FEDERAL COMMUNICATIONS COMMISSION

JULIUS GENACHOWSKI
CHAIRMAN

January 22, 2013

The Honorable Cathy McMorris Rodgers
U.S. House of Representatives
2421 Rayburn House Office Building
Washington, D.C. 20515

Dear Congresswoman McMorris Rodgers:

Thank you for your letter regarding the Snohomish Public Utility District. I appreciate your interest in this matter and am pleased to provide the enclosed letter on this issue from the Chief of the FCC's Public Safety and Homeland Security Bureau.

If you have any additional questions or need any further assistance, please do not hesitate to contact me.

Sincerely,

Julius Genachowski

Enclosure

Federal Communications Commission
Washington, D.C. 20554

January 22, 2013

In Reply Refer To:
1201020

The Honorable Cathy McMorris Rodgers
United States House of Representatives
2421 Rayburn House Office Building
Washington, DC 20515

Dear Congresswoman Rodgers:

Thank you for your letter dated August 2, 2012 concerning comments the Public Safety and Homeland Security Bureau (Bureau) of the Federal Communications Commission (FCC) filed with the Federal Energy Regulatory Commission (FERC) regarding Snohomish County Public Utility District No. 1's (District) proposed Admiralty Inlet Pilot Tidal Project (Project).[1]

In its comments, the Bureau recommended that FERC consider requiring a minimum 500 meters separation between a trans-Pacific submarine cable (PC-1) operated by FCC licensee PC Landing Corporation, and the District's proposed hydrokinetic project. The Bureau expressed its concern that the roughly 100 meters separation between the cable and the Project offered by the District might not sufficiently account for adverse incidents that could occur, both during construction of the Project and during routine maintenance of the project and the submarine cable, and such events could pose an unacceptable risk to communications reliability.

The Bureau based its initial recommendation on the International Cable Protection Committee (ICPC) Recommendation No. 13, "Proximity of Wind Farm Developments & Submarine Cable."[2] In its comments, the Bureau noted that, while this recommendation treated the interaction of at-grade, off-shore wind farms with submarine cables, "many of the same principles [of appropriate distance separation] apply here."[3] In the absence of more definitive guidance, the Bureau accepted this more cautious approach.

Subsequently, on October 4, 2012, the Bureau filed a response[4] to a request for clarification from FERC.[5] For your convenience, I am including a copy of this response. In its

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[1] *See* Initial Comments of the Public Safety and Homeland Security Bureau of the Federal Communications Commission (PSHSB Comments) (filed May 23, 2012).

[2] *See* ICPC Recommendation No 13, "Proximity of Wind Farm Developments & Submarine Cable" (available at http://www.advancepipeliner.com/Resources/Cable/Recommendation_13_Iss_01A.pdf) (rel. Jan. 26, 2007) (updated Sept. 27, 2010) (ICPC Recommendation No. 13).

[3] *See* PSHSB Comments at 4 n. 14. Further, while off-shore wind farms have proliferated globally to such a degree that the ICPC felt compelled to provide guidance, hydrokinetic power generation is not yet as wide-spread, and ICPC has not yet made recommendations on the appropriate separation distance between existing cables and proposed projects that will sit on the ocean bed. The Bureau believed that out of an abundance of caution, and in order to promote and maintain communications reliability, it should at least make decision-makers at FERC aware of the ICPC guidance.

[4] *See* Response of the Public Safety and Homeland Security Bureau of the Federal Communications Commission (PSHSB Response) (filed October , 2012)

response, the Bureau more thoroughly explained its reasoning regarding its initial recommendation. Moreover, the Bureau reviewed additional information provided by the District and acknowledged that, based on this additional information, installation and removal of the Project will occur under strict conditions, and that the location of the Project 170 and 249 meters away from PC-1 should not impact the ability to repair PC-1. Accordingly, the Bureau clarified that based on the information it had seen at that time, it does not oppose licensing of the Project at the distance of 170 and 249 meters now proposed by the District so long as FERC determines that the Project does not present material risk to PC-1, and FERC is able to ensure (via imposition of license conditions, if appropriate), that the District, its agents, contractors and successors all adhere to the safety and distance separation representations that the District made in its additional filings.

I trust that this information addresses your concerns. I appreciate your interest in this matter. Please let me know if I can be of any further assistance.

Sincerely,

David S. Turetsky
Chief, Public Safety and Homeland Security Bureau

[5] *See* Letter from Vince Yearick, Acting Director, Division of Hydropower Licensing, Office of Energy Projects, Federal Energy Regulatory Commission, to David L. Furth, Acting Chief, Public Safety and Homeland Security Bureau (Jul. 16, 2012) at 2.

Federal Communications Commission
Washington, D.C. 20554

October 4, 2012

Vince Yearick
Director, Division of Hydropower Licensing
Office of Energy Projects
Federal Energy Regulatory Commission

RE: Project No. 12690-005, Admiralty Inlet Pilot Tidal Project
Snohomish County, Washington, Public Utility District No. 1

Dear Mr. Yearick:

This responds to your July 16, 2012, letter, in which you ask the Public Safety and Homeland Security Bureau (Bureau) of the Federal Communications Commission (FCC) to clarify certain points raised in the comments the Bureau filed on May 23, 2012, regarding Snohomish County (Washington) Public Utility District No. 1's (District) proposed Admiralty Inlet Pilot Tidal Project (Project).[1] In its comments, the Bureau recommended that the Federal Energy Regulatory Commission (FERC) consider requiring a minimum 500 meters separation distance between a trans-Pacific submarine cable (PC-1) operated by FCC licensee PC Landing Corporation, and the District's proposed hydrokinetic project. The Bureau expressed its concern that the roughly 100 meters separation distance between the cable and the Project offered by the District might not sufficiently account for adverse incidents that could occur both during construction of the Project, and during routine maintenance of the project and the submarine cable.

We understand your letter to seek clarification on two issues: how the Bureau arrived at 500 meters as the appropriate separation distance between the two underwater items (*i.e.*, the existing cable and proposed hydrokinetic project), and why the Bureau believed a separation of more than 120 meters was necessary.[2]

As a preliminary matter, we note that as a result of the Bureau's filing, the District considered and addressed the issue of separation distance in a substantive manner, and has determined that it can relocate the project to 170 and 249 meters away from PC-1.[3]

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[1] *See* Initial Comments of the Public Safety and Homeland Security Bureau of the Federal Communications Commission (PSHSB Comments) (filed May 23, 2012).

[2] *See* Letter from Vince Yearick, Acting Director, Division of Hydropower Licensing, Office of Energy Projects, Federal Energy Regulatory Commission, to David L. Furth, Acting Chief, Public Safety and Homeland Security Bureau (Jul. 16, 2012) at 2.

[3] *See* Response of Public Utility District No. 1 of Snohomish County, Washington to PC Landing Corp's Additional Information Request Response (filed Aug. 28, 2012) ("Snohomish County PUD Response"). The two figures (179 and 249 meters) represent the two points at which the project, including its two turbines, will sit on the seabed. *See* PSHSB Comments at 2 n.3, "The turbines are closed-shroud, open-centered devices with no exposed blade tips,

Regarding how the Bureau arrived at the 500 meters separation distance, we refer to International Cable Protection Committee (ICPC) Recommendation No. 13, "Proximity of Wind Farm Developments & Submarine Cable,"[4] a copy of which is enclosed. In its comments, the Bureau noted that while this recommendation treated the interaction of at-grade, off-shore wind farms with submarine cables, "many of the same principles [of appropriate distance separation] apply here."[5] ICPC notes that as between a proposed power generator (without distinguishing between wind farms and other types of generators) and an existing cable, there ought to be 200 meters separation for "run-on" (the distance between the submarine cable and the point at which the grapnel[6] hits the ocean floor).[7] Further, the recommendation indicates that when a cable is at 20 meters water depth, there should be an additional 150 meters distance to account for grapnels (for a total of 350 meters separation), and when the cable is at 40 meters depth, the starting recommendation of 200 meters for run-on should be increased by an additional 250 meters (for a total of 450 meters separation).[8] The Bureau calculated that when, as here, the cable lays at roughly 55 meters water depth, an additional distance of 300 meters should be added to the starting recommendation of a 200 meters separation. Thus, by choosing 300 meters to account for grapnel, and adding the 200 meters starting recommendation, the Bureau arrived at the 500 meters figure.[9] In sum, the Bureau believed 500 meters to be an appropriate separation distance between the proposed project and the existing submarine cable because this figure was based on ICPC guidance for an analogous set of circumstances (*i.e.*, separation recommendations for submarine cable and power generators generally). In the absence of more definitive guidance, the Bureau accepted this more cautious approach.

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installed without anchors or pilings; the two turbines will sit on the seabed and remain stationary because of their weight."

[4] *See* ICPC Recommendation No 13, "Proximity of Wind Farm Developments & Submarine Cable" (available at http://www.advancepipeliner.com/Resources/Cable/Recommendation_13_Iss_01A.pdf) (rel. Jan. 26, 2007) (updated Sept. 27, 2010) (ICPC Recommendation No. 13).

[5] *See* PSHSB Comments at 4 n.14. Further, while off-shore wind farms have proliferated globally to such a degree that the ICPC felt compelled to provide guidance, hydrokinetic power generation is not yet as wide-spread, and ICPC has not yet made recommendations on the appropriate separation distance between existing cables and proposed projects that will sit on the ocean bed. The Bureau believed that out of an abundance of caution, and in order to promote and maintain communications reliability, it should at least make decision-makers at FERC aware of the ICPC guidance.

[6] A grapnel is the multi-pronged anchor used to lift submerged cables for repair.

[7] *See* ICPC Recommendation No. 13 at pp. 5, 6.

[8] *Id.*

[9] The Bureau did not recommend further separation distance to account for the length of the cable repair ship, or a 500 meter "safety zone" as provided in ICPC Recommendation No. 13. *See generally*, PSHSB Comments at 4 n.16. While certain aspects of ICPC Recommendation No. 13's separation-distance guidance are applicable to both surface level and seabed power generation projects (*e.g.*, run-on and grapnels), the Bureau accepted that interaction of an off-shore wind farm at surface level and a cable repair ship may require additional separation for ship maneuverability not applicable here.

Having said that, the Bureau acknowledges that the District's additional filings (*i.e.*, the material filed by the District in response to the Bureau's comments) present information relevant and responsive to our previously-filed comment and concern, specifically, that installation and removal of the Project will occur under strict conditions, and that the location of the Project 170 and 249 meters away from PC-1 should not impact the ability to repair PC-1.[10] In light of this new information, the Bureau clarifies that it does not oppose licensing of the Project at the distance of 170 and 249 meters now proposed by the District, which is less than 500 meters separation, so long as FERC determines that the Project does not present material risk to PC-1, and FERC is able to ensure through its own licensing process (via imposition of conditions if appropriate), that the District and its agents, contractors and successors adhere to the safety and separation distance representations it has made in its additional filings.[11] The Bureau reminds all parties that, whatever separation distance FERC ultimately determines, PC-1 is a vital trans-Pacific submarine cable, upon which the American public and businesses and financial institutions depend.

If you have additional questions, please contact Michael Connelly, Attorney Advisor, Public Safety and Homeland Security, at (202) 418-0132 or Michael.connelly@fcc.gov.

Sincerely yours,

David Turetsky
Chief
Public Safety and Homeland Security Bureau

Encl.

[10] *See* Snohomish County PUD Response at 2, 3-4, 7-13, 25-30.

[11] *See generally, e.g.*, Snohomish County PUD Response.

ICPC Recommendation

Recommendation No. 13

Proximity of Wind Farm Developments & Submarine Cables

Note: Issue status suffix 'A' relates to minor format changes, not content.

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Contact for Enquiries and Proposed Changes

If you have any questions regarding this document or suggestions for improving it, please contact:

International Cable Protection Committee Ltd
PO Box 150
Lymington
SO41 6WA
United Kingdom

Secretary: **Mr. Graham Marle**
Tel: **+ 44 1590 681 673**
Fax: **+44 870 432 7761**
E-mail: **secretary@iscpc.org**
ICPC Web-site: **www.iscpc.org**

DISCLAIMER

An International Cable Protection Committee Ltd ("ICPC") Recommendation ("Recommendation") implies a consensus of those substantially concerned with its scope and provisions. A Recommendation is intended as a guide to aid cable owners and other seabed users in promoting the highest goals of reliability and safety in the submarine cable environment. The existence of a Recommendation does not in any respect preclude anyone, whether he has approved the Recommendation or not, from laying or repairing undersea cables or employing procedures to these ends which may be required by the ordinary practice of seamanship or by the special circumstances of each case, but which may not be conforming to the Recommendation.

The ICPC does not develop standards and will in no circumstances give an interpretation of a Recommendation in the name of the ICPC. The ICPC and its members do not accept any liability for any errors in the Recommendation or for any consequences resulting from its use as a planning guide. Nothing in this Recommendation should be viewed as relieving anyone from the rights and obligations of seabed users under international law, including but not limited to the United Nations Convention of the Law of the Sea ("UNCLOS").

NB: ICPC Recommendations are subject to periodic review and users are cautioned to obtain the latest issues. This Recommendation may be revised or withdrawn at any time without further notice to the recipient.

TABLE OF CONTENTS

1. INTRODUCTION

This document recommends the separation principles to be used when undertaking the planning of new wind farm developments and/or submarine cables where the planned plant approaches close to existing plant.

The information contained in this recommendation is based on established submarine cable repair practices.

NB: Because the majority of wind farms are located in relatively shallow water the separation distances recommended in this document are designed to deal water depths up to 40 metres. This Recommendation will be updated to cover deeper waters when there is evidence of a requirement for it.

2. CONSULTATION

Owners of wind farms and those planning construction are strongly advised to contact the submarine cable owners during the initial planning stage for information on existing and planned submarine cables.

If there is any doubt about who the submarine cable owners may be, the ICPC can be requested for asistance via secretary@iscpc.org

3. REQUIREMENTS OF EACH INDUSTRY

3.1. Wind Farm Industry

The wind farm operator has two prime considerations: the security of the turbines from surface navigation and the security of the wind farm's submarine power cables from other seabed users.

A safety zone of up to 500m around an offshore structure may be established by a coastal State to ensure the safety of the structure and navigation, as described in Article 60 of the United Nations Convention on the Law of the Sea (1982) and the Geneva Convention on the Continental Shelf (1958).

3.2. Submarine Cable Industry

The cable industry also has two prime considerations: the security of existing submarine cables during the wind farm construction phase and access for submarine cable repair vessels afterwards.

4. SEPARATION RECOMMENDATIONS

4.1. General

If wind farms are to have a 500 metre safety zone around the turbines then it is unreasonable to position them where it would force any third party who has to maintain their existing plant to enter that safety zone in order to carry out their legitimate business.

The recommended separation between submarine cables and a wind farm reflects the distances required for a cableship to carry out a cable repair. The deeper the water the longer the "layback" required to tow a set of grapnels to recover the cable.

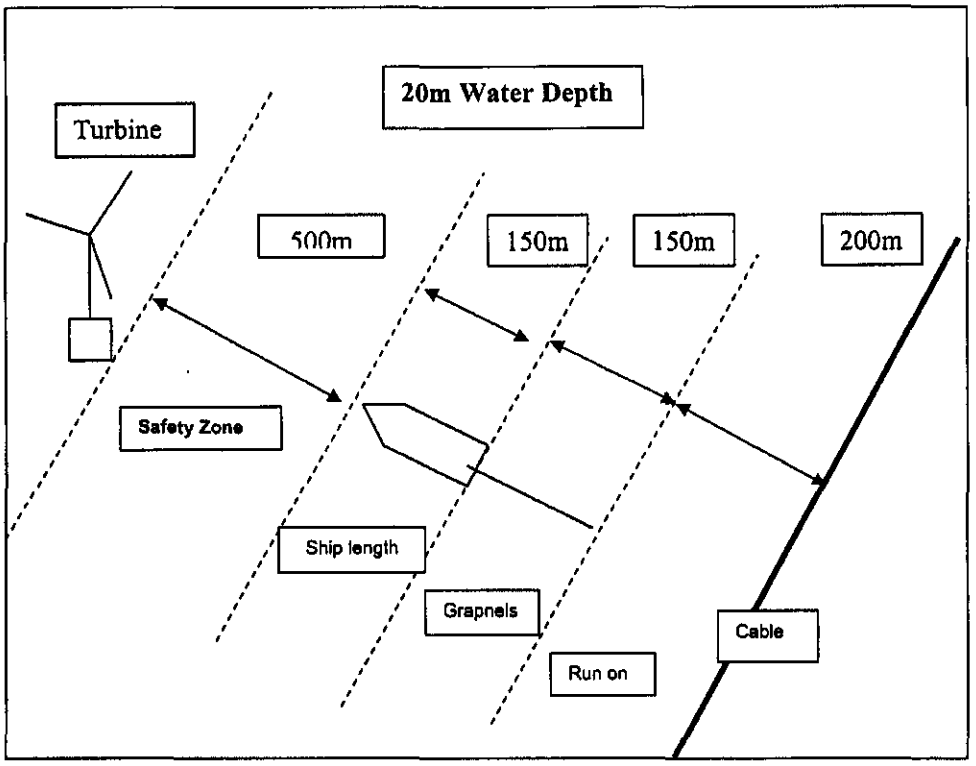
4.2. Turbine Structures

It is recommended that the position of turbine structures in relation to existing submarine cables should allow access for a ship to repair an existing submarine cable in the event of a fault.

The same principles are recommended for the separation of new submarine cables from existing wind farm structures.

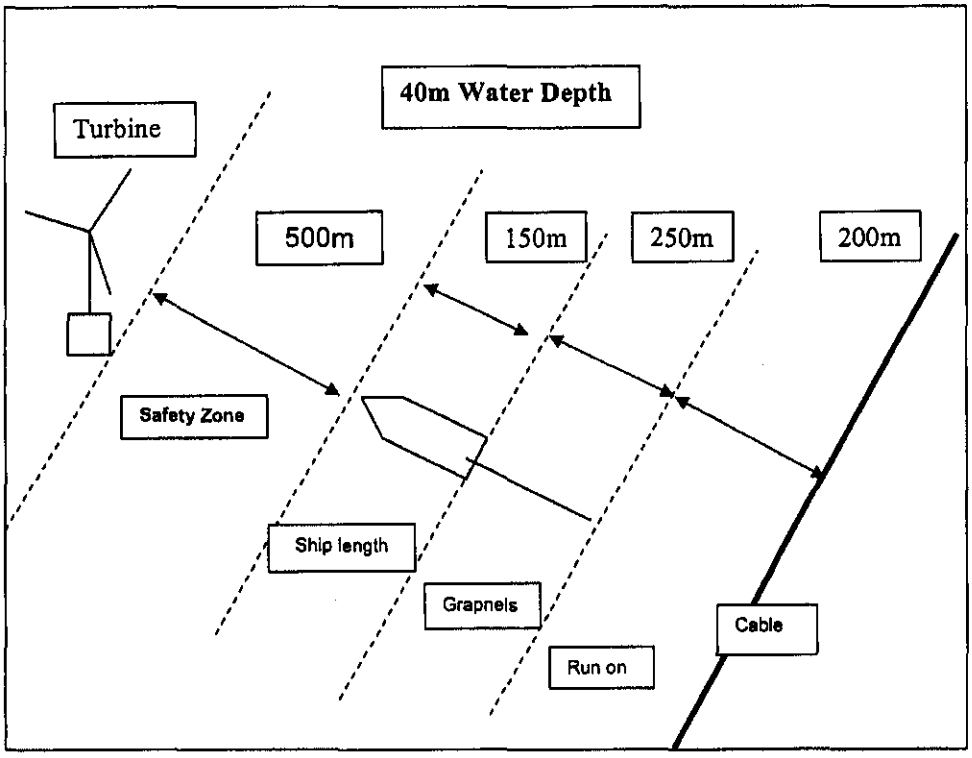
The manoeuvrability and station-keeping (dynamic positioning) properties of a ship should all be taken into account when planning a repair or maintenance operation in the vicinity of a wind farm.

For safety reasons it is recommended that a cable repair vessel should not operate within the 500m safety zone of a turbine structure. The total separation required will be dictated by the depth of water as illustrated in the two examples below:



20m water depth, recommended separation:

500m Safety Zone
150m Ship's Length
150m Grappling rig
200m Run on
1,000m Total



40m water depth, recommended separation:

500m Safety Zone
150m Ship's Length
250m Grappling rig
200m Run on
1,100m Total

Precise separation distances should be agreed and documented between the parties during the planning process. It is also recommended that wind farm developers consult the following ICPC Recommendation:

No.7: Procedure To Be Followed Whilst Offshore Civil Engineering Work Is Undertaken In The Vicinity Of Active Submarine Cable Systems

This recommendation is available via the ICPC web site www.iscpc.org

4.3. Power Cable Links

When planning the route of power cable links it is recommended that wind farm developers consult the following ICPC Recommendations:

No. 2: Recommended Routing and Reporting Criteria for Cables in Proximity to Others.

No. 3: Criteria to be applied to Proposed Crossings Between Submarine Telecommunications Cables and Pipelines/Power Cables.

These recommendations are available via the ICPC web site www.iscpc.org

5. PRECAUTIONS DURING CONSTRUCTION

5.1. Anchor Patterns

If an anchored vessel, platform or barge is used during the construction of a turbine (i.e. coring, piling or installing the tower) the closest anchor in the mooring pattern should be separated from existing submarine cables by:

a) a minimum 200 metres if the anchor wire does not cross the cable.

b) a minimum of 400 metres if if the anchor wire crosses the cable.

Anchor wires that cross the cable should maintain 20 metres vertical distance from the cable.

5.2. Support Vessels

All project procedures should include detailed charts with all existing submarine cables clearly identified.

All support vessels must be made aware of the positions of the submarine cables and instructed not to anchor within the safety zone.

6. NOTIFICATIONS

6.1. General

Where wind farm construction will result in their associated power cables running in close parallel to or crossing existing submarine cables, advance notification shall be given to the responsible Maintenance Authority.

6.2. Contact List

The project manager responsible for construction of a wind farm shall establish a list identifying the maintenance contacts for every operational submarine cable system in the general area of the planned wind farm.

This list will be used to facilitate the required notifications and for establishing the location of existing submarine cables for use during the planning of the turbine sites and their associated submarine cable links.

6.3. Government Owned Submarine Cables

The organisation that has responsibility for planning the wind farm construction shall make all reasonable efforts to ensure that the planned wind farm does not conflict with submarine installations that exist for reasons of national security.

If there is any doubt about who to contact, the ICPC can be requested for asistance via secretary@iscpc.org

6.4. Operational Notifications

The wind farm owner should ensure that it is a requirement of the project manager to inform all relevant parties of the intention to commence construction operations at least 30 days prior to commencement.

7. DEFINITIONS

The following words, acronyms and abbreviations are referred to in this document.

Term	Definition
Maintenance Authority	The organisation responsible for the operation and maintenance of a particular submarine cable system

8. ACKNOWLEDGEMENTS

The Directors of ICPC Ltd wish to place on record their appreciation of the United Kingdom Cable Protection Committee (UKCPC) for allowing one of their Recommendations to be used as the basis for this International version.