WP&C WHITESTONE POWER & COMMUNICATIONS
PHONE: (907) 895-4938 FAX (907) 895-4787 P.O. BOX 1630 DELTA JCT. AK, 99737

Hydrokinetic Pilot Project License Draft Application
Whitestone Poncelet RISEC Project
FERC No. 13305

Pursuant to 18 CFR § 5.18

May 1, 2010

Ms. Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Dear Madam Secretary,

On behalf of Whitestone Power and Communications (WPC), I am pleased to submit pre-filing materials for a Hydrokinetic Pilot Project License for the Whitestone Poncelet RISEC Project located at the confluence of the Delta and Tanana rivers near the community of Whitestone, Alaska. The project would develop a prototype of a single pontoon-mounted undershot waterwheel with a maximum capacity of 100 kW to generate electrical power from the river current. This proposal is based upon the design of WPC's Poncelet Kinetics RHK100 completed by Hasz Consulting, LLC for WPC as well as extensive consultation with state environmental agencies, state and federal energy regulatory agencies and local energy producers conducted under Preliminary Permit No. 13305.

WPC is submitting the information required under the guidance of the Commission's Hydrokinetic Pilot Project Licensing Procedures (April 2007). This material is organized as described below in the Table of Contents.

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WPC has provided electronic copies to or advised the official service list for the project, as well as other federal, state, and local resource agencies, non-governmental organizations, and members of the public potentially interested in the project of the availability of this draft application. WPC has published notice of filing of these materials in local newspapers and is posting this draft license application on its website www.whitestonecommunityassociation.net.

WPC would like to thank the Commission staff for their guidance throughout the preliminary permit period and looks forward to working with the Commission and all interested parties to successfully complete the hydrokinetic pilot project licensing process.

Sincerely,

Steven M. Selvaggio
President

WP&C WHITESTONE POWER & COMMUNICATIONS
PHONE: (907) 895-4938 FAX (907) 895-4787 P.O. BOX 1229 DELTA JCT. AK, 99737

NOTICE OF INTENT TO FILE AN APPLICATION FOR AN ORIGINAL LICENSE FOR A HYDROKINETIC PILOT PROJECT

FERC Project No. 13305

Whitestone Power and Communications (WPC) of Whitestone, AK hereby notifies the Federal Energy Regulatory Commission (FERC) of its intent to file an application for a hydrokinetic pilot license for the Whitestone Poncelet RISEC Project located at the confluence of the Delta and Tanana rivers near the community of Whitestone, AK. This application will be filed according to the guidance provided in FERC's whitepaper, "Licensing Hydrokinetic Pilot Projects" and in accordance with FERC's regulations under 18 CFR Part 5. With this notice, WPC is also filing a request for waiver of pre-filing components of the Integrated Licensing Process (ILP) in order to allow for the expedited processing of a Hydrokinetic Pilot Project License Application, a Justification Statement for the use of this process, and a draft application prepared under the requirements of §5.18 of FERC's regulations. This notice of intent is prepared according to §5.5 of FERC's regulations.

(1) Applicant Name and Address

Whitestone Power and Communications
P.O. Box 1630
Delta Junction, AK 99737

(2) Project Number

Under its existing FERC Preliminary Permit, Whitestone Poncelet RISEC Project has been assigned Project No. 13305.

(3) License Expiration Date

N/A

(4) Statement of Applicant's Intention to File

Whitestone Power and Communications hereby states its intention to file an application for an original license for a hydrokinetic pilot project, WPC's Whitestone Poncelet RISEC Project located at the confluence of the Delta and Tanana rivers near the community of Whitestone, AK. WPC will follow the Commission's whitepaper,

"Licensing Hydrokinetic Pilot Projects" which provides guidance on how best to apply the ILP (Part 5 of 18 CFR), with specific waivers granted under §5.29(f)(2), in order to obtain a license in an expedited manner for a hydrokinetic pilot project. As stipulated in the whitepaper, WPC has included in this application a statement justifying that the Whitestone Poncelet RISEC Project qualifies as a hydrokinetic pilot project under the Commission's criteria.

(5) Type of Principal Project Works

WPC's Whitestone Poncelet RISEC Project is a hydrokinetic river-in-stream-energy-conversion project which would consist of one (1) pontoon float 34-feet long and 19-feet wide supporting a Poncelet style undershot waterwheel 16-feet in diameter and 12-feet wide with a maximum capacity of 100 kW. The float will be moored to the shore by cables and struts above the surface of the water. The anchoring system will also carry the electrical power transmission cables from the float to the grid tie installation on the shore.

(6) Location of the Project

The project is located at the confluence of the Tanana and Delta rivers near the community of Whitestone, Alaska, approximately 90 miles south of Fairbanks, Alaska (64°09'22.66" N, 145°51'39.88" W).

(7) Installed Plant Capacity

The project would have a maximum installed capacity of 100 kW.

(8) Contact Information for:

(i) Every county in which any part of the project is located, and in which any Federal facility that is used or to be used by the project is located;

The project is not located in any organized county or borough and does not make use of any federal facilities.

(ii) Every city, town, or similar political subdivision

(A) In which any part of the project is or is to be located and any Federal facility that is or is to be used in the project is located:

The project is not located in any city, town or similar political subdivision and does not make use of any federal facilities.

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(B) That has a population of 5,000 or more people and is located within 15 miles of the existing or proposed project dam;

There are no towns with a population greater than 5,000 people within a 15 mile radius of the project and there is not an existing or proposed dam associated with the project.

(iii) Every irrigation district, drainage district, or similar special purpose political subdivision:

The project is not located in any irrigation district, drainage district or similar political subdivision.

(iv) Every other political subdivision in the general area of the project or proposed project that there is reason to believe would be likely to be interested in, or affected by, the notification:

Whitestone Community Association
P.O. Box 1630
Delta Junction, AK 99737

(v) Affected Indian tribes:

WPC's research shows there are no Indian tribes or tribal lands affected by the proposed project.

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REQUEST FOR WAIVERS, PROCESS PLAN AND JUSTIFICATION STATEMENT

FERC Project No. 13305

Whitestone Power and Communications proposes a process plan and schedule for expedited review of its application for a hydrokinetic pilot license. This plan is presented below and provides the parties that will be involved in this licensing process with the information necessary to facilitate their participation, including the anticipated milestones and the overall path associated with the licensing process. Also included in this section is the justification statement for using FERC's Hydrokinetic Pilot Project Licensing Process and the request for designation as the non-federal representative for ESA and Section 106 consultation.

REQUEST FOR WAIVERS

In accordance with the Commission's regulations under 18 CFR §5.29(f)(2), WPC hereby requests express waiver of timelines and respective responsibilities under the following pre-filing components on the Integrated Licensing Process in order to allow for the expedited processing of a Hydrokinetic Pilot Project License Application prepared under the guidelines of §5.18:

- §5.2(a) Document Availability, as a Pre-Application Document will not be prepared and will not be available to the public for inspection;
- §5.6 Pre-Application Document, as the relevant information required under this section, is included in Exhibit E of the Draft Pilot Project License Application.
- §5.7 Initial Tribal Consultation Meeting, as the proposed project will not affect any Indian tribes.
- §5.8 Notice of Commencement of Proceeding and Scoping Document, as under the Hydrokinetic Pilot Project Procedure, the Commission intends to notice the pre-filing process within 15 days of filing and will not prepare a scoping document.
- §5.9 Comments and Study Requests, as under the Hydrokinetic Pilot Licensing Procedure, comments will be due in 30 days and the required post-license monitoring plans have been developed with consideration of the Integrated Licensing Procedure study criteria under §5.11.
- §5.10 Scoping Document 2, as it is optional and not considered in the Hydrokinetic Pilot Licensing Procedure.
- §5.11 Potential Applicant's proposed Study Plan and Study Plan Meetings, as the intent of this and the following sections are covered under the required post-licensing monitoring plans.
- §5.12 Comments on the Study Plan.
- §5.13 Revised Study Plan and Study Plan Determination.

- §5.14 Formal Dispute Process.
- §5.15 Conduct of Studies.
- §5.16 Preliminary Licensing Proposal, as it is covered in the draft Pilot Project License application.
- §5.18(c) Exhibit H, as the information pertains to new license applications and is not applicable to an original hydrokinetic pilot project license application.

In addition, because Whitestone Power and Communications has prepared this application under the requirements of §4.61, Application Contents for Minor Water Power Projects and Major Water Power Projects less than 5 MW, WPC is submitting an initial statement; Exhibits A, E, F, and G, as modified to include the specific information requested under the Commission's hydrokinetic licensing process whitepaper; but is requesting waiver of all specific information requirements not applicable to a hydrokinetic project or the Hydrokinetic Pilot Project License Procedure as indicated within the application document.

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PROPOSED PROCESS PLAN AND SCHEDULE

Whitestone Power and Communications proposes a process plan and schedule for expedited review of its application for a hydrokinetic pilot license according to Figure 1A, "Schematic of Hydrokinetic Pilot Project Licensing Procedures in the Commission's Hydrokinetic FAQ document. This plan is shown in Table 2 below and provides the parties that will be involved in this licensing process with the information necessary to facilitate their participation, including anticipated milestones and overall path associated with the licensing process.

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Table 2. Hydrokinetic Pilot Project Licensing Process Plan and Schedule

DATE	DAYS	FERC	MILESTONE
PRE-FILING ACTIVITY			
January 17, 2011		BOX 1	1) WCA Files Notification of Intent
			2) WCA Files a Draft License Application
			3) WCA Requests Waivers Necessary for Expedited Processing of a Hydrokinetic Pilot Project License Application
			4) WCA Requests Designation as Non-Federal Representative for ESA and 106
			5) WCA Distributes, Notices and Files Pre-Application Packet
February 1, 2011	15		6) Commission Notices Pre-filing Process, Docket Number and a Tentative Pre-Filing Schedule
February 16, 2011	30	BOX 2	Agencies and Others File Comments on Process Plan and DLA
			If needed, Commission Solicits Tribal Consultation
			Commission Designates WCA as Non-Federal Representative for ESA and Section 106 Consultation
March 31, 2011	45	BOX 3	If needed, Commission Issues Notice of and Conducts a Public Meeting to Discuss Proposal
April 15, 2011	15	BOX 4	Commission Notices Conclusion of Pre-filing Process and Makes Determination on Request for Waiver/Process Plan
POST- FILING ACTIVITY			
May 2, 2011	30	BOX 5	1) WCA Files License Application
			4) WCA Files Revised Post-License Monitoring Plan
May 16, 2011	15	BOX 6	Commission Issues Acceptance & REA Notice and Request for Interventions
			If needed, Commission Issues Biological Assessment (BA)

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June 16, 2011	30	BOX 7	Agencies and Others File Recommendations, Conditions and Comments on the Application
August 16, 2011	60	BOX 8	Commission Issues Single EA if FONSI
September 16, 2011	30	BOX 9	Agencies and Others Comment on EA; 10j Resolution
September 19, 2011		BOX 10	Ready for Commission Decision

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JUSTIFICATION STATEMENT

FERC Project No. 13305

The following justification statement demonstrates that Whitestone Power and Communication's Whitestone Poncelet RISEC Project meets the *Criteria for Using the Pilot Project Licensing Procedures*, listed in Section III of the Commission's whitepaper, "Licensing Hydrokinetic Pilot Projects". These criteria specify that the proposed project must be: (1) small; (2) short term; (3) not located in sensitive areas; (4) removable and able to be shut down on short notice; (5) removed, with the site restored, before the end of the license term unless a new license is granted; and (6) initiated with a draft application that is adequate as filed to support environmental analysis.

(1) Pilot projects will be small.

As mentioned in the whitepaper, FERC staff will evaluate projects on a case-by-case basis, but expects that pilot projects will be less than 5 MW and often will be substantially smaller. In addition to generating capacity, staff also will consider carefully the number of generating units and the project footprint in determining whether the proposal qualifies as a pilot project.

WPC's proposed Whitestone Poncelet RISEC Project is in compliance with this requirement as its maximum capacity is 100kW, which is below the Commission's 5 MW threshold. It is likely that this will be a typical size for hydrokinetic generation units in remote rural communities in Alaska should this technology prove feasible for river conditions in Alaska.

(2) The license will be short term.

As mentioned in the Commission's whitepaper, FERC will evaluate on a case-by-case basis, but expects that pilot projects will have terms of five years.

WPC will request a license term of five years as stipulated in the Commission's whitepaper. WPC expects that this project will be ready for full commercialization by the end of that time with deployment planned for May 2012 which will allow for a three year testing period. This will give WPC ample time to prove the reliability, operational costs and profits of the proposed technology.

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(3) Pilot Projects will avoid sensitive locations.

The Commission's whitepaper, "Licensing Hydrokinetic Pilot Projects", indicates that the applicant must describe potential areas of sensitivity in the proposed project area and indicate reasons for the sensitivity. Commission staff will determine whether a potential use conflict makes the proposal inappropriate for an expedited review process.

WPC's proposed Whitestone Poncelet RISEC Project would be located at the confluence of the Delta and Tanana rivers near the community of Whitestone, AK (64°09'22.66" N, 145°51'39.88" W). This area of the rivers is not subject to more than incidental water transportation traffic of any kind. All boating in this area is small and infrequent. However, the area is a sensitive biological resource for the salmon which migrate through it in the spring and fall. This is an unavoidable condition in the preponderance of Alaska's rivers which are home to unusually high densities of aquatic life in general and salmon in particular. For this reason, one of the major objectives of this project is to prove the ability of this technology to operate without harm or disturbance to the resident and migratory aquatic life. No deployment will take place until the necessary permits have been obtained from the Alaska Department of Fish and Game and the National Fish and Wildlife Service. The technology being developed by WPC is uniquely suited to coexist with aquatic life and would receive all necessary approvals prior to deployment.

(4) Pilot projects will be subject to strict safeguards for the public and environmental resources potentially leading to project modification, shutdown or complete removal.

The Commission's whitepaper states that unacceptable risks to the public or the environment during the license period, as observed through the monitoring protocols required by the license (or as otherwise evident), will lead to project alteration, shutdown or removal followed by site restoration.

The proposed Poncelet Kinetics RHK100 pontoon mounted undershot water wheel can be unmoored and removed from the river in a matter of a few hours. Because all mooring and power transmission systems are above the surface of the water, the technology is uniquely suited to swift deployment and removal. In addition, it is anticipated that the device will be removed from the water in October and be redeployed in April of each year.

WPC has opened negotiations with the United States Coast Guard (USCG) concerning appropriate demarcation and public warning systems for the float and will receive the appropriate permits from the USCG guaranteeing the safety of the technology prior to deployment. WPC has already received the necessary permits from the United States Army Corps of Engineers (USACE)

(5) Pilot projects will be required to complete project removal and site restoration before the end of the license period unless the licensee obtains a new license covering the pilot project site.

The Commission's whitepaper states that licenses for pilot projects will require that the project be removed and the site restored as directed by FERC. If a pilot project licensee opts to apply for a standard license at the end of the pilot project license term, authorization of the build-out project will be evaluated in a full Commission proceeding with the National Environmental Policy Act (NEPA) review and participation by all interested stakeholders. If the build-out is licensed, there may be no need to remove the pilot device.

WPC accepts these conditions as outlined in the Commission's whitepaper. In addition, as required by the Commission guidance, WPC includes in this license application a plan to assure financing to remove the project and restore the site, in the event that a successive license is not pursued.

(6) Pilot projects will be initiated with a draft application that is adequate as filed to support environmental analysis.

The whitepaper states that the draft application must include a thorough description of the existing environments, incorporating a review of existing information and a description of the environmental baseline, which may require basic pre-application surveys, measurements or observations. Potential effects of the project should also be included.

WPC has been actively studying the proposed project area, consulting with local, state and federal agencies including the Department of Natural Resources (DNR), the Alaska Department of Fish and Game (ADFG), the National Fish and Wildlife Service (NFWS), the United States Army Corps of Engineers (USACE), the United States Coast Guard (USCG) and the State Historic Preservation Officer (SHPO). WPC believes that the environmental report submitted with this application as Exhibit E, which is based on these studies and consultations, provides a sufficient level of information to support the environmental analysis for issuance of the pilot project license and thus believes the project is compliant under this criterion.

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REQUEST FOR DESIGNATION AS NON-FEDERAL REPRESENTATIVE FOR ESA AND SECTION 106 (NHPA) CONSULTATION

FERC Project No. 13305

Pursuant to 50 CFR §402.13, Whitestone Power and Communications requests designation as FERC's non-federal representative to initial informal Section 7 consultation (16 U.S.C. § 1536) with the USFWS and the NMFS and to hold discussions related to threatened and endangered species with other appropriate parties on behalf of FERC with regard to the Hydrokinetic Pilot Project Licensing Procedures.

Section 106 of the National Historic Preservation Act of 1966 (as amended), 16 U.S.C. § 470f, requires FERC to take into account the effect of its undertakings on historic properties and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. Under 36 CFR §800.2(c)(4), FERC may authorize an applicant for a Federal license to initiate Section 106 consultation with the SHPO and any relevant Tribal Historic Preservation Officer(s) (THPO). WPC hereby requests designation as the non-federal representative to initiate Section 106 consultation and other historic and archeological discussions with the Alaska SHPO and other interested parties on behalf of FERC with regard to the Hydrokinetic Pilot Project Licensing Procedures.

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COMMUNICATION RECORD

In accordance with the Commission's whitepaper, Whitestone Power and Communications has provided a copy of the pre-filing materials including its NOI, draft license application, and the waiver request and process plan to the federal, state and local resource agencies, non-governmental organizations, and members of the public potentially interested in the project. These parties are listed below.

Additionally, on a date not later than the filing date of the pre-filing materials with the Commission, WPC has published notice of the filing of its NOI, draft application, and request for waver and process plan in a daily or weekly newspaper in each county in which or off of whose shore, the project would be located. This notice disclosed the date of the filing of the pre-filing materials with the Commission and stated that comments could be filed with the Commission for up to 30 days following the pre-filing materials filing date.

i. Record of Document Distribution
   a. Potentially interested federal, state and local resource agencies, non-governmental organizations:

The following potentially interested federal, state and local resource agencies, non-government organizations and members of the public are being notified of this application:

First Name	Last Name	Title	Organization
Eric	Feige	Representative	Alaska House
John	Coghill	Senator	Alaska Senate
Lisa	Murkowski	Senator	United States Senate
Sean	Parnell	Governor	State of Alaska
Karla	Bush	Fishery Biologist IV	AK Dept. of Fish & Game
James	Durst	Habitat Biologist III	AK Dept. of Fish & Game
Bob	Henszey	Fish & Wildlife Biologist	US Fish & Wildlife Services
Mary	Dowling	Mayor	Delta Junction, Alaska

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Jack	Detzel	Public	Goodpaster Association
Daniel	Bergstrom	Fishery Biologist IV	AK Dept. of Fish & Game
Howard	Thies	Division Director	Department of Transportation, Fairbanks
Dan	Bishop	Staff Member	Golden Valley Electric Association
Mike	Wright	Director of Operations	Golden Valley Electric Association
A.J.	Wait	Natural Resource Manager I	Dept. of Natural Resources
Stuart	Pechek	Natural Resource Specialist II	Dept. of Natural Resources
Chris	Milles	Natural Resource Manager III	Dept. of Natural Resources
Gary	Prokosch	Natural Resource Manager III	Dept. of Natural Resources
Robert	McCormick	Permitting Officer	US Coast Guard
Brandy	Baker	Management Biologist	AK Dept. of Fish & Game
Robert, "Mac"	McLean	Regional Supervisor	AK Dept. of Fish & Game
Michael	Harper	Executive Director	Alaska Energy Authority
Ellen	Lyons	Permitting	USACE
Denali	Daniels	Senior Energy Program Manager	Denali Commission
Dennis	Johnson	Senior Electrical Engineer	Applied Power & Control
Don	Young	Representative	United States House of Representatives
Susan	Bell	Commissioner	DECCED
Greg	Wyman	New Construction	GVEA
R. Scott	McClintock	RPLS	Eco-Land LLC

John	Hasz	Professional Engineer	Hasz Consulting LLC
Chris	Roach	Hydrologist	Chris Roach, P.E.
David	Lockard	Program Manager	Alaska Energy Authority
Alan	Fetters	Program Manager	Alaska Energy Authority
Josiah	Keller	Vice President	Whitestone Community Association
Jack	Schmid	Researcher	University of Alaska, Fairbanks
Monte	Miller	Coordinator	Statewide Hydropower/Hydrokinetic
Susan	Walker		NOAA

ii. Publications of Notice of Filing:
   a. Delta Wind
   b. Fairbanks Daily News-Miner
   c. Anchorage Daily News

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CERTIFICATION OF SERVICE

In accordance with Section 16.8 of the Commission's Regulations, I hereby certify that I have this day provided a copy of the Draft Hydrokinetic Pilot Project License Application for the Whitestone Poncelet RISEC Project or a notice of its availability to each entity designated on the attached Distribution List.

Dated in Delta Junction, Alaska on this 14th day of JANUARY, 2011.

Steve M. Selvaggio, President
Whitestone Power and Communications
P.O. Box 1630
Delta Junction, AK 99737

JENNIFER R. AUSTIN
Notary Public
State of ALASKA
My Commission Expires
February 12, 2012

Steve M. Selvaggio, President
Whitestone Power and Communications

Signed & sworn before me this 14th day of January, 2011

Jennifer R. Austin
Notary Public in and for the State of AK
My commission expires 02/12/2012

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Record of Consultation Prior to Submission of Pre-Filing Materials

Date	Organization	Type	Description	Location of Document
09/20/2008	WCA	Meeting	WCA Board Meeting – Hydrokinetic Energy Installation discussed by entire board with resolution to proceed	WCA
09/24/2008	AHWG	Meeting	Proposal of Developmental Hydrokinetic Energy Project	Docket
02/26/2009	FERC	FERC Filing	Order Issuing Preliminary Permit	WPC
03/15/2009	WPC	FERC Filing	Schedule of Activities Letter	WPC
08/14/2009	WPC	FERC Filing	Semi-annual progress report	WPC
3/10/2009	WPC	FERC Filing	Permit Activities Schedule	WPC
08/17/2009	WPC	Letter	Submitted application to AKDNR for water rights and land use permits	WPC
06/29/2009	AHWG	Meeting	Explanation of goals and discussion	Docket
10/26/2009	WCA	Meeting	Quarterly board meeting – discussed the device design	WCA
1/26/2010	AHWG	Meeting	Address the Hastings Report	Docket
2/01/2010	WPC	FERC Filing	Semi-annual progress report	WPC
3/04/2010	AHWG	Meeting	Address permitting and scheduling questions	Docket
04/12/2010	WCA	Meeting	Quarterly board meeting – updates on Whitestone Poncelet RISEC Project	WCA
04/20/2010	WPC	Letter	Received Clean Water Act, Section 10 Letter of Permission from USACE	WPC
4/25/2010	WPC	Letter	Received Letter of Deferral from USF&W allowing WP&C to seek all environmental permits though AKF&G and	WPC

			waiving the EFH study requirements.	
04/29/2010	WPC	Meeting	Attended Alaska Energy Conference – presented Whitestone Poncelet RISEC Project	WPC
05/03/10	WPC	Letter	Received letter from USDC, NOAA to the USCG granting permission for a device to be put into the Tanana River	WPC
05/05/10	WPC	Letter	Received letter from ADF&G granting permission for continued progress	WPC
5/05/2010	AHWG	Meeting	Discuss methodology to be applied in future meetings to determine the most far-reaching, scientifically valid, cost effective and transferable research topics, objectives and methodology.	Docket
06/03/2010	WPC	DOE Filing	Submitted application to ADOE for funding to complete all design and feasibility studies	WPC
08/11/2010	WPC	FERC Filing	Semi-annual progress report	WPC
09/10/2010	DOE	Letter	Received word of grant approval	WPC
10/13/2010	AHWG	Meeting	Alaska Hydrokinetic Working Group Meeting to give updates on the summer's field season and plan ahead for the fall/winter meeting season.	Docket
10/14/2010	AHWG	Conference Call	Update on Project and Connecting to the Grid questions	Docket
10/22/2010	WPC	Letter	Established contact with USCG to determine necessary permitting and demarcation	WPC
12/15/2010	AHWG	Meeting	Alaska Hydrokinetic Working Group Meeting to discuss NW Territories Power Project in the Mackenzie River	Docket
12/24/2010	DOE	Letter	Received Award Funding	WPC
1/11/2011	AHWG	Meeting	Met with representatives from	Docket

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			GVEA, ADF&G, DNR, etc to discuss connecting device to GVEA grid	

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APPLICATION FOR AN ORIGINAL HYDROKINETIC POWER PILOT PROJECT LICENSE FOR THE WHITESTONE PONCELET RISEC PROJECT

FERC Project No. 13305

INITIAL STATEMENT

1. Whitestone Power and Communications (WPC) applies to the Federal Energy Regulatory Commission (FERC) for a hydrokinetic pilot project license, under guidance of FERC's *Licensing Hydrokinetic Pilot Projects* whitepaper, for the Whitestone Poncelet RISEC Project as described here. The project number assigned by FERC to this project is 13305.

2. The location of the project is:
   a. State or territory: Alaska
   b. County: N/A
   c. Township or nearby town: Whitestone
   d. Stream or other body of water: Tanana River

3. The exact name, address and telephone number of the applicant are:

   Whitestone Power and Communications
   PO BOX 1630
   Delta Junction, AK 99737
   907-895-4938

4. The exact name, address, and telephone number of each person authorized to act as agent for the applicant in this application, if applicable are:

   Steven M. Selvaggio
   President
   907-803-5432

   Steven A. Selvaggio
   Registered Agent
   907-803-3021

   Address for both agents is the same as that for the applicant as listed above.

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5. The applicant is a domestic non-profit entity and is not claiming preference under section 7(a) of the Federal Power Act. See 16 U.S.C. 796.

6. (i) The statutory or regulatory requirements of the state(s) in which the project would be located that affect the project as proposed with respect to bed and banks and the appropriation, diversion and use of water for power purposes, and with respect to the right to engage in the business of developing, transmitting and distributing power and in any other business necessary to accomplish the purposes of the license under the Federal Power Act, are included along with, (ii) The steps which the applicant has taken or plans to take to comply with each of the laws cited:

7. Brief Project Description
    a. 100 kW
    b. Check appropriate box:

    ☐ Existing Dam ☐ Unconstructed Dam

    ☐ Existing Dam, major modified project (see §4.30(b)(14))

    ■ Hydrokinetic Pilot Project

8. Lands of the Unites States affected (shown on Exhibit G):
    a. National Forest: N/A
    b. Indian Reservation: N/A
    c. Public Lands Under Jurisdiction of: N/A
    d. Other: N/A
    e. Total U.S. Lands: 0
    f. Check appropriate box:

    ☐ Surveyed Land ■ Unsurveyed Land

Construction of the project is planned to start within 18 months and be completed within 24 months from the date of the issuance of the license. In no event will construction begin later than 2 years from the issuance of the license.

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EXHIBIT A

PROJECT DESCRIPTION AND OPERATION

Whitestone Power and Communications is proposing to develop the Whitestone Poncelet RISEC project near the confluence of the Delta and Tanana rivers (See map in Figure 1) under the Commission's new Hydrokinetic Pilot Project Licensing Process. The project would consist of the following:

1. 1 pontoon mounted, 12-foot wide, 16-foot diameter Poncelet undershot water wheel with a nominal capacity of 100 kW
2. A float with a total footprint on the water surface of 34-feet by 19-feet
3. Float-to-shore mooring system and electrical power transmission cabling
4. Vessel mounted switch gear and appropriate navigational safety appurtenances

Whitestone Power and Communications proposes to develop the project as follows:

2011-2016: Obtain hydrokinetic pilot project license and test project for at least three years under its auspices.

The following Project and Operations description follows the requirements of §4.61(c) for Exhibit A, with some needed expansions and adjustments to accurately describe a hydrokinetic project.

Whitestone Power and Communications' RISEC device includes an undershot water wheel arranged according to the method of General Poncelet. The wheel drives an epicyclic transmission and permanent magnet generator. The main structure of the wheel as well as the chassis and other structural elements are constructed from aluminum with stainless steel fasters as needed. The blades of the wheel are a proprietary curved design constructed from high density polyethylene (HDPE). The pontoons on which the wheel is suspended are constructed from HDPE. The entire float will be moored to the shore and will have no submarine structures or cabling. At the date of this writing, the project is in the design phase and no construction has taken place.

PONCELET KINETICS RHK100 TECHNICAL DESCRIPTION

The Poncelet Kinetics RHK100 consists of five major components:

- Main wheel with 36 fixed blades
- Support chassis and flotation

- Transmission and generator system
- Electronic controls and grid intertie
- Mooring and propulsion systems

TURBINE WHEEL

A 12-ft-diameter wheel constructed from 5086 aluminum will be used for this design. HDPE blades with a profile of 2-ft depth and 4-ft width will be fastened to the frame of the wheel. The design of the blades was formulated by Hasz Consulting, LLC of Delta Junction, Alaska and will be manufactured by ACI Plastics of Kansas City, Missouri. The wheel is of a modular, 3 stage design which gives an improved power signal and smoother operation.

If the wheel needs to be stopped for repair or inspection, it can be braked manually through the generator for a short period of time then lifted from the water or it can be lifted from the water and allowed to coast to rest.

CHASSIS AND FLOTATION

The wheel is supported on one side by the transmission flange and on the other side by a spherical, self aligning bearing. Both supports can be adjusted for plunge depth of the blades in the water by the use of high-load, manual screw jacks. These jacks are also to be used for lifting the wheel entirely out of the water for the purpose of transportation or repair. The entire frame is constructed of 5086 aluminum and consists of closed box beams which are bolted together to create the decking of the float. These are bolted to long C-channels which run the entire length of either pontoon providing both the mounting surface for the structure as well as adding strength to the pontoons for the deployment and recovery operations. Due to the extreme harshness of Alaskan winters, the craft will have to be deployed in the spring and removed from service during the winter.

The pontoons are manufactured by Ferguson Industrial Plastics of Washougal, Washington from HDPE. The drive train is on one side, causing uneven weight distribution. Therefore, one pontoon will be 42-in diameter and the other 36-in diameter. The ends of the pontoons will be capped with pulling heads capable of sustaining loads in excess of 200,000 lb which far exceeds the requirements of this application but represents the standard in the industry. Both pontoons are 34 feet long.

The entire craft will weigh approximately 15,000 lb. All appurtenances other than cables and mooring equipment will be located on the craft in order to minimize the footprint and increase ease of deployment and recovery. The entire deck is surrounded by safety railings both between the wheel and the deck and shielding the deck from the surrounding river environment.

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TRANSMISSION AND POWER GENERATION SYSTEM

The transmission is an epicyclic or planetary transmission having a gear ratio of 30:1. This transmission is produced by Brevini USA. This design is recommended for several reasons. The slow speed of the wheel renders a belt system ineffective due to its prohibitively large size and the inefficiency of belts at low speed. The weight and expense associated with a chain drive system render it unsatisfactory. In addition, the life expectancy of chains is substantially lower than that for gear transmissions. Synchronized belt drives are slightly more advantageous than chains in that they do not require lubrication and sealed cases, but the dependability of these systems at low speed is unfavorable. Due to the expense of designing a gear transmission and having it custom made, it is recommended to use a stock transmission and the Brevini design is ideal for this particular application. The life expectancy of the transmission is 100,000 hours.

The AC electric generator is a 36-pole, 480 V, 3-phase, permanent magnet generator which is designed for low speed applications with its operating range between 0-rpm and 200-rpm. This generator allows the turbine to be used as a grid-tie system, standalone power producer or as a parallel assist to small power producers on finite grids. The versatility of the design is key to producing power in remote locations with severe conditions where the grid conditions are widely variable and unpredictable.

ELECTRONIC CONTROLS AND INTERTIE

The electronic controls system will be supplied by Energetic Drives, LLC. The system is based on Parker variable frequency drives which work efficiently to accept a wide range of frequencies and voltages and produce a clean power signal with a unity power factor. This control system allows for remote monitoring, startup, shutdown and manipulation and control of the turbine at all times either remotely or on site. In addition, the controls allow the operator to optimize the operation for grid-tie, standalone or parallel operation depending on the situation at hand. The programmable logic controller (PLC) also allows these settings to be changed automatically based on load or a daily, weekly or monthly time cycle depending on changing demand, parallel generators coming on or off line or other predictable changes to the active grid to which the unit is tied.

The grid-tie portion of the system is controlled by a Schweitzer relay which gives the system the ability to sense load, frequency, power factor and other critical values including taking the system offline in the case of a power failure on a large grid or any other emergency. The system is then also capable of bringing the turbine back online once the problem is corrected. The entire system can also be disconnected and connected remotely or on site by an operator.

Marine grade, sealed shore plugs including breakaways will be used for all electrical connections. The breakaways will also be disconnects so that, in the unlikely event that the

craft breaks loose from its moorings or some other emergency arises, the power can be quickly disconnected without injury or damage to operators or equipment.

The cable running from the output side of the inverter/rectifier system is a 4-conductor, 4-ought, armored copper cable. It will be anchored at various points along its route from the float to the grid-tie-point. In order to satisfy the Commission's requirements for the system to be easily removable, the cable will be run along the surface of the ground and anchored using grouted ground anchors. The anchoring system is being developed by Williams Form Engineering, of Portland, Oregon.

MOORING AND PROPULSION SYSTEMS

Because of the harsh Alaskan winters, the turbine will have to be deployed each spring and recovered in the fall. For this reason, easily manipulated moorings systems will be needed. A well formulated approach to deployment and recovery will be necessary to avoid high labor costs and potential equipment damage. The turbine will be assembled on shore near the location of its deployment and slid into the water on the HDPE pontoons via an earthen ramp constructed for the purpose. From there, cables will be run from the pulling heads on the front of the pontoons to winches on either shore. These winches will work in tandem to guide the float into anchoring position. The deployment process will be aided by a workboat which will be docked to the float and will help maneuver it in the water.

Once in position, the float will be docked to a gangway using a similar device to the fifth-wheel and pin connector used for large trucks and trailers. This gangway will hold the float at the desired distance from the shore and will have its own anchoring cable. The float will have an additional anchoring cable which will run at water level to the shore. This cable will act as a debris diverter as well as an anchor cable and will be a 3/4"-diameter stainless steel aircraft cable. The gangway and the cable will work together to hold the float in position and hold it parallel to the direction of flow. Both anchoring systems will be adjustable for height as the river level rises and falls. Secondary tether cables will be in place in the event that the primary anchoring system fails. One of the cables will be attached to the rear of the craft and one to the front. These secondary cables will be designed to swing the craft to shore in the event of a mooring system failure. At the time of this writing, it is expected that the distance from the shore to the inner pontoon of the float will be approximately 30 ft.

The first advantage of anchoring to the shore rather than the river bed is that the tremendous down force that would accompany such an anchoring system is eliminated. The second advantage is that by keeping the cable out of the water, it is not subject to catching submerged debris which would greatly increase the load upon it and possibly jeopardize its integrity. Finally, by anchoring the float to the shore with the cable making an angle of approximately 30 degrees to the direction of flow, the cable will act as a debris diversion device. Although it will not divert all debris, it will divert that debris which has an above water profile greater than six inches. This will keep large root wads and trees with large

branches and protrusions from impinging on the wheel. Proximity to the shore also offers the advantage that most debris tends toward the middle of the stream.

The work boat mentioned above will be supplied by Munson Boats based in Seattle, Washington. It will be a variation of their 30-ft Packcat design equipped with pushing knees for assistance in deployment of the float. It will have twin 150 hp Honda outboard motors and will be built as a landing craft to assist in maintenance and installation duties.

PROJECT DESIGN, MANUFACTURING AND CONSTRUCTION

The prototype to be tested as part of this project is being designed in full by Hasz Consulting, LLC of Delta Junction, Alaska. The design paradigm has focused around the objective of maximizing the use of commercial-off-the-shelf (COTS) technologies and integrating them with new ideas to create a system robust enough to withstand the harsh and demanding power generation environment in Alaska. This design process will be ongoing as the system is tested in situ over the license term. All design costs to date have been funded by WPC and through the Department of Energy's 2010 Marine Hydokinetic Technology Advancement grant opportunity.

MANUFACTURING

As stated above, a major tenet of the design paradigm was to maximize the use of COTS technologies. In keeping with this design goal, most of the important components are being integrated into the design from established manufacturers.

The transmission is manufactured by Brevini USA Power Transmission based in Yorktown, Indiana. The generator and electronic controls are being supplied by Energetic Drives, LLC based in Gresham, Oregon. The pontoons are being manufactured by Ferguson Industrial Plastics based in Washougal, Washington. The blades which are a proprietary design of Hasz Consulting, LLC are being manufactured by ACI Plastics based in Kansas City, Missouri. The anchoring systems are being supplied by Williams Form Engineering based in Portland, Oregon. All custom aluminum parts comprising the chassis, wheel frame, struts and other parts will be manufactured by certified aluminum fabricators in Alaska.

CONSTRUCTION

Construction of the system must take place on site due to the size of the float and wheel. At this point, WPC plans to construct the device in partnership with CE2 Engineers of Anchorage, Alaska and with personnel from the Alaska Energy Authority, a state agency which has assisted WPC throughout the process of design and which will play a continued role in the deployment of these systems throughout the state pending a successful test period. CE2 Engineers is a highly respected remote location project constructor and operator in

Alaska and has many years of experience in constructing and operating complex technical systems in adverse and isolated conditions.

Pending the necessary funding and timely decision on the part of the Commission, WPC plans to commence the manufacturing and construction of the device over the summer and winter of 2011 with the goal of deploying the turbine during May of 2012.

The grid-tie system will be constructed by Golden Valley Electric Association (GVEA) personnel assisted by WPC personnel during the spring of 2012. WPC will supply all materials for the project. WPC expects the total ground disturbance to be less than 0.25 acre. The only permanent components will be the drilled rock anchors for anchoring the turbine and securing the grid-tie cabling. These anchors will be threaded rods of 2-inch diameter or less and will be less than 30 in number.

Having all necessary permits in hand by the end of 2011, WPC expects to begin construction in 2011 in order to deploy the turbine as quickly as possible following the Commission's decision. WPC expects the cost to manufacture and construct its Poncelet Kinetics RHK100 prototype to be $1,000,000.00 or less.

EFFICIENCY AND RETURN-ON-INVESTMENT PROJECTIONS

For a horizontal axis water wheel arranged according to the method of General Poncelet, the maximum efficiency is obtained when the tip speed of the blades on the wheel is 40% of the velocity of the water. WPC has chosen a controls system which is comprised of a permanent magnet generator and a variable frequency inverter/rectifier system. This system will allow the generator to control the speed of the wheel and maintain the most efficient ratio of the rotational speed of the wheel to the speed of the water at all water velocities. This technology provides a significant efficiency upgrade over the standard induction generator design. The wheel is designed for a maximum water speed of 16 fps.

During the summer of 2010, the University of Alaska, Anchorage (UAA) completed a velocity survey for the purposes of this project over a 3,500 ft section of the Tanana River including the project area. The purpose of this study was to provide a benchmark from which return-on-investment numbers could be generated and to allow WPC to determine the best location for the float to be installed. There are many considerations that affect this decision including distance from intertie point to the main grid, ease of anchoring, aquatic habitat concerns and others. However, the principle consideration was the location of the fast moving water within 100 ft of the shore line.

The survey was conducted using an Acoustic Doppler Current Profiler (ADCP) which measures water velocity as a function of depth and distance from a set point on the shore. The UAA team took measurements at 10 different transects spanning the entire project area as well as some

measurements above and below the project area. This allowed WPC to make an informed decision concerning the location of the float and final project boundary delineation.

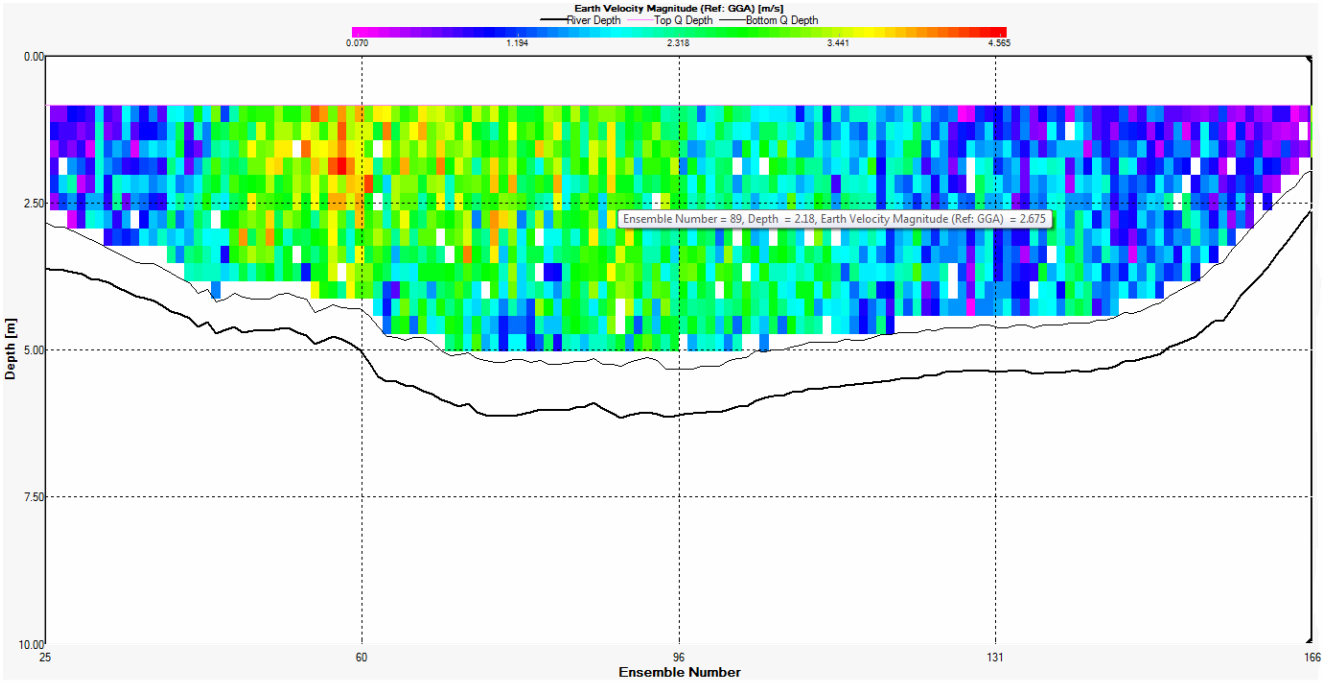

Chart showing the velocity distribution at the site chosen for project deployment

The numbers returned from the study were somewhat better than expected, particularly considering that the study was conducted in early June when the water is not at its highest point. Based on the study results as shown below, WPC expects to operate in water velocities at or exceeding 12 fps for a majority of the summer.

The output of the turbine is 107 kW at 15 fps and 7 kW at 6 fps. Although the cost of electricity is widely variable, the average cost of power in remote communities in Alaska is approximately $0.50. This is the number that has been used for the return on investment chart below.

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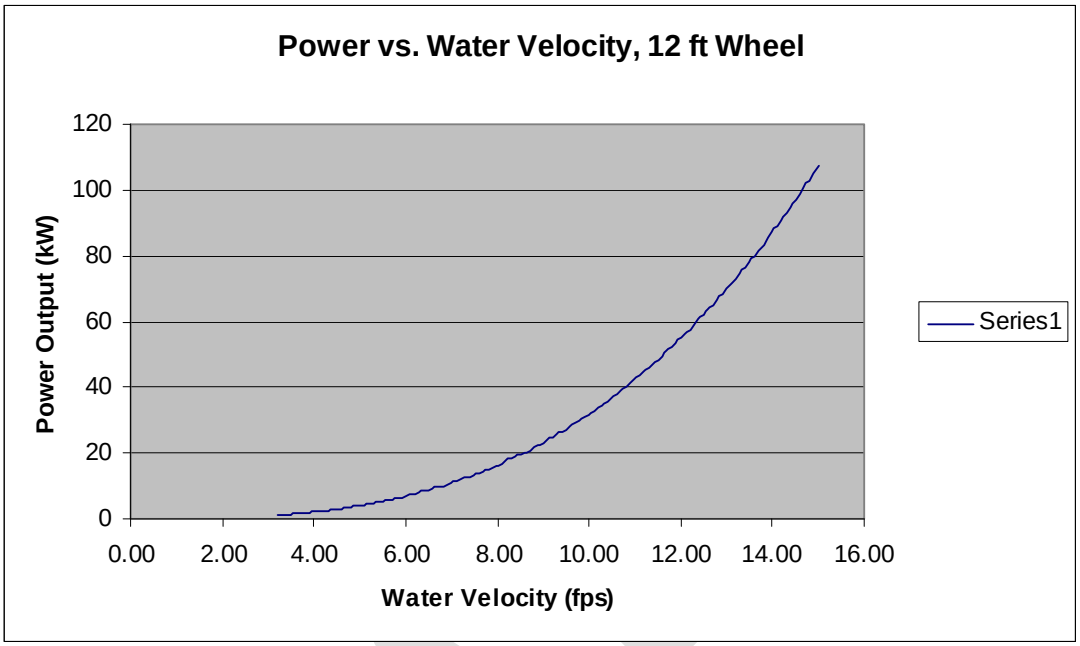

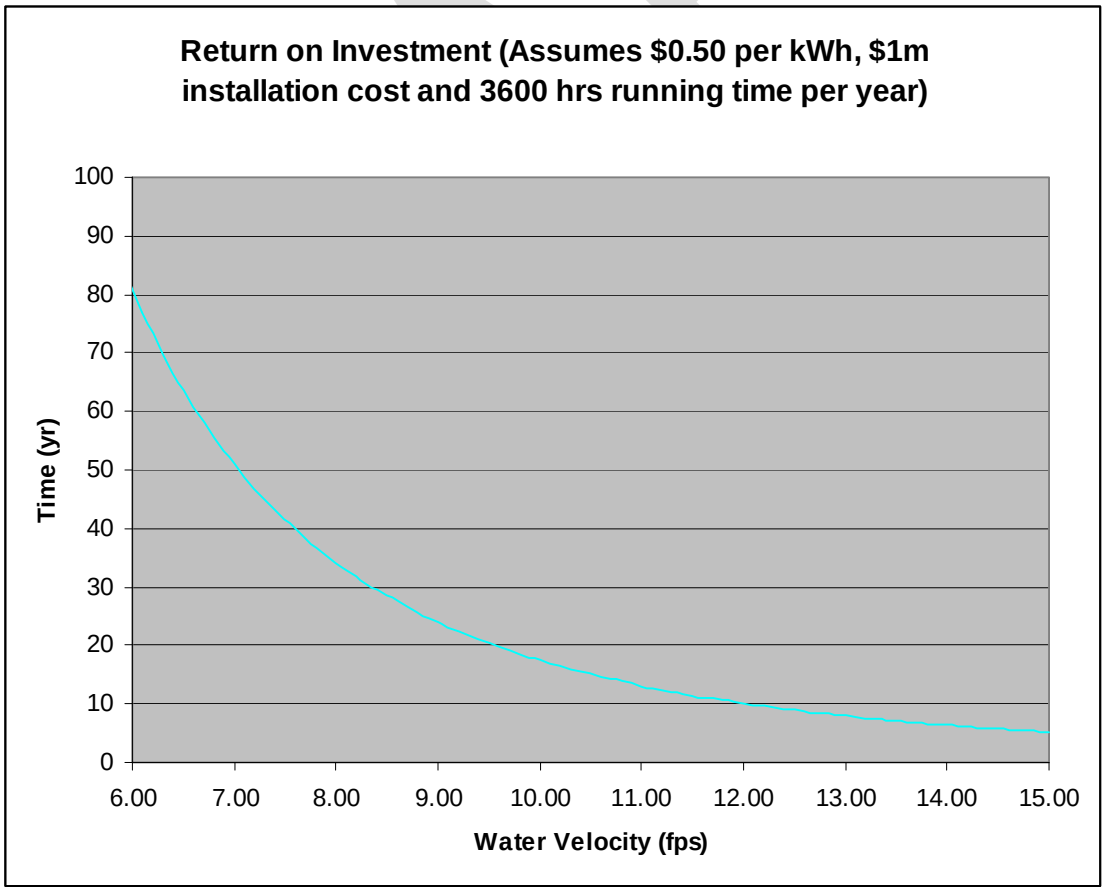

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PROJECT OPERATION AND MAINTENANCE

The Whitestone Poncelet RISEC Project will operate using the natural river currents of the Tanana River. The WPC design captures energy efficiently from the flow of the current using an undershot wheel arranged according to the Poncelet method. The blade construction is from high density polyethylene (HDPE). This gives the system excellent resistance to both corrosion and the destruction from repeated impingement by trees and other debris which is so prevalent in Alaskan rivers.

The electronic control system chosen for this design will control all aspects of power generation including disconnecting the generator from the grid in the event of blackout and dissipating the power produced by the wheel until the grid can be reconnected. Additionally, these controls will bring the system back online when the grid is stabilized or after a repair. The controls will also act to optimize the speed of the wheel relative to the water.

The blades and wheel are designed to withstand the impact of a 1,500 lb tree without sustaining any damage or interrupting operations. The debris diversion cable which runs at an acute angle to the flow of the river is designed to deflect any debris with a large profile. In the event that a large log or tree is ingested by the turbine and damage is caused or power is interrupted, the controls system will alert technicians of the issue via an alarm system which operates via ethernet connection. This will alert the team to the need for repair or clearing of debris from the system. Technicians will be in place to deal with these issues although WPC is confident that the debris management systems formulated in this design will be effective.

Data acquisition will be controlled from the shore where the health and power variables of the unit can be read, interpreted and stored. A combination of these techniques will provide advance warning of failure and timely response should a failure occur. Night time inspections will also be necessary periodically in the spring and fall to insure that the marker lights and beacons are all operational. For a majority of the time during which the unit will operate, there will be 24 hour daylight. It is expected that the turbine will operate 24 hours per day while it is deployed with less than one day per month down time. Much of the necessary maintenance such as greasing of the axle and checking integrity of the unit can be performed during operation. Because the unit will be removed from the water each winter, any extensive repairs can be completed during the winter months.

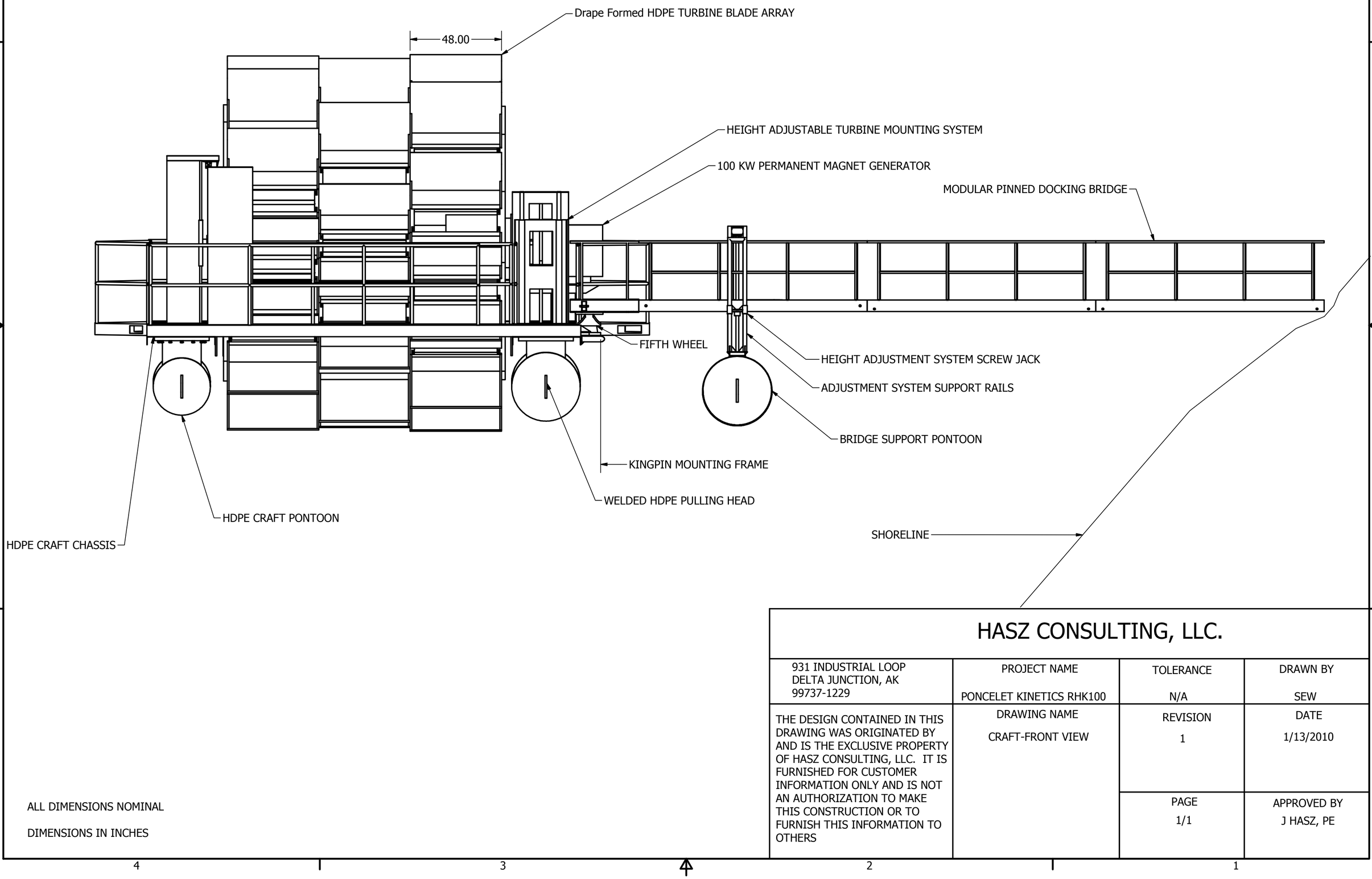
Remote monitoring software allows the generator to controlled and connected and disconnected from the grid manually in the case of a failure of the automatic controls. However, the system is designed to operate unattended the majority of the time. It is not expected that the system will have to be monitored more often than a weekly inspection.

Maintenance should be minimal. The float will need to be visually checked for debris caught on it. In addition, it will need periodic inspections to verify that it has not been compromised

in any way. However, all this should be possible from the shore. The health of the system should be readily observable both by sight and by inspection of the on-shore gauges monitoring power output. Should any of the blades be destroyed or should any part of the transmission or wheel be compromised, the power output signal will signal this to the monitor equipment and alert the operator. The oil level in the transmission will need to be checked every 1,000 hours along with the tightness of the belts. Other than this, the system should require very little maintenance.

Although the specific design considerations are not articulated here, the float will be demarcated in such a way that it will be clearly visible at night and complies with all USCG regulations. It is recommended that high efficiency LED strobes be used for this purpose. They could easily be powered by batteries and last for several weeks or even months at a time. This will not necessitate more maintenance but is a vital safety consideration.

The deck on the front of the float as well as the railing should be sufficient to prevent any boat, however small, from floating into the wheel while it is in operation in case of an emergency. Should an emergency arise, medical and rescue personnel and equipment will be available from the nearby community of Whitestone to respond.

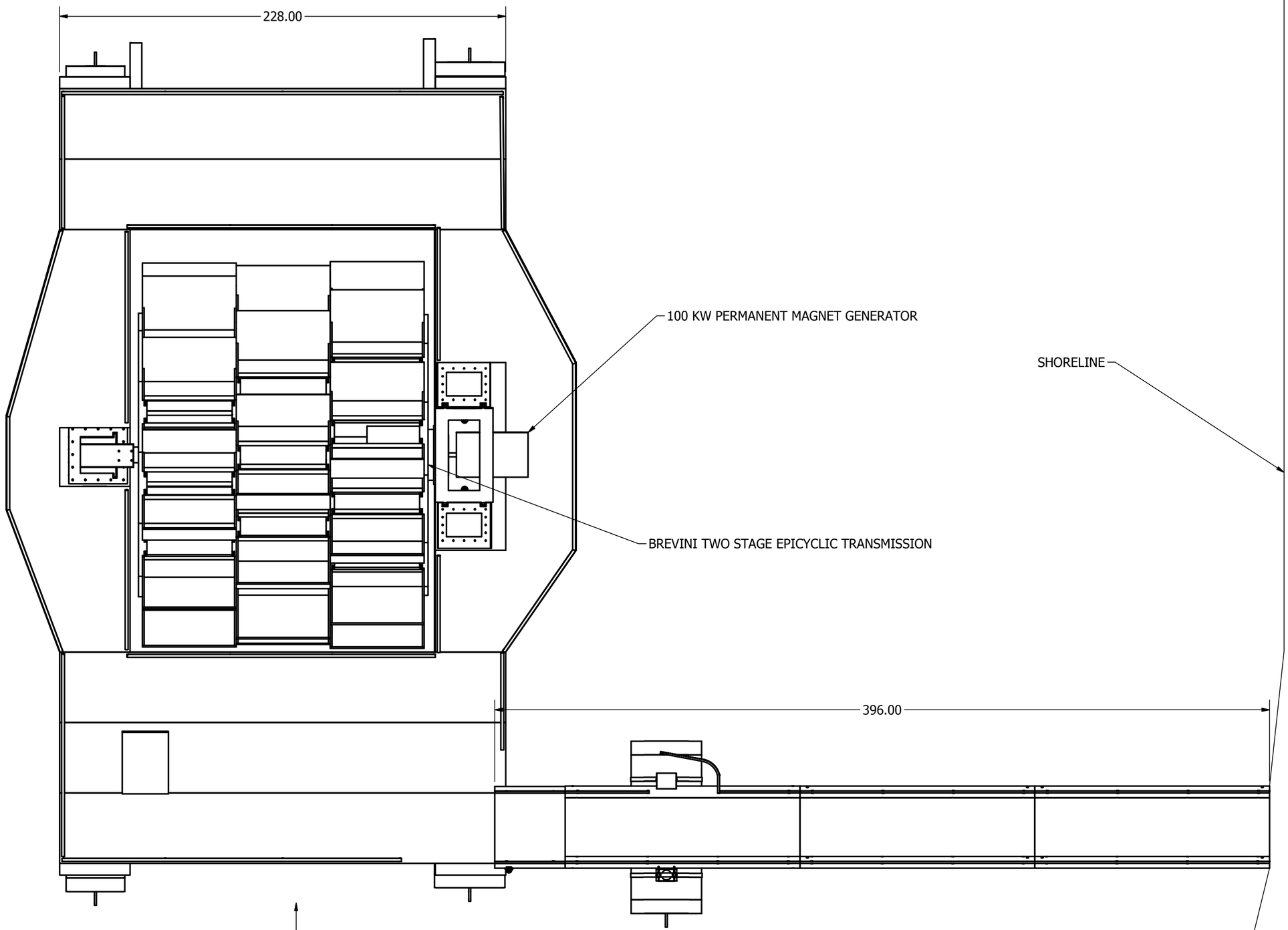


ALL DIMENSIONS NOMINAL

DIMENSIONS IN INCHES

HASZ CONSULTING, LLC.

931 INDUSTRIAL LOOP DELTA JUNCTION, AK 99737-1229	PROJECT NAME PONCELET KINETICS RHK100	TOLERANCE N/A	DRAWN BY SEW
THE DESIGN CONTAINED IN THIS DRAWING WAS ORIGINATED BY AND IS THE EXCLUSIVE PROPERTY OF HASZ CONSULTING, LLC. IT IS FURNISHED FOR CUSTOMER INFORMATION ONLY AND IS NOT AN AUTHORIZATION TO MAKE THIS CONSTRUCTION OR TO FURNISH THIS INFORMATION TO OTHERS	DRAWING NAME CRAFT-FRONT VIEW	REVISION 1	DATE 1/13/2010
		PAGE 1/1	APPROVED BY J HASZ, PE



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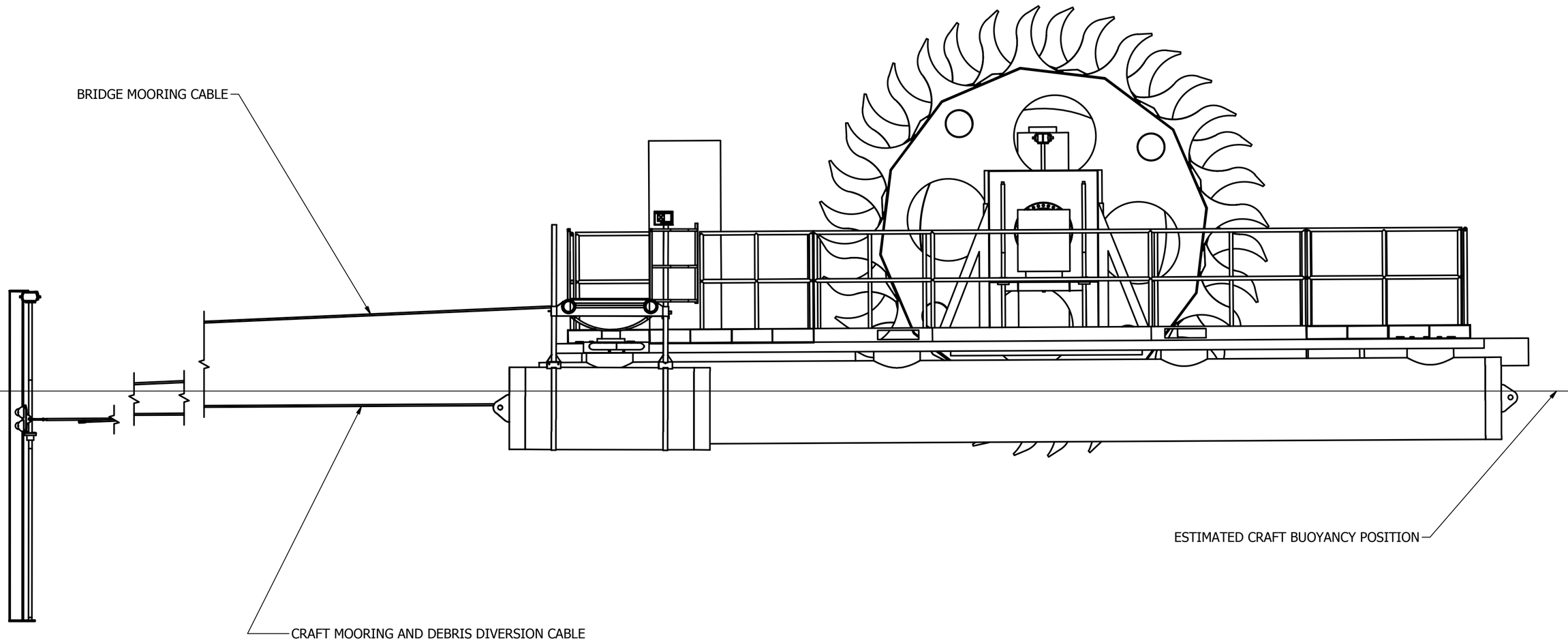
		PAGE 1/1	APPROVED BY J HASZ, PE



HASZ CONSULTING, LLC.

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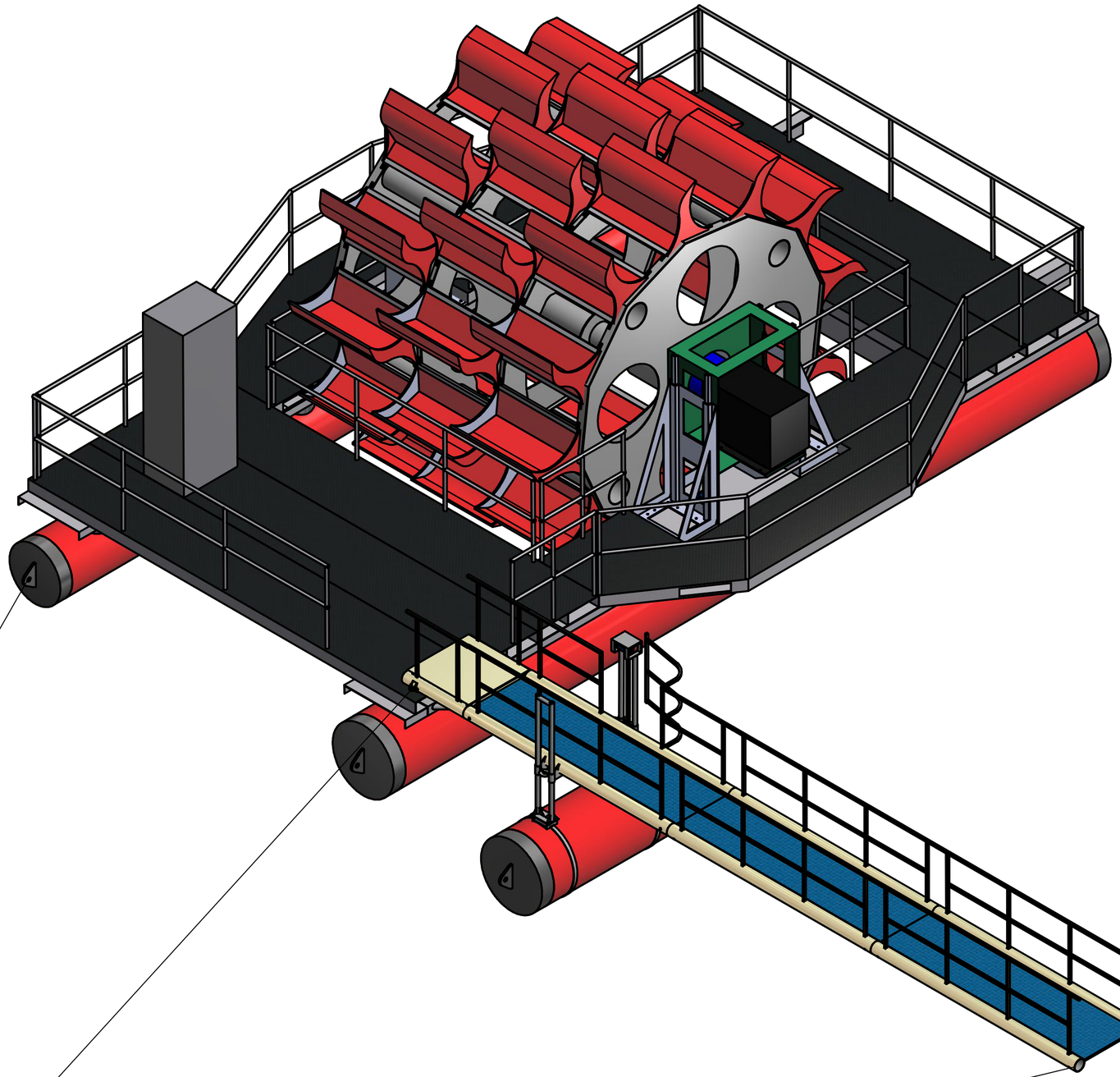

SHORELINE

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ANNUAL ENERGY PRODUCTION

In order to develop an estimate of the dependable capacity and average annual energy production in kilowatt-hours for a hydrokinetic facility using river current, a slightly different approach to hydrologic analysis must be outlined compared to the conventional hydroelectric requirements under the license application regulations.

- The minimum, mean and maximum flow (in cfs) is not applicable. Instead a velocity versus time profile must be developed which shows the variation of the river current during the spring, summer and fall. Because the river in question is glacially fed, there is a large amount of variability in its level and current velocity.
- Since there is no impoundment, area-capacity curves are not applicable.
- The estimated minimum and maximum hydraulic capacity (typically flow Q on the y-axis and efficiency on the x-axis) is redefined for a hydrokinetic RISEC device as velocity on the y-axis and efficiency on the x-axis. Therefore rather than a flow duration curve, a river current exceedance curve is generated. As there are no control wicket gates, efficiency is further defined as cut-in speed and best efficiency of the unit. Generator output under these conditions is easily defined.
- Tail-water rating curves are not applicable since this is an open-channel device.
- Power plant capability versus head and maximum, normal and minimum heads are also not applicable since the river current velocity determines the output of the generator.

During the summer of 2010, the University of Alaska, Anchorage (UAA) sent a surveying team to the project location to determine the velocity distribution of the river at that point and to ascertain whether suitable velocities were available for power production. They conducted velocity measurements at 10 different transects of the river over a total distance of approximately 3,500 feet along the path of the Tanana River. The survey was conducted using an Acoustic Doppler Current Profiler (ADCP) which gives velocity as a function of depth and horizontal distance from a set point on the bank of the river. The results of this study have led to the conclusion that this is a favorable site for power production with velocities as high as 14 fps measured relatively near the shore. WPC believes that, given the time frame of the study (June 11-12) and the known river behavior, it is likely that high velocities will be available for at least 5 months of each year with the possibility of 6-7 months of operation depending on temperatures and river conditions.

Because the Tanana River is glacially fed, the level and velocity of the river is highly variable within each season. This variation follows a fairly reliable trajectory within each season that varies little from year to year based upon USGS discharge charts dating back to the early 1970s as shown below. Losses due to the effects of an array do not apply to this project since it is a single unit application.

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WATER-TO-WIRE EFFICIENCY

A key metric for all developers of kinetic hydropower is the water-to-wire efficiency which is the ultimate efficiency of the entire system from the power in the flowing water to the electrical power inserted into the grid or other end-use. This includes the cascaded efficiencies of the rotor, load-matching, drive train, seals, bearings, gearing, generator, cabling and power conditioning. The overall efficiency of the Poncelet Kinetics RHK100 is projected between 25% and 35%.

WPC has determined that the following requested information in Exhibit A is not applicable, based on kinetic hydropower technology and projects:

1. The estimated average head on the plant
2. The reservoir surface area in acres and, if known, the net and gross storage capacity
3. The estimated minimum and maximum hydraulic capacity of the plant (flow through the plant) in cubic feet per second and estimated average flow of the stream or water body at the plant or point of diversion; for projects with installed capacity of more than 1.5 megawatts, monthly flow duration curves and a description of the drainage area for the project site must be provided
4. Sizes, capacities, and construction materials, as appropriate, of pipelines, ditches, flumes, canals, intake facilities, powerhouses, dams, transmission lines and other appurtenances

PURPOSES OF PROJECT

The Whitestone Poncelet Kinetics RHK100 would be interconnected to the Golden Valley Electric Association (GVEA) grid system which supplies power to interior Alaska. WPC has investigated two different options for this intertie.

- Direct connection to the grid through the GVEA SNAP program which pays a higher rate for energy produced through renewable means but is limited to a max capacity of 25 kW.
- Direct connection to the grid as a small power producer under the GVEA QF-1 tariff if the project can produce substantially more than 25 kW.

ESTIMATE THE COST TO DEVELOP THE LICENSE APPLICATION

Whitestone Power and Communications estimates the cost of developing this application to be in excess of $200,000. Due to the fact that this project is still in its infancy, much of the costs of this application have been spent in developing the design and researching and preparing the various permits and licenses necessary to install the device.

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The on-peak and off-peak values of project power, and the basis for estimating the values, for projects which are proposed to operate in a mode other than run-of-river.

This project operates in run-of-river mode.

The estimated average annual increase or decrease in project generation, and the estimated average annual increase or decrease of the value of project power due to a change in project operations (i.e., minimum bypass flows, limiting reservoir fluctuations) for an application for a new license.

Not applicable: WPC is applying for an original license.

The remaining undepreciated net investment or book value of the project.

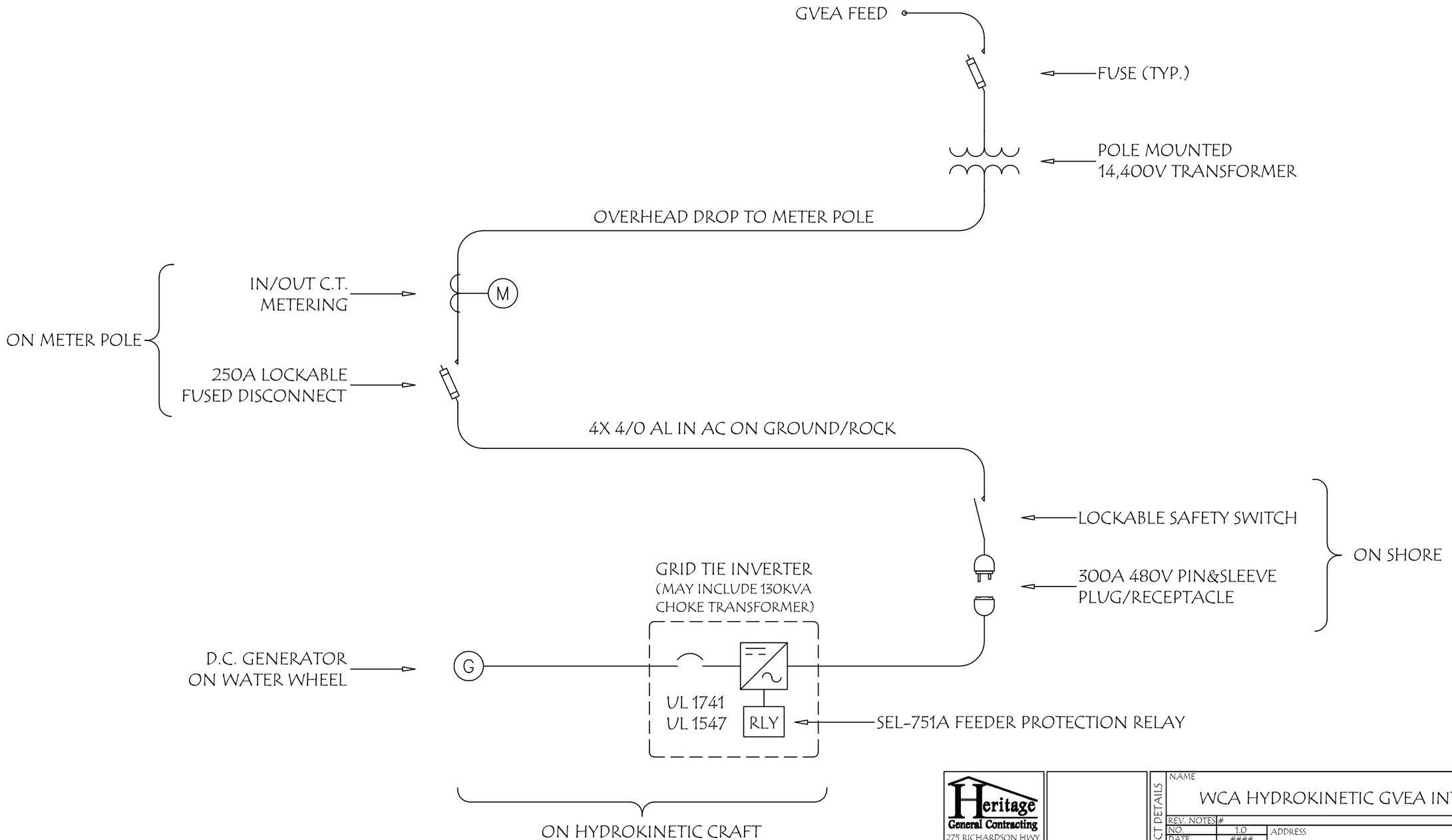
This item is not applicable since this is a new project development.

The annual operation and maintenance expenses, including insurance, and administrative and general costs.

The purpose of the project as proposed is to determine the maintenance and operations costs and compare them with construction costs and the energy produced in order to confirm that the design is feasible for energy production in remote locations. All systems and operations will be insured by the Whitestone Community Association's general liability insurance policy which offers coverage up to $1,000,000.00. All necessary administrative staff, equipment and supplies are already maintained by WPC at its own costs and will not be charged to the project.

WPC will seek to obtain a funding agreement with a third party which will provide funding not only for manufacturing and construction of the device but also for monitoring, testing, maintenance and operation on a time and materials basis. WPC plans to purchase enough extra parts from the manufacturers as part of the purchase price to facilitate three years of testing. In addition to this, WPC will seek funding for an engineer and a technician to test the various segments of the design in order to recommend and implement any necessary changes and upgrades to the design during the test period. WPC expects these costs to be less than $200,000.00 and will seek funding for them as part of funding for construction. Deployment and recovery costs will be part of the construction cost. In the event of an emergency or required shut down or end of license recovery, WPC will assume all costs for removal of the turbine and appurtenant systems using labor and infrastructure it maintains at its own expense on a perpetual basis.

A detailed single-line electrical diagram.



Heritage General Contracting
275 RICHARDSON HWY
DELTA JCT, AK 99737
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FOR
WCA

PROJECT DETAILS

NAME
WCA HYDROKINETIC GVEA INTERTIE

NO. ##

REV. NOTES	#
NO.	1.0
DATE	####
CURRENT	14.01.2011
DRAWN	JMB
CHECKED	JBM

ADDRESS
P.O. BOX 1229
DELTA JUNCTION

SHEET TITLE
LINE DIAGRAM

SHEET NO
1.0