March 31, 2009

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1-A
Washington, DC  20426

Re:  Nenana OCGen™ River TGU Power Project (P-13233)
     Progress Report No. 1

Dear Ms. Bose:

On October 21, 2008, ORPC Alaska, LLC (ORPC) was issued a preliminary permit for the Nenana OCGen™ River TGU Power Project (P-13233-000) located in the Tanana River, within the Unorganized Borough of Yukon-Koyukuk, near Nenana Alaska. The Schedule of Activities (December 1, 2008) was filed in accordance with Paragraphs (C) of the Director’s Order issuing the preliminary permit.

ORPC submits the following progress report in compliance with Article 4 of the permit.

Project Activities

In October 2008, ORPC, in conjunction with the University of Alaska, Fairbanks, retained Terra-Sond to perform an initial ADCP velocity profile of the Tanana River site. The results of this first survey confirmed ORPC’s belief that the Nenana site is suitable as a hydrokinetic power project site.

ORPC began working with the Alaska Center for Energy and Power (ACEP - a collaborative organization within the University of Alaska system) to further ORPC’s Nenana Project and to assist ACEP in establishing a hydrokinetic device test center at Nenana. ACEP submitted a proposal to the Alaska Energy Authority for a grant under the Alaska Renewable Energy Fund based on ORPC’s OCGen™ River Technology on October 8, 2008 for the funds to further study the Tanana River at the Nenana site for a full year and to test ORPC’s River Turbine Generator Unit (“TGU”). On February 18, 2009, ACEP was awarded a grant equal to approximately 25% of the original request. Since the award occurred three months later than originally scheduled, it
precluded ORPC’s building and testing the River TGU in summer 2009 so ORPC and ACEP are presently developing a joint effort to re-scope the work and schedule. This work will further characterize the site in regards to current velocities throughout the year, provide baseline environmental studies on fish and sedimentation, as well as quantify the frequency and distribution of river debris. In addition, ACEP will work with ORPC to develop an appropriate mooring system and TGU protection system from debris and ice for permanent deployment.

In conjunction with the above activities, ORPC has completed the design and engineering of two (2) River TGUs. One River TGU is designed for smaller remote river applications and can be shipped fully assembled in a standard shipping container to Nenana and other remote areas where free-flowing river resources can provide a reliable energy source. The second River TGU is larger in size and output and is shipped in modular components and assembled in the field. However, with the less-than-expected funding and the delay which precluded a 2009 deployment, ORPC has decided to test the larger beta pre-commercial River TGU at its existing test facilities in Eastport, Maine in the fall of 2009. Following that testing and ACEP’s completion of a full year of studying the river’s natural environment and developing appropriate mooring and protection designs, ORPC plans to build and install at least one River TGU at the Nenana site in 2010.

With this modification to the project timing, ORPC plans to begin agency and stakeholder consultations in the summer 2009 with the goal of submitting a draft Pilot License Application for the Nenana Project in the fall of 2009.

Please contact me at (813) 417-6660 if you have any questions or need any additional information.

Very truly yours,

Christopher R. Sauer
President and Chief Executive Officer

CS/MM/jph
Attachments

cc: Service List
M. McCann
File
CERTIFICATE OF SERVICE

I hereby certify that I will, within the timeframe and means established in 18§C.F.R.385.2010, serve the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

DATED this 31th day of March, 2009.

Christopher R. Sauer  
President and Chief Executive Officer  
Ocean Renewable Power Company, LLC  
151 Martine Street, Suite 102-5C  
Fall River, MA 02723  
Phone (813) 417-6660
March 30, 2010

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1-A
Washington, DC  20426

Re:  Nenana OCGen™ River TGU Power Project (P-13233)
Progress Report No. 3

Dear Ms. Bose:

ORPC Alaska, LLC (“ORPC”) is pleased to submit the third progress report for the Nenana OCGen™ River TGU Power Project (P-13233-000) located in the Tanana River, within the Unorganized Borough of Yukon-Koyukuk, near Nenana Alaska. ORPC would like to take this opportunity to request a change in the title of the project to the Nenana RivGen™ Power Project in order to remain consistent with recent changes to our own technology lexicon.

FERC Pilot Project License Consultation

ORPC continued efforts on pre-filing consultation and submitted a Draft Fish Monitoring Plan and Draft Sediment Flow and Erosion Monitoring Plan to state and federal agencies and to our stakeholder group for comment on Oct.1 2009 requesting a 30 day review of these plans. Comments on these plans were received from the Alaska Department of Fish and Game on October 29th, 2009. ORPC has also continued to participate in the Alaska Hydrokinetic Working Group meetings organized by the Alaska Energy Authority that have included agency representatives and other industry stakeholders in monthly discussions. These discussions have focused on potential impacts of hydrokinetic development to fish, sediment transport, and erosion among other things. ORPC has gained useful input from agencies and other stakeholders on what questions need to be addressed through our study plans.

Feasibility Studies

ORPC continues collaboration with the Alaska Center for Energy and Power (“ACEP” - a collaborative organization within the University of Alaska system) and now works directly with the Alaska Hydrokinetic Energy Research Center (“AHERC”) a subdivision of ACEP to further ORPC’s Nenana Project and to assist ACEP in establishing the Nenana Hydrokinetic Test Center (“NHTS”) a hydrokinetic device test center at Nenana. ORPC has continued to collect environmental and site characterization data at the Nenana RivGen™ Power Project site along with AHERC who is developing data to inform the NHTS within ORPC’s Preliminary
Permit area. Additional studies have included continued monitoring of sub ice velocity through the winter months and the installation of a Shallow Water Ice Profiler (“SWIP”) to document the formation and breakup characteristics of river ice at the Nenana site. AHERC has also begun a literature survey investigating potential impacts of hydrokinetic devices to fish in the Tanana River. ORPC has also been working with AHERC and UAF faculty to further refine the methodology for a fish monitoring plan and the sediment flow and erosion monitoring plan for the Project.

ORPC has chosen to delay the submission of the Draft Pilot Project License Application for the Nenana RivGen™ Power Project until more data has been collected and a more complete license application can be submitted. It is anticipated that this will take place in the 3rd or 4th Quarter 2010.

**Project Development**

ORPC’s Nenana RivGen™ Power Project was selected for funding under the Denali Commission’s Emerging Energy Technology Grant. This funding will contribute $830,325 to the implementation of the project and includes funding dedicated to continued literature and field studies to be performed by AHERC, as well as money for the procurement and fabrication of the RivGen™ Power System components. AHERC has recently begun the literature studies associated with the Foundation and Debris Diversion systems to inform ORPC’s design of these project components. In the coming 2010 field season, more geophysical data will be collected including multi-beam bathymetry and ADCP measurements to continue to characterize the resource and better understand the site for optimal project design and placement.

Please contact me at (907) 388-8639 if you have any questions or need any additional information.

Very truly yours,

Monty Worthington
Director of Project Development, ORPC Alaska, LLC

MW/MM/jph
Attachments

cc: Service List
M. McCann
File
September 30, 2010

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1-A
Washington, DC  20426

VIA E-FILING

Re:  Nenana OCGen™ River TGU Power Project (P-13233)
Progress Report No. 4

Dear Ms. Bose:

ORPC Alaska, LLC (ORPC) is pleased to submit the fourth progress report for the Nenana RivGen™ Power Project (P-13233-000) located in the Tanana River, within the Unorganized Borough of Yukon-Koyukuk, near Nenana Alaska.

FERC Pilot Project License Consultation

ORPC has continued to keep stakeholders and agency representatives informed of the status of the Nenana Project through private and public meetings. On June 11, 2010 ORPC held a meeting at the Alaska Department of Fish and Game (ADF&G) office in Fairbanks that included representatives of ADF&G, the United States Fish and Wildlife Service, the United States Army Corps of Engineers, the Alaska Department of Natural Resources, and the University of Alaska Fairbanks (UAF). This meeting focused on updating agency personnel on the status of the project and answering any questions or concerns they had. On the same day, ORPC also held a public stakeholder meeting at the Nenana Civic Center in Nenana, to provide a public forum on the project for local stakeholders. The meeting notes from the ADF&G meeting are included in Attachment A.

ORPC has also continued to participate in the Alaska Hydrokinetic Working Group meetings organized by the Alaska Energy Authority that have included agency representatives and other industry stakeholders in discussions.

Feasibility Studies

ORPC continues collaboration with the Alaska Hydrokinetic Energy Research Center (AHERC) at UAF to further ORPC’s Nenana Project and to assist AHERC in establishing the Nenana Hydrokinetic Test Center (NHTS) a hydrokinetic device test center at Nenana. ORPC has
continued to collect environmental and site characterization data at the Nenana RivGen™ Power Project site along with AHERC who is developing data to inform the NHTS within ORPC’s Preliminary Permit area. ORPC has contracted TerraSond to collect additional bathymetry and Acoustic Doppler Current Profiler (ADCP) current velocity data through the lower region of the site under funding from the Denali Commission’s Emerging Energy Technology Grant (EETG) that was recently made available to ORPC for the project. TerraSond collected the data in early August and has issued a preliminary graphic of the data (Attachment B).

AHERC has also continued work at the site that included the following:

1. Continued to measure current velocity transects at the Nenana test site during the winter (2009/2010) and throughout the summer season. Winter current velocity data has been analyzed and preliminary results have been provided to ORPC. During the 2010 open water season, time synchronized measurements of current velocity, discharge, and sediment transport have been taken on a monthly basis. Analysis of sediment data is in progress. The goal is to establish the seasonal variation of the river hydraulics and sediment transport. Measurements are made on an approximate monthly basis.

2. River hydraulic measurements (bathymetry, current velocity, turbulence, side scan sonar) collected in 2009 have been analyzed and used to construct and validate a 2-D model of river hydraulics for the river reach at Nenana. Current velocity, discharge, specific power, maximum specific discharge and power, and turbulence levels were included in the hydraulic model. A journal article describing this study has been submitted and accepted by the Journal of Power and Energy. The published report will be filed with the next progress report.

3. Sediment bedload and suspended sediment measurements were collected during the open water season of 2009 and 2010. Measurements demonstrated that the river bed of the main channel is dynamic (i.e., significant bed load transport) and that sediment sizes vary from sand-size to cobble-size at river current velocities of 2 to 3 meters/second.

4. Preliminary frazil ice formation study was conducted during fall, 2009 and forms the basis for continuing the more detailed study to be continued during fall, 2010.

5. A method for analysis of ADCP current velocity, discharge and Shallow Water Ice Profiler (SWIP) sonar measurements has been developed. Analysis of SWIP data demonstrated that it could detect the ice bottom and multiple sonar signal returns within the water column.

6. Underwater video was taken to examine the presence of frazil ice during the winter field season. This will be continued fall 2010.
7. A report describing a literature review of what is known about fishes in the Tanana River was completed and has been submitted for journal publication review.

After review of the data collected by TerraSond for ORPC and AHERC from 2008 through the most recent effort in August 2010, and the data collected by AHERC to inform the development of the Test site, ORPC has recently narrowed down the area of interest for the first RivGen™ device deployment at the site to an area at the downstream edge of the FERC preliminary permit. It is important to note that it has taken two years of dedicated effort at the site by ORPC, AHERC, and the subcontractors to collect sufficient data on the river currents, bathymetry, bed load, and riverbed composition to be able to make a recommendation for the project’s initial location. Based on this, ORPC will be contracting TerraSond to return to the site in early October and perform a river bed and sub bottom characterization of the area chosen for further investigation. This data will inform the bottom support frame design to be completed by ORPC and the riverine foundation studies that will be completed by AHERC.

**Project Development**

Grant documents from the EETG funding that ORPC received from the Denali Commission were recently executed allowing for those funds to be accessed for project work. AHERC will complete their literature review of riverine foundation systems and debris diversion systems under this funding. ORPC will be contracting TerraSond to return to Nenana in early October and collect additional data on the bottom and sub bottom characteristics of the site chosen for the initial RivGen™ device location, based on the data collected in August and ongoing community consultations. A project kickoff meeting with both AHERC and National Renewable Energy Laboratory representatives will be held in Eastport, Maine on October 7, 2010 in conjunction with a technical visit to ORPC’s Beta TidGen™ Power System to begin collaboration on the Nenana RivGen™ Power Project.

ORPC recently revised the scope of work and timeline for the Nenana RivGen™ Power Project during the process of executing grant documents to allow for the release of the EETG funding for the project. As there were delays in the release of these funds and in ORPC’s ability to begin engineering on the project it was necessary that ORPC adjust the schedule to account for these delays. As a result ORPC now plans to install the RivGen™ Power System by in June 2012. Based on FERC’s anticipated expedited processing of six months for a pilot license, ORPC plans to file a final pilot license application in January 2012. In order to allow the maximum time to prepare a thorough and accurate license application ORPC now intends to submit the Draft Pilot Project License Application (DPLA) for the Nenana RivGen™ Power Project in the third and fourth Quarter 2011 prior to the expiration of the preliminary permit. ORPC will be submitting a request for extension on the filing of the DPLA in the near future to allow for this.
Please contact me at (907) 388-8639 if you have any questions or need any additional information.

Very truly yours,

Monty Worthington
Director of Project Development, ORPC Alaska, LLC.

MW/MM
Attachments

cc: FERC Service List
    M. McCann, HDR|DTA
    File
Attachments
6/16/10

MEETING NOTES

MEETING DATE: 6/11/10
LOCATION: Fish & Game Bld - Fairbanks, Alaska
ATTENDEES: Luise Smith (USFWS), Audra Brase (ADFG), Jerry Johnson (UAF), Jack Schmid (UAF), Robert F. McLean(ADFG), Gary Prokasch, Bonnie Borba (ADFG), Andy Seitz (UAF), Greg Brimberst, Dave Pelunis-Messier, AJ Wait (ADNR), James Durst (ADFG), Christy Everett (USACE), Monty Worthington (ORPC), Herbert Scribner(ORPC), Tessa Kara (ORPC). Total;16 attendees.
NOTES BY: Tessa Kara
SUBJECT: ORPC - Nenana RivGen Project

On 6/11/10 at 10:30am Monty Worthington and Herbert Scirbner presented an update on ORPC’s Beta project in Maine and the RivGen project in Nenana, Alaska at the Fairbanks Fish and Game building. Jerry Johnson and Andy Seitz, from UAF, presented their work on the Tenana River modeling the fish research.

A question and answer session followed the presentation.

Question: Is the turbine made of aluminum?
Answer: No, a composition of composite and steels.

Question: What is the white tank on the barge? (Asked during pp presentation regarding deployment of the pilot unit deployed in Maine)
Answer: Mooring Tank

Question: What is the designed RPM?
Answer: 30-60 RPM, with 60 being the upper limit.

Question: What is your target resolution? (Regarding the DIDSON units)
Answer: Currently investigating the optimal resolution.

Question: DIDSON units are currently used in AK and do not have the same turn-around issue that you seem to be having in Maine. What would be different?
Answer: We are currently working with a consultant who has prior experience working with this technology.

Question: Will you be using gravity or anchor support for the RivGen?
Answer: Gravity.

Question: Do we know how far below the surface debris will be present?
Answer: Currently unknown, but a safe assumption is mass seen above will be present below.

Question: Is the FERC timeline realistic?
Answer: Yes.

Question: Would there be a greater benefit to a more general study versus an ORPC study?
Answer: We will share all of our data and aim to have an open relationship with the hydrokinetic community.

Question: We should contact the Coast Guard regarding navigational responsibility on the Tanana River.
Answer: We have done so and will continue to keep communication open.

Monty Worthington closed by thanking all who attending and sent out a request to the community to compile questions that they would like answers to.
Attachment B
TerraSond Preliminary Data Graphic
FEDERAL ENERGY REGULATORY COMMISSION  
Washington, D. C. 20426  
December 14, 2010  

OFFICE OF ENERGY PROJECTS  
Project No. 13883-000--Alaska  
Nenana RivGen Power Project  
ORPC Alaska, LLC  

Monty Worthington  
Director of Project Development  
ORPC Alaska, LLC  
725 Christensen Dr., Suite 4A  
Anchorage, AK  99501  

Subject: Acceptance Letter for Preliminary Permit Application  

Dear Mr. Worthington:  

Your preliminary permit application for the Nenana RivGen Power Project has been accepted by the Commission for filing as of November 22, 2010. Federal, state, and local agencies will be informed in the Commission's public notice that a copy of the complete application can be viewed or printed on the "eLibrary" link of the Commission's website.  

Within 5 days after you receive this letter, please send one copy of the application to the following:  the Department of the Interior, Office of Environmental Affairs; the U.S. Coast Guard; and the Alaska State Office, Bureau of Land Management. A list of their addresses is enclosed.  

If you have any questions, please contact me at (202) 502-6136.  

Sincerely,  

Jennifer Harper  
Division of Hydropower  
Licensing  

Enclosure: List of Addresses  

cc: Public Files
LIST OF ADDRESSES

Department of the Interior  
Office of Environmental Affairs  
Room 2340 MIB  
1849 C Street, NW  
Washington, DC  20240

U.S. Coast Guard  
Attention:  Mr. George H. Detweiler, Jr.  
CG-54133/Room 1407  
2100 2nd Street, SW  
Washington, DC  20593-001

Division of Alaska Land (AK963)  
Bureau of Land Management  
222 W 7th Ave., Stop 13  
Anchorage, AK  99513-7504
BEFORE THE UNITED STATES FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR PRELIMINARY PERMIT

Nenana RivGen™ Power Project No. ______

ORPC Alaska, LLC
725 Christensen Dr. Suite 4A
Anchorage, AK 99501

November 2010
PRELIMINARY PERMIT APPLICATION FOR
THE NENANA RIVGEN™ POWER PROJECT

A. Initial Statement

1. Statement of Application

ORPC Alaska, LLC (hereinafter, ORPC), a wholly owned subsidiary of Ocean
Renewable Power Company, LLC, applies to the Federal Energy Regulatory Commission for a
preliminary permit for the proposed Nenana RivGen™ Power Project (hereinafter, Project), an
in-stream hydrokinetic project as described in the attached exhibits. The proposed Project will
use the river currents of the Tanana River in the vicinity of Nenana, Alaska to generate
electricity. This application is made in order that the applicant, ORPC, may continue to maintain
priority of application for a license for the project under Part I of the Federal Power Act while
furthering efforts to obtain data and perform the acts required to determine the feasibility of the
Project and to support an application for a license. ORPC has already spent over two years and
significant resources at the site under its initial preliminary permit for the area, FERC permit No.
P-13233. As ORPC’s site characterization efforts had revealed that the area of interest for the
initial deployment of a RivGen™ device fell just outside of the preliminary permit boundary, and
that additional field work and time would be necessary to complete a rigorous Draft Pilot
License Application (DPLA), ORPC is submitting a second preliminary permit to include the
new area of interest and allow for more time to develop the DPLA.

2. Project Location

The Project would be located on the Tanana River and would lie adjacent to the city of
Nenana, approximately 45 miles Southwest of Fairbanks, and within the Unorganized Borough
of Yukon-Koyukuk. The proposed Project does not lie within any protected areas. The Nenana
waterfront on the Tanana River is home to a thriving barge industry that will offer exceptional
project support as well as having railroad and highway access to facilitate project logistics.

The precise coordinates (WGS 84) of the proposed permit boundary are:

<table>
<thead>
<tr>
<th>ID</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW Corner</td>
<td>64° 34' 04.3998&quot; N</td>
<td>149° 5' 16.2774&quot; W</td>
</tr>
<tr>
<td>SW Corner</td>
<td>64° 33' 55.6920&quot; N</td>
<td>149° 5' 15.0792&quot; W</td>
</tr>
<tr>
<td>NE Corner</td>
<td>64° 33' 24.3432&quot; N</td>
<td>149° 3' 20.5014&quot; W</td>
</tr>
<tr>
<td>SE Corner</td>
<td>64° 33' 17.2800&quot; N</td>
<td>149° 3' 37.3962&quot; W</td>
</tr>
</tbody>
</table>

In this river reach, the Tanana River generally flows westerly along the northern slope of
the Alaska Range. The Tanana River empties into the Yukon River approximately 160 miles
downriver of Nenana. The water depths at the Project location range from approximately 20 to
30 feet, and observed flows reach 5 knots or more in high-water conditions.
ORPC began working on the Project in 2008 with the collaboration of the Alaska Center for Energy and Power (ACEP) at the University of Alaska, Fairbanks. Since that time ACEP has formed a subgroup, the Alaska Hydrokinetic Energy Research Center (AHERC), who continues to work with ORPC to characterize the reach of the Tanana River within the original Preliminary Permit boundary. This work has the intention of both supporting ORPC’s development of a License for the Project as well as to further the body of knowledge on hydrokinetics in Alaska by performing focused efforts at a specific location and to develop it as a hydrokinetic test site. Considerable data has been collected over the past three field seasons that includes:

- October 2008: Acoustic Doppler Current Profiler (ADCP) current velocity/discharge transects;
- June - October 2009: ADCP current velocity/discharge transects, sediment transport measurements, full-reach multi-beam bathymetry and side-scan sonar (within preliminary permit No. 13233 area), current velocity/turbulence measurements;
- Winter 2009 - 2010: Fish population & behavior literature review, hydraulic modeling, frazil ice study, under-ice current velocity, under-ice sonar studies using Shallow Water Ice Profiler;
- June – October 2010: Extended reach multi-beam bathymetry (including entire preliminary permit No. 13233 area and new area of interest- see Attachment A), ADCP current velocity/discharge transects in new area of interest at high water levels, sediment transport, debris observational studies, and riverbed morphology study; and
- October 2010: Sub-bottom profiling and characterization data collected at new area of interest for initial RivGen™ deployment and ADCP current velocity/discharge transect in new area of interest at low water conditions.

ORPC has been in consultation with the City of Nenana, the Nenana Native Council, resource agencies, the local community, and local businesses as the field work and design of the project has moved forward. ORPC and AHERC have engaged the assistance of the Yukon River Inter-Tribal Watershed Council to further efforts in public outreach to ensure that the information from the Project is accessible to a wider audience as well. Through these efforts ORPC has held three public stakeholder meetings over the course of the Project, and met with the City of Nenana and the Nenana Native Council on multiple occasions to give Project updates and seek input on the Project. In June 2010, ORPC held a joint meeting with many of the relevant resource agencies at the Alaska Department of Fish and Game office in Fairbanks to seek agency input on study plans and Project development in general. Notes from that meeting are included in Attachment B for reference.

3. Name, business address and telephone number of applicant:

ORPC Alaska, LLC
725 Christensen Dr. Suite 4A
Anchorage, AK 99501
(907) 339-7939
The following people are authorized to act as agents for the applicant in the application:

Christopher R. Sauer  
President & Chief Executive Officer  
Ocean Renewable Power Company, LLC  
120 Exchange Street, Suite 508  
Portland, ME 04101

Monty Worthington  
Director of Project Development  
ORPC Alaska, LLC  
725 Christensen Dr. Suite 4A  
Anchorage, AK 99501

Herbert Scribner  
Director of Environmental Affairs  
Ocean Renewable Power Company, LLC  
120 Exchange Street, Suite 508  
Portland, ME 04101

Mary T. McCann  
Manager of Environmental Services  
HDR|DTA  
970 Baxter Blvd.  
Portland, ME 04103  
Phone (207) 775-4495

4. Preference under section 7(a) of the Federal Power Act

ORPC is a Delaware limited liability 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 36 months.

6. Existing Dams or Other Project Facilities.

There are no existing dams or other project facilities within the proposed project evaluation and test area.
EXHIBIT 1 – PROJECT DESCRIPTION

1. Project Configuration

ORPC’s proposed Project consists of an in-stream hydrokinetic power generation facility that will utilize hydrokinetic RivGen™ Turbine Generator Units (TGUs) placed under the water’s surface to convert the energy of in-stream flow into electrical energy. ORPC has been testing and refining our proprietary TGU technology since 2008 at our Eastport Test site in the waters of Cobscook Bay and Western Passage, near Eastport, Maine. Most recently ORPC has been testing the Beta TidGen™ Power System beginning in March 2010. The Beta Power System has successfully met all of the criteria of its performance tests, and following completion of its testing by the end of 2010, the data collected will be used to inform the design and construction of the RivGen™ TGU, scheduled for completion and testing by the fourth quarter 2011 at the Eastport Test Site.

The RivGen™ TGU will be mounted on a bottom support frame that will secure the device beneath the water's surface at the Nenana site (Figure 1). The device will be submerged to a depth that will allow safe navigation clearance (minimum 4 feet) over the device at even the lowest river stages. Power will be transmitted to shore via a submarine cable, and will feed into power electronics and switchgear that will transform the power into safe, grid compatible power that will interconnect into the local Golden Valley Electrical Association (GVEA) grid. The Power System will also be tested in a micro-grid configuration where the power electronics will interface with an isolated load powered by a diesel generator to verify the system's compatibility with the isolated diesel powered micro-grids it is intended to integrate with. As the Tanana River ices over in the winter and there are not viable current velocities for overwinter power extraction at this site, this system will be installed and removed seasonally being deployed in May after the ice has gone out and retrieved in October before the onset of winter ice.

Figure 1. RivGen™ Device
Following successful verification of this initial RivGen™ Power system, the Project may be built out to a small scale commercial array of from 2 to 6 RivGen™ devices, to both prove out a pilot scale in-stream hydrokinetic power system, and to test the operation of the devices in an array configuration. This will provide valuable information on the economics of power production from the Project and enhance understanding of the interactions of multiple devices with each other and the river environment.

The RivGen™ Power System will initially have a capacity of 30kW in a 6 knot current; however this capacity will increase as future iterations of the technology integrate improvements in the efficiency of the devices to an eventual capacity of up to 50kW in a 6 knot current. Each RivGen™ TGU will be approximately 40 feet long by 6 feet in diameter and mounted on a bottom support frame that elevates it 13 feet above the riverbed at its highest point.

Adjustments to the number of TGUs will be made based on the variability of the Tanana River both spatially (depth and width) and in magnitude (current velocity). Further studies conducted during the initial RivGen™ testing phase scheduled to begin at the Nenana site in 2012 will be used to determine the exact placement and number of TGUs as well as the appropriate deployment structure and transmission line route for the final commercial phase.

There are no dams, spillways, penstocks, powerhouses, tailraces, or other structures within or near the proposed tidal energy project area or that would be constructed as part of this proposed project.

2. Reservoirs

There are also no proposed reservoirs to be created as part of this Project.

3. Transmission Lines

Upon commercialization of the Project, the TGUs will be connected to the GVEA grid at Nenana. A 138 kV and a 24.9 kV 3-phase transmission lines are available for electrical interconnection. Initially ORPC plans to connect the Project to the 24.9 kV transmission line on the north bank of the Tanana River opposite the Nenana waterfront. The length of the power cable is estimated to be approximately than 450 feet. ORPC will also evaluate a possible connection on the south bank of the Tanana River along the Nenana waterfront where a transmission line would either be run across the Tanana River or traverse the Alaska Railroad bridge to the Nenana side of the river.

4. Estimate Annual Energy Production

ORPC estimates that under commercial build out its proprietary RivGen™ TGUs will have a generating capacity of 30 to 50 kW each. ORPC plans on developing the Project with a 100 to 300 kW rated capacity. Assuming a 300 kW rated capacity, the Project is expected to have an average annual power output of 721 MWh over the expected 140 days of annual deployment at the site.
5. Lands of the United States

The Project would be located on state submerged lands and does not include “lands of the United States” as defined in the Federal Power Act. Thus, no public land survey or other identification of such lands is required.

6. Public Interest Benefits

The Project would bring a new source of renewable, non-polluting energy to the United States. The Federal Energy Policy Act of 2005 encouraged the development of renewable energy resources, including hydrokinetic energy. Domestic sources of energy are in the public’s best interest as they reduce the country’s dependence on foreign oil and other fossil fuel energy sources. The RivGen™ TGUs will use natural free flowing water to generate energy in a predictable, dependable and environmentally sound way. In-stream hydrokinetic energy - a sustainable, natural, and nonpolluting energy source - has great potential to become another "green power" resource, joining wind and solar power in providing alternatives to coal, gas or oil. River in-stream hydrokinetic energy projects produce none of the environmental and atmospheric pollutants produced by fossil fuels. In fact, RivGen™ TGUs have no gas or liquid discharges to the environment thus the TGUs are expected to have minimal environmental effects.

River in-stream energy systems of this type are especially valuable to remote communities that currently rely on diesel generators for power. These remote communities must rely on fuel delivery by barge and they must maintain large storage facilities for this fuel as they are often only seasonally accessible to barge shipments due to winter ice. This makes power extremely expensive, and the burning of fossil fuels for energy production produces CO2 and other air born pollutants as well as introducing the risks of fuel spills during transportation, storage, and utilization of these fuels. These communities would welcome a renewable energy source from the adjacent river which would be clean, reliable, and not subject to the unstable costs associated with fossil fuels.

The proposed hydrokinetic Project does not involve the construction of dams or reservoirs, affect water quality, block fish passage, or direct fish and other aquatic life through turbine generators. These TGUs have an added benefit of being completely submerged and will not be visible, thus avoiding any aesthetic issues. In addition, they are designed to be totally submerged allowing them to be located below the winter ice sheet when river depths allow, thus being capable of year round operation and continuous power production in locations where viable winter current velocities exist.
EXHIBIT 2 – DESCRIPTION OF PROPOSED STUDIES

1. Description of Studies

ORPC has been performing field studies in cooperation with AHERC at the Nenana Project site since 2008. This fieldwork has included two multi-beam bathymetry surveys of the project area performed in 2009 and 2010. The latest bathymetry effort is included as Attachment A. In conjunction with these bathymetry efforts side scan sonar was used in 2009 to characterize the river bottom, and ADCP transects have been performed with each effort to collect data on current velocities at different river stages. Discharge measurements have been made as part of each field effort. ADCP transects from the August 2010 effort are also included in Attachment A. Bed load measurements to inform sediment transport modeling efforts have been taken and in October 2010 a sub-bottom profiler was used to characterize the riverbed substrates. Wintertime studies of current velocities and frazil ice formation have also been undertaken in 2008-2009 and 2009-2010.

AHERC has drafted a literature review on fish populations and behavior in the Tanana River that is currently undergoing revisions prior to publication. AHERC has also submitted a paper for publication on hydraulic modeling of the reach of the Tanana River within permit No. 13233 with a focus on modeling for energy density and current velocity for hydrokinetic energy extraction. AHERC will be continuing their collaboration with ORPC on the project by performing a literature review on existing riverine foundation systems for consideration for the RivGen™ bottom support frame, as well as a literature review on debris diversion systems. The 2011 field season will include the test deployment of the prototype RivGen™ bottom support frame designed based on inputs from the AHERC work. AHERC will also be working with ORPC to design a debris monitoring system for inclusion in the prototype bottom support frame test to advance ORPC’s understanding of submarine debris loads in the river and to inform the design of a debris mitigation system for the RivGen™ device.

ORPC has been consulting with resource agencies on appropriate studies for the Nenana hydrokinetic project and will continue the discussions as study plans are developed. In addition to the ongoing studies being conducted by AHERC, ORPC will be redrafting the fish study plan previously submitted to resource agencies to reflect advances in the understanding of potential impacts of hydrokinetics to fish that recent studies have produced, as well as lessons learned from other hydrokinetic fish study efforts in Alaska and elsewhere. ORPC will be convening meetings with regulatory and resource agencies in advance of redrafting these studies to define the knowledge gaps in the understanding of interactions between fish and hydrokinetic turbines and deciding on the most rigorous and cost effective methods to answer these questions.
2. Need for New Roads

It is not anticipated that any new roads will be required to conduct the above referenced studies.

3. Dam Construction

The proposed Project does not include any new dam construction or associated civil structures under the term of this preliminary permit.

4. Waiver

No waiver is being sought for the evaluation and testing of the feasibility of an in-stream hydrokinetic energy project installation.

5. Statement of Costs and Financing

Evaluation of the costs of installing the initial RivGen™ Power System at the Nenana site has been ongoing through the development of this project. Currently ORPC anticipates a total permitting, installation, and operation and maintenance cost through the first year of operation of $4 million that will include design, fabrication, and testing of all of the system components, field studies, environmental work, and permitting and licensing of the project. ORPC has secured a $830,325 grant from the Emerging Energy Technology Fund through the Denali Commission of Alaska and has recently executed grant agreements and begun work under this funding which will include the fabrication and testing of the RivGen™ TGU at our Eastport Test Site and the bottom support frame and debris diversion system at the Nenana site.

ORPC intends to continue to pursue both private and public funding sources to finance the remainder of the Nenana RivGen™ Power Project. To date, Ocean Renewable Power
Company has been successful in raising over $30 million of total funding, with approximately $17 million coming from public funding, and will continue to pursue both public and private investment in the company. The Project proposed herein will be funded through a combination of private and public investment in the company and equipment financing and/or debt. The principals of ORPC have extensive experience and expertise in development and financing conventional and renewable energy projects, having financed several billion dollars of such projects over the past 20 years.
EXHIBIT 3 – PROJECT MAP

1. Project Boundary Map

A map of the proposed Project boundary is attached (Figure 2). The relative location and physical interrelationships of principal project features will be developed during Project feasibility studies. The Project coordinates were developed based on aerial photography which is more recent than topographic maps and have been chosen for the overlay of our project as topographic maps are very out of date with the every changing banks of the dynamic Tanana River.

2. National Wild and Scenic Rivers

The proposed Project area does not include any areas designated as or being considered for inclusion in the National Wild and Scenic Rivers System.

3. Wilderness Act

The proposed Project area does not include any areas designated as or recommended for designation as a wilderness area or wilderness study area under the Wilderness Act.
Figure 2. Project Location Map
SECTION 4.32 INFORMATION

1. ORPC Alaska, LLC is the only entity that has or intends to obtain and will maintain any proprietary rights necessary to construct, operate or maintain the proposed property.

2. Municipal Information

   No federal facilities would be used by the proposed Project. The area proposed for evaluation and testing is located within the Unorganized Borough of Yukon-Koyukuk.

3. City or town where project will be located:

   Nenana Municipal Office
   PO Box 70
   Nenana, AK 99760
   Phone: (907) 832-5441
   Fax: (907) 832-5503

   No dam is proposed in association with this in-stream hydrokinetic energy Project. There are no cities and towns with a population of 5,000 or more that lie within 15 miles of the proposed evaluation and study area.

4. No federal facilities would be used by or otherwise associated with the proposed project and no special purpose political subdivisions exist within the proposed boundary for the evaluation and testing of tidal energy potential within the proposed project area.

   No other known political subdivisions exist within the proposed project evaluation and test area; however, ORPC will consult with all agencies and organizations with regulatory authority over the waters and resources of the proposed project area during the evaluation of project feasibility.

5. Indian tribes that may be affected by the project.

   ORPC has identified the following Indian tribes that may be affected by or have interest in the project. ORPC will continue to research and consult with tribes that may have interest in the proposed project.

   Alatna Traditional Council                         Evansville Tribal Council
   P.O. Box 10                                          P.O. Box 26087
   Allakaket, AK 99720                                   Bettles Field, AK 99726
   Phone: (907) 968-2304                                 Phone: (907) 692-5005
   Fax: (907) 968-2305                                   Fax: (907) 692-5006

   Allakaket Traditional Council                       Hughes Traditional Council
   P.O. Box 50                                          P.O. Box 45029
   Allakaket, AK 99720                                   Hughes, AK 99745
   Phone: (907) 968-2237                                 Phone: (907) 889-2239
   Fax: (907) 968-2233                                   Fax: (907) 889-2252
Lake Minchumina Traditional Council
P.O. Box 53
Kaktovik, AK 99747
Phone: (907) 455-9555

Manley Hot Springs Traditional Council
P.O. Box 105
Manley, AK 99756
Phone: (907) 672-3177
Fax: (907) 672-3200

Minto Traditional Council
P.O. Box 26
Minto, AK 99758
Phone: (907) 798-7112
Fax: (907) 798-7627

Nenana Traditional Council
P.O. Box 356
Nenana, AK 99760
Phone: (907) 832-5461
Fax: (907) 832-1077

Rampart Traditional Council
P.O. Box 67029
Rampart, AK 99767
Phone: (907) 358-3312
Fax: (907) 358-3115

Stevens Village IRA Council
P.O. Box 16
Stevens Village, AK 99774
Phone: (907) 478-7228
Fax: (907) 478-7229

Tanana Tribal Council
P.O. Box 130
Tanana, AK 99777
Phone: (907) 366-7170
Fax: (907) 366-7195
VERIFICATION STATEMENT

This application for a preliminary permit for the ORPC Alaska, LLC Nenana RivGen™ Power Project is executed in the State of Maine, County of Cumberland

By:

Christopher Sauer, ORPC Alaska, LLC, 120 Exchange Street, Suite 508 Portland, ME 04101 being duly sworn, deposes and says that the contents of this Preliminary Permit Application are true to the best of his knowledge or belief. The undersigned Applicant has signed the application on this 18 day of November, 2010.

By: ____________________________

Subscribed and sworn before me, a Notary Public of the State of Maine this ___ day of November 2010. My commission expires on ___ July 2, 2011._____

By: ____________________________

SHANNON L. NEEDHAM
Notary Public
State of Maine at Large
Commission Expires July 2, 2011
MEETING NOTES

MEETING DATE: 6/11/10

LOCATION: Fish & Game Bld – Fairbanks, Alaska

ATTENDEES: Luise Smith (USFWS), Audra Brase (ADFG), Jerry Johnson (UAF), Jack Schmid (UAF), Robert F. McLean(ADFG), Gary Prokasch, Bonnie Borba (ADFG), Andy Seitz (UAF), Greg Brimberst, Dave Pelunis-Messier, AJ Wait (ADNR), James Durst (ADFG), Christy Everett (USACE), Monty Worthington (ORPC), Herbert Scribner(ORPC), Tessa Kara (ORPC). Total: 16 attendees.

NOTES BY: Tessa Kara

SUBJECT: ORPC – Nenana RivGen Project

On 6/11/10 at 10:30am Monty Worthington and Herbert Scribner presented an update on ORPC’s Beta project in Maine and the RivGen project in Nenana, Alaska at the Fairbanks Fish and Game building. Jerry Johnson and Andy Seitz, from UAF, presented their work on the Tanana River modeling the fish research.

A question and answer session followed the presentation.

Question: Is the turbine made of aluminum?
Answer: No, a composition of composite and steels.

Question: What is the white tank on the barge? (Asked during pp presentation regarding deployment of the pilot unit deployed in Maine)
Answer: Mooring Tank

Question: What is the designed RPM?
Answer: 30-60 RPM, with 60 being the upper limit.

Question: What is your target resolution? (Regarding the DIDSON units)
Answer: Currently investigating the optimal resolution.
Question: DIDSON units are currently used in AK and do not have the same turn-around issue that you seem to be having in Maine. What would be different?
Answer: We are currently working with a consultant who has prior experience working with this technology.

Question: Will you be using gravity or anchor support for the RivGen?
Answer: Gravity.

Question: Do we know how far below the surface debris will be present?
Answer: Currently unknown, but a safe assumption is mass seen above will be present below.

Question: Is the FERC timeline realistic?
Answer: Yes.

Question: Would there be a greater benefit to a more general study versus an ORPC study?
Answer: We will share all of our data and aim to have an open relationship with the hydrokinetic community.

Question: We should contact the Coast Guard regarding navigational responsibility on the Tanana River.
Answer: We have done so and will continue to keep communication open.

Monty Worthington closed by thanking all who attending and sent out a request to the community to compile questions that they would like answers to.
ORPC Alaska, LLC

PROJECT NO. 13883-000

NOTICE OF PRELIMINARY PERMIT APPLICATION ACCEPTED FOR FILING AND SOLICITING COMMENTS, MOTIONS TO INTERVENE, AND COMPETING APPLICATIONS

(December 14, 2010)

On November 22, 2010, ORPC Alaska, LLC filed an application for a preliminary permit, pursuant to section 4(f) of the Federal Power Act (FPA), proposing to study the feasibility of the Nenana RivGen Power Project (Nenana Project) to be located on the Tanana River in the vicinity of Nenana, Alaska, in the unorganized borough of Yukon-Koyukuk, Alaska. The sole purpose of a preliminary permit, if issued, is to grant the permit holder priority to file a license application during the permit term. A preliminary permit does not authorize the permit holder to perform any land-disturbing activities or otherwise enter upon lands or waters owned by others without the owners’ express permission.

The proposed Nenana Project will consist of the following: (1) up to six 50-kilowatt RivGen turbine-generator modules with a combined capacity of 300 kilowatts; (2) an approximately 450-foot-long, 24.9-kilovolt underwater transmission cable from the module site to a shore station on the north bank of the Tanana River, or an alternate transmission cable configuration that is yet to be determined; and (3) appurtenant facilities. The Nenana Project would operate 140 days per year, and the estimated annual generation would be 721 megawatt-hours.

Applicant Contact: Monty Worthington, Director of Project Development, ORPC Alaska, LLC, 725 Christensen Drive, Suite A, Anchorage, AK 99501; phone: (907) 339-7939.

FERC Contact: Jennifer Harper (202) 502-6136.

Deadline for filing comments, motions to intervene, competing applications (without notices of intent), or notices of intent to file competing applications: 60 days from the issuance of this notice. Competing applications and notices of intent must meet the requirements of 18 CFR 4.36. Comments, motions to intervene, notices of intent, and competing applications may be filed electronically via the Internet. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission’s website http://www.ferc.gov/docs-filing/efiling.asp. Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at
http://www.ferc.gov/docs-filing/ecomment.asp. You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support. Although the Commission strongly encourages electronic filing, documents may also be paper-filed. To paper-file, mail an original and seven copies to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426.

More information about this project, including a copy of the application, can be viewed or printed on the "eLibrary" link of Commission's website at http://www.ferc.gov/docs-filing/elibrary.asp. Enter the docket number (P-13883-000) in the docket number field to access the document. For assistance, contact FERC Online Support.

Kimberly D. Bose,
Secretary.
NOTICE OF SURRENDER OF PRELIMINARY PERMIT

(October 20, 2010)

Take notice that ORPC Alaska, LLC, permittee for the proposed Nenana OCGen River TGU Power Project, has requested that its preliminary permit be terminated. The permit was issued on October 21, 2008, and would have expired on September 30, 2011. The project would have been located on the Tanana River, within the unorganized borough of Yukon-Koyukuk, near Nenana, Alaska.

The permittee filed the request on October 18, 2010, and the preliminary permit for Project No. 13233-000 shall remain in effect through the thirtieth day after issuance of this notice unless that day is a Saturday, Sunday, part-day holiday that affects the Commission, or legal holiday as described in section 18 CFR 385.2007, in which case the effective date is the first business day following that day. New applications involving this project site, to the extent provided for under 18 CFR Part 4, may be filed on the next business day.

Kimberly D. Bose,
Secretary.
June 2, 2008

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1-A
Washington, DC 20426

VIA E-FILING

Re: Preliminary Permit Application (Nenana OCGen™ River TGU Power Project)

Dear Ms. Bose:

On behalf of ORPC Alaska, LLC (“ORPC”), I am pleased to submit via e-filing ORPC’s Application for a Preliminary Permit for the Nenana OCGen™ River TGU Power Project.

Please contact me at (813) 417-6660 if you have any questions or need any additional information.

Very truly yours,

Christopher R. Sauer
President and Chief Executive Officer

CS/MM/jph
Attachments

cc: M. McCann
File
BEFORE THE UNITED STATES FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR PRELIMINARY PERMIT

Nenana OCGen™ River TGU Power Project No. ______

ORPC Alaska, LLC
151 Maritime Street, Suite 102-SC
Fall River, MA 02723
(508) 672-4970

June 2008
A. Initial Statement

1. Statement of Application

ORPC Alaska, LLC (hereinafter, ORPC) applies to the Federal Energy Regulatory Commission (FERC) for a preliminary permit for the proposed Nenana OCGen™ River TGU Power Project (hereinafter, Project), an instream hydrokinetic energy project, as described in the attached exhibits. The proposed Project will be located near the town of Nenana on the Tanana River, approximately 45 miles southwest of Fairbanks, Alaska. The Project will utilize the instream hydrokinetics of the Tanana River to generate electricity. This application is made in order that the applicant, ORPC, may secure and maintain priority of application for a FERC 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 Project would be located in the Tanana River near the town of Nenana. The proposed Project would lie approximately 45 miles to the southwest of the city of Fairbanks, within the Unorganized Borough of Yukon-Koyukuk. The proposed Project does not lie within any protected areas.

The precise coordinates (WGS 84) of the proposed Project boundary are:

<table>
<thead>
<tr>
<th>ID</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW</td>
<td>-64° 34' 04.34161&quot; N</td>
<td>149° 04' 44.40778&quot; W</td>
</tr>
<tr>
<td>SW</td>
<td>-64° 33' 58.59589&quot; N</td>
<td>149° 04' 35.68980&quot; W</td>
</tr>
<tr>
<td>NE</td>
<td>-64° 33' 25.95332&quot; N</td>
<td>149° 03' 06.65235&quot; W</td>
</tr>
<tr>
<td>SE</td>
<td>-64° 33' 07.56474&quot; N</td>
<td>149° 02' 57.70107&quot; W</td>
</tr>
</tbody>
</table>

In this river reach, the Tanana River generally flows westerly along the northern slope of the Alaska Range. The Tanana River empties into the Yukon River approximately 160 miles downriver of Nenana. The water depths at the Project location range from approximately 20 to 30 feet, observed flows reach four knots.

3. Name, business address and telephone number of applicant:

ORPC Alaska, LLC
151 Maritime Street, Suite 102-SC
Fall River, MA 02723
(508) 672-4970

The following people are authorized to act as agents for the applicant in the application:

Ernest Hauser
Director of Project Development
4. Preference under section 7(a) of the Federal Power Act

ORPC is a Delaware limited liability 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 36 months.

6. Existing Dams or Other Project Facilities.

There are no existing dams or other Project facilities within the proposed Project evaluation and test area.
EXHIBIT 1 - PROJECT DESCRIPTION

1. Project Configuration

ORPC’s proposed Project consists of an instream hydrokinetic power generation facility that will utilize hydrokinetic Turbine Generator Units (TGUs) placed under the water’s surface to convert the energy of instream flow into electrical energy. ORPC initially worked with the Naval Surface Warfare Center-Carderock Division under a Cooperative Research and Development Agreement (CRADA) to develop the TGU technology. Since then, ORPC has continued testing and refinement of the technology in Western Passage, Maine.

The proposed Project will be developed in multiple phases. The Phase I of the Project development will consist of the testing of a prototype scale instream TGU specifically designed for river flows. The purpose of the instream hydrokinetic TGU will serve for proof of concept and will not be grid connected. Phase I is expected to be conducted during 2009. Phase II of the Project development will be focused on pre-commercialization. Under Phase II a full scale TGU will be tested for approximately one year to allow for further engineering refinements and potential environmental effects evaluation, Phase II may be connected to the electrical grid. The final phase, Phase III, will consist of installation of a commercial scale grid-connected array of TGUs.

In Western Passage, Maine, ORPC is currently working on a similar phased approach for project development. Phase I of Western Passage development consisted of deployment and testing a 1/3 scale prototype TGU which is the core power generating mechanism of a tidal powered OCGen™ module. This testing was completed in April 2008. Phase II of testing will consist of deployment of a full scale TGU for one year to conduct further engineering tests and potential environmental effects evaluation. Following that, a Phase III test will consist of a full scale OCGen™ module which will consist of four TGUs. Additional information regarding the ORPC organization, development plans and our innovative OCGen™ TGU technology is available at http://www.oceanrenewablepower.com/home.htm.

The basic OCGen™ River TGU design for instream hydrokinetic applications consists of two ORPC proprietary advanced design cross flow (ADCF) turbines driving a single generator on a common shaft as shown in Figure 1.

The nominal generating capacity per OCGen™ River TGU is approximately 25 kilowatts in a four knot current. The design to secure the OCGen™ River TGUs in place in the Tanana River will be based on a site-specific geophysical and environmental resource data.

ORPC cannot determine the precise number of OCGen™ River TGUs that can feasibly be installed within the Project boundaries at this time, but is initially targeting a generating capacity range of 100 to 400 kW for the commercial phase, Phase III. Based on the approximate nominal generating capacity per TGU, the range of units will likely be approximately 4 to 16 TGUs.

Adjustments to the number of TGUs will be made based on the variability of the Tanana River both spatially and in magnitude. Further studies conducted during Phase I, the prototype testing phase, will be used to determine the exact placement and number of TGUs as well as the appropriate deployment structure and transmission line route for the final commercial phase.
Key Design Features

- Generating capacity varies with water speed – 50 to 200 kilowatts typical in a 6 knot current
- Two proprietary ADCF turbines drive a single proprietary underwater permanent magnet generator on a common shaft – direct drive arrangement with no gears (one moving part)
- OCGen™ TGU can be shop assembled and shipped to project sites for installation
- More than one TGU can be “stacked” and mounted on a single foundation in deeper rivers
- TGU’s can be deployed in arrays comprised of a few to dozens of TGU’s (or stacked TGU’s)
- A power cable connects each TGU to an underwater transmission line that feeds a common power electronics system located on shore (plug & play)
- The power electronics system is interconnected with an on-shore substation
- TGU operations are monitored and controlled on shore using a control cable embedded with the power cables and underwater transmission line
- OCGen™ TGU’s are brought to the water surface for inspection and maintenance

There are no dams, spillways, penstocks, powerhouses, tailraces, or other structures within or near the proposed tidal energy project area or that would be constructed as part of this proposed project.

2. Reservoirs

There are also no proposed Project reservoirs to be created as part of this Project.

3. Transmission Lines

Upon commercialization of the Project, the TGUs will be connected to the Golden Valley Electric Association electrical grid at Nenana. A 138kV and a 24.9kV 3-phase transmission line are available for electrical interconnection. Initially ORPC plans to connect the Project to the 24.9kV transmission line adjacent to the northern boundary of the proposed Project area. The length of the power cable is estimated to be less than 100 feet. The nearest substation to the Project is located approximately 2.75 miles south (Refer to Figure 2 in Exhibit 3). The exact details of the transmission line cannot be fully determined at this time but it will be designed to minimize possible environmental impacts.
4. Estimate Annual Energy Production

ORPC estimates that under commercial build out its proprietary OCGen™ River TGUs will have a generating capacity of 50 to 200 kw each. ORPC plans on developing the Project with a 100 to 400 kW rated capacity. Assuming a 400 kW rated capacity, the Project is expected to have an average annual power output of 1,752 MWh based on a 50 percent capacity factor.

5. Lands of the U.S.

All lands within the proposed Project boundary are identified under Exhibit 3.

6. Public Interest Benefits

The proposed Project would utilize the affected waters in the public interest by bringing a new source of renewable, non-polluting energy to the United States. The OCGen™ River TGUs will use natural free flowing water to generate energy in a predictable, dependable and environmentally sound way. This natural source of energy is also sustainable as opposed to the limited sources of other energy resources such as oil, gas, and coal. The potential of instream hydrokinetic energy is also an important source of alternative renewable nonpolluting energy or “green power”. The use of native resources for power generation will help alleviate the cost of importing diesel fuel for power generation. The Federal Energy Policy Act of 2005 encouraged the development of renewable energy resources, including hydrokinetic energy. Domestic sources of energy are also in the public’s best interest as they reduce the country’s dependence on foreign oil and other fossil fuel energy sources.

River instream energy systems of this type are especially valuable to remote areas that currently rely on diesel generators for power. Power generated using diesel fuel produces fossil fuel air pollutants. Remote river accessible areas of Alaska must rely on fuel delivery by barge and they must maintain large storage facilities thus making power extremely expensive. Communities, such as Nenana would welcome a renewable energy source from the adjacent river which would be clean and reliable and which generates electricity year round. The proposed hydrokinetic Project does not involve the construction of dams or reservoirs, affect water quality, block fish passage, or direct fish and other aquatic life through turbine generators. These TGUs have an added benefit of being completely submerged and will not be visible, thus avoiding aesthetic issues encountered by other renewable energy projects such as wind. In addition, they are deep enough to be below the winter ice sheet thus operating throughout the year. River instream hydrokinetic energy projects also produce none of the environmental and atmospheric pollutants produced by fossil fuels. In fact, OCGen™ River TGUs have no gas or liquid discharges to the environment, thus, the TGUs are expected to have minimal environmental effects.
EXHIBIT 2 - DESCRIPTION OF PROPOSED STUDIES

1. Description of Studies

ORPC will use the existing information to locate the most suitable site for river instream hydrokinetic energy turbine deployment. Where existing information is insufficient, ORPC may undertake additional studies to ensure the best placement of turbines, best use of available instream hydrokinetic resource, and minimize any potential environmental effects. ORPC will site the Project with regards to existing users including commercial navigation and fish wheel infrastructure.

Additional research may be needed in regards to detailed bathymetry, instream flow information outside of immediate study area, sedimentation and ice formation and movement, navigation and recreation activities, fishing uses, and aquatic resources. ORPC will be consulting with appropriate resource agencies and Native Tribes on appropriate studies.

In addition to the above studies, ORPC will be researching access to transmission line infrastructure and conducting an economic and financial feasibility analysis for the proposed Project. ORPC will work closely with Golden Valley Electric Association for electrical transmission details.

ORPC recently completed in-water engineering and environmental testing of a prototype TGU at their Western Passage, Maine project area. The results of this testing effort will allow for engineering design of a commercial TGU in 2009.

2. Need for New Roads

It is not anticipated that any new roads will be required to conduct the above referenced studies.

3. Dam Construction

The proposed Project does not include any new dam construction or associated civil structures under the term of this preliminary permit.

4. Waiver

No waiver is being sought for the evaluation and testing of the feasibility of an ocean energy project installation.

5. Statement of Costs and Financing

Evaluation of the feasibility of installing OCGen™ River TGUs for the generation of instream hydrokinetic energy will be conducted in phases. The initial Phase I will include review of existing hydrokinetic energy and aquatic resource information as well as permitting requirements for a prototype project. The completion of Phase I will include the construction and deployment of a prototype OCGen™ River TGU. The estimated costs to conduct initial environmental studies and permitting for a prototype project, in addition to engineering, construction and installation of the OCGen™ River TGU and further environmental effects...
studies during the operation of the Project, as identified under Description of Studies above, are 
in the range of $300,000 to $700,000. The larger commercial development will depend greatly 
on the results of the prototype project studies.

Over the past three and a half years, ORPC has spent nearly $3 million developing its 
OCGen™ technology. Ongoing pilot testing efforts and company operations are currently being 
funded with private equity funds, private investors, and state technology development awards. ORPC was awarded $511,200 from the Maine Technology Institute and awarded $300,000 from 
the Massachusetts Technology Collaborative. Funding sources for the ultimate commercial 
projects will be through a combination of private and/or institutional investment in the company 
and equipment financing and/or debt. The initial commercial project will likely be funded 
primarily by private equity and loans or grants from federal and/or state governments. The Management Team and Board of Managers of ORPC have extensive experience and expertise in 
development, permitting, financing, engineering/procurement and construction, and operation of 
conventional and renewable energy projects having financed several billion dollars of such 
projects over the past 20 years.
EXHIBIT 3 - PROJECT MAP

1. Project Boundary Map

A map of the proposed Project boundary is attached (Figure 2). The relative location and physical interrelationships of principal project features will be developed during Project feasibility studies. The Project coordinates were developed based on aerial photography (Figure 3), which is more recent than topographic maps. As shown in Figure 2, the Tanana River is very dynamic and the river edges change significantly over time. On-site work will be done to confirm river boundaries and may subsequently alter the project coordinates to line up with the river banks.

2. National Wild and Scenic Rivers

The proposed Project area does not include any areas designated as or being considered for inclusion in the National Wild and Scenic Rivers System.

3. Wilderness Act

The proposed Project area does not include any areas designated as or recommended for designation as a wilderness area or wilderness study area under the Wilderness Act.
FIGURE 2
PROJECT LOCATION MAP
FIGURE 3
AERIAL PROJECT LOCATION MAP
SECTION 4.32 INFORMATION

1. ORPC Alaska, LLC is the only entity that has or intends to obtain and will maintain any proprietary rights necessary to construct, operate or maintain the proposed property.

2. Municipal Information

No federal facilities would be used by the proposed Project. The area proposed for evaluation and testing is located within the Unorganized Borough of Yukon-Koyukuk.

3. City or town where project will be located:

Nenana Municipal Office
PO Box 70
Nenana, AK 99760
Phone: (907) 832-5441
Fax: (907) 832-5503

No dam is proposed in association with this instream hydrokinetic energy Project. There are no cities and towns with a population of 5,000 or more that lie within 15 miles of the proposed evaluation and study area.

4. No federal facilities would be used by or otherwise associated with the proposed Project and no special purpose political subdivisions exist within the proposed boundary for the evaluation and testing of tidal energy potential within the proposed Project area.

No other known political subdivisions exist within the proposed Project evaluation and test area; however, ORPC will consult with all agencies and organizations with regulatory authority over the waters and resources of the proposed Project area during the evaluation of Project feasibility.

5. Indian and Native Tribes that may be affected by the Project.

ORPC has identified the following Native Tribes that may be affected by or have interest in the Project. ORPC will continue to research and consult with tribes that may have interest in the proposed Project.

<table>
<thead>
<tr>
<th>Alatna Traditional Council</th>
<th>Evansville Tribal Council</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.O. Box 10</td>
<td>P.O. Box 26087</td>
</tr>
<tr>
<td>Allakaket, AK 99720</td>
<td>Bettles Field, AK 99726</td>
</tr>
<tr>
<td>Phone: (907) 968-2304</td>
<td>Phone: (907) 692-5005</td>
</tr>
<tr>
<td>Fax: (907) 968-2305</td>
<td>Fax: (907) 692-5006</td>
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<table>
<thead>
<tr>
<th>Allakaket Traditional Council</th>
<th>Hughes Traditional Council</th>
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<tbody>
<tr>
<td>P.O. Box 50</td>
<td>P.O. Box 45029</td>
</tr>
<tr>
<td>Allakaket, AK 99720</td>
<td>Hughes, AK 99745</td>
</tr>
<tr>
<td>Phone: (907) 968-2237</td>
<td>Phone: (907) 889-2239</td>
</tr>
<tr>
<td>Fax: (907) 968-2233</td>
<td>Fax: (907) 889-2252</td>
</tr>
</tbody>
</table>
Lake Minchumina Traditional Council  
P.O. Box 53  
Kaktovik, AK  99747  
Phone: (907) 455-9555

Manley Hot Springs Traditional Council  
P.O. Box 105  
Manley, AK  99756  
Phone: (907) 672-3177  
Fax: (907) 672-3200

Minto Traditional Council  
P.O. Box 26  
Minto, AK  99758  
Phone: (907) 798-7112  
Fax: (907) 798-7627

Nenana Traditional Council  
P.O. Box 356  
Nenana, AK  99760  
Phone: (907) 832-5461  
Fax: (907) 832-1077

Rampart Traditional Council  
P.O. Box 67029  
Rampart, AK  99767  
Phone: (907) 358-3312  
Fax: (907) 358-3115

Stevens Village IRA Council  
P.O. Box 16  
Stevens Village, AK  99774  
Phone: (907) 478-7228  
Fax: (907) 478-7229

Tanana Tribal Council  
P.O. Box 130  
Tanana, AK  99777  
Phone: (907) 366-7170  
Fax: (907) 366-7195
VERIFICATION STATEMENT

This application for a preliminary permit for the ORPC Alaska, LLC Nenana OCGenTM River TGU Power Project is executed in the State of Maine, County of Cumberland

By:

Christopher R. Sauer, ORPC Alaska, LLC, 151 Maritime Street, Suite 102-SC, Fall River, MA 02723, being duly sworn, deposes and says that the contents of this Preliminary Permit Application are true to the best of his knowledge or belief. The undersigned Applicant has signed the application on this 2nd day of June, 2008.

By:

Subscribed and sworn before me, a Notary Public of the State of Maine this 2 day of June 2008. My commission expires on July 2, 2011

By:

SHANNON L. NEEDHAM
Notary Public
State of Maine at Large
Commission Expires July 2, 2011
December 1, 2008

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1-A
Washington, D.C. 20426

Subject: Nenana OCGen™ River TGU Power Project (P-13233)
Schedule of Activities

Dear Ms. Bose:

On October 21, 2008, ORPC Alaska, LLC (ORPC) was issued a preliminary permit for the Nenana OCGen™ River TGU Power Project (P-13233) located near the town of Nenana on the Tanana River, approximately 45 miles southwest of Fairbanks, Alaska. Paragraph (C) of the Director’s Order issuing the permit requires a schedule of activities for the project be submitted within 45 days of the issuance date. In response, ORPC submits the following schedule of activities.

**Background Information**

ORPC filed an application for the Nenana OCGen™ River TGU Power Project (P-13233) on June 2, 2008. The proposed Nenana project is initially targeted to generate a capacity ranging from 100 to 400 kilowatts (kW) for the commercial phase. Assuming a 400 kW rated capacity, the project is expected to have an average annual power output of 1,752 megawatt hours (MWh). Based on the approximate nominal generating capacity per Tidal Generation Unit (TGU), the range of units will likely be approximately 4 to 16 TGUs. Since filing the application, ORPC has established a collaborative relationship with the Alaska Center for Energy and Power (ACEP) at the University of Alaska, Fairbanks. This project will be locally supported by ACEP with significant contributions from the University of Maine, Yukon River Intertribal Watershed Council, and the Tribal and City Councils of Nenana.
The Director’s Order issuing the permit (Paragraph C) stipulated the schedule of activities should cover the three-year permit term, leading to the filing of a development application. At this time, ORPC anticipates using FERC’s recently-proposed hydrokinetic energy pilot project licensing process.

**Schedule of Activities**

- **September 30, 2008**..............................Completed initial bathymetric mapping survey of Nenana Test site
- **October 30, 2008**.............................Conducted velocity survey of project area
- **January - March 2009**..........................Submittal of USACE Section 10 Permit to conduct demonstration test
- **March 31, 2009**..............................Submit FERC preliminary permit six-month progress report #1
- **Summer 2009**.................................Deployment of TGU for Phase I demonstration test (pending USACE permit approval). Fish monitoring begins
- **September 30, 2009**..............................Submit FERC preliminary permit six-month progress report #2
- **October 15, 2009**.............................Completion of summer testing
- **January - December 2009**.................Collect available environmental information relevant to the Tanana River
- **Fall - Winter 2009/2010**......................Conduct pre-filing consultation with federal, state, and local agencies and governments. Analyze existing information relevant for preparing the Pilot License Application.
- **March 31, 2010**..............................Submit FERC preliminary permit six-month progress report #3
- **September 30, 2010**............................File Notice of Intent and Draft License Application for Pilot Project
- **September 30, 2010**..............................Submit FERC preliminary permit six-month progress report #4
- **October 2010 – June 2011**......................Finalize Draft Application and submit Final Pilot License Application
Some aspects of this schedule may be adjusted based on field conditions during site-specific mapping surveys as well as timing for obtaining appropriate federal and state permits for the initial demonstration test.

If you have any questions regarding this schedule and the included information, please contact Christopher R. Sauer at (813) 417-6660.

Very truly yours,

Christopher R. Sauer
President and Chief Executive Officer

CC/MM/jph

cc: Service List
M. McCann
File

CERTIFICATE OF SERVICE

I hereby certify that I will, within the timeframe and means established in 18 § C.F.R. 385.2010, serve the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

DATED this 1st day of December, 2008.

Christopher R. Sauer
President and Chief Executive Officer
Ocean Renewable Power Company, LLC
151 Martine Street, Suite 102-5C
Fall River, MA 02723
Phone (813) 417-6660
ORDER ISSUING PRELIMINARY PERMIT

(Issued October 21, 2008)

On June 2, 2008, ORPC Alaska, LLC filed an application pursuant to section 4(f) of the Federal Power Act (FPA),\(^1\) to study the feasibility of the Nenana OCGen River TGU Power Project, located in the Tanana River, within the Unorganized Borough of Yukon-Koyukuk, near Nenana, Alaska. The project uses no dam or impoundment.

The proposed Nenana OCGen River TGU Power Project would consist of: (1) 16 proposed OCGen River TGU generating units, with a total installed capacity of 400-kilowatts, (2) a proposed 100-foot-long, 24.9-kilovolt transmission line, and (3) appurtenant facilities. The project is estimated to have an annual generation of 1.7-gigawatt-hours, which would be sold to a local utility.

Background

The Commission issued public notice of the application on August 7, 2008. The Bureau of Land Management filed comments, stating it has no comments at this time, but would like to be notified if the feasibility studies result in the further pursuit of a project. No motions to intervene were filed.

Discussion

Section 4(f) of the FPA authorizes the Commission to issue preliminary permits for the purpose of enabling prospective applicants for a hydropower license to secure the data and perform the acts required by FPA section 9,\(^2\) which in turn sets forth the material that must accompany an application for license. The purpose of a preliminary permit is to preserve the right of the permit holder to have the first priority in applying for a license for the project that is being studied.\(^3\) Because a permit is issued only to allow the permit holder to investigate the


feasibility of a project while the permittee conducts investigations and secures necessary data to determine the feasibility of the proposed project and to prepare a license application, it grants no land-disturbing or other property rights.4

On February 15, 2007, the Commission issued a notice of inquiry seeking comments on how it should treat applications for preliminary permits to study hydropower projects involving proposals to utilize wave, current, and instream new technology methods.5 In the notice of inquiry, the Commission posed three possible alternatives and stated that, pending the outcome of the notice of inquiry proceeding, it is adopting in the interim a “strict scrutiny” approach. Under that approach, the Commission will process new technology preliminary permit applications with a view toward limiting the boundaries of the permits, to prevent site-banking and to promote competition. Further, to ensure that permit holders are actively pursuing project exploration, the Commission will carefully scrutinize the reports that permit holders are required to file on a semi-annual basis,6 and would, where sufficient progress was not shown, consider canceling the permit. Stricter scrutiny could entail requirements such as reports on public outreach and agency consultation, development of study plans, and deadlines for filing a Notice of Intent to file a license application and a Pre-Application Document.

During the course of the permit, the Commission expects that the permittee will carry out prefiling consultation and study development leading to the possible development of a license application. The prefiling process begins with preparation of a Notice of Intent (NOI) and Pre-Application Document (PAD) pursuant to sections 5.5 and 5.6 of the Commission’s

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3 See, e.g., Mt. Hope Waterpower Project LLP, 116 FERC ¶ 61,232 at P 4 (2006) (“The purpose of a preliminary permit is to encourage hydroelectric development by affording its holder priority of application (i.e., guaranteed first-to-file status) with respect to the filing of development applications for the affected site.”).

4 Thus, a permit holder can only enter lands it does not own with the permission of the landholder, and is required to obtain whatever environmental permits federal, state, and local authorities may require before conducting any studies. See, e.g., Three Mile Falls Hydro, LLC, 102 FERC ¶ 61,301 at P 6 (2003); see also Town of Summersville, W. Va. v. FERC, 780 F.2d 1034 (D.C. Cir. 1986) (discussing the nature of preliminary permits). For these reasons, issuance of this preliminary permit is not a major federal action significantly affecting the quality of the human environment.


6 As a standard condition in all preliminary permits, the Commission requires the permit holder to file progress reports every six months.
Regulations. The permittee must use the Integrated Licensing Process unless the Commission grants a request to use an alternative process (Alternative or Traditional Licensing Process). Such a request must accompany the NOI and PAD and set forth specific information justifying the request. Should the permittee file a development application, notice of the application will be published, and interested persons and agencies will have an opportunity to intervene and to present their views concerning the project and the effects of its construction and operation.

This permit includes conditions to closely monitor the progress of the permittee’s activities. In addition to the six-month progress reports required of permittees, this permit will also require the permittee to file, within 45 days of the issuance date, a schedule of activities to be carried out under the permit and target dates for completion of these activities. At a minimum, this should include the filing of the NOI and PAD within one year of permit issuance, along with any request to use the traditional or alternative licensing process, or an NOI and Draft Application within two years of permit issuance for a request for necessary waivers to pursue hydrokinetic pilot project licensing procedures. The PAD must also include the time frame for consulting with federal, state, and local agencies, tribes, non-governmental organizations, and any other interested entities; and a preliminary list of issues identified and necessary studies related to these issues. If the periodic progress reports required by Article 4 of this permit do not show significant progress, or if the permittee fails to comply with any other conditions, the permit may be cancelled.

A preliminary permit is not transferable. The named permittee is the only party entitled to the priority of the application for license afforded by this preliminary permit. In order to invoke permit-based priority in any subsequent licensing competition, the named permittee must file an application for license as the sole applicant, thereby evidencing its intent to be the sole licensee and to hold all proprietary rights necessary to construct, operate, and maintain the proposed project. Should any other parties intend during the term of any license issued any of these proprietary rights necessary for project purposes, they must be included as joint applicants in any application for license filed. In such an instance, where parties other than the permittee are added as joint applicants for license, the joint application will not be eligible for any permit-based priority.

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7 18 C.F.R. §§ 5.5 and 5.6 (2008).

8 See id. § 5.3 (2008).

The Director orders:

(A) A preliminary permit is issued for this project to ORPC Alaska, LLC for a period effective the first day of the month in which this permit is issued, and ending either 36 months from the effective date or on the date that a development application submitted by the permittee has been accepted for filing, whichever occurs first.

(B) This preliminary permit is subject to the terms and conditions of Part I of the Federal Power Act and related regulations. The permit is also subject to Articles 1 through 4, set forth in the attached standard form P-1.

(C) The permittee, in addition to the six-month progress reports required under Article 4, shall file the following:

Within 45 days of the issuance date of the permit, a schedule of activities proposed by the permittee during the three-year permit term, leading to the filing of a development application. At a minimum, this shall include filing, within one year of the date of this permit, a notice of intent to file a license application (NOI) and pre-application document (PAD), accompanied by, if desired, a request to use the Traditional Licensing Process or Alternative Licensing Process, or the filing of an NOI and Draft Application no later than two years from permit issuance for development of a request for necessary waivers to pursue hydrokinetic pilot project licensing procedures. The PAD shall include a time frame for consulting with federal, state, and local agencies, tribes, non-governmental organizations, and any other interested entities; and for developing and filing a preliminary list of issues identified and studies related to these issues needed to develop a license application.

(D) This order is issued under authority delegated to the Director and constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days from the date of issuance of this order, pursuant to 18 C.F.R. § 385.713.

William Guey-Lee
Chief, Engineering and Jurisdiction Branch
Division of Hydropower Administration
and Compliance
FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF PRELIMINARY PERMIT

**Article 1.** The purpose of the permit is to maintain priority of application for a license during the term of the permit while the Permittee conducts investigations and secures data necessary to determine the feasibility of the proposed project and, if said project is found to be feasible, prepares an acceptable application for license. In the course of whatever field studies the Permittee undertakes, the Permittee shall at all times exercise appropriate measures to prevent irreparable damage to the environment of the proposed project. All test sites shall be restored as closely as possible to their original condition and to the satisfaction of the Commission’s authorized representative or, where federal lands are affected, to the satisfaction of the agency administering such lands.

**Article 2.** The permit is not transferable and may, after notice and opportunity for hearing, be canceled by order of the Commission upon failure of the Permittee to prosecute diligently the activities for which a permit is issued, or for any other good cause shown.

**Article 3.** The priority granted under the permit shall be lost if the permit is canceled pursuant to Article 2 of this permit, or if the Permittee fails, on or before the expiration date of the permit, to file with the Commission an application for license for the proposed project in conformity with the Commission’s rules and regulations then in effect.

**Article 4.** At the close of each six-month period from the effective date of this permit, the Permittee shall file four copies of a progress report with the Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426; and shall serve a copy on the interveners in this proceeding. The report shall describe, for that report period, the nature and timing of what the Permittee has done under the pre-filing requirements of 18 CFR sections 4.38 and 5 and other applicable regulations; and, where studies require access to and use of land not owned by the Permittee, the status of the Permittee’s efforts to obtain permission.