

In The Matter Of:
Coastal Resources Management Council

Hearing
November 1, 2022

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STATE OF RHODE ISLAND

COASTAL RESOURCES MANAGEMENT COUNCIL
SEMI-MONTHLY MEETING - FULL COUNCIL

November 1, 2022
6:00 p.m.
Administration Building
Conference Room A
One Capitol Hill
Providence, Rhode Island

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PRESENT:

Raymond C. Coia, Chair
Donald Gomez
Ronald Gagnon
Stephen Izzi
Catherine Robinson Hall
Jerry Sahagian
Lindsay McGovern

ALSO PRESENT:

Jeffrey Willis, Executive Director
Anthony DeSisto, Esquire, Legal Counsel
Mark Harmon, Esquire, Legal Counsel
Justin Skenyon
David Ciochetto
Kevin Sloan

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NOVEMBER 1, 2022

(The proceedings commenced at 6:13 p.m.)

THE CHAIRMAN: Good evening everyone, and, again, thank you for your patience. I call to order the semimonthly meeting of the Coastal Resources Management Council.

Today is a Tuesday, November 1, 2022. The first matter on our agenda -- well, actually, I'll do a roll call of council members for attendance.

Mr. Sahagian?

MR. SAHAGIAN: Present.

THE CHAIRMAN: Ms. McGovern?

MS. MCGOVERN: Present.

THE CHAIRMAN: Mr. Gomez?

MR. GOMEZ: Present.

THE CHAIRMAN: Mr. Izzi?

MR. IZZI: Present.

THE CHAIRMAN: Mr. Gagnon?

MR. GAGNON: Present.

THE CHAIRMAN: Ms. Hall?

MS. HALL: Here.

THE CHAIRMAN: And I'm Ramond Coia, and I'm here. Let the record reflect the CRMC staff members that are present this evening.

1 And the first matter on our agenda would be the
2 approval of the minutes of the previous meeting, that
3 meeting being held on Tuesday, October 11, 2022. I know
4 they have been disseminated. I'll entertain a motion to
5 accept them.

6 MR. SAHAGIAN: So moved.

7 THE CHAIRMAN: Motion has been made by Mr. Sahagian.

8 MR. GAGNON: Second.

9 THE CHAIRMAN: Seconded by Mr. Izzi. Was it Izzi or
10 Gagnon? Mr. Gagnon.

11 All those in favor say "aye."

12 (All members present responded "aye")

13 THE CHAIRMAN: All those opposed.

14 (No reply)

15 THE CHAIRMAN: I am abstaining. I was not here that
16 evening.

17 The next matter is subcommittee reports.

18 MR. WILLIS: There are no subcommittee reports,
19 Mr. Chair.

20 THE CHAIRMAN: Staff reports.

21 MR. WILLIS: No staff report again tonight,
22 Mr. Chair.

23 THE CHAIRMAN: Which brings us to our one agenda
24 item. All right. Our one and only matter to be heard

1 this evening is review and action regarding application
2 requiring public hearing and special exception. That
3 matter being 2021-07-005, Revolution Wind. For the
4 benefit of those here, I will read what the application
5 is.

6 It's two submarine export transmission cables of
7 275 kilovolt high voltage alternating current have been
8 proposed for the project. Each cable measures
9 approximately 23 miles in length and has been proposed to
10 be installed in CRMC Type 4 and 6 waters in Rhode Island
11 Sound and the West Passage of Narragansett Bay, making
12 landfall at the Quonset Business Park, North Kingstown.
13 The export cable will cross an area of particular concern
14 as identified by Ocean Special Area Management Plan
15 Section 11.10.2, and will require a special exception
16 under Coastal Resources Management Program Section 1.1.8.

17 The cables will be installed at a target burial
18 depth of four to six feet (or deeper) below the seabed,
19 which will create a total estimated disturbance of
20 approximately 730 acres within state waters. Secondary
21 cable protection in the form of rock bags, concrete
22 mattresses, and/or rock berms may be used where the
23 target burial depth could not be achieved.

24 The export cables will make landfall at the Quonset

1 Business Park, the heavily industrial waterfront, via
2 horizontal directional drilling, which will require the
3 construction of the two offshore exit pits.

4 After joining with the export cables, the onshore
5 transmission cable will follow Circuit Drive northwest to
6 135 Circuit Drive, where it will cross this property
7 north of the existing driveway and cross the property in
8 a north-northwest direction until reaching the property
9 owned by Quonset Development Corporation. Here the cable
10 will continue north until reaching 101 Circuit Drive.
11 The cable will then continue north across 101 Circuit
12 Drive and 75 Circuit Drive within the existing paved
13 access road to the existing Davisville substation. At
14 the Davisville substation the cable continues west,
15 parallel to the northern property boundary before
16 reaching Narragansett Electric Company's parcel. After
17 crossing, the cable enters the onshore substation, tying
18 in to the proposed access road. The total cable length
19 is approximately one mile.

20 So that is the application and the description of
21 the application before us this evening. The applicant is
22 present. Attorney Robin Main is here representing the
23 applicant. And prior to calling upon Mr. Skenyon, who I
24 believe did some review of this, I'm going to ask our

1 Executive Director, Mr. Willis to give us a brief
2 description and game plan for this application.

3 MR. WILLIS: Thank you, Mr. Chair. I just want to
4 bring everybody up to speed where we're at and why we're
5 here and some of the logistics of this meeting, and I'll
6 go into some detail about where we're going to go with
7 the process of the meeting and where we're going to go
8 from here forward.

9 So the application that we're hearing tonight is for
10 work as explained by the Chair, as requested by
11 Revolution Wind, that is within state water and state
12 jurisdiction only. As you all know, there is an offshore
13 wind farm also being proposed, but this particular
14 application is only for the work that needs to occur in
15 state waters in state jurisdiction. So we will not be
16 talking about the offshore wind farm tonight or at any
17 related hearing on this matter.

18 But there is a lot to cover tonight. We anticipate
19 this application will be heard over the next -- over two
20 meetings, tonight and at the November 22nd meeting. We
21 have set aside those two hearing dates to hear this
22 application.

23 We will hear from staff on the proposed work. We'll
24 also hear from the applicant on the proposed work, and

1 we'll also hear the applicant's arguments as to why the
2 project is consistent with our program. We'll hear from
3 staff on our review of the activities and the
4 application's consistencies with our program.

5 I just want to let everyone know that we have spent
6 a lot of time with the applicant working on a lot of
7 different issues associated with activities being
8 requested. We've spent several meetings going over
9 specific issues. We've invited our Fisheries Advisory
10 Board, our Habitat Advisory Board to those meetings to
11 discuss them and find ways to find common ground on how
12 to move them forward. We've also had weekly meetings
13 with the applicant. Every Friday morning at ten o'clock
14 we've had meetings with the applicant to go over these
15 issues in detail so we can find common ground on how to
16 move the issues forward.

17 There's been a lot of discussion with all the
18 parties involved on a lot of the different activities
19 involved in this application to try to find that common
20 ground. We're all looking for agreement on how to move
21 forward. Everybody participated in those meetings.
22 Everybody had words to say. Everybody had ideas to move
23 forward. We all didn't agree on everything, but we all
24 agreed to participate, and we all agreed to find common

1 ground, and we think we did that.

2 So before I hand it off to staff, I just want to
3 recognize them. Justin Skenyon, who did a large part,
4 wrote the staff report with input from all of us, but was
5 a principal staff person that moved this issue forward.
6 Kevin Sloan, David Ciochetto, Laura Dwyer. Myself, I had
7 a hand in this. And many other staff worked very hard to
8 get the staff report to the point where it is today that
9 we can work with the FAB, we can work with the applicant
10 on that staff report and stipulations contained therein
11 to be in agreement on how to move the application
12 forward.

13 So I just wanted to recognize them for their hard
14 work and thank them very much for the amount of time and
15 effort they put in. It's obviously well recognized, and
16 I just want everyone to understand that.

17 So, Mr. Chair, if you don't mind, I would like to
18 turn the rest of the presentation to Justin to present
19 the issues as we saw them in our review of the
20 application.

21 THE CHAIRMAN: Thank you, Mr. Willis for that.
22 Well, before that, any questions of Mr. Willis from
23 council members?

24 Hearing none, Justin Mr. Skenyon, please. Thank

1 you.

2 MR. SKENYON: Thank you, Mr. Chair. All right. I'm
3 going to start off with touching on what Mr. Willis has
4 just outlined with what this project is going to be
5 focused on here tonight.

6 This project and CRMC is in basically three parts.
7 We have the Ørsted federal consistency portion, which is
8 the wind turbines. What we're reviewing tonight is the
9 inland cable substation and the cable going up West Bay
10 Passage. This does not include the transmission
11 facility, that's covered under a fresh water wetlands
12 application. So tonight I thought the best way to move
13 forward, and I'm going to touch on all the areas of the
14 application that were of critical importance, and I'm
15 going to do that from the order basically from offshore
16 to inshore, winding up just to kind of give a vague
17 outline of how this is going to go.

18 So as described, this project includes two offshore
19 transmission cables running parallel for 23 miles up the
20 West Bay Passage.

21 Back in 2018, CRMC with a bunch of stakeholders from
22 FAB to communities to experts with applicants with
23 offshore wind representatives and representatives from
24 DEM and NOAA, I believe, started off the process of the

1 notice of advance public rule making to include a change
2 to our red book that included requirements for the cable.
3 One of these was a -- it was a cable loop proposal for a
4 corridor. The applicant is using this corridor as kind
5 of a -- how do we describe it? We have set this area
6 aside to -- of course from our conversations and
7 everything, this was a very solid way to avoid as many
8 impacts as we could without giving anyone from Offshore
9 Wind access to an onshore tie-in. That's a big thing
10 with this project is where the cable has to go. It has
11 to make landfall. And this is a large amount of power.
12 The PPA right now is for 704 megawatts, which gives
13 limited avenues from where the power can flow into the
14 grid.

15 So part of that -- and the biggest part of
16 minimizing any potential impact, the staff believes, is
17 ensuring the cable achieves proper cable burial depth,
18 that is between four and six feet or deeper. This is
19 kind of the best area where it minimizes all potential
20 negatives of a cable getting exposed to anything or
21 getting damaged, and it minimizes impact from EMF.

22 So working with the applicant we were able to go
23 through and talk and go through to try to ensure what is
24 the best methods they could use and the best technology

1 they can approach for trying to achieve this goal.

2 So in our discussions with them, the application
3 indicates that up to 10 percent of the cable may be
4 exposed to certain things, and, therefore, requires
5 secondary cable protection. That is, you know, a problem
6 because, you know, you have increased impacts to changes
7 -- you have impacts to the environment and permanent
8 habitat change from soft bottom habitat to hard bottom
9 habitat, you have potential snags that the fishing
10 community can run into, you have an increased EMF impact
11 due to -- the details, I'll get into more detail with EMF
12 in a bit.

13 The applicant indicated that they showed us they
14 have done the utmost to choose the best method they
15 could. They're using two primary methods throughout the
16 Bay, one is a mechanical plow and the other is a jet
17 plow. They're going to change those out at the Jamestown
18 Bridge area due to the fact that it's more shallower over
19 the Jamestown Bridge, and the bottom habitats will get
20 more confused using a jet plow.

21 So when you look at cable burial and how we come to
22 understand it, the biggest thing is to stop the cable
23 from being problematic from two factors. First is
24 changing of equipment or mechanical breakdown or anything

1 that stops the process. So if you have to bring the
2 cable up to the boat to fix something or fix the machine,
3 that cable cannot go right back to where it started. It
4 has to be out, it has to get retrenched, because that
5 will lead to exposed cable. The second is if something
6 gets hit, that will knock the machine up or off the site,
7 whether it's a different sediment layer or an unforeseen
8 boulder.

9 So working with the applicant, they have done their
10 duty to go through and measure sediment, analyze it, and
11 come up with a profile of the cable from the state
12 boundary all the way up through the Bay. This includes
13 sediment analysis and samplings and doing seismic scan
14 sonars. And from those they were able to identify areas
15 of boulders that were potentially in the way that will be
16 moved during the process.

17 We did stipulate how that can be done in the report,
18 and that was in contrast with the work of DEM for that
19 part. That's critical, because, if anything, if you hit
20 a giant rock, it's going to pop out. So the applicant
21 has identified these locations and done a plan to do
22 seabed preparation to change that.

23 So with those measures we feel that the applicant
24 should achieve the best they can, or best possible with a

1 current technology and methodology for this kind of cable
2 to have the least amount of exposure they can.

3 And now I'm going to go into why that's critical.
4 As mentioned before, like, this cable is going to go
5 through seven crossings that will require secondary cable
6 protection. These crossings are usually cables or pipes
7 that you cannot cut through so you have to go over, and
8 if you go over, then you have to pad it, so that way
9 nothing gets hit. And you have to pad it in such a way
10 that it doesn't get knocked off. And anything like that,
11 anything of that nature, is a hazard to the applicant's
12 cable, but also to anyone who is either fishing out there
13 or, you know, gets near it, it has an impact.

14 So we have called for the applicant to outline and
15 survey and hand off to the fishing community with new
16 maps and new information any of these potentials that are
17 going to exist out there.

18 And then when you look at the potential -- when you
19 look at what's going to be used, the applicant has a few
20 options which they will deem with their cable burial
21 plans, and we'll come back with what would be the best
22 tool for which kind of exposure we're looking at.

23 There's many different kinds of ways the cable can
24 be at risk and possibly exposed, not all of them require

1 the same solution. The most popular one is what we call
2 mattress protection, which is an articulated concrete mat
3 that's linked together that will be laid down on the
4 cable. And they use rock bags and that kind of -- and
5 that is another option. We requested the applicant to
6 work to, and they have indicated they want to address
7 those methods, that will have the least environmental
8 impact.

9 We have noticed that now from the Block Island
10 project that particular mattresses there, and through
11 some other studies of other things, they are not always
12 the most conducive, but they are the industry standard,
13 and they are very effective. So that requirement is
14 something the applicant is willing to do as part of the
15 mitigation process of any potential impact.

16 Second, we have heard from the fishing community at
17 large their concern about EMF, electromagnetic fields
18 being generated from fields. Power cables of this size
19 and with this much power through it have a large magnetic
20 output, and as with species and a lot fish and a lot of
21 all those, lobster, crab and so on, they use sense or
22 electromagnetic fields as part of their, you know, way
23 they navigate, the way they sense, the way they hunt.
24 And so that stuff can have potential impacts, if high

1 enough, to the fishing, the environment, essentially.

2 The way to properly address EMF is through trying --
3 through distance, and in this case that means bury it
4 deep. And if you bury deep consistently, there's a world
5 of difference even a few feet can make. The applicant
6 has given us some estimates on their -- what the EMF
7 should look like at peak loading. So peak loading is at
8 704 megawatts. A cable that is just protected by
9 secondary cable protection, which doesn't impact EMF.
10 Secondary protection is not shielding in any sense. It's
11 about 1,052 milligauss, which is -- it's pretty
12 significant. It's not to the point -- it's at a point
13 where we've seen some studies indicate that there could
14 be potential issues, but it's not universally considered
15 the threshold.

16 BOEM has put out some indication -- BOEM and other
17 scientific literature has indicated that that threshold
18 is a little higher than that, also, that a sea current is
19 different than the current that is a natural background
20 magnetic field. But there's also other reports we talked
21 about in the community we received from our -- from URI
22 that indicated that that's not always the case. So
23 there's still some scientific literature debate on it,
24 and given the nature of this cable, and the fact there's

1 two of them, and it's going up the Bay, we endeavor to
2 minimize any theoretical impact. Which to prove that,
3 Revolution Wind has demonstrated through the estimates
4 that even achieving like a three-and-a-half foot burial
5 depth would reduce any EMF to the surface to like an 82,
6 if I remember that number correctly, which is, you know,
7 almost a factor of ten reduction, and one of the things
8 we looked at in trying to minimize impact.

9 So those are major concerns with the cable.

10 During the installation process, the mechanical plow
11 and the jet plow, they operate displacing the sediment
12 and plowing through it, essentially. During displacement
13 there will be sediment kick-up, which is a concern to
14 certain environmental factors, such as benthic species
15 and some others, any agriculture in the area, potentially
16 any of that. The staff reviewed those concerns and does
17 not -- it indicates that even though the impacts would
18 exist, given in essence the relatively small area,
19 compared to the rest of the environment, that the
20 sediment will be temporary, as in days and hours, to
21 return to the normal background sediment. This
22 disturbance is kind of unavoidable, but also not
23 disastrous.

24 And we also planned -- also, the applicants

1 indicated that they are within the risk that
2 agriculturists seem to be concerned. Most agriculture
3 sites are far enough away from the cable and main
4 activity that they shouldn't be affected by what we've
5 seen in our staff report unless other changes occur.

6 So that is for the Bay cable heading to near shore.
7 At near shore the applicant is going to do a horizontal
8 directional drilling activity. This was absolutely
9 requested by CRMC, and the applicant has agreed. Coming
10 off of our experience with the Block Island wind project,
11 where the onshore cable was not horizontally drilled at
12 first, it was trenched all the way to the substation. It
13 came unburied. It came unburied on a public beach, and
14 it affected a lot of people, and affected -- cost a lot
15 of money to eventually have to buried for an awful lot of
16 money to Deep Water, which is now -- which was bought out
17 by Ørsted, and the cable itself was bought out by
18 National Grid, and it cost National Grid a lot of money
19 to have to rebury it, and it took about two years to
20 accomplish that.

21 So we indicated, you know, they should very
22 seriously consider to do this method, and they agreed,
23 and we're here.

24 So horizontal directional drilling is when you

1 pretty much put a whole deep underground all the way
2 through, and it comes up the other end, and you filter it
3 through. So all the above sediment, all the above rock
4 and everything is still there. So you didn't remove it,
5 and it allows you to get much deeper.

6 The applicant has indicated that the depth should be
7 between 10 and 18 feet, which is more than sufficient
8 probably for any coastal activity that could disrupt it.

9 Now, to do this, an exit pit is going to be formed
10 offshore. They're going to dredge the -- I'm sorry --
11 they're going to dredge the material out of this pit,
12 load it up into barges temporarily, do the pull through,
13 through the line, connect the cable there, rebury
14 everything.

15 This is consider a dredging application style.
16 That's -- that is the best way to do this, also, the
17 least impact to users, the least impact for the least
18 risk.

19 The location also of the cable outside of horizontal
20 directional drilling is good. The applicants worked very
21 well with Quonset to get all the permissions needed and
22 required to land their cable there. This is not on a
23 public beach, this is not a wetland, this is in a heavily
24 industrial area, a prime location for an activity that is

1 disruptive like this.

2 From there the applicant is going to trench the
3 cable inland along what was outlined by the Chair
4 earlier. It follows mostly roads, and then it's going to
5 cut across the transmission facility and into what
6 they're going to construct to be a new substation.

7 They have done the permissions to go along the area.
8 North Kingstown is signing off on this. They went
9 through the approval process of the Energy Facilities
10 Siting Board. The Energy Facilities Siting Board has
11 requested and the applicant worked with us to fulfill
12 that request that they should alter the route to not
13 impact a local neighborhood. That was done. It didn't
14 go -- you know, they worked to give an update on that,
15 and we approved all that, and we're happy the applicant
16 can now avoid noise mitigation and potential traffic
17 hazards.

18 Also, all this work, we mentioned the time of year
19 restrictions, all this work is going to happen during our
20 traditional dredge window from end of October to early
21 January -- sorry -- early February, over basically two
22 years is the term of construction. That is a very
23 important requirement of the applicant, because it will
24 limit potential impact to anything recreational by not

1 heading into any of the summer months and potential
2 impact to multiple species.

3 I'll go into the potential species impact a little
4 later, why we think that some of the major species will
5 not be impacted, will not be critically damaged or
6 critically affected, but I'm going to cover the
7 substation first.

8 So the applicant is going to need to build a new
9 substation to handle the power. Their existing location
10 is nearby an existing transition facility that will be
11 upgraded as part of this project, but that is not handled
12 under this application. So that is the main reason why
13 the substation is going there, to put a new tie-in so it
14 meets the purpose it needs there. It's also being built
15 on what is the old capped landfill from the days when
16 Quonset was used as a military base. So this area,
17 nothing can really be built on it that would be, like,
18 people consideration, so this is a good use for that kind
19 of land.

20 The applicant has shrunk the size of the facility to
21 the greatest extent you can shrink one of these
22 substations while still holding on to all of the safety
23 requirements. The spacing there is what the stations
24 require through other federal regulations. There's

1 limits to -- there's limits to how much distance you can
2 retract and how big the fences have to be, et cetera, et
3 cetera, for worker safety and for the public, like,
4 closing it off.

5 With that, the applicant will encroach a little bit
6 on the buffer to the wetland, not the wetland itself. So
7 the wetlands remain not directly impacted. Which brings
8 us to what could potentially directly impact them, which
9 is stormwater.

10 The applicant -- we have worked really hard and
11 really well with both DEM and the applicant about
12 stormwater analysis for this project. The applicant --
13 there's couple of changes to the regs that we had to look
14 at, because the way the substation is, there's certain --
15 you can't have a lot of recreational of any kind near a
16 substation because you can't. It's a giant electrical
17 facility. It's actually a risk to have anything hanging
18 close by. But you still have to be able to meet what is
19 needed in terms of work quality certification. The use
20 the temporary roads is fine because of the lack -- the
21 lack of -- traditionally, gravel roads are not considered
22 impervious under this regulation, because if you use them
23 enough, they do -- the stone breaks down and kind of
24 creates a solid surface, essentially. But if you have it

1 temporarily, as this facility will, due to the not always
2 manned nature of it, that is more welcome too. It will
3 not affect it. So that was good.

4 I think the one thing I did forget to mention, back
5 to impacts with species and impacts to recreational.
6 This cable is assumed that once it's buried it will
7 remain buried unless there is a critical failure of some
8 kind, which is unexpected, such as an anchor tearing at
9 it or anything, which goes back why we achieve proper
10 burial depth, that that minimizes the risk of any
11 potential snags.

12 So during the lifetime of the project, which is
13 estimated to be 25 years, maintenance on the cable is not
14 really expected, or it will have to be a critical problem
15 for that. Not to say no work is to go happen out there.
16 We request the applicant to ensure the cable remains
17 buried, perform surveys, and will we work with DEM to
18 write those, and the applicant to write reasonable
19 timelines for routine surveys. The surveys we will
20 conduct throughout the entirety of the state cable, and
21 will be reporting to CRMC. This will ensure if anything
22 is missed, or anything becomes uncovered, or for whatever
23 reason, for instance, if the applicant knows there's a
24 storm that comes by, they will have to go out, you know,

1 depending on the size of the storm, like a once in
2 50-year event will require, you know, to probably have
3 someone to check it. Those will ensure everything is
4 pretty much continuing to function and continue to have
5 minimal risks that we can.

6 So that's during the lifetime of the project.
7 Periodic surveys happening every five to ten years,
8 sometimes more frequently depending on the weather.

9 Decommissioning is still a bit theoretical at this
10 point. BOEM is working on this. This is kind of a new
11 thing for these projects.

12 Now, for impacts to the environment, specifically,
13 species that are in the area. Time of year restriction
14 was a massive part, as I mentioned earlier, of trying to
15 avoid impact to these species. A major one -- there's a
16 couple of major species under consideration that we at
17 CRMC were focused on. Submerged aquatic vegetation, or
18 SAV. There really is no SAV near this project in any
19 reasonable degree that should be impacted. The closest
20 SAV we have are basically 850 feet away and over a
21 thousand feet away. Given the models we've seen, the
22 sediment -- the sediment is not going to result in
23 significant burial.

24 There's also any benthic species, so anything like

1 mussels, mollusks, conch, worms that live along the ocean
2 sediment, they will be impacted obviously from a plow
3 going through, but this is comparatively for the entire
4 disturbance area, compared to the rest of the Bay, they
5 will be able to repopulate in a few years at most, and,
6 relatively speaking, be minimally impacted compared to
7 large areas.

8 Winter flounder also lay their eggs. They're one of
9 the few species that like to procreate during the winter
10 months, but their eggs tend to favor sandy bottoms and
11 shallow water habitats, which are pretty far away from
12 where the cable is going to be. So their eggs are
13 vulnerable to burial, they should be, you know, much
14 farther away. We don't anticipate impact to the
15 population. So there are other species in the area, but
16 those are the ones that were the major concern.

17 This application also comes with two variances and
18 special exception requests, which I'm going to leave the
19 applicant to discuss in more detail. The special
20 exception is to our APC for recreational. And the
21 variance request is for monitoring pre-application
22 requirements.

23 And with that, I think that's everything I need to
24 conclude with the brief overview of the staff report.

1 THE CHAIRMAN: Thank you, Mr. Skenyon.

2 Any questions of Justin? Don.

3 MR. GOMEZ: I'm just trying to get everything
4 straight in my head. And you answered some of the
5 questions that I had. Is the cable -- what's the
6 armoring that's used on that cable? Is it one you go
7 over the pipelines or that type thing to get that second
8 protection?

9 MR. SKENYON: Yes.

10 MR. GOMEZ: The cable has special armoring. You
11 indicated there were mattresses and the rocks and things.

12 MR. SKENYON: Oh, so the cable itself?

13 MR. GOMES: Yes. Just to toughen it up more. Is
14 the whole cable around it --

15 MR. SKENYON: Yes.

16 MR. GOMEZ: -- the whole cable around it, or just
17 those areas that come up on the surface? It doesn't
18 really matter, I guess. The basic question is the
19 armoring.

20 MR. SKENYON: So the cable itself is actually like
21 -- the best way to think about is like three cables
22 combined surrounded by, like, a shell. So it's a pretty
23 thick shell around those three cables. And then whenever
24 it gets close, there'll be like an artificial something,

1 like, either a -- you know, industry standard is concrete
2 mattresses, so there will be nothing except for the cable
3 itself and at least three and a half feet or four feet of
4 sediment. And then if there is not that, then --

5 MR. GOMEZ: So the mattresses like on Block Island?

6 MR. SKENYON: Yes.

7 MR. GOMEZ: And then you put sediment over the top
8 of that, is that what you said?

9 MR. SKENYON: No. You would not put sediment over
10 the top of the mattresses. It might accumulate there
11 naturally, but usually the mattresses lay down. It's
12 usually in areas where the sediments will not stay that
13 you put the mattresses down.

14 MR. GOMEZ: And on the magnetic or the EMF
15 shielding, what materials did they use to try to, you
16 know, contain the EMF? Like, you know, I'm familiar with
17 Netic and Co-Netic type materials that basically will
18 encapsulate the EMF and reduces the output. Was the
19 cable built with any regards to the EMF or the shielding
20 embedded inside the cable?

21 MR. SKENYON: Um, yes. Okay. So this is a little
22 bit more complicated question than --

23 MR. GOMEZ: Well, I'm just -- I'm bringing it out,
24 so that it will get answered along the way.

1 MR. SKENYON: Yes. No, this is part of the nature
2 to deal with a large project like this. There was a
3 further analysis presented by the applicant to BOEM that
4 indicated how the binding of the cable itself can help
5 the cables themselves cancel out --

6 MR GOMEZ: Exactly.

7 MR. SKENYON: -- the EMF.

8 MR. GOMEZ: Exactly.

9 MR. SKENYON: I considered that. I also -- we also
10 received that analysis without, and obviously with the
11 cancelling there's been less EMF. So this represents not
12 only the worst case in terms of -- so it doesn't include
13 that analysis, our analysis, but we are aware that the
14 applicant will do that.

15 MR GOMEZ: You're relying on basically burying it to
16 try to contain it.

17 MR. SKENYON: Yeah.

18 MR. GOMEZ: Is there anything that was done to
19 determine any effects on ship electronics, effects to
20 small crafts, any of that, or we don't anticipate any EMF
21 problems or electronics, you know, GPS systems, things
22 like that?

23 MR. SKENYON: We really don't, because EMF, like how
24 it works, as you get farther away, it gets exponentially

1 less powerful. So like even in the worst case, you're
2 looking at, you know, three to four feet of a water
3 column going back to basic background, essentially.

4 MR. GOMEZ: That's good.

5 MR. SKENYON: You know, so unless you're really,
6 really shallow, it's going to be washed out, essentially,
7 at that point.

8 MR. GOMEZ: This is a broad frequency considered
9 associated with the EMF. Is it pretty much -- is EMF
10 pretty much contained in a small range, or is it quite
11 large, I guess, in scope?

12 MR. SKENYON: It's contained in a fairly small range
13 of 60 hertz. Around that.

14 MR. GOMEZ: Okay. Do you consider 120, which is
15 probably -- a high frequency will probably reduce faster?

16 MR. SKENYON: Yeah, that is possible. This would be
17 around 60, which is opposite to like the .01 hertz
18 tested. Yeah.

19 MR. GOMEZ: I don't want to belabor this.

20 MR. SKENYON: No, go right ahead.

21 MR. GOMEZ: I'm trying to sort things out in my head
22 so I won't have to ask again. On the cable lay, is that
23 -- you said you did sub-bottom profiling of the rocks to
24 determine if you had rocks and things?

1 MR. SKENYON: Yes.

2 MR. GOMEZ: Okay. Good. Let's see. All right. So
3 we learned about their trenching out of the Block Island
4 thing, that was good. And more of a operational
5 question, which you didn't cover, but I'm wondering if
6 there's going to be the use of any independent observers
7 to watch this process as we did for the Block Island one;
8 yes?

9 MR. SKENYON: Yes. Certified CVA's will be present
10 for the entire thing.

11 MR. GOMEZ: Exactly.

12 MR. SKENYON: It will be the same CVA's used for the
13 federal consistency.

14 MR. GOMEZ: You mentioned decommissioning. What do
15 we expect for life expectancy for this?

16 MR. SKENYON: This project is expected to be
17 constructed and fully operational -- constructed within
18 two years and fully operational for 25 years.

19 MR. GOMEZ: Block Island ended up 25 years.

20 MR. SKENYON: That's kind of what we're seeing in a
21 lot of lease proposals is a lease of 25 years.

22 MR. GOMEZ: Thanks for your patience.

23 MR. SKENYON: Oh, no, I'm happy to.

24 THE CHAIRMAN: Any other questions for Mr. Skenyon

1 by council members?

2 Hearing none, I will now turn it over to the
3 applicant and Attorney Main.

4 MS. MAIN: Thank you, Mr. Chair. Good evening. My
5 name is Robin Main. I'm an attorney with the law firm of
6 Hinckley Allen. My partner from Hinckley, Christine
7 Dieter, and I represent Revolution Wind.

8 On behalf of Revolution Wind we want to thank all of
9 you for the opportunity to present here tonight, and we
10 do want to extend our thanks to Justin Skenyon, Kevin
11 Sloan, David Ciochetto, and Jeff Willis for all the work,
12 and Jeff talked about it a few minutes ago, but for all
13 the work that the staff has done on this application to
14 bring us here before you tonight, including the extensive
15 work on the staff report. All much appreciated.

16 Tonight Revolution Wind relies on its application
17 and the various filings to support its request for an
18 assent, and we showed through those filings, and we will
19 further affirm that with the testimony tonight, that we
20 meet the requirements of the CRMC program in order for an
21 assent to issue under this Category B application.

22 So tonight we will present several witnesses. The
23 first witness will cover an overview of the project.
24 Then the next witness up will talk about the construction

1 schedule, among other things for the project, including
2 some of the local permitting. Then our cable expert will
3 come up and describe some of the installation work for
4 the cable and had also address some of the points that
5 Mr. Gomez made a few moments ago. And then we will
6 finish up with a few witnesses who will deal with our
7 special exception, rebuttable presumption on the
8 recreational area of particular concern, and then our
9 request for a variance.

10 So if the Chair and the council would like this
11 evening, we can make at the conclusion of that testimony
12 our arguments for the special exception and the variance,
13 but that's certainly up to the council. And without
14 further adieu, I will call our first witness so we can get
15 on with this evening.

16 THE CHAIRMAN: Please proceed.

17 MS. MAIN: Thank you. Our first witness is Kellen
18 Ingalls.

19 Do you swear him in?

20 MR. DeSISTO: Please raise your right hand.

21 KELLEN INGALLS (DULY SWORN)

22 MR. DeSISTO: Please state your name and spell it
23 for the record.

24 THE WITNESS: Kellen Ingalls. K-e-l-l-e-n

1 I-n-g-a-l-l-s.

2 MS. MAIN: It might better if you angle a little bit
3 so the stenographer can also hear you.

4 THE WITNESS: Okay.

5 EXAMINATION BY MS. MAIN:

6 Q Again, state your name for the record.

7 A Kellen Ingalls.

8 Q And, Kellan, by whom are you employed?

9 A Ørsted.

10 Q And what is your role at Ørsted?

11 A I am the Project Development Director for Revolution
12 Wind.

13 Q And is Revolution Wind the only project you work on,
14 Kellan?

15 A It is.

16 Q Before we get into your job at Ørsted as the development
17 director for Revolution Wind, tell the council briefly
18 about your educational background and professional
19 experience leading up to your time at Ørsted?

20 A Sure. So I have a master's degree in English with a
21 concentration in environmental studies. Since receiving
22 that the degree I've focused mainly on renewable energy
23 development here in New England and New York from small
24 scale solar to now offshore wind. And I joined Ørsted

1 approximately three years ago.

2 Q Thank you, Kellan. And, Kellan, I want you to describe
3 to the council who the applicant is here tonight. It's
4 Revolution Wind, LLC, but the tell the council more about
5 what Revolution Wind, LLC is.

6 A Okay. Yes. Revolution Wind, LLC is a 50/50 joint
7 venture between Ørsted and Eversource. Eversource, of
8 course, is a regional utility with a lot of experience
9 building transmission and related infrastructure. They
10 have spent billions of dollars on transmission and
11 substations and cables. And Ørsted is the world's
12 leading offshore wind developer. We've been doing it for
13 about 25 years, including the very first offshore wind
14 farm in Denmark. And since then we've installed
15 approximately 1,600 wind turbines, and that makes for
16 about 7,500 megawatts of capacity for around the world.

17 Q Thank you. And now I'd like to turn your attention to an
18 overview of what the Revolution wind project is. And
19 with that we're going to show a demonstrative so that
20 Kellan can speak to that more.

21 So, Kellan, explain Revolution Wind at a general
22 level, and then focus on the state jurisdictional
23 aspects.

24 A Sure. Understanding that it's not a subject of tonight's

1 proceeding, I'll just start for some context with the
2 wind farm.

3 We've submitted to BOEM an application for up to 100
4 wind turbines out in this lease area. Each of those wind
5 turbines will be connected to two offshore substations by
6 buried array cables, out there in the wind farm lease
7 area again. From those substations there will be two
8 export cables running from the wind farm itself, and you
9 can see the green line being traced here, approximately
10 19 miles in the federal waters, and then the remaining
11 23 miles in state waters. And as we heard from
12 Mr. Skenyon, that cable will be buried at a target depth
13 of three to four feet.

14 Once the cable gets to shore -- and I'll point to
15 that. I may have another slide following this one. Ah,
16 there we go. Once it gets to shore, landfall will be at
17 Quonset Development Corporation's property, the Quonset
18 Business Park, and we will be installing it by a
19 horizontal directional drill, HDD we sometimes call it.
20 That pit to bury that will be approximately 1,200 feet
21 out off of the seawall that's there at Quonset. That HDD
22 method will allow us to bury the cable or to drill the
23 cable at a depth of approximately 60 feet at its deepest.
24 Underneath the seawall, a concrete seawall, emerging in a

1 parking lot in the Quonset Business Park at a transition
2 joint bank, where it will merge with the onshore portion
3 of the cable, which is the line in purple. That's
4 approximately one mile. Buried primarily underneath
5 roads along private property where we've worked with the
6 landowners to find the best possible route there.

7 From there it goes into the property that was
8 described by Mr. Skenyon where we'll construct a offshore
9 -- excuse me -- an onshore substation, along with
10 interconnection facility where the power will connect to
11 an existing substation at Davisville.

12 Q Thank you, Kellan. And now let's address need. Will the
13 Revolution Wind project fulfill any needs in Rhode
14 Island?

15 A It will.

16 Q And explain to the council what that is.

17 A Sure. So as you undoubtedly know, Revolution Wind has
18 some of the most ambitious clean energy goals in the
19 nation.

20 Q Rhode Island.

21 A Excuse me?

22 Q You said Revolution Wind. Rhode Island?

23 A Rhode Island. They're synonymous. Rhode Island has some
24 of the most ambitious clean energy goals in the nation.

1 So just this year it was mandated that all power by 2032,
2 I believe, will be will coming from renewable sources.

3 So the 400 megawatts that is contracted through
4 Rhode Island from Revolution Wind will play a large role
5 in meeting that mandate. We're going to need large
6 projects like offshore wind to fill that need, and
7 Revolution Wind is in a great spot to do that.

8 Q So, Kellan, you said that Revolution wind is bringing in
9 400 megawatts to Rhode Island of energy. All right. And
10 how is that done? Is there an agreement for that?

11 A Yes. There is a power purchase agreement which was
12 approved by the Rhode Island Public Utilities Commission
13 in the summer of 2019.

14 Q And does that power purchase agreement have any type of
15 milestones that you must meet in it as far as getting
16 energy into the State of Rhode Island?

17 A It does. So our current schedule has us operating in
18 2025, and that's right in line with the power purchase
19 agreement milestones. And if we were to go beyond that,
20 there are consequences, including potential termination
21 rights and things that we don't want to occur.

22 Q And are you aware of the project's construction schedule?

23 A Yes.

24 Q Can you tell the council briefly about it, but keep in

1 mind the next witness will talk about it in more detail?

2 A Sure. So we have Megan Eakin here, our permitting
3 manager, to talk about the nitty-gritty details with the
4 schedule. But from a very high level we expect to start
5 construction in the fall of 2023, that's when BOEM's
6 permit schedule has its last milestone and we received a
7 final approval to begin. And so we would complete the
8 rest of the wind farm construction beside the HDD, the
9 horizontal and directional drilling, and a portion of the
10 seabed clearance activity in 2024, that includes the
11 foundations and much of the cable laying and the wind
12 turbines themselves. And then we would be operational in
13 2025.

14 Q And that schedule that you just talked about, does that
15 take into the account the time of year restrictions that
16 Mr. Skenyon pointed out earlier?

17 A It does.

18 Q Okay. So is there much maneuverability in this schedule
19 in order to fulfill the milestones under the PTA?

20 A No, there isn't.

21 Q All right. And, Kellan, tell us, will the rate payers of
22 Rhode Island be on the hook for any of the cost of the
23 project?

24 A No.

1 Q And is there any Rhode Island state money in this
2 project?

3 A No, there's not.

4 Q Is there any federal money in this project?

5 A No, there's not.

6 Q So let's focus on the Category B application. Are you
7 familiar with the Category B application that's before
8 the council tonight?

9 A I am.

10 Q And what was your role, if any, with the development of
11 this application?

12 A So as the development director, I oversee permitting,
13 site investigations, so the geophysical and the
14 geotechnical investigations of the seafloor, the
15 commercial aspects of the wind farm, the design of the
16 wind farm and cables, and the big picture. And so I'm
17 there to make sure that everybody is talking, that we're
18 planning all the best information, that we're using all
19 the best resources available at our disposal within the
20 company so we have a really world-class cable
21 installation and engineering team, bringing them in.

22 Gareth Ellis is here to talk to you tonight from
23 that team. Site investigations, I mentioned, geophysical
24 and geotechnical information that they're receiving,

1 that's understanding what rocks and dirt and everything
2 is below the seafloor, what are we getting ourselves into
3 here for when we dig.

4 And also the -- so that's the geotechnical. The
5 geophysical would be what obstructions are there,
6 shipwrecks, unexploded --

7 (Interruption by the court reporter)

8 A -- unexploded ordnances. Right. So making sure all that
9 information is brought to bear for this application.

10 And so we're also working with a phenomenal
11 consulting team, BHB, is working with our permanent folks
12 to compile this application. And they bring a really
13 regional/local expertise that fits well with our own
14 permitting team that adds to it, where we bring in sort
15 of a worldwide experience in this type of permitting.

16 So it's making sure everybody is talking, we're
17 making sure we're getting all the best information.

18 Q Right. And, Kellan, I now want to turn to another topic.
19 Will Revolution Wind create any jobs in Rhode Island?

20 A It will.

21 Q Explain what jobs will be created by Revolution Wind in
22 Rhode Island?

23 A So it's estimated that Revolution Wind will create
24 approximately a thousand direct construction jobs, that's

1 during the construction of the wind farm in Rhode Island.
2 On top of that, Ørsted has established its
3 co-headquarters right in Providence, and there are a
4 number of people employed there. We've grown very
5 quickly.

6 We have also set up an innovation hub in the CIC
7 space in Providence, which really connects upstart
8 businesses, good ideas, people who want to get involved
9 in the offshore wind industry as it emerges. We help
10 make those connections, help ideas become really tangible
11 products that we can then really work with them on.

12 So that's what Ørsted has been able to do as a
13 result of Revolution Wind in Rhode Island. The project
14 itself is also committed to spending tens of millions of
15 dollars on Rhode Island ports. So you can see that right
16 now at Prov Port where we've constructed a foundation
17 component facility. Those components will be the
18 complicated steel pieces that are going outside of the
19 wind turbines. We're making those right here in Rhode
20 Island.

21 We've also signed an agreement for a helicopter use
22 program at Quonset. Quonset is going to be a major part
23 of our operations for our entire U.S. portfolio, not just
24 Revolution Wind, but Revolution Wind has helped to make

1 that happen.

2 We're also building a fleet of crew transfer vessels
3 right here in Rhode Island. It's Blount Boats and
4 Senesco. So those will be used to transport our crew
5 right out to the wind farm from the operation hub.

6 Q And, Kellan, I want to turn back to the job creation.
7 You talked about approximately 1,000 construction jobs
8 being created, and then obviously the headquarters here
9 and some other jobs through the manufacturing of the crew
10 transport boats and so forth. Are there any other type
11 of indirect jobs that will be created by the project?

12 A There will. That number becomes closer to 3,000 when
13 you consider the services, the equipment that will be
14 purchased by those employees, those workers, all the
15 money spent because of those 1,000 approximate jobs, all
16 the money that is spent from there during the
17 construction phase.

18 MS. MAIN: Thank you. I have no further questions
19 for Kellan Ingalls.

20 THE CHAIRMAN: Any questions from council members?

21 MR. GAGNON: I just have one. You mentioned the
22 target burial depth of three to four feet.

23 THE WITNESS: Right.

24 MR. GAGNON: But our staff report, and from what I

1 understand, the target depth is four to six feet.

2 MS. MAIN: Yes, I thought you said four, but, yeah.

3 THE WITNESS: It was a mistake on my part. I
4 apologize. Four to six feet target burial depth.

5 MS. MAIN: I'm sorry. I thought you said four. It
6 was probably three.

7 MR. GAGNON: There was a four in there.

8 THE WITNESS: I got one of them right.

9 MR. GAGNON: Thank you.

10 MS. HALL: Really quick. Mine is probably really
11 easy. You may have said it. You mentioned a couple of
12 times about your role in terms of keeping everyone
13 talking. And there was some discussion in the report
14 regarding historic preservation, and I was just curious
15 about your outreach to indigenous communities along the
16 coastline with respect to that. I realize that there was
17 a proposed condition regarding a memorandum of agreement,
18 and that there would be oversight involving CRMC at that
19 point, but pre-project I'm guessing, but I'd like to hear
20 more about what you've done for that kind of reach-out to
21 really think through it, because we have that issue here
22 on Rhode Island on the coast with underground cables with
23 wind.

24 THE WITNESS: That's a great question. Thank you.

1 We have -- that's a really important thing for us, to
2 maintain a relationship, to reach out to the tribes to
3 bring them into the discussion of what's happening,
4 that's both onshore and offshore, the submerged lands of
5 some of their ancestors 10,000 plus years ago, time
6 immemorial.

7 So we have had extensive outreach and discussions
8 with tribes. I believe we are the first offshore wind
9 company to bring a tribal relations lead on board to help
10 us facilitate those discussions. We think that's the
11 start of what we should be doing with this industry. And
12 so there's a tie on the state level to what's going on in
13 the federal level with Section 106 where we consult on
14 historic and cultural properties. But it has to go
15 deeper than that. We recognize that, and that's a really
16 important part of our outreach.

17 MS. HALL: So with that, is there any survey work?
18 You talked about boulders. You know, anything
19 significant to authentic characteristics? What about
20 surveying for those types of cultural artifacts?

21 THE WITNESS: We have done those surveys as well out
22 in the ocean itself, or those cultural resources, but
23 also at the site of our substation onshore, and we had
24 input from members of the tribes on that.

1 MS. HALL: What about in between?

2 THE WITNESS: And in between. All the way, start to
3 finish.

4 MS. HALL: Thank you.

5 THE CHAIRMAN: Mr. Gomez.

6 MR. GOMEZ: Just before I get to my questions, the
7 involvement of the tribes, we were heavily involved with
8 them when we developed the OSAMP, which you can look at.
9 There's an interesting section in there on their local
10 history and stuff, and so they were brought on board
11 early. We felt the same need that you're expressing.

12 I'm interested in where you cited some of the
13 materials that will be built in state and locally. The
14 other materials, where are most of them manufactured, the
15 cable, for instance, or major pieces, or whatever?

16 THE WITNESS: Sure. The backdrop of this is we're
17 starting a new U.S. industry with a lot of European
18 experience we're bringing in, but bringing that over here
19 to have it stand up on its own is very important to us.

20 So the cable itself we're working with -- you know,
21 Gareth Ellis can speak a lot more to that -- we're
22 working with a U.S. company on that. We are working to
23 set up a whole supply chain in the U.S.

24 MR. GOMEZ: Good.

1 THE WITNESS: We're using, for example, the first
2 U.S. Jones Act compliant turbine installation vessel is
3 being built right now in Texas.

4 MR. GOMEZ: Great. Thank you.

5 MS. McGOVERN: The 400 megawatt hours going to the
6 State of Rhode Island. Where specifically are those wind
7 turbines located, in Rhode Island state waters? Where
8 are they located?

9 THE WITNESS: That's a good question. So, no, the
10 wind turbines are in federal waters, and it's not
11 necessarily a specific turbine that is allocated, but
12 it's an allocation that is done at the metering --

13 (Interruption by the court reporter)

14 THE WITNESS: -- at the point of interconnection,
15 the metering point.

16 MS. McGOVERN: All at the points you've mentioned?

17 THE WITNESS: That's right.

18 THE CHAIRMAN: Anything else? You may proceed.

19 MS. MAIN: Okay. Thank you. We will call our next
20 witness.

21 THE CHAIRMAN: Okay.

22 MS. MAIN: The next witness is Megan Eakin.

23 And I think it might be better if you stand there,
24 and I'll be over here.

1 MR. DeSISTO: Raise you right hand.

2 MEGAN EAKIN (DULY SWORN)

3 MR. DeSISTO: Please state your name and spell it
4 for the record.

5 THE WITNESS: Megan, M-e-g-a-n, Eakin, E-a-k-i-n.

6 EXAMINATION BY MS. MAIN:

7 Q And, Megan, by whom are you employed?

8 A By Ørsted.

9 Q What is your job at Ørsted?

10 A I'm the permitting manager for the Revolution Wind
11 project.

12 Q And is Revolution Wind the only project that you're
13 working on?

14 A It is, yes.

15 Q And, again, before we get into your job on the Revolution
16 Wind project, please describe to the council briefly your
17 educational background and your experience before you
18 joined Ørsted?

19 A Yes. I have a bachelors in geology and environmental
20 science, also a masters in geology. After college I
21 worked for a few years as an environmental technician.
22 And then in 2008 I joined Ecology and Environment, which
23 is now a WSP, as a junior geologist. I had a very
24 successful career there. I was promoted about every

1 three years or so. And about the time I became a senior
2 geologist, I also took on a roll as more of a project
3 manager, where I was focusing on large complex
4 infrastructure projects in the offshore environment.

5 Q Great. Thank you. Now, Megan, describe to the council
6 what you do as permitting manager for Revolution
7 Wind.

8 A Yes. So my job is to oversee the Revolution Wind
9 permitting team for Ørsted. I know you heard Kellan
10 mention we have a lot of different teams. My
11 responsibility there is particularly our permitting
12 package, but I also do coordinate and collaborate with
13 our other internal teams, such as you'll hear from Gareth
14 this evening, our site investigations team, our marine
15 affairs team, as we go through our permitting process on
16 Revolution Wind.

17 I'm also responsible for management and oversight of
18 our consultants. You'll hear from some of them later
19 this evening, as Kellan also mentioned.

20 And also as part of my role, I did help prepare the
21 package that went to CRMC for our certified verification
22 agent for the project, which is an independent
23 third-party review as the project moves through the
24 various phases.

1 Q And that certified verification agent, or CVA, which was
2 referred to earlier in Justin's description of the staff
3 report; correct?

4 A Yes, it was. And it was also provided to BOEM, because
5 they have very similar guidelines to CRMC for the CVA.

6 Q Great. And, again, we've got so many acronyms. For
7 BOEM, it's the Bureau of Ocean Energy Management?

8 A That's correct.

9 Q And, again, CVA is Certified Verification Agent?

10 A Yes.

11 Q So, Megan, explain briefly, and focus on the state
12 permits that Revolution needs to construct its project.

13 A So first and foremost is we're here to talk about the
14 Category B assent with CRMC, but we also in this past
15 July received our order from the Energy Facility Siting
16 Board, so that was great news for the project, and then
17 we have also applied for a water qualify certificate and
18 a dredge permit through the Rhode Island Department of
19 Environmental Management.

20 Q Great. Thank you. And did you work on the Category B
21 application that's before the council here tonight?

22 A Yes, I have -- did.

23 Q Okay. And what was your role with the development of
24 that application?

1 A It was my job to oversee and collaborate with other
2 subject-matter experts that provided information, and our
3 internal teams, as that application was prepared, and
4 then it was also my job to review and provide feedback on
5 that application to make sure we were meeting the
6 regulations of the red book and the OSAMP before we
7 submitted that to the agency for review.

8 Q Great. And since the filing of the application, have you
9 had ongoing communications with CRMC staff about the
10 application?

11 I think that some of that was referred to earlier,
12 but would you like to add to that?

13 A Yeah. As was noted by, I think, both Mr. Willis and
14 Mr. Skenyon, we've been meeting regularly. The staff has
15 done a great job reviewing the questions, as evident in
16 those discussions we've had with them and their
17 information requests, we've come, you know, a very long
18 way in providing supporting information, and as
19 Mr. Willis noted, meeting regularly to talk about issues
20 such as cable burial and installation.

21 Q Great. And talk to us now a little bit about the
22 outreach Revolution Wind has done to certain groups,
23 particularly the public. Can you address that?

24 A Certainly, so Covid did put a little hamper on, you know,

1 in-person outreach, but the Revolution project does
2 maintain a project website with a virtual meeting room
3 that everyone can access. And then more recently this
4 past June we held an in-person open house at the URI Bay
5 Campus, which was a really good attendance and positive
6 experience for the project.

7 Q Now, Megan, I finally want to turn to the construction
8 schedule, and we have a demonstrative for that.

9 A Can everyone see that okay?

10 Q And, Megan, are you familiar with the construction
11 schedule for Revolution Wind?

12 A I am, yes.

13 Q And does this demonstrative show the approximate
14 construction schedule for the project?

15 A It does. This is a kind of quarterly high level
16 indicative schedule for the whole entire project, the
17 offshore wind farm all the way to the onshore
18 component.

19 Q So I'd like you to focus, and feel free to walk up if
20 that helps you at all and points out what line you're
21 talking about, but I'd like to focus on the installation
22 of the cables in state waters and when that will occur.

23 A Yeah.

24 Q So can you talk us through that, please?

1 A Certainly. So there's a couple of portions that will
2 happen particularly in state waters. The landfall
3 construction, which you heard Kellan mention, and Gareth
4 will get into a little bit more detail on, would happen
5 in the fall of 2023, and then the export cable route
6 would happen in the fall of 2024.

7 So that schedule does align. We did take into
8 account those time of year restrictions that were noted
9 in the staff report. So that's been worked in to that
10 schedule for when we can be on the water.

11 Q All right. And let's break it down more specifically on
12 when the export cable will be installed in state waters.
13 During what months of the year will that occur,
14 Megan?

15 A Yeah, so there's a bunch of activities that, again,
16 Gareth will talk about a little bit later that encompass
17 around the cable installation, but all those activities
18 will happen between September 1st and January 31st.
19 Cable installation itself would happen in the months of
20 October and November.

21 Q And so does the cable installation in the months of
22 October and November, that covers state waters; correct?

23 A It does, yes.

24 Q And that is about 23 miles of cable; correct?

1 A Yes, correct.

2 Q And two cables?

3 A And two cables.

4 Q So October and November. And does that schedule align
5 with the time of year restrictions that we've been
6 talking about this evening?

7 A It does, yes. So we are restricted from doing in-water
8 work or seabed disturbance from February 1st through the
9 end of August.

10 Q So with the schedule that you gave, again, getting toward
11 the end of the year, you've got to be out of the water by
12 February 1st?

13 A By February 1st.

14 Q January 31st, that's it?

15 A Correct.

16 Q Okay. Lastly, Megan -- and if we could have the chart
17 back up on the screen, please. You're familiar with this
18 chart; correct?

19 A Yes.

20 Q And you see where the cable route is; correct?

21 A Yes.

22 Q And can you just show that with your finger, just so --

23 A So if we start up here for horizontal directional
24 drilling landfall, and it kind of moves out to the state

1 waterline.

2 Q So you were, just for the record, you were describing the
3 landfall at Quonset Point on the northern-most end there;
4 correct?

5 A Correct.

6 Q And following south through the West Passage and out into
7 Rhode Island Sound --

8 A Uh-hum.

9 Q -- and to the state's water limit; correct?

10 A Correct.

11 Q Focusing on the schedule again, Megan, in the area that's
12 the southern tip of Jamestown, the Beavertail area, and a
13 going into Rhode Island Sound, with the construction
14 schedule that you talked about a few moments ago, when in
15 that schedule do you estimate you will be installing the
16 cable in that area? Again, just at the southern tip of
17 Jamestown further south into the Sound.

18 A So that would be approximately late October into
19 November.

20 MS. MAIN: All right. Thank you. I have no further
21 questions for Megan.

22 THE CHAIRMAN: Any questions of Ms. Eakin from
23 anybody on the council?

24 Hearing none.

1 MS. MAIN: Thank you.

2 THE WITNESS: Thank you all.

3 MS. MAIN: I will our call next witness, Gareth
4 Ellis.

5 And, Gareth, this is also a good line up we have
6 here.

7 MR. DeSISTO: Sir, please raise your right hand.

8 GARETH ELLIS (DULY SWORN)

9 MR. DeSISTO: Please state your name and spell it
10 for the record.

11 THE WITNESS: Gareth Ellis, G-a-r-e-t-h E-l-l-i-s.

12 EXAMINATION BY MS. MAIN:

13 Q Great. Gareth, by whom are you employed?

14 A Ørsted.

15 Q And what is your job at Ørsted?

16 A I'm the Senior Electrical Package Manager.

17 Q Okay. And, again, I want to give the council a bit of
18 your background, so before we talk about your job at
19 Ørsted as a Senior Electrical Package Manager, please
20 tell the council a bit about your background, your
21 education, and your professional experience.

22 A Sure. I'm a geologist. I graduated in 1993 --

23 (Interruption by the court reporter)

24 A Yeah. I'll come a bit closer. I graduated in industrial

1 geology in 1993, and I took a masters in the same subject
2 in '94. I then proceeded to work in the oil and gas
3 industry in the North Sea as a surveyor -- as a
4 geologist. And post that in 2000 I started working in
5 installation and trenching of subsea cables for oil and
6 gas and in the pipelines, et cetera.

7 For the last 14 years I have work solely on offshore
8 wind. I've installed -- my management has been
9 installing 750 kilometers of cable, which represents 2.9
10 gigawatts of power, which can power up to 1.5 million
11 homes. And I'm very proud to bring that out. That's all
12 in Europe, and I'm very proud and happy to be trying to
13 bring that here to Rhode Island also.

14 Q Thank you, Gareth. Gareth, how long have you been with
15 Ørsted?

16 A Six years in total, and 18 months on this project.

17 Q And are you working solely on Revolution Wind right now?

18 A That's correct.

19 Q Tell the council what you do as the Senior Electrical
20 Package Manager for Revolution Wind.

21 A So I lead and manage the team of approximately 20 people
22 who had performed the due diligence on all of the supply
23 and installation of contracts and contractors. And that
24 encompasses also the contract management and the document

1 control itself that goes around it. And then I report
2 directly to the project director.

3 Q Right. And, Gareth, given your position at Ørsted, do
4 you know if Revolution Wind has selected a contractor yet
5 for the installation of the cable?

6 A Yes, we have.

7 Q And who is that contractor?

8 A That's Nexans, N-e-x-a-n-s.

9 Q And why was Nexans selected?

10 A So we have a rigorous procurement procedure, a quality
11 management plan for all our projects and all our
12 procurement, actually, but in particular for this project
13 starting in 2019 where we had six preapproved cable
14 contractors who could perform this work. They were taken
15 through the process of three individual rounds, and at
16 the end of the third round, two were taken forward to the
17 last round, best and final, the battle you might have
18 heard it called. The final part of that process is to go
19 through with a fine-toothed comb the full evaluation,
20 everything, technical, commercial, union labor, local
21 content, et cetera. And at the end our evaluation came
22 out with Nexans as being the leader of the two.

23 Q All right. Thank you. And let's talk about the cable
24 route selection process. Are you familiar with the cable

1 route selection process for Revolution Wind?

2 A Yes, I am.

3 Q And describe how the route was selected for Revolution
4 Wind's export cables in Rhode Island waters.

5 A So in the early development stages there is a preliminary
6 route, and that preliminary route is then used to design
7 the surveys that will be used to rehone that route into a
8 viable route.

9 During that survey, first one was 2017, we performed
10 a technical survey which is interacting with the seabed
11 itself with drills and what we call cone --

12 (Interruption by the court reporter)

13 A -- cone penetration, which gives a feeling for the
14 stiffness of the soils. And then there's a geophysical
15 survey which then gives us a picture of the seabed, and
16 we can understand where the boulders and other debris, et
17 cetera, is, and then the magnetometer survey, which gives
18 us information on potential munitions, as Kellan had
19 pointed out earlier.

20 All that goes to produce a ground model. The ground
21 model is used to both procure and to put forward to the
22 contractors so they can develop their techniques and
23 their trenching machines.

24 And then, finally, after they have done their

1 further assessments, during the procurement stage and
2 post-contract, now they can perform a final analysis,
3 which will then give them the full methodology that will
4 be used to install the cable.

5 Q Okay. So Nexans participated in the route selection
6 process with Revolution Wind; is that correct?

7 A Yes. Both at procurement stage and post-procurement
8 they're now involved in filing that route.

9 Q Thank you. And do you know how the seabed will be
10 prepared in order for the cable to be installed?

11 A Yes, I do.

12 Q Could you explain that to the council? And, again, keep
13 your voice up.

14 A Yeah. Sure. So first process we talked about here,
15 boulders on the seabed that Mr. Skenyon pointed out very
16 nicely before, we actually have 49 boulders which need to
17 be cleared along the two routes in the 23 nautical miles.
18 These are ranging in size from naught point 330
19 (verbatim) centimeters up to four, which are between 1
20 meter and 1.5 meters.

21 Q And how big is a meter?

22 A Three feet.

23 Q Three feet or so?

24 A Approximately, or 3.1. Yes, so we will need to clear

1 these boulders because we don't want them to come into
2 the trenching machines. So how we do this is use a grab
3 similar to an amusement arcade grab when you pick up a
4 teddy bear, it lifts the boulder itself perpendicular to
5 where we find it on the route approximately 10 meters
6 away. We then deploy that so it's away from the
7 trenching machine, which will pass through when we lay
8 the cable itself.

9 That's the first process, we clear all the boulders.
10 Once we've done that, we perform what we call a pre-lay
11 grapnel run -- a pre-lay grapnel, g-r-a-p-n-e-l. A
12 grapnel is like an anchor. In this particular scenario
13 these anchors -- this anchor will have a tine, so that's
14 the loop on the anchor itself.

15 Q Kind of what you have on a rake, a tine?

16 A A hook on rake almost, yes. 0.5 meters, 50 centimeters.
17 We use that to drag through the seabed to the surface to
18 clear any debris which may cause a problem to the plow or
19 jetting tool, such items as ropes, or even logs which had
20 floated down and subsequently sunk to the seabed.
21 Because we don't want to get that caught in our machine
22 when we've got a power cable in the machine itself.

23 So once we performed that particular activity, we
24 then have a final survey, which is visual with an ROV,

1 remotely operated vehicle, which is a small submarine.
2 It will have cameras and sonars, and it will give us a
3 clear picture of the seabed. We can then give that to
4 the masters on the vessels and say we're good to go and
5 the seabed is clear.

6 Q And you talked about moving some boulders, and was it 49
7 boulders over the 23 miles that need to be moved?

8 A Yes, correct.

9 Q And then you mentioned the grapnel run?

10 A Uh-hum.

11 Q Gareth, have you read the Category B application that's
12 before the council tonight?

13 A Yes.

14 Q And was there an another method of clearing the seabed
15 mentioned in the Category B application other than the
16 grapnel run?

17 A Yes. So during the application we haven't finalized our
18 studies of seabed mobility, and we haven't finalized what
19 techniques we'd use for laying and trenching the cable.
20 So in order to keep that opportunity open, if there was
21 some significant sand waves, we would need to clear them
22 to allow the cable to be laid to a depth which would mean
23 they wouldn't be exposed in the future. If you can
24 imagine, a large sand wave would need dredging to clear

1 it, so we now know that we don't need to do that, and the
2 only technique we need to clear the seabed is the pre-lay
3 grapnel run.

4 Q So there's no sand waves that need to be cleared in state
5 waters; correct?

6 A That's correct.

7 Q All right. And what creates more disturbance to the
8 sediment, the dredging machine that you would have used
9 had there been sand waves or the grapnel run that you now
10 can use?

11 A So most definitely the dredging machine to clear the sand
12 waves.

13 Q Thank you. So I want to turn now to the actual
14 installation of the cable in state waters, and what I
15 would like to do is have you explain, if you can, how
16 that will be done, but we'll take it in segments. And
17 we'll start first with the landfall area which you heard
18 about and Kellan spoke about. Talk about how the cable
19 will be installed at the landfall area at Quonset Point?
20 Be brief.

21 A Yes, sure. Well, actually, Mr. Skenyon explained it very
22 well.

23 Q Yes.

24 A So we'll be using horizontal directional drilling, HDD.

1 We will drill from the shore side to the marine side,
2 approximately 400 meters of drill. We will ream the hole
3 so we'll make it a sufficient size for cable to be pulled
4 into. And once that is completed, we will then pull in
5 what we call the conduit, which is a polyethylene pipe.
6 That polyethylene pipe is going to be manufactured on the
7 north side of Quonset at port and towed around to site,
8 and pulled through into the duct itself -- I'm sorry --
9 into the bore hole itself to create the duct.

10 The duct is then sealed at both ends, and it is
11 lowered in the seabed, so that for the small interim
12 period between the completion of the HDD and the start of
13 the export cable we will have a safe area within the Bay
14 there.

15 Q Great. So once the HDD process is done, then what
16 happens next on the marine side or the water side from
17 the HDD pit out into the West Passage of Narragansett
18 Bay? Let's talk about that next segment.

19 A Sure. So as you probably know, it's in shallow water
20 there, so we can't bring in a larger cable installation
21 vessel. We'll be using what we call a near shore barge.
22 That barge, it moves on anchors, and it's also towed by
23 an anchor handling tug. The barge will then be moved
24 into position next to the HDD duct, which will then be --

1 the seal will then be removed by divers. A rope is then
2 passed through the duct, and a winch wire from the near
3 shore, from the onshore side, will pull the cable through
4 the duct.

5 We make sure that there's no sediment within the
6 duct, and we're doing that by placing what we call a bell
7 mouth, which it looks like a bell, and it's a fluted
8 piece of steel which lifts the duct off the seabed.

9 Once you have installed it and secured it into the
10 onshore side, we start to lay away with the near shore
11 barge. As we start to lay away, we'll deploy what we
12 call the jet plow. That is a trenching machine for the
13 near shore area. The jet plow uses two saws to inject --

14 (Interruption by the court reporter)

15 A -- saws, yes. And it fluidizes the sediment and creates
16 a slim trench where the cable will fall into the trench.
17 In fact, it's encapsulated in the machine itself, so it's
18 placed on the bottom trench. The trench then collapses
19 in behind, and the sediment settles back down on top of
20 the cable itself.

21 The barge will move out just south of the Jamestown
22 Bridge, taking approximately four days in total to do
23 that piece of work. And then it will lay the cable on
24 the seabed there, and leave it there partially buried so

1 it's away from any attrition from any outside forces
2 until the main vessel will come back and pick it up at a
3 later date. The barge then goes back to the second duct
4 and does the exact thing all the way through, past the
5 Jamestown Bridge.

6 And just one thing. The barge has our spare cable
7 on for the operations period. It will then go to the
8 Providence Port, our new facility there, as Kellan
9 discussed, and offload that cable there and store it
10 there for the duration of the project.

11 Q So, Gareth, before the barge comes up to Providence, it
12 will leave the cable where it is. And that barge is
13 needed on the northern side of the Jamestown Bridge
14 because the water there is too shallow for the larger
15 vessels; is that correct?

16 A That's correct, yes.

17 Q So then another vessel comes in just south of the
18 Jamestown Bridge to pick up the cable; is that
19 correct?

20 A Yes.

21 Q So please explain to the council that next step to the
22 process for laying the cable?

23 A Yes, sure. So the next vessel, it's called the Aurora,
24 as in borealis, and it will pick up the cable which is on

1 the seabed left by the near shore barge and take it on
2 top of the deck of the vessel. We will then join the two
3 cables, the one which is already on the vessel to the
4 cable which has been picked up. And that needs to be a
5 very clean environment, almost like the factory itself.
6 And, actually, we use our experienced jointers to perform
7 this work. They're specifically on the vessel to do this
8 work because we want to make sure that every joint we do
9 is as best quality as we can to prevent any potential
10 risk in the future.

11 Once that's performed, and that takes seven days,
12 the cable vessel will start to lay away, and it will lay
13 the joint gently down on the seabed for trenching later.
14 As the vessel pulls away, we'll deploy what we call a
15 mechanical plow. Now that is a device which also
16 encapsulates the cable through it and creates a trench in
17 the seabed. And the way it does that is it has some jets
18 to pre-fluidize the soil ahead of it. So it uses what is
19 called a share, which is a common piece of steel on the
20 plow which is a front edge like a knife, and it will cut
21 through the seabed and create this trench. The way it
22 moves forward is it's pulled literally by the vessel
23 itself. The cable lay vessel has at this point two times
24 34 kilometers of cable on it, so it will go way past the

1 state boundary and lay that cable down. Once that is
2 complete, we come back and pick up the second joint and
3 do exactly the same thing.

4 Q Great. And that completes the installation of the cable
5 at that point; correct?

6 A Correct.

7 Q So let's move on to another issue, and that is, are you
8 familiar with the term target burial depth?

9 A Yes, I am.

10 Q And what does that mean here in regards to the Revolution
11 Wind export cables?

12 A So, of course, you have heard before we have four to six
13 feet target, which all our equipment is aimed to achieve,
14 and in fact some areas slightly deeper, and our
15 contractor is specifically engaged to perform that work
16 to install the cable beneath that target.

17 Q Are there any areas where the cable will be buried deeper
18 than six feet?

19 A Yes. So just at the entrance to the Bay we have the
20 Narragansett traffic separation scheme. And we know
21 we've got lots of activity, we have a lot of large
22 vessels there, so our risk analysis shows that we should
23 go slightly deeper than the target, the deepest CRMC
24 target, and that is 2.5 meters or 8.2 feet.

1 Q So let's talk about what happens if the target of four
2 feet is not met on cable depth. And before we go to that
3 point, explain what burial means. It means below the
4 seabed floor; correct?

5 A Yes.

6 Q And then you're measuring from the top of the cable to
7 the natural seabed; is that correct?

8 A That's correct. So it's from the very top of the cable
9 to the actual seabed level, which is where the trenching
10 started.

11 Q So what happens if the cable is not buried to the target
12 of four feet?

13 A So, again, we have a rigorous process, which is backed up
14 by all of the procedures and the contract with the
15 installation contractor. The first point of contact here
16 is to look into the risk assessment, which we will do.
17 That's an engineering document which takes into account
18 all the shipping traffic and all the fishing activity,
19 and also the seabed mobility studies that we've done.
20 And we can then see if the risk of where the cable
21 actually is, let's say for example it's three feet rather
22 than four feet, if the risk is such that we do not need
23 to go any deeper, then we would leave the cable at that
24 depth. We don't want to necessarily trench something

1 where we know it's already at low risk, and by performing
2 additional trenching, we can put it at risk by performing
3 that trenching. Although that is at low risk itself,
4 it's still something we would rather avoid if we know
5 it's deep enough.

6 Q So have you heard the term secondary protection?

7 A Yes.

8 Q What is secondary protection in regards to these cables?

9 A Can I just take a quick step back?

10 Q Absolutely.

11 A So the second part of the process actually is if we find
12 we're not within that safe area of the risk that we've
13 engineered, then we will place the machine called the
14 capjet, c-a-p-j-e-t. This is a Nexans machine, trenching
15 machine which uses a fluidization, again similar to the
16 jet plow, but it's a much bigger, more powerful machine,
17 and it moves on its own propulsion, that's based on the
18 Aurora vessel. So that once we see that cable is not
19 buried deep enough, we'll put that onto the cable, and
20 we'll try to bury it deeper than that.

21 If we subsequently survey that and we see it's still
22 not deep enough within that risk zone we talked about,
23 then we will place secondary protection. And as
24 secondary protection, as pointed out before, we mean

1 either flexible concrete mattresses, rock bags, which are
2 polyethylene nets filled with rock, or rock berms, which
3 are placed by a separate vessel onto the seabed.

4 Q So you said a few minutes ago that you read the
5 Category B application; correct?

6 A Yes.

7 Q And did you see in that application where Revolution Wind
8 estimated approximately 10 percent secondary protection
9 plus cable crossings?

10 A Yes.

11 Q So first let's talk about the cable crossings.

12 A Uh-hum.

13 Q Again, they've been described briefly before.

14 A Uh-hum.

15 Q But approximately how many cable crossings have you
16 identified as of now?

17 A So we have seven in state waters here.

18 Q And so you need to cross those cables, protect the other
19 cables, whether they're owned by Verizon or other
20 companies; correct?

21 A Yes, that's correct.

22 Q And then put your cable over that secondary protection?

23 A Yes.

24 Q And then protect your cable?

1 A Yes. So in order to create a positive separation between
2 the two cables, if there was ever to be any scour, we'd
3 place a rock -- a concrete mattress, a flexible concrete
4 mattress, and we would lay our cable over the top of
5 that, and on top of our cable we will also lay concrete
6 mattresses.

7 Our cable is shrouded in steel wires, so it's
8 protected between those two mattresses itself, and yet we
9 have seven of these locations to undertake.

10 Q Okay. So seven crossings of other cables?

11 A Yes.

12 Q But then you'll have other potential areas where
13 secondary protection is required; correct?

14 A Yes.

15 Q And the application estimated about 10 percent of the
16 cable route would have such secondary protection;
17 correct?

18 A Yes, it did.

19 Q Standing here tonight, what do you estimate, Gareth, for
20 the secondary protection for the cable route?

21 A Our studies are showing it should be 5 percent and not
22 10 percent. That's because we have taken all the ground
23 models we discussed, and the contractor has taken their
24 new methodology and their plow and everything into

1 account based on the track record on the plow in these
2 types of soil, and they have redefined that to give us an
3 idea, also for planning purposes, of what the amount of
4 secondary protection we might need.

5 Just bear in mind, the trenching machines are
6 designed for this particular job, soils, et cetera. So
7 it's only in the mitigation where we don't achieve that
8 for other reasons that use that secondary projection.

9 Q But you've been able, based on all the work that's been
10 done, to cut in half the estimate on the amount of
11 secondary protection; correct?

12 A Yes, that's correct.

13 Q So a few minutes ago you may have heard some questions
14 about the cable itself and any armoring on the cable.

15 A Uh-hum.

16 Q Can you describe the cable generally and what it's made
17 up of?

18 A Sure. So there's three individual coils, and the
19 cross-sectional area is 800 millimeters of copper. These
20 are in a trefoil, t-r-e-f-o-i-l, layer so that three
21 cables are laid together and twisted together. There's
22 also fiberoptic cable in there. And then on the outside
23 of the whole cable we have armoring of both steel and
24 polyethylene, which protects the cable and gives it extra

1 stiffness for installation purposes.

2 Q And do you know if there's any value to the twisting of
3 the cable as you described it?

4 A Well, as Mr. Skenyon pointed out, it is a feature that
5 can reduce EMF.

6 Q Thank you. So let's turn to the amount of time it will
7 take on a per-day basis to install the cable. Earlier
8 Megan testified to the construction schedule.

9 A Uh-hum.

10 Q But do you know, Gareth, how much cable is estimated to
11 be installed on a per-day basis in state waters?

12 A Yes. So it's around five kilometers a day, which is two
13 and a half to three nautical miles a day, which is fairly
14 rapid.

15 You know, the type of trenching technique that we're
16 using allows us to move at that sort of speed, 250 meters
17 per hour.

18 Q 250 meters per hour?

19 A Yes.

20 Q Thank you. And is the cable lay process is a 24-hour,
21 seven-day-a-week process?

22 A Yes.

23 Q Okay. And why is that?

24 A There's a few reasons. So in the short term, we

1 obviously have a weather window to predict, and, you
2 know, the further outside of that window you look at, the
3 less -- the higher risk of some weather coming in. And
4 if weather comes in, we have to stand with the cable or
5 cut the cable and come back again. So we don't want to
6 do that. So we always perform 24/7 so we can be the most
7 effective and efficient we can in that process. Of
8 course we've got the TOY boundary to consider at the
9 end --

10 Q Time of year?

11 A Time of year restriction. And we don't want to, you
12 know, bump into that either. So the simple plan is we
13 need to get in and lay the cable as fast as we can.

14 Now, if we were to let's say stop for a weekend or
15 something like that, the cable will be set on the vessel,
16 and, you know, we wouldn't want to cut the cable and come
17 back again because of the joint, which takes seven days,
18 and the quicker we can do this the better.

19 Q Okay. Is it customary in the industry, based on your
20 experience, to lay a cable like the ones Revolution Wind
21 will use on a 24/7 --

22 A Yes.

23 Q -- progress?

24 A Yes.

1 Q Thank you. So, finally, Gareth, I want to turn to the
2 operations and maintenance of the cable. What is
3 anticipated for the operations and maintenance of the
4 cable?

5 A So we'll develop a plan based on the permit requirements,
6 and on top of that our own requirements for assessment of
7 areas of where we know we have crossings and secondary
8 protection. As we've already discussed here, the whole
9 of the Bay is relatively benign in terms of the seabed
10 mobility. There are some sun waves, and we've done
11 engineer work that shows that these can range between .25
12 of a meter and half a meter further out past the Rhode
13 Island Sound there. So we're quite confident that we're
14 going to bury it, and it's going to stay buried and not
15 be exposed over its lifetime.

16 Of course, there's some significant storms, as we
17 know, and we will assess them on a storm-by-storm severe
18 weather event basis whether we would need to go back and
19 potentially look at seabed protection, secondary
20 protection.

21 MS. MAIN: Thank you very much. I have no further
22 questions for Gareth Ellis.

23 MR. CHAIRMAN: Any questions from council members of
24 Mr. Ellis?

1 MR. GAGNON: I have a question.

2 THE CHAIRMAN: Yes.

3 MR. GAGNON: So there are two cables; correct?

4 THE WITNESS: Correct.

5 MR. GAGNON: With two trenches and two trenching
6 operations some distance apart?

7 THE WITNESS: Yes. The distance varies as we go
8 through the Bay, because the engineers route around
9 certain beaches and boulders, et cetera. We try to keep
10 them within a reasonable separation, not using too much
11 of the Bay.

12 MR. GAGNON: Do you have two trenching operations
13 going on at the same time, where you use the same
14 equipment?

15 THE WITNESS: The same vessel, yes. The near to
16 shore barge will do one 9.7 kilometer route out to the
17 Jamestown Bridge.

18 (Interruption by the court reporter)

19 THE WITNESS: I'll turn around, yes.

20 And then the main lay vessel will do one cable at a
21 time, yes.

22 MR. IZZI: When you talk about the amount of time
23 that it's going to take to lay the cables, you said
24 it will take four days for the barge to lay its cables.

1 THE WITNESS: Yes.

2 MR. IZZI: Is that for both of the cables that the
3 barge has?

4 THE WITNESS: Each one will take four days.

5 MR. IZZI: So that is a total of eight days?

6 THE WITNESS: Yes.

7 MR. IZZI: You said the Aurora would take seven days
8 to lay the cable south of the Jamestown Bridge to the
9 turbines.

10 THE WITNESS: Correct, yes.

11 MR. IZZI: So you double that to take into
12 consideration both cables, so it would take 14 days to
13 lay the two cables.

14 THE WITNESS: Yes, but I would like to also add that
15 we have to join the cables both together, and that's a
16 seven-day period. So, in fact, one cable will take 14,
17 and two will take 28.

18 MR. IZZI: All right. And the cable laying
19 operation, part of it is digging the trench and part of
20 it is laying the cable. Is that done simultaneously?

21 THE WITNESS: Yes, correct. We call it simultaneous
22 lay and burial. And in both cases, the near shore barge
23 and the main lay vessel, we have simultaneous lay and
24 burial techniques. The cable actually is encapsulated

1 through the machine and has what we call a depressor that
2 sits on the back of the cable, which makes sure it goes
3 into the trench, on the bottom of the trench.

4 MR. IZZI: Is there any anchoring of the cable?

5 THE WITNESS: Any?

6 MR. IZZI: Anchoring.

7 THE WITNESS: Anchoring.

8 MR. IZZI: Once it's in the trench, or does it just
9 get buried with the sediment?

10 THE WITNESS: Yes. Its self weight takes it to the
11 bottom of the trench as well at the depressor, and the
12 trench walls collapse, and the sediment settles down on
13 the cable itself behind the trench, but there's no
14 physical anchoring of the actual cable.

15 MR. IZZI: And are you aware of supply-chain issues
16 that other wind turbine companies, maybe Ørsted and other
17 places are experiencing?

18 THE WITNESS: Oh, yes. Absolutely, yes.

19 MR. IZZI: Are supply-chain issues going to affect
20 the schedule for the substation or the marine cable?

21 THE WITNESS: No. The issue that we're facing is
22 planning around the multiple jobs that are going on and
23 the limited amount of vessels in the U.S. capable of
24 supporting the work. So that's ongoing work, but, you

1 know, there's no delay on this project whatsoever.

2 MR. IZZI: So you don't anticipate any issues in
3 getting cables or getting the turbines themselves?

4 THE WITNESS: No, no. I mean, in fact, the cables
5 are manufactured by Nexans in Charleston here in North
6 Carolina.

7 MR. IZZI: South Carolina?

8 THE WITNESS: I'm sorry. South Carolina. Excuse my
9 U.S. geography. It's great in Rhode Island, but further
10 south, no. Yeah, so we've got our own quality managers
11 within that factory, and they keep a 24-hour view on the
12 cable at the moment.

13 MR. IZZI: Thank you.

14 MS. HALL: I just have a couple of quick questions,
15 back to your boulder relocation plan.

16 THE WITNESS: Yeah.

17 MS. HALL: I want to be clear on what you were
18 saying with respect to where those are going in relation
19 to essential fishing habitat, or, you know, just the
20 areas that are really important relative to our
21 commercial and recreational fisheries.

22 THE WITNESS: Okay. So our intention is to move the
23 boulder only as far away as it won't impact the trenching
24 machine. The trenching machines are approximately five

1 meters, six meters wide. So we will aim to move it only
2 ten meters from the center line of where we are trenching
3 the cable. So this will mean that we'll be moving it to
4 very similar locations to where it came from. So we're
5 moving them perpendicular by ten meters.

6 MS. HALL: Right. So those areas have been surveyed
7 relative to a fish habitat?

8 THE WITNESS: Yeah. So the whole sway, 50 meters of
9 each route have been surveyed, and all the due diligence
10 on the route and archeology and everything like that is,
11 done, and we would only ever move a rock to a position in
12 the known survey area.

13 MS. HALL: Thank you. I just had another question
14 regarding something you said about -- you were talking
15 about, I think it was during your discussion of the
16 landfall location, and it was shortly after that relative
17 to the those areas that we have discussed with secondary
18 protection. You said if it can't go down four feet, if
19 the risk is such that it is considered low risk. And I'm
20 not clear on what is considered that risk is such versus
21 low risk. Could you explain that?

22 THE WITNESS: Well, we use an industry standard
23 engineering report called the Cable Burial Risk
24 Assessment. The acronym is CBRA, C-B-R-A. This is used

1 to -- we take the ship traffic data for the whole area
2 and the fishing activities, and we put them together into
3 a risk matrix to understand, you know, the quantity of
4 vessels and type of anchors that are moving across the
5 cables during a certain period, and the same with fishing
6 activities. So we know some areas where we've got
7 neither of those are a very low risk. So if we only
8 reach, say, three feet, we know that we don't have to go
9 deeper because the risk of anything coming into contact
10 with the cable is very low. Whereas we know in other
11 areas, for example, the traffic separation scheme, we
12 need to get that cable buried to the actual depth that is
13 required to be buried because the risk is high.

14 MS. HALL: So what you're describing I think is risk
15 for interaction of vessels and/or fishing gear with the
16 cable.

17 THE WITNESS: Correct.

18 MS. HALL: But that doesn't address the risk that
19 Justin was talking about with respect to EMF. I mean,
20 that doesn't really address the presence of benthic
21 species. I mean, I thought that one of the major issues
22 relative to risk is when you can't go to the four to six
23 feet deep.

24 THE WITNESS: Well, we bury to three feet, as

1 Mr. Skenyon pointed out, the risk is much lower, and
2 obviously the risk is increasing slightly as we increase
3 that depth.

4 MS. HALL: Did you say three feet?

5 THE WITNESS: Yes.

6 MR. SKENYON: So the estimates for the EMF I gave
7 tonight were at three feet as a worst case that would not
8 be mitigated. That was given as an estimate.

9 THE WITNESS: We have to imagine that these areas
10 where we will not potentially reach that depth will only
11 be small lengths of cable, because the machines
12 themselves are designed to create that depth.

13 MS. HALL: All right. Thank you.

14 THE CHAIRMAN: Yes, Mr. Gomez.

15 MR. GOMEZ: You discussed the connections a couple
16 of times now. How many? The connection cable to cable?

17 THE WITNESS: Yes, so the joint. So in the state
18 waters there's only two, so one per cable, both to the
19 south of Jamestown Bridge.

20 MR. GOMEZ: Are they different cables, or are they
21 just the same?

22 THE WITNESS: No, the same.

23 MR. GOMEZ: The same cable. And that seems like a
24 pretty critical operation. You explained it took quite a

1 bit of time, the conditions you're going to be under to
2 do that.

3 THE WITNESS: Yes. The benefit of actually having
4 Nexans manufacturing the cable and installing the cable
5 is we have their factory experts to do that joint on the
6 vessel. So it's really good for us, that the vessel
7 itself is very much planned like their own factory.

8 MR. GOMEZ: Is it a fairly large vessel?

9 THE WITNESS: It's over a hundred meters long.

10 MR. GOMEZ: That's pretty big.

11 THE WITNESS: Uh-hum.

12 MR. GOMEZ: The only other -- so you have two, and
13 you agree that's a critical operation.

14 THE WITNESS: Yeah, yeah.

15 MR. GOMEZ: The only other thing that I had was back
16 on EMF. And it sounds to me -- a couple of issues -- and
17 it sounds to me that what you're looking for EMF
18 reduction is basically burial, as opposed to shielding
19 inside the cable. It sounds like burial of the cable is
20 pretty normal.

21 THE WITNESS: Yes. In every case, burial is best.

22 MR. GOMEZ: And you said 800 millimeters, the
23 diameter.

24 THE WITNESS: 800 millimeters square is a

1 cross-section of the copper.

2 MR. GOMEZ: That's pretty large.

3 THE WITNESS: Yeah, it's a big ole cable, like a
4 dinner plate.

5 MR. GOMEZ: I did my math, it's like 30 inches. I
6 had not envisioned that.

7 THE WITNESS: Yes. It's a very stiff cable. It's
8 very heavy so it sinks into the trench.

9 MR. GOMEZ: So it's a benefit, but it seems like it
10 makes transportation and stuff a little more difficult.

11 THE WITNESS: It's heavy, yeah.

12 MR. GOMEZ: Thank you.

13 THE CHAIRMAN: Any other questions from council
14 members?

15 MS. MAIN: Thank you. My partner, Ms. Dieter, will
16 present her next witness.

17 MS. DIETER: We would like to call Drew Carey.

18 (Interruption by the court reporter)

19 MS. DIETER: Maybe now is a good time for a break.

20 THE CHAIRMAN: We'll take a break.

21 (Brief recess)

22 THE CHAIRMAN: We're back on the record, and I just
23 want the record to indicate that -- just for the record,
24 Council Member Sahagian had to leave. He had a medical

1 emergency, family, but everything is okay, but he had to
2 leave. We can proceed without him, we still have a
3 quorum.

4 MS. DIETER: Mr. Chair, we'll call our next witness,
5 Drew Carey.

6 Dr. DREW CAREY (DULY SWORN)

7 MR. DeSISTO: Please state your name and spell it
8 for the record.

9 THE WITNESS: Drew Carey, D-r-e-w C-a-r-e-y.

10 EXAMINATION BY MS. DIETER:

11 Q Dr. Carey, where are you employed?

12 A I'm employed with Inspire Environmental in Newport.

13 Q And what is your position with Inspire Environmental?

14 A I'm the Chief Executive Officer of Inspire.

15 Q What is your responsibilities with that role?

16 A So I manage a team of scientists. The scientists collect
17 data, study the seafloor and all the resources that
18 depend on it.

19 Q Could you briefly describe for the council your
20 professional and educational background?

21 A Certainly. So my whole career has been spent studying
22 the ecology of the seafloor. In order to do that I have
23 a PhD in both marine geology and marine ecology. I have
24 an academic career of research and teaching at Wesleyan

1 University in Connecticut, Woods Hole Oceanographic
2 Institution and Stoney Brook University.

3 When I finished my academic career, I began here in
4 Rhode Island as a consultant studying the effects of
5 dredge material on the seafloor.

6 Q Have you performed during your career any studies within
7 the area of Narragansett Bay and Rhode Island Sound?

8 A Yes. As part of that work and subsequent work, I've
9 spent over three decades studying Narragansett Bay, Rhode
10 Island Sound, Long Island Sound, and other parts of the
11 world, and most recently, of course, offshore wind.

12 Q And what work have you done in connection with offshore
13 wind?

14 A I started with the Block Island wind farm. We did a site
15 assessment looking at the site of the turbines, the cable
16 route, and advised Deep Water Wind at that time about the
17 location of the cable and the turbines.

18 Q Have you previously testified before any regulatory
19 bodies?

20 A Yes. The Connecticut Energy Siting Board, the Energy
21 Facility Siting Board, and the Article 7 process in New
22 York State.

23 Q And the Energy Facility Siting Board that you mentioned,
24 that's the Rhode Island Energy --

1 A Yes.

2 Q -- Facility Siting Board?

3 A Correct.

4 Q Have any of these bodies recognized you as an expert in
5 any field?

6 A Yes.

7 Q And in what field?

8 A As a marine ecologist.

9 MR. DIETER: Mr. Chair, I would ask the council to
10 recognize Dr. Carey as an expert in marine ecology.

11 MR. DeSISTO: Well, typically we don't, for this
12 agency, qualify experts. The fact that you have detailed
13 his education and experience background is enough for the
14 council to weigh his credentials when he renders opinion
15 testimony.

16 MS. DIETER: Okay. Thank you.

17 BY MS. DIETER:

18 Q Have you worked on the Revolution Wind project,
19 Dr. Carey?

20 A Yes, I have.

21 Q And when did you begin work in connection with the
22 Revolution Wind project?

23 A Well, I started as soon as it was -- the lease was
24 approved in 2013.

1 Q And what did that work involve?

2 A So we began with site assessment work, that includes
3 benthic assessment work, essential fish habitat
4 monitoring. Fish, recreational fishing, and a few other
5 smaller elements, but those are the primary ones.

6 Q And has that work that Inspire Environmental performs
7 been incorporated into the application that's before the
8 council this evening?

9 A Yes. For the Category B application there's a technical
10 report on benthic assessment, a technical report on
11 essential fish habitats and one on commercial and
12 recreational fishing. For each of those my staff
13 collected data, wrote the reports, and I managed and
14 reviewed each of the documents.

15 Q You mentioned that one of those reports was an essential
16 fish habitat report?

17 A That's correct.

18 Q In that report the statement is made that the
19 installation of cables in Narragansett Bay could disturb
20 animals and that as much as one to three years could be
21 required for recovery. How did this recovery affect fish
22 resources in the vicinity of the export cable?

23 A Well, that recovery estimate, as I think Mr. Skenyon
24 indicated, it could take several years for the seafloor,

1 and the seafloor is a mixture of sediment and animals.
2 But we've been studying that process for many decades,
3 and initially, there's actually lot of food on the
4 surface as a result of sediment disturbance. There are
5 three stages. The first stage is just almost weed like
6 little tiny animals that show up, they're fish food. And
7 the second stage are a little bit larger, maybe about an
8 inch long, they form small tubes, and that's also very
9 heavily grazed by fish.

10 So fish move in, literally, immediately. There's
11 animals rendered by the disturbance that are available,
12 and then the recovery. And then eventually in that
13 second stage, the fish graze them. We often find them in
14 fish stomachs.

15 And then there's a third stage where there is much
16 deeper burrowing organisms, and that's in the sort of one
17 year and slightly longer phase.

18 Q So I want to break this down a little bit if we can.

19 A Uh-hum.

20 Q So you talked about sort of this phased recovery. How
21 long do those different phases take?

22 A Sure. So there's a very well established model of
23 succession that's similar to what you might see in a
24 field that's cleared. The first stage takes weeks. So

1 little teeny animals are almost hard to see. That takes
2 anywhere from one to six weeks for them to appear.

3 The second stage, those larger organisms, typically
4 we would see them in three to six months, would begin to
5 appear during that phase, or sometimes as early as one
6 month.

7 Then following that, anywhere from nine months to a
8 year we begin to see evidence of these deeper burrowing
9 organisms. They move in from the side of a small area,
10 or they will settle and begin to grow, and they burrow
11 very deeply into the sediment.

12 So total, year, year and a half to that level of
13 completion.

14 Q So this year to year and a half compared to the one to
15 three years that's referenced in the report, would it be
16 fair to characterize the one to three year range in the
17 report as conservative?

18 A Well, yes, that's a very conservative estimate we put in
19 the report. In dynamic environments like Narragansett
20 Bay or even parts of Rhode Island Sound, the seafloor is
21 subjected to storms and other sort of disturbances, and
22 that can sometimes accelerate the process by bringing the
23 animals in, and sometimes it can slow it down. So
24 there's a bit of a range.

1 Q You say that within six weeks, or in those first six
2 weeks after the disturbance, the tiny organisms that can
3 be fish food will be returning to the area.

4 A Uh-hum.

5 Q So when do you expect fish can return to the area after
6 the disturbance?

7 A So in the process that was described of fluidizing the
8 sediments or physically moving them through, it's
9 somewhat similar to dredging, for instance, in the
10 Providence River. And what happens there is the animals
11 float up to the surface that are in the sediment, and the
12 fish move in right away to begin feeding on those. We
13 have done studies watching that happen. It's sort of as
14 soon as the sediments settle down, the fish come in. So,
15 days.

16 Q Thank you. I want to switch to a different topic now.

17 A Uh-hum.

18 Q Are you familiar with the term area of particular
19 concern, or APC as it's used in CRMC's Ocean Special Area
20 Management Plan?

21 A Yes, I am.

22 Q And are you familiar with the recreational boating APC
23 that's identified in the Ocean SAMP?

24 A Yes, I am.

1 Q How does the area identified in the recreational boating
2 APC relate to recreational boating?

3 A So I was a participant in the Ocean Special Area
4 Management Plan, as some of you know, in the stakeholder
5 meetings, the public meetings following that through.
6 And there was one section which was recreational boating
7 and tourism, and in that group, Dr. Robin Wallace from
8 Newport, he was the head of the state yachting
9 commission, he provided the OSAMP with a list of seven
10 what are called buoy yachting races. So these are
11 offshore races defined by buoys that yachts would transit
12 around. And so those seven races were put into
13 Chapter 6, and then a figure was put in which
14 corresponded to the location of those buoys. And that
15 area that's in the SAMP corresponds to that recreational
16 boating APC.

17 Q I would like to pull up, if I may, we previously
18 submitted as Exhibit C to Revolution Wind's request for a
19 special exception. Dr. Carey, are you familiar with this
20 figure?

21 A Yes. I supervised our geographical information
22 specialist to prepare this map.

23 Q And could you describe for the council generally what
24 this shows?

1 A Sure. I'll use a pointer to make sure that I'm clear.
2 So I think to most of you, you recognize the Rhode Island
3 coastline here and the land masses in sort of a slight
4 yellow/green.

5 This is the OSAMP boundary, so the OSAMP was
6 concerned with the offshore area.

7 Q And that's the red line you're pointing to?

8 A I'm sorry. The red line, for the stenographer. Then
9 there is a dotted or dashed line in black, which is the
10 state water boundary. Then inside the state water
11 boundary there are a series of pink circles. These
12 correspond to the recreational boating APC. There is a
13 blue polygon, or sort of a long fat line, that is the
14 cable corridor extending from the state boundary at the
15 dashed line all the way to Quonset inside the Bay.

16 Q And, Dr. Carey, approximately how large is the
17 recreational boating APC?

18 A So as you can see the legend here, the recreational
19 boating APC is a little over 16,000 acres.

20 Q And it appears in this figure that there's a portion of
21 the export cable that is going to overlap or go through
22 the recreational boating APC; is that correct?

23 A That's correct. And you can see that by combining the
24 blue with the pink, you get a purple polygon associated

1 with that overlap.

2 Q And approximately what percentage of the recreational
3 boating APC will be touched by the export cable corridor
4 as shown in this figure?

5 A So within the state waters that is slightly over
6 10 percent of the whole recreational boating APC in state
7 waters.

8 MS. DIETER: Thank you. I don't have any further
9 questions for Dr. Carey.

10 THE CHAIRMAN: I have a question. Did you say
11 10 percent?

12 THE WITNESS: Yes, 10 percent. So the dark purple.

13 THE CHAIRMAN: The purple area.

14 THE WITNESS: Yes.

15 THE CHAIRMAN: Represents 10 percent.

16 THE WITNESS: Uh-hum.

17 THE CHAIRMAN: Thank you. Any questions from
18 council members?

19 THE WITNESS: Yes?

20 MS. HALL: Relative to area, the buoy area and the
21 overlap and the construction timing, if you could just
22 elaborate a little bit. I understand 10 percent
23 spatially, but what are you talking about in terms of
24 that area relative to those activities that you were

1 involved in identifying the SAMP and the OSAMP and also
2 the scheduling that we heard from before?

3 MS. DIETER: Madam Council Member, if I may, our
4 next witness is going to address that in greater detail.

5 THE WITNESS: I'll answer as best I can. I didn't
6 provide the information. It was Dr. Wallace. But those
7 races occur between June and September each year, and I
8 think the next witness will probably talk about what was
9 said. Megan mentioned that activity would be from
10 October to I think to November. Is that correct?

11 So the active installation occurs after the end of
12 the yachting season.

13 MS. HALL: I have one more question about the
14 recovery relative to fish returning, et cetera.

15 THE WITNESS: Yes.

16 MS. HALL: Does that phased recovery change relative
17 to the areas that are in the secondary protection?

18 In other words, to the benthic community, is that
19 time frame a little bit different for those areas for
20 that 10 percent or 5 percent?

21 THE WITNESS: Well, yes, of course. So the recovery
22 that I'm talking about is in what we would call soft
23 sediment, silt, sand, mud, that kind of things. It's a
24 very specific kind of recovery process.

1 If you place rocks or hard material on the seafloor,
2 it's a different succession. We've been studying that at
3 Block Island and at the coastal Virginia facility.
4 Within six months you get a covering of algae and other
5 material, if it's shallow enough, on that material if
6 it's suitable. So if it's steel or rock or certain forms
7 of concrete, then other organisms begin to attach. But
8 because it's hard, it's a different group of organisms,
9 and it has a little bit different succession.

10 MS. HALL: Okay. Thank you.

11 THE CHAIRMAN: Any other questions?

12 Thank you.

13 MS. DIETER: We will call our next witness Ross
14 Pearsall.

15 MR. DeSISTO: Please raise your right hand.

16 ADRIAN ROSS PEARSALL (DULY SWORN)

17 MR. DeSISTO: Please state your name and spell it
18 for the record.

19 THE WITNESS: Adrian Ross Pearsall. A-d-r-i-a-n
20 R-o-s-s P-e-a-r-s-a-l-l.

21 EXAMINATION BY MS. DIETER:

22 Q Ross, where do you work?

23 A Ørsted North America.

24 Q And what's your position at Ørsted?

1 A I am the Fisheries Relations Manager.

2 Q How long have you been a Fisheries Relations Manager with
3 Ørsted?

4 A Three years.

5 Q And what are your responsibilities in that role?

6 A Very quickly, I oversee a group of five people that
7 conduct outreach across our portfolio.

8 Q Could you describe briefly for the council your relevant
9 professional experience?

10 A Sure. Before Ørsted I worked for NOAA in the Office of
11 National Marine Sanctuaries as a policy analyst in the
12 conservation policy and planning department. I run a
13 community supported fishery in Rhode Island. I've worked
14 with the Rhode Island Charter and Party Boat Association
15 determining what their membership base was as part of
16 their Block Island mitigation package.

17 Q And what's your educational background?

18 A I obtained my bachelors in government, and after that
19 went on to get my JD, and ended up in Rhode Island to get
20 my masters in marine affairs.

21 Q Do you have any additional professional certifications?

22 A I do. I'm a licensed attorney in Pennsylvania, and I
23 also obtained my 100-ton mariner's credential, which is
24 colloquially known as a captain's license.

1 Q So based on your experience, are you familiar with
2 recreational boating that occurs in Narragansett Bay and
3 Rhode Island Sound?

4 A I am.

5 Q What types of activities are the focus of recreational
6 boating here?

7 A It really ranges from everything from sightseeing to day
8 sailing to sail racing to just pleasure cruising.

9 Q Based on your experience, what is the recreational
10 boating season in Narragansett Bay and Rhode Island
11 Sound?

12 A The height of the season is Memorial Day to Labor Day.
13 There are shorter seasons on either side of those, and
14 generally a hard stop between -- hard dates of in on
15 May 1 and out by November 1.

16 Q Why out by November 1?

17 A That's generally tied to moorings and docks in your
18 contract. When you rent one of those, you have hard
19 timelines to be out by November 1.

20 Q So I want to pull up figure 3.2-3 from the application.
21 Are you familiar with this figure?

22 A I am.

23 Q Could you identify for the council where the export cable
24 is on this particular figure?

1 A Sure. It's the same as we've seen before. It's this
2 purple/red line that starts in Quonset, goes down the
3 West Passage in between Jamestown, Saunderstown,
4 Narragansett, and then out into the ocean.

5 Q Based on your experience, are there particular areas of
6 Narragansett Bay and Rhode Island Sound that are popular
7 for recreational fishing -- excuse me -- recreational
8 boating?

9 A I would say that all of it is pretty popular, but there
10 is a larger focus on the Newport area.

11 Q And the Newport area is in the East Passage?

12 A It is.

13 Q And where is that in relation to where the export cable
14 is going to go?

15 A It's on the other side of Jamestown.

16 Q And are you familiar with the proposed construction
17 schedule for the export cable?

18 A I am.

19 Q And you heard Megan's testimony that the export cable is
20 going to be installed in late October and November of
21 2024.

22 A That's correct.

23 Q So based on your knowledge of that construction schedule
24 and your familiarity with recreational boating in and

1 around Rhode Island Sound, do you expect export cable
2 construction to have anything more than a minimal impact
3 on recreational boating?

4 A No, I do not.

5 Q And are you familiar with sailboat raising in and around
6 Narragansett Bay and Rhode Island Sound?

7 A I am.

8 Q What's your experience with sailboat racing?

9 A Well, I've been racing on Narragansett Bay since I was a
10 teenager, but also as part of earning my captain's
11 license, you need to have a requisite number of days at
12 sea. In my case it was 720 days. And most of that was
13 earned on a sailboats.

14 Q And does your role at Ørsted involve any outreach to the
15 sailboat community?

16 A It does. We are affiliated with Shields Fleet 9, which
17 is based in Newport, Rhode Island, and tends to race
18 inside the Bay. We've also hosted numerous sailors at
19 our simulator.

20 Q Are you familiar with buoy racing that occurs in and
21 around Rhode Island Sound?

22 A I am.

23 Q And where does that buoy racing primarily occur?

24 A Buoy racing tends to occur in the Bay itself, but also in

1 the shaded circles here.

2 Q And when you say in the Bay itself, are you talking about
3 the East Passage?

4 A In the East Passage, yeah.

5 Q In the shaded areas, are those what Dr. Carey identified
6 previously as the recreational boating APC?

7 A They are.

8 Q What time of year does buoy racing typically occur?

9 A In the height of the season, at Memorial Day to Labor Day
10 is the bulk of it. There are a few races on the outside
11 of that, but everything generally stops by Columbus Day.

12 Q You said everything generally stops by Columbus Day?

13 A That's correct.

14 Q And so given that export cable construction is going to
15 be at the end of October and November, do you anticipate
16 anything more than minimal impacts to buoy racing?

17 A I do not.

18 Q In a typical calendar year, how many distance races pass
19 through Narragansett Bay or Rhode Island Sound?

20 A Typically one to three.

21 Q And when do those races, those distance races typically
22 occur?

23 A They tend to occur earlier in the season around June.

24 Q Are you familiar with the Volvo Ocean Race?

1 A I am.

2 Q And will the Volvo Ocean Race be affected by export cable
3 construction?

4 A It will not.

5 Q Why not?

6 A Because it's making a stopover to Newport East Passage in
7 May of 2023.

8 Q And it will not be stopping there to your knowledge in
9 2024?

10 A It will not.

11 Q If you look at that figure, can you point out those
12 dashed red lines that are at a diagonal for the council?

13 A Sure. And I'm assuming you mean these three?

14 Q Over on the left, yes.

15 A Yes. So these three dashed lines over on the left are
16 all related to the Annapolis to Newport race.

17 Q So generally those red dashed lines refer to distance
18 sailing races?

19 A Yes.

20 Q And you said the three furthest to the left refer to the
21 Annapolis to Newport race?

22 A Yes.

23 Q How do you know that?

24 A Because these tracks are actually on the Northeast Ocean

1 Data Portal, and you can go there to click on the tracks
2 and see what tracks correspond to which race.

3 Q I want to pull up briefly here what we marked as
4 Exhibit B to Revolution Wind's request for a special
5 exception. Are you familiar with these images?

6 A Yes.

7 Q And what are they?

8 A Those are screenshots from the Northeast Ocean Data
9 Portal.

10 Q What do they show -- oh, how do you know what they are?

11 A Oh, the red lines?

12 Q No. The images themselves.

13 A Because I took them.

14 Q You took them?

15 A Yes.

16 Q And what do these particular screenshots show?

17 A They do show a multitude of distance races, but the ones
18 highlighted in red are those three Annapolis to Newport
19 race routes.

20 Q Will the Annapolis to Newport race be affected by export
21 cable installation?

22 A No, it will not.

23 Q How come?

24 A Because it is occurring in 2023, and it's a biannual

1 race.

2 Q So it will not be occurring in 2024?

3 A That's correct.

4 Q Are you familiar with the Newport to Bermuda race?

5 A I am.

6 Q Will the Newport to Bermuda race be affected by export
7 cable construction?

8 A Not, it will not.

9 Q How come?

10 A Because that occurs in June.

11 MR. DIETER: Thank you, Ross. I don't have any more
12 questions for Mr. Pearsall.

13 THE CHAIRMAN: Any questions from council members?

14 Okay. Thank you.

15 MS. DIETER: We will call our next witness, who is
16 Kyle Cassidy.

17 MR. DeSISTO: Please raise your right hand.

18 KYLE CASSIDY (DULY SWORN)

19 MR. DeSISTO: Please state your name and spell it
20 for the record.

21 THE WITNESS: Kyle Cassidy, K-y-l-e C-a-s-s-i-d-y.

22 EXAMINATION BY MS. DIETER:

23 Q Kyle, where do you work?

24 A I work for Ørsted.

1 Q What's your role with Ørsted?

2 A I'm a fisheries and environmental specialist.

3 Q What are your responsibilities in that role?

4 A So for my role at Ørsted I manage all the fisheries
5 related science projects that we have going on across the
6 project portfolio. So that's not only Revolution Wind,
7 but it's all the leases we have that are actively in
8 development.

9 Q Could you briefly describe for the council your relevant
10 professional background?

11 A Yeah. So I got my bachelor's degree in biology, and I
12 had my master's degree from SMAST, and the focus of my
13 thesis was a ventless trap survey in Buzzard's Bay --

14 (Interruption by the court reporter)

15 THE WITNESS: Ventless trap.

16 A And then I had been working for SMAST for about almost
17 ten years prior to my position at Ørsted. There I was a
18 program manager, so I led all the fisheries related
19 research that we did under Dr. Kevin Stokesbury. We
20 worked cooperatively with the a fishing industry on a
21 number of different fisheries, primarily the Atlantic Sea
22 Scallop fishery, the offshore lobster fleet in
23 Massachusetts, as well as the ground fish fishery in the
24 Gulf of Maine.

1 Q Are you familiar with the Revolution Wind Fisheries
2 Research and Monitoring Plan?

3 A Yes, I am.

4 Q And what surveys does the plan propose for Rhode Island
5 state waters?

6 A So in state waters DEM is going to run a ventless trap
7 survey along the cable corridor route.

8 Q So this is a partnership between Revolution Wind and
9 RIDEM?

10 A Yes.

11 Q And what kind of survey did you say it's going to be?

12 A It's a ventless trap survey.

13 Q What species are targeted by this survey?

14 A The primary target species of the ventless trap survey is
15 lobster, with Jonah crab as a secondary cause species.

16 Q So how long is this survey anticipated to run?

17 A So in total the DEM survey is going to run about seven
18 years.

19 Q And how frequently is it going to sample?

20 A They're going to sample twice per month, every month.

21 Q Was this ventless trap survey designed to provide an
22 assessment of commercially and recreationally targeted
23 species in the area of the export cable?

24 A Yes, it was. Rhode Island DEM had significant outreach

1 and input from stakeholders and industry members to help
2 develop this survey, which they felt would accurately
3 represent the commercial and recreational species in the
4 area.

5 Q And those are the species you identified earlier.

6 A Yeah. American lobster and Jonah crab.

7 Q When do you anticipate Revolution Wind's ventless trap
8 survey is going to start?

9 A We anticipate that it's going to start in the winter,
10 early winter 2023.

11 Q So when you say winter, we're talking December or
12 January?

13 A From December through January, yeah. It would be the
14 start of winter.

15 Q December of 2022 or January --

16 A '22/'23, yeah.

17 Q You heard Megan's testimony earlier that export cable
18 construction will occur in October and November of 2024?

19 A Yes, I did.

20 Q So how far in advance of construction is this survey
21 going to be starting?

22 A In total we estimate we're going to have about a year and
23 half, maybe a year and three-quarters worth of
24 pre-construction data.

1 Q Why is it that the ventless trap survey isn't going to
2 start until either December 2022 or January of 2023?

3 A The initial plan start date was over the summer. We just
4 had delays we encountered along the way with regard to
5 Rhode Island DEM's significant outreach efforts and their
6 planning with the industry to develop this survey, and
7 then coordinating with us to get a finalized and agreed
8 upon contract. And then there were supply-chain issues
9 associated with DEM acquiring the traps they needed to
10 conduct the survey.

11 Q Can you say a little bit more about this outreach to the
12 fisheries community?

13 A Yes. So DEM, it was about a year, I think, they spent
14 with outreach to the fishing industry and other
15 stakeholders to get buy-in for the survey so they could
16 develop a study that they felt and the community felt
17 would accurately represent the question at hand, which is
18 to determine if there was going to be a change in
19 population over time as a result of the export cable
20 installation.

21 Q And were there supply-chain issues that contributed to
22 the delay as well?

23 A Yes, there was. From when DEM start ordering traps, they
24 had a delay immediately. And it's not just limited to

1 them, other lobster fisherman and industry members have
2 also seen a delay in acquiring traps as a result of the
3 Covid-19 supply-chain issues.

4 Q And those are the traps required to actually run the
5 survey?

6 A Yes, that's correct.

7 Q Are there existing survey programs that assess
8 commercially and recreationally targeted fisheries
9 species in the area of the export cable?

10 A Yes. So DEM has been running a ventless trap survey
11 consistently since 2006 to the present, and it uses the
12 similar survey protocols that they proposed to use for
13 this survey.

14 Q So this is also a ventless trap survey?

15 A Yes, it is.

16 Q And what is the RIDEM ventless trap survey designed to
17 capture primarily?

18 A It's designed to capture lobsters, and they also do some
19 -- get some bycatch with Jonah crab.

20 Q You said it has a similar sampling methodology to
21 what RIDEM --

22 A Yes, similar sampling methodology. They both sample
23 twice per month. The difference would be that the RIDEM
24 survey samples June, July, and August, the summer months,

1 which is the height of lobster season. And this survey
2 is designed to run year-round.

3 Q So the preexisting RIDEM survey, what geographical areas
4 does that cover?

5 A It's a stratified random survey. They randomly select
6 stations every year from different strata. But it
7 equally samples the Narragansett Bay area, the Rhode
8 Island Sound area, and the Block Island Sound area.

9 Q And so it covers the area the export cable is going to be
10 going through?

11 A Yes.

12 Q In your opinion, with respect to lobsters, does the
13 existing RIDEM survey provide a reasonable supplement of
14 pre-construction data to what the Revolution Wind survey
15 is going to capture?

16 A Yes, I do believe it does.

17 Q Can you tell the council why?

18 A So when we designed, or when DEM designed the survey for
19 Revolution Wind, they did a power analysis, which is a
20 statistical analysis to determine how many samples that
21 you need. Through that analysis and our proposed
22 sampling method, we're sampling a significantly higher
23 amount with the proposed study along the cable corridor
24 route than with the DEM state survey sample, so we'll

1 still be able to detect a change in the population with
2 statistical robustness.

3 Q So notwithstanding the slightly delayed start, the
4 Revolution Wind survey in collaboration with RIDEM is
5 still going to be able to accomplish its intended
6 purposes?

7 A Yes.

8 MS. DIETER: Thank you. I don't have any further
9 questions.

10 THE CHAIRMAN: Any questions?

11 MR. GOMEZ: It sounds like you are focusing
12 primarily on lobsters rather than white catch, but the
13 lobster population, and DEM can maybe help on this, but
14 this year they've had a terrible, terrible year. Last
15 year was a good year. So it's really an up-and-down
16 thing. But it appears from commercial lobster fisherman
17 that I deal with, talk to, the lobster -- the centroid of
18 the lobster masses moved over a hundred miles away from
19 here. So it seems that's that a species we're going to
20 rely on less and less and less. I would worry more about
21 -- sea bass have really come in, and I'm not sure if
22 that's a commercial fishery or not, and I don't see where
23 any work we're going to do would harm that. But maybe
24 you could comment a little bit on shellfish, scallops,

1 oysters those types of beds, which it sounds like the
2 material you're running don't raise scallops. The
3 scallops are offshore. Maybe not so much oysters.
4 Oysters are probably better near shallow water. Are you
5 looking at those at all?

6 THE WITNESS: Yeah. So at year-one and then
7 post-year as recommended by Cat B there's a benthic
8 habitat assessment.

9 MR. GOMEZ: A what?

10 THE WITNESS: A benthic habitat assessment, and that
11 assessment will look at the species that dwell in that
12 area.

13 MR. GOMEZ: The shellfish.

14 THE WITNESS: Yeah, the shellfish.

15 MR. GOMEZ: Yeah, but what are you looking for
16 there, just a disturbance that would occur because of the
17 lying of the cable?

18 THE WITNESS: In the benthic habitat assessment?

19 MR. GOMEZ: Yeah.

20 THE WITNESS: That will be looking at the population
21 at time point zero, so when it is installed, and then it
22 will look at it over time through -- I forget what the
23 time frame is of it, but it is staggered.

24 MR. GOMEZ: But it's being done?

1 THE WITNESS: It is being done. There is an
2 assessment.

3 MS. HALL: I just want to follow-up on that
4 question, because I am a little unclear on 1.5 year
5 pre-construction survey, which it sounds like -- I mean,
6 that is ventless traps relative to the Jonah crab and
7 lobster. Just to follow-up up on my colleague, I'm still
8 not clear on the pre-construction type of survey that
9 you're doing in the corridor relative to those other
10 species, not just mollusks, but also herring fishery and
11 flounder fishery. What kind of pre-construction
12 surveying in the corridor are you doing? And I'm sorry
13 if I missed when you explained it.

14 THE WITNESS: Yeah, so the ventless trap is the only
15 proposed survey pre-construction in the corridor. And
16 this was not something that we just directed. DEM
17 designed and came up with the study collectively and then
18 had community engagement. So that is what they
19 determined was the most appropriate survey to sample the
20 species within the Bay.

21 MS. HALL: So there's no pre-construction survey in
22 the corridor for the presence of other species that are
23 going through that area.

24 THE WITNESS: No, aside from bycatch within the

1 lobster trap.

2 MS. HALL: Right, aside from bycatch.

3 THE WITNESS: Yes. Which they have historical
4 bycatch from the DEM survey as well, so you can have a
5 relative estimate with that.

6 MR. GOMEZ: Just to follow-up on that if I may. It
7 seems that the area that we're talking about would be
8 good flounder-fluke type area, and I would expect that
9 would be something you really want to look at. It's a
10 pretty commercial fish. And you get -- some of this area
11 you get near some of the trap fisherman and stuff like
12 that. But the fluke fishery, both from a recreational
13 and commercial standpoint, it's pretty important, but it
14 doesn't sound you're looking at that at all.

15 THE WITNESS: No. The focus of the fluke, yeah, was
16 not part of that, the proposal from DEM.

17 MR. GOMEZ: It does sound like the time frame that
18 Robin had, the time frame for doing these things didn't
19 coincide with the fluke fisheries, but it is a very
20 commercially viable and recreational fish that you might
21 just think about.

22 THE WITNESS: Yes. Thank you. I appreciate it.

23 THE CHAIRMAN: Any other questions?

24 Thank you.

1 MS. MAIN: I believe that concludes our presentation
2 of witnesses.

3 THE CHAIRMAN: What else do you have in looking,
4 planning ahead?

5 MS. MAIN: Sure. My understanding, subject to again
6 CRMC staff and council's desires, is that on
7 November 22nd, which is our next hearing, there will be
8 discussions and testimony put forth on mitigation. So
9 we'll have several witnesses on that aspect. And then we
10 will present to you our arguments on the special
11 exception, presumptive approval on the recreational areas
12 of particular concern, and the variance on the baseline
13 monitoring.

14 THE CHAIRMAN: Okay. So I think we're in good
15 posture that we can end for this evening.

16 MS. MAIN: As you wish, yes.

17 THE CHAIRMAN: And then recommence our hearing on
18 November 22.

19 Any last questions from council members before we do
20 that?

21 Yes, Steve.

22 MR. IZZI: I have a question for the Chair. Are we
23 going to have objectors testify on the 22nd as well?

24 THE CHAIRMAN: I think public comment will be

1 scheduled for that day as well.

2 Just for completeness, I'll entertain a motion to
3 continue this matter to our next date for this matter,
4 which would be November 22nd. Someone want to make that
5 motion?

6 MR. GAGNON: So moved.

7 THE CHAIRMAN: Motion has been made. Seconded?

8 MR. GOMEZ: Second.

9 THE CHAIRMAN: All those in favor say "aye."

10 (All members present responded "Aye")

11 THE CHAIRMAN: Opposed?

12 (No reply)

13 THE CHAIRMAN: Motion carries.

14 I would entertain a motion to adjourn this meeting.

15 MS. McGOVERN: I'll make a motion.

16 THE CHAIRMAN: Motion made, and seconded. All in
17 favor say "Aye."

18 (All members present responded "Aye.")

19 THE CHAIRMAN: Motion carries.

20 (The proceedings concluded at 9:06 p.m.)

21

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23

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C E R T I F I C A T E

I, Linda M. Cordeiro, a Notary Public in and for the State of Rhode Island, hereby certify that the foregoing pages are a true and accurate record of my stenographic notes that were reduced to print through computer-aided transcription.

In witness whereof, I hereunto set my hand this 8th day of November, 2022.

LINDA M. CORDEIRO, NOTARY PUBLIC

My commission expires on 1/17/25

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