HOUSE FINANCE COMMITTEE
January 18, 2017
1:35 p.m.

1:35:00 PM

CALL TO ORDER

Co-Chair Seaton called the House Finance Committee meeting to order at 1:35 p.m.

MEMBERS PRESENT

Representative Paul Seaton, Co-Chair
Representative Neal Foster, Co-Chair
Representative Les Gara, Vice-Chair
Representative Jason Grenn
Representative David Guttenberg
Representative Scott Kawasaki
Representative Dan Ortiz
Representative Lance Pruitt
Representative Steve Thompson
Representative Cathy Tilton
Representative Tammie Wilson

MEMBERS ABSENT

None

ALSO PRESENT

Randall Hoffbeck, Commissioner, Department of Revenue; Dan Stickel, Assistant Chief Economist, Tax Division, Department of Revenue; Paul Decker, Division of Oil and Gas, Department of Natural Resources; David Teal, Director, Legislative Finance Division(LFD); Rob Carpenter, Analyst, Legislative Finance Division; Kelly Cunningham, Analyst, Legislative Finance Division; Lacey Sanders, Analyst, Legislative Finance Division; Amanda Ryder, Analyst, Legislative Finance Division; Alexie Painter, Analyst, Legislative Finance Division; Danith Watts, Analyst, Legislative Finance Division; Helen Phillips, Finance Committee Assistant, Legislative Finance Division; Representative Delena Johnson; Representative Dan Saddler; Representative Collen Sullivan-Leonard; Representative Lora Reinbold;

PRESENT VIA TELECONFERENCE

SUMMARY

Fall 2016 Revenue Forecast Presentation

Co-Chair Seaton introduced the committee members and indicated the committee would be doing a significant amount of work in the session. He was hoping the committee would concentrate on responsible budget reductions and developing a sustainable fiscal plan. He introduced his staff, Joan Brown and Arnold Liebelt, who would be working on the operating budget. Taneeka Hansen would be helping with a sustainable fiscal plan and other legislation. Jenny Martin was his office manager and the contact for reserving the House Finance room. Tom Spitzfaden was a University of Alaska intern who would be doing a little bit of everything.

Co-Chair Foster introduced his staff. Paul Labolle was his Chief of Staff and aide for the capital budget. Jane Pierson was his finance committee aide handling legislation. Brodie Anderson was his aide for the finance subcommittees for the Department of Transportation and Public Facilities (DOT) and the Department of Labor and Workforce Development (DOL). Graham Judson was his aide to the finance subcommittee for the Department of Environmental Conservation (DEC).

Co-Chair Seaton acknowledged Representative Kawasaki at the table.

Representative Ortiz introduced his staff, Mary Hakala, who was his finance subcommittee aide for the Department of Education and Early Development (DEED).

Representative Pruitt introduced Dirk Craft, his finance aide.

Representative Kawasaki introduced his staff. He was proud to have an intern, William Jodwalis, in his office who would be following the finance subcommittee for the Department of Military and Veterans Affairs (DMVA). Ashley Strauch would be working on the finance subcommittee budget for the Department of Public Safety (DPS). Olivia Garrett

would be working on the finance subcommittee budget for the Department of Corrections(DOC). Mercedes Colbert was his Chief of Staff and would be monitoring the activities of the committee.

1:39:04 PM

Representative Wilson introduced Remond Henderson who would be her aide for the House Finance Committee.

Vice-Chair Gara was happy to be working with the members of the committee. He encouraged anyone listening with ideas for the budget to contact him, as he was happy to hear from them. Molly Carver and Laura Cartier were his committee aides. He clarified the correct pronunciation of Representative Guttenberg's name.

Representative Tilton reported that Heath Hilyard would be her finance aide.

Representative Grenn introduced his staff, Brook Ivy and Joseph Cassie.

Representative Guttenberg introduced his staff, Tom Atkinson and Seth Whitten. He also indicated having an intern, Alliana Salanguit, who was currently in Norway working on Artic Policy issues.

Representative Thompson introduced his aide, Brandon Brefcznski. He looked forward to working with everyone. He encouraged the chair to introduce the finance room staff.

Co-Chair Seaton asked David Teal to introduce his staff.

DAVID TEAL, DIRECTOR, LEGISLATIVE FINANCE DIVISION(LFD), invited his staff to introduce themselves.

ROB CARPENTER, ANALYST, LEGISLATIVE FINANCE DIVISION, worked on the capital budget, the supplemental budget, and the budgets for the Department of Transportation and Public Facilities (DOT) and the Department of Revenue (DOR).

KELLY CUNNINGHAM, ANALYST, LEGISLATIVE FINANCE DIVISION, was the fiscal notes coordinator and was involved in the budgets for the Department of Public Safety (DPS), the Department of Corrections (DOC), and Judiciary (JUD).

LACEY SANDERS, ANALYST, LEGISLATIVE FINANCE DIVISION, coordinated the operating budget and helped with the budgets for the Department of Military and Veterans Affairs (DMVA) and the Department of Commerce, Community and Economic Development.

AMANDA RYDER, ANALYST, LEGISLATIVE FINANCE DIVISION, helped with the budgets for the Department of Health and Social Services (DHSS) and the Department of Fish and Game (DFG).

ALEXIE PAINTER, ANALYST, LEGISLATIVE FINANCE DIVISION, was the analyst for the budgets for the Department of Education and Early Development (DEED), the Department of Environmental Conservation (DEC), and the Department of Natural Resources (DNR).

DANITH WATTS, ANALYST, LEGISLATIVE FINANCE DIVISION, assisted with the budgets for the Department of Administration (DOA), the Department of Labor and Workforce Development (DOL), the Department of Law (LAW), and the University of Alaska (UA).

Co-Chair Seaton asked Helen Phillips to introduce her staff.

HELEN PHILLIPS, FINANCE COMMITTEE ASSISTANT, LEGISLATIVE FINANCE DIVISION, introduced herself; Bree Wylie and Jodie McDonnell, committee secretaries; and Donna Page, the page.

Co-Chair Seaton asked if Ms. Phillips wanted to provide any information to members.

Ms. Phillips indicated that she and her staff were non-partisan support staff for the finance committee employed within the Legislative Finance Division. She and her staff worked at the direction of the co-chairs of House Finance and provided operational, clerical, and secretarial support. They assisted with logistical issues including hearing preparation, bill files, minutes, and supplies. All policies went through the co-chairs' office. She reviewed the room protocol. She advised that no one, including staff, was allowed to approach the table during the meetings. The page was available to pass notes for legislators.

Ms. Phillips mentioned a few items regarding recording. She reminded members that the little red light meant that the meeting was being recorded. In using the mics, it was best to speak directly into them about 6 inches away. She advised that to have a private conversation, members needed to push the button and hold it down to avoid being recorded. She provided information about the resources available to committee members. There were three sets of statutes located around the room [she pointed to the various locations]. She also highlighted that there was a set of detail budget books in the room, and in each member's drawer an LFD overview and a copy of the Revenue Sources Book could be found. There was also a set of the administrative codes in the room. For new members, she reported that each member had a filing cabinet which was behind where they were seated. The cabinets were labeled with member names. Bills in committee were in the top drawer and bills reported out of committee were in the bottom drawer. Bill files were placed in the top drawer once they were scheduled. Overview documents went in the bottom once they were heard. Prior to the meeting schedule, members could find bills for the following week in the front of their top drawer, scheduled by day. The weekly schedule was delivered via email to everyone's office as soon as it was published.

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Representative Ortiz asked if the finance committee staff would be available for the subcommittee meetings.

Ms. Phillips responded her staff's duties were typically related to the House Finance Committee room. However, a member's staff would be informed about the ways in which her staff provided support.

Co-Chair Seaton pointed out that members had a document titled, "House Committee Rules." Co-Chair Foster would review the rules with members.

Co-Chair Foster read from a prepared statement on the House Finance Committee Rules:

> Time:
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> House Finance meets in Room 519 at 1:30 p.m. to 3:30 p.m. (longer meetings and additional meeting times

will be scheduled when necessary). All committee members shall be on time to committee. Please notify the appropriate Co-Chair if you must be absent from or leave during a meeting:
Representative Seaton, Operating and Supplemental Budgets
Representative Foster, Legislation and Capital Budget

If not able to be in attendance, let the Chairs' offices know where you can be reached in case you are needed for a vote or to establish a quorum. Members must be present to vote on passage of a bill from committee and to sign committee reports.

If you are requesting an excused absence from the Call of the House, both House Finance Co-Chairs must sign the form and approve the absence from committee.

Committee Quorum and Voting Rules:

A quorum of the majority of the committee membership (six members) is necessary to vote or take any committee action.

If fewer than eleven members are present, motions to amend may be adopted by a majority of those present or attending telephonically.

Members participating via teleconference may be considered for the purposes of establishing quorum and for passage of amendments. Attached is a memo from Legal Services regarding committee quorum.

Conflicts of Interest / Abstention from Voting:

It is not required to request to abstain from voting to report a bill from committee due to conflict of interest. However, if members would like to declare a conflict of interest and request to abstain from voting, they may.
Amendments:

Amendments should be drafted by Legislative Legal Services to ensure conformity and legality. This will facilitate the transmittal of amended legislation.

All amendments to legislation must be turned into the appropriate Co-Chair's office at least 24 hours prior to an amendment hearing in House Finance. This will be strictly enforced. We will hold bills over if amendments need to be done but are not submitted 24 hours ahead.

Committee Reports:

Members must be present to sign the committee report. Please do not leave the room before signing (see attached legal memo).

Draft House Finance Committee Substitutes:

Only the Co-Chairs and their staff may request draft House Finance Committee Substitutes.

Participation:

All committee members are requested to be on time. When necessary, and with notice to the Co-Chairs, members may participate via teleconference. They may vote on amendments and participate in committee debate. However, members may not vote to move a bill from committee. A member must be physically present to vote on the passage of a bill from committee (see attached legal memo).

Notice Requirements:

Written notice of the time, place, and subject matter of all House Finance Committee meetings shall be given in accordance with Rule 23 of the Uniform Rules.

Electronic Devices:

Members may not use electronic devices at the committee table during official committee business. If a person’s cell phone goes off in committee they will be required to bring a healthy snack to the next meeting, no doughnuts or cookies. Additionally, electronics will not be allowed to be used by the audience in the front row during committee business.

Other:

Committee alternates will be called to serve on the Finance Committee at the discretion of the Co-Chairs.

Co-Chair Foster asked if members had any questions.

1:51:33 PM

Representative Pruitt asked if it was acceptable to wear "Make America Great Again" hats. It was not addressed in the rules.

Co-Chair Seaton indicated that advertising was not generally permitted. Hats without advertising were allowed.

Representative Wilson asked about bill substitutions. She asked if committee members would be given materials 24 hours to review prior to voting on a bill. She wanted to establish a 24-hour period for members to review a bill, especially ones with substantial changes.

Co-Chair Seaton indicated the co-chairs had not had a chance to discuss the issue. Their intention was that everyone would have all the materials in plenty of time to review them. However, the chairs would have to talk about it. If the committee adopted amendments and rolled them into a committee substitute, the whole committee would have heard and seen all the provisions, therefore, a 24-hour provision might not be necessary. The intention was for all members to have adequate time to review anything that passes from the committee.

Co-Chair Seaton reviewed the agenda for the meeting.

^Fall 2016 Revenue Forecast Presentation

1:54:16 PM

Co-Chair Seaton asked Commissioner Hoffbeck if he preferred questions be held until the end.

RANDALL HOFFBECK, COMMISSIONER, DEPARTMENT OF REVENUE, introduced himself and indicated he preferred questions at the end due to the number of slides in the presentation.

Co-Chair Seaton encouraged members to note the pages they had questions about. He mentioned that he wanted page numbers on all the slides in presentations. It was much

easier to reference a slide number when asking questions. He reiterated that questions would be held until the end of the presentation.

1:56:16 PM

Commissioner Hoffbeck was going to make a couple of brief statements and then turn the presentation over to Mr. Stickel. He informed the committee that in Revenue Sources Book there was a major change in methodology in how DOR forecasted production. In the past, DOR had used outside contractors to do the production forecasting. The Department of Revenue saw an opportunity in the current year, because of the need to reduce spending wherever possible and the fact that the current contract had expired, to work with the Department of Natural Resources (DNR) who did forecasting. The Department of Natural Resources' numbers were used for the official forecast for DOR. The change saved the state about $100,000. He wanted to put the forecast into perspective: for FY 17 the production forecast was 490,300 barrels per day. Currently the production average for the year was about 510,000 barrels per day - about 4 percent more than the forecast. He reported that production was currently running about 550,000 per day. In March, April, May, and June he saw declines in production with warming on the North Slope. Although production was currently robust, the average would not be determined until the end of the year. He noted that it was currently running higher than forecasted.

Co-Chair Seaton relayed that Representative Johnson and Representative Saddler were in the audience.

Commissioner Hoffbeck continued that the price forecast for FY 17 was $46.81. The price year-to-date was $46.92, very close to the forecast. The price of oil was bouncing between $52 and $54. The forecast was done prior to the Oil Producing and Exporting Countries (OPEC) agreement to reduce production. He thought prices would average higher than forecasted by the end of the year, which would result in more revenue to the state.

Co-Chair Seaton relayed that Representative Sullivan-Leonard had joined the meeting.

Commissioner Hoffbeck furthered that there were two additions to the Revenue Sources Book. First, there was a

new chapter, Chapter 1, which specifically dealt with dedicated fund revenue available for appropriation. The book generally dealt with unrestricted general fund revenue. However, clarity and documentation were needed for meetings with investors and rating agencies. The discussion pointing to funds available for appropriation included unrestricted general funds (UGF), realized earnings of the Alaska Permanent Fund (PF), earnings of the Constitutional Budget Reserve (CBR), and earnings from other funds that were statutorily or customarily restricted rather than constitutionally restricted. He added that Chapter 3 focused on income tax and sales tax. It included a ground work discussion for a broad-based tax.

2:00:46 PM

DAN STICKEL, ASSISTANT CHIEF ECONOMIST, TAX DIVISION, DEPARTMENT OF REVENUE, introduced the PowerPoint Presentation: "Fall 2016 Revenue Forecast". He noted that the department came up with a robust deck of slides, some of which he would be glossing over. He was happy to revisit any of them later.

Co-Chair Seaton acknowledged Representative Lora Reinbold in the audience.

Mr. Stickel began with slide 3: "FORECASTING METHODS: Trends for Forecast Period":

Oil Price is projected to increase 7 percent on average over the forecast period (FY 2017-2026)

- Oil Production is projected to decrease 4 percent on average over the forecast period
- Unrestricted General Fund Revenue is projected to increase 5 percent on average over the forecast period
- Investment Income is projected to increase 5 percent on average over the forecast period
- Total State Revenue is projected to increase 2 percent on average over the forecast period

Mr. Stickel advised that the slide showed a list of high-level trends. The average oil price in FY 16 was $43 per barrel. The fall forecast anticipated an increase of about 7 percent annually over the following decade. In FY 16, North Slope oil production averaged 515,000 barrels per day and the department was forecasting, on average, a 4 percent

annual decline over the following decade. He continued that UGF revenue in FY 16 was about $1.5 billion. The department anticipated increases of about 5 percent annually over the following decade. He indicated that investment income was growing at about 5 percent annually. The largest piece was the Permanent Fund. He noted that any of the investment numbers were before any potential changes that were being discussed in the current session. The total state revenue was projected to increase by about 2 percent annually over the following decade, which was a little bit less than the unrestricted revenue amount. The department had a flat forecast for federal revenue.

Mr. Stickel turned to slide 4: "FORECASTING METHODS: Introduction":

All data is based on the DOR Fall 2016 Forecast.

- This is a forecast. All figures and narratives in this document that are not based on events that have already occurred, constitute forecasts or “forward-looking statements.” These numbers are projections based on assumptions regarding uncertain future events and the responses to those events. Such figures are, therefore, subject to uncertainties and actual results will differ, potentially materially, from those anticipated.
- This forecast supersedes all prior estimates or forecasts as the official forecast of the department. Therefore, all prior forecasts should be used only for comparison purposes.

Mr. Stickel elaborated that the slide was the department's standard disclaimer. The large point was that there was uncertainty around the forecast and all the numbers presented by the department represented one possible scenario within a range of scenarios. The department had already talked about how prices and production were doing a little better for the current fiscal year than anticipated at the time the forecast was put together. He asked committee members to keep that in mind in going through the forecast numbers.

Mr. Stickel continued to slide 5: "FORECASTING METHODS: What Do We Forecast at DOR":

We directly forecast Petroleum Revenue Accounted for 72% of state unrestricted revenue in FY 2016

Projected to be 67 percent to 68 percent in FY 2017 and FY 2018 Includes severance taxes, royalties, corporate income tax, and all other revenue from oil companies

- We directly forecast Non-Petroleum Revenue
- We use investment advisor forecasts for Investment Revenue
- We use the Federal Revenue authorized for spending as the forecast It is typically 20 percent to 30 percent more than actually gets spent
- Compile all of these into Revenue Sources Book

Mr. Stickel reported that the economic research group within the Tax Division at DOR maintained models for the various petroleum taxes and other petroleum revenue sources as well as non-petroleum revenue sources. They are forecasted within DOR. The division worked with the Alaska Permanent Fund Corporation (APFC) and the Treasury Division to determine the investment revenues for the forecast. They utilized projections from Callan Associates, the investment consultant to both organizations. He indicated that when looking at the federal revenue forecast the division used the total authorized federal spending in the budget. It did not attempt to estimate what the federal government was going to provide to the state in the future. Typically, actual receipts were a little less than the total federal authorization. Historically, it had been about 20-30 percent less.

Mr. Stickel moved to slide 7: "PETROLEUM REVENUE FORECAST: Factors":

Four Factors for Petroleum Revenue Forecast

1. Production
2. Price
3. Costs
   - Capital Expenditures
   - Operating Expenditures
   - Transportation Costs
4. Credits

Mr. Stickel explained that, for many years, the petroleum revenue provided 80-90 percent of the state's general fund (GF) revenue. Looking out over the time horizon of the

forecast, the number was expected to be closer to 70 percent. It was still the largest contributor to unrestricted revenue by far. There were four primary factors the department considered when looking at the petroleum revenue forecast. Oil production and price were very important. Given the net value-based production tax the state had, the lease expenditures were deductible. The department looked at capital costs and operating costs which were also important for tax credits. He added that the credits themselves were deductible against the production tax and some might be repurchased by the state. He would walk through each of the four components in more detail in the following set of slides.

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Mr. Stickel spoke to slide 9: "PRODUCTION FORECAST: Methods Used." He explained that the slide looked at several different components of the production forecast. It showed DNR's new approach to the forecast versus the method of the previous engineering consultant. One of the most significant changes was moving from a well-by-well forecast to a pool level forecast by DNR. Another significant change was that the previous forecast had a 10-year time horizon. Any project expected to come on line in the following ten years would be evaluated for the forecast. The new method had a 5-year time horizon. Therefore, the forecast was only looking at current oil production and fields expected to come on line in the following 5 years. He thought it was a salient point. However, with implementing this method for the fall forecast, the department did not drop anything out of the forecast.

Mr. Stickel advanced to slide 10: "PRODUCTION FORECAST: ANS History and Forecast by Pool." He drew attention to the familiar mountain chart which showed North Slope production by the major fields since the start of production on the slope. Production peaked at 2 million barrels per day in the late 1980s and, with a few exceptions (last year being one of them and the start of the Alpine field being another), production had generally been in decline since the peak. The state was now looking at 500,000 barrels per day of production. Recently, it had been slightly higher. He added that the forecast over the following decade anticipated an average of a 4 percent annual decline. Most of the production in the forecast was still coming from

major fields of Prudhoe, Kuparuk, and the Colville River Unit.

Mr. Stickel explained that in putting the forecast together the department looked at production and potential production in 4 different categories which he would review. The categories included: currently producing, under-development, under evaluation, and fields not included in the current forecast.

Mr. Stickel scrolled to slide 11: "Production Forecast: Currently Producing":

Volumes from Currently Producing (CP):

- Oil from all currently producing pools and wells
- Decline curve analysis forecast at pool level inherently includes 'background' ongoing development activity, facility maintenance, turn-around events

Mr. Stickel reported that currently producing volumes included all oil from currently producing pools and wells. The Department of Natural Resources used a decline curve analysis on the pool level to estimate production on the currently producing fields. It also assumed a certain amount of background development. For example, for a field like Prudhoe Bay there was a certain amount of drilling that would occur of which the department extrapolated an estimate forward based on historical activity.

Mr. Stickel turned to the next category on slide 12: "Production Forecast: Under Development":

Volumes from Under Development (UD):

- Ongoing development wells in existing, mature fields above and beyond CP
- New fields expected to produce within 1 year (by 6/30/2017)

Mr. Stickel explained that with the new methodology it represented oil volumes expected to come on within the following year - new fields expected to come on by the end of FY 17 as well as any development wells above the background level of drilling in the existing fields. He

cited the example of an under-development project, the continued build out of the CD5 in the Colville River Unit.

Mr. Stickel continued to slide 13: "Production Forecast: Under Evaluation":

Volumes from Projects Under Evaluation (UE):

- New fields expected to produce within 2-5 years (7/1/2017 to 6/30/2021)
- UE 1: Facilities in place, significant sunk cost, well locations finalized, drilling plans in place
  - Examples: Nuna, GMT1, Mustang, Moraine, 1H NEWS, Nuiqsut expansion
- UE 2: Facility-sharing agreements in place, source of funding identified, EIS progress
  - Example: GMT2
- Risk factors internalized in forecast based on breakeven price

Mr. Stickel relayed that the projects under evaluation in the fall forecast were anything expected to come on line in the following 2-5 years, through the end of FY 21. He noted the Oooguruk Unit, the Kuparuk Unit, the Mustang Unit, the Greater Moose's Tooth Unit, and the National Petroleum Reserve Alaska (NPRA). The Greater Moose's Tooth Unit would be the first major development on federal land in NPRA.

Mr. Stickel advanced to slide 14: "Production Forecast: Excluded from Forecast":

Characteristics:

- Unknown first-oil date/estimated greater than 5 years
- Discovery (contingent resource) or just prospects (prospective resource)
- Uncertain finances (e.g., sourcing for private equity)
- Facilities incomplete or nonexistent
- Projects in Appraisal
- Technological Uncertainty
- Environmental/Permitting Uncertainty
- Economic Uncertainty

Examples: Pikka, Ugnu, Placer, Tofkat, Pt Thomson (MGS or full-cycling), Liberty, Fiord West, Smith Bay

Mr. Stickel specified that the fourth category was those things excluded from the forecast. There had been many recent announcements that were very exciting, and the department was monitoring them with the hopes of them coming on line. However, they were projects that did not have enough of a level of certainty to be included in the forecast yet. The department had a list of some of the various types of uncertainty around those projects. Typically, they would be projects that would start oil production 5 years or more into the future. Examples of projects not included in the forecast were Pikka, Ugnu, Smith Bay, and Willow.

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Mr. Stickel reviewed slide 15: "Production Forecast: Official Forecast." He conveyed that the official production forecast consisted of currently producing, under development, and under evaluation categories.
Mr. Stickel scrolled to slide 16: "Production Forecast: ANS." He relayed that the slide showed that most of the oil in the forecast was from the currently producing fields (Prudhoe, Kuparuk, Colville River, and some of the smaller fields). Alaska had a small amount of oil that qualified for the under development category of projects coming on line in the following year and a modest amount of under evaluation oil peaking at about 30,000 barrels per day.

Mr. Stickel explained slide 17: "Production Forecast: DOR Cases":

High Case (P10):
- Based on DNR modeling, oil production would have a 10 percent probability of exceeding this level

Official Forecast (P50):
- Based on DNR modeling, oil production would have an equal probability of coming in above or below this level

Low Case (P90):
- Based on DNR modeling, oil production would have a 90% probability of exceeding this level.

Note: None of the cases include any of the “Excluded from forecast window” fields

- With these fields, production could exceed the high case

Mr. Stickel relayed that in addition to the baseline forecast, the DNR modeling allowed for a range of possible values for the production forecast. The Department of Natural Resources provided a P50, which was the base case. The department also provided a high case production forecast [P10], which (based on the activity set in the forecast) had a 10 percent probability of production being base case level or higher. The department also provided a low case (P90) where there was a 90 percent chance that oil production would be at least the base case value. He reiterated that the modeling only encompassed those fields included in the production forecast. It did not comprise any of the excluded fields.

Mr. Stickel continued to slide 18: "Production Forecast: ANS by Case." He noted that in the official forecast oil production would decline to about 331,000 barrels per day by 2026. In looking at the high and the low case, based on the DNR modeling, it was a plus or minus of 40,000 barrels per day.

Mr. Stickel spoke to slide 19: "Production Forecast: ANS Details." He conveyed that the chart provided the same information supplied in the previous slide but in a table form. The slide came from page 37 of the Revenue Sources Book. He added that it showed the amount eligible for the gross value reduction (GVR), an element of the production tax that allowed for an additional benefit for certain qualifying new production. He highlighted that the amount of GVR went to zero in 2026 due to some changes that were made in the 2016 legislative session establishing a limit on the amount of time fields could qualify for the GVR.

Mr. Stickel turned to slide 20: "Production Forecast: ANS Comparison to Prior Forecast." He relayed that the slide was a comparison of the official forecast from the fall forecast to the spring forecast for the North Slope production over the near and midterm. The production forecast had been decreased from the previous forecast because there had been a reduction in planned drilling in some of the plans of development from the operators in response to low oil prices. He noted some projects being pushed out and some rigs being taken down in response to low prices. Over the long term there was a slight increase

over the previous forecast partially due to some projects being pushed out later and remnants of the methodology change.

Mr. Stickel introduced slide 22: "Price Forecast: Historical ANS West Coast, West Texas Intermediate and Brent Crude Prices 2009+." The chart showed the previous 8 years of Alaska North Slope (ANS) prices. It also showed the West Texas Intermediate, which was the US crude bench mark, and Brent, an international waterborne crude benchmark. He highlighted that from 2011 to 2013 toil prices were fairly stable, making forecasting prices easy. However, prices started to decline in mid-2014 and throughout 2015. Since then, 2016 had seen a modest recovery. Prices had doubled from their lows reached in the beginning of 2016.

Mr. Stickel reviewed some of the key drivers when evaluating ANS prices in slide 23: "Price Forecast: Key Drivers":

Supply, Demand and Spare Capacity in CY 2017

- Supply – 97.4 mb/d
- Demand – 96.9 mb/d
- Global Spare Capacity – 1.17 mb/d or 1.2%

Current Events

- Weak global demand growth
- Cost of supplying the marginal barrel has decreased
- OPEC (Saudi Arabia) maintains market share and accepts lower prices OPEC recently agreed to cut supply
- Cost of supply has fallen as new sources have been defined and developed (i.e. Shale oil)

Mr. Stickel indicated that the drivers included the fundamentals of supply and demand as well as spare capacity - the amount of slack in the market to pick-up a potential increase in demand or a potential shock to supply. He elaborated that spare capacity was fairly low by historical standards, but at the same time demand growth had been weak globally. Some of the major producers had aimed to secure market share. At the same time the costs of new supply dropped. In the shale patch, in particular, there had been some amazing changes in technology and approaches that were allowing some of the developments to come on line at much lower prices than previously.

2:15:31 PM

Mr. Stickel moved to slide 24: "Price Forecast: Historical ANS West Coast Price 2015+." He reported that the slide showed key events over the previous 2 years. He reported that the prior day's closing ANS price was $54.83 per barrel and the low in early 2016 reached $26.23 per barrel. Prices had more than doubled from the low. The low was reached at the same time sanctions were lifted against Iran and there was significant concern that Iranian oil could flood the market. Since then, demand had come back slightly, although not to the extent projected.

Mr. Stickel reviewed slide 25: "Price Forecast: Impact of Spare Capacity." He reported that the slide, provided by Energy Information Agency (EIA), was used for comparison purposes. It was an example of the slides the department looked at when coming up with a price forecast. He highlighted the blue line (representing world oil production) being ahead of the green line (representing world oil consumption). Globally, the world had been placing oil into inventory for the previous couple of years. He explained when there was too much supply and not enough demand, prices adjusted accordingly. Looking at their analysis of the market fundamentals, the EIA and several other experts were looking for supply and demand to come into balance over the following year, which would support price stability.

Mr. Stickel discussed slide 26: "Price Forecast: Base Price Method":

- Price forecast is based on fall 2016 forecasting session held on October 4
- Participants gave 10th, 50th, and 90th percentile paths
- Average of these paths used to derive PERT distribution
- Base case is the median of the distribution

Mr. Stickel detailed what the department did to generate its forecast. About 30 experts from around the state got together for the day. People from DOR, DNR, DOL, and the University of Alaska discussed oil prices, what was going on with supply and demand, and what other forecasters and analysts were saying. At the end of the day each

participant was asked for a price path forecast. Everyone provided their most likely P50 case, a high case, and a low case. The cases were used to construct a distribution of potential oil price paths shown on the following slide.

Mr. Stickel advanced to slide 27: "Price Forecast: Nominal ANS Price Distribution." He indicated the forecasts were in nominal terms. He pointed out that in the low case of 10 percent, oil prices ended at about $50 in FY 27. In the high case, oil prices were up over $140. The official forecast was the middle most likely median case within the range of possible oil prices. Prices slowly climbed to reach a little over $90 in nominal terms by the end of the forecast period. In real terms, without inflation, the price amounted to about $70 to $75.

Mr. Stickel drew attention to the bar chart on slide 28: "Price Forecast: Historical ANS West Coast Price FY Oil Price Bands (Annual Average and Fall 2016 Forecast)." He reported that the chart spoke to some of the incredible stability in oil prices Alaska had until the recent price collapse. The historical bars on the chart through FY 16 showed the average price for the fiscal year as well as the range in prices. For example, in 2015 the average price was a little more than $70 per barrel. It ranged from about $50 and $110 in the year. He continued that for the forecast for 2017 and beyond the bars represented the state's official forecast within the range of the high and low case forecast for each year.

Mr. Stickel moved to slide 29: "PRICE FORECAST: Consensus View of Wide Distribution." He noted that the slide came from EIA. The Department of Revenue was forecasting ANS prices at $47 per barrel for FY 17 and $54 per barrel for FY 18. He included the slide to show that EIA and the New York Mercantile Exchange (NYMEX) futures curve both had similar prices for the following year and a half in the range of between $50 to $55 per barrel were in a similar price range. He spoke to uncertainty on the chart that reflected a price range of between $30 to $100 per barrel. The department was doing its best.

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Mr. Stickel advanced to slide 30: "Price Forecast: Impact of other prices in FY 2017: ANS Price Sensitivity." The table was prepared in the prior month and included actual

prices for the first 5 months of the year through November. It allowed the user to determine the final price for FY 17 if a given price was in place for the remainder of the year. The forecast price was $46.81 which anticipated a price of between $45-$50 for the remainder of FY 17 to arrive at the price. Currently, prices were closer to about $55 per barrel. In looking at the chart, if prices were $55 per barrel for the remainder of FY 17, then the final FY 17 price of about $51 per barrel would be about $4 to $5 above the official forecast.

Mr. Stickel explained the chart on slide 31: "Price Forecast: ANS Comparison to Prior Forecast." The chart compared the official price forecast for the fall to the previous spring forecast. He noted that with the recovery and some of the market fundamentals, there was an increase in the forecast for all of the years within the time horizon. However, prices were not expected to reach the $100 per barrel level any time soon.

Mr. Stickel moved to costs on slide 33: "Cost Forecast: North Slope Capital Lease Expenditures." He iterated that company lease expenditures were deductible in the production tax calculation. The expenditures also factored into several of the tax credits. Costs were also interesting as a barometer of oil industry activity. He highlighted that for 2017 and 2018 there was a significant reduction to capital costs on the North Slope. He informed the committee that when the department talked with the companies, they indicated that it was their response to lower oil prices. They had taken rigs off the slope, shelved some projects, and pushed some things off where possible. However, there were several projects going forward. He mentioned some of the announcements of companies taking activity down to save some capital which could be seen reflected in the production forecast through reduced drilling.

Mr. Stickel continued to slide 34: "Cost Forecast: North Slope Operating Lease Expenditures." He reported that the operating costs had also come down for 2017 and 2018. Projections for operating costs were down due to cost containment measures that the companies were pursuing. There had been some layoffs and similar actions. He noted a little bit of an increase starting in 2019, which was largely a function of inflation. In real terms, he expected operating costs to be fairly flat. He noted that on both of

the cost slides he pointed out it did not include any of the potential development costs should a Smith Bay, Pikka, or Willow Unit come on line. Those costs would be above and beyond what was shown on the slides.

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Mr. Stickel detailed slide 36: "Credits Forecast: Compared with Production Tax." He reported that tax credits were the fourth and final piece of the petroleum revenue puzzle. He indicated that in the production tax code there were numerous tax credits, which he was not planning to discuss in detail. He was happy to speak to the committee on the subject at a different time. In general, there were tax credits that could be used against a tax liability. A company that paid tax and had enough activity in the state to generate a tax liability could use the credits to reduce what they paid to the state. Some of the credits could also be repurchased by the state in cash. For instance, the state could repurchase tax credits from a company that did not have a tax liability or one that did not have enough to use all of their tax credits. If a company drilled a well and earned a loss credit on it, they could apply to the state to have that credit purchased in cash. The slide showed both types of credits. He pointed out that the blue lines for 2016, 2017, and 2018 showed the total estimated production tax to the state before any credits. The orange bar showed the production tax net of only those tax credits against liability. In other words, it was how much cash payments came into the state as revenue. The third bar depicted in grey netted the credits that were repurchased by the state in cash. They came out on the appropriations side.

Mr. Stickel explained that the credits program was offsetting the production tax revenue. He highlighted that for FY 17 and FY 18 the department only assumed that the statutory appropriation for credits was made. He would discuss the issue in the following slide in more detail. Under the oil and gas tax credit fund statute there was statutory language that the legislature would appropriate either 10 percent or 15 percent of the production tax revenue to the oil and gas tax credit fund for purposes of purchasing those tax credits. In that case, at the end of FY 18 the state would have about $887 million of tax credits available for repurchase.

Mr. Stickel advanced to slide 37: "Credits Forecast: Compared with Unrestricted Petroleum Revenue." He explained that the slide addressed the same chart as the previous chart but looked at total unrestricted petroleum revenue, which included the production tax, the unrestricted royalty, the corporate income tax, and the property tax. He highlighted that even after all of the credits were claimed, the industry would still be providing over $1 billion in unrestricted revenue to the state in FY 18. If the department were to provide a third chart that included restricted revenue (the portion of the royalty that went to the permanent fund, the settlements to the CBR, and other accounts), the number would be higher.

Mr. Stickel moved on to slide 38: "Credits Forecast: Outstanding Tax Credit Obligations." He offered that the department set up the oil and gas tax credit fund to repurchase tax credits from those companies that did not have enough of a tax liability to offset them. Historically, through FY 16, the legislature provided enough funding and the governor authorized enough funding to repurchase those credits in full. In FY 16 the appropriation was $500 million, which turned out to be just enough to pay what came in for requests. However, in FY 17 after a veto, only $30 million was appropriated. There was $646 million in credits available for repurchase and requested for FY 17 that was not able to be paid out of the appropriation.

Mr. Stickel indicated that for FY 18, assuming the statutory appropriation would be made (15 percent of production tax revenue) there would be about $885 million in outstanding tax credits available for repurchase at the end of FY 18. He furthered that in carrying it out through the end of the forecast period, if only the statutory appropriation was made for each year, the liability would continue to grow to about $1.6 billion by the end of FY 26.

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Mr. Stickel advanced to slide 40: "Forecast Change: Production Tax Revenue Highlights":

Oil price forecasts increased slightly from spring forecast

- Long-term prices (FY2025+) now expected to settle around $70- 75 real

Change to oil production forecast methods

- Forecast now produced by technical experts at DNR
- FY 2017-18 forecasts decreased, long-term forecast increased slightly

Unrestricted revenue forecast increased somewhat due to higher oil price forecast

Capital expenditures stabilize at lower level than last few years

Companies cited oil prices and uncertainty regarding the state budget and fiscal system, as factors impacting decision-making

Mr. Stickel conveyed that the following set of slides offered some comparisons to the previous Spring 2016 forecast in terms of the petroleum revenue forecast. Oil prices were increased slightly over the spring forecast. The production forecast for 2017 and 2018 was decreased slightly while the long-term production forecast increased. He continued that the unrestricted revenue forecast increased slightly due to the higher oil price. The department expected that capital expenditures would fall in 2017 and 2018 and stabilize thereafter.

Mr. Stickel continued to slide 41: "Forecast Change: Comparison from Spring 2016 Forecast for FY 2017." He reported that there were a couple of tables that looked at some of the detailed data for FY 17 and FY 18. The department increased the oil price forecast by 20 percent in FY 17 and decreased its production forecast by 3 percent. He noted that the deductible lease expenditure deserved some explanation. There were two ways the department presented lease expenditures in the Revenue Sources Book. The first way was looking at total lease expenditures including operating and capital expenditures in the oil patch. The second way the department presented lease expenditures was to look at deductible lease expenditures; how much of the total expenditures could be used by a company to offset a positive revenue. He concluded that even though the department's forecast of total expenditures decreased for FY 17, with the increase in gross value and oil price, the amount of lease expenditures deductible against the tax increased by 9 percent. The state's transportation costs forecast

decreased slightly. In total, the forecast for the wellhead value of crude oil on the North Slope increased by 34 percent and the unrestricted petroleum revenue forecast increased by 37 percent or $262 million. The department was currently forecasting just shy of $1 billion for FY 17 in unrestricted petroleum revenue.

Mr. Stickel turned to slide 42: "Forecast Change: Comparison from Spring 2016 Forecast for FY 2018." He reported that the estimated wellhead for North Slope crude oil increased 36 percent. The department was forecasting unrestricted petroleum revenue for FY 18 at about $1.1 billion, a 40 percent increase over the previous forecast.

Mr. Stickel scrolled to slide 44: "Revenue Forecast: 2016 to 2018 Totals." He explained that throughout the Revenue Sources Book, with the exception of Chapter 1, the department followed the budget conventions in consultation with LFD and the Office of Management and Budget (OMB). There were 4 categories of revenue included. He elaborated that UGF revenue was revenue available for appropriation for any purpose and was typically discussed the most. He reported that unrestricted revenue was about $1.5 billion in FY 16 and the department was forecasting about $1.4 in FY 17 and $1.6 in FY 18. The next category of revenue was designate general funds (DGF). There was not a constitutional prohibition against it, but DGF was customarily more statutorily used for a specific purpose. He cited the alcohol tax as an example. He relayed that half of the alcohol tax revenue was UGF and half was customarily appropriated to the alcohol and other drug abuse treatment and prevention fund. Even though the money was customarily sent to that fund, the legislature technically had the discretion to spend it on whatever it wanted. the federal government dictated how federal revenue, the third category, could be spent. The final category was other restricted revenue, which was revenue throughout the budget process viewed as "hands-off" funding. It was revenue that had a constitutional or debt covenant prohibition against the use of it for other purposes. He provided some examples: oil revenue to the Permanent Fund, settlements to the CBR fund, and other non-oil examples. Non-oil examples included revenue that went to the Alaska Fish and Game fund, different program receipts, and investment revenue (earnings on the PF and the CBR). The department historically and in budget

documents considered those items to be other restricted revenue.

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Mr. Stickel pointed to slide 45: "Revenue Forecast: By Spending Category." He explained that the slide showed a 10-year history and forecast of the same total revenue picture the committee had just looked at. The total revenue was expected to grow over the time horizon of the forecast and was largely driven by expected growth in investment revenue from the investment portfolio. He noted that the investment portfolio had been the most volatile source of revenue for the prior 10 years.

Mr. Stickel explained slide 46: "Revenue Forecast: 2016 to 2018 General Fund Unrestricted Revenue (GFUR)." He mentioned having talked a lot about petroleum revenue. The state also had non-petroleum revenues including non-petroleum corporate income taxes, mining license taxes, and marijuana taxes. The Marijuana tax was new and had generated some interest. The state had received its first set of collections in Marijuana taxes, half of which were considered unrestricted revenue and half were considered designated restricted revenue. He continued that there were several other taxes the department administered as well as the other non-tax revenue such as fines and forfeitures, Non-petroleum rents and royalties, charges for services, and miscellaneous revenues. He noted a small amount of investment revenues that were considered to be unrestricted. An example was earnings on the general fund. The table was a summary of Chapter 5. Chapter 5 was specific to non-petroleum taxes and other non-petroleum revenue sources.

Mr. Stickel turned to slide 47: "Revenue Forecast: Revenue Available for Appropriation." The department had a new Chapter 1 in the current Revenue Sources Book, which focused on revenue available for appropriation. It was a process with which the department started with a table and a couple of paragraphs in the previous year which was expanded to be a full chapter. The goal was to provide a better view of the state's ability to meet its obligations for outside analysts or organizations that were not familiar with Alaska's various budget conventions.

Mr. Stickel advanced to slide 48: "Revenue Forecast: 2016 to 2018 Totals to Appropriate." He reported that revenue available for appropriation started with general fund unrestricted revenue and added in designated general fund revenue (revenue restricted by custom or statute), royalties beyond 25 percent to the Permanent Fund (25 percent of all mineral royalties were guaranteed to the Permanent Fund by constitution - an additional 25 percent for certain leases went to the Permanent Fund by statute), settlements and earnings on the Constitution Budget Reserve Fund, and realized earnings of the Permanent Fund.

Mr. Stickel moved quickly to slide 49: "Wrap-Up: Big Picture Takeaways for Forecast Period":

Oil Prices up by 7% and GFUR up by 5%

- Current prices trending higher than forecasted price for FY 2017

Oil Production down by 4% but potential for upside

- Forecast doesn't include recent announcements new finds (i.e. Smith Bay, Nanushuk, Pikka)
- Current production trending higher than forecasted volume for FY 2017

Petroleum Revenue represents ~70% of our GFUR revenues

The GFUR trend over forecast period:

- Increase of 12% in FY 2018 or $177M
- Increase of 15% in FY 2019, or $249M
- Increases taper off in FY 2020 to average of 3% per year until FY 2026
- Still low compared to past decade but no longer decreasing as had since FY 2015

Mr. Stickel concluded by mentioning some high-level trends he had discussed. Oil prices were expected to grow by about 7 percent annually. General fund unrestricted revenue was expected to grow by about 5 percent annually even as oil production under the forecast declined by about 4 percent per year. There was a significant potential for an upside with the exciting new developments if they preceded. Oil revenue would represent about 70 Percent of the state's unrestricted revenue under the forecast. Also, the state appeared to have turned the tide in terms of the message that had to be delivered to the legislature. The current

forecast had a modest increase in the revenue forecast, which was nice, instead of the continued reductions the state had experienced in the previous several forecasts as prices were falling.

Mr. Stickel turned to slide 50: "Wrap-Up: Big Picture Takeaways for Forecast Period (cont.)":

Investment Income is projected to increase 5% on average over the forecast period

- Still have ~$53B in the Permanent Fund Account

Other Positive Revenue Trends:

- Mining Taxes to recover from low of $11M in FY 2016 to $36M average over the forecast period
- NPR-A Revenue is projected to increase 40% on average over the forecast period (from $4M in FY2017 to a high of $45M in FY2024)

Mr. Stickel relayed that the slide mentioned investment income was projected to increase by about 5 percent per year before any potential changes. There were a couple of other positive trends worth mentioning. Mining taxes were expected to recover. It was a relatively small revenue source for the state but definitely important to the over all economy. Mineral prices for the minerals that were mined in Alaska had recovered along with oil prices which the department saw as a positive sign. Another item was that in the Revenue Sources Book the NPRA revenues were expected to increase up to $45 million per year. He elaborated that the federal government received all of the royalties for federal land in the NPRA and shared 50 percent of the revenue with the state to be used for certain purposes. Historically, the revenue stream had been a share of lease bonuses, and rents. Currently, with the development of Moose's Tooth, which would be the first development in the NPRA on federal land, the state would start to receive a shared revenue from the royalties.

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Representative Pruitt wanted to address 2 specific areas. First, he wanted to address the forecast for throughput. He had concerns about what was being forecasted for throughput because it was dramatically different from the current average for the fiscal year to-date. He suggested the average for the previous 6 months was 507,000 and a couple

of days prior it was 542,000 for the month. He expected that in April and May there might be a dip in throughput as the summer months approached. There was about a 3 percent difference from what the state currently averaged and from the department's forecast from last spring and in the most recent Fall Revenue Sources Book. He wondered about the large disparities.

Mr. Stickel would defer the technical questions to DNR. He explained that when DOR looked at the forecast, it had some of the same questions. The department wondered how the state was producing 550,000 per day currently and forecasting 490,000 for the year. He mentioned that seasonality was a factor. Production seemed to be significantly higher in the winter and lower in the summer. The department's understanding was that there were some turnarounds that could have been done the previous fall but were potentially being pushed to later in the spring or the following summer. Another factor was the change in the methodology. He explained that what DNR had done in producing the forecast was to look at what the actual oil production was through the end of FY 16. The Department of Natural Resources used that information as well as information about the wells being drilled (the plans of development) to generate the projection for FY 17 and FY 18. The good news was that production appeared to be coming in stronger than the experts projected. He thought it was a good thing.

Representative Pruitt understood the seasonality. Back in July the throughput was 459,000, much lower than what the department had forecasted. He noted the number in November being 549,000 and December at 556,000. He thought Mr. Stickel was suggesting he direct his question to DNR. He had a glaring concern. He noted that in the Revenue Sources Book the North Slope was separated from Cook Inlet. Yet he was uncertain they were separated in the slides of the presentation.

Mr. Stickel responded in the negative. The slides reflected total statewide credits against total statewide revenue.

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Representative Pruitt disagreed with how the department presented the information. He argued that the two could not be put together [the North Slope and Cook Inlet] because

they were different tax regimes. He thought it provided a false sense of what the state was dealing with. He suggested that everyone understood that there was a drag with Cook Inlet. He continued that there would be a net output based on the current regime. However, he thought grouping the North Slope with Cook Inlet was not a true picture. He asked why the two regimes were put together. He thought they should be separated. He wanted to have an appropriate discussion about the two separate regimes. He thought the information was clouded.

Commissioner Hoffbeck responded that expediency was a factor. Otherwise, the department could have included 100 slides in the presentation. He was more than happy to present the information separately and offered that there was never any intention to obscure the information. Also, the Cook Inlet credit regime would be gone in 2 years. He referred to slide 38 noting that the forecast went out to 2026. Following 2019 the numbers reflected only the North Slope credits.

Representative Pruitt understood the reason why the growth slowed down substantially. Otherwise, there would be a much steeper increase if the state was only paying a minimum amount. He thought it was appropriate going forward that the two regimes were separated out to avoid confusion.

Co-Chair Seaton appreciate Representative Pruitt's input. He thought there would be another slide included. However, the committee wanted to see the overall budget and the overall impact on the state's budget.

Commissioner Hoffbeck had a comment on the reduced production forecast. He reported that the department ran some sensitivity numbers because substantially more oil was being produced than the forecast. The increase was approximately 50,000 barrels on average which amounted to about $100 million in additional revenue.

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Representative Guttenberg asked the commissioner about testing the in-house forecasts to previous forecasts to see how accurate the department would have been had it been doing the forecasting earlier.

Commissioner Hoffbeck recognized that the contractors tended to over-forecast in the short-term. The new method was similar to the method used prior to the most recent contractor. He elaborated that when D. A. Platt and Associates had the contract previous to 2011, he did pool-by-pool forecasting. The method was similar, but the probabilistic modeling was added along with other things that were more sophisticated. The department was surprised how much it dropped.

Mr. Stickel commented that in developing the new methodology, DNR did a robust analysis of the previous forecasts and back-tested the new methodology. The testing helped show that the new methodology was reasonable and provided a good forecast for the state. Although certain slides were not included in the current presentation, he was happy to do another presentation in the future.

Representative Guttenberg noted the commissioner mentioning the change from the well-by-well methodology to the pool level forecast. He wondered about any other changes the commissioner observed with the change in methodology. He wondered if he had seen changes in production or in revenue. He asked if anything else significantly changed that took him by surprise.

Commissioner Hoffbeck deferred to Mr. Stickel.

Co-Chair Seaton relayed that DNR was available on the phone.

Representative Guttenberg was saving some of his questions for DNR.

Mr. Stickel referred to slide 9, which showed some of the significant changes on the methodology. He highlighted that the state went to a probabilistic production forecast. He explained that rather than having a single point estimate of production, the department looked at a range of possible outcomes for each pool. By doing so, additional information was gleaned regarding the high side and low side.

Mr. Stickel highlighted that some meaningful changes were made to the way risking was incorporated into the forecast. In the previous methodology, the state received a forecast for each field from the engineer of which the department applied a uniform risk factor to the under development and

under evaluation categories. He continued that for under evaluation, in particular, it ended up risking away the vast majority of the expected production once reaching 10 years out. The Department of Natural Resources had changed that methodology to more thoroughly look at risks and economic parameters of each individual development. By doing so, he thought it provided for a more robust risking methodology and a higher forecast at the end of a decade than in the previous forecast. He spoke to another change which was the change to the cut-off window. It did not affect the current forecast because everything the state had coming online was within a 5-year window to start. However, going forward, as the department evaluated potential new developments it could result in a significant change.

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Representative Guttenberg referred to slide 26 [slide 27] and Mr. Stickel's reference to rounding down. He wondered if an analysis with actuals had been done. He asked if anything had changed considerably. He mentioned the footmark at the bottom of the slide.

Commissioner Hoffbeck replied that it would not have made any significant change. The department truncated the cents off of the actual forecast.

Representative Guttenberg referred to slide 41. In reference to transportation costs decreasing, he wondered about resulting increased revenues.

Mr. Stickel would provide the information later.

Vice-Chair Gara asked if he was accurate that for every additional dollar in oil price, the state gained about $30 million in production tax revenue.

Mr. Stickel replied that it depended on what year was being examined as well as the starting price. He provided an example. For instance, for FY 18 on page 101 of the Revenue Sources Book there were sensitivity matrices with revenue at different oil prices. At $50 per barrel the state would expect $1.52 billion. At $60 billion per barrel the state would expect $1.79 billion. It was a difference of $270 million for a $10 change, which would be $27 million per dollar change - close to the $30 Vice-Chair Gara suggested.

Vice-Chair Gara referred to slide 38. He asked if the blue bars represented the credits the state purchased. He wanted to make sure they did not reflect the credits companies were able to deduct off their production taxes. He asked if he was accurate.

Mr. Stickel responded, "Correct."

Vice-Chair Gara referred to FY 18 on slide 36. He wondered about the amount the state would have left after allowing deductions and payments of credits. In FY 18, companies that had profits would deduct about $400 million in credits. He asked Mr. Stickel to comment about the idea of the state, in FY 18, paying only the credits accrued in FY 18. Under the department's model the state would only be paying the statutory minimum.

Mr. Stickel had the section highlighted on page 78 of the Revenue Sources Book. He reported that approximately $646 million of the $961 million in total credits available for repurchase in FY 18 were carry-forwards of excess for FY 16 and FY 17. The remainder was a little over $300 million of new credits that would be earned and available for repurchase in FY 18.

Vice-Chair Gara supposed that under the current system, if the state allowed the current law's deductions of credits from production taxes and paid what was generated for credits for activity in FY 18, the state would have a balance of -$200 million to -$250 million. In other words, the state would pay about $250 million more that the state received in production taxes. He asked if he was accurate.

Mr. Stickel responded that he was correct. He furthered that if the legislature was to appropriate to repurchase all of the credits that became available for appropriation in FY 18, the state would have a net negative for the total production tax. He added that there would also be a positive in terms of total oil revenue.

Vice-Chair Gara asked if it was because of royalties.

[Mr. Stickel nodded affirmatively].

Vice-Chair Gara referred to Representative Pruitt's question about just looking at the North Slope generated

credits, which the state really did not change in the previous year. In FY 18 there would be $500 million in production taxes, companies would deduct $400 million, and $100 million would be left. He asked how munch was projected in FY 18 as payable North Slope credits.

Mr. Stickel reported that of the total credits available for purchase in FY 18 of $961 million, $537 million was North Slope and $420 million was non-North Slope. He indicated the numbers could be found on page 80 of the Revenue Sources Book.

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Vice-Chair Gara asked for the amount for North Slope credits that accrued for activity in FY 18. He wonted to know what the payable amount would be.

Mr. Stickel could provide the information later.

Representative Thompson was concerned with the state's number being over conservative. He was in the legislature when the state over estimated every year. In a couple of instances, the state over estimated by 20 percent which promted the legislature to direct the department to use more conservative numbers. The state went from a 5 percent or 6 percent decline in production per year to an increase in the previous year. The state projected $38 per barrel and the price was up closer to $50 per barrel. He was concerned that the numbers were too conservative showing a larger deficit. He would be watching closely.

Representative Wilson asked if the state was doing anything regarding royalty contracts. She wondered if the state was selling to any in-state producers.

Mr. Stickel responded that there was royalty oil being sold to in-state refineries.

Representative Wilson had questions about the information on slide 19. She suggested that as of January 12, 2017 the state had 557,000 barrels per day. On the slide it showed 490,289 barrels per day. She referred to the fall forecast and wondered what months it included.

Mr. Stickel replied that for the particular production forecast she was referring to, DNR incorporated actual

information through June 2016 to derive the base cast forecast and information from the plans of development in the department's discussions with the operators. The state added the actual information it had at the time including the first 3 to 4 months in FY 17. At the time that the department produced the forecast the remaining 9 months, October-December 2016 and January-June 2017 actuals were incorporated into the forecast.

Representative Wilson suggested that the reason they were seeing a large difference could be because DNR was using 2016 production numbers versus 557,000 barrels per day. She asked if actual numbers would be reflected in the spring forecast.

Mr. Stickel responded that the spring forecast would incorporate some additional actual information into re-running the forecast model. He indicated that to the extent the actual information showed an over-performance, an increase would likely appear in the spring forecast.

Co-Chair Seaton relayed that DNR was online. He preferred that rather than DOR explaining DNR's forecast model for production, members should hold parts of their question for DNR.

3:02:52 PM

Representative Wilson asked about the $100 million figure per additional 50,000 barrels per day.

Mr. Stickel had done some analysis anticipating such a question. He elaborated that the number the commissioner cited for FY 18, holding all else equal, with an additional 50,000 barrels of production the state would receive about $100,000 million in additional unrestricted revenue (consisting of primarily production tax royalty). In terms of total revenue, the amount would be closer to $135 million which would include the restricted royalty component to the Permanent Fund.

Representative Grenn referred to slide 26. He noted that there was a bullet that indicated participants provided their percentile path. He asked about the 30 experts that met in the fall. He wondered if there were any non-State of Alaska participants. He asked of the list of participants was available to the public.

Mr. Stickel responded in the positive. Some private economic consultants participated. He thought the department could provide the list.

Representative Grenn referred to slide 38 where it showed the bar of tax credits in the following 10 years. He pointed to where it read, "…assuming statutory minimum appropriations for FY 2018+." He asked about the work assumption and whether it was used for ease of creating the slide or whether it was a working strategy to be used long-term.

Mr. Stickel indicated that the intent was to set the stage of the state's potential liability. There was statutory language concerning a minimal appropriation which was the amount proposed by the administration for FY 18. The actual appropriation amount in any of the years was still up for debate and up to the legislature.

Representative Thompson referred to page 46 where it showed investment revenues of $18.6 million. He asked if the state was looking at changing the state's investment of its wealth in order to get higher investment returns for non-Permanent Fund assets. He thought the state was not making much profit from a significant amount of investment money like it should.

Commissioner Hoffbeck responded in the affirmative. He relayed that the amount was primarily being driven by the returns on the CBR. Until the state had a fiscal plan that used other forms of revenue besides the CBR, the state could not invest in anything long-term due to the prudent investor rule. As soon as a fiscal plan was in place, DOR would have a better idea of what the long-term use of the CBR would be and would reinvest it in a much more aggressive fashion.

Representative Thompson was interested in the returns for many pots of money besides the CBR and the ERA. He would like more information about the different funds.

Mr. Stickel replied that he could provide information about how the various funds were invested.

3:07:49 PM

Representative Ortiz referred to slide 38. He assumed that the blue line represented increasing liability to the state due to "unpaid credit." He asked if he was correct.

Mr. Stickel responded affirmatively.

Representative Ortiz asked Mr. Stickel to define the word liability, without considering possible changes in current tax credit law. He wondered if the state was actually liable for the amount of money listed on the slide.

Commissioner Hoffbeck relayed that there was no obligation on the part of the state to pay the credits in cash. The credits had been earned and the entities had certificates. They had the option of holding the certificates and using them against future tax liabilities, or they could sell them to someone that had current taxes that could be written off. The third option was for the state to purchase the credits back. However, there was no requirement for the state to purchase them back. Ultimately, at some point the credits would hit the books as a purchase or as a credit taken against tax liability.

Co-Chair Seaton indicated that in statute the state was liable to place funds into an account but did not obligate the state to pay money out of the fund. He asked if he was correct.

Commissioner Hoffbeck responded affirmatively.

Co-Chair Seaton clarified that slide 38 was based on the legislature appropriating what was deposited into the fund every year and represented the growth of liability.

Commissioner Hoffbeck answered, "That is correct."

Co-Chair Seaton asked if the slide included any of the other projects such as Pikka, Smith Bay, or other projects with potential huge liabilities under the current regime.

Commissioner Hoffbeck responded in the negative.

3:11:06 PM

Representative Pruitt mentioned the federal revenue portion. He noted an increase to the state of about $1 billion. He referred to the federal revenue section in

Chapter 6 [Revenue Sources Book]. He highlighted an increase which would cost the state about $15 million, which he thought was a good investment. He also mentioned an increase of more than $100 million in FY 18. He asked about the changes and the additional monies the state would receive in terms of the additional $1 billion initially in FY 17. He also quarried about the additional cost to the state of $100 million in matching funds.

Co-Chair Seaton asked if Representative Pruitt was looking at the Revenue Sources Book or one of the slides.

Representative Pruitt was looking at the Revenue Sources Book. However, he noted that one of the slides was highlighted because it was part of the state's revenues.

Co-Chair Seaton wanted to pull up the slide.

Commissioner Hoffbeck pointed to slide 44.

Mr. Stickel referred to page 62 of the Revenue Sources Book. He responded that the department would investigate the reason for the $100 million increase in matching funds from FY 17 to FY 18. The numbers were provided by OMB. He addressed the question about the increase in the forecast for federal receipts between FY 16 and FY 17 of about $1 billion. He reported that the FY 16 represented the state's estimated federal receipts for the fiscal year. He pointed to footnote 3 on slide 44 noting that the forecasted federal revenue was based on the total authorization for federal receipts. Typically, the authorization was given for the maximum amount of federal receipts the state could possibly receive. Traditionally, the actual revenue came in below that amount. He thought $3.5 billion would likely be on the high side.

Commissioner Hoffbeck reported that for Pikka and some other fields there was an increment of credits for what DOR projected for spending for things such as environmental studies and some work in defining a reservoir. However, it did not include the large dollars associated with developing a field.

Co-Chair Seaton clarified that $600 million to $800 million per year in some years was not a big dollar spend.

Commissioner Hoffbeck responded that it was not.

3:15:12 PM

Vice-Chair Gara referred to slide 38 and noted that the department listed the credits the state had to pay to companies that did not have a profit. He referred to slide 36 which he thought had a great disparity from year-to-year on the credits that the state essentially paid to the large companies that had a profit - the credits they were able to deduct from their production taxes. He wondered about the amount the profitable companies were able to deduct - so different in FY 16, FY 17, and FY 18. It looked like the companies only deducted about $100 million in FY 16 and $500 million in FY 18.

Mr. Stickel explained that the blue line, the production tax before any credits, showed an anticipation of a higher production tax liability for the major producers largely due to an increase in prices. As far as the credits taken against liability, one piece was the taxable per barrel credits. Currently, companies had liabilities to apply the credits against. Also, there were some exploration credits incorporated that might be worth mentioning. Some of the explorers had transferred credits to the major producers in the amount of about $20 million in FY 17. The department was estimating $100 million in FY 18. He noted page 80 of the Revenue Sources Book.

Representative Guttenberg commented that the department had included potential new fields and opportunities and noted the issue of heavy oil. He spoke of technological breakthroughs that would allow the production of heavy oil to increase. He asked if the department consider the things he mentioned in its forecasting.

Mr. Stickel responded that it came up when the department met with the major oil companies during the process of producing the forecast. The department asked them about their different opportunities and developments. There were no significant heavy oil plans that anyone was reviewing at the current price level. He suggested that as the department proceeded through future forecasts it would continue to monitor the issue.

Representative Guttenberg wondered if the department had information regarding the amount the major producers were spending on heavy oil research.

Mr. Stickel did not think the number was at the department's fingertips but he would look into it.

Co-Chair Seaton queried that if the producers had expenses on the North Slope associated with a find or development, their expenses would be available for tax credits at the rate of 35 percent of their expenditures.

Mr. Stickel responded that as long as a prospect was on the lease, it would be deductible. For instance, if a company drilled an exploration well into a heavy oil prospect, it would be treated the same way as an exploration well into a light oil prospect.

Co-Chair Seaton thanked the presenters from DOR for their presentation.

3:19:43 PM

Co-Chair Seaton asked Mr. Decker to explain the revised methodology.

PAUL DECKER, DIVISION OF OIL AND GAS, DEPARTMENT OF NATURAL RESOURCES, reported that the restriction of projects with expected start-up dates within a 5-year window made a dramatic difference in the forecast relative to former forecasts. He continued that the former forecasts that incorporated much longer lead projects and speculative projects tended to over predict especially in the outyears of the forecast. Some of the work the division did showed that the error in previous forecasts increased with each year forward the forecast was looking. He thought forecasts might be good in the near years. However, by including the more speculative projects, they tended to over forecast further out into the future. The division had concluded it was the fundamental challenge that needed to be addressed. Some of the changes adopted included incorporating probabilistic statistics - understanding that there was a P50, P10, P90 range of certainty associated with many aspects of the forecast. The division tried its best to define distributions and to quantify uncertainties. He asked if there were specific questions about the forecast.

Representative Pruitt commented that the department had been accurate in the forecasting in the spring in terms of the average. He understood the discussion about the future.

However, he wondered how the state could have confidence in the future, because there was an estimate of 3 percent less than what the state saw for the average for the first 6 months. He could see how there would be a dip in the warmer weather month. However, he did not see the state dropping down to as low as DNR forecasted, which was done recently in the previous December. He wondered how the forecast shifted so drastically from the spring forecast.

Mr. Decker replied that the previous forecast had been crafted by DOR and its consultant. The Department of Natural Resources did not consider the previous spring's forecast in the process of preparing the department's forecast. There had been a methodology change between the two forecasts. One of the large changes had been changes in behavior of the operators. They had amended their plans, laid down rigs, and deferred drilling in entire units that formerly were expected to be developing throughout the upcoming year. He agreed that seasonality played a big part in the forecast for the fall. He relayed that the department's methodology tended to produce a straight line through the year of relatively uniform decline throughout the months of any given year. He noted that the department was looking at the chance to reconcile monthly production as the state was climbing out of low production in the summer into peak production in the cold months. The forecast was more of a baseline decline through the year. The department thought its prediction would average out because in the summer there was less efficient compression for injection purposes, and turnaround events and field maintenance occurred. He noted that the deferral of development drilling activity in several fields was also a contributing factor to the department's prediction leveling out by the end of the fiscal year. He reported that turnarounds done in previous years were major maintenance events and that the state was reaping the benefits of some of those efficiencies and improvements. He thought the state was still seeing an increase in production from the former turnarounds. He reported there was a lag in the effect of industry operations or the lack of operations or the deferral of things. He thought the state would see a further slow-down throughout the rest of the year.

3:27:13 PM

Representative Ortiz asked about the net effect of going from a well-to-well forecast to a pool forecast. He asked

Mr. Decker to define "pool." He wondered if the net impact was causing a general decrease in production.

Mr. Decker explained that pool was an individual accumulation of oil or gas. He elaborated that a field might contain multiple pools. An example would be the Prudhoe Bay Unit. A unit or a field was a collection of multiple individual reservoirs. At Prudhoe Bay there were more than a dozen pools in the field. He furthered that pool-by-pool meant the production data reported by the operators to the Alaska Oil and Gas Conservation Commission. The department took the data, grouped it by a geological reservoir in any given field, and applied its decline curve analysis to look at the rate of decline.

Mr., Decker continued that the department also developed a method to understand the possible high-end projection and low-end projection of decline rather than a single decline percentage estimate. He emphasized that the major difference between what DNR did and what previous entities had done in terms of forecasting had to do with what was viewed as appropriate to be in the forecast. The Department of Natural Resources was careful not to count certain activity twice. Mr. Stickel had mentioned in his testimony that the decline curve analysis incorporated a certain element of background development activity inherent in running an oil field. The department wanted to be sure that if a company indicated it would drill 7 wells in a field, a look back at the previous 3 years of development activity had to be completed. The look-back would show how many wells would they have been drilling on an average year because that number was already included in the decline curve projection. The under development category of the forecast was small because there were not many new wells in existing fields coming on in the forecast period.

Co-Chair Seaton thanked the testifier. He reviewed the agenda for the following meeting.

#
ADJOURNMENT

3:30:57 PM

The meeting was adjourned at 3:31 p.m.