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Submitted On: 11/25/2015

Docket Number: 15-MISC-05

**Bulk Storage Follow Up - Columbia Gorge Renewable Energy Balancing Project,
FERC No. P-14729**

Additional submitted attachment is included below.

**Clean Power Development, LLC
PO Box 5734
Portland, OR 97228**

Electronic Filing

November 2, 2015

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

**RE: Clean Power Development, LLC's Application for Preliminary Permit for
the proposed Columbia Gorge Renewable Energy Balancing Project**

Dear Secretary Bose:

Pursuant to 18 CFR §§ 4.32 and 4.81 of the Federal Energy Regulatory Commission's ("FERC" or "Commission") regulations, enclosed for filing is the Application for Preliminary Permit for the proposed Columbia Gorge Renewable Energy Balancing Project ("Project") from Clean Power Development, LLC, an Oregon limited liability company ("Applicant").

As explained in this Application, Applicant proposes to develop a "closed-loop" pumped storage hydroelectric generating facility located primarily on private and a small portion of federal land in Klickitat County, Washington. Applicant is dedicated to the need for reliability of an affordable clean power supply in decarbonizing the power system, and Applicant is submitting this Application for Preliminary Permit in order to secure and maintain priority in the FERC licensing process, while undertaking activities and working with key stakeholders to determine the economic viability and feasibility of the proposed energy storage project to support an application for a license.

Applicant looks forward to working with the Commission in developing this critical new source of proven, clean energy storage to balancing existing and future intermittent renewable energy cost-effectively. If you have any questions regarding this submittal, please contact Nathan Sandvig at (971) 229-1949 or cleanpowerdevelopmentllc@gmail.com.

Sincerely,



Nathan Sandvig
President
Clean Power Development, LLC

Cc: NSC Smelter, LLC
Portland District, U.S. Army Corps of Engineers

**BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION
APPLICATION FOR PRELIMINARY PERMIT**

Columbia Gorge Renewable Energy Balancing Project



Clean Power Development, LLC

PO Box 5734

Portland, OR 97228

November 2, 2015

Application for Preliminary Permit
Columbia Gorge Renewable Energy Balancing Project

VERIFICATION STATEMENT

This Application for Preliminary Permit for the Columbia Gorge Renewable Energy Balancing Project is executed in the:

STATE OF OREGON)
)ss.
COUNTY OF MULTNOMAH)

By: Nathan Sandvig
 President
 Clean Power Development, LLC
 PO Box 5734
 Portland, OR 97228
 Telephone: (971) 229-1949

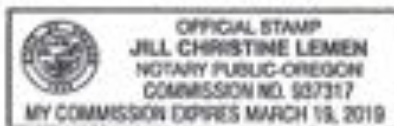
Nathan Sandvig, being duly sworn, deposes and says that the contents of this Application for Preliminary Permit are true to the best of his knowledge or belief. The undersigned Applicant has signed the Application on this twenty-fourth day of October, 2015.

Clean Power Development, LLC

By: Nathan Sandvig
 Nathan Sandvig
 President

STATE OF OREGON)
)ss.
COUNTY OF MULTNOMAH)

Sworn to and subscribed before me by NATHAN SANDVIG, on this twenty-fourth day of October, 2015.



Jill Lemen
Notary Public for Oregon

Printed Name: Jill Lemen

My commission expires: March 19, 2019

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Initial Statement, Section 4.81(a)

1. Clean Power Development, LLC, an Oregon limited liability company applies to the Federal Energy Regulatory Commission ("FERC" or "the Commission") for a Preliminary Permit for the proposed Columbia Gorge Renewable Energy Balancing Project ("Project"), an energy storage and waterpower project, as described in the attached exhibits. This Application is made in order that the Applicant may secure and maintain priority of application for a license for the Project under Part I of the Federal Power Act while obtaining the data and performing the acts required to determine the economic viability, feasibility of the Project and to support an application for a license. The Applicant is in good standing with the State of Oregon (see Exhibit 5).

2. The location of the proposed Project is:

State or territory: Washington
County: Klickitat County
County Seat: City of Goldendale
Renea Cambell, County Clerk
205 S. Columbus Avenue
Goldendale, WA 98620
Telephone: (509) 773-5744

Body of Water: Not applicable – off-system/“closed-loop” other than initial fill and a small amount of make-up water from Columbia River (i.e. Lake Umatilla). Water intake uses existing pumping infrastructure from the former Columbia Gorge Aluminum smelter.

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

Clean Power Development, LLC
PO Box 5734
Portland, OR 97228
Telephone: (971) 229-1949

The exact name and business address of authorized agent to act for the Applicant in this application is:

Nate Sandvig
President
Clean Power Development, LLC
PO Box 5734
Portland, OR 97228
Telephone: (971) 229-1949
Email: cleanpowerdevelopmentllc@gmail.com

4. Clean Power Development, LLC is an Oregon limited liability company and is not claiming municipal preference under Section 7(a) of the Federal Power Act. Given this

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Columbia Gorge Renewable Energy Balancing Project

early stage development, municipal preference increases complexity and can be a detriment to the Project moving forward, limiting a broader array of both foreign and/or domestic private capital and equity that typically requires some level of project ownership, controlling and management interest that can be structurally challenging from a business standpoint with the involvement of a public entity. This fact is self-evident weighing the current status of the proposed JD Pool Pumped Storage Hydroelectric Project (FERC Project No. P-13333) and limited progress albeit well-intentioned, meaningful efforts tenaciously championed by Public Utility District No. 1 of Klickitat County. However, an eventual public-private partnership with a public utility district or public entity and access to tax-free municipal revenue bonds can be advantageous in attracting large financial institutions and capital at a later stage for a detailed design engineering and construction consortium to realize this long lead time, upfront capital-intensive project.

5. The proposed term of the requested permit is 36 months.
6. The Columbia Gorge Renewable Energy Balancing Project is a new development and would not be using an existing dam or other project facility.

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Additional Contact Information, Section 4.32(a)

1. Every person, citizen, association of citizens, domestic corporation, municipality, or state that has or intends to obtain and will maintain any proprietary right necessary to construct, operate, or maintain the project:

Clean Power Development, LLC
PO Box 5734
Portland, OR 97228
Telephone: (971) 229-1949

2. Identification:

- (i) Every county in which any part of the project, and any federal facilities that would be used by the project, would be located:

County: Klickitat County
Renea Cambell, County Clerk
205 S. Columbus Avenue
Goldendate, WA 98620
Telephone: (509) 773-5744

- (ii) Every city, town or similar local political subdivision:

- A. In which any part of the project, and any federal facilities that would be used by the project, would be located.

None. The Columbia Gorge Renewable Energy Balancing Project is not proposed to be located within the limits of any city, town, or similar political subdivision.

- B. That has a population of 5,000 or more people and is located within 15 miles of the project dam:

None. The Columbia Gorge Renewable Energy Balancing Project is not proposed to be within 15 miles of any population of 5,000 or more people. The nearest town with a population over 5,000 is The City of The Dalles, Oregon, over 15 miles to the southwest.

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

- A. In which any part of the project, and any federal facilities that would be used by the project, would be located.

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Public Utility District No. 1 of Klickitat County
Jim Smith, General Manager
1313 S. Columbus Ave.
Goldendale, WA 98620
Telephone: (509) 773-5891

- B. That owns, operates, maintains, or uses any project facilities or any federal facilities that would be used by the project:

Klickitat County
205 S. Columbus Avenue
Goldendale, WA 98620

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

City of Goldendale
Connie Byers, Clerk
1103 S. Columbus
Goldendale, WA 98620
Telephone: (509) 773-3771

City of Rufus
304 W. Street, Suite 100
Rufus, OR 97050
Telephone: (541) 739-2321

- (v) All Indian tribes that may be affected by the project:

Confederated Tribes and Bands of the Yakima Nation
401 Fort Road
PO Box 151
Toppenish, WA 98949
Telephone: (509) 865-5121

Confederated Tribes of the Umatilla Indian Reservation
46411 Ti'mine Way
Pendleton, OR 97801
Telephone: (541) 276-3165

Confederated Tribes of Warm Springs
1233 Veterans Street
Warm Springs, OR 97761
Telephone: (541) 553-1161

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- (vi) State and Federal Agencies that may be interested in, or affected by, the application are:

Environmental Protection Agency (EPA)
Region 10
1200 6th Ave, Suite 900
Seattle, WA 98101

National Oceanic and Atmospheric Administration (NOAA)
West Coast Region
1201 NE Lloyd Blvd, Ste 1100
Portland, OR 97232

State of Washington Department of Ecology
300 Desmond Drive SE
Lacey, WA 98503

Washington State Office of Archeology & Historic Preservation
P.O. Box 48343
Olympia, WA 98504

Washington Department of Fish & Wildlife
600 Capitol Way N.
Olympia, WA 98501

Washington Department of Natural Resources
MS 47000
Olympia, WA 98504

U.S. Fish and Wildlife Service
Pacific Region
911 NE 11th Ave.
Portland, Oregon 97232

U.S. Army Corps of Engineers
Portland District
P.O. Box 2946
Portland, OR 97208

U.S. Army Corps of Engineers
Northwest Division
P.O. Box 2870
Portland, OR 97208

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Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208

Bureau of Land Management
1220 S.W. 3rd Avenue
Portland, OR 97204

I, Nathan Sandvig, subscribe and verify under oath that the information in this original Application for Preliminary Permit is truthful.



Nathan Sandvig
President
Clean Power Development, LLC

Application for Preliminary Permit
Columbia Gorge Renewable Energy Balancing Project

Exhibit 1 – Description of the Proposed Project

Exhibit 1 must contain a description of the proposed project, specifying and including, *to the extent possible*, the information identified in the following 6 numbered sections.

1. *The number, physical composition, dimensions, general configuration, and, where applicable, age and condition, of any dams, spillways, penstocks, powerhouses, tailraces, or other structures, whether existing or proposed, that would be part of the project.*

The proposed Columbia Gorge Renewable Energy Balancing Project is located approximately 8 miles southeast of the City of Goldendale in Klickitat County, Washington (see Exhibit 3).

The proposed Project is a sustainable brownfield redevelopment of the former Columbia Gorge Aluminum smelter that closed in 2003. The reuse of this site and the associated water right would provide staggering local and regional economic development. All structures on the site have been demolished with the exception of one building and a small active wastewater treatment plant. Currently, the process is ongoing for site-wide cleanup by NSC Smelter, LLC and Lockheed Martin Corporation with a finalized Washington State Department of Ecology Agreed Order No. 10483 in the matter of remedial action pursuant to the Model Toxics Control Act and the requirements of Washington Administrative Code Dangerous Waste Regulations 173-303-646-64630. The Applicant will consult closely with these Potentially Liable Persons and Washington State Department of Ecology to best understand, align and prioritize efforts for optimal compatibility and mutual benefit of all parties with the Project and the cleanup action plan.

The Project would utilize variable-speed pump-turbine generator units and provide critical balancing services and renewable energy flexible capacity to utilities in the Pacific Northwest and potentially California to decarbonize the electric power system cost-effectively.

The Project is strategically located at the northern terminus of the AC-DC Interties operated by Bonneville Power Administration (BPA), Los Angeles Department of Water & Power and the California Independent System Operator (CA-ISO). The AC-DC Interties allow for the bulk seasonal exchanges of power between British Columbia, Canada, the Northwest and California. In addition to BPA's secondary hydropower sold to California, this high-voltage transmission infrastructure facilitates the export of over 36% or 3,150 megawatts (MW) of Northwest wind capacity presently contracted to utilities outside the region.

In addition to access of these regional electricity transmission and energy markets in the western states, the Project is located in close proximity to substantial existing and abundant, high-quality and untapped wind power generation that can be developed with relatively low environmental conflict and cost. The Project's location can also support

Application for Preliminary Permit
Columbia Gorge Renewable Energy Balancing Project

the daily inter-regional exchanges of California massive mid-day solar oversupply and the significant power generation ramping needed by CA-ISO. This gigantic solar oversupply and ramping need problem is further exacerbated by California's 50% Renewable Portfolio Standard signed into law (i.e. AB350) on October 7, 2015, by Governor Jerry Brown.

The proposed Project's potential contributions to a reliable, clean, least-cost and risk power system are: frequency regulation, regulation reserve, resource adequacy, contingency spinning reserve, non-spinning reserve, replacement/supplemental reserve, load following, load leveling, peak demand management, energy shifting, carbon-free firming of variable energy resources, generating capacity, quick-start with high reliability and flexibility, blackstart capability, oversupply absorption, regional power generation portfolio optimization, spill mitigation, reduced cycling of thermal and hydro units, increased ecosystem function of Federal Columbia River Power System operability in the context of the Columbia River Treaty, reduced transmission congestion, reduced environmental emissions and high-voltage transmission deferral. Many, if not all, of these myriad applications can be bundled into a single, least-cost, low-risk energy storage project such as the proposed Columbia Gorge Renewable Energy Balancing Project to serve the Northwest and the Western Electricity Coordinating Council.

A new lower and upper reservoir, underground water conveyance tunnel, underground powerhouse, 230-kV transmission line(s), and other appurtenant facilities will be constructed as part of the proposed Project.

The attractive topography of the Columbia Gorge in the vicinity allows for a gross head of more than 2,000 feet to be utilized by the Project. With this head, more energy can be stored using smaller reservoirs, smaller water conveyances, and smaller physical equipment sizes, usually resulting in lower investment costs and minimal potential environmental impact.

The Project would be a "closed-loop" system and would use the Columbia River for initial fill and periodic make-up water. A dedicated off-river pumped storage project does not have the operational restrictions imposed such as those dams that occur on the Columbia River, and hence, can freely start, stop, reverse, and fluctuate as needed by the power system without negatively impacting aquatic species, or adversely impacting other demands such as flood control, fish passage, navigation, irrigation and recreation.

Underground Powerhouse:

| | |
|------------------------------|------------------|
| Rated Head (Gross) | 2,000 feet |
| Hydraulic Discharge Capacity | 7,000 cfs |
| Generating Capacity | Up to 1200 MW |
| Number of Units | Up to 4 × 300 MW |

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Underground Water Conductors/Penstock:

| | |
|-----------------------|-----------------|
| Total Length | 7000 feet |
| Composition | Shotcrete/steel |
| Tunnel/Shaft Diameter | 24 feet |
| Length/Head Ratio | 3.5 |

Lower Reservoir Dam

| | |
|--------|-------------------------------|
| Type: | Rockfill embankment ring dike |
| Height | 295 feet |
| Length | 5,870 feet |

Upper Reservoir Dam

| | |
|--------|-------------------------------|
| Type: | Rockfill embankment ring dike |
| Height | 270 feet |
| Length | 8,610 feet |

2. *The estimated number, surface area, storage capacity, and normal maximum surface elevation (mean sea level) of any reservoirs, whether existing or proposed, that would be part of the project.*

Lower Reservoir:

| | |
|------------------------------|------------------|
| Surface Area at Maximum Pool | 100 acres |
| Active Storage Capacity | 11,000 acre-feet |
| Maximum Surface Elevation | 570 feet MSL |

Upper Reservoir:

| | |
|------------------------------|------------------|
| Surface Area at Maximum Pool | 100 acres |
| Active Storage Capacity | 11,000 acre-feet |
| Maximum Surface Elevation | 2,750 feet MSL |

The preferable reservoir configuration and location will be determined by the Applicant during the preliminary permit term in order to maximize available head and minimize tunnel length within the terrain, geologic, power system need and environmental constraints of the project study area. The reservoir sites identified in this Application (Exhibit 3) are conceptual by the Applicant. During the term of the Preliminary Permit, Applicant will investigate these configurations (and possibly other alternatives) with hydropower design engineers further in order to inform the optimal configuration based on landowner and wind farm owner input, offtaker discussions, economic and financial modeling, cost/benefit analysis, geologic and environmental considerations.

The proposed Project will use water from Columbia River for the initial filling of the lower reservoir and a small amount of makeup water as needed using an existing pumping station largely in a “closed-loop” system. The line shaft turbine pumps are 600 horsepower, 3,500 gpm with a total capacity of approximately 35.3 cfs. The existing pumps are submersed in a lagoon separated from the Columbia River by a BSNF Railway railroad embankment and right-of-way. The lagoon is connected to the river by a culvert

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and is upstream from the U.S. Army Corps of Engineers John Day Lock and Dam in Lake Umatilla.

Public Utility District No. 1 of Klickitat County owns a 15,591 ac-ft/year water right from the former aluminium smelter (No. S3-00845C, No. G4-01130C). This water right was gifted to the public utility district by a quickclaim deed executed on December 22, 2005. After legal transfer of ownership, this water right was amended for municipal purposes. As mandated by State of Washington Department of Ecology, the water right must be put to beneficial use by 2028. Subsequently, by Washington State law passed unanimously and signed by Governor Christine Gregoire on March 30, 2012, SB 6044 expressly authorizes Public Utility District No. 1 of Klickitat County to use this water right for a pumped storage generating facility and authorizes them to sell water for pumped storage projects. Applicant anticipates negotiating with Public Utility District No. 1 of Klickitat County for use and appropriate fair-market compensation of this water right if the proposed Project is determined economically viable.

3. *The estimated number, length, voltage, interconnections, and, where applicable, age and condition of any primary transmission lines whether existing or proposed, that would be part of the project (in accordance with 16 U.S.C. 796(1)).*

The location, number of circuits, voltage, and configuration of the proposed Project's interconnection into the regional electric utility network will be established by studies initiated during the term of this Preliminary Permit. At the time of application submittal, the Project's proposed transmission interconnection is the existing BPA's Harvalum Substation located within the study area project boundary. The length of the 230-kV transmission line from the proposed powerhouse step-up transformers to the Harvalum Substation is approximately 3000 ft. Utilizing BPA's Large Generator Interconnection Process, the Applicant will perform the required transmission interconnection studies to understand the feasibility, system impact and cost of interconnecting the Project into the transmission system.

4. *The total estimated average annual energy production and installed capacity (provide only one energy and capacity value), the hydraulic head for estimating capacity and energy output, and the estimated number, rated capacity, and where applicable, the age and condition, of any turbines and generators, whether existing or proposed, that would be part of the project works.*

The rated maximum gross head of the Project is 2,000 feet and the estimated maximum discharge is 7,000 cfs. The maximum potential total installed capacity is up to 1,200 MW (4×300 MW). However, economic modeling, cost-benefit analysis, system need and market will determine the optimal size and configuration that could be as small as 300MW and on par with a typical carbon-emitting natural gas-fired power project. The Project will utilize Francis type variable-speed, pump-turbines units with an overall cycle efficiency for pumping and generating of approximately 80% and a power factor of 0.9.

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The estimated annual energy production generating 8 to 10 hours a day, 7 days a week is 2,558 GWh.

5. *All lands of the United States that are enclosed within the proposed project boundary described under paragraph (e)(3) of this section, identified and tabulated on a separate sheet by legal subdivisions of a public land survey of the affected area, if available. If the project boundary includes lands of the United States, such lands must be identified on a completed land description form, provided by the Commission. The project location must identify any federal reservation, federal tracts, and townships of the public land surveys (or official protractations thereof if unsurveyed). A copy of the form must also be sent to the Bureau of Land Management state office where the project is located.*

The study area project boundary includes primarily private lands, with the exception of the existing pumping facilities and a portion of the water conveyances piping and equipment located on U.S. Army Corps of Engineers lands. This land is shown in Exhibit 3 and on FERC Form 587, attached as Exhibit 4. Necessary rights will need to be obtained under a new lease by the Applicant and the U.S. Army Corps of Engineers to use this property for the proposed Project, because the current lease to Columbia Gorge Aluminum Company (Department of Army Lease No. DACW57-1-69-75) conditioned the lease purpose solely for the operation of the former aluminum reduction plant.

6. *Any other information demonstrating in what manner the proposed project would develop, conserve, and utilize in the public interest the water resources of the region.*

As proposed, the Columbia Gorge Renewable Energy Balancing Project will provide a firm source of cost-effective renewable energy, carbon-free peaking capacity and ancillary services while conserving the water resources of the Columbia River. The Project takes advantage of a former industrial development to locate new facilities off-stream to minimize potential environmental impacts. The Applicant intends to work closely with all pertinent agencies and stakeholders to ensure that the operations within the existing Federal Columbia River Power System and the windfarm are in no way negatively impacted, and further, to maximize the multitude of benefits for sustainable use as a regional transmission and generation asset.

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Exhibit 2 – Description of the Proposed Studies

Exhibit 2 is a description of studies conducted or to be conducted with respect to the proposed project, including field studies. Exhibit 2 must include the information identified in the following four numbered sections.

1. *General requirement*

(i) Description of Studies:

Applicant proposes to conduct a detailed study of the technical features of the proposed Project and confirm the Project's economic viability. The feasibility study will be designed to evaluate the proposed Project's location, configuration, and equipment arrangement and to analyze potential changes to the design in order to optimize the Project's ability to develop, conserve, and utilize in the public interest the energy and water resources of the region. The feasibility study is proposed to include:

- Develop model-based studies examining the regional value streams and environmental benefits of the proposed Project on an intra-hour basis
- Engineering studies to optimize the Project's physical configuration and to determine the optimal size and specific type of equipment and improvements required, including the asynchronous pump-turbine generator units, powerhouse, conveyance, tailrace and reservoirs
- Confirmation of proposed Project water rights, supply plan, commercial discussions and negotiations with Public Utility District No. 1 of Klickitat County for use of their water right
- Land ownership confirmation, commercial discussions and negotiations with NSC Smelter, LLC and U.S. Army Corps of Engineers for site control
- Discussions and agreements with Potential Liable Persons and Washington State Department of Ecology to align and prioritize efforts with cleanup action plan and the construction plan for the proposed Project.
- Cost estimating and financial modeling and valuation studies to determine economic viability and power marketing structuring with utilities, balancing authorities and potential offtakers
- Stakeholder engagement, environmental, social, and cultural study scoping and consultation, surveys, impact identification and assessment, and formulation of mitigation measures to micro-site the proposed Project features (i.e. reservoirs, transmission lines, etc.) within known constraints
- Power marketing and establishing preliminary power sales, ancillary services and power supply expectations with utilities and regional balancing authorities

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- BPA's Large Generator Interconnection Request, possibly Transmission Service Request(s) and associated studies
- Topographical surveying and aerial mapping
- Geological investigations

Applicant will develop appropriate studies and may modify the scope of the above-mentioned studies in response to consultation with utilities, resource agencies, Indian tribes and other stakeholders and members of the public, and as it studies the proposed Project in anticipation of filing a Notice of Intent and Pre-Application Document, Draft and Final License Applications.

(ii) Need for New Roads:

There are no access roads anticipated for the studies. All areas within the proposed project boundary are accessible over existing county rights-of-way (i.e. Miller Road), roads and terrain, using off-highway vehicles.

2. *Work Plan and Schedule for New Dam Construction*

(i) Description of field studies:

Field studies will be required for geological investigations, topographic surveying and mapping, environmental and cultural surveys.

Topographic surveying may involve traversing the study project area on foot or in a light vehicle to conduct on-the-ground topographic surveying. This work is not expected to disturb or alter any lands or waters in the project study area.

Environmental and cultural surveys and studies may involve traversing the study project area on foot or in a light vehicle to collect samples, perform inventories, or perform observations necessary to conduct the environmental and cultural analyses and evaluations required for the proposed Project. This work is not expected to disturb or alter any lands or waters in the project study area.

Geological investigations may involve exploratory drill holes, test pits, test trenches, and seismic surveys. Exploratory drill holes would be required in the proposed upper reservoir area, lower reservoir area, powerhouse location, and along the proposed waterway connecting the proposed upper and lower reservoirs. At this time, the total number of holes that Applicant may drill is not known, but a reasonable assumption is five (5) in each of the upper and lower reservoir areas, three (3) at each powerhouse location, and three (3) along each waterway alignment. The exact location of such holes would be selected only after alternatives have been investigated and a preferred Project configuration emerges from the engineering and environmental studies. Best practices will be observed in terms of waste material disposal, generation of noise, noxious fumes and dust, and in completing work and leaving the site. State and local guidelines and

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regulations would apply and would tend to contribute to minimizing any possible harm to the environment.

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(ii) The proposed schedule is as follows:

| Scheduled term | | Work Item |
|-------------------------|-----------------|--|
| From beginning of month | To end of month | |
| 0 | 12 | Discussions about project plans, intent and agreements with private landowners and U.S. Army Corps of Engineers |
| 0 | 12 | Discussions with Public Utility District No. 1 of Klickitat County regarding use and commercial terms for water right and existing available data |
| 0 | 12 | Develop model-based studies examining the value streams and environmental benefits of the proposed Project on an intra-hour basis |
| 0 | 12 | Discussions and agreements with Potential Liable Persons and Washington State Department of Ecology regarding cleanup action and construction plans for the Project. |
| 0 | 12 | Cost estimating, financial modeling and valuation, and cost-benefit analysis to determine economic viability of the proposed Project |
| 0 | 12 | Engineering studies to optimize the proposed Project physical configuration |
| 12 | 24 | Stakeholder consultation to determine public acceptance and support |
| 12 | 24 | Interconnection and possibly Transmission Service Request studies with BPA Transmission |
| 12 | 24 | Power marketing and structuring with utilities and interested parties for preliminary power sales agreements |
| 24 | 36 | FERC licensing pre-filing process |
| 24 | 36 | Environmental, cultural, visual, soil, geotechnical studies |
| 24 | 36 | Preparation, review and filing of the FERC Draft License Application |

The actual work may deviate from this proposed schedule, depending upon circumstances that may develop as the work proceeds.

3. *Waiver*

Preliminary studies will not adversely impact cultural resources, endangered species. Field studies, tests and other activities to be conducted under the Preliminary Permit may

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only cause only minor alterations or disturbances of lands and waters, and that any land altered or disturbed would be adequately restored. Therefore, Applicant requests waiver of the requirements of § 4.81(c)(2) pursuant to § 385.207.

4. *Statement of costs and financing*

(i) *The estimated costs of carrying out or preparing studies, investigations, tests, surveys, maps, plans, or specifications identified in this Exhibit 2:*

\$1,000,000 - \$3,000,000

(ii) *The expected sources and extent of financing available to the applicant:*

The Applicant expects investors and the Applicant will fund costs.

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Exhibit 3 – Map

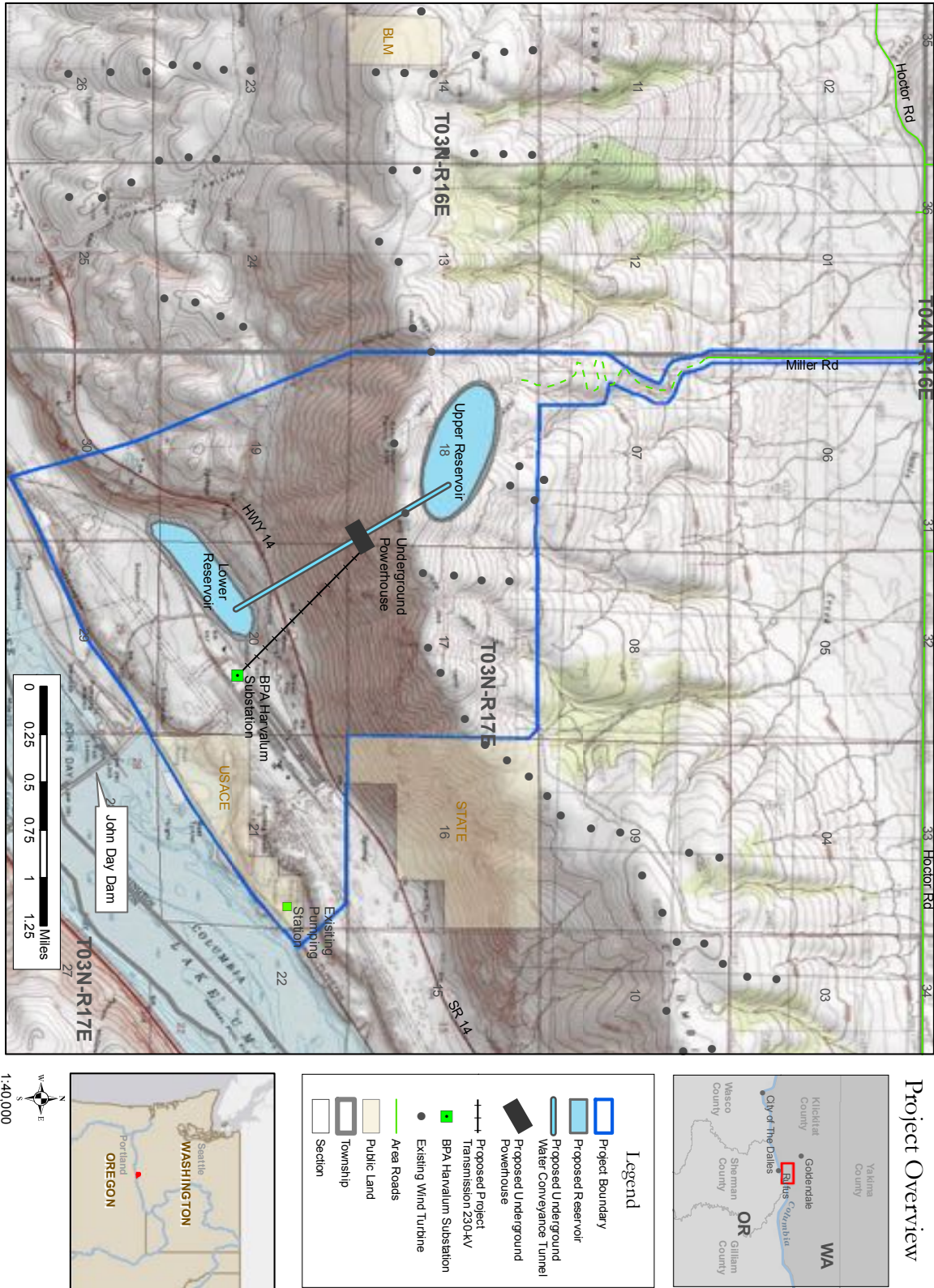
Exhibit 3 must include a map or series of maps, to be prepared on United States Geological Survey topographic quadrangle sheets or similar topographic maps of a State agency, if available. *The maps need not conform to the precise specifications of § 4.39(a) and (b).*

1., 2., and 3. See Exhibit 3 - Columbia Gorge Renewable Energy Balancing Project – Study Area Project Boundary, attached.

4. No areas within or in the vicinity of the Project Boundary labeled on Exhibit 3 are included or have been designated for study for inclusion in the National Wild and Scenic Rivers System.

5. No areas within the study area project boundary, under the provisions of the Wilderness Act, have been: (i) designated as wilderness area; (ii) recommended for designation as wilderness area; or (iii) designated as wilderness study area.

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Project Overview

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Exhibit 4 – Land Description Form (FERC Form 587)

Form FERC-587
OMB No. 1902-0145
(Expires 10/31/2015)

LAND DESCRIPTION

Public Land States (Rectangular Survey System Lands)

1. STATE Washington 2. FERC PROJECT NO. _____
3. TOWNSHIP 03N RANGE 17E MERIDIAN Willamette

4. Check one:

Check one:

 License
 X Preliminary Permit

 Pending
 Issued

If preliminary permit is issued, give expiration date: 36 months from FERC order

5. EXHIBIT SHEET NUMBERS OR LETTERS

| Section 6 | 5 | 4 | 3 | 2 | 1 |
|-----------|----|----|----|----|----|
| X | | | | | |
| 7 | 8 | 9 | 10 | 11 | 12 |
| X | | | | | |
| 18 | 17 | 16 | 15 | 14 | 13 |
| X | X | | | | |
| 19 | 20 | 21 | 22 | 23 | 24 |
| X | X | X | | | |
| 30 | 29 | 28 | 27 | 26 | 25 |
| X | X | | | | |
| 31 | 32 | 33 | 34 | 35 | 36 |
| | | | | | |

6. contact's name Nathan Sandvig

telephone no. (971-229-1949)

Date submitted November 2, 2015 -19

Application for Preliminary Permit
Columbia Gorge Renewable Energy Balancing Project

Exhibit 5 – Certificate of Existence

State of Oregon
OFFICE OF THE SECRETARY OF STATE
Corporation Division

Certificate of Existence 736X129Y2

I, JEANNE P. ATKINS, SECRETARY OF STATE, and Custodian of the Seal of said State, do hereby certify:

CLEAN POWER DEVELOPEMENT LLC

is

Organized

under the laws of The State of Oregon

and is active on the records of the Corporation Division as of the date of this certificate.



In Testimony Whereof, I have hereunto set my hand and affixed hereto the Seal of the State of Oregon.



JEANNE P. ATKINS, SECRETARY OF STATE
9/10/2015

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