

ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE

January 27, 2010

3:36 p.m.

MEMBERS PRESENT

Senator Lesil McGuire, Co-Chair
Senator Bill Wielechowski, Co-Chair
Senator Hollis French
Senator Thomas Wagoner

MEMBERS ABSENT

Senator Charlie Huggins, Vice Chair
Senator Bert Stedman
Senator Gary Stevens

COMMITTEE CALENDAR

SENATE BILL NO. 220

"An Act declaring a state energy policy; relating to energy efficiency and alternative energy; establishing the energy efficiency grant fund, an emerging energy technology fund, a renewable energy production tax credit, and an energy use index; and relating to a fuel purchasing cooperative, to energy codes and efficiency standards, to energy conservation targets in public buildings, to a state agency energy use reduction plan, to the alternative energy revolving loan fund, and to the renewable energy grant fund."

- HEARD AND HELD

PREVIOUS COMMITTEE ACTION

BILL: SB 220

SHORT TITLE: ENERGY EFFICIENCY/ ALTERNATIVE ENERGY

SPONSOR(S): RESOURCES

01/19/10	(S)	READ THE FIRST TIME - REFERRALS
01/19/10	(S)	RES, FIN
01/20/10	(S)	RES AT 3:30 PM BUTROVICH 205
01/20/10	(S)	Heard & Held
01/20/10	(S)	MINUTE(RES)
01/21/10	(S)	RES AT 3:30 PM BUTROVICH 205
01/21/10	(S)	-- MEETING CANCELED --
01/25/10	(S)	RES AT 3:30 PM BUTROVICH 205

01/25/10 (S) Heard & Held
01/25/10 (S) MINUTE(RES)
01/27/10 (S) RES AT 3:30 PM BUTROVICH 205

WITNESS REGISTER

ROBERT VENABLES, Energy Coordinator
Southeast Conference
POSITION STATEMENT: Supported SB 220.

NATHAN SOBOLEFF, Natural Resources Planner
Sealaska Corporation
Juneau, AK
POSITION STATEMENT: Supported SB 220.

KIRK HARDCASTLE, Operations Manager
Taku Renewable Resources Coalition
Dba/Fishermen's Daughters' Biofuels
POSITION STATEMENT: Supported SB 220.

JEREMY WOODROW
Alaska Municipal League (AML)
POSITION STATEMENT: Supported SB 220.

JEDEDIAH SMITH, Legislative Liaison
Alaska Center for the Environment
University of Alaska
POSITION STATEMENT: Supported SB 220.

NICK HORRAS, representing himself
Bethel, AK
POSITION STATEMENT: Supported SB 220.

WILLIAM ROTECKI, representing himself, Ketchikan, supported SB
220.
POSITION STATEMENT:

HARVEY BOWERS, representing himself
Wasilla, AK
POSITION STATEMENT: Supported SB 220.

RICH WILSON
Alaska Ratepayers
POSITION STATEMENT: Supported SB 220.

MIKE KRAFT, representing himself
Fairbanks, AK

POSITION STATEMENT: Supported SB 220.

BILL NOLL, representing himself
Anchorage, AK

POSITION STATEMENT: Strongly supported SB 220.

MARK MASTELLER, State Director
Cascadia Region Green Building Council
Wasilla, AK

POSITION STATEMENT: Supported SB 220.

MARGARET SUBERS, representing herself
Palmer, AK

POSITION STATEMENT: Supported SB 220.

DAVID OWENS, Legislative Liaison
Alaska State Home Builders Association (ASHBA), said he owns
Owner, Owens Inspection Services
Palmer, AK

POSITION STATEMENT: Supported SB 220.

PAUL MICHELSON
Alaska State Home Builders Association
Palmer, AK

POSITION STATEMENT: Supported SB 220.

PAT LUBY, Advocacy Director
AARP
Anchorage, AK

POSITION STATEMENT: Supported SB 220.

MAKO HAGGERTY, Member
Kenai Peninsula Borough Assembly
Homer, AK

POSITION STATEMENT: Supported SB 220.

LISA HUGHES, Legislative Liaison
Northern Environmental Research Center
Fairbanks, AK

POSITION STATEMENT: Supported SB 220.

DAVE MESSIER, Renewable Energy Technician
Yukon River Intertribal Watershed Council
Fairbanks, AK

POSITION STATEMENT: Supported SB 220.

KIMBROUGH MAUREY, representing herself

Anchorage, AK

POSITION STATEMENT: Supported SB 220.

BRENDAN BABB, Board Member
Alaska Center for the Environment
Fairbanks, AK

POSITION STATEMENT: Supported SB 220.

THOMAS DEERFIELD

Dalson Energy
Anchorage, AK

POSITION STATEMENT: Supported SB 220.

JASON MEYER, Program Manager
Emerging Energy Technology Program
Alaska Center for Energy
University of Alaska Fairbanks

POSITION STATEMENT: Supported SB 220.

MIRA KOHLER, President and CEO
Alaska Village Electric Co-op (AVEC)

POSITION STATEMENT: Supported SB 220.

IAN DUTAN

Alaska SeaLife Center
Seward, AK

POSITION STATEMENT: Strongly supported SB 220.

BRAD REEVE, General Manager and CEO
Kotzebue Electric Association

POSITION STATEMENT: Supported SB 220.

CHARLES DEARDON, representing himself
Ketchikan, AK

POSITION STATEMENT: Supported SB 220.

MONTE WORTHINGTON, Director of Project Development
Ocean Renewable Power Company (ORPC Alaska)

POSITION STATEMENT: Supported SB 220.

CATHERINE KEITH

Wind Diesel Application Center
Alaska Center for Energy and Power (ACEP)
University of Alaska

POSITION STATEMENT: Supported SB 220.

TOM LAKOSH, representing himself

Offnet testifier

POSITION STATEMENT: Supported SB 220.

PAUL KENDALL, representing himself

Offnet testifier

POSITION STATEMENT: Supported SB 220.

ACTION NARRATIVE

[3:36:06 PM](#)

CO-CHAIR LESIL MCGUIRE called the Senate Resources Standing Committee meeting to order at 3:15 p.m. Present at the call to order were Senators Wagoner, French, Wielechowski and McGuire.

SB 220-ENERGY EFFICIENCY/ ALTERNATIVE ENERGY

[3:37:39 PM](#)

CO-CHAIR MCGUIRE announced SB 220 to be up for consideration.

ROBERT VENABLES, Energy Coordinator, Southeast Conference, supported SB 220. He said their mission is to undertake activities that promote strong economies and healthy communities in a quality environment. For over the last dozen years their Energy Committee has been working with communities and utilities to displace diesel as much as possible as a primary fuel source for power generation. They have made significant strides, but much work is left to be done. He applauded the work the legislature has done in this regard. The Southeastern utilities are following the committee's work and look forward to working with them in the future.

[3:39:33 PM](#)

NATHAN SOBOLEFF, Natural Resources Planner, Sealaska Corporation, said a large portion of what he does is working on alternative energy projects for the corporations. He thanked the 26th Legislature for considering important legislation like SB 220, which they support. He said they also support SB 150, creation of the emerging energy technology fund. He noted that Sealaska has spearheaded converting its corporate headquarters to a wood pellet boiler to completely eliminate its annual need for 35,000 gallons of diesel heating fuel. A large portion of that, \$510,000, was funded from the Denali Commission Emerging Energy Technology Fund. He said the technology has not been proved in the states, but it has existed in Europe for over 30 years and they hope to add credence to it here. He urged people to call Sealaska if they were interested in looking at their "show case" project. "The door is open for anyone."

He said Sealaska also supports SB 71 that requires the state to consider using alternative energy systems when designing a public works project. This is one of the key things to help grow an industry and to convert buildings off of fossil fuels to more renewable energies. A good example is Canada's Northwest Territories' legislative building that is converting to wood pellets because of legislation like SB 71.

MR. SOBOLEFF said Sealaska supports and encourages SB 132, the Southeast Alaska Energy Fund, to help pay for hydroelectric projects, interties - and tidal projects as well. He said that Sealaska has been running its Black Bear Hydroelectric Project on Prince of Wales already for a number of years and is working on some tidal hydroelectric projects within the Southeast region.

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KIRK HARDCASTLE, Operations Manager, Taku Renewable Resources Coalition, DbA Fishermen's Daughters' Biofuels, supported SB 150 and SB 220. He said the coalition is a group of Alaskan fishing families looking for ways to reduce the cost of their energy through alternative fuels. They have received a feasibility preconstruction grant from the Alaska Energy Authority (AEA); their research is focused on converting fish waste to biodiesel and they are the only ones in the state that have received a grant for this. The goal is for communities to be able to harness any energy wherever it is available "in this waste stream."

He said there is a great need for the state to compile emerging technology data to build foundations for further studies, if deemed feasible, to help policy and program managers make effective energy decisions. Such a system would also eliminate duplication. They hope the access to information will engender competition and collaborative business practices.

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MR. HARDCASTLE said they feel if people are using public funds that all of their data and information should be available for others to build upon. He said that many energy research funds are used as a "vehicle" to further businesses looking to lower their energy costs, but he wanted to see that money stay in the state longer - what he called the "vessel" concept. For example, due to his lack of experience in these fields, he had to go to Finland to research the technology and paid for it himself. Often they have had to go to the Lower 48 for much of the

research, and that migrates money out of the state. He said he supported SB 220 because it will help the state become "not so much a venture capitalist, but a venture catalyst" to attract other businesses from the Lower 48 to come up to Alaska.

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CO-CHAIR MCGUIRE said the database idea has come up before and she agreed with him. She asked if he had any other policy ideas with respect to keeping investments in Alaska.

MR. HARDCASTLE said Alaska's apprenticeship programs "are envied" throughout the rest of the United States. This model could be used a little bit more by having the "imported" people or technologies relay their skills to "sourdoughs" who have a vested interest in their communities.

CO-CHAIR MCGUIRE said that Denali Biodiesel presented their fish waste biodiesel project to the committee yesterday and she would be happy to provide him with their information.

MR. HARDCASTLE thanked her saying it is very essential for communities to share their information with each other.

[3:51:35 PM](#)

JEREMY WOODROW, Alaska Municipal League (AML), said energy is one of their top four priorities for this legislative session. He said SB 220 is the right step forward in meeting this goal. The AML seeks ways to make communities much stronger through things like energy efficiencies.

[3:52:55 PM](#)

JEDEDIAH SMITH, Legislative Liaison, Alaska Center for the Environment, University of Alaska, supported SB 220. He said it encourages development of emerging renewable energy technology which will create economic opportunities for Alaskans. As a recent graduate of the University of Alaska system, he attested to its importance in educating and preparing students for a challenging and demanding work environment and he said that this bill takes forward steps in meeting Alaska's unique energy challenges in a way that is innovative and efficient.

MR. SMITH said that the savings this bill engenders is "an intelligent step" towards a more sustainable and stable future. He thanked them for including additional funding for public transportation that he speculated would assist Alaskan communities in capturing more federal funding for efficient

transportation. This would enable Alaskans to get to and from work while reducing traffic congestion.

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NICK HORRAS, representing himself, Bethel, supported SB 220 as a major step forward in addressing critical needs in rural Alaska. He saw it encouraging job creation and economic development in rural Alaska as well. He said he is currently an energy rater trainee and has worked in the low income weatherization program. His experience has shown him that energy efficiency programs really work for all. These programs have been a catalyst for energy efficiency so far; he urged them to keep the momentum going.

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WILLIAM ROTECKI, representing himself, Ketchikan, supported SB 220. He said that improving energy efficiency in public facilities will translate into money earned in the future. Also because Alaska rural areas have the most to gain, he thought those areas should be prioritized.

Further, he said that plenty of technologies are available elsewhere, but they need to be fine-tuned for Alaska. For example, several ground source heat pumps have been put into Juneau, but not much is known about thermal conductivity of the soils here. Each heat pump has to be tested separately for its unique location, which brings the need of a database into play, so people could get "a leg up" on whether or not their location is appropriate for ground source heat pumps.

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HARVEY BOWERS, representing himself, Wasilla, supported SB 220 even though he doesn't usually favor anything government does. He said he owns a lot of buildings in Wasilla and is trying to take them to net-zero energy, which means the buildings would supply their own energy with solar and wind. He has cut his energy costs by 50 percent so far. He said a database is needed so people can find out what equipment works and what doesn't and what works in what areas. Canada and Antarctica already have net zero buildings.

[4:02:53 PM](#)

RICH WILSON, Alaska Ratepayers, said they represent electricity consumers throughout the state and their goal is affordable and predictable electric rates for Alaskans. They firmly believe that such a goal cannot be achieved without a substantial state investment in hydroelectric power and other renewables around

the state. From the perspective of their children and grandchildren, he said, over-reliance on instate natural gas, especially in the case of the Railbelt, is a perilous path to take. The time for action is now.

MR. WILSON said that energy base load has to be affordable, reliable, predictable and long-term. The best base load resource in the Railbelt is hydro - the Four Dam Pool and Bradley Lake - much as small hydro does elsewhere. That is why Alaska Ratepayers supports immediate legislative appropriations for design, permitting, equity funding for Susitna hydro phase 1 and other statewide hydro development.

Further, he said the state must wean Railbelt ratepayers off of dependence on gas-fired electric generation and strive for 50 percent renewable energy by the year 2020, not 2025. He stated that the process of moving to large hydro generation as the Railbelt's prime source of base load electric power must be accelerated. "A statewide or regional entity with adequate authority to accomplish these goals in concert with utilities is essential," he said.

[4:07:12 PM](#)

Finally, Mr. Wilson said, they need urgent action and a state contribution, much as was the case of the Four Dam Pool and Bradley Lake, to bring down the initial cost of hydro power so that rates can be levelized over the long term. He also supported the committee's \$10 million proposal for analyzing the Railbelt's Susitna, Chakachamna and Glacier Fork hydro projects as well as the proposal's other hydro projects. He said that Alaska Ratepayers also support a "down payment" of \$200 million for long-term Railbelt energy projects.

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CO-CHAIR WIELECHOWSKI said he appreciates his input in this process of developing an energy plan.

[4:09:52 PM](#)

MIKE KRAFT, representing himself, Fairbanks, said Delta Junction is developing a 15 mgW wind farm and pinning down what costs they are competing against is one of their major issues in moving forward. The interior of Alaska is competing against diesel and he wanted an amendment that requires public utilities doing business in Alaska to buy renewable energy if it can match their actual avoided cost. One of the reasons he is asking for this is because the City of Fairbanks is dealing with bad air quality issues and it has an opportunity to displace about 3

million gallons of diesel a year through use of the wind farm. The wind farm has been able to attract \$35 million in private capital and employs many people. If they can bring on 15 mgW, they can offer a long-term contract at a fixed price which does equate to cheaper energy and stable rates.

[4:11:56 PM](#)

BILL NOLL, representing himself, Anchorage, strongly supported SB 220. He thanked the legislature for its efforts in this area and said the weatherization programs are needed and accepted gratefully. He said he is a member of the Alaska Ratepayers group. He informed them that in the 1980s, the state spent \$130-150 million for environmental and economic studies, but when the Ratepayers discussed this with Chugach Electric Association, they said the same effort would cost \$500 million today. Simply using inflation makes the studies worth \$325 million, he remarked.

At any rate, Mr. Noll pointed out, this report is a real asset that the state can use as a "down payment" to get future financing. It would also be getting good value for a lot of work that was done by good Alaskans in the past.

He said the members of Ratepayers are very interested in the \$10-million appropriation to figure out which projects should have priority and how big they should be. He was quick to say their interest in Susitna is not an anti-gas move, and that, in fact, looking at value-added methane would be well-warranted.

CO-CHAIR MCGUIRE said they greatly appreciate his board's work.

[4:17:51 PM](#)

MARK MASTELLER, State Director, Cascadia Region Green Building Council, Wasilla, supported SB 220. He said Cascadia is the chapter of the US and Canada Green Building Council that covers Alaska. His members are architects, engineers, builders, building owners mostly in the commercial building world. He thanked the committee for their work on this issue.

MR. MASTELLER said he was especially pleased that the bill includes conservation and efficiency aspects and upgrades to public buildings. He said that nationwide, buildings use 40 percent of all energy including 70 percent of all electricity and they produce about 40 percent of the country's CO₂. All those things are probably more in Alaska. So energy conservation and efficiency in the "built environment" is one of the fastest and

cheapest ways to save both money and energy, and it creates a lot of jobs.

MR. MASTELLER said the state has done a great job promoting weatherization and energy efficiency in the residential sector, but a lot more work needs to be done in the commercial and public facility perspective for their long-term viability. Most importantly he said, "Conservation and energy efficiency work in the built environment is what makes the renewable energy transition possible."

[4:20:52 PM](#)

MARGARET SUBERS, representing herself, Palmer, supported SB 220. She said conserving energy first is crucial and then the renewable energy piece can come into play. She said she currently works as an energy rater and is building her own zero-net home where she recently had a solar tour, and 50 people showed up. Everyone is concerned and ready to go forward with conservation, sustainability and saving resources. She asked that the simple things in weatherization be expanded.

[4:23:45 PM](#)

DAVID OWENS, Legislative Liaison, Alaska State Home Builders Association (ASHBA), said he owns Owens Inspection Services in Palmer, and supported SB 220. He said he hated to bring up the subject of code, but SB 220 mentions the ASHRAE/IESNA Standard 90.1 on page 8, line 9, and that can be problematic. It would be better to assign a specific year to the standard and to provide for a way to review it as it changes every three years.

[4:26:03 PM](#)

PAUL MICHELSON, Alaska State Home Builders Association, Palmer, supported SB 220. He said he has sat on the Energy Standards Committee of the International Code Conference (ICC) for six years and he thinks that Alaska is the premier leader in this area. However, he pointed out that Alaska has five to six different climatic regions and people must be careful about instituting this policy because what might work well in Fairbanks won't work well in Ketchikan.

He remarked that SB 220 sets up AHFC to be the main watch dog for energy, but mainly in the residential arena - where it should stay. AHFC should not have oversight over commercial building, which should be given to someone with "a little more authority." He also mentioned that the National Association of Home Builders just passed an internal resolution urging Congress to acknowledge hydro power as a renewable resource. The

Department of Energy is in the process of discussing that classification. If hydro power is not listed as a renewable resource, a lot of the existing dams in the country will go by the wayside, and getting permits for new dams will be quite difficult. He supported Mr. Owens' comment that ASHRAE 90.1 is forever changing; and it is very important to label an edition the state will follow and stay with it.

[4:28:56 PM](#)

CO-CHAIR MCGUIRE asked what organization he thought could oversee commercial building.

MR. MICHELSON said he would give her suggestions in a couple of days after consideration.

SENATOR WAGONER asked why Congress would want to take hydro out of the renewable classification and if dams would be taken out of service if that happened.

MR. MICHELSON replied that is what the Association understood would happen at its Las Vegas meeting. They are under the impression that Congress is trying to do away with some of the existing dams and he clarified that hydro is not currently listed as renewable.

SENATOR WAGONER said he knows that environmentalists have wanted to take out some dams on the Snake and Columbia Rivers for years, but that happens to be the lowest cost electricity in the United State right now.

MR. MICHELSON agreed. He added the the legislative intent language calls for a 10-percent increase in energy efficiency by 2015 which is less than the 15 percent increase in energy efficiency by 2013 and 50 percent by 2023 that the DOE called for to accept Stimulus money. He asked if the state wasn't supposed to meet the International Energy Conservation Coordinating Committee (IECCC) standards within seven years.

CO-CHAIR MCGUIRE said the committee would take a look at that.

[4:33:38 PM](#)

PAT LUBY, Advocacy Director, AARP, Anchorage, said he didn't claim to have any technical expertise on energy, but he has 97,000 members who pay energy bills every month. These customers need energy for safe living. He explained that older persons use energy differently than younger workers. They spend 90 percent of their time in their homes that tend to be older, and usually

they have the least weatherization and insulation. Because of their greater susceptibility to hypothermia, he tells retirees not to turn down their thermostats.

MR. LUBY said that AARP members were surveyed to determine how they were coping with energy costs; 14 percent said they turned off their energy source during the winter. He urged them to develop alternative and less expensive energy sources. He said lawmakers need to reduce energy costs for the state's public facilities, health facilities and citizens. He talked to a retired math teacher in Fairbanks last week and her December heating bill was \$750. That bill made her happy because she expected her other bills to be between \$900 and \$1000 a month. She and her husband are concerned about being able to continue to afford living in Alaska.

He said SB 220 will not only cut energy costs, but also help keep older Alaskans in the state. He said the legislature did a great job recently with the historic weatherization and low income energy assistance programs, and SB 220 is the logical next step that will also be historical.

[4:35:30 PM](#)

MAKO HAGGERTY, Member, Kenai Peninsula Borough Assembly, Homer, supported SB 220. He thanked the committee for their leadership and vision. He said, "This is exactly the type of thinking and action we need from our leaders down in Juneau."

[4:37:32 PM](#)

LISA HUGHES, Legislative Liaison, Northern Environmental Research Center, Fairbanks, supported SB 220. She thanked the committee for all its hard work and the community outreach during the Interim. Much of the future economy will come from sustainable resource and alternative energy development, and she said that Alaska has the potential to be a world leader in renewable energy technologies. She hoped the legislature would do its part to help the state fulfill that role - and most importantly, help Alaskans find relief from expensive and unsustainable energy options.

[4:39:01 PM](#)

DAVE MESSIER, Renewable Energy Technician, Yukon River Intertribal Watershed Council, Fairbanks, said they are a consortia of over 70 tribal and First Nation governments and supported SB 220. He was encouraged by the mention of renewable energy training to strengthen mobile work forces for some of the projects that will be put in place. Emphasizing the importance

of these trainings he noted that over the past two months the Council has run a number of them for rural Alaskans through state and federally fund grants and the response from member tribes has been overwhelmingly positive. He said, "People see this technology as an answer and they want more of it, but more than that they want to be a part of it."

MR. MESSIER suggested that "tribal consortia" be specifically listed under the definition of eligible applicant able to apply for funding through the Emerging Energy Technology Fund established in the bill.

[4:40:47 PM](#)

KIMBROUGH MAUREY, representing herself, Anchorage, said she is a property owner in Wasilla and a citizen who goes to extremes to reduce her electricity and natural gas bills. She supported SB 220. Ms. Maurey said she studied at Duke University and did Masters studies at Western Washington learning the science behind climate change. She also works with non profits in Anchorage and with TDX Power Corporation; and she is seeing great successes at getting renewable energy in the state. She thanked the legislature for what it had done so far. She has knows the effects of these funds are good in other states and would work wonders in Alaska. Passing this legislation means that Alaska is taking a step forward in being a leader in innovative and clean technologies.

MS. MAUREY thanked them for recommending the funding for public transportation that would reduce traffic on the highways with new forms of public transit. She said these new systems would all contribute to new job creation.

[4:43:53 PM](#)

BRENDAN BABB, Board Member, Alaska Center for the Environment, Fairbanks, said they support SB 220 and he thanked the committee for all of the valuable work it has done and continues to do. He said he also likes SB 121 and its stress on energy efficiencies. When power lines were accidentally cut recently in Juneau and electricity prices sky rocketed, people were able to immediately reduce electrical use by over 20 percent. He said these high costs for electricity are what the rural areas regularly see. If facilities are made 20 percent more efficient, it's possible to save money and energy without turning down the heat and making it painful especially for older people. SB 121 and weatherization will go a long way to helping that.

MR. BABB said he recently went to a talk by Gwen Holdmann, Alaska Center for Energy and Power, who mentioned advances by the Denali Commission's Emerging Technology Fund, which is modeled on SB 150. He also visited Reykjavík, Iceland, in 2007 and saw their amazing geothermal resources. Ms. Holdmann's talk reminded him that Iceland used to be run completely on hydro carbons and had to import coal and oil. When those were cut off during WWII Iceland decided to convert to geothermal, a resource they had in abundance and went to Boise, Idaho Capital Mall to study how geothermal was being used there and took that information back to Iceland. Now they are a leader in geothermal energy. Alaska, if it uses this Emerging Technology Fund, could be a world leader in geothermal, tidal, wave, wind and hydro kinetic technologies; it is already a leader in wind diesel research, a technology that can be exported to other countries right now.

4:46:51 PM

SENATOR FRENCH thanked him for his testimony.

4:47:01 PM

THOMAS DEERFIELD, Dalson Energy, Anchorage, Alaska, said he is a renewable energy consultant and primarily assists communities with community-scale renewable energy projects, grant writing, feasibility studies. He is currently working on a 2 mgW biomass gasification CHP project that is being proposed for the Upper Tanana. He supported SB 220. When folks approach him to do grants, he asks them if they have determined how much energy they use and if they have dealt yet with the energy they waste. Third he asks what energy resource is feasible to use in their location. He advises clients that no granting agency in their right mind will give grants for renewable energy projects when the applicant hasn't determine what their energy use is. He also advises that it would be "virtually immoral" to spend anyone's money on renewable technology for a building that is still wasting energy.

MR. DEERFIELD related that he didn't think renewable energy technology is on a level playing field with conventional energies and therefore he advises that universally cheaper is not the correct goal for energy. If renewables stabilize costs and create local jobs and are renewable rather than unsustainable and they are environmentally clean, why be obsessed with cheaper, he reasoned. "Cheaper today is a short sighted concept." Fossil fuels are volatile and will surely escalate again sooner or later because oil, coal and gas are

finite resources. They should focus on cost stability and consider where the money goes.

If all costs are considered included PCE reductions reduction in wildfire fighting costs and the benefits of localization of the economy and whatever value can be attached to non-local fuel sources - things like biomass energy do become less expensive, Mr. Deerfield stated. Also the emerging technology industry in renewables is looking for testing ground to try out new projects and Alaska can be a leader with its high conventional fuel prices and very challenging climate, off-grid communities and skilled labor force.

MR. DEERFIELD said the best investment Alaska can make in its future is to do essentially three things: 1. Fully assess the renewable resources of biomass, wind, solar, hydro, tidal and the appropriate locations for each of those, 2. Reduce our waste especially state buildings; and 3. Support and incentivize the development and deployment of sustainable site specific and right sized renewable energy systems.

[4:51:12 PM](#)

JASON MEYER, Program Manager, Emerging Energy Technology Program, Alaska Center for Energy, University of Alaska Fairbanks, supported SB 220, particularly the Emerging Energy Technology Fund on page 5, line 21. He said he believes this piece of legislation is critical to meeting the state's stated goals of sustainable energy for Alaska because it fills an important funding gap for energy development. He explained that technology is a development process that moves from idea to the lab to demonstrations then to commercialization. This transition is known as "Death Valley" to many in the industry. Great ideas or potential solutions cannot receive funding or be implemented because they have not been proven and they have not been proven because they have not received funding. This, in effect, locks up many of Alaska's great energy resources - wave power, tidal energy, solid waste energy, underground coal gasification - as there is no proven method of utilizing them.

MR. MEYER said that for the most part, Alaska imports all of its energy solutions, but the state could change that by promoting innovative energy solutions and the Emerging Energy Technology Fund is such an example. He said some of Alaska's communities emerging energy projects include waste heat recovery from the Tanana Chiefs region, biomass digesters for Cordova, a commercial-scale wood pellet boiler for Juneau, a seawater heat pump in Seward, and solar thermal system for elders in Kotzebue.

He related that the most valuable element of funding these projects through public funding is having access to the data and analysis, reports and lessons learned. It is an early opportunity to analyze technologies especially if future funding decisions or large spending initiatives are being considered.

He echoed the gentleman from Ketchikan's comments that the current bill addresses his concerns about state spending on noncommercial energy technology. Finally, he said Alaska's energy needs and infrastructure, particularly in rural Alaska, will be largest growing market of energy demand in the next 50 years along with the developing world. By developing home-grown technology and expertise Alaska has the opportunity to become a world leader in these technologies.

[4:55:05 PM](#)

CO-CHAIR MCGUIRE thanked him for his testimony and said they look forward to having him as a resource.

[4:55:23 PM](#)

MIRA KOHLER, President and CEO, Alaska Village Electric Co-op (AVEC), said they serve about 53 rural Alaska villages and that they support SB 220. She said the state has needed a comprehensive energy policy for many years. She echoed others' comments about conservation standards and improvements and said the Emerging Energy Technology Fund has been very near and dear to their hearts for a long time. The renewable energy production tax credit is going to catalyze a lot of major projects in our state, and she said she is very interested in what may transpire with renewable energy as it develops across the state.

She said Alaska needs a viable long-term energy solution that impacts the entire state; she didn't want our regions to be pitted against each other for scarce resources. The resource should be local, indigenous, and perpetual.

[4:57:58 PM](#)

IAN DUTAN, Alaska SeaLife Center, Seward, strongly supported SB 220. He said that the Center is Seward's largest private employer and the state's only public aquarium. They believe the action it takes is practical and the targets it sets are realistic and achievable. He specifically said that he would like to see Section 18.15.310 on page 2, line 27, on efficiencies in public facilities, to be expanded to include non-profit partner institutions like the Alaska SeaLife Center.

He explained that they were initially funded by a grant from the Exxon Valdez Oil Spill Trust Council and it operates in the exactly the same manner as a public library, the University research center or a tourism visitor center and yet it enjoys none of the privileges of public support that those facilities enjoy. For instance, under the American Recovery and Reinvestment Act, the Center is specifically excluded from receiving any funding for energy conservation because they are designated as a public aquarium. This exclusion has made it very difficult for them to compete for critical funding and has undermined their ability to not only retain staff, but to maintain their position as a leading state marine tourism attraction.

He added that this limitation has served to dampen their willingness to invest in emerging energy technology and mitigation research. This brought him to a second point in section 44.99.115 on page 13, lines 25-27, that the state energy policy should not limit the range of renewable energy technologies that qualify for this act and suggested adding a reasonable "current options" - specifically ocean thermal energy, which is comparable to geothermal energy.

MR. DUTAN explained that over the years, with the help of Senator Stevens, the Seward community, and most recently with the support of the Denali Commission, he has developed a project to implement ocean thermal energy using ambient seawater from Resurrection Bay. That same technology is widely used in Europe already, he said, and has provided heating in communities with up to 40,000 people in Scandinavia. So, it is a proven technology that has never been applied in Alaska.

He said the SeaLife Center has received some funding from the Emerging Technology Fund to implement what would be the largest scale application of this project in Alaska. It will save them around 57,000 gallons of fuel oil each year and will reduce their green house gas emissions by more than 1.2 million pounds; but most importantly this technology would enable them to maintain their year-round work force of more than 80 full-time equivalent staff keeping the cost to the visitors down and critical marine research going.

They also believe that this project has enormous leverage potential, because this technology could be applied in Southeast Alaska, Southcentral Alaska, and Southwestern Alaska. He mentioned there would be a TV show about it soon.

CO-CHAIR MCGUIRE asked him what channel and what time the showed would be on.

MR. DUTAN answered it is scheduled to be on channel 11 at 10 p.m. on Friday night.

5:02:39 PM

BRAD REEVE, General Manager and CEO, Kotzebue Electric Association, said he is also president of the Alaska Power Association. Both organizations support SB 220, he said. The bill has a lot of good elements: energy efficiency, sustainability, and renewable portions that can fund long-term renewable energy technologies. The addition of the Emerging Energy Technology Fund will allow new things to be tried. He said that Kotzebue is the recipient of a solar thermal project that will be successful because of the high refraction rate it gets. These technologies will lead to new jobs and a sustainable economy.

5:05:04 PM

CHARLES DEARDON, representing himself, Ketchikan, supported SB 220. He said he found "no exception" to any comment that anyone before him had made. He thanked them for their efforts. He said that Ketchikan liked the energy efficiency, weatherization and rebate program. They have also adopted the International Code Council energy codes, a big step, that includes commercial work.

5:06:23 PM

MONTE WORTHINGTON, Director of Project Development, Ocean Renewable Power Company (ORPC Alaska), supported SB 220. He said they were selected as one of the recipients for the Emerging Energy Technology Grant for their Nenana Hydro Kinetic Project on the Tanana River in collaboration with the Alaska Center for Energy. They are also pursuing a tidal energy project in Cook Inlet in conjunction with researchers at UAA to develop materials testing and environmental modeling and monitoring techniques for this project.

MR. WORTHINGTON said his company relies on both public and private funding sources to develop these projects in a timely manner. Passing this bill and establishing particularly the EETF will go a long way to not only provide clean emissions and free power to Alaskans, but also establish Alaska as a leader in this field. He supported the renewable tax credits in section 43.20.046 because production based tax credits and feed-in tariffs are important aspects of renewable energy development as it helps transition technologies from the emergent phase through

to being competitive in the market phase. He also supported the University's involvement with renewable research.

SENATOR WAGONER asked where his tidal project is.

MR. WORTHINGTON answered off of Fire Island.

5:10:04 PM

CATHERINE KEITH, Wind Diesel Application Center, Alaska Center for Energy and Power (ACEP), University of Alaska, supported SB 220 and specifically the Emerging Energy Technology Fund. She said many things can be done to improve performance of wind diesel systems and energy storage systems for them.

5:11:17 PM

TOM LAKOSH, representing himself, supported SB 220. The most important aspect of improvement would be the codification of the energy conservation and renewable energy goals. The reason is because it is necessary for all of the state agencies to have codified statute in order to apply the policy the committee is promoting. The RCA, in particular, needs codified guidance from the legislature in order to make its rulings. They need to be able to look to a codified energy efficiency goal in order to be able to "decouple" energy production from rates; they need the codified goal of renewable generation sources in order to rule on projects that are submitted by utilities and private power producers in deciding what which projects will go forward and approving rates for them.

He added that energy storage is needed; and while ACEP wanted it for wind/diesel, money could more effectively be kept in communities if storage for wind/biogas or wind/biodiesel backup were developed. This should be an energy policy goal and could be included as a tax credit of up to 15 percent of the per unit cost of that particular fuel source.

MR. LAKOSH said the levels for conservation should be substantially improved and should at least match the 15 percent improvement in energy efficiency by 2015 and 20 percent improvement by 2020. The renewable energy generation goal should be improved as well, but should have some short-term goals so that that planning for the renewable projects could be undertaken immediately to have the most long-term effect.

He said AEA and the DOE should be tasked with generating those Alaska-specific commercial and residential building codes suited to each of Alaska's climate zones so that substitutes that will

meet or exceed the ASHRAE standards will be in place. To the extent that there is any subsidy in a PCE or in an energy grant fund, those communities and utilities should be mandated to adopt those specifically tailored commercial building codes, because it makes no sense to pour state money into a sieve.

[5:17:02 PM](#)

PAUL KENDALL, representing himself, thanked everyone for the comments and stated for the record that he had no conflicts of interest. He supported SB 220. He said he had started a website labeled "MFH20" that stands for "magnetic fields" where he has compiled a series of stories about energy technologies relating to residential use; reasoning that all business comes down to families eventually. He thought they need to start a "Personal Residential Life Essential Clean Energy Needs Committee." He talked about how home fueling stations are being developed by different companies and remarked that the children of Alaska have a chance to lead the world overnight.

MR. KENDALL warned them, however, that the state was going to go through a repeat of 1981 when the price of fossil fuels dropped so much that it decimated funding and markets for alternative energy. Now, technology is emerging at a pace that he has never seen before, and the gas [pipeline] is so far out that it is unpredictable. He hoped that whatever the legislature does that it brings the oil companies to the table so some kind of legal foundation could be built. He urged them to focus on the TAPS line being two-thirds empty and that companies might be "looking to finagle some hydrogen or something down that line."

[5:23:49 PM](#)

CO-CHAIR MCGUIRE noted that the committee had run over its time limit and thanked everyone for their testimony. She adjourned the meeting at 5:23 p.m.