FEDERAL ENERGY REGULATORY COMMISSION

PUBLIC SCOPING MEETING FOR

SUSITNA-WATANA HYDROELECTRIC PROJECT

Held at:

Loussac Library

3600 Denali Street

Anchorage, Alaska

March 26, 2012

6:03 p.m.

DAVID TURNER: All right. I guess we'll get started.

My name is David Turner. Welcome this evening to the scoping meeting for the Susitna-Watana project. I'm with the Federal Energy Regulatory Commission, and I'm a wildlife biologist by training.

Also, I'll ask my colleagues to introduce themselves.

JENNIFER HILL: Jennifer Hill, chief of the Northwest Branch for hydropower licensing.

KATIE PARKS: I'm Katie Parks, and I'm a civil engineer with the Division of Dam Safety & Inspections in the Portland Regional Office.

JESSICA HERNANDEZ: Hi, I'm Jessica Hernandez. I'm a recreation planner with the Northwest Branch.

MATT CUTLIP: I'm a fisheries biologist out of Portland, Oregon, also with the Northwest Branch.

KIM NGUYEN: I'm Kim Nguyen. I'm a civil engineer with the licensing branch.

LISA MacDONALD: I'm Lisa

MacDonald with the Louis Berger Group, an economist working with FERC on the project.

DAVID TURNER: Wayne, do you want to introduce any of your staff at this time?

WAYNE DYOK: I'll introduce them when I come up there and maybe simplify the process.

DAVID TURNER: Sounds good.

KIM NGUYEN: And Frank.

DAVID TURNER: And Frank Winchell, our cultural resources specialist back there at the table where people sign in.

Okay. Just to kind of get some housekeeping and other things done. The way this thing is going to work tonight is we're going to give a -- or I'm going to give a very brief presentation to make sure everybody understands what to expect over the next couple of years and what tonight's all about.

We'll start off with an overview of our licensing process and the purposes of the scoping and the meeting tonight. Then we're going to turn the floor over to Wayne to make sure to give a brief project description to make sure everybody understands what's being

proposed.

Then I'll introduce the discussion of some of the topics that we've identified based on the record as being issues that we'll cover in our EIS. Then we'll open the floor up for your comments. I was expecting a bigger crowd tonight than this, so I think we're going to have plenty of time in terms of giving your comments. So we'll just run through.

If somebody wants to make a comment or statement, raise your hands and I'll call on you. Come up front to the podium. Give your name and your affiliation, because everything is being recorded here this evening for the record, and we'll use this for part of our decision-making process for the project. Again, state your name and affiliation before speaking. And as an FYI, there's comments -- if you don't want to make oral comments tonight, you don't have to or if you think of something else you'd like to add to it, you can always file written comments with the Commission by April 27th of 2012, this year.

In the back of the Scoping

Document, which I hope everybody has gotten a copy of -- there were some extra ones up there on the table when you checked in. Look in the back of that document. If your name is not on that mailing list, you're not on the Commission's official mailing list for the project. If you want to be added, follow the directions in that document on how to do so.

Then after everybody has had a chance to provide their comments -- oh, one other item. E-library, I want to make sure everybody understands their opportunities for e-subscription and e-filing of comments. On the FERC web page, www dot FERC dot gov, there is an e-library system. You can go on there, register, and you'll get immediate notification of any filings with the Commission or any issuances by the Commission. Also, in the back there's a hand out called Public Get Involved. It also has a description of how to e-subscribe and how to e-file your comments.

This is just a very quick, short review of -- overview of the licensing process that the Alaska Energy Authority will being undertaking to license or develop an application

for the project. It begins with the Notice of Intent or Pre-Application Document that sets the foundation for what we know about all the resources in the area and the way the project interacts and affects the resources. AEA filed that document on December 12th of last year. Now we're in the second box, the scoping phase.

Over the next several months we're going to be working to finalize study plans. That's what we call in the third box the Study Plan Development Phase. At the end of that phase, the Commission will issue a decision that says, Alaska Energy Authority, this is the information we need to develop for a record. You've got to go collect this information.

In the last box there's a study development -- a Studies Implementation and Application Development. That's if all goes well, it's through the 2012/2015 time period and that's when they're gathering information and preparing their license application. They file the application with us. We review it. We find that it's complete. We'll issue our Ready for Environmental Analysis Notice, which says we have everything we need to do an analysis on

this. We want your input on -- comments on how the project should proceed or what are your issues and concerns, what kind of measures are necessary to deal with those concerns.

Then we're going to take all that and prepare an Environmental Impact Statement, both draft and final. That will be what the Commission makes its decision on.

This is a little bit more detailed review of that overview that I just gave you. It, again, begins with a Notice of Intent in Box 1. We're in scoping now, which we're going to be conducting in March of this year. We issued the Notice of Scoping back on February 27th. Comments are due, again, on April 27th. I will note that there has been a request by several federal agencies to extend that time frame for filing recommendations and study requests to May 31st and AEA has filed a letter in support. We just got that letter today, I think, so we haven't acted on that extension of time request. So right now April 27th is still the due date, but it may very well extend to May 31st.

Again, we go into the Proposed

Study Plan Phase where AEA takes those study requests, develops a study plan based on that information. We go through a 90-day period, working with all the stakeholders to try to resolve disagreements on those studies. Ultimately, AEA will produce a Revised Study Plan by October of this year, but all these dates past the April 27th will likely move about a month. So it would probably be November of this year that AEA introduces its Proposed Study Plan.

Then the Commission will act on that and, again, make a decision on what studies are necessary for preparing the application. In that it will resolve any disagreements that AEA and the parties may have had over what they've gotten from those studies.

The items in the yellow box are for mandatory conditioning agencies, those that have the Federal Land Management Agency, like maybe BLM or Forest Service -- Forest Service is not involved here -- but BLM. They have forwarding conditioning authority; that is, they could condition any license with specific conditions and if we decided that a study that

they had requested was not -- we didn't need it for our purposes, they could ask a panel to reconsider that request. That box is really for those mandatory conditioning agencies, like Fish & Wildlife Service or Fishway Prescriptions or the Water Quality Certification Agency.

Then they take that. AEA goes out and starts conducting those studies through 2013 and 2014. In that period there will be some periods of check-in to make sure that the studies are being done and there doesn't need to be any modifications to those studies. Then they will produce a Draft License Application or a Preliminary Licensing Proposal and ultimately file a License Application. Their projected time line for that is 2015.

Now we really get into what the purpose is for tonight's meeting, and that's to make sure that we understand the issues that surround this project and are of concern to you. We've gone through the record and in the Scoping Document have a bulleted list of items that we've identified based on the record before us, but this is your first opportunity to tell the Commission where we've missed something, where

we have maybe included something that didn't need to be included and where additional information needs to be acquired to address those issues.

Again, the types of information that we're looking for are the geographic and scope of the analysis that we need to do to address your issues and your interests, any data that would help us describe the existing environment or the effects of the project on those resources, any local or federal resource management plans that we may not have known about that may be influenced -- may influence our decisions or measures that get supplied to any license we may issue. Again, any resources that we -- or issues that we missed in the Scoping Document or ones that we've included that really aren't issues. And then, again, studies for collecting the information to address those issues.

Again, your information can be given tonight orally or you can file in writing by April 27th and you can mail those in or use e-library to file them electronically. When you make your study request, when we develop the

integrated licensing process, we -- when I say "we", the Commission in collaboration with state and federal agencies, Native tribes, NGOs, we came up with a set of criteria that helps guide those information requests and studies to make sure that they're relevant and on point to the project effects and the resources that are going to be affected by that project.

We came up with seven criteria. They're also in the back of your Scoping Document we were handing out. You need to address each of these and it's important to do so because it helps us understand the basis of your study request and why it's there and what level of effort and what you think needs to be done to gather that information.

Again, just to keep this in the forefront. This is a very schedule-driven process, but the due date for an information request and for comments is April 27th unless we extend it, which we probably will, which would be May 31st of this year. When you file this information and your study request, be sure to put on the first page of your filing the name of the project, which is Susitna-Watana

Hydroelectric Project, and the project number. That's our system for keeping track of all of the various dockets that we have before us. The project number for this project is 14241.

Again, you can file electronically or by letter and you need to send this information to our secretary, Kimberly Bose, Federal Energy Regulatory Commission in D.C., not to staff directly to make sure it gets appropriately entered into the record.

With that, I'm going to turn it over to Wayne to kind of go through their project.

WAYNE DYOK: Thank you, David, and thank you FERC staff for coming out this way to hear the concerns of our colleagues here in Alaska, and most importantly thank you all for attending tonight to take time out of your busy schedule.

My name is Wayne Dyok, D-y-o-k. I'm the project manager for the Susitna-Watana project. I'm employed by the Alaska Energy Authority. With me tonight I have Sarah Fisher-Goad, our executive director, Emily Ford, who is our public outreach liaison, Brian

Bjorkquist, our attorney, Bruce Tiederman, who's responsible for Alaska Native consultation. I don't know if Bryan Carey has made it here yet, but on the consultant team we have Kirby Gilbert and Steve Padula.

A little bit about the project here. First of all, we're located -- the project is located 184 miles upstream of the mouth of the Susitna River and it's upstream of Devil's Canyon. Devil's Canyon is a blockage for all anadromous salmon except for king salmon. So some numbers of king salmon make it upstream, and we're going to be evaluating that starting this year.

We're looking at a dam that's going to be on the order of 700 but could be as high as 800 feet high. Ultimately we could build it up to 885 feet high. That was the height of the dam that was proposed initially back in the 1980s. The reservoir that would be formed by the dam would be 39 miles long, approximately two miles wide at its widest point. If we go to an 800 foot high dam, then you're probably looking at a reservoir length of 43 miles.

Nominally the project would have 600 megawatts of installed capacity. Right now we're looking at three 200 megawatt units, but, quite frankly, it could be 150 megawatt units. We may end up with four 150 megawatt units. We will produce around 2-and-a-half million megawatt hours annually, and that's about half of the railbelt electrical energy, you know, load on an annual basis. I think that's an important number. Because I can never remember what really 2-and-a-half million megawatt hours is, but when you look at it as half of what we need here in the railbelt, it might give you a flavor for it.

One of the important aspects of the project is providing reliable winter energy. So the project can provide in 49 out of 50 years on the average of 250 megawatts. I'll talk a little bit about how we might operate that a little bit later.

So for the project area. Let me just maybe point out here the upstream limits of the reservoir. So here you come up and about this point here is the upstream limit of the reservoir; that's 39 miles, and you probably

come down to about here if we ended up with an 800 foot high dam.

We're considering three access corridors. The Denali access comes along the Denali Highway and then goes down here to the project site. That's 44 miles long. Then we have the Chulitna access corridor that goes from the railroad to the project site. That's 45 miles long. And then the last route that we're evaluating is what we call the Gold Creek that also starts from the railroad and goes along. That's about 50 miles long.

You'll see this deviation here. The reason for that is the road would come this way. If we use this route, we'd have a transmission line that would come this way because we can span some of the steeper creeks in the area. We would co-locate the transmission line with -- one transmission line with the access road, but we would probably need another one of these corridors for a second transmission line so that we have reliable electric energy for the railbelt since we're going to be providing such a great percentage of it.

Now, we're kind of honing in on the project site here. Here's the dam. We're studying up to elevation 2200; that's this line here. And even though the reservoir isn't going to be that high, we felt like that would encompass the entire area that we need to study within the reservoir.

The project would have an airstrip. It would have a temporary camp, and we would probably have around 800 construction employees on average with a peak of 1,000 construction employees. That would be dismantled after construction was done, and then we'd have a permanent camp. Maybe 20 to 30 people would be required to operate the project.

You see some of these quarry areas and borrow areas on here as well and then these are the access routes coming into the project site. Building the project you need to go through a sequence. You have to have your access road come in first. These lines are access routes here that we would need to gain access to the site. So that's the first thing you have to do.

The second thing you have to do

is you have to do your constructed diversion tunnel. Once you get the diversion tunnel done, then you need to put your diversion dams in here but you can't interrupt the flow of water as it goes downstream. You need to have water flowing all the time.

This would be the dam here. This dam is an RCC, which is a roller-compacted, concrete dam. Diversion that we show here is a straight version. It has about 5.1 million cubic yards of concrete in it. We're looking at a curve to that. We could maybe reduce that about a million cubic yards and take some of the load on the abutments.

It's most likely going to be a roller-compacted, concrete dam, but we are also looking at a concrete-faced, clay core dam as well. In the 1980s they -- in the 1980s they did just a rock-fill, clay core dam, but that requires a lot more volume then.

The powerhouse is right here. It's located a little bit further downstream than you normally would put behind a dam. But the reason for that is this would allow us to raise the dam at some point in the future to an

ultimate elevation of 885 feet.

A little bit about the operation of the project. What we really want to do, as I said earlier, we want to have a lot of energy in the wintertime when we need it most, so we need to store the water. So when we get the spring runoff, we would be collecting water in the reservoir and filling it up during the course of the summer and then releasing it in the winter. We're looking at a reservoir elevation change of around 150 to maybe as much as 200 feet on an annual basis to be able to get that amount of energy. So that's on the annual basis how we want to do that.

Then what we would like to be able to do -- we met with the utility railbelt managers. They would like to make sure we maintain this project as flexible as possible for them to meet their system electrical needs. So what you see here is a typical energy demand over a course of 24 hours. This particular one is a typical day in January, 2025. On this side here is the number of megawatts that we would need in the system. You can see that in the early morning hours it drops down. In this

particular case it's a little less than 600. Then it comes up in the morning when people wake up and turn on their lights and their appliances. And then they head off to work. We see a little bit of a decline. Then they come back at the end of the day and there's another peak and then it sort of falls off as people turn their lights off and go to bed. So that's what you need to do.

What this dashed blue line here is, this would be everything else in the system. We're idealizing this as though it's providing a straight amount of energy. In fact, we have some flexibility because we have a 136 megawatt Bradley Lake project. We have a couple of other hydros in this system. We can vary the load from some of the gas turbines. So we do have some flexibility. We're going to be adding a lot of wind into the system in the future and maybe some other renewables, so we want to assume as much flexibility as possible here.

So what we're saying is we would ideally like to be able to provide this amount of energy here from the Susitna-Watana project. It would vary from a minimum here, which would

be around a little less than a couple hundred megawatts, maybe around 175 megawatts, to in this case about 400 megawatts. But ultimately we would like to have the flexibility for 600 megawatts.

So what would that really mean in terms of what it looks like in the river? And there's a gauging station at Gold Creek, which is between Talkeetna and Devil's Canyon. That's in a very sensitive place. So if we look at the minimum flow that we might want to operate in the nonsummertime -- and I'll talk about the summertime in a minute -- in the nonsummertime maybe 3,000 cfs. The most amount of water that we can get out of the system with our 600 megawatts is about 14,500. So if we fluctuated between 3,000 and 14,500 cfs, that would translate to about a 2.8 foot water level change at Gold Creek. It would be less elsewhere between Devil's Canyon and Talkeetna and certainly beyond that it would be even less, but we have to study that. So that's like the one spectrum.

The other spectrum is if you operate it at the same rate during the

wintertime where you didn't have that variation. So we're going to be looking at that. We also have to be very careful to provide flows for the aquatic resources. Back in the 1980s they were looking at a minimum flow of around 9,000 cubic feet per second as a minimum flow during the June, July, August time period. So that's what we're starting with as the minimum flow at Gold Creek.

So the amount of flow fluctuation that you would see at Gold Creek during the summertime, if we looked at those kinds of conditions with the higher flows, would be around two feet. So we would be looking at something less than two feet of flow fluctuation if we went to a full load following, but we recognize that there may be some constraints upon us.

One of the things that we want to do as we go forward is make sure we understand all of the environmental issues and make sure that we operate this project in an environmentally benign manner.

So I guess that's really it from the perspective of a project description. I'll

turn it back to David here.

DAVID TURNER: Okay. In Section 4.2 of the Scoping Document there's pages 11 through 17. If you don't have a copy of the Scoping Document with you, we have some extra ones up there on the table. We listed the environmental issues that we analyzed -- that we think we're going to need to analyze in the EIS. This list is not intended to be exhaustive or a final list. We're looking for your input, again, on what may need to be added or what needs to be removed.

We're particularly interested in hearing from you, again, on what your concerns are tonight and try to address those. I know we've covered a lot very quickly. We intended to do so to make sure we had enough time here tonight to hear from you. So if there's anything at all that you want to ask about the licensing process or the project, we'll entertain those, but it's also your time to let us know what your concerns are.

I think we have one person that said they needed to leave, so I'm going to turn it over to the floor now and start taking

comments. I forget your name.

PETER MJOS: Peter Mjos.

DAVID TURNER: You want to be the first? We're glad to take your comments.

Remember, again, give your name and affiliation for the court reporter so we can attribute your comments to you.

PETER MJOS: Good evening. Thank you very much. My name is Peter Mjos. Last name is M-j-o-s. I'm speaking for myself. My comments will be brief.

The proposed Susitna dam is a most precarious, I repeat, a most precarious proposition. It is certainly physically and geologically precarious. Certainly we are a state of movers and shakers. The foremost occurred in 1964, which you're aware. More recently we had the proximate Denali fault quake and weekly there's a whole lot of shaking going on. Imagine just imagine a breach of this mega project. Who would dare live downstream?

How precarious the entire Alaska budget. The total cost is the great unknown of this project, but sure will come into the mega billions. In addition, the dam would require

perhaps billions in subsidies. The dam by definition will centralize the power grid. History has surely taught us how very precarious such centralization of power grids is, and certainly today we are more than ever subject to not just criminal disruption but natural disruptions. Yet the dam would provide at most today, as I understand it, 25 percent of total railbelt energy. We must surely develop other alternatives.

As an aside, there has been a rumor circulating that the dam might possibly supply power to the proposed Pebble project. Were that the case, it would certainly severely cripple available railbelt energy. By dedicating such massive resources to a single mega project, our remaining resources for the rest of Alaska would be seriously compromised.

Finally, Alaska has a great decentralized alternative energy potential. You're aware of these: Wind, solar, tidal, wave, geothermal, biomass and natural gas. Perhaps you saw the headline today that there may be a hundred years' worth of natural gas in Upper Cook Inlet.

I would respectfully request that the State of Alaska study all energy options before us. Thank you.

DAVID TURNER: Thank you.

RICH WILSON: How long do we have? Two or three minutes?

DAVID TURNER: Actually there's a limited number of people that said they wanted to speak. We have the place until 10:00 o'clock, so you can probably talk.

RICH WILSON: Well, I'll go to about 9:49.

My name is Rich Wilson. I'm president of the citizen group called the Alaska Rate Payers, Inc. We are a purely unpaid volunteer group of people. Unlike other nonprofits we don't get any pay and we don't have anybody pay for our travel or any other expenses that we have. We are totally out of our back pocket citizen group. So I think that says something, to me, that the number of people that have joined in -- there's over 30 folks that are involved in this on a weekly basis.

We were formed in 2007 as a result of rapidly rising gas prices and

gas-fired electric generation rates. We think there's got to be a better way and there's no plan. So the State was embarking on a little broad planning process and considered all the options that were available, including all the renewable options as well as nonrenewables.

We feel that a balanced portfolio is what we need. Contrary to what the last speaker said, this is only going to provide 175 to 400 megawatts of the total 600 megawatts required in the railbelt, existing use. So it is not going to -- it's not enough to even be shared with any new industrial project. As a matter of fact, we feel that's a mistake, but we are very supportive of going with this hydro project because it replaces variable priced gas-fired generation.

The only way the gas prices go over the long run is that way (indicating), and we feel that it's important for us to put a major chunk, not all of it, but a major chunk of our generation into the stable, flat-priced category. It's only available from -- with technology that's proven over the centuries. And that's not to say that new technology should

not be explored and demonstration projects. We totally support that.

The tidal projects and the wind and the geothermal are all worthy of study and many others too. But we do not believe that we can sort of put the hydro project off to the side while we think up and work out the technology kinks that are still out there. There are no kinks in the hydro business.

There's a lot of new engineering that is available to the Alaska Energy Authority in sponsoring this project, and it's a crime to really compare this new project with new techniques that have been identified through trial and error over the years with those that were build 30, 50 years ago that have had some problems. We recognize those problems are bad and we shouldn't repeat those mistakes. We don't have to and we won't. It won't be possible with this process. This is an incredibly extensive process.

One of my points here is that we -- you know, somebody asked us why are we as kind of experienced, shall we say, citizens in the community here, in the Alaskan community, in

favor of something that won't get built for ten years or more? We believe that it's worth waiting for and we also owe it to the next generations behind us. Just like previous generations built little dams in Juneau, like the Salmon Creek project. And that project, by the way, is producing power at 6 percent today of the cost of wholesale power in gas-fired country up here in the railbelt. So old hydro can't be beat and it can be built, but it takes time and we're willing to take that time.

We want to have a long vision and we believe that this is the way to go. We're glad that the -- that FERC has decided to go with the integrated licensing process because it has the best chance of getting us through this thing efficiently. I'm a little disappointed that we're already asking for delays in the process that was established to accommodate more study.

We have to go back to the '70s and '80s when $140 million, worth 400 million today, was spent on those studies. Sure, things have changed. Some things need to be updated. Some needs to be done fresh with new

requirements. But there's a huge body of information that should be incorporated into the record and utilized. I know that there's an attempt to do this, but I'm not sure how much of that will be accepted by FERC as acceptable data. I urge you to really take time to utilize what we have in the name of efficiency and ultimate low rates to people like us, people that pay the electric bills.

We don't have any doubt that this thing will be built in a responsible way. We all fish. Some of us hunt. Some of us just take photos of wildlife. We enjoy Alaska. We enjoy the features that are offered here and we do not -- we don't want to hurt anything out there. We think this is an incredible opportunity to do something that is unusually neutral in terms of impact on major environmental issues.

Now, there are some, yes, and they need to be fully vetted, fully studied in a responsible way. We need to be able to get to the end point here. Time for some us to enjoy the energy that will be generated ultimately by this project. I think that it is one of those

legacy projects that needs to be given full consideration, even though there are those that just don't want anything to be built on any river. That is unfortunate, because this site is way above a seven-mile, Class 6 rapid and it's up above it. There's no permanent population up there. It is a perfect site. It's got a big basin and it's out of the way. Nobody seems to know where Watana is, if you ask them on the street, because it's so remote.

This is an opportunity to -- it's one in a million. It really is. We ought to do what we can to make it work. So thank you for the opportunity to comment today and we'll be submitting written comments as well.

DAVID TURNER: Thank you.

LEE WAREHAM: My name is Lee Wareham. For me, I'm here this time on behalf of myself. This is the second time around for Susitna for me. During the last time, I was co-chairman of a citizens group called Susitna Power Now. In one year the size of -- we had enough -- we had over 400 members and some of them were corporations and a lot of private citizens. One year -- this is 1985, so double

it for current dollars -- we spent $250,000 on TV ads, newspaper ads, PSA type stuff, public information stuff. This project was so right back in the 1980s that somebody ought to be in jail because we didn't build it then. We got right up to the edge.

We got the Fairbanks-Anchorage intertie built. We got the power cost equalization that's still in existence. We got that legislation passed so it -- the revenue stream from Susitna from power sales was to fund power cost equalization so the people that weren't on the grid here in the railbelt would benefit from it too. All that stuff was put in place and Governor Sheffield and Senator Vic Fisher killed it.

The reason they killed it when we were going like gangbusters, oil prices, if you remember, tailed off and the price of oil went down to 9 or 10 bucks a barrel. These people with a time horizon about this long got the accountants in there and the accountants said, this is never going to be the least cost. This is going to be like Norwegian ship masts back in the 1880s that were built out of pine, out of

Norwegian pine, and the price of that spiked and then sailing ships went away. They're going to be giving oil away, so this will never be the least cost alternative.

Well, while all that was going on, Tom Starr, who was one of our members and a cool guy who understood electricity, the economics of electricity in a very profound way, better than anybody else in the state. He was the general manager of Municipal Light & Power. He was a very thinking guy. He did a private study using resources that were available to him and his study was very simple.

When you take -- now, there was no combined cycle with thermal stuff then with gas turbines, and everybody builds gas turbines because you don't have to plan. You can screw around and wait until the last minute and call Mr. GE and they put a big turbine on a flatcar and send it up to you. You hook it up to the busbar and start hooking gas pipeline about eight inches in diameter to it and let her rip. Well, you got small up-front costs, but your ongoing costs are high.

Now, we had at that time

artificially low gas prices, long-term contracts that expired in the early '90s for Cook Inlet gas for Chugach and for ML&P. But you could see the horizon out there. That was coming to an end. And Tom knew that once those contracts were exhausted, whatever the hell the price of natural gas was, that's where ours was going. And because we're in Alaska, it's not going to the reference line, it's going above.

Well, guess what happened? Exactly that. So Tom did a study. And I don't remember the numbers right now and I don't know -- I've got a lot of files. I'll look and see if I can find his study. But the proven reserves in Cook Inlet at the time of Tom's study, he took that as how much gas we had. He did some pricing assumptions and he compared the use of natural gas through gas turbines where 70 percent of it goes up the flue. That's why you see these ravens out here. They get in that thermal updraft, the exhaust from the power plant, and they go up to about a thousand feet and then they kick off and they dive back down and then they go up and do it again. So we provided a wonderful roller-coaster ride for the

ravens with 70 percent of the gas. Even that long ago if you used it for space heating, you recovered 90 percent. Well, 90 percent versus 60 percent, it's pretty easy to see that there's an awful lot of stuff going up the flue.

Tom's numbers in 1985 dollars was that the opportunity cost of not building Susitna and using this gas until it ran out -- about now is when -- I can't remember what the cutoff -- 1.8 billion with a B. Now, a billion dollars for a few folks like us -- $1.8 billion, double that for now, that's how much money we've already wasted. Build this dam. The technical work is done. I was right in the middle of that stuff. As the other speaker said, we spent, I thought it was 180 million, but I haven't looked at the numbers. We looked at every aspect. We looked at the wildlife. I'm a pilot. I've been flying up here for 55 years. You fly up that thing. The hills are so steep nothing lives there. It's not habitat for anything. Woodpeckers maybe in some of the trees.

What we used to say, and I don't know if this is true anymore, is that this was the world's premier hydro project in terms of

the megawatts per acre of impoundment. The size of the impoundment, somebody mentioned it's two miles wide at the widest. Most of the places you can shoot across it -- well, we can shoot across that with a 30 aught 6, but most places you could shoot a caribou across if you had a long-range rifle.

I mean, this is a wonderful project. We built -- when we built the Fairbanks-Anchorage intertie, we sized the towers, the conductors and the insulators to handle 345 kv. It's not running at that now, but to handle the power. So that's already there. Susitna sits in the middle. If you were an electrical engineer and you were looking at this thing and you said, I got to put a generating facility. My load center is here. I got this many percent here. I got that many percent here. It's just about perfect.

As my co-chairman, Bob Penny, used to say, we can either build Susitna where it is or we can build a nuke there. Either one will work. But why should we penalize the people of Alaska with unnecessarily high electrical bills? The first power should have

hit the busbar in 1995. I got all kinds of documents that talk about first power hitting the busbar in 1995. 1995 was a long time ago and here we are again. It was a failure of leadership. Don't fail again. My grandkids were supposed to be having low cost, reliable hydro. They got gas-fired electricity.

I hope their grandkids have low-cost hydro electricity. Thank you.

DAVID TURNER: Thank you.

SHERYL SALASKY: Could I propose that maybe the first time around we keep comments to three minutes just so that everybody does get a first time? Then if people want to come back, we could do that again a second time around.

DAVID TURNER: That's fine. Like I said, though, I think we've got plenty of time. It's only 6:29.

SHERYL SALASKY: Right. Just so that some of us could get up there before 10:00 o'clock is all I was thinking.

DAVID TURNER: All right. Why don't we do that.

CARL PORTMAN: Good evening. My

name is Carl Portman, deputy director of Resource Development Council. RDC is an Alaskan business association comprised of individuals and companies from Alaska's oil and gas, mining, tourism and fishing industries. Our membership includes all of Alaska's regional corporations, local communities, organized labor and industry support firms. Our purpose is to expand Alaska's economic base through the responsible development of our natural resources.

RDC supports the proposed Susitna hydroelectric project as we believe this project is truly in the public's best interests. Railbelt communities from Seward to Fairbanks are in need of a sustainable and reliable energy source to power homes and businesses. Susitna offers long-term, cost-effective and reliable power at a cost and price for decades.

The project will also help the State meet its established goal of deriving 50 percent of its electricity from renewable and alternative sources by 2025. Realistically, the only way to achieve that goal is for a new hydro project to be built in the railbelt region. Of the hydro projects examined, Susitna has the

best chance of being built.

RDC urges all permitting agencies to not delay the completion of environmental review and approval of this project. Considering the studies performed in the 1980s and the fact that the FERC process provides approximately five years for studies and analysis, this is more than ample time for completing environmental work and monitoring.

Railbelt energy consumers may be at risk if the project is needlessly delayed. Susitna hydro will diversify the railbelt's energy portfolio and provide needed security to flatten out market fluctuations in energy prices. Price volatility and high cost of electricity are limiting factors in economic development. The proposed project is important to economic growth and resource development in Alaska.

The project will bring many economic benefits including new business and jobs. Moreover, it has the potential to expand the economy by attracting some new business to the region. The Susitna project will include mitigation measures to stabilize Susitna River

salmon runs and protect moose and caribou abundance. At a minimum the project has the ability to help manage river flows that are favorable to fisheries. The Hydro Lake project on the Kenai Peninsula is a model for fish and wildlife abundance and good public policy.

In concluding I would like to note that a recent Hellenthal survey of Alaskan voters showed 60 percent support for the project. A recent Dittman poll revealed 63 percent support for Susitna in the Fairbanks area and 54 percent in Anchorage. Only 26 percent in Anchorage expressed opposition.

Thank you for the opportunity to provide testimony on this most important project.

DAVID TURNER: Thank you.

SHERYL SALASKY: Hi, my name is Sheryl Salasky and I'm here as a concerned citizen and resident of Talkeetna, which is just below the dam site. I've lived in that area, in Talkeetna, for the last three decades. I know the area very, very well. I was a fisheries biologist with Fish & Game working on the Susitna hydroelectric project back in 1981 until

it ended in 1985.

I'm a much better writer than I am a speaker. I'm nervous as all get out. I probably won't make all my points here tonight, which is fine. Because I am a better writer, you can look forward to my written comments and I also did file my motion on the FERC web site, my motion to intervene. However, I feel compelled to speak tonight. I'm not going to be able to be at the meeting Wednesday night when you're up in Talkeetna, so I wanted to come tonight and say a few things.

Suffice to say, I oppose this dam vehemently for a myriad of reasons. You'll hear a few of them tonight. You'll hear many of them as you carry on in your hearings throughout the railbelt area. So I can't begin to go into them all. Paramount of my reasons for opposing this proposal is just the immense complexities of an ecosystem this huge, a watershed that supports just a vast natural system. As a biologist, I'm aware of those and I'm sure that every Alaskan worth their weight in gold is also aware of that, and I would hope that the researchers that you all have on staff also dig deep into that.

A system -- a natural system of this size simply cannot be mitigated. I mean, we can divert this and transport that, but there are going to be huge losses in interfering into that. I should try and keep with my points here. This dam, as I understand it, only supplies electricity. Up here in Alaska what we need is heat energy more than electrical energy. I don't think many people have electrical heat.

For that reason I would implore the Commission or the researchers to seriously consider looking at alternatives for energy along the railbelt. Those would include a variety of energy, such as tidal energy, geothermal energy, further developing Cook Inlet natural gas, lowering consumption levels, increasing energy efficiencies. And I'll leave it at that because I sort of figure that that's you guys' job to look at everything that's available and not just this one hydroelectric proposal.

I heard something earlier about load following and fluctuations in the water level, both winter and summer. I'm sure most people in this room and everybody that you will

meet in Alaska are avid winter and summer recreationists. I, for one, know that the shelf ice in the winter -- and our winters are longer than our summers -- the shelf ice from the river freezing at this level and then dropping to this level daily is going to make trails for winter recreation, whether it's snow machining, dog mushing, skiing, ice fishing, people are out all winter long doing stuff like that. The safety of those trails crossing the river and following the river will definitely be impacted.

Lastly, I think the economic benefit of keeping this river in its natural state will far outweigh the benefits of damming a wild river and destroying the habitat and the livelihood of this huge area that supports incredible outdoor recreation and tourism.

The bottom line -- actually I guess I also wanted to say that the earlier speaker threw around a lot of -- we're all throwing around words and numbers. We can all throw whatever words and numbers out there that we want; however, your is job as the regulatory Commission is to actually verify those numbers and make sure that they are accurate.

So I'm going to throw around -- I have thrown around words and I can throw in any numbers, but suffice to say, just because AEA is proposing to build this damn does not mean you have to license it and I, for one, really hope that you don't.

Last thing I want to say is there's a movie out there called "Salmon Running the Gauntlet." I don't know whether PBS put it our or National Geographic put it out, but it is about the Columbia River and taking down some of the dams in that and how the ecosystem responds to that. I would highly, highly recommend that you take a look at that movie. It's fascinating. If you need to know where to get a copy of it, I have a link to it. Actually you're going up to Talkeetna and I'm sure that someone will offer you a copy as well.

Thank you for your time.

DAVID TURNER: Thank you. Anyone else?

JOE GRIFFITH: First, welcome to Alaska. My name is Joe Griffith. I'm the general manager of Matanuska Electric Association and the CEO of an organization

called ARCTEC. That's the railbelt generation and transmission co-op.

We support the project. It is needed. Our economy works on electricity and without it Alaska wouldn't have an economy. We have five utilities of six in the railbelt supporting this, and I dare say that the other utility that is not a member of ARCTEC will tell you the same thing, that we support the diversification that goes along with a hydro plant of this nature. We're confident that FERC knows -- as the lead agency knows how to do the EIS and in the end it will all come out that it makes sense and we know how to make it happen.

We have a system today that's 50 years old that is being replaced in a couple of areas, but all of us utilities are relying on having that 600 megawatts available in 2023. Otherwise, we would be doing something different than we are today. We're working closely with AEA. We will participate in the financing of it, much as we did to the premier hydroelectric plant in the state, that being Bradley Lake. I'm sure you've looked at the statistics on that. It's a roaring success in Alaska.

Anyway, five of the six utilities are standing here tonight supporting it. We will be happy to participate with you any way we can.

Thank you.

DAVID TURNER: Thank you.

MICHAEL JESPERSON: Good evening. My name is Michael Jesperson and I am representing myself and my wife and our three children. My oldest son had planned on being here tonight, but he didn't do so good on a geometry test so he's at home.

As far as conservation to take care of our power needs, fine, turn the lights off at your house, but not mine. Turn off the power at your house, but not mine. People are complaining that every time people try to develop natural gas or oil in this state saying, we need to use renewable resources. This is a renewable resource. The water is going to come almost every year. A couple years we might have a drought, but in general the water is going to be there and it's going to provide power.

It's going to provide one more of a myriad of reasons that my children when they

graduate high school and college may be able to stay here economically. I don't want them to have to head to the Lower 48. In the Lower 48 and throughout the world there are hydroelectric dams that have been producing for nearly 100, sometimes more than 100 years. Yeah, they've replaced the turbines a few times as the mechanics get old and made them more efficient, but the projects are still going.

It's a great way to provide energy. A previous speaker complained that putting this dam up would centralize power and if we had an earthquake or other disaster, he hinted at, we would all be in trouble. A meteor could hit and we could all be dead tomorrow anyway. Centralization isn't the problem. If we get this project going, then we'll have funds available to do the other things that that gentleman wanted, like study wave energy, wind energy and find other ways to get more power into the system.

We don't need to be stopping projects; we need to be finding more projects and getting things going. If this gets going, then we can look at the next project and the

next project. I don't want everything centralized. I would like as broad-based energy as possible without hurting the economy or without hurting the environment. There's going to be some parts of the environment that are damaged no matter what we do. If we do nothing, parts of the environment get damaged every day. If we do this dam, there might be parts that are damaged, but damage is relative. What's damage to one is growth for another. Things die so that other things are born.

Change isn't bad. Building this dam is not bad. Yeah, I admit there's risks, but I think they're far outweighed by the potential upside. Stable energy costs make it incredibly easier to attract business here, incredibly easier to provide reasons for my children and my future grandchildren to stay here in Alaska.

People complain that we don't do enough to get renewable energy. People complain that we burn hydrocarbons, yet they're the same people that say, don't build the dam. You can't have it both ways. Build the dam. Reduce our dependence on natural gas, but don't take

natural gas away. Have all the options available so that we can grow our economy, grow our civilization and keep our children close to us.

In short, I see no economic benefit to not building the dam. I see no environmental benefit to not building the dam. Use the studies that were done, build on them using the five-year process that FERC has and let's going on this. If somebody can show me in a year or two disastrous effects if we do build the dam, then maybe I'll change my mind. But right now move the process forward and if you find additional information, I would be more than happy to look at it.

Thank you.

LARS GLEITSMANN: My name is Lars Gleitsmann and I'm here as a concerned private citizen. I'm also here to represent my family, my wife and my daughter, and maybe also to represent those of a grass roots organization that elected me as their government affairs volunteer.

My concern is that the dam could not be built again. Here in Alaska 82 percent

of our villages are not connected to the national road system. The transportation costs of the essential services of those people out there that are living in those 82 percent of our villages are getting higher every day. The EPA is trying to outlaw the aircraft, if you will, because it has a little bit of lead, 2 parts per million, the aircraft fuel that 95 percent of the airplanes serving those villages need. Those people in the villages will be forced by cost of living to come to Anchorage and Fairbanks. Those people will be forced to come to the railbelt. The economy and the things that are going on will force more people to live on the railbelt.

So there is no question that the railbelt's electric needs will be rising. That we are using natural gas to create electricity is an atrocity. The efficiency of electric generation with natural gas is so incredibly low I see it as a real disaster to do that. We will run out of the available natural gas much earlier than we should be because natural gas should be used exclusively to heat houses where it's extremely efficient.

If I look at other countries, as in projects, hydropower done right -- I believe, America and Alaska has the ability to do it right -- has improved fisheries. If you study, for example, the Bradley Lake hydropower project, it looks like it has actually improved fisheries there. It has improved the life of animals and the abundance of animals there.

Personally, I see it in a way that part of the population that is an outspoken minority basically wants to turn Alaska into a national park. By the way, Alaska has 1.52 square kilometers of landscape but we have only 8,000 kilometers of roads. We basically don't have roads to measure. There's basically those out there that want to turn Alaska into a big national park and lock us up on the road system and throw away the keys. If we run out of natural gas, basically that would be accomplished. If we run out of natural gas because we've wasted it all creating electricity, then nothing is left some day for heating houses and then the sheer cost of existence in Alaska with heating houses and electricity and all those utilities will go

through the roof.

There are those that say, oh, if the natural gas that is available here is not available anymore, then we just import it as LNG, as liquified natural gas. The cost of LNG in the Pacific is outrageous. The idea that we could import natural gas to keep running here, it's ridiculous.

The Susitna project in its proposed location is as ideal as it can possibly be. It's so high up in the mountains. It's above rapids that basically keep the salmon out of there. I believe that with all the millions of dollars that have to be spent and that will be spent that it will be totally environmentally safe.

My personal background is a scientific background as well as a piloting background. Flying all over the world and flying in Alaska since 16 years, I know that area in great detail. It's right above Talkeetna. If you take a Bell 206 helicopter and you try to fly to the dam site, you will run out of fuel on the way back to Talkeetna. It is that far away. People are almost behaving like

the dam will be in their backyard and they will be threatened by it and I don't think that there's any reality. It's a big country out there.

As a scientist, I have specialized on arctic and subarctic environment and earth science. I've worked for a technology company here in town that works on many projects, and I think this project is what Alaska desperately needs before it's too late because it will take time to build it. The current administration is openly against -- in Washington, D.C. the current administration is openly against hydropower development. What else do we do in Alaska?

Some people have proposed even sun energy. I mean, in Alaska we have a long winter. We have lots of snow. In the summer, in August, we have things like 44 days of continuous rain. I don't think that Alaska is in any way feasible to have any viable sun energy alternative energy systems. If you look at wind energy, wind turbines don't work very well if they're all iced up from rhyme icing. The days out of the year that rhyme ice is

killing off any wind turbine energy development is significant.

So I hope this dam gets built.

DAVID TURNER: Thank you.

HARVEY AMBROSE: Good evening. My name is Harvey Ambrose, and I'm the director of power supply for Homer Electric Association. Homer Electric supports responsible development of hydroelectric resources. Hydropower has proven to be a clean, reliable and cost-effective source of electrical energy.

Homer Electric believes that Southcentral Alaska is too dependent upon natural gas as a source of heat and electricity, especially given the current decline in production of this region's gas fields. Pursuant to its confidence in the value of hydropower, Homer Electric has invested considerable effort and expense in the pursuit of a FERC license to constrict its own small-scale hydroelectric generating plant.

Large-scale hydroelectric projects like the proposed Watana project have the potential to greatly reduce our reliance on natural gas and thereby to help ensure reliable

electric power for persons living along the Alaska railbelt.

Thank you for the opportunity to comment.

DAVID TURNER: Thank you. Anybody else?

FRANK MIELKE: Good evening. My name is Frank Mielke. I'm a lifelong Alaskan. I'm submitting these comments on my own behalf as an individual citizen. I've been involved in energy issues since about 1973 and have followed the Susitna project from its -- about as long as I can remember there's been a project proposed for the Susitna. I have written comments, but I will just summarize those three main points.

One is there is no viable demonstrated alternative to fossil fuels, nonrenewables than Susitna. The Alaska Energy Authority did a very extensive document, involved hundreds of people, many days of input, and certainly took a very good look at all the other renewables other than hydroelectric and the bottom line is they just don't produce enough. They're good as an adjunct, but as far as main power, they just do not have the

potential. Point No. 1.

Secondly, as far as the process goes, the habitats and environments have been studied for decades. I just think that the process as its laid out, the length that it takes is certainly adequate to fully analyze all of the important issues there.

The third thing I'd like to say is all the talk about habitat and environmental degradation. It's striking that when you look at the scoping document, it looks at damage done and all this. I think the better approach is to look at, what opportunities do we have here? I know Alaska rate payers and other groups have looked at it. There's great opportunities for enhancement of fisheries, wildlife habitats and recreation. Now, you can look at it like, oh, this is all bad. But if you take the approach that this could be good, we could have more recreational opportunity. We could have more fish as there is at the Bradley River. According to Fish & Game, there's more fish now than there was before the Bradley Lake hydro project went in because there's less silt and a more even flow.

I'm not saying this is how it will have to turn out at Susitna, but the opportunities are there. There are great opportunities of this project for enhancing those things and because of the scope of the site, great financial resources could be brought to those that probably couldn't happen under any other context.

I hope that everybody looking at this looks at the opportunities and not like, oh, this is all going to be bad. Yeah, things are going to change, but with that change there's a lot of opportunity. Or we can just be overtaken by the change in the energy market that's taking place. Where natural gas used to be 10 cents a thousand when I was a kid and it was first coming in, now it's $10 a thousand at the peak rates. So it's gone up 100 times in my own, I like to think, short lifetime.

If we had been looking ahead and didn't have that 10 cent gas, we might have already built it. It's almost like the curse of overabundance that a lot of Third World countries get into. In that way, maybe we're a Third World country too.

You'll also get my written comments. I think the most important thing I want to say is to look to the opportunities. Don't just look to the negative side. There are great opportunities here. I've spent a lot of time on the Lower Susitna since the early '50s and a lot of time on the very Upper Susitna in more recent years and there are great opportunities there.

Thank you for this opportunity to comment.

DAVID TURNER: Thank you. Next person?

ALEX YOUNG: Hello. My name's Alex Young. I'm from Cantwell, Alaska. Born and raised in Alaska. I'm glad to testify for Susitna hydro. I support that because there's some more hunting. It used to be good hunting on Denali Highway, but there's too many four-wheelers and vehicles for hunting now. We used to walk out there, but it's -- I think it was -- I got commercial power from the intertie in 1984. It was easier -- it's easier than having a generator. That's all.

Thank you.

DAVID TURNER: Thank you.

GREG JOHNSON: My name is Greg Johnson. My family has owned property on the Denali Highway, the Susitna since the 1950s. I just wanted to state that my family supported this project in the '80s. We support it now. My only concern that I see looking through this is the proposed Denali corridor. I would like to see that basically be the last one, and I think the Chulitna corridor would probably be the least impact on the animals and on basically the esthetics of the area.

Thank you.

DAVID TURNER: Thank you.

JOSEPH HENRI: Mr. Moderator, members of FERC, my name is Joseph Henri. I'm an attorney in Alaska for about 50 years. I'm the secretary/treasurer of Alaska Rate Payers, the volunteer not-for-profit group trying to achieve low-cost, reliable power in this part of Alaska.

We've struggled, Mr. Moderator, with having to go to FERC for a long time. This wouldn't be very popular I'm sure, but I hope the next time that the government of the United

States tries to reorganize itself as it did with Woodrow Wilson and then with Herbert Hoover and then the Congress under Congressman Wayne Aspinall of Colorado tried that in the early '60s -- the next time an effort is made to reorganize the government, streamline it and so forth, I hope that Alaska, an entirely separated place from the rest of the United States -- this is Seward's Day, as somebody mentioned, the day honoring the day that Secretary of State William Henry Seward bought Alaska from Russia in 1867. And we are different and we shouldn't have to put everything before FERC for permission to develop this great place, which is really a subcontinent of North America.

And as I say, if we reorganize one more time, I hope we would exempt Alaska from FERC oversight. There's no federal land involved in this project and there's certainly not any interstate commerce. I'd be very happy to see the Alaska Energy Authority have the charge of this new hydroelectric facility.

The other -- as I'm fault-finding with the federal government, I'd like to say that I think five years of review by FERC is an

exceedingly long time. I think you would have to ask yourself logically whether that's truly needed. The United States was attacked, waged war in World War II in three years and eight months, Africa, Europe, all the Pacific, but we can't authorize a dam in Alaska which has been studied since the 1940s starting with the Bureau of Reclamation for less than five years. It seems rather extreme.

And it isn't much in keeping with the need for the United States to do something dynamic with its economy. We're sort of sluggish. We're falling behind. We have great annual deficits and a huge debt and the regulatory inertia is just keeping us from succeeding.

The oldest producing generation in Alaska today still on line is the hydroelectric generation at Juneau that my friend Mr. Rich Wilson mentioned earlier, two small projects, the Annex Creek and the Salmon Creek dams. They are about 100 years old and they're producing electricity today for 3 mils a kilowatt hour. That's pretty good testimony for hydroelectric. Even though they're 100 years

old, there's no reason to think they won't be around for many, many more decades if not centuries.

My friend Carl Portman from the Resource Development Council who has previously testified reminded me and asked me to tell you that it's anticipated now that LNG will have to be imported into Cook Inlet by 2014. We don't have enough gas now to run these turbines. I was the chair of the Municipal Light & Power board for five years and on it for seven. Lee Wareham mentioned Tom Starr, the general manager of Municipal Light & Power. But that's going to be pretty pitiful because of our dilatoriness in not getting Susitna on line at least in the 1980s when we had a very good shot at it, but we were too wavering and missed our chance.

I think, Mr. Moderator, that hydro is certainly the best generation for reliable, low-cost electricity. I'd like to associate myself with the remarks of Lee Wareham, who was one of the first speakers here, about what Alaska did wrong in not getting Susitna 30 years ago. I say, let's get on with it now.

Thank you very much.

KATHERINE HUFFMAN: Good evening. My name is Katherine Huffman and this is my husband Tim and my daughter Emma. We just woke up this morning at the property out there that -- where one of the proposed roads is being considered starting at the Chulitna section. My grandpa worked on the railroad starting in 1945 and worked at that section for ten years, and then I inherited the five acres he was able to purchase which is now an inholding in the state park on the west side of the track.

Then on the east side of the track right at the section are dear friends of ours who live out there year-round. We all consider it really precious, quiet, wonderful land and it's just a nightmare of mine to think that there could possibly be a 40-acre camp at our front door and a road going across our little, you know, hiking trail that goes to the Indian River.

We were just talking to our friends last night about this and they live out there, so I just wanted to speak on behalf of them as well. Their livelihood is out there.

One person who lives out there is a full-time artist and she's well-published and that's her home. She relies on being out there in the wilderness. This would be a huge shift. It doesn't seem very cost efficient with all the other options. The wind turbines, I would love to see that. I've heard there's much more cost-efficient ways of having hydroelectric power using other sites that are not as remote.

When I look at other states, the best practices in energy is about taking down dams now. It just seems really archaic to be in a state where that's our big idea when all the other states are taking them down because of conservation issues.

TIM HUFFMAN: My turn, I guess. There's three transportation routes; two of them are terrible. One of them would be -- well, we would lose our property. I'm confident that we would be eminent domained right out of our little parcel there, as would our neighbors.

The impact of it -- you're not going to be able to keep people in the winter out of there. There are already enough people that come in off the highway. They find their

way in. Depending on the route, they take three to six miles off the highway snow machining around. You're just not going to keep them off. It's already a Tier 1 caribou area. 13E has extra moose restrictions, whether that's a predator pit or whether it's just a lot of hunters and not many moose restriction, you increase access, all you're going to do is increase pressure on those animals.

They finally settled on a caribou Tier 1 plan that seems to be working. I imagine you're probably very familiar. It's where if you apply for a Tier 1 caribou, you have to commit to not hunt in any other area of the state, any other gaming of the state. They finally kind of got that one right. That restricted a lot of the additional harvest, but it's still very heavily harvested.

So I guess there's a lot of people that live on the rail, a lot of ways to mess it up. It wouldn't mess it up for us; it would just end it. Our property would be gone as would our neighbors'. The Gold Creek route has its own problems and the Denali route has its own problems. I would encourage you --

we've gotten a couple of mailers, but I feel like the locals haven't been involved in the process very heavily. Our input hasn't been solicited. I have mixed feelings about the dam. I understand the attraction to achieve power. I also hear that it will silt up in 100 years, which seems like a really short time to me, a really short time to me for the same reasons that my wife talked about.

Now you have a dam that's silted up and what are you going to do? Are you going to just trust future technology to resolve that problem? Seems very dicey to me. Anyway, we're out there. We're not hard to find. The MatSu Borough knows who owns property out there. If the plan is to just take our property and proceed, then I can understand why our input would not be considered. Well, I guess I can see why it wouldn't be solicited.

If the plan is to try to find the least impact, the one that puts the least additional resources on what's already a strained resource, caribou, moose, then we're not hard to find. I realize that it's a bit of a dilemma. I know there's the State's goal of

having 50 percent renewable energy and hydro is an attractive way to get a big chunk of that. But I'm not sure -- if this is long term, I know it ruins -- with at least two of the road plans, it ruins the area with the additional pressure.

Thank you.

DAVID TURNER: Anybody else?

NICHOLAS VAN WYCK: Good evening. My name is Nicholas Van Wyck, and I'm an Alaskan. I'm here representing myself. I'm not paid to be here to lobby on any particular point of view. I'm just here to speak my opinion and to say why I think this is pretty much a no-brainer, good idea to be developing this project.

A number of people have said the reasons. Hydro has viability of hundreds of years or more, we've been told. It's cheap. The country now is in a stage of crying out for renewable energy, energy that doesn't emit carbon dioxide. Hydroelectric power does that. It's not tied up with the difficulties of wind power. It's a true, tried, tested method and for those reasons it deserves consideration.

I think also you need to consider

yourself and the role, the process of how we get these things approved. Here's a project that's been talked about for many, many, many years. You are yet another one of the committees who has to sit there and evaluate it. I noticed recently that you went to a very speedy resolution on a wind power process that CIRI put forward. I would also ask that you consider this equally in a timely manner as well.

We're starting to get to a period here where the actual process of how these things get evaluated is really a detriment to how we develop our society today. We spend far too much time talking and talking and talking. I would ask you all at some point in time to start making some decisions and start moving it forward. This is a very, very good case of something that has large demonstrable benefits.

You will hear people, in fact, the people just before me, who will come up and put examples about how it impacts this or it's a detriment to that or it's going to ruin my fishing camp or my hunting. We all have to make sacrifices, all of us. Every single one of us have an impact on the environment. The cars we

drive, the environment we live in, the houses we have, the clothes we wear; we all make an impact. We have to as a society balance those causes against what's good.

We're a society that needs energy. It needs cheap energy for our industries to work, for our houses to be heated, for our new technologies to work. Before you is a project that develops 600 megawatts of power, over half of the power on the railbelt in one fell swoop. This project could be working 100 years from now if it's well-maintained. It will put people to work in the state. It will develop resources in the state.

Please, let's move on with this thing. Thank you.

DAVID TURNER: Is there anybody else who wants to speak and hasn't had the opportunity?

SCOTT CROWTHER: Welcome to summertime in Alaska. It started today and I've got my shorts on. I wear my shorts all summer long. I'm Scott Crowther. I was born in the Territory of Alaska and have spent most of my life here. I'm a civil engineer and I've seen a

lot of good take place in Alaska. I was born in the Valley where this dam will be constructed. The dam is behind the Matanuska-Susitna Valley.

I grew up fishing these tributaries to the Susitna River with my father and my grandfather. We saw the best of it in the 20th century before the pipeline came here. It's a little bit shocking to see what happens when the development happens and comes into place and that things change; however, the fish are still there. We have to share it with everybody now.

I support the project because now we're in the 21st century. We need to focus on environmental sustainability. There is an international effort to reduce hydrocarbons in the atmosphere. I believe that's very serious and something that we need to do. This project gives Alaskans an opportunity to participate in that effort to reduce hydrocarbons going into the atmosphere. Susitna is a very good opportunity for that. The geography of the location is very favorable for a hydroelectric project. You won't find a more favorable set of geography anywhere in the world for a

hydroelectric project.

We have analyzed the economics of the investment. We find that the economics are similar to our Permanent Fund. It's capable of providing at market rates of electricity a return on the investment very similar to what our Alaska Permanent Fund provides. This proposed project is the most economical form of renewable energy that we can pursue.

The Susitna River is not the Columbia River. Existing dams in Alaska have not had the legacy impact on the salmon runs that the Columbia River has had. These dams are very well situated. They're above -- mostly above the salmon runs and they do not block the flow. The proposed dam on the Susitna River is mostly above the salmon runs. There may be a fragment of Chinook salmon flowing through it, but it's a fragment of the run.

We need to do a meticulous examination of how the change in hydrology will affect the fisheries downriver of it. I believe it's going to be favorable because we are going to be providing more water into the river during the wintertime and fish prefer water.

So because of all the things I've described above, I am in favor of the proposed project. Thank you.

DAVID TURNER: Thank you. Anybody else that hasn't had an opportunity to speak?

JAN KONIGSBERG: Hi. My name is Jan Konigsberg. I live in Anchorage, and I'm representing the Natural Heritage Institute in these remarks.

With respect to FERC's decision to grant the licensing, its involvement as the lead agency in the National Environmental Policy Act, I have a few comments that might address the way in which FERC proceeds with licensing this project if it decides to go ahead and license it. I would like to say that FERC's decision to grant a license to construct and operate the proposed Susitna River dam hinges ultimately on its determination that doing so is in the so-called public interest.

Part of the problem is the public interest is always an amorphous and porous concept. That's why many statutes, whether they're federal or state statutes that depend on

a public-interest determination, fail to provide for a rigorous public-interest calculus. Much of it's left up to agency discretion or administrative discretion in determining the public interest. Therefore, in a lot of public-interest determinations it seems that they're ultimately justified by resorting to that historic Supreme Court dictum, I know it when I see it.

At any rate, as required by the Federal Power Act, the Commission, as you undoubtedly know, is to make its licensing decision after giving equal consideration to the multiplicity of other nonpower values provided by this relatively undeveloped and pristine watershed, the Susitna River watershed. So what I'm suggesting is that regardless of the vagueness inherent in the concept of the public interest and it's ultimately the determination of the Commission whether it will license it or not in terms of it's being in the public interest or not in the public interest, it does seem that FERC's determination of public interest is the nation's public interest, not simply that of the state of Alaska or the more

circumscribed railbelt energy region to which most of the comments tonight have been directed.

There's a larger public interest involved. As a nation, it's the national public interest under which FERC makes its licensing determination. Now, if I'm right and, if so, it follows to me that the Commission should consider, one, whether damming one of the last free-flowing rivers in the nation is in the public interest.

And, two, the Commission should consider whether the potential project's effect on salmon abundance and biodiversity is in the nation's public interest. If the Commission is to give equal consideration to the nonpower values of the Susitna River, the fact that it's free flowing, the fact of natural abundance and biodiversity in that drainage, it seems like it's incumbent upon FERC to first determine what value Americans place on the undammed river and that this determination be based upon credible information and analysis, not merely on opinion and speculation.

In other words, equal consideration of nonpower values under the

Federal Power Act presumably depends upon equally reliable and comprehensive data and analysis as that required to ascertain the watershed's energy supply value. That's a pretty tall order, but I think it's necessary particularly now if there's going to be a credible determination of the nation's interest in this matter. Yes, we're all probably in the room Alaskans, but we're also Americans.

With respect to considering the importance of maintaining salmon populations, remember, I'm suggesting that we need to look at what the nation thinks of in terms of what's left of the free-flowing rivers in this country, because we've dammed most of them. Most of the undammed rivers are obviously up here. We need to look at that and we need to look at salmon abundance and biodiversity, almost all of which that's left in the United States resides in Alaska.

So if we're going to maintain salmon populations both in abundance and genetic diversity, it's not just numbers that are important. It's a separate, distinct population genetically of salmon given resilience during

environmental change. There's a crucial difference in terms of the scale at which FERC needs to approach this problem, at least in my opinion. Nonpower value of salmon needs to be considered. It can be considered in two scales, within Alaska or within the United States. And the national perspective is going to be different than the Alaska perspective.

If you simply look from within Alaska, there can be an argument for destroying a few populations of salmon. There obviously is arguments for doing that because we've got a lot of projects on the drawing board that propose to do just that. If you look at the national perspective, then the scale changes, which means that nationally, at least in terms of the United States, we know that one-third of the known historical populations of California and Pacific Northwest salmon have been lost. They're extinct. About one-third of the remaining populations are listed as endangered or threatened.

We also know that probably in terms of straight biomass the amount of abundance that's being produced in the Lower 48

in salmons may have declined up to 90 percent in the last 100 years. So, again, it's a question of scale in terms of how the Commission is going to make its determination about nonpower values and the consideration it's going to give to those values. It becomes relatively important in the final decision.

Again, I think it's important that you at least consider in terms of methodology in preparing the license what sort of scale you'll be using in determining what the value of these resources is that might be affected by the power dam.

Now, the other thing I would suggest is since the dam is being licensed pursuant to the integrated licensing process, the purpose of which is to integrate the information that you need for the licensing decision with the National Environmental Policy Act, I think it would be indeed efficient if FERC were to make sure to develop all the information it needs for the licensing decision during -- in its approved study plan. So the sorts of things -- at least on the two factors I suggested, what the nation's public interest is

in undammed rivers and the analysis of salmon from a national perspective be part of a study plan. I'm not aware that that's currently be requested.

Finally, I would like to take issue with one conclusion in your scoping document that you issued a couple weeks ago. If I'm remember -- I believe that FERC's conclusion and staff's conclusion was that there were no cumulative impacts in the watershed for purposes of NEPA analysis. I think it's true that in its entirety the watershed is relatively pristine and the existing human activities that would lead you to believe there's no cumulative impact, that is, logging, mining, agriculture, human settlement, recreational activities, as a whole do not appear to be affecting baseline conditions in the watershed at this point.

Therefore, you draw the conclusion that from a cumulative impact standpoint there aren't any in terms of how the dam is going to operate on top of that. I would suggest there is in fact a major concern of cumulative impact that's been left out, and that's human-induced climate change, global

warming. We already know that's affecting the watershed's hydrology. I think that's going to be covered in a separate environmental impact in terms of hydrology and stream flow, river morphology, ice formation, that sort of thing. Part of that will be covered, but in terms of the assertion that we have no cumulative impacts, I think climate change has to be considered as an ongoing impact in the watershed independent of the dam project or any other human activities.

On a large scale that means that apart from looking at hydrology, we're also looking at changes in vegetation throughout the watershed potentially. I don't know that, but I'm suggesting that you need to analyze it. You're also looking at -- actually I think the more fundamental -- although it's not readily apparent and I may be wrong about this, but I would like to throw it out for your consideration.

Perhaps the biggest effect of climate change in an ongoing sense has been the return -- the decline in salmon returns to the watershed. Salmon are an integral part of the

watershed that provide nutrients to all reaches in the tributaries, marine nitrogen, et cetera. The carcasses are there for basic productivity as well as food for larger mammals, birds, et cetera. What I'm suggesting is that they're part of this climate change dynamic because theory would have it that the marine conditions now are affecting salmon abundance. So the fish that are leaving the watershed and going out to the ocean are not surviving and growing as big due to unfavorable marine conditions some of which can be attributed to climate change.

When those fish are coming back, they're coming back as smaller size fish generally throughout the North Pacific and they're coming back in reduced numbers. That means that the nutrients they're bringing back into the watershed is affecting the baseline conditions of the watershed in terms of human-induced climate change. It's going on in the North Pacific.

So from that perspective, not to be too speculative, but I would really caution against saying there's no cumulative effects and suggest that it be studied for NEPA purposes.

That's the extent of my comments.

DAVID TURNER: Thank you. Anybody else that hasn't had a chance to say anything?

MARILYN LELAND: Thank you. My name is Marilyn Leland. I'm the executive director of the Alaska Power Association, which is the statewide trade association for the electric utilities. Our members -- the railbelt utilities are all members, but in addition to them we've got the rural utilities from up in Barrow down through Western Alaska to the Aleutian Chain through Southcentral Alaska down into Southeast. So it's a very diverse group of membership. Even though many of our members -- the rural members would not see a direct benefit from this dam, I think they all still are very supportive of it. They see it as one piece of a very large puzzle of addressing the energy problems in Alaska.

About three years ago our governor issued a goal to have 50 percent renewable by 2025. Then following that there was a legislative committee that created a think tank. I was part of that group. We ratified

that goal, and ultimately the legislature passed it in a resolution. Without large hydro, we're really not going to reach that goal. I think that's the only possible way of reaching that get goal. As I said, it is one piece of a large puzzle. I don't think it's the only piece, but I think that you need to take a look at that and very strongly consider it.

Thank you, and thank you for coming to Alaska this time of year.

DAVID TURNER: Thank you. Anyone else?

CORRINE SMITH: Hi. I'm Corrine Smith. I'm with the Nature Conservancy. I wanted to be clear that the conservancy has not taken a position on the project, but we do have some concerns about the dam and its potential impact on five species of wild Pacific anadromous salmon that spawn, migrate over winter in the Susitna River not only in the main stem, but in the sloughs and the side channels.

Salmon are important to the ecology of the river and they're also very important to the economy of this region through sport fishing, commercial fishing and

subsistence use of the resource. As has been mentioned, salmon are already experiencing decreases in numbers and that makes them more vulnerable to other changes in this habitat. As has also been mentioned, there are no other visible changes to the habitat at this time in the river.

The scoping document and the proposed studies that AEA has so far listed appear to be very complete. I just wanted to highlight two aspects that I think are especially critical, especially given the intent to operate this dam in a load-following manner.

The first, as was recently mentioned, is climate change. We need to understand how the flows from the glaciers are going to change, how precipitation will change in the next 50 to 100 years, and what will be the changes in temperatures in the river and also the change in ice formation due to climate change. Then we also need to understand how ice formation and ice processes will be changed by the dam. Will the load-following affect the formation of ice in the lower and the middle river? Will those changes affect how ice

processes that normally would shape and reshape important side channels and slough habitats, will those be changed by ice forming later or by the load-following operation?

It's going to be very difficult to answer these questions because these are not things that we can test. They're not things that we can simulate in the river. It's totally going to be by modeling that we're going to have to guess whether or not these changes in ice formation will change how the river operates. If we are proposing to change this river forever, we must take the time to understand how it will change and what we might lose.

I hope you'll take requests for time extensions for adequate studies seriously. There's a lot of great science from the '80s, but things have changed since the '80s. Climate change is one. Our salmon populations have decreased and we don't really understand why that's happening already. Also the science is a lot better. We have a lot better methods and modeling techniques to really understand what's happening in the river.

Thank you very much for coming to

Alaska, for visiting so many communities about this issue and about this project. Thank you very much for taking my comments this evening.

DAVID TURNER: Thank you.

Anybody else?

LOUISA YANES: Thanks so much for being up here. My name is Louisa Yanes, and I'm speaking on behalf of myself this evening. I just have a couple quick comments.

Dams have been shown to have extremely negative impacts on rivers and on the watersheds and I'm afraid that Susitna dam is going to be no different. This will change the hydrology of the Susitna River, the temperature, the contours of the river. This is all going to have negative impacts on the five species of salmon, the grayling and the trout that the Susitna River and its tributaries support.

Downstream impacts from dams include warming of the waters and changing the habitats that spawning salmon need to survive. Some of these populations in the Susitna River have already been listed as critical. In addition to the impacts on the salmon, I have doubts that this project is really the answer to

the railbelt's energy needs. Most of us don't heat our homes with electricity. We use natural gas. For me, I know that that's where most of my money goes in the winter. This dam isn't going to have any effect on my wintertime heating bills. So I'm afraid that we're going to be spending many billions of dollars on a project that's going to provide about 25 percent of our total need.

So, in sum, I'm concerned about the impacts on the river and on the fish and that these billions of dollars spent isn't going to provide the buffer to the rate payers against rising and volatile gas prices. I'm really hoping that everybody that is involved in this project will take the time to look at these impacts and look at what alternatives we have.

Thank you very much and enjoy the rest of your time up here.

DAVID TURNER: Okay. Is there anybody else that would like to have an opportunity that hasn't had one?

NANCY BAILS: Good evening. I got here rather late, so I didn't hear whether you had made a statement predicting the length

of viability for Susitna-Watana. Is that known at this time?

DAVID TURNER: Lifetime viability? No, we have not made a --

NANCY BAILS: Is there a range of years that has been considered?

DAVID TURNER: No. We would be looking at a license period that would go up to 50 years and then we'd do something thereafter, but most projects do have a lifetime longer than most license periods.

NANCY BAILS: My name is Nancy Bails and I live in Anchorage. Although I'm on the board of directors of the Denali Citizens Group, a small group up at the entrance to Denali, I'm speaking for myself tonight.

One of the first things that I wanted to tell you is to thank you for agreeing to do a scoping meeting in Cantwell. I hope that when you are in Cantwell that you will be prepared to help the people in Cantwell understand the implications of the Denali corridor for their community. It will be a fairly big and life-changing event for Cantwell if the Denali corridor is selected. So rather

than just a generic presentation in Cantwell, I think a lot of people up there may not know very much at all about the scope of the project, haven't checked your Susitna-Watana dot org web site, looked at the maps and so forth. So they may need a little help in understanding the impacts of the Denali corridor on their community. It would be very helpful if you were to help them do that.

In listening to the other two groups talking about the Chulitna and the Gold Creek corridors and what impact it would have on their land holdings along the railroad made me realize -- I was ready to recommend that you use one of those to keep the impacts off the Denali Highway. But now I don't know if I'm ready to make any recommendations about corridors other than that the people that live there be adequately informed by you of the socioeconomic impacts.

I don't know whether you're planning on closing the road when it gets close to the dam for security reasons, if that has been a thought, or if it's part of the alternatives, but it might be something to

consider.

There was just one other question that I had, and that was the whole concept of wintertime operation of a dam where in fact most of the contributing tributaries for a dam as high latitude as Susitna-Watana would virtually shut down in the winter. So the net recharging of the dam resource might not be equivalent to the total demand over the course of a long winter. As long as you're doing studies to look at that and make sure that you can model, that you can do load following with a dam like that with cold-weather operation, then that's fine, but you do need to look at that.

There's not a whole lot of dams at this north of latitude. I think most of them are probably in Russia and Europe. So this is certainly a new project for North America. It really isn't comparable to any other dam that's been built in this country yet because of those recharge issues, the fact that the glaciers are receding in the Alaska Range and have been quite dramatically receding over the past three or four decades. So your supply of water from the glacially-fed waters of the Susitna may be

subject to change especially over a 100 to 150-year dam horizon.

Then the issue of glacial silt where if you get siltation up to a certain point, are you going to be able to take down the dam? Is reclamation of the dam an impact topic that you're considering? If it isn't, it probably should be because there's no reason in having a silted up dam exist anymore, but is there a plan for successful taking down of such a dam? Are you going to have to dredge behind the dam the way they do out here in the inlet to keep an open shipping channel?

All these issues are very important in the northern cold-weather operation of a high-latitude dam in glacial waters, and I hope that you will carefully consider all of these. I don't have a position on this dam yet. I am familiar with a lot of the territory in the project area having lived in the Denali area or worked for Denali Citizens Council since the 1970s. I do remember the original Susitna project was a lot larger. This is a scaled-down project, which I do appreciate. I think that project was way too huge.

So I wish you luck. Have fun in Cantwell. It might be below zero up there, so take your woolies.

DAVID TURNER: Thank you. Anybody else have anything they want to add?

LARS GLEITSMANN: Lars Gleitsmann once again. I feel compelled to add a some facts because of some of the statements that have been made by the audience. The old studies of the dam point out that there would be, like, less than 5 percent -- I think it was like 3 or 4 percent of sedimentation of the volume in 100 years. So it is not like some people claim that the dam would be sedimented and the reservoir would be useless after 100 years because of the glacier sediments.

There have been made statements that in the United States and in Canada all the dams are being taken down. Isn't it in North America less than 1 percent of all dams have been taken down? Isn't it that there's less than 1 percent of dams that have been removed since they were built in the history of the United States?

When people talk about manmade

global warming and when people believe that manmade global warming exists, I think that should be an argument for building the dam, not against it. All over Alaska we are burning diesel fuel to create electricity. That diesel fuel is usually flown in with aircraft instead of having small hydro projects. All over Alaska small hydro projects are not happening because of environmental concern and instead diesel fuel is being flown in to generate electricity with diesel generators. So if there's arguments about global warming and manmade global warming, it should be arguments for building a dam, not against it. Yeah, as I said, I'm for the dam.

DAVID TURNER: Thank you.

LARS GLEITSMANN: Excuse me.

Another thing. People say they know the area up there. If I'm circling in the airplane over the dam site, the next cabin, the next manmade location is about half a flight hour away, maybe 50 nautical miles. The next cabin that is in the vicinity of the dam site is a commercial lodge at Stephan Lake. It's an extremely expensive commercial -- large and some small cabins around Stephan Lake that are mostly

owned by multi-millionaires. That's like half a flight away. Then on the northern side of the river there's High Lake. There is a grass runway at the lake with, again, expensive seasonal dwellings. Those are the only manmade structures within, I would say -- my memory is not that detailed, not that good, but you can look at some maps yourself -- I would say within a 50 nautical mile radius.

Then, people talk about the access through the Denali corridor. If you look at the history of the area, people have accessed that area for mining, exploration and hunting with four-wheelers and snow machines and all kinds of machinery over the decades. There is a maze of trails that leads south from the Denali Highway into that area. The entire northern side of the proposed dam location is full of access trails that are easy, fast trails where you don't need to ford rivers or you don't need to ford swamps that people are using to access that area. So a northern access corridor would basically, in my mind, in my personal opinion as somebody that really knows that area in detail, make no difference whatsoever because the access

exists. The access is there. With snow machines, with ATVs, with the existing trails, there's no problem about access if anybody wants to use that area.

Since the crash of the F-22 jet fighter there's a bulldozer trail that goes from the Denali Highway almost directly to the dam site. It's a well-established bulldozer trail that was used extensively that was an old mining trail -- or excavation trail rather that was opened up maybe even before the recovery of the wreckage and the contaminants of that jet fighter crash. So the access to the area from the Denali Highway is there.

Like, for example, from Gold Creek they would probably never make it through the phase of consideration because of the mountainous nature and because of the costs of the mountainous nature including bridges and whatnot. So many of those arguments I don't really view as facts. Like people say there will be a 400-people camp right in front of my doorstep, but I would say their doorstep is at least a flight hour away from the actual location. I just feel like I have to point out

some things.

DAVID TURNER: Thank you.

Anybody else have a statement they want to make? Okay.

Just to sort of wrap up, I want to again talk about a few dates. Study requests and comments are due by April 27th unless we grant the extension of time, which we likely will and then it will be May 31st. AEA will be looking at those information and study requests and file a proposed study plan in June. Right now it says June; it will probably move back to July.

We'll be holding a number of study plan meetings with the stakeholders to try to resolve some of the information needs that we need to address your issues and concerns. Those dates will be -- if we grant the extension time, these dates will be updated and a new Scoping Document will be issued with new dates in it, but each of these dates will be moved back about a month. Ultimately a study plan determination will determine what studies we'll need to complete our EIS considering the information provided tonight as well as what we've heard on

the record so far.

I want to thank you all for coming tonight and sharing your concerns and your passions for and against the project. At the beginning of this we need to figure out what we need to look at to make an informed decision and we will be doing that. We should be issuing a Scoping Document -- a Revised Scoping Document based on these comments probably in July. So look forward to that.

If there's no other questions, we'll adjourn the meeting. Thanks again for coming.

(Meeting adjourned at 8:13 p.m.)