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Case: In Re: Hydrokinetic Pilot Project Workshop

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In Re: Hydrokinetic Pilot Project Workshop
October 2, 2007

FEDERAL ENERGY REGULATORY COMMISSION
HYDROKINETIC PILOT PROJECT WORKSHOP

* * *

October 2, 2007
911 N.E. 11th Avenue
Portland, Oregon

Grace F. Lengmueller, RPR, CSR
Court Reporter

1 APPEARANCES

2 COMMISSIONERS

3 COMMISSIONER PHILIP D. MOELLER

4 COMMISSIONER JON WELLINGHOFF

5
6 FERC STAFF

7 JOHN KATZ - Office of the General Counsel

8 TIMOTHY WELCH - Office of Energy Projects

9 ANN MILES - Office of Energy Projects

10 MARK ROBINSON - Office of Energy Projects

11
12 AGENDA

13 Opening Remarks and Introductions

14 FERC Staff's Presentation of Pilot Project Licensing
15 Process

16 Panel: Hydro Industry Perspectives on the Pilot
17 Process

18 CRAIG COLLAR: Senior Manager for Energy Research
19 Development, Snohomish County Public Utility
District

20 DANIEL IRVIN: President and CEO, Free Flow Power
21 Corporation

22 KEVIN BANISTER: Vice President, Business
Development, Finavera Renewables

23 STEVE KOPF: Marketing, Ocean Power Technologies

24

25

1 AGENDA (Continued)

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3 Panel: Government Agency and Tribal Perspectives on
4 the Pilot Process

5 BOB LOHN: Northwest Regional Office Administrator,
6 NOAA Fisheries

7

8 WALTER CRUICKSHANK: Deputy Director, Minerals
9 Management Service

10 ANNIE SZVETECZ: Southwest Regional Assistance Lead,
11 Washington Governor's Office of Regulatory
12 Assistance

13 DAVID VAN'T HOF: Oregon Governor's Sustainability
14 Advisor

15

16 DARYL WILLIAMS: Environmental Liaison, Tulalip
17 Tribes

18

19 Panel: Additional Perspectives on the Pilot Process

20

21 MICHAEL SULIS: Senior Systems Analyst, PNGC Power

22

23 CAROLYN ELEFANT: CEO and General Counsel, Ocean
24 Renewable Energy Coalition

25

26 LINDA CHURCH CIOCCI: Executive Director, National
27 Hydropower Association

28

29 TERRY THOMPSON: Lincoln County Commissioner, Oregon

30

31 ROBIN HARTMANN: Ocean Program Director, Oregon
32 Shores Conservation Coalition

33

34 RICHARD ROOS-COLLINS: Director of Legal Services,
35 Natural Heritage Institute

36

37 Open Forum Facilitated by FERC Staff

38

39 Closing Remarks

40

41 Adjourn

1 PORTLAND, OREGON; TUESDAY, OCTOBER 2, 2007

2 10:11 a.m.

3 * * *

4 COMMISSIONER MOELLER: Good morning. We're
5 glad you're here. One look around the crowd, and it's
6 obvious that hydropower issues are sexy again.

7 My name is Phil Moeller. I'm the
8 Commissioner with the Federal Energy Regulatory
9 Commission. I am from Washington State, and I'm happy
10 to be joined by my colleague and friend, Commissioner
11 Jon Wellinghoff, from the hydro-challenged state of
12 Nevada.

13 We're glad you're here today. The purpose of
14 our conference is relatively simple. We're here to
15 present the Commission staff's proposed licensing
16 process for hydrokinetic energy pilot projects and to
17 seek your feedback; feedback from representatives of
18 the industry, state and federal agencies,
19 non-governmental organizations, native American tribes,
20 and the public, in general.

21 This is an issue that we're happy to be
22 promoting as a Commission from -- as a perspective from
23 a Northwest Commissioner, I work to try and raise the
24 profile of hydropower amongst the nation's
25 policymakers, but it's been a job that's been made

1 easier by the enthusiasm generated by this new wave of
2 technologies. They include, of course, wave power,
3 tidal power, in-river flow. We group them all under
4 the heading of hydrokinetic issues and hydrokinetic
5 energy.

6 As a personal representative of the great
7 Northwest, one of my priorities is to support policies
8 that avoid delays in the development of these new
9 technologies, and that's something that we're going to
10 talk about today. We want to hear from you and find
11 out your perspectives on whether this pilot process
12 will work as a way to generate the kind of data and
13 information that, again, I hope to help promote this
14 industry.

15 I'll hand it over to my colleague,
16 Commissioner Jon Wellinghoff.

17 MR. WELLINGHOFF: Thank you, Phil. I
18 appreciate it, and I do want to commend Commissioner
19 Moeller for being a real leader in the hydro area. In
20 fact, Phil and I went up together for the confirmation
21 hearings in the Senate for the Senate Energy Committee
22 as a pair. And as I was sitting there, I told the
23 Senators, if they had any questions about hydro, it was
24 Phil; I don't want to answer. So he has been a real
25 leader, and this is a very promising technology.

1 I've tried to be a leader in the area of
2 renewables, an area that I'm extremely interested in
3 and was interested in before I got the Commission, and
4 I've been on the Commission for about a year. And I
5 think this one technology -- hydrokinetics, ocean power
6 technology, and in-river technology -- has the promise
7 to truly bring renewables to this entire nation.

8 We have many areas in the nation that are
9 very concerned about improving their level of
10 renewables in their resource mix and fear that they do
11 not have adequate wind resources or other renewable
12 resources to truly participate with the other states,
13 and here's an opportunity for one more resource for
14 areas in the coastal states and areas that have large
15 rivers to truly participate, and I think it has great
16 promise from a number of perspectives.

17 Number one, it potentially can be base-load,
18 and many of these systems will run constantly.
19 Secondly, it's close generally to the load centers,
20 which is very critical.

21 We have lots of wind in this country, but
22 unfortunately, most of it is in North and South Dakota
23 or Montana. The problem is: How do you get that to
24 Los Angeles or Phoenix or Chicago or, you know,
25 Atlanta? And so here we have an opportunity to bring

1 power to where the people are because it's very near to
2 that area. Also, it has the promise, I think, to
3 provide power at competitive prices, so ultimately, it
4 can compete with our traditional fossil fuels if we can
5 bring this down to scale and bring in enough systems in
6 enough places and start ultimately generating in large
7 enough quantities. I think there is a potential scale
8 there.

9 Of course, there are issues, issues we're
10 going to address today, as Commissioner Moeller
11 indicated, by looking at this pilot process that FERC
12 has put forward. There's environmental impacts we have
13 to look at. There's competing uses that we have to
14 look at, and of course, the law of unintended
15 consequences.

16 We have to determine exactly how these
17 systems are going to function, and that's why I think
18 it's so important here today to solicit from all of you
19 information about this pilot licensing process that
20 FERC is going through, and of course, the goal, as I
21 understand it, is to get this process down, we can
22 actually issue these pilot licenses in a six-month
23 period potentially, but to do that, we really need your
24 help.

25 We need everybody's help. We need the

1 state's help. We need other federal agencies' help.
2 We need the individual organizations, the environmental
3 organizations and fishery, fishermen, others that are
4 all part of the overall ecosystem of our marine and
5 river systems. And, ultimately, we need to do that so
6 we can try to, number one, relieve regulatory burdens
7 to do that without compromise on the environment, and
8 that's what I look forward today to hearing from all of
9 you, but how FERC can move forward with this, so we can
10 move forward with this together and make this happen.

11 Thank you very much.

12 COMMISSIONER MOELLER: We'll proceed with
13 John Katz from our Office of General Counsel to
14 describe the logistics of today.

15 John.

16 MR. KATZ: Thank you very much, Commissioner.
17 Can you hear me out there?

18 My name is John Katz. I'm with the Office of
19 the General Counsel. With the guidance of
20 Commissioners Moeller and Wellinghoff, I'm going to be
21 moderating the workshop here today.

22 Couple of logistical notes. One is, as you
23 can see, we have a court reporter here, so to the
24 extent that anyone from the audience is speaking during
25 the course of the day -- particularly, during the open

1 forum in the afternoon -- make sure that you use one of
2 the microphones which Commission staff will be bringing
3 around, and please give your name and affiliation so
4 that the court reporter can get that down. In the
5 notice of the workshop, information was provided about
6 buying transcripts, so if you're interested, you can
7 find that in the notice, or you can talk to the
8 reporter at the close of the day.

9 We will not be getting into case-specific
10 discussion today; something important to note under the
11 Administrative Procedures Act. The Commission can only
12 discuss matters that it is issued an official notice
13 under the Sunshine Act. So while particular panelists
14 will indeed be free to discuss what's going on with
15 their projects, questions like "Why hasn't the
16 Commission issued a license yet," or, "Gee, I filed a
17 pleading, and why haven't you answered my really good
18 points," we will not discuss.

19 For those on the left side here who I may be
20 a disembodied voice for, I apologize; although, that
21 may be the best way to see or not see me. After Tim
22 Welch gives his presentation, the podium will be moved
23 so that you'll be able to see fully.

24 MR. WELCH: (Indicating.)

25 MR. KATZ: That was Tim.

1 I want to make a couple of quick
2 introductions before handing it over to Tim. In
3 addition to the Wellinghoff and Spitzer offices -- I'm
4 sorry -- the Wellinghoff and Moeller offices, we have a
5 couple of assistants here representing two of our other
6 Commissioners, and I can't see them, but I know they're
7 in the front row here.

8 Elisabeth Blaug is here from Commissioner
9 Kelly's, and Monique Watson is here with Commissioner
10 Spitzer's office. We also have Jignasa Gadani, who is
11 with Mr. Moeller's office, and James Pederson, who is
12 with Commissioner Wellinghoff's office. And I know, if
13 you want to mingle and talk with them during the course
14 of the day, they'll be happy to do that.

15 With that, I'm going to turn the podium over
16 to Tim Welch, who is one of the leaders of the Office
17 of the Energy Project, and he's going to give you a
18 brief presentation on FERC staff's pilot licensing
19 project proposal.

20 Take it away.

21 MR. WELCH: Thank you, John.

22 I have the distinct honor and pleasure of
23 sort of kicking things -- our workshop off today. As
24 you can see, we're going to be talking about our
25 hydrokinetic pilot license process.

1 By hydrokinetic technologies, we're speaking
2 about both wave and tidal and in-river technologies.
3 Now, as with most new technologies, the environmental
4 impacts of these new technologies are, for the most
5 part, relatively unknown at this time, so the
6 Commission staff has developed this pilot license
7 process so that a few pilot projects can move forward
8 and begin collecting important environmental
9 information to allow us to move forward and fill this
10 void of information.

11 So in the next 20 minutes or so, I'd like to
12 go over three different areas. First, I'm going to go
13 through very briefly the process itself; talk a little
14 bit about what we see or some of the advantages of the
15 process. And then I'd like to leave you with some
16 thoughts about some things that have to happen in order
17 for our proposed six-month process to work.

18 So the goals of our process, the overall
19 goal, is to allow developers to test new technologies,
20 determine the appropriate sites, and most importantly,
21 to confirm environmental effects, while at the same
22 time, providing for Commission oversight and -- whoops.
23 Oh, no.

24 MR. KATZ: Oversight, then we thought.

25 MR. WELCH: Yeah. Sorry about that. I hit

1 the wrong button. I think I shut the whole thing down.

2 MR. KATZ: We are the Government, and we're
3 here to help.

4 MR. WELCH: Thank you, John. All right.

5 Okay. Thank you very much. I apologize for
6 that little gap.

7 Again, as I was saying, one of the goals of
8 the process is to allow developers to test the new
9 technologies to determine the appropriate sites, and
10 most importantly, confirm environmental effects with --
11 at the same time, providing for Commission oversight
12 and agency input. Now, both Commissioner Wellinghoff
13 and Commissioner Moeller mentioned that we're proposing
14 a licensing process that will complete licensing in as
15 few as six months so that we can get these projects in
16 the water and operating and start collecting this
17 important environmental information.

18 Now, what are we considering to be a pilot
19 project? The process is available to projects that are
20 what we consider small, and by that, we're defining
21 less than five megawatts; most importantly, as you'll
22 see later on, projects that are removable or able to
23 shut down on very short notice and not located in
24 waters with sensitive designations. And by sensitive
25 designations here, we're using that as more of a

1 generic term and not a specific capital "S" sensitive
2 designation. So that will vary from project to
3 project.

4 So here it is. I know you can't read this
5 slide, but you do have little handouts here that we had
6 in the front of the process, and what I'm going to do
7 is I'm going to break down each of these little boxes
8 and just go through it very briefly with you.

9 So things kick off by an applicant filing a
10 notice of intent to use the pilot licensing process and
11 submitting a draft application. Now, we're envisioning
12 a draft application is going to be very similar to the
13 pre-application document or PAD that you see in the
14 integrated licensing process, and it will include both
15 existing information describing the effective
16 environment or baseline information about where the
17 project's going to be located and any other
18 environmental information that the applicant has
19 collected. And at the same time, if it's appropriate,
20 the applicant will request to be FERC's non-federal
21 representative for both Environmental Species Act
22 consultation and National Historic Preservation Act,
23 Section 106, consultation.

24 Thirty days later, we expect the resource
25 agencies, non-governmental organizations, to file

1 comments on the draft license application. And at the
2 same time, the Commission staff will begin initiating
3 tribal consultation to talk to any affected Indian
4 tribes and that, if appropriate, we would designate the
5 applicant as our non-federal rep for both ESA and
6 National Historic Preservation Act. So that pretty
7 much ends the pre-application process.

8 Now, you begin the post-filing activity.
9 Once that begins, the applicant would take all the
10 comments that were filed and incorporate them into its
11 actual pilot license application. And we expect that
12 the application would include study plans; any
13 monitoring plans; if appropriate, a draft, biological
14 assessment under Section 7 of the Endangered Species
15 Act as our non-federal rep, any applications for any
16 other permits that may be necessary, such as a CZMA
17 application or, if appropriate, an application for a
18 401 water quality certification. So that would be the
19 actual pilot license application.

20 So 15 days later, the Commission would assess
21 that application, determine if there is enough
22 environmental information to move forward with a NEPA
23 document, and if so, we would issue our official
24 acceptance and ready for environmental analysis notice.
25 And at the same time, that notice would also request

1 any interventions for anyone who would like to
2 intervene in the project.

3 At the same time, under ESA, if it was
4 appropriate and acceptable, the Commission staff would
5 review the draft biological assessment, and if it was
6 adequate, it would issue the biological assessment as
7 its own, thus kicking out formal consultation under the
8 Endangered Species Act, if it's appropriate in this
9 situation.

10 So, once the application is filed 30 days
11 later -- or 30 days after the REA and acceptance notice
12 is issued, we would expect the agencies, tribes, and
13 NGOs to file any comments on the application, and most
14 importantly, any recommendations for mitigative
15 measures that they would like to see in the pilot
16 license and any study or monitoring requests that they
17 believe are important during the license term. And at
18 the same time also, if -- once again, if it's
19 appropriate, the agencies could file any mandatory
20 conditions under Section 4E of the Federal Power Act if
21 there are any kind of federal lands involved, such as a
22 marine sanctuary or something of that nature.

23 Sixty days after that, the Commission would
24 then issue a single EA and hopefully conclude a finding
25 of no significant impact. Now, this is very important

1 information here that, if we can't get to the finding
2 of no significant impact, then maybe truly this was not
3 an appropriate pilot license application. And I'll
4 talk a little bit about how we hope to get to a finding
5 of no significant impact a little bit later.

6 Thirty days after we issue our EA, we expect
7 all stakeholders to give us some comments on that EA,
8 and at the same time, we would be seeking resolution of
9 any 10(j) recommendations under the Federal Power Act,
10 any resolution with Fish and Wildlife agencies for any
11 kind of mitigative measures that have been recommended.
12 We would seek to come to some sort of mutual agreement
13 with the resource agencies about the appropriate
14 measures to include in the pilot license.

15 Once that's all wrapped up, in six-months, we
16 would be prepared to present a draft license to the
17 Commission for its decision.

18 So that's it. There you have it.

19 So what are some of the advantages that we've
20 identified here? Well, overall, we think that the
21 overall advantage, of course, is to allow testing of
22 new technologies for domestic renewable power sources.
23 And in doing so, we have come up with a simpler, faster
24 review process -- only taking six months, once again --
25 so we can get these projects in the water and begin

1 collecting important environmental information in an
2 efficient manner and, most importantly -- and this is
3 the key -- that it provides an opportunity to gather
4 environmental and engineering information while, at the
5 same time, generating electricity and connected to the
6 grid. So these pilot projects would actually be
7 operating pilot projects that are actually generating
8 electricity and maybe some revenue from power sales as
9 well.

10 Now, we recognize that with any new
11 technology that there is some degree of environmental
12 risk in moving forward. Now, how would we propose to
13 manage that environmental risk? Well, we propose to
14 manage that environmental risk in four different ways:
15 By instituting or recommending to the Commission
16 institute safeguards in licenses against environmental
17 harm.

18 There's four different aspects here. First,
19 we're recommending a short license term; not 30 to 50
20 years, but right now, we're proposing that these
21 licenses expire after only five years to limit any kind
22 of environmental impact. Second, we're looking for
23 projects with a relatively small environmental
24 footprint. So, if there are any kind of environmental
25 impacts, they're very small and localized.

1 And, of course, we would recommend in any
2 pilot license issue intense environmental monitoring to
3 detect any changes in the environment and any
4 unanticipated environmental impacts associated with
5 these projects. And the results from that monitoring
6 would lead to the fourth bullet there, if there was
7 some adverse environmental impacts identified through
8 this monitoring that we would expect project shutdown
9 or removal, much unlike the conventional hydro
10 projects, which, you know, a large dam and a powerhouse
11 that can't be removed, we would expect these things,
12 these pilot projects, to be removed if monitoring
13 indicated any kind of adverse environmental impacts.

14 So those are our safeguards that we're
15 proposing to manage any kind of environmental risk.

16 How can we make this work? Well, most of us
17 in this room or many of us in this room that have been
18 involved with conventional hydro -- or relicensing of
19 conventional hydro projects know that we typically have
20 a three-year intensive pre-filing study process,
21 developing a study plan, and going out and collecting a
22 lot of information about conventional hydro projects
23 because we're proposing to license these projects for
24 30 to 50 years. And following a license application,
25 typically, a two-year FERC review process in preparing

1 a NEPA document.

2 Now, this is for conventional hydro projects.
3 This is kind of what we're all used to. Well, we have
4 a completely different situation here. We don't have
5 conventional hydro -- we're not talking about
6 conventional hydro projects that are being licensed for
7 30 to 50 years. We're talking about new technologies,
8 a short license term with environmental impacts that
9 are unknown.

10 So this is going to require a completely new
11 way of thinking, a shift in the dominant -- sort of
12 dominant paradigm. Basically, this is not your
13 father's relicensing hearing -- or your mother's, for
14 that matter. But, anyway, so it's a new way of
15 thinking.

16 In a major aspect of that new way of
17 thinking, not only from FERC staff, but also, we need a
18 commitment from federal and state agencies, tribes, and
19 NGOs to work with us together to make this process
20 work. And by working together, we're talking about two
21 very specific areas. First, the scope of the
22 pre-filing environmental studies and, most importantly,
23 expedited permitting -- and I'm talking about
24 permitting outside of the Federal Power Act; ESA,
25 Marine Mammals Protection Act.

1 Now, in regards to the scope of pre-filing
2 environmental studies, I'm talking here about
3 pre-filing studies, not the more intensive studies that
4 would be conducted post-licensing as the projects are
5 operating. We all know that FERC still needs to
6 prepare a NEPA document, and we need to get to a
7 finding of no significant impact for this to work. So
8 we can't proceed with no information at all, but, as
9 you know, we don't have a heck of a lot to go by. So
10 we need to -- along with the agencies, tribes, and NGOs
11 to agree to some sort of -- what the scope of these
12 pre-filing environmental studies.

13 Now, remember; we have a very short process
14 here, six months, so it doesn't make much sense to take
15 two years to collect environmental information for a
16 license term that may be only five years. So we need
17 some kind of agreement primarily on the affected
18 environment baseline information. And whether that --
19 the description of that baseline information is
20 quantitative or qualitative, we need to agree that
21 those -- especially quantitative studies -- need to be
22 very short term and very focused.

23 We also need to depend a lot on the
24 environment effects of similar structures, existing
25 information. There is a plethora of information out

1 there already on just the effects of just a buoy for --
2 to take an example, or there's a lot of information
3 from the communications industry about the effects of a
4 cable on the sea bottom. So we need to bring those --
5 that existing information into the process and identify
6 that and present that so that we can move forward with
7 our NEPA process.

8 Now, what allows us to move forward with
9 maybe a little less information than we're used to,
10 well, once again, it's our environmental safeguards;
11 the short license term, the small footprint, the
12 intense monitoring, and if impacts are detected,
13 stopping operation of the project and pulling it out of
14 the water. Those environmental safeguards, we believe,
15 allows us to move forward with maybe a little less
16 information that we may be typically used to.

17 Now, most importantly, expedited permitting.
18 Once again, we need a commitment for the -- from
19 especially resource agencies in this manner. We need
20 for agencies to develop their own internal processes
21 based -- using our pilot license process as a
22 springboard to issue their permits under ESA, Marine
23 Mammals Protection Act, within our six-month period.
24 So this is very important, if other agencies need to
25 develop their own internal processes as well.

1 Because, if we don't get this kind of
2 commitment from agencies and tribes and NGOs to work
3 together, especially with the expedited permitting,
4 this process simply will not work. We will not be able
5 to fit it into our six-month time frame, but if we can
6 make it work, the rewards are great because we then
7 will begin building the important body of information
8 necessary to evaluate the cumulative impacts of larger
9 projects. We'll have a good base of information to
10 move forward in an environmentally sensitive manner for
11 much larger projects so that we can begin to tap the
12 tremendous energy potential that are in our oceans and
13 our waterways.

14 Okay. I know that many of you probably have
15 some questions right now, but we'd like to get to our
16 panels as soon as we can. So if you just hold your
17 questions right now, I think a lot of the answers will
18 come out of our panel discussion and possibly our open
19 forum at the end.

20 So I'd like to turn things back over to John
21 at this point, and we probably need to shift around a
22 little bit, so if you be patient, we'll move into our
23 panels. Thank you very much.

24 MR. KATZ: Well, it's good to see all of you.

25 We're going to turn right to our first panel,

1 which are members of the industry working to develop
2 potential hydro pilot projects.

3 Our first panelist is Craig Collar. We're
4 working from, I guess, stage right to stage left.
5 Craig is a senior manager for Energy Resource
6 Development for the Snohomish County Public Utility
7 District No. 1 in Washington State. He has over 20
8 years of experience in a variety of technical and
9 operations leadership roles. He holds a bachelor's
10 degree in mechanical engineering as well as a master's
11 degree in business administration. Just last week, he
12 returned from a two-week visit to Europe, during which
13 time he had participated in the European Wave and Tidal
14 Energy Conference in Porto, Portugal. Perhaps he also
15 tasted some wines. Can't imagine the name of Porto,
16 and they didn't have port there.

17 Sitting next to him is Dan Irvin, who is the
18 president and CEO of Free Flow Power Corporation, a
19 renewable energy company engaged in generating
20 electricity from the movement of water without dams
21 using a proprietary magnetic levitation turbine
22 generator technology. He has 25 years of project
23 finance experience as an investment banker with energy
24 facilities and other types of infrastructure. He's a
25 graduate of Princeton and has served as a guest

1 lecturer at Columbia and Northwest University's
2 graduate business schools.

3 Next panelist is Kevin Banister, who is the
4 vice president for business development with Finavera
5 Resources. He also serves as the president of Oregon
6 Wave Energy Trust and has been appointed to the Oregon
7 Renewable Energy working group and sits on the Oregon
8 Workforce Investment Board. Prior to working with
9 Finavera, he worked in the utility industry in the
10 Pacific Northwest. He holds an advanced degree in
11 economic development from the London School of
12 Economics and a bachelor's degree from the University
13 of California at Santa Barbara.

14 Steve Kopf, who is laudably humble, asked me
15 only to say that he is a consultant with -- for Energy
16 Power -- excuse me -- Energy Power Technologies, and he
17 works for them on the Reedsport project.

18 With that, I will hand it over to the
19 panelists. Craig, if you could start off.

20 MR. COLLAR: Good morning. Is the volume
21 okay?

22 All right. Well, I appreciate this
23 opportunity to provide feedback on the new FERC pilot
24 licensing process, which we at Snohomish do see is a
25 very important element at facilitating the development

1 of these new renewable resources.

2 We do have a couple of key challenges in
3 Snohomish that we think are relevant to the dialogue
4 today. We do have it very rapidly growing in our
5 service territory, and we're also obligated to meet the
6 requirements of our state's renewable portfolio
7 standard, which does have firm deadlines associated
8 with it, so the timeliness with which we're able to
9 afford our various renewable initiatives is important
10 to us. And, of course, tidal energy is particularly
11 compelling in our region, given the tremendous
12 potential of the Puget Sound as well as the proximity
13 of Puget Sound resource to load.

14 So we do see that this power process does
15 have tremendous value in terms of filling some of the
16 needs that were represented at the previous FERC
17 licensing processes, and that really best helped fill
18 much of that gap between preliminary permit, site study
19 activities, and eventual commercial site licenses.

20 We do agree that's absolutely critical that a
21 process be established that provides for the very
22 timely deployment of pilot devices into an ocean
23 environment so that that meaningful data that we talked
24 about can start to be generated. We think that those
25 sorts of activities is absolutely critical in terms of

1 moving forward to thinking kind of commercial-scale
2 array and realizing the benefits, economic and
3 otherwise, as we talked about a little bit here this
4 morning.

5 We're certainly hopeful that the limited
6 scale and the careful siting of these devices --
7 although, we think there are questions with respect to
8 details, as with things like the very definition of
9 sensitive waters designation and also the duration of
10 these projects listed as criteria, will translate into
11 very timely approvals on the part of the agencies and
12 other entities with that authority and accountability.

13 But we think that's a key question. I mean,
14 in terms of what degree of pre-licensing studies are
15 truly envisioned to be required prior to the granting
16 of the license, we certainly would advocate the vast
17 majority of those types of resources. The time and
18 money should be relegated to studies during the
19 installation and certainly the operation of the pilot
20 plant and that the pre-licensing activities be more
21 focused again on that currently available and relevant
22 information and review of that in a way that can --
23 from which we can draw up the right conclusions in
24 terms of the correct types of monitoring activities.

25 We also think it's important that we look for

1 opportunities to avoid duplication of effort on the
2 part of various federal, state, and local
3 FERC-regulating processes and entities for the
4 memorandums of understanding or other formal types of
5 agreements. And we'd also suggest there's some
6 opportunity to look globally towards some of the
7 expertise that's out there in the world.

8 In Europe, for example, folks like the
9 European Marine Energy Center, the Environment &
10 Heritage Service, have spent a tremendous amount of
11 time grappling with these same types of questions and
12 had developed some permitting and monitoring approaches
13 from which we can at least learn.

14 The folks at the Environment & Heritage
15 Service, for example, who issued the license for the
16 construction and deployment of that megawatt scale of
17 Marine Current Turbine device in Strangford Narrows
18 north of Ireland have referred to what's a very
19 environmentally sensitive Strangford Lough location as
20 in an infancy completely surrounded by committees. So
21 you get the sense we're not the only ones having to
22 travel down this road to contend with some of these
23 issues. Certainly wouldn't advocate to replicate what
24 those folks have done, but there's certainly a lot
25 there that we can learn from.

1 I also would like to comment certainly on the
2 path to commercial plan development following
3 successful pilot plant activities. While the data
4 gained from pilot plant activities is certainly
5 invaluable, I don't know that it will offer enough
6 knowledge at least in the Puget Sound to move forward
7 with full-scale commercial arrays. At least on a very
8 large scale, we at least would envision that occurring
9 in a series of phases or stages, each phase building on
10 the successful evaluation of the previous stage. In
11 fact, in our vision, at least one vision, the pilot
12 plant itself could possibly be the first phases of such
13 a development. Obviously, that type of an approach
14 needs to balance environmental considerations as well
15 as, importantly, economic considerations to be viable,
16 and we think that is the type of balance we should be
17 seeking to strike.

18 I bring that last point up because it may
19 require down the road some additional flexibility or
20 changes in FERC's licensing processes for large-scale
21 commercial plants. I think the real question is: What
22 does that path or roadmap look like from a successful
23 pilot plant to a full-scale commercial array? Is this
24 a process of amendments to an initial license or
25 relicensing process? Does the pilot plant, for

1 instance, maintain priority for the applicant for that
2 site of interest, and if so, for what kind of scale or
3 footprint? And then, of course, also important, how
4 does now the scrutiny protocol begin to dovetail with
5 this pilot plant licensing process? So those are a few
6 of the questions that we think are important to have
7 out on the table for visibility and dialogue today.

8 With that, I'd like to thank the
9 Commissioners and the FERC staff for this opportunity.
10 I'm certainly very appreciative of the efforts of folks
11 on all fronts working to facilitate these new renewable
12 energy and technology, so thank you.

13 MR. KATZ: Thank you very much, Craig.

14 Dan Irvin, if you could go next, please.

15 MR. IRVIN: Thank you. I thank everybody for
16 your interest in this area. I think it's an extremely
17 exciting opportunity, and it's an extremely exciting
18 time.

19 I want to start by a very general comment,
20 which is that we believe it is an extremely important
21 step in the evolution of the regulatory framework for
22 this business, so we wholeheartedly are in favor of
23 this proposal by FERC.

24 Our comments, I think, I want to frame from
25 another general comment, which is that in this

1 industry, as in any industry, technical feasibility and
2 financial viability have to go hand-in-hand. It's not
3 enough to have a technically feasible approach to doing
4 something. And you can look at any industry and any
5 set of examples; Microsoft versus Wang. I can go
6 through hundreds and bore you to tears on this, but
7 financial viability is a key part of this, and so I'm
8 going to focus a little bit on that because there's
9 been a lot of attention on the technical aspects of it.

10 People are putting up a great deal of money
11 in this area, and I think there will be a great deal of
12 money available from investors in this area if -- if --
13 we do this right in terms of the financial model.

14 There are three aspects, I think, of this proposal that
15 are worth looking at from a financial point of view. I
16 think one of them is the term. A five-year term is not
17 long enough to get an investor a return, so you're
18 looking at that as being pure risk capital, which is
19 going to make it harder to get money into the cost of
20 putting these in the water. So I think looking at the
21 term and thinking about the term of the licenses is
22 worth doing because five years is simply not long
23 enough for anybody to get a return on their investment.

24 The second aspect has to do with the risk of
25 the investment, which is the definition of things like

1 adverse economic impact. If you're going to convince
2 people to put money into something in a pure risk
3 capital kind of situation, I think it will help to
4 reduce the uncertainty as to what kinds of things or
5 what thresholds there will be for it to be required to
6 be pulled out. You know, what is this? Can it be
7 anybody coming along and saying they don't like some
8 minor environmental impact, or is there some standard?
9 I just think that that will help.

10 And the other aspect is clearly delineating
11 over time, and this may not be something that can be
12 done very quickly, but say over the next six months to
13 a year delineating how this license process interacts
14 with the bigger commercial license process for its site
15 so that there is less -- what I think I'm getting at
16 is, if you can eliminate unnecessary uncertainties --
17 and we all recognize that there are legitimate
18 environmental issues here and sources of uncertainty,
19 and that's what risk capital is all about is taking
20 those uncertainties, but if you can eliminate
21 uncertainties that are not necessary to achieve the
22 policy objectives, it will make the process of
23 financing projects more viable or possible, and it'll
24 facilitate this objective. So, fundamentally, we think
25 these kinds of energy generation are positive. I think

1 it's important for people to look at how do you make
2 that more efficient.

3 I want to kind of deviate from the purpose of
4 this panel a little bit on that issue because I think
5 an important aspect of all of this is the overall
6 energy policy and things like the tax code, which right
7 now have many biases toward different types of energy.
8 My view of the world is that, if you have an apparatus
9 like this, which can determine suitability or set
10 standards -- and I think the FERC and the other
11 environmental agencies do a very, very good job of
12 that -- I think the best thing the higher-level
13 policymakers can do -- and I'm -- I mean by that, the
14 President and the Congress and State legislators and
15 other policymakers can do is to create a framework that
16 creates the economic incentives, levels the playing
17 field, and then let people compete. Because I think
18 the standards are there, and the standards are very
19 high, and to the extent that those standards are met
20 environmentally, I think water should be allowed to
21 compete with wind and should be allowed to compete with
22 solar, and there should be an environment in which the
23 best economic technology and approach based on all of
24 the things that go into delivering that power are
25 allowed to emerge.

1 So, you know, I do think the free market does
2 a very, very good job of competing if the rules are
3 really clear and the field is relatively level. I'm
4 convinced that this renewable energy can compete with
5 fossil fuels if it's allowed to have some of the same
6 advantages in terms of certainty of process and
7 limiting the time of the process. If you can, you
8 know, permit a pipeline in a year, that gives a huge
9 advantage over something that takes five years to
10 permit.

11 So I think as the playing field is leveled
12 and the policy incentives are made clear, the free
13 market will provide a way of doing this and making it
14 very commercial.

15 MR. KATZ: Thank you very much.

16 Kevin Banister.

17 MR. BANISTER: Thank you. First, I want to
18 thank the Commissioners Wellinghoff and Moeller for
19 coming here to Portland. Finavera established its U.S.
20 headquarters here in Portland, so I'd like to be
21 certainly among those that welcomes you here to Oregon.
22 We're really happy to have you.

23 I also want to extend our company's thanks
24 for this proposal, which we think is really a very good
25 first step towards creating the kind of environment

1 that our technologies need in order to get our devices
2 into the water and to install some arrays and start to
3 get to some of the important environmental information
4 that you talked about that will help us build the
5 larger commercial installations that we all ultimately
6 want to see.

7 So we have several comments related to the
8 proposal, but first, I want to sort of echo some of the
9 comments that Craig and Dan have made, especially as
10 they relate to the importance of a consistent and
11 predictable regulatory process; obviously, to the
12 degree that we can appropriately ease the burden on
13 developers to get projects in the water. That's
14 helpful for us, and it's a reduction in costs and, from
15 our perspective, certainly a good thing.

16 There's a concurrent benefit to reduction in
17 inconsistencies and the redundancies in the regulatory
18 environment, and that is the response of the investment
19 community, and I think Dan did a good job of touching
20 on that, but one of the things that we have come to
21 understand is that the investment community looks at
22 the regulatory uncertainties as probably the primary
23 barrier to getting involved with our industry. So to
24 the degree that we can communicate and have a process
25 that is consistent and predictable and reliable -- much

1 like the energy that we're trying to produce -- the
2 investment community will respond, and we'll start
3 getting -- and we'll start providing the sort of power
4 to the degree that we can.

5 So Finavera understands that this process
6 exists within the framework of the current preliminary
7 permit process, and there are a couple things that
8 we -- through experience, we've come to understand
9 about that process. And largely, what we've come to
10 understand is that there's a need for flexibility. As
11 we have pursued commercial projects, we've come to
12 understand that there's a need for flexibility in the
13 schedule and a need for flexibility in the project
14 boundaries, and we're interested in the way that this
15 proposed process would flow from the preliminary permit
16 process and vice versa and are interested -- I think
17 these guys said it, too; how that pieces together is
18 something that we're going to need to answer.

19 Let's see. Part of the problem, we think,
20 with permit process exists because our technologies are
21 fundamentally different from those that were originally
22 considered when these processes were made. Obviously,
23 ocean wave energy, for example, what our company is
24 pursuing is really different from technologies that
25 distract energy from other forms of moving water like

1 rivers, and the environmental conditions are also very
2 different. So we think that one way that might be
3 appropriate to advance the permitting process is to
4 look at something like generic environmental impact
5 statements because that -- the ocean, the open ocean
6 certainly is more uniform ecologically than other hydro
7 resources, and that might be one place we can look to
8 provide -- to reduce some of the burden that might be
9 unnecessary on ocean wave energy, for example.

10 We're also uncertain that the proposed
11 five megawatt scale and five-year term are sufficient
12 to provide the sort of assurances that private parties
13 need to provide financing for projects. Dan did a nice
14 job of describing that issue, and we believe that the
15 information that's gathered during any sort of pilot
16 project should be institutionalized into the larger
17 commercial development process.

18 So, for a proposal like this to work for a
19 company like ours, we need to have a better
20 understanding of what that sort of interim step would
21 be between a pilot project and a commercial project.
22 And, again, both Dan and Craig did a good job of
23 describing some of the concerns related to that issue.

24 So Finavera very much appreciates the efforts
25 that FERC has made. We look at FERC as a productive

1 partner as we try to get these new technologies into
2 the water generating electricity, and we look forward
3 to further dialogue on this and other issues. Thank
4 you.

5 MR. KATZ: Thank you.

6 Steve Kopf, if you can please give us your
7 thoughts.

8 MR. KOPF: Good morning, Commissioners.

9 My name is Steve Kopf, and I represent Ocean
10 Power Technologies or just OPT for short. Just by way
11 of introduction, I spent the last 20 years of my career
12 kind of working in emerging technologies; aerospace,
13 oil and gas, dense materials, and, most recently, wind
14 power industry before coming to ocean renewables. And
15 early in my career, I spent a good number of years
16 working for DuPont, an emerging tech group, and
17 involved in all kinds of technologies, and I guess some
18 of the things I learned there were very much what's
19 been talked about with the three panelists before me.

20 We had a process called Product and
21 Cycle-Time Excellence, and the bottom line was phase
22 development. How do you build incremental trust? How
23 do you -- as you're -- an investor develops a product,
24 is it fair to ask him to lay out a full marketing plan.
25 You know? He needs to understand what the market

1 potential of that product is, but as you bring the
2 product along during this phase development approach,
3 you have to answer the appropriate questions for the
4 phase development that you're in.

5 We at OPT have been working here in Oregon
6 now for about two years. In July 2006, we filed a
7 preliminary permit application for a project called
8 "Into Reed's water." And that PPA says that we're
9 going to build a 50 megawatt power project. Well, the
10 truth is we're going to put one buoy in this spring,
11 and if that works and our investors like what we're
12 doing and the monitoring on that buoy shows that
13 everything's okay, in the following after a FERC
14 license, we hope to put in 14 buoys. And, again, we've
15 got a lot of work to do technically to make sure that
16 things are working and that we're heading down the cost
17 curve, and we're going to do more monitoring and more
18 studying of those buoys and make sure everything's
19 okay, and that data will hopefully be an amended
20 license where we would build out.

21 Now, would we go straight to 50 megawatts?
22 Probably not. Again, I think what we have to talk
23 about is what Craig mentioned is that -- kind of the
24 incremental steps. How do you go from ones to tens to
25 hundreds to tens of thousands like the wind power

1 industry?

2 And I see many of the people in the audience
3 here are participating in our settlement process.

4 Right now, when we started this project a year ago, we
5 kind of looked at the current for regs and said, "How
6 are we going to take what's on the table and use it to
7 get what we want," which is this kind of this
8 incremental trust? How are we going to do this phase
9 development?

10 And what we came up with is we wanted to use
11 traditional licensing for the settlement process. We
12 filed our NOI and PAD in July. We hope to submit a
13 draft application in December. This fall, we've been
14 working very aggressively on a settlement agreement.
15 And, again, that settlement agreement is based on not a
16 lot of existing information. Where we're trying to
17 build certainty is in what we're going to do to study
18 and monitor once we have the 14 buoys in, but certainly
19 with an eye to the data that we need to eventually do
20 that full commercial build-out.

21 So I guess bottom line in the proposal is,
22 again, I think I agree with Kevin; it's a good first
23 step. I agree with Craig that it's got to be part of
24 an entire plan that gets you from one device to, you
25 know, a small-pilot scale program and to a -- you know,

1 first step of a commercial-phase program.

2 So I think we have to look at all this as a
3 whole, and I think -- I printed out a list of the
4 questions that you plan to ask us, and I think that's
5 where we're to kind of get into the meat of this of how
6 some of your proposal fits into our needs in this whole
7 area of phase development.

8 So with that, bring the questions on.

9 MR. KATZ: Thank you. Before I ask the
10 Commissioners if they have any questions, I want to
11 introduce to my immediate left, Ann Miles, who is the
12 director of the Commission's Hydropower Licensing
13 Group, and to her left, Mark Robinson, who is the
14 director of the Office of Energy Project, which deals
15 not only with hydropower projects but with natural gas
16 pipelines who provide natural gas to facilities, and
17 perhaps some day electric transmission siting.

18 With that, Commissioners, if you have any
19 questions, please go ahead.

20 COMMISSIONER MOELLER: Thank you, John.

21 Mr. Wellinghoff and I were speaking and
22 thought it might be worth a little more elaboration
23 from Tim on the difference between the preliminary
24 permit application process and the pilot process.

25 MR. WELCH: There are two mutually exclusive

1 processes, and the pilot process that I talked about
2 earlier is not intended in any way to replace the
3 preliminary permit process. The preliminary permit
4 process simply reserves a site for a particular
5 developer so that the developer can do some sort of
6 feasibility studies without having a project in the
7 water to determine if it has an area that it would like
8 to pursue further.

9 So the difference being, with a pilot
10 license, you would actually have a license to put a
11 project in the water and connect to the grid and
12 actually operate. You cannot do any kind of
13 operational activity under our preliminary permit
14 process. So they're two very different animals, and
15 one's not intended to replace the other.

16 MR. KATZ: Let me just clarify a little bit
17 that when Tim said the processes are mutually
18 exclusive, they're not really mutually exclusive;
19 they're, as Tim said, separate. You do not need a
20 preliminary permit -- if this doesn't go sequentially,
21 you don't need -- first, you have to get a permit, then
22 you get a license. You can proceed directly to the
23 licensing if you have a project that you feel ready to
24 undergo that process.

25 As Tim said, the preliminary permit is

1 intended to allow someone without undertaking any
2 construction activity to study a project for a period
3 of up to three years before they decide whether they
4 want to file a license application.

5 COMMISSIONER MOELLER: First, a question for
6 Dan.

7 Given that we're here in the Pacific
8 Northwest and the Columbia River brings its own set of
9 politics and issues, you might want to just clarify
10 that you're not talking about putting your type of
11 projects in the Columbia, are you?

12 MR. IRVIN: No, we are not.

13 COMMISSIONER MOELLER: You want to give a
14 minute on what --

15 MR. IRVIN: Yeah.

16 COMMISSIONER MOELLER: -- you are planning to
17 do?

18 MR. IRVIN: Right now, what we are focusing
19 on is the Mississippi River. And if you look at the
20 Mississippi, it is a huge water resource. It also is a
21 huge industrial porter; particularly, between Baton
22 Rouge and New Orleans, so -- and, by the way, having
23 good marine content. So it's kind of an ideal site
24 from our point of view because the river is very, very
25 deep; very wide.

1 What we will ultimately propose to use of the
2 river is a very, very small percentage of it; about
3 1 percent of a slice of the river at any given site.
4 So I think I've seen numbers; the river is as deep as
5 300 feet in some places. It averages a quarter mile
6 wide. I think the average depth is a hundred feet. So
7 these are all pretty much 40 feet below the surface of
8 the river and in areas that have a lot of big chemical
9 plants and refineries who -- some of which I think use
10 as much as a thousand megawatts.

11 So good customer base, big industrial area,
12 not -- probably not ever going to propose one of these
13 in Snake River or National Park.

14 COMMISSIONER MOELLER: Hopefully that --

15 MR. IRVIN: Definitely not the Columbia
16 River.

17 COMMISSIONER MOELLER: I have one general
18 question that I'd like all of you to answer. It has to
19 do with the minimal amount of information needed to
20 accept an application, form recommendations, and issue
21 of license in terms of the proposal, baseline
22 information, and environmental effects.

23 Given that you all are in different places
24 with different characteristics of the marine
25 environment, what are your views on what you're going

1 to submit in that context?

2 Craig, can you start it off?

3 MR. COLLAR: Well, that's, in fact, a
4 question we're asking ourselves right now. We're about
5 six months now into, you know, what we anticipated via
6 three-year study period, and we've had some dialogue
7 with the staff up to this point. But it's new to us,
8 so we're very much in the learning mode. We're
9 certainly working now in compiling all the information
10 that would typically be associated with the very
11 thorough preliminary application document, but beyond
12 that kind of scale, that's about as far down that road
13 as we thought to go.

14 COMMISSIONER MOELLER: Well, with fairly
15 sophisticated data in this country and on wind
16 patterns, and you could probably type in an address
17 into the website and figure out wind potential, but I
18 presume we have much less knowledge on certainly tidal
19 patterns. We know what the tides are, but the amount
20 of energy you can count on on a regular basis, I
21 presume that's what you're looking for?

22 MR. COLLAR: Yeah, exactly, right. In fact,
23 that would be a very significant portion to the work
24 we're doing, and imperative to have is a lot of
25 acoustic Doppler profiling work with which we attend.

1 They are, in fact, right now, feeding into a model
2 being put together by the University of Washington so
3 that, as we seek to put devices potentially into places
4 like Admiralty and the Rich Passage, you know, we can
5 start to be informed with respect to what kinds of
6 potential effects should we be vigilant to look for in
7 the rest of the Sound. That's obviously going to be a
8 very important question.

9 COMMISSIONER MOELLER: Dan.

10 MR. IRVIN: No. I mean, I think we also are
11 still looking at that and trying to get our arms around
12 that kind of data. I think the data in rivers is
13 probably better than tidal and ocean wave; although, I
14 don't profess to have spent anywhere near as much time
15 on those two areas, but one of the things we like about
16 rivers is that there is a lot of data; there has been a
17 lot of studies done.

18 So I think we can provide a lot of data on
19 the flow characteristics and so forth, and hopefully,
20 in most places, a lot of data on the existing species
21 and so forth. So I think we -- this is more
22 interactive. You know, the easy thing to do is: What
23 kind of data do you want? And I think, you know, we're
24 interested in providing as much data as possible.

25 I think you -- in the end, we're going to get

1 there anyway, so the more we can just put out and
2 provide early on, the better off we're all going to be.
3 This license process, as it's configured, is a pure, in
4 effect, speculative investment. If you think about the
5 cost of doing one of these projects, if it's got a
6 five-year project and you have to, in effect, look at
7 the investment as being amortized over five years, it's
8 almost a pure speculative investment, so we need to
9 study it as much as the regulatory bodies do before you
10 put money into something like this.

11 COMMISSIONER MOELLER: But it's worth knowing
12 that you're allowed to apply for a traditional 30- to
13 50-year license during that five-year --

14 MR. IRVIN: Right.

15 COMMISSIONER MOELLER: -- period?

16 MR. IRVIN: And that's the way we're kind of
17 looking at this now. This is a C equity investment in
18 a project, and hopefully, it will materialize and be
19 part of the larger investment, but it's an early stage
20 investment, and hopefully, it can get rolled into or --

21 COMMISSIONER MOELLER: Okay.

22 MR. BANISTER: Well, on -- for ocean wave
23 and -- at least on the West Coast of the United States,
24 there is a lot of existing data about the
25 characteristics of the waves. Some of those

1 characteristics -- or excuse me. Some of that data may
2 not be precise enough for us to determine exactly where
3 we want to install a wave park, but there, you know,
4 NOAA thinks it's a pretty good idea, and others who are
5 closer to shore gets a pretty good idea of what the
6 overall wave characteristics are. So in terms of that
7 data, we feel pretty comfortable that it exists.

8 Seems to me your question may be a little
9 more related to environmental data and probably some
10 socioeconomic data, and the truth is that I've been
11 surprised at how little we do know about the ocean and,
12 even -- even some of the things that we would have
13 thought we knew more about, we've learned that we don't
14 know as much about it. An example is the gray whale
15 migration patters. We all know that they go from north
16 to south and south to north, but the precise route that
17 they follow is not as well-known as I would have
18 thought it to be.

19 Having said that, there is some good existing
20 data and, certainly, a lot of -- sort of a -- well,
21 what's the word I'm looking for? Some information that
22 gives us a good idea about how these species and others
23 will interact with something like a buoy array, but of
24 course, what we're being asked to do is prove the
25 assumptions, and that's really difficult, of course,

1 without having anything in the water.

2 So what would we be expected -- what would we
3 expect to provide? I think, at the least, describe
4 what we recognize as the shortcomings in data, and then
5 with the help of others, hopefully start to provide.
6 We look forward to the way that we propose to capture
7 it.

8 COMMISSIONER MOELLER: Steve.

9 MR. KOPF: I think my perspective is a little
10 bit different is because of the stage we're at in
11 filing a license application for Reedsport. Starting
12 in July of '06, we did a pretty extensive stakeholder
13 outreach process and conducted dozens of meetings with
14 the resource agencies, the public, crab and fishing
15 industry, and used that as a way to really compile
16 potential effects. That was done through what was
17 called the Oregon Solution's Process.

18 Governor Kulongoski in north Oregon appointed
19 Reedsport mayor, Keith Tymchuk, and state Senator,
20 Joanne Verger, to kind of convene this process, and we
21 really use that as a way to kind of reach out and get
22 all of -- everybody's opinions as well as the available
23 information. That was compiled into our PAD, which was
24 submitted in July, which is an extensive document --
25 it's over 500 pages -- and so -- although, we don't

1 have specific data on the effects, we were able to
2 collect quite a bit of background information, and
3 that'll kind of set the stage for the -- kind of the
4 next phase of discussion with respect to licensing.

5 COMMISSIONER MOELLER: Any surprises, either
6 good or bad, that you could share with us?

7 MR. KOPF: Well, I'll tell you some good news
8 we got last week. We were assuming that the coast of
9 Reedsport was nice, sandy, flat bottom, and we did our
10 bathymetry work, and the only thing we found were a few
11 derelict crap pots, but other than that, it was smooth
12 and flat.

13 I think there -- you know, the real work has
14 just started here in the past couple of months working
15 through these settlement meetings, and I give a lot of
16 credit to the resource agencies because, again, they
17 don't -- there's no experience here. There isn't that
18 gut-level feeling like there is in hydro relicensing,
19 and I think that's some -- what we're all struggling
20 with, and I think where we're trying to build some
21 strong certainty is around what we plan to do once
22 those 14 buoys are in the water, what we plan to study
23 as a baseline, what we plan to study as a reference
24 site, and what we plan to monitor once those buoys are
25 in.

1 So that's where I think we're trying to build
2 some certainty. And, again, the objective of that --
3 collecting that data is to have the data that we'll
4 need as we go to amend that license and build out to
5 bigger phases.

6 COMMISSIONER MOELLER: Thank you.

7 Commissioner Wellinghoff.

8 MR. WELLINGHOFF: Thank you, Commissioner.

9 I guess my first question is: Given what the
10 Commission is indicating we have available today, which
11 would be this pilot license that, under its terms,
12 would be for five years and five megawatts, would any
13 of you contemplate actually filing under that process,
14 or do you think you absolutely need to have -- as I
15 heard from a couple of the panelists -- either a longer
16 term or perhaps a larger amount of capacity that would
17 be authorized under that?

18 I mean, certainly, I don't want the
19 Commission to have in place some process that nobody
20 ever uses, so I want to make sure that we have a
21 process that's useful here, but -- on one hand, but on
22 the other hand, we have to take into account the fact
23 the intended process is to make it flexible enough so
24 we can do it quickly so we can have these environmental
25 protections in place after you put the particular

1 infrastructure in place as opposed to a hydro dam that
2 we ensure we have all the environmental things in place
3 prior to that dam being constructed.

4 We're trying to get some flexibility here so
5 we can give you the opportunity to get these things in
6 the water quickly on one hand, but on the other hand,
7 we want to make sure that the environment's protected,
8 so is this a process that will work for you, or do you
9 have some suggestions as to how it may need to be
10 monitored? That's the bottom line.

11 MR. COLLAR: Well, I think our part in
12 Snohomish is early in the dialogue in considering how
13 this fits, you know, given the fact that we're just
14 getting started, but our impression so far is, yes,
15 very much this would be the type of process that we
16 would seek to take advantage of.

17 MR. WELLINGHOFF: Dan?

18 MR. IRVIN: I think there's a risk that it
19 won't work for a lot of developers. I think it can
20 work for us; particularly, if it goes together with
21 something that isn't really directly related to this
22 license, and that is the applicability of the
23 information gained from that study to other sites that
24 are similar-related sites. So -- and that's unique --
25 not unique, but it's particular to us and to our

1 strategy of being able to bear the cost of this study.

2 And so, for example, if you're talking about
3 a smaller-scale developer trying to make that work, I
4 think it's problematic because there isn't that much
5 pure venture equity capital that somebody is willing to
6 say, "I will tolerate and evaporate." And that's where
7 the comment about a longer term, a better definition of
8 what could go wrong that would have the regulatory
9 agency say, "Take it out."

10 For us, if -- you know, I think we will be
11 able to attract the capital, invest our own capital
12 into it because if -- if -- it isn't going to apply to
13 each site. If we had to do that on each of our sites,
14 I would say right now it's not an economically viable
15 option. That's my preliminary conclusions. I won't --

16 COMMISSIONER WELLINGHOFF: But your business
17 plan doesn't require you to do that, so if you could --
18 so this process could be useful to you, then?

19 MR. IRVIN: Yes.

20 MR. WELLINGHOFF: Kevin?

21 MR. IRVIN: Again, just if we can get clarity
22 on what studies are applicable beyond a single site.

23 MR. WELLINGHOFF: Well -- and let me just for
24 a second, Kevin, let me go to Dan because, Dan, I think
25 you did mention one issue that you were concerned

1 about, and that's the risk issue, so as to what -- on
2 what basis you'd have to go with that, basically?

3 MR. IRVIN: Right.

4 COMMISSIONER WELLINGHOFF: Pull the system
5 out. Do you have any suggestions as to what those
6 damages would be?

7 MR. IRVIN: Yeah. I -- that's a very good
8 question. I don't, off the top of my head --

9 COMMISSIONER WELLINGHOFF: Well, and --
10 please, feel free, again, anybody in the audience will
11 submit information and comments to us later.

12 MR. IRVIN: I think that's a very useful --

13 COMMISSIONER WELLINGHOFF: Yeah. But, Kevin,
14 why don't you go ahead and answer the other one in
15 respect to whether this new process is useful for your
16 company, as FERC is configured.

17 MR. BANISTER: Thanks. Thanks. Well, first,
18 I think Dan is making some really good points about the
19 project financing and risks associated with pursuing
20 down this path. And I think that we would concur with
21 those points. It's interesting because our Makah Bay
22 project, we've proposed that -- you know, a five-year
23 term for that license, which is currently under
24 consideration.

25 So, in some ways, we think that some ways

1 we're already pursuing a process that's similar to
2 this. We've agreed to remove the installation after --
3 for decommissioning the installation after five years.
4 So I think we have to think about forming another pilot
5 project like that because, without sufficient
6 assurances that the process will be smoothed, moving to
7 larger projects, we have to think about: Where are the
8 hurdles here? What -- the amount of work that goes
9 into -- from our side, from Finavera's side, to apply
10 for and construct a pilot project is essentially the
11 same as it would be for a commercial project than, you
12 know, rationally who probably have all decided to
13 pursuing a commercial project.

14 And the way that we've talked about it here,
15 you know, submitting an NOI and a PAD, if the same
16 amount of information is required in a PAD for this
17 pilot project as would be required to work commercial
18 projects, then from our perspective, why wouldn't we
19 pursue a commercial project? Because then we can have
20 the guarantee, perhaps, of the 30-year license that may
21 take several more months to get that response back
22 first, but 30 years versus five, that might be
23 something that -- I mean, this is behind the thing that
24 we'd have to stick in our offices to think about.

25 Now, I don't want to discourage the

1 Commission on the prospects of this proposal because,
2 again, we think it's a great first step, but we'd be
3 interested in having more dialogue and coming out and
4 seeing if there are additional ways to, again, provide
5 those kinds of assurances that we think will make the
6 proposal go better.

7 MR. WELLINGHOFF: Steve, do you have --

8 MR. KOPF: I do. It's a complicated answer.
9 We're currently about to make application for a 50-year
10 license, so I think it doesn't necessarily apply to our
11 immediate plans, but I do see how it would apply to a
12 single device or a small number of devices; you know,
13 two to four.

14 I think an important aspect of all this is
15 adaptive management. As we kind of set out on our
16 licensing path a year-plus ago, that was with all our
17 resource agencies have really talked about adaptive
18 management. How would you do that? And so I looked at
19 a five-year term, and I'm concerned that, within that
20 five years, you may not have enough time to really do
21 adaptive management.

22 One of the things that I'm learning in terms
23 of, you know, alteration of benthic habitat, you're
24 going to have phyto fouling on anchors and ropes, but
25 for that to really happen to a significant degree and

1 really start to affect and create an island, if you
2 will, might take several years. So it might be two or
3 three years till you either saw the benefits of that or
4 started to see problems. We've have concerns about
5 invasive species.

6 So what if you're three years into this, and
7 you start to see a problem, and you go through adaptive
8 management, and you make a change and, you know, it
9 takes another three years to see the effects? So I
10 think there's a little bit of a disconnect between the
11 proposed term and being able to do pilot scale. I
12 think it works well for what I would call
13 demonstration. You know, a single device or one or
14 two -- two or three devices; you get them in the water
15 quickly. But, again, we kind of move past that. We're
16 starting to ramp up and tens of devices in, you know,
17 hopefully in three to five years to be moved from tens
18 to hundreds. So I don't really see it fitting with
19 what we're doing.

20 That said, I don't want to discourage the
21 Commission from the creative thinking that's obviously
22 happened in the past -- since the December meeting.

23 MR. IRVIN: Could I interject, Commissioner?

24 COMMISSIONER WELLINGHOFF: Go ahead.

25 MR. KATZ: Go ahead.

1 MR. IRVIN: So one quick comment, I guess, I
2 would make is: Stepping back and looking at what would
3 you need to do to satisfy people that this isn't going
4 to be a problem, and you have two things in here that
5 do that that, I think, one may be sufficient to
6 accomplish. In other words, you've got the five-year
7 limited term, and then you also have the ability to
8 pull it based on an environmental disruption or an
9 adverse environmental impact. Why is it the adverse
10 environmental impact did not?

11 I mean, that's already a fairly big risk, and
12 I think, if you're going to keep one or the other,
13 that's the one, I think, from a policy point of view,
14 you want to keep. But, if you have that, why not grant
15 a longer term and make the investor and the company
16 take the risk that if anything at any time reaches this
17 threshold of adverse environmental impact, it's going
18 to get pulled. That could happen in a year; it could
19 happen in 10 years, but that seems to me to be, I
20 think, sufficient to accomplish the environmental
21 objective, but makes the economics at least for the --
22 able to quantify and -- you know.

23 MR. WELLINGHOFF: Thank you.

24 MR. KATZ: Commissioner, I just want to make
25 sure I was clear that from Commission staff perspective

1 and pulling together the proposal that's before
2 everybody right now, we're treating it very much like
3 when stakeholders and the Commission worked on the
4 alternative licensing process with -- there was a need
5 felt from more collaboration to work together and what
6 we did and what the Commission did was to allow people
7 to develop that process in the room and to see what
8 worked and didn't work in individual -- did not work in
9 individual cases.

10 And here, I don't think staff used five years
11 as their magic term or five megawatts as a magic term,
12 and I want to make sure people understand that the
13 thought was that that sort of time frame might be
14 something that worked for certain projects, and
15 obviously, from Finavera's perspective, there are
16 certain projects it works for, but I think everybody
17 involved in the discussion is open to hearing from
18 folks what will work both generically and with the
19 understanding that, for one project, five years might
20 be great; for another, it might be seven; for one, it
21 might be five megawatts; for one, it might be 500
22 kilowatts; for one, it might be more, and that what we
23 would have to do is work with the stakeholders on a
24 case-by-case basis to see if a pilot type license would
25 work for projects of varying design and in various

1 circumstances.

2 The key from the Commission's perspective is
3 we will need enough information to take the hard look
4 that NEPA requires and to make the public interest
5 inquiry that the public -- excuse me. The Federal
6 Power Act requires, and within that framework, it's
7 hoped that there will be flexibility on the part of all
8 stakeholders in order to come up with something that
9 works.

10 MR. WELLINGHOFF: Thank you.

11 COMMISSIONER MOELLER: Want to take over,
12 John?

13 MR. KATZ: Sure. See if my fellow panelists
14 have any questions -- I guess one of my questions was:
15 I heard, I think, Dan mention things going on in
16 Europe, and I've heard over the last couple of years a
17 lot about work going on in Europe, but I haven't really
18 seen the hard documents coming over; like here's
19 something studying the impacts of a potential wave
20 energy project on shelf to shore, on anagamous species.

21 Is there that kind of information out there,
22 or we just haven't gotten it yet? Is that kind of
23 information being developed, or it's just not there?

24 MR. COLLAR: Actually, some of it is pretty
25 new. One of the larger bodies of information that I

1 think would be coming into this ability is some
2 associated with the baseline studies and environmental
3 monitoring studies that will be associated with that
4 Marine Current Turbine installation; obviously, a very
5 large machine and over one megawatt capacity in that
6 very sensitive site. If it's not there already, we
7 were able to look at some of the hard copies of that
8 information, which is very thorough. That would be
9 available live on the MCT's Web site here shortly, if
10 not already.

11 There's also quite a bit -- although, it
12 seems to be real hard to get to through the European
13 Marine Energy Center. They have -- a lot of their
14 effort for time into making that information available
15 to, you know, wide bodies of stakeholders, and it gets
16 it closer to home, but it is there and available to
17 take a look at.

18 OpenHydro also now in any package started
19 with also the same types of information will be
20 available, but the MCT information that we were unable
21 to look at with respect to the law is pretty
22 substantial.

23 MR. KATZ: Several of you spoke about the
24 reaction of potential institutional lenders to this
25 type of technology, and I'm wondering: What are you

1 hearing? I realize that you're hearing -- Daniel
2 mentioned it or somebody mentioned it that there is a
3 concern about regulatory uncertainty, but beside that,
4 what are you hearing? Are you hearing this technology
5 is not mature enough for us to invest in yet? Are you
6 hearing, "Boy, this is really exciting, and we need to
7 have some things cleared up," when it's something we
8 could really see getting into? What are you hearing
9 generally from the lending institutions?

10 MR. KOPF: I'll take a shot at that. The
11 company that I represent, Ocean Power Technologies, did
12 an IPO in 2003 in the one-in-eight market where U.S.
13 company raised about 40 millions dollars, and just this
14 past spring, we IPO'd again on the NASDAQ and raised
15 \$100 million. So, certainly, from institutional
16 early-stage investors, there's strong interest.

17 I think some of Dan's comments -- and I
18 certainly support them -- I think are more based around
19 your lower risk, get investors, so as you're -- as we,
20 you know, move from a pilot-scale project -- in our
21 case, our 14 buoy Reedsport project, which will be
22 funded out of the proceedings from our IPO, but as we
23 start to scale that up, we just can't keep looking back
24 to the capital market; we've got to look forward to get
25 financing.

1 And, again, I think it's that -- you know,
2 it's back to my little term "incremental trust." We've
3 got to use each stage of this development to not only
4 validate the technology and to address stakeholder
5 concerns around socioeconomic and environmental issues,
6 but also build the confidence of that investment base.
7 That's very much what we're doing here, but --
8 although, wind power industry went through it, and, you
9 know, now -- how many megawatts are we up to? Forty or
10 50,000 megawatts installed overall.

11 So, you know, that industry built that
12 confidence. It didn't happen overnight, but that's --
13 I think groups like this are laying the groundwork to
14 build that trust and move forward.

15 MR. IRVIN: I just want to make kind of a
16 generic comment and step back a little bit. I think
17 there's a distinction between debt capital and equity
18 capital is really important here. I can't emphasize
19 enough how important that is to making this viable. If
20 people want to see something other than renewable
21 industry that can compete with traditional methods of
22 generating energy, they have to also compete with
23 general -- traditional methods of raising capital. And
24 if you're trying to raise capital for these kinds of
25 facilities with venture capital, which is looking for,

1 you know, relatively high double-digit returns, it will
2 not be economically viable. You can't get there from
3 here.

4 Coal plants are being funded largely with
5 debt; you know, six and a half, seven percent returns.
6 There's a very small amount of double-digit return in
7 that. If you want to try to finance something overall
8 with equity capital with varying high returns, hey, I
9 don't care how good your technology is; I don't care if
10 it's better than traditional -- to generate that any
11 more efficiently and better than traditional methods
12 are generating energy; you will never get there. So
13 the ability to move quickly to something that has a
14 project finance ability to it that can be financed with
15 debt is extremely important.

16 And as a -- a sort of more specific comment,
17 I think that it gets to a question you had, John, I
18 think the general feedback we're getting is that you
19 have a technology that is -- has been operating for a
20 year or more. You get project lenders comfortable with
21 the technology. There's certainly a lot of equity
22 capital available, but again, equity capital is seeking
23 a very high return. Debt capital is available for
24 this.

25 If you deal with the two issues, which are

1 what is the -- regulatory insert via the technological
2 insert, and if you could address those two issues, I
3 think you can get there to be the technological
4 uncertainty, I think, the standard is having something
5 generating electricity there for a year or more.
6 There -- you know, some people or more, very few people
7 less than a year, and then deal with what could go
8 wrong from a regulatory permit.

9 MR. KATZ: One thing you mentioned that I
10 wanted to follow up on, Dan, was you were talking about
11 things that could be done, things in the policy,
12 legislative, administer arena to help out this type of
13 project. Now, is that as simple as please don't forget
14 hydro when you do tax incentives, which -- which a
15 couple of folks out there in the audience have some
16 experience working with, or are there other things
17 you'd like to see out of the legislature or the
18 governors or other folks?

19 MR. IRVIN: Well, that's a big question. I
20 don't think I've thought enough about that to -- but
21 I'll come up with a list and maybe submit comments
22 later, if I can do that. I think a tax policy that --
23 that includes hydro ideally gives -- treat hydro and
24 wind the same. I'm not sure why, from a tax point of
25 view, wind should be treated differently than hydro;

1 particularly, given the standards that all the people
2 in this room are part of imposing and assurance up
3 under the environmental point of view. I think the
4 standards assure that hydro is at least as benign as
5 wind, and so I think -- and I think the House Bill --
6 the recent House Bill has the right language in it,
7 meaning that it includes hydrokinetic. The existing
8 law only includes hydro, I think, if it's attached to
9 some existing infrastructure, which is very limited.
10 And, again, even that legislation, even the new
11 legislation gives hydro only half the tax to credit
12 that wind gets.

13 So I think tax policy goes a long way. I
14 think tax policy is the most general way to say to the
15 market, "You go figure out the most efficient way to do
16 it." You know, the Soviet Union failed at
17 micromanaging how you get from here to there. I think
18 if your goal is to limit greenhouse gases and fossil
19 fuels to create a tax strategy that does nothing wrong,
20 then let the market do it. I think you'll be gratified
21 by what comes out of the woodwork in terms of
22 renovation.

23 MR. KATZ: Thanks. I'm going to ask Mark and
24 Ann if they have any questions.

25 MR. ROBINSON: Thank you all for

1 participating. I find this absolutely eye-opening for
2 you all to talk about how you finance the projects and
3 what you're looking for, and we take that to heart, but
4 there is a key provision of the process that I want to
5 focus on just for a second. This provision that we
6 have here to make sure that the agencies and the
7 resource constituencies that we have will participate,
8 they will accept some of the risks that we have to all
9 live with a new technology that doesn't have the base
10 of information that other technologies do have, and
11 that's the provision that allows the Commission to say,
12 "Take it out. You've got a project. You've got your
13 license. You look at it. We monitor it. It isn't
14 doing what we expected it to do. It's worse than that,
15 take it out."

16 How do you all finance a project with a
17 provision like that in the process? What does that do
18 to your ability to go forward and use -- not only use
19 the process, but to finance the project to put
20 something in the water? And I just -- all of you.

21 MR. KOPF: I'll take a stab at it first.

22 I think the part that's missing is the quid
23 pro quo, so if there are problems, we take it out, but
24 if there aren't problems, we get to build it out. And
25 I think that's what we're all struggling with. It's

1 not that the investors don't want to take any risk;
2 they want to know that if they take the risk and that
3 that pays off, that we can move forward. And I think
4 that gets back to some of the comments that we all made
5 in our opening address is that this needs to be part of
6 a multi-phase approach to licensing these type of
7 projects that are just so different than hydro
8 licensing.

9 So, again, it's not that the investors are
10 taking a huge amount of risk, but how does it balance
11 out if it's -- if that's right, how do we move forward
12 and not end up in another, you know, three, three-plus
13 year loop of, you know, licensing process for the next
14 stage?

15 In our case -- and I've said this before --
16 we were willing to put the hard work in up front to do
17 the stakeholder work and collect the data because we're
18 bullish, and we think everything's going to work out,
19 but at the same time, we realize we've got to go
20 through the process.

21 MR. BANISTER: And absolutely right. I mean,
22 in terms of the -- and Dan made this point well, too.
23 So what would define when the devices have to be taken
24 out? How would that be defined?

25 Presumably, it would have to be defined on a

1 project-by-project basis. I mean, one of the things
2 that continues to concern Finavera is -- no offense,
3 but the way that our technologies, Ocean Wave
4 Technologies, continues to get put in the same bag with
5 technologies that utilize other resources, and we're
6 concerned that that starts to muddy some of these
7 definitions that might provide us with -- again, I've
8 said it a lot, but greater assurances that, I guess,
9 our technology is going to be looked at in the right
10 way. I would think that what would require taking out
11 our device would be different from what would require
12 taking out one of Dan's devices -- not that I would
13 anticipate that that would happen for either one of us.
14 So I think that kind of definition is going to be
15 something that we want to see.

16 And to Steve's point, we've all made it, but
17 how do we -- what's the reward once we approve it, not
18 only for us, but for our investors that our
19 technologies are doing what we thought they would do
20 from this pilot process? And it seems like, from our
21 perspective, that would work if there would be some
22 sort of expedited process again to get from a pilot to
23 a commercial project.

24 MR. IRVIN: And I guess the way I would think
25 about it is -- in kind of a answer to your direct

1 question -- how you finance it is the way I think about
2 it is that is pure early-stage venture, which is the
3 most expensive and the most scarce source of capital.
4 And if -- and that's okay. That's what -- kind of what
5 premised my comment on smaller projects being more
6 difficult. If you have to do that for every project,
7 and it's, you know, 10 percent of 20 percent of the
8 cost of each one of those projects, you've got a big
9 problem of ever making this viable.

10 If you can put it in one project of a cluster
11 of projects and use that data and make applicable to a
12 group of projects, you get -- you know, it's less
13 overwhelming in terms of its cost, but you -- the
14 C venture part of the investment needs to be relatively
15 small in order to get a viable economically feasible
16 project, and I think that's the key, but I would think
17 about that as very scarce, very expensive capital, and
18 that anything that you can do to make the -- reduce the
19 uncertainty will help that, but I think there is a
20 minimum of uncertainty that everybody's going to have
21 to tolerate, and you have a legitimate policy generally
22 that you --

23 MR. COLLAR: As a public entity, our
24 financing options would be a bit different than some of
25 the other groups. There are quite a variety of them,

1 in fact, so it probably depends how you decide to go
2 about doing that, while I think a lot of the concerns
3 will be very soon.

4 It makes me think of another question that
5 did come up, though, when we were visiting with folks
6 in Europe around the definition of adverse impact, and
7 very much, you know, is in the eye of the beholder;
8 frankly, the question -- the one they had not come to
9 terms with is they have a very similar requirement for
10 that Strangford Lough solution that I talked about, so
11 there's more adverse impact maybe you -- some very
12 minimal impact, say, to a group whose sole
13 accountability is to watch out for the viability of sea
14 life or seals in the area, which is statistic -- from a
15 statistical standpoint that adverse impact might be a
16 very different definition.

17 So I think different that the question was
18 asked, but this was something that we had also noted as
19 something we're going to have to come to grips with,
20 and then others who were -- had gone down this road
21 have not yet quite gotten the diversity of that
22 question, maybe.

23 COMMISSIONER MOELLER: Well, I think -- I
24 gave Dan a chance to describe his project, but I think
25 in terms of context and some of the folks in the

1 audience may not be fully aware. Could the three
2 others of you describe in a little bit more detail what
3 you're really talking about in terms of technologies?

4 MR. BANISTER: Sure. Finavera Renewables
5 owns a wave energy technology that's called the
6 AquaBuOY, so it's a buoy, and it's a hydraulic device
7 that exploits the heaving motion of the waves to --
8 converts that heaving motion into electricity. We
9 typically would put out buoys a few miles off shore.
10 We're interested in getting to a certain depth of
11 around 50 meters of depth to capitalize on the wave
12 action while also being relatively close to shore that
13 you could be as -- for our undersea cable -- cabling
14 costs.

15 Current project that's under the license
16 process is a project off of the northwest coast of
17 Washington State. It's a four-buoy array that we've
18 termed "the pilot project," and we've requested a
19 five-year license for that project, and we're also
20 pursuing commercial projects, not in locations in the
21 west, and also in South Africa, potentially Portugal.

22 COMMISSIONER MOELLER: Craig?

23 MR. COLLAR: We have preliminary permits for
24 seven of the eight sites in the Puget Sound for which
25 permits have been issued. So we're working at, right

1 now, primarily site characterization activities that
2 increase the current profile that I mentioned;
3 inter-connection opportunities at each of the sites,
4 and of course, the parallel technology evaluation
5 that's to select the type of technology that we think
6 has the characteristics of alternate that would be best
7 suited for the attributes for the sites that we have.

8 So we're looking at technologies like Marine
9 Current Turbines, OpenHydro, Clean Current, Verdant
10 Power, folks like that, we concur, most likely to be
11 the best sites for the Puget Sound.

12 COMMISSIONER MOELLER: Most likely attached
13 to the sea?

14 MR. COLLAR: Yes, that's correct.

15 COMMISSIONER MOELLER: Steve.

16 MR. KOPF: The company I represent, Ocean
17 Power Technologies, much like Finavera, is also a point
18 observer, so we're extracting that heaving motion of
19 the wave converting it into electricity. As I
20 mentioned before, kind of our focus project in the U.S.
21 is here in Reedsport. Phase 1 of that project would be
22 a single buoy deployed next year. That's going in
23 under an Army Corps 404 permit. Following year, we
24 hope to have the FERC license with 2.1 megawatts; 14
25 buoys in the water. We also have a preliminary permit

1 at Coos Bay and two other applications, one in Lincoln
2 County and one in Humboldt County in California.

3 COMMISSIONER MOELLER: Thank you.

4 MR. KATZ: We are pushing up right against
5 our lunch break, so I propose we go to that. I thank
6 the panel very much for your thoughtful comments and
7 your availability for questions.

8 Lunch is going to go until 1:00, and I ask
9 the panel members and the rest of the audience, please,
10 to be back precisely, then we'll have our second panel
11 this afternoon.

12 (A recess was taken from 11:46 a.m. to
13 1:09 p.m.)

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1 Our next panelist is Annie Szvetecz, who is
2 the southwest regional assistance lead with the
3 Office -- I'm sorry -- the Washington Office of
4 Regulatory Assistance. She's worked for Washington
5 State agencies for five years and, during most of that
6 time, has addressed regulatory process improvements,
7 both for effectiveness and efficiency. She has an MS
8 in environmental studies and has spent most of her
9 career in working with environmental NGO's in
10 California, Hawaii, and Montana.

11 Next to her is Dave Van't Hof, who's the
12 Oregon Governor's sustainability advisor. His areas of
13 focus include implementing the Governor Executive Order
14 on sustainability, directing the Governor's climate
15 change initiatives and fostering the development of
16 renewable energy and associated technologies in Oregon.
17 Prior to joining the Governor's office, he spent five
18 years working for Stoel Rives, LLP, as a private sector
19 attorney. He served two years as a Peace Corps
20 volunteer in Senegal and graduated from the University
21 of Michigan Law School and Trinity College in Hartford,
22 Connecticut.

23 Our final panelist is Daryl Williams, who is
24 the environmental liaison for the Tulalip Tribes. He's
25 worked for the tribe for over 30 years and has a BA in

1 business administration from Columbia College of
2 Missouri. He's been working with a wide range of
3 environmental fisheries, archeological and cultural
4 issues and -- excuse me. And has participated with the
5 Jackson Hydroelectric Project relicensing and reviewing
6 proposed tidal energy projects.

7 With that, I'll turn it over to Bob.

8 MR. LOHN: Thank you, John.

9 Commissioner Moeller and Wellinghoff, thank
10 you for your interest and your leadership and
11 identifying the challenges faced by ocean energy,
12 hydrokinetic energy, and seeking to streamline the
13 process as necessary.

14 I want to indicate up front that I think
15 that's something we very much want to support, and we
16 certainly want to work with you to achieve that. My
17 experience with federal agencies has been such that, to
18 accomplish a significant change or a new action, you
19 need three things. You need a willingness with any
20 agency, you need a certain amount of resources, and
21 ultimately, you need laws that at least allow the
22 change to come to be.

23 On our part, I think what you'll find is a
24 great deal of interest and willingness, and what I want
25 to talk to you today are a couple of serious challenges

1 in terms of resources and laws, so we'll have -- this
2 is not in the spirit of trying to say, "Let us throw up
3 additional road blocks to development"; it's really to
4 say, "We see these things in our path. How can we work
5 together to deal with them realistically?"

6 I was impressed by this morning's panel, both
7 by the attitude of those developing these projects and
8 by their awareness of the limits of our knowledge and
9 the importance of understanding biological systems as a
10 part of moving forward. So a specific issue as we move
11 out that we've referred to this morning is the problem
12 of baseline information. When we conduct an ESA
13 consultation on a hydroelectric project in the Columbia
14 River -- as they were referred to -- we start with a
15 really fairly thorough knowledge of what the protected
16 critters are trying to do when they are there and what
17 it is that matters to them. And then the next question
18 is: Therefore, how will this action affect what
19 they're trying to do?

20 Our problem with ocean energy projects is,
21 very often, we don't have a specific knowledge. We may
22 have some knowledge of which plants and animals are
23 there. We often lack a very well-compiled piece of
24 information about what are they trying to do, and we
25 need to know that first as part of the baseline before

1 we can answer the question.

2 So how will this project affect them? Until
3 we have this information, it is difficult to move
4 forward as effectively as we would like to when you're
5 asking us questions particularly under the Endangered
6 Species Act for similar laws. Under NOAA Fisheries --
7 or, actually, NOAA's authorities, there are at least 10
8 statutes that typically would be involved over which we
9 have some authority, or they're given to us to carry
10 out that would be touched upon by one of these actions.
11 The leading ones that would be probably of greatest
12 concern here would be the Endangered Species Act,
13 Marine Mammal Protection Act and the Habitat
14 Consultations -- essential official habitat
15 consultations such as Magnuson-Steven Fisheries Act.

16 The difficulty under some of those laws is
17 the requirement of an affirmative finding of no harm.
18 For example, the Endangered Species Act requires a
19 finding from us that the proposed federal action -- in
20 this case, Commission licensing a project on a filed
21 basis -- the proposed federal action is not likely to
22 jeopardize the list of species. In order to answer
23 that question, it's presumed that we know something
24 about what the species is trying to do in that place
25 and then how the action will interact with it. And

1 until we have that, it's hard to address those as
2 crisply and clearly as we would like.

3 Well, the proposal before us today for a
4 pilot-sized project with a five-year term will
5 certainly reduce the likely scope of effects. Without
6 better knowledge, it may still be difficult; complete
7 consultation successfully certainly within the time
8 that's described here. I'm not saying we can't get to
9 a successful end; you need both goals, a favorable
10 conclusion, if that is an outcome that protects both
11 the listed species and the interest in developer and
12 others and between energy and still do that quickly is
13 going to be very challenging.

14 On that point, to move beyond a -- our
15 experience with ESA consultation is that developers
16 typically are not interested in the quick yes-or-no
17 answer -- or excuse me. It's simply a quick yes-or-no
18 answer. That, we usually can render; sometimes when
19 someone comes before me, I say not entirely in jest,
20 "We can offer you a fast no or a slow yes; which one
21 would you prefer?"

22 Generally speaking, though, the development
23 community -- and I want to acknowledge this
24 generally -- the importance of clean new sources of
25 energy. This, we see, is not just a nice thing, but

1 really is a matter of national security, so we take
2 these proposals very seriously, but what proposal comes
3 before us, there's usually the desire for us to provide
4 genuine consultation; that is, the words with the
5 developer to work seriously as they design the project,
6 figure out ways that these goals can be accomplished,
7 and minimize effects on a protected species or the
8 environment in general. Some of these -- some of this
9 advice takes time; some of this advice takes resources.
10 We'd like to be able to provide it. Currently, we're
11 probably not well-situated to provide that; at least on
12 an aggressive basis.

13 In general, when we talk about baseline
14 information, NOAA is the ocean's -- the nation's ocean
15 agency, and we have a great deal of information about
16 critters in the ocean, about life histories, about
17 particular kinds of environments, but currently, I
18 wouldn't say that it's drawn together into a kind of
19 comprehensive or applicable site-specific pattern of
20 information, so our first resource need would be to do
21 some aggressive data-mining; that is, to draw in what
22 research we know, what we have, draw it together, and
23 figure out what would really matter, at least in the
24 areas of greatest potential.

25 There likely will be some need for further

1 research, but if you've done the data-mining right,
2 that research need could be greatly confined. We're
3 not suggesting that all scientific questions have to be
4 answered or all uncertainties resolved, but we want to
5 bound the uncertainty and not -- so we can say it is
6 likely that this project will not jeopardize listed
7 species. We'd like to go beyond that and say, "We can
8 give this a clean bill of health, at least as best we
9 know how." This is consistent with our nation's
10 fisheries and our nation's oceans' health.

11 The second issue on -- and it's done. We are
12 talking with the Department of Energy about the
13 possibility of some kind of short-term focused effort
14 to draw this information together to allow us to
15 provide better baseline, and frankly, provide greater
16 regulatory stability, a better understanding, and lower
17 some up-front costs because many of these questions
18 don't need to be asked repeatedly; answering them once
19 should provide information for everyone.

20 Final -- or a comment on simply regulatory
21 expertise. There, the answer is a mixed bag within my
22 region, the Northwest region, which includes the states
23 of Oregon and Washington. Now, I said I've checked
24 with my counterparts in California and the northeast.
25 They reported a similar story. We're largely

1 overwhelmed with the Endangered Species Act
2 consultations. We try to meet those timely, but a big
3 new project -- big in terms of scientific challenges,
4 new unanswered questions, takes time. If you ask us
5 right now, what could we accommodate, we perhaps could
6 accommodate one or two projects on the scale we're
7 talking about, and our time line for doing so would be
8 roughly 10 months to a year.

9 Now, whether that interferes with the
10 proposal of the pilot project depends on how much of
11 that consultation takes place before the application is
12 filed, and we'd certainly encourage that versus how
13 much takes place afterwards. Definitely, if there's
14 room and resources for an adequate up-front
15 consultation, then the filing goes quickly, and we --
16 you could expect to meet that time line. If it hasn't
17 happened that way, we're just going in full, we receive
18 a fresh BA, we pick it up and say, "Gosh, there's a few
19 more questions we need to know the answer to." It's
20 likely to take significantly longer than the scheduled
21 contemplate.

22 Finally, as we carry out these consultations,
23 we do need to be mindful, and we'll be very interested
24 not just in the biological issues, but our role as an
25 agency requires us to give full consideration to the

1 trust and treaty obligations we have to the Indian
2 tribes in the Northwest, and I was pleased to see that
3 the Commission's diagram contemplated that and
4 specifically included that.

5 We also need to be mindful of the protection
6 in the advancement of fisheries, which is part of the
7 Magnuson-Steven Act, which is one of our major
8 statutes. And, finally, we need to be mindful of the
9 protection of marine sanctuaries, such as the one
10 that's involved off the northwest coast of Washington
11 and the siting of Finavera project there.

12 None of these are insuperable challenges.
13 Now, all of them can be resolved, I think, in most
14 cases by working through them, but none of them are
15 small challenges either. And so our plea at this point
16 is -- well, commending the Commission, is that, as a
17 government, we might be conscious about identifying
18 strategically those resources in terms of people and
19 knowledge that are going to be necessary to
20 aggressively respond to the proposals before us, to
21 encourage this as a source of energy, to site the
22 places of least impact. So we'll work with you in that
23 direction.

24 Again, our thanks. In the spirit of trying
25 to figure out how we make this happen and how we can

1 work best with you, we will be submitting further
2 comments, but thanks again for coming and illuminating
3 the subject, and thanks especially for being in the
4 Northwest; we appreciate it.

5 MR. KATZ: Thank you, Bob. Thank you. Being
6 in the Northwest has been our pleasure.

7 Walter.

8 MR. CRUICKSHANK: Well, thank you, John, and
9 thank you Commissioners Moeller and Wellinghoff for
10 your attention to be here today. And I also want to
11 applaud FERC for putting this proposal on the table.

12 At Mineral Management, as we held our
13 workshops and stakeholder meetings around the country,
14 the thing we consistently hear is the need to gather
15 better information for planning, for management, and
16 making better decisions. And a lot of the information
17 people are asking to have really can't be developed
18 without getting some things in the water, so I really
19 applaud this proposal to try and find a way to get some
20 things in the water and start dabbling in it to get some
21 information. And I would encourage people to find
22 opportunities to -- just to leverage those activities.

23 Certainly, a lot of the information that
24 people would gather under licenses such as this would
25 be proprietary, and they get their information from the

1 machines they're putting out there, but I think there's
2 an opportunity to form some partnerships and gather
3 information on potential environmental impacts that can
4 be used in a much broader way to inform the entire
5 industry or at least the entire region, and that
6 would really encourage, as this process goes forward,
7 to look for a way and try and create those partnerships
8 for the furtherance of the entire industry.

9 The main thing I want to talk about today is,
10 I think, what some people want to hear because I've
11 been asked several times already is the status of the
12 jurisdictional question between the Minerals Management
13 Service and FERC and, in particular, the memorandum of
14 understanding that we've been working on with FERC to
15 clarify those issues. Now, I do want to say right out
16 of the box that FERC has been wonderful to work with on
17 this question. We have largely worked through the MOU,
18 and FERC has been ready to sign for awhile, and the
19 holdup has been on our end. I want to be very clear on
20 that point.

21 What happened is that we got calls from
22 Senator Bingaman, who is Chairman of the Energy and
23 Natural Resources Committee, and Senator Domenici, who
24 is the ranking minority member. That's the committee
25 that happens to authorize just about everything we do

1 at the Department of the Interior, and when two
2 Senators with such power call and ask you to just hold
3 off a little while on signing, you tend to listen to
4 the question. What they were asking is that we wait a
5 little bit because they want to try and clarify the
6 issue in an Energy Bill this year. So we said, "Okay,
7 we'll -- let's try and clarify that," but this is not
8 an open-ended commitment as far as we're concerned.

9 This Congressional session will probably stop
10 at the -- in late November. And, at that point, I
11 think we'll have a pretty good idea whether there will
12 be an Energy Bill, and if so, what sorts of things may
13 be in it. And, at that point in time, I think we'll be
14 able to get a sense of whether they're going to fix it
15 or not, and if not, then we'll be calling on FERC again
16 and see if they're still ready to sign the MOU. At
17 that point, I expect they will be.

18 But that raises a couple of issues with
19 respect to this proposal in the outer continental shelf
20 that bear mentioning. I assume most of you are
21 familiar that the outer continental shelf starts about
22 three miles offshore, so these comments deal with the
23 shelf and not with river projects, politics in state
24 waters. The two main issues that I think would come up
25 in following this sort of pilot process is: First, if

1 you want to get on the OCS, how do you get access to
2 the site? And that is something that we are attentive
3 to.

4 We are just about done with our Programmatic
5 Environmental Impact Statement on the Offshore
6 Alternative Energy Program, and that will allow us to
7 start stepping out and allowing some things to happen,
8 and we will be, in the very near future, putting out a
9 notice asking people for their interest in doing that,
10 a gathering or technology testing projects on the outer
11 continental shelf; something consistent with what we're
12 trying to do here. We'll resolve the access question,
13 at least for pilot type projects, with data-gathering
14 on the information on USC. It'll put us in a position
15 where, if there is interest, we'll be able to move
16 forward, even before our regulations are finalized.

17 The other issue that will come up for us is
18 that, under our statutes, access must be granted
19 competitively unless the Secretary determines the
20 competition isn't warranted. And when we're dealing
21 with pilot projects or data-gathering projects that are
22 relatively small in footprint, I think that creates an
23 opportunity for a number of folks to be out there
24 without necessarily tripping over each other, and I
25 think that we're expecting there would be opportunities

1 for these sorts of projects to be non-competitive. But
2 the bigger issue, commonly want to convert to a
3 competitive or to a commercial type project, then it's
4 not so clear whether or not we'll be able to do the
5 sort of transition that folks were asking for this
6 morning without having some sort of competitive process
7 on the OCS. So that's something that we'll have to
8 take a look at and work through at least with regards
9 to these sort of projects that are looking at the outer
10 continental shelf as a location.

11 But, again, as Bob just mentioned,
12 willingness and interest is far more than half the
13 battle of making things happen, and we are willing and
14 interested in working with FERC through this process to
15 make sure that the opportunities are there for folks
16 who wanted to try and invest and move into the outer
17 continental shelf. Thank you.

18 MR. KATZ: Thanks, Walter. And if you knock,
19 you can be sure we'll answer.

20 Annie.

21 MS. SZVETECZ: Hello, and thanks again for
22 providing us this opportunity to listen to more about
23 what's being proposed and to provide comments and some
24 questions.

25 I want to echo the support and interest

1 comments that we've been hearing all day. The agencies
2 in Washington are very interested and very supportive
3 of renewables and supportive of the process to look at
4 pilot projects. There's both the potential benefit of
5 wave and tidal projects in Washington, but there's
6 also, as we've been hearing, yet, undefined
7 environmental risk that needs to be addressed.

8 Consequently, we kind of have a
9 proceed-with-caution approach with the regulatory
10 agencies in Washington. The political and
11 environmental setting that we find that kind of is
12 focused on Puget Sound and tidal projects in Puget
13 Sound kind of present a bit of a conundrum or an issue
14 because, for many, Puget Sound as a whole is considered
15 sensitive area due to its current water quality and
16 habitat degradation issues. The newly-formed Puget
17 Sound partnership is charged with developing an action
18 agenda or cleanup plan for the Sound to protect and
19 restore its health by the year 2020. This initiative
20 raises awareness, and it could raise the bar for
21 regulation of development in Puget Sound basin.

22 The good news -- at least for me as a
23 facilitator and coordinator of projects -- is I've
24 gotten some very consistent feedback from the various
25 agencies that have queried about the proposal. I think

1 it can be summarized as follows. The proposal needs a
2 broader context. The regulation of hydrokinetic
3 projects in Washington requires programmatic analysis
4 on a regional scale of the technical feasibility and
5 environmental impacts. I think this perspective is
6 based in part on the preliminary permit process. It's
7 kind of a gold-rush mentality, and a fair amount of
8 permits -- preliminary permits have been issued for the
9 Sound. There's also a growing concern that energy
10 extraction issues are potentially limiting and of
11 concern for water quality and habitat in general in the
12 Sound.

13 For instance, the Sound might only be able to
14 sustain a handful of projects of commercial-level
15 projects. So how do we, as kind of a collaboration,
16 ensure that the right handful of projects are built?
17 So here's the challenge. Approving pilot projects with
18 limited information in a tight schedule on a
19 case-by-case basis based upon the first ones through
20 the door can create more regulatory burden instead of
21 less, unless there's a programmatic or non-project
22 environmental analysis that is done in conjunction or
23 ideally beforehand.

24 There's chicken and the egg. I realize we
25 have got a tiny problem. The details, though, of this

1 approach are being discussed in -- through informal
2 policy and technical work groups in Washington, so I
3 think it's a challenge that we're trying to step up to
4 the plate and address.

5 A few quick comments on the details of the
6 proposal that I'd like to run through. The first three
7 involve issues to rethink. The first one, the limit of
8 five megawatts as a representation of the small size or
9 representing a small footprint of a project does not
10 really correlate given the variability of the
11 technology and the site characteristics. Terms of five
12 megawatts of tidal or wave generation could have a
13 relatively small area or footprint or pretty big. I
14 realize there are other issues that are trying to
15 qualify and reduce the risk, but looking at size might
16 not be enough.

17 The time frame between the filing of the NOI
18 and the draft application and the filing of a formal
19 application does not really allow for enough review by
20 the stakeholders and agencies' comment and completion
21 of any additional studies that might be done prior to
22 filing the formal application. It seems more useful
23 to -- at least for the first few projects, to start the
24 clock at the time of complete application so that the
25 agencies and FERC can track the process and track the

1 time lines with parts of the process that we have more
2 control over as opposed to the applicant doing more
3 work or more -- looking for more research out there.

4 Number three, the environmental analysis
5 through NEPA appears to come at the end of the
6 licensing process as opposed to the beginning, and I
7 realize that a lot of the analysis will start at the
8 time of the application or the draft, but this really
9 reduces the usefulness of the environmental analysis
10 through NEPA. And, furthermore, from Washington, we
11 have the State Environmental Policy Act that needs to
12 take place when certain state approvals are triggered,
13 and SEPA needs to happen no sooner than a NEPA is
14 completed.

15 And then we have state approvals that need to
16 rely on NEPA and SEPA as well, and those need to be
17 addressed earlier in the process, which kind of leads
18 me to my next point under kind of a category of issues
19 in further discussion and detail, The Clean Water Act.
20 And I should say it a couple more times -- The Clean
21 Water Act -- was not really addressed earlier today as
22 being a statutory obligation that these projects need
23 to address.

24 CZMA also. When a particular Section 401
25 permits and CZMA approvals need to be addressed through

1 this process, and those time lines and agency
2 collaboration and what constitutes a complete
3 application, all those issues need to be clarified
4 through this process, and I think that it's an obstacle
5 that we need to address just to keep in mind the
6 agencies, particularly Department of Ecology, is very
7 interested in a -- you know, a non-traditional
8 permitting process, a special consideration for these
9 types of projects, but the time line -- statutory time
10 line for CZMA is six months, and for the Section 401,
11 it's one year.

12 The sensitive area designation, we've heard
13 today already, needs some criteria and should be
14 applied consistently but with flexibility to take into
15 account site specifics on regional differences. We've
16 heard about the need for baseline information; I won't
17 go into that in any more detail. I wanted to mention
18 that the --

19 MR. KATZ: Annie, I'm sorry to interrupt you.
20 If you can --

21 MS. SZVETECZ: You're going to cut me off?

22 MR. KATZ: No, no. If you can --

23 MS. SZVETECZ: I'll just go real quickly, and
24 then we'll go back.

25 MR. KATZ: -- wrap up.

1 MS. SZVETECZ: The processing criteria for
2 the applicants to monitor and report on impacts that
3 might lead to a stop group order is also very much of
4 interest, and I wanted to add that the five-year time
5 limit fits into this issue well because it serves as an
6 additional risk immunization because some impacts you
7 won't be able to get immediate information for, and
8 remember that impacts are direct, indirect, and
9 cumulative. You need that five-year time period as
10 kind of a safety net.

11 And then the last thing I want to mention is
12 the process for multi-agency collaboration. This is
13 something that my office has -- actually has some
14 expertise in, so I will speak to this. We could be
15 looking at something resembling a standing team of
16 agency staff people to work on these pilot projects so
17 that you have the same people working on all the pilots
18 in terms of permitting. You could do it as an ad hoc
19 group that gets together different people for each
20 project in different areas; either way, we'll have to
21 have some staff resources devoted to it, so I want to
22 just mention that.

23 MR. KATZ: Thank you very much.

24 David, you're up next.

25 MR. VAN'T HOF: Thanks. On behalf of

1 Governor Kulongoski, I want to thank the Commission for
2 holding this hearing here in Portland. We also applaud
3 the Commission's willingness to tackle the challenge of
4 how to get ocean technologies deployed and tested in an
5 expedited manner.

6 Governor Kulongoski has made it a priority to
7 have Oregon lead the nation in wave energy development.
8 Oregon has the resource, and it also has invested
9 millions of dollars in assisting the private sector in
10 establishing a wave energy industry here in our state.
11 With the Governor signing into law this year a
12 requirement that utilities meet 25 percent of their
13 electricity loads with new forms of renewable energy by
14 2025 in RPS standard, we are hopeful that ocean power
15 will play a significant role in this transition to
16 renewable electricity in our state.

17 And Oregon is leading the way in ocean power
18 development. Oregon already is home to seven
19 preliminary permit applications with FERC for wave
20 energy development. The Governor designated the ocean
21 power technology Reedsport application as an Oregon
22 solutions project, and a broad array of stakeholders
23 have been meeting for over a year to devise a pathway
24 for development that all parties can support, and I
25 think you've heard about that a bit this morning.

1 Also, Finavera has deployed a pilot buoy off
2 the coast of Newport for testing and analysis, and this
3 was made possible in part by the Oregon legislature
4 enacting this year a new provision waiving state
5 requirements for small-scale pilot projects that are
6 deemed exempt under FERC's permitting process.

7 We recognize that wave energy development has
8 the potential to be a significant new source of
9 electricity as well as of economic development
10 potential for our coastal communities. Wave energy not
11 only represents the new industry for coastal counties
12 supplying energy jobs and investment opportunities, but
13 it also could spawn additional business opportunities
14 and jobs servicing and constructing wave energy
15 devices. At the same time, the significant interest in
16 wave energy development in Oregon has raised concerns
17 with resource users on the coast such as crabbers,
18 fishers, and environmentalists. Oregon is committed to
19 building this new industry in a manner that protects
20 any existing resource uses and incorporates
21 environmentally safe design into the projects.

22 The Governor's office and state agencies
23 collectively support FERC's proposed new licensing
24 process for small pilot projects as a pragmatic and
25 reasonable approach that will help new technologies get

1 deployed sooner so that the necessary testing and
2 research can be carried out to assess their
3 appropriateness for large-scale commercialization. At
4 the same time, we are satisfied that the expedited
5 permitting process will still adequately address the
6 potential effects of these projects on fish and
7 wildlife by providing an opportunity to collect
8 information, monitor effects, and, if necessary,
9 provide for a depth of management and even early
10 removal of facilities. Oregon's committed to working
11 with FERC to make several of the proposed projects in
12 this state to first utilize its new process should any
13 applicants choose to go that route.

14 And with that said, let me offer a few
15 suggestions that we think could provide some greater
16 certainty to state and local governments, resource
17 users, and other interested stakeholders with your
18 proposal. We recommend that FERC consider limiting the
19 number of applications that can utilize this process
20 either by state or by region. As cumulative impact
21 assessments are completed for given projects in each
22 state, the new information would provide a basis for
23 deciding whether or not to expand the number of
24 projects allowed under this new process. The new
25 process contemplates changes in project operations to

1 design a project removal when adverse effects federally
2 listed species or mammals are discovered, and we
3 recommend that this include protection of the broad
4 range of fish and wildlife species consistent with the
5 10 -- Section 10(j) and based on the expertise of Fish
6 and Wildlife agencies.

7 We support the Commission's proposal of the
8 projects not be located in waters with sensitive
9 designations; that Commission should allow states to
10 make the determination of which areas are sensitive
11 should a state develop a planning process to make such
12 an assessment. In addition, we recommend that the
13 Commission recognize the potential conflict between
14 these projects and fishing uses of ocean areas and the
15 need to address any significant displacement of
16 commercial and recreational fishermen from traditional
17 fishing grounds.

18 We also recommend that the Commission
19 evaluate as part of the ongoing evaluation of permitted
20 projects the economic and social impacts to commercial
21 or recreational fisheries. In the Reedsport context
22 that I think you've heard about, the developers and
23 stakeholders are attempting to develop a settlement
24 agreement for the FERC application. We think this is a
25 useful mechanism and recommend that this process also

1 expressly provide for settlement agreements, if
2 desired, by developers and stakeholders.

3 We support the Commission's proposal to
4 consider immediate shutdown of project operations or
5 removal of the facilities if the project causes injury
6 or mortality of fish and wildlife. We support that the
7 pilot projects will still require NEPA review and that
8 state agencies will be able to provide comments, and
9 the state Fish and Wildlife agency will maintain
10 authority over Section 10(j). Additionally, we think
11 that similar authority has been granted for FERC
12 exception to protect fish and wildlife under 10(j)
13 recommendations of the -- by requirement of pilot
14 licenses in this process.

15 So that's generally our kind of suggestions
16 for your proposal. We think it's a great start. We're
17 hopeful that it will be implemented, and that would be
18 one of the first places to be able to use it. And
19 thank you again for your leadership and being here
20 today.

21 MR. KATZ: Thank you for your comments.

22 Daryl.

23 MR. WILLIAMS: Thank you. Once again, I'm
24 Daryl Williams. I'm the environmental liaison for the
25 Tulalip Tribes. We're located just 30 miles north of

1 Seattle, and I've been working on reviewing the
2 proposed tidal energy projects to the Puget Sound
3 region. I haven't really paid a lot of attention with
4 what's been going on with the wave energy development,
5 so I'm not really prepared to say anything about that,
6 but, first of all, I'd like to thank the Commission
7 staff for posting this workshop here in the Northwest
8 and for inviting me to participate.

9 In general, I think I do support the idea of
10 the pilot process. I'm kind of concerned about the
11 short time lines for issuing the license. You know,
12 over a hundred years ago when we first started
13 developing our traditional hydro that we've been using,
14 the Federal Government thought that that was a good way
15 of producing power and that by building a few fish
16 hatcheries, we could mitigate the damages. Since that
17 time, we've shown the damage has been far greater than
18 what anyone ever expected back a hundred years ago.
19 And even today, in the re-licensing processes, we're
20 still trying to correct problems continued 50 years
21 ago. And now that we're experimenting with new
22 technologies, I do think we need to take a careful look
23 at what we're doing, so, as Commissioner Wellinghoff
24 said earlier, we don't fall under the law of unintended
25 consequences.

1 One advantage to doing these short-term pilot
2 projects is to give us a chance to really see what the
3 impacts are before doing a long-term license, but
4 before we could really measure what the impacts are, we
5 need to know the condition of the area that we're
6 putting these projects. Like in Puget Sound, Puget
7 Sound does have a lot of problems currently that the
8 state of Washington and the tribes and the Federal
9 Government are all spending hundreds of millions of
10 dollars to try and fix. So when we look at doing new
11 technologies in the Puget Sound area, you know, we're
12 going to be taking a very close or very careful look at
13 what the potential impacts are.

14 Since this technology is so new, and we know
15 so little about it, the only way that we can really
16 identify what the impacts are is to put a couple of
17 projects in the water and see what happens. You know,
18 we do need to collect some good baseline data at these
19 sites. You know, we've got some rough ideas of what
20 the bathymetry looks like, what some of the species are
21 that use the sites, but we really don't have detailed
22 information about what's in the Sound. We don't have
23 good detailed information about where the exact
24 migration routes are that the salmon and that the
25 whales use. And as we measure these sites, we also

1 have to keep in mind that we have decadal cycles that
2 affect those routes.

3 Now, although we don't know the exact routes
4 that our salmon follow all the time, we do know, like,
5 for example, the fresh river sockeye, during one cycle,
6 the fish migrate around the -- or when they return,
7 migrate around the outside of Vancouver Island. In
8 another cycle, they migrate through the inside of
9 Vancouver Island, which, you know, that's totally
10 different use of each side of the islands depending on
11 which weather cycle we're in or which ocean cycle we're
12 in. So, you know, when we're collecting baseline
13 information, you have to keep in mind that what we're
14 collecting is for that year, and it may not be the same
15 next year.

16 So we have to figure out how we're going to
17 analyze the effects, what they do vary from year to
18 year. And, you know, with these different cycles that
19 can range from five to fifteen years, you know, if
20 you're starting to collect baseline data at the
21 beginning of the cycle, it's going to be several years
22 before you can actually get data of what the next cycle
23 is going to be like. So that really makes the tribes
24 and the agencies really thinking about how they're
25 going to assess the impacts of these projects as we

1 monitor them once they're in the water.

2 As one of our panelists said earlier, I do
3 have some concerns about looking at a maximum number of
4 megawatts as the limiting cycle or our limiting factor
5 for what would qualify for a pilot project. For
6 looking at, you know, at least for tidal energy, the
7 type of turbine that Marine Current Turbines is testing
8 now is 1.2 megawatts. Well, that would only be four
9 turbines, which isn't too bad to look at for a pilot,
10 but if you're looking at turbines the size of which
11 Verdant is using in the East River of New York, they
12 could do 50 turbines of that size, which would be a
13 pretty sizeable project, so we really think they should
14 be limiting the number of turbines or number of devices
15 rather than looking at a megawatt for a limit.

16 We do like the idea of having a
17 decommissioning process where, if we do find
18 significant impacts during the monitoring, that the
19 project can be shut down and then look for either ways
20 to mitigate the problem or remove the project, but, you
21 know, when we're experimenting with something and, you
22 know, we have several species in Puget Sound that if
23 they're not listed, their populations are low enough to
24 where they could be listed under the ESA in a few years
25 if their populations continue to decline very much.

1 We'd hate to see these projects be the cause of listing
2 more species, so I know in the paper that was put out,
3 they were mainly talking about looking at impacts to
4 listed species for requiring a shutdown, but I think
5 you -- we really need to look at all the species that
6 are out there, especially the ones that are low
7 population numbers now.

8 We also have some concerns about FERC not
9 using the regular rule-making process to initiate this
10 permitting process or licensing process. This -- I
11 mean, this licensing process was officially available
12 for proponents to use at the time they announced it,
13 which means that tribes, governmental agencies, the
14 public have not had the proper process in which to
15 comment on it and see whether or not it really works
16 for them. I think we can make it work, but I get a
17 little nervous when a governmental agency pushes
18 through a new licensing process without going through
19 the proper procedures, and I do think that, if anyone
20 were to complain about it, it could open up the agency
21 to lawsuits that could tie projects up for a few years.

22 And, of course, as a tribal representative,
23 I've got to bring up tribal fishing for tribes with
24 treaty fishing rights like we have in the Northwest.
25 You propose a project in an area that is a usual

1 extensive fishing area for a treaty fishing tribe, you
2 can't build a project there without permission from the
3 tribe. These projects cannot be built without
4 interfering with tribal fishing in those areas, and
5 that's a clear violation of treaty rights if a project
6 is developed without consent from the tribes, and that
7 would also -- could tie projects up for several years
8 in the courts. So you -- if you're proposing projects
9 in tribal fishing areas, you really do need to have
10 consent from the tribes before moving forward.

11 And with that, I think I've gone over my time
12 allocation, and so I'll stop.

13 MR. KATZ: Thank you, panelists, very much.

14 And, Commissioner, I'll turn it over to you
15 for questions.

16 COMMISSIONER MOELLER: Thank you, John.

17 I guess I heard a variety of perspectives
18 from that panel. I appreciate all of your efforts in
19 being here.

20 And, Annie, you -- you don't speak for the
21 Governor's office, as I understand it?

22 MS. SZVETECZ: No, I want them to put their
23 pens down.

24 COMMISSIONER MOELLER: A little story; we
25 talked about having this meeting out here in the

1 Pacific Northwest to talk to the Chairman. In addition
2 with Commissioner Wellinghoff, we mentioned earlier the
3 representatives here from Mr. Kelly's office and
4 Mr. Spitzer's office, and of course, the staff and, of
5 course, the Chairman, and we wouldn't be here if we
6 haven't agreed that they can hold it in the Northwest,
7 but I want you to hold it in Oregon, not your home
8 state of Washington because I like what Oregon's doing.
9 And what I just heard was the state of Oregon basically
10 taking a lot of initiative to promote this industry;
11 funding, an effort by the Governor, an effort by the
12 universities that we're aware of, giving us positive
13 suggestions on this process, and I just heard my home
14 state of Washington frankly be quite hostile. If I
15 were from Snohomish or Seattle or Tacoma or Grays
16 Harbor, I'd probably be leaving this meeting pretty
17 depressed today.

18 So, anyway, I want to give you a chance to
19 correct me if I'm wrong.

20 MS. SZVETECZ: You know, in the Office of
21 Regulatory Assistance, we'd love to be the cheerleader.
22 And, you know, working on these types of projects,
23 although challenging, is just very rewarding, so I
24 guess the caveats are there because of the
25 environmental realities that we have, and we have some

1 serious challenges and -- but I want to kind of qualify
2 that by saying agencies have been participating in the
3 discussions and the meetings with the applicants
4 aggressively, and I think that shows a fair amount of
5 initiative, you know, without having, perhaps, specific
6 directive from the Governor.

7 Except for the general, we have, you know,
8 some climate change, executive orders. We have lots of
9 emphasis from the directors of our agencies along these
10 lines, so I think I wanted to try and just provide some
11 comments to the proposals without putting a wet -- a
12 wet blanket over it.

13 COMMISSIONER MOELLER: Well, good point, but
14 we also as the state of Washington have an RPS, and
15 it's aggressive, and this is non-carbon emitting, so I
16 think we'll probably talk about this more at the end,
17 but a lot of this is going to come down to attitude
18 where the people are going to be willing to work
19 together or not, and I'm as happy to hear what both MMS
20 and said in terms of this, and I'm sure hoping that my
21 home state of Washington will also have a constructive
22 attitude toward approaching this industry.

23 Commissioner Wellinghoff.

24 COMMISSIONER WELLINGHOFF: Thank you,
25 Commissioner Moeller. And, Annie, let me see if I can

1 sort of help amplify some of what I thought might have
2 been points of light of your presentation.

3 Am I -- was I correct in hearing you when you
4 indicated that with respect to a programmatic EIS on a
5 regional basis that you thought that might be able to
6 be done in conjunction with, i.e., in pair with our
7 process so you cannot wait for the programmatic EIS to
8 be in --

9 MS. SZVETECZ: I think it's something to
10 consider most definitely.

11 COMMISSIONER WELLINGHOFF: Okay. So that --

12 MS. SZVETECZ: I mean, it doesn't necessarily
13 have to be an EIS, I don't think --

14 COMMISSIONER WELLINGHOFF: Right.

15 MS. SZVETECZ: -- the way we think about a
16 NEPA programmatic -- and a SEPA EIS.

17 COMMISSIONER WELLINGHOFF: Just the regional
18 programmatic look at it, and I assume that you're
19 really looking at that from the perspective of we have
20 widespread deployment of these kind of technologies,
21 and you wouldn't see individual pilot projects as
22 something that would be stopped before that happened;
23 is that correct?

24 MS. SZVETECZ: I don't think so. I think it
25 could be a vehicle to start gathering and mining the

1 thing --

2 COMMISSIONER WELLINGHOFF: But we could do
3 that at the same time --

4 MS. SZVETECZ: -- that occurred and to do it
5 in a coordinate way that's not a -- you know, just
6 available or just applies to individual projects.

7 COMMISSIONER WELLINGHOFF: Right.

8 MS. SZVETECZ: They can look at regional --

9 COMMISSIONER WELLINGHOFF: And then we can do
10 that at the same time that we are deploying pilot
11 projects?

12 MS. SZVETECZ: I think that it's definitely
13 worth discussion. I mean, it really depends on what
14 we're doing in the study and how the pilot projects are
15 proceeding.

16 COMMISSIONER WELLINGHOFF: Okay. Good. That
17 helps me a lot.

18 And let me go to you, Bob. Also, on the
19 same sort of tone, do you see we could start gathering
20 this baseline information at the same time of this
21 deploying some of these pilot projects?

22 MR. LOHN: Excuse me. Commissioner, I see
23 two focuses for baseline information. One, I think we
24 should be starting right now to sort of do the more
25 general baseline well in advance of any

1 project-specific things. Secondly, as a particular
2 area is designated as an area of interest, I see no
3 reason why we couldn't and shouldn't be moving ahead.
4 So I agree with you.

5 COMMISSIONER WELLINGHOFF: Thank you.

6 No further questions.

7 MR. KATZ: Mark?

8 MR. ROBINSON: Bob, if I could ask you to
9 just put this in context. One of the things that
10 worries me about this, the approach of all the people
11 who have a role in deciding what particular project
12 moves forward is if they not look at it in the context
13 of the worst project that could possibly come in the
14 door and have all the safeguards necessary to protect
15 that worst project. In that vain, it seems like there
16 might be some opportunity under your authorities with
17 the ESA, in particular, to look at the context of the
18 pilot process and the numbers of projects that we
19 talked about, the size of them and the vastness of the
20 area that we're talking about that they would go into.

21 In my mind -- and I haven't done the
22 calculations -- is like a -- you know, felling a tree
23 in the Pacific Northwest. Does that really have a --
24 if it's a tree that lands on your head, it's important,
25 but if it's just a tree in the Northwest, maybe it

1 doesn't potentially have an impact. Is there a way
2 that we can bring the context of the vastness of the
3 area we're talking about and the small size of these
4 projects and the -- but the potential for them, even
5 collectively, to ever result in a tree that falls on
6 your head, can we bring that into the ESA in context
7 and possibly sort of lower the fear or lower the look
8 that we have to do on a project and project basis?

9 MR. LOHN: Mark, first of all, I want to
10 thank you for consistently being a source of creative
11 ideas and frankly helping us think through, in new
12 ways, ESA application. I think there is some advantage
13 to what you described, but like real estate, location
14 matters, and some of the very characteristics that make
15 a particular site interesting to developers for this
16 kind of energy may well make it a high-use site for
17 fish and wildlife. That's one of the challenges we
18 face.

19 What I really would propose is to try and do
20 as much screening up front to say these kinds of sites
21 get this kind of use, and therefore, there's a low
22 probability of ill effects if you're developing in the
23 following way. That, we certainly can do.

24 The reason I'm particularly cautious about
25 the Endangered Species Act is just to be direct with

1 the audience -- and most of you would recognize this
2 already -- is that of all the laws that, at least, I
3 see were touched upon, this is the one that, if
4 someone -- some one individual, some organization,
5 doesn't like the project will be in the Northwest, the
6 first place they go to say, "There's a flaw, this
7 feature wasn't considered, let's shut it down." And
8 that's why I want to be, in approaching ESA, very
9 realistic about the need not to do an ultimate job -- I
10 mean, to know every piece of information, but to do it
11 in a way that's sound and defensible because there's
12 some real investment resting on it, too.

13 So I agree with your location on siting, with
14 your notion that there's some areas you can sort of use
15 a screening to reduce risk in the probability of
16 problems. We're sure willing to work with you on it,
17 but it will always end up being a site-specific
18 consultation; that is, now they've narrowed the risk.
19 We want to look at it and say, "What is it that we
20 know? How have we bounded that risk in this place?"

21 MR. ROBINSON: Actually, I think that the
22 site-specific is a given; we understand that. It
23 really boils down to what do you have to know to make
24 the affirmative call?

25 MR. LOHN: Sure.

1 MR. ROBINSON: And in some areas -- and
2 that's why I think we have a sensitive area in the next
3 year if we can -- given the vastness of the -- what
4 we're -- area we're dealing with, if you can find some
5 areas where the probabilities are low, you can make the
6 affirmative call with less information than you would
7 in other areas, then that's something that would be
8 very helpful unless, I think, the development of the
9 communities --

10 MR. LOHN: Absolutely.

11 MR. ROBINSON: -- of identifying them.

12 MR. LOHN: That's something -- I'm confident,
13 as an agency, we'd like to respond almost not quite
14 with zoning, but with, you know, suitable areas and
15 areas that are going to be greater challenges and let
16 you know up front. Currently, we have only a rough
17 idea of that; that is, we haven't advanced the baseline
18 enough to give you a more crisp picture.

19 MR. ROBINSON: I'm certainly not asking for
20 protected rivers type of --

21 MR. LOHN: That's all right. This goes way
22 back.

23 MR. ROBINSON: It does go back.

24 MS. MILES: I have one other thing for Bob or
25 anyone else, and that is: One of the key elements of

1 this pilot project is the safeguards, the monitoring
2 and the opportunity or ability to shut it down and
3 remove it if there is harm.

4 And my question is: Does that allow you to
5 go forward under your acts with less information given
6 that that is an aspect of it?

7 MR. LOHN: Two challenges there, Ann, for us,
8 and I'll let others speak to it.

9 One, something like -- under the Endangered
10 Species Act, the affirmative finding, this will not
11 jeopardize the list of fish, requires us to have a
12 certain level of knowledge up front. I wouldn't say
13 that's an absolutely bright line, but we can't just
14 say, "Well, we don't know, but we'll shut it down."

15 Secondly, there is a real challenge in the
16 ocean in the monitoring effects at a particular site.
17 If, for example, there's -- assume for a moment that
18 some device was killing a significant number of fish as
19 they swam past, but the current was depositing those
20 fish on the ocean floor in a place where there were a
21 high number of scavengers, but maybe, you know, 500
22 yards or thousand of yards away. It would be very
23 difficult to pick up that event unless you have sort of
24 constant video camera monitoring.

25 The challenges of the detecting what a

1 problem would be in the ocean can be considerable;
2 thus, that's why we're certainly willing to -- I'm not
3 ruling out monitoring as an effective tool; it's just
4 the realities of our work on the ocean floor is a lot
5 can happen there that you can't see, and so you'll need
6 to have a reasonable safeguard up front that the range
7 of things likely to happen is not going to be too far
8 into that zone.

9 COMMISSIONER MOELLER: Anyone else?

10 MS. SZVETECZ: Can I add to that?

11 MR. KATZ: Sure.

12 MS. SZVETECZ: I will kind of defer to the
13 open forum if some of the permanent agencies want to
14 speak to this question specifically, but I wanted to
15 just add that, typically, with The Clean Water Act
16 and -- you know, and other approvals that the state
17 might be issuing, the goal is to employ best
18 practices so that you don't have the impact. And so to
19 develop that list of appropriate management tools so
20 that you're preventing water quality impacts or any
21 other habitat impacts, I think, is the best thing we
22 can do, so we have to develop that list and condition
23 the approval so that they don't happen. I think
24 monitoring is a way to double-check those conditions;
25 not necessarily a way to provide the only source of

1 adaptive management and learning from these projects.

2 So, you know, maybe we can get more filled in later.

3 MR. KATZ: Commissioners, unless you have
4 anything further, we're about out of time on this
5 panel.

6 COMMISSIONER MOELLER: Just a common theme
7 that is emerging is that, with proper environmental
8 safeguards, we need to get some of these in the water
9 to learn more, and I hear that from almost everyone.

10 MR. KATZ: I thank the panel for a very
11 interesting panel and for your very thoughtful
12 comments. For those of you whose schedules permit
13 sticking around, we are going to advise all the
14 panelists to come back during the open forum in case
15 the audience has something they want to address to you.

16 So, Bob, I know you're very busy. Those who
17 can stick around, please do. And I'll switch out the
18 panels and bring the group for the next panel.

19 (A recess was taken from 2:02 p.m. to
20 2:06 p.m.)

21 MR. KATZ: We are ready to start with our
22 last panel.

23 Our first panelist is Mike Sulis, who is PNGC
24 Power's senior systems analyst and database
25 administrator in 2001. He's responsible for

1 implementing, integrating, and managing the systems
2 used by power operation to schedule and deliver
3 reliable energy to PNGC's 15-member cooperative located
4 in seven western states. He holds a master's of
5 architecture degree from southern California to
6 architecture and a BS from University of Illinois at
7 Havana Champaigne.

8 Carolyn Elefant didn't give us a lot of
9 information, but she's a hydro attorney about town and
10 is CEO and general counsel, Ocean Renewable Energy
11 Coalition.

12 Linda Church Ciocci is the executive director
13 of the National Hydropower Association, NHA, which is
14 the only trade association dedicated exclusively to
15 represent the interest of the hydropower industry.
16 She's held this position since 1991.

17 Terry Thompson is a Lincoln County
18 Commissioner from Lincoln County, Oregon. He graduated
19 with a degree in education from Oregon State University
20 in 1969, and at that school, he took multiple courses
21 in fishery and oceanography study, which kindled his
22 interest in ocean science and its relationship to
23 fishery resources off the Pacific Coast. He's also a
24 fisherman with over 4,000 days at sea who's been
25 involved in most of the major fisheries along the West

1 Coast.

2 Robin Hartmann is the ocean program director
3 of the Oregon Shores Conservation Coalition.

4 Richard Roos-Collins is the director of legal
5 services of the Natural Heritage Institute, and he's
6 around the Commission's office so much that we ought to
7 charge him rent. Since 1991, he has represented public
8 agencies and non-profit in water and tidal matters. He
9 specializes in settlements in complex, multi-party
10 disputes. He is a graduate of Harvard Law School and
11 at Princeton University.

12 With that, I will turn it over to our
13 panelists.

14 MR. SULIS: Thank you. Thanks very much,
15 Commissioner Moeller and the FERC staff. I appreciate
16 the opportunity to come here and talk to you.

17 Commissioner Moeller, at the end of the last
18 panel, you stated something, I think, in summary that
19 sums up our position, which is this proposed pilot
20 licensing project will hopefully allow us to get the
21 license in the water and start the project. So I'm
22 here hopefully to represent a perspective that's a
23 little bit distinct among the panelists, which is that
24 of a local regional utility who's really eager to get
25 the license in the water in ocean-based generation, in

1 particular.

2 So maybe a little bit about PNGC Power might
3 help to understand what we do. We're a Portland-based
4 not-for-profit group composed of 15 rural electric
5 cooperatives. We're responsible for procuring and
6 scheduling their energy and their transmission on a
7 realtime basis as well as pre-scheduled basis, so that
8 includes hourly power scheduling for 15 of these
9 cooperatives around the Northwest. They're located in
10 three states -- in Idaho and Washington and Oregon --
11 and they serve customers in seven western states. Our
12 primary resource right now is hydroelectric power from
13 a federal-based system. That is our load ground. In
14 the future, we're looking at increasing the other
15 opportunities. We're looking for new resources and
16 ways to meet other goals.

17 We're partnering right now with Ocean Power
18 Technologies providing funding towards the fabrication
19 and ocean installation of a non-grid connected
20 150 kilowatt single buoy off the Oregon coast near
21 Reedsport. That's planned to be deployed in early
22 2008, and hopefully, the follow-on will be the
23 deployment of an additional 13 buoys. Eventually, I
24 think, we're going to install two megawatts, and at
25 that point, we'll be interconnecting into our loads

1 there at the coast.

2 So Ocean Power Technologies was on the first
3 panel today, and they spoke about the opportunities and
4 the challenges of the program, and to the extent that
5 we're partnering with them, we're aligned with that
6 position. I think, from our perspective, the proposed
7 pilot licensing project is attractive probably to
8 utilities like us; although, I think at this point, our
9 partnership with Ocean Power Technologies, we're a
10 little bit further into the pilot licensing project
11 than some of the utilities may be, but we're hoping --
12 I think like they are -- that the spirit of this, that
13 the idea that we've got to expedite the process can be
14 applied to beyond the pilot licensing stage into the
15 full-scale commercial deployment phase; something that
16 would allow us some process by which we can
17 incrementally license the projects as we -- as they do
18 prove to be hopefully low impact as well as -- as we
19 see the technology become more commercially viable.

20 And a little more -- the ocean wave-based
21 generation is particularly attractive to contingency
22 power, and to us, in fact, other utilities like us for
23 a few of the obvious reasons. It's a renewable,
24 hopefully, low-impact resource that we're looking
25 forward to seeing, but possibly even more so than wind.

1 We've got proximity to electrical loads. A large
2 amount of our loads are on the coast and Willamette
3 Valley, so the proximity of the wave-based generation
4 of that resolves a lot of transmission issues, and
5 distributing the generation helps greatly.

6 Probably most importantly, the reason that
7 I'm particularly interested in this is that, from a
8 system integration perspective, we've got, unlike wind
9 generation, say, of some other renewables, we've got a
10 large degree of forecastability in wave generation, and
11 that's -- I'm not sure that we've heard yet;
12 particularly, the -- from the scheduling of the
13 business operation side, it's a significant impact on
14 us when we've got loads changing. Especially as
15 scattered as we are across the region, we're subject to
16 whether on different loads and irrigation loads that
17 come on and off; a lot of variability. And so a
18 resource with some predictability is really attractive
19 to us, it gives us an opportunity to make renewable
20 energy a much more significant part of the power
21 portfolio that we hold that might otherwise be.

22 So as these are -- as these are shown to be
23 hopefully low pact in this pilot license processing
24 hopefully works. We'd like to see this carry forward
25 into something that might allow us to work into

1 full-scale development in small increments, so more in
2 keeping with this pilot project and helping to keep
3 with it.

4 So there's one message I could leave with
5 you. It's that these clean renewable energies are of
6 significant interest for rural customers. They're
7 really interested in these, and they've told us
8 several -- and we're really looking into them trying to
9 explore them having not just reserve to some of the
10 larger areas and more urban environments, so
11 the current electric cooperatives like our 15 members
12 are typically on the front line integrating these
13 systems into their electrical -- you know, into their
14 regional grid, and so they're hoping to be involved as
15 well, so the leadership role working on these policies
16 with you trying to figure out how these -- to move this
17 wave energy forward.

18 MR. KATZ: Thank you very much.

19 Carolyn, you're next.

20 MS. ELEFANT: Hi, I'm Carolyn Elefant, and
21 I'm here on behalf of the Ocean Renewable Energy
22 Coalition. I'm actually the legislative and regulatory
23 counsel for this group. We were founded in 2005, and
24 OREC's goal is to promote the advancement in
25 commercialization of marine renewables in the United

1 States. In other words, we have an interest in
2 building a real industry in the U.S. for these
3 technologies.

4 When I was coming here today, I actually
5 thought that paradigm that the Commission has proposed
6 with this pilot process resembles Alvin Toffler's -- a
7 paradigm in Alvin Toffler's book, "The Third Wave."
8 Maybe I should also state, to be fair, "The Third
9 Tidal." Basically The Third Wave paradigm is one where
10 bureaucracies are replaced by entities that are
11 adaptable and flexible and where a one-size-fits-all
12 solution is replaced by something that's customizable.

13 And so in that spirit, what I'd really
14 commend is the Commission for stepping away from
15 business as usual and moving forward with a third wave
16 approach leading this industry into the future.

17 We were asked to speak about the
18 opportunities and challenges to this pilot process. I
19 think we've heard a lot about the opportunities.
20 They're enormous. We can get projects -- developers
21 can get projects into the water. We can gather
22 information about the environmental impacts. Another
23 opportunity, which we haven't discussed as much is not
24 only can developers get projects into the water, but
25 they can also start selling power into the grid, and

1 the reason that's important is because, right now, one
2 of the hurdles our organization is based in getting
3 favorable past treatment is that Congress and
4 legislative staff are asking, "These projects don't
5 generate. Why do you need a production tax credit?"
6 If we can get projects in that are producing power, we
7 can get those favorable tax climate. And a favorable
8 tax climate helps track private investment. So not
9 only does this pilot process allow developers to put
10 something in the water to attract their own individual
11 investors, but it helps stimulate a broader favorable
12 tax environment for these projects.

13 Now, of course, there are also challenges. I
14 think the biggest challenge is making this process work
15 in a six-month period. As we've already heard from the
16 developer panel, if this process is not going to work
17 in six months and the costs are going to be exorbitant,
18 if the monitoring requirements are going to be
19 prohibitive and extensive and disproportionate, there's
20 going to be a need for lengthy studies. Developers
21 have no incentive to avail themselves of this process.
22 They'll simply move ahead to the full-blown
23 commercial-scale license, and as a result, will lose
24 all of these potential benefits.

25 So what I want to focus on most today is:

1 How would we make this process work in six months or,
2 at most, a one-year period? And here are some of the
3 ideas that OREC has had.

4 First, we're suggesting that in preparing the
5 information for the preliminary ap -- for the
6 applications that are submitted that developers rely on
7 existing and available information. Ideally, the pilot
8 approach allowed developers to defer almost all studies
9 to post-licensing part of the process because, after
10 all, that's the very purpose of this process is to
11 allow developers to get projects in the water and
12 generate data in the post-licensing -- the
13 post-deployment and monitoring phase. That would
14 really help us get the projects into the water more
15 quickly.

16 Second, the Commission should do what it's
17 already been trying to do, from what I've heard in the
18 comment today from staff, which is to get the other
19 federal and state agencies on the board. And I think
20 that the federal -- the Commission should encourage the
21 federal and state agencies to follow its lead, to take
22 a look at their statutes, and come up with legal ways
23 that they can get these projects deployed, to take a
24 look at the possibility of legal statutory waivers, to
25 take a look at categorical exclusions, nationwide

1 permits, to take a look at the Small Business
2 Regulatory Enforcement Fairness Act, which is enacted
3 to help small businesses deal with regulatory hurdles.
4 Take a closer look at these statutes, and you can come
5 up with ways that would be legal that would allow you
6 to -- allow the agencies to fill their statutory
7 responsibilities and still move forward.

8 Third, we're suggesting that the Commission
9 create a tidal or wave liaison very similar to the one
10 that has been implemented for tribe -- for the tribal
11 liaison program. The liaison can serve as a
12 clearinghouse for information. It could evaluate
13 monitoring plans, serve as a resource for all the
14 agencies and keep these processes on track. But in
15 contrast to what staff does, the liaison would not be
16 playing an advisory role, it wouldn't be evaluating for
17 projects, and so the liaison might have more leeway to
18 act as an arbiter in these proceedings.

19 The other advantage of having a liaison is to
20 set some models for other agencies. We heard one state
21 agency talking about how it would be helpful to have a
22 designated team, so by taking the lead with the
23 liaison, the Commission could set a model for what
24 other agencies could do. The other advantage of the
25 liaison is it's a position that enables the industry to

1 go and ask for more -- to ask for funding to help get
2 the -- take the burden off of these agencies.

3 The Commission should also allow for
4 flexibility. We've heard about that so far. OREC's
5 position is that five megawatts should serve
6 presumptively as the criteria qualifying for this
7 process, but developers should have an opportunity to
8 make a case for something that is larger based on the
9 footprint of the project or other characteristics where
10 it's located. We also think that, in order to make
11 this process work, the Commission has to recognize that
12 the pilot process is the first step to
13 commercialization. As we've heard, no investor is
14 going to fund a project that stays in the water for
15 five years. This pilot process is part of a phased
16 commercialization, and as a result, we can't constrain
17 the process, so if licensed -- if a project is
18 operating under the five-year license and applies for a
19 full-blown license, the Commission should allow for
20 continuity of operation.

21 MR. KATZ: Carolyn, if you can, I need you to
22 wrap up.

23 MS. ELEFANT: Yeah. So I'll just --

24 MR. KATZ: Thanks.

25 MS. ELEFANT: Yeah. Okay. I'll just wrap up

1 by saying that this process can work if we see it as a
2 step towards commercialization of this technology. Let
3 projects go in for the pilot period and give them an
4 opportunity, fair opportunity, to show that they can be
5 built out if the technologies work and if there are no
6 unacceptable environmental impacts.

7 Thank you so much for your leadership and for
8 this forum.

9 MR. KATZ: Thank you very much.

10 Linda.

11 MS. CIOCCI: Commissioners Moeller and
12 Wellinghoff, thank you very much for the opportunity to
13 participate in today's workshop and for the fact that
14 you have posted this. I think this is a wonderful
15 opportunity for us to learn and to move forward what we
16 believe is a very important new licensing tool.

17 NHA has prepared a written statement, much of
18 which I have to say this afternoon. The first panel
19 has already discussed, and I believe other participants
20 have raised, some of the same issues, so I'm going to
21 beg your indulgence for two reasons. First, because
22 I'm going to be repeating a lot of what's already been
23 said, but also, I am going to confess that I am flying
24 high on cold medicine at this point and have got
25 cotton-mouth, and as a result, I'm going to pretty much

1 stick to my written statement, if you don't mind,
2 rather than trying to summarize what's included in
3 that.

4 Let me say at the very beginning that the
5 association is pleased with the fact that these
6 Commission staff has acknowledged in your opening that
7 this process is going to be available to hydro
8 in-stream hydrokinetic technologies. We believe it's
9 very, very important. There's great potential in those
10 technologies, and we think that this pilot process is
11 going to be very important to see those projects
12 develop, so we thank you for that clarification.

13 The NHA commends the Commission for its
14 leadership in proposing the pilot license. It is what
15 we believe is a very bold and creative move and
16 supporting. Since our 2004 meeting with the resource
17 agencies, industry, and FERC, NHA has urged FERC to
18 consider a smarter, efficient, yet responsible
19 licensing process for these emerging technologies. It
20 is clear to us that hydrokinetic tidal and ocean
21 technologies pose a unique set of challenges, and we
22 believe they require a unique solution.

23 One of the major problems rests with the need
24 for information. Resource agencies simply do not have
25 this information and -- about known impacts, and this

1 pilot process gives us an opportunity to glean that.
2 As such, while NHA has argued for a process that would
3 allow projects to test and thereby address a seriously
4 deficient information gap. We believe that the
5 creative approach of your pilot licensing proposal does
6 indeed offer a workable framework. The key to the
7 success of this approach is the issue of stakeholder
8 engagement, cooperation, and expectation. We believe
9 this is the Achilles heel in this proposal.

10 The pilot process requires the development of
11 a number of plans. It will require consultation and
12 involvement of the resource agencies, in some cases, by
13 the states and of the stakeholders. A common
14 understanding of the process, information, expectation,
15 terms, and most importantly, buy-in, in acceptance of a
16 speedy process would determine the success of your
17 proposal and, ultimately, the success of this young
18 industry in meeting its full potential.

19 The issue of how states in the case of 401 or
20 the resource agencies are engaged in this process is
21 critical. While this is a FERC process, the other
22 stakeholders must be vested. Finding the appropriate
23 balance so that all stakeholders have a reasonable
24 level of comfort and could obtain the information for
25 decision-making all while moving expeditiously is

1 essential to our ultimate goal. We are suggesting that
2 FERC might consider entering into MOUs with the states
3 and the other agencies to accomplish this. One
4 important outcome of such an arrangement would be
5 standard terms clearly defined and accepted by all
6 stakeholders. We hope this would result in a clear
7 understanding of the process and expectation.

8 Now to a few specifics on the proposed
9 process itself. On eligibility criteria, NHA supports
10 proposed individual criteria; however, we offer a few
11 suggestions. First, we encourage you to more clearly
12 define what is meant by the term "sensitive areas." A
13 listing of officially designated areas as developed by
14 various governmental agencies may be a good place to
15 start.

16 Second, on size, NHA supports the limitation
17 to five megawatts, but we believe that there may be
18 cases where a developer and other stakeholders would
19 support a larger project in order to get a better sense
20 of impact and to glean more information on larger
21 machines. Consequently, NHA would urge FERC to
22 approach size criterion with some flexibility.

23 On license term, NHA would suggest some
24 flexibility to a hard-and-fast five-year term. While
25 not all pilot projects may file for a standard license,

1 under the ILP, those that do will need to be given at
2 least two years before the pilot license terminates.
3 So some projects may require more than three years to
4 collect the necessary data to move forward, we suggest
5 that FERC consider a seven-year licensing term. In the
6 alternate, NHA recommends the Commission consider
7 extending the pilot license perhaps with a showing of
8 good cause by the licensee.

9 On time line and license requirements, FERC
10 has proposed a very ambitious time line. It is
11 efficient and expeditious, but we recognize that time
12 line, too, may be considered with some flexibility.
13 Obviously, the major factor will be the agencies
14 involved, their expected information at the time of
15 pilot license filing. For example, the Section 401
16 apply. How is this built into the process, and what
17 might be expected in terms of information? In order
18 for this time line to work, FERC will need to post and
19 manage the process and work with the other agencies and
20 stakeholders to adhere to this rigorous schedule.

21 On the matter of baseline, NHA believes
22 baseline information should be limited to existing
23 information only. While the proposal often cites this
24 fact, we urge other stakeholders in agreement of these
25 important facts. Developers should not expect to

1 perform pre-application studies; rather, these should
2 be part of the monitoring component.

3 Immediate availability of process. As a --
4 MR. KATZ: Linda, I have to ask you to try to
5 wrap up.

6 MS. CIOCCI: I'm just about finished. I'll
7 wrap it up. Thanks.

8 There are questions, but we believe, however,
9 that FERC should quickly consider using this new
10 process. On selling to the grid, we think this is a
11 critical component of this proposal. We think that
12 many of the developers will need this type of financial
13 support in order to attract initial investment as well
14 as to prove their marketability. There are a host of
15 transition issues that have already been raised, and we
16 believe that we need to figure out specifically how
17 this particular process is going to fit in with the ILP
18 and the preliminary permit issue.

19 There are competition issues that our
20 industry noticed and raised with the competition
21 between pilot licenses when they're filed, preliminary
22 permits and pilot licenses, as well as the pilot
23 license in some conventional relicensing, and we urge
24 you also to consider that, and we'll be providing more
25 information on that in our official finding.

1 And last thing on decommissioning. I will be
2 certain to officiate the need for bonding. This will
3 require that legalese is being posed a serious hurdle.
4 We're seeing already that international industry is
5 very, very difficult to attract bonding; in some cases,
6 we feel that perhaps the cost and the ability of these
7 projects to attract that type of support is going to be
8 difficult to learn, and we ask that you would kind of
9 work with the industry to find some creative mechanism
10 to move that standard. We support the standard, but it
11 will pose some problems.

12 So, in conclusion, NHA supports the proposed
13 pilot process. We endorse this process for marine and
14 tidal industry and hydrokinetic projects. We applaud
15 the Commission for its vision, boldness, and
16 creativity. We believe it's a workable framework. We
17 also encourage all stakeholders to be engaged.

18 MR. KATZ: Thanks for your operation under
19 pressure. And we'd like to ask the Commission to
20 extend, and you're out of time.

21 Commissioner Thompson.

22 MR. THOMPSON: I'm in politics. Being brief
23 is not my specialty, but --

24 MR. KATZ: Well, you're also in politics,
25 then you recognize that what happens next is the

1 public's opportunity to address everybody, so --

2 MR. THOMPSON: I should be appointed to the
3 Congress.

4 Yesterday, if you were at the meeting over at
5 Lewis & Clark -- and I wish that all of you could have
6 been there -- it was a very interesting process
7 because, two years ago, you would not have heard what
8 we heard. We heard that local communities have to be
9 involved, and it's a necessity. You heard it from
10 NGOs; you've heard it now from Finavera and other
11 people in the room.

12 Lincoln County filed under Subsection D of
13 the Admissible Preference Act for the entire section of
14 our coast. We saw a hole and a problem developing.
15 That problem was between our local communities and
16 potential industries that we wanted to have and to
17 trumpet was the conflict of a hundred million dollar
18 fishing industry that had to share the grounds with
19 that.

20 Some square miles of the ocean out there
21 produce annually as much as a hundred thousand dollars
22 into our community. And even though power's important,
23 I have trouble believing that the way power industry is
24 probably going to be able to produce more power out of
25 square mile than some square miles on it. This is

1 where we think that local people have to be involved
2 and why our communities step forward. We feel that, if
3 we work together, we can have both; that the fishing
4 industry can do well and that power industries, if
5 sited in the proper location, can do well also and make
6 a robust community.

7 This is a conflict that we have to deal with
8 under law. It's called the conflict between renewable
9 power and renewable food resources, and as long as
10 we're dealing in the ocean, we're going to deal with
11 that. In Lincoln County, that's why we've created
12 FINE. FINE is a group of fishermen across from sports
13 industries to draggers to crab fishermen. We created
14 that entity so they could sit down and communicate with
15 the power companies that wanted to be in here.

16 Now, you say community. Here's the problem
17 in what you're proposing. You're still -- you've
18 created a new set of rules by applauding for that, but
19 you've still got the basic flaw in this. It's a flaw
20 in that you're going to turn around and allow a power
21 company just come in and mark a box out in the ocean
22 and say, "This is ours," with no consideration of what
23 the fishing industry's doing there or what other
24 industries might need to be there. Like fiber optic
25 cables; I also work on fiber optic cables. I've done a

1 lot of that. There's only certain routes for fiber
2 optic cables. We have to make sure those routes stay
3 viable.

4 So what we have is the problem here under
5 which you're proposing. It's still the same old thing.
6 You just come in and mark out an X, and then we have to
7 deal with it. We believe that there's a better
8 process, and that's why Lincoln County did what it did,
9 and that's to create the energy so that power companies
10 could come and talk about what they need, and then the
11 fishing industry can talk about what they need and then
12 start the process to move forward.

13 You're going to have untold conflicts in the
14 future if you keep going the same way you're going.
15 This is not a dam; this is an ocean. It already has
16 people out there that have lived there and worked there
17 for years and years and years. Probably their families
18 are there. You're not going to be able to do it if you
19 just turn around and create it like it's a gold mine.
20 That's the problem.

21 I'm going to just make it brief because I'm
22 looking forward to questions, but I'm going to jump
23 down here to the situation where he says also is in
24 removal. The fishing industry is very worried about
25 removal because we've seen it so often when things go

1 in the ocean, and you can have good intent. The
2 fishermen are asking, "Where's the money to clean it
3 up?" The state of Oregon, we passed a bill, but I'm
4 still not sure it's there. And when is it cleaned up
5 when something's gone wrong? It's easy to sit here and
6 talk about it, but when it comes time to remove a
7 product like that, we'd feel a lot more comfortable if
8 we knew exactly where the money is going to come from
9 and exactly when it's going to be done.

10 I'll touch on a couple of other points here.
11 I wanted to tell you also good news -- and I mean good
12 news -- is that OSU, we hope, next week, they've
13 contacted us and said, "We'll have another buoy in the
14 ocean off of Lincoln County." And if you were not
15 aware what went on different in our area than most
16 other areas, we actually have fishermen on board that
17 helped OSU put their anchor in the bottom. We have
18 good relationship. Now, I can't promise you a good
19 relationship in the future because of the cumulative
20 effects that may happen, but at least we have the
21 process. And at this point, the fishing industry
22 realizes that this power is important; that they just
23 don't want to feel like they're left out of the table.

24 We're at the back end of the process. The
25 local communities feel like they're at the back end of

1 the process, and unless we create situations somewhat
2 similar to what we did with the under-sea cables in the
3 state of Oregon where these two groups come forward in
4 the process, I see nothing but conflicts, and I'm
5 afraid, even though you're well-intended with your law
6 changes, I don't think it will solve the real problem
7 we face in the future.

8 MR. KATZ: Thank you very much.

9 Robin.

10 MR. HARTMANN: Thank you. Thank you,
11 Commissioners and staff. My name is Robin Hartmann,
12 and I work as the ocean program manager for Oregon
13 Shores Conservation Coalition. I live in Roseburg,
14 Oregon, which is about 75 miles inland from the
15 Reedsport projects, but it's also about 75 miles
16 downstream from the North Umpqua Hydropower Project,
17 and I was engaged throughout that relicensing episode.
18 That's how I got to know the FERC process initially.

19 I became engaged in ocean issues in addition
20 to fish and wildlife issues when I adopted a mile of
21 coastline. Douglas County has 19 miles of coastline,
22 and I adopted a mile of coastline under Oregon Shores
23 program called Coast Watch, so I've been going out to
24 my mile for a year -- well, for nine years now and
25 keeping track of the development on that mile.

1 I serve on Oregon's Ocean Policy Advisory
2 Council with Commissioner Thompson. For the past year,
3 I've chaired the OPAC's Wave Energy Work Group, and our
4 focus there has been on the statewide framework and
5 listening to coastal residents and hearing their
6 concerns. And we're also working to establishing a
7 network of marine reserves to identify those energy
8 sites to get them protected. We appreciate Ann Miles'
9 help there. She serves as our federal liaison and has
10 come out and presented on FERC's process. We also
11 appreciate the help of Jim Hastreiter, your Portland
12 staff. He's been engaged in everything.

13 I also am serving on a steering committee for
14 an ecological effects workshop that's going to occur
15 next week. It's for scientists. It's October 11th and
16 12th at the Health and Science Center. We're bringing
17 40 to 50 scientists from all over the region and across
18 the nation to help them focus on wave energy, the
19 potential impacts, our knowledge, where the gaps are,
20 where are the priority issues. So I would urge the
21 Commission to take a look at the results of that. I've
22 been engaged in the Oregon Solutions Process, and right
23 now, in spending sometimes two or three consecutive
24 days a month sitting in on the settlement discussions
25 on OPT's project, and that's kind of where I'm going to

1 draw from my testimony today.

2 This is practical experience of sitting for
3 two or three days at a time in a room with folks trying
4 to identify the issues that need to be addressed with
5 this new technology and this new industry, and I think
6 OPT spoke to us this morning. We're all trying to
7 really do a good effort and due diligence and get some
8 good work done, and the hard work and -- at the
9 beginning of these projects. So it's really hard for
10 me to -- we're supportive of the pilot project process,
11 but it's hard to understand how it could be more
12 condense than what we're already doing in this
13 settlement process. And it's taking a lot of time and
14 a lot of focus, and it's hard to understand how it can
15 be more compressed than that is.

16 We are concerned about the listed species
17 that the pilot project should be concerned about more
18 than just the listed species. Gray whale is a case in
19 point; it's not listed. It's -- if you listen to most
20 folks, it's a main concern. There's about 20,000 gray
21 whales that migrated along Oregon's coast, and they all
22 migrate from the corridor two and a half miles off the
23 coast, and they have to use this area that would be in
24 competition with these wave energy facilities all the
25 way along Washington, Oregon, and California's coast.

1 What we're learning through the OPT project in which --
2 what has been brought up here is that the ocean is a
3 black box, and monitoring is not going to be easy. And
4 a case -- the gray whale is a case in point to describe
5 that.

6 The whale experts in our state, the
7 scientists and from other folks -- other places, are
8 telling us that, number one, they don't even know much
9 about migration of the gray whales. The last studies
10 of this was done in the '80s. We don't know how --
11 really how far off the coast they go. We don't know
12 exactly when they come through and how many. So we're
13 really starting with the baseline studies of gray
14 whales that need to be done here in the state. We
15 can't -- gray whales can't be monitored through the OPT
16 site because they have to be monitored from the shore
17 using the technology we have. They don't vocalize in
18 the water, so you can't record their sounds. They
19 don't do a lot of vocalization, so there's concerns
20 about monitoring that's not easy in the ocean.

21 Sensitive sites. We hope that state
22 designations, such as marine reserves, will be
23 included, but until that time, federal and state
24 agencies and scientists and local residents should be
25 able to -- we hope that FERC will consider the

1 ecologically sensitive sites that they identify. We're
2 concerned a little bit about cumulative effects even
3 with pilot projects with the footprint -- you know,
4 with maybe 10 to 20 pilot projects all within the
5 migration corridor. That could -- with 15 to 35 buoys
6 at the five megawatt level, these could have serious
7 impacts collectively.

8 We'd like to suggest that you clarify some
9 processes in the pilot project process a little bit
10 better and make them more meaningful. For instance,
11 who determines unacceptable adverse impacts? We think
12 that it's best that the agencies and the license
13 applicant and the stakeholders set a threshold at the
14 time the license is issued using quality -- the most
15 qualitative data that is available. For instance, is
16 one whale killed, A, is that the threshold?

17 MR. KATZ: Okay. Robin, I have to ask you to
18 try to wrap up.

19 MR. HARTMANN: Okay. I guess, just wrapping
20 up, I'd like to make a point that the threshold
21 component is important and should be explicitly
22 addressed. My adopted mile happens to be the mile that
23 the OPT project, just serendipitously, it turned out
24 that way, but it -- so just siting of facilities on the
25 land side, for instance, to store your monitoring

1 equipment and the lines that need to go up to the grid,
2 all of that should be considered in the pilot project,
3 and I appreciate the opportunity to testify today.
4 Thank you.

5 MR. KATZ: Thank you very much.

6 Richard is touching on the -- perhaps you
7 seem you want to be sworn in with your hand on the FERC
8 regulations. We'll call on you anyway.

9 MR. ROOS-COLLINS: Commissioner Moeller,
10 Commissioner Wellinghoff, staff, thank you for your
11 innovation and advancing this proposal to increase our
12 renewable generation. On behalf of the Hydropower
13 Reform Coalition, I represent -- we support that goal.
14 We also appreciate the new thinking taking place. To
15 my knowledge, this is the first time that the
16 Commission in its 75-year history of administering The
17 Power Act has acknowledged or claimed the authority to
18 issue a license less than 30 years in length, and
19 that's only one of many examples of new things in this
20 proposal. So thank you for that as well.

21 I'll take Tim's last slide as my cue. That
22 slide asked how to make this work. And I assume that
23 means how do we make a process that involves roughly
24 six months of hearing work? I have five
25 recommendations for you.

1 First, how do you develop the record on which
2 you make the decision required by the several laws that
3 you administered? Whether it's a Programmatic
4 Environmental Impact Statement or just a programmatic
5 review, plainly, it's in the Commission's interest to
6 compile whatever data exists by marine resource and
7 also by marine location, such as estuary or tidal river
8 or offshore, so that you have that record as the basis
9 for your review of individual applications.

10 I believe that each of the four states on the
11 West Coast and ditto the eleven states on the East
12 Coast have compiled documents not necessarily for this
13 purpose, but the documents could be used as a baseline
14 record. If any studies are to be done specifically to
15 site, the studies must be done before the notice of
16 intent is filed. There simply is not time from the
17 notice of intent until the application is filed under
18 the schedule which you're proposing to undertake any
19 field studies, whatsoever. So if the studies are to be
20 done specific to a site, it must be done before the
21 notice of intent is filed.

22 Second comment goes to the question: So how
23 do you establish performance measures? We go with a
24 compliance plan, if you will, for a given project. The
25 proposed license articles that are attached to the

1 white paper suggest that that will occur after the
2 licenses is instituted to provide, for example, that
3 the licensee will submit a monitoring plan after the
4 license is instituted. Respectfully, that will be too
5 late. The pre-application document, the application
6 itself, should include proposed performance standards,
7 environmental impact, proposed monitoring plan, and
8 other proposed compliance plans, which the Commission
9 can review and decide upon in making the decision.

10 Third comment goes to red tape. How can the
11 several agencies permitting role regulatory
12 jurisdiction have red tape? I concur with Ms. Ciocci,
13 and I also repeat commentary in the December 2006
14 workshop. We really do need MOUs or similar standing
15 arrangements with the 15 states which are potentially
16 affected by this proposal in order to assure
17 cooperation in the preparation of any of the documents
18 as well as the other necessary steps in the procedure.

19 Next comment. How do pilot licenses fit into
20 the cost market? After all, most of the panelists that
21 you've had today represent merchant generators, not
22 utilities; although, there are several utilities in the
23 audience, including Portland Gas and Pacific Gas &
24 Electric. What are the conditions to interconnection
25 with the power grid? What are the tariffs and so

1 forth? I recommend that the Commission continue to
2 look hard at how you could use your rate-making
3 authority to encourage further development of renewable
4 generation.

5 And, finally, again, to pick up on Tim's cue,
6 how do you encourage the agencies, tribes, and NGOs to
7 work together? Well, I'll start, John, by saying if
8 you had charged your unit with a contract, there's
9 certain rights and privileges, and that means a long
10 ways towards turtle butt breaking. Short of that, and
11 understanding if you want this proposal to go, I think
12 that you should find a way to engage stakeholders
13 inherently to help develop these concepts either in the
14 form of policy or possibly a rule. I'm mindful that
15 many of the concepts in the innovative licensing
16 process resolve not just from the hard work of the
17 Commissioners and your staff and the experience of us
18 all in licensing proceedings, but from negotiations
19 which began between NHA and Hydropower Reform Coalition
20 15 years in Portland, Maine, with Julie Kyle, among
21 others, present.

22 Stakeholders, regardless of where we start,
23 can find a way to common ground if the agency would
24 follow -- and that's you -- this proposal and encourage
25 that form of cooperation. Thanks so much for your time

1 this afternoon.

2 MR. KATZ: Thank you.

3 Commissioners, any questions?

4 COMMISSIONER MOELLER: A quick question for
5 Commissioner Thompson.

6 Can you -- we may need to talk a little bit
7 about what's in our proposal and what's not, but that's
8 another subject, but can you tell us briefly about how
9 the seabed cable experience went? Because it sounds
10 like you found some common ground with that.

11 MR. THOMPSON: That was a real interesting
12 situation where they wanted to come to the shores in
13 Oregon, and our Governor gave us the opportunity as a
14 fishing industry to resolve the problems up front
15 before they started the process.

16 Now, in their case, because they buried in
17 the bottom, they let us fish over it. We'll never get
18 to that situation with wave energy because there will
19 always be some contact, but we worked out the best
20 cable routes in the world. We have a 99.8 percent
21 burial rate in the state of Oregon, and the fishermen
22 move over, and if a fisherman hits an area like that
23 where there is or might be a potential cable, instead
24 of pulling back and maybe destroying the cable, we cut
25 the gear off, and the industry reimburses that

1 fisherman. And reimbursement is made literally at the
2 time he's in the ocean. When he cuts the gear, we
3 start -- we create a fund so that gear is reimbursable.
4 That's it. There's a lot more to it, but that's the
5 quick 30-second version. And it's worked well.

6 We actually sit down at the table with all
7 the cables out here and work together to figure out the
8 best routes. In fact, we even go so far in the fishing
9 industry as to go out around the world and advertise
10 for cables to come here. We're just siting another one
11 from China. They expected us to have three in 10
12 years. I think we're on 12 or 13 without any conflict.

13 COMMISSIONER MOELLER: Michael, can you tell
14 us a little bit more? You're coming from the
15 perspective of, as you said, a customer, potentially.
16 What's been your commitment to date of financial?

17 MR. SULIS: I don't have a whole lot of
18 experience with the sort of business side of it. I
19 come from Oregon operational perspectives, so I may not
20 be able to answer that, actually. Sorry.

21 COMMISSIONER MOELLER: Jon.

22 COMMISSIONER WELLINGHOFF: I don't have any
23 questions.

24 MR. KATZ: Well, I guess for all the panel, I
25 have sort of a quick bottom-line question which is from

1 FERC, more or less, but given the proposal by
2 Commission staff and given the understanding that it is
3 just a proposal and is subject to discussion, debate,
4 change, shrink -- being shrunk, being increased in
5 size, do you think this is something that could work,
6 or is it just not something that looks to you like it
7 could get there no matter how much we -- just run down
8 the row, if you would.

9 MR. SULIS: I think from our perspective,
10 yes, I think for something that -- for a rural
11 utilities like us, I think definitely. So we can stay
12 over the top, we might think it's a great way for us to
13 start getting information about how these buoys are
14 going to perform and what the resources are.

15 MS. ELEFANT: From our perspective, it seems
16 like a very obvious approach. It's something that
17 we're just a gap between the preliminary permit and the
18 30-year license. So we think it's something that can
19 work, but if it appears that -- it will need the
20 participation and the cooperation of other agencies,
21 and if it appears that it doesn't work, we prefer to
22 see the Commission put more of its resources into
23 expediting the more full-blown licensing process to get
24 it down to something reasonable, which would be part of
25 it anyway.

1 MS. CIOCCI: From NHA's perspective,
2 absolutely. We do believe that this is a workable
3 approach. As I mentioned, the involvement of the
4 agencies is going to be key in this; their acceptance,
5 the time line. And the understanding of a speedy
6 process, that's going to be critical to the ultimate
7 success, and they think that what you propose gives you
8 an opportunity to get to the unknowns, to bring a
9 comfortable level to resource agencies in the
10 decision-making process, which I think is key.

11 We don't think, otherwise, you will be able
12 to permit these technologies, so from our perspective,
13 we think it's a creative and workable approach.
14 Obviously, it's been -- there's some issues that still
15 need to be flushed out and significant to that is the
16 question of how this fits into the overall licensing
17 process or the transition to a 30- or 50-year license.

18 From our perspective, we want to see projects
19 built, we want to see new energy on line, we want to
20 see renewable energy grow, and we believe that the
21 water power technologies area has great potential.
22 What you propose, we think, is the way of getting
23 there.

24 MR. THOMPSON: Quite simply, yes, it will
25 work, but it's going to be fought with lots and lots of

1 conflicts if we don't resolve some of the problems up
2 front now in the process. Also, this void in our
3 offshore environment, you've got to get these fishermen
4 to the table. The information you're looking for is
5 already there. I'm going to jump out so far -- is Bob
6 Lohn still in the room?

7 MR. LOHN: (Indicating.)

8 MR. THOMPSON: Bob, you've got to go to work
9 on the green sturgeon. Its migration pattern is only
10 four fathoms wide and some go right down through the
11 middle of this. Its spawning habitat is in the
12 Klamath; its rearing ground is in the Columbia River;
13 and nobody's even talking about them yet. And I know
14 you've got the staff and people who will do a great
15 job.

16 MR. KATZ: Before you go down that route,
17 Commissioner Thompson, I just want to make clear: Sort
18 of along the lines of what Commissioner Moeller was
19 saying, because I heard you expressing concern that the
20 Commissioners will sort of wake up one day and say,
21 "Oh, we're going to reserve 500 miles of ocean just for
22 some nasty developer that doesn't care about the
23 fishermen at all." Presuming that we do have a process
24 that has public involvement from day one, and not only
25 that, provides for the resolution of conflicts and for

1 the balancing of different interests not necessarily in
2 favor of one or the other before a resolution that
3 meets everyone's needs as much as possible, is that
4 something that you think the folks that you represent
5 would be willing to participate in?

6 MR. THOMPSON: Boy, it depends on the group
7 and how it's structured, but I think people in Lincoln
8 County -- and that's as far as I can dare extend my
9 words -- they wouldn't -- yeah, it's got some problems,
10 and I'll have to go back and ask FINE to make sure. I
11 hope I'm not speaking too -- but let's put it this way;
12 I think they would.

13 MR. KATZ: Thank you very much.

14 Robin, if you can take it up next.

15 MR. HARTMANN: Yeah. Well, I think it will
16 work. I mean, I guess the question is: What will
17 work? I mean, if it -- the big picture can be
18 addressed, climate change, and if this will help us
19 resolve -- wave energy will help us resolve some of the
20 problems that we've created for ourselves, I'm hoping
21 that we could find some solutions to that.

22 So, I mean, it'll work, A, if we look at the
23 different technologies and consider this as a solution
24 and maybe some other technologies that aren't helping
25 come off line; if we invest in this research and

1 studies that are needed up front and baseline
2 information; and third, if there's a coast-wide or
3 statewide framework for planning for these wave energy
4 facilities.

5 And that's a question we have to ask from
6 Oregon. If the state works on a statewide framework
7 from accumulative effects studying, will the Commission
8 take that into account as they consider whether these
9 sites are approved, and we'd just like to know the
10 answer to that.

11 MR. KATZ: Richard?

12 MR. ROOS-COLLINS: Yes.

13 MR. KATZ: Thank you.

14 Mark, do you have a -- yes?

15 MR. ROBINSON: And, hopefully -- thank you.

16 Richard, hopefully, I'll get more than a yes
17 or no out of this. You were the last of a number of
18 people in the discussion that brought up the idea of
19 some kind of programmatic review or programmatic EIS.
20 Given the whole concept on this initiative is to put
21 projects in the water so that we can develop
22 information, and also given that none of us here are
23 paid for development of the record by the panel, and
24 none of us are served by just having record, and that
25 the process is designed to try to identify that

1 information, which is specific of what is necessary to
2 make a judgment on that particular project that might
3 go to the Commission. What specific benefits do you
4 see by having any type of programmatic EIS for
5 programmatic review in an area where we have so little
6 information about what these projects can actually --
7 what programmatic do you cause?

8 MR. ROOS-COLLINS: Mark, you framed the
9 question as either/or. I think of it as both/and.
10 Yes, this proposal could proceed to be implemented, and
11 part of the licenses could be issued, and the
12 Commission could concurrently and iteratively develop
13 through programmatic review the baseline information
14 which we need.

15 Just to give one for instance, Robin tells me
16 that gray whales can't back up. That's news to me, and
17 I've been in hydropower for 17 years. That's the kind
18 of thing that we should not discover in an individual
19 hearing. It's the kind of thing that should be
20 conventional wisdom through a programmatic review. I
21 understand that MMS in the Department of Energy may be
22 starting such a review. They should be encouraged.
23 Mineral Management Services finished a programmatic
24 document. We could adopt it. States have similar
25 documents off the shelf that could be adopted. I'm not

1 suggesting red tape for the sake of delaying; I'm
2 suggesting an iterated strategy we could be undertaken
3 parallel with the presentation of this proposal.

4 MR. ROBINSON: So, no, let's go out and do
5 the programmatic review, come back when we're finished
6 with that, and then discuss the project? Go ahead and
7 let the projects flow, collect information, and advance
8 the programmatic understanding of what we're doing at
9 the same time?

10 MR. ROOS-COLLINS: That's what I'm
11 suggesting; mindful that you might deny applications
12 if, indeed, you don't have enough information on other
13 applications to grant them. But if I could just switch
14 over for a moment -- since John cites to this document.

15 I am concerned about the ability of the
16 Commission to implement this proposal as policy rather
17 than rule if you waive as many of the requirements of
18 the ILPs that appear to be necessary. For example, if
19 you take the suggestion of Linda and Carolyn and waive
20 pre-application studies, I'm not sure you can do that
21 under the authority of Section 5.29F, and that's
22 particularly true if you waive any other requirements
23 as well. And so while I understand your desire to
24 implement this proposal quickly, and I think it can be
25 implemented quickly, I also think that the more you

1 waive the requirements of the ILP, the greater the risk
2 for the Commission of successful litigation, and that's
3 a given.

4 MR. KATZ: Commissioners, anything further?

5 If not, at this time, we thank the last
6 panel, and why don't we take about five minutes to
7 rearrange the stage.

8 (A recess was taken from 2:58 p.m. to
9 3:08 p.m.)

10 COMMISSIONER MOELLER: Good afternoon. We'd
11 like to reconvene the session in open forum facilitated
12 by the FERC staff. Please take your seats, and we want
13 the panelists back on the stage.

14 John, you're going to describe how we're
15 going to do this.

16 MR. KATZ: We're now in the open forum
17 portion of the program where folks in the audience can
18 come either to make comments or to address questions to
19 any member of the panel. Two members of the Commission
20 staff will be passing amongst you with mikes. After I
21 call on you, you'll get your mike.

22 As I mentioned earlier, please do give your
23 name and the organizational affiliation at the
24 beginning of your statement or question so that the
25 court reporter can note that information.

1 Who is first?

2 MR. CINQ-MARS: My name is Rob Cinq-Mars with
3 Free Flow Energy. I know many of you have heard this
4 before, so I'll just say it this one last time to
5 qualify my comments here. I'm an electrical engineer
6 with Eta Kappa Nu honors, a former commercial
7 fisherman, a former licensed master, and a certified
8 diver. I work the coast of New England to the Gulf of
9 Alaska and the Gulf of Mexico. And now, I'm
10 representing myself as Free Flow Energy.

11 Many in the ocean energy community are
12 concerned about blanket-involved permitting by
13 applicants prior to their demonstrated technology,
14 expertise, and finances. Using the Wright brothers
15 analogy; yesterday, if the Wright brothers were here
16 today, the first thing they would have done is to seek
17 priority of applications for airports in Boston,
18 Cincinnati, Los Angeles, and Atlanta before building
19 and trying out their airplane.

20 Should we in the community have a focus on
21 technology and corporate structure and organization for
22 a permit like crazy?

23 No comments? Okay.

24 MR. KATZ: Well, I'm not sure who that
25 question was addressed to.

1 MR. CINQ-MARS: Well, I suppose FERC. I
2 think there's a lot of blanket permitting going on that
3 we're concerned about, and there seems to be -- it
4 seems -- well, let me go to the next point. Maybe --

5 MR. KATZ: Well, I guess I can answer that
6 briefly.

7 The preliminary permit process is not the
8 same as that which we're addressing here today, which
9 is a pilot license process; however, in the
10 Commission's recent policy statement on preliminary
11 permits, it indicated that it was going to give strict
12 scrutiny to permit applications and make sure that they
13 are geographically and otherwise appropriate, and it's
14 my understanding Commission staff is doing that.

15 MR. CINQ-MARS: The numbers in the
16 applications and the media -- specifically, watts,
17 kilowatts, and megawatts -- are historically from the
18 conventional power industry, but they represent values
19 of instantaneous power under perfect conditions. In
20 the case of the periodic and intermittent sources, it's
21 the energy units averaged over a long period of time
22 that tell the real story of the value and potential of
23 resources. Area is also very important. You've got to
24 use quite a bit of area for this type of energy
25 conversion, and I would like to suggest to you that, in

1 the case of in-stream tidal energy conversion and
2 perhaps wave as well, if you don't hear numbers like
3 less than one kilowatt hour per meter squared, I would
4 question the value of the numbers. That represents six
5 and a half cents, about, per meter squared or 15 cents
6 to the consumer.

7 MR. KATZ: And let me ask you before you go
8 on. If you can ask one more thing or make one more
9 comment, and then let's give someone else a chance and,
10 ideally, if everyone else is done, we can get back to
11 you, but I want to make sure that everyone has a chance
12 to communicate with the panels.

13 MR. CINQ-MARS: Okay. I've got about six
14 points or so. Okay. What's most important?

15 Well, the five megawatts you're proposing
16 using the Verdant technology with a 35 kilowatt
17 generator and five-meter diameter assuming a four-knot
18 resource, two meters per second, 30 percent efficiency,
19 and a half meter perception has been -- that would be
20 143 turbines blade tip to blade tip. It's about a
21 kilometer, and it would represent \$195 per hour worth
22 of electricity.

23 I can do more, but you can come back to me.

24 MR. KATZ: Okay. Thank you very much. We'll
25 see if we have time to get back to you. And also, bear

1 in mind that you can submit any written comments to the
2 Commission.

3 MR. HAMMERSTROM: Hi. Doug Hammerstrom,
4 mayor of Fort Bragg, California, and I hear primarily
5 concerns with local community input and a couple
6 questions for staff clarification. One of the
7 qualification things was that the -- there would be a
8 site-appropriate determination, and I'd like some
9 details on what that would be and then, secondarily,
10 some clarity about what the public input process would
11 be; whether FERC would initiate that, whether the
12 proponent would initiate that, and if we as local
13 communities even prior to applications knowing that we
14 may have some or -- or when an application is thought
15 about if we initiate a robust public input process, how
16 much attention will FERC pay to that?

17 MR. KATZ: Well, let me just say one thing
18 about the public input. I'm not sure exactly what
19 would be available on a particular process, but under
20 the Federal Power Act, the Commission is required to
21 give certain public notice regarding proposed
22 applications such as the applicant and all the
23 Commission's processes about scoping meetings and the
24 opportunity for people to give comments, so I don't
25 anticipate that that would change under the process.

1 Tim, do you have anything further on any of
2 those questions?

3 MR. WELCH: No, not really. I just wanted to
4 clarify that I think there is some -- a level of
5 expectation that even prior to filing a draft license
6 application, that an applicant has had some sort of
7 communication about its pilot proposal with not only
8 resource agencies and tribes, but members of the public
9 as well.

10 And just to clarify, the pilot process
11 itself -- although, I didn't say it specifically --
12 there are, as John said, several comment periods, and
13 we point it out to resource agencies, tribes, and NGOs,
14 but those comment periods would also be available to
15 members of the public as well.

16 MR. KATZ: And, Mr. Mayor, also, thank you
17 very much for taking the time to come here. This is
18 the kind of public input the Commission deeply
19 appreciates.

20 MR. HAMMERSTROM: And my other question was
21 about -- I think the statement is that before one of
22 these licenses would be issued, the appropriateness of
23 the site would be determined, and I just wondered if
24 there was some detail on what that process is of
25 determining the appropriateness of the site?

1 MR. KATZ: Sure. I don't know if we can give
2 great detail, but again, looking back to the statute
3 the Federal Power Act requires that the Commission
4 license only projects that are best suited or best
5 adapted as determined in the statute of comprehensive
6 development of a waterway, so in other words, if
7 someone proposed to put up some huge dam across a major
8 river to develop a very teeny-tiny amount of power, the
9 Commission probably would not license it, and it would
10 do the same inquiry with regard to these types of
11 projects to make sure that they were sized
12 appropriately and that they were in areas that were
13 appropriate to the site development; not every area is
14 appropriate. So the Commission would look at that
15 based on the fact in the record it would develop for
16 each case.

17 I see someone in the back. Why don't we go
18 there.

19 MR. NAGLE: My name is Eric Nagle. I'm an
20 attorney for the U.S. Department of Interior. My
21 comment is not an official one of the department, but
22 just on my own behalf. I have spent the last 10 years
23 litigating cases under the Endangered Species Act, and
24 it's been my general observation that when we have good
25 data in our record and we pay attention to it, we win,

1 and when we don't have good data, we lose.

2 So I was quite surprised to hear the industry
3 representatives' suggestion that an applicant could not
4 be required to collect at least some level of baseline
5 field data before submitting an application. But in my
6 mind, to do that would be to take a
7 shoot-first-and-ask-questions-later approach. I think
8 it would be very legally misused.

9 MR. KATZ: Since that comment was based on
10 information from the panelists, do any of our panelists
11 have a response?

12 MS. ELEFANT: I think to clarify, we said
13 that any -- that there should be a game plan. It
14 should be based on the existing and available data and
15 not extensive studies about perspective impacts that
16 are to attenuate. We definitely support the concept of
17 providing as much data as possible, gathering it from
18 existing areas and also from some -- and applicants do
19 study. They study sites before they go ahead and make
20 a proposal. They'd be presenting that as well.

21 So it would just be based on as much
22 information that's out there, but to the extent that
23 there are studies about unknown impacts, we propose
24 deferring those until after the projects are sited or
25 until after the pilots are sited.

1 MS. CIOCCI: And from NHA's perspective,
2 that's the case as well. We would like to see the
3 baseline information move into specifically to the
4 existing information that is there and not essentially
5 move into specific studies on impacts of that
6 particular piece of equipment at that site because
7 that's impossible to gain in advance of the process,
8 which is essentially moderate, but we should be
9 provided all existing data and information at the time
10 of the pre-filing.

11 MR. KATZ: Yes. There's a hand way in the
12 back.

13 MR. HAMNER: My name is Burt Hamner. I'm
14 from Seattle, Washington. My company is Puget Sound
15 Tidal Power, and I'm the general contractor for the
16 Tacoma Narrows Tidal Power Feasibility Project.

17 We have completed our modeling of some of the
18 narrows to identify the power that's available there,
19 and looking at that site in comparison to other sites
20 around the country, I can observe that it's unlikely
21 that FERC will be having to deal with very many
22 large-scale tidal power projects. There just aren't
23 that many good sites. However, we've also been seeing
24 a development of application in the same technologies;
25 tidal power technologies for rivers. And last week, I

1 spent five days in Washington D.C. with the head of the
2 Department of Energy's Hydropower Division, Doug Hall,
3 who some of you probably know, talking about the
4 application of these technologies in rivers and all --
5 many other smaller sites. And I would observe to you
6 that it is much more likely that FERC can be dealing
7 with complete hydropower projects under one megawatt in
8 large numbers in the future; much more likely than
9 dealing with a lot of wave projects or tidal projects.

10 I am now -- and the Department of Energy has
11 identified over 130,000 sites in the USA suitable for
12 low-scale hydropower projects of the type that might be
13 powered by this permitting process, but these are not
14 going to ever be big projects. They don't need -- go
15 through all -- through a five megawatt scale because
16 there's no power grid for that.

17 So I would be interested in hearing from FERC
18 how you can see that your proposed tidal project
19 licensing system would apply as the actual licensing
20 system for many thousands of small in-stream
21 hydrokinetic energy projects for the total value
22 producing 100 kilowatts to 500 kilowatts. Is this
23 going to work? That's the only thing I want to do, but
24 that's for the -- probably where most of the action is
25 going to be.

1 MR. KATZ: Well, I don't have a detailed
2 answer to that. I will tell you it's not -- there
3 would not necessarily be any difference, vis-a-vis a
4 small project between a pilot license that would be
5 asked for as appropriate deemed by folks who are
6 testing out experimental technology and a traditional
7 licensing. Ann, who's not up here, could probably tell
8 you what percentage of projects that are licensed by
9 the Commission are relatively small -- you know,
10 500 kilowatts, 1,000 kilowatts, less than that, but
11 it's a pretty significant percentage, so it already
12 regulates the small projects, and I don't think that
13 would change.

14 I thought there was a hand up over there; the
15 gentleman in the blue shirt. Yes, Stephen, if you
16 could get the microphone to the gentleman in the middle
17 in front, and then -- I'm sorry. Wrong blue shirt.
18 We'll go to you in the back, then, and then we'll do
19 the gentleman up front next. Why don't you go first
20 since you're standing up, the gentleman standing up,
21 and then you can go next.

22 MR. MARTIN: Thank you. My name is Jim
23 Martin. I'm West Coast regional director of the
24 Recreational Fishing Alliance, and we're a national
25 organization of saltwater recreational fishermen. And,

1 you know, obviously, our concern here is a loss of
2 near-shore fishing grounds.

3 And I live in Fort Bragg and have looked at
4 this project area for PGE's proposal, and it basically
5 encompasses our entire fishing grounds off of Fort
6 Bragg. It would mean that we would have to go out
7 about three or four miles, take a right-hand turn, and
8 go about 10 miles to get to somewhere that we have to
9 fish. And we also have in California the Marine Life
10 Protection Act process, which, according to the size
11 and spacing guidelines, just about -- you could
12 book-end marine protective areas on either side of the
13 study area, and we really would have no place to fish.

14 So I think it's important to work with local
15 communities, and I think that what Terry Thompson said
16 about the cable committees could be a useful guideline
17 that we could work with. Working with local fishermen,
18 maybe we can work some of this stuff out, but federal
19 and state regulations give us very few areas to fish.
20 As recreational fishermen, we don't have a lot of areas
21 to give up. Thank you.

22 MR. KATZ: Okay. We can't, as I said
23 earlier, discuss the merits of particular proceedings,
24 but I can tell you that in every licensing case that
25 I've ever seen -- and there are others who have more

1 experience than I -- there has been an analysis by the
2 Commission of impacts on fisheries often both
3 residential and anagamous fish, and, again, I don't
4 think there's anything in this new proposal that would
5 cause the Commission to do any less of an analysis than
6 it does.

7 Now, the gentleman closer to the front with
8 the blue shirt.

9 MR. SHIPPEL: Yes. I'm Darren Shippel with
10 Westmar Engineers and Consultants out of Kirkland. My
11 comments are directed to the FERC staff and the
12 Commissioners. I have basically three short questions.

13 Obviously, similar to rivers, there are a
14 fixed number of locations and technologies that would
15 be evaluated in this region, and we're wondering
16 whether, prior to Oregon using temporary permits, is
17 that a requirement for some sort of formal
18 determination or a reserve area for computer
19 technologies to do side-by-side during these interval
20 periods of five years?

21 And the second thing would be: After the
22 five years, can there be a finding or a determination
23 of this technology so that we can use the information?
24 As was previously brought up, not all of these should
25 be scaled, and maybe not all of these technologies can

1 be scaled. There may be a market niche for these
2 smaller technologies and companies that do not intend
3 to build huge terawatt or multiple megawatt parks maybe
4 more suitable for some of the more pristine areas that
5 we've identified.

6 And then further -- the final question would
7 be probably to the Commissioners; if there would be any
8 interest within FERC to spearhead some sort of
9 technology evaluation to concur with technologies to go
10 side-by-side in the same level?

11 MR. KATZ: Well, I guess I understood the
12 first part of your question, the
13 non-Commissioner-related parts. In terms of
14 side-by-side, when the Commission issues a license of
15 any kind, it issues a license for a specific area, so
16 if someone wanted to develop technology right next to a
17 particular project, there's no reason that would be
18 barred unless the new project would, in some way,
19 interfere with the operation of the existing project.

20 And I think as to -- with regard to the
21 development of information, the Commission always looks
22 to see if there is information from analogous sites;
23 for example, in riverine environments, Commissioners
24 often used information on fish entrainment from the
25 next river over with a project of similar size, and I

1 think the Commission would certainly want to do that,
2 and I think the resource agencies probably would be
3 glad if there was information that everybody agree
4 with, indeed, analogous and appropriate to a nearby
5 site. I think we would be very eager to use that.

6 Commissioners, I don't know if you had any
7 response to the third question.

8 COMMISSIONER MOELLER: Well, I think we
9 would -- I would defer in terms of -- whether we have
10 rule -- a park, a marine park of sorts, I would rather
11 leave that academia to -- Oregon state's making some
12 effort there, and obviously, Europe as well.

13 We do have a new office of technology within
14 our Commission. It was prompted largely by
15 Commissioners Kelly and Wellinghoff, and I believe
16 these new technologies would be something that they'll
17 be following as well.

18 COMMISSIONER WELLINGHOFF: I'll just add to
19 that that another entity that might be appropriate to
20 head that would be DoE, and often, some of the -- the
21 great people here that they are seeking additional
22 funding through Congress from DoE to look at and
23 evaluate technologies, and I think that's something
24 appropriate for them to do; it's something that
25 certainly FERC would support; at least I would in

1 something that I think our energy division sector could
2 become involved in the DoE probably in the agency as
3 well as the efforts on part of the different facts that
4 any institution --

5 MR. KATZ: And, you know, one thing that's
6 important to remember is that the Commission is not a
7 land management agency like some of -- we don't own any
8 land, so the Commission couldn't reserve any particular
9 development. The Commission also funds itself by
10 charges to the entities that it regulates, and so it
11 doesn't really have R&D funds, per se, so we're more
12 constrained than some other agencies might be.

13 I see a hand in the middle. If you can stand
14 up so we can find you.

15 MR. SPIRES: I'm Al Spires with Anthrax
16 Environmental. Sort of picking up off of one of the
17 questions from the gentleman here. There was a number
18 of comments today about the value and the interest and
19 the programmatic document, and one thought would be
20 that, since this is a pilot program, the whole idea is
21 testing so that you have data that you could evaluate.
22 Why not have the applicants in the pilot program agree
23 to participate in the programmatic study that, perhaps,
24 FERC could publish at the end of the five- or
25 seven-year period, which allows you to evaluate not

1 only technologies, but different environmental
2 conditions, environmental impacts, significance
3 criteria, and so forth, and then that becomes available
4 to Lincoln County or whatever for the next phases?

5 MR. KATZ: Do any of our panelists have any
6 thoughts on that?

7 MR. WILLIAMS: Once again, I'm Daryl Williams
8 with the Tulalip Tribes, and I think what I would like
9 to see is something like the Scottish executive did in
10 Scotland. They did a -- what they call their strategic
11 environmental assessment where they basically went out
12 and identified all the pertinent information that was
13 currently available to look at, you know, what the
14 baseline information is and then pull their agencies
15 together to basically pull out a list of shortfalls,
16 try to figure out what kind of studies are really
17 needed to assess the impacts of this type of
18 development so that, you know, each site didn't have to
19 dig up their own baseline information, they gathered it
20 all at once and that, as they went to develop, they
21 knew what kind of information was needed in order to
22 assess the impacts of their project.

23 And I think that's what, you know, companies
24 in Puget Sound or off the coast of Oregon or whatever
25 could do it on a regional basis. I wouldn't really see

1 a national type EA or EIS done, but some type of
2 regional programmatic environmental assessment just
3 looking at the data that's currently available would be
4 very helpful.

5 MR. BANISTER: Something similar to that is
6 happening here in Oregon, and I think Robin
7 mentioned -- I think it was Robin who mentioned the
8 Ecological Effects Workshop that's going to be held
9 down in Newport next week, actually, and Oregon state
10 has led an effort along with Wave Energy Trust of
11 Oregon to fund this program. And researchers are
12 coming from around the world, really, to talk about
13 what are some of the outstanding ecological questions
14 associated with wave energy, in particular.

15 So I think there's a recognition that this
16 kind of information is really important, and I
17 mentioned earlier that something like a generic EIS
18 might be appropriate for wave energy development where
19 arguably the -- ecologically is a little more uniform
20 in the open ocean, and so it's something that I think
21 all the community is supportive of the opportunity of
22 having a sort of collectivized information-gathering
23 like that.

24 MS. ELEFANT: Also, if I could just add; when
25 these pilot projects go forward, much of the material

1 that's filed at FERC is public information. I'm not --
2 certainly not, you know, company data about issues that
3 are proprietary, but information about impacts and
4 assessments, those are all publicly available on FERC
5 Web site, and so it helps to create a body of
6 information.

7 I think, really, the challenge at this point
8 is just figuring out a place to house and aggregate
9 that information. That's one thing that MMS did. MMS
10 put out a programmatic EIS, and I think Mr. Cruickshank
11 could correct me, but they worked from a lot of
12 available information that had already been generated
13 from other offshore permitting processes from the oil
14 and gas industry, which is a wealth of information.

15 So we don't really need to continue to
16 re-create the wheel. I think the challenge is for
17 certain bodies or the Oregon Wave Energy Trust or other
18 groups to begin to aggregate this information. There's
19 a lot more out there than we think, and we are living
20 in the information age, so I think that it's -- it is
21 important to do that, and that will help move the
22 industry forward.

23 So we support that, and -- but not
24 necessarily having a developer do it individually, but
25 have the results of the developers' studies and the

1 developers' permitting process be part of the public
2 record as it already is.

3 MR. KATZ: Tim Welch, did you have a comment?

4 MR. WELCH: Yeah. Just -- I'm not so sure if
5 the NEPA process is the vehicle for what you're
6 proposing or not. I just want to let you know that I
7 think your point is a good one about, you know,
8 compiling this information so people have a central
9 location to go to, and there are discussions currently
10 going on. A lot of the discussions are being
11 facilitated by NHA, and there are discussions between
12 NOAA Fisheries, the Department of Energy, and the
13 Department of Interior, and industry representatives to
14 form some sort of a committee or a body that would
15 compile this type of information and make it very
16 user-friendly and accessible to the public. So there
17 are discussions regarding your point.

18 MR. CRUICKSHANK: And if I just may add that
19 one thing the programmatic EIS supports as a draft is
20 undergoing its final preparation to be published in the
21 final form in the next couple of weeks. And also going
22 to do our Web site where we put up a study, which is a
23 worldwide synthesis of the environmental information
24 that's been collected on offshore renewable energy
25 projects, and that review is trying to focus a workshop

1 about a month ago to facilitate what the information
2 needs are for these types of projects, and so if you're
3 interested, that would be a good place to get some
4 background information, but all of our efforts has
5 really been on a national basis to try and see what's
6 on a national basis. It wouldn't necessarily easily
7 transform all the issues that you may have, as
8 Mr. Williams mentioned.

9 MR. KATZ: We've got two on the aisle over
10 here.

11 MR. KILGORE: Excuse me. I've been standing
12 here waiting for this for awhile.

13 MR. KATZ: I'm sorry. There's a gentleman in
14 the back.

15 MR. MOORE: Just a real quick one. Okay.
16 Thank you.

17 I'm Rob Moore. I'm the executive director of
18 the West Coast Seafood Processors Association, and we
19 represent seafood processors and associated seafood
20 businesses from central California up to the Washington
21 border -- to the Washington/Canada border.

22 We're power users, so we like the idea of new
23 sources of power coming in, but the reason we use power
24 is because we cut fish that are delivered by fishermen
25 who fish in the same areas that some of these projects

1 are going into. With that in mind, a couple of
2 comments.

3 One, you need to consider cumulative impacts.
4 It's a very good idea to put stuff in the water to find
5 out information, as someone put it earlier, but if you
6 put stuff in the water in front of every major
7 commercial fishing port up and down the coast, that's
8 not going to do a whole lot for commercial fishermen or
9 for the associated businesses that are located on shore
10 and the communities they support. So you can't just
11 put stuff in the water everywhere; you have to have
12 some sort of limit on it. You have to figure out what
13 the best way is to test out theories, you test out the
14 equipment to figure out how this is going to work.

15 The second thing that is somewhat missing
16 from your proposal right now -- although, I think
17 you're getting the idea from some of the things you've
18 heard -- is the point Terry Thompson made in regard to
19 the -- what we did with the cable committee and the
20 cable companies. If you resolve the conflicts with the
21 users up front, this whole thing goes a lot faster, and
22 I would strongly encourage FERC to find a way to
23 encourage the various wave energy and other alternative
24 energy companies to work with the users, not simply
25 communicate in terms of sending out a brochure and

1 having a meeting, but sitting down, talking, resolving
2 the differences because that gets you a lot further.
3 Thank you.

4 MR. KATZ: Thank you. Now, back to the
5 gentleman with his hand up.

6 MR. KILGORE: Mark Kilgore with Louis Berger
7 Energy Group in Bellevue, Washington. I was looking at
8 one of the bullets on guarding against environmental
9 harms and specifically looking at project shutdown or
10 removal, and one idea that came to mind particularly
11 maybe on some of the hydrokinetic technologies and
12 riverine environments and things is that you could
13 potentially get a highly localized environmental
14 effect, and so what I was considering was whether
15 project relocation would be a third option that you
16 could add to that list and what kind of flexibility one
17 might be able to build into the issue with the
18 five-year license to deal with that eventuality if
19 something turned out to be located on a spotting bed
20 that was disrupting juvenile migration or something.

21 MR. KATZ: Interesting question. I don't
22 know if anyone has any thoughts on addressing it.
23 Otherwise, we'll take it under advisement, but it is an
24 interesting thought. Thank you.

25 Anybody else?

1 MR. PRIMAR: Thank you. My name is William
2 Primar. I'm with the Washington State Attorney
3 General's office, and the -- FERC and the
4 Commissioners, thank you for coming out here.

5 You've obviously put a lot of thought into
6 your proposal. What I'm wondering is you know these
7 other federal mandate agency or entities from federal
8 authorities are there. Do you see the best course to
9 move ahead with your sort of vision about how to get
10 this going and expect the other federal laws that need
11 to be complied with to adapt their processes to fit in,
12 or do you see working with them to try to create a
13 coordinated process to deliver the benefit you're
14 trying to get to?

15 MR. KATZ: Tim, you want a feel at that one.

16 MR. WELCH: Bill, I think it's a little of
17 both. This morning during my talk, I requested that
18 the agencies begin at least to be -- to think about how
19 their internal processes for some of these other
20 statutory requirements could fit into our process, and
21 I think that would sort of be the first step, but we
22 would be more than happy to discuss with the various
23 state agencies, you know, just a little bit about, you
24 know, what the proposal would be and how it would fit
25 in, but I -- we're always open for discussion, but I

1 just wanted to get it out there that the agencies
2 should be at least thinking about this and how they
3 can -- how they can adapt to our process.

4 MR. PRIMAR: A comment I meant to ask -- or a
5 question I meant to ask, to begin with, was I thought I
6 heard a comment that this is -- this proposal is in
7 effect now; is that correct? Can you apply for this
8 permit?

9 MR. KATZ: I think the sense in which it is
10 in effect is Commission staff has put this forward as a
11 proposal, so that means someone come could in tomorrow
12 and say, "Gee, I'd like to try out using that
13 proposal," but doing that would involve getting
14 together with all the stakeholders and the resource
15 agencies and seeing, "Can we indeed make a go of it?"

16 MR. PRIMAR: Okay. So what I understand, at
17 least your thinking, John, is at least your thinking is
18 that there would be a discussion about the important
19 authorities that would need to be worked through, and
20 that discussion has not yet happened; although, you're
21 sort of keying it up before the FERC would start
22 accepting notices of interest and sending draft
23 applications and stuff like that? I just want to know
24 whether we're in it, or we're talking about it in the
25 future, and we're going to try to work it out?

1 MR. KATZ: I think staff has indicated that
2 this is a process that is proposing the Chairman at the
3 open meeting announcing this workshop said that,
4 indeed, he was prepared to consider projects under that
5 process, but the implementation and the details are
6 going to be on a case-by-case basis.

7 And, Bill, it's good to see you. I've been
8 on the phone with you, and I've seen your name on
9 numerous pleadings, but we've never met.

10 Anyone else?

11 MR. HUSING: Good afternoon. My name is Onno
12 Husing. I'm director of the Oregon Coastal Management
13 Zone Association. We work for local governments up and
14 down the Oregon coast, and we've been very involved
15 with wave energy. I also serve on the Wave Energy
16 Trust and the Ocean Policy Advisory Council.

17 Because of what I'm doing with some of the
18 outreach process, building upon what the FINE group is
19 doing up and down the Oregon coast, I could tell you
20 that when you talk to people on the Oregon coast about
21 this issue, they want to -- I think they intuitively
22 understand the pilot projects are not that big of a
23 deal; we need to do them to understand what's going on
24 and learn from them, but to get their agreement to go
25 forward on that, they want to know that a larger

1 framework is in place about how many projects, the
2 scale, this and that, and certainly, all those answers
3 can be done up front.

4 But I want to share with you what happened
5 last week at the Ocean Policy Advisory Council. We
6 passed a resolution that would seek funding and
7 development RFP to do a cumulative effects study, and
8 we don't have all the details worked out, we don't have
9 the funding yet or anything like that, but at least
10 we're moving down that road to developing the kind of
11 RFP we can to work with the state to have this final
12 cumulative effects process in place. Everybody kind of
13 thought it was a good idea till the question came up.

14 Under Section 10 of the Federal Power Act, I
15 understand the Commission would -- needs to pay
16 attention to a state plan if a state plan is in place.
17 And while there was a lot of enthusiasm moving, the
18 question came up: Will FERC ultimately heed that kind
19 of a outstanding local -- if there was an outstanding
20 local state effort in place? I had -- without knowing
21 you at all, I -- the Commission, I answered, "Yes, they
22 will. Why wouldn't they honor and take that kind of
23 state plan into consideration?"

24 So those of us that have to go back to the
25 front lines, I hope we can get some kind of signal from

1 you that if we do a responsible job locally at a state
2 level that the Commission will, in fact, you know, take
3 a very hard look and try to work within that context.
4 Thank you very much.

5 MR. KATZ: Well, I will say let -- before I
6 have the Commissioners speak here, they want -- that
7 statute indeed requires the Commission to take into
8 account appropriate state comprehensive plans. And, on
9 a regular basis, for every application, the Commission
10 looks to see what state plans there are that may be
11 implicated by a project and, indeed, does consider it.

12 COMMISSIONER MOELLER: We would much rather
13 that it would be worked out and brought to us, but
14 naturally, and as John mentioned, it's also part of the
15 law.

16 MR. HUSING: Which is why you like settlement
17 agreements?

18 MR. KATZ: We love settlement agreements.

19 MR. LEAHY: Jeffrey Leahy with National
20 Hydropower Association. First off, thanks again to the
21 Commissioners and staff for all the work they've put
22 into the workshop.

23 Just a process question. I know that you are
24 accepting written comments on the issues that were
25 discussed here, and there was a lot discussed and a lot

1 to comment on, I think. Is that November 2nd that
2 you're looking for those, or are you looking -- what is
3 the deadline going to be for those as we go to work in
4 putting things together?

5 MR. KATZ: I think we said 30 days, which
6 would be right about November 2nd. I mean, this is not
7 a formal proceeding with deadlines, so if someone got
8 in something November 3rd or November 4th, it would not
9 be ignored, but that's the general deadline for
10 comments.

11 MR. LEAHY: Thank you.

12 MS. HOSNER: Thank you. Sheila Hosner with
13 the Office of Regulatory Assistance in Washington
14 State. I'm trying to clarify the relationship between
15 the preliminary permitting process that Snohomish
16 County is under and the pilot licensing process. And,
17 according to the document, it appears that if someone
18 applied for a pilot project license, they would have
19 had to do a lot of up-front baseline data gathering and
20 all of that and be prepared when they come in and apply
21 for a license, but the preliminary permitting process,
22 as I understand it, has -- sort of reserves potential
23 spots, like Craig Collar has -- you know, or Snohomish
24 County PUD has reserved, you know, the right to
25 investigate certain spots.

1 What prevents or saves a spot for someone who
2 has an idea if they wanted to go to save another area
3 and get a license for that, but someone gets in ahead
4 of them? Should they participate in the preliminary
5 permit process and then -- and then also move into the
6 project licensing process so that they reserve or save
7 the spots they're interested in? Because the --
8 gathering the baseline data is expensive and
9 time-consuming, so I just don't understand the
10 relationship between those two things.

11 MR. KATZ: Yeah. That is a business
12 decision. There is not a requirement that an entity
13 have a preliminary permit before applying for a
14 license, and the first person who applies for a
15 license, all things being equal, the Commission has a
16 first-in-time tiebreaker, so if you apply first,
17 there's a municipal exception of -- for an original
18 license on a municipality or a state as a preference
19 over somebody else, but setting that aside,
20 first-in-time generally gets it.

21 What a preliminary permit does for you -- and
22 I think you do understand it properly -- is if you have
23 a preliminary permit, during the term of that permit,
24 no one else can file a license application for that
25 project, and you have priority as the first to file if

1 you file a license application for that site. So if
2 you don't file for a permit and you're studying away,
3 someone can, indeed, steal a march on you and file for
4 a project there. If it's a license application,
5 someone else would have a chance to compete, but it
6 would be a risk.

7 So if, indeed, someone is seriously
8 considering a site and they know where the site is and
9 they think they'd like some time to study it, holding a
10 preliminary permit guarantees that no one else is going
11 to sneak by and file a license application during the
12 term of the preliminary permit.

13 MS. HOSNER: So it makes sense that,
14 realistically, someone would use both processes, it
15 seems?

16 MR. KATZ: Yeah. And --

17 MS. HOSNER: I mean, they could?

18 MR. KATZ: -- the business plan sort of
19 decision, and I don't know if any of these folks have
20 thoughts on -- if they think about it. Yeah, if you
21 want to be sure that no one else gets a site that you
22 are interested in, what you want to do is file for a
23 preliminary permit to take that time to study and get
24 your license application in the door.

25 MS. HOSNER: Okay. And then at the end of

1 the preliminary permit process, you can either, at that
2 point, apply -- or during that time, apply for a pilot
3 project license or the full license?

4 MR. KATZ: Yes. You could apply at any time
5 for either of those, but yes, that's correct.

6 And I'm going to make that the last question
7 since we are out of time. Before I turn the mike over
8 to the Commissioners for closing comments, I should
9 mention that we owe a great debt of thanks to Tim
10 Welch, who was the team lead on this, and particularly
11 to Kristen Murphy and Stephen Bollar, who worked
12 incredible hours and got all of this set up and making
13 this happen, so thank you to both of them.

14 Commissioners, it is your choice to say the
15 last words.

16 COMMISSIONER WELLINGHOFF: I just want to say
17 thank you to all the FERC staff who helped organize
18 this. Thank you to all the panelists who came and
19 provided us with all this valuable information and very
20 useful, and also thank all of you in the audience for
21 also participating and providing the information and
22 welcoming us to Portland. Thank you.

23 COMMISSIONER MOELLER: John, are you going to
24 be around for a little while for people who have some
25 more questions?

1 MR. KATZ: Yes. Thank you. I did forgot to
2 mention that. The FERC staff will stick around for a
3 few minutes, so if folks want to come and talk to us
4 once that's all done, if any of the panelists are
5 sticking around, you can have further conversation.

6 COMMISSIONER MOELLER: I'll echo Commissioner
7 Wellinghoff's thanks to members in the audience, the
8 panelists, and the FERC staff who put this together.
9 The fact that we were all here, made an effort to be
10 here, shows you are interested, and obviously, the
11 creative approach to try to come up with something that
12 we think and hope will work.

13 We want to thank you for your perspectives,
14 your points of view, your suggestions for how we can
15 potentially make this better. I'm going to choose to
16 be optimistic and take away from today the fact that,
17 yes, we have a great deal of challenges to try and make
18 this new set of technologies work, but I believe
19 everything I heard today is solvable if people want to
20 solve the problems and challenges suggesting it, and
21 it's going to be up to us as federal agencies, state
22 agencies, non-governmental organizations, tribes,
23 localities, members of the public, developers,
24 investors, to work together to make this work if we
25 want it to work.

1 It's always a pleasure to get back to the
2 Northwest and, as stated earlier, we want to hear more
3 of your comments formally and informally, so probably
4 try and get them in the next 30 days. In the future,
5 hopefully we'll be able to move more on this decision.

6 Thanks for your interest and your times.

7 (Workshop concluded at 3:52 p.m.)

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