ORIGINAL

TRC

P-12666-000

March 30, 2006

Honorable Magalie Salas
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: Preliminary Permit Application (KENNEBEC TIDAL ENERGY PROJECT)

Dear Ms. Salas:

On behalf of the Kennebec Tidal Energy Project, enclosed for filing please find an original and eight copies of the Maine Tidal Energy Company's Application for a Preliminary Permit for the Kennebec Tidal Energy Project for your consideration.

We are eager to begin pursuing licensing options and approvals for the various phases envisioned by the Application. Please feel free to contact me at 978-656-3567 if we can be of further assistance.

Thank you for your consideration in this matter.

With regards,

Charles B Cooper

Charles B. Cooper
Director of Environmental Permitting and Planning
TRC Environmental Corporation
Agent for Kennebec Tidal Energy Project

116 John Street, Boott Mills South • Lowell, Massachusetts 01852
Main: 978-970-5600 • Fax: 978-453-1995
www.trcsolutions.com

BEFORE THE UNITED STATES
FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR PRELIMINARY PERMIT

METIDAL™
Energy Company

Maine Tidal Energy Company
Kennebec Tidal Energy Project
Sagadahoc County, Maine

Docket #: _____

A. INITIAL STATEMENT

1. Statement of Purpose

Maine Tidal Energy Company (METidal) applies to the Federal Energy Regulatory Commission for a preliminary permit for the proposed Kennebec Tidal Energy Project as described in the attached exhibits. This application is made in order that the applicant may secure and maintain priority of application for a license for the project under Part I of the Federal Power Act while obtaining the data and performing the acts required to determine the feasibility of the project and to support an application for a license.

2. Project Location

The location of the Project is under water in a section of the Kennebec River in Maine. The under water area begins southeast of West Chops Point and extends northwest between the northern tip of West Chops Point and the southern tip of Chops Point. The coordinates of the requested permit area are provided below. Water depths in the area are variable and range from 25 feet to over 100 feet deep. Potential transmission line routes to the shore include routes along the northern tip of West Chops Point or the southern tip of Chops Point.

Coordinates of Defined Boundary, as displayed on Exhibit 4:

Id	Easting	Northing
1	433020.891791	4870370.769330
2	433159.042791	4870415.120330
3	433624.708791	4869356.080330
4	433906.600791	4869513.378330

Project coordinates are based on UTM Zone 19, NAD 83 information. Refer to Exhibit 4 for a detailed illustration of the Project area and the location of the referenced coordinates. The Project footprint and affected water resource locations will reside within a smaller area than delineated by the proposed boundaries. The anchoring and transmission infrastructure will occupy a small area of water column and riverbed. There will be no consumptive or otherwise preemptive use of water resources, making this type of application different from those traditionally considered for other energy projects such as dams. Environmental research, as discussed in Exhibit 2, will assist in determining the precise locations of the units and the footprint within the overall area defined above.

3. Applicant's Contact Information

The exact name, business address, and telephone number of the applicant is:

Maine Tidal Energy Company
1785 Massachusetts Ave., NW
Suite 100
Washington, DC 20036
Telephone: 202-494-9232

Authorized Agents

The exact name, business address, and telephone number of each person authorized to act as agents for the applicant in this application are:

Joseph A. Cannon
Pillsbury Winthrop Shaw Pittman LLP
2300 N Street, NW
Washington, D.C. 20037-1128
Telephone: 202-663-8000

Charles B. Cooper
Director of Environmental Permitting and Planning
TRC Environmental Corporation
Boott Mills South, 116 John St.
Lowell, MA 01852
Telephone: 978-656-3567

4. Statement of Authority

Maine Tidal Energy Company is a domestic corporation and is not claiming preference under Section 7(a) of the Federal Power Act.

5. Term of Permit

The proposed term of the requested permit is not to exceed 36 months. The project concept includes phased development, as follows:

- First Phase demonstration of a pilot Tidal In Stream Energy Conversion (TISEC) device, initially testing and refining the design components and subsequently installing and delivering the device's power onshore to a distributing entity;

- Second phase build-out of additional devices in the field, up to the capacity of the cable infrastructure sited in the initially used transmission corridor to land; and

- Third phase build-out of other appropriately sited fields, based on identification and use of appropriate sites, transmission corridors and business arrangements for delivered power.

It is targeted that at least the First phase would occur in the three-year timeframe of this permit. See APPENDIX A for a figure illustrating the conceptual schedule for the project.

6. Existing Dams or Other Project Facilities

There are no existing dams or other project facilities within the vicinity of this project.

The applicant has identified existing cable areas on the attached exhibit of the proposed project area. These infrastructure elements will be fully considered in the development and siting of our project in preparation for a license application.

VERIFICATION STATEMENT

I hereby verify that Charles B. Cooper, authorized agent for Maine Tidal Energy Company, 1785 Massachusetts Ave., NW, Suite 100, Washington, DC 20036, being duly sworn, deposes and represents that the foregoing Application for Preliminary Permit is true and accurate to the best of his belief. The undersigned Applicant has signed the Application on the 30th day of March 2006, in the Commonwealth of Massachusetts, County of Middlesex.

By: Charles B Cooper
Charles B. Cooper

Subscribed and sworn to before me, a Notary Public of the Commonwealth of Massachusetts this 30th day of March 2006. My commission expires on July 24, 2009.

By: Lisa J Cronier

LISA J. CRONIER
Notary Public
Commonwealth of Massachusetts
My Commission Expires Jul 24, 2009

B. EXHIBIT 1 – DESCRIPTION OF THE PROPOSED PROJECT

1. Physical Description

The Kennebec Tidal Energy Project would consist of one or more clusters of TISEC devices connected by underwater transmission cables to electrical infrastructure onshore. The TISEC devices are proposed for installation in navigable waters of the United States in the Kennebec River in approximately 25 to 100 feet of water. The project landfalls include areas along the northern tip of West Chops Point and or the southern tip of Chops Point. There are no dams, spillways, penstocks, powerhouses, tailraces, or other structures, whether existing or proposed, that would be part of the project. The nature of each TISEC device is currently being researched by the Electric Power Research Institute in a study titled "EPRI North American Tidal In Stream Energy Conversion Feasibility Demonstration Project." Because this technology is not yet commercially available, the physical description of the devices may only be described in general terms. It is envisioned that each TISEC device would consist of: (1) rotating propeller blades, approximately twenty (20) to fifty (50) feet each in diameter; (2) an integrated generator, producing 500 kilowatts to two (2) megawatts of electricity; (3) anchoring systems supporting the TISEC device at varying depths underwater; (4) a mooring umbilical line to an anchor on the river bottom; and (5) an interconnection transmission line to shore. Monitoring systems for parameters including but not necessarily limited to pressure, temperature, vibration, RPM, and power output may be located on the TISEC devices and on shore. Transmission from the TISEC device cluster to shore will also be by submerged cable, which may be buried beneath the river bed in its inshore portion. Onshore underground transmission cables will carry the electricity to where it will be fed into the land-based electrical use infrastructure.

It is anticipated that at least some of the power delivery arrangements will involve partnering with and co-sponsorship by other entities. The exact location of the onshore tie-ins is not yet determined. METidal will be identifying and discussing partnerships and agreements with local entities to evaluate the best means of co-sponsoring at least some of the receiving points for using and/or distributing the energy.

The placement of the units will take into account fishing activities and recreational activities such as sea kayaking. As part of the environmental permitting for the Project, we will account for the presence of protected species and as necessary, will work with applicable regulatory agencies to ensure the project has no significant impact on such species. The designers of these TISEC devices will undertake to minimize and avoid potential adverse impacts to aquatic organisms.

2. Reservoirs

The number of reservoirs, existing or proposed, that would be part of the project is zero.

3. Transmission Lines

The characteristics of transmission lines that would be part of the project are in a development stage. Because the nature of this installation is emerging technology in marine applications, voltages and interconnection parameters will be defined in a manner consistent with technical, commercial, and compatible environmental feasibility.

4. Estimates of Energy and Capacity

The TISEC devices produce electricity by utilizing the flow of tides in approximately 20 to 100 feet of water. One TISEC device with a diameter of 20-50 feet is expected to produce approximately 500 kilowatts to two (2) megawatts of electricity. Therefore, each TISEC device is capable of providing power to about 750 homes. The units will be installed in groups or clusters to the extent allowed by the configuration of the waterway. The initially estimated build-out total is about 50 units at this time. The actual number of units will be determined on a site-specific basis, taking into account the need to co-exist with other uses of the area, including, navigation. The configuration will be designed to avoid wake-interaction effects between the devices and to allow for access by maintenance vessels. An 80 percent capacity factor is targeted, averaging approximately 8,760 megawatt-hours per unit per year. It is expected that the overall capacity of the project will be determined by research which identifies the best number of TISEC devices and transmission lines to provide power while avoiding significant use conflicts and avoiding impacts on significant environmental resources.

5. Submerged Lands

For the most part, the anchoring and transmission facilities for the project will occur on State submerged lands located in Bath and or Woolwich, Maine. The State of Maine owns all tide and submerged lands that are not granted to the United States, local agencies, or private parties.

There is the potential for the project's transmission infrastructure to cross submerged lands owned by others, especially near shore. This potential would only become evident as the project reaches the stage of individual, site-specific route development. METidal will refine its development plan as appropriate to accommodate these site-specific ownership conditions.

6. Public Interest Benefits

The TISEC devices generate power from natural marine tidal currents, and therefore are not dependent on fuel. Removing the fuel component, such as the cost of coal in a traditional power plant, decreases environmental impacts and production costs tremendously. This form of energy production is essentially emission-free with no adverse impacts on air quality and minimal foreseeable adverse environmental impacts overall. Unlike traditional onshore hydropower, no dam or water diversion with associated use conflicts is needed. In addition, unlike some coastal wind farms that have drawn criticism for their visual impacts, the TISEC devices are expected to be located under water and would not intrude on the viewscape, shipping or pleasure navigation uses. By partnering with local entities for at least some of the output, a public benefit of lower-cost, alternative, renewable energy for local use can likely be realized.

C. EXHIBIT 2 – DESCRIPTION OF PROPOSED FIELD STUDIES

1. Study Plan

METidal has initiated a phased study plan to collect and analyze data related to the proposed project. Environmental studies include a water bottom and water column survey plan with a phased approach for identifying and understanding geological and geophysical characteristics, as well as biological attributes of the area.

The first phase of baseline studies will develop a three-dimensional image of the river bottom. Review of historic data, supplemented as appropriate by grab sampling and/or gravity coring in the vicinity of the candidate site anchors and transmission lines, is envisioned for identifying river bottom composition. Additional surveys involving the use of Acoustic Doppler Current Profilers (ADCPs), where necessary, will be conducted to identify strength fluctuations, variations in current direction, and flow in the water column. A statistical study of published data has already been initiated.

The second phase of baseline studies will involve benthic surveys, which may include side-scan sonar, sled-mounted video camera, bottom mounted ADCPs, and Remote Operated Vehicles (ROVs). Side-scan sonar is used to identify any hardbottom habitats, cultural resources or other sensitive subsurface structures. A sled-mounted video camera can be used in conjunction with the side-scan sonar to identify any unknown objects or inconsistencies in the images. Since current speed can vary depending on the location and depth in the water column, additional current meters may be needed to identify near-bottom currents. ROVs may be used for collecting samples or conducting any other activities that may require a submersible.

Ongoing and/or additional studies will be necessary to better understand the fluctuations in the tidal current and environmental impacts that may be associated with this project. In accordance with the National Environmental Policy Act, and corresponding State and local laws, an Environmental Impact Statement (EIS) is expected to be prepared for this project. The scoping process associated with the EIS and other Federal, State and local review processes are expected to initiate individual studies specific to agency and other stakeholder concerns.

METidal does not believe the project will negatively impact aquatic organisms, wildlife, vegetative species, historical and cultural resources, recreation uses, navigation, or commercial and recreational fishing. To document this subject matter during the preliminary permit period, there are plans to:

- Evaluate fish mortality and injury prevention measures;
- Study the impacts of construction and placement of the TISEC devices and transmission lines on aquatic organisms, historical and cultural resources, recreation, navigation, commercial and recreational fishing;
- Study the impacts on potentially affected aquatic organisms due to the operation of the TISEC devices, especially addressing fish and other organisms' movement around the units; and
- Study the impacts of the TISEC devices and transmission lines on surrounding wetlands, riparian wildlife and vegetative species, where applicable; and

- Study the extent and impacts of phenomena such as biological fouling on performance and microhabitat.

APPENDIX A – PROJECT SCHEDULE - Figure 1 - Illustrative Project Schedule shows the anticipated timeframes for the Federal, State and local permit preparation and agency review, as well as investigative studies.

2. New Dam and Road Construction Work Plan

There is no new dam construction or road construction proposed as part of the project.

3. Waiver

The applicant does not request that the Commission waive the study requirement.

D. EXHIBIT 3 – STATEMENT OF COSTS AND FINANCING

1. Costs of Planning and Studies

METidal has estimated that over the duration of this permit period, studies costing in the range of $1.0 to $4.0 million will be carried out. These will include field investigations, environmental analyses, engineering and design studies; and Federal, State and local permitting work.

2. Expected Sources of Financing

All studies associated with this project will be fully funded by METidal and its participating partners and investors.

3. Description of the Proposed Market

The proposed market consists of municipal partners and/or utilities servicing the New England region. In the Northeast, as in the rest of the country, there is a growing demand for energy. In general, the number of U.S. households is projected to rise by 1.0 percent per year between 2000 and 2020 while residential demand for electricity is expected to grow by 1.8 percent annually.[1] This is an increase in demand of 52% over current capacity over the next twenty years, representing a market increase of $17 billion per year. This means that due to increased demand, approximately 14 gigawatts of new generating capacity will have to be developed just to keep pace each year. While renewable sources of energy are projected to remain minor contributors to U.S. electricity supply, these sources are expected to increase from 357 billion kilowatt-hours of generation in 2000 to 464 billion (9 percent) in 2020.[2] METidal is committed to providing clean, renewable energy to the growing Northeast market.

[1] U.S. Department of Energy, Energy Information Administration, *Annual Energy Outlook 2002 with Projections to 2020;* (Report#:DOE/EIA-0383(2002) December 21, 2001.
[2] Id.

E. EXHIBIT 4 – PROJECT MAPS

Refer to Figure 1 – Representative Size of Proposed Energy Development Project Map for identifying the project area in the Kennebec River.

National Wild and Scenic Rivers

There area no areas designated as National Wild and Scenic Rivers found within the project area.

Designated Wilderness Areas

There are no areas that are designated Wilderness Areas found within the project area.

Recommended Designated Wilderness Areas

There are no areas that are recommended Wilderness Areas found within the project area.

Designated Wilderness Study Areas

There are no areas that are designated Wilderness Study Areas found within the project area.

LARGE-FORMAT IMAGES

One or more large-format images (over 8½" X 11") go here. These images are available in E-Library at:

For Large-Format(s):
Accession No.: 20060410-0131

Security/Availability:

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File Date: April 3, 06 Docket No.: P12666-000

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APPENDIX A – PROJECT SCHEDULE

LARGE-FORMAT IMAGES

One or more large-format images (over 8½" X 11") go here. These images are available in E-Library at:

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