars, while the numbers he is presenting here - as he has done in all of his presentations - are in 2012 real dollars.

1:13:34 PM

MR. PULLIAM, in response to Representative P. Wilson, confirmed that the black line in the graphs on slide 3 labeled "CS SB21 (FIN)" is the bill before the committee [CSSB 21(FIN) am(efd fld)]. When referring to "CS SB 21 (FIN)" or to "the Senate bill," he is meaning the bill that came out of the Senate.

1:14:02 PM

MR. PULLIAM, in response to Representative Tuck, confirmed that royalty received by the state is included in the comparison for government take on slide 3. He said government take encompasses all forms of government take, including taxes and royalty. Some of the royalty is at 12.5 percent and some is higher.

1:14:30 PM

MR. PULLIAM, continuing his discussion of the comparisons shown on slide 3, said the bottom graph shows the effective tax rate for severance that taxpayers would pay at different price levels. The effective tax rate equals the nominal rate minus

the credits that are received. At a price just above $80 per barrel, the effective tax rate for all three systems is the same at about 22.5 percent. As the price increases the effective tax rate under CSSB 21(FIN) am(efd fld) rises to about 30 percent; due to the manner in which it is calculated - starting with a 35 percent base rate and then subtracting the fixed $5 per barrel allowance - the tax rate at higher and higher prices would approach 35 percent asymptotically but would never actually touch 35 percent. That is because as the $5 credit is deducted from the taxes, the tax rate on a percentage basis is lower and lower as prices go up.

1:16:07 PM

MR. PULLIAM, in response to Representative Tuck, stated that royalty would not be included in the effective tax rate depicted on slide 3.

1:16:26 PM

REPRESENTATIVE SEATON asked whether the effective tax rate depicted on slide 3 is a combination of production tax and corporate income tax.

MR. PULLIAM replied the effective tax rate includes just the production tax.

1:16:42 PM

MR. PULLIAM moved to slide 4 and compared the effective tax rates on gross value for legacy production under ACES, SB 21/HB 72, and CSSB 21(FIN) am(efd fld) with that of other large oil-producing states with production taxes at a wellhead value of $100 ($2012). Most other states in the U.S., he explained, have a gross tax while Alaska's current tax is on the net. Thus, for comparison purposes on this graph, he converted Alaska's tax to a percentage of the gross value and, because Alaska's tax varies with price, he chose for this comparison the 2012 wellhead value of $100 per barrel, which is about today's value. For comparison on the chart he chose states with production of 100,000 barrels or more per day. On a gross basis, ACES provides an effective tax rate of about 30 percent, SB 21/HB 72 provides about 17 percent, and CSSB 21(FIN) am(efd fld) provides 20 percent [compared to effective tax rates of about 12.5 percent for LA, about 11 percent for ND, about 8 percent for OK, about 7 percent for NM, about 6 percent for WY, 5 percent for CO, and about 4.5 percent for TX]. Thus, he pointed out, while

CSSB 21(FIN) am(efd fld) would lower the rate seen under ACES, the proposed rate would still be higher than those of the other major producing states in the U.S.

1:18:38 PM

REPRESENTATIVE SEATON, referring to the wellhead value of $100, calculated that "to get to ANS" would be approximately $10 of transportation. With Alaska's production taxes based on gross value at point of production, he asked what Mr. Pulliam subtracted from this as the actual taxable value.

MR. PULLIAM responded he is starting here with $100 at the wellhead, so that would be the gross value of the production.

1:19:17 PM

REPRESENTATIVE SEATON noted that production tax value subtracts out the cost, which is basically $26.

MR. PULLIAM answered correct, under any of the Alaska scenarios the cost must be subtracted out and then the tax is computed. To calculate these percentages he divided the tax by the gross value of the oil as opposed to the net value of the oil.

1:19:51 PM

REPRESENTATIVE SEATON asked whether that is by the gross value at the point of production, the taxable value, or this wellhead value, meaning subtracting just the marine transportation and the cost of the Trans-Alaska Pipeline System (TAPS) to get the effective tax rate.

MR. PULLIAM replied that, in his view, gross value at the point of production is the same as wellhead value. There is taxable value, which then would subtract capital and operating costs from the gross value. But gross value and wellhead value are, in his mind, one and the same.

1:20:42 PM

REPRESENTATIVE SEATON said his understanding is that the production tax value is the gross value at point of production and that is what Alaska taxes, which is minus transportation minus costs.

CO-CHAIR FEIGE said his interpretation is that gross value at the wellhead is the West Coast price minus the transportation. Alaska taxes the net production value, which is the gross after subtracting the expenses, royalties, and capital and operating expenses. He understood Mr. Pulliam to be saying that after taxing it the way Alaska normally would, then based on the gross this is how Alaska compares.

MR. PULLIAM confirmed Co-Chair Feige's interpretation.

1:21:31 PM

REPRESENTATIVE SEATON understood, then, that the effective tax rate is based on looking at the ANS West Coast minus $10 and what percentage of that is paid in tax.

MR. PULLIAM responded correct. So, at a wellhead value - gross value - of $100, and a 20 percent effective tax rate under CSSB 21(FIN) am(efd fld), the State of Alaska would receive about $20 in taxes. Under ACES at a wellhead value of $100, the state would receive about $30 in taxes, even though the taxable value is not $100, but something lower subtracting capital and operating expenses. To be able to compare Alaska's tax rate with the other tax rates in the U.S., one or the other must be converted, and it was much easier to convert Alaska's to a gross equivalent and then compare.

1:22:32 PM

CO-CHAIR FEIGE surmised this effective tax rate would not include the application of any gross revenue exclusion (GRE).

MR. PULLIAM answered some GRE would be included because this is based on production that is forecast over the next five years. Thus, there would be a little bit, but not a significant amount. [See timestamp 1:25:15 p.m. where Mr. Pulliam corrects this answer, saying the graph on slide 4 is for legacy production which has no GRE and therefore no GRE is included in the effective tax rate depicted in the graph.]

1:23:04 PM

CO-CHAIR SADDLER inquired whether slide 4 is a snapshot in time now or looking forward.

MR. PULLIAM replied it is looking forward.

CO-CHAIR SADDLER asked whether the difference between Alaska and other states would increase or decrease if the wellhead value was at $80 per barrel and if it was at $120.

MR. PULLIAM responded as the price is lowered, in Alaska the tax as a percentage of the gross value will drop; and as the price is raised, the tax as a percentage of the gross value will increase.

1:23:42 PM

REPRESENTATIVE TUCK understood [the effective tax rate] does not include royalties. He understood royalties in North Dakota and Texas are around 25 percent. He asked whether his understanding is correct and if it would affect the graph on slide 4.

MR. PULLIAM answered the graph is simply severance taxes. In other states the royalties with state and private landowners vary between a low of one-eighth and up to 25 percent for more recent leases in some of the more productive Lower 48 areas.

REPRESENTATIVE TUCK asked whether royalties should be included when comparing total government take.

MR. PULLIAM replied those pieces are included when looking at government take. He said he will provide slides later in the presentation that look at total government take.

REPRESENTATIVE TUCK surmised Alaska would look better in those slides than it does in slide 4.

MR. PULLIAM agreed Alaska is a little bit closer when looking at total government take.

1:25:03 PM

REPRESENTATIVE SEATON inquired whether the graph on slide 4 depicts a five-year look forward.

1:25:15 PM

MR. PULLIAM first corrected his answer to [Co-Chair Feige's] question of 1:22:32 p.m., saying the graph on slide 4 is for legacy production which has no GRE and therefore no GRE is included in the effective tax rate depicted in the graph.

MR. PULLIAM then answered Representative Seaton's question, saying it is a projection over a 25-year period. However, he added, he did look at it over a 5-year period and it does not look any different over a period of 5 years than it does over 25 since the analysis uses the real 2012 price.

1:25:54 PM

REPRESENTATIVE SEATON surmised, then, that this calculation is counting on oil being $185 per barrel by year 25, and about $163 by year 20, and these are all rolled into the calculation.

MR. PULLIAM replied in nominal terms he does not know what the number would be in year 25, but said these are all done in terms of 2012 real dollars, so an inflation of 2.5 percent per year is included in the calculation.

1:26:38 PM

REPRESENTATIVE SEATON understood, then, that everything is inflated at 2.5 percent, including the costs, and therefore the costs in the graph are not inflated at the 6.5 to 8 percent history of the fields.

MR. PULLIAM responded that is not correct, the costs in his calculation are inflated at higher than 2.5 percent.

REPRESENTATIVE SEATON requested Mr. Pulliam to provide the committee with those figures.

1:27:12 PM

MR. PULLIAM resumed his presentation, providing a sample of how the tax would be calculated under CSSB 21(FIN) am(efd fld) with no production qualifying for the GRE at the per barrel prices of $80 West Coast ANS, $100, and $120 [slide 5]. He said his assumptions included 100,000 barrels in gross production at 12.5 percent in royalty barrels, resulting in 87,500 net taxable barrels. Focusing on the price of $100 a barrel, he subtracted $10 in transportation costs, arriving at a wellhead value of $90 per barrel. He then subtracted $30 in lease expenses, arriving at a taxable value of $60 per barrel for a total production tax value of $5,250,000. A 35 percent tax rate is next applied, arriving at $1,837,500. The $5 per barrel production allowance, totaling $437,500, is subtracted to arrive at a tax due of $1,400,000. This tax as a percentage of the net value of production is 26.7 percent, and as a percentage of the gross

value of production it is 17.8 percent. At a price of $80, the tax percentages drop [to 22.5 percent for net value of production and 12.9 percent for gross value of production]. At $120, the tax percentages increase [to 28.8 percent for net value of production and 20.9 percent for gross value of production].

1:29:14 PM

MR. PULLIAM provided another sample tax calculation, this time for production qualifying for the 20 percent GRE [slide 6]. Focusing on a West Coast ANS price of $100, he calculated that 20 percent of the $90 wellhead value is $18, which is subtracted from the wellhead value, as is the $30 in lease expenses, arriving at a taxable value of $42. Multiplying $42 times the taxable volume equals $3,675,000 in production tax value. At a 35 percent tax rate, the tax is $1,286,250. The $5 per barrel production allowance, totaling $437,500, is subtracted, arriving at a total tax of $848,750. This tax as a percentage of the net value of production is 23.1 percent, and as a percentage of the gross value of production it is 10.8 percent. [At a price of $80 per barrel the percentages are 15.8 percent and 5.9 percent, respectively, and at $120 the percentages are 26.4 percent and 13.9 percent, respectively.]

1:31:30 PM

MR. PULLIAM next summarized how state support, or credits, for capital spending work under ACES and under CSSB 21(FIN) am(efd fld) at a West Coast ANS price of $100 ($2012) and a capital spend of $1 billion [slide 7]. Under ACES, an incumbent would get a 20 percent qualified capital expenditure (QCE) credit, which would amount to $200 million. An incumbent would also have a tax reduction because of the higher per barrel expenditure and the effect of buying down the tax rate on existing production. The total value of the credit and buydown to an incumbent would be about $780 million. A new participant under ACES would have the same 20 percent QCE credit of $200 million and would also be eligible to monetize its net operating loss (NOL) at 25 percent, for a total credit of about $450 million. Thus, ACES provides a higher value to the incumbent than to the new participant. Under CSSB 21(FIN) am(efd fld), the values to both the incumbent and the new participant would be equal at an upfront credit of effectively 35 percent for $1 billion in capital spending. For the incumbent, the credit will be in the form of a tax reduction because the incumbent will be able to immediately expense its capital spending. A new

participant without a tax liability will be able to monetize its capital spending in the form of a credit with the state.

1:34:54 PM

MR. PULLIAM reviewed the $5 per barrel production credit from the perspective of its worth when thought about as replacement of the current capital credit [slide 8]. He explained the chart depicts the relationship between capital spending and the percentage on a net present value (NPV) basis of that $5 credit. Under CSSB 21(FIN) am(efd fld), each barrel of oil gets $5 of credit as it comes in over the years. A field producing 50 million barrels over 25 years would get a total of $250 million from this allowance. Since it would be coming over the life of the production of the field, that $250 million is brought back to the time that the capital is spent to develop the field; the sum arrived at is the net present value of it, let's say $150 million. Looking at that sum, that net present value of the $5 credit, as a percentage of the producer's capital expenditure, gives a sense of what this credit is providing, what kind of offset it is providing if it is looked at relative to the capital being spent - that is what is done in this chart. For example, at a per barrel capital spend of $20 the NPV is about 8 percent. So, if spending $20 per barrel to develop a field, the production credit would translate to about 8 percent of the amount of that capital expenditure on a net present value basis.

1:37:33 PM

MR. PULLIAM, in response to Representative Seaton, said he is using a discount rate of 12.5 percent in this example.

1:37:44 PM

REPRESENTATIVE SEATON asked whether an inflation of 2.5 percent per year is used over time.

MR. PULLIAM answered he does inflate that by 2.5 percent for each of the years. However, he pointed out, that spending is going to all occur pretty much in the first five years. The $5 per barrel credit does not inflate; it remains just $5 in nominal terms across the time of the production because the credit is structured such that it has no inflation aspect to it. In further response, he posed a scenario of spending $20 per barrel to develop a field of 50 million barrels, for a total upfront expenditure of $1 billion. Against that $1 billion, if 50 million barrels is produced, the producer will get cash of

$250 million over time. That $250 million divided by $1 billion is 25 percent. This chart brings back that $5 a barrel that is received over time and looks at it on a net present value basis - how a producer might be looking at this as the kind of support it is getting in a credit. From that standpoint, it is appropriate to look at that $5 value, the present value of that, at the time the capital is spent. What the value is of that $5 essentially at the time the capital is spent.

1:40:19 PM

REPRESENTATIVE SEATON understood, then, that this calculation is based on the expenditure occurring at the start and nothing is spent through time that calculates into this.

MR. PULLIAM replied this is assuming the capital is spent up front during the first five years of developing the field.

CO-CHAIR FEIGE interjected that this is when all the wells are drilled and the pipelines put in.

MR. PULLIAM confirmed it is when the facilities are put in.

1:41:06 PM

MR. PULLIAM resumed his presentation, turning to slide 9 to discuss the effective tax rate for a new participant with and without the GRE under CSSB 21(FIN) am(efd fld) on both a gross and a net basis. He first posed a scenario of a new development with no GRE at a $20-per-barrel cost of development. In this scenario, the effective tax rate on the gross, or wellhead, value would be a little over 0 percent at a West Coast ANS price of $60 per barrel in 2012 dollars, rising to just below 20 percent at $110, and approaching 25 percent at $160. The effective tax rate on the net, or taxable, value would be about 5 percent at a per barrel price of $60, rising to about 30 percent at $110, [on up to about 31 percent at $160].

1:43:02 PM

CO-CHAIR SADDLER requested a definition of "asymptotically."

MR. PULLIAM explained something approaching "asymptotically" means it gets closer and closer but never exactly touches. For example, the effective tax rate under CSSB 21(FIN) am(efd fld) will approach 35 percent, but it will never touch it and that relationship can be seen in the charts on slide 9.

1:44:33 PM

MR. PULLIAM continuing his discussion of the effective tax rate depicted on slide 9, posed the same new development scenario under CSSB 21(FIN) am(efd fld), but this time with the GRE. On a gross basis, the effective tax rate would be above 0 percent beginning at a per barrel price of $70, rising to about 15 percent at $130. On a net basis, the effective tax rate would be above 0 percent at a price of about $70, reaching 20 percent at $120 per barrel. Thus, the GRE has the effect of reducing the effective tax rate on production. At very low prices with the GRE, he noted, it can go into a negative tax rate situation due to the 35 percent monetization of the net operating loss.

1:45:35 PM

REPRESENTATIVE TARR inquired how low the price would have to go for that negative situation to happen.

MR. PULLIAM responded in this example it would be at about $70 per barrel West Coast. He pointed out this is currently happening under ACES, just at a higher level of 45 percent as opposed to a 35 percent level. Elaborating, he said it is happening at least at a 45 percent level for a new producer and at a higher level for an incumbent.

1:46:11 PM

CO-CHAIR SADDLER understood Mr. Pulliam to be saying that at prices below $70 a barrel with the GRE, the state would be losing money.

MR. PULLIAM answered for a new development it could be a negative tax situation for the state if prices did not go up above $70 a barrel. In other words, the state would expend more in monetizing the net operating loss up front than it would get back in taxes over the life of the field. Just the tax take would be negative, he added; the state would be getting royalties, so the total take to the state would not be negative.

1:47:09 PM

MR. PULLIAM resumed his discussion of the effective tax rate on gross and net value, reviewing the rates under ACES [slide 10]. Under ACES, he said, the effective tax rates on the gross and net values are generally higher for a new participant than for

an incumbent. This is because the incumbent has the ability to buy down its rate on its other production by having the new investment.

1:48:08 PM

REPRESENTATIVE SEATON requested Mr. Pulliam to elaborate further on the effective tax rate.

MR. PULLIAM stated that with GRE under CSSB 21(FIN) am(efd fld), the tax is negative at a price of about $70, whereas under ACES it would be negative at $60.

1:48:58 PM

REPRESENTATIVE SEATON recalled that when ACES was being constructed the thought was that some good years would give quite a bit of revenue to balance that, allowing the state to take that liability on the low end. [Under CSSB 21(FIN) am(efd fld)], he observed, the low end is moved out so the state has a liability but is not getting the relative counter-balance on the high end to put something in the bank to be able to absorb those losses. Therefore, he asked, how does CSSB 21(FIN) am(efd fld) with the GRE make the state more secure when looking at $70 and below and the state is subsidizing production taxes.

MR. PULLIAM agreed the state would be in a negative situation with the GRE. The way it makes the state more secure, he said, is that the state is more apt to get the development of those additional barrels with the rates that have been proposed with the GRE. If prices were below $70, the state would find it hard to get much activity because that is a pretty challenging price range for development on the North Slope.

1:50:47 PM

CO-CHAIR FEIGE pointed out that in the near term most of the production would not have the GRE applied to it.

MR. PULLIAM concurred, noting that at lower price ranges the effective tax rate on gross and net value under CSSB 21(FIN) am(efd fld) with no GRE pretty much tracks the rate under ACES. Above a price of $80 the two diverge.

REPRESENTATIVE SEATON remarked it is a question of whether the state wants a design where it subsidizes production development

out of royalty; it is a question as to what kind of long-range liability that produces for the state.

1:52:18 PM

REPRESENTATIVE TARR commented the third way to qualify for the GRE is not as well understood as the first two ways, plus the third way is at the discretion of the commissioner. She asked Mr. Pulliam how he determined what oil development would qualify for the GRE under CSSB 21(FIN) am(efd fld) when he developed the graphs on slides 9-10.

MR. PULLIAM replied he is looking at it as being either one situation or another, so he did not try to draw the graphs to say the percentage that would or would not. The lower line on the graph represents that 100 percent of the barrels qualify for the GRE and the higher line on the graph represents that 0 percent of the barrels qualify for the GRE. The actual mix of oil over time is going to be some combination of those two.

1:53:36 PM

MR. PULLIAM commenced his presentation, turning to slide 11 to compare the investment metrics for a new participant for a 50 million barrel development scenario at a mid-range cost assumption under ACES and under CSSB 21(FIN) am(efd fld) versus benchmark areas in the U.S. and around the world. At a 12.5 percent royalty rate, the net present value (NPV) at $100 per barrel under ACES is $3.09 while under the Senate bill it nearly doubles to $5.93. Under the Senate bill this would all be with the GRE because it is new development, he pointed out. For offshore Gulf of Mexico [the NPV is $6.22]. He directed attention to the other measures of profitability index, internal rate of return (IRR), and cash margins, stating the cash margins are better under the Senate bill than under ACES. He noted government take is nearly 14 percentage points less under the Senate bill than under ACES, bringing it out of the unattractive range and into the attractive range relative to the opportunities that producers would have elsewhere.

1:56:44 PM

MR. PULLIAM moved to a comparison of these same economics for an incumbent [slide 12]. Under the Senate bill, he pointed out, the columns for 12.5 percent royalty rate and 16.67 royalty rate look pretty much the same as they do for the new participant. On these incremental investment analyses, the ability of an

incumbent to buy down its existing tax rate increases the NPV and IRR relative to a new participant. So, for an incumbent, there is not much of a change when going between ACES and the Senate bill on an incremental basis.

1:57:52 PM

REPRESENTATIVE SEATON inquired what the number of years is for this scenario.

MR. PULLIAM believed most of the production here would go over 25 years. Two thirds of the oil, he added, is going to be produced in the first 10 years.

1:58:19 PM

REPRESENTATIVE SEATON requested these charts be prepared for the committee in nominal dollars because inflating it to 2.5 percent changes completely the calculations where there is or is not progressivity. At a price of $185 per barrel the calculation completely changes, he said. Both the legacy producers and new entrants have testified that they make their calculations and decisions on nominal dollars, not 2.5 percent inflated dollars. If these charts are prepared in nominal dollars, then a price of $100 per barrel will be $100 throughout the calculation.

MR. PULLIAM responded he can produce charts that way if the committee likes, but he strongly cautioned members against drawing any meaningful conclusions from that kind of analysis because he does not think it is correct. He said he does not think it will provide an appropriate way to look at the problem and he does not think it is the way industry would look at the problem either. In particular with a system like ACES, it would be problematic to ignore that inflation over time pushes a company's tax rates higher. He further noted that going all the way back to 2006, all the charts and presentations for PPT and ACES were done this same way.

2:00:58 PM

MR. PULLIAM, returning to his presentation, said the charts on slides 13-16 are the same as the last two slides except they change the cost assumptions [which can be found at the bottom of each slide]. He therefore left the charts for members to study on their own.

2:01:33 PM

MR. PULLIAM next looked at the cash flows to the state and to new and incumbent producers under ACES and CSSB 21(FIN) am(efd fld) using a scenario of $100 West Coast ANS ($2012) and a 50 million barrel oil development at mid-range cost [slides 17-18]. He said the relationships between these two bills do not change relative to what he presented to the committee at an earlier hearing [January 24, 2013, slides 59-60].

2:02:08 PM

MR. PULLIAM then reviewed the annual producer cash flows to a new participant and to an incumbent under ACES and CSSB 21(FIN) am(efd fld) using the same aforementioned scenario of $100 West Coast ANS ($2012) and a 50 million barrel oil development at mid-range cost [slide 19]. For both an incumbent and a new participant, spending occurs up front with revenues starting about year five. Under ACES, the incumbent's spending is lower than that of the new participant's because of the increased subsidy upfront through the effect of the buydown of the tax rate. The result of this difference is that the incumbent has a higher net present value [$277 million] than does the new participant [$131 million]. Under CSSB 21(FIN) am(efd fld), the upfront spending and revenues are virtually identical for an incumbent and a new participant because these two different classes of producers are now being treated identically under this proposed tax system.

2:03:43 PM

CO-CHAIR SADDLER observed that under ACES in year four, a bar is seen for the new participant but none is seen for the incumbent.

MR. PULLIAM said the bar [for the incumbent] cannot be seen because it is probably right at the zero line.

2:04:11 PM

MR. PULLIAM turned to discussing what he calls the "break-even analysis" [slide 20], which addresses how much new development it would take to offset the revenue being lost by going from ACES to CSSB 21(FIN) am(efd fld). He pointed out that the fiscal notes put out by the [Department of Revenue (DOR)] assume there is no change in production; the fiscal notes hold everything constant and look at what the different tax rates do. Of course, it is known that tax rates affect profitability and profitability is going to affect investment decisions. The

question everyone has is whether the state will get more oil production and will it make up for the tax cut. He explained slide 20 looks at how much more oil is needed for the State of Alaska to break even revenue-wise. Using [DOR's] forecast and the assumptions of a mid-cost [$20 per barrel] development and a West Coast ANS price ($2012) of $105, he looked at revenues the state could expect to generate on a per barrel basis at the one-sixth royalty rate [16.67 percent], which would be mostly new development, and at the one-eighth royalty rate [12.5 percent].

2:06:07 PM

MR. PULLIAM said the revenues generated over time under CSSB 21(FIN) am(efd fld) at [16.67 percent] royalty would amount to $35.50 a barrel in nominal dollars and $25.75 in real terms (2012 dollars). Additionally, each new barrel flowing down the Trans-Alaska Pipeline System (TAPS) would help spread the cost of TAPS and reduce the per barrel tariff. The impact of that reduction would increase state revenue by $3.50 per new barrel ($2012). He clarified the reduction in the tariff is not $3.50, the reduction is much smaller than that; however, expressed in total dollars in savings to the state across each new barrel produced, it works out to about $3.50 for each new barrel. At 12.5 percent royalty, each new barrel would generate $23 in production revenue and $3.50 in additional savings on TAPS tariffs, for a total of $28.50. Looking at the projected impact over the next 30 years assuming no production change, Mr. Pulliam said the nominal difference would be about $17 billion and, in 2012 real dollars, it would be about $12.9 billion. To make up those dollars at the aforementioned per barrel amounts, it would take 441 million barrels at 16.67 percent royalty and 487 million barrels at 12.5 percent royalty. At 16.67 percent royalty, this equates to needing to develop 15 million new barrels per year, or 40,000 new barrels a day, over the next 30 years. At 12.5 percent royalty, it equates to needing to develop 16 million new barrels per year, or 44,000 new barrels a day, over the next 30 years. Regarding how that amount of new development relates to estimates of what is left to find, he said that on state lands just in the Central North Slope the estimate is 3 billion barrels of undiscovered economically recoverable oil at $90 a barrel. Per year, that is 0.5 percent of what is left.

2:09:21 PM

CO-CHAIR SADDLER requested Mr. Pulliam to interpret the chart on slide 20 in one or two sentences.

MR. PULLIAM replied the sentence is how much more oil needs to be developed for the state to break even with the revenues that are estimated will be lost in moving from ACES to CSSB 21(FIN) am(efd fld).

CO-CHAIR SADDLER understood the answer to be 15 million barrels per year, each year, for 30 years; or [a total of] 441 million [barrels] over that 30 years.

MR. PULLIAM confirmed it would be about 15 million barrels a year of new oil for a total amount of between 440 million to 487 million barrels. In further response, Mr. Pulliam confirmed that each year the production equivalent of 40,000 barrels would have to be added per day over the production that is forecast. He said this example assumes it is all new production and he has applied the GRE to all of this as well as the $5 [per barrel] credit. If additional oil is brought on that does not qualify for the GRE, then the volumes required would be lower.

2:10:46 PM

REPRESENTATIVE TARR asked what discount rate was used to calculate breaking even. She further asked what year during this period of 30 years was assumed for when the new barrels would come on line.

MR. PULLIAM responded the figures are all done in real 2012 dollars, so the discount rate is implicitly 2.5 percent. He believed his assumption was four years from now for when new oil would start coming on line.

2:11:31 PM

MR. PULLIAM resumed his presentation, addressing how reasonable it is that this new production will happen. There is no formula that will predict, he noted, but it can be looked at as to whether this is or is not a gargantuan task. As seen on slide 20, what needs to be developed is 0.5 percent of undiscovered resources each year; over 30 years that is about 15 percent. From the standpoint of physical capability that would not seem to be an unreasonable amount, but what would that take capital-wise? Assuming a development cost of $20 per barrel, he calculated it would be about $300 million [slide 21].

2:12:40 PM

MR. PULLIAM, in response to Co-Chair Saddler, reiterated there is [an estimated] 3 billion barrels of undiscovered oil. In further response he confirmed that 0.5 percent of 3 billion barrels would have to be found and produced per year, for a total of about 15 percent [of the 3 billion barrels]. Thus, new production does not have to be more than what is thought to be left and economically available.

CO-CHAIR SADDLER surmised, then, that this is not a pipe dream and is within the realm of possibility.

MR. PULLIAM concurred.

2:14:03 PM

MR. PULLIAM returned to slide 21, saying that at a per barrel development cost of $20, about [$300 million] per year in additional investment would be needed. Relative to the $2.4 billion invested in 2012, this would be about a 12.5 percent increase in investment, so not a gargantuan level of increase.

2:14:40 PM

REPRESENTATIVE TARR recalled hearing that some of the current investment is related to the credits [under ACES], some of which would be going away under CSSB 21(FIN) am(efd fld). She inquired what the impact would be given that CSSB 21(FIN) am(efd fld) removes 10 percent of the incentive available now for some of that capital investment. She further recalled criticism that the [current] credits have not lead to new production and asked whether there should be a more critical look at where that $2.4 billion was spent to see the impact of where those dollars go.

MR. PULLIAM, regarding whether the credit coming down would make the spending less likely, answered he would say no because the credit is a part of an overall system. While the current overall system has a higher level of credit, it has a much higher level of take once the oil starts to be produced; so the overall economics are not as attractive as the lower credit and the lower take proposed under CSSB 21(FIN) am(efd fld). He added he does not think there is any question about that and cautioned against getting wrapped up in the credit by itself. For example, taken to an extreme, there could be an 80 percent credit, but a tax of 90 percent, and this would take the state the other way. The credit must be treated as part of the overall package because how the investment economics work for that package is how it is looked at.

MR. PULLIAM, regarding Representative Tarr's second question that some of this money was spent in other ways, said he hopes it is not being spent in ways that do not lead to production. However, even if it did, it is part of this $2.4 billion and how much more is needed to get to the development of 15 million barrels a year. It is really that increment that is being talked about, and that increment is about $300 million, which is 12.5 percent of what was spent in 2012. It gives a sense as to how gargantuan is this task.

2:17:30 PM

REPRESENTATIVE SEATON expressed skepticism regarding Mr. Pulliam's answer to Representative Tarr's question about the 10 percent loss in credit, saying those are dollars now for new development. While CSSB 21(FIN) am(efd fld) says that 10 years from now when a producer has some oil flowing there will be less take, it also says the small producer must spend at least 10 more years. Additionally, the Senate bill would take away the small producer tax credit and when production started the small producer would immediately have to start paying tax. He said he would like to see more analysis than just a statement, given the small producers have told the committee that [HB 72/SB 21] would probably change their decisions of investing in Alaska because of the risk and long-term investment. A promise in the future and more expense now changes the risk/reward for other options the small producers have, such as in the Lower 48. He requested Mr. Pulliam to discuss this issue further.

2:19:15 PM

MR. PULLIAM replied he has had discussions and has listened to all of the testimony of the small producers. In those discussions the small producers were focused on SB 21 as introduced; that version provided no ability to monetize the losses, so the small producers would have gone from being able to monetize 45 percent of their expenditure to having to carry forward that full amount. In his view, the one producer most concerned about that was Pioneer Natural Resources Alaska, Inc.; however, viewed as a package, he said he thinks the others looked at the change more favorably. As the bill worked its way through the Senate the small producers came back and talked to that body; he suggested committee members particularly listen to Armstrong Oil & Gas, Inc. and Brooks Range Petroleum Corporation. Although he did not recall Pioneer coming back after the changes proposed in the Senate, he said he thinks

Pioneer views the package as being very favorable and pro-investment.

MR. PULLIAM, regarding more analysis, referred Representative Seaton to the chart on slide 11 in which a lot of analysis was done looking at the value and investment metrics of this proposal. Mr. Pulliam contended the proposal undoubtedly raises the value of this investment on any level to a new participant, even without the additional 10 percent credit or the carry forward of the small producer tax credit. He pointed out that the NPV is doubled, the profitability index (PI) is increased, the internal rates of return (IRR) go up, the cash margins go up, and the government take goes down. Sure, if he was a producer getting credits he like to keep getting those and also have lower taxes. However, he continued, the package under CSSB 21(FIN) am(efd fld), from the standpoint of either a new participant or incumbent, is much stronger from an investment standpoint than what Alaska has under ACES.

2:21:52 PM

CO-CHAIR SADDLER inquired whether it is true that replacing credits, like the current qualifying capital expenditure (QCE) credit that does not necessarily lead to production, with the GRE and the $5-per-barrel credit will lead to investment that is more efficient or more focused on actual production.

MR. PULLIAM offered his belief that it will and is a better way of providing the kind of incentive to get additional barrels than simply having the QCE credit.

2:22:29 PM

MR. PULLIAM, resuming his discussion of the reasonableness test, displayed a graph [slide 22] of the estimated capital spending for exploration and development on Alaska's North Slope compared to spending in the rest of the U.S. and the world for the years 2003-2012. Over that time period, he said, Alaska's spending went up about 250 percent total, whereas worldwide spending went up about 400 percent and U.S. spending went up a little more than 450 percent. Keeping these numbers in mind, he turned to another reasonableness test depicted on slide 23, noting that had investment in Alaska kept pace with the rest of the world, an additional $1.6 billion would have been spent in Alaska in 2012. Responding to Co-Chair Saddler, he reiterated that worldwide spending went up 400 percent over the last decade. Spending in Alaska in 2003 was about $1 billion, and had

spending in the state gone up at the same rate as worldwide, Alaska would have been at $4 billion in spending in 2012 instead of the actual $2.4 billion, a difference of $1.6 billion. Continuing, he said he is asking the question of what that $1.6 billion would turn into in terms of development. At $20 per barrel [in production cost] it is about 80 million barrels and Alaska needs 15 million barrels a year; so, from the standpoint of keeping up with the Jones's, Alaska would be there.

2:24:37 PM

REPRESENTATIVE TARR inquired how the unique situation of joint operating agreements on the North Slope is accounted for. In the past, she said, expenditures desired by some partners were vetoed by one of the partners so that the spending did not go forward.

MR. PULLIAM disagreed the North Slope joint operating agreements are unique. He said there are joint operating agreements worldwide that require agreement amongst owners and that are operated in similar ways as on the North Slope. Rarely does a big field have just one owner; therefore, he would say that is one thing that makes them comparable. Additionally, in looking at effects over time since 2003, the same issue of joint operating agreements remains on the North Slope, so he does not try to untangle that from the analysis. It is an issue, but it is an issue in Alaska as well as elsewhere and he does not know that it could be untangled from analysis even if that was wanted.

2:26:32 PM

REPRESENTATIVE TARR asked whether it is possible to get the representative companies and actual data used to produce the graph on slide 22.

MR. PULLIAM responded that, with respect to the North Slope, he does not think he can provide the underlying data because it is confidential, but he can provide it in aggregate form. With respect to the others, he said he does have the details for some of the years as opposed to just the aggregate.

CO-CHAIR FEIGE noted this is a repeating issue that comes up. Based on the confidentiality of these tax returns, he continued, at least three of them must be aggregated to provide a number.

REPRESENTATIVE TARR said BP's [recent oil spill] in the Gulf of Mexico may have limited the company's opportunities for investments in North American and elsewhere. Therefore, it would be helpful to more critically examine the data used to create the graph.

MR. PULLIAM agreed to provide as much detailed information as he can. The worldwide and U.S. figures in the graph are all public information, he continued, so there is no confidentiality there.

2:28:04 PM

REPRESENTATIVE SEATON said he would like to distinguish Prudhoe Bay from other places on the North Slope and around the world because it requires the agreement of all three owners for investment to move forward. According to the information he has, only one other field in the world has the same criteria where all participants must agree to the investment or the project is vetoed. He recalled that two enhanced oil recovery projects in Prudhoe Bay were proposed and sanctioned by BP, but were vetoed by Exxon. He maintained there is a broader question here if Alaska is counting on Prudhoe Bay being most of that 5 percent that needs to be developed because there is a greater restriction in that than other fields. He requested Mr. Pulliam to discuss this further in writing.

MR. PULLIAM answered that, first, most fields are operated in a manner where, at the very least, there must be majority agreement to move forward on anything. Second, this is not a situation new to Alaska; it has been here so that aspect is controlled for in his analysis when looking at the potential of changing from one level to another. Third, it is looking at a situation of changing the tax climate and making things more profitable and how likely it is to see a favorable investment response. Those metrics have been looked at to see whether they have been made attractive here versus opportunities elsewhere. Lastly, the revenue requirement he looked at has anticipated that this would all qualify for the GRE, so it would all be new production, and then couching it in terms of what is undiscovered. Prudhoe Bay is something that has been discovered and it would be great to get some more production there as well, and the economics - the proposed changes - make that a high probability. However, what he is showing here is that more production from Prudhoe Bay is not required to get to the kind of volumes that are needed.

2:31:34 PM

CO-CHAIR FEIGE asked where the other field with the same kind of joint operating agreement [as Prudhoe Bay] is located.

REPRESENTATIVE SEATON replied he does not recall its name, but that it is in Indonesia and is associated with a large pipeline. He said he was at a Pedro van Meurs' tax seminar and a fellow from Australia was familiar with only one other field in the world that had this same constraint as in Prudhoe Bay.

2:32:37 PM

REPRESENTATIVE TUCK, referring to slide 22, asked whether U.S. spending includes or excludes the Alaska North Slope.

MR. PULLIAM answered he subtracted the North Slope from U.S. spending to get the figures on the slide. In further response, he clarified that the published U.S. figures include the North Slope, but for this slide he subtracted out the North Slope.

REPRESENTATIVE TUCK inquired whether Mr. Pulliam subtracted U.S. spending from the worldwide spending.

MR. PULLIAM answered the worldwide spending includes the U.S.

2:33:25 PM

CO-CHAIR FEIGE said that does not work and asked whether the worldwide spending depicted on slide 22 includes the U.S.

MR. PULLIAM replied the U.S. is part of the world.

REPRESENTATIVE TUCK said Alaska is part of the U.S. but was excluded from the U.S.

MR. PULLIAM responded he subtracted Alaska from all of these figures.

2:33:48 PM

CO-CHAIR FEIGE said the bar on the graph for worldwide spending, then, would have to be higher than the U.S. bar.

MR. PULLIAM clarified the bars on slide 22 are indexes, so it is changes over time that are being looked at. To explain how the bars are constructed, he pointed out that spending in Alaska in 2003 was $1 billion, so the index value is 100 on the graph.

Spending in Alaska rose to about $2.4 billion in 2012 so on an index basis that is 240; thus it is 240 percent of the level it was in 2003. While Alaska was at $1 billion in 2003, U.S. spending was probably $100 billion and worldwide spending was probably $250 billion. Thus, this graph is showing that U.S. spending overall has increased the fastest, and worldwide spending has increased a bit slower than the U.S., and Alaska is slower than either one.

2:35:20 PM

REPRESENTATIVE TUCK asked why the North Slope is not included in the overall average worldwide spending.

MR. PULLIAM replied that could be done, but the picture would not look any different because spending in Alaska is so small relative to the world. What is trying to be done is compare changes in Alaska to changes elsewhere. In doing that, subtract Alaska out and look at Alaska versus the U.S. and versus the rest of the world.

2:36:16 PM

REPRESENTATIVE TARR noted that some of the earlier years depicted on slide 22 include years where Alaska's tax system was under the economic limit factor (ELF) under which there was effectively no tax on some of the largest producing fields. She surmised if overall behavior is related to tax rate, then Alaska should have seen significant spending under that scenario.

MR. PULLIAM responded it can be seen during that time period that spending increases in Alaska are roughly consistent with spending increases elsewhere in the world. Spending in that early period was not held back by the tax rate, but rather by the low oil prices. The rate of increase everywhere in the world is not the kind of increase that has been seen in the last five years as compared to the first five years of that [2003-2012] time period.

2:37:26 PM

MR. PULLIAM continued his presentation, moving to slide 24 and again resuming his discussion of the reasonableness test. He said a group of economists studied the impact of tax rates by constructing a model to try to predict the impact of changes in tax rates on drilling, among other things ["State Taxation, Exploration, and Production in the U.S. Oil Industry" by Kunce,

Gerking, Morgan, and Maddux, November 26, 2001]. The authors looked at rates in a number of different states, constructed a model, and then applied their model to Wyoming.

2:38:53 PM

REPRESENTATIVE HAWKER inquired whether Mr. Pulliam places high or low credibility on the quality of work in this study.

MR. PULLIAM replied it is not a peer-reviewed study. He said he has looked at the study, but has not dug into any of the underlying calculations. Directionally, the results look correct, but he cannot say about the magnitude of them. He said Professor Gerking talked to the Alaska Senate last year about potential impacts in Alaska, but may not have been familiar at that time with the Alaska tax system; Mr. Pulliam offered his belief that all the analyses were done based on the old gross system. He reserved judgment on the study, but said the kind of impacts talked about, and the measuring on drilling responses to tax rate changes, do seem reasonable and some of the results in the study match with the reasonableness tests he is presenting to the committee.

2:40:27 PM

MR. PULLIAM returned to his presentation, saying the economists in the aforementioned study went through a thought experiment by looking at Wyoming to see what would happen if the tax rate was doubled in that state. They found that doubling the tax rate did not have a huge impact on production, but Wyoming got a lot more production taxes. They also found that while the doubling did not have a huge impact on production, it had a big impact on drilling - and, in Alaska, drilling is the driver of getting additional production. Something to keep in mind, he pointed out, is that doubling the tax rate in Wyoming is going from 5.3 percent to 10.6 percent, about a 3 percentage point change in government take. Directing attention to page 22, table 3, of the Gerking study he noted that a doubling of the tax results in a 19.4 percent drop in drilling. Moving to slide 24 of his presentation, Mr. Pulliam said he decided to turn that result around and calculate the percentage if taxes were dropped from 10.6 percent to 5.3 percent and found that it would be a change of about 23 percent. Thus, for each 1 percent drop in the severance tax rate there is about a 4 percent change in drilling. Under CSSB 21(FIN) am(efd fld), Alaska is looking at about a 10 percent drop in the effective gross tax. So, if this same kind of relationship in drilling impact holds in Alaska,

that would suggest about a 43 percent change in drilling. In 2012 the Alaska North Slope had 60 wells started that produced; a 43 percent increase would be about 26 additional wells a year. In the first year of production, 26 wells would produce about 11 million barrels. Assuming a 15 percent decline over the life of the production, that would be about 72 million barrels, which is a lot higher than the 15 million barrels the committee just looked at.

2:43:32 PM

MR. PULLIAM allowed he cannot say whether the results translate from Wyoming to Alaska, although the authors of the study think the results would be generally applicable. To further test the reasonableness of achieving breakeven development, Mr. Pulliam said he therefore conducted the same analysis as he did on slide 24, but at half the predicted response rate, which translates into 13 new well starts per year [slide 25]. Over the life of those wells, about 36 million barrels would be produced, which is more than double what Alaska would need to break even on revenues.

2:44:36 PM

REPRESENTATIVE SEATON noted the Gerking study is from November 26, 2001, when oil prices were $14-$20 per barrel; increasing the tax from 5.3 to 10.6 percent on the gross at such a low price would mean going bankrupt or backwards. He said he is skeptical on how doubling a gross-based tax at low prices is applicable to a profit-based tax at today's prices. He continued: "That is why we are here is because people are saying ... we went to a scenario at $65 a barrel and now we are $100 a barrel, and ... is the applicability the same. ... Taking this assumption for reasonableness and saying that we were in $15 a barrel oil and we are doubling the gross tax rate, which you have to pay no matter whether you are making a profit or not. I think those outcomes and those decision points ... could be quite different."

MR. PULLIAM agreed they could be different and added that these kinds of things are taken with a grain of salt. There is not a lot of work in this area, he said, it is a very difficult thing to tease out. But this is an example of one that has been done and the kind of relationships that were found. One of the reasons he ran a sensitivity test is in case these things do not directly translate over - perhaps it is only one-half or one-third that effect [slide 24]. However, it is all still pointing

to say that that breakeven volume is something that is doable and is not a big stretch, which is the point here.

2:47:33 PM

CO-CHAIR SADDLER commented this is an interesting calculation and said he would like to have more familiarity with it before he gives it a lot of credence. He asked whether this is the only test of reasonableness and why this particular one was presented to the committee.

MR. PULLIAM responded he looked to see whether there are studies that have looked at what effect might be gotten from a tax rate change. There is not a lot and this is the one he has seen. Also, one of the authors talked to the legislature last year.

2:48:26 PM

CO-CHAIR SADDLER said Representative Seaton has basically questioned the validity of the study because it is old and different conditions. He inquired whether there is a better, more reliable, more up-to-date study.

MR. PULLIAM answered he does not believe there is something more reliable or more up-to-date, and he is not saying that this study is. There is not a formula he can give the committee, he reiterated. [The Gerking study] is one piece among several: slide 20 looks at how reasonable is it to expect that Alaska might get this kind of change; slide 11 looks at the investment metrics, which would increase considerably. Then there is looking at how much more production is needed - which is 15 million barrels a year - and how that relates to what is left [to be discovered]. That 15 million is not a lot, so from that standpoint it would be reasonable to assume that Alaska could get it. Slide 21 looks at how much additional capital would be needed to get that 15 million barrels; that capital is $300 million a year, a 12.5 percent increase from 2012. Achieving this increase is not a stretch as can be seen on slide 23 which looks at the spending increases that have happened in the rest of the world under tax rates that Alaska would be more comparable to. The Gerking study is another piece that suggests such an increase is not an unreasonable result. While he would not use this study to predict, it is one piece to consider.

2:50:25 PM

CO-CHAIR FEIGE understood Mr. Pulliam to be saying he is not really predicting that this is going to be the end result; just that the possibility exists that it could be done.

MR. PULLIAM replied one has to look and balance the evidence.

2:50:37 PM

CO-CHAIR SADDLER understood the last three lines of slide 23 to be saying that if Alaska had seen the same increase in capital investment as had the rest of the world, Alaska would have had $1.6 billion more spending which would have encouraged the production of an additional 80 million barrels of oil.

MR. PULLIAM said $1.6 billion would be enough to develop an additional 80 million barrels at $20 a barrel. In further response, he confirmed this would not be per day.

CO-CHAIR SADDLER, continuing, understood it would take 15 million barrels per year for the state to break even or get back what it has given in lower tax rates.

MR. PULLIAM responded correct. Responding further, he confirmed that 65 million barrels is the additional amount of production [per year] that Alaska could have seen if investment in Alaska had been at the same rate as in the rest of the world.

2:52:07 PM

MR. PULLIAM, skipping slide 26, concluded his presentation by moving to slide 27 to discuss how the divisible income is divided up between state government, federal government, and producer. The divisible income is the net value of the oil after costs, explained. Under ACES, at a West Coast ANS price of $60 ($2012) per barrel, the state take is a little more than 40 percent. State take includes taxes, royalties, ad valorem, and income taxes. At $120 the state take is just shy of 60 percent and at $140 the state take is just over 60 percent. Producer take declines over this price range [to about 39 percent at $60, about 28 percent at $120, and about 26 percent at $140]. Under CSSB 21(FIN) am(efd fld), the takes basically remain flat across the price spectrum: state take is about 43 percent at $60, rising to about 45 percent at $140; producer take is in the mid-30 percent range, slightly declining as the state take rises; and federal take is just below 20 percent.

2:53:39 PM

REPRESENTATIVE P. WILSON observed that [under CSSB 21(FIN) am(efd fld)] the take for each entity basically remains the same between a price of $60 and $140 a barrel. She asked whether this is still the case at prices below $60 and above $140.

MR. PULLIAM answered that at the top range it does not really change much from what is seen on slide 27. At very low prices the state take would go up - the state would get regressive at lower prices.

2:54:21 PM

REPRESENTATIVE SEATON inquired what dollar amount is being transferred from the state to the federal government at the price of $120 per barrel.

MR. PULLIAM replied he does not know the dollar amounts, but under ACES the federal take is about 14 percent and under CSSB 21(FIN) am(efd fld) it is just below 20 percent. The federal government gets its share from a combination of the state and the producers because what producers pay in state taxes is deductible against their federal taxes. The producers will have more profit, which will be shared 35 percent to the federal government and 65 percent to the producer.

2:55:37 PM

REPRESENTATIVE TUCK observed the maximum price depicted on slide 27 is $140 and noted that the Organisation for Economic Co-operation and Development (OECD) forecasts prices of $170-$220 in 10 years. He requested Mr. Pulliam to prepare a graph that goes up to a price of $250 a barrel.

MR. PULLIAM agreed to do so.

2:56:17 PM

REPRESENTATIVE TARR returned to slides 24-25 and requested Mr. Pulliam to prepare a chart for government take that drops from 60 percent to 50 percent, so the difference can be seen between going from 60 to 55 percent versus 55 to 50 percent in an effort to determine the "sweet spot" for getting this new amount of investment.

MR. PULLIAM replied these relationships will not be continuous because at some point government take is going to "choke it off

... you are going to fall off the cliff" and which is where he thinks Alaska has been. So reducing 10 percentage point from that level down may well get a much bigger impact than increasing government take in a system that goes from 5 percent to 10 percent; that is a 3 percentage point government take at a fairly low government take level. So, with that background, he would not be surprised to see a bigger impact with the kind of change being talked about than just a proportional change in the government take.

2:58:10 PM

REPRESENTATIVE TARR requested Mr. Pulliam to do some evaluation of that for the committee, perhaps looking at Alaska's current government take and evaluating it by percentage point change and then 1 or 2 percent beneath that; something that would give the committee an idea of the bang for the buck in a bracketed way.

MR. PULLIAM responded doing it quantitatively would be a gargantuan task, but said he can provide a qualitative analysis.

2:59:00 PM

CO-CHAIR FEIGE thanked Mr. Pulliam for presenting the governor's point of view. He recessed the meeting to a call of the chair, saying the next presentation will be from the legislature's consultant [Janak Mayer, PFC Energy].

4:40:02 PM

CO-CHAIR FEIGE called the House Resources Standing Committee meeting back to order. Representatives P. Wilson, Tuck, Hawker, Saddler, and Feige were present at the call back to order. Representatives Johnson, Olson, Seaton, and Tarr arrived as the meeting was in progress. Representative Herron was also present.

4:40:12 PM

JANAK MAYER, Manager, Upstream and Gas, PFC Energy, stated Econ One Research provided a good introduction to what CSSB 21(FIN) am(efd fld) would do. To frame the issues and aims overall, he said he will start with the fundamental problems that PFC Energy has identified with Alaska's Clear and Equitable Share (ACES) and where and how those issues are addressed in CSSB 21(FIN) am(efd fld) [slide 2]. He said the largest issue, and the center of debate, is the high government take under ACES. The

very high degree of progressivity under ACES means Alaska's regime, relatively speaking, is uncompetitive compared to many jurisdictions it would be competing against for investment capital, particularly at the current high price levels. Another issue under ACES is capital credits and the significant downside exposure these create for the state in low price environments, for high cost projects, and for projects that are not entirely or not at all on state land. The capital credits, plus the producer's ability to buy down its tax rate through spending, means there are many different circumstances under which the state can find that on a production tax basis, it effectively contributes more in low price environments and for high-cost projects than it actually reaps through the production tax. That is particularly the case for a project that is not entirely on state lands where the royalty received by the state is also substantially less, but the royalty is still making the same effective contribution through tax credits to the cost of development of a project.

4:43:21 PM

MR. MAYER said all of the aforementioned points come back to a common one - the issue of high marginal rates. High marginal rates under ACES create the buydown effect, meaning if a producer has a current high level of tax under ACES because of where it is on the progressivity scale, it can reduce its tax burden by spending additional capital. This benefit accrues to an incumbent producer but not to a new development. In addition, it is not always clear that that benefit actually translates into the way a company looks at the economics of its projects. It is a case after the fact once a producer knows exactly what the oil price was. In terms of the way a company runs economics on a project, the benefit it gets from rates of return and other things from the buydown effect is in some ways ephemeral - it is nice to have but a company cannot always rely on it. But, it does mean that a producer gets very different economics when it looks on an incremental basis and a stand-alone basis and it is not always clear which of those, even to an existing producer, best represents the actual fundamental economics of the project. Even if a producer chooses one or the other, it is very different economics between a new development for a new producer that has no production versus a new development on an incremental basis for an existing producer.

4:45:11 PM

MR. MAYER emphasized ACES is a complex system because of the many different components and because of all the different capital credits. But, ultimately, it is most complex because it is very difficult to take a simple look at the system and understand what it does because what it does and how it works is very different in different price environments for different types of producer. More than anything, he opined, it seems the state should be seeking to create a much more overall level and neutral playing field that treats everyone the same - that gives everyone the same basic economics - and he will later talk about how CSSB 21(FIN) am(efd fld) achieves that. The very high marginal rates also mean that producers face very little incentive for greater efficiency in costs. If a producer is faced with an effective marginal tax rate of 70, 80, or almost 90 percent, the benefit it gets from saving $100,000 is ultimately one-fifth to one-tenth of its savings and unless there is significant benefit from making investments to achieve efficiencies, in many cases it will not be worth doing so under ACES. Ultimately, these all add up to a complex system with often counter-intuitive effects.

4:46:41 PM

MR. MAYER reviewed how CSSB 21(FIN) am(efd fld) aims to tackle the aforementioned issues. Most significantly, he said, through eliminating progressivity, CSSB 21(FIN) am(efd fld) creates an overall neutral regime that gives a steady level of government take across a very wide range of prices - essentially close to 65 percent government take at prices as low as $70 a barrel to over $160. The bill limits the downside risk to the state from the capital credit by eliminating the capital credit. However, it does not eliminate the downside risk because it maintains the net operating loss (NOL) credit, which is at the rate of 35 percent rather than [the current] 25 percent to go with the higher 35 percent base rate. That seems a manageable downside risk, he said, because it is 35 percent effective government support for spending versus the 45-90 percent effective support for spending under ACES depending on whether one is a new or incumbent producer.

4:48:07 PM

MR. MAYER addressed the question that came up during Mr. Pulliam's testimony about the possibility of negative taxes from the gross revenue exclusion (GRE) in a low price environment under CSSB 21(FIN) am(efd fld). He confirmed that that is the case, saying it would be a remaining exposure to the state under

the Senate bill. However, he continued, that exposure also exists under ACES; the difference under CSSB 21(FIN am(efd fld) is that most of the downside risk is controlled because of eliminating the capital credit. It remains an issue primarily with projects that are eligible for the GRE - so, by definition, no existing production and only a small portion of production over the coming years as new projects come on line. Most importantly, CSSB 21(FIN) am(efd fld) achieves a balance within the system through completely even impacts for an incumbent versus a new producer. It suddenly becomes very clear to assess how the system works, what it means for any number of different producers because its impacts are equivalent across the spectrum and across a wide range of prices.

MR. MAYER further said that a neutral regime also creates just one low, constant marginal rate. The marginal tax rate under CSSB 21(FIN) am(efd fld) is the 35 percent that is specified in the base rate, creating a very strong incentive for producer efficiency in cost control of investments that can bring down costs and increase efficiencies. A balanced regime for both a large and small producer, along with elimination of the capital credit, allows for the 2016 sunset of both the small producer tax credit and the exploration credit under CSSB 21(FIN) am(efd fld). The state is still able to achieve its intention that small producers are not disadvantaged, while getting rid of a number of the perverse and counter-intuitive aspects of ACES. Particularly once those things have been sunset, the state will have an overall much cleaner and much simpler fiscal system.

4:50:57 PM

REPRESENTATIVE SEATON said he is trying to figure out the idea that the balanced system is this goal the state has. The state was trying to incentivize production from new participants through its tax regime, he continued. They responded actively and the state has lots of new participants, leases, units applied for, and exploration drilling taking place. The higher marginal amount for the producers did not stimulate them to invest in the legacy fields. It sounds like it is being said that a legacy owner cannot analyze what it is with existing production. They know they have a higher buydown, higher marginal rate, and that they get a lot more investment on an individual expenditure from the state, yet they have chosen not to accelerate their capital spend and increase production like the smaller participants have. While both systems would be analyzed as being the same [under CSSB 21(FIN) am(efd fld)], the state would have less incentive for the producers because they

will get less support at high prices and there will be fewer credits available for the new producers. He asked how this new balance achieves the goal of stimulating the investment.

4:53:28 PM

MR. MAYER replied he does not concur that ACES has been a boon for small producers and has attracted an enormous number of them to the state. Looking at who is actually in Alaska and active, Nikaitchuq and Oooguruk are the best examples of significant projects that have come on line in recent years, and they were discoveries that occurred and were put into sanction before ACES. Ultimately, he continued, ACES had a detrimental impact on the economics of those projects. A number of explorers have come to Alaska and potentially made promising finds but said it would require a better tax regime. So, in his opinion, it is not quite clear that somehow ACES has been a boon to small producers in that sense. It certainly is a boon if a company is just an explorer just looking to prove up a prospect with no intention of taking that into production because it provides that explorer with a high level of government support for exploration costs. Beyond that, it is hard to see how ACES helps, whether a small or large producer.

4:55:06 PM

MR. MAYER, continuing his response, said his comment on incremental economics was not that people are unable to figure out what the benefit is. Rather, producers assessing the economics of projects look at them in a wide number of ways and a project needs to make sense on a stand-alone basis before looking at the question of after-tax benefits. A large developer producing a large project is not developing a project in order to purchase tax equity for itself. It is looking to make a substantial investment in a long-term asset that produces significant cash flow over the very long term in a very, very wide range of price environments. Being able to look at a chart and seeing that, in theory, a magical internal rate of return (IRR) can be had if the producer can get an oil price of exactly $120 over the next 20 years, does not help that producer in the real world of actually assessing project economics. It seems ACES is a system engineered to achieve certain magic goals, like a higher IRR at $120 if an existing producer is looking just at that one price level at incremental economics. It is the system that one creates when trying to pull as many levers as possible to hit particular targets, rather than a system that one creates if saying that what is wanted is an overall, simple, balanced,

competitive regime that lets the private sector make the crucial decisions about allocation of capital and prices at a level playing field and then let the private sector play.

4:57:16 PM

MR. MAYER commenced his presentation, discussing the key changes that CSSB 21(FIN) am(efd fld) would make to the state's current tax system under ACES [slide 3]. The current base tax rate would be increased to 35 percent, explained. Progressivity as a separate construct under ACES would be eliminated; however, the $5 per barrel allowance under CSSB 21(FIN) am(efd fld) would be an implicit progressivity that is progressivity just sufficient to counteract the regressive nature of the royalty and provide an overall balanced, steady, neutral level of government take. The maximum tax rate of 75 percent under ACES would be reduced to a maximum 35 percent, also known as the base rate under the Senate bill. Further, CSSB 21(FIN) am(efd fld) provides incentives for new production. [A gross revenue exclusion (GRE)] would apply to new producing areas, expansions to existing producing areas, or areas in legacy fields that are not currently contributing to production that the Department of Natural Resources (DNR) has certified as such. The Senate bill eliminates the current capital credits and the net operating loss (NOL) credit would be increased from 25 percent to 35 percent to match the Senate bill's base rate. Additionally, the NOL credit would be monetized over one year rather than two years. Also, CSSB 21(FIN) am(efd fld) would sunset the current small producer credit and the exploration credit in 2016.

4:59:21 PM

MR. MAYER compared government take at base production between ACES and CSSB 21(FIN) am(efd fld) [slide 4]. He pointed out ACES is a steeply progressive tax system that rises particularly steeply from a West Coast Alaska North Slope (ANS) price of $70 a barrel to $120-$125. The $120-$125 reflection point roughly matches with $92.50 a barrel in production tax value. Beyond $125, the progressivity levels out somewhat but still steadily increases until going above 75 percent government take at $150, ultimately reaching over 80 percent government take at the highest price levels for existing production. Under CSSB 21(FIN) am(efd fld), progressivity is replaced with essentially a nearly flat 65 percent government take, coming down to about 64 percent at the lowest price levels.

5:00:31 PM

REPRESENTATIVE TUCK inquired what the value is to the State of Alaska for each percentage point.

MR. MAYER replied he will need to check, but his guess is around $100 million.

CO-CHAIR FEIGE asked at what price.

MR. MAYER responded at the current oil prices of $100-$110.

5:01:10 PM

MR. MAYER turned to discussion of the new production that would be eligible for the gross revenue exclusion under CSSB 21(FIN) am(efd fld) [slide 5]. Under ACES, rates of government take are actually higher for new developments on a stand-alone basis than for base production or a new project on an incremental basis, rising to rates substantially above 75 percent at upper price levels. However, the Senate bill seeks to further incentivize new development by applying the GRE, essentially getting the government take down to 60-61 percent across a very broad range of prices.

5:02:11 PM

CO-CHAIR SADDLER requested a definition of stand-alone project.

MR. MAYER answered stand-alone means looking just at a new project by itself with nothing else. It can be viewed as what that project looks like for a completely new producer with no existing production, or simply as an exercise in looking at that project by itself and assessing its economic value by itself. In further response, he explained stand-alone versus incremental means rather than looking just at that one project, an existing producer would add that project onto the producer's view of the base portfolio and run it through a model. Then the producer would take just the base portfolio and run it through the model and subtract the difference between the two. He pointed out it is under incremental economics that some of the effects come into play of counter-intuitively high rates of return at particular oil prices or very high levels of government support for spending under ACES.

5:03:53 PM

MR. MAYER, in response to Co-Chair Feige, confirmed that the $18 per barrel development on slide 5 is the capital expenditure.

5:04:09 PM

MR. MAYER, in response to Representative Seaton, confirmed that stand-alone is as if Alaska had a tax system that was ring fenced. Under CSSB 21(FIN) am(efd fld), the result is the same whether or not it is looked at on a stand-alone/ring fenced basis because the economics look the same either way. It is only for ACES that there is a significant difference.

5:04:38 PM

REPRESENTATIVE TARR observed Mr. Mayer used $18 per barrel in development cost [slide 5] while Econ One used $20. She asked whether this is enough for the development costs of heavy oil.

MR. MAYER replied it depends entirely on the grade of heavy oil as there can be viscous and heavy or heavy and ultra-heavy. "For the most expensive of those, possibly not," he said. On the other hand, he said he thinks the most expensive of those is unlikely to be economic at current technology and current prices. If this was run at $20 or $25 per barrel in terms of overall levels of government take, the result would look basically the same because it looks the same across a very wide range of development cost for a new project.

5:05:31 PM

REPRESENTATIVE SEATON understood Mr. Mayer to be saying that the interaction between different fields, such as heavy oil or shale oil development, would be no different on the economics if ring fencing was used than under CSSB 21(FIN) am(efd fld).

MR. MAYER responded that is certainly true under CSSB 21(FIN) am(efd fld) and he does not think one would want to do that in the interest of maintaining the overall simplicity of the tax regime. Seeking to incentivize particular types of development can be done in other ways, the gross revenue exclusion (GRE) being an example. Under CSSB 21(FIN) am(efd fld), a ring fenced project making a loss would be eligible for the net operating loss credit, which at 35 percent is the same benefit as writing down that loss against the producer's current tax liability; so, the two things are identical under the Senate bill. But, they are not identical under ACES because of the difference between a

25 percent net operating loss credit versus, perhaps, being taxed at 40 percent under ACES.

5:06:51 PM

REPRESENTATIVE SEATON inquired whether Mr. Mayer is saying that under CSSB 21(FIN) am(efd fld) the major producers can apply net operating losses to all developments when prices are down.

MR. MAYER answered it is not his intention to suggest, but simply to say that, in terms of the fundamental economics, looking at a project on a stand-alone basis or an incremental basis is the same thing under CSSB 21(FIN) am(efd fld), which is not so under ACES.

5:07:35 PM

MR. MAYER resumed his presentation, discussing how CSSB 21(FIN) am(efd fld) compares in competitiveness of fiscal regime to regimes similar to Alaska [slide 6]. For example, taking out of the picture countries like Ireland and New Zealand, which have very low government take but very little oil and gas production, and countries like Kazakhstan, which have enormous oil fields that can sustain a much higher level of government take. He explained slide 6 looks at regimes comparable to Alaska across a range of different prices; each cluster of [different colored] bars on the graph represents four different prices - red is $80 per barrel, yellow is $100, blue is $120, and green is $140. The left red arrow at the top of the graph represents ACES for base production and the right red arrow represents ACES for new development at $18 per barrel. The height difference between the four bars indicates the very steep progressivity under ACES - government take under ACES rises from 65 percent to 75 percent across that range of prices. The effect of that progressivity is to overall put Alaska's regime at the upper end among countries with which Alaska might seek to compare itself. At a new development cost of $18 and prices of $100-$140, ACES is as bad, if not worse, than Norway, which has the highest government take within countries belonging to the Organisation for Economic Co-operation and Development (OECD).

5:09:51 PM

CO-CHAIR SADDLER asked whether slide 6 includes a world average or mean for the regions against which Alaska is compared.

MR. MAYER replied he has not calculated the mean for this particular data set, so will get back with an answer. In further response, he said regimes comparable to Alaska are around the 60 percent level; for pure tax royalty regimes, probably a little below that; and for production-sharing contracts about [60 percent].

5:10:49 PM

REPRESENTATIVE TARR observed the regimes on the left side of the chart on slide 6 appear to have somewhat of a regressive tax, and on the right side of the chart a more progressive tax. She requested Mr. Mayer to talk about the trends.

MR. MAYER responded many of the regimes on the left side of the chart, including Canada and the U.S. Lower 48, are tax royalty regimes in which the royalties are the most significant portion and royalties are inherently regressive. Those appearing most regressive are usually because they have a relatively high level of government take and may also have a high level of costs.

REPRESENTATIVE TARR inquired whether a chart is available in similar format to slide 6 that compares the profits per barrel.

MR. MAYER answered he does not have that as such, but at any given price level the government take is calculated by first determining the divisible income. Divisible income is all the revenues less the costs that are netted out. Government take is the measure of how much of the divisible income is going to the government; by corollary, the remaining portion is the amount going to the company. So, it is a percentage of each of those barrels at each of those prices.

5:12:59 PM

MR. MAYER, in response to Co-Chair Feige, said [the column on slide 6 labeled Canada - Alberta OS] is Alberta oil sands.

CO-CHAIR FEIGE commented that production from the Alberta oil sands only sells for $55 per barrel.

5:13:23 PM

REPRESENTATIVE TARR understood the chart on slide 6 does not reflect the ability in the U.S. to buy state taxes towards federal taxes in terms of overall government take.

MR. MAYER, qualifying he is unsure he understands the question, replied the chart includes all of the components of the fiscal regime combined.

REPRESENTATIVE TARR presumed, then, that for Alaska the total government take should be a little bit lower once a taxpayer applies its state taxes towards its federal taxes.

MR. MAYER responded that, like Econ One, he assumed an effective state tax rate of 6 or 6.5 percent in Alaska, rather than the nominal 9.4 percent.

5:14:07 PM

REPRESENTATIVE SEATON noted the same producers are operating in Alaska as are in the Alberta oil sands. He related that analysts attending a ConocoPhillips meeting in February [2013] released a statement saying companies are planning to reduce their assets in the Canadian oil sands. He therefore asked why it is being said here that it is a tax regime that is going to drive this differential.

MR. MAYER answered many different factors drive investment decisions: fundamental economics of the asset itself combined with oil prices and the tax environment all come together in those questions. He said he cannot address in his presentation a particular quote from ConocoPhillips that is specifically about the oil sands. However, when looking at the overall levels of investments being made by ConocoPhillips in the Lower 48 as a whole, and the rate of growth of those investments in the Lower 48 as a whole, there is no question that the company sees a dramatically more economic opportunity for itself in the Lower 48 than it does in Alaska.

5:16:02 PM

CO-CHAIR FEIGE surmised a producer receiving $55 per barrel for Alberta heavy crude is probably not making as much money as it would in a place where the price is $95-$100, no matter what the government percentage is.

REPRESENTATIVE SEATON said that is the point. Producers are leaving some of these low-tax regimes because of the other economic factors, but it is being considering in this presentation that basically the tax regime is the only characteristic that is changing the economic decisions. It may

well be found that this change in tax regime does not do what was thought because there are other considerations.

CO-CHAIR FEIGE responded "possibly," but said government take is the major expense; of the total price received for a barrel, government take is the largest of the components.

5:17:15 PM

MR. MAYER concurred with Co-Chair Feige, saying that is likely in general. Addressing Representative Seaton, he said he is not suggesting that government take is the only metric looked at or is the only thing affecting the desirability of any investment. The attractiveness of an investment is due to a number of things and the economics of a project are due to a number of things, including the cost structure of the project, the price received, and the interaction of those things with the fiscal environment. Taking the Alberta oil sands out of the picture and looking at the rest of the fiscal regimes on slide 6, it can be seen that these are mostly fiscal regimes at a lower government take as well as environments that have substantially lower costs than Alaska. Unfortunately, both of these things work against, rather than toward, Alaska's competitiveness. PFC Energy has produced a wide range of analyses looking at what the different regimes achieve, and has always tried to look at net present value per barrel and rate of return of different projects. PFC Energy frequently comes back to slides like these because, overall, government take is a measure that is particularly useful and particularly easy to understand what is happening, but it should definitely not be seen as the only one. In all those cases, though, what is seen is that the economic value of projects under ACES is not competitive compared to some of the other alternative uses of capital, and CSSB 21(FIN) am(efd fld) goes a long way in rectifying that problem.

5:19:35 PM

REPRESENTATIVE TUCK, given that there are so many other factors besides taxes in a fiscal regime, requested a comparison be done between Alaska North Slope, the rest of the U.S., and the world that looks at an investment comparison along with tax competitiveness so a direct relationship can be seen between the two.

MR. MAYER answered he can look at doing that and said Econ One earlier had a useful slide in terms of looking at the trajectory of investment.

REPRESENTATIVE TUCK concurred, but said not as specific to the different prices per barrel as shown on slide 6.

5:20:29 PM

REPRESENTATIVE TARR noted Alaska has a system based on net profit rather than the gross. She asked which regimes depicted on slide 6 are gross and which are net profit.

MR. MAYER replied Louisiana, United Kingdom, and Australia are net profit-based systems similar to Alaska, but purer in that they only tax profits while Alaska is a hybrid of both gross and net. The rest of the depicted regimes are gross, royalty-based regimes.

REPRESENTATIVE TARR commented it would seem logical that a net profits system would create a more competitive regime to start with because a producer would know it is not liable for taxes until it has made money.

MR. MAYER said he will address this when he moves to his next two slides.

5:22:01 PM

CO-CHAIR SADDLER, for purposes of slide 6, inquired whether it matters if the regime is net based or gross based, given it measures government take, not how it was gotten there.

MR. MAYER responded correct, they can all be compared in terms of government take. The regimes that are regressive tend to be gross systems, but they can all be compared ultimately. In further response, he confirmed slide 6 is therefore a fair measure. He added that royalties in the Lower 48 accrue to the private landowner rather than technically to government; in most cases, all those things are counted as government take for the reason of being able to compare like to like.

5:22:50 PM

MR. MAYER, returning to his presentation, said the question of relative attractiveness of net versus gross feeds into the question of regressive and progressive regimes [slide 7]. In general, there are two possible reasons to desire a progressive element in Alaska's fiscal regime. One is to "counteract regressive elements in the regime to achieve something close to

neutrality." The other is to do what ACES does, which is "to go beyond neutrality to assure a higher level of government take for the state in high price environments." In thinking about why do one or the other, it is important to think about what regressive and progressive regimes imply in terms of very different outlooks on risk and reward for government and for the private sector. Regressive regimes have many flaws, but essentially they limit risk to the state because they put a lot of downside risk on the private sector, thereby protecting the state in low price or high cost environments. In return they provide outsized benefits to corporations in high price or low cost environments. Progressive regimes, by and large, involve the contrary: the state bears more price and more costs in return for taking less when there is less to go around and more when times are fat.

MR. MAYER, regarding Representative Tarr's question about the attractiveness of net profit regimes, said Norway is a good example in that it is a pure net profit-based tax that is at an overall high level and quite progressive. But Norway has a number of ways to keep investment going that do not necessarily apply to Alaska, such as a state-owned oil company and also a government vehicle that can invest directly in the oil sector. Norway is also a regime that while having high government take at the high end, also has substantially lower government take when prices fall off, so it has no regressive element in its regime. Unusual about Alaska is that it combines a fixed royalty with a very progressive net profit-based tax. So, from an investor perspective, Alaska's fiscal system arguably has the worst of both worlds because the investor still has all of the downside risk that comes with a royalty system. Under ACES, the royalty alone can result in 100 percent government take at $60 per barrel, which is coupled with high government take in high price environments. So, rather than being a system that chooses one or the other, ACES does both because it is a hybrid of royalty regime and profit-based tax.

5:26:32 PM

REPRESENTATIVE TUCK surmised, then, some sort of progressivity is beneficial.

MR. MAYER, to provide an answer, drew attention to the chart on slide 8 which demonstrates regressivity, progressivity, and neutrality in regard to ACES, CSSB 21(FIN) am(efd fld), and royalty only. He said royalty by itself has a regressive impact because it is a fixed percentage of a barrel - royalty takes an

ever greater proportion of the available cash net of costs as prices go down. Effectively, if the price went down to $40 per barrel, the royalty would reach 100 percent government take. While CSSB 21(FIN) am(efd fld) does not specifically have progressivity as a separate element, the intersection of the higher rate with the $5 per barrel allowance/credit gives something that is effectively equivalent to an implicit and mild progressivity. The counterbalance is that regressive element of the royalty, giving an overall flat neutral government take. Some mildly progressive element like that is needed in the system to achieve neutrality.

5:28:09 PM

MR. MAYER, responding to Representative Seaton, confirmed the blue line on slide 8 delineates the 12.5 percent royalty rate on legacy fields and that the royalty at a price of $60 per barrel is 60 percent and at $100 it is 50 percent. Drawing attention to slide 11, which depicts how the different components of government take stack together, he clarified that when he says "royalty only" he is meaning royalty along with state and federal income tax, but no production tax. Thus, royalty by itself is not 50 percent government take, rather royalty with the other standard components of the system is 50 percent government take.

5:29:23 PM

MR. MAYER, in response to Representative Tuck, confirmed that the blue line on slide 8 is the royalty plus state and federal income tax, but no production tax. In further response, he confirmed the red and yellow lines depicting government take percentages for ACES and for CSSB 21(FIN) am(efd fld) do include royalty.

5:29:46 PM

MR. MAYER, responding to Representative Seaton, confirmed the line depicting royalty percentages also includes property tax.

5:30:12 PM

REPRESENTATIVE TARR returned attention to slide 7 regarding regressive versus progressive regimes. She understood the argument here as being that under ACES the state takes on some of the downside risk and the benefit is on the high side, and flipping that. She inquired whether, in transitioning to CSSB

21(FIN) am(efd fld), oil companies will need to use a different discount route for planning projects on the North Slope.

MR. MAYER replied the discount rate used by oil companies is an internal matter that reflects possibly, in part, the risks of a project, but mostly it is a corporate standard to enable different projects to be compared against each other. He said he does not think the discount rate used would be affected; or, if it did, that it would make a material impact. The benefits of different projects are compared against each other by using a common standard. So, regardless of what the common standard is, it does not change the result.

5:31:36 PM

MR. MAYER concluded his discussion of slide 8, stating the point is that royalty is a regressive element. To achieve an overall neutral or very mildly progressive regime, some sort of progressive element would still need to be included. In that sense, the difference between CSSB 21(FIN) am(efd fld) and ACES is in the degree of that progressivity as well as how it is achieved. The Senate bill contains an essentially progressive element that is just progressive enough to counteract the effect of the royalty and achieve overall neutrality rather than the jacking up of government take at higher prices.

5:32:27 PM

REPRESENTATIVE TARR asked whether Mr. Mayer has done any evaluation to see if some small level of progressivity could be maintained across higher prices.

MR. MAYER responded there are a number of different ways that could be achieved should that be the direction the committee wants to go in. For example, explicit progressivity could be included, which he would recommend against, or the same mechanism included in the current Senate bill could be used, which is a combination of a higher base rate with the progressive element of the dollar per barrel exclusion to bring it down at lower prices.

REPRESENTATIVE TARR said she is interested in requesting how the $5 per barrel credit in the current Senate bill could be modified to have a much more gradual incline than does ACES, so that rather than a neutral position it is a just slightly progressive take over higher prices.

CO-CHAIR FEIGE stated that is something Mr. Mayer has already been asked to do.

5:34:50 PM

MR. MAYER resumed his presentation, explaining the $5 production allowance is like reverse progressivity to counteract the effect of royalty [slide 9]. He posed a scenario of 50 million barrels of production. At a price of $60 per barrel, the production tax value (PTV) totals $1 billion, for a PTV per barrel of $20 under the terms of a profit-based tax. At the flat tax rate of 35 percent, the production tax prior to factoring in the $5 per barrel allowance would be $350 [million]. The production allowance of $5 would deduct $250 [million], for a production tax liability of $100 million, or 10 percent of the total PTV rather than 35 percent. So, at this low oil price, the rate is substantially below the notional 35 percent base rate. As oil prices increase, the tax rate after the allowance steadily rises, reaching a rate of 30 percent after the allowance at a price of $140. The rate asymptotically approaches 35 percent, never quite reaching 35 percent as prices get higher and higher. The 35 percent is therefore better understood as the maximum rate under the tax rather than as the base rate. The effect of the $5 production allowance is, in some ways, like a mild form of progressivity. It is reverse in that rather than going from a fixed base and building up, it is instead decreasing from a fixed top level.

5:37:51 PM

MR. MAYER, in response to Representative Seaton, said the progressive tax rate deduction shown on the bottom of the chart on slide 9 is the difference between the 35 percent tax rate [and the tax rate after the allowance]; so progressive tax rate deduction is what the taxpayer was able to take off its tax rate by virtue of the $5 per barrel allowance.

CO-CHAIR FEIGE interjected it is the percentage that the $5 per barrel is worth at each price.

5:38:27 PM

REPRESENTATIVE TUCK understood more is subtracted as the state taxes at lower prices.

MR. MAYER answered this is because that $5 per barrel is fixed and $5 per barrel is a much bigger proportion of a $60 barrel than it is of a $140 barrel.

CO-CHAIR FEIGE interjected that this is to counteract the royalty curve depicted on slide 8.

MR. MAYER added those two things are offsetting each other to achieve overall neutrality.

5:39:07 PM

REPRESENTATIVE SEATON understood the gross revenue exclusion would be 20 percent of everything on slide 9.

MR. MAYER replied slide 9 does not include the GRE because it is just looking at existing production. In further response, he clarified that "production allowance" is the $5 per barrel credit. It can be referred to either way, he said, but he prefers to think of it as an allowance rather than a credit.

5:39:46 PM

MR. MAYER, returning to his presentation, compared the marginal and average rates between ACES and CSSB 21(FIN) am(efd fld) [slide 10]. He explained the depicted tax rates are not graphed on oil price, but rather on production tax value (PTV) per barrel, which is what the tax is actually based on. Under ACES, the average tax rate rises steeply between a PTV of $30 [and tax rate of 25 percent] and $92.50 (and tax rate of 50 percent). After this, the rate of incline is shallower, reaching a maximum tax rate of 75 percent at $300 per barrel PTV. At current prices of $110 and $30 per barrel in costs, the PTV is $80. At a PTV of $80, the marginal tax rate under ACES is just below 80 percent. At a PTV of $92.50, the marginal tax rate under ACES is 86 percent.

5:41:27 PM

MR. MAYER pointed out what can happen at this high marginal tax rate when a producer is making a decision on capital to spend or to do something to reduce costs. At a PTV of $92.50, anything a producer does to increase its efficiency - reduce its costs - the producer gets only 16 percent of the benefit because the remaining percent of the benefit goes to the state. Similarly, for any dollar a producer decides to spend it bears effectively only 16 percent of the cost of that dollar because the remainder

on an after-tax cash flow basis goes to the state. In his opinion, this is one of the biggest problems of ACES from the perspective of incentivizing cost control and efficiency. In the hypothetical example of reaching a PTV of $300 per barrel, the marginal tax rate under ACES would reach 100 percent and at even higher prices could go above 100 percent, and more than 100 percent government support for spending, although that is not a major concern at the moment or in the near future.

5:43:02 PM

CO-CHAIR FEIGE inquired what a PTV of $92.50 equates to for the sales price on North Slope crude.

MR. MAYER responded it would be an oil price of $120, assuming $30 per barrel in costs; therefore it would be territory the state has seen recently.

5:43:31 PM

REPRESENTATIVE SEATON remarked this would be a big stimulation to increase investment because the state is paying most of the cost, but it would be a very high marginal rate if a producer does not invest.

MR. MAYER agreed this is one way to look at it, but cautioned against looking at it that way because it is an incentive in general to spend money or not to put a lot of effort into saving money. The distinction between that and investing is that when a producer looks to investing in Alaska for a large scale new project, the producer is considering what it looks like over a very broad range of prices and how it performs over the next 20-30 years. Whereas a producer considering whether to resurface a runway can base its decision on this year's cash flow, this year's prices, and what the after-tax benefit of that decision is to the producer this year. When running economics, a producer first and foremost wants to know that the project on a stand-alone basis makes sense within the regime and then maybe the producer will also take into account the after tax cash flow benefits of looking at it on an incremental basis.

5:45:15 PM

MR. MAYER, in response to Representative Tuck, confirmed that the yellow line depicting the ACES marginal rate on slide 10 does not factor in any of the credits.

5:45:29 PM

MR. MAYER returned to his comparison of the marginal and average rates on slide 10, pointing out that the marginal tax rate under CSSB 21(FIN) am(efd fld) is a steady flat 35 percent, never changing and never deviating from the base rate, unlike the steeply rising rate of ACES. When the $5 per barrel allowance is taken into account, there is a downward curve of the tax rate [at lower PTVs]. Where ACES sets the average rate and gets spikes in the marginal rate that correspond to that, CSSB 21(FIN) am(efd fld) sets the marginal rate and that rate is 35 percent. Under the Senate bill, the very first dollar of value has the $5 credit/allowance applied to it and from that point on each marginal dollar of value is being taxed at the 35 percent marginal rate, bringing up the average and resulting in the progressive slope depicted on the graph, rather than the spikes of up to 80 percent as happens under ACES.

5:46:38 PM

MR. MAYER turned to discussing the ACES tax regime in a base production portfolio [slide 11]. Drawing attention to the upper left graph, he said the regime's profit-based production tax consumes a progressively larger amount of the pie as the price per barrel increases, rising to 75 percent and above at the upper price levels. Turning to the upper right graph, he looked at the split of net present value of production between the state, the federal government, and the company. At around $70 West Coast ANS price - the point at which progressivity kicks in after costs have been netted away - the value of the project as a whole to the State of Alaska starts to rise dramatically (blue line) while the value to the company starts to flatten out (yellow line). So, relatively speaking, for each incremental increase in oil price there is less benefit to the company and the vast majority of the increased value is captured by the state under the progressivity under ACES. Correspondingly, there are only small increases, relatively speaking, in project value in terms of net present value per barrel of oil equivalent (boe) as price levels rise.

5:48:23 PM

MR. MAYER, in response to Co-Chair Saddler about the upper right graph, pointed out that the state's split (blue line) pulls away from the company's split (yellow line) and the federal government's split (red line). This is because progressivity under ACES takes the lion's share of the net present value at

higher price levels as compared to the company. Responding further, he clarified the dollar sum is in millions, so [25,000] represents $25 billion in net present value of a future production stream of base production. But, he added, it is more useful to think about proportion than the absolute numbers.

5:49:31 PM

MR. MAYER then discussed, for comparison, the tax regime in a base production portfolio under CSSB 21(FIN) am(efd fld) [slide 12]. [Drawing attention to the upper left graph], he said the Senate bill has an overall flat, neutral, roughly 65 percent level of government take across a broad range of prices. The mild implicit progressivity created by the $5 per barrel credit counteracts the regressive element of the royalty to create that overall neutrality. Drawing attention to the upper right graph, he pointed out the relatively even split of net present value between state government, federal government, and the company across all the different price levels. The state still takes the lion's share compared to the other two, but overall it is a much more even balance. Correspondingly, there is a higher net present value per barrel for the base production portfolio.

5:50:38 PM

MR. MAYER, in response to Representative P. Wilson about the lower left graph, explained that ATCF stands for after tax cash flow. The green color within the bars represents all the revenues received and the colors below $0 represent all the costs incurred - government take and capital, operating, and drilling costs. Essentially, the after tax cash flow line is the balance of the positive and negative.

5:51:17 PM

REPRESENTATIVE SEATON surmised the graphs on slides 11-12 are inflated at 2.5 percent through the year 2037 and a per barrel price of $185.

MR. MAYER answered correct. He added that all the analysis PFC Energy has presented to the legislature, in the two years he has been presenting as well as previously, has always used some sort of inflation assumption, usually 2.5 percent.

5:51:55 PM

REPRESENTATIVE TARR observed the after tax cash flow for CSSB 21(FIN) am(efd fld) [slide 12] does not look much different than the ATCF for ACES [slide 11]. She requested further discussion in this regard, given that is the part that the state is really trying to get to if it wants companies to invest.

MR. MAYER replied there is a substantial jump in that ATCF line, which he demonstrated by scrolling from one slide to the other. To quantify this difference he drew attention to the bottom right graph on each slide, noting the per barrel cash margin for a 5-year window at a price of $120 per barrel is $27 under ACES versus $36 under CSSB 21(FIN) am(efd fld).

5:53:12 PM

REPRESENTATIVE SEATON asked whether the aforementioned 5-year window is the years 2012-2017.

MR. MAYER responded the 5-year window is the years 2017-2022. If looking just at base production, he explained, there would be no reason not to look at 2012-2017. However, since a new development is also being included, the idea is to take a look after the majority of the capital has been spent because one would get a big difference between the early years when the capital is being spent and the later years when harvesting cash. So, the idea is to look at one reference period after the big lump of capital has been spent to see how much the producer gets to keep during the cash accretion portion of the project.

5:53:56 PM

REPRESENTATIVE SEATON surmised, then, that the price assumption is $113-$120 per barrel.

MR. MAYER answered that, in nominal terms, he would have to look it up. There are two ways to build a model, he elaborated, and both achieve the same thing. One way is to run a model in real terms where the oil price and the costs remain constant. For example, this type of model could be used to look at a fixed royalty regime in the Lower 48 that does not have any price-dependent components. As long as a stable discount rate is used for comparison those results are comparable with anything. However, the ACES regime has price-dependent elements, meaning inflation must be included in the model because the threshold at which progressivity and other elements kick in is going to change in real terms. Rather than trying to figure out what those thresholds are, it is easier to do the standard type of

modeling which has everything in the model on a nominal basis. An inflation rate of 2.5 percent is assumed and that occurs on the revenue side rather than on the question of where the brackets of progressivity kick in.

5:55:39 PM

REPRESENTATIVE SEATON said he is asking this because "we have these cash margin assumptions and yet we have in other reports from oil companies, cash margins, their worldwide assumptions, and all, and if we do not know how we are comparing because we are talking about $165 a barrel oil compared to their cash margins at a particular time, it makes it very difficult to make those comparisons. So that is why I am trying to understand if we have inflated these; then it would appear that Alaskan oil is far more profitable than ... their margin worldwide .... In those shorter time periods, shorter year periods, it does not seem to be as big an effect on that."

5:56:35 PM

MR. MAYER resumed his presentation, addressing the impact of the gross revenue exclusion [slide 13]. He pointed out that the slide in the committee's packets shows a GRE of 30 percent, rather than 20 percent, which he has corrected in the on-screen slide. For purposes of this exercise, he continued, it is not the absolute numbers that are of concern but rather the question of what the GRE does. The answer is the GRE simply shifts the overall curve so that the point at which "progressivity" kicks in is moved out. Slide 13 repeats the calculations of [slide 9], he explained, but adds in a GRE. At a price of $60 per barrel and no GRE, the effective tax rate after application of the $5 per barrel allowance is 10 percent; when a 20 percent GRE is factored in, the effective tax rate is lowered to no tax. At a price of $80 per barrel the effective tax rate with the GRE is 4.1 percent [22.5 percent with no GRE], at $120 per barrel the effective tax rate with the GRE is 14.3 percent [28.8 percent with no GRE], and at $140 per barrel the effective tax rate with the GRE is 16.4 percent [30 percent with no GRE]. Thus, in each case, applying the GRE results in a substantial reduction in the tax rate and, essentially, a shifting of the point at which the production tax starts to kick in.

5:58:12 PM

MR. MAYER then looked at a scenario of new development at a cost of $18 per barrel on a stand-alone basis under ACES [slide 14].

Drawing attention to the lower left graph, he pointed out that negative cash flows go along with a new development in its early years. This negative cash flow is the result of expenditures for facilities (yellow color in the bars) and drilling (blue color). Once production starts, operating costs (red color) and government take (purple color) begin to occur. In the early stages of development, the positive impact of the ACES credits can be seen (purple bars projecting upward), which reduce the initial cost to the developer. The green bars depict revenue from the project. Continuing, he said the upper left chart shows the overall high level of government take that comes from the substantial progressivity in ACES, which rises to nearly 80 percent as prices [reach $160 per barrel]. Drawing attention to the upper right graph, he noted the substantial diversion in value of the project to the state versus value to the company.

5:59:49 PM

The committee took an at-ease from 5:59 p.m. to 6:08 p.m.

6:08:44 PM

MR. MAYER next looked at this same scenario of new development, but under CSSB 21(FIN) am(efd fld) [slide 15, top left graph]. Government take is much lower, he said, going down to a flat level of just below 61 percent over a broad range of prices because of the GRE. The GRE reduces the overall level of the tax and pushes out the price point at which production tax starts to occur to $65. When combined with a net operating loss, this can mean that at low prices the production tax is negative. Drawing attention to the bar for $50 per barrel, he noted that the production tax is located above federal and state income tax rather than beneath them as is the case for the other prices. "The top of that bar is the top of where the royalty by itself comes to and the blue is, in this case, the production tax taking down the total level of government take to 70-something percent rather than the 90-something percent that you would have had from the royalty alone. That is effectively negative contribution from the production tax at the lowest price level."

6:10:17 PM

MR. MAYER, in response to Co-Chair Feige, clarified that at a West Coast ANS price of $50 per barrel, the top of the bar is at 90 percent because if it were just royalty with federal and state income tax, the government take would reach 90 percent.

However, in this price case of $50 per barrel, the way to interpret the production tax (light blue color) is that the production tax is negative, thereby lowering the government take from 90 percent to about 73 percent.

6:11:26 PM

MR. MAYER continued, reiterating that at low prices the combination of the GRE with the net operating loss credit can result in a negative tax exposure to the state. He noted, however, that in general it is a much smaller liability than what the state has under the existing system of ACES where all production accrues to capital credit. Under CSSB 21(FIN) am(efd fld) this only occurs in circumstances where there is new development with the gross revenue exclusion, which will be a very small portion of production in the coming years.

6:12:11 PM

MR. MAYER moved to the cash flow chart at the bottom left of slide 15, pointing out there would still be a "negative contribution of government take in the early years" which, under CSSB 21(FIN) am(efd fld), come in the form of the net operating loss credits. These credits are smaller than the contribution that comes under ACES. Under the Senate bill, the state's support for spending is 35 percent through the net operating loss credit rather than the 45 percent level of support on a stand-alone basis under ACES; for an incumbent producer under ACES the support is much higher than 45 percent.

6:13:04 PM

REPRESENTATIVE SEATON calculated the differential under the GRE is about 17 percent. Regarding Mr. Mayer's statement that not much of the oil now or in the near future would be under the GRE, he pointed out that if the state is trying to do something for a long term then almost all of the oil eventually is going to be under this GRE. He asked, therefore, whether it makes sense to have a provision that could be a huge negative at low prices and when the value of the royalty would also be low.

MR. MAYER replied his view is that it is a trade-off of a number of things. It is a smaller negative liability than the state currently has under the capital credits of ACES. Both the GRE and the ability to monetize the net operating loss come back to a question of balance in the system and wanting to achieve the same economics for a small producer as for an incumbent. In his

opinion, that cannot be done without having an operating loss allowance. He said he thinks this trade-off is an effective one because the capital credits are gone while not eliminating the liability entirely because one also wants to maintain strong economics for new producers and give them the same opportunities that an incumbent producer has.

6:14:51 PM

REPRESENTATIVE SEATON, directing attention to slide 14, observed that [the top left graph] shows the [government take] under ACES as being down to only 75 percent [at a price of $50 per barrel]. So, he concluded, the ACES reduction on capital credits are less of a liability for the state than the liability under [CSSB 21(FIN) am(efd fld)]. He inquired whether the reduction [under the Senate bill] is mostly the GRE.

MR. MAYER answered it is the impact of the 20 percent GRE in conjunction with the net operating loss credit.

REPRESENTATIVE SEATON requested that as the analysis moves forward the committee look at a way to limit downside liability from the GRE at low prices, such as a limitation at certain prices on gross revenue exclusion. If the state builds a long-term system that over time has more and more percentage of oil qualifying for the gross revenue exclusion, he opined, it will have even more liability and will have to take money out of royalties to pay for that GRE.

CO-CHAIR FEIGE replied "fair enough."

6:16:38 PM

REPRESENTATIVE TUCK drew attention to the effects of the GRE shown on slide 13 and surmised the GRE is regressive rather than a reverse progressivity because as prices go up the more tax is reduced.

MR. MAYER, shaking his head no, said it is almost entirely the $5 per barrel allowance that does this. The reduction in tax is still by far the greatest at the lowest prices, he continued. The GRE slightly overall reduces the level of tax and it pushes the curve out a bit farther so that at a price of $60 per barrel there is no tax liability.

REPRESENTATIVE TUCK understood, then, it is the $5 per barrel allowance that gives more back at lower prices.

MR. MAYER responded "exactly."

REPRESENTATIVE TUCK further understood the GRE does the opposite as prices go up - it gives more back as the price goes up.

MR. MAYER confirmed that is the case compared to the $5 per barrel exclusion, but in absolute terms he said he would need to check the numbers.

6:18:54 PM

MR. MAYER resumed his presentation, turning to discussion of the net operating loss credit and sunset of the exploration and small producer credit [slide 16]. Recounting its progress through the Senate, he said the original bill had a sunset date of 2022 for the exploration and small producer credit. Removing the ability of small producers to stack credits, which can result in 75 percent effective support of spending for exploration, limits the overall level of government support for exploration spending to a sensible amount and makes government support equal between a new company with no existing tax liability and an incumbent. Whatever that level of government support is, it is his opinion that the state would want to be equal between a new company with no existing tax liability and an incumbent.

6:21:03 PM

MR. MAYER said a nice thing about how this all works out - the higher rate with the higher corresponding net operating loss - is that even though the capital credits have been taken out and the exploration credit is sunset, people will still have 35 percent government support for exploration spending because the net operating loss credit can be monetized. A complicated lever is being taken out of legislation to get to a simpler system that is completely even in its impacts. Whether for an existing producer or someone with no tax liability, the impact is an even 35 percent in government support for exploration spending and the bill is much simpler. By doing this, that flat low marginal rate is maintained to create a strong incentive for efficiencies and for cost control. Exposure to the state from higher cost projects at lower prices is limited, relatively speaking, by not having the capital credits. Additionally, the overall level of government support for exploration spending is evened out.

MR. MAYER added there may be specific instances in which the administration wants to go beyond 35 percent government support. For instance, when there are particular known prospects that it is strongly in the state's interest to see drilled for information purposes as much as anything else. Mechanisms for accomplishing this can be talked about at a later point by the administration. He offered his opinion that it makes a lot of sense to have the same level of support for new companies as for incumbent ones and to have it capped at 35 percent overall support for exploration rather than the current 70-90 percent effective government support under ACES.

6:23:05 PM

MR. MAYER, in response to Representative Seaton, confirmed that the bill currently before the committee, CSSB 21(FIN) am(efd fld), does not have any credits that can be stacked because it has only the 35 percent net operating loss credit. The current bill still has the exploration credit, he continued, but that sunsets in 2016. So, once that exploration credit is gone there will only be the 35 percent net operating loss credit.

REPRESENTATIVE SEATON understood that between now and 2016 the exploration credit will be available to both producers and explorers.

MR. MAYER answered correct. Given people may have commitments and other things already made on that basis, and given that it is a short timeframe, it seems easier to let them expire as they are already slated to do rather than to take them away for the benefit of a year.

CO-CHAIR FEIGE, responding to Representative Seaton, noted that the "Middle Earth" credits under "025 (n), (m), and (o)" are not stackable, a company must take one or the other.

6:25:01 PM

MR. MAYER concluded his presentation [slides 16-18], stating that CSSB 21(FIN) am(efd fld): provides overall neutrality at a competitive level of government take; improves competitiveness for new projects via the GRE; reduces, although does not eliminate, the downside risk to the state from credits; provides an overall balanced system with even impacts for both incumbents and new producers; incentivizes producer efficiency through a neutral regime with low and constant marginal rates; substantially simplifies the fiscal system; and moves Alaska

into the realm of serious competitiveness with other regimes for international capital.

6:26:02 PM

REPRESENTATIVE TARR requested Mr. Mayer to provide the internal rate of return [for the bottom right graphs] on slides 11-12.

MR. MAYER answered no, explaining internal rate of return is a concept that relies on initial capital spending with subsequent cash flow that comes from that. Slides 11-12 look at the base production portfolio where there is no initial spending and subsequent cash and therefore an internal rate of return cannot be gotten because it is undefined.

6:26:44 PM

REPRESENTATIVE SEATON drew attention to slide 3 and the gross revenue exclusion (GRE) of 20 percent for oil from new participating areas (PAs), PA expansions, and areas in legacy fields not previously contributing to production. He recounted that at the February 28, [2013], meeting of ConocoPhillips and during a trip to the North Slope, it was discussed that Alaska is a place where it is very hard to develop and produce every last barrel, but ways have now been developed to economically produce pockets of oil that were once uneconomic. He therefore inquired why the state should give gross revenue exclusions to things that are more economic than conventional drilling. He further asked why, from a legislative aspect, members should not listen to the producers' testimony.

6:28:59 PM

MR. MAYER, displaying slide 18, replied there is some degree of trade-off between how far one is comfortable going in reducing government take overall and where one wants to be in terms of incentivizing new production. He said CSSB 21(FIN) am(efd fld) takes Alaska to the upper end of that realm of competitiveness, but is far from radical or aggressive in how far it goes. The gross revenue exclusion is a way of saying the state recognizes that to be truly competitive across a broad range of new developments it would like to be a little bit lower than this. What the gross revenue exclusion should apply to is then the next question. New units and new producing areas are fairly straightforward and, in his opinion, so are expansions of existing areas. Thus, the remaining area in question is the legacy fields, given it is known that the greatest resources

could be produced from these fields, particularly in the next five to six years. Is there a way of incentivizing the legacy fields and what is the trade-off of reducing government take on things that in some cases many not need a lower rate but also wanting to ensure the state has a competitive rate for things that do? The tax code is not necessarily the sharpest instrument for doing that, and probably is the bluntest. The Department of Natural Resources has the expertise to make a call as to whether a portion of a reservoir is or is not currently contributing to production and on the basis of the department's determination something could then qualify for the gross revenue exclusion. If the largest volume of potential new resources is in the legacy fields and one really wants to get to a truly competitive rate to encourage as much activity as possible, then it makes sense to apply some form of gross revenue exclusion to those. It is a trade-off between a number of things, including how far one is willing to go on the base rate.

6:32:21 PM

REPRESENTATIVE SEATON stated he has a problem with throwing this into an administrative procedure to determine whether something is or is not new. He predicted a gross revenue exclusion will be requested for every single thing that requires a drill or enhanced production such as coil tubing and laterals, consequently resulting in a multitude of court challenges. He said he would like further analysis as to how difficult it is going to be to throw this into the realm of administration. He offered his belief the Senate overreached when it provided that new oil does not have to be a new reservoir or new producing area or a new unit.

CO-CHAIR FEIGE said there are two issues as far as what is considered new oil - oil that may not necessarily get produced given the ACES tax regime, or new oil that can be produced given the economics of CSSB 21(FIN) am(efd fld). There are two coiled tubing rigs on the North Slope, and one of them is stacked. So, they can only drill holes so fast. He offered his opinion that if the state improves the economics it will lead to more coiled tubing rigs drilling more holes and more holes will lead to more oil in the Trans-Alaska Pipeline System.

6:35:18 PM

REPRESENTATIVE SEATON, in regard to improving the economics, argued that "we're not talking about having to build new production facilities, we're not having to do new piping, we're

not having to do transit pipes ... and when we give a gross revenue exclusion to those that don't require much investment, at least according to the testimony ... of ConocoPhillips at their analyst meeting ... we have to presume they are not lying to their investors. It seems like extending that to existing ... participating areas that are already drilled, that are already producing, and that they're simply fault blocks and those kind of things which this more economical method is to access, further lowering that government take is questionable."

CO-CHAIR FEIGE said the committee can have the Division of Oil & Gas testify as to how well it can determine whether that is the case. The question is how to define new oil and whether new oil will be taxed differently than legacy oil. He said CSSB 21(FIN) am(efd fld) makes a significant improvement in getting Alaska into the zone of being more competitive. The question for this committee is whether that is competitive enough to lead to the development that is needed to level off or increase production.

6:37:29 PM

REPRESENTATIVE SEATON, in response to Co-Chair Saddler, agreed to share the information that generated his questions of today.

6:37:45 PM

REPRESENTATIVE TARR returned to her question about internal rate of return on slides 11-12 and asked for further elaboration.

MR. MAYER replied in those slides that are base production there is capital being spent but it is being spent at the same time as there is production, so there is never a period of negative cash flow.

6:38:13 PM

REPRESENTATIVE TARR, referring to slide 18, offered her understanding that Alaska's lease expenditures are quite a bit lower than in the Lower 48. She surmised, however, that that would not be reflected as a part of government take in the Lower 48 because of the private landholder situation there. Since slide 18 only looks at government take, she asked whether there is a way to evaluate some of those other expenditures in terms of overall competitiveness.

MR. MAYER responded Econ One did well in terms of looking at a range of economic metrics. It ultimately comes back to net

present value and how other things compare between these regimes and others. He agreed to provide other comparisons, concurring that it is not just about government take, but also cost and other things. By and large, he said, costs in Alaska tend to be higher rather than lower and they hurt rather than hinder the competitiveness question.

6:39:38 PM

REPRESENTATIVE SEATON, regarding the Gerking study of drilling sensitivity to tax rates, inquired whether Mr. Mayer shares the perspective that lowering the tax rates would lead to dis-investment in new oil.

MR. MAYER answered, yes, he absolutely believes that drilling, investment, and all those other things are responsive to tax rates. He said he also agrees with Mr. Pulliam's reading of the Gerking paper and the conclusions that Mr. Pulliam drew on that basis. As to what he knows about the paper itself and the soundness of its methodology, he said he only knows as much as Mr. Pulliam, which, as was said, is limited to what can be told from the paper itself because of not having the sources of the data. The paper is one reasonableness test of how reasonable is it to believe the state could, over an extended period of time, make back the revenue that is foregone by doing this. As was said by Mr. Pulliam, there are a number of tests of reasonableness, but they are only tests and none of them is a guarantee. Taken together, however, they indicate it is reasonable to expect that it is possible even if not guaranteed.

6:41:21 PM

REPRESENTATIVE SEATON read from the conclusion of the Gerking study, page 15, which states: "Results of this study suggest that oil production is highly inelastic with respect to changes in production taxes. ... Policy implications of this outcome suggest that state officials may consider raising production tax rates as a way to increase revenue while risking little in the way of loss to future oil activity." Therefore, Representative Seaton said, it seems the conclusion in this paper is exactly the opposite of what is being proposed.

MR. MAYER replied he and Mr. Pulliam both came away from the paper with the same conclusion, which is that the study's authors drew their conclusion based on very, very small changes in government take. In looking at the study data and the sensitivity implied to drilling rather than just production, one

would expect that for the scale in government take [being talked about for Alaska], there would actually be quite a significant change in overall amount of drilling and investment.

6:43:27 PM

CO-CHAIR FEIGE drew attention to slide 18 and requested both Mr. Pulliam and Mr. Mayer to each state their opinion on whether CSSB 21(FIN) am(efd fld) would make Alaska competitive with other regimes against which it competes.

MR. PULLIAM responded he thinks CSSB 21(FIN) am(efd fld) strikes a good balance and would give Alaska a competitive system, particularly with the GRE in place for new production. When thinking about the investment metrics outlined on slide 11, and opportunities in Alaska versus opportunities elsewhere, the Senate bill would put Alaska projects in a good and favorable spot. While the bill is not the best economics in the world, it is solidly in the competitive range.

MR. MAYER agreed with Mr. Pulliam. Particularly with the GRE, he said, CSSB 21(FIN) am(efd fld) would get Alaska to where it needs to be in competitiveness for new production. Without the GRE, the Senate bill would be in the competitive range, but at the upper end of that range. There is a trade-off between how far the state can go in forgone revenue to get to the heart of the competitive level for existing production and this can be achieved through the GRE. There is also a trade-off between wanting to be as competitive as possible while also needing a regime that is fiscally stable and secure over the next many years. In making these decisions, one needs to absolutely look at breakeven analyses while also remembering that it may take 10 years, if all goes well, before the state is back at the revenue levels it would have been under ACES with no increased production. There is a good several years before increased production starts to take off some of the fiscal weight, and the further one goes on the base production, the more that is the case. So, given these things, he said it is his opinion that CSSB 21(FIN) am(efd fld) is not a bad balance.

6:47:00 PM

MR. PULLIAM, in further response to Co-Chair Feige, said he thinks that he and Mr. Mayer are in basic agreement on the bill, particularly when looking at the economics of new development where the GRE comes into place. He and Mr. Mayer are in agreement that CSSB 21(FIN) am(efd fld) puts Alaska in a good

competitive position. The state would not be at the high end of competiveness, but would be right in the middle.

6:47:38 PM

CO-CHAIR SADDLER inquired what Mr. Pulliam and Mr. Mayer, as professionals in the petroleum economics field, see Alaska's future being if the ACES tax structure is maintained for the next 5 to 10 years.

MR. PULLIAM answered he thinks the state will see continued declining production at rates higher than desired. And, like this year, he thinks there will be more situations of budget deficits. If that is the policy the state wants to pursue, then legislators need to figure out how to save more than what the state has been doing, he advised.

MR. MAYER replied the ability of ACES to continue generating substantial revenues from declining production over the next several years is dependent on high prices. The part of this debate that puzzles him most, he said, "is when people look at some of these charts and say 'oh but look at the revenue we would be forgoing at $200 a barrel.' ... At $200 a barrel, the State of Alaska has relatively little to worry about ... in any of these regimes." If he was planning for the future fiscal health of the state he would be much more concerned with what any of these regimes look like between $70 and $90 a barrel rather than $200. Not only does the bill get Alaska to a range that is substantially more competitive, it does a good job of protecting the state in lower price environments.

6:49:22 PM

REPRESENTATIVE TUCK surmised that both Mr. Pulliam and Mr. Mayer believe CSSB 21(FIN) am(efd fld) better guarantees investments in the state of Alaska in the future.

MR. MAYER nodded yes.

MR. PULLIAM responded it certainly creates a much stronger probability of getting the kind of investment the state wants than letting the current system stay in place.

6:49:54 PM

REPRESENTATIVE SEATON asked whether the legislature's consultant will be available to members of the committee. He noted he has

twice requested to meet [with Mr. Mayer] and it has not happened. He pointed out that, in the past, consultants have had a room and members could make appointments to see them. He requested this be done to avoid having to hash out every question.

CO-CHAIR FEIGE agreed the request is valid and said he will look into working something out since Mr. Mayer will be in Juneau all week. He held over CSSB 21(FIN) am(efd fld).

6:50:54 PM

ADJOURNMENT

There being no further business before the committee, the House Resources Standing Committee meeting was adjourned at 6:51 p.m.