

ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE

February 22, 2023

3:30 p.m.

MEMBERS PRESENT

Senator Click Bishop, Co-Chair
Senator Cathy Giessel, Co-Chair
Senator Bill Wielechowski, Vice Chair
Senator Forrest Dunbar (via TEAMS)
Senator Scott Kawasaki
Senator James Kaufman
Senator Matt Claman

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

CS FOR HOUSE JOINT RESOLUTION NO. 6 (RES) am Supporting oil and gas leasing and development within the National Petroleum Reserve in Alaska; and urging President Biden and the United States Department of the Interior to approve the Willow Master Development Plan.

- MOVED CSHJR 6 (RES) am OUT OF COMMITTEE

PRESENTATION: ALASKA'S MINERAL POTENTIAL ON STATE FORESTED LANDS

- HEARD

DISCUSSION ABOUT CARBON OFFSET PROJECTS AND THEIR POTENTIAL ON STATE LAND

- HEARD

PREVIOUS COMMITTEE ACTION

BILL: HJR 6

SHORT TITLE: NAT'L PETROLEUM RESERVE IN ALASKA

SPONSOR (s): REPRESENTATIVE (s) PATKOTAK

02/10/23 (H) READ THE FIRST TIME - REFERRALS
02/10/23 (H) RES

02/17/23 (H) RES AT 1:00 PM BARNES 124
02/17/23 (H) Moved CSHJR 6(RES) Out of Committee
02/17/23 (H) MINUTE(RES)
02/20/23 (H) RES RPT CS(RES) 6DP
02/20/23 (H) DP: RAUSCHER, MCCABE, MEARS, WRIGHT,
PATKOTAK, MCKAY
02/20/23 (H) TRANSMITTED TO (S)
02/20/23 (H) VERSION: CSHJR 6(RES) AM
02/22/23 (S) RES AT 3:30 PM BUTROVICH 205

WITNESS REGISTER

GRACE ERVINE, Staff
Representative Josiah Patkotak
Alaska State Legislature
Juneau, Alaska

POSITION STATEMENT: Reviewed the changes made to HJR 6 in House Resources and on the House floor.

MELANIE WERDON, PhD., Chief
Minerals Resources Section
Division of Geological and Geophysical Surveys
Department of Natural Resources (DNR)
Fairbanks, Alaska

POSITION STATEMENT: Delivered a presentation on Alaska's mineral potential on state forested lands.

JOHN CROWTHER, Deputy Commissioner
Department of Natural Resources
Anchorage, Alaska

POSITION STATEMENT: Participated in the presentation on Alaska's mineral potential on state forested lands.

SEAN CARNEY, President
Finite Carbon
Philadelphia, Pennsylvania

POSITION STATEMENT: Discussed carbon offset projects and their potential on state lands.

ACTION NARRATIVE

3:30:18 PM

CO-CHAIR CATHY GIESSEL called the Senate Resources Standing Committee meeting to order at 3:30 p.m. Present at the call to order were Senators Wielechowski, Kaufman, Kawasaki, Claman, Dunbar (TEAMS) Co-Chair Bishop, and Co-Chair Giessel.

HJR 6-NAT'L PETROLEUM RESERVE IN ALASKA

[3:31:38 PM](#)

CO-CHAIR GIESSEL announced the consideration of CS FOR HOUSE JOINT RESOLUTION NO. 6 (RES) am Supporting oil and gas leasing and development within the National Petroleum Reserve in Alaska; and urging President Biden and the United States Department of the Interior to approve the Willow Master Development Plan.

She noted that this was the first hearing, although the committee heard the Senate companion resolution last week. She asked Grace Ervine to go over the differences between the two resolutions.

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GRACE ERVINE, Staff, Representative Josiah Patkotak, Alaska State Legislature, Juneau, Alaska, reviewed the changes that were made to HJR 6 in House Resources and on the House floor. She spoke to the prepared document.

**Summary of Changes
CS for House Joint Resolution 6
Version S.A**

The following changes were made from Version B to Version S.A:

Page 2, Line 25 following "sound": "WHEREAS the Inupiat people are the long-standing stewards of the lands on which the National Petroleum Reserve in Alaska sits, and take seriously the need for careful and balanced stewardship; and"

Page 3, Line 27 following "populations": "WHEREAS Alaska's leadership in the nation's energy future includes robust support for the development and implementation of renewable energy systems and sources to ensure that cost-effective energy and power exist for communities and individuals; and "WHEREAS we recognize that responsible resource development today equips our communities to make investments in technology and infrastructure to support the use of renewable sources of energy and power; "WHEREAS the Willow project is an important part of a diverse energy future for Alaska and the United States;"

Page 4, Line 19 following "residents": "and the nation"

SENATOR CLAMAN asked which version of the resolution was before the committee.

MS. ERVINE clarified that it was version S.A.

CO-CHAIR GIESSEL found no further questions and solicited a motion.

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CO-CHAIR BISHOP moved to report CSHJR 6, work order 33-LS0415\S.A, from committee with individual recommendations and zero fiscal note.

CO-CHAIR GIESSEL found no objection and CSHJR 6 (RES)am was reported from the Senate Resources Standing Committee.

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At ease

PRESENTATION: ALASKA'S MINERAL POTENTIAL ON STATE FORESTED LANDS

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CO-CHAIR GIESSEL announced a presentation about Alaska's mineral potential on state forested lands.

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MELANIE WERDON, PhD., Chief, Minerals Resources Section, Division of Geological and Geophysical Surveys, Department of Natural Resources (DNR), Fairbanks, Alaska, began the presentation on slide 2 that has a map that identifies the mineral belts throughout the state. She read the following commentary:

- Alaska Division of Geological & Geophysical Surveys (DGGS) and U.S. Geological Survey (USGS) use available geologic data to identify areas where various mineral deposit types can be found in Alaska
- Multiple mineral deposit types overlap, and they cover a large part of the state

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DR. WERDON advanced to slide 3, Critical Minerals & Conventional Mineral Belts, and described the map by reading the following:

- Alaska has numerous Conventional Mineral Belts (i.e., gold belts, a copper belt, and base metal belts [including zinc, lead, silver, copper, gold])
- Additionally, Critical Minerals (CM) are most numerous in red areas, and are largely coincident with the broader "Conventional Mineral Belts"
- The potential for finding mineralization is everywhere within these mineral belts

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DR. WERDON advanced to slide 4, Alaska's Mineral Belts & Forest Lands. She stated that land in the major mineral belts that overlap state forest land may be considered for carbon offset projects.

CO-CHAIR GIESSEL asked if the green areas on the map reflect state forests.

DR. WERDON said yes.

CO-CHAIR GIESSEL observed that the copper belt across the inlet from Anchorage showed just a little forest land.

DR. WERDON explained that the Division of Forestry was in the process of updating the forest inventory in Alaska when she prepared the presentation, so the map might not have the updated information. She deferred further explanation to Deputy Commissioner Crowther.

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JOHN CROWTHER, Deputy Commissioner, Department of Natural Resources, Anchorage, Alaska, added that this dataset about forestation came from the wildfire team and is not meant to be an accurate depiction of forestation or ownership. He committed to provide a more comprehensive map on Friday of the different land statuses and types. He noted that the maps in this presentation give very granular detail about mineral occurrences, both under state forests and other forest lands.

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SENATOR WIELECHOWSKI asked for help understanding how minerals and carbon sequestration is linked and whether there was a concern that mineral development could be affected if carbon sequestration is allowed.

MR. CROWTHER said he believes the next presentation will talk about that interplay and DNR will present details on Friday. He also offered to follow up if there were lingering questions after that.

CO-CHAIR GIESSEL advised that the impetus for this presentation was to better understand what restrictions there might be on the mineral resources under the surface if a forest carbon offset project were to be located above ground.

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SENATOR CLAMAN wondered whether selling a carbon offset that's on top of a high value mineral deposit would preclude developing those minerals. He asked whether a later presentation would provide detail about areas where that conflict might exist.

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MR. CROWTHER replied that in future presentations DNR intends to present in more detail how carbon offset projects interrelate with other uses, including a subsurface development that requires the removal of trees. He assured the committee that doing an offset project does not preclude mineral development. To the second question, he said Dr. Werdon has very detailed information about some of the highly prospective areas that overlap forest lands.

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CO-CHAIR BISHOP pointed out that some mines that have been in existence for 70 years started reclamation projects before the federal government required reclamation. Those mines created additionality when they planted forests 50 years ago.

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SENATOR KAWASAKI asked Dr. Werdon if the areas outside of the mineral belts really don't have any minerals or if it's that the state doesn't know whether those areas have mineralization.

DR. WERDON answered that there's a possibility of less concentrated mineral occurrences outside the belts.

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DR. WERDON directed attention to the map on slide 5 that identifies five mining regions throughout the state: Interior, Ambler, Southcentral, Southwest, and Haines.

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DR. WERDON advanced to the map on slide 6, Interior: Mines, Mineral Occurrences & Forests. She stated that almost all land in the Interior is covered by one or more of the mineral belts; the potential for new discoveries is everywhere. She said the red dots reflect the known mineral occurrences, the yellow dots reflect placer gold deposits, and the green areas reflect forested lands. Many of Alaska's active mines are in the Interior and numerous exploration projects are underway.

DR. WERDON advanced to the map on slide 7, Interior: Pogo Mine & Nearby Exploration. She directed attention to the exploration projects in the Pogo Mine region and noted that exploring close to existing mines was an effective way to find new ore deposits. To that point, mineral resources have been defined at the Naosi deposit under the Sam gold project. She said the hundreds of red squares represent mining claims that are located within state forest boundaries and tree covered lands.

CO-CHAIR GIESSEL commented that Pogo is an underground mine and the surface forests are still intact.

DR. WERDON said that's correct with the exception of the area covered by roads, infrastructure, housing, and a tailings pile.

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DR. WERDON turned to the picture on slide 8 of the 13.6 million ounce Livengood gold deposit north of Fairbanks. It illustrates that access roads and the loss of trees for drill pads is unavoidable at the advanced exploration stage.

DR. WERDON displayed the map on slide 9, Ambler: Mineral Resources & Access Road, and made the following points:

- ~ In the southern Brooks Range, the Alaska Industrial Development and Export Authority (AIDEA) and Ambler Metals propose constructing an industrial road to access significant base mineral resources in the Ambler Mining District.
- ~ This area is part of a significant base metal belt that extends from the Red Dog Mine through the Ambler District to the east.
- ~ The proposed route passes through forested lands, potentially more than the map shows.

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DR. WERDON advanced to the map on slide 10, South-Central: Mineral Resources & Forests and made the following points:

- ~ Across Cook Inlet from Anchorage, state and private forest lands lie within the statewide copper mineral belt.
- ~ Significant mineral resources have been defined at the Estelle gold project, the Whistler Island Mountain and Raintree projects.
- ~ The Old Man project is just starting.
- ~ The potential for copper deposits exists under the forested lands.

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DR. WERDON advanced to the map on slide 11, Southwest Alaska: Mineral Resources & Forests, and made the following points:

- ~ The statewide gold belt that runs through this area has the 34 million ounce Donlin gold deposit.
- ~ The statewide copper belt that runs through this area has the Pebble deposit and the copper and gold deposits mentioned in the previous slide.
- ~ The tree-covered areas are shown in bright green.

DR. WERDON turned to the map on slide 12, Haines Area: Mineral Resources & Forested Land, and made the following points:

- ~ The state forest boundary and tree-covered lands partially overlap the Haines mineral belt in the Palmer Mineral District. This area is outlined in red.
- ~ This region has many mineral sites of various types and metal associations under exploration by industry, the most advanced of which is the Palmer project.

DR. WERDON advanced to slide 13, Palmer Project - Constantine (APM)/DOWA, and made the following points:

- ~ Palmer is a Preliminary Economic Assessment-stage project that hosts numerous mineral deposits of the same type as the Greens Creek Mine near Juneau.
- ~ Palmer deposits have calculated resources of copper, zinc, gold, silver, and barite.

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DR. WERDON advanced to the map on slide 14, Haines Area: DGGS Geologic Mapping - Summer 2023. She said DGGS was asked to conduct a landslide hazards assessment and bedrock geologic

mapping in the area that's outlined in purple. This will be done this coming summer

DR. WERDON thanked the committee for the opportunity.

CO-CHAIR GIESSEL thanked her for the presentation.

DISCUSSION ABOUT CARBON OFFSET PROJECTS

[3:56:36 PM](#)

CO-CHAIR GIESSEL announced the next presenter would be Sean Carney, the president of Finite Carbon. He was invited to discuss the carbon projects his company helped Alaska Native corporations establish, and what the state's next step might be as it looks at carbon offset on public lands.

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SEAN CARNEY, President, Finite Carbon, Philadelphia, Pennsylvania, stated that his company was founded in 2009 and today it has 68 carbon projects in the US and has registered about 80 million carbon offset credits that have been transacted for more than \$800 million. Finite Carbon has 3.1 million acres in the US and over 700,000 are in Alaska.

He suggested the committee think about a carbon offset project as akin to building a house. The carbon offset developer is similar to the builder and the third-party registry is similar to the municipality or city that manages the zoning. The rules are in place from the registry and the developer acts on those rules to register the credits.

The first step is to define the project and measure the carbon in that area. A typical project will require from 300 to 500 measurements, which can take from six weeks to three months. The second step is to do computer modeling. The project scenario includes potential restrictions, financial considerations, and the harvestability of the timber. The theoretical model shows what would happen in the absence of doing the carbon project and the actual comes from measuring the trees. The trees are measured every 5-6 years and provide a true-up for the interim when the model predicts the growth of the trees.

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MR. CARNEY explained that in the next step an auditor does a site visit and remeasures a sampling of the trees to ensure the measurements fall within a certain error range. The modeling and project documentation are also reviewed. The auditor will either

sign off or request corrective action. The next step is the registry for another round of approvals. After the final approval, the credits are issued into an account. Between 15-20 percent is taken off the top to cover unintentional reversals such as fire or windfall. The credits are serialized, which ensures that the credits are tracked and can be traced to the original source. The credits are then transacted and a buyer can do one of two things: 1) hold the credits and potentially sell them in the future, or 2) retire the credits and carry them on their ledger. Those are the mechanics from the landowner's perspective. It's a long-term commitment to not harvest more than is grown. The proof that this is happening comes from the five-year audit.

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SENATOR CLAMAN asked why the state would be in the voluntary market.

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MR. CARNEY said it's not required, but he suggested the voluntary market because the compliance market has much stricter rules for public lands. In the voluntary market, the state is treated akin to a private owner.

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SENATOR WIELECHOWSKI asked if he had ever been involved in litigation related to the sale of carbon credits.

MR. CARNEY answered no; he had seen boundary disputes but those disputes had not led to legal action.

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SENATOR WIELECHOWSKI referenced the previous presentation on minerals in Alaska. He asked whether the state would be sued for specific performance if it developed a forest carbon offset project then reversed course 10 years later so it could develop a gold mine under that forest land.

MR. CARNEY said yes; the state would have contracts with the developer, with the registry, and with the buyer. The contract with the registry offers the least flexibility and the penalty for breaking that contract requires repayment of the credits received to date. If the original contract were for 100,000 acres and 100 acres was converted, the loss probably wouldn't show up because the growth of the forest would likely be more than the conversion. He said conversion for minerals occurs frequently in Appalachia, but he had yet to see an instance

where the conversion exceeded the annual growth of the forest. The developer contracts are custom but they're usually from 5-10 years. The risks are the same with the buyer's contract.

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SENATOR WIELECHOWSKI asked about the potential for getting carbon credits by cutting a forest and turning it into long lumber to build houses or other structures.

MR. CARNEY said there is an incremental benefit to using wood for long-term storage of carbon in building products. However, it's important to understand that in the overall project the amount of carbon on the property always has to be greater than what is harvested. If all the wood on a property is cut, the landowner would have to repay all the credits that were reversed.

SENATOR WIELECHOWSKI pressed the hypothetical possibility of a landowner benefiting from using the wood for building projects because the carbon would be in long-term storage.

MR. CARNEY suggested he think about the golden rule which is that the amount of carbon that is put into a project must be retained. If a landowner were to convert the forest to wood products, about 60 percent of the volume would be lost with the conversion from trees to lumber. That lumber would only have 40 percent of the carbon that was in the forest at the start of the project.

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SENATOR WIELECHOWSKI suggested planting more trees to offset the carbon loss.

MR. CARNEY answered that there's a requirement to replenish or catch up the shortfall within 10 years and the reality is that it would take 50 years to catch up if all the trees were harvested. He added that the assumption is correct but the policy is based on science.

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SENATOR CLAMAN mused that if the landowner were to clear cut 100 acres for long lumber for building projects, the additionality would be lost but the carbon that's stored in those structures would be more than if the timber had been made into pulp. To get the maximum carbon credits from that 100 acres would mean leaving the trees standing.

MR. CARNEY said he believes in managing forest land. Carbon was designed by foresters with the idea of subsidizing management to the ideal rotation age so the landowner will have more wood products and store more carbon on the same ground, but over a longer period of time. An unfortunate byproduct is the notion that a landowner can create the most carbon by not managing at all. While allowed, that is not in the spirit of forest carbon projects.

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CO-CHAIR GIESSEL recalled that Finite Carbon helped the Native corporations Sealaska, Doyon, and Ahtna develop carbon projects. She asked what he could tell the committee about their approach to a forest carbon offset project.

MR. CARNEY clarified that the Native corporations that Finite Carbon helped were Sealaska, Ahtna, Tyonek, and Hoonah Totem. Those were compliance projects so their rules were different than he'd been discussing.

CO-CHAIR GIESSEL offered her understanding that compliance projects would use a registry in California or the state of Washington.

MR. CARNEY clarified that the established compliance registry was in California.

CO-CHAIR GIESSEL asked what approach those projects were taking and whether their private forest land was different than the state's forest land that potentially will be used for a carbon offset project.

MR. CARNEY explained that the primary difference is that state land tends to be more evenly managed for sustained yield, whereas private land is more event-driven. For example, the timber prices the last several years have led to landowners cutting far more than growth.

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SENATOR WIELECHOWSKI asked whether the state could have an issue with a forest carbon offset project since the constitution requires state land to be managed for sustained yield.

MR. CARNEY said the term "sustained yield" has wide breadth. He used a bank account as a hypothetical analogy. In the timber context, there would be a long term flow of wood products, which is the opposite of cutting all the timber every 20 years. The

compliance market is more rigid and any change has to be clear and specific to get credit, whereas the voluntary market has more leeway in the interpretation of the credit.

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CO-CHAIR BISHOP asked if he agreed that the voluntary market is less secure for payment than the compliance market. He drew an analogy between the compliance market and investing in a US Treasury bill.

MR. CARNEY said the short answer is yes. In the compliance market, companies are required to buy the credits; the number of credits that will be purchased and the sale price is generally known. It's a more liquid product that's traded more frequently. The voluntary market is not a commodity market; it is more of a boutique market and the characteristics of the project are more important than the fact that it's a carbon project, which can affect price. Prices in the voluntary carbon market can vary widely, whereas the price is generally even in the compliance market

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CO-CHAIR GIESSEL asked if it was up to the state to choose which market.

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MR. CARNEY said yes, and even if the choice was the voluntary market, there would be a wide range of scenarios from which to choose. One option would be to reduce or eliminate timber harvesting. He said the idea is to use carbon to invest in the forest to make it more productive. The win-win is that the landowner can have more carbon sequestered on a property and create more wood products. He acknowledged that doing that may not create the maximum amount of carbon, but it could offer more value to society.

He cited examples in Oregon, Washington, and California where the focus is on creating more climate resilient forests. That means having fewer trees that are larger and more valuable. That forest is also less susceptible to fire. To get to that point, the smaller trees have to be thinned and carbon pays for that.

MR. CARNEY opined that the most important question is not whether to participate but how to participate to maximize the benefits of the resource. His belief is that it has to be both carbon and timber. He suggested drawing on DNR's expertise to

decide how to responsibly implement a project in the best way possible.

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SENATOR CLAMAN asked if state forests tend to be managed less aggressively than private forests because: different values are placed on state-owned forest lands, investments are required for more intensive management, private lands are better conditioned to have managed forests, or something else.

MR. CARNEY replied it can be all of those things, and there might not be one right answer.

CO-CHAIR GIESSEL noted that the Anew report identified three potential areas in the state for forest carbon offset projects. She asked, if that's the first step, how much more has to be done and how long might that take.

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MR. CARNEY replied that the mechanics are heavily dependent on the weather and daylight and the extent that helicopters are necessary, but in theory it could be done in one season. That timeline is very tight and a more realistic scenario would be to take the measurements the first season and do the verification the next season. After that it depends on how fast the modeling and verification can be done and the audit report submitted. He said the realistic timeline from contracting to issuance is 18 months.

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SENATOR WIELECHOWSKI asked if it was reasonable to assume that some logging could be done on lands open to carbon sequestration contracts, which would bring more revenue to the state.

MR. CARNEY answered that the carbon revenue should be invested in responsibly managed forests. He said he didn't know whether that would result in more harvesting than an unmanaged forest, but a case could be made that a managed forest could have both more harvesting and more sequestered carbon. The opposite could be argued, but it really depends on the forest. He said the longer he's in the industry, the more he agrees with a friend who once told him that forestry isn't rocket science; it's more complicated.

SENATOR WIELECHOWSKI asked if there was a private market for carbon credits. He posed the idea of letting residents use their permanent fund dividend to buy carbon credits.

MR. CARNEY replied that there are myriad ways for consumers to buy offsets. For example, everybody who buys gas in California is contributing to the purchase of carbon offsets; there's the option to voluntarily pay more for that gas that will go to purchase carbon offsets; and Etsy buys carbon offsets every time it ships something to a customer.

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SENATOR WIELECHOWSKI asked if he'd seen the governor's legislation and had an opinion about whether it takes the right approach.

MR. CARNEY said he would like to see effort and thought put into how to get it all. For example, what is the best way for the state to deal with the nearly two million acres of forest that is affected by spruce budworm. Salvage harvesting costs money but it can yield saw timber that will be around for perhaps 100 years. Once those trees are gone, it will be easier and faster for new trees to come up. He emphasized that the state has a lot of land and a lot of special cases, so there was no lack of opportunity to do something special.

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CO-CHAIR BISHOP commented that this conversation was sure to get DNR's attention.

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SENATOR WIELECHOWSKI asked how to best maximize the extensive acreage that is affected by the spruce budworm.

MR. CARNEY said the US Forest Service has done extensive research on this and there is no ultimate answer; solutions seem to be specific to a region and site. For example, salvage harvest in British Columbia was not very effective. He noted that modeling had been used for a long time in forestry and there were people who could model different management practices, the costs, and the carbon impacts specific to the spruce budworm both pre- and post-kill. The side benefits would be promoting a forest products industry, creating jobs, and being good for the environment.

CO-CHAIR GIESSEL commented on the quality of life issues that could be associated with such a project.

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SENATOR KAUFMAN asked why the salvage harvest in British Columbia wasn't economic.

MR. CARNEY offered his understanding that one issue was that without fire, the seed dispersal was inhibited because of the moss on the trees. That contributed to poor regeneration. He repeated that there were experts to help find site-specific solutions.

CO-CHAIR GIESSEL commented that it sounds as though this would be a question for the state's foresters.

MR. CARNEY restated his preference to look for solutions that involve both timber and carbon.

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SENATOR CLAMAN said his general understanding of salvage logging is that there's a two year window to harvest fire or spruce budworm damaged trees and still have some market value. Harvests after that time would only be valuable because new trees would regenerate faster.

MR. CARNEY said the trees killed by spruce budworm lose market value after two years because the wood is discolored, not that it's rotten. One solution is to get ahead of the curve and harvest living trees in the path of the spruce budworm and the dead trees before they discolor.

CO-CHAIR GIESSEL thanked him for the good information.

MR. CARNEY said it had been a very positive experience.

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There being no further business to come before the committee, Co-Chair Giessel adjourned the Senate Resources Standing Committee meeting at 4:45 p.m.