

**ALASKA STATE LEGISLATURE**  
**SENATE RESOURCES STANDING COMMITTEE**

March 11, 2010

3:40 p.m.

**MEMBERS PRESENT**

Senator Lesil McGuire, Co-Chair  
Senator Bill Wielechowski, Co-Chair  
Senator Charlie Huggins, Vice Chair  
Senator Hollis French  
Senator Bert Stedman  
Senator Gary Stevens  
Senator Thomas Wagoner

**MEMBERS ABSENT**

All members present

**COMMITTEE CALENDAR**

**FINISH OVERVIEW OF AGIA REGULATIONS**

**SENATE BILL NO. 242**

"An Act providing income tax credits for geothermal resource exploration and development."

- HEARD AND HELD

**SENATE BILL NO. 243**

"An Act removing the royalty obligation for geothermal resources."

- HEARD AND HELD

**PREVIOUS COMMITTEE ACTION**

BILL: SB 242

SHORT TITLE: GEOTHERMAL RESOURCE TAX CREDITS

SPONSOR(S): SENATOR(S) MCGUIRE

01/27/10	(S)	READ THE FIRST TIME - REFERRALS
01/27/10	(S)	RES, FIN
02/10/10	(S)	RES AT 3:30 PM BUTROVICH 205
02/10/10	(S)	Heard & Held
02/10/10	(S)	MINUTE(RES)

03/11/10 (S) RES AT 3:30 PM BUTROVICH 205

BILL: SB 243

SHORT TITLE: NO ROYALTY ON GEOTHERMAL RESOURCE

SPONSOR(s): SENATOR(s) MCGUIRE

01/27/10 (S) READ THE FIRST TIME - REFERRALS  
01/27/10 (S) RES, FIN  
02/10/10 (S) RES AT 3:30 PM BUTROVICH 205  
02/10/10 (S) Heard & Held  
02/10/10 (S) MINUTE(RES)  
03/11/10 (S) RES AT 3:30 PM BUTROVICH 205

**WITNESS REGISTER**

COMMISSIONER PATRICK GALVIN

Department of Revenue (DOR)

Juneau, AK

**POSITION STATEMENT:** Finished Overview of AGIA Regulations from 3/10.

MIKE PAWLOWSKI

Staff to Senator Wielechowski

Alaska State Legislature

Juneau, AK

**POSITION STATEMENT:** Explained CSSB 242(RES) and CSSB 243(RES).

JONNE SLEMONS

Division of Oil and Gas

Department of Natural Resources (DNR)

Juneau, AK

**POSITION STATEMENT:** Answered questions about SB 242 and SB 243.

ALAN DENNIS, Division of Oil and Gas

Department of Natural Resources (DNR)

Juneau, AK

**POSITION STATEMENT:** Answered questions about SB 242 and SB 243.

PAUL THOMSEN, Director

Policy and Business Development

Ormat Technologies, Inc.

**POSITION STATEMENT:** Supported SB 242 and SB 243.

RAYMOND MANN, Renewable Energy Program Manager

City of Akutan

Akutan, AK

**POSITION STATEMENT:** Supported SB 242 and SB 243.

BRAD EVANS, CEO  
Chugach Electric Association  
**POSITION STATEMENT:** Supported SB 242 and SB 243.

**ACTION NARRATIVE**

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**CO-CHAIR LESIL MCGUIRE** called the Senate Resources Standing Committee meeting to order at 3:40 p.m. Present at the call to order were Senators French, Wagoner, Huggins, Stevens, Wielechowski, and McGuire.

**FINISH OVERVIEW OF AGIA REGULATIONS**

CO-CHAIR MCGUIRE said the committee would first finish the overview of the AGIA regulations by Commissioner Galvin, Department of Revenue (DOR).

COMMISSIONER PATRICK GALVIN, Alaska Department of Revenue (DOR), went to slide 28 and said he would first talk about how to the qualify for the AGIA tax inducement in the regulations and next he would go through what the AGIA upstream inducement means.

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He said the AGIA inducement represents an exemption from any tax increase on the gas (slides 30-33). So, in order to determine whether there was an increase and how much it is, you need two different numbers - gas production tax as calculated under the law at time of production and the gas production tax under the law that was in place at time of the open season. You subtract the 2010 gas production tax from your current one and that is your exemption that you get to apply to your current tax bill; ostensibly you are brought back to whatever it was in 2010.

So, for the purposes of the current tax law, the regulations provide a methodology for establishing the gas production tax in a system that taxes oil and gas together. The gas portion becomes what you would compare in the future to whatever the future gas production tax is.

COMMISSIONER GALVIN explained that the exemption applies to the capacity that a taxpayer has acquired and uses the point of production (POP) value of the gas that is being transported on that capacity in determining its value relative to the entire POP oil/gas that particular taxpayer has. That percentage gets multiplied by the entire tax liability and that figure becomes

the percent of the taxpayer's tax liability that is represented by the AGIA gas.

SENATOR WAGONER asked if all three companies commit gas to the pipe initially would there be multiple rates of tax.

COMMISSIONER GALVIN answered yes, and he emphasized that it would only apply to the gas that flows through the capacity in the initial open season.

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He illustrated this with the chart on slide 34, which for this example showed a POP value of \$120 for oil and \$8 for gas. He said this broad disparity in gas to oil ratio represents the situation where you have a significant dilution of the tax revenue. His example subtracted the transportation costs only, not lease expenditures. In other words, the numbers that they put into the formula assumed that all of the gas that is flowing through the capacity qualifies for the AGIA tax exemption. This is the "A" portion of the formula. Then using the formula he talked about earlier, gas is figured out as a percent of the total value of the oil and gas, and that number is multiplied by the total combined tax obligation to get the value of the gas production tax in 2010. Twenty-seven percent of the total POP value was represented by the gas coming through the AGIA line - an almost \$1.2 billion in gas production tax that is being allocated for the purposes of comparing it to the future gas production tax obligation.

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CO-CHAIR WIELECHOWSKI asked if AGIA says that the benefit the producer gets from committing their gas early on is that their gas production tax is locked in at the tax rate in effect on May 1, 2010.

COMMISSIONER GALVIN answered yes and it stays that way for 10 years of production.

CO-CHAIR WIELECHOWSKI asked if he defined that in the regulations as a number.

COMMISSIONER GALVIN replied the regulations have provided for a formula for determining which amount of production gas obligation is considered to be the gas production tax and what is going to then be used to compare to future gas price allocations.

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CO-CHAIR WIELECHOWSKI said he was trying to understand the importance of May 1 lock-in date. Could they decouple oil and gas in five years and not be subject to the gas production tax under AGIA?

COMMISSIONER GALVIN said the next slide walks exactly through that type of scenario.

SENATOR FRENCH interrupted for a moment and went back to slide 35 and asked him to explain the difference in the two taxes using the regulations he promulgated under AGIA or ACES statutes in reference to the spreadsheet figures.

COMMISSIONER GALVIN responded that the formula is not intended to match up in the one column, because that column has a whole bunch of assumptions with regard to primarily allocated costs associated with oil production and gas production. This particular representation is just an illustration where the costs are allocated almost 90/10-oil/gas.

SENATOR FRENCH said he wanted to know that there was no indemnification or payment because the tax figures were different.

COMMISSIONER GALVIN said the end result is if you separated oil from gas and had two different systems with the same progressivity and everything else and the costs were allocated in this way, and that separation took place sometime after the open season, you would end up in your future world calculating your gas production tax at \$1.1 billion. You would then compare it to this methodology for your 2010 calculation and end up with \$1.2 billion; and then there would be no exemption to claim.

SENATOR HUGGINS said his slide had an arrow going from tango down to the combined tax in the lower right-hand circle. Why wouldn't you be nervous about the difference between the combined tax and the oil tax?

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COMMISSIONER GALVIN replied that the regulations are about how much of the combined \$5.5 billion tax liability is going to be considered to be from the gas and how much from the oil, so that if the legislature changes the tax system after the open season (because lawmakers decide that they don't like going from \$6.4 billion oil down to \$5.5 billion oil), would that cause the end result to be different than the combined \$7.5 billion. However,

that is a separate discussion. What they tried to do with the regulation is to provide an established number for what would be considered the gas production tax in the current ACES system so that when it is compared to whatever it changes to in the future you have "the bogie" and "whatever the new thing is." They can then determine if that would cause an exemption.

One can imagine a number of different scenarios someone might use to claim what the gas production tax is, the Commissioner said. Some might say you need to allocate the costs and retroactively imagine what they should have been and recalculate the column. That would be an accounting nightmare. The department tried to make it clear in the regulations that the point of production value of the gas is a percentage based upon the combined tax. This way they have a very clear 2010 gas production tax number that can be compared to a future tax change to see if the tax exemption is implicated.

SENATOR HUGGINS asked if you put that into the context of the open season, going into 2014 you could make the case this is all irrelevant because the Commissioner and the Governor have the authority to come back with a recommendation after negotiation with the producers on fiscal terms.

COMMISSIONER GALVIN responded that the Legislature or the Administration could, after the open season, change all the terms, and with the consent of those who would otherwise qualify for these, just change it entirely. He said the regulations deal with the statute as it exists now along with the potential that there might be no package deal that comes in later and that the Legislature may act unilaterally to change the tax system at some point, so that the AGIA tax inducement could be relied upon by an initial shipper who would actually want to utilize it.

SENATOR HUGGINS said he asked multiple producers if they had concerns with separating gas and oil and they said no because they were going to negotiate fiscal terms anyhow. This led him to believe that they are going to negotiate with the Legislature and the Administration to move the gas pipeline forward. "Am I on track or off track?"

COMMISSIONER GALVIN replied that is a very realistic possibility. To a large extent they are setting up a post open season world, which includes the strong possibility of the producers and the state deciding on something everyone can agree to and putting that in place. However, that may not happen and they have the obligation to continue the course that the current

statute puts in place and to ensure that the rules are clear for how that would be applied if there is no larger agreement that is put in place by the Legislature in the future.

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SENATOR FRENCH asked if SB 305 passes, how much of this work has to be redone.

COMMISSIONER GALVIN said he didn't want to speculate on that. It depends on what SB 305 says at the end of the day.

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COMMISSIONER GALVIN said they have now shown how the 2010 gas production tax number could be established out of this particular set of assumptions (slide 36). So the next slide shows how it would be used in an imaginary world 10 or 12 years from now. For this example they assumed that nothing happens between the open season and 2021, and instead in 2021 the legislature decides to separate oil taxes from gas taxes and raises the 25 percent production tax on gas to 30 percent. So, using the previous example's assumptions - \$120/\$8 oil/gas, these production levels and cost allocation numbers - then you would end up with the same \$6.4 billion for the oil side and the gas tax would be increased by 20 percent; so it goes up to \$1.35 billion.

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He explained how to determine the amount of the AGIA tax exemption as follows:

1. Calculate Gas Production Tax under the system in place in the Year of Production - based on the above assumption = \$1.35B.
2. Calculate Gas Production Tax under the system in effect at the Open Season (including the regulations) - previous slide shows gas tax attribution of \$1.2B.
3. Claim by the taxpayer of an exemption for the difference = \$150M. So the total production tax obligation in 2021 would be the separate gas and oil taxes minus the exemption = \$7.6B.

CO-CHAIR WIELECHOWSKI went back to slide 35 and asked him to explain how the current progressivity works for gas. At what level does it kick in?

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COMMISSIONER GALVIN answered in this example (production tax value of \$14B) if oil were taxed alone you would have a progressivity rate of 23 percent. That is because oil is at \$88/barrel, a \$58-profit at .4 percent (just about to the 25

percent cap). When you combine it with the gas, which is at \$19, it's not contributing on a per barrel basis much to the progressivity. So, it's actually diluting the stream to a \$47/barrel value. That's only \$17 profit which results in a 6.8 percent progressivity. That 6.8 percent is applied against the combined numbers.

CO-CHAIR WIELECHOWSKI said he was trying to figure out at what gas price progressivity kicks in - assume a tariff of \$4.50.

COMMISSIONER GALVIN answered you would have to consider not just the tariff but lease expenditures, too. So, if you assume a situation like this where the lease expenditures are relatively modest (\$400M), then this all-end cost of production and transportation is going to be a tariff of around \$4.60. You need a \$5/Mmbtu with a 6:1 ratio = \$30 as the kick off point. Divide that by \$6. So, there is a \$5/Mmbtu profit to start progressivity and with a \$4.60 all-end cost anything over \$9.60 would start progressivity. Progressivity would climb a lot faster per dollar under gas than oil. So, for every \$1/Mmbtu, you get 2.4 percent increase in your tax rate (as opposed to .4 percent per \$1).

He said that is why there are certain scenarios where the life of the gas line runs out and at a certain point oil on a per barrel basis could be less profitable than gas. This dilution effect would operate in reverse where the value of the gas production tax becomes diluted by the oil.

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COMMISSIONER GALVIN said he wanted to show that although on this slide the gas column appears to be representational of the attribution formula that is not always the case. It depends upon the price relationship. So, he showed the range and the change that would take place at different price relationships on slide 37. As the prices converge (the price of oil drops to 12.5/1 ratio) the value of the attributed 2010 gas tax goes down. So, if in 2021 you have the same tax obligation, your exemption is going to be greater because you are going to be considered to charge the 2010 rate. The same if the price of oil goes down even further; your attributed gas tax is lower because your oil tax keeps going down; so your exemption will grow.

CO-CHAIR WIELECHOWSKI said he wanted to see some runs on where the oil and gas ratio gets reversed and how those ratios would impact the state - if oil hit \$120/barrel and gas hit \$16/mcf, for instance.

COMMISSIONER GALVIN said he had a similar request from Senator French and he would get that prepared.

SENATOR HUGGINS said the Commissioner was talking about price forecasting.

COMMISSIONER GALVIN answered that he understood the request to be not a forecast of what they think the prices are going to be, but if the prices turned out to be X/Y for oil/gas what revenue would be generated under the current system and under a particular proposed bill. He elaborated that while the introduction of gas into an existing oil system has the effect of bringing down the oil tax, the AGIA gas production tax inducement does not capture that portion of the effect. It just says that the gas production tax obligation that you have in 2010 is going to be the same as what you are going to have in 2020-whatever. So, the answer to the question of locking in the effect on the oil tax brought by the gas is no. The Legislature may after the open season change either the effect that gas production has on oil taxes or even separate oil from gas entirely. The AGIA tax exemption only applies to gas production tax; it does not apply to oil taxes or the effect that gas production has on oil tax.

4:17:25

SENATOR HUGGINS said his concern is if they are going to negotiate with producers, the commissioners and the administration that "Everything is on the table."

COMMISSIONER GALVIN agreed.

SENATOR HUGGINS said he didn't accept his bullet factors as being descriptive of what he anticipates what will really happen. If the producers think that oil taxes are too high now and the state wants a gas pipeline, they'll say they think everything is on the table.

COMMISSIONER GALVIN summarized that these regulations represent the current AGIA tax inducement not what the producers may ask for or ultimately show they need and what the administration and the legislature may decide to offer through a change in the law.

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CO-CHAIR MCGUIRE announced an at ease.

**SB 242-GEOTHERMAL RESOURCE TAX CREDITS**

[4:21:54 PM](#)

CO-CHAIR MCGUIRE called the meeting back to order at 4:21 and announced SB 242 to be up for consideration.

SENATOR FRENCH moved to adopt CSSB 242(RES) 26-LS1347\E. There were no objections and it was so ordered.

MIKE PAWLOWSKI, staff to Senator Wielechowski, explained that the committee substitute (CS) version E for SB 242 makes a substantial departure from the original version by changing the development and exploration tax credits in the following ways:

- Page 1, lines 9-14, subsection (b) is an exploration credit. Since geothermal is a resource you have to drill for, they felt it was appropriate to develop an exploration credit. The original bill had an exploration tax credit that differentiated between exploration on state land and land that was not state land. It was originally 50/25 percent, but is changed to a flat 30 percent. In the original version the applicability of the expenditures was retroactive; in the current version it is not. These are prospective expenditures made within the state. The carry-forward language in the original bill was limited to 5-7 years and that has been changed to 20 years on page 1, line 13.
- Page 2, lines 2-6, subsection (c) introduces a development tax credit - you have explored for a geothermal resource, discovered that there is a commercial project there and then step into the development phase. The development tax credit is also a 30 percent tax credit. The unused carry-forward tax credit on page 2, line 5, has been extended to 20 years. In the original version of the bill this was a 10 percent credit. The substantial departure that was made in the bill is rather than a credit against income taxes, they moved to a refundable credit (page 2, lines 12-15) for the exploration expenditures (lines 12-13) that are refundable on an annual basis. Once you move to the development of a phase of a project (lines 14-15) the development credit is only refundable after the project actually goes into service. So you actually have to finish the project and start producing gross income from the project and then you can get your development credits. The reason carry-forward language was included in a refundable credit is that refundable credits are ultimately subject to legislative appropriation. That is a risk project sponsors take when they are looking at refundable credit. So, in the event the Legislature didn't appropriate the money for a refundable

credit that unused credit could be rolled forward and applied against income taxes or when the Legislature had the money to appropriate for the credit.

- Page 2, lines 20-21, working with the Department of Natural Resources (DNR) they developed a definition of when exploration turns into development.

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CO-CHAIR WIELECHOWSKI said he supported the bill in concept but the state could be put into a position of investing tens of millions of dollars without getting any geothermal plant from it, and he wanted to make sure that this credit is actually needed. He had the same concern about any project.

MR. PAWLOWSKI responded that the original bill capped exploration credits at \$20M; a refundable credit for the actual facility doesn't exist until you go into the development phase - the facility has to be actually built and producing energy. In terms of the overall risk of not ever getting a project, he was correct there could be a lot of exploration that eventually yields no project.

CO-CHAIR WIELECHOWSKI said he understands that the exploration aspect of the Mt. Spurr project is about \$137M, and so a 30 percent tax credit would be \$40M-plus.

MR. PAWLOWSKI said he felt uncomfortable answering that. The language that they used from the Division of Oil and Gas is different than what the Ormat project sponsors thought in determining exploration versus development. He would let them or the representatives from Akutan speak about what would be expenses in the exploration phase.

CO-CHAIR MCGUIRE said these are great questions to get on the record. She had asked Ormat to model their internal rate of return (ROR) and to show what every one of the government incentives would look like and how that would benefit consumers, in particular.

CO-CHAIR WIELECHOWSKI said he could wait and see that presentation and then ask Mr. Pawlowski questions afterwards.

CO-CHAIR MCGUIRE set CSSB 242(RES) aside.

**SB 243-NO ROYALTY ON GEOTHERMAL RESOURCE**

[4:29:56 PM](#)

CO-CHAIR MCGUIRE announced SB 243 to be up for consideration.

SENATOR WAGONER moved to adopt CSSB 243(RES), 26-LS1346\R. There were no objections and it was so ordered.

MIKE PAWLOWSKI, staff to Senator Wielechowski, said the committee substitute (CS) version R represents a departure from the change made in SB 242 where they increased the overall level of state subsidy. The original version of SB 243 repealed royalties on geothermal and made them a flat zero. Looking around the country at royalties in other states and the federal model, they decided to reinstitute the federal royalty rate of 1.75 percent of gross revenues for 10 years and then 3.5 percent of gross revenues thereafter for geothermal projects.

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CO-CHAIR MCGUIRE said the Senate has a diverse range of opinions. Many agree that hot water is not a nonrenewable resource that is being removed from the subsurface of Alaska and therefore not subject to the typical considerations they would have about resources being developed and shared for the maximum benefit. Some felt a level of royalty was appropriate. But what she didn't want Alaska to do is become uncompetitive if they were going to put royalty in. Using the federal level, at least, guaranteed that people won't be developing federal land over state land. States that have a 10-percent royalty on the gross income for geothermal development haven't had success with it. The goal is to incentivize people to develop geothermal energy so either no royalty or low royalty gets us there, she reasoned.

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SENATOR HUGGINS asked if Nevada has the most success with geothermal and what their tax rate is.

MR. PAWLOWSKI said Ormat has a large geothermal development in Nevada and they could speak to that.

CO-CHAIR MCGUIRE said one of the things she likes about Ormat is that they have been doing it the longest. It was interesting to see what other jurisdictions are doing relative to developing geothermal.

MR. PAWLOWSKI said one of the Division of Oil & Gas conversations around geothermal leases is that while it is hot water it is also a property right and that maintaining some sort of royalty is an appropriate rationale for leasing that property.

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CO-CHAIR WIELECHOWSKI asked if the administration has a position on royalty change.

JONNE SLEMONS, Division of Oil and Gas, Department of Natural Resources (DNR), said she didn't oppose the bill. She could see the rationale behind using the federal royalty rate. However, the DNR commissioner does currently have the ability to waive, extend or modify royalty rates for any mineral including geothermal in AS 38.05.140(d). That statute appears to provide ultimate flexibility to the commissioner in determining under what conditions and at what rate royalty should be applied. This bill could be considered redundant of those powers.

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CO-CHAIR WIELECHOWSKI asked what the purpose of the royalty is from the state's perspective.

ALAN DENNIS, Division of Oil and Gas, Department of Natural Resources (DNR), answered that the laws, the Constitution and the department's regulations all speak to using the state's resources to the maximum benefit of its citizens. These are property rights and they belong to the citizens, and if private companies are using that for their benefit it wouldn't pass those principles.

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CO-CHAIR MCGUIRE thanked them both for being on line for the committee. She said they are aware of the commissioner's flexibility within the statute, but like other areas of mineral management, they are choosing to make that policy statement so people can make business decisions accordingly.

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PAUL THOMSEN, Director of Policy and Business Development for Ormat Technologies, said a barrel of hot water is worth about 15 cents. When they are looking at developing a geothermal project in the Railbelt, they are working in a confined and regulated market. When they look at the project costs today they would need a price of 14 cents for those barrels of hot water from the utility to make their project pencil. Unlike other developers they don't have the luxury of exporting the product. They have to find a local off-taker and deal with the local market. That is how they look at the incentives in SB 242 and SB 243 impacting their project as well as the ratepayers in the

Railbelt area and other areas that may have geothermal development coming on line.

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SENATOR STEDMAN joined the committee.

MR. THOMSEN said without any incentives and a 10 percent royalty on gross electricity sales today they would need a price of 14 cents. If SB 243 were implemented (taking the federal rate of 1.75 percent for the first 10 years and 3.5 percent thereafter), they would be able to lower the price of the needed power purchase agreement by 1 cent. Staff had requested a walk-through of that calculation, so his slide 2 showed a 50 MW project; if you multiply that by their availability or capacity factor (0.95), multiply that by the hours in a year (8760), times the \$130 MWh (13 cent rate), times the average royalty rate (2.8 percent), times a 25-year power purchase agreement (PPA), they would pay the State of Alaska \$38 million in royalties.

What does it mean to lower the price by 1 cent? They took the same calculation and showed that would result in a saving of \$104 million to the Railbelt ratepayers. He clarified that Ormat is talking about selling the power to a wholesaler; they are not in the business of distributing it to constituents at large. The total economic benefit of this bill for Ormat would be around \$140 million.

SENATOR STEVENS asked him to explain how the ratepayer is protected in this system.

MR. THOMSEN answered simply put any tax or royalty is going to be a "pass through" for Ormat. They cannot recover those costs through the RCA or through increased taxes. So, lowering the amount of royalty they have to pass through to the constituents is where they will see that savings. Not having to deal with a 10 percent royalty on gross proceeds brings the cost of the project down drastically.

SENATOR HUGGINS said it is important to Ormat as a business to have a structure to count on and asked if they might come back and ask for royalty relief if for some reason what is represented in this bill is too onerous for their business model.

MR. THOMSEN said he had hit the nail on the head. This bill would limit their total liability from a very potentially high royalty payment. He explained when they calculate the total cost

of the project in SB 242, they plug in how much the power plant will cost, what the leases cost, and the potential royalty rate - and for something that is variable they have to put in the highest potential exposure to the project. This bill would dramatically bring that down from a potential of 10 percent on gross proceeds to a maximum of 2.8 percent on the average to still potentially be waived if a project is struggling. He reminded them that this is on top of the \$3 million they paid for leasing 36,000 acres from the state.

CO-CHAIR WIELECHOWSKI asked if this project would be regulated by the RCA so they can ensure that these benefits are passed on to consumers.

MR. THOMSEN answered absolutely.

CO-CHAIR WIELECHOWSKI said if the state were to collect a 10-percent royalty rate, it would get around \$380 million, and by reducing it to 1.75 percent it would collect around \$38 million, a lot less.

MR. THOMSEN reiterated that they would have to get 14 cents from the ratepayer if they have to pay a royalty. But shifting that burden from the ratepayers to DNR is a policy decision for the legislature to make.

CO-CHAIR WIELECHOWSKI said the cost of their project is \$275 million and if that meant their credit would be around \$82 million.

MR. THOMSEN answered yes.

SENATOR STEDMAN asked him to clarify the difference between a wholesale rate and what a customer would actually be paying.

MR. THOMSEN said his understanding is that the utility or off-taker of this power would get the product at a wholesale price and then mark it up for transmission and delivery to the ratepayer, and he would let the utility comment on what their mark up for that is.

CO-CHAIR MCGUIRE stated they asked that the RCA regulate the contract with the utility to decide on rate of return and to show how the state tax credits and royalty relief would end up benefiting the wholesale rate they could offer the utility which would in turn be passed on to the consumer.

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CO-CHAIR WIELECHOWSKI asked if Ormat's project would be regulated by the RCA or the power sales agreement.

MR. THOMSEN replied that Ormat Technologies would be regulated directly. There would be three layers of regulation - Ormat as the entity selling the power, the state-owned utility that is buying the power, and then the broader decisions the RCA makes on top of that.

CO-CHAIR WIELECHOWSKI asked if Ormat had any intention of coming back and asking to be deregulated at any point in time.

MR. THOMSEN said they don't have those plans; the current regulation scheme in Alaska wouldn't stop them from developing this project at this time.

CO-CHAIR WIELECHOWSKI said he wanted it clear if this bill should pass that Ormat's huge tax breaks go through to the consumer. He would not like to see for this to pass giving them big tax breaks and then for them to come back in a year or two asking for deregulation. That would be a worst case scenario from his perspective.

MR. THOMSEN responded that once the contract is approved it is a fixed price long-term contract. Because all of those entities in Alaska are regulated, they don't have much flexibility. However the utilities are going to have to get to a price that they are feel comfortable with in signing a contract with Ormat. They need to take that to the RCA to make sure they agree that it's in the public's best interest. Once that contract is approved it is binding for the life of the project.

The reason he sounds hesitant with the word "regulation" is not because they don't intend on honoring their contract, but rather if they refinance this project at a later date, being a regulated entity doesn't really translate outside of the bounds of the State of Alaska. Being regulated in Nevada or California is very different, and he didn't want to see the standards for which they enter into a contract in Alaska be changed even though any change or amendment would take approval from both sides.

CO-CHAIR WIELECHOWSKI moved to a slightly different topic of royalty and asked what the rate is in Nevada.

MR. THOMSEN replied that Nevada has no royalty.

CO-CHAIR WIELECHOWSKI asked if they collect any higher income taxes or do they make it up anywhere else.

MR. THOMSEN replied no. Nevada has a sales tax and an income tax, but geothermal is granted a 50-percent abatement of both of those taxes.

CO-CHAIR WIELECHOWSKI asked what the sales tax would be charged on for Ormat.

MR. THOMSEN answered on the sale of equipment into the state, buying trucks and things like that for the project. It's very minimal.

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SENATOR HUGGINS asked how federal incentives would apply here.

MR. THOMSEN answered that Ormat is eligible for both a production and an investment tax credit, but they have to choose which one. Unfortunately both of those federal incentives get renewed typically on two-year cycles. Building a geothermal project takes about five or six years. So, they are always entering into projects without knowing when the federal tax credits will expire. Today as part of the federal stimulus bill, geothermal, wind and solar are eligible for a 30-percent investment refundable tax credit mirrored here in Alaska. Unfortunately those incentives expire in 2012 and they don't know if they will be extended or renewed.

The 30 percent was part of the federal ARRA bill which tried to get new investment. If that should not be extended they could fall back to the original tax credit which was a 10 percent investment tax credit or a \$.02/KWh production tax credit; those expire around 2015. For those to apply to this project would require an extension. So for this project's model they have scheduled no federal incentives.

SENATOR HUGGINS asked how many jobs would be created by this project.

MR. THOMSEN replied that during the construction phase they tend to act as the general and will try to employ as many locals as possible, in the triple digits. During the operation phase it's in the low double-digits.

**SB 242-GEOTHERMAL RESOURCE TAX CREDITS**

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CO-CHAIR MCGUIRE said they would go to back to SB 242.

MR. THOMSEN said they reset their model in SB 242 to again say at today's costs they would need \$.14. If SB 243 were to pass they would be eligible for a 30-percent refundable investment tax credit and that would allow them to lower the price they would need to develop this project by 2.5 cents. In dollars this would be worth \$82.5 million to this \$275-million project. A very small portion of that is in the exploration phase; the majority is in the development phase.

When they originally look at resource development they are talking about all the wells required for the development of the project. In CSSB 242(RES) exploration is defined to stop after drilling the second production well. To put that into perspective, he said a good geothermal well today at a good temperature is enough to produce approximately 4-5 MW. So, after the second well is drilled and they can confirm that there is a resource, they move into the development phase where they will still drill many production and reinjection wells for the fluid and covering the body of the power plant. So for total exposure during this exploration phase they are looking at a number in the vicinity of \$15 million. If both of the production wells were \$5 million and the leases they have already acquired in Alaska are about \$3 million, any additional money in between those would amount to an exposure of about \$4.5 million. Since this would be in the exploration phase they could get that tax credit annually. Once they get past that point then there is no exposure until the project is placed in service.

MR. THOMSEN said that \$82 million would be quite a commitment from the State of Alaska to make this project happen. Lowering the rate by 2.5 cents would result in a \$260 million savings to Railbelt ratepayers for the life of the project and an economic benefit for Ormat of \$175 million.

Eighty-two million is an undiscounted number. Knowing the time value of money and that \$82 million in one payment up front is worth a lot more than them paying the state for the next 26 years, they used a discounted rate of 7 percent and said with the time value of money the estimated discount savings to ratepayers would about \$132 million, which still nets an economic benefit of \$50 million for Ormat. He said they were trying to show that dealing in a fixed market if the state is willing to partner with Ormat and give them \$82 million up front

allowing them to get this PPA in place and move the project forward more rapidly they would be able to discount the wholesale price to the utility by 2.5 cents.

He explained that because they are regulated by the RCA they will know what their construction costs were because the credit is based on them reviewing the eligible construction costs and giving them 30 percent of that in a cash rebate. They disclose their rate of return and the RCA will know the price because not only will Ormat have disclosed it but the utility will have brought the contract to them. So, there should be very good transparency with this model.

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SENATOR STEDMAN asked why the tax credit is 30 percent instead of 10, 15, 50 or zero.

MR. THOMSEN replied that they are trying to get to what they think utility expectations are today for a PPA. The savings is less with 10 percent. To enter into a PPA in an aggressive time frame they need to be around 10 cents; this gets them to that price.

CO-CHAIR MCGUIRE said the earlier version had a 25 percent on state land and 50 percent on federal land. The decision was made to go to a flat 30 percent. It's just a question of what level of partnering. The idea is that the state offers exploration credits in Cook Inlet and other places; so is this a place the state wants to help mitigate costs and absorb risk. If they think they do, then they can argue about what the rate should be. She appreciated them at least putting in the numbers so they could understand what the benefits are.

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SENATOR FRENCH followed up on some questions from Senator Wielechowski and asked how an amendment saying something like a taxpayer accepting credits under this bill accepts RCA regulation would be viewed.

MR. THOMSEN said he didn't see a problem with that. Ormat's understanding is that they are currently regulated by the RCA and will always be regulated by them as long as they are selling power to anyone in the State of Alaska.

CO-CHAIR WIELECHOWSKI said if that 10 cents was a wholesale price or retail to the consumer.

MR. THOMSEN replied that all prices his prices are wholesale.

CO-CHAIR WIELECHOWSKI said he understood that the wholesale price for consumers in the Cook Inlet area is roughly 6.5 cents.

MR. THOMSEN answered that he just came from the House hearing on GRETC and the Black & Veatch report had changed their estimate from 5 cents to 17.5 cents. So he didn't know enough to tell him what the wholesale price is today.

CO-CHAIR WIELECHOWSKI said he is curious as to the competitiveness of the project because the state would be making a pretty large up front contribution.

MR. THOMSEN said Ormat can be competitive. They have been developing projects for 40 years and they make money doing it; they typically have a 13-14 percent rate of return. What is unique about this price is if they move quickly to lock it in - whether it's 10 or 11 cents - that is a fixed price for 25 years. So, 10 years from now when they are trying to find the prevailing rate of electricity, this is their hedge; 10 cents locked in for this period of time is very competitive. He said they brought on projects in Nevada in 1985 and had to compete with and draw down their rate of return to compete at 6.5 cents. They are still sitting on those projects today saying boy that was a good investment.

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He said their project would diversify the state's energy resources and remove the fuel cost risk; and while he didn't know how to value that, but he didn't know of any other fuel supply they could go to to get a 25-year fixed rate. They have zero emissions, a closed loop system and are not depleting the reservoir of any hot water, and they think in the long term this will be 100-percent competitive. They might get to the point someday where renewable resources will enable policy to be changed on directing fossil fuel generation.

CO-CHAIR WIELECHOWSKI asked if his numbers are a fixed price for 25 years if in 2035 the utility would still be paying a wholesale price of 11.5 cents.

MR. THOMSEN replied that they have negotiated a very modest price escalation in the price contract for operations and maintenance and the RCA would have to approve it.

CO-CHAIR WIELECHOWSKI asked who would build the long transmission line.

MR. THOMSEN answered they assume that building a 40-mile transmission line is a job for the utility.

SENATOR STEDMAN said if they were going to incentivize geothermal electrical generation, maybe they should do modeling to see if the state would be better off subsidizing the transmission lines, which are the negative side of this whole scenario. He didn't know the answer.

CO-CHAIR MCGUIRE remarked if you don't have a project to begin with to connect to a transmission line who cares.

SENATOR STEDMAN said he assumed they had selected a physical location.

MR. THOMSEN answered yes, because they are on state leases. He added that these bills are independent of transmission lines because they can impact other geothermal developments that may not have the same transmission "log jams" they have. The Mount Spurr development is 40 miles from the Beluga power plant where they would tie in and be able to access the Railbelt grid. This infrastructure would benefit future hydro plans in this area like Chakachamna and Tyonek/CIRI.

SENATOR STEDMAN asked if they had done economic models for the 40-mile power line to Beluga.

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CO-CHAIR MCGUIRE explained that the bill was designed to incentivize geothermal exploration and development generally in any geothermal area that might be explored in the state of Alaska. It is not project-specific. Interestingly, the contract that Ormat has already entered into renders the royalty portions of the bills before them meaningless.

MR. THOMSEN said he would be happy to provide them with a presentation on those hurdles that they are already preparing for another committee.

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RAYMOND MANN, Renewable Energy Program Manager, City of Akutan, said they are currently pursuing development of both hydro electric and geothermal power with feasibility and exploration currently being funded by the Renewable Energy Grant Fund. He

thanked the legislature for continuing support of renewable energy development which is critical to the development of sustainable rural communities. They are committed to eliminating their dependence on diesel fuel, reducing or eliminating PCE subsidies, eliminating the 50,000 tons of carbon emissions per year and providing residential and commercial power well below the current 32 cents KWh that their residential users pay.

They are also committed to public private funding for the development of their geothermal resource. It's currently estimated that 3/4 of the total development cost of their project will be borne by private investors. However, the ability to attract private capital and development expertise will depend heavily on reasonable tax incentives, carbon offsets, exploration credits and a positive investment environment. They believe that both SB 242 and SB 243 are the right approach and would go a long way in creating the investment environment that will allow Akutan and many other communities to create the public private partnerships needed for geothermal development.

MR. MANN said they support the legislation in general although its applicability to Akutan is not quite clear. They are developing on private land, for example, and the royalty issues may not be applicable to them.

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BRAD EVANS, CEO, Chugach Electric Association, said Chugach generates 90 percent of its electricity with natural gas from Cook Inlet and they are now facing tremendous pressures in security in the price of their natural gas fuel supply. In reaction to this, Chugach is embarked on a mission to diversify its generation portfolio and reduce their reliance on a single source of fuel. They also support the development of a rational statewide energy policy that addresses where, when, and how the state incentives should be applied for development of alternative energy supplies. He said priority should be made for those projects that are sustainable and geothermal is sustainable; it is also good for future prosperity.

He said the potential for geothermal development in Alaska appears viable; however the cost of development for this resource in remote areas is significant. Even a location that you might be able to see from a tall building in Anchorage is still a long ways away in terms of getting a project built. In these situations it makes an appropriate state energy policy to lower costs barriers to development where possible. Both bills want to lower costs and in each of these cases their primary

concern is the assurance these benefits flow through to the consumers and not merely result in additional enrichment to the developer. To be clear, their concerns do not stop just at the incentives contemplated here today; they also apply to those situations where any public money is loaned to developers whether they are state or federal. If public money touches any project directly or indirectly transparency should be demanded ensuring the flow of the benefits to the public.

In this specific situation, Mr. Evans said, Ormat has demonstrated a refreshing willingness to work towards an open and transparent process. He said the efforts of this committee are noteworthy, measurable and a step in the right direction.

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CO-CHAIR MCGUIRE thanked everyone for their testimony, set both bills aside, and adjourned the meeting at 5:22 p.m.