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UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

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Tidewalker Associates : Project No. 12704-002  
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Daytime Scoping Meeting  
Half Moon Cove Tidal Power Project

Marine Technology Center  
Multipurpose Room  
16 Deep Cove Road  
Eastport, Maine  
Wednesday, June 24, 2009

The public hearing, pursuant to notice, convened at  
10:07 a.m. before a Staff Panel:

STEPHEN KARTALIA, Federal Energy Regulatory  
Commission

JOHN BAUMMER, FERC  
JEFFREY BROWNING, FERC  
PAUL MAKOWSKI, FERC;

1           and an Applicant Panel:

2                           NORMAND LABERGE, Ph.D., Tidewalker Associates

3                           LESLIE BOWMAN, Tidewalker Associates

4                           ZEL BOWMAN-LABERGE, Tidewalker Associates

5                           ERNST F. HUNTER, Tidewalker Associates

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## 1 P R O C E E D I N G S

2 MR. KARTALIA: Good morning, and thanks for  
3 coming. My name is Steve Kartalia, I am the Project  
4 Coordinator for the FERC's licensing of this proposed  
5 project, the Half Moon Cove Tidal Power Project, No. 12704,  
6 which is proposed by Tidewalker Associates, and they'll be  
7 telling us more about the project shortly.

8 This is the first of two meetings today; we're  
9 also going to hold a meeting at 7 p.m. Everyone is welcome  
10 and invited to attend both or either.

11 (Slide.)

12 This is what we're going to do today; I'm going  
13 to introduce some of the FERC staff, and the Tidewalker  
14 staff can introduce themselves. I am going to tell you a  
15 little bit about the FERC licensing process, the purposes of  
16 scoping, and why we're here. Then Tidewalker will give a  
17 presentation of their proposed project and a project  
18 description; then we can discuss issues and studies, how to  
19 request studies, the timeline for requesting studies, the  
20 criteria that should be in a study request. And I'll go  
21 over some important dates coming up.

22 First among them would be July 23rd, which is the  
23 date to comment on the preliminary application document, the  
24 PAD that Tidewalker prepared, or the scoping document, or to  
25 request studies. And that date is July 23rd.

1           There's an error on page 18 of the scoping  
2 document. The scoping document is the document that the  
3 Commission prepared and mailed out, and I'll get into the  
4 mailing list later; if you need to get added to the mailing  
5 list, I'll tell you how to do that.

6           Scoping documents are what the Commission mailed  
7 out. On page 18 there's an incorrect date in there; it's  
8 from an older document that was used to create this one. In  
9 the back of the document, there's an appendix that has the  
10 process, plan and schedule. That date for study requests is  
11 correct; it's the July 23rd date. So if you will please  
12 ignore the date on page 18 of the document.

13           The most important part of the meeting today will  
14 be questions and comments from agencies, public and anyone -  
15 - comments and questions can be submitted in written format,  
16 too, and I'll tell you how to do that.

17           I hope everyone has signed in; if you haven't,  
18 please do before you leave. This whole meeting and  
19 tonight's meeting as well are being recorded by a court  
20 reporter, and the transcripts of these meetings will be  
21 posted on our website. If you speak, I would like you to  
22 use the microphone so the court reporter and everyone else  
23 can hear you; state your name clearly and your affiliation  
24 so the transcript can accurately show who was speaking.

25           Written comments. There are instructions for

1 filing written comments in the scoping document, and they  
2 need to include the project number, and there's an address  
3 in there where to send the comments. Those need to be filed  
4 by the July 23rd date. You can make comments here and file  
5 identical comments or different comments in writing; it's up  
6 to you. And mailing list instructions are in here for how  
7 to change an address or to add an address.

8 The mailing list that's on the back of this  
9 scoping document is based on the combination of what  
10 Tidewalker Associates used for their PAD distribution and  
11 then what we had in our records for the official list, and  
12 then a few tribal addresses that we used for initial  
13 consultation. So that's what's in there now. If you know  
14 people who want to be added, please take a copy of the  
15 scoping document which explains how they can get on the  
16 mailing list. Or if you have two addresses in there and  
17 want to be just getting it once, or not get anybody, there  
18 are instructions on how to be removed from the list.

19 (Slide.)

20 Here's a brief flow chart of the process. Back  
21 in March, Tidewalker filed the Notice of Intent and the  
22 Preliminary Application Document for this proposed project.  
23 Then we issued, at the end of May we issued our scoping  
24 document and like I said, this is the first of two meetings.  
25 Then over the next several months, beginning with the formal

1 study requests that are due July 23rd, the Commission and  
2 the agencies and public will be developing a study plan to  
3 address issues and data needs, study needs that would be  
4 needed to address the potential environmental impacts of  
5 this project.

6 This whole thing leads into, the whole study plan  
7 development and the conducting of the studies will  
8 eventually lead to Tidewalker filing a formal application;  
9 and that will initiate our environmental review process  
10 under the National Environmental Policy Act. Under that  
11 Act, any federal agency is required to address and evaluate  
12 the potential environmental effects and disclose those  
13 effects to the public.

14 Then, once our Office of Energy Projects within  
15 the Commission issues an environmental document, an EA or an  
16 EIS, then the Commission, which is a five person appointed  
17 commission, would make a decision on whether to issue a  
18 license; and if so, what conditions that would contain.

19 So this process is about five years to get us to  
20 here, and then the Commission would have the information it  
21 needs to make a decision.

22 Now I'd like Tidewalker to describe their  
23 proposal, and I'm going to switch to their PowerPoint  
24 presentation here.

25 DR. LABERGE: Thank you, Steve, and thank you to

1 the people who are attending this meeting. Half Moon Cove  
2 project, Tidewalker Associates. My name is Normand Laberge,  
3 of a geoscience, scientific Ph.D., a professional engineer.  
4 I've worked on this project on and off for close to 30  
5 years. I worked 15 years for the U.S. Navy doing  
6 environmental compliance work.

7 I would like now to introduce Leslie Bowman, who  
8 is a long-time contributor to the Quoddy Tides, a local  
9 newspaper; and was the founding member of the Eastport Arts  
10 Center and the Quoddy Bay Land Trust. She currently works  
11 as an editor for the Bangor Metro, magazine.

12 Next to her in the middle, is Zel Bowman-Laberge,  
13 who is our daughter. She is a fourth year architecture  
14 student at the Rhode Island School of Design, and has  
15 interests in sustainable designs.

16 Ernst F. Hunter is a recent law school graduate  
17 and is a current LLM candidate with emphasis on business,  
18 real property and tax law.

19 (Slide.)

20 Can you all see this? (Room lighting  
21 adjusted.)

22 This is an aerial view of Half Moon Cove, which  
23 is located between the communities of Pleasant Point, Perry,  
24 and Eastport. At the entrance of Half Moon Cove is where  
25 the proposed dam or barrage would be located. The surface

1 area of Half Moon Cove is approximately 900 acres, and at a  
2 spring tide, which is the extreme tide, it draws down to  
3 about 250 acres. The opening across Half Moon Cove at the  
4 entrance is 1200 feet.

5 As you note, the Half Moon Cove is not an  
6 estuary; it has a small influx of fresh water at the upper  
7 end, and the only other source of fresh water now is  
8 rainfall and snow melt.

9 I've also shown in there two causeways that were  
10 constructed in the 1930s; they were part of the big  
11 Passamaquoddy tidal project which was commissioned by  
12 President Roosevelt. The causeways were eventually used to  
13 place a road which connected the mainland with Eastport, and  
14 it still currently performs that function.

15 We've included this as a possible element of the  
16 tidal project. We're familiar with a proposal by the  
17 Passamaquoddy Tribe and the Corps of Engineers to breach the  
18 causeway; and in our case, we feel it's a dual purpose,  
19 breaching the causeway could help us control the level of  
20 Half Moon Cove to sort of optimize the production at the  
21 power plant.

22 The second of feature of it is that it would  
23 partially recover the nature of Half Moon Cove before the  
24 causeways were constructed, and in that way improve water  
25 quality for the tidal basin.

1                   The way we feel this project would be constructed  
2 would be a combined effort of the different parties to  
3 assist in the construction and operation of the filling  
4 gates on the Half Moon Cove.

5                   (Slide.)

6                   This is a schematic of the same view. It's  
7 presented to show the level of the Half Moon Cove at high  
8 tide and also at low tide. One of the unavoidable  
9 consequences of the project now is the fact that the low  
10 tide level would be raised two or three feet above its  
11 normal elevation. This will happen for both the new tides  
12 and the spring tides; and in this drawing there's a dark  
13 blue and then a lighter blue. The lighter blue would be the  
14 new boundary for the low tide level under the proposed mode  
15 of operation. The dam itself would be constructed of,  
16 either of a rock fill material or a sort of tidal wall, and  
17 that's proposed to be investigated during the course of this  
18 process.

19                   (Slide.)

20                   This is a schematic view of what a tidal barrage  
21 does. It essentially retains back the water, allowing the  
22 development of a differential between -- in this case for  
23 the basin side and the ocean side. Once the elevation  
24 difference is great enough, then the gates are open through  
25 the turbine, generating electricity for approximately four

1 to five hours after high tide.

2 This shows sort of a road surface on top. Our  
3 plans now are to just include a one lane facility as a  
4 service road for the operations.

5 (Slide.)

6 Now this is a curve showing -- I'll get closer to  
7 point out some features. The red line is the natural tidal  
8 function; high tide, low tide, and then high tide. The  
9 period of tide cycle is approximately 12 hours 25 minutes.

10 I've shown three different modes of operation for  
11 this project. The green line shows, what we call the  
12 maximum production, it is to use the most optimum conditions  
13 for producing electricity. The controlling equation is the  
14 difference in elevation between in this case the green line  
15 and the red line for the head, the hydraulic head. In this  
16 case you extend production and you work under optimum  
17 conditions for a head to maximize the production.

18 The yellow curve shows a different mode of  
19 operation, where you work at a steeper curve to discharge  
20 the water from the basin; and that's also an optimum mode of  
21 production, but with a different capacity than the green  
22 line.

23 And finally, the blue line indicates what we feel  
24 is the best mode of operation for the facility. In this  
25 case it's a curve that looks very close to the natural sine

1 curve; high tide-low tide-high tide, and maintains almost a  
2 constant head while you're producing electricity.  
3 Production will occur from high tide, just beyond high tide,  
4 to almost low tide. At low tide, all the gates would be  
5 opened to allow the water to sluice out and to get to this  
6 level.

7 If you are trying to produce electricity on both  
8 the incoming and outgoing tides, you would use this part of  
9 the curve also to close the gates, develop a head, and also  
10 operate under a slightly lower hydraulic head. This would  
11 require reversible turbines.

12 The main difference environmentally in terms of  
13 impacts to the project is that if you selected the green  
14 line, you would have a tidal range reduction in the basin of  
15 about 10 to 12 feet on an average tide of 18 feet. The  
16 yellow line would have less of a reduction, but still  
17 possibly 6 to 7 feet.

18 Our desired mode of operation would result in a  
19 facility that would result in only 2 to 3 feet loss in tidal  
20 range within the basin. When you equate the loss of 2 to 3  
21 feet of a spring tide, that represents about 140 acres of  
22 land that would be transformed from so-called inter-tidal to  
23 submerged conditions.

24 (Slide.)

25 So the greatest impact would be the effect of the

1 new tidal regime on the generalized intertidal zone. Now  
2 living in this area, the reason Half Moon Cove is a  
3 desirable project is the fact that the tidal range is so  
4 great. An 18 foot average tide represents a difference of  
5 12 feet for a neap tide and approximately 25 or 6 feet for a  
6 spring tide.

7 In the top half of this diagram, it shows the  
8 intertidal zone, it shows a high tide level, and the mean  
9 high tide level, the mean water level, and then the low  
10 water levels.

11 The neap tide is represented by the distance  
12 between the lowest high tide to the highest low tide, which  
13 is about 12 feet of area. This is the only section of the  
14 intertidal zone that always sees a intertidal type of  
15 behavior, in the sense that it's going to be exposed to air  
16 and exposed to water. For a neap tide, the area between the  
17 lowest high tide and the highest high tide will only be  
18 exposed to air. And conversely, at the low end, between the  
19 low low tide and the high low tide, that will always be  
20 submerged for a neap tide. When you get to the spring tide,  
21 then the whole area is subject to intertidal conditions,  
22 exposed to water, exposed to air.

23 It is our assumption that in increasingly the low  
24 water level only two to three feet for any tide that the  
25 ecosystem will be able to adapt to that change. That the

1 majority of the impact will be located between the low low  
2 water and halfway up the high tide water table.

3 So we propose to study this type of effect in the  
4 long term. Sheri Liggett

5 (Slide.)

6 Why? At this time I'll turn the presentation  
7 over to Leslie Bowman.

8 MS. BOWMAN: Thank you. Leslie Bowman,  
9 Tidewalker Associates.

10 So one thing we are interested in today, and my  
11 answer is why are we doing this? Why is Tidewalker  
12 Associates involved in this, and why do we continue to work  
13 on it, and why is it a good project?

14 One thing that Normand did not mention was that  
15 at the opening of Half Moon Cove, you could place four 16-  
16 foot hydrokinetic devices. That would produce 100 times  
17 less power than the production with this barrage at Half  
18 Moon Cove. So it's a significant -- Normand had already  
19 gone through a lot of the math, but it's significantly  
20 different once you develop a head to produce power. So that  
21 is one of the reasons that we continued working on this.

22 (Slide.)

23 Production of local energy resource. The  
24 calculations have come up with a cost per kilowatt hour of  
25 between 7 and 9 cents to produce power, and that's over the

1 life of the project. Once you have your great capital  
2 expenditures to build this, there will be no increase in  
3 fuel cost, so you're able to predict how much the power will  
4 be, what will cost over time. And as you all know, our  
5 power rates go up; right now it's around 22 cents per  
6 kilowatt hour.

7           So it's a source of electricity that has good  
8 value. The annual production is estimated to replace  
9 1,500,000 gallons of oil. So it's our energy resource;  
10 there are not many places in the world that have this type  
11 of tidal fluctuation, and so if we look to develop and  
12 harvest our own resources here, it is the obvious resource.

13           Second, why are we working on this? It's  
14 available technology. Last time Half Moon Cove was brought  
15 up, over 30 years ago, Nova Scotia was planning to build a  
16 tidal project at the same time. It's been in operation now  
17 for 30 years, or about 30 years at Annapolis Royal.

18           A couple of years ago, when we decided to bring  
19 this project back to life, we went and visited Annapolis  
20 Royal and talked to the people there in the community. It  
21 was a thriving community; they had developed a lot their  
22 historical resources based on the income from that project.  
23 It was a great tourist destination, it is a great tourist  
24 destination, and there was a lot of positive feedback from  
25 not just the people that worked at the plant but the people

1 in the community. So it gave us a lot of encouragement to  
2 say "Hey, let's go ahead into the wonderful thing for  
3 Annapolis Royal, let's do that."

4           Unfortunately we've never been able to get to La  
5 Rance, but that was built in '66. That was the first modern  
6 day tidal project. In our own community, Tide Mill Farm up  
7 in Cobscook, was developed around Tide Mill, and those were  
8 all up and down the coast. Right now down in Vinalhaven, a  
9 fellow has re- -- he started his tidal -- he has a motel  
10 there in Vinalhaven and he has started his tidal project,  
11 trying to get that off the ground again.

12           But it is an available technology, and it has  
13 dependable production, which you can go exactly when they're  
14 going to be able to produce and how much you're going to be  
15 able to produce, so it's very dependable.

16           It's compatible to the region's environmental  
17 values. A lot of people come to this area because -- not  
18 just because they love the environment, because it is  
19 wonderful, but they are so infatuated with the tides. I  
20 talk to people all the time that see this region as just a  
21 phenomenal opportunity to use a renewable resource.

22           So the same people who would come camping at  
23 Cobscook or who come here to do the hiking or to go fishing  
24 or whatever, they are the same people who express a lot of  
25 interest in this kind of technology; and I think that it

1 would really piggyback on the tourism that we already have  
2 here.

3           Creating an economic engine. This project,  
4 which already has available technology and although we hear  
5 it could take five minutes to license, which it possibly  
6 could, it is something that once it gets moving, it will not  
7 only produce power to the region, which we would hope that  
8 we could develop a way that it could be used locally --  
9 these are things that we're looking at -- but it also will  
10 encourage like projects. For instance, ORPC which is  
11 working a way right now -- this is a project that does not  
12 conflict with that; it actually sort of piggybacks, and  
13 perhaps if this one is on line first, it could provide the  
14 technology to help build those turbines, whether composite  
15 turbines for wind -- and I've talked to people about that,  
16 that we would talk to people at the university about  
17 different uses of composites; we've been looking at that as  
18 the bridge, that the dam possibly can even go with  
19 composites.

20           But it will be something that is visible and  
21 tangible, creating energy, and an opportunity for attracting  
22 business and industry that could use that power. That's  
23 something else I'm very interested in, is what kind of  
24 industry could use a power that is predictable, and knowable  
25 amount of power.

1           So creating an economic engine. I really feel --  
2       we were walking around and we were thinking "Oh, Eastport  
3       really needs a boost." I've been living in Bangor for five  
4       years now, I have a magazine there. I'm very involved in  
5       economic development, and I travel all the time and I meet  
6       all the people doing all these sorts of things and I think  
7       "God, but Washington County." I try to keep it in the  
8       magazine, but -- (displaying article). If you're familiar  
9       with MaineBiz Magazine, they recently came out with a map of  
10      Maine, it's their 15th anniversary-- and this is the  
11      projection of what Maine's going to look like in 2024.

12           Well, when you look at Washington County, not  
13      only is the port not there; it's in Searsport. Not only is  
14      hydro not here, it's down in Wiscasset; there's nothing  
15      happening in Washington County but a trailer pulling a boat.  
16      So in 15 years, this is how people in Maine, MaineBiz, sees  
17      our part of the country. And I'd very much like to be back  
18      here, but right now I'm working -- I'm trying to pay the  
19      bills.

20           So I think that a project like this, every time  
21      we go out I the world, people are very excited about the  
22      different things that are going on; but I think this would  
23      help be an economic engine.

24           (Slide.)

25           Consistent with our historical development of

1 energy, as you all know in the Thirties, the Passamaquoddy  
2 project -- it built Quoddy Village. Quoddy Village was the  
3 workers -- this is stuff you all know. Quoddy Village could  
4 in the future house workers for the new industry brought by  
5 Half Moon Cove. Here they are building the dam. This is  
6 the causeway. And this is part of the project that makes  
7 Half Moon Cove, and it's also part of the project that we're  
8 looking at now, ways to maybe mitigate through breaching  
9 that, using some of the power from Passamaquoddy Bay.

10 So historically, not only that -- that was the  
11 Thirties, the model is right downtown. If you haven't seen  
12 it -- the model got brought from Quoddy Village, people in  
13 the community have restored it; that was the big too full  
14 system.

15 In the Sixties, there's a photograph I sometimes  
16 show of President Kennedy with Senator Muskie and Senator  
17 Margaret Chase Smith flying overhead here and looking down  
18 and saying "Wow, this would be great." And Nate Cohen tells  
19 the story -- told the story to somebody I know -- that that  
20 was right before November, the assassination of Kennedy,  
21 that he came here and saw it and he was very excited about  
22 the potential. So that was in the Sixties.

23 And then the tribe got involved back in the  
24 Seventies, and it was alive for a while. There was a lot  
25 of interest in alternatives back then. That sort of shifted

1       because at that point we were just interested in  
2       alternatives to save on fuel. Today with concern about  
3       climate and global warming and about carbon footprints and  
4       all this and that, there are a lot of other reasons people  
5       are being interested in renewables.

6                       (Slide.)

7                       But why are we here? The reason that we're here  
8       today is to hear what everybody has to say, to learn about  
9       the things that are of concern to all people, because it  
10      takes the diversity of interests and the diversity of  
11      understandings and points of view. And I've been doing this  
12      for so long, obviously I have my own point of view. So it's  
13      important that we understand what everybody's point of view  
14      is. We are totally committed to the project as a viable  
15      source of energy and economic development here, but we need  
16      to learn from diverse interests.

17                      The only way this project will ever happen is  
18      with cooperation from a lot of people. We're keeping the  
19      door open to a project like this, because we feel that it  
20      would be a meaningful contribution; but there has to be  
21      cooperation between stakeholders for any success. A lot of  
22      the reason people don't look, investors are reluctant to get  
23      involved in any project, because they worry that it will  
24      take forever to get licensed; they can't tie up their money  
25      in it for that long. They're worried that there won't be

1 community support.

2 So if we come away seeing that there's not  
3 community support or that there's too many regulatory  
4 hurdles, you know, it will change the nature of things.

5 (Slide.)

6 So now I'd like to introduce Zel.

7 MS. LABERGE: Hi. I'm just going to quickly go  
8 over the future and the challenges that we face as we go  
9 forward.

10 (Slide.)

11 Here's an image that you might have seen from the  
12 early bridge crossing; there was a toll bridge. And our new  
13 proposal, whereas we're not offering it for vehicular  
14 traffic, we are talking about it as a way for pedestrians or  
15 bicycles to pass between the two, linking the two.

16 (Slide.)

17 Some of the drawbacks. Some of them we've  
18 already gone over; clearly there's discussion about the  
19 change in the low tide, which is something that we're going  
20 over as a way -- how is the aquatic life going to be  
21 affected, what is this going to do? All these things we're  
22 going to be looking at. Also construction, issues with  
23 construction; obviously it will be noisy, there will be  
24 traffic going through; but as an upside, construction brings  
25 jobs, brings people to the area, brings attention to what

1 will be going on. And the access to the Cove is a large  
2 issue that we have been working through as well; how do you  
3 get boats in? Lots of boats pass in between here.

4 One proposal we're looking at, the project in  
5 Nova Scotia, Annapolis Royal; there is a parallel set of  
6 docks which brings small boats into the Cove, but obviously  
7 there will be some restriction on the size of boats, all of  
8 which we are willing to discuss.

9 (Slide.)

10 As we see it, this is a recommendation that for  
11 me, for my generation coming in -- I grew up in Washington  
12 County, I now go to school out of state, but I've always  
13 planned on wanting to come back into this area. But in  
14 order, we need to work together to get this project off the  
15 ground. How are we going to have power? How are people of  
16 my generation going to want to come back to this county?  
17 And what we're going to do is we're going to have to work  
18 together as a community in order to reach these goals; we  
19 need things like imagination, cooperation, respect and  
20 creativity.

21 (Slide.)

22 And Option 2 is that we do nothing; we wait for  
23 people from the outside to come in and develop the area that  
24 we all know as home. I personally would like to see this  
25 project happen from within the community, because there are

1 a lot of people thinking forward about this project. This  
2 is our resource and this is the time to take advantage of  
3 it.

4 And now I'll hand it over.

5 MR. HUNTER: Hello, everyone. I'm Ernst Hunter.  
6 I came to this project recently, as someone much like  
7 yourselves -- many of you here, anyway -- who do not have  
8 any particular vested interest in this project other than my  
9 general interest as a member of this community in its  
10 development. And as such, I will endeavor, above all, and  
11 with my legal background in business and taxation to ensure  
12 that -- next slide.

13 (Slide.)

14 To ensure that the institutional structure for  
15 development and investment in this project is one that not  
16 only maintains its economic liability so that it can attract  
17 investment so that we can see this project through to  
18 development and completion; but also so that it ensures the  
19 enhancement of the local economy while addressing your  
20 community concerns and preserving the local environment.

21 It's for this reason that these meetings here  
22 today are convened, and in furtherance of which I would  
23 like, on behalf of Tidewalker, to welcome all of your  
24 comments and questions today; and please, if you do not make  
25 an oral comment today, anyone with comments that they would

1       like to make, please submit them orally before the deadline  
2       to FERC.

3                   And at this time I'd like to hand over the mic.  
4       We're going to discuss studies now?

5                   MR. KARTALIA:  Yes.

6                   Thank you.  Let me just switch back to the other  
7       presentation.

8                   If you look on pages 13 to 15 in the FERC scoping  
9       document, which you should have been either mailed one if  
10      you're on the mailing list, or hopefully you picked one up  
11      on your way in, or definitely leave here with one if you  
12      don't have one now.

13                  FERC Staff, along with comments made during the  
14      preparation of the PAD, by agency and public groups, NGOs,  
15      tribal, commenters; we preliminarily identified a list of  
16      issues at this time, and they're on pages 13 to 15, and I'm  
17      not going to go through them all right now, but I do want  
18      you to take a look at this list.  Because one of the things  
19      that we need to do in the scoping process is to identify any  
20      other issues or eliminate issues that turn out not to be an  
21      issue with this project.

22                  So please, if you haven't already, please review  
23      that list and consider that list as you make comments and  
24      ask questions shortly.

25                  The other major purpose of scoping, based on the

1 issues that we've identified and perhaps others that you  
2 raise, we will need to formulate a study plan for the next  
3 year or two to study issues and get the data into the record  
4 that we need to do in an environmental review of the  
5 project.

6 As I mentioned earlier, July 23rd is the deadline  
7 for requesting studies; and a study request should address  
8 these seven criteria, which I think are self-explanatory.  
9 One that often gets a lot of questions is the final bullet -  
10 - many people aren't comfortable estimating the cost of an  
11 environmental study, and if you request a study and don't  
12 know how to estimate the cost, then a better way of  
13 approaching it might be to describe what you think the level  
14 of effort, how much sampling might be necessary, and then  
15 from that we can probably come up with an estimate of the  
16 cost.

17 The first date here is July 23rd. That's the  
18 date by which we need to have comments on our scoping  
19 document, or Tidewalker's Preliminary Application Document,  
20 the PAD, or study requests.

21 Then over the next several months there will be a  
22 proposed plan submitted by Tidewalker, after they have a  
23 chance to review the study requests. Then there will be  
24 study plan meetings probably at least one or two meetings in  
25 this area; others may be by teleconference. Typically,

1       there will be as many meetings as it takes, and they'll be  
2       in this local area. FERC staff will attend at least the  
3       first meeting. If there are additional meetings, FERC staff  
4       often calls in and participates by teleconference for  
5       additional meetings.

6               Then Tidewalker, after the meetings, will submit  
7       a revised study plan that takes into account the comments  
8       made at the meetings and again feedback between the various  
9       stakeholders and Tidewalker.

10              And then this date is where the Commission issues  
11       a study plan determination, which effectively lays out for  
12       the next one or two study science the studies that  
13       Tidewalker is required to do and submit to the FERC so that  
14       we can get that information into the public record, into the  
15       application, and then we have the information we need to  
16       conduct our environmental review.

17              So this next seven months is a very important  
18       period, and these dates do come up pretty quickly; but this  
19       is the first major opportunity for everyone to be involved  
20       in this important part of the process.

21              And finally, before I turn the mic over to  
22       comments and questions, I neglected to tell you all who else  
23       is here from FERC. So if they can -- you can address  
24       questions to us, you can address questions to Tidewalker.  
25       The answers might not be known; they might be among the

1 things that we need to determine through studies, for  
2 example, but if you have questions about the process, very  
3 soon is the time to raise those. And I'll just let the FERC  
4 Staff here briefly introduce themselves.

5 Again, I'm Steve Kartalia, I'm a fisheries  
6 biologist by training, but I'm also going to be the Project  
7 Coordinator for the FERC's environmental review of this  
8 proposed project.

9 MR. BROWNING: Good morning. I'm Jeff Browning,  
10 an environmental protection specialist with FERC. I'll be  
11 working on the terrestrial, wildlife issues as well as  
12 threatened and endangered species and the cultural  
13 resources.

14 MR. BAUMMER: Good morning, my name is John  
15 Baummer with FERC. I'm a fisheries biologist and I'll be  
16 covering aquatic resources for this project.

17 MR. MAKOWSKI: I am Paul Makowski, I'm a civil  
18 engineer. I'll be dealing with soils, geology, and project  
19 economics.

20 MR. KARTALIA: And also there's another staff  
21 member at FERC who wasn't able to come up here. Her name is  
22 Samantha Davidson, and she will be handling recreation, land  
23 use and aesthetics resources. She probably will be here at  
24 the study plan meeting.

25 Now I'd like to get to the main purpose of the

1 meeting today, and I appreciate your patience, sitting  
2 through these initial comments. I'm just going to go by  
3 show of hands. I notice a couple do have prepared oral  
4 comments that they would like to give, and I think I'll  
5 start with those people that have indicated that here, and  
6 then we'll open it up to anyone.

7 And just a reminder, tell us who you are and if  
8 you have an affiliation whom you're representing, and please  
9 use the microphone so that the court reporter and everyone  
10 else can hear you. And if you choose not to make oral  
11 comments, again instructions for filing written comments are  
12 in the scoping document.

13 So I'd like to start with Edward Basset, who  
14 indicated he would like to make a comment.

15 PUBLIC COMMENTS

16 MR. BASSET: Thank you. My name is Edward  
17 Basset, and I'm a member of the Passamaquoddy Tribal  
18 Government, a Council Member. I have not been given the  
19 official permission to speak on behalf of the tribes, but I  
20 do have a resolution here concerning the Half Moon Cove and  
21 our Tribe's position. I would like to give the resolution  
22 to the FERC to consider for the official record; and speak  
23 that basically the Tribe, to my knowledge, the position that  
24 Tribe has taken with respect to this area is to open up the  
25 Half Moon Cove back to its original state in some manner to

1 begin to reclaim the area the way it used to be before the  
2 causeways were put in.

3 On a personal note, I will tell you a story that  
4 my dad told me. Being a member of the Tribe, he was born at  
5 Pleasant Point in 1929. Told me about when he was a boy,  
6 before the causeways were put in, he used to go down to the  
7 shores of Pleasant Point; I believe it's right where, on  
8 this document there's a red circle that indicates there's  
9 some kind of project area.

10 In that area where the first causeway is, he used  
11 to go down there with a pitchfork and catch lobsters, by  
12 hand; and told me there was a lobster breeding ground right  
13 there that was traditionally fished by the Passamaquoddy  
14 People. And with the causeway being put in there, that no  
15 longer exists.

16 That was the first indication I got personally  
17 that there was a unique environmental situation in this area  
18 that the Tribe considered to be important. So the Tribe has  
19 made this position known, has worked with the U.S. Army  
20 Corps of Engineers, and requests the Army Corps of Engineers  
21 to do a reconnaissance study to give us some feedback on  
22 what it would take to open up the causeway, to restore the  
23 area. There was three options that was laid out;  
24 completely remove the causeways was one, the most expensive  
25 option. The other ones were put in a bridge or a culvert,

1 each option being less expensive. But the same results  
2 would be to establish that flow of water from the  
3 Passamaquoddy bayside, not just the Cobscook bayside.

4 I don't know who to give this resolution to.  
5 There's also a supporting document here from the Army Corps.

6 (Documents presented to FERC.)

7 MR. KARTALIA: Thanks.

8 MR. BASSET: When I first came in here, I was  
9 under the assumption that the causeway would be used as a  
10 barrier to hold back the water, and that the Cobscook Bay,  
11 Half Moon Cove area would be flooded moreso than what you  
12 have now indicated that there will be almost a natural flow.  
13 In your presentation, Normand, I think that -- I'm speaking  
14 now as a tribal member who lives right on the shore. I have  
15 a house that is right on this reservation that is on the  
16 shore of Half Moon Cove, and although the project -- you  
17 know, I came in here with the assumption that the project  
18 would create an impoundment that would have a lot of water  
19 there constantly. I was encouraged to hear that you may  
20 have the ability to almost maintain a certain amount of  
21 natural flow, similar to the way the tide fluctuates up and  
22 down.

23 Being a member of the Tribe, I know there's  
24 always, the tribal interests are to strike a delicate  
25 balance between what's in the best interests of preserving

1 culture and the environment, and also to provide for  
2 economic development. Sometimes those interests clash, and  
3 it takes a while for us to deliberate and figure these  
4 things out, and decide which is in the best interests  
5 overall for the Passamaquoddy Tribe.

6 With your presentation, I think there may be some  
7 opening for us to work together, and I have not seen or  
8 heard much of any consultation to date with the  
9 Passamaquoddy Tribe. I've been a member of the Council for  
10 the past three years, roughly; there has not been a  
11 presentation to the Council. And I think that the  
12 consultation process is very important, that we need to open  
13 up that dialogue so the Tribe can begin to weigh out its  
14 interest, as I indicated; cultural, environmental and  
15 economic, and what's in the best interests of the  
16 Passamaquoddy Tribe as well as the local region.

17 I appreciate the opportunity to be able to speak,  
18 and I will look forward to providing further documentation  
19 to FERC.

20 MR. KARTALIA: Thank you, Mr. Basset.

21 I would like to mention now, it seems like a good  
22 time, that if you do have documents and you want me to enter  
23 them into the record for you, I can take them back and do  
24 that. You can also mail them to the Secretary of the  
25 Commission at the address in the scoping document. But if

1       you want me to take some documents back, that's no problem.

2               The next person that indicated they would like to  
3       make an oral comment is Jeff Murphy with the National Marine  
4       Fisheries Service.

5               MR. MURPHY: Hi, my name is Jeff Murphy, National  
6       Marine Fisheries Service. And I just want to simply state  
7       that we plan to provide written comments by the July 23rd  
8       deadline.

9               MR. KARTALIA: Okay. Thank you.

10              Mr. Dana Murch, with Maine DEP.

11              MR. MURCH: Hi. My name is Dana Murch, with the  
12       Maine Department of Environmental Protection. For the  
13       record, I'll state that the Half Moon Cove project would  
14       need a State permit from my agency under a statute called  
15       the Maine Waterway Development and Conservation Act. Also,  
16       my agency's position that the project would require water  
17       quality certification pursuant to Section 401 of the Clean  
18       Water Act. The DEP will administer that requirement in  
19       conjunction with the State permitting requirement.

20              I did have some questions, both for Tidewalker  
21       and for FERC. So is now a good time?

22              MR. KARTALIA: Yes. That's what we're here for.

23              MR. MURCH: Why don't I start with FERC. As I  
24       read through the list of issues in the scoping document,  
25       economics isn't there, and I know one of you mentioned that

1 your role will be reviewing the economics of the project.

2 The reason I'm going to pursue this with you and  
3 with Tidewalker is there are no tidal barrages, no tidal  
4 dams in the United States; and I think there are many  
5 reasons for that. One of them is traditionally the  
6 economics of these projects has not been very good. The  
7 size of the dam that's proposed for Half Moon Cove is large;  
8 it's 1100 feet long, 72 feet at its highest point to the  
9 elevation that's proposed. This will be a very capital-  
10 intensive construction project.

11 So I guess my first question for FERC is: What's  
12 your role in looking at economics, and is there specific  
13 information that you will require from the applicant in this  
14 process?

15 MR. MAKOWSKI: Paul Makowski. The economics  
16 we're going to be looking at is not whether or not the  
17 project is going to be economical; what we're assessing is  
18 the economic effects or the costs of the mitigation measures  
19 to allow the project to go forward. So those will be  
20 developed. What we'll need is to identify those issues that  
21 will require mitigation actions and then to, whatever those  
22 actions are, to assign a cost to that so basically FERC can  
23 have an understanding of the economic impact associated with  
24 those actions. We're not dealing with the project  
25 profitability or anything. I don't know if that answers

1 your question or not.

2 MR. MURCH: FERC could issue a license for a  
3 project that is uneconomic in the sense that it can't  
4 generate enough money to pay for itself and thus won't get  
5 built. Can FERC issue those kinds of licenses? Or does  
6 FERC actually look at the economics of a project in making  
7 the licensing decision?

8 MR. KARTALIA: I think I can address that.

9 In the past, FERC took a more active role in  
10 predicting the profitability of a project, but there was a  
11 decision called the Meade decision, and I don't know, I  
12 think it was in the late Nineties; but FERC's approach to  
13 dealing with the economic feasibility of a project changed.

14 The long and short of it is that now FERC looks  
15 at the various costs of measures against the estimated  
16 generation of the project, and reduces the profitability  
17 incrementally based on the environmental measures proposed;  
18 but FERC doesn't wade into the issue anymore of trying to  
19 get a real accurate handle on the profitability of the  
20 project, only to compare relatively, for example, with this  
21 scenario -- with no mitigation, the project could estimate  
22 to make this much power, and therefore this much money at a  
23 certain kilowatt rate; or incrementally less with these  
24 measures, or incrementally less with these measures.

25 So we compare things relatively, but we don't

1 really put it forward as a well-researched economic  
2 feasibility study. And we kind of leave -- then when the  
3 Commission makes the decision to issue or not issue the  
4 license, then it would be up to the applicant to decide,  
5 based on the applicant's own research, the feasibility.

6 MR. MURCH: Thank you, that's helpful. I knew  
7 some of those answers, but I suspect a lot other folks  
8 didn't, so I think that's helpful.

9 If I could ask Tidewalker, Normand, do you have  
10 an estimate of the capital cost of the project? Both with  
11 one-way turbines and with two-way turbines, reversible  
12 turbines.

13 DR. LABERGE: Thank you, Dana. I want to comment  
14 on something you said before, that there are no tidal  
15 barrages in the country, therefore it's a questionable  
16 technology.

17 If you look back at the history of tidal mills  
18 and so on, most tidal mills operated with the use of dams to  
19 control the level of the water and to produce electricity at  
20 times. As Leslie mentioned, when we first considered the  
21 tidal project in the late Seventies with the Passamaquoddy  
22 Tribe, there was a proposal for Annapolis Royal similar in  
23 capacity as Half Moon Cove but different in the sense that  
24 it was an estuary; it had to deal with a large flow of  
25 water, and it also had to deal with the fact that the

1       impoundment had to be controlled to a certain level, or a  
2       range of levels, which reduced the output from the plant.

3               The La Rance project is another example; 240  
4       megawatts which has operated successfully since 1966.  
5       Recently the South Korean government has started a project,  
6       I think 500 megawatts, which uses a tidal range  
7       approximately the same as Passamaquoddy Bay, Cobscook Bay.  
8       They had plans for two other large barrage projects. The  
9       Russians are talking about a large barrage project; the U.K.  
10      is talking about one in the Saverne which would be major;  
11      there would be 3,000, 4,000 megawatts. The Chinese have a  
12      number of small tidal barrages and are investigating a  
13      larger tidal barrage.

14             In the U.S., there have been numerous studies on  
15      tidal barrages; Passamaquoddy Bay and also the Bay of Fundy.  
16      There have been studies in the Gulf of Mexico for its  
17      potential for tidal development. Also in Alaska, Cook Inlet  
18      has the potential.

19             I've dealt with this issue for years and years; I  
20      think there's a mindset against dams per se. There's sort  
21      of an understanding that a hydroelectric dam which impounds  
22      water and which operates in one direction, and which raises  
23      the level, it's different than a tidal barrage. We've  
24      persevered with the project because we feel it's the best  
25      use of the resource for Cobscook Bay. We have 18 foot tidal

1 ranges, we have tidal currents that are powerful, but that  
2 tidal currents are very limited.

3 As we noted, if you took the entrance to Half  
4 Moon Cove -- and we've studied hydrokinetic devices for Half  
5 Moon Cove, because of the configuration and the depth you  
6 could put four maybe 16-foot turbines that have to be placed  
7 under water, and it would be 100th the production as Half  
8 Moon Cove.

9 So let's talk about tidal barrage, we feel it's  
10 the most efficient use, we feel Half Moon Cove has the  
11 perfect conditions to construct a meaningfully-sized project  
12 in the United States and on the East Coast. We're not  
13 interested in Half Moon Cove II, Half Moon Cove III; we are  
14 interested in developing Half Moon Cove as a community  
15 resource.

16 And if you've lived in this area long enough,  
17 you've heard these big projects, the big Passamaquoddy  
18 project, the Pittston refinery, a coal fired plant and other  
19 projects; and we've waited sort of on the sidelines and seen  
20 other projects constructed. This we feel is an opportunity.

21 On your question about economics, you can be  
22 assured, if the project doesn't provide greater revenues  
23 than the cost of the project, then the project will not be  
24 constructed. It's sort of this fail-safe mechanism that a  
25 developer won't go through the whole licensing process

1 unless it feels it's close to economic feasibility.

2 We've done estimates on the cost for a single  
3 pool system that, back in 2008 the cost was approximately  
4 seventy to eighty million dollars. And the estimated  
5 production cost, which is the key parameter, the cents per  
6 kilowatt hour; depending on the method of financing, we felt  
7 it would range from 7 to 9 cents.

8 With the interest in developing renewable  
9 energies and subsidies and tax incentives and other  
10 instruments, we feel we could bring that power cost down.

11 The key point, also, is to use the power locally.  
12 We're paying approximately 22 cents a kilowatt hour. Half  
13 of that cost is distribution and transmission. If we can  
14 produce power for less than 9 cents a kilowatt hour, between  
15 7 to 9 cents, it could be viable to develop an economy that  
16 uses that local electricity, say in a greenhouse, say  
17 generation of hydrogen, generation of ammonia; there's ways  
18 to do it.

19 We live in this area. We know we're highly  
20 dependent on heating fuel. And to us -- you've been  
21 involved in these discussions, Dana, that the best way to  
22 get us off the dependence on heating fuel is to switch to  
23 electric heating. Maine has a surplus of electricity, it  
24 exports more than it produces; and if you do the transition  
25 from burning oil to using electric heat, that's going to be

1 a big impact on this area.

2 I know last fall when talk was about heating oil  
3 at \$4 a gallon, it had an incredible impact on the local  
4 population. So that's some of the indirect benefits we're  
5 talking to.

6 Finally, on the use of reversible turbines, we  
7 have looked at the cost and we're also looking at this idea  
8 of a constant head device that wouldn't use the pumping  
9 capability of turbines. The trouble with pumped storage or  
10 where you need energy to pump, you have to bring energy in.  
11 We would like to have a project that's completely green in  
12 the sense that we're not relying on an external source to  
13 produce electricity to pump out the facility, but a facility  
14 that's totally dependent on the tide. And for that reason,  
15 we're also looking doing this process without changing the  
16 main thrust of the mode of operation. We want to minimize  
17 the loss of tidal range and work with the communities to  
18 gain some mutual benefits from the project.

19 There's a technology that's out there now, the  
20 low head hydro technology, I think could be applied to the  
21 constant head mode of operation at Half Moon Cove and still  
22 give you both high cool and low cool operation. I hope  
23 that answers your question.

24 MR. MURCH: Just for my edification, are  
25 reversible turbines more expensive than one-way turbines?

1 DR. LABERGE: Oh, yes.

2 MR. MURCH: The answer is yes. Are they  
3 significantly more expensive?

4 DR. LABERGE: Yes. If you look at the experience  
5 of La Rance, they do have reversible turbines. When they  
6 put the turbines in, they were using the pumping capability  
7 of approximately 13 to 15 percent of the time. And in terms  
8 of cost of operation, it amounted to about 25 percent of the  
9 cost.

10 So it depends on what rate you can buy the  
11 electricity; and there's another feature of reversible  
12 turbines that have been answered partially by La Rance; is  
13 that they have generator problems. They decided that they  
14 would use reversible turbines only during the spring time  
15 where it would have more of an impact. So they've gradually  
16 gone away from reversible turbines.

17 The concept is nice, and it's being developed  
18 also by the hydrokinetic manufacturers, because their  
19 turbines have to be reversible, too. For the La Rance  
20 project there's a complicated mechanism of changing the  
21 blade angles and so on, and in 1975 because of problems with  
22 the reversible turbines, they had to replace all their  
23 generators. So there's a cost, there's questions, and as I  
24 said we're looking at other options; the constant head type  
25 of unit, while still maintaining, to minimize a tidal

1 reduction.

2 MR. MURCH: Thank you.

3 Just to clarify, I wasn't -- and I apologize if I  
4 was misleading -- I didn't mean to suggest that tidal was  
5 infeasible from a technological standpoint. I think it's  
6 fair to say that with all the potentials there are in the  
7 United States for tidal dams to be in 2009 and there aren't  
8 any does suggest that historically both economics and  
9 environmental impacts have been big problems for this  
10 technology.

11 The DEP will certainly be submitting comments and  
12 study plans and requests. I think we remain skeptical of  
13 the economics of the project; it's a huge capital expense.

14 And I think with Normand's explanation of the  
15 additional cost of reversible turbines and the potential  
16 problem with having to bring in extra power to pump, you may  
17 be looking at a one-way operation; and then the question  
18 will be what is the impact on the tidal range in Half Moon  
19 Cove.

20 I see it as highly problematic that the DEP would  
21 approve any reduction in the tidal range in Half Moon Cove,  
22 taking what is now intertidal zone habitat and transforming  
23 it into permanently submerged land is not something that in  
24 2009 the DEP is likely to do. We don't have an application  
25 in front of us now, but I think the burden is on Tidewalker

1 to explain and evaluate what the impacts are of that  
2 reduction in tidal zone; and we would suggest that that be  
3 done for a variety of reductions, because we don't know yet  
4 what the final operations would look like.

5 And also I think we're very concerned about  
6 project economics. One of the standards of the hydropower  
7 permitting statute is that the applicant have the financial  
8 capability to construct the project. So this has to look  
9 like it may work on paper; we understand you won't have your  
10 financing together then. This is, as I say, a very capital-  
11 intensive project for 60 megawatts of capacity, which is not  
12 small but also not large, sort of in the middle there.

13 Yes.

14 MS. BOWMAN: I'm Leslie Bowman with Tidewalker.

15 It was interesting how you presented that; it is  
16 a Catch-22 in a process like this. You said that you  
17 wouldn't really look at it unless it was economically  
18 viable; yet people who are investing in these projects --  
19 and at the same time you are saying that you would never --  
20 it was highly unlikely that you would permit this project.  
21 So that is the environment in which a project like this sits  
22 in the State of Maine.

23 You have a bias against a project, yet they don't  
24 want to look at it unless you can prove that it's  
25 economically viable. Well, we have been in contact with

1 investors; we've talked to a number of them, and they're all  
2 afraid of the environmental processing in Maine. It is what  
3 keeps projects from being built like this.

4 So it's true that this project could just die  
5 flat in the water with remarks like that, "that it's not  
6 economically viable and we'll never process it unless it is"  
7 but how is someone going to put up the money for a project  
8 when they hear that the Maine Department of Environmental  
9 Protection will never permit it? Well, that's crazy. Why  
10 would they do that?

11 And in fact we are working on our own dime,  
12 because we believe that in this new economy that is  
13 challenged by all the things that we're challenged with, we  
14 have a younger population that's starting to look at the  
15 world differently. What sacrifices do you make so that some  
16 people can -- what are the compromises? The fact that you  
17 would not change the tide by a certain number -- well, the  
18 tide may be going up a foot in the next -- you know, how  
19 many feet do we have to plan for in the next 50 years?

20 I'm told by the climate specialists that you  
21 should be looking at a two foot rise in sea level. So when  
22 we're talking about -- we have to be in charge of our own  
23 destiny here, and it's important that the Department of  
24 Environmental Protection in the State of Maine will see  
25 people as part of the environment, and that is something

1 that I've been really thinking and working hard about all my  
2 life, to see that people are part of the ecosystem.

3 And the people out here in Washington County need  
4 to have some ability to chart their own path, and that's  
5 what we're asking for with this project. So I hope you  
6 don't keep a closed mind about never licensing this project,  
7 because that will certainly keep anybody who would be willing  
8 to invest in our project way far away. Okay? Thank you.

9 MR. KARTALIA: All right. I don't have anyone  
10 else who indicated they want to make a comment, but you  
11 don't need to have checked this to make a comment.

12 So if you'd like to. Yes?

13 (Slides/photographs on screen)

14 CAPT PEACOCK: My name is Robert Peacock, I live  
15 on Toll Bridge Road, I am one of the abutters to the  
16 project. I'm also a ship pilot here in Eastport, and I've  
17 been heavily involved in the fisheries my entire life, and  
18 particularly in herring, urchins, sea cucumbers and any  
19 other species I could find to process.

20 I have a couple comments, and one of them  
21 concerns the Preliminary Application Document. I've gone  
22 through a lot of it, not all of it; but particularly some of  
23 the marine side things, since I live on the Cove. Some of  
24 the comments that Mr. Basset had about the opening of the  
25 causeway to allow more flow through the water, I'd like to

1 make a comment about -- my boatmen from the sardine carriers  
2 all picked up herring along the Perry shore, with Mr. Olemby  
3 {ph}, his father, running the weirs. And on the inside,  
4 before the causeway was built, I had people working for me  
5 that actually worked on boats before that. And they said  
6 that Half Moon Cove and the area around Birch Point as you  
7 come out of Half Moon Cove was a great area for herring  
8 fisheries, and there were many weirs in that area, and  
9 there's none today because there is no herring coming  
10 through.

11 So the opening of the causeway, whether it's done  
12 through the Corps of Engineers or the Tribe, or done through  
13 Tidewalker would be I think a great thing, and would  
14 definitely help the area.

15 One of the issues that has come up, and it is  
16 mentioned many times in the pre-application document are  
17 aquatic area. On page 622, it says: Few fish species of  
18 commercial value are found in Half Moon Cove. Restriction  
19 on the use of draggers have prevented the development of  
20 flounder fishery.

21 On page 620 it says: Presently, Clam Flats near  
22 Quoddy Village are closed to clam diggers due to the raw  
23 sewage discharge into the Cove. Now this has severely  
24 limited any serious consideration of extensive commercial  
25 clamming activities.

1           That was obviously written before the sewage  
2 treatment plant in Quoddy Village was put into effective,  
3 because there was extensive clamming in Half Moon Cove.  
4 When there isn't red tide and when there isn't a rain  
5 closure. And right now we do have a rain closure, I  
6 believe; it's still in effect for the entire State of Maine.

7           So the information that you're presenting in the  
8 Preliminary Application Document to FERC is dead wrong; it's  
9 just not -- you need to do more research. Mr. Basset made a  
10 comment that you hadn't been to see the tribe, and I've  
11 invited you to come to my house and present your plans and  
12 talk about it; I know some of my neighbors would like to  
13 have you come; you haven't come there. I think if you want  
14 to develop this project that you need to spend more time in  
15 the community working with community members; it's really  
16 important, and it needs to be done. And not just with the  
17 members of the community but with the administration of the  
18 various communities, Perry, the Tribe, and Eastport,  
19 particularly.

20           As far as the causeway goes, as an abutter, my  
21 concerns are the study of traffic, the construction cost --  
22 not cost, the cost of having trucks going by all the time.  
23 How long would it take to construct this? I think a study  
24 needs to be presented to the community. How much traffic  
25 will be involved, and what are we going to do about the

1 fisheries? And I think as a person that buys some of the  
2 fish, the urchins, and uses them, I think it's really  
3 important that that be addressed, because there are people  
4 who will lose some of their livelihood; in fact some of the  
5 boats fish exclusively during the season in Half Moon Cove  
6 or right at the entrance.

7 So I have presented the FERC with photographs  
8 taken over two months -- many photographs, but I just picked  
9 11 of them here, to be brief.

10 (Series of photographs.)

11 This was taken January 14th, it shows one of the  
12 draggers in the area. This is Carlow Island.

13 This is the same boat on a different day.

14 These are two boats fishing way up along Carlow  
15 Island up towards Quoddy Village. They're dragging for sea  
16 urchins.

17 This is another boat that came in on January  
18 19th, and you can see Passamaquoddy Tribe in the background  
19 and the water tower that's up to the reservation.

20 This was on February 10th. Again, it's a good  
21 picture with the water tower in the background, different  
22 boat.

23 This is the high tension pole that's right at the  
24 entrance to Half Moon Cove, so the bridge would go right  
25 across where this boat's coming out. That's a smaller boat,

1 he came in a few times this year.

2 This is February 24th, another boat.

3 Here you can see two boats, they're fishing;  
4 they're going back and forth. The current really streams  
5 across the entrance during certain tides, and these boats go  
6 back and fish back and forth across it. It's a fairly bumpy  
7 area with a lot of rocks, and they still seem to fish in  
8 there on a constant basis. Every day that the fishery  
9 season was open this year for urchins, there was at least  
10 one boat in there. Most days there are three boats, and if  
11 the weather is blowing very hard out in Cobscook Bay, the  
12 boats will go up inside, you can have as many as five boats  
13 up there.

14 The other issues is periwinkling, and lot of  
15 people do periwinkling. I just talked to Will Hopkins; he  
16 said that he counted five in there today. There's a picture  
17 along the Perry shore, all the way from right where the  
18 bridge is, all the way down across to the tribal -- where  
19 the mud flats start down to the tribe -- all around Carlow  
20 Island and up in, behind our area on Toll Bridge Road,  
21 there's quite a few people wrinkling in there. The  
22 wrinkling goes on around the clock, based on when the tide  
23 is, so at low water there's a lot of wrinkling going on,  
24 whether it's day or night; and I'm talking 2 in the morning  
25 in February -- it's amazing, the weather that they work in.

1 It's hard work, and they do it. But it's more of a daytime  
2 operation, but it also occurs (at night).

3 So my concern is that this gets addressed in one  
4 of your studies, I think it's very important that we A)  
5 identify the people, B) identify how much fish they're  
6 catching, and C) How many people are involved totally, so we  
7 have some idea of the effect of this, and then what they're  
8 planning to do, how that will affect them.

9 Generally, I'm not for or against this project;  
10 I'm probably more for it than against it, but I think the  
11 information needs to be much more accurate than what we've  
12 seen in the preliminary, pre-application document. Thank  
13 you.

14 MR. KARTALIA: Thank you.

15 This would be a good time to mention also, Mr.  
16 Peacock, I'm going to put these, along with the  
17 Passamaquoddy filing, I'm going to put these on our official  
18 record, which is known as eLibrary.

19 For those of you who haven't followed a FERC  
20 proceeding yet, the easiest way to do it, through the  
21 Internet, is through our website, FERC.gov. There's a link  
22 there to somebody called eLibrary, which is a posting of all  
23 things that have been issued or filed on this docket, and  
24 the search engine on eLibrary, you would go there and enter  
25 P-12704, the docket for this project, and you would see a

1       chronological list of all things issued or filed.

2               So if you're curious whether something's been  
3       filed, that would be the place to check.  If you didn't get  
4       a mailing but you want to make sure something was issued or  
5       filed, you could go there to check.  There's also something  
6       at our website called eSubscription which allows you to get  
7       an e-mail notification anytime that something is issued or  
8       filed; and again you would sign up based on the Docket No.  
9       P-12704.

10              So that's a good way for most people to keep in  
11       touch with what's happening on a project; and not just this  
12       one, but any FERC project you might be interested in.

13              Are there other comments?

14              MR. KARDATZKE:  I'm Jim Kardatzke (spelling).  
15       I'm the Hydropower Coordinator for the Houlton Region of the  
16       Bureau of Indian Affairs.

17              We will, with the rest of the services in the  
18       Department, be making formal filings, but I just want to hit  
19       a few highlights.  One of the things in the Notice of  
20       Intent, you initiate a consultation with the Fish & Wildlife  
21       and the State SHPO.  You neglected to initiate consultation  
22       with the TPO of the Passamaquoddy Indian Tribe.

23              The shoreline of this project goes on about 25  
24       percent where the Passamaquoddy Reservation is located at,  
25       and all that land is in federal trust.  And that leads to

1       our second point, in that our agency will be taking the  
2       position that if this becomes licensed, ready for  
3       environmental, we will probably be issuing conditions under  
4       the Section 4E of this. A lot of that will depend on what  
5       the studies go.

6               Based on our review of the PAD, we've had -- like  
7       FERC, we will be submitting a number of study requests, most  
8       of which mirror what you've already put in in your scoping  
9       document, because there is very little if any current  
10      information in the pad, and it's all historic in nature, and  
11      it really does not reflect current environmental -- it is  
12      our position there will be a significant environmental  
13      impact on the Cove if this is created.

14             Most of the rest of it we'll go on; other than  
15      the fact that you need to mention you're doing an economic  
16      study. If you look at the DEIS for Downeast liquefied  
17      natural gas, you'll notice that the Passamaquoddy Indian  
18      Tribe at Pleasant Point is identified as an environmental  
19      justice community; and like that project, this project also  
20      will have a significant impact on that community, and it  
21      needs to be incurred and part of your economic evaluation of  
22      this particular project.

23             MR. BROWNING: A question for you.

24             MR. KARDATZKE: Sure.

25             MR. BROWNING: I'd sent a letter to the

1 Passamaquoddy Tribe at Pleasant Point, addressed to Richard  
2 Doyle. Is that incorrect?

3 MR. KARDATZKE: That's the Governor's -- it goes,  
4 Richard-Doyle Phillips. He's still the governor.

5 MR. BROWNING: And then I also --

6 MR. KARDATZKE: And that's who you start the  
7 formal consultation with.

8 MR. BROWNING: Right, and I also called Donald  
9 Soctomah.

10 MR. KARDATZKE: Donald Soctomah is the TPO.

11 MR. BROWNING: Okay. I just never heard any --  
12 I'm saying I did make an effort; I just haven't heard  
13 anything. I left a message; I just wanted to clarify that.

14 MR. KARDATZKE: You'll have to ask the Indian  
15 Township governor, and a lot of times what you do when you  
16 do consultation, you'll ask Indian Township and you'll ask  
17 Penobscott, and I've seen you go to the Maliseets and the  
18 Micmacs. It's their choice to determine whether or not they  
19 want to do consultation with you or just leave it up to, you  
20 know, Pleasant Point and the Passamaquoddys.

21 MR. BROWNING: Okay.

22 MR. KARDATZKE: I mean, that's not something we  
23 decide, that's their decision.

24 MR. KARTALIA: Thank you.

25 Is there anyone else that would like to make a

1 comment?

2 AUDIENCE: How about questions?

3 MR. KARTALIA: Sure. Well, comments or  
4 questions. After this gentleman, you can make a comment or  
5 a question.

6 MR. PRITCHARD: Good morning. My name is Dan  
7 Pritchard, I'm a Director of the MarshLands Program with the  
8 Maine Department of Environmental Protection, and we'll be  
9 providing comments later in writing; but given the forum, I  
10 thought it would be helpful just to state that the State of  
11 Maine owns the submerged lands below the mean low water  
12 line; Maine is one of five states in the country that's a  
13 mean low water state, intertidal lands in Maine are  
14 privately held with the public easement to use those  
15 intertidal lands for fishing and navigation. So any  
16 development associated with this project that occurs on  
17 state submerged lands will require some sort of conveyance  
18 from the State, a lease of some kind, that typically run for  
19 30 years and are renewable.

20 Our interests in this project will be whatever  
21 the impacts might be from development on state lands and  
22 impacts to the public uses of the state's lands and waters,  
23 including the public's interest in using the intertidal  
24 lands for commercial fishing and recreation. And I assume  
25 because the intertidal lands will be partially flooded as a

1 result of this project, that there will probably be some  
2 sort of easements required for the use of those private  
3 lands as part of this project. That's all I wanted to say.  
4 Thank you very much.

5 DR. LABERGE: Steve, I have one question for Mr.  
6 Pritchard.

7 Mr. Pritchard, one question about tribal land.  
8 What's the type of protocol on the submerged lands lease for  
9 tribal land?

10 MR. KARDATZKE: There are no tribal lands that  
11 are submerged.

12 MR. PRITCHARD: That's correct. My understanding  
13 is the reservation lands stop at the mean low water line,  
14 where state lands take over. So one's private, one's state-  
15 owned.

16 Does that answer your question?

17 DR. LABERGE: I think so. Thank you.

18 MR. KARDATZKE: But the intertidal lands are not  
19 submersed lands, right?

20 MR. PRITCHARD: Correct.

21 MR. KARTALIA: Would you like to make a comment,  
22 or ask a question?

23 AUDIENCE: I just had a rather simple question.  
24 I just wondered if Normand could comment --

25 MR. KARTALIA: Pardon me, could you please

1 identify yourself so the court reporter --

2 MS. GROSSMAN: Lois Grossman, Eastport resident  
3 in the summer.

4 MR. KARTALIA: Thank you.

5 MS. GROSSMAN: I just wanted Normand to comment  
6 on what effect opening the causeway would have; how those  
7 two things might interact. Mr. Basset said they're  
8 contemplating various ways of opening the causeways; and  
9 it's the same water going in and out, so I just wanted  
10 Normand to comment on that.

11 DR. LABERGE: Well, the project, as I mentioned,  
12 would have to be a joint-type project with the Corps of  
13 Engineers, Maine Department of Transportation, because they  
14 have some jurisdiction over the project, and the  
15 Passamaquoddy Tribe, besides Tidewalker.

16 In terms of the dynamics, if you did open that up  
17 with emptying and filling gates to help control the level,  
18 then there would be an improvement in the water quality of  
19 Half Moon Cove because then you would get a source from  
20 Passamaquoddy Bay, and just a more dynamic area.

21 I agree that it would reduce the tidal link by  
22 two or three feet, then you are also reducing the tidal  
23 volume, the exchange rate in Half Moon Cove; but it's that  
24 balance. We see that as an opportunity to balance some of  
25 the impacts associated with the historical creation of the

1       causeway by producing a project that will allow  
2       Passamaquoddy Bay waters to enter.

3               One comment on the process; if you look at the  
4       Corps of Engineers proposal and the Passamaquoddy proposal,  
5       there's a great deal of material that has to be dredged out,  
6       both on the Half Moon Cove side and the Passamaquoddy Bay  
7       side. So any project you do in the restoration would  
8       involve some impacts to the existing conditions; but we see  
9       this as a terrific opportunity to work with communities and  
10      get a better water quality for Half Moon Cove.

11              Does that answer your question, Lois?

12              MS. GROSSMAN: And it wouldn't have a negative  
13      impact, let's say, on your project?

14              DR. LABERGE: Oh, no. Engineering-wise we could  
15      use it to control. If you look at Half Moon Cove, it's  
16      fairly narrow and long, and the purpose of it is to be able  
17      to empty it as much as possible; and that would allow us to  
18      empty it and also control the level, especially during  
19      spring tide conditions.

20              MR. KARTALIA: Would anyone else like to make a  
21      comment or ask a question?

22              MR. MINTZ: Jeff Murphy Mintz {ph} (off mic, in  
23      audience.) A question for Tidewalker.

24              Is it technically feasible to eliminate the loss  
25      of the mo tide with the proposed barrage, or would that just

1       require a different mode of operation?

2                   DR. LABERGE:  There is some possibility to do  
3       that, but sort of the point Dana brought up is the economics  
4       and the reliability of the equipment.  That curve I had up  
5       on the screen shows the constant head condition that, if you  
6       stopped production just before low tide and you had turbines  
7       or other devices that could pump that out, then you could  
8       further reduce it.

9                   But that's an issue that would be discussed in  
10       the project; it's an unavoidable consequence based on mode  
11       of operation, and there is some flexibility to do so.  
12       Especially with spring tide conditions, because then you  
13       have more water.  Neap tide conditions are a little bit  
14       different, but the intertidal environmental is different at  
15       neap tide, the conditions also in spring tide.  So hopefully  
16       that will be a topic of discussion with the regulatory  
17       agencies.

18                   One point if I can make while I'm up here; we did  
19       send a letter to all of the abutting land owners  
20       approximately a month before this meeting, and in that one  
21       we gave a realistic assessment of what the impacts of the  
22       project would be.

23                   A major one would be access to the basin.  We  
24       will consider the possibility of locks and dams to allow big  
25       boats, but that might not be a practical option.  Our

1 position is that we're not going to damage the sea urchins  
2 or the scallops in Half Moon Cove; we're going to change the  
3 mode of access to that resource. Divers exist in Cobscook  
4 Bay that could take advantage of diving for scallops and  
5 recovering a species that might have greater value in a  
6 different market; and if you transform what we feel is a  
7 fairly unproductive section of the intertidal zone, the  
8 submerged lands, that's going to increase that habitat for  
9 the species that live in submerged waters.

10 So these are impacts, but the issue of access is  
11 important and will be considered within the community  
12 environment.

13 MR. KARTALIA: Would anyone else like to make a  
14 comment or as a question?

15 MR. KARDATZKE: Steve, this is Jim Kardatzke with  
16 the Bureau of Indian Affairs again. I'm probably going to  
17 offend the tribal leaders. The Bureau of Indian Affairs,  
18 who holds the title to that land, did not receive any  
19 letters.

20 MR. KARTALIA: Not from the Applicant.

21 MR. KARDATZKE: We received your correspondence,  
22 your stuff.

23 MR. KARTALIA: Okay.

24 MR. KARDATZKE: But not from the Applicant.

25 DR. LABERGE: I think it was 2008 that we met

1 with Governor Phillips-Doyle and Steve Prophet was there,  
2 too, and we discussed the project. At that time the tribal  
3 was concentrated on the referendum for the casino and also  
4 on the proposed LNG project.

5 We've discussed projects with the tribal members  
6 not on an official basis; and a month or two before this  
7 meeting, I contacted the tribal manager to try to get  
8 together to discuss some issues associated with the project;  
9 and all the mailings we sent out, I know we sent a CD out to  
10 Governor Doyle. So there's been communication all along  
11 with the Passamaquoddy Tribe, both written and orally, and I  
12 can only speak about our effort to discuss the project with  
13 the Passamaquoddy Tribal Government.

14 MR. CLEMENT: Jay Clement, Army Corps of  
15 Engineers.

16 Normand, in the early stages, whether it was FERC  
17 or your introduction, there was some reference to parallel  
18 piers. I am assuming that that again related to access to  
19 the Cove. Could you clarify what exactly that was all  
20 about?

21 DR. LABERGE: The Annapolis Royal uses parallel  
22 boat ramps, that it's sort of away from the barrage or the  
23 dam, because some of the problem with the flow and so on.  
24 But there they have, I think they even have a way to  
25 transport people from one boat ramp to the other boat ramp.

1 But that would be designed more for smaller boats. If you  
2 did go up and gear it up to say a 35 footer or a 40 footer,  
3 it would be difficult.

4 That's why, in addressing the passage of big  
5 draggers with -- we are going to look at the option of lock,  
6 but it doesn't seem to be a practical type of solution.  
7 Even if locks came in, the only real access would be at high  
8 tide when you have a slack tide and you have the water high  
9 enough to go through the waters.

10 We feel also that in creating this area that the  
11 potential for recreational use in the impoundment might be  
12 greater than it is presently, and especially the idea of  
13 breaching the causeway might allow for some access from Half  
14 Moon Cove into Passamaquoddy Bay.

15 MR. KARTALIA: Yes?

16 MR. BASSET: Just would like to make a point of  
17 clarification. The official governing body for the Pleasant  
18 Point Passamaquoddy Tribe is the Governor and the Council;  
19 so any communication should be to that body, to speak with  
20 individuals is not what we would consider true contact and  
21 consultation.

22 Another thing I neglected to say earlier was,  
23 Route 190, the causeway and those, that has been put through  
24 the community, right through the heart of Pleasant Point.  
25 And it has brought immeasurable changes to our community

1 since it was put in, and there's been a lot of discussion on  
2 the tribal level to attempt to reroute that traffic from  
3 time to time, so that we can again begin to get some  
4 semblance of a tribal community without the heavy trucking  
5 and the constant flow of traffic right through the middle of  
6 our community.

7 And when I look at the pictures that you  
8 presented here, an idea came that maybe we could reroute the  
9 traffic over the dam that you're proposing to build, into  
10 Eastport around Pleasant Point rather than through the  
11 middle of Pleasant Point. It's just a thought that would be  
12 a point of discussion with the tribal government. Just  
13 thought I'd say that. Thank you.

14 MR. KARTALIA: Anyone else?

15 John.

16 MR. BAUMMER: Normand, as a point of  
17 clarification, you have several proposed modes of operation  
18 and also several proposed, a measure for a rock-filled dam  
19 and a tidal barrage, and also you mentioned opening up the  
20 causeway, using reversible turbines. For us to evaluate  
21 the environmental impacts of all those actions, it might be  
22 feasible for yourself or wise for your group to consider  
23 what's going to be the best, what you would like to have as  
24 your proposed mode of operation and proposed construction so  
25 that we can effectively evaluate those; otherwise, we could

1       potentially generate a very extensive list of studies that  
2       would be required to do an effective environmental  
3       evaluation of all those proposed measures.

4               One more point of clarification, too; we wanted  
5       to make sure that your group is clear that the FERC process,  
6       licensing process, is four and a half to five years, and  
7       because of the ILP process, the way it's written and  
8       designed, it does take four and a half to five years to go  
9       through the entire process.

10              MR. KARTALIA: I just wanted to add on, I think  
11       what John said kind of reflects what I was hoping to say  
12       today also; in the absence of a concrete alternative, and  
13       the study request deadline quickly approaching, in order  
14       that we cover different potential alternatives, we'll of  
15       course have to ask for maybe more studies than might  
16       ultimately be necessary if there was one clear-cut  
17       alternative.

18              So, just wanted you to be aware of that. If we  
19       need to write an environmental document that considers three  
20       or four or five potential alternatives, then we'll need to  
21       make sure we have studies and data in the record to address  
22       whichever one of those might get selected.

23              DR. LABERGE: In regards to the mode of operation  
24       and the use of turbines, we've started a dialogue with  
25       turbine manufacturers in trying to optimize the type of

1 turbine. I think within 30 or 60 days we can give you a  
2 definitive statement on the type of turbine to sort of  
3 narrow the options available, and also the selected mode of  
4 operation. But the mode of operation would still be based  
5 on keeping the tidal range reduced as much as possible.

6 MR. KARTALIA: Anyone else?

7 Paul.

8 MR. MAKOWSKI: Normand, could I have a  
9 clarification. When you say reversible, are you saying  
10 flood and ebb, generating on flood and ebb?

11 DR. LABERGE: Yes.

12 MR. MAKOWSKI: And when you're talking about  
13 pumping, you don't mean, that's not interchangeable with  
14 'reversible'; is that correct?

15 DR. LABERGE: The reversible turbines can also  
16 pump.

17 MR. MAKOWSKI: No, I understand, but you can  
18 generate at both flood and ebb without the pumping  
19 capability?

20 DR. LABERGE: Correct.

21 MR. MAKOWSKI: So I guess when you say  
22 reversible, is the pumping capability -- are you generating  
23 both on the flood and the ebb tides?

24 DR. LABERGE: I'm thinking more of the  
25 hydrokinetic technology that is a reversible flow because

1 they produce them both ways; but their units can't pump,  
2 either. So it would be that type of low head unit that  
3 could operate in both directions, but not have pumping  
4 capability.

5 MR. MAKOWSKI: Okay.

6 MR. KARTALIA: Anyone else?

7 (No response.)

8 Okay, well, I just want to remind you before you  
9 leave of upcoming dates, with regard to this first date,  
10 please disregard the incorrect date that's in the scoping  
11 document. If you got here late, you didn't hear me point  
12 that out.

13 The date on page 18 is incorrect. This is the  
14 correct date, which is also found in Appendix A of the  
15 scoping document.

16 Also remember, this is the first of two meetings.  
17 If you spoke today, or didn't, you may come this evening;  
18 you may speak again if you'd like to. If you know people  
19 who may be interested in hearing more about the project or  
20 asking FERC questions, please let them know about tonight's  
21 meeting at 7 p.m.

22 And if you would like to keep track of what's  
23 going on with the project, eLibrary and eSubscription from  
24 the FERC website are good tools to allow you to know what's  
25 been filed or issued on this docket.

1                   Anyone?

2                   Okay, meeting adjourned. Thank you for coming.

3                   (Whereupon, at 11:55 a.m., the scoping meeting  
4 concluded.)

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