

Alaska Energy Authority
BOARD OF DIRECTORS WORK SESSION
Independent Power Producers - Future in Alaska
November 10, 2011
Anchorage, Alaska

PARTICIPANTS PRESENT:

Chairman Hugh Short, Public Member
Commissioner Susan Bell, Department of Commerce, Community, and Economic Development
Deputy Commissioner Angela Rodell, Department of Revenue
Ron Arvin, Public Member (telephonic)
Robert Sheldon, Public Member
Gary Wilken, Public Member
Senator Lesil McGuire
Sara Fisher-Goad, AEA Executive Director
Peter Crimp, AEA Deputy Director, AEEE
Linda MacMillan, AEA Deputy Director, Operations
Jim Strandberg, AEA Project Manager
Shauna Howell, AEA Executive Assistant
Karin St. Clair, AEA Administrative Assistant
Karsten Rodvik, AEA Project Manager, External Affairs
Rich Stromberg, AEA Project Manager, Wind
Bryan Carey, AEA Susitna-Watana Engineering Manager
Doug Ott, AEA Project Manager, Hydro
Robert Kahn, Northwest & Intermountain Power Producers Coalition
T.W. Patch, Regulatory Commission of Alaska
Daniel Patrick O'Tierney, Attorney General's Office
James Keen, Regulatory Commission of Alaska
Bernie Smith, Regulatory Commission of Alaska
Michael Pawlowski, Staff, Senator McGuire
Chris Spens, Cascade Creek LLC and Alaska Hydro Corporation
Chris Rose, REAP (Renewable Energy Alaska Project)
Dean Thompson, Law Firm of Kempel, Huffman & Ellis
Earle Ausman, Polarconsult Alaska
Joe Griffith, General Manager, Matanuska Electric Association
Ed Jenkin, Vice President, Power Delivery - Chugach Electric Association
Paul Risse, Sr. Vice President, Power Supply – Chugach Electric Association
Chad Schumacher, Superior Pellet Fuels
Brad Garrett, Alpine Energy
Daniel Patrick, Hobbs Industries
Brian Bjorkquist, Department of Law
Joel Groves, Polarconsult Alaska, Inc.
Jolene McKanoff, TDX Power (telephonic)
Darryl Jordan, (telephonic)
Captain Don Kubley, Alaska International Consulting (telephonic)
Peter Naoroz, Kootznoowoo, Inc. (telephonic)
Doug Mitchell, Juneau Hydro Power

Thom Fischer, Toll House Energy
Gene Therriault, Golden Valley Electric Association
John Foutz, City of Seward
Mike Craft, Delta Wind Farm
Randy Kaer, Alpine Energy
Ethan Schutt, CIRI

1. ROLL CALL

The meeting was called to order by Chairman Short at 9:00 a.m.

2. WELCOME - Chairman Hugh Short

Chairman Short welcomed everyone to the meeting. Introductions were made.

FRAMING THE ISSUE

Chairman Short said that Alaska Industrial Development & Export Authority (AIDEA) and Alaska Energy Authority (AEA) were both served by one Board, which is comprised of Alaskan citizens concerned about energy issues. The strategies of the railbelt, as well as rural, southeast and interior Alaska are highly dependent upon forming a strategy where we all work together.

AIDEA and AEA have undertaken two important projects. The Susitna-Watana Hydroelectric Project is supported by this Board, as well as Governor Parnell. We have hired a lead project manager with extensive experience for the project, which will serve half of the needs of the railbelt. This is a 100-year project, and we believe it is an important cornerstone of our strategy for Alaska energy. The second project, an AIDEA project, is called Endeavour. We are currently in discussions and negotiations to mobilize, renovate and bring a jack-up rig to Cook Inlet to find additional gas reserves. We are excited about Escopeta Oil's recently reported success in the Cook Inlet region. Many projects from PCE to the Technology Fund have strong support by key legislators, the Governor, and our Board of Directors.

We are all stakeholders, whether you are a regulator, a power producer, a utility, or just a power consumer. We are all responsible to our individual Boards, shareholders and constituencies. You are the experts. We are here to listen to your input on what we need to do, the policies we need to support, and the projects we need to fund.

SARA FISHER-GOAD, AEA Executive Director - Structure/Purpose/Goal

Ms. Fisher-Goad outlined the purpose of the meeting, which is to discuss how independent power producers (IPPs) fit into Alaska's energy picture. The meeting has been structured to allow for public comments at the beginning of the meeting, as well as follow-up comments at the end of the meeting. Further written comments can be provided to AEA, which will be provided to the Board of Directors. Everyone was thanked for participating in the meeting.

RCA PERSPECTIVE

T.W. Patch, Chairman of the Regulatory Commission of Alaska (RCA), thanked everyone for attending the meeting. I am going to encourage you all to do what was popularly reported when

Steve Jobs recently passed away. As you get to the end of your journey at 2:00 o'clock today, look back and connect the dots. Much of today's conference will be looking to the future, but it is important to look at the present as well. The RCA and AEA have never been more cooperative than they are today. In July, Ms. Fisher-Goad and I began discussions to assist both of our agencies and the rate-payers. We identified areas of interest where cooperation would enhance our roles, benefit the public, and safeguard state funds.

Both the RCA and AEA play a role in the state's PCE program. Based on filings that the utilities make to the RCA, we set a rate for PCE payments, employ financial analysts in rate-setting methodologies, calculate a rate and ensure the information is verifiable, provide rate information to those impacted, and AEA disperses payments. AEA also plays a critical and trusted advisory role to the utilities that derive PCE benefits. We develop matrixes to improve the program and the efficiency of utilities throughout the state.

Another advisory function AEA performs is assisting the utilities. In the village of Egegik, the utility was purchased from Naknek by a very colorful gentleman. As time went by, the generators at the utility began to fall into disrepair. AEA went with us to do an inspection after we received complaints about the reliability of the utility. AEA could not have been more helpful. They worked with a professional engineer to do an evaluation of the distribution lines in the town. They worked with environmental agencies regarding oil spills, as well as questions regarding environmental concerns from the leaking transformers on the distribution lines. AEA then redesigned the power plant and served in a peacemaking role with the residents and large consumers in the village. After the owner passed away and the city assumed operation of the utility, AEA went back and helped the city again. AEA should be held in high esteem and should be thanked for holding this conference, as the result will be better information, communication, and an opportunity for us all to look forward.

With regard to the subject of today's IPP meeting, I have every confidence that if you make a dedicated contribution, if you look back and connect the dots, if you speak openly about your concerns and don't hide your agendas, we will all be better served.

The upcoming speakers were reviewed. Please keep in mind that RCA members can only speak about decided matters and are prohibited from offering advisory opinions or speculation on what might occur in the future.

If you go before the Legislature to seek relief, guidance or legislation, you should keep two things in mind. Be careful what you ask for, because you might get it, and define your terms. Make certain that what you ask the legislature to enact will get you what you really want. This type of meeting should also be held with Legislators, as they consider extremely complex matters.

When discussing Chugach Electric Association's (CEA) desire to purchase and incorporate Fire Island wind electrical energy into its rates, one Commissioner said, "This is the most challenging and frustrating docket I have ever been involved with." One of the slides that we use when talking about rate cases is a picture of a red onion that says, "A rate case has many layers, sometimes you cry." The same thing can be said of what you are facing as IPPs. As you peel this onion of independent power production and discover how it should be implemented, you will go through many layers, have frustrations, and probably cry. But I say good luck and stay the course.

Last, I want to present you with what I call a power sandwich, which is a deconstructed hamburger. The top bun is the legislature from which we get laws, directives and guidance. Next is a series of tomatoes, which is the RCA. The layer of lettuce is AEA. Next is a layer of pickles and grilled onions, which adds flavor, texture, color, and delight. This represents the independent power producers. The hamburger patty and cheese represents the current distribution grid, transmission grid, and established and respected entities that generate electricity. The foundation is the bottom of the hamburger bun, which represents the people we serve who come home after a hard day's work and reach for the switch expecting instant gratification in the form of light. With this power sandwich, we must all join together to deliver what our rate payers expect, as well as what our society and economy demands.

3. PUBLIC COMMENTS

Chris Rose said he is the Executive Director and founder of the Renewable Energy Alaska Project (REAP), a coalition of 75 organizations whose goal is to increase the production of renewable energy in Alaska. The group includes utilities, independent power producers, environmental groups, consumer groups, and Alaska Native organizations. We work closely with state and federal agencies like AEA, AHFC, and the Denali Commission. Since our formation eight years ago, we have seen a lot of progress. We were instrumental in getting the Renewable Energy Grant Fund passed in 2008, which has funded over 200 projects in the last few years. We work closely with AHFC and were happy to see money being invested in weatherization programs. We worked to get the Emerging Energy Technology Fund passed. I was part of the group that the House Energy Committee put together to pass House Bill 306, which was passed in 2010. The bill includes goals of 50 percent renewable energy and reducing energy consumption by 15 percent on a per capita basis by 2020.

As Mr. Patch pointed out, the Fire Island docket was very frustrating. It took a four-day hearing to get a relatively small project on the grid. The Susitna-Watana project is also an important project. There will be other projects and IPPs who want to come into this grid. Some of those entities may have experience that the current utilities do not have. Ocean Renewable Power Company (ORPC) wants to work on tidal energy, as Alaska has 90 percent of the country's tidal energy potential. I am pleased that the Commission approved the contract between CEA and CIRI. If they had not, it would have sent the message that this is not a place where we can do business. Renewable energy is important and the rest of the world is moving in that direction. It provides certainty and predictability in the cost of power. Norway and Iceland both have 98 percent renewable electricity and heat. Those places are drawing investments from around the world, because they can provide long-term contracts for renewable power that does not rely on fuel. Alaska has been blessed with large amounts of natural gas and we anticipate increased development in the near future. However, we are entering the world market and we will not be able to control the price, which makes renewable energy very important. We need to have alignment between all of the goals that the legislature passed including the 50 percent renewable electricity, 15 percent energy reduction, as well as the regulations that the Commissioners have to follow and the practices that the utilities have to follow.

Chris Spens, Cascade Creek and Alaska Hydro Corporation, discussed a project they had in southeast Alaska that was in the permitting process in the Thomas Bay area. Our operating premise is to collaborate in the public interest, which we define as providing energies for homes and business, as well as providing a renewable resource economy. We are actively pursuing

and support a connection to Canada and the North American grid so we can both export and import. We hope to generate and distribute power anywhere that the market favors it. We would like to help certain communities equalize their rates. We recognize that there are isolated communities on single system generation where they do not have access to transmission from larger facilities. We believe that a private project that exports, even if it cannot make a direct connection, can be part of the financial support base. We would like to help Alaska to export its renewable hydro and wind resource, like they do in fisheries, minerals and petroleum. Our company's operating policy and philosophy is we do not want someone to win at the expense of someone else losing. We have some recommendations that we would like you to consider within your charter and purpose. Private enterprises would like an invitation to do business or have informed consent for acceptance at a minimum. We may want to export your resources, but in exchange we offer jobs, training, education, purchasing from local vendors, and education to future workforces. We recognize that your primary activity is providing the lowest cost power to Alaskans. IPPs can do that as well, but we can also help to grow your renewable resources and expand your economy. To do this, you need clear legislative policy, clear laws, and a good process with consistent administrative procedures. Consistency in how you do business is important in any industry. Our company would like to achieve access to markets in transmission. The Southeast Alaska Power Agency (SEAPA) is the generation transmission entity in the southeast, which is a closed system. There is no clear set of rules, procedures or guidance on how to engage with that entity or what the responsibilities of an IPP would be. We would like to see project review and coordination carried out on an equal basis. If you compare three independent power producer projects with public projects, and walk them through the regulatory process, you'll see that there is quite a difference in how they are responded to. My recent experience with a state agency functionary was that I was greeted in the first three minutes with, "Nobody wants this project. The local community doesn't need the energy." That is not a welcome invitation to business. And as you may be aware, southeast Alaska does need more energy. Our project is in Thomas Bay, which is 15 miles northeast of Petersburg.

Jim Strandberg invited Chris Spens to join Panel 2 as he represents the independent power producers from southeast Alaska.

Chad Schumacher, general manager for Superior Pellet Fuels in Fairbanks/North Pole, discussed a project their company was considering. We are the first large-scale pellet producing facility in the state of Alaska. We are capable of producing 30,000 tons of wood pellets on an annual basis, which would heat up to 6,000 homes at a reduced home heating cost of about 40 percent in comparison to fuel prices. We are interested in decreasing the cost of producing the wood pellets by offsetting power costs, which are currently 10 percent of our production cost. We have approximately 15,000 tons of residual biomass on an annual basis when operating at full production capacity. This provides a tremendous amount of residual product that is essentially free to our use and would be perfect fuel for combined heat and power options. We hope to work with AEA and AIDEA to move the project forward. Our main concern is offsetting our power costs. Golden Valley Electric Association (GVEA) has been a great partner in moving our facility forward. We would like the option of selling power back into their system, in addition to producing power to offset the 1.3 megawatts of sustainable power that we consume at the pellet facility. GVEA can handle up to two megawatts of power produced on a consistent basis and they are willing to purchase it from us, but the rate is of concern. If grant funding participation is available, we would like to produce the power and use it directly rather than selling all of it back to the grid. This is just an idea at this point, but we are definitely pursuing it.

We feel it would present a tremendous opportunity for local users in the Fairbanks/North Pole area, as well as the possibility of expanding to the rest of the Railbelt area.

Gene Therriault, GVEA, discussed the efforts GVEA was undertaking, current agreements, and interactions with independent power producers. We are doing everything possible to lower electric costs. We have an aggressive plan to get off of oil-fired generation, which accounts for 40 percent of our power sources, yet a tremendous portion of our annual fuel cost. We purchase 24 megawatts of electricity every day from Aurora Energy, which is the power plant on the banks of the Chena River. We purchase one megawatt of the electric power from the IPP Delta Wind, and we can double that under our current experimental tariff. We support Ormat's efforts to explore the potential on Mount Spur. Our CEO wrote a letter to the Governor encouraging him to approve the expenditure in the capital budget for their exploration work. We are interested to see if that resource is there and whether it can be produced at a price that would fit into our system. We have also been supportive of ORPC and their efforts to see if their technology works on Alaska's river system. We have ongoing discussions to see if their technology in the Nenana area can feed power into our distribution system. Under the same experimental tariff, we are going to purchase power from Bernie Karl as he tries to get a facility up and running at mile 9 of the Richardson Highway using surplus biomass to generate power. There was criticism earlier this year when our Board selected the Eva Creek Wind Project as a source of up to 25 megawatts of wind power to be brought onto our system. We had proposals from Fire Island at 10.8 cents per kilowatt hour, Delta Wind at 14 cents per kilowatt hour, and Eva Creek came in at 9.9 cents per kilowatt hour. Our Board made a basic business decision based on those costs. We cannot lower power costs if we are forced to purchase power that is more expensive than what we can produce ourselves. We are a non-profit and no profit was included in our proposal. As a coop, we have access to Krieb financing, which turns out to be even lower than the 2.1 percent that we used when comparing those numbers. GVEA is interested in lowering the cost of power in the interior. We break even after factoring in the integration costs for the Eva Creek project, which honors the Board's pledge to use alternative sources of power without raising rates. The people in the Interior are interested in those alternatives, but not if it causes them to pay more on a monthly basis. Our average residential usage has been declining for a number of years. Like many utilities in Alaska, we have to upgrade our facilities for generation, but at the same time the number of widgets we're selling is declining. Our fixed costs are not going down and so we need to manage the cost components of our operation very aggressively. We currently buy power from IPPs, and we support the efforts of Ormat and all of our IPPs.

Mike Craft, President and CEO of Delta Wind Farm, said they were excited about the opportunity of the State of Alaska to have oversight between the utilities and the IPPs, because we see things differently. In February, we offered GVEA a contract based on less than their average costs, which was 12.5 cents per kilowatt hour. That was for their average avoided cost, not their actual avoided cost. In the meantime, the electricity that we are selling to GVEA has escalated in price to about 12.68 cents per kilowatt hour, which is higher than what was offered on a 20-year flat rate with no capital investment on their side. We felt like we had a nice project with 36 months of wind data, \$54 million in capital investments lined up, and workforce development that we had worked on for two years. We had everything lined up and this spring we get to tell 200 people not to show up for work. At the same time, the Fairbanks Northstar Borough has decided to expand Wood River Elementary School, which is where my children attended and now my grandchildren attend. The air quality in Fairbanks is so bad that the kids cannot even go out and play in the playground. From an environmental perspective, we thought

that taking five million gallons of diesel out of downtown Fairbanks area, at less than GVEA's average cost and without any capital expenditures on their part, was a good thing. At Delta Junction, for example, we produced 17,000 kilowatt hours yesterday, which displaced about 1,100 gallons of diesel. We were paid 12.68 cents per kilowatt hour for that power. When GVEA sold that power, they charged 22.5 cents per kilowatt hour, including the energy surcharge, as well as enjoying a 7 percent increase in efficiency. Those are the kinds of things an IPP can do for Alaska. We can bring in private capital and workforce development, as well as acting quicker and without as much oversight as the Eva Creek project.

Jim Strandberg introduced Dr. Robert Kahn and reviewed his background. Dr. Kahn will discuss what is happening with respect to independent power and relate it to Alaska's situation.

**PANEL 1 - Robert Kahn, Executive Director
Northwest Independent Power Producers Coalition**

Dr. Robert Khan gave a presentation on the Northwest Independent Power Producers Coalition (NIPPC). I have been in this business for a long time. I have always served as an advocate for independent power and the competitive power paradigm. I love the description earlier of our industry being the grilled onions and pickles of the business, and I hope to add some spice to the conversation. My assignment was to provide an overview of what is happening in the Lower 48. After hearing the comments, I might be able to delve into relating this to your situation. At the very least, I will have some pointed questions for the Board members. For the sake of transparency, I need to disclose that I am speaking as an advocate. I make no claims to be an independent analyst. I have my experience and perspective on the world and what I relate to you may be seen differently by different people.

The NIPPC is your closest neighbors in the Lower 48. NIPPC was created in 2002. We are active in three states: Idaho, Washington and Oregon. We are loosely affiliated with the Electric Power Supply Association, which is the national advocate for competitive power. We also work very closely with other IPP advocacy groups throughout the west. We have 14 members who generate electricity on an ongoing basis, and 10 associate members. Our generating members have a combined capacity of more than 4,000 megawatts with the full spectrum of generation resources including coal, natural gas fired power plants, wind, and solar. Some of the companies in NIPPC, which will be familiar to you, were reviewed. We are the principle and sole advocate of competitive power in the northwest. We focus on two basic issues. The first is access to the transmission system on a fair and equitable basis, which is an ongoing challenge. The second is competitive procurement, which is advocating for acquisition of new generation resources, electricity, generated at the least cost and risk to consumers on an equivalent, competitive, and fair basis with the distributors of that electricity, who are the utilities. Competitive procurement puts us in an odd situation. When your customer is also your competitor, it can be awkward. This is one of the reasons that NIPPC exists. Our members need to do business with the utilities. Our role is to advocate and mitigate a form of monopoly power, which utilities exercise as sole buyers. The term for that unique form of monopoly is monopsony, which is exercise of power in the form of being the sole buyer.

Where did NIPPC and groups like us come from and how is it we have established a rather sizable role in the Lower 48? Federal policy supports competition in power generation and transmission. That is an old story, but it's still revolutionary. It was utility monopolies that created the transmission grid and generation of electricity, which is an indispensable prerequisite of

civilization. Thirty years ago, the vertical integration of the utility industry began to unravel as a result of a shift in federal policy in 1978 with the passage of the Public Utility Regulatory Policy Act (PURPA). That new paradigm has broken up the logic of monopoly power in generation. Section 210 of PURPA came out of the oil embargo of 1973 and concerns over energy independence.

The second significant weigh-in by Congress to spawn competition in electricity was the Energy Policy Act of 1992. The context was the break-up of Ma Bell, the deregulation of the airline and trucking industries, and a recognition that maybe we should do that with our electricity sector. The Energy Policy Act set the stage for what became regional transmission organizations. This was a very important development, because Congress directed the Federal Energy Regulatory Commission (FERC) to require utilities to desegregate their transmission operations to full transmission in the operation of the grid into an independent entity, which would then operate the transmission grid on behalf of all the parties who use and need transmission access. This eliminated built-in bias and favoritism. The federal policy became the promotion of a proforma tariff that was uniformly applied around the country to assure that the operational transmission did not favor the incumbent utilities.

The Energy Policy Act of 1992 was underscored even more vigorously with the passage of the Energy Policy Act of 2005. This was driven by a need to spur innovation in the electricity sector, and Congress furthered its commitment to competition. Up until this point, Congress had declined to extend its reforms to public utilities, public utility districts, municipal utilities, or coops. The Energy Policy Act of 2005 gave FERC the option to evoke its policies over non-jurisdictional utilities in the event the commission found there were favoritism practices over the transmission systems, which it had wanted to unravel through the passage of the Act in 1992.

What is the result of these policy initiatives? Of the total U.S. power capacity of the power plant fleet, 40 percent of the capacity today is owned by IPPs in the Lower 48. In the west, about 18 percent is owned by IPPs. Most of the country has RTOs in place. There is a robust power market where electricity is traded everywhere in the Lower 48, which has resulted in overall lower prices. The California experience 10 years ago was the result of extremely poor regulatory redesign by a California legislature, which was a disaster. California did not abandon its commitment to re-regulation, and they improved it the second time around. There are complexities, paradoxes, tensions, and legal bills associated with everything I've just described.

Why the disparity between 40 percent and 18 percent? For starters, if I had my way, any new power facility built would be subjected to a competitive test. I would bet that the competitive test would result in an IPP securing the contract. But revolutionary changes occur slowly. Alaska is facing that reality. It is really two steps forward and one step back. Implementation of FERC policy is largely the responsibility of the states. Every state in the Lower 48 goes about its electricity policymaking differently, even those within RTOs. There is tension between how the states go about it and how FERC goes about it. Two weeks ago, FERC rejected a decision by the Idaho Public Utilities Commission regarding a wind power project on the basis of it failing to adhere to the requirements and regulations FERC has created over the years with PURPA. There is tension between the states and FERC. There are differences between the states. There are incumbent utilities with more power in one state than another. And then there is the Bonneville Power Administration, a federal agency in the Pacific Northwest that is a challenge to our industry since it is non-jurisdictional to FERC and need not adhere to the principles of open

access. It pretends to be accountable and provide open access, but it does not. So that helps to account for the disparity within the regions.

The third part is that despite these changes, there are several tensions that remain. The most relevant and fundamental is the cost of service ratemaking by states over their regulatory or jurisdictional utilities. The concept of cost of service ratemaking is based on the principle that the utility takes on the obligation to service consumers and in exchange it is guaranteed a regulated rate of return. It is a regulated monopoly. Each state has different policies, conditions and rules regarding IPPs, but most of the states maintain cost of service ratemaking when it comes to how they treat utilities acquisition and operations. As a result of that, which has not been affected by the revolutionary change in federal policy beginning with PURPA, it complicates the consumers' access to least cost, least risk resources. Utility regulatory commissions have several masters. One of them is highly influential and rarely comes up in polite conversation, Wall Street. If a utility commission is too tough on its investor, Wall Street makes the cost of capital for that utility greater, which has consequences to the consumers as well. In addition, there is the risk that the utility regulators become so closely identified with the utility's interest that they fall into a trap that we refer to as regulatory capture. That's a problem from a consumer point of view, as well as for IPPs. But what the cost of service ratemaking does is it removes the risk dimension in power production. So if I'm operating a power plant in the Lower 48 and have a significant failure of equipment that takes my power plant out of production, I'm still getting paid for that power plant. But if I'm an independent power producer and I stop running for some reason, I don't get paid. A utility is paid for being there and taking on the obligation to serve. An IPP is like every other real business and is only rewarded when it performs. When an IPP goes out of business, it is their shareholders' problem and not the ratepayers' problem. The fundamental paradigm and difference between regulated utilities and IPPs has remained in place, despite that revolutionary change in federal policy.

What are the stakes and what are we really talking about? Despite the difference between the cost of service and the IPPs operations, building and operating power plants is a risky business. Huge capital is required to create these power plants. It is also a business that has a high measure of exposure to Murphy's Law. When a wind power developer's measurements and analysis were wrong, the capacity factor is reduced and someone is stuck with the difference. When it is a utility owned generating plant, the consumer is stuck with the difference. Construction overruns is a factor. For the utilities that California has built in the last 10 years, we have seen a cost over construction of 10 percent, which results in millions and millions of dollars, and is passed onto the consumer. Those could have been avoided if an IPP built those power plants, because those cost overruns would have been the IPPs problem and not the ratepayers' inherited problem. We all encounter risks in the power business, but the question is who is going to bear those risks. Several types of risks were reviewed. Degradation of heat rates on thermal power plants is similar to the capacity factor for the wind farms. We aggregated data from around the country on power plant performance and nationally a 5.5 percent degradation in power production increased heat rates effectively over the last 10 years. Who is going to eat the difference? I guess by now you know the answer and you understand the stakes.

Congress' intent for the Lower 48, particularly with the passage of the Energy Policy Act of 1992, was to create a robust market for electricity. From what I know about Alaska, I do not believe that you can have a robust market for electricity, even in your populated areas, in the foreseeable future. What you can have, and I would suggest that you should have, is a

competitive procurement policy where least cost and least risk resources to ratepayers are incorporated into your grid, because they have proven to be the best deal.

First, I would suggest that you look at the State of Oregon and its Public Utility Commission. In 2007, they enacted a policy of competitive procurement guidelines, which are spelled out in UM.11.82. The guidelines require that any power plants that are 100 megawatts or greater, whether proposed by a utility or an IPP, must be subjected to competitive solicitation. It is odd to have a utility bid an RFP that it runs, so the Commission created an independent evaluator to ensure fair competition in the RFP process. The independent evaluator is there when the RFP is written and the RFP is acknowledged by the utility Commission only after it has been vetted through a public process. The Commission in Oregon has stood by its policy and defended its integrity. That is a tangible way of doing business that might have some utility in Alaska.

Now I have some questions for you to spark some conversation. If you really want IPPs to succeed in Alaska, how do you incentivize them? In the comment session, I heard a considerable amount of angst as to whether or not that is currently happening. How do you want to go about giving them incentive? Do you want to mimic cost of service ratemaking, have fairer RFPs, or is there some other mechanism? I would suggest that we focus on your major load centers, although there are unique conditions in rural areas that I cannot speak to. How is marginal cost defined? The federal policy underlying PURPA is fundamental on this point. Margin of cost, or avoided cost, is defined as what it would cost the incumbent utility to build the resource. Have you truly tested your hydro project, the Watana project, to a competitive test? Do you know if the capacity you expect from the project, at a cost that has probably been identified and will cost more, been subjected to the same kind of competitive procurement test that I just described? One of the advantages of the independent power industry is that not only does the IPP assume the preponderance of risk, but the IPP developer adds power capacity incrementally to the system. How do the two compare and what does that tell you?

Chairman Short opened the floor to questions.

Robert Sheldon asked for more information on the competitive procurement guidelines in Oregon. Dr. Kahn said Oregon has a robust public process. From the time the concept of competitive procurement with an independent evaluator was first put on the Commission's agenda to the time that the guidelines were adopted was less than 10 and 12 months. What instigated this was a controversy over a self-built project that was proposed by one of the Oregon utilities. Someone from one of the largest IPPs in the world stood up at the public meeting and said we will build your power plant, at your site, for 10 percent less than you can. What often happens in regulatory environments is you may lose one fight, but you get another chance. And that's what happened and spurred Oregon to consider the competitive procurement guidelines.

Robert Sheldon asked if UM.11.82 process was in effect. Dr. Kahn said the docket was closed for a number of years and another docket was opened to look at it from a different direction. However, we are currently examining how to further mitigate what the Commission publicly, explicitly defines as the utilities self-build bias, even within the procurement process, by quantitatively identifying the risk adders in utility owned generation. We are now looking at the specific values in terms of who bears the cost and what that cost is of heat degradation from thermal power plants. Within six to eight months, the Commission is going to adopt an

enhancement to the competitive procurement rules and they are going to make it fairer for the IPPs. Needless to say, it is still being debated.

Robert Sheldon questioned at what point was access actually gained. Dr. Kahn said they were generating at the wholesale level, and not advocating for retail access where they compete directly with the utility in supplying load. Our agenda is long-term power purchase agreements, or PPAs, with the utilities to supply power at a wholesale price under a long-term contract. The markup on that power is between the utility and the Regulatory Commission. Never let a utility tell you that they are the only one who can aggregate capital. There are a lot of investors who will take a risk if they feel like they have a fair chance of making money. Someone once told me that if you ever want to have something change in this society, the best way to do it is to figure out how somebody can make money doing it. We are capitalists and we are here to help you, but make sure that we assume all the risks. We want long-term contracts and it's all about wholesale, which is why our relationship with the utility is so complicated and the monopsony dimension has to be addressed by the regulator or the state. Without that oversight, we do not have a chance.

Ron Arvin asked for more information about the utilities' avoided cost structure, which is a direct line function of fuel costs. Dr. Kahn pointed out that he had posed that as a question earlier. He asked if it was Alaska state policy that marginal cost is defined on the cost of fuel. If it is not then I cannot answer the question. Federal law calls for it to be defined as a basis of green field projects. Clearly, that's a way to incentivize entrepreneurial capitalist investment. I can do it cheaper than they can, but I cannot compete against an existing resource that's already in the process of being amortized. But I can compete against a green field resource and beat them every time. Mr. Arvin asked Mr. Strandberg to weigh in on the issue. Mr. Strandberg said that the regulatory regime in Alaska is embryonic and there is precious little case experience of utilities making contracts with IPPs on the basis of avoided cost. There is a regulation that is with the RCA for avoided cost, but it is not really inclusive of all potential large-sized developments. We have a blank sheet of paper before us to create the right regime for Alaska that will benefit the ratepayers. There is some regulation on avoided cost, but it is not meant to apply to all different sized potential projects.

Chairman Short noted that this issue would be further explored in the next panel discussion.

Chris Rose talked about least cost versus least risk. We are dependent on natural gas, which is our primary fuel for electric generation in the railbelt, and the price of fuel continues to increase. No one can provide the price of natural gas in the next three to four years, yet we are building power plants that are going to require natural gas for the next 25 years. How is least cost, particularly with renewable resources, balanced against the less risk of stable priced resources? Dr. Kahn said the easy answer is more and more Commissions have been encouraging their utilities to do sole source bidding. In other words, RFPs that are only renewable and only thermal. All source bids, which often include energy efficiency, vary from jurisdiction to jurisdiction. The short answer is you can bifurcate them as they do have different characteristics. If the revolution in natural gas extraction through fracking withstands true environment scrutiny, that will be a game changer of first order to the point where utility regulatory commissions are beginning to consider extending the timelines for that risk profile of the volatility of natural gas. In addition, existing wind farms are the only power plants of any kind that can compete with natural gas. In Texas, you are seeing prices for wind becoming a game changer as well. In a true competitive market, a running wind farm is incredibly competitive. In

terms of designing an RFP, I would suggest that they be bifurcated and have a renewable only RFP.

Break from 11:11 a.m. to 11:30 a.m.

**PANEL 2 - Current State Policy, Laws and Regulations on Private,
For-Profit Power Companies in Alaska (Jim Strandberg - Moderator)**

Jim Strandberg said he promised the utilities that the meeting would take a balanced approach. We have heard from the IPPs and we hope to hear from the incumbent utilities as well.

❖ **Alaska Policy, Alaska Law**

Jim Strandberg said that a very informed group had been assembled to discuss Alaska policy and Alaska law, which includes Senator McGuire, James Keen, Daniel Patrick O'Tierney, and Dean Thompson.

James Keen, Chief Engineer, RCA, gave a PowerPoint presentation entitled RCA Regulation of Independent Power Producers. For statutory guidance, we have two levels of certification: basic certification based on the public interest and fitness finding for a public utility, and certification and economic regulation. The second includes the basic certification finding, as well as regulating rules and rates, as well as getting involved in resolving complaints. One of the big questions we need to understand is whether an IPP is a utility. By Alaska statute, a public utility is every corporation that owns, operates, manages or controls any plant, pipeline or system for furnishing generation, transmission or distribution to the public. By this definition, an IPP could be a public utility if it provides service to the public. Public is defined in three tiers: 10 or more customers, one or more customers within a certified utility service area or an entity that sells power directly to a utility. In Alaska's broad definition, many IPPs are public utilities, but there are exemptions. Municipalities and boroughs are exempt from economic regulation, but not certification. Utilities with revenues of less than \$50,000 are exempt from certification and economic regulation. Utilities with revenues of less than \$500,000 can elect to be exempt from economic regulation. A cooperative may elect to be exempt from economic regulation. Sales, exchanges, or gifts of energy to an electric utility of waste heat, electricity, or other surplus energy, or byproduct, would exempt that power provider from being a utility. And finally, a plant or facility generating power entirely from renewable energy is exempt from RCA certification and economic regulation if it comes into service before January 1, 2016, generates less than 65 megawatts, sells electricity directly to regulated electric utilities, and the person constructing, owning and operating the plant has not received a state grant or tax credit related to generation from renewable resources. Once this expires, many IPPs would again come under the RCA regulation as a public utility unless further exemptions are put in place. The Commission has the ability to exempt a utility, class of utilities, or service from all or a portion of the certification requirements or economic regulation if it is in the public interest. The Commission has done this recently with South Fork Hydro and Fishhook Renewable Energy, which are both prospective hydro projects.

James Keen discussed how the Commission makes decisions regarding the relationships of IPPs and electric utilities. There is a convergence of guidance from our statutes, our own regulations, and federal law. When it comes to the power of the RCA to fix rates for IPPs, state statute gives us clear guidance for two regulated utilities. When both are certificated and

economically regulated, a wholesale power agreement between the two public utilities is subject to advance approval by the RCA. However, if the IPP is exempt from RCA regulation and certification, statutes are unclear on the RCA's role. The RCA has regulations for contracts between two regulated utilities. Before they enter into a contract that has a term exceeding 12 months, they must come to the Commission and request approval. We will want a copy of the contract, load forecasting data, and documentation that it is the most feasible means for the utility to meet the forecasted load. However, if it is with a non-regulated IPP, the Commission's regulations state that upon entering a contract with a non-regulated vendor, other than a qualified facility, for the purchase of energy for a term exceeding 12 months, a utility must file the previously mentioned documentation with the Commission.

Federal law and the RCA regulations for qualifying facilities were discussed. Our regulations state that an electric utility must pay a qualifying facility the full avoided cost of power or agree by special contract, subject to Commission approval, to different rates. Avoided cost is a standard explicitly mentioned in our regulations. We have regulated, non-regulated and qualifying facilities, with regulations that overlap both. Examples were given. A qualifying facility is a small power production facility that is 80 megawatts or less, has a primary renewable energy source. Facilities producing one megawatt or more have to self-certify with FERC or apply for official FERC certification. However, a new FERC rule says if you meet the top two qualifications, and you are less than one megawatt, you are a defacto qualifying facility. Another path for a qualifying facility is to be a co-generation facility. For a co-generation facility built after August 2005, it must be a facility that is primarily designed to do something else besides selling power to an electric utility. If it produces less than one megawatt, there are no certification requirements. If it produces more than one megawatt, it must be FERC self-certification.

Avoided cost was discussed. Avoided cost means the incremental costs to an electric utility of electric energy or capacity, or both, which, but for the purchase from the qualifying facility, such utility would generate itself or purchase from another source. Avoided cost is the cost that the utility is avoiding by virtue of purchasing power from the IPP. Our regulations have two different methods based upon whether the power source from the IPP is non-firm or firm. Non-firm means unpredictable quantities at unscheduled times and intervals. Firm means supplied in a predetermined and reliable quantity at specific times and intervals, enabling the utility to reduce, defer, or eliminate planned generation or purchases of capacity. For a non-firm IPP, the definition in our regulations is that avoided cost is fuel cost plus purchase power cost over a 12 month period, plus variable operations and maintenance expenses that the utility is avoiding by virtue of interconnecting with an IPP. And that is all divided by the number of kilowatt hours sold by the utility over a 12 month period. Expenses and kilowatts sold associated with hydroelectric generation are excluded from an electric utility that relies on hydro for 25 percent or more of its total power requirements. Rates are adjusted with fuel-cost rate adjustments, usually quarterly, and general rate revisions are as applicable.

James Keen stated calculated avoided costs for a firm power producer are much more complex and determined on a case-by-case basis. This is largely untested before the RCA and there is not much precedence in calculating avoided costs for firm IPPs.

Non-firm purchase power rate is the standard inclusion in the tariffs or economically regulated utilities. The calculation for what a non-firm or firm cost for each utility will be different. And it will be different as the capacity increases of the IPP interconnecting. What we have currently published in our tariffs is the non-firm purchase power price for an IPP with a design capacity of

100 kilowatts or less. That is all that we have calculated quarterly, because there are so many nuances.

Senator McGuire thanked the entire group for their advocacy on behalf of all Alaskans. I have met with many of you individually to work on legislation and energy issues. This is an exciting time for Alaska. We finally reached a period of time where we were able to coalesce around the energy issues and drive home a series of exciting omnibus packages.

Senate Bill 277 was discussed. We felt we needed more renewable energy systems, more competition, more choices for the consumer, and that the legislature had an obligation to interject itself into the marketplace. Lawmakers look to the RCA to continue advocating for consumers in trying to strike a fair balance between power producers and utilities. IPPs are a new area for us in Alaska. We are trying to come up with the best statutes, regulations and outcomes for the ratepayers. When we put together our package in the capital budget this year, we looked to the Railbelt Integrated Resources Plan (RIRP). There will be integrated resource plans coming from southeast and western Alaska in the next legislative session, but ours came first. The plan came with a series of recommendations, the most daunting of which was the \$5 billion needed in new capital infrastructure before 2023. The railbelt utilities know that with the small markets and rates, they do not have the capacity or financing to make those needed improvements on their own. Part of the solution that we looked at was the Greater Railbelt Energy & Transmission Company (GRETC), which was supported by Governor Parnell. I would like to complement the utilities as this was the best display of cooperation among the utilities in the state that I have ever seen, including a genuine concern for the transmission lines, the generation capacity, and the consumers. It was a travesty that it failed, because I knew it would be beneficial and it was well thought out. The utilities picked up where GRETC left off by coming up with the Alaska Railbelt Cooperative Transmission & Electric Company (ARCTEC), which was further discussed. The legislative recommendations that came to me on the Finance Committee totaled \$96.5 million in infrastructure investments, and they came at the last minute possible. I explained to the Co-Chairman that this was a new formation, a rescue operation from GRETC, and it was absolutely necessary considering the 2023 deadline. We have been a partner at the state level and we will continue to be a partner, recognizing that the utilities cannot do it on their own due to lack of market and financial opportunities. However, we cannot shoulder the entire burden. To keep the FY12 budget balanced, the state needs the TransAlaska pipeline to produce 610,000 barrels of oil a day at \$92 per barrel. To date, we have averaged 552,750 barrels a day at \$111 per barrel. Prices are 15 percent higher, but production is 10 percent lower than forecast in April. Through the private sector and with the state's support, utilities must bridge this gap between investments needed for infrastructure. For the private sector and IPPs to invest, Alaska needs a transparent, fair, and avoided cost calculation that utilities and regulators can agree upon. I would like to see some solutions come out of this meeting that the policymakers can rely upon, because we are looking to you to grow the marketplace. The time has come for IPPs to be a part of the equation. The utilities cannot do it on their own and the state is no longer going to be the go-to place. When you look at the Lower 48 system, you see different systems, but they tend to be more fair market based, more contract based, and more transparent in nature. Alaska is unique and things have always been done in a certain way. Change can be scary for the utilities, which also look out for their consumers, as well as for the RCA. I want you to know that I am here as a partner and not just an advisor. You are the lifeline to Alaskan families, who cannot survive without power. We are all counting on you to come up with the best solution. I hope that it will be something that will be forward looking and will make Alaska competitive. As you think about competition, remember that it takes a little

bit of work to allow for competition in the marketplace to benefit the consumer. More choices for the consumer and more power on the grid are ultimately better. There will be growing pains. We really do not want monopolies or the utilities in the state having to shoulder the entire burden. In the RIRP recommendation, there are two specific points that should be considered. Under general risk and issues it is recommended that market development, risk and issues, including the need to implement a competitive power procurement process to encourage the development of generation projects by IPPs and the potential for large load increases be assessed. Recommendation 12 is to develop a regional competitive power procurement process and a standard power purchase agreement to provide IPPs an equal opportunity to submit qualified proposals to develop specific projects. I took those recommendations to heart and that was what we based our capital recommendations on and what we are looking to as we move forward.

❖ RCA Regulations

Daniel Patrick O'Tierney said it was his understanding that this was to be a panel discussion and had not prepared comments. He referenced Dr. Kahn's earlier presentation in which he heard him argue for level playing fields, but expressed skepticism as to how effective the state regulatory bodies were in terms of providing them. He asked Dr. Kahn if there were public advocates or representatives of the broader public interest in his state. In Alaska, I am the supervisor and effectively the founding chief of Alaska's public advocacy entity, which resides within the Attorney General's office. Based on executive orders and statutes, we are authorized to represent the public interest in regulated matters that come before the RCA. The classic cases that come before the RCA are the ratemaking cases purposed by utilities, which we test. We are the step before the final decision maker, which is the RCA. I have been on both sides of the table of the regulatory dynamic as an adjudicator on the Commission, as a private practicing lawyer for various entities, and currently as the leader of the section that performs the Attorney General's public advocacy role. The Commission's recent decision on the Fire Island/Chugach wind supply proposal was discussed. The decision was consistent with what was anticipated by the legislature in enacting the exemption for certain classes of IPPs.

Senator McGuire discussed the Commission's recent decision on the Fire Island/Chugach wind supply proposal. The legislature ultimately trusts that when the contract comes back before the RCA that they will review it. It is important to consider that the RCA is not saying that they have no role in the matter, but the question is when they should oversee contract negotiations. Ultimately, we will all fair better if this particular group can develop a series of recommendations and the RCA can develop a series of rules. But whatever it is, it has to be timely. What I liked about the ruling was that it was immediate and effective in the sense that the parties can move forward. One of the biggest issues we have in terms of moving forward in the marketplace and building the infrastructure that we need is the amount of time. If you have to come before the RCA just to negotiate your contract, and then you have to come back after the contract is negotiated, you are talking about two and a half years on average. By then many things can change such as access to the land or the price of steel and wind turbines. I was pleased with the ruling, pleased that the RCA is out of it, and pleased that they are going to be able to move forward. I trust that skilled negotiators will fight for the best deal, and in the end, the consumer will win.

Daniel Patrick O'Tierney said that the Commission approved the Fire Island/Chugach contract. The RCA applied a standard of review that was deferential based upon the legislature's

exemption of the qualifying entity and ruled that it could not determine that the cost benefit analysis presented by CEA was unjust or unreasonable, and therefore they allowed it to be approved.

Dean Thompson discussed the RCA statutes in regard to allowing IPPs to participate in the marketplace. Much of the statutory scheme was drafted in the 1970s with some amendments in the 1980s, so it does not clearly address all situations. Statute 42.05.381 requires that all rates demanded or received by a public utility be just and reasonable. Statute 42.05.431(a) requires the Commission to determine just and reasonable rates when it determines that a rate being charged or a term or condition being imposed is not just and reasonable. Statute 42.05.431(b) provides that a wholesale power agreement between public utilities is subject to advanced approval of the Commission. If the Commission finds that rates set in accordance with the agreement are not just and reasonable, the Commission may order the parties to negotiate an amendment, and if they fail to agree then they will use the dispute resolution process as in the contract. Those are the main statutes that an IPP should be concerned with. The big message is that if you are not a qualifying facility and you do not have a statutory exemption then you are treated like a public utility under Alaska's statutes. That means you have to get a certificate of public convenience and necessity, and then you are subject to economic regulation. A certificate of public convenience and necessity requires that you prove you are fit, willing and able to provide the service. It also requires the Commission to find that the services you plan to provide are required by the public convenience and necessity, which is not hard to do if you are a wholesale provider with a negotiated agreement with the utility. The standard routes for an IPP to get a certificate are an approved agreement with a utility or file a tariff. Dr. Kahn talked earlier about utilities enjoying a guaranteed regulated return as part of the Social Compact, which is arguable in that it provides an opportunity to earn a return. Many IPPs say it would be great to be a utility and have this guaranteed rate of return, but historically IPPs have not wanted to be a utility because they think they can do better than the regulated rate. Since PURPA, there have been some extreme positions taken by both IPPs and utilities. IPPs think the utilities want to protect their territory and will do irrational things that are against their customers' interests just to avoid contracting with them. Utilities think some IPPs are not true IPPs, but just a guy who wants to get a contract and then sell it to someone else. Between those two extremes are utilities looking out for the best interest of their customers and IPPs who have thought of ways to provide a service at a competitive price. It would be productive to understand the interests of both entities. Alaska is unique in that most electric utilities are non-profit cooperatives or municipal-owned utilities, so the typical concern about shareholder interest versus customer interest may not apply. This is something the IPPs need to recognize when approaching a cooperative or municipal utility to provide power.

Bringing this back to the RCA, the statutory scheme is setup for utilities to be utilities, whether or not you are an IPP. If you are generating electricity to be sold to a utility, who then resells it to the public, then you are a public utility by definition and need to get a certificate and be subjected to RCA regulations, unless you have a statutory exemption. Senate Bill 277 provided for exemptions from regulation for certain IPPs. Alternatively, the approach is to become a qualifying facility, which was discussed earlier in the meeting. If you provide non-firm power that the utility cannot rely on in its production planning, 100 percent of the cost that the utility avoids, and no more, will be provided to the qualifying facility. If you provide firm power then you have to consider green field issues and the long-run avoided cost over a 20 plus year horizon. Due to the limitation of avoided cost pricing, IPPs do not typically want to be qualifying facilities. This is ironic, because when PURPA was implemented, the utilities did not like having to pay avoided

cost pricing and felt there should be some benefit in it for the customers. The Commission has implemented regulations on PURPA rights to qualifying facilities. There is still another path for IPPs and that is becoming a utility. The Commission can waive regulation under the public interest exception if you can show that it does not make sense to regulate a specific project for a contract with a regulated utility. The counter argument from IPPs is that the process takes too long. According to statutory timelines, the RCA can only take six months. A lot can be said about the Fire Island wind decision, but a positive is that the commission moved very quickly. It took three and half months from filing of the contract to approval. Under the current statutory and regulatory scheme, the Commission is aware of the changing landscape and that a 40 year old statutory scheme may need to be improved. The task for this group is to identify if there are any statutes or regulations that can be implemented, without having unintended consequences, that will materially improve the process.

The floor was opened for questions.

Senator Wilken thanked Senator McGuire for her support and efforts. After discussing a chart of the state's general fund budgeting, he asked Senator McGuire to distribute a link for the chart as appropriate. He felt it should be required reading on a yearly basis for every Alaskan.

Break from 12:15 p.m. to 1:05 p.m.

PANEL 3 - How Are Things Working for IPPs?

Jim Strandberg posed the question (not on record).

Joe Griffith felt that IPPs were generally more nimble and motivated than cooperatives, although they are often undercapitalized when they start the process and haven't read all the rules. After having been a consultant to IPPs, as well as being on the other end, my view is bring me a better deal and I'll take it. To date, no one has brought me a better deal.

Chris Spens said that IPPs can do a great job bringing a cost effective project to the public. The principles in my company, Cascade Creek and Alaska Hydro, have built four projects in Alaska. As construction contractors, they are familiar with construction in very difficult and hazardous environments. As that type of knowledge builds, it instills confidence and efficiency, which is reflected in the cost of the project. The process starts with a FERC preliminary permit for site control so you can investigate the site. On a recent project, we invested about \$15,000 into preparing a preliminary permit application whereas a nearby municipality invested well over \$200,000 for the same type of project. Knowledge from permitting through construction enables us to bring cost effective projects forward.

Earle Ausman said IPP activities create jobs, disperse sources of energy and capacity, result in lower costs, and saves non-renewable energy. The European Small Hydropower Association claims each megawatt of small hydropower provides a man with one year of employment. There are currently about 20,000 people employed on projects. IPPs can build hydro, especially the smaller facilities, faster and more economically than governmental organizations. The U.S. Corps of Engineers and the U.S. Bureau of Reclamation no longer work on smaller plants, even in Europe, and small hydro projects are generally built and operated privately. Canada provides a good illustration of this entrepreneurship. BC Hydro has contracted with IPPs for about 1,800

megawatts of new capacity. IPPs are faster, more innovative, and less expensive. These hydro projects, with three times the capacity of Susitna, will be built in a fraction of the time.

Randy Hobbs agreed that IPPs were more nimble and faster than utilities. IPPs are generally smaller and have a different niche in the market. The CHBs provide additional value. They conserve the resource. They provide public benefit in the way of lower cost heat. I think there is a place for the IPPs in this market.

Jim Strandberg posed the question of whether there were unreasonable barriers that exist within the state for the actual entry of IPPs into power markets or into power contracts.

Mike Craft discussed his experience in negotiating with facilities in good faith only to have them set up another roadblock or require additional studies. From an investor's perspective, that is scary because you don't know what you are getting into or how long it will take to get a contract with the utility to gain access to customers. Our biggest problem has been we are not sure what the utilities are or are not willing to do, which has stalled us on many occasions. We have spent a lot of money in development costs that ended up being unnecessary. It is hard on a private company when you cannot figure out the cost of putting a project on the table.

Chris Spens said he did not think there were unreasonable barriers, but barriers that should be expected in the existing framework. We see a lack of clear direction, if not expectation, at the state policy level. What needs to happen is to write, direct, and distribute a clear message on how the state has chosen to provide a service to a community. You need to embrace the private sector. The government should do what they do best, which is policies, laws, administration, and organization. Private companies should do what they do best, which is design, build, figure logistics, and work really hard on projects.

Randy Hobbs said his company has been involved in discussions with utilities for years and there have been a lot of barriers and confusion with the regulatory process. The utilities' ability to challenge projects is a struggle and financial burden for smaller IPPs. They want IPPs to invest a lot of money in developing projects that they don't even know if they want or would consider, rather than going with state law. Joe Griffith was the first utility manager who has considered how IPPs might help his utility and ratepayers, and he has given us a clear opportunity to do that. There is no real IPP market in Alaska. The only way an IPP can get into the market is through the qualifying facility process. The regulatory laws would be okay if they were enforced more vigorously and the avoided cost was calculated by the RCA.

Earle Ausman, who provided his comments in writing, discussed two ongoing projects. AEA needs to improve some of their practices. He discussed what was happening in British Columbia, Canada. They are building a 1,800 megawatt hydropower plant using IPPs. Financing is also an important issue. We need loans at the lowest rate that the state can provide, without losing money, because it reduces the cost of the project and gives people the incentive to do these types of projects. The MEA Board has made it possible for us to get a contract, which we could not get a loan without. We were put in an impossible position and only the kindness of MEA made it possible. The IPPs need to understand the rules. The biggest hurdle is to be competitive with what the utility can do it for themselves. Calculation of avoided cost must be done properly. In many cases, what is in the tariff is not the correct avoided cost. The IPP can do a lot better job if they can offer firm power rather than non-firm power. However, to firm up a power supply costs more money and makes it less competitive.

Jim Strandberg posed the question of what actions can the RCA and AEA take to assist in private sector, private power producers gaining access to power production markets for the benefit of ratepayers.

Mike Craft felt the biggest hurdle was the lack of a clear path. We started this five years ago when we saw there were some deficiencies. Fairbanks was losing jobs, energy costs were increasing and there was no relief in sight. We asked the utility what they planned to do to resolve the issues and they did not have an answer. So we decided, as Alaskans, to take it upon ourselves. We had the opportunity, the know-how, the capital, and a situation that warranted response. We want to produce wind power in Delta Junction. We did the integration studies and jumped through all of GVEA's hoops, and all of the indicators came out positive. We've all heard all the talk about 50 percent renewables by 2025 and the desire to attract private capital to Alaska. There is no clear path for the private sector to come in and make the decision to invest their time, money and effort into solving these problems. We are like a racecar sitting at the starting line and waiting for the green flag that never drops. The best thing AEA can do is exactly what we are doing now, taking these conversations to the public. The utilities provide the public with erroneous and misleading information. I have to file legal documents with GVEA to find out their avoided costs, fuel sources or trend outlooks. This meeting is the first time that I have felt like there was a reason to consider moving forward with a project in Alaska. There should be more involvement between the State Legislature, AEA and the RCA so you can take advantage of the skilled people in your communities and the financial capital that they can bring to the table to solve these energy issues.

Jim Strandberg asked Mr. Craft what additional oversight the AEA and the RCA should provide.

Mike Craft felt the most important issue was developing a formula for avoided cost, which would be used by the utilities, that everyone could understand.

Earle Ausman discussed the South Fork project grant. We were offered a grant of \$1 million. In the grant application there was a section addressing the public's benefits, which in this case exceeded the grant. Because there were fears of a profit being made from the grant, new requirements were implemented that said a qualifying facility had to be treated like, and paid like, a public utility, which it is not. When a public utility has problems, they are allowed to raise their rates, whereas an IPP cannot. The full risk burden falls on the IPP. The grant process was reviewed. Inside the grant process, there is also a statement that says a plant cannot be sold for 50 years without AEA's approval. Once the loan is paid off, AEA should have no say in the matter. If you are going to give a grant to a public utility then you should be willing to give a grant to an IPP if they can both show that the return to the public is at least equal to the grant. The loan structure needs to be restructured. The state can borrow money at a very low rate and should be able to provide low-rate loans to both IPPs and public utilities and still make a profit.

Randy Hobbs felt that AEA and the RCA should enforce the existing regulations more vigorously, including the avoided cost calculations in the green field mode. Qualifying facilities should be exempt from the regulations. There should be a mandate on the percentage of the utility generation that is to be provided by qualifying facilities. Including combined heat and power as a recognized renewable resource would be helpful. Utilities should be required to include in their integrated resource plans to qualifying facilities that hope to supply a portion of their power. The Oregon model that was discussed earlier in the meeting should be reviewed.

We need to ensure a level playing field for the IPPs and the utilities. The Power Project Fund could be expanded to where the larger IPPs could use it, especially in the railbelt area.

Chris Spens felt the issue was pretty straightforward. To bring investment dollars into the game, you have to reduce the risks by increasing predictability and providing access to the markets. The current paradigm is to develop a facility to service a community and provide transmission from the facility to the community. It might be helpful to look at transmission highways, which is the infrastructure that helps IPPs get their product to market. That can be the Alaska-Canada connection to the North American grid or a more regionalized system. An IPP needs to be able to sell 100 percent of the power it generates, as well as predict the market. Having a strong incentive for renewable resources is how you are going to achieve the proposed objectives for renewable energy in Alaska. The way procedures are carried out should be reviewed. A huge barrier is that the State of Alaska responds to the FERC regulatory process through the Sportfishing Division, which makes no sense. AEA should have the authority to speak in response to project applications, procedures, and study investigations. The IRP process is the planning process that identifies needs, potential projects, ways and means of getting there, and invites the public sector to participate. The Southeast IRP is very open, accessible, responsive, and transparent. In that process, the message needs to be sent that public-private partnerships should be utilized rather than relying solely on public projects.

Joe Griffith said the state needs an energy czar and an energy plan. We need to review and expand AEA's role at the state level, although there is resistance in the Legislature. The avoided cost issue needs to be resolved. Another big step would be an ISO for our transmission system.

4. PUBLIC COMMENTS

The floor was opened for questions.

Robert Sheldon said based on the recommendations at the meeting, he wrote down 23 items to be reviewed.

Mike Pawlowski, staff to Senator McGuire, pointed out that the entire conversation had revolved around IPPs selling power to a utility. There are situations when an IPP can sell directly to a mine, a company, or someone other than a utility, but the laws can interfere with that. As you consider the IPP situation, consider the impact of how state laws and regulations should work in a completely commercial transaction.

Mike Craft said that once his company realized that GVEA was not interested in seeing Delta Wind Farm move forward, they started talking to Fort Greely and the Missile Defense system. We are three and a half miles from them and we are an adjacent property owner. They have a federal mandate to go renewable. Their biggest concern was the fact that they would have to deal with GVEA and the wind and integration issues. We were also approached by Fort Knox Gold Mine and the University of Alaska Fairbanks and the same issues came up. There are many companies in Fairbanks that have looked at dealing with their own energy issues by themselves and for themselves, but the current system will not let that happen.

Randy Kaer, Alpine Energy, questioned if the state recognized waste heat from co-generation as a renewable. The waste heat from our plant will heat about 10 acres of greenhouses at peak production, which would equate to 20 percent of the Alaska market in tomatoes and create 78

jobs in greenhouse operations. The question is does that equate to the best interest of the ratepayer and I would say it should.

Chris Rose asked two questions. Between Homer and Fairbanks there is an average annual load of 600 megawatts, which would be a medium sized power plant in the Lower 48, but in Alaska it is six utilities and ARCTEC. Would it be helpful if there was a central one-stop-shopping with ARCTEC? If so, how can we help you get there?

Randy Hobbs said that an entity that wanted to sell off the grid to a large mine, for example, was not required to go through any regulatory process. If they were on the grid, they could still supply their own needs without regulatory interference, unless they wanted to sell energy back to the utility. I'm not sure if it would be easier to deal with individual utilities or a single entity like ARCTEC. ARCTEC might be an easier venue, because all of the utilities could share in the qualifying facility resource.

Joe Griffith felt a single point of sale would lessen the confusion of dealing with several independent entities. ARCTEC would probably be the best entity to do that, but they have to convince its members that they are up to the task. ARCTEC has only been in existence for 10 months, but it often takes a long time to make things happen in Alaska.

Mike Craft expressed concern about looking at the state as a single entity. I would not have a problem with a single entity, as long as it was taken into that, for example, it takes more to produce energy in Fairbanks than it does in Anchorage. This would limit the number of projects that could move forward based on economics.

Dr. Robert Kahn felt that the idea of an ISO within a well defined and clearly understood zone made sense. It should probably be up to the utilities to manage. Renewable resources have a unique contribution to the grid and the future. However, they must be sustainable economically to be cost effective. There are places where they would be inexpensive to develop and other places where it would be marginal. Nationally, it might be better if we had clean energy standards rather than renewable energy standards. We must have transparent planning and disclosure of actual costs of power generation, power supply on utilities, and genuine integrated resource planning, especially where there are larger loads. It is evident that your legislation is hodge-podge, but Senator McGuire seems willing to work on that issue.

5. BOARD COMMENTS - Potential Actions

Deputy Commissioner Rodell thanked everyone for participating in the meeting. As many of you know, I am new to Alaska so this was particularly helpful. I look forward to working with all of you going forward.

Commissioner Bell thanked everyone with participating in the meeting. It has been very educational. We have touched on a few of these issues in Board discussions and this will give us the ability to discuss them in full.

Mr. Sheldon expressed appreciation for Senator McGuire's frankness on this issue and her willingness to make it a top-shelf item. Everyone was thanked for speaking their minds, which is important to move the state forward.

Mr. Arvin said he was encouraged by the discussion. It is clear that we have some big challenges before us. If what I heard today was from the heart and true, there appears to be a good dialogue between the private sector, the utilities, and the IPPs, which will lead to additional growth. Everyone was thanked for their participation.

Mr. Wilken thanked everyone for their participation. I came this morning to learn and I have. I look forward to more discussions and more work.

Ms. Fisher-Goad felt the meeting was very useful. We will be writing up a summary of the meeting and working with our Board of Directors on providing some recommendations. Staff was thanked for their work in organizing the meeting. The Grant Program and the Power Project Loan Program are very important programs to the AEA and we are always looking at ways to improve those programs. We will be going through an evaluation of the Renewable Energy Fund Program. I will work to ensure that the Power Project Fund works for the advocates so any borrower can successfully work with us to build a project.

Chairman Short said Alaska is a young state and it is evident that we have a lot of work to do. Dr. Kahn was thanked for his attendance. I was struck by the similarities between the telecommunications and electricity infrastructure in Alaska, including how expensive it is, how difficult it is to build out, and how important it is to have the state and federal programs. In that mix, we need to figure out how to create competition for the small independent companies that want to get into the game. Everyone was thanked for their participation.

6. ADJOURNMENT

Mr. Wilken moved to adjourn the meeting. Seconded by Mr. Sheldon. Without objection, the meeting adjourned at 2:05 p.m.