

SENATE FINANCE COMMITTEE  
March 22, 2012  
1:12 p.m.

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CALL TO ORDER

Co-Chair Stedman called the Senate Finance Committee meeting to order at 1:12 p.m.

MEMBERS PRESENT

Senator Lyman Hoffman, Co-Chair  
Senator Bert Stedman, Co-Chair  
Senator Lesil McGuire, Vice-Chair  
Senator Johnny Ellis  
Senator Dennis Egan  
Senator Donny Olson  
Senator Joe Thomas

MEMBERS ABSENT

None

ALSO PRESENT

Janak Mayer, Manager, Upstream and Gas, PFC Energy; Senator Gary Stevens; Senator Joe Paskvan; Senator Tom Wagoner; Senator Cathy Giessel.

SUMMARY

SB 192 OIL AND GAS PRODUCTION TAX RATES:

SB 192 was HEARD and HELD in committee for further consideration.

#sb192

SENATE BILL NO. 192

"An Act relating to the oil and gas production tax; and providing for an effective date."

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Co-Chair Stedman announced that the presentation contained additional slides in response to questions raised at the earlier meeting.

JANAK MAYER, MANAGER, UPSTREAM AND GAS, PFC ENERGY, continued with the revised presentation from the earlier meeting (March 22, 2012, 9:11 a.m.) titled, "Discussion Slides: Alaska Senate Finance Committee," (March 22, 2012)(copy on file).

Mr. Mayer summarized the tax allowance analyses proposed in SB 192, with different variables, depicted on the slides on Pages 30 to 32. He explained that the legislation provided a \$10 allowance for new production above the amount that was produced the previous year. He cited the slide on Page 30, "CSSB 192 Including \$10 New Oil Allowance Over 1 Year (Existing Producer)." Based on a hypothetical model of 100,000mb/d (thousand barrels per day) the allowance had a negligible impact for the producer.

Mr. Mayer highlighted slide 31, "CSSB 192 Including \$20 New Oil Allowance Over 7 Years (Existing Producer)." He noted that if the allowance was raised to \$20 and extended over 7 years, the NPV (net present value) for the producer rose slightly but the high government take remained mostly unchanged (ranging from 74 to 79 percent at a range of \$100/bbl. to \$230/bbl. (dollars per barrel). He referenced the slide on Page 32, "CSSB 192 Including \$60 New Oil Allowance Over 7 Years (Existing Producer)." He remarked that when the allowance was raised to \$60 the overall impact remained minimal.

Mr. Mayer addressed slide 33, "CSSB 192 Excluding New Oil Allowance (New Producer)." In response to a question that Co-Chair Hoffman had asked him in the previous meeting (March 22, 2012, 9:11a.m.) he included the slides on Pages 33 to 36 that analyzed the impact of the allowance on new producers. The allowance had a favorable impact at the \$60 level extended over 7 years. He cautioned that the hypothetical model based on such a large field development (100,000mb/d) was necessary to detect a quantifiable amount of incremental production for purposes of analysis. The scenario was unlikely to happen in the predictable future. Slide 33, "CSSB 192 Excluding New Oil Allowance (New Producer)" illustrated the data proposed in SB 192 without an allowance incentive for a new producer without existing production.

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Mr. Mayer compared slide 34, "CSSB 192 Including \$10 New Oil Allowance Over 1 Year (New Producer,)" to the base data on the previous slide. He reported that the \$10 allowance applied over one year resulted in similarly high government take (ranged from 77 to 80 percent at oil prices ranging from \$100/bbl. to \$230/bbl.) and a modest increase in net present value (NPV) with the same rate of return (11%). He turned to the slide on Page 35, "CSSB 192 Including \$20 New Oil Allowance Over 7 Years (New Producer)." He highlighted that a \$20 allowance expanded over 7 years compared to the \$10 allowance for one year, yielded a decrease in government take [5 percent decrease at \$100/bbl.; 72 percent from 77 percent], a significant increase in NPV and 3 percent increase in the rate of return (14 percent). He turned to slide 36; "CSSB 192 Including \$60 New Oil Allowance Over 7 Years (New Producer)," which depicted a \$60 allowance extended over 7 years. He noted a 4 percent decrease (78 percent reduced to 74 percent) from the previous slide in government take at very high oil prices of over \$200/bbl. He concluded that under the particular hypothetical scenario modeled; a new producer, a large field development, \$60 allowance over 7 years, and no base decline in production, the government take was significantly reduced. He warned that the scenario was unlikely and that the threshold for the allowance was too high. He reiterated that the later scenario was the only circumstance that the allowance incentive demonstrated a significant impact.

Co-Chair Stedman requested that Mr. Mayer repeat his conclusion. Mr. Mayer responded that under generous terms; "incentivizing new investments by existing producers and new developments that would raise the decline curve", the new oil incentives in SB 192 had no impact. He reiterated that the sole scenario which demonstrated an impact on the decline curve included a new producer, no base decline compensation, and a substantially increased allowance extended over 7 years.

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Mr. Mayer explained the way the proposed tax holiday worked. He recapped that the allowance incentive in SB192 established a target rate of production based on last year's production and incentivized incremental production above that level. The tax holiday also established a target level set at last year's production level less a decline factor. The decline factor was determined based on the moving average of the prior 3 year's production and decline. He exemplified a scenario of a steady 6 percent per year decline over the prior 3 years production; the current year's target equated to last year's production less 6

percent. The tax holiday provided an exclusion from production tax of all revenue derived from production that exceeded the target level. He identified slide 37, "CSSB 192 Excluding New Oil Allowance (Existing Producer)" that depicted the provisions contained in SB 192 without the new oil allowance as a base comparison. He compared the data to the slide on Page 38, "CSSB 192 Including Tax Holiday Based on 3 Year Rolling Decline (Existing Producer)," that illustrated the tax holiday analysis. He remarked that the NPV slightly increased and the government take did not change (74 to 79 percent at oil prices ranging from \$100/bbl. to \$230/bbl.)

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Mr. Mayer determined that the tax holiday worked off of the decline curve instead of the previous year's production but was only applicable for a single year. The decline rate calculation was based on a rolling average; as incremental production increased the decline curve flattened out over time. The tax holiday was more difficult to claim again in the future.

Mr. Mayer discussed slide 39, "CSSB 192 Including Tax Holiday Based on 3 Year Rolling Decline for 7 Years (Existing Producer)." The graphed analysis was based on extending the tax holiday for seven years. He noted that, compared to the previous slide the impacts were more significant. The government-take decreased by 4 percent and the NPV and cash flow slightly increased. He pronounced that overall; the result remained minimal as an incentive.

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Mr. Mayer identified slide 40, "CSSB 192 Excluding New Oil Allowance (New Producer)" and noted that the graphed data depicted the effects of the legislation without the new oil

allowance for a new producer without existing production. He compared the slide on Page 40 with the slide on page 41, "CSSB 192 Including Tax Holiday Based on 3 Year Rolling Decline (New Producer)," the slide portrayed the graphed analysis of the tax holiday for a new producer. He reported that the government take(78 percent on \$100/bbl.) and NPV remained unchanged. He discerned that the tax holiday proposal improved one aspect over an allowance method, by basing the target threshold on a decline as opposed to the previous year's production. He felt the holiday had two shortcomings: the tax holiday only lasted for one year and the benefit applied to a single year when measured against the overall life of the project was nominal.

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Mr. Mayer discussed slide 42, "CSSB 192 Including Tax Holiday Based on 3 Year Rolling Decline for 7 Years (New Producer)" that illustrated the effects of the tax holiday extended over 7 years for a new producer. He relayed that the after tax cash flow analysis at \$100/bbl. oil portrayed an increase in the NPV, a one percent increase in the rate of return (11 to 12 percent),and the government take decreased from 78 percent to 76 percent. He remarked that the result was "limited."

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Mr. Mayer reviewed slide 43, "Differences in Incremental Production." The slide depicted a chart divided into three sections with various data that summarized the analyses of the different incentive scenarios discussed in the presentation. He explained the middle section of data titled, "Incremental." The data underlay the allowance proposal in SB192 that was based on production above the previous year's production. Each column of numbers corresponded to a given year sequentially beginning with 2012 and ending in 2020.

Incremental:

|                                  |     |     |     |     |     |     |     |     |     |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Target Production (prior year)   | 186 | 175 | 177 | 180 | 183 | 187 | 191 | 196 | 201 |
| Production Above Target          | -   | 2   | 3   | 3   | 4   | 4   | 5   | 5   | -   |
| Percentage Above Target Forecast | 0%  | 1%  | 1%  | 2%  | 2%  | 3%  | 3%  | 3%  | 3%  |

Mr. Mayer explained that the target production numbers represented the previous year's production. The production above target figures was the actual production that occurred above the target base line. Depicted as a percentage, production above the target was very small. He pointed to the figures in the first section of the chart that considered the data from the tax holiday proposal.

3year rolling decline:

|                                  |     |     |     |     |     |     |     |     |     |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 3 year rolling decline rate      | 6%  | 4%  | 1%  | -1% | -2% | -2% | -2% | -3% | -1% |
| Target Production                | 175 | 169 | 175 | 182 | 186 | 190 | 195 | 201 | 202 |
| Production Above Target          | -   | 8   | 5   | 1   | 1   | 0   | 0   | 0   | -   |
| Percentage Above Target Forecast | 0%  | 5%  | 3%  | 0%  | 0%  | 0%  | 0%  | 0%  | 0%  |

Mr. Mayer compared the tax holiday data to the incremental data. He delineated that the target production was mostly lower than the allowance scenario. The production above the target rates was higher for the first three years and lower in the out years. The 3 year rolling decline rate was 6 percent the first year and decreased each year to negative rates by 2015. The tax holiday benefit was quickly lost because production increased above that target level and the decline rate was based on a rolling 3 year average. The decline curve flattened out. He felt that as an incentive, the consequence was problematic. He turned to the last section of the graph. He noted that the data represented a different alternative.

Decline above fixed forecast:

|                                  |     |     |     |     |     |     |     |     |     |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Target Production                | 175 | 165 | 155 | 145 | 137 | 128 | 121 | 113 | 107 |
| Production Above Target          | -   | 13  | 25  | 38  | 50  | 62  | 75  | 87  | 88  |
| Percentage Above Target Forecast | 0%  | 8%  | 16% | 26% | 37% | 49% | 62% | 77% | 82% |

Mr. Mayer explained that the proposal set the decline rate at the current year's production based on the prior year's production and decline. The decline curve was set in future years based on the same rate calculated from the base year. The decline rate represented in the data was 6 percent. The incremental new production accumulated above the 6 percent decline grew substantially more each year. He felt the incentive for new production based on a fixed forecast was more "meaningful."

Co-Chair Stedman deduced that the fixed forecast decline curve was parabolic and would flatten out to 100 percent after 2020. All of the production after 2020 would be considered new. Mr. Mayer confirmed that over time, more and more production would actually be "new." He exemplified the current production decline

at 6 percent. Without significant new investment, the decline will continue. The target production line in the fixed forecast data reflected a 6 percent decline over years. If production was incentivized above that rate then the "new" production over years becomes more of the base production. He opined that an incentive must apply over a long time period to offset the investment costs over a new projects life cycle if the goal was to lower government take to stimulate new production.

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Co-Chair Stedman noted that one of the challenges was determining when the parabolic curve flattened out. He mentioned oil production forecasts that predicted a flattened out decline curve over time instead of a precipitous drop in the near future. He wondered how to reconcile the flattened decline possibility with a fixed forecast model. Mr. Mayer felt that method had a lot of strengths. He noted that one difficulty was how to accurately predict the decline curve. The challenge was determining the decline rate and how to best calculate it, i.e., exponential or hyperbolic. He shared that in some fiscal regimes the fixed decline forecast method was used in production sharing contracts. The contracted fiscal terms were negotiated between the producer and government. Determining the base decline to establish a new production threshold proved difficult and complicated during the negotiation process.

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Co-Chair Stedman asked if the fixed forecast model required separate decline curves for the major producers working different fields. Mr. Mayer replied that the logistics were difficult to resolve. He hypothesized that a single decline curve would provide a substantial incentive to all, even if a little lopsided to some. A more tailored decline curve for each producer was better but exceptionally complex to administer. Additional definitions of new production could be included to augment using a single decline curve; either production from new areas or new production from a planned development approved by a regulator. He remarked that production above a base decline curve was only one way to measure new production.

Co-Chair Stedman pointed out that if the state did implement two different tax structures, one for current and one for incremental production, a lot of the incremental production would fall under an incremental tax structure. He wondered how the state could develop a tax structure that worked in 2012 but

was applicable in the future, without creating a system where most production was applied to the "more lenient" tax code. Mr. Mayer contended that if the decline curve was carefully structured then any incremental production classified as new was actually new production and the policy was successful.

Senator McGuire asked Mr. Mayer to share his experiences working with other jurisdictions that used the fixed decline rate. She queried whether he had worked with any governments who had to set a fixed decline base rate or defined new production in other ways. Mr. Mayer replied that a number of governments used the approach of incentivizing production above a base rate. He noted service contracts in Iraq that provided monetary compensation for incremental barrels above an existing base or decline rate in established oil fields. Specifically, PFC Energy worked with Bahrain to negotiate an appropriate decline curve with producers. Negotiating precise terms under contractual arrangement was much more difficult than in a tax royalty regime where the terms were set by the legislature.

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Senator McGuire inquired about the outcome of the negotiated contracts. She wondered if more production over time "migrated" into the "new production" stream. Mr. Mayer felt there was a better way to understand the result. He hypothesized a decline curve rate established at 6 percent in a scenario where new production above the base was continually produced each year. Progressively more of the production base over time would be taxed at the preferential rate and less at the base rate. He emphasized that outcome was precisely how the system was designed to work. The new production was a "result of the success of the policy by stimulating production above the six percent decline rate."

Senator McGuire mentioned the idea of the state defining new development by approving planned development that qualified for favorable tax terms and asked Mr. Mayer to relate his experience with alternate definitions of new production. Mr. Mayer replied that he could not recall "concrete" examples to share with the committee.

Mr. Mayer continued with the presentation. He compared the slides on Page 44, "CSSB 192 Excluding New Oil Allowance (Existing Producer)," which applied the data from SB 192 excluding the new oil allowance in a large field development (100,000 mb/d) as a base comparison with the slide on page 45,

"CSSB 192 Including 20% Gross Revenue Allowance Above Fixed Decline Rate (Existing Producer)". The slide depicted a 20 percent gross revenue allowance above a 6 percent fixed decline rate. He pointed out that the project economics and government take changed considerably. The government-take decreased from 79 percent to 75 percent at \$230/bbl. oil and from 74 percent to 69 percent at \$100/bbl. The NPV significantly increased for producers. He highlighted the projected results from the slide on Page 46, "CSSB 192 Including 40% Gross Revenue Allowance Above Fixed Decline Rate (Existing Producer)." He noted the graphed data illustrated a further reduction in government take to 65 percent at \$100/bbl and 70 percent at \$230/bbl prices of oil. He commented that he introduced the fixed decline incentive to the committee as an alternative for further consideration.

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Mr. Mayer concluded with slide 47:

#### Conclusions - New Oil Allowance:

Even under highly aggressive assumptions regarding the potential for a new-source development for a given company, the impact of CSSB192's \$10 allowance for "new oil" is almost undetectable

- By increasing the time horizon and value of the allowance, it is possible to increase the impact to the point at which it becomes noticeable in the specific hypothetical case of a 100 mb/d new development for an existing producer.

- This, however, is a highly unlikely scenario. Under any foreseeable scenario, regardless of rate or duration, it is unlikely to have any impact because it does not incentivize new production above the existing decline, only volumes incremental to prior years' production.

- Senate Resources Amendment B2 instead proposed a tax holiday based on production above a target rate, set based on the rolling average decline rate for the prior 3 years.

- While the decline-curve approach is a sounder one, the impact of this proposal is also highly limited, for two reasons

- The allowance applies each year only to production that year which exceeds the target
- After a few years of production growth, the incentive no longer applies to new production, due to changes in the rolling-average decline curve

- An allowance based on a set decline-curve, based at a particular point in time, has a significantly greater impact than either of the other forms of allowance.

- Determining the appropriate decline basis to use could pose difficulties.

- The decline curve concept could also be complemented with other incremental production definitions, such as production from new areas, and from approved development plans

He determined that a more favorable incentive system based on new production was one that spanned the life cycle of a new project.

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ADJOURNMENT

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The meeting was adjourned at 2:06 PM.