

PERMITTING AND LEASING FOR MAINE MARINE HYDROKINETIC (MHK) POWER PROJECTS

MHK Power Project Roadmap 2013



Prepared by
Jeff Thaler, Esq.
University of Maine



The Maine **Composites** Alliance

January 2013

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On behalf of

Maine Composites Alliance (MCA)

Maine Wind Industry Initiative (MWII)

And

*Environmental and Energy Technology Council of Maine
(E2Tech)*

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Project Background

Maine possesses considerable natural wind and ocean energy resources and has assets in its current business base – precision and composites manufacturing, engineering, construction, marine services and trades, applied research and development, and transportation and logistics – to play a significant role in the onshore, offshore and ocean energy supply chains necessary to develop these resources.

The **Maine Composites Alliance (MCA)**, **Maine Wind Industry Initiative (MWII)** and **Environmental and Energy Technology Council of Maine (E2Tech)** are collaborating to help organize, promote and expand Maine’s ocean and wind energy cluster through a) strengthening the industry’s supply chain in Maine, b), fostering collaboration between Maine businesses and global partners, and c) recruiting major suppliers and/or manufacturers to Maine.

Jeff Thaler, an energy and environmental attorney presently serving as Visiting Professor of Energy Law and Policy at the University of Maine Schools of Law and Economics, used his years of experience working with the DeepCWind Consortium and on other energy projects to create roadmaps for potential developers and interested parties on federal, state and local laws and regulations applicable for Maine Marine Hydrokinetic Projects (MHK) and for offshore wind energy projects. Each roadmap serves as an instructional outline for permitting and licensing in the Gulf of Maine for developers and is intended to help interest and guide potential wind and ocean energy developers to the Gulf of Maine. Mr. Thaler served as the primary author and Maine Law student Andrew Wells assisted with the research and editing.

MCA is an alliance of composite businesses in Maine who work together to recognize and promote Maine’s leadership in the international composite industry. They enhance the competitiveness of Maine’s existing composite industry and their members by providing opportunities for new commercial ventures, and by providing education and training for members and their employees. MCA serves marine, automotive, aerospace, architecture and industrial industries throughout Maine, the United States and the world.

<http://www.maine-composites-alliance.org>.

MWII is a collaborative created to organize Maine wind industry interests, act as a knowledge transfer network linking opportunities to Maine companies, relate industry needs to the state and federal government and act as a communication hub, representing Maine-based industrial partners in the wind energy industry. www.mainewindindustry.com.

E2Tech seeks to build and expand the State’s environmental, energy and clean technology sectors. In addition to providing networking and educational events, E2Tech promotes business development and sustainable job growth, research and development, new product commercialization, cluster initiatives and supply chain development. www.e2tech.org.

Permitting and Leasing for Maine Marine Hydrokinetic (MHK) Power Projects

January 2013—by Jeff Thaler¹

I. MHK POWER PROJECTS IN STATE WATERS

A. Within One of Maine's Test Sites

1. Maine Statutes and Programs

In order to facilitate the development of alternative ocean energy in Maine, Governor John E. Baldacci's Ocean Energy Task Force recommended and drafted [L.D. 1465 \(.pdf\)](#), which was passed unanimously by the Maine State Legislature in June 2009.

The legislation directed the Maine Department of Conservation (DOC), in consultation with the Maine State Planning Office, to select up to five locations within Maine's waters to be designated as "Ocean Energy Testing Areas."

Through comprehensive review of available map information and numerous meetings with the public and interest groups, three sites were designated by MDOC on December 15, 2009: off of Monhegan Island, Boon Island, and Damariscove Island. More information on the test sites can be found at the Maine ocean energy website, <http://www.maine.gov/doc/initiatives/oceanenergy/oceanenergy.shtml>.

As part of Maine's efforts to expedite regulatory review of demonstration wind or wave energy projects proposed for development within a test site, a special general permit program was established to be administered by the Maine Department of Environmental Protection (DEP); a parallel but not identical general permit process was set up for demonstration tidal energy projects, not just in the three test sites and under a separate statutory scheme, as described below.

Maine DEP's General Permit

There are separate statutory provisions for the expedited, general permitting of a) wave energy and b) tidal energy demonstration projects. The former is contained within the General Permit

¹ **NOTE:** This Roadmap document was prepared with the research and initial drafting assistance of Andrew Wells, a Maine Law student. It is not intended to provide legal advice to any reader, nor is any attorney-client relationship created. This document is for educational purposes only and to convey general information and a general understanding of the law, not to provide specific legal advice. There is no attorney-client relationship between you and any of the authors. This document should not be used as a substitute for competent legal advice from a licensed professional attorney applied to your circumstances.

provisions for an offshore wind energy project, 38 M.R.S.A. §480-HH. The latter is contained within the hydropower permitting legislation, the Maine Waterway Development and Conservation Act, at 38 M.R.S.A. §§ 636.

A. Wave Energy Demonstration General Permit

A general permit may be acquired for an "Offshore wind energy demonstration project," which is defined to actually include wind energy, as follows:

H. "Offshore wind energy demonstration project" or "project" means a wind energy development that uses a wind turbine to convert wind energy to electrical energy and that employs no more than 2 wind energy turbines, each of which may use different technology, for the primary purpose of testing and validating a turbine blade design, floating platform or other support structure, mooring or anchoring system or other offshore wind energy technology that the applicant certifies is designed for use in ocean waters and is not in use elsewhere in the Gulf of Maine for commercial production of electricity and that may also include:

(1) Up to 3 meteorological towers per wind energy turbine proposed;

(2) One submerged utility line that is sized to transmit:

(a) An amount of electricity less than or equal to that produced by the offshore wind energy demonstration project; or

(b) Up to 25 megawatts of electricity if the line is intended to serve multiple offshore wind energy demonstration projects located within the Maine Offshore Wind Energy Research Center and the department has not previously granted approval for such a submerged utility line pursuant to this section; and

(3) A wave energy test project. 38 M.R.S.A. §480-HH(1)(H)

Note that a wave energy test project, which may be developed within a test site along with a wind project, is defined in the statute as: "Wave energy test project" means a hydropower project, as defined by section 632, subsection 3, that uses ocean wave action to produce electricity and that: (1) Is proposed as part of an offshore wind energy demonstration project and is designed and sited to test production of electricity from wave energy in conjunction with and in a manner that complements electricity produced by an offshore wind energy turbine; (2) Employs up to 2 wave energy converters, each of which may use different technology, that the applicant certifies are designed for use in the ocean and are not in use elsewhere in the Gulf of Maine for commercial production, for the primary purpose of testing and validating the overall design of the converter and its related systems, subsystems or components; and (3) May include one or more of the following additional elements: (a) A mooring or anchoring system; and (b) An ocean sensor package. 38 M.R.S.A. §480-HH(1)(K).

Section 632(3) defines "Hydropower project" to mean "any development that utilizes the flow or other movement of water, including tidal or wave action, as a source of electrical or mechanical power or that regulates the flow of water for the purpose of generating electrical or mechanical power. A hydropower project development includes all powerhouses, dams, water conduits, turbines or other

in-stream power devices, generators, transmission lines, water impoundments, roads and other appurtenant works and structures that are part of the development.”

If a general permit is acquired, then a permit under 38 M.R.S.A. §480-C (Natural Resources Protection Act) is not required. 38 M.R.S.A. §480-HH(1). The DEP is the lead agency for permits under 480-HH.

Contents of General Permit

Pursuant to 38 M.R.S.A. §480-HH(3), the application must include the following:

- Written certification that all of the wind farm test site facilities will be entirely within the test site, with the exception of the submerged utility line.
- A site plan, which includes a plan view drawing of the entire site, and all proposed facilities that would be constructed. This includes geographic system references, the energy generating facilities, meteorological tower, monitoring equipment, and any submerged utility lines. The site plan should include a narrative, which describes the proposed construction activities. This includes the proposed methods of construction, operation, and eventual removal of the offshore wind energy demonstration project. Additionally, there must be an explanation of management of fuels, lubricants and other materials that would be used for project maintenance. There must also be a site drawing that includes the design and location of the mooring lines, and anchoring system. Additionally, there must be a scale drawing of the location of the utility lines, which is accompanied by an explanation of the proposed plans for the construction of the lines, and how the location and construction of the lines will comply with permit rule standards. Furthermore, the plan must include a drawing of the location of the proposed wind turbines in relation to other offshore wind energy demonstration projects within 10 kilometers, and a written verification that the proposed project would not interfere with the operation of any other wind energy projects.
- Before applying for a General Permit, the applicant must consult with the Department of Marine Resources. The application should include a report following the consultation that would include present information concerning the commercial fishing and other current uses of the project area, and any information taken from a field report concerning marine resources, benthic communities in the marine areas in and surrounding the proposed location of any mooring lines, anchors, utility lines, meteorological tower, ocean sensor package, or other project elements secured to the seabed.
- Written acknowledgement that the DEP may require the applicant to take remedial action, which might include the termination and removal of all facilities and submerged utility lines. The applicant must also acknowledge that they would bear the cost of the remedial action.
- A fish and wildlife monitoring plan that would include an explanation of the monitoring process of the behavior and interaction of species listed as endangered or threatened under Title 12 M.R.S.A. §6975 or Title 12 M.R.S.A. §12803, as well as all bird species, bats, marine mammals and other marine resources for the duration of the general permit. The plan should account for the

monitoring of the potential impacts resulting from all of the project equipment, facilities, and actions. These actions include the mooring system, anchoring system, and submerged utility lines on the various animal species and marine resources. The plan should also include details concerning the methods and the equipment used in the monitoring process. Additionally, the plan should include a description of how the monitoring information will be analyzed, put into an electrical format, and should be sent to the DEP. Furthermore, there should be a detailed explanation of the monitoring schedule and implementation of the data recovery, maintenance of the monitoring equipment and the quarterly reports to the DEP, as well as a schedule that considers ocean conditions, seasonal variations in species presence or absence, and other biological factors. Furthermore, the plan should describe the remedial measures that will be taken if any adverse impact to any fish or wildlife in the vicinity is found, and a description of the equipment that will be used to monitor and potential adverse impact from any noise and electromagnetic fields produced by the project's construction and subsequent operation. The application must include provisions for applicants to provide annual monitoring reports and any recommendations for any modifications to the facilities or removal plan. Thirty days prior to the submission of the report to the DEP, the applicant shall supply a draft of the report to the Department of Marine Resources, Department of Inland Fisheries and Wildlife, the DOC, the U.S. Fish and Wildlife Services and the National Marine Fisheries Service, and allow the agencies to make comments and recommendations pertaining to the draft report. The submitted report must include these comments.

- A navigation safety plan, which would be designed to protect the public safety, public property, and project facilities from potential events such as a collisions between commercial and recreational vehicles with the proposed facilities, and the possible entanglement of fishing equipment with the facility's underwater equipment and devices, and electrocution. The plan must consider and provide for the following;
 - A boundary of an exclusion zone around the proposed generation facilities, anchoring system, submerged utility lines, and other facilities. The boundary should be described with global positioning system coordinates and should be designed to take up only enough area needed by the project to accomplish its purposes. The extreme corners of the exclusion zone must be marked with lights, buoys, or other indicators that would be sufficient to warn sea vessels of the project elements both above and underneath the water, and the exclusion zone boundaries both day and night.
 - The generating facilities must be marked with fog signals, low-intensity navigation lights, hazard marking lights, or other aids to navigation. The generation facilities must also be painted "in a way that considers the aesthetic resources of the project area as well as the safety of the public and project facilities. . ." and meets the Federal Aviation Administration and U.S. Coast Guard guidelines.
 - Procedures to ensure the safety of the public near the project area.
 - A description of the monitoring procedures, and the actions that the applicant will partake in detecting and addressing an emergency situation.
- A removal plan that indicates the applicant will initiate a project removal plan within 60 days of the expiration of the general permit at the applicant's expense. The removal plan should

provide for the complete removal of the project from the water, unless the applicant supplies substantial proof to the DEP that there are of plans for continued beneficial use. The removal plan should minimize the disturbance of the seabed as much as possible, and provisions to monitor the potential impact of the removal on endangered or threatened species, and marine resources. The plan should also include an implementation schedule and the estimated cost of the removal, prepared by a professional engineer. There must also be written evidence and certification that the applicant possesses the necessary funds for the project removal. The applicant is required to post the removal funds with a bond company or federal or state-chartered lending institution authorized to do business in Maine. The amount can never be less than 25% of the estimated removal cost.

- The applicant must provide documentation that there has been a consultation with Department of Marine Resource, Department of Inland Fisheries and Wildlife, DOC, Maine Land Use Regulation Commission (now the Maine Land Use Planning Commission), the Executive Department, United States Army Corps of Engineers, United States Coast Guard, National Marine Fisheries Service (NMFS), National Park Service, United States Fish and Wildlife Service, the lobster management policy council established under Title 12 section 6447 for the lobster management zone, and each municipality in or adjacent to the location of the project. The applicant must also include the recommendations of the agencies, and if the recommendations are not followed, specific reasoning why they were not carried out. The agencies shall be given 60 days to comment, and the municipalities shall be notified at least 30 days before the initiation of the project and invited to participate in the consultation process.
- The applicant must provide documentation of insurance that would include a liability policy for bodily injury, environmental, and property damage.
- Documentation must be provided that shows that the applicant has the technological and financial means to complete project.
- The applicant must provide certification that they or anyone with a financial interest in the project does not have any other permit for an offshore wind development project pending. This does not apply for any applications by the University of Maine System that are funded in part or in whole federally or by the state.
- If offshore wind energy demonstration project proposed for location within Maine Offshore Wind Energy Research Center, needs to be in cooperation with University of Maine Systems, and there must be written evidence of such.

Notification by the Department of Environmental Protection

There is a review period of 60 days for the applications. The review period begins when the department has accepted the application for processing. The DEP must notify the applicant if the department determines that the requirements have not been met, within the 60-day period. If the department finds that the application does not meet the requirements, then they must also specifically explain which requirements have not been satisfied. §480-HH(4)

Permit Term

If the project is not located in the Maine Offshore Wind Energy Research Center off of Monhegan Island, then the permit term is either three years from the date construction on submerged lands started or five years from the date the general permit has been granted, whichever date that comes first. However, if the site is located in the Maine Offshore Wind Energy Research Center then the permit term is from five years from the date construction begins on submerged lands, or seven years from the date the application has been granted, whichever date that comes first. §480-HH(8).

Removal

Within 60 days of the expiration of the general permit term, the applicant must initiate their removal plan. If the applicant has not implemented the removal plan within the 60 days of the expiration of the permit, then the department may do what the department deems is necessary to initiate the removal process. §480-HH(11)

Submerged Lands Lease

“Within 15 days of receipt of a copy of an application submitted to the Department of Environmental Protection for a general permit under Title 38, section 480-HH or Title 38, section 636-A, the director [of the Division of Parks and Public Lands] shall, if requested by the applicant, provide the applicant a lease option, to be effective on the date of receipt of the application, for use of state-owned submerged lands that are necessary to fulfill the project purposes as identified in the application. Within 30 days of receiving notice and a copy of a general permit granted pursuant to Title 38, section 480-HH or Title 38, section 636-A, the director shall waive the review procedures and standards under this section and issue a submerged lands lease for the permitted activity. The term of the lease must be consistent with that of the permit, including any extension of the permit, and the period of time needed to fully implement the project removal plan approved pursuant to Title 38, section 480-HH or Title 38, section 636-A, as applicable. The director may include lease conditions that the director determines reasonable, except that the conditions may not impose any requirement more stringent than those in a permit granted under Title 38, section 480-HH or Title 38, section 636-A, as applicable, and may not frustrate achievement of the purpose of the project.12 M.R.S.A. §1282(2)(F).”

Natural Resources Protection Act §480-C and §480-D

If the demonstration wave energy project is confined within the test site, then a permit under the Natural Resources Protection Act (NRPA), 38 M.R.S.A. §§480-A-HH, other than the general permit described above, is not required. However, if a cable is run from the energy device to shore,² then a permit would be required for dredging, soil replacement, bulldozing, filling, drilling, or construction or alteration to permanent structures in or on any protected natural resource or any land that is adjacent

² If a cable is run to shore, then local or municipal ordinances may also be triggered, such as shoreland zoning; also, depending on the local zoning, Planning Board approval may be required if the cable comes ashore into a Resource Protection District. It is beyond the scope of this document to analyze different local ordinances.

to and could be washed into a coastal wetland, pond, river, stream, brook, or “significant wildlife habitat” located in a freshwater wetland. 38 M.R.S.A. 480-C. This includes coastal shores. The DEP is again the lead agency for this permit. 38 M.R.S.A. §480-A. Regulations for NRPA can be found in Chapters 305, 310, 315 and 335 here: <http://www.maine.gov/sos/cec/rules/06/chaps06.htm>.

The DEP requires that the application fit the following standards:

- The proposed activity does not interfere with existing, scenic, aesthetic, recreational or navigational uses.
- The proposed activity would not cause unreasonable soil erosion and/or prevent soil to naturally transfer from the land to the marine environment.
- The proposed activity cannot cause any unreasonable harm to any “significant wildlife habitat,” freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine or marine fisheries, or other aquatic life. The DEP will also consider the proposed mitigation the applicant intends to utilize to diminish the potential impact of the project.
- The proposed project cannot unreasonably interfere with the natural water flow of any surface or subsurface waters.
- The proposed activity will not violate any Maine state water quality laws.
- The proposed activity will not unreasonably increase the risk of flooding adjacent lands.
- If the proposed project is on or adjacent to sand dunes, then the proposed activity will not unreasonably interfere with the sand supply to the sand dunes, or increase the erosion hazard to the dunes.
- If the proposed project crosses any outstanding river segment, then the applicant must show that there are no reasonable alternatives that would have less of an effect on the river segment.
- If the proposed activity involves dredging, dredge spoil disposal, or the transporting of dredge spoils by water then the applicant must show that the chosen transportation route minimizes adverse impacts to the commercial fishing industry, and that the site is suitable geologically. The DEP will consult with the Commissioner of Marine Resources, who will assess the potential impacts of the transportation route to the area and the area’s fishing industry. The Commissioner of the Marine Resources is required to hold a public meeting pertaining to the proposed dredging operation in at least one of the municipalities impacted by the operations. Furthermore: the applicant must do the following:
 - Clearly mark or designate the dredging area, and the spoil disposal and transportation routes
 - Publish the approved transportation route in a newspaper of “general circulation” in the “area adjacent to the route”
 - Publish in a newspaper of “general circulation” in the adjacent area to the approved route the procedure that the applicant will use to answer inquiries concerning the loss of fishing gear during the dredging. 38 M.R.S.A. §480-D

B. State Waters But Outside of One of Maine’s Test Sites—Maine Programs

If a wave energy project is proposed for Maine waters outside of one of the three designated test sites, then the General Permit program discussed above is not applicable, and the applicant must seek unexpedited State approval under the Site Location of Development Act, 38 M.R. S. A. §481 et seq. The applicant will have to demonstrate to the DEP, in part, that there will be no adverse effect on natural environment, scenic character, or natural resources in the area; and also demonstrate that it has made adequate provision to fit development harmoniously into the existing natural environment. There are a variety of implementing regulations that should be examined, in Chapters 371-377, that can be found here: <http://www.maine.gov/sos/cec/rules/06/chaps06.htm>.

The NRPA statutes discussed above would also apply to a project in State waters but outside of a test site. In addition, a developer should be aware that the following statutes or programs involving the State agencies may also be applicable, depending on specific circumstances and agency consultations.

General Permit for tidal energy demonstration project

Maine Waterway Development and Conservation Act

A General Permit may be sought for a tidal energy demonstration project, which is defined as a hydrokinetic project that uses tidal action as a source of electric power with a primary purpose of testing and is no more than 5 MW. 38 M.R.S.A. §636-A(1). If an applicant receives a General Permit, then a permit under 38 M.R.S.A. § 633 is not required. 38 M.R.S.A. §636-A(2).

An application for a general permit for a tidal energy demonstration project must include written certification that the applicant has first filed an application with the Federal Energy Regulatory Commission (FERC) for a pilot project license. The general permit application and the FERC license applications are similar and must include the following information pursuant to 38 §636-A(3):

- 1) A description of the State waters where the proposed project will be located.
- 2) A description of the proposed facility’s construction plan, the location of the facility, and the operation plan of the facility.
- 3) Information describing the physical environment of the specific sites where the proposed project would be located and the potential environmental effects of the construction and operation of the proposed project.
- 4) A plan that includes how the environmental effects of the project will be monitored and what equipment will be used for monitoring through the general permit term.
- 5) A plan for safeguarding the environmental resources, and public safety throughout the term of the general permit. Safeguarding public safety refers to protecting human life and property.

- 6) A removal plan, which would describe the plans for removing the project after the conclusion of the general permit, unless the applicant is pursuing a commercial lease for a tidal energy project on the same site.
- 7) Consultation documentation, which certifies that the applicant has consulted with appropriate local, state, and federal resource agencies, local governments, Indian tribes, nongovernment organizations, and public citizens that may have an interest in the project.
- 8) Documentation of insurance. The applicant must ensure that insurance has been acquired and will maintain a liability policy that covers bodily injury, property damages and environmental damages. The amount should be reasonable to the scope of the project.
- 9) Documentation that the applicant has the financial capability to construct, operate, and maintain that tidal energy project.
- 10) A copy of the Environmental Assessment (EA) completed and issued by FERC, which shows a finding of “no significant impact”.
- 11) A written document by the applicant which acknowledges that the DEP might require the applicant to “take remedial action” at the applicant’s expense. The remedial action could be removal of the generating facilities, submerged utility lines and the termination of the project.

The DEP shall notify the applicant if the requirements of the application have not been met within 60 days of the acceptance of the application for processing. If the DEP finds that all the requirements have not been met, then the unmet requirements must be specifically cited in the notification. If the department does not notify the applicant within the 60-day period, then the application is deemed to have been granted. 38 M.R.S.A. §636-A(4). The general permit term is the same as the term for the granted FERC license unless the applicant chooses to surrender the permit prior to the expiration date, if remedial action is required by the DEP that results in early termination of the project. 38 M.R.S.A. § 636-A(7). Remedial action can be required by the department if the project monitoring finds that the project is having an “adverse effect on a protected natural resource. . .” which includes but is not limited to wildlife, bird species, fish, marine mammals, bat species, and/or public health or safety. 38 M.R.S.A. §636-A(9).

Within 60 days of the expiration of the general permit term, the applicant must initiate their removal plan, unless the applicant is pursuing a commercial license for a tidal energy power project at the site. If the applicant has not implemented the removal plan within the 60 days of the expiration of the permit, than the department may do what is deemed necessary to initiate the removal process. 38 M.R.S.A. §636-A(10).

Tidal energy project over 5 MW

A permit is required for the initiation of the construction or reconstruction of a hydrokinetic energy project that is not a demonstration project. 38 M.R.S.A. §633. The DEP administers permits for projects that are “wholly or partly within an organized municipality,” or a project that uses tidal or wave energy as a source of power. §634-A. The Maine Land Use Planning Commission has jurisdiction over “a hydropower project that is located wholly within the State’s unorganized and deorganized areas . . .” but

not over projects utilizing tidal or wave power no matter where they are located. §634-A. The Commissioner of the DEP will give written notice to the Commissioner of Inland Fisheries and Wildlife and the Commissioner of Marine resources if the applicant intends on constructing a dam. §634. The application for the permit must be made on the forms supplied by the Commissioner of the DEP and filed with the Commissioner of the DEP. §634. Within 10 working days of receiving a completed application, the commissioner will notify the applicant of the official date the application was accepted. §634. The commissioner will circulate the application amongst the DEP, DOC, Department of Marine Resources, Department of Inland Fisheries and Wildlife, Department of Transportation, Historic Preservation Commission, Public Utilities Commission, and municipal officials from the municipalities in which the project will be located. Comments will be supplied concerning whether the energy generation will be economically adequate. §634.

The DEP will determine whether to approve the project depending on the following criteria:

- Whether the applicant has the financial and technological capability to complete the project.
- If the applicant has made adequate provisions to ensure the safety and protection of the public.
- Whether the project will result in significant economic benefits for the public.
- Whether the applicant has made provisions for the traffic coming in and out of the development area.
- If the applicant has made reasonable provisions to mitigate potentially adverse environmental impacts.
- Whether the advantages of the potential project outweigh the potential cumulative negative environmental impacts over the life of the project based on the following considerations:
 - Whether the project will harm the coastal and inland wetlands, soil stability, or the natural environment of any surface waters and shore lands
 - If the project will cause a significant harm or benefit to the fish and wildlife, while considering other uses of the watershed and fisheries management plans
 - Whether there will be any impact on any historical archeological resources
 - If there will be any burdens or benefits to the public rights of access to the State surface waters for navigation, fishing, fowling, recreation, and other lawful public uses
 - If the applicant has considered and accounted for possible flood control
 - Whether the project will potentially yield significant energy benefits
- Furthermore, the applicant must provide assurance that water quality standards will be followed pursuant to CWA section 401 and Maine standards. §636.

Submerged Lands Leasing Program

The director of the Bureau of Parks and Lands within the DOC may determine whether or not to grant a lease and grant the right to dredge, fill or erect pilings, moorings, or other permanent structures on state owned submerged and intertidal for a term of 30 years. 12 M.R.S.A. §1862(2). For the director to grant a lease it is required that the proposed lease activity would not unreasonably interfere with

navigation, fishing, or other marine uses of the area; unreasonably diminish the availability of services and facilities needed for commercial marine activities; or interfere with the ingress and egress of riparian owners. 12 M.R.S.A. §1862(2)(A)(6). In addition, the director may grant an easement for the use of state intertidal or submerged lands. 12 M.R.S.A. §1862(3).

The director must consult with the Commissioner of the DOC, the Commissioner of Marine Resources, the Commissioner of Inland Fisheries and Wildlife, and other agencies the director deems appropriate in developing and enforcing the terms and conditions for conveyances of the grants. For rental terms for a renewable ocean energy project, the director must consult with the Public Utilities Commission as well. 12 M.R.S.A. §1862(7).

Within 30 days before filing applications for a lease or easement for a renewable energy project, the applicant also must participate in a joint interagency pre-application meeting involving the Department of Marine Resources and follows the permit procedures of the DEP or the Land Use Planning Commission if necessary. 12 M.R.S.A. §1262(13)(B)(1). Furthermore, the applicant must communicate to the director that the applicant has filed completed applications for necessary state permits for the project. 12 M.R.S.A. §1262(13)(B)(2). The director must also provide notice to the Maine Resource Advisory Council and any lobster management council. 12 M.R.S.A. §1262(13)(B)(3).

Clean Water Act Section 401

An applicant for a federal license or permit to conduct an activity that may result in a discharge to a navigable water of the United States must supply the federal licensing authority with a certification, pursuant to 33 U.S.C. § 1341, from the State that any such discharge will comply with State water quality standards. The federal license or permit may not be issued until water quality certification has been issued or waived. DEP may add conditions to the certification, and these must become conditions of the federal license. See a graphic flow chart at Appendix A attached to this document.

Where possible, the DEP has combined the decision concerning water quality certification with the review of an application for a state permit that already requires compliance with state water quality standards. In this case, the issuance of the order approving the project constitutes both the state permit and the water quality certification. This may occur with reviews pursuant to, for example, the Natural Resources Protection Act.

Coastal Zone Management Act (CZMA) Consistency Certification

According to Section 307 of the CZMA, 16 U.S.C.A. § 1456, for any applicant for a federal permit for activities that would impact a state's land or water use or natural resources in or outside the coastal zone, the applicant must provide a certification showing that the activity would comply with the state's federally approved coastal zone program. 15 C.F.R. §§930.50-930.66. The State of Maine created the

Maine Coastal Zone Management Program, and the National Oceanic and Atmospheric Administration (NOAA) approved it. For a project within one of the three State designated test sites, approval of a General Permit should satisfy the State's Consistency requirement. However, for a project outside of the test site requiring federal permitting, the State may still be required to review for consistency, and that would be handled by the DOC.

The State or its designated Coastal Zone Management Act (CZMA) agency has up to six months from receipt of the certification to notify the federal licensing or permitting agency that it concurs with or objects to the consistency certification. An objection means that the federal license or permit can be issued if the Secretary of the DOC finds that the activity is consistent with the CZMA's objectives or is otherwise needed because of national security reasons. No federal license, lease or permit can be issued until there is either actual or deemed (by failure to act within six months) concurrence by the state.

The Federal agencies from which an applicant seeks a permit where a consistency review might be required include the following:

- The U.S. Army Corps of Engineers- Permits under section 404 of the CWA, Section 10 of the River and Harbors Act, and a permit for transporting dredged material under section 103 of the Marine, Protection, Research, and Sanctuaries Act.
- Environmental Protection Agency (EPA) NPDES permit under the CWA section 402, Ocean Dumping permit (jointly with the U.S. Army Corps of Engineers) under MPRSA section 103.
- U.S. Department of the Interior- Outer Continental Shelf Lands Act
- U.S. Department of Energy/FERC- license under the Federal Power Act (FPA) section 4(e)
- The DOC will also request a consistency review of other federal license or permit activity if the action is reasonably expected to affect the Maine coastal zone.

Specific to offshore wind development, consistency review is triggered by the lease sale and site application plan (SAP) process, and by approval of the construction and operations plan (COP); also, because the COP is considered a federal license or permit under the CZMA, state approval of the Secretary of Commerce's consistency determination is required.³ For a competitive lease sale, if the state objects to a consistency determination, then the Bureau of Ocean Energy Management (BOEM) can go forward if it concludes that the sale is consistent with that state's CZMP and it so notifies the state.⁴ For a noncompetitive lease sale, a state's consistency objection triggers an applicant's ability to submit an amended plan to BOEM.⁵ BOEM then requests the state's consistency determination; if the

³ 16 U.S.C. §§ 1456(c)(1)(A), (1)(C), (3)(A) (2011); Preamble, Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 30 C.F.R. §§ 250, 285, 290 (2009), 76 Fed. Reg. 19,638, 19691, Apr. 29, 2009. *See generally*, Peter J. Schaumberg & Angela F. Colamaria, *Siting Renewable Energy Projects on the Outer Continental Shelf: Spin, Baby, Spin!*, 14 ROGER WILLIAMS U. L. REV. 624, 659 (2009).

⁴ 15 C.F.R. §§ 930.43(d), (e) (2008). The procedure BOEM follows also is found in the Preamble to the Final Rules, *supra* note 3, at 19651-52.

⁵ 15 C.F.R. §§ 930.77-930.78, 930.82.

state objects to the modified plan, then BOEM cannot override its decision, and the applicant can attempt to address any continuing state concerns with another modified plan.⁶

Below are the steps of the CZMA consistency review process; for a graphic flow chart representation of the CZMA process, see Appendices A and B to this document:

Step 1) Federal agency sends consistency determination, request for review, which includes the supporting documents to DOC. If they have already consulted with DOC, the agency can go directly to DEP and send consistency determination reference materials to the DOC. This process must be done 90 days prior to final federal approval.

Step 2) The DOC sends copy of submission to the DEP and other appropriate agencies as soon as they can.

Step 3) The DEP checks for completeness. The process must be done within 14 days. If the submission is complete, then the state review process begins and a 60 day period begins from when submission was received. If the submission is not complete then the DOC, in consultation with the DEP, notifies the federal agency in writing and they work together to solve the information needs. When the submission is found to be complete, the 60-day period starts.

Step 4) The State ensures public notification of federal consistency determination and the public can comment. The comment period is usually 14 days. The notification and public comment period is usually around 30 days.

Step 5) The lead agency (DEP) consults with other state agencies that may be involved. The consultations must be done within 60 days.

Step 6) The DEP makes a determination on whether they concur or object and send the decision to DOC in an agency order, which grants or denies permit.

Step 7) The DOC communicates the state's concurrence or objection with federal agency once the determination is made. If there is an objection, there needs to be an explanation concerning what the inconsistency is and what can be done. The determination must be done within 90 days. 15 CFR 930.43(b).

Step 8) DOC notifies director of Ocean Coastal Resource Management (OCRM) if there are any objections and what they are. 15 CFR 930.43c. If there is no resolution in the 90 days, either party can seek mediation through the DOC or the NOAA office of the OCRM. 15 CFR §§930.110-116.

2. Federal Statutes and Regulations for MHK Projects in State Waters

Introduction

Hydrokinetic power projects require a license from the Federal Energy Regulatory Commission (FERC) pursuant to the Federal Power Act (FPA). 16 U.S.C.A. §§792-823. According to the "BOEM/FERC Guidelines on Regulation of Marine and Hydrokinetic Energy Projects on the OCS," which is available

⁶ *Id.* at § 930.84.

online, hydrokinetic power projects on the Outer Continental Shelf (OCS) will require a lease from the BOEM along with the FERC license. <http://www.ferc.gov/industries/hydropower/gen-info/licensing/hydrokinetics/pdf/mms080309.pdf>.

Projects, such as in-stream river or estuary tidal power projects, which are constructed and operated within state waters and not in the OCS, require a FERC license, but a BOEM lease is not necessary. However, a number of federal environmental resource statutes are applicable to projects even in state waters, as discussed below. For two flow chart representations of some of the federal processes, see Appendices C and D to this document:

FERC License Under the Federal Power Act (FPA)

Pre-Application Requirements

NOI (Notification of Intent) Draft

“A potential applicant for an original, new, or subsequent license must file a notification of its intent to do so. . . .” 18 CFR §5.5(a). The applicant must file a letter with the secretary of the FERC, which includes information that is listed on the FERC website, <http://www.ferc.gov>. Additionally, the information required is listed in 18 CFR §5.5(b). The NOI is required five years before the license expires; the applicant can request a waiver from this requirement if the proposed project is less than 1.5 MW.

PAD (Pre-application Document)

The PAD must be filed directly after the NOI with the Secretary of the Commission pursuant to the procedural rules posted in <http://www.ferc.gov>. It is a precursor to the Environmental Assessment (EA) or Environmental Impact Statement (EIS), and to the environmental analysis of the Preliminary License Proposal or Draft License Proposal. The PAD must also be “distributed to appropriate Federal, state, and interstate agencies, Indian Tribes, local governments, and members of the public likely to be interested in the proceeding. . . .” 18 CFR §5.6(a)(1). The PAD is a document provided to the FERC and other agencies so that they can begin determining potential issues and information needs. The applicant is required to exercise “due diligence” in supplying adequate information. 18 CFR §5.6(b)(1). A potential applicant is not required to conduct studies in order to generate information for the inclusion in the pre-application document. Rather, a potential applicant must exercise due diligence in determining what information exists that is relevant to the document and provide information pertaining to existing and proposed facilities and operations, as well as current data or studies relating to the existing environment of the area and any known potential environmental impacts the project could have on the specified resources. If FERC determines that more information is needed, the Commission may request the necessary information, and the applicant has 20 days to respond. 18 CFR §5.6(c)(2).

At the same time the applicant may file an NOI and distribute its PAD, the applicant can request to be designated as the Commission’s non-Federal representative. 18 CFR §5.5(e). Therefore, the applicant may act as the non-Federal representative for consultations under section 7 of the Endangered Species Act, and section 305(b) of the Magnuson-Stevens Fishery Conservation and

Management Act. §5.5(e). Additionally, the applicant can request a consultation under the National Historic Preservation Act (NHPA). §5.5(e). The content of the PAD pursuant to 18 CFR § 5.6 is listed below.

Process Plan and Schedule

The PAD must include a plan and schedule of pre-application activities. 18 CFR § 5.6(d)(1).

Project Location, Facilities, and Operations

The applicant must include a detailed description of the location of the facilities, which includes detailed maps of the lands and waters within the project's boundaries, as well as maps of roads and transmission lines. Furthermore, the PAD must include a description of the facilities and the operation of those facilities. 18 CFR §5.6(d)(2).

Existing Environment and Resource Impacts

There should be a description of the current environment and existing studies and data. Additionally, there must be information pertaining to the geology and soil, as well as water resources, fish and aquatic resources, wildlife and botanical resources, and rare and endangered species in the area. Furthermore, the PAD should discuss the potential impact on wetlands, riparian, and littoral habitats, and a description of utilized river basins. The PAD also must take into consideration other environmental elements such as recreational and land use, aesthetic resources, cultural resources, socio-economic resources, and tribal resources. 18 CFR §5.6(d)(3).

Draft License Application

The applicant is required to file for comment on the draft license application or a preliminary license proposal no more than 150 days prior to the deadline for filing a new or a project continuation license application. The draft license application includes the information pertaining to the following:

- Existing environment
- Project proposal
- Potential effects associated with the proposal
- Monitoring plans for potential environmental and safety issues
- Removal plan
- Emergency shutdown plan
- Navigational safety plan
- Financial assurance
- Records of document distribution, the consultation record, and the distribution list
- Letters of request for waivers and modifications of Integrated Licensing Process (ILP) if necessary for the expedited processing of the pilot license, which include a proposed process plan, and schedule and a justification statement
- "Request designations as a non-federal representative" section. This section is a request for consultations pursuant to Section 7 of the ESA, and Section 106 of the National Historic Preservation Act (NHPA). The draft should also include records of consultations that took place

before the submission of the pre-filing materials, records documenting the distribution of the pre-filing materials to the appropriate stakeholders, and the stakeholder distribution list. 18 CFR §5.17

Preliminary Permit

A preliminary permit does not authorize the construction or operation of the project or special access to the site. It does prevent another party from acquiring a license or permit for the site during the term of the preliminary permit. The preliminary permit allows the permit holder to maintain priority of application for up to three years, while performing feasibility studies and preparing the license application. 18 CFR §5.17.

Processes

There are three processes the applicant may use to apply for a commercial lease for an original license, a new license for an existing project, or a subsequent license. The three processes are Integrated Licensing Process, Traditional License Process (TLP), and Alternative Licensing Process (ALP). You must receive approval from the Commission to use the TLP or ALP. Consultation periods and procedures will vary depending on the type of process used and the size and scope of the project. Each of the licensing processes will entail a substantial level of consultation. For an explanation of the differences between these processes, see FERC's "Licensing Handbook," http://www.ferc.gov/industries/hydropower/gen-info/handbooks/licensing_handbook.pdf.

As with any of the Commission's processes, the FERC licensing process begins when you file a pre-application document (PAD), which includes all existing, relevant, and reasonably available information gained through consultation with federal, state, and local resource agencies, Indian tribes, nongovernmental organizations, and members of the public (stakeholders). In the PAD, you must identify information and study needs for the proposed project, and provide a process plan or a schedule of upcoming licensing activities. Many of the requirements for the FERC PAD are similar to the requirements for a BOEM SAP.

Integrated licensing process

The first step of the process is for the applicant to file its NOI and PAD, which must be done at least 5 years but no more than 5 ½ years before an existing license expires, and it be distributed to federal and state resource agencies, Indian tribes, and members of the public who are interested in the proceeding. 18 CFR §5.5. The filing of the NOI and the PAD is the beginning of the pre-filing consultation and is done at the same time as the Commission's NEPA scoping process and includes the proposed date and location of the scoping meeting. 18 CFR §§5.5- 5.6.

Within 60 days of the NOI and PAD filing, the Commission issues a notice of commencement of proceeding which will include the following:

- Intent to file a license application

- Initiation by the Commission of informal consultation under section 7 of the ESA, section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act, Section 106 of NHPA, and, if necessary, the designation of the applicant as the Commission's non-federal representative
- PAD filing; commencement of the proceeding
- Time frame for commencing the PAD
- Possibility that additional state and federal agencies, and/or Indian tribes request to be cooperating agencies for the developing of an environmental document
- Date, time, and place for the public scoping meeting
- Applicant must communicate if she intends to request to use the traditional or alternative licensing process (18 CFR §5.8)

Furthermore, within 60 days of the notice of the commencement of proceedings and the initiation of the scoping process, the interested resource agencies, tribes, and members of the public may present the Commission with written comments that include information and studies needed. 18 CFR 5.9. The Commission may then issue a revised scoping document within 45 days from the deadline for filing the scoping documents.

Within 30 days of the filing of the NOI, the Commission must hold a meeting with each Indian tribe potentially interested in licensing action, if the tribe or tribes agree to the meeting. 18 CFR §5.7. If the applicant intends on seeking Public Utility Regulatory Policies Act (PURPA, 16 U.S.C. §2601) benefits, then the comments must include a reasonable cost estimate of compliance costs resulting from the fish and wildlife agencies' comments. 18 CFR §5.9(c).

Within 45 days of the conclusion of the comment period, the applicant will provide a proposed study plan for each study. Each study plan includes the following information:

- Description of the study and methodology that will be used
- Schedule for conducting the study
- Provisions for progress reports
- Explanations for why certain studies may not have been conducted
- Provisions for initial and updated study reports
- Description of the goals and objectives of the study
- Addressing of any resource management goals of the interested agencies
- Description of existing information and the need for additional information
- Relationship between the project operations and the effects on the resources
- Explanations of how the studying methods are consistent with accepted scientific practices, and potential tribal interests
- Description of the amount of effort and cost involved in the study process (18 CFR §5.11)

Once the proposed study plan is filed, the interested agencies, tribes, and individuals have 90 days to file comments concerning the plan. 18 CFR §5.12. Following the comment period, the applicant must file a revised study plan within 30 days of the completion of the comment period. 18 CFR §5.13.

The agencies, tribes, and interested individuals have 15 days to file comments after the revised study plan is filed, and the Director of the Office of Energy Projects will issue a study plan determination within 30 days of the filing of the revised study plan. 18 CFR §5.13. The applicant must present periodic progress reports to those agencies that requested a progress report; additionally an initial study report describing the results, schedule, and data collected must also be supplied to FERC within a year after they had approved the study plan. 18 CFR §5.15.

The applicant must file for a preliminary licensing proposal once the studies are near completion, but no later than 150 days prior to the deadline for a filing a lease. The proposal clearly describes the following:

- Existing and proposed project facilities
- Existing and proposed maintenance plan
- Protection and mitigation measures to be taken for resources affected by the proposed project; and a draft environmental assessment. 18 CFR §5.15.

The applicant may file a draft license instead of a preliminary license proposal if the applicant includes a notice of intent to file a draft license in the updated study report. 18 CFR §5.15(f). Within 90 days of the filing of the draft license or the proposal the Commission may file recommendations, and whether an EA or an EIA is necessary.

The post-filing stage of the integrated licensing process is initiated when the complete application is filed and distributed to all interested parties; additionally, if there is an existing license, this application must be filed no more than two years before the existing license expires. 18 CFR §5.17. Within 14 days of the filing of the application the applicant shall publish a notice twice in a daily or weekly newspaper in the communities that are impacted by the project. The notice includes the filing date and a brief summary of the application. 18 CFR §5.19. Furthermore, the Commission shall issue a tendering notice within 14 days of the filing date for the application, which would include the following target dates:

- Issuance of the filing of the EA
- Filing of recommendations, preliminary terms and conditions, and fishway prescriptions
- Issuance of an EA or EIS
- Filing of comments on the draft EIS (DEIS) or draft EA (DEA)
- Filing of modified recommendations, terms and conditions, and fishway prescriptions in the response to a draft NEPA document
- Issuance of the final NEPA document
- Deadline for the final submission of amendments
- Readiness for the Commission decision. 18 CFR §5.19.
- An Exhibit E, which would have the same form and content as an EA. 18 CFR §5.18(b).

After the application is filed, a team of engineers and environmental specialists will review the application for adequacy. If the specialists and engineers find that the application does not comply with regulations then the Commission can take two possible courses of action. First, it could reject the

application as patently deficient, knowing that the relicensing application cannot be refilled after the two-year deadline for filing. The second option is that the Commission finds the application deficient, but not patently deficient, and the applicant is given an appropriate time, but no longer than 90 days to fix the deficiencies. 18 CFR §5.20(a). Even if the application does satisfy the Commission's regulations, they may still request additional information deemed necessary to make an informed decision on the application. 18 CFR §5.21.

When the Commission determines that the application meets all of the filing requirements, the studies have been completed, and there are no unresolved deficiencies, then the Commission will issue a notice of acceptance and ready for environmental analysis (REA). There is a comment period within 60 days after the issue of the notice and the REA. 18 CFR §5.22(a). The applicant has 45 days to respond to the comments submitted. The comment responses should be given to the entity that submitted the comments and a copy should also be given to the Commission. 18 CFR §5.23. Furthermore, the applicant must file a copy of the water quality certification and either a copy of the request for certification or evidence of waiver of the water quality certification. §5.23.

The Commission will issue an EA within 120 days from the date the comments to the REA notice are due. The EA will include the following information: draft license article, preliminary determination of consistency of each fish and wildlife agency recommendation pursuant to FPA section 10(j), and any preliminary mandatory terms and conditions and fishway prescriptions. 18 CFR §5.24. Modified prescriptions or terms and conditions must be filed no later than 60 days after the close of the comment period. §5.24. Once the Commission determines that a draft EA or EIS is required, the Commission will issue a draft EA or EIS within 180 days of the REA notice. 18 CFR §5.25. The time period for filing comments on the draft EA or EIS may be longer than a single EA. §5.25. The license process concludes with the issuing of the license. The license order contains the following information: a description of the project works licensed, a description of the project operation, findings of the issues that have been raised, term and license, environmental conditions, engineering conditions, and administrative compliance conditions.

Traditional Licensing Process

If the applicant intends on using the traditional licensing process, the applicant must submit a request to the Commission to use traditional procedures for pre-filing consultation, as well as the filing and processing of an application for a new, original, or subsequent hydropower license. 18 CFR §5.3. The applicant must submit this request at the same time the NOI and the PAD are filed, and must also address the following issues in the request:

- Likelihood of a timely license issuance
- Complexity of the resource issues
- Level of the potential controversy
- Potential cost differences between the traditional and integrated process
- Available information and the potential for disputes over the studies
- Other pertinent factors. 18 CFR §5.5.

The authorization request will be made submitted to impacted resource agencies, tribes and interested members of the public. 18 CFR §5.3. Furthermore, the applicant must publish notice of the NOI, PAD, and traditional process request in a weekly or daily newspaper in every county where the proposed project would be located, and request must solicit comments to be submitted with the Commission within 30 days of the request filing date. §5.3. The Office of Energy Project director's decision concerning the request for the use of the traditional process will be included in the notice of commencement of proceeding issued within 60 days of the NOI filing. §5.3. The Commission might then grant permission for the use of the traditional process if there is good cause shown.

A joint consultation between the applicant and interested resource agencies, tribes, and the public within 30 days but no later than 60 days of the Commission's approval of the traditional process. 18 §CFR 4.38(b). The meeting should include a site visit, and should have the following objectives: to develop a common understanding of the potential project between all impacted, to discuss the current and potential resource needs for the proposed project, the management objectives for the project area, and a reaching of a decision on what information and studies will be required. 18 CFR §4.38(b)(3)(i). In addition, within 15 days prior to the date of the meeting, the applicant must write a notification of the time, date, and location of the meeting to the Commission, and at least 14 days before the joint meeting, the applicant must publish the meeting specifics and the agenda in a daily or weekly newspaper in every county where the potential project will be located. 18 CFR §4.38(g)(2)(i). The information in the PAD must also be made available to the public, and there must be two copies of the consultation package available at the joint meeting. §4.38(g)(2)(i), (g)(2)(iii). In addition, the meeting must be recorded by the applicant and those records must be available to any resource agency, tribe, or members of the public who request a copy of the recording. 18 CFR §4.8(b)(4).

No later than 60 days of the joint meeting, the agencies, tribes, and interested members of the public must provide the applicant with written comments and study requests, which can be submitted to the applicant or the Commission. 18 CFR §4.38(b)(4). Once the study plans have been finalized, the applicant is required to proceed with all reasonable studies and gather all reasonable information requested during the first consultation process. 18 CFR §4.38(c). If the potential applicant is seeking an original license, studies must be done before the application is filed if the results would influence the financial or technical feasibility of the project, or if the studies would be needed to determine the project's design, location, environmental impact, or reasonable alternatives to the project. 18 CFR §4.38(c)(2). A particular study can be completed after the filing of the application if the potential applicant initiates a formal consultation at least 4 years before the expiration date of the lease, the study would take longer to complete than the time between the first consultation stage and the application deadline, and if the study would not need to be conducted until after the license is issued. It may be necessary to postpone a study until a license is issued if the study must be conducted following the construction of the facilities, or if the study's purpose is to determine the success of implemented measures, refine project operations or modify project facilities. 18 CFR §4.38(c)(2).

A draft application would be developed during the second stage of consultation. A draft application would include the following:

- Indication of the type of application the applicant intends to file
- Response to any comments and recommendations made by any interested resource agency, or Indian tribe during the previous consultation
- Results of the requested studies
- Discussion of the study results and proposed protection, mitigation and enhancement measures

The applicant must then distribute the draft application to resource agencies, Indian tribes, and other interested parties, and these agencies and parties are then given 90 days to provide comments on the draft application. 18 CFR §4.38(c)(4-5). If any of the agencies, tribes, or interested parties have a substantive disagreement with any of the applicant's conclusions concerning the potential project's impact on resources or proposed mitigation, enhancement, or environmental protections measures, then the applicant must schedule another joint meeting with the disagreeing groups, agencies, and tribes as well as other consulted agencies within 60 days of receiving the written comments. Additionally, the Commission must receive written notice of the time, place, and agenda of the meeting within 15 days of the meeting. The applicant then documents a summary of the joint meeting, which includes outstanding disagreements, and finalizes the draft application for filing. 18 CFR §4.38(c)(8-9). The application must include an "Exhibit E" which includes information concerning, and evidence of the consultations, disagreements, resolutions, and future proposals for addressing issues. 18 CFR §4.38(f).

An existing license holder is required to allow a competing applicant site access so that the applicant can gather information, conduct studies, or hold site visits with resource agencies. This requirement is in effect once the potential competing applicant has complied with all of the information requirements from the first consultation, and they have given the existing license holder a written notice stating the need and extent of access needed. 18 CFR §16.5.

Filing of the Application

If the applicant is a current licensee, the application must be filed within two years before the existing license expires. 18 CFR §4.38. The applicant must also provide copies of the application to the interested resource agencies, tribes, and previously consulted members of the public. 18 CFR §4.38(d)(2). Fourteen days after the filing of the application, the Commission will issue a notice soliciting a request for additional studies and a consultation with the Maine State Historic Preservation Officer under 106 of the NHPA.

The application will be reviewed for adequacy by a Commission team of engineers and environmental specialists. The application must include the following: minimum content requirements under 18 CFR §4.38; the protection, mitigation, and enhancement proposals; evidence of completion of the pre-filing consultation; and CZMA compliance. Once the Commission completes an adequacy review, and deems the application acceptable then the Commission will issue a letter of acceptance. However, the Commission may also reject the application as patently deficient, if the Commission

decides that the application fails to comply with the basic regulatory requirements of content and pre-filing consultation. 18 CFR §4.41. If the Commission determines that the application is inadequate, then they will issue a deficiency letter and communicate the deficiencies with the applicant and whether more information is needed. The Commission will give the applicant adequate time to remedy the issues, but no more than 90 days. 18 CFR §4.32(e)(1). If the deficiencies are not corrected, the Commission can dismiss the applicant, however if they are corrected then the Commission will issue a letter of acceptance. 18 CFR §4.32(d)1 and §4.32(e)(1). A public notice will be published in the federal registrar, local papers, and issued to relevant agencies if the application is accepted. 18 CFR §4.34(b).

NEPA Compliance

After the notice of application has been filed, the Commission will either hold a public scoping meeting or simply solicit public comments for the scoping process to identify the potential environmental issues. The Commission will issue a scoping document at least 30 days prior to a public scoping meeting, which includes the tentative REA notice schedule, and comprehensive plans. If the Commission requires more information resulting from scoping comments and study requests, the applicant has within 60 to 90 days to provide the information, depending on the time the Commission grants. 18 CFR §4.32(g). Once all of the additional information has been submitted and deemed adequate, the Commission will issue an REA notice, which solicits final comments. The agencies, tribes, and public interests will have 60 days to comment. Furthermore, the applicant must file a copy of the water quality certification, proof of the water certification request, or a waiver for a water certification. 18 CFR §4.34(b)(5)(i). The Commission will then prepare the EA or EIS if necessary.

The process is completed with the issuance of the license followed by the monitoring process, which is the same for all three licensing processes.

The Alternative Licensing Process

The applicant must request and receive permission from the Commission to use the alternative licensing process. 18 CFR §4.38. The goals of the alternative licensing are as follows:

- To coordinate the pre-filing consultation process, the NEPA environmental review process, and other administrative processes relating to statutes such as the Clean Water Act (CWA)
- To facilitate effective communication and participation between all parties involved in the pre-application consultation process
- To allow for the pre-creation of an EA or EIS funded by the applicant
- To promote cooperation between the applicant and interested parties, and encourage the sharing of information between the parties; and to expedite the review process for an agreement of offer of settlement for a license

In addition, the request to use the alternative licensing process must show that the applicant has made a reasonable effort to contact all resource agencies, Indian tribes, citizen groups, and others impacted by the proposed project. The applicant is also required to demonstrate that there is a consensus concerning whether the alternative licensing process is appropriate according to the

circumstances, include a protocol for written communication to govern the communication between the applicant and those involved in the pre-application consultation process, to provide a copy of the written request to all effected resource agencies, Indian tribes, and entities contacted by the applicant who have communicated interest in the alternative licensing process. 18 CFR §5.3.

If the request for use of the alternative licensing process is filed prior to the filing of an NOI to seek a new or subsequent license, then the Commission will give public notice in the Federal Register, which invites comments to be considered for the applicant's request to use the request for the alternative license process. If the request is filed at the same time as the NOI, then the applicant will be required to supply a copy of the request to use the alternative process to all interested parties, and participants with a notification that they have 30 days from the date of the request to issue their comments. Additionally, the applicant must publish notices of the NOI and PAD, and request to use the alternative process in a daily or weekly newspaper in each county where the project will be located no later than the date of the NOI filing. 18 CFR §3.34(i)(5); 18 CFR §5.3.

If the Commission grants permission for the use of the alternative licensing process then the following must take place:

- The Commission gives notice to the Federal Register.
- The applicant gives notice of the information meeting and the scoping of the environmental issues in the local newspaper of each county the project will be located in, and the applicant must send notice of these events to those on a mailing, which the Commission provides.
- The applicant provides the Commission with a summary of the progress made on the alternative process every six months, however summaries of meetings held during the pre-filing consultation period can be filed instead of a report.
- Eight copies of the PAD need to be supplied, each scoping document, and the preliminary draft EA or draft EIS that has been prepared by a third party contractor.
- The applicant must keep a public record available for all relevant documents.
- The Commission maintains a public file of the applicant's PAD, scoping documents, and the preliminary draft EA or EIS prepared by a third party.
- The preliminary EA or EIS prepared by the third party contractor may be issued instead of Exhibit E.
- The applicant files the results of any studies with the Commission as directed by the Commission.
- Participants set reasonable deadlines for interested parties, resource agencies, and tribes to request scientific studies during the pre-filing consultation.
- During the pre-filing consultation, the Commission might require for all preliminary fish and wildlife recommendations, prescriptions, mandatory conditions, and comments to be submitted in final form after the application is filed.
- Any participant in the alternative process who can show that they have supported the process, but that a consensus that the use of the alternative process no longer exists, may petition the Commission with suggestions to complete the application process. 18 CFR §4.34(i)(6).

The potential applicant shall distribute the PAD, publish notice of an information meeting open to the public, and conduct environmental scoping review pursuant to NEPA, while the Commission will give notice of the scoping and information meeting to the Federal Registrar and local paper. 18 CFR §4.34(i)(4-6). During the scoping process the applicant and stakeholders examine the need for scientific studies, which is similar to the other two license processes. Once the needed studies have been completed, a third party contractor will begin to prepare the EA or EIS.

Once the application is completed along with the EA or EIS, the original application and eight copies are filed with FERC. Additionally, the copies of the filed application and the NEPA documents will be provided for all resource agencies, Indian tribes, and involved parties as well.

Processing

The application will be reviewed for adequacy by a Commission team of engineers and environmental specialists. The application must include the following information:

- Minimum content requirements under 18 CFR §4.38
- The protection, mitigation, and enhancement proposals
- Evidence of completion of the pre-filing consultation
- CZMA compliance
- Documentation showing compliance with the CWA section 401 certification
- The application might include the EA or EIS prepared by a third party contractor. 18 CFR §4.32

Once the Commission completes the adequacy review, the Commission will issue a letter of acceptance if the application is found to be acceptable. If the application is not found to be acceptable, the Commission has two courses of action, they can either deem the application as patently deficient, or inadequate but not patently deficient. These two courses are the same as the acceptance process for the alternative license process. Also similar to the other license processes, if the application complies with regulations, but the Commission requests additional information deemed relevant to making an informed decision on the application, then the applicant may be required to file the additional information with relevant agencies and tribes. 18 CFR §4.32(g).

If an application is accepted then the Commission will provide public notice to the Federal Register, local newspapers, the relevant resource agencies, and interested Indian tribes. The notice invites comments concerning the final fish and wildlife recommendations from the relevant agencies. The Commission will then review the preliminary draft for the EA or EIS to check for consistency with the Commission's requirements. Following the review the Commission prepares an engineering and environmental analysis to the proposal. The completion and monitoring process remain the same for the three licensing processes.

Pilot Project License

An applicant who is attempting to utilize the Pilot Project License process must request the appropriate waivers and modifications to do so. The Integrated Licensing Process allows for specific waivers to be granted on a case-by-case basis, which can reduce the timeframe for receiving a license while maintaining the consultation process, commenting process, and EA. 18 CFR §5.29(f)(2). Pilot projects need to be small (less than 5 MW), have a short term (5 year terms), avoid sensitive locations, the project must have strict safeguards for the public and environmental resources, the project must be able to be shutdown, removed, or modified if necessary to protect the public and environmental resources, the projects will be required to be shut down and removed before the conclusion of the license unless the license is extended, and the application must be submitted in a format which supports the EA. See generally <http://www.ferc.gov/industries/hydropower/gen-info/licensing/hydrokinetics/energy-pilot.asp#skipnavl>; http://www.ferc.gov/industries/hydropower/gen-info/licensing/hydrokinetics/pdf/pilot_project.pdf; http://www.ferc.gov/industries/hydropower/geninfo/licensing/hydrokinetics/pdf/white_paper.pdf.

To begin the Pilot Project Licensing process there will first be a public notice of the application, acceptance of the pilot project license application, soliciting motions to intervene and protest, and soliciting comments, final recommendations, terms and conditions. The motions to intervene could be expected from the Department of the Interior, DEP, DOC, other Maine State agencies, possible local concerns and/or businesses, NMFS, and the U.S. Army Corps of Engineers might also have comments. An EA must be prepared by FERC. Additionally, the EPA, NMFS, and relevant Maine State agencies (DEP, DOC, and potential others) may comment.

A recent pilot project license, issued for the Cobscook Bay Tidal Energy Project of ORPC Maine, LLC, can be found at: <http://www.oceanrenewable.com/wp-content/uploads/2012/04/ORPCLicense2282012.pdf>.

Transition from Pilot to a Build-Out License

The transition will likely be handled as a relicensing of the Pilot license and will require a standard NEPA review. The applicant would need to file an NOI and a PAD. An NOI is required five years before the license expires, when relicensing a hydropower project, however a waiver can be sought, if the project is less than 1.5 MW. In some cases the Pilot license can be extended while the applicant is completing the relicensing process.

There are other options the commission might consider when an applicant is planning to transition from a pilot license to a build-out license. The applicant may request a pilot license for more than five years to give the applicant a reasonable amount of time to prepare the relicensing application, or the applicant could request a phased-license. The applicant may also request a large enough boundary around the site to accommodate a future build-out. These options should be communicated and exercised as early in the licensing process as possible. Basically, it would be to the applicant's

benefit to act with significant foresight if they eventually plan to apply for a build-out license, to make the process proceed smoothly in the future.

Monitoring, Safety and Removal Plans

A FERC pilot project license requires a through description of the applicant's plans to monitor the impacts of the construction and operation of the project and its facilities on the environment, and public safety. There are also additional Federal statutes pertaining to the safe navigation of state and federal waters that need to be considered, and, in some cases, require permits. Furthermore, a FERC license and an EA or EIS requires a removal plan that describes the applicant's proposed removal plan once the license expires, and an emergency shutdown and removal plan if it is determined during monitoring that the project must be shut down and removed because of a safety risk.

Removal and Restoration

The applicant must include the removal and restoration plan for restoring the area when the license expires. At least 120 days before starting project construction and/or installation, the licensee is required to submit a Project Removal Plan to the FERC. The plan must include a provision to remove all facilities from the project lands and water, the revegetation measures for the site to restore the disturbed vegetation, the measures that will be taken to minimize any seabed disturbances and sediment during the removal of any of the project's underwater facilities, measures to monitor the environmental impacts of the project removal, and an implementation schedule to ensure the project is removed and the area is restored before the expiration of the lease. The licensee shall consult with relevant agencies and tribe(s) before the completion of the plan, and the licensee is required to supply the interested parties with copies of the plan and allow them 30 days to comment before filing the plan with FERC.

Emergency Shutdown and Removal

The Office of Energy Project's Office Director, as the FERC's authorized representative, can order the emergency shutdown and removal of a project's operation if the shutdown is necessary to protect the environment, or the life, health, or property of the public. The licensee is required to report any potential emergencies to the Office Director, and any relevant agencies as soon as possible, but no longer than 24 hours after becoming aware of the situation. During these consultations, the parties are to discuss the immediate course of action to prevent injury, minimize the threat, or eliminate the threat. A written report describing the environmental status, effect to any endangered or threatened species, and any information associated with public health and property must be submitted to FERC and relevant agencies within 7 days after discovering the threat. Furthermore, the report must include the location, time, date, and causes of the incident; any unusual circumstances preceding the incident; an account of any immediate action taken in attempt to remedy the situation; any injuries or mortalities to any endangered species resulting from the incident; adverse effects on any environmental resources, the public, or public property; a description of any adverse impacts to any relevant agency; and any further action that will be taken.

Project Facilities

A detailed description of what the layout of the facilities will be and what technology will be used. 18 CFR §5.18(b)(4).

Project Boundaries

A detailed description of the boundaries of the proposed project, which includes longitudinal and latitudinal boundaries, should be given. 18 CFR §5.18(b)(4).

Proposed Project Operation

The application must explain how the project will be operated once it has been built, and what technology will be used to operate the facility. For example, the application should explain how the turbines operate, how predictable the energy generation is, and how the turbines operate with regards to the tidal cycle, or waves, depending on the technology. Furthermore, the application should include information pertaining to how and when energy will be produced. 18 CFR §5.18(b)(4).

Monitoring

The licensee needs to file for commission approval of an assessment plan determining whether the project would emit noise and/or an electromagnetic field that would be harmful to species in the area. The plan must be submitted at least 90 days prior to the beginning of project construction and installation. The plan should include a description of the technology that will be used to monitor, a monitoring schedule, and provisions for filing a report containing the results, and comments from relevant agencies and tribes that are consulted, and the licensee's response to the comments. The licensee is required to give the agencies and tribes a minimum of 30 days to comment before the approval can be sought from the FERC.

Project Maintenance

There should be an explanation of how the facilities be maintained and monitored for functionality once up and running, which includes what the strategy of maintenance will be, what the maintenance schedule will be, and who will do the maintenance. 18 CFR §5.18(c)(1)(ii).

Proposed Environmental Measures Monitoring

During the installation and operating of the project, there must be monitoring measures taken. The application must describe how the environmental effects on the site and the surrounding area will be minimized, mitigated, and monitored, and what technology will be used for the monitoring. It is necessary to monitor the noise, the effect on the bird species in the area, the fish species, the endangered or threatened species on the ocean floor and below, and all other endangered and threatened species in the area. A consultation with the Maine State Historic Preservation Officer (Maine Historic Preservation Commission) is necessary, and the National Register of Historic Places needs to be considered as well to determine whether the proposed project would adversely impact any registered federal sites. 18 CFR §5.18(b)(5).

Environmental Monitoring Plans

NMFS recommends that all environmental studies by the relevant state and federal agencies should be finalized to the satisfaction of the agencies prior to the installation of the turbines. The monitoring plans formulated must be implemented. Additionally, the application should also include a post-license monitoring plan that would provide information pertaining to the specific thresholds that would constitute a shut-down, removal, or project modification. At least 90 days before starting construction or installation, the licensee must file for FERC approval for monitoring plans that would monitor the interaction between marine mammals, seabirds and other ESA listed or sensitive species with the in-water project facilities. These plans must include a description of the monitoring technology, how the data will be analyzed, the implementation schedule including the frequency and timing of data retrieval and maintenance to the monitoring equipment, and the standards used. The plans are required to be developed in consultation with appropriate state and federal agencies, and to identify the remedial measures to be used if there is an adverse impact to the behavior or use of the ocean habitats.

An annual report must be filed annually by December 31 with FERC, which describes the monitoring results and recommendations for modifying the project facilities. The report will also be shared with appropriate state and federal agencies, as well as affected Indian tribes. The licensee will include the comments from agency and tribe consultations in the report, and gives the agencies and tribes 30 days to comment before submitting the report to FERC; therefore the report must be given to the agencies and tribes at least 30 days prior to December 31.

Safeguarding the Public and Environmental Resources

The applicant is required to describe new proposed environmental protection and mitigation measures that will be implemented. This description should also explain how the measures will protect or improve the existing environment. This section also needs to include the comments made pertaining to recommended measures to take for environmental protection, mitigation, and enhancement, and current measures that are being taken. 18 CFR §5.18(b)(5)(ii)(C).

Proposed Safety Plan

The applicant must explain their Public Safety Plan and the Emergency Shutdown Plan. A Navigational Safety Plan is also required for commercial and recreational vessels. Furthermore, a Project Removal and Site Restoration Plan that explains how the project will be removed and the site will be restored before the expiration of the license, must be included. At least 90 days before starting project operations, the licensee must submit a copy of the Project Safety Plan to the Division of Dam Safety and Inspections and two copies to FERC. The plan includes the safety measures to be taken in case of any emergency that may risk life or property. The licensee will prepare the Project Safety Plan after a consultation with the U.S. Coast Guard. The plan should include details pertaining to keeping the nearby public safe, how the project will be monitored in case there is an emergency, the procedures that will be utilized in case of an emergency, and how a potential emergency will be reported to local, state, and federal agencies. Furthermore, the plan must include the contingency measures to modify the operations or to initiate the emergency shutdown and removal plan, an annual testing of the

emergency equipment and emergency shutdown plan, and a plan to coordinate with response agencies annually. Before submitting the plan to FERC, the licensee must provide copies of the plan to all relevant agencies and tribe(s) and allow 30 days for comments. The comments from the U.S. Coast Guard, and other relevant agencies and tribe(s) should be included in the plan given to FERC.

Financial Assurance

Financial assurance is required to ensure that the licensee will have adequate funds to remove and restore the site before the expiration of the lease. At least 90 days prior to the start of the project's construction or installation, the licensee is required to file proof of an assurance bond or another equivalent financial assurance instrument that would cover the entire cost of removing the project and restoring the site. Additionally the licensee must annually file proof on January 1 that the financial assurance has been maintained.

FPA Section 18 Fishway Prescription

Section 18 of the Federal Power Act (FPA) provides that the FERC requires the construction, maintenance, and operation by a licensee of such fishways as might be prescribed by the Secretary of the Interior or Secretary of Commerce.

Wild Scenic Rivers and Wilderness Acts

If there are any areas in the vicinity of the "proposed project boundary that are included or have been designated for study for inclusion in, the National Wild and Scenic Rivers System, or have been designated as wilderness area, recommended for designation, or designated as wilderness area under the Wilderness Act," then there must be a description included. 18 CFR §5.18 (b)(3)(vii).

Section 10(j) of the FPA

Section 10(j) of the FPA, 16 U.S.C. § 803(j)(1), requires the Commission to include recommendations given by the federal and state fish and wildlife agencies in relation to the Fish and Wildlife Coordination Act, 16 U.S.C. § § 661-667e, to protect the fish and wildlife in and around the proposed site in the time of license issuance. Additionally, it is necessary to consider the impact on the spawning grounds and habitat of the fish and wildlife possibly impacted by the proposed project. 18 CFR §5.26. Any project, for which the Commission issues a license, requires a comprehensive plan for the following:

- Developing or improving of waterways that would benefit interstate or foreign commerce, the improvement and utilization of waterpower development
- Protection, mitigation, and enhancement of fish and wildlife
- Other beneficial public uses such as flood control, water supply, and recreation

Ports and Waterways Safety Act (PWSA) Private Aids to Navigation

The PWSA, 33 U.S.C.A. §1221, was designed to allow for the U.S. Coast Guard (USCG) to ensure safe navigation through U.S. waters while protecting the marine environment. The USCG would also consult with the Secretary of State, the Secretary of the Interior, the Secretary of Commerce, the Secretary of the Army, and the Governors of affected States, to discuss other uses of U.S. waters including offshore energy projects. 33 U.S.C.A. §1223(c)(3)(B). The impact of the project needs to be considered, as well as the mitigation measures the applicant will take. Potential radar interference resulting from the turbines and the impact on navigational safety will also be taken into consideration and evaluated. Additionally, the applicant may be required to provide an emergency response plan. Once the proposed navigation aids are reviewed by the USCG, the applicant must obtain either a permit or a letter of no objection.

Rivers and Harbors Act Section 10 Permit

In order to prohibit the obstruction or alteration of navigable waters, any structures or activities (e.g., anchoring cables, aids to navigation) occurring in or affecting the navigable waters of the U.S., including the Territorial Seas and the Outer Continental Shelf, are subject to authorization by the U.S. Army Corps of Engineers (USACE). 33 U.S.C.A. §403. The USACE can authorize activities by a standard individual permit, letter-of-permission, nationwide permit, or regional permit. Based on the level of impacts associated with a proposed project, the USACE will make a determination on what type of permit is needed. For example, Aids to Navigation may be authorized by a nationwide permit if they are approved by and installed in accordance with requirements of the USCG. (33 CFR 330.5(a)(1)). However, if the USACE can exercise its authority through mandatory Federal Power Act §4(e) conditions to the license, it is possible that structures and activities that are part of a project authorized by a FERC license may not require a § 10 Permit.

If a project may affect threatened or endangered species (or their designated critical habitat), then the USACE must consult with NMFS and USFWS before making a permit decision. Additionally, permit applicants will be required to submit a Biological Evaluation describing the species in the area, the impact the project may have on the species or its critical habitat, and measures that can be taken to minimize impacts. Before issuing a decision on a Standard Individual Permit, the USACE will provide a 15 to 30 day public notice period. Also, the USACE must provide notice of and opportunity for public hearings before issuing a permit.

Clean Water Act §404 Permit

Enacted to conserve and restore the quality of the nation's waterways, §404 of the Clean Water Act, 33 USC § 1344, requires authorization for dredge and fill activities for activities in waters of the U.S., including certain wetlands. The 404 permit program is administered jointly by EPA and the USACE. The USACE handles the actual issuance of permits and determines whether a particular area of land is a

wetland or water of the U.S. The USACE also has primary responsibility for ensuring compliance with permit conditions, although EPA plays a role in compliance and enforcement.

The USACE may authorize dredge and fill activities with a standard individual permit, a letter-of-permission, a nationwide permit, or a regional permit. Based on the level of impacts associated with a proposed project, the USACE will make a determination on what type of permit review and authorization is appropriate. Authorizations expire within 2-5 years from the date of issuance; however, they may be renewed if the USACE is notified at least one month prior to expiration.

In its application review, the USACE will consult with federal and state agencies, to evaluate potential impacts, such as effects on fish and wildlife, water quality, navigation, historic, cultural, scenic and recreational values, and economics. The inter-agency consultation process also involves review and negotiations to identify conservation measures that can help protect and mitigate potential effects. Before issuing a decision on a Standard Individual Permit, the USACE will provide a 15 to 30 day public notice period. Also, the USACE must provide notice of and opportunity for public hearings before issuing a permit. Depending on the scope of the project and construction methods, certain activities associated with advanced water-power renewable energy projects (e.g., transmission cables) may require a §404 permit.

If a project could affect a threatened or endangered species or its critical habitat, then the USACE must consult with NMFS and the USFWS before issuing an authorization. Additionally, the project applicant may be required to submit a Biological Evaluation.

National Environmental Policy Act (NEPA)

NEPA, 42 USC § 4321 et seq., was enacted so that federal agencies will evaluate the environmental impacts of a proposed action and reasonable alternatives to those actions before authorizing the action. NEPA provides a framework to identify and assess environmental effects and reasonable alternatives to the proposed actions. The federal action agency, which is the agency issuing the license, lease or permit (usually the USACE or BOEM for MHK), is expected to utilize alternatives and/or mitigation to avoid or minimize impacts so that the purpose and need for the proposed action is accomplished in a manner that does not result in significant environmental effects. A detailed flowchart of the process can be found in Appendix E to this document.

The federal action agency documents the NEPA process by first determining that either 1) the proposed action is categorically excluded from detailed environmental review, or 2) the proposed activity requires a detailed environmental review and documentation containing information about the proposed project, alternatives considered, and likely environmental effects. If a categorical exclusion does not apply, then the federal agency prepares either an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). If substantial issues are not identified in the scoping period, agency staff will prepare an EA indicating that project is not likely to have significant effects, along with a Finding of No Significant Impact (FONSI). 40 CFR §1508.9. If substantial issues are identified and there

is not a FONSI after the EA review, then an EIS must be prepared. 40 CFR §1501.4. For a hydrokinetic project, the EA or the EIS is handled by FERC whether the project is inside or outside of the OCS. If the project is on the OCS, then FERC would work with BOEM when preparing the EA or EIS. In Maine, the OCS starts 3 nautical miles from the coastline shores, and extends to 200 nautical miles offshore. For pilot licenses, simply an EA is required, which is less expensive and thorough than an EIS.

An EIS is intended to insure that Federal agencies integrate the policies and practices of NEPA into their actions. 40 CFR §1502.1. NEPA calls for an EIS to consider the environmental impact on the proposed action, any unavoidable environmental impact of the proposed action, alternatives to the proposed action, the long-term and short-term effects of the action, and any irreversible commitment of resources to the action. 42 U.S.C. §4332. If an EIS is prepared there is no need to complete an EA. 40 CFR §1501.3. However, if an EA is completed for a pilot license, which is resubmitted for a commercial license, an EIS may still be required. For a pilot license for a hydrokinetic power project, the EA would be prepared by FERC and for the project to move forward there must be an FONSI.

Structure of EIS

There is an early and open process to determine the significant issues associated with the proposed action to be examined in the EIS called “scoping”. During scoping the lead agency invites local agencies, federal agencies, and affected Indian tribes to be involved in the process. 40 CFR §1501.7. Once the decision is made that an EIS will be necessary, the lead agencies will publish a notice of intent before the scoping process begins. 40 CFR §1507.1. In accordance with the significant issues identified in the scoping process, the lead agency shall prepare a draft EIS, which will be made available to cooperating agencies who will be given an opportunity to work with the lead agency and provide comments. 40 CFR §1502.9(a). The agency shall then prepare a final EIS that responds to the comments provided from the draft EIS. 40 CFR §1502.9(b).

FERC encourages the EIS to be prepared in a format which allows for a clear analysis. The recommended structure includes the following: a cover sheet; summary; table of contents; purpose and reason for action; the alternatives included with the proposed actions; potential environmental consequences; list of preparers; list of agencies, organizations, and individuals to whom the statements are sent; index; and appendices if necessary. 40 CFR §1502.10. Agencies will circulate the draft EIS and the final EIS, unless the EIS is unusually long then the summary can be circulated. 40 CFR §1502.19.

An EA or an EIS requires a detailed description of the location and technology of the proposed project. There should be a clear and detailed description of the location of the transmission wires. The permittee or licensee must also be able to demonstrate, that they have the technological capacity to complete the project. Potential alternative locations should also be included in the description as well. 42 U.S.C. §4332.

Any other federal agency that has jurisdiction or expertise to the specific environmental issue is a cooperating agency. The lead agency is required to request the participation of the coordinating

agencies as early as possible in the process, and shall use the cooperating agencies' proposals to the greatest extent possible within the lead agency's responsibilities. 40 CFR §1501.6.

Environmental Review and Consultations Under NEPA or Section 10

During the preparation of an EA or an EIS necessary for a MHK project, or generally during the USACE's permitting process, consultations with appropriate federal and state agencies, and impacted Indian tribes to ensure compliance with relevant statutes is required. In some cases, additional permits may need to be acquired from some of these agencies. Below are some of the relevant federal statutes and the associated agencies that would need to be considered and potentially consulted.

National Historic Preservation Act (NHPA) Section 106

Under NHPA, the construction of the proposed facility cannot be located on a historic property listed in the National Register of Historic Places, Maine's State Register of Historic places, tribal lands, and other historic lands that are not yet listed in the National or Maine State Historical Registers. Consultations need to take place with National Park Service (NPS), Advisory Council on Historical Preservation, and the State or Tribal Historic Preservation Officer. The visual effect on historic properties within the "area of potential effect" (APE) needs to be taken into consideration as well. If the proposed project would have an adverse physical effect on a historical property, then that effect might need to be mitigated or minimized. There can also be historical sites offshore, such as shipwrecks, which must be taken into consideration. 16 U.S.C. §470(f).

In Maine, the State Historic Preservation Office (SHPO), which must be consulted concerning the project's potential impact on historic landmarks, is the Maine Historic Preservation Commission. Additionally, any Indian tribes that may be adversely impacted must be consulted with.

There are three stages of formal consultation with defined time frames; however, FERC includes NHPA analysis in its NEPA documentation, so the timeframes of the consultation stages are not necessarily formally followed. The federal action agency will seek concurrence from the SHPO or the ACHP at each stage.

Initiation of Consultation (60 days) - First, the action agency initiates a 30-day consultation period with other relevant agencies to identify the Area of Potential Effect (APE) and to determine if any historic resources exist within the APE that are listed or eligible for listing in the National Register.

Assessment of Adverse Effects (60 days) - If the action agency concedes that the action will affect historic properties (or those eligible for listing), then the action agency consults with SHPO and Indian tribes to assess what effect the project would have on the historic properties.

Concurrence on determination of effects is sought from SHPO and tribes, who have 30 days to respond to the finding. If there is no response to a determination of effects, then the § 106 consultation concludes. If the SHPO or a Tribe objects and the action agency cannot resolve the objection, then the action agency forwards the objection to the ACHP, which can provide its opinion. Concurrence on project APE is then sought from SHPO, tribal governments, and other agencies involved. If it is determined that no historic properties are present or that present properties will not be affected, then the action agency notifies SHPO. If SHPO does not object within 30 days, then § 106 consultation concludes.

Resolution of Adverse Effects (60 days) - If the action agency concedes that that the project will have adverse effects, then the action agency must consult with SHPO and tribes on mitigation measures to protect or mitigate the effects on the historic properties. If the parties agree, they can incorporate those measures into a Memorandum of Agreement (MOA).

In situations where FERC is the federal action agency for a proposed project, FERC typically incorporates the Programmatic Agreement (PA or MOA) into the project license, which defines the APE and requires the licensee to develop and implement a Historic Properties Management Plan between the action federal agency and SHPO. If the effects of the project on historic properties cannot be fully assessed before the action agency approves the project, consultation may result in a PA between the SHPO and the action agency (e.g., FERC). If the action agency and SHPO are unable to agree on how to resolve adverse effects, then the ACHP will make recommendations.

Clean Air Act

FERC will work with the EPA, and the DEP to determine whether the project could potentially have an adverse impact on air quality pursuant to the Clean Air Act (CAA). The EIS would also take into consideration the impact of construction and decommission of the project on the air quality. Under the General Conformity Rule, federal actions that result in air emissions within a designated non-attainment area, or an area with worse air quality than the National Ambient Air Quality Standards (NAAQS), will have to conform to a federally approved state implementation plan (SIP). 42 U.S.C. §7609 and 40 CFR §93.150. A federal action may issue a license or a permit for the construction of an offshore renewable energy project. 40 CFR §93.152. Thus, if it is found that the air quality is below the NAAQS, then the SIP must be followed, which is dictated by the DEP.

Endangered Species Act (ESA)

The ESA prohibits the “take” of endangered or threatened species that are listed in 50 CFR §17.11. The “resource agencies” USFWS and NMFS administer the ESA. “Take” is defined as to harass, harm pursue, wound, kill, capture, collect or to disrupt the behavioral patterns or significantly impair the behavioral patterns. 16 U.S.C.A. §1539. Under section 7 subsection 2 of the act, a federal action agency must consult with the resource agencies to ensure that the agency’s activities, such as issuing a permit or a lease, shall not “jeopardize the continued existence of any endangered or threatened species. . . .” or adversely impact the species’ habitat. 16 U.S.C.A. §1536.

Generally, an applicant will prepare a draft biological assessment (BA) under the supervision of the action agency and in cooperation with the Service. Once complete, the applicant will submit the BA to the action agency (e.g., FERC or USACE) for its adoption and submission to the Service. Under the FERC licensing process, FERC's NEPA documentation includes an ESA section that serves as the final BA to the Service. Any additional consultation after this is FERC's responsibility.

If the action agency determines from the BA that the proposed action is not likely to have adverse impacts and the Service concurs with this determination, then the consultation process is complete. However, if the Service does not concur with such determination, or if the action agency determines that the proposed action is likely to adversely impact an ESA-listed species or its critical habitat, then the action agency must initiate formal consultation. To initiate formal consultation, a written request must be submitted to the Service.

During formal consultation, the Service develops a "jeopardy analysis" and uses this analysis to make informed decisions about the action's effects. If the Service's analysis concludes that the proposed project is not likely to jeopardize the species and/or its critical habitat, then the Service will issue a "no jeopardy" biological opinion (BO), along with an Incidental Take Statement (ITS) detailing the amount and extent of expected incidental take, and terms and conditions that the applicant and the action agency must take to minimize impacts. If the Service's analysis concludes that the proposed project is likely to jeopardize the species and/or adversely impact its critical habitat, then the Service will issue a "jeopardy" BO, including any "reasonable and prudent alternatives" (RPAs) to the action that would prevent adverse impacts. Issuance of the BO concludes the formal consultation process.

Also, if it is found that there would be a taking of an endangered or threatened species, then a Section 10 (of the ESA) Incidental Take Permit (ITP) can be sought, even for a non-federal activity. In order to receive an ITP, the applicant first must prepare a detailed habitat conservation plan (HCP) that outlines, among other elements, the likely impacts from anticipated taking, mitigation measures to minimize and mitigate such impacts, and alternatives considered. Depending on the species involved, if the relevant Service finds, in part, that the taking would be incidental, that the applicant will "to the maximum extent practicable, minimize and mitigate the impacts of such a taking", and that the taking "will not appreciably reduce the likelihood of the survival and recovery of the species in the wild", then the ITP will be issued. 16 U.S.C.A. §1539.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), 16 U.S.C. §§ 703-712, provides that it is illegal to pursue any action that would result in the "taking" of migratory birds listed in 50 CFR §10.13 unless a permit is obtained from the Secretary of the Interior. The regulations under the Act are regulated by USFWS. 50 CFR §10.1. If in the EA or EIS analysis, or monitoring, it is determined that there is a risk of taking under the Migratory Birds Act, a Special Purposes Miscellaneous application would need to be completed and filed with the USFWS. 50 CFR §21.27.

However, the MBTA is relatively unique compared to other species protection laws in that it only provides for criminal sanctions and does not allow for incidental take. 16 U.S.C. §§ 706-07. The MBTA codifies and implements four separate treaties between the United States and Mexico, Great Britain, Japan, and Russia, respectively. The MBTA imposes strict liability, prohibiting the taking or killing of migratory birds. The Act allows for a misdemeanor conviction based upon strict liability, while a felony conviction requires a knowing violation of the Act. 16 U.S.C. § 707(a)-(b) (2011). Under the MBTA, “take” means to “pursue, hunt, shoot, wound, kill, trap, capture, [or] collect,” and includes both intentional and unintentional actions. 50 C.F.R. § 10.12.

The one caveat to the Act’s application however, is that prosecution for take is left solely to the discretion of the USFWS; there is no citizen suit provision under the MBTA. Consequently, the USFWS may exercise prosecutorial discretion when a developer has employed mitigation measures intended to minimize risk to avian species.

Marine Mammals Protection Act

The Marine Mammals Protection Act (MMPA), 16 U.S.C. §§ 1361-1423(h), prohibits the taking of marine mammals unless the taking is permitted by law. Under MMPA Section 101(a)(5)(A), an incidental take permit can be applied for and acquired. 16 U.S.C.A. §1371. Section 101(a)(5)(A) authorizes, on request, for the USFWS to allow for the application specific activity (other than commercial fishing) in a specific geographical region the incidental, unintentional take of small numbers of a species or stock of marine mammals if certain findings are made and regulations prescribed. 16 U.S.C.A. §1371. If it is found that there would be a possible taking, the applicant will be advised to seek an Incidental Harassment Authorization with NMFS and an Endangered Species Act Incidental Take Statement before the project commences. There must be analysis, mitigation, and monitoring measures and these must be consulted with the NMFS. Additionally, there should be an analysis done regarding the impact of the potential noise from the construction and operation of the project on whales and sea turtles. The implementing regulations can be found at 50 C.F.R. § 18.27 (USFWS regulations); 50 C.F.R. § 216 (NOAA Fisheries regulations).

Magnuson-Stevens Fishery Conservation Act

The Magnuson-Stevens Fishery Conservation Act calls for an assessment of federally managed fish and invertebrate species when the potential essential fish habitat (EFH) might be affected. The lead agency for the Magnuson-Stevens Act is NOAA/ NMFS, and NMFS must be consulted to ensure that there will not be an adverse impact on nearby fisheries. 16 U.S.C.A. §1855. The consultation would include the NMFS and the permit’s lead agency, or the applicant acting as a non-federal representative pursuant to 50 §CFR 600.920. Furthermore, the parties in the consultation are required to use the best available scientific information to mitigate the potential impacts on the EFH. 50 CFR §600.920(d).

Additional Environmental Permits under Federal Statutes

There are additional permits that are required for the construction and operation of a hydrokinetic project. As noted above, under the ESA, and MMPA, incidental take permits may need to be acquired from USFWS if the studies find that there is a potential taking of and endangered or threatened species (ESA) or a marine mammal (MMPA). Additionally, as previously noted, under the Migratory Birds Act, if the studies find that there is a risk of a taking of any migratory birds, the applicant must seek a special purposes permit. Furthermore permits must be sought under the Clean Water Act (CWA) as well.

Clean Water Act §404 Permit

Enacted to conserve and restore the quality of the nation's waterways, §404 of the Clean Water Act, 33 USC § 1344, requires authorization for dredge and fill activities for activities in waters of the U.S., including certain wetlands. The 404 permit program is administered jointly by EPA and the USACE. The USACE handles the actual issuance of permits, and it determines whether a particular area of land is a wetland or water of the U.S. The USACE also has primary responsibility for ensuring compliance with permit conditions, although EPA plays a role in compliance and enforcement.

The USACE can authorize dredge and fill activities with a standard individual permit, a letter-of-permission, a nationwide permit, or a regional permit. Based on the level of impacts associated with a proposed project, the USACE will make a determination on what type of permit review and authorization is appropriate. Authorizations expire within 2-5 years from the date of issuance; however, they may be renewed if the USACE is notified at least one month prior to expiration.

In its application review, the USACE will consult with federal and state agencies, to evaluate potential impacts, such as effects on fish and wildlife, water quality, navigation, historic, cultural, scenic and recreational values, and economics. The inter-agency consultation process also involves review and negotiations to identify conservation measures that can help protect and mitigate potential effects. Before issuing a decision on a Standard Individual Permit, the USACE will provide a 15 to 30 day public notice period. Also, the USACE must provide notice of and opportunity for public hearings before issuing a permit. Depending on the scope of the project and construction methods, certain activities associated with advanced water-power renewable energy projects (e.g., transmission cables) may require a §404 permit.

If a project could affect a threatened or endangered species or its critical habitat, then the USACE must consult with NMFS and USFWS before issuing an authorization. Additionally, the project applicant may be required to submit a Biological Evaluation.

II. MHK POWER PROJECTS IN FEDERAL WATERS

A hydrokinetic energy project that is constructed and operated in Federal waters would still require a FERC license, which was described above. A BOEM lease would also be required for a project in federal waters, which is from three miles to 200 miles from the ocean shore and would also place the project in the OCS. Maine statutes, such as 38 M.R.S.A. § 480-C, §636-A, §633, a CZMA consistency review, and a Maine water certification pursuant to the CWA section 401 would still need to be considered even if the energy generating technology is not to be locating on state waters and submerged lands. The project could still have facilities such as a transmission cable located on state lands, submerged lands, or waters, and thus Maine state permits might be necessary.

A proposed MHK project generally will require a BOEM lease if the following are true: 1) The project will produce or support the production, transportation, or transmission of energy; 2) The project is to be located on the OCS; and 3) The project involves the temporary or permanent attachment of a structure or device to the seabed. (Note that BOEM will consider proposed MHK activities on a case- by-case basis to determine what constitutes an “attachment to the seabed” and to decide if a lease would be required. More information can be found at: <http://www.boem.gov/Renewable-Energy-Program/Regulatory-Information/Index.aspx>.)

All applicants must have a FERC license to operate a hydrokinetic project on the OCS unless they are a federal agency with congressional authorization. However, project developers may conduct limited testing under a BOEM lease without a FERC license if: 1) the technology in question is experimental; 2) the proposed facilities are to be used for a short period for the purpose of conducting studies necessary to prepare a license application or providing an educational experience; and 3) power generated from the test project would not be transmitted into or displaced from the interstate electric grid and would, therefore, not constitute "developing electric power" for purposes of the Federal Power Act (FPA). See Verdant Power LLC, 111 FERC ¶ 61,024 (2005), order on reh'g, 112 FERC ¶ 61,143 (2005). Testing as part of an educational experience fulfills the purpose of conducting studies necessary to prepare a license application. See Maine Maritime Academy, 130 FERC ¶ 62,234 (2010).

For a flowchart representation of some of the leasing process, see Appendix F to this document, as well as generally the information at the following link: <http://www.boem.gov/Renewable-Energy-Program/Regulatory-Information/Renewable-Energy-Auction-Formats.aspx>.

Commercial Lease for an OCS Marine Hydrokinetic Project

With a Competitive interest

If the project is on the OCS then it requires a BOEM lease. To determine whether there is a competitive interest, BOEM issues a notice in the Federal Register to request any expressions of interest in the lease area, and the applicants may then submit a response to the notice. 30 CFR §585.210,

§585.211, and §585.213. If there is a competitive interest, then BOEM then announces the determination of that competitive interest, publishes the proposed sale notice, and performs an area-identification. 30 CFR §585.211 and §585.216. Next, BOEM publishes the final sales notice, evaluates the bids and executes the lease within 10 days of receiving the lease copies. 30 CFR §585.211, §585.216, §585.222, and §585.224. Once the applicant is awarded the bid, then a site application plan (SAP) would be filed with BOEM when the PAD is being filed with FERC. See the flowchart at Appendix G to this document.

With No Competitive Interest

If BOEM issues the notice to the Federal Register, the applicant responds to the notice, but BOEM has determined that there is no competitive interest; then BOEM will announce the lack of competitive interest. 30 CFR 585.231-585.232. Within 60 days of the determination that there is no competitive interest, the applicant shall submit the SAP to BOEM, and the PAD to FERC. 30 CFR §585.601, 30 CFR §585.103, and 18 CFR §§5.5-5.6.

Site Application Plan (SAP)

The SAP describes the activities planned to be performed under the commercial lease, which includes the project easements and the test technology devices. The SAP must describe how resource assessment and technology testing would be conducted, and data gathered from physical characteristic surveys and environmental baseline surveys. 30 CFR §585.605. The plan must show that the applicant has planned and prepared to conduct the proposed site assessment in a manner that conforms to all applicable laws, regulations, and the lease provisions for the commercial lease. The site assessment activities must not unreasonably interfere with other uses of the OCS, does not interfere with activities pertaining to national security or defense, must not cause undue harm to the natural resources, wildlife or human life, property, objects, sites, or structures that have architectural or historical significance, or human, marine, or coastal environment. The plan must also use the safest and best technology, it must use the best management practices, and the plan should account for the collection of information that is required for the COP. 30 CFR §585.606. See generally the flowchart at Appendix H attached to this document.

Project Information

The SAP must include the following information:

- Applicant's contact information
- Discussion of the objectives, and proposed activities including the technology that will be used
- Proposed schedule from the beginning to the end
- Designation of the operator
- Commercial lease stipulations and compliance
- Location plat
- General structural and project design that includes information on each type of facility associated with the proposed project
- Description of safety measures, and the environmental protection measures

- Description of proposed measures to be used to mitigate, minimize, or avoid any potential incidental take or adverse environmental impact from the proposed project’s activities
- Certified verification agent nomination if required
- Reference information
- Decommission and site clearance procedures
- Air quality information
- List of all federal, state, and local authorizations or approvals required for the proposed activities in the site assessment
- List of agencies and people that have been communicated with and will potentially need to be communicated with or consulted as a requirement to conduct the proposed activities in the site assessment
- Financial assurance information
- Other information required by BOEM, 30 CFR §585.610.

Surveys

The SAP must include survey data, which has been collected. The types of surveys and the information necessary are as follows:

- A geotechnical survey, which includes all necessary seabed data that shows the conditions below the seabed will not jeopardize the integrity of the structures to be installed. The survey could include tests from multiple locations. The tests include in situ tests, boring tests, soil samples, and likely at least one deep boring test.
- A shallow hazards survey that provides significant information to describe whether risks such as shallow faults, gas seeps or shallow gas, slump blocks or slump sediments, hydrates, and ice scour seabed sediments would be likely to impact the proposed facilities.
- An archeological survey includes a description of the historic and prehistoric archeological resources in the area, pursuant to NHPA.
- A geological survey includes data describing the seismic activity of the proposed site, fault zones, the possibility and effects of seabed subsidence, and “the extent and geometry of faulting attenuation effects of geologic conditions near the site.”
- A biological survey includes descriptions of hard bottom or live bottom habitats; topographic characteristics; and other resources such as fish habitats, migratory birds, marine mammals, sea turtles, and sea birds in the vicinity of the proposed project. Chart 30 CFR §585.610

NEPA/CZMA

The SAP must include information that would aid BOEM in complying with the NEPA and the CZMA. For a competitive lease, BOEM will prepare a NEPA document, and a CZMA consistency determination. However, for a non-competitive commercial lease, or if a SAP submitted for a competitive lease shows changes in the information from the NEPA and the CZMA documents, then the applicant must provide a SAP with additional information, which describes resources, conditions, and activities which could be impacted by the proposed project. More specifically, the additional requirement would include information pertaining to water quality, biological resources, threatened or

endangered species pursuant to the ESA, sensitive biological resources or habitats, archeological resources, social and economic resources, coastal and marine uses, consistency certification, hazard information, and other resources conditions and activities. 30 CFR §285.611.

Conducting SAP Activities

The applicant cannot begin conducting the activities in the SAP until BOEM has approved the SAP. (30 CFR §285.614). The applicant must notify BOEM within 30 days of completing installation activities approved in the SAP. 30 CFR §585.614. If the applicant files a timely Construction and Operations Plan or a FERC license prior to the expiration of the lease, then the applicant can keep the facilities in place while the COP or the FERC lease is being reviewed for approval. 30 CFR §585.618.

After the SAP

FERC and BOEM conduct a joint scoping process plan, where the potential environmental issues are determined and documented. 30 CFR §585.231 and 18 CFR §5.8. A scoping document would be prepared within 60 days of the submitting of the PAD, and a scoping meeting between FERC, BOEM, potentially effected resource agencies, and other interested parties. 30 CFR §585.231 and 18 CFR §5.8. Forty-five days after the scoping comments are due a study plan will be submitted by the applicant to FERC, and a study plan meeting would be held within 30 days of the submittal. There are then 90 days for comment from relevant government agencies, and interested members of the public, which would be followed by a 30-day period for the applicant to revise the plan. 18 CFR §5.11. BOEM would then issue an information request and FERC would make a determination on the study plan. 18 CFR §5.13(c).

The applicant has 12 months to conduct the studies from the FERC study plan, and the applicant shall file for a preliminary licensing proposal with FERC 150 days before filing a licensing application. 18 CFR §§5.15-5.16. Once the FERC license application is filed, the Issue notice of Ready for Environmental Analysis (REA) and request for comments and conditions will be filed 60 days after the filing of the application, and the comments are due from interested agencies and members of the public within 60 days of the REA. A joint environmental document is provided by BOEM and FERC, and the comment period will be 120 days. 40 CFR §1508 and 18 §CFR 5.24. The BOEM lease will then be executed and announced and the license will be issued if the applications are accepted. 30 CFR §585.231. A COP, which is normally required for a BOEM lease, is unnecessary for a project where a FERC license is required. 30 CFR §585.620.

Limited Lease

Limited leases will be considered on a case-by-case basis. A limited lease will usually be issued for projects smaller in scale. The project for a limited lease will likely generate less than 5 MW, and is available for shorter terms (5 years or less).

Research Lease

Research leases will be considered by BOEM on a case by case basis. A research lease can only be issued to a federal agency or a state that is using the lease for renewable energy research that will be

utilized in the future for the generation, transmission, and transportation of renewable energy. In addition, the site used for a commercial lease need to be sites where BOEM determines there is no competitive interest for the site. 30 CFR §585.238.

General Activities Plan (GAP)

The BOEM must approve the applicant's GAP before conducting any activity under an ROW, RUE, or a limited lease. 30 CFR §585.640. The GAP describes the applicants proposed construction, activities, and decommissioning plan for all facilities, which includes testing facilities, the onshore support facilities, and any easements for the assessment and development of the lease or grant. The applicant must receive approval for the GAP from BOEM before any of the activity under the lease or grant can be commenced. 30 CFR §585.640. See generally the flowchart at Appendix I to this document.

The activities under the GAP must be safe, they cannot unreasonably interfere with other uses of the OCS, the activities cannot interfere with activities pertaining to national security or defense, they must not cause undue harm to the natural resources, wildlife or human life, property, objects, sites, or structures that have architectural or historical significance, or human, marine, or coastal environment. The plan must also use the safest and best technology, the best management practices, and properly trained personnel. 30 CFR §585.641.

Surveys Required for the GAP

The GAP must include data from the following surveys:

- Shallow hazards survey that provides significant information to describe whether risks such as shallow faults, gas seeps or shallow gas, slump blocks or slump sediments, hydrates, and ice scour seabed sediments exist and would be likely to impact the proposed facilities.
- Archeological survey that includes a description of the historic and prehistoric archeological resources in the area, pursuant to NHPA.
- A geological survey that includes data describing the seismic activity of the proposed site, fault zones, the possibility and effects of seabed subsidence, and "the extent and geometry of faulting attenuation effects of geologic conditions near the site."
- A biological survey including descriptions of hard bottom or live bottom habitats; topographic characteristics; and other resources such as fish habitats, migratory birds, marine mammals, sea turtles, and sea birds in the vicinity of the proposed project.
- A geotechnical survey including relevant information pertaining to the seabed and engineering of the proposed facility to allow for the facility's foundation design, and to ensure that the seabed and below will not jeopardize the foundation's integrity. The survey should likely include tests from multiple locations. The tests include in situ tests, boring tests, soil samples, and likely at least one deep boring test. 30 CFR §585.645(a)

GAP Project Information

The GAP must include the following project information:

- Applicant's contact information
- Designation of the operator if applicable
- ROW, RUE, or limited lease grant stipulations
- Location plat
- General structural and project design that includes information on each structure associated with the proposed project
- Description of safety measures, and the environmental protection measures that will be utilized
- List of chemical products that will be used in the construction and operation of the project if the storage of the chemicals exceeds the EPA's reportable volume
- Waste disposal location and methods
- Reference information; decommission and site clearance procedures
- Air quality information pursuant to the Clean Air Act (CAA, 42 U.S.C. §7409)
- List of all federal, state, and local authorizations or approvals required for the proposed activities in the site assessment
- List of agencies and people that have been communicated with and will potentially need to be communicated with or consulted as a requirement to conduct the proposed activities in the GAP; financial assurance information
- Construction schedule
- Other information required by BOEM, 30 CFR §585.645(b)

If the applicant is applying for an easement or constructing a facility that BOEM finds to be "complex or significant" the following additional project information must be included:

- Discussion of the construction activities, objectives and schedule
- Information pertaining to the location, design, transmission cables including the cables on project easements, a description of environmental and safety measures for the project deployment
- General description of operating procedures and systems under normal circumstances and in emergency situations
- CVA nomination
- Construction schedule
- Any other information required by BOEM 30 CFR §585.645(c)

GAP/NEPA Compliance

The applicant must submit information to assist BOEM in complying with the NEPA. The GAP should include information pertaining to the following resources, activities and conditions:

- Hazard information that includes meteorology, oceanography, sediment movement, geology, and shallow geological or manmade hazards
- Water quality
- Biological resources

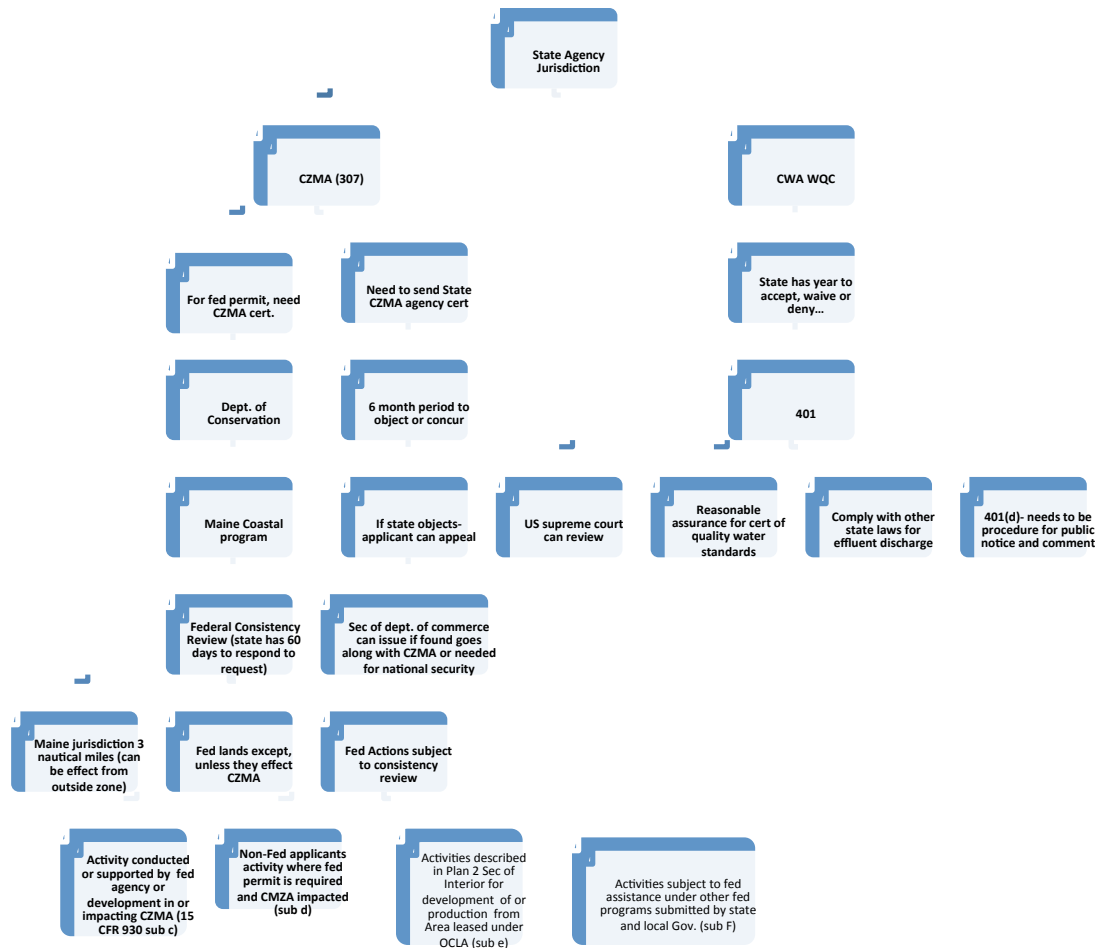
- Threatened or endangered species pursuant to the ESA
- Sensitive biological resources or habitats
- Archeological resources pursuant to NHPA
- Social and economic resources which include but are not limited to employment, existing infrastructure, land use, recreation, recreational and commercial fishing, coastal zone management groups, and viewshed
- Coastal and marine uses such as military activities and vessel traffic
- Consistency certification pursuant to CZMA
- Other resources, conditions and activities 30 CFR §585.646.

If the lease, ROW, or RUE grant was issued competitively, than the consistency certification is processed by the BOEM, however, if it was issued noncompetitively the applicant will produce the consistency certification. 30 CFR §585.647.

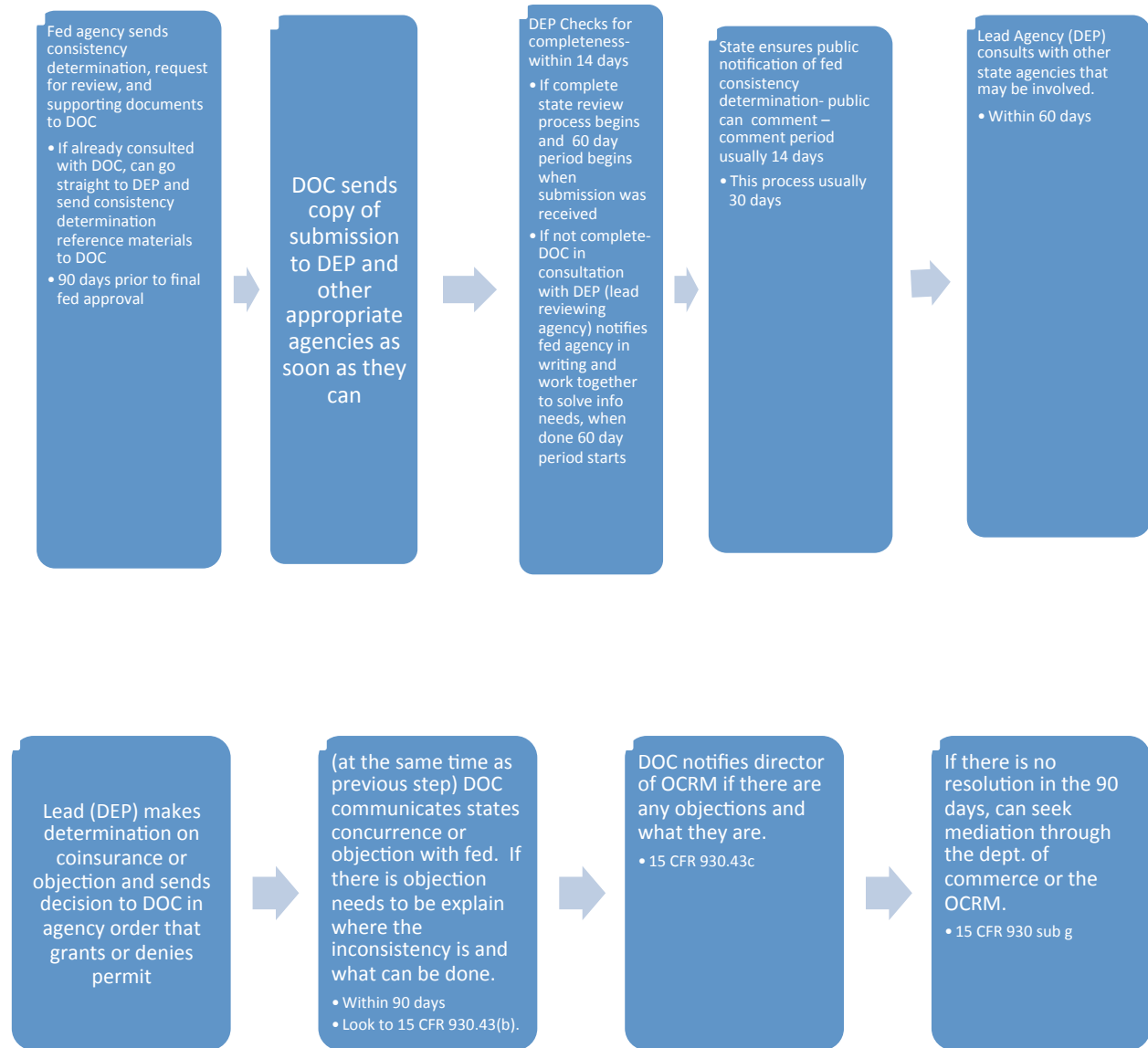
After the GAP is Completed

Once the BOEM approves the GAP, than the applicant may begin conducting activities in the GAP, unless BOEM deems the easement of facility to be complicated or significant. 30 §CFR 285.650. For facilities and easements deemed significant or complicated, than the applicant must submit addition requirements listed above and a Safety Management System. 30 CFR §585.651. The applicant must notify the BOEM in writing 30 days after completing the approved activities in the GAP. In addition the applicant must provide the BOEM annual reports that show the applicant's activities comply with the terms and conditions of the GAP. 30 CFR §585.653. Once all approved activities under the GAP have been completed, the applicant must commence their decommissioning plan. 30 CFR §585.657.

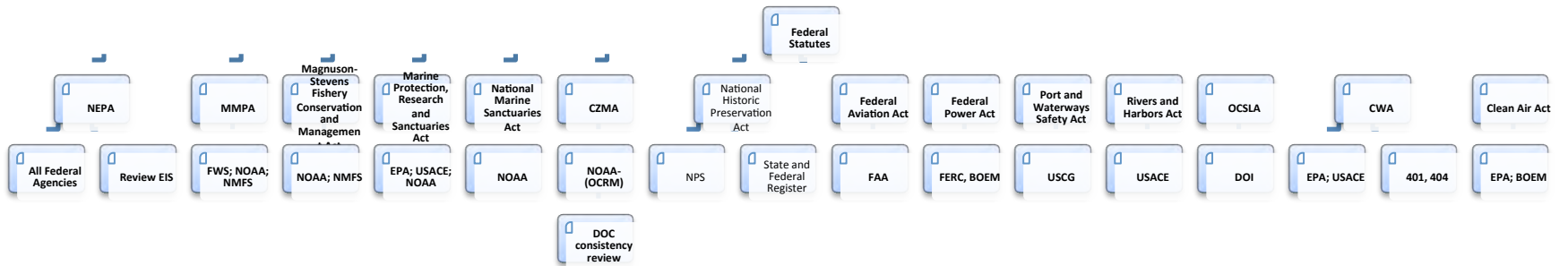
Appendix A: Before FERC can issue License for construction, BOEM can issue lease, or Corps can issue Permit, Federal Agency needs CWA and CZMA reviews with state agency



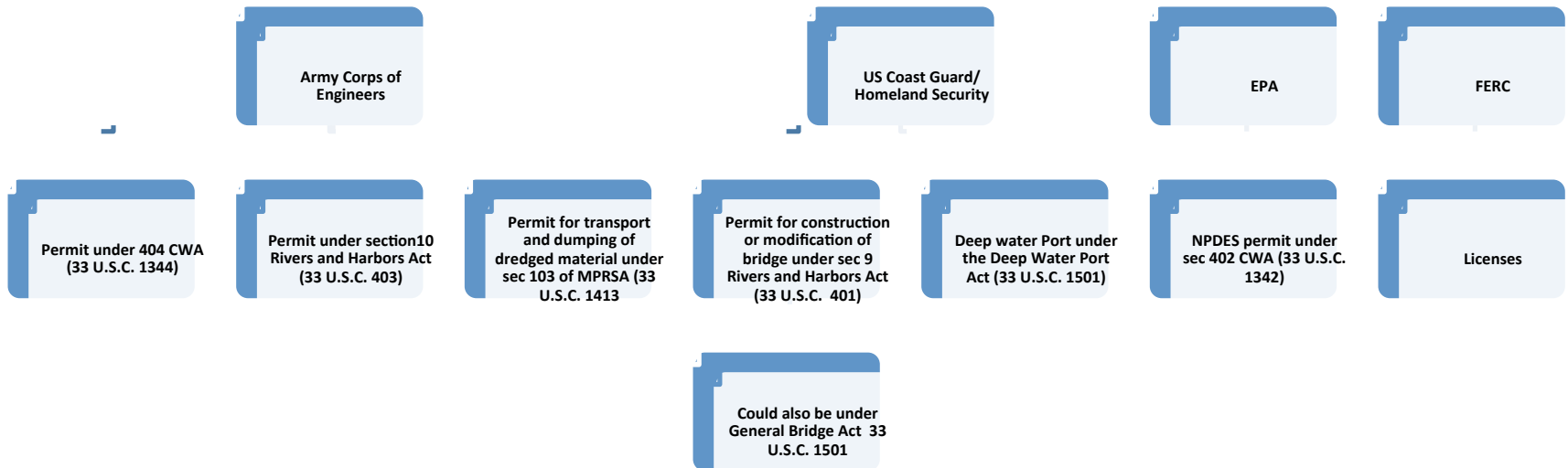
Appendix B-- CZMA Consistency Review



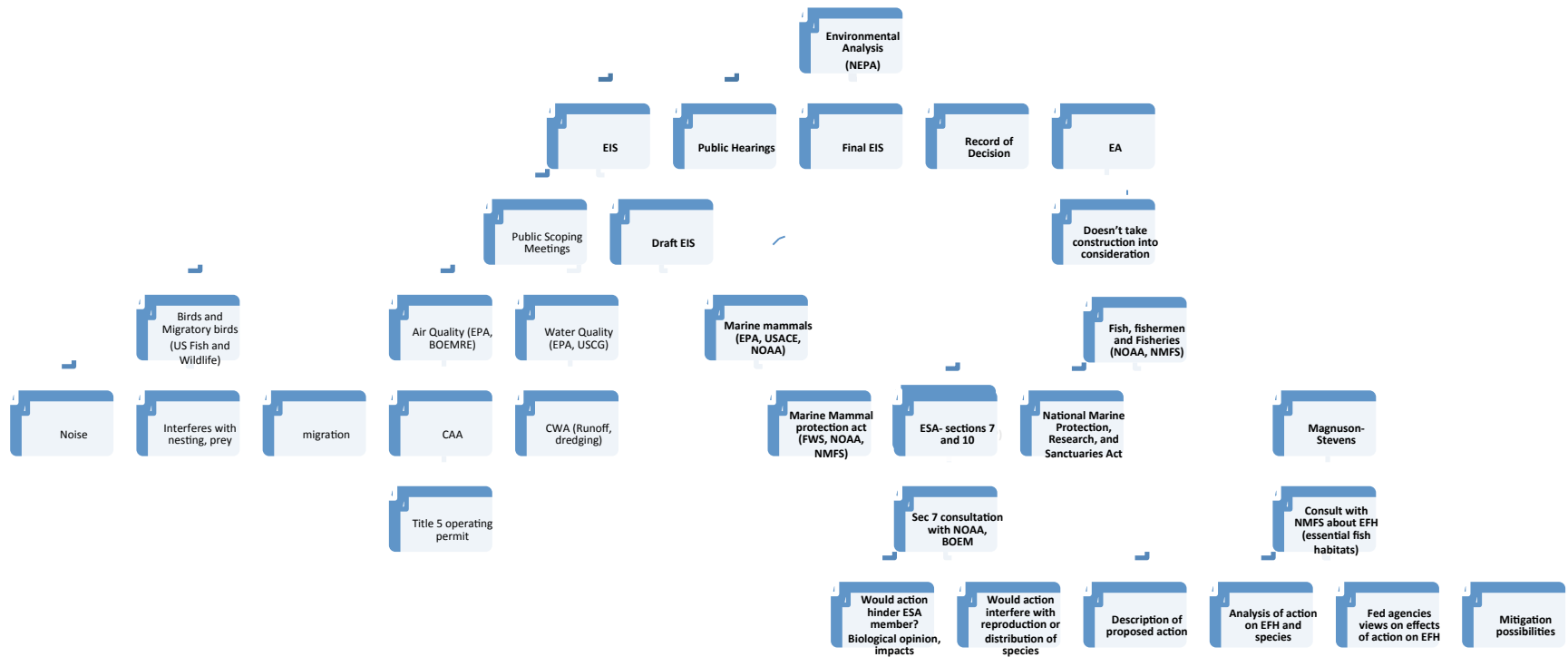
Appendix C--Federal Permitting Process



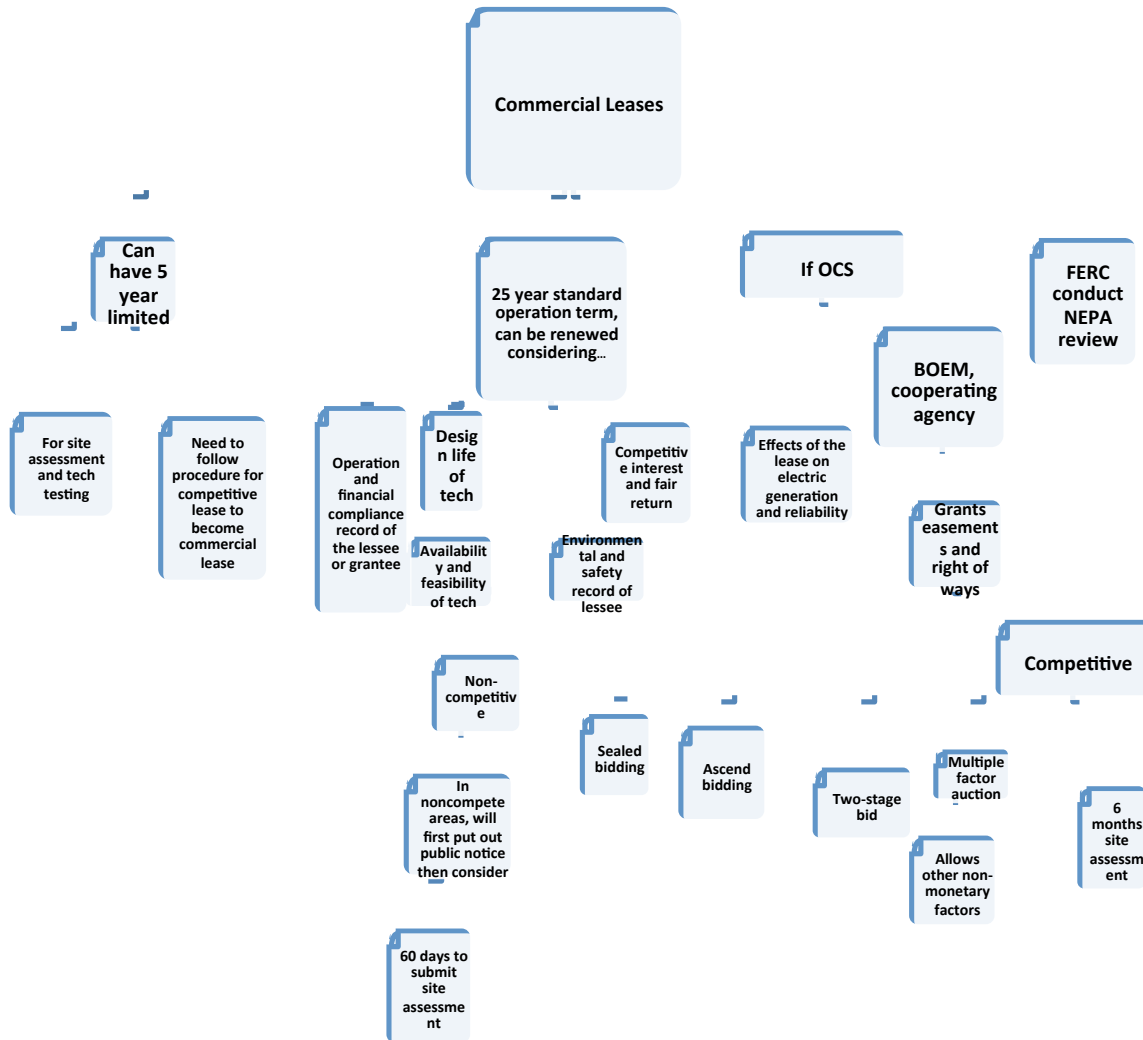
Appendix D: Some Federal Permits and Licenses



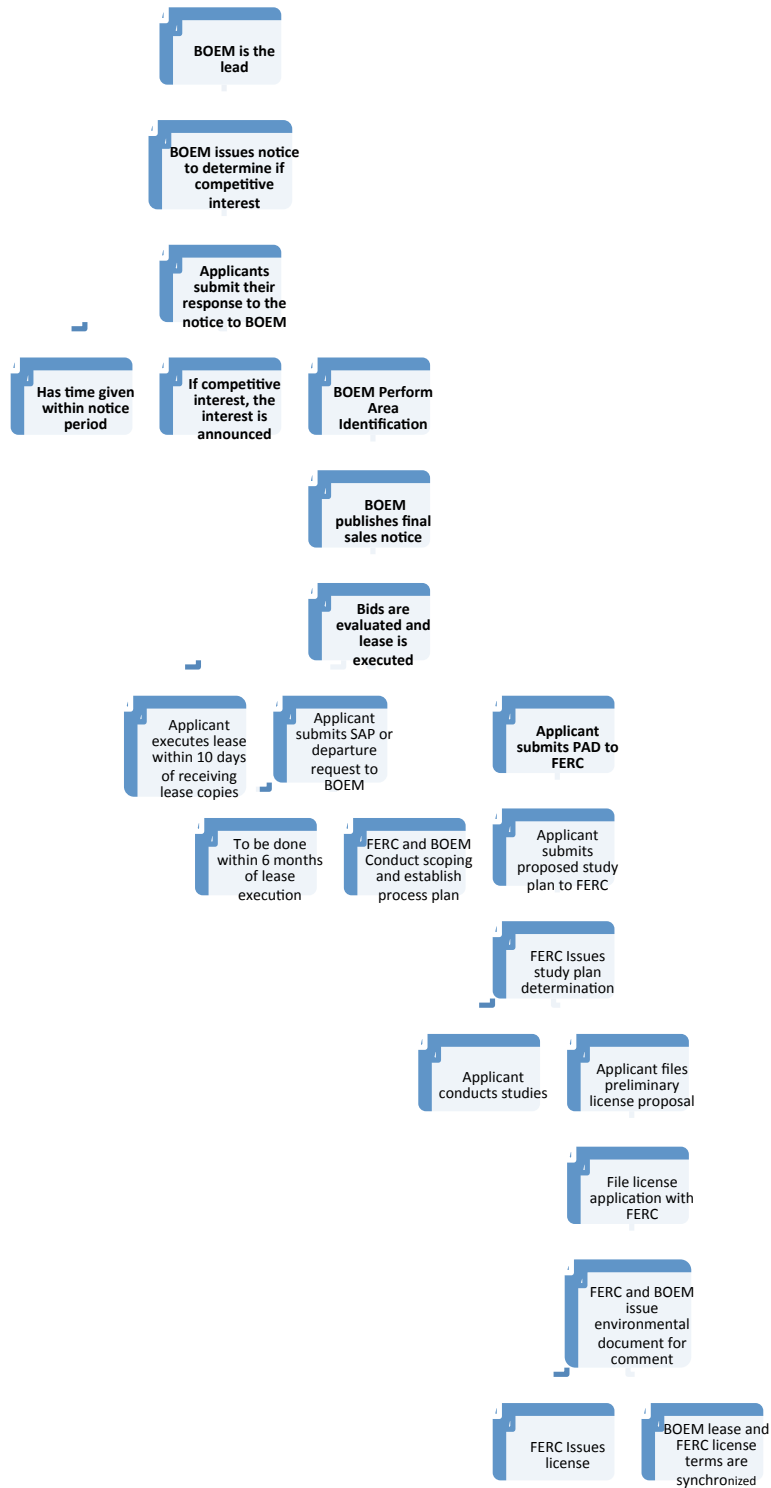
Appendix E: NEPA Environmental Analysis- Federal Lead Agency



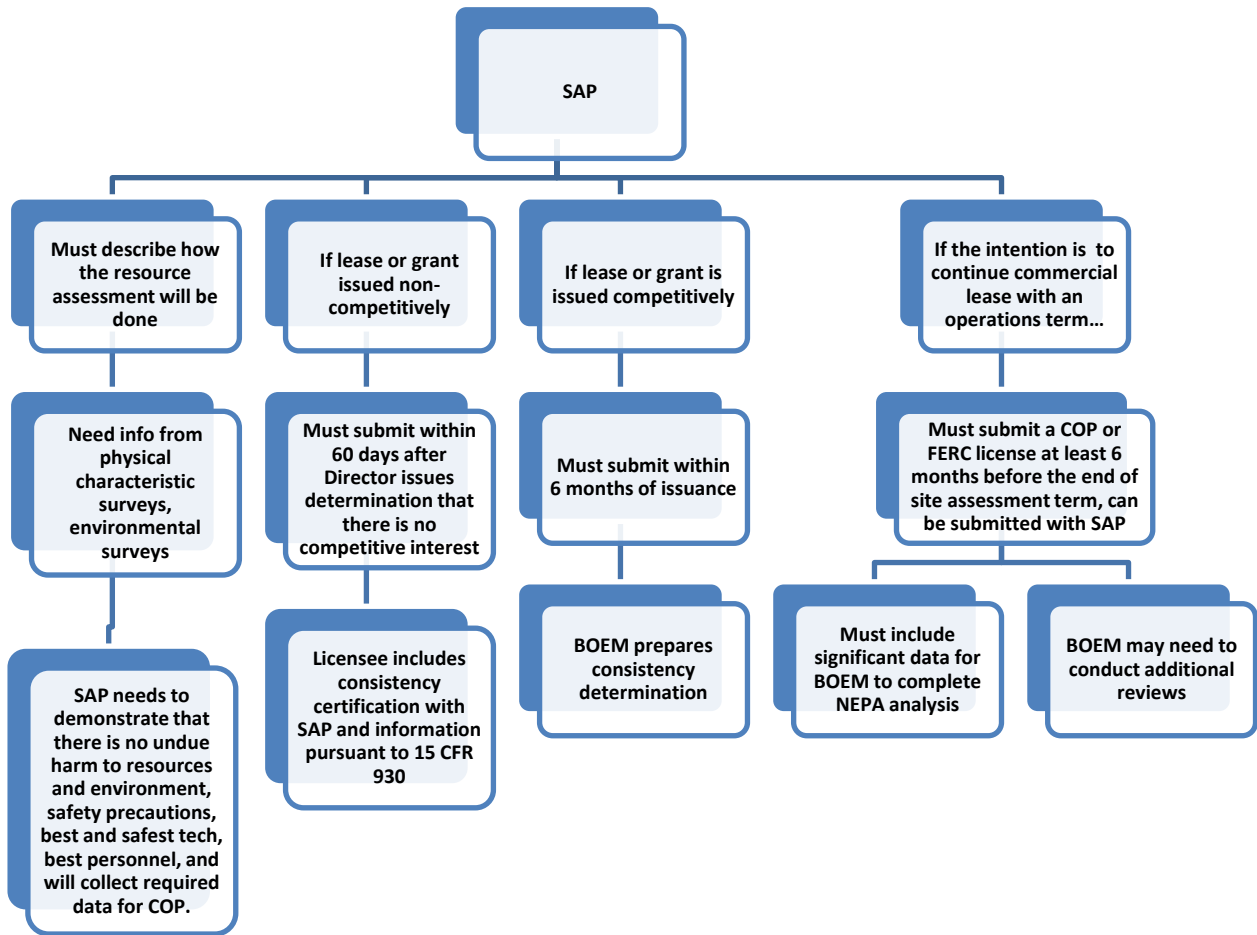
APPENDIX F-- BOEM COMMERCIAL LEASE PROCESS



Appendix G: Hydrokinetic Energy Project on the OCS: Commercial Leasing and Licensing; Competitive Interest (FERC and BOEM)



Appendix H--SAP (Site Assessment Plan) – BOEM



Appendix I: GAP (General Activities Plan) BOEM

