Before the
BUREAU OF OCEAN ENERGY MANAGEMENT
U.S. DEPARTMENT OF THE INTERIOR
Washington, D.C.

In the Matter of Request for Information and Comments on the Preparation of the 2017–2022 Outer Continental Shelf (OCS) Oil and Gas Leasing Program	BOEM 2014-0059

COMMENTS OF THE
NORTH AMERICAN SUBMARINE CABLE ASSOCIATION

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EXECUTIVE SUMMARY

To safeguard U.S. national-security and economic interests, the North American Submarine Cable Association ("NASCA") urges the Bureau of Ocean Energy Management ("BOEM") to adopt measures to protect existing and planned submarine cable systems—which comprise the core of U.S. international communications and Internet infrastructure and have been identified by the U.S. Government as critical infrastructure—and to address the unique legal protections afforded to such systems as integral parts of BOEM's development of a new Five Year Program for oil and gas exploration and exploitation on the U.S. outer continental shelf ("OCS"). As the demand for energy increases and as technology evolves, NASCA expects that oil and gas infrastructure will increasingly move offshore into deeper waters and potentially to new areas along with Atlantic and Pacific coasts. The prospect of more intensive oil and gas uses of the OCS therefore requires significant and improved coordination with submarine cable systems.

Submarine cables carry more than 95 percent of the international voice, data, and Internet traffic of the United States, a percentage that is expected to continue to increase. Without submarine cable infrastructure, the global Internet would not function. Customary international law and various international treaties grant to submarine cables unique rights and freedoms not granted to any other activities in the marine environment. Although the potential for conflict between submarine telecommunications cables and energy-related activities on the U.S. OCS continues to grow, BOEM's Request for Information makes no mention of submarine cables, much less of the unique rights and protections due to such cables, the federal laws and agencies governing such cables, or any of the threats to submarine cables posed by energy-related activities in the OCS.

In developing its next Five Year Program, BOEM should expressly account for existing and planned submarine cable systems in the U.S. OCS, the federal agencies regulating such systems, their national-security and economic importance, and the unique treaty and statutory protections for such systems. In its Request for Information, BOEM has neglected to identify submarine cable infrastructure as a critical marine activity requiring coordination with any oil and gas exploration or exploitation on the U.S. OCS. It has also not requested any specific information regarding installed or planned submarine cable systems. These omissions, if left unremedied in BOEM's planning activities, threaten to exacerbate risks to existing submarine cable systems and limit the deployment of future systems. As a marine activity pervasive throughout the U.S. OCS, submarine cables are critical to U.S. economic and national-security interests.

Uncoordinated oil and gas exploration and exploitation activities pose significant risks to submarine cable infrastructure. Submarine cable installation, operation, and maintenance activities require spatial separation from other cables and other marine activities—including oil and gas exploration and exploitation—as recognized in various international standards. Absent sufficient spatial separation and coordination, oil and gas activities threaten submarine cables with:

- Direct physical disturbance through the use of anchors for production platforms and semi-submersible drill rigs, support vessels, barges, and tankers; core sampling; drills, dredges, hydraulic jets, and cutting tools; and ROVs;
- Pipeline proximity to and crossings with cables, which pose direct physical disturbance risks during installation, operation, and maintenance and add significant

complexity, costs, and time requirements for repair operations for a submarine cable (as well as the adjacent or crossing pipeline); and

- Impaired access to submarine cables both at the surface (for cable ships) and on the seafloor (for cables)—given the spatial needs for large-vessel cable ships to maneuver in variable ocean conditions on the ocean's surface (which can be impeded by the presence of platforms, rigs, tankers, and support vessels) and for sea plows, grapnels, and ROVs on the sea floor during installation and maintenance (which can be impeded by a variety of oil and gas equipment)—all of which increases the complexity, costs, and time required to complete installations and repairs and can increase the costs to customers of network outages.

To ensure better coordination with, and protection of, submarine cables NASCA urges BOEM to implement the following actions in its planning activities and documents for its next Five Year Program:

- Recognition of categorical exclusion zones around existing submarine cables and withdrawal from leasing those lease blocks or portions of lease blocks traversed by existing submarine cables;
- Revision of BOEM lease and right-of-way grant documentation to recognize the presence of, and federal legal protections for, submarine cables;
- Specific identification of submarine cables in BOEM planning processes and inclusion of submarine cable operators as critical stakeholders in those processes;
- Establishment of coordination mechanisms with expert agencies engaged in the regulation of submarine cables; and

- Continued engagement with, and implementation of recommendations adopted by, the federal advisory committee advising the Federal Communications Commission on submarine cable protection.

These measures will are critical for protecting existing submarine cable infrastructure and ensuring the development and protection of future submarine cable infrastructure.

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To safeguard U.S. national-security and economic interests, the North American Submarine Cable Association ("NASCA") urges the Bureau of Ocean Energy Management ("BOEM") to adopt measures to protect existing and planned submarine cable systems—which comprise the core of U.S. international communications and Internet infrastructure and have been identified by the U.S. Government as critical infrastructure—and to address the unique legal protections afforded to such systems as integral parts of BOEM's development of a new Five Year Program for oil and gas exploration and exploitation on the U.S. outer continental shelf ("OCS").[1] As the demand for energy increases and as technology evolves, NASCA expects that oil and gas infrastructure will increasingly move offshore into deeper waters and potentially to new areas along with Atlantic and Pacific coasts. The prospect of more intensive oil and gas

[1] *See Department of the Interior, Bureau of Ocean Energy Management, Request for Information and Comments on the Preparation of the 2017-2022 Outer Continental Shelf (OCS) Oil and Gas Leasing Program*, 79 Fed. Reg. 34,349 (June 16, 2014) ("*RFI Notice*").

uses of the OCS therefore requires significant and improved coordination with submarine cable systems.

Submarine cables[2] carry more than 95 percent of the international voice, data, and Internet traffic of the United States, a percentage that is expected to continue to increase. Without submarine cable infrastructure, the global Internet would not function. Customary international law and various international treaties grant to submarine cables unique rights and freedoms not granted to any other activities in the marine environment. Although the potential for conflict between submarine telecommunications cables and energy-related activities on the U.S. OCS continues to grow, the *RFI Notice* makes no mention of submarine cables, much less of the unique rights and protections due to such cables, the federal laws and agencies governing such cables, or any of the threats to submarine cables posed by energy-related activities in the OCS absent awareness and coordination.

NASCA is a nonprofit association of the principal submarine cable owners, submarine cable maintenance authorities, and prime contractors for submarine cable systems operating in North America. NASCA members' cables land in seventeen (17) U.S. states and territories, with thousands of kilometers of installed cable traversing the U.S. OCS and many more under construction or in the planning stage. NASCA seeks to protect the interests of the submarine cable industry by educating government decision makers and the public, coordinating with other marine activities, and ensuring efficient government regulation of cable installation and maintenance activities in accordance with applicable law and treaty obligations. For decades, NASCA's members have worked with federal, state, and local government agencies, as well as

[2] The terms "submarine cables" and "undersea cables" are used interchangeably here to refer to telecommunications cables deployed in the marine environment. They are distinguished from "power cables" and "power transmission cables."

other concerned parties—such as commercial fishermen, offshore energy companies, and private environmental organizations—to ensure these ends.

These comments are divided into three parts. *First*, NASCA details the extensive presence of submarine cables in the U.S. OCS and urges BOEM to account for existing and planned submarine cable systems in the U.S. OCS, the federal agencies regulating such systems, their national-security and economic importance, and the unique treaty and statutory protections for such systems. *Second*, NASCA details the potential threats posed to submarine cables by uncoordinated oil and gas exploration and exploitation activities. *Third*, NASCA proposes specific recommendations for incorporation into BOEM's next Five Year Program that would protect existing submarine cable infrastructure and ensure development and protection of future submarine cable infrastructure:

- Recognition of categorical exclusion zones around existing submarine cables and withdrawal from leasing those lease blocks or portions of lease blocks traversed by existing submarine cables;
- Revision of BOEM lease and right-of-way grant documentation to recognize the presence of, and federal legal protections for, submarine cables;
- Specific identification of submarine cables in BOEM planning processes and inclusion of submarine cable operators as critical stakeholders;
- Establishment of coordination mechanisms with expert agencies engaged in the regulation of submarine cables; and
- Continued engagement with, and implementation of recommendations adopted by, the federal advisory committee advising the Federal Communications Commission on submarine cable protection.

I. IN ITS DEVELOPMENT OF A NEW FIVE YEAR PROGRAM, BOEM SHOULD ACCOUNT FOR EXISTING AND PLANNED SUBMARINE CABLE SYSTEMS AND THE UNIQUE LEGAL PROTECTIONS FOR SUCH INFRASTRUCTURE

In its development of a new Five Year Program for oil and gas exploration and exploitation on the U.S. OCS, BOEM should expressly account for existing and planned submarine cable systems and the unique legal protections for such infrastructure. In the *RFI Notice*, BOEM has requested "comments and suggestions of national or regional application that would be useful in formulating the Five Year Program."[3] In identifying "the types of information that would be most useful in conducting the analysis, pursuant to section 18 of the OCS Lands Act," however, BOEM has neglected to identify submarine cables as a critical marine activity requiring coordination with any oil and gas exploration or exploitation on the U.S. OCS. It has also not requested any specific information regarding installed or planned submarine cable systems.[4] These omissions, if left unremedied, threaten to exacerbate risks to existing submarine cable systems and limit the deployment of future systems. As a marine activity pervasive throughout the U.S. OCS, submarine cables are critical to U.S. economic and national-security interests. To address these omissions, NASCA identifies below both existing and planned submarine cable infrastructure, key U.S. Government agencies involved in regulating such infrastructure, and the treaty and domestic-law protections for such infrastructure.

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3 *RFI Notice*, 79 Fed. Reg. at 34,351.

4 *See id.* (identifying "other uses of the sea and seabed, including fisheries; navigation; military activities; existing or proposed sea lanes; potential sites of deepwater ports (including liquefied natural gas facilities); potential offshore wind, wave, current, or other alternative energy sites; and other anticipated uses of OCS resources and locations.").

A. Submarine Cables Are Critically Important to the U.S. Economy and U.S. National Security

Contrary to popular perception, most U.S. international voice, data, and Internet traffic travels by submarine cable—a percentage that continues to increase over time.[5] Submarine cables provide higher-quality, more reliable and secure, and less expensive communications than do communications satellites.[6] Submarine cables also provide the principal connectivity between the contiguous United States and Alaska, Hawaii, American Samoa, Guam, Puerto Rico, and the U.S. Virgin Islands, and also significant connectivity within Alaska, Hawaii, and the U.S. Virgin Islands.[7]

Submarine cables play a critical role both in ensuring that the United States can communicate with itself and the world, and in supporting the commercial and national security endeavors of the United States and its citizens. Submarine cables support U.S.-based commerce abroad and provide access to Internet-based content, a substantial percentage of which is still located in the United States, as evidenced by interregional Internet traffic flows.[8] They also carry the vast majority of civilian and military U.S. Government traffic, as the U.S. Government does not generally own and operate its own submarine cable systems for communications

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5 *See Submarine Cables and the Oceans – Connecting the World*, UNEP-WCMC Biodiversity Series No. 31 (UNEP-WCMC and ICPC, 2009) at 8, *available at* www.iscpc.org/publications/ICPC-UNEP_Report.pdf (noting that more than 95 percent of the world's telecommunications and Internet traffic is routed via submarine cable) ("UNEP-WCMC-ICPC Report").

6 *Id*. at 15-16.

7 *Cf. id.* at 16; *see also* TeleGeography, Submarine Cable Map, http://www.submarinecablemap.com.

8 *See* TeleGeography, Global Internet Map 2012, http://global-internet-map-2012.telegeography.com.

purposes.[9] Submarine cables have long been designated as critical infrastructure by the U.S. Government.[10]

Submarine cables—which typically have the diameter of a garden hose—are laid and repaired by cable ships built specifically for cable-related operations and designed for covering vast distances and multi-month deployments. Cable ships are crewed by highly trained and experienced merchant mariners, submersible engineers, and cable operations staff. These ships use a variety of remotely operated vehicles ("ROVs"), sea plows, lines, and grapnels for manipulating cable and repeaters beyond the ship, whether in the water column or on the seabed.

Cable maintenance providers contract with individual owners of submarine cable systems and with regional maintenance authorities for the provision of long-term maintenance services. They also occasionally contract with system owners for one-off maintenance operations. Cable and repeaters for repairs are typically manufactured on a system-specific basis and kept on hand for immediate use by the maintenance provider.

Although damage to submarine cables is rare, it most often is caused by human activities such as commercial fishing (in which nets and clam dredges ensnare cables), vessel anchors,

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[9] *See, e.g.*, John Cummings, *Contract Awarded for Kwajalein Cable System*, U.S. Army News, June 13, 2008, *available at* www.army.mil/-news/2008/06/13/9972-contract-awarded-for-kwajaleincable-system-kcs/ (describing Defense Information Systems Agency's contract for service on the privately-owned HANTRU1 system, which will connect Guam with the U.S. Army Kwajalein Atoll/Reagan Test Site in the Republic of the Marshall Islands); Naval Facilities Engineering Command, Capabilities, *available at* https://www.navfac.navy.mil/products_and_services/ci/products_and_services/naval_ocean_facilities_program/capabilities.html

[10] Presidential Policy Directive – Critical Infrastructure Security and Resilience, PPD-21 (Feb. 12, 2013), www.whitehouse.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil; *See* Department of Homeland Security, Communications Sector-Specific Plan (2010), www.dhs.gov/xlibrary/assets/nipp-ssp-communications-2010.pdf.

dredging related to sand and mineral extraction, petroleum extraction, and pipeline construction.[11] Submarine cables are also at risk from natural hazards such as hurricanes, underwater landslides, and seismic events such as earthquakes and tsunamis resulting therefrom.[12] Timely repairs are critical given the economic and national-security significance of traffic carried by these cables. Consequently, maintenance providers and cable ships must be prepared to respond rapidly, with continuously-qualified personnel, vessels on stand-by, and appropriate equipment. Recent damage to submarine cables in Alaska in 2013 and 2014, east Africa in 2012, in the Pacific following the Tohoku earthquake in 2011, and in East Asia, south Asia, and western Africa in July and August of 2009, only underscores the importance of such maintenance operations.[13]

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[11] *See* UNEP-WCMC-ICPC Report at 43-48; International Cable Protection Committee, *Fishing and Cables: Working Together* (2d ed. 2009), *available at* www.iscpc.org/information/Openly%20Published%20Members%20Area%20Items/ICPC_Fishing_Booklet_Rev_2.pdf; International Cable Protection Committee, *Loss Prevention Bulletin: Damage to Submarine Cables Caused by Anchors* (Mar. 18, 2009), www.iscpc.org/publications/Loss_Prevention_Bulletin_Anchor_Damage.pdf; International Cable Protection Committee, *About Submarine Telecommunications Cables* (presentation), Oct. 2011, *available at* http://www.iscpc.org/publications/About_SubTel_Cables_2011.pdf ("About Submarine Telecommunications Cables").

[12] *See* About Submarine Telecommunications Cables at 37.

[13] *See* "5.9 earthquake causes telecom outage in Southeast Alaska," *Alaska Dispatch News* (July 25, 2014), www.adn.com/article/20140725/59-earthquake-causes-telecom-outage-southeast-alaska (last visited Aug. 15, 2014); David Smith, *East Africa internet access slows to a crawl after anchor snags cable*, The Guardian (UK) (Feb. 28, 2012), *available at* http://www.guardian.co.uk/world/2012/feb/28/east-africa-internet-access-anchor (last visited Aug. 15, 2014); Solomon Moore, *Ship Accidents Sever Data Cables Off East Africa*, Wall St. J. Online, Feb. 28, 2012, http://online.wsj.com/article/SB10001424052970203833004577249434081658686.html; Owen Fletcher & Juro Osawa, *Rush to Fix Quake-Damaged Undersea Cables*, Wall St. J. Online, Mar. 15, 2011, http://online.wsj.com/article/SB10001424052748704893604576199952421569210.html; Sean Buckley, *Southeast Asia undersea cable suffers major damage*, FierceTelecom.com (Aug. 13, 2009), http://www.fiercetelecom.com/story/southeast-asian-undersea-cable-suffers-major-damage/2009-08-13.

B. Significant Submarine Cable Infrastructure Already Exists in the U.S. OCS, and More Is Planned

The U.S. OCS contains significant existing and planned submarine cable infrastructure, and more is planned. At present, at least 53 in-service submarine cable systems traverse the OCS of the United States and its territories. Thirty-eight of these systems are at least partly located in OCS planning areas identified in the *RFI Notice*. NASCA expects to see additional cables planned and installed in all of these U.S. OCS planning regions in the near future.

The following-in-service submarine cable systems currently traverse the North Atlantic, Mid-Atlantic, South Atlantic, and Straits of Florida OCS Planning Areas (collectively, "Atlantic OCS Planning Areas"):

- ***Americas-II***: landing at Hollywood, Florida; Miramar, Puerto Rico; St. Croix, U.S. Virgin Islands; Martinique; Curaçao; Venezuela; Trinidad & Tobago; French Guyana; and Brazil;
- ***AMX-1***: landing at Jacksonville, Florida; Miami, Florida; Puerto Rico; Brazil; the Dominican Republic; Guatemala; and Mexico;
- ***Apollo***: landing at Manasquan, New Jersey; Shirley New York; France, and the United Kingdom;
- ***ARCOS-1***: landing at North Miami Beach, Florida; Isla Verde, Puerto Rico; Bahamas; Belize, Colombia; Costa Rica; Curaçao; Dominican Republic; Guatemala; Honduras; Mexico; Nicaragua; Panama; Turks & Caicos Islands; and Venezuela;
- ***Atlantic Crossing-1***: landing at Brookhaven, New York; Germany; the Netherlands; and the United Kingdom;
- ***Atlantic Crossing-2/Yellow***: landing at Bellport, New York, and the United Kingdom;
- ***Bahamas-II***: landing at Vero Beach, Florida, and the Bahamas;
- ***Bahamas Internet Cable System***: landing at Boca Raton, Florida; Spanish River Park, Florida, and the Bahamas.
- ***Canada-United States-1 (CANUS-1)***: landing at Manasquan, New Jersey, and Canada;
- ***Challenger Bermuda***: landing at Charlestown, Rhode Island, and Bermuda;
- ***CFX-1***: landing at Boca Raton, Florida; Colombia; and Jamaica;
- ***Columbus-III***: landing at Hollywood, Florida; Italy; Portugal; and Spain;
- ***FLAG Atlantic-1***: landing at Island Park and Northport, New York; France; and the United Kingdom;

- ***Gemini Bermuda***: landing at Manasquan, New Jersey, and Bermuda;
- ***Globenet***, landing at Tuckerton, New Jersey; Boca Raton, Florida; Bermuda; Brazil; and Venezuela;
- ***Hibernia Atlantic***: landing at Lynn, Massachusetts; Canada; Ireland; and the United Kingdom;
- ***MAYA-1***: landing at Hollywood, Florida; Cayman Islands; Colombia; Costa Rica; Honduras; Mexico; and Panama;
- ***Mid-Atlantic Crossing***: landing at Brookhaven, New York; Hollywood, Florida; and St. Croix, U.S. Virgin Islands;
- ***SAm-1***: landing at Boca Raton, Florida; San Juan, Puerto Rico; Argentina; Brazil; Chile; Colombia; Ecuador; and Peru;
- ***TAT-14***: landing at Manasquan and Tuckerton, New Jersey; Denmark; France; Germany; the Netherlands; and the United Kingdom; and
- ***TGN Atlantic***: landing at Wall, New Jersey, and the United Kingdom.[14]

The following planned or announced new submarine cable systems will traverse the Atlantic OCS Planning Areas:

- ***Emerald Express***: landing at Shirley, New York; Iceland, Ireland, and the United Kingdom; and
- ***Seabras-1***: landing at New York and Brazil.[15]

The following-in-service submarine cable systems currently traverse the Washington-Oregon, Northern California, Central California, and/or Southern California OCS Planning Areas (collectively, "Pacific OCS Planning Areas"):

- ***AKORN***: landing at Florence, Oregon, and Anchorage, Homer, and Nikiski, Alaska;
- ***Alaska Northstar***: landing at Nedonna Beach, Oregon, and Lena Point, Valdez, and Whittier, Alaska;
- ***Alaska United East***: landing at Juneau, Valdez, and Whittier, Alaska, and Lynwood, Washington;
- ***Alaska United West***: landing at Seward, Alaska, and Warrenton, Oregon;

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[14] *See* TeleGeography, Submarine Cable Map, www.submarinecablemap.com.

[15] *See id.*

- ***Asia-America Gateway***: landing at San Luis Obispo, California; Keawaula, Hawaii; Tanguisson Point, Guam; Brunei; Hong Kong; Malaysia; the Philippines; Singapore; Thailand; and Vietnam;
- ***China-U.S.***: landing at Bandon, Oregon; San Luis Obispo, California; Tanguisson Point, Guam; China, Japan; Korea; and Taiwan;
- ***Japan-U.S.***: landing at Morro Bay, California; Makaha, Hawaii; and Japan;
- ***Pacific Crossing-1***: landing at Harbour Pointe, Washington; Grover Beach, California; and Japan;
- ***Pan-American Crossing***: landing at Grover Beach, California; Costa Rica, Mexico; and Panama;
- ***Southern Cross***: landing at Hillsboro, Oregon; Morro Bay, California; Kahe Point and Spencer Beach, Hawaii; Australia; Fiji; and New Zealand;
- ***TGN Pacific***: landing at Hermosa Beach, California; Hillsboro, Oregon; Piti, Guam; and Japan;
- ***Trans-Pacific Express***: landing at Nedonna Beach, Oregon; China; Japan; Korea; and Taiwan; and
- ***Unity***: landing at Hermosa Beach, California, and Japan.[16]

The following planned or announced new submarine cable systems will traverse the Pacific OCS Planning Areas:

- ***APX-East***: landing at Hermosa Beach, California, and Australia;
- ***Arctic Fibre***: landing at Seattle, Washington; Prudhoe Bay, Alaska; Canada; Ireland; Japan; and the United Kingdom;
- ***FASTER***: landing at the West Coast of the United States and Japan;
- ***Hawaiki***: landing at Pacific City, Oregon; Oahu, Hawaii; Australia; and New Zealand;
- ***New Cross Pacific Cable ("NCP")***: landing at the West Coast of the United States and China; and
- ***SEA-US***: landing at the West Coast of the United States; Hawaii; Guam; the Philippines; and Indonesia.[17]

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[16] *See id.*

[17] *See id.* (showing APX-East, Arctic Fibre, and Hawaiki); Julian Rawle, "How Sustainable Is Asian Growth?," *Submarine Cable News* (Feb. 14, 2014), www.pioneerconsulting.com/site/images/stories/Pioneer_Consulting_Rawle_Article_How_Sustainable_is_Asian_Growth_Feb_2014_Edition_of_SCN.pdf (discussing APX-East, FASTER, Hawaiki, NCP, and SEA-US); NEC Corporation, *A Global Consortium to Build New Trans-Pacific Cable System "FASTER"* (Aug. 11, 2014),

The following-in service submarine cable systems currently traverse the Gulf of Alaska, Kodiak, Cook Inlet OCS Planning Areas around Alaska:

- ***AKORN***: landing at Anchorage, Homer, and Nikiski, Alaska, and Florence, Oregon;
- ***Alaska Northstar***: landing at Nedonna Beach, Oregon, and Lena Point, Valdez, and Whittier, Alaska;
- ***Alaska United East***: landing at Lynwood, Washington, and Juneau, Valdez, and Whittier, Alaska;
- ***Alaska United West***: landing at Warrenton, Oregon, and Seward, Alaska;
- ***Kodiak-Kenai Fiber Link***: landing at Anchorage, Homer, Kenai, Kodiak, Narrow Cape, and Seward, Alaska;
- ***SEAFAST***: landing at Angoon, Hawk Inlet, Juneau, Ketchikan, Petersburg, Sitka, and Wrangell, Alaska; and
- ***TERRA-SW Cook Inlet Segment***: landing at Homer and Williamsport. Alaska.[18]

The following announced new submarine cable system will traverse the Beaufort, Chukchi, and perhaps other OCS Planning Areas around Alaska:

- ***Arctic Fibre***: landing at Prudhoe Bay, Alaska; Seattle, Washington; Canada; Ireland; Japan; and the United Kingdom.

The following-in-service submarine cable systems currently traverse the Western Gulf of Mexico and Central Gulf of Mexico OCS Planning Areas:

- ***BP Gulf of Mexico Fiber Optic Network***: landing at Freeport, Texas, and Pascagoula, Mississippi.[19]

Of course, there are also numerous out-of-service telecommunications and telegraph cables traversing the U.S. OCS.

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[18] *See* TeleGeography, Submarine Cable Map, www.submarinecablemap.com.

[19] *See* BP GoM Fiber Optic Network, www.gomfiber.com (last visited Aug. 15, 2014).

The planned commercial lifespan of these and other submarine cable systems is 25 years.[20] Nevertheless, the commercial lifespan of submarine cable systems can extend well beyond 25 years, particular where the systems have been upgraded or redeployed. Consistent with these characteristics, the Federal Communications Commission ("FCC") grants cable landing licenses for a term of 25 years from commencement of commercial service, subject to renewal.[21]

C. Submarine Cables Enjoy Unique Treaty Rights and Protections Granted to No Other Activity in the Marine Environment

U.S. treaty obligations and customary international law (as observed by the United States) recognize unique freedoms for the installation and maintenance of submarine cables. These rights and freedoms are not accorded to energy-related activities, commercial fishing, or marine transport, and sometimes these rights and freedoms take precedence over those of other marine activities.

Various international treaties dating back to 1884 guarantee unique freedoms to lay, maintain, and repair submarine cables—freedoms not granted for any other marine activities—and restrict the ability of coastal states (*i.e.*, countries) to regulate them.[22] Principles articulated in these treaties have since been recognized as customary international law.

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20 UNEP-WCMC-ICPC Report at 33.

21 47 C.F.R. § 1.767(g)(14) (providing that "[t]he cable landing license shall expire twenty-five (25) years from the in-service date, unless renewed or extended upon proper application."). For additional detail regarding the FCC's role as one of the principal regulators of submarine cables landing in the United States and its territories, *see* part I.D below.

22 *See* Convention for the Protection of Submarine Telegraph Cables, Mar. 14, 1884, 24 Stat. 989, 25 Stat. 1424, T.S. 380, (entered into force definitively for the United States on May 1, 1888) ("1884 Convention"); Geneva Convention on the High Seas, Apr. 29, 1958, 13 U.S.T. 2312, T.I.A.S. 5200, 450 U.N.T.S. 82 (entered into force definitively for the United States on Sept. 30, 1962) ("High Seas Convention"); Geneva Convention on the Continental Shelf, Apr. 29, 1958, 15 U.S.T. 471, T.I.A.S. 5578, 499 U.N.T.S. 311 (entered into force

Specifically, these treaties guarantee:

- The freedom to install submarine cables on the high seas beyond the continental shelf and to repair existing cables without impediment or prejudice;[23]
- The freedom to install and maintain submarine cables on the continental shelf,[24] subject to reasonable measures for the exploration of the continental shelf and the exploitation of its natural resources;[25]

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definitively for the United States on June 10, 1964) ("Continental Shelf Convention"); Law of the Sea Convention, Dec. 10, 1982, 1833 U.N.T.S. 397 (entered into force on Nov. 16, 1994) ("LOS Convention").

[23] High Seas Convention, arts. 2 ("Freedom of the high seas is exercised under the conditions laid down by these articles and by the other rules of international law. It comprises, inter alia, both for coastal and non-coastal States: . . . Freedom to lay submarine cables and pipelines."), 26(1) ("All States shall be entitled to lay submarine cables and pipelines on the bed of the high seas"), 26(3) ("When laying such cables or pipelines the State in question shall pay due regard to cables or pipelines already in position on the seabed. In particular, possibilities of repairing existing cables or pipelines shall not be prejudiced."); LOS Convention art. 112(1) ("All States are entitled to lay submarine cables and pipelines on the bed of the high seas beyond the continental shelf.").

[24] LOS Convention arts. 79(1) ("All States are entitled to lay submarine cables and pipelines on the continental shelf, in accordance with the provisions of this article"), 79(5) ("When laying submarine cables or pipelines, States shall have due regard to cables or pipelines already in position. In particular, possibilities of repairing existing cables or pipelines shall not be prejudiced."). *See also* LOS Convention, art. 78(2) ("The exercise of the rights of the coastal State over the continental shelf must not infringe or result in any unjustifiable interference with navigation and other rights and freedoms of other States as provided for in this Convention.").

[25] Continental Shelf Convention, art. 4 ("Subject to its right to take reasonable measures for the exploration of the continental shelf and the exploitation of its natural resources, the coastal State may not impede the laying or maintenance of submarine cables or pipe lines on the continental shelf."); LOS Convention, arts. 79(2) ("Subject to its right to take reasonable measures for the exploration of the continental shelf, the exploitation of its natural resources and the prevention, reduction and control of pollution from pipelines, the coastal State may not impede the laying or maintenance of such cables or pipelines"), 79(4) ("Nothing in this Part affects the . . . [coastal State's] jurisdiction over cables and pipelines constructed or used in connection with the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction."). The course of a pipeline on the continental shelf is subject to coastal-state consent, while the

- The freedom to install and maintain submarine cables in the exclusive economic zone of all states;[26]
- The ability to install submarine cables in a state's territory or territorial sea subject to conditions and exercise of national jurisdiction;[27] and
- The freedom to maintain existing submarine cables passing through the waters of an archipelagic state without making landfall.[28]

These treaty obligations are now treated as customary international law,[29] in particular by the United States.[30]

For purposes of the EEZ and the continental shelf, submarine cables are distinguished from (1) artificial islands, (2) structures and installations used for exploration or exploitation of

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course of a submarine cable is not. *See id.*, art. 79(3) ("The delineation of the course for the laying of such pipelines on the continental shelf is subject to the consent of the coastal State.").

[26] LOS Convention art. 58(1) ("In the exclusive economic zone, all States, whether coastal or land-locked, enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in article 87 of navigation and overflight and of the laying of submarine cables and pipelines.").

[27] *Id.*, art. 79(4) ("Nothing in this Part affects the right of the coastal State to establish conditions for cables or pipelines entering its territory or territorial sea").

[28] *Id.*, art. 51(2).

[29] *See* Delimitation of the Maritime Boundary in the Gulf of Maine Area (Can. v. U.S.), 1984 I.C.J Rep. 246, 294 ¶ 94 (1984).

[30] The United States recognized these freedoms starting in 1983, even though the United States has never ratified the LOS Convention (it signed only in 1994) and even though the Convention did not enter into force for those states that had ratified it until 1994. Presidential proclamations by two different U.S. presidents expressly stated that the establishments of an Exclusive Economic Zone ("EEZ") and a contiguous zone, respectively, did not infringe on the high-seas freedoms to lay and repair submarine cables. *See* Presidential Proc. No. 5030, 48 Fed. Reg. 10,605 (Mar. 10, 1983) ("Pres. Proc. No. 5030") (establishing the U.S. EEZ); Presidential Proclamation No. 7219, 64 Fed. Reg. 48,701 (Aug. 2, 1999) (establishing the U.S. contiguous zone).

living or nonliving natural resources or for "other economic purposes," and (3) installations and structures which may interfere with the exercise of the rights of the coastal state in the EEZ or on the continental shelf.[31] Although these treaties permit coastal states to take reasonable measures respecting natural resource exploitation on the Continental Shelf, they bar states from taking such measures with respect to submarine cables, the construction and repair of which are not undertaken for natural resource exploration or exploitation.[32] These treaty provisions are reflected in the official position of the United Nations' Office of Legal Affairs of the Division for Ocean Affairs and the Law of the Sea, which states that:

> [B]eyond the outer limits of the 12 nm territorial sea, the coastal State may not (and should not) impede the laying or maintenance of cables, even though the delineation of the course for the laying of such pipelines [but not submarine cables] on the continental shelf is subject to its consent. The coastal State has jurisdiction only over cables constructed or used in connection with the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction.[33]

Thus, a coastal nation must forbear from imposing any restrictions on the installation or maintenance of submarine cables unless those submarine cables themselves are used for natural resource exploration or exploitation.

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31 LOS Convention, arts. 56, 60(1), 80.

32 *Id.*, art. 79(2); Continental Shelf Convention, art. 4.

33 *Maritime Space: Maritime Zones and Maritime Delimitations—Frequently Asked Questions*, United Nations Department of Oceans and Law of the Sea, Office of Legal Affairs (responding to Question #7, "What regime applies to the cables and pipelines?"), http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/frequently_asked_questions.htm (last visited Aug. 15, 2014).

Coastal states also have obligations to prevent willful or negligent damage to cables.[34] And all states "shall have due regard to cables or pipelines already in position."[35] Submarine cables are thus afforded a great degree of protection from regulation or interference by coastal states, reflecting the vital role that submarine cables play in facilitating communications, commerce, and government.

D. The U.S. Government Has Long-Established and Specific Regulatory Regimes for Licensing and Regulating Submarine Cables

The United States regulates the installation and operation of submarine cables under laws and regulatory regimes that are largely specific to submarine cables. The principal regulatory regimes include the following:

- ***FCC***: A submarine cable operator must be granted a cable landing license for the installation or operation of any submarine cable in U.S. territory pursuant to the Cable Landing License Act of 1921.[36] Before granting any cable landing license, the FCC must seek the views of the U.S. Department of State (acting through its Office of International Communications and Information Policy), the U.S. Department of Commerce's National Telecommunications and Information Administration, and the Defense Information Systems Agency.[37]

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[34] *See* LOS Convention, art. 113 ("Every State shall adopt the laws and regulations necessary to provide that the breaking or injury by a ship flying its flag or by a person subject to its jurisdiction of a submarine cable beneath the high seas done willfully or through culpable negligence, in such a manner as to be liable to interrupt or obstruct telegraphic or telephonic communications, and similarly the breaking or injury of a submarine pipeline or high-voltage power cable, shall be a punishable offence. This provision shall apply also to conduct calculated or likely to result in such breaking or injury. However, it shall not apply to any break or injury caused by persons who acted merely with the legitimate object of saving their lives or their ships, after having taken all necessary precautions to avoid such break or injury.").

[35] *Id.*, art. 79(5).

[36] An Act Relating to the Landing and Operation of Submarine Cables in the United States, *codified at* 47 U.S.C. §§ 34-39; Executive Order 10,530, *reprinted in* 3 U.S.C. § 301; 47 C.F.R. § 1.767.

[37] 47 C.F.R. § 1.767(j).

- ***Team Telecom***: For submarine cables connecting the United States with foreign points or with significant foreign ownership, the U.S. Departments of Defense, Homeland Security, and Justice and the Federal Bureau of Investigation (collectively known as "Team Telecom" in this context) review and often request the FCC to impose security-related conditions in the cable landing license in order to assure both infrastructure security and information security. Team Telecom does not act pursuant to any particular law but instead appears to rely on the President's plenary foreign affairs power, role as Commander in Chief, and sole organ of the United States in foreign relations.[38]

- ***U.S. Army Corps of Engineers*** ("ACOE"): The ACOE must authorize the installation of any submarine cable in U.S. waters pursuant to the Rivers and Harbors Act of 1899, as well as the installation of any submarine cable in an estuary pursuant to the Clean Water Act. These cables are sometimes authorized under the ACOE's Nationwide Permit Program. In other cases, they involve the issuance of individual permits following the submission and review of draft environmental impact statements.

NASCA notes that while BOEM has sought specific information from the States, the U.S. Department of Commerce, and the U.S. Department of Energy to address particular information needs with respect to coastal zone management and energy markets, it has not requested any specific information from the FCC, Team Telecom, or the U.S. Army Corps of Engineers.[39] As part of the development of its Five Year Program, NASCA urges BOEM to seek information from these agencies and coordinate with them to protect existing submarine cable infrastructure and ensure the ability to develop and protect future submarine cable infrastructure, as described further in part III below.

E. U.S. Law Establishes Federal Offenses for Cable Damage

U.S. law provides that damaging a submarine cable—whether deliberately or through negligence—is a federal offense punishable by fine, imprisonment, or both.[40] Federal law

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[38] *See, e.g.*, *United States v. Curtiss-Wright Exp. Corp.*, 299 U.S. 304, 319 (1936); U.S. Constitution art. II.

[39] *RFI Notice*, 79 Fed. Reg. at 34,352-53.

[40] 47 U.S.C. §§ 21 (willful damage), 22 (negligent damage).

imposes obligations on fishing vessels to keep their nets from interfering with or damaging submarine cables, and requires fishing vessels to maintain a minimum distance from any vessel engaged in laying submarine cable or any buoy placed to mark the position of a submarine cable. Violators are subject to imprisonment and financial penalties.[41] In addition, submarine cable owners have a right under U.S. law to sue for damages to their cables.[42] As presently drafted, the DPEIS makes no mention of the threat of cable damage posed by energy-related activities on the OCS, much less the legal consequences of such damage.

As described in part II.A below, it is the submarine cable operators themselves who have developed industry standards and private contractual arrangements for managing marine spatial conflicts and minimizing cable damage. These tools include cable-crossing agreements and minimum separation distances between cables.[43] Such self-help remedies, however, are unlikely to be sufficient in the face of government-led energy development in the OCS, if left uncoordinated with submarine cable activities.

II. OIL AND GAS ACTIVITIES ON THE U.S. OCS, IF LEFT UNCOORDINATED, POSE SIGNIFICANT RISKS TO SUBMARINE CABLES

Submarine cable operators, installers, and maintenance providers have particular spatial requirements on the surface of the ocean and on the sea floor. Without adequate spatial

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41 *See* 47 U.S.C. § 25.

42 47 U.S.C. § 28.

43 Industry standards have been developed over many decades to facilitate cable installation, retrieval, and repair operations above and below the ocean surface. These standards minimize the risk of damage to neighboring cables during installation and maintenance operations and ensure access to a damaged cable with both a cable ship and other equipment to be used on the sea floor. *See, e.g.*, International Cable Protection Committee Recommendation No. 2, at 5, available from the International Cable Protection Committee at www.iscpc.org (ICPC Recommendation No. 2).

separation and coordination, oil and gas activities on the U.S. OCS pose significant risks to submarine cable systems.

A. Submarine Cable Installation, Operation, and Repair Require Spatial Separation from Other Cables and Other Marine Activities, as Well-Established in Various International and Foreign Standards

1. Vessel and Equipment Access

Cable ships—used for both installation and repair activities--are large vessels that consequently require adequate maneuvering space to accommodate operations and the effects of bad weather on the ocean. They frequently operate in less-than-perfect weather and ocean conditions, which necessitate additional maneuvering room. They operate in such conditions given the significant running costs of a cable ship (more than US $100,000 per day) makes delays costly, given commercial imperatives to minimize the time to market for new systems, and given the commercial and security imperatives to minimize the delay in repairing damaged systems and restoring communications.

2. Installation Activities

During an installation, a cable ship will pay out cable from the ship's tanks, maintaining tension to ensure that the cable does not throw loops, which can result in transmission failures if pulled tight and render a cable more susceptible to physical damage due to greater exposure above the seabed. Cable installers use various slack management techniques and software to minimize these outcomes. In shallow areas, cable is generally buried using a sea plow (typically to a depth of up to two meters) to protect it from the hazards such as commercial fishing and anchoring. In limited areas where there are no significant fishing or anchoring risks or where the seabed does not permit burial, it will be laid on the surface of the seafloor.

3. Cable Retrieval

To recover a cable from the sea floor for repair purposes, a ship can either deploy an ROV, or it can grapple for the cable. ROV use is limited to shallower depths between 50 and 2000 meters. ROV use is generally limited to cable laid or exposed on the surface of the sea floor, although an ROV can be used for retrieval of shallow-buried cable depending on the sediment type. To retrieve a surface-laid cable in deeper water, a cable ship uses grapnels. And to retrieve a buried cable at any depth, a cable ship uses a detrenching grapnel, the size and weight of which increases with the depth of water.

The grapnel (whether for surface-laid or buried cable) is lowered to the sea floor from lines on the cable ship and dragged in a direction perpendicular to the cable. This allows the grapnel to dig into the seabed and under the cable, maximizing the chance that the grapnel will hook the cable (rather than graze or accidentally release it) and bring it to the surface of the seabed. Current ship positioning technology allows for extremely accurate placement of this gear and for controlled cable retrieval. Nevertheless, bad weather, heavy seas, or strong currents can decrease the accuracy of these operations—a situation which poses a greater risk to other submarine cables or sea floor installations in the vicinity of the target cable.

A damaged submarine cable must be repaired onboard a cable ship. But a cable (whether tensioned or not) that is resting on, or buried in, the seabed will lack sufficient slack to reach the surface for repair. Unless a cable is already severed, therefore, it must first be cut in order to be brought to the surface. This retrieval operation takes at least three passes with the grapnel— one to cut the cable, a second to bring up and buoy one end of the cable, and a third to bring up and bring onboard the second end. After the ends are repaired and tested, a section of cable must be spliced in between the two ends in order to have them meet at the surface and restore

connectivity. This additional section is typically two and a half times the depth of water in length. This length permits what was previously a cable lying flat on the sea floor to reach up to the cable ship, provide length for manipulation and repair activities on board, and reach back down to the sea floor.

This final configuration (known as the final bight) must be carefully placed back on the seabed. The ship uses additional rope to pull the bight in a direction perpendicular to the line of the original cable and then lower it to the seabed. Only with this careful placement can the repair ship have any chance of laying the cable flat. It is critical that the cable lay flat. If the cable has loops or is elevated above the seafloor, it is virtually impossible to bury the repaired section. Loops are undesirable for a variety of reasons: they can result in transmission failures if pulled tight, they can stand upright on the seabed, and they are more susceptible to physical damage due to greater exposure above the seabed. Elevation of the cable above the seafloor is undesirable, as it exposes the cable to greater risk of damage by external events. Either exposes even more of the cable to the risk that caused the damage or fault in the first place.

4. Spatial Separation Standards

The submarine cable industry has developed standards to protect submarine cables from other marine activities, including adjacent cables.[44] The key recommendations of the International Cable Protection Committee ("ICPC") are summarized below and available at www.iscpc.org:

[44] Each installation and maintenance company also has more specific methods for handling cable per each cable manufacturer's recommendations.

Table 1		
No.	**Issue**	**Recommendation**
2	10	Cable Routing and Reporting Criteria This Recommendation provides generalized cable routing and notification criteria that the ICPC recommends be used when undertaking cable route planning activities where the cable to be installed crosses, approaches close to or parallels an existing or planned cable system. The criteria set out are designed to specifically apply to submarine telecommunication cables.
3	10	Telecommunications Cable and Oil Pipeline / Power Cables Crossing Criteria The continued increase in both the numbers of submarine cables and the exploitation of oil and gas from the seabed inevitably means that there will be more cases of crossings between telecommunications cables, power cables, and pipelines. The purpose of this document is to give guidance to those who are faced with this situation and provides some basic questions that need to be asked as the first step in considering any proposed crossing so that areas of concern can be identified and mutually acceptable solutions developed.
4	8	Co-ordination Procedures for Repair Operations Near In Service Cable Systems This document provides recommended procedures with respect to any repair operations that are undertaken near active cable systems. The procedures apply to the repair operations of active cable systems in the vicinity of any cable crossing or cables that are closely parallel. Considerations to be addressed include proximity to each other, ship operations, cable retrieval options, repair scheduling, establishing points of contact, and other non-site specific guidelines.
6	8A	Actions for Effective Cable Protection (Post Installation) This recommendation concerns post-installation measures to mitigate the risk of cable faults caused by human activities such as fishing and vessel anchoring. Such measures are often referred to as marine liaison, offshore liaison, or cable awareness. Different measures may be appropriate in different areas, even when a single cable system is involved. Such measures must take into account the characteristics of the different mariners active in each area, such as fishermen, merchant mariners, pilots, port authorities, military officers, marine traffic control officials, operators of resource extraction vessels, etc. These conditions and risks may change over time.
8	7A	Offshore Seismic Survey Work in the Vicinity of Active Submarine Cable Systems An active submarine cable system includes electro-optic devices that are required to manage the signal at intervals along its route. If the internal components of these submerged devices are subjected to acceleration greater than specification there is a risk of serious damage. This document recommends the procedure to be followed while offshore seismic survey work is undertaken in the vicinity of active submarine cable systems where these are installed in water depths of 200 meters or less.

ICPC Recommendation 2, which establishes principles for submarine cables located adjacent to each other, is instructive for all marine activities near existing submarine cables. ICPC Recommendation 2 recognizes that cables can be placed only so close to each other until they endanger other cables during installation and maintenance, or until they impede access for installation and maintenance—particularly if there are multiple installation and maintenance companies operating in the same vicinity above or below the ocean surface. The submarine cable industry therefore developed the following minimum cable separation distances. In shallow water when cables are plow buried, a cable separation of 500 meters is recommended. In deeper water, submarine cable operators follow a guideline according to which two parallel cables are to be separated by a distance equal to the lesser of three (3) times the depth of water or nine (9) kilometers, though actual placement may vary on a case-by-case basis.[45] Similarly, if both operators of parallel cables agree, cables in deeper water may be separated by a distance equal to the lesser of two (2) times the depth of water, or (6) six kilometers.[46] For example, a cable in 100 meters of water should be placed no closer than 300 meters to any other cable for any significant parallel length.

ICPC Recommendation 3 addresses submarine cable-pipeline crossings and reflects the fact that the submarine cable industry has a long history of working with the oil and gas producers in areas such as the North Sea where both industries are present. Crossing agreements are often required where a cable and a pipeline (or another cable) must cross. These agreements

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45 *See* ICPC Recommendation No. 2, at 10.

46 *Id.* While the submarine cable operators may agree to place the cables as little as 200 meters apart—either because the length of the parallel is short or the probability of damage and repair is low—most operators take a more conservative approach to cable separation distances. The "three-times-the-depth-of-water" standard allows the repair ship to lay the repaired cable back flat on the seabed without laying it over the adjacent cable.

specify the obligations and liabilities of each party during the installation and life cycle of the crossing. They are often required by the crossed party (whichever utility was there first) prior to giving permission to be crossed. In this case risk is reduced by agreeing the technical details of the crossing prior to the commencement of any work. Commercial liabilities are also agreed in the event of one party damaging the cable or pipeline of the other. Nevertheless, these mechanisms do not establish principles for minimizing crossings or limits on the total number of crossings for a particular cable.

B. Potential Impacts of Oil and Gas Exploration Activities on Submarine Cables

1. Direct Physical Disturbance

Oil and gas exploration and production activities risk disturbing the seabed and damaging existing submarine telecommunications cables. These activities including anchoring of production platforms and semi-submersible drill rigs (which use particularly large anchors), support vessels, barges, and tankers; core sampling; use of drills, dredges, hydraulic jets, and cutting tools; and use of ROVs.

These activities also present a threat of erosion and abrasion, destabilization of the seafloor, and redeposited sediments. All of these may result in exposing or suspending cables above the seafloor, thereby subjecting them to a heightened risk of damage from vessel traffic and fishing nets and anchors, as well as the risk of debris accumulating on cables. Risks of cable fault increase, while the presence of oil and gas exploration and exploitation activities limits cable vessel access for maintenance and repair, increasing the complexity of such activities, and driving up the time and costs involved.

2. Pipeline Proximity to, and Crossings with, Submarine Cables

Offshore oil and gas operators frequently run pipelines from their installations back to shore. Pipeline crossing with submarine cables pose direct physical disturbance risks during installation, operation, and maintenance activities for submarine cables and add significant complexity during repair operations for either the cable or the pipeline. Submarine cable owners therefore seek to coordinate with pipeline owners to ensure safe crossing.

Submarine cable installers and operators prefer not to run cables in parallel tracks for long distances but rather to have the cables cross so that the cables are in close proximity only where they cross. This minimizes complexity for repair operations, among other benefits. Cable operators therefore consult with each other when planning a cable crossing, and it is standard to seek permission for a crossing.[47] They do this to minimize the risk of damage to other cables during installation and maintenance operations, and also to ensure route diversity across a number of cables. This route diversity preserves connectivity between domestic or international points—for a single cable system, or across systems in a region.

As with crossings between cables, cable owners enter into crossing agreements with pipeline owners to minimize conflict and maximize access for maintenance purposes.[48] This protects both the cable operator and the pipeline owner from potential damage to their respective systems from the routine operations and maintenance of the other. Each additional pipeline crossing adds risk, complexity, and cost to the submarine cable operators' installation,

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[47] *See* ICPC Recommendation No. 2, at 4. Although permission is generally granted, there have been instances where the crossing company assumes liability for damage of the crossed cable if the crossing is planned in a congested area or in proximity to a repeater or other underwater body.

[48] *See*, *e.g.*, International Cable Protection Committee Recommendation No. 3, available from the International Cable Protection Committee at www.iscpc.org.

operations, and maintenance activities—which ultimately are reflected in the costs of communications services or in capacity constraints due to difficulties laying new systems.

3. Impeded Access—at Both the Ocean Surface and Seafloor—for Installation and Maintenance

Large offshore developments impede access to submarine telecommunications cable systems both at the surface (for cable ships) and on the seafloor (for cables). Cable ships are large vessels, and require space in which to maneuver when installing or repairing submarine cables, and to accommodate the effect of bad weather on the ocean. Offshore developments involving large structures, like oil platforms, present obstacles precluding cable ships from having ready access to the sea floor and to previously-installed cables.

Offshore developments that cover large areas of sea floor have the effect of forcing new submarine telecommunications cable projects into "gaps" on the sea floor between offshore developments. This, in turn, limits the access that cable vessels and the equipment necessary for cable installation (sea plows) and repair (grapnels and ROVs) have to the sea floor and the cable laid there. The result is to make the already complex tasks of cable installation and maintenance exponentially more complex, meaning that cable faults will be repaired less quickly and communications system outages will last longer, and that the costs to operators and the customers they serve could increase considerably.

III. BOEM SHOULD UNDERTAKE SPECIFIC MEASURES TO ENSURE SUBMARINE CABLE PROTECTION

A. BOEM Should Recognize Categorical Exclusion Zones Around Existing Submarine Cables and Withdraw from Leasing Those Lease Blocks or Portions of Lease Blocks Traversed by Existing Submarine Cables

NASCA urges BOEM to recognize categorical exclusion zones around existing submarine dabbles and to withdraw from leasing those lease blocks or portions of lease blocks

traversed by existing submarine cables. As described in part II above, the spatial requirements for cable installation and maintenance operations are well-established. Technological developments by other marine activities are irrelevant to these minimum spatial requirements, given the access requirements for submarine cable vessels and equipment. BOEM should consider the default minimum separation distances established in ICPC recommendations in establishing such exclusion zones and in identifying lease blocks or portions thereof ineligible for leasing.

B. BOEM Should Revise Its Lease and Right-of-Way Grant Documentation to Recognize the Presence of and Federal Legal Protections for Submarine Cables

NASCA remains concerned that BOEM lease and right-of-way grant documentation does not adequately reflect the presence of submarine cables in the marine environment or the unique legal protections granted to such cables. For a lessee or grantee unfamiliar with the legal and regulatory regimes governing submarine cables, the lessee or grantee could be left with the impression that lease or grant provides it with (a) the right to exclude submarine cable-related activity from the grant area, (b) protection from submarine cable-related activity, or (c) limited liability or immunity from liability with respect to submarine cable-related activities in the lease or grant area, when in fact in fact it does not and cannot, as BOEM has no statutory authority to confer such rights.

As with BOEM's other regulatory activities on the OCS, NASCA believes it important for lease and grant documents to account not just for the presence and maintenance of existing submarine cables but also permit surveying for and installation of new submarine cables traversing the U.S. OCS and landing in the United States. As NASCA has previously

recommended,[49] BOEM can and should make textual additions and modifications to inform its lessees and grantees about submarine cables and their associated legal regimes.

C. BOEM Should Specifically Identify Submarine Cables in Its Planning Processes and Include Submarine Cable Operators as Critical Stakeholders

As noted in part I above, BOEM should expressly identify existing and planned submarine cables in its planning processes and include submarine cable operators as critical stakeholders in the development of a new Five Year Program. Such inclusion is vital for more effective coordination and planning and for putting oil and gas companies on notice about the importance of submarine cables in the process. In the Draft Programmatic Environmental Impact Statement ("DPEIS") to be prepared by BOEM in connection with the Five Year Program,[50] BOEM should expressly identify the economic and security issues associated with submarine cables.

D. BOEM Should Establish Coordination Mechanisms with Expert Agencies Engaged in the Regulation of Submarine Cables

NASCA urges BOEM to develop interagency coordination measures, such as memoranda of understanding, with those federal agencies engaged in regulation of submarine cables or having submarine cable expertise, particularly the FCC. BOEM should also make better use of the interagency coordination procedures established by the National Environmental Policy Act, including the provisions for "lead agencies" and "coordinating agencies"[51]—particularly as

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[49] See, *e.g.*, Comments of the North American Submarine Cable Association, Docket No. BOEM–2011–0082 (Right-of-Way Grant of Submerged Lands on the Outer Continental Shelf to Support Renewable Energy Development) (filed Sept. 28, 2012).

[50] *See RFI Notice*, 79 Fed. Reg. at 34,349.

[51] 40 C.F.R. § 1506.2(b). *See also* 42 U.S.C. § 4332(C)(v) (requiring the lead agency to "consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved.").

BOEM intends to issue a DPEIS in connection with the development of the Five Year Program.[52] The adoption of such measures would provide BOEM with valuable and relevant information necessary for its development of the next Five Year Program.

E. BOEM Should Continue to Work with Submarine Cable Stakeholders in the FCC's CSRIC Process and Implement Submarine Cable Guidelines and Policy Recommendations Developed by the CSRIC

NASCA urges BOEM to continue to engage with submarine cable stakeholders in the FCC's Communications Security, Reliability and Interoperability Council ("CSRIC"), a federal advisory committee chartered through March 2015. The FCC has tasked CSRIC Working Group 8 with developing recommendations for better submarine cable protection, including spatial separation standards for submarine cables, interagency coordination mechanisms, and methods for encouraging geographic diversity of submarine cable routings and landings.[53] CSRIC Working Group 8 includes representatives of the submarine cable industry, the energy regulatory agencies, and the energy industries. It will deliver to the full CSRIC its first report on spatial separation in September 2014.

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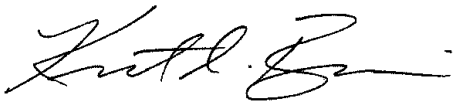
[52] *See RFI Notice*, 79 Fed. Reg. at 34,349.

[53] Federal Communications Commission, CSRIC IV Working Group Descriptions and Leadership, http://transition.fcc.gov/bureaus/pshs/advisory/csric4/CSRIC_IV_Working_Group_Descriptions_5_7_14.pdf .

CONCLUSION

For the reasons stated above, NASCA urges BOEM to adopt measures to protect existing and planned submarine cable systems and to address the unique legal protections afforded to such systems as integral parts of BOEM's development of a new Five Year Program for oil and gas exploration and exploitation on the U.S. OCS.

Respectfully submitted,



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