GOLDENDALE ENERGY STORAGE HYDROELECTRIC PROJECT

Federal Energy Regulatory Commission Project No. 14861

Klickitat County, Washington

FINAL LICENSE APPLICATION
Appendix F: Correspondence

For:

FFP Project 101, LLC

June 2020

SUMMARY OF AGENCY AND STAKEHOLDER WRITTEN CORRESPONDENCE SENT AND RECEIVED TO DATE FOR FERC P-14861

- October 2017 Preliminary Permit Application (PPA)
- November 2018 Request for Information Letter (RFI)
- January 2019 Pre-Application Document (PAD)
- December 2019 Draft License Application (DLA)

No	Agency	Name	Date Received	Type of Response	Subject
2017-2018					
00	Rye Development	Erik Steimle			PPA Submittal
01	FERC	David Turner	11/02/2017	FERC eLibrary	AIR Request
02	Rye Development	Erik Steimle	12/01/2017	FERC eLibrary	AIR Response
03	FERC	Kim Nguyen	12/15/2017	FERC eLibrary	PPA Acceptance
04	FERC	Nathaniel J. Davis	12/15/2017	FERC Library	PPA Notice
05	WDFW	Robert Ferguson	01/25/2018	FERC eLibrary	MTI
06	Klickitat County	David R. Quesnel	01/29/2018	FERC eLibrary	MTI
07	Confederated Tribes of the Umatilla	Kristen Tiede	01/31/2018	FERC eLibrary	PPA
08	U.S. Department of the Interior	Allison O'Brian	02/05/2018	FERC eLibrary	PPA
09	Columbia Riverkeeper	Simone Anter	02/09/2018	FERC eLibrary	MTI
10	American Rivers, Center for Environmental Lay & Policy, and Friends of the White Salmon River	Wendy McDermott, Trish Rolfe, Patricia Arnold	02/13/2018	FERC eLibrary	MTI
11	Oregon Department Fish & Wildlife	Elizabeth Moats	02/13/2018	FERC eLibrary	MTI
12	Confederated Tribes of the Yakima Indians	Lonnie Selam	02/14/2018	FERC eLibrary	PPA
12	FERC Issuance	David Turner	03/08/2018	FERC eLibrary	Preliminary Permit Grant
14	Rye Development	Erik Steimle	08/16/2018	FERC eLibrary	6 Mo status
15	Sherman County	Jenine McDermid	11/26/2018	Email	RFI
16	Confederated Tribes of the Umatilla	Shawn Steinmetz	11/27/2018	Email	RFI
17	Bureau of Land Management	Lenore Heppler	11/28/2018	Email	RFI
18	Washington Department of Ecology	Garin Schrieve	11/29/2018	Email	RFI
19	National Oceanic and Atmospheric Administration Marine Branch Division	Diane Melancon	11/30/2018	Email	RFI
20	Oregon Department of Justice	Patrick Rowe	11/30/2018	Email	RFI
21	WDFW	Patrick Verhey	12/04/2018	Email	RFI
22	Oregon Public Utility Condition	Diane Davis	12/13/2018	Email	RFI
23	U.S. Hang Gliding & Paragliding	Kelly Kellar	12/19/2018	Email	RFI
24	Oregon State Historic Preservation	Jamie French	12/20/2018	Email	RFI
25	Oregon Department of Fish & Wildlife	Elizabeth AO Moats	12/20/2018	Email	RFI
26	U.S. Geological Survey Washington Water Science Center	Rick Dinicola	12/21/2018	Email	RFI
2019					
27	WDFW	Patrick Verhey	01/14/2019	Email	RFI
28	Rye Development	Erik Steimle	02/04/2019	FERC eLibrary	NOI & PAD Submittal
29	Rye Development	Erik Steimle	02/26/2019	FERC eLibrary	6 Mo Status Report
30	Columbia Riverkeeper	Simone Anter	02/28/2019	FERC eLibrary	TLP Process
31	Confederated Tribes and Bands of the Yakima Nation	JoDe Goudy	02/29/2019	FERC eLibrary	PAD
32	American Rivers, Center for Environmental Lay & Policy, & Friends of the White Salmon River	Wendy D. McDermott, Trish Rolfe, Patricia L. Arnold	03/01/2019	FERC eLibrary	TLP Process
33	FERC	David Turner	03/01/2019	FERC eLibrary	Consultation Request

No	Agency	Name	Date Received	Type of Response	Subject
34	Washington Department Fish & Wildlife	Patrick Verhey	02/28/2019	Email	PAD
35	USDA Forest Service	Lynn Burditt	03/01/2019	FERC eLibrary	TLP Process
36	Goldendale Chamber of Commerce	Dana Peck	03/04/2019	FERC eLibrary	Support for Project
37	Klickitat County Commissioners	Unsigned	03/05/2019	FERC eLibrary	Support for Project
38	U.S. Geological Survey	Jill Rolland	03/08/2019	Email	PAD
39	City of Goldendale	Michael Canon	03/21/2019	FERC eLibrary	Support for Project
40	FERC	Kimberly Bose	03/21/2019	FERC eLibrary	TLP Approval
41	Rye Development	Erik Steimle	03/21/2019	FERC eLibrary	Notice to File License Application
42	Turlock Irrigation District	Kenneth Holmboe	04/08/2019	FERC eLibrary	MTI
43	Rye Development	Erik Steimle	04/11/2019	FERC eLibrary	Notice of Joint Agency Meeting
44	FERC	Kimberly Bose	04/30/2019	FERC eLibrary	Denial of Late MTI
45	USFWS	Brad Thompson	05/2019	FERC eLibrary	PAD
46	Columbia Gorge Audubon Society	David Thies	05/04/2019	FERC eLibrary	PAD
47	WDFW	Patrick Verhey	05/29/2019	FERC eLibrary	PAD
48	FERC	Suzanne Novak	06/19/2019	FERC eLibrary	Memo RE Tribal Contact Attempts
49	Rye Development	Erik Steimle	06/27/2019	FERC eLibrary	Response to USFWS
50	Rye Development	Erik Steimle	06/27/2019	FERC eLibrary	Response to WDFW
51	U.S. Army Corps of Engineers	Kevin Brice	07/27/2019	FERC eLibrary	PAD
52	Rye Development	Erik Steimle	08/27/2019	FERC eLibrary	6 Mo Status
53	Rye Development	Erik Steimle	11/07/2019	Letter	Request to Meet
2020					
54*	Confederated Tribes of the Umatilla	Shawn Steinmetz	2/10/2020	Email	DLA Comments
55	Rye Development	Erik Steimle	3/2/2020	Letter	Response to Umatilla Comments
56	USFWS	Brad Thompson	3/3/2020	Letter	DLA Comments
57	Center for Environmental Law and Policy	Trish Rolfe	3/10/2020	Letter	DLA Comments
58	WDFW	Kessina Lee	3/10/2020	Letter	DLA Comments
59*	Yakama Nation	Delano Saluskin	3/11/2020	Letter	DLA Comments
60	Turlock Irrigation District	Chief Operating Officer	3/11/2020	Letter	DLA Comments
61	American Rivers	Wendy McDermott, Patricia Arnold, Margie Van Cleve	3/12/2020	Letter	DLA Comments
62	Columbia River Keeper	Simone Anter, Patricia Arnold	3/12/2020	Letter	DLA Comments
63	FERC	David Turner	3/19/2020	Letter	DLA Comments
64	Rye Development	Erik Steimle	3/24/2020	Letter	Response to USFWS
65	Rye Development	Erik Steimle	3/24/2020	Letter	Response to WDFW
66	WDFW	Patrick Verhey	4/13/2020	Letter	Compensatory Mitigation Ratios
67*	The Warren Group, LLC	Dave Warren	4/21/2020	Letter	Tribal Consultation
68	FERC	David Turner	4/30/2020	Letter	DLA Comments
69	Wasco County Commissioner	Steven Kramer	No date	Letter	DLA Comments

AIR = Additional Information Request; FERC = Federal Energy Regulatory Commission; MTI = Motion to Intervene; NOI = Notice of Intent; TLP = Traditional Licensing Process; USDA = United States Department of Agriculture; USFWS = United State Fish and Wildlife Service; WDFW = Washington Department of Fish & Wildlife

* This document is filed as privileged in Appendix H of this FLA.

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426
November 2, 2017

OFFICE OF ENERGY PROJECTS

Project No. 14861-000—Oregon
Goldendale Energy Storage Project
FFP Project 101, LLC

Erik Steimle
Rye Development
745 Atlantic Ave. 8th Floor
Boston, MA 02111

Reference: Request for Additional Information

Dear Mr. Steimle:

On October 20, 2017, you filed an application for a preliminary permit to study the feasibility of the proposed Goldendale Energy Storage Project, located on the Columbia River in Klickitat County, Washington and Sherman County, Oregon, on lands owned by NSC Smelter, LLC at the former Columbia Gorge Aluminum smelter. These lands have been designated a Resource Conservation and Recovery Act contaminated site and are currently the subject of a clean-up effort being overseen by the Washington Department of Ecology. We need additional information in order to further assess your preliminary permit application. Within 30 days, please file the information requested in attachment A.

The Commission strongly encourages electronic filing. Please file the requested information using the Commission's eFiling system at http://ferc.gov/docs-filing/efiling.asp. For assistance, contact FERC Online Support at FERCOnlineSupport@ferc.gov, (886) 208-3676 (toll free), or (202) 502-8659 (TTY). In lieu of electronic filing, please send a paper copy to: Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Washington, D.C. 20426. The first page of any filing should include docket number P-14861-000.

Failure to provide this information may result in the rejection of your application. If you have any questions concerning this letter, please call Kim Nguyen at (202) 502-6105.

Sincerely,

David Turner, Chief
Northwest Branch
Division of Hydropower Licensing

Enclosure: Attachment A

ATTACHMENT A

ADDITIONAL INFORMATION

On December 31, 2015, Commission staff dismissed two preliminary permit applications for proposed hydropower projects at this site because of the speculative nature of the cleanup timeline and the uncertainty regarding the site's future suitability for development, due to decades of contamination from the former operation of the Columbia Gorge Aluminum smelter. On rehearing, the Commission stated that it would only consider applications for such a site once the relevant agency certifies the cleanup as complete.[1]

Your application states that "unlike previous permit applications filed for the site, the present application involves no cleanup or investigation of the lands selected for the Goldendale Energy Project's primary project features." The application also includes a letter from the Washington Department of Ecology (Washington Ecology) that generally supports the proposed project and states that Washington Ecology does not believe that the project, as described in the application, will hinder the cleanup process.

Based on the information provided in your application, we need further details to understand how your project is consistent with the Commission's current policy on hazardous materials sites. It is unclear whether there is overlap between land that would be affected by project construction and land that is subject to cleanup. Please provide detailed maps or figures showing cleanup areas relative to *all* the project features (the upper reservoir, water conveyance systems, powerhouse, transmission line, and access roads, as well as staging areas) and a project boundary, highlighting any differences between these features and prior project proposals. Specifically, please provide information to show that construction of the proposed hydropower project would not be affected by the timelines and activities that have or will be required for the overall site's cleanup. Your response should indicate how your proposal is consistent with the Commission's current policy on hazardous materials sites.

In addition, Attachment B of your application indicates that Washington Ecology expects that there are likely two paths forward with redevelopment of the portion of the site you propose for hydropower development, prior to the end of active remediation of the entire site. Please explain how, and at what point, the cleanup process with Washington Ecology would or could be coordinated with the FERC licensing process. Your response should address the detailed information Washington Ecology will need to evaluate the next steps for the hydropower project to move forward, as noted in its letter.

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[1] *Public Utility District No.1 of Klickitat County, Washington, et al.*, 155 FERC ¶ 61,056 (2016).

Document Content(s)

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

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

December 1, 2017

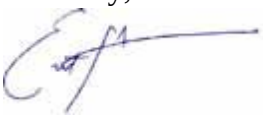
Re: Goldendale Energy Storage Project, FERC No. P-14861 – RESPONSE TO THE NOVEMBER 2, 2017 ADDITIONAL INFORMATION REQUEST FOR THE GOLDENDALE ENERGY STORAGE PROJECT PRELIMINARY PERMIT APPLICATION

Dear Secretary Bose:

On November 2, 2017, the Commission issued an Additional Information Request (AIR) in response to the Preliminary Permit Application for the proposed Goldendale Energy Storage Project. Comments and questions in Attachment A of the AIR are addressed below in the order they were presented.

Please contact me with any questions you may have.

Sincerely,



Erik Steimle
Vice President
erik@ryedevelopment.com

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

FERC Request for Additional Information

On December 31, 2015, Commission staff dismissed two preliminary permit applications for proposed hydropower projects at this site because of the speculative nature of the cleanup timeline and the uncertainty regarding the site's future suitability for development, due to decades of contamination from the former operation of the Columbia Gorge Aluminum smelter. On rehearing, the Commission stated that it would only consider applications for such a site once the relevant agency certifies the cleanup as complete. Your application states that "unlike previous permit applications filed for the site, the present application involves no cleanup or investigation of the lands selected for the Goldendale Energy Project's primary project features." The application also includes a letter from the Washington Department of Ecology (Washington Ecology) that generally supports the proposed project and states that Washington Ecology does not believe that the project, as described in the application, will hinder the cleanup process.

Based on the information provided in your application, we need further details to understand how your project is consistent with the Commission's current policy on hazardous materials sites. It is unclear whether there is overlap between land that would be affected by project construction and land that is subject to cleanup. Please provide detailed maps or figures showing cleanup areas relative to all the project features (the upper reservoir, water conveyance systems, powerhouse, transmission line, and access roads, as well as staging areas) and a project boundary, highlighting any differences between these features and prior project proposals. Specifically, please provide information to show that construction of the proposed hydropower project would not be affected by the timelines and activities that have or will be required for the overall site's cleanup.

Applicant Response

Applicant is providing FERC with additional details regarding the proposed project that demonstrate there is no overlap between land that would be affected by project construction and land that has been identified by Washington Ecology and the responsible parties for the site as being subject to future cleanup activities as part of the ongoing Remedial Investigation/Feasibility Study (RI/FS). Because there is no overlap, construction of the proposed project would not be affected by the timelines and activities that have been or will be required for the overall site's cleanup. Additional maps have been appended to this response that depict areas subject to future cleanup relative to the proposed project boundary (Appendix A). The maps show that the project boundary for the proposed project is significantly more limited in scope than the project boundary associated with prior permit applications, and does not include areas in which future cleanup is anticipated. The attached figures delineate all project features requested in the AIR, including, but not limited to, the upper reservoir, water conveyance systems, powerhouse, transmission line, access roads, and staging areas. The figures highlight differences between the project as currently proposed and prior project proposals. The applicant wishes to emphasize to the Commission that the proposed Goldendale Energy Storage project area, including the project features listed above, do not include any areas identified as being subject to future cleanup.

While there are no areas within the project boundary that are subject to further cleanup, there is one formerly impacted area within the project boundary that has already been closed in accordance with

applicable regulations under the oversight of Washington Ecology. The West Surface Impoundment (WSI), sometimes referenced as the West Side Landfill (Landfill), is an area associated with the historical aluminum smelter that has been certified as closed by Washington Ecology since 2005 (See Letter of Closure in Appendix B) and is not subject to additional characterization or investigation in the current RI/FS that Washington Ecology is currently working on with NSC Smelter, LLC (NSC) and Lockheed Martin Corporation. As part of the proposed project, the Applicant proposes to work with Washington Ecology to remove all remaining landfilled material from this area within the project boundary. In its September 7, 2017 letter to Rye Development, the agency stated: "*Ecology is supportive of the project proponents plan to remove the West Surface Impoundment, as this would be a higher level of environmental protection than Ecology would likely cover in the cleanup*." All areas of focus in the current RI/FS study are outside of the proposed project boundary and have been delineated in the maps appended to this filing for the Commission's review. Finally, the Applicant is providing a detailed development timeline demonstrating that the construction of the proposed Goldendale Energy Storage Project will not be affected by the RI/FS and associated timeline for cleanup in Appendix C.

FERC Request for Information

Your response should indicate how your proposal is consistent with the Commission's current policy on hazardous materials sites. In addition, Attachment B of your application indicates that Washington Ecology expects that there are likely two paths forward with redevelopment of the portion of the site you propose for hydropower development, prior to the end of active remediation of the entire site. Please explain how, and at what point, the cleanup process with Washington Ecology would or could be coordinated with the FERC licensing process. Your response should address the detailed information Washington Ecology will need to evaluate the next steps for the hydropower project to move forward, as noted in its letter.

Applicant Response

Unlike prior permit applications for this site that were dismissed by FERC, the present permit application involves no overlap between land that would be affected by project construction and land that is subject to cleanup. Because there is no overlap, construction of the proposed project would not be affected by the timelines and activities that have been or will be required for the overall site's cleanup. Accordingly, the concerns identified by FERC with respect to the prior applications – the speculative nature of the cleanup timeline and the suitability of the project for development based on future cleanup – are not presented by this application.

FERC has requested Applicant to explain how, and what point, the cleanup process with Washington Ecology would or could be coordinated with the FERC licensing process. Applicant has already begun coordinating with Washington Ecology prior to submitting this permit application and both parties intend to continue this coordination. As part of its effort in responding to this AIR, Applicant recently reached out to Washington Ecology to confirm its understanding of its future coordination on the development of the Goldendale Energy Storage project. In response, via email on November 16, 2017, Mr. Guy Barrett of Washington Ecology confirmed Applicants' understanding of the agency's

coordination on this site and authorized Applicant to provide FERC with the following response to the AIR:

> *Ecology intends to begin the formal coordination with the applicant and FERC regarding the proposed project and the ongoing cleanup effort shortly after issuance of a FERC Preliminary Permit (in this case coordination began even earlier). After issuance of a preliminary permit, Ecology agrees that the developer would coordinate/consult with Ecology during public/agency meetings, study design, completion of studies, and continue to coordinate with Ecology through preparation of a FERC License Application. This entire process would include Ecology's feedback on active remediation in the broader geographic area. This continual coordination and feedback with Ecology over the 3-year preliminary permit period will be necessary for the developer to prepare and file a complete License Application.*

Washington Ecology has indicated that it does not view the cleanup activities and timeline that are projected for the lands outside the project boundary as a barrier to FERC's issuance of a preliminary permit or to Applicant's subsequent ability to begin a formal consultation process with Washington Ecology and other stakeholders as part of the FERC licensing process for a hydropower facility. As part of the consultation process during the term of the preliminary permit, Washington Ecology will have access to all detailed information and studies generated in support of the preparation of a final license application, including the additional information Applicant is currently providing to FERC, which demonstrates that there is no overlap between land affected by project construction and land that is subject to cleanup.

Appendix A

Created By: Alex Kirk Date: 11/28/2017

M:\Projects\Goldendale Energy Storage Project\maps\Figure 1 GESP SWMUs and JDDPSP.mxd

Hoctor Rd
Swale Creek
Swale Creek
Miller Rd
97
Upper Reservoir
Underground Powerhouse
Existing Pumphouse
14
Lower Reservoir
John Day Dam
Columbia River
Underground Powerhouse
Existing Pumphouse
Lower Reservoir
14
John Day Dam
Columbia River
John Day Substation
14
97
0 1,000 2,000 4,000 Feet
0 2,000 4,000 8,000 Feet

Site Location
The Dalles
0 12.5 25 50 Miles

Legend

- Proposed Project Boundary
- Proposed Transmission Line
- Proposed Access Tunnel
- Proposed Penstock
- Existing Waterline
- Proposed Reservoir
- Proposed Construction Staging Area
- Wetlands

Prior Project Infrastructure

- Prior Project Boundary
- Buried High Votage Cable
- Access Roads
- Access Tunnels
- Buried Powerhouse
- Surface Structures
- Penstock and Intake
- Reservoirs
- Construction Laydown Area (Temporary)
- Spoil Area (Landscaped)

Solid Waste Management Areas (SWMU)

- Closed Landfill within Proposed Project Footprint
- SWMU Outside Proposed Project Boundary

Source: National Agricultural Imagery Program, Flown 7/2015 at 1m per pixel.

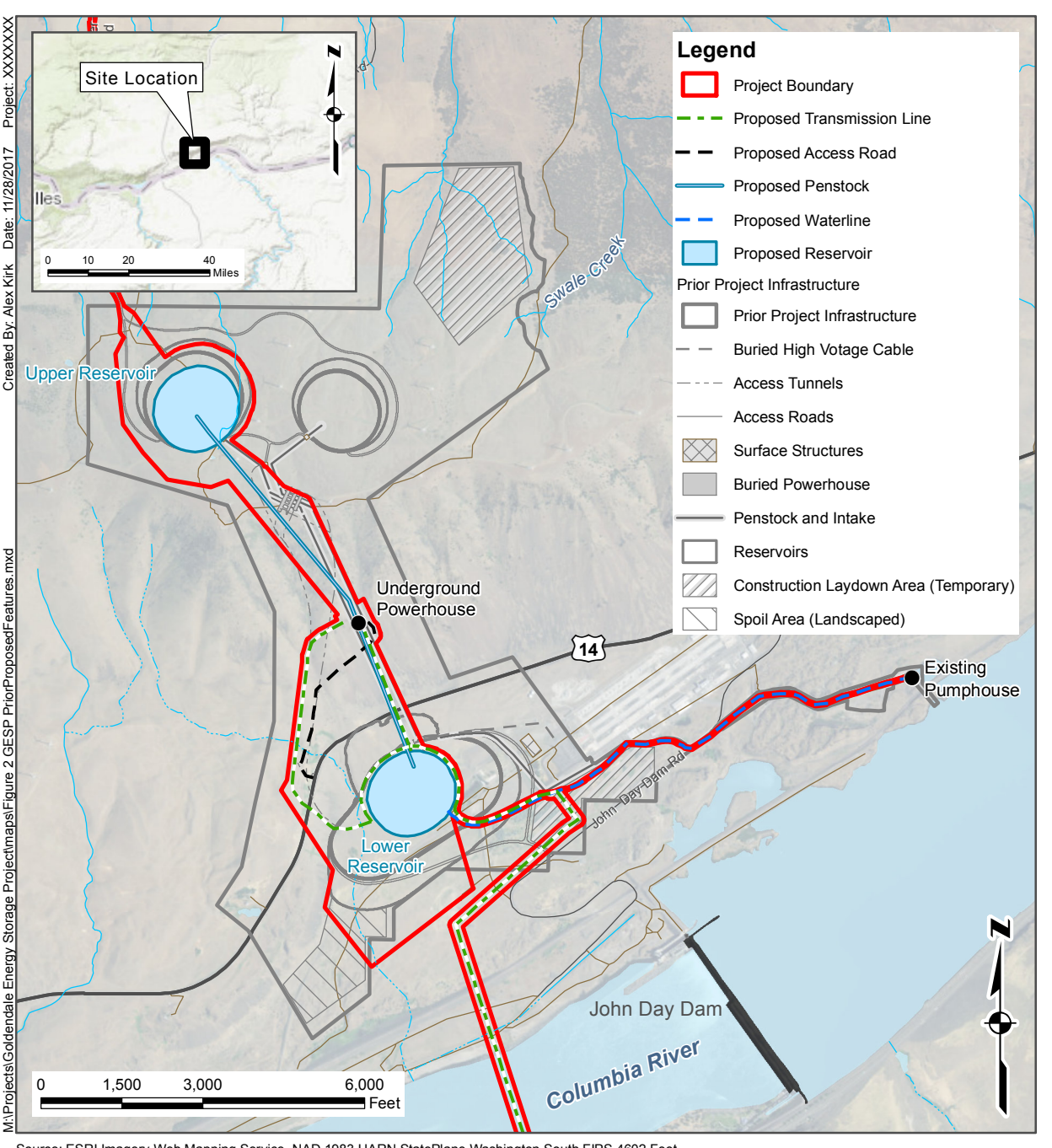
GOLDENDALE ENERGY STORAGE PROJECT
FFP Project 101, LLC

AREAS OF POTENTIAL CONTAMINATION RELATIVE TO CURRENT & PRIOR PROJECT INFRASTRUCTURE

DATE: 11/28/2017	SCALE: AS NOTED	FIGURE 1

Environmental Resources Management
1001 SW 5th St, Suite 1010
Portland, Oregon 97204

ERM



Source: ESRI Imagery Web Mapping Service NAD 1983 HARN StatePlane Washington South FIPS 4602 Feet

Environmental Resources Management
www.erm.com

Figure 2

Comparison of Project Boundary for Current & Prior Pumped Hydroelectric Storage Project
Goldendale Energy Storage Project
Goldendale, Washington

Appendix B

(confidential filing)

APPENDIX C REDACTED

Document Content(s)

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426
December 15, 2017

OFFICE OF ENERGY PROJECTS

Project No. 14861-000−Washington & Oregon
Goldendale Energy Storage Project
FFP Project 101, LLC

Erik Steimle
Rye Development
745 Atlantic Ave. 8th Floor
Boston, MA 02111

Subject: Acceptance Letter for Preliminary Permit Application

Dear Mr. Steimle:

Your preliminary permit application for the Goldendale Energy Storage Project has been accepted by the Commission for filing as of December 15, 2017. Federal, state, and local agencies will be informed in the Commission's public notice that a copy of the complete application can be viewed or printed on the "eLibrary" link of the Commission's website.

Within 5 days after you receive this letter, please send one copy of the application to the following: the U. S. Bureau of Land Management and the U.S. Army Corps of Engineers. A list of their addresses is enclosed.

If you have any questions, please contact me at (202) 502-6105.

Sincerely,

Kim Nguyen, Civil Engineer
Northwest Branch
Division of Hydropower Licensing

Enclosure: List of Addresses

cc: Public Files

LIST OF ADDRESSES

U. S. Bureau of Land Management
Lands and Minerals Adjudication Section (OR 936.1)
PO BOX 2965
Portland, Oregon 97208-2965

U.S. Army Corps of Engineers, Northwestern Division FERC Hydropower Coordinator
Attention: CENWD-RBT, Brad Bird
P.O. Box 2870
Portland, OR 97208-2870

Document Content(s)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

FFP Project 101, LLC Project No. 14861-000

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

(December 15, 2017)

On October 20, 2017, FFP Project 101, LLC filed an application for a preliminary permit, pursuant to section 4(f) of the Federal Power Act, proposing to study the feasibility of the Goldendale Energy Storage Project (project) to be located near Goldendale in Klickitat County, Washington and Sherman County, Oregon. The sole purpose of a preliminary permit, if issued, is to grant the permit holder priority to file a license application during the permit term. A preliminary permit does not authorize the permit holder to perform any land-disturbing activities or otherwise enter upon lands or waters owned by others without the owners' express permission.

The proposed project will be closed-loop. Water to initially fill the reservoirs and required make-up water will be pumped from the Columbia River via an existing pumphouse. The proposed project would consist of an upper and lower reservoir, an underground water conveyance system connecting the two reservoirs, an underground powerhouse, and a transmission line. The lower reservoir would be formed by a 7,400-foot-long, 170-foot-high rockfill embankment, with storage capacity of 7,100 acre-feet at maximum water surface elevation of 580 feet and surface area of 62 acres. The upper reservoir would be formed by an 8,000-foot-long, 170-foot-high rockfill embankment, with storage capacity of 7,100 acre-feet at maximum water surface elevation of 2,940 feet and surface area of 59 acres. Water would be conveyed from the upper reservoir to the lower reservoir via a 5,000-foot-long, concrete and steel tunnel with internal diameters ranging from 20 to 29 feet, and a 600-foot-long, 15-foot-diameter steel/concrete penstock. The powerhouse would contain three, 400-megawatt (MW) Francis-type pump-turbine units for a total installed capacity of 1,200 MW. Project power would be transmitted through a new 5-mile-long, 500-kilovolt transmission line from the powerhouse to Bonneville Power Administration's John Day Substation.

The estimated averaged annual generation of the project would be 3,500 gigawatt-hours.

Applicant Contact: Erik Steimle, Rye Development, 745 Atlantic Ave. 8th Floor, Boston, MA 02111, phone (503) 998-0230.

FERC Contact: Kim Nguyen, (202) 502-6105.

Deadline for filing comments, motions to intervene, competing applications (without notices of intent), or notices of intent to file competing applications: 60 days from the issuance of this notice. Competing applications and notices of intent must meet the requirements of 18 CFR 4.36.

The Commission strongly encourages electronic filing. Please file comments, motions to intervene, notices of intent, and competing applications using the Commission's eFiling system at http://www.ferc.gov/docs-filing/efiling.asp. Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at http://www.ferc.gov/docs-filing/ecomment.asp. You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY). In lieu of electronic filing, please send a paper copy to: Secretary, Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426. The first page of any filing should include docket number P-14861-000.

More information about this project, including a copy of the application, can be viewed or printed on the "eLibrary" link of Commission's website at http://www.ferc.gov/docs-filing/elibary.asp. Enter the docket number (P-14861) in the docket number field to access the document. For assistance, contact FERC Online Support.

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Document Content(s)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

FFP Project 101, LLC	Project No. 14861-000

STATE OF WASHINGTON
DEPARTMENT OF FISH & WILDLIFE'S
NOTICE OF INTERVENTION

Pursuant to Rule 214 of the Federal Energy Regulatory Commission's (FERC or Commission) Rules of Practice and Procedure, 18 C.F.R. § 385.214, Washington Department of Fish and Wildlife (Department) hereby files its notice of intervention in the above-captioned proceeding. The grounds for this intervention are:

I.

The names and addresses of the legal counsel for the Department and the Department's main staff contact are below. Copies of all orders, notices, pleadings, and correspondence related to this proceeding should be directed to:

William C. Frymire, Senior Counsel
Attorney General of Washington
Fish, Wildlife & Parks Division
1125 Washington Street S.E.
Post Office Box 40100
Olympia, Washington 98504-0100

Email: BillF@atg.wa.gov

Patrick Verhey
Renewable Energy Biologist
WDFW Habitat Program
Renewable Energy Section
1550 Alder Street N.W.
Ephrata, Washington 98823

Email: Patrick.Verhey@dfw.wa.gov

II.

The Department is an agency of the State of Washington with jurisdiction over fish, shellfish, and wildlife resources and charged with the duty of protecting, conserving, managing, and enhancing those resources. Wash. Rev. Code, Title 77. Pursuant to these statutory obligations, the Department brings this intervention on behalf of the citizens of the State of Washington, who, by the laws of that state, own the fish and wildlife resources.

III.

The Department is a state fish and wildlife agency which is required to be consulted in determining losses to the fish, shellfish, and wildlife resources caused by construction and operation of hydroelectric projects licensed by the federal government and to be consulted in identifying the appropriate measures to preserve and enhance those resources. Fish and Wildlife Coordination Act, 16 U.S.C. § 662(a), (b). The Department is authorized to provide recommended terms and conditions to the Commission that shall be included in any new license unless the Commission finds, in writing, that the Department's recommendations are inconsistent with applicable law. Federal Power Act, 16 U.S.C. § 803(j); 18 C.F.R. § 4.34.

IV.

FFP Project 101, LLC filed an application for a preliminary permit, pursuant to section 4(f) of the Federal Power Act, proposing to study the feasibility of the

ATTORNEY GENERAL OF WASHINGTON
1125 Washington Street SE
PO Box 40100
Olympia, WA 98504-0100
(360) 753-6200

Goldendale Energy Storage Project to be located near Goldendale in Klickitat County, Washington and Sherman County Oregon.

V.

The FERC Notice of Preliminary Permit Application Accepted for Filing and Soliciting Comments, Motions to Intervene, and Competing Applications identifies that the proposed pumped storage project would consist of an upper and lower reservoir, an underground water conveyance system connecting the two reservoirs, an underground powerhouse, and a transmission line. The lower reservoir would be formed by a 7,400-foot-long, 170-foot-high rockfill embankment, with storage capacity of 7,100 acre-feet at maximum water surface elevation of 580 feet and surface area of 62 acres. The upper reservoir would be formed by an 8,000-foot-long, 170-foot-high rockfill embankment, with storage capacity of 7,100 acre-feet at maximum water surface elevation of 2,940 feet and surface area of 59 acres. Water would be conveyed from the upper reservoir to the lower reservoir via a 5,000-foot-long, concrete and steel tunnel with internal diameters ranging from 20 to 29 feet, and a 600-foot-long, 15-foot-diameter steel/concrete penstock. The powerhouse would contain three, 400-megawatt (MW) Francis-type pump-turbine units for a total installed capacity of 1,200 MW. Project power would be transmitted through a new 5-mile-long, 500-kilovolt transmission line from the powerhouse to Bonneville Power Administration's John Day Substation.

This request may affect fish or wildlife under the jurisdiction of the Department.

ATTORNEY GENERAL OF WASHINGTON
1125 Washington Street SE
PO Box 40100
Olympia, WA 98504-0100
(360) 753-6200

VI.

For the above reasons, the Department has a significant interest which may be directly affected by the outcome of this proceeding, and this interest is not adequately represented by existing parties. The Department's participation in this proceeding is in the public interest.

VII.

THEREFORE, in order that this proceeding be fully developed in accordance with the applicable law, and that the Commission have before it all the material facts relating to this project, the Commission should recognize the Department as an intervener.

As a party in the above-entitled proceedings, the Department requests the right to have notice of and appear at any and all hearings or proceedings, to produce evidence and cross-examine witnesses, to be heard through counsel in written and oral argument, to be served with copies of all pleadings, applications, and notices, and for any other such participation and relief as may be appropriate.

DATED this 25th day of January, 2018.

Respectfully submitted:

ROBERT W. FERGUSON
Attorney General

William C Frymire

WILLIAM C. FRYMIRE, WSBA 16551
Senior Counsel

ATTORNEY GENERAL OF WASHINGTON
1125 Washington Street SE
PO Box 40100
Olympia, WA 98504-0100
(360) 753-6200

PROOF OF SERVICE

I certify that I served a copy of this document on all parties or their counsel of record on the date below as follows:

☒ US Mail Postage Prepaid via Consolidated Mail Service, E-mail, or State Campus Delivery

I certify under penalty of perjury under the laws of the state of Washington that the foregoing is true and correct.

DATED this 25th day of January, 2018, at Olympia, Washington.

JEANNE ROTH
Legal Assistant

ATTORNEY GENERAL OF WASHINGTON
1125 Washington Street SE
PO Box 40100
Olympia, WA 98504-0100
(360) 753-6200

Document Content(s)

January 29, 2018

Kimberly Bose
Secretary
Federal Energy Regulatory Commission
888 First St. NE
Washington, DC 20426

Re: P-14861-000
Klickitat County's Motion to Intervene in the matter of FFP Project 101 LLC's Permit Applications for Preliminary Permit for Goldendale Energy Storage Project

Dear Secretary Bose:

Attached is Klickitat County's Motion to Intervene for the above referenced proceeding.

Sincerely,

David Quesnel
Prosecuting Attorney, Klickitat County

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULARTORY COMMISISON

FFP Project 101,	PROJECT NO. P-14861-000
Application for Preliminary Permit For Proposed Goldendale Energy Pump Storage Project	KLICKITAT COUNTY'S MOTION TO INTERVENE

I. INTRODUCTION

Pursuant to Rules 212 and 214 of the Federal Energy Regulatory Commission ("Commission") Rules of Practice and Procedure, 18 C.F.R. §§ 385.212, .214, Klickitat County, Washington ("County") hereby moves to intervene in the above-captioned proceeding. The County is filing this motion for intervention in response to the Commission's December 15, 2017, Notice of Preliminary Permit Application Accepted for Filing and Soliciting Comments, Motions to Intervene and Competing Applications, Project No. 14861-000. In support of its motion, the County respectfully states the following:

II. COMMUNICATIONS

All correspondence, communications, pleadings and other documents related to this proceeding should be addressed to:

David Quesnel, Prosecuting Attorney
Klickitat County Prosecuting Attorney's Office
205 S. Columbus Ave., Room 106
Goldendale, Washington 98620-9289
Telephone: (509) 773-5838
Facsimile: (509) 773-6696
E-mail: davidq@ klickitatcounty.org

Klickitat County Prosecutor
205 S. Columbus Avenue, Rm 106
Goldendale, WA 98620
(509) 773-5838
Fax: (509) 773-6696

The County requests that each of the individuals identified above be placed on the Commission's official service list in this proceeding and hereby consents to receiving such service electronically.

III. BACKGROUND OF THIS PROCEEDING

The proposed project would consist of: (1) an upper earthen reservoir with a height of 170 feet and a length of 8,000 feet; (2) an upper reservoir with a surface area of 59, a storage capacity of 7,100 acre-feet and a normal surface elevation of 2,940 feet MSL; (3) a lower earthen reservoir with a height of 170 feet and a length of 7,400 feet; (4) a lower reservoir with a surface area of 62 acres, a storage capacity of 7,100 acre-feet and a normal surface elevation of 580 feet MSL; (5) a 5,000 foot long, 15 foot diameter steel/concrete penstock; (6) a powerhouse containing three 400-megawatt Francis-type pump-turbine units with a total installed capacity of 1,200 MW; (7) a 500 kV, 5 mile long transmission line and; (8) appurtenant facilities. The estimated average annual production would be 3,500 GWh.

IV. INTERESTS OF THE INTERVENOR JUSTIFYING INTERVENTION

Rye Development, on behalf of FFP Project 101, LLC, is proposing to study the feasibility of the Goldendale Energy Storage Project to be located in Klickitat County, Washington. As a host jurisdiction, the County has significant public and regulatory interests in the issues before the Commission.

The Project will have both direct and indirect effects on the County's citizens and on County services. The County is extensively involved in a variety of natural resource management issues on the Columbia River, including watershed management and the recovery of salmon and steelhead species listed as threatened under the Federal Endangered Species Act.

Klickitat County Prosecutor
205 S. Columbus Avenue, Rm 106
Goldendale, WA 98620
(509) 773-5838
Fax: (509) 773-6696

The County is also charged with implementing and enforcing local water quality, water resources and fish and wildlife resources regulations and policies. The project may affect fish or wildlife resources in the County. The County is also charged with providing for the safety, health and welfare of its citizens and is not adequately represented by any other party in this proceeding. It is in the public interest that the host county government maintaining these interests and charged with compliance with these various laws be heard before the Commission on matters that affect those interests.

V. MOTION TO INTERVENE

Therefore, good cause having been shown, the County respectfully requests pursuant to Commission rules that it be permitted to intervene in the above-entitled proceedings and be made a party thereto. It requests the right to have notice of and appear at any and all hearings or proceedings, to produce evidence and cross-examine witnesses, to be heard through counsel through written and oral argument, to be served henceforth with copies of all pleadings, applications, and notices, and for such other participation and relief as may be appropriate under Commission rules.

RESPECTFULLY SUBMITTED this 29th day of January 2018.

KLICKITAT COUNTY PROSECUTING ATTORNEY

David R. Quesnel, WSBA #38579

Klickitat County Prosecutor
205 S. Columbus Avenue, Rm 106
Goldendale, WA 98620
(509) 773-5838
Fax: (509) 773-6696

CERTIFICATE OF SERVICE

I certify that I have served a copy of the foregoing document on all parties or their counsel of record on the date below via first class mail.

I certify under penalty of perjury under the laws of the state of Washington that the foregoing is true and correct.

Dated this 29th day of January, 2018 at Goldendale, Washington.

Rebecca Sells, WSBA #48192
Klickitat County Deputy Prosecuting Attorney

Klickitat County Prosecutor
205 S. Columbus Avenue, Rm 106
Goldendale, WA 98620
(509) 773-5838
Fax: (509) 773-6696

Confederated Tribes *of the*
Umatilla Indian Reservation
Department of Natural Resources
Cultural Resources Protection Program

46411 Timíne Way
Pendleton, OR 97801
www.ctuir.org Phone 541-276-3447

January 31, 2018

Kim Nguyen
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

RE: Preliminary Permit Application for Project No. 14861-000, Goldendale Energy Storage Project

Dear Ms. Nguyen:

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Cultural Resources Protection Program (CRPP) has reviewed Rye Development's Preliminary Project Application for the proposed Goldendale Energy Storage Project. We have submitted our comments under the Privileged Security Level on FERC's eFiling system.

Respectfully,

Kristen Tiede

Kristen Tiede, M.A.
Archaeologist

Document Content(s)

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
620 SW Main Street, Suite 201
Portland, Oregon 97205-3026

IN REPLY REFER TO:
9043.1
ER17/0575

Electronically Filed

February 5, 2018

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

Subject: **COMMENTS –** Notice of Preliminary Permit Application Accepted for Filing and Soliciting Comments, Motions to Intervene, and Competing Applications for the Goldendale Energy Storage Project, FERC Project No. 14861 - Klickitat County, Washington and Sherman County, Oregon

Dear Ms. Bose:

The Department of the Interior (Department) has reviewed Notice of Preliminary Permit Application Accepted for Filing and Soliciting Comments, Motions to Intervene, and Competing Applications for the Goldendale Energy Storage Project - Klickitat County, Washington and Sherman County, Oregon. If a preliminary permit is issued for this Project, the Department recommends that the applicant consult with the U.S. Fish and Wildlife Service (Service), the Washington Department of Fish and Wildlife, and any Native American Tribe or Nation whose treaty rights may be affected by the Project. These entities can provide guidance in developing the Project in a manner that seeks to preserve, protect, and enhance fish and wildlife resources and other environmental values in the project area. It is especially important for the applicant to initiate consultation early, so studies may begin in a timely fashion and delays may be avoided. This correspondence does not constitute consultation pursuant to the Federal Energy Regulatory Commission's (Commission) regulations. If the requested preliminary permit is issued, we recommend that the applicant devote special attention to the following areas of concern.

Fish and Wildlife Resources

The proposed Project has the potential to impact fish and wildlife resources and habitats of special interest to the Service. Because the Service's overall goal is to restore and protect Federal trust resources supported by the conditions present within the proposed project area, the

Service reviews the Project from an ecosystem perspective and considers whether the Project can be successfully integrated into ongoing operations and address ecosystem needs. Based on this ecosystem needs approach, the Service will be seeking information about the chemical, physical, and biological relationships, processes, and linkages necessary to enhance and maintain a healthy, biologically diverse ecosystem in concert with the proposed construction, operation, and maintenance of this Project.

In general, while performing project feasibility studies during the term of the permit, the applicant should ensure that damage to habitat and resources, particularly aquatic habitat, wetlands, and riparian vegetation, is avoided or minimized. We recommend that the applicant be directed to coordinate with the Service prior to undertaking any scientific study, investigation, or other work required by the preliminary permit. This communication with the Service would be for the purposes of developing measures to avoid, minimize, and mitigate study impacts on federally-listed, threatened, or endangered species, or critical habitat. Further, the applicant should be directed to request and secure from the Service such permits and authorizations that may be necessary to avoid violating the take provisions of Section 9 of the Endangered Species Act (ESA), during the performance of the required studies.

Threatened and Endangered Species Consultation

Section 7 of the ESA and its implementing regulations (at 50 CFR Part 402) require Federal agencies to review their actions at the earliest possible time to determine whether any action may affect listed species or critical habitat. If so, formal consultation with the Service is required unless the exceptions at 50 CFR 402.14(b) apply.

Under 50 CFR 402.08, the Commission may designate Public Utility District No. 1 of Klickitat County as its non-Federal representative to conduct informal consultation or prepare a Biological Assessment (BA) to determine if the proposed Project may affect listed species.

Because listed species, but no critical habitat, are likely to occur in the Project area, we recommend the Commission (or its designated non-Federal representative) enter into informal consultation with the Service to determine if ongoing and future effects of the Project to listed species warrant formal consultation. At this stage, the purpose of informal consultation is to ensure that the applicant understands any potential impacts of the Project on listed species and what studies may be necessary to inform that determination if they decide to file for a license. We also recommend that you request a conference on the effects of the Project on the sage-grouse, which currently has no status under the ESA.

Once the NEPA scoping process has been completed, the Department recommends that the Commission obtain a current list of ESA species in the project area. If formal consultation is warranted and a BA is prepared by the designated non-Federal representative, the Commission must furnish guidance and supervision, and must independently review and evaluate the scope and contents of the BA. The ultimate responsibility for compliance with ESA section 7 remains with the Commission.

Licenses must remain flexible and open to adaptive management to ensure that measures to protect fish and wildlife, including listed species, remain adequate and effective. Although we work collaboratively to resolve issues and concerns regarding changing status and/or new information on listed and proposed species, re-initiation of consultation under Section 7 of the ESA may be necessary at some time during the term of the new license if one or more of the re-initiation criteria at 50 CFR 402.16 apply.

In closing, the Department has no objection to issuance of the requested permit and recommends the above concerns be addressed during the term of the preliminary permit to prevent unnecessary delays and to assist in the creation of an environmentally sustainable project. After issuance of the preliminary permit, the applicant should contact the Service to discuss these concerns in more detail. Consultation and technical assistance requests, questions, comments, documents, and required progress reports should be directed to Mr. Steve Lewis of the Central Washington Field Office in Wenatchee, Washington, at (509) 665-3508 ext. 2002 or via e-mail (Stephen_Lewis@fws.gov). If you have any other questions or concerns, please feel free to contact me at 503-326-2489.

We appreciate the opportunity to comment.

Sincerely,

Allison O'Brien
Regional Environmental Officer

Document Content(s)

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

FFP PROJECT 101, LLC	**)**	**FERC Project No. 14861-000**
	)	
	)	**MOTION TO INTERVENE OF**
Application for Preliminary Permit	**)**	**COLUMBIA RIVERKEEPER**
For Proposed Goldendale Energy Storage	**)**	
Project	**)**	

INTRODUCTION

On December 15, 2017, the Federal Energy Regulatory Commission (FERC) issued a notice regarding a preliminary permit application for the Goldendale Energy Storage Project (Project), FERC Project No. 14861-000. In accordance with Rule 214 of FERC's Rules of Practice and Procedure, 18 C.F.R. §385.214, Columbia Riverkeeper (Riverkeeper) moves to intervene in FFP Project 101's application for preliminary permit. By this motion, Riverkeeper seeks to protect the non-developmental values of the Columbia River and to ensure that FERC's decision with respect to this project is in the public interest.

CONTACT INFORMATION

Riverkeeper wishes to be informed regarding the progress reports or any other filings by the preliminary permit applicant. This includes being added to all official service and mailing lists regarding the aforementioned preliminary permit application. Please send such information to the following contact:

Simone Anter
Columbia Riverkeeper, Associate Attorney
111 3rd Street
Hood River, OR 97031
541-387-3030
simone@columbiariverkeeper.org

STATEMENT OF INTEREST

Riverkeeper is a 501(c)(3) non-profit, tax exempt, public interest conservation organization incorporated in Washington with headquarters in Hood River, Oregon. Riverkeeper's mission is to restore and protect the water quality of the Columbia River and all life connected to it, from the headwaters to the Pacific Ocean. Riverkeeper represents over 12,000 members and supporters in the Columbia River basin and is a member of the international Waterkeeper Alliance, a group of 300 organizations and affiliates working on behalf of their local waterways.

Riverkeeper works to accomplish its mission through diverse activities including monitoring and commenting on the activities of federal, state, and local agencies charged with responsibility over the Columbia River basin. Additionally, Riverkeeper coordinates education research projects and presentations from the Columbia's headwaters to the Pacific Ocean. Riverkeeper and its members actively participate in governmental decision-making processes that impact the Columbia River and species that depend on the river for survival. Riverkeeper also engages in litigation under the Clean Water Act, acting as a representative of the public interest as authorized by 33 U.S.C. §1365 and as applied to state permitting programs under 40 C.F.R. §123.30

Riverkeeper and its members are directly affected by the outcome of these proceedings. Riverkeeper has members, supporters, and staff that use and enjoy the Columbia River. For example, Riverkeeper members live, work, and/or recreate near the proposed Project. Many of Riverkeeper's members live and/or work in communities on the banks of the Columbia River. The staff, members, and volunteers of Riverkeeper are directly affected by the outcome of these proceedings because the Project application

includes activities that are detrimental and adverse to the members' interest by harming their aesthetic, recreational, and professional interests in the ecological integrity and natural resources of the Columbia River.

Riverkeeper's staff, members, and volunteers participate in fishing, swimming, boating, wildlife viewing, and aesthetic and scientific pursuits on and along the Columbia River. Riverkeeper's staff and members also use the Lewis and Clark National Historic Trail. Riverkeeper's interests in these uses are directly affected by the proposed Project, which has the potential to degrade water quality, fish and wildlife habitat, aesthetics, and recreation. Riverkeeper's staff, members, and volunteers also have an interest in protecting salmonids, including salmonid rearing, migration, and spawning, and other aquatic and terrestrial life that could be harmed by the proposed Project.

Additionally, Riverkeeper is organized for the purpose of protecting water quality and beneficial uses within the water affected by the outcome of these proceedings. A major component of achieving this goal is ensuring compliance with state and federal laws aimed to protect water quality and designated use species. Riverkeeper has spent significant time, resources, and effort to protect and restore the Columbia River and its tributaries, and these efforts may be impinged by the proposed Project.

GROUNDS FOR INTERVENTION

FERC Rules of Practice and Procedure 214 permits intervention by a party that can establish (1) the position taken by the movant, to the extent known, together with the basis in fact and law for the position, and (2) the movant's interest in the proceeding. 18 C.F.R. §§ 385.214(a)(3), (b)(1), (2). The movant's interest must be stated in sufficient factual detail to demonstrate that the movant has a right to participate for one of the

following reasons: (1) the movant has a right to participate, which is expressly conferred by statute or FERC rule, order, or other action; (2) the movant has or represents an interest which may be directly affected by the outcome of the proceedings; or (3) the movant's participation is in the public interest. *Id.* at § 385.214(b)(2). Riverkeeper has and represents interests that may be directly affected by the outcome of the proceedings and the participation of Riverkeeper is also in the public interest. Additionally, this motion to intervene is timely.

Through intervention, Riverkeeper seeks to obtain equal consideration of non-energy values, adequate and equitable protection, mitigation, and enhancement measures for fish and wildlife, and the protection of recreation, water quality, and other non-energy related values of the Columbia River. Riverkeeper and Riverkeeper members are concerned about threats posed by the Project including, but not limited to: toxic pollution, thermal pollution, impacts on dissolved oxygen levels, increased turbidity, water quantity impacts, fish and wildlife habitat degradation, and aesthetic and cultural impacts. In short, Riverkeeper and Riverkeeper members have a strong public interest in the authorization of the Project and its impacts on Columbia River water quality, salmon spawning and rearing habitat, and the ecological and economic health of the Columbia River.

PROPOSED PROJECT

FFP Project 101, LLC (applicant) is proposing to study the feasibility of the Goldendale Energy Storage Project (Project) to be located near Goldendale in Klickitat County, Washington, and Sherman County, Oregon. On October 29, 2017, applicant filed an application for a preliminary permit, pursuant to section 4(f) of the Federal Power Act (FPA). According to the Federal Register Notice, the proposed Project would consist of:

- A lower reservoir with a surface area of 62 acres, a capacity of 7,100 acre-feet, and a maximum water surface elevation of 580 feet;
- An upper reservoir with a surface area of 59 acres, a capacity of 7,100 acre-feet, and a maximum water surface elevation of 2,940 feet;
- A 5,000-foot-long, 20-29 feet diameter, concrete and steel tunnel water conveyance;
- A 600-foot-long, 15-foot-diameter steel/concrete penstock;
- A powerhouse containing 3 pump/turbine units with a total installed capacity of 1,200 MW;
- A 5 mile long, 500 kV transmission line and;
- Appurtenant facilities.

The proposed Project is located along the Columbia River approximately 8 miles southeast of the City of Goldendale in Klickitat County, Washington, within several miles of the John Day Dam on the Columbia River and near the John Day River. According to the application, "the Project would be a "closed-loop" system and would use the Columbia River for initial fill and periodic make-up water." Application for Preliminary Permit, Goldendale Energy Storage Project, FERC Project No. 14861 (Oct. 20, 2017). Portions of the Project will be located on the Historic Columbia Gorge Aluminum Smelter Site.

STATEMENT OF POSITION

Riverkeeper seeks to participate in these proceedings in order to ensure that the public resource values of the Columbia River and the surrounding environment, as well

as the lands and waterbodies impacted by this project, are protected and enhanced and that the authorization complies with all state and federal environmental laws.

Riverkeeper reserves the right to take any position on this proceeding consistent with the goal of protecting the public interest, the native fish and water quality of the Columbia River basin, recreational values of the Columbia River, and the health and safety of its residents. In this application proceeding, Riverkeeper will advocate positions consistent with public safety and other environmental natural resource, recreational, and economic concerns.

Specific issues of concern for Riverkeeper, known at this time, include, but are not limited to the following:

Public Interest: It is not clear from the application that the proposed transmission lines, reservoirs, and water diversions are in the public interest or required for public convenience and necessity. The application fails to provide a solid factual basis for the contention that the Project would develop, conserve, and utilize, in the public interest, the water resources of the region. Additionally, the application fails to provide any factual basis for the contention that the Project will further increase domestic renewable energy generation. The applicant has failed to demonstrate that the public benefit of the Project, if any, outweighs the significant social, economic, and environmental harm. It is not clear from the Project application that the public interest will be served by issuing the preliminary permit.

Aquatic and Fisheries Resources: The Project would have serious direct, indirect, and cumulative impacts on aquatic species and fisheries resources and these impacts are not adequately described or acknowledged in the application. The application does not

describe, for example, how the project could kill, impinge or injure Endangered Species Act-protected juvenile salmonids, steelhead, and other fish species. The application does not discuss potential impacts to sturgeon or lamprey.

Water Quality and Quantity: The Project could result in a number of significant impacts to water quality from the construction, operation, and maintenance of the proposed reservoirs and transmission lines. It is unclear what dredge and fill activities would be associated with construction. Such activities could increase in-river turbidity, mobilize toxics in river sediment, and remove riparian vegetation. The discharge of large volumes of water warmed in reservoirs will result in increased temperature in the Columbia River. The Columbia River is already water quality limited for temperature. In addition, the Clean Water Act prohibits new discharges of heat because there is no TMDL for temperature and the river is on the CWA 303(d) list. Water withdrawals for the project construction and operation would exacerbate existing temperature problems on the Columbia River by decreasing flow. Construction in riparian areas and along steep slopes also increases the risk of erosion and sedimentation to the Columbia River. Finally, the application does not adequately describe how feasibility studies will impact riparian areas, wetlands/lagoons, and the Columbia River. In addition, the discharge may contain toxic pollutants; either added by the project or concentrated pollutants from the Columbia River.

Air quality: The increase in emissions from construction and operation of the proposed project would degrade local and regional air quality.

Economic impacts: The proposed project would result in significant adverse economic impacts as a result of potential impacts to fishing, recreation on the Lewis and

Clark National Historic Trail, and water withdrawals. The project could impact tourism and recreation related jobs.

Wildlife Impacts: The proposed project would degrade or destroy hundreds of acres of riparian, scrub/steppe, grasslands, and rock/cliff habitat. The Project would inundate quality habitat at the reservoir sites and degrade habitat by construction and operation of the facility. This habitat is utilized by a wide variety of plants, reptiles, amphibians, birds, and mammals, including threatened and endangered species. The construction of new transmission lines and reservoirs would significantly alter the landscape. Potential wildlife impacts include, but are not limited to, impacts to: deer, elk, coyotes, osprey, hawks, eagles, herons, and grouse.

Recreational impacts: The Project would adversely affect and degrade recreational opportunities in and around the Columbia River by industrializing the project area, increasing traffic and interfering with recreational boating, fishing, and other recreational activities. The project would also impact the Lewis and Clark National Historic Trail and state designated Lewis and Clark auto tour routes.

Historic and Cultural Impacts: The Columbia Hills are known Native American archeological sites. The Project site may contain cultural and historic resources. Furthermore, the project site is upstream of the Maryhill Museum and Maryhill State Park. The Lewis and Clark National Historical Trail, administered by the National Park Service, is also within the vicinity of the proposed project. State designated Lewis and Clark auto tour routes are also within the vicinity of the site.

Aesthetic Impacts: The project proposes significantly altering the landscape with a series of reservoirs, associated infrastructure, and new transmission lines. In turn the Project poses significant aesthetic impacts to the surrounding area.

Energy Efficiency and Global Warming: The proposed project would produce electricity using an inefficient pump and turbine system. The application materials do not adequately describe how much energy will be wasted in order to produce a smaller amount of energy. The application materials are also unclear on the source of the energy used to pump the water uphill. The inefficient use of energy degrades the value of renewable energy projects, particularly if the energy wasted is from renewable sources, such as wind. This project may reduce the incentive to construct more efficient energy transmission systems. Energy produced by burning fossil fuels may have to replace the energy potentially wasted by this project. Also, it is unclear how this project fits into the states of Washington and Oregon's renewable energy policies and legislation.

Contamination from Columbia Gorge Aluminum Smelter Site: Portions of the Projects infrastructure are located on the former Columbia Gorge Aluminum Smelter Site (Site), now a Resource Conservation and Recovery Act (RCRA) contaminated site. According to a FERC order denying a request for a rehearing on the denial of a preliminary permit in the same area, "Smelter operations contaminated the soil and groundwater at the site with fluoride, polycyclic aromatic hydrocarbons, cyanide, and polychlorinated biphenyls." 155 FERC ¶ 61,056 Project Nos. 13333-005, 14729-001. Further, the denial states that, "as a matter of policy, it is not prudent to issue a preliminary permit for a contaminated site that is still undergoing a cleanup process, regardless of whether that site is a RCRA site or a Superfund site." *Id.* Despite attaching a

letter from the Department of Ecology stating that applicant may either purchase the property, thus become severally and jointly liable for contamination, or clean up the portion of the site needed for the Project, it is unclear how applicant's Project will interact with cleanup efforts and now the Project will disturb contamination located at the site.

Inadequate and Insufficient Information: The application fails to provide adequate information about all of the above project impacts.

CONCLUSION

Because Riverkeeper has a substantial interest in the outcome of the Goldendale Energy Storage Project and no party adequately represents Riverkeeper's interests, Riverkeeper respectfully requests that FERC grant this motion to intervene in the Goldendale Energy Storage Project, FERC Project No. 14861-000.

Dated: February 9, 2018.

Respectfully submitted,

/s/Simone Anter

Simone Anter
Columbia Riverkeeper, Associate Attorney

CERTIFICATE OF SERVICE

I certify that on the 9th day of February, 2018, I electronically filed the original document, Motion to Intervene on behalf of Columbia Riverkeeper with:

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

DATED: February 9, 2018

/s/Simone Anter

Simone Anter
Columbia Riverkeeper, Staff Attorney

SERVICE LIST

**Douglas MacCourt
Ater Wynne LLP

222 SW Columbia St. Ste 1800
Portland, Oregon 98201-6618
UNITED STATES

Colleen Fagan
Oregon Department of Fish and Wildlife
107 20th Street
LaGrande, OR 97850
Colleen.e.fagan@state.or.us

Ken Homolka
Hydropower Program Leader
Oregon Department of Fish and Wildlife
3406 Cherry Ave. NE
Salem, OR 97303
Ken.homolka@state.or.us

Bill Frymire
Senior Counsel
Washington Office of Attorney General
PO Box 40100
Olympia, WA 98504-0100
billf@atg.wa.gov

Mark Albert Hunter
Major Projects Section Manager
Washington State Department of Fish and Wildlife
600 Capitol Way N
Olympia, WA 98501
huntermah@dfw.wa.gov

**: To be served by First-Class U.S. Mail.

Document Content(s)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Klickitat County, WA **Sherman County, OR** **Goldendale Energy Storage Project** **Rye Development**	**FERC Project No. 14861-000** **Preliminary Permit Application**

AMERICAN RIVERS, CENTER FOR ENVIRONMENTAL LAW AND POLICY, AND FRIENDS OF THE WHITE SALMON RIVER
MOTION TO INTERVENE

I. INTRODUCTION

Pursuant to Rule 214 of the Commission's Rule of Practice and Procedure, 18 C.F.R. § 385.210 and § 385.214, and in response to FERC's December 15, 2017, *Notice of Preliminary Permit Application Accepted for Filing and Soliciting Comments, Motions to Intervene, and Competing Applications*, American Rivers, Center for Environmental Law and Policy, and Friends of the White Salmon River hereby move to intervene as parties in the proceeding for Rye Development's proposed Goldendale Energy Storage Project (FERC Project No. 14861-000) located in Klickitat County, Washington and Sherman County, Oregon.

II. IDENTITY OF INTERVENORS AND STATEMENT OF POSITION

American Rivers is a national non-profit 501(c)(3) river conservation organization. American Rivers protects wild rivers, restores damaged rivers, and conserves clean water for people and nature. Since 1973, American Rivers has protected and restored more than 150,000 miles of rivers through advocacy efforts, on-the-ground projects, and an annual America's Most Endangered Rivers® campaign.

Center for Environmental Law and Policy (CELP) is a non-profit organization dedicated to protecting the public's interest in the rivers and aquifers of Washington State. CELP has extensive experience with Washington's water rights, water supply, and instream flow protection processes, and has participated in much of the key litigation relating to streamflow protection. We have members throughout the Columbia River watershed, and have a long-standing interest in protection of the Columbia's streamflows in particular. CELP's interest in this project stems from its potential to increase consumptive water use from the Columbia, as well as our long-standing work to protect Columbia River instream flows and the salmon and other wildlife that depend on them.

Friends of the White Salmon River is a non-profit 501(c)(3) organization that has worked since 1976 to protect and restore naturally-reproducing anadromous fish populations, and to protect the

shorelines, water resources, and habitat areas that affect wild salmonid populations within Klickitat County. Friends of the White Salmon River has an interest in protecting and conserving water resources affecting wild salmonid populations.

Service of process and other communications should be made via electronic communications to:

Wendy McDermott
Associate Director, Rivers of Puget Sound and Columbia Basin
PO Box 1234
Bellingham, WA 98227
wmcdermott@americanrivers.org

Trish Rolfe
Executive Director
Center For Environmental Law and Policy
85 S. Washington Street, Suite 301
Seattle, WA 98104
trolfe@celp.org

Patricia Arnold
President
Friends of the White Salmon River
P.O. Box 805
White Salmon, WA 98650
pat.arnold@friendsofthewhitesalmon.org

III. GROUNDS FOR INTERVENTION

Intervention by American Rivers, CELP, and Friends of the White Salmon is in the public interest as required by 18 C.F.R. §385.214(b)(2)(iii). Each organization has significant undeniable interests in preserving the natural resources of the Columbia River, and seek to intervene in these proceedings to ensure that the non-power values are protected. No other parties to the proceeding will be able to adequately represent these interests, and therefore, American Rivers, CELP, and Friends of the White Salmon each have a direct and substantial interest in the outcome of this process.

IV. CONCLUSION

Granting intervenor status to American Rivers, CELP and Friends of the White Salmon will not delay this proceeding. No other party represents our organization's interests in this proceeding. For these reasons, we respectfully request that FERC grant intervention in the above referenced proceeding.

Respectfully submitted this 13th day of February, 2018.

Wendy McDermott
Associate Director, Rivers of Puget Sound and Columbia Basin
American Rivers

Trish Rolf
Executive Director
Center for Environmental Law and Policy

Patricia Arnold
President
Friends of the White Salmon River

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Klickitat County, WA **Sherman County, OR** **Goldendale Energy Storage Project** **Rye Development**	**FERC Project No. 14861-000** **Preliminary Permit Application**

CERTIFICATE OF SERVICE

Pursuant to Rule 2010 of the Commission's Rules of Practice and Procedure, I hereby certify that I have this day caused the foregoing **American Rivers, Center for Environmental Law and Policy, and Friends of the White Salmon's Motion to Intervene on Rye Development's Preliminary Permit Application for the Goldendale Energy Storage Project Application (P-14861)** to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated this 13th day of February, 2018.

Patricia Arnold
Friends of the White Salmon River

Document Content(s)

Oregon
Kate Brown, Governor

Department of Fish and Wildlife
East Region
107 20th Street
La Grande, OR 97850
(541) 963-2138
FAX (541) 963-6670

February 13, 2018

ELECTRONIC FILING

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

Subject: Goldendale Energy Storage Project (FERC Project No. P-14861)
Application for Preliminary Permit – Notice of Intervention

Dear Secretary Bose:

On December 15, 2017, the Federal Energy Regulatory Commission issued a *Notice of Preliminary Permit Application Accepted for Filing and Soliciting Comments, Motions to Intervene, and Competing Applications* for FFP Project 101, LLC's Goldendale Energy Storage Project (FERC No. P-14861). The proposed project is located adjacent to the Columbia River near Goldendale in Klickitat County, Washington, and Rufus in Sherman County, Oregon. Attached for filing is the Oregon Department of Fish and Wildlife's Notice of Intervention.

Sincerely,

Elizabeth Moats
NE Region Hydropower Coordinator

C (electronic):
Mary Grainey – OWRD
Marilyn Fonseca - ODEQ
Ken Homolka – ODFW
Service List

Attachment

Attachment

BEFORE THE
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

FFP Project 101, LLC	)	FERC Project P-14861
	)	
Goldendale Energy Storage Project	)	Application for Preliminary Permit
	)	

OREGON DEPARTMENT OF FISH AND WILDLIFE
NOTICE OF INTERVENTION

(February 13, 2018)

The Oregon Department of Fish and Wildlife (Department) hereby provides notice pursuant to 18 C.F.R. §385.214(a)(2) (Rule 214) that it is intervening in this proceeding. The Department is the state fish and wildlife agency with authority over the fish and wildlife resources in the state of Oregon that may be affected by this proceeding. The Department intervenes for the purposes of becoming a party, and to ensure its interests and the public's are represented in this proceeding.

On October 20, 2017, FFP Project 101, LLC filed an application for preliminary permit pursuant to section 4(f) of the Federal Power Act (FPA), proposing to study the feasibility of the Goldendale Energy Storage Project (Project). The Project would be located adjacent to the Columbia River near Goldendale in Klickitat County, Washington, and Rufus in Sherman County, Oregon.

I. COMMUNICATIONS

The following persons are designated for service of process and placement on the official service list in this proceeding.

Ken Homolka
Oregon Department of Fish and Wildlife
4034 Fairview Industrial Drive, SE
Salem, OR 97303-4924
503-947-6090
ken.homolka@state.or.us

Elizabeth Moats
Oregon Department of Fish and Wildlife
107 20th Street
La Grande, OR 97850
541-962-1832
Elizabeth.A.OsierMoats@state.or.us

II. STATEMENT OF INTEREST

The Department is the state agency with jurisdiction over fish and wildlife in Oregon. See ORS 496.012; the Fish and Wildlife Coordination Act (FWCA) at 16 U.S.C. § 661 and 662; the Federal Power Act (FPA) at 16 U.S.C. § 803 and §823a. The proposed Project would utilize water from the Columbia River for initial fill and make up water. At the proposed project location, the Columbia River is the state boundary between Oregon and Washington and both states are deemed to have concurrent jurisdiction for regulating, protecting and preserving fish therein (ORS 507.101 and ORS 507.020). The Department possesses expertise regarding the management and protection of fish and aquatic resources in the Columbia River that may be affected by the project. Through this intervention, the Department seeks to protect and preserve fisheries resources in the Columbia River.

The proposed transmission lines will connect to Bonneville Power Administration's existing John Day Substation, located in Sherman County, Oregon. The Department possesses expertise regarding the natural resources in the Project vicinity and manages Oregon's wildlife resources that may be affected by the project. Pursuant to Oregon statues and rules, the Department would seek to avoid, minimize or mitigate Project impacts to habitat and any potential impact to state sensitive, threatened or endangered species (OAR 635-415; ORS 496.171 through 496.182).

By carrying out its statutory responsibilities under the FPA, FWCA, and Oregon law, the Department acts in the public interest.

III. CONCLUSION

The Department respectfully files this notice of intervention to participate in further proceedings.

Attachment

Respectfully submitted,

Elizabeth A. O. Moats
East Region Hydropower Coordinator

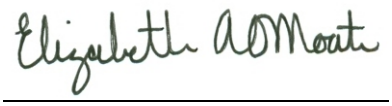
BEFORE THE
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

FFP Project 101, LLC	)	FERC Project P-14861
	)	
Goldendale Energy Storage Project	)	Application for Preliminary Permit
	)	

CERTIFICATE OF SERVICE

I certify that I have served the foregoing OREGON DEPARTMENT OF FISH AND WILDLIFE'S NOTICE OF INTERVENTION for the Goldendale Energy Storage Project by electronic mail or first-class mail upon each person designated on the official service list compiled by the Secretary in this proceeding and by electronic filing to FERC.

DATED: February 13, 2018



Elizabeth A.O. Moats
East Region Hydropower Coordinator

SERVICE LIST

David Quesnel
KLICKITAT, COUNTY OF
205 S. Columbus Ave.
Room 106
Goldendale, WASHINGTON 98620
UNITED STATES
davidq@klickitatcounty.org

Rebecca Sells
KLICKITAT, COUNTY OF
205 S. Columbus Ave.
Room 106
Goldendale, WASHINGTON 98620
rebeccas@klickitatcounty.org

William C. Frymire, Senior Counsel
Washington Office of Attorney General
Fish, Wildlife & Parks Division
Post Office Box 40100
Olympia, Washington 98504-0100
billf@atg.wa.gov

Erik Steimle, Vice President
Rye Development
745 Atlantic Avenue
Boston, MASSACHUSETTS 02111
UNITED STATES
erik@ryedevelopment.com

Document Content(s)

Confederated Tribes and Bands
of the Yakama Nation

Established by the
Treaty of June 9, 1855

Erik Steimle,
Rye Development,
745 Atlantic Ave. 8th Floor
Boston, MA 02111,
(503) 998-0230.

February 14, 2018

RE: FERC Docket 14861-000, Goldendale Energy Storage Project

Erik Steimle,

The Confederated Tribes and Bands of the Yakama Nation (Yakama Nation) received a notice of application from the Federal Energy Regulatory Commission in regards to the proposed Goldendale Energy Storage Project. The proposed project is within the Ceded Area of the Yakama Nation as set forth in the Treaty of 1855 (12 stat., 951) signed with the United States of America, The Treaty is considered the Supreme Law of the Land according to Article 6 of the U.S. Constitution. It is the policy of the Yakama Nation to preserve, protect, and perpetuate all significant natural and cultural resources. Only the Yakama Nation can determine what is significant to the Tribe.

Upon review of the proposed project and based upon extensive working knowledge of the proposed project area, the Yakama Nation is opposed to this undertaking as it would cause detrimental impacts to significant cultural resources near the John Day Dam and the Columbia Hills. These cultural resources are sacred to the Yakama Nation and include archaeological, ceremonial, burial, petroglyph, monumental, and ancestral use sites. These sites are commonly called Traditional Cultural Properties (TCPs). The TCPs present within the proposed project area are but a remnant of what once was along the Columbia River. It is the responsibility of the Yakama Nation to protect those resources now and in the future for the benefit of those not yet born.

If you have any questions or comments please contact Gregg Kiona at (509) 865-5121 x4603 or Nick Finley at (509) 790-8958.

Sincerely,

Lonnie Selam
Deputy Director
Yakama Nation Cultural Resources

Document Content(s)

162 FERC ¶ 62,144
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

FFP Project 101, LLC Project No. 14861-000

ORDER ISSUING PRELIMINARY PERMIT
AND GRANTING PRIORITY TO FILE LICENSE APPLICATION

(Issued March 8, 2018)

1. On October 20, 2017, FFP Project 101, LLC (FFP) filed an application for a preliminary permit, pursuant to section 4(f) of the Federal Power Act (FPA),[1] to study the feasibility of the proposed Goldendale Energy Storage Project No. 14861 (project) to be located near Goldendale in Klickitat County, Washington and Sherman County, Oregon.

I. Project Proposal

2. The proposed project would be a closed-loop pumped storage project. Initial fill and make-up water would be pumped from the Columbia River via an existing pump house. The proposed project would consist of an upper and lower reservoir, an underground water conveyance system connecting the two reservoirs, an underground powerhouse, and a transmission line. The upper reservoir would be formed by an 8,000-foot-long, 170-foot-high rockfill embankment, with a storage capacity of 7,100 acre-feet at maximum water surface elevation of 2,940 feet and a surface area of 59 acres. The lower reservoir would be formed by a 7,400-foot-long, 170-foot-high rockfill embankment, with a storage capacity of 7,100 acre-feet at maximum water surface elevation of 580 feet and a surface area of 62 acres. Water would be conveyed from the upper reservoir to the lower reservoir via a 5,000-foot-long, concrete and steel tunnel with internal diameters ranging from 20 to 29 feet, and a 600-foot-long, 15-foot-diameter steel/concrete penstock. The powerhouse would contain three, 400-megawatt (MW) Francis-type pump-turbine units for a total installed capacity of 1,200 MW. Project power would be transmitted through a new 5-mile-long, 500-kilovolt transmission line from the powerhouse to Bonneville Power Administration's John Day Substation.

II. Background

3. The Commission issued public notice of FFP's permit application on December 15, 2017. Timely notices of intervention were filed by Washington

[1] 16 U.S.C. § 797(f) (2012).

Department of Fish and Wildlife and Oregon Department of Fish and Wildlife.[2] Timely motions to intervene were filed by Klickitat County, Washington; Columbia Riverkeeper; and, collectively, American Rivers, Center for Environmental Law and Policy, and Friends of the White Salmon River (Friends of the River).[3] Comments were filed by the U.S. Department of the Interior (Interior); Confederated Tribes and Bands of the Yakama Nation (Yakama Nation); and the Confederated Tribes of the Umatilla Indian Reservation (Umatilla).

III. Discussion

A. Public Interest

4. Columbia Riverkeeper states that it is not clear from FFP's preliminary permit application that the proposed transmission lines, reservoirs, and water diversions are in the public interest or required for public convenience and necessity. The FPA does not condition issuance of a preliminary permit upon a finding that it is in the public interest because to make such a finding would require the information and conclusions that are to be developed during the permit phase.[4]

B. Site Development

5. Portions of the project's proposed infrastructure would be located on the site of the former Columbia Gorge Aluminum Smelter, which is now a Resource Conservation and Recovery Act (RCRA)[5] contaminated site. Columbia Riverkeeper notes that the Commission has previously stated that "as a matter of policy, it is not prudent to issue a preliminary permit for a contaminated site that is still undergoing a cleanup process, regardless of whether that site is a RCRA site or a Superfund site."[6] Columbia Riverkeeper states that it is unclear how the proposed project will interact with cleanup efforts or disturb contamination located at the site.

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[2] Timely notices of intervention are granted by operation of Rule 214(a)(2) of the Commission's Regulations. 18 C.F.R. § 385.214(a)(2) (2017).

[3] Timely, unopposed motions to intervene are granted by operation of Rule 214(c) of the Commission's regulations. 18 C.F.R. § 385.214(c) (2017).

[4] *See, e.g., Wind River Hydro, LLC*, 115 FERC ¶ 61,009, at P 10 (2006).

[5] 42 U.S.C. §§ 6091 *et seq.* (2012).

[6] *Public Utility District No. 1 of Klickitat County, Washington*, 155 FERC ¶ 61,056, at P 8 (2016).

6. The Commission has previously stated that it will only consider development applications for sites undergoing a RCRA or Superfund cleanup process once the relevant state or federal agency certifies that cleanup is complete. As part of its permit application, FFP includes a letter from Washington Department of Ecology (Washington DOE), the state agency that oversees cleanup of the site, in which Washington DOE states that it is "supportive of the proposed project and believes that [the project] will not hinder the cleanup process."[7] Moreover, FFP has sufficiently demonstrated that its project boundary, which includes all lands that would be necessary for construction and operation of the project, does not include any land subject to further cleanup activities by Washington DOE.[8] FFP must pursue progress during the permit term and in any future licensing process without adversely impacting ongoing cleanup activities, and will have to demonstrate that licensing will not result in any issues arising from contamination in the project area.

C. Issues Related to Project Construction and Operation

7. The Umatilla recommend that the applicant's review of previously conducted cultural resource studies should include all cultural resource work conducted within one mile of the project's area of potential effect (APE). The Confederated Tribes ask that the Commission consider the potential effects of the proposed project on any historic properties that may be within the APE. The Yakama Nation states that it is opposed to the project because of the potential impacts to significant natural and cultural resources.

8. Interior notes that it will request information about the chemical, physical, and biological relationships, processes, and linkages necessary to enhance and maintain a healthy, biologically diverse ecosystem in concert with the proposed construction, operation, and maintenance of the project. Columbia Riverkeeper is concerned that aquatic and fisheries resources, water quality and quantity, wildlife, recreation, cultural resources, air quality, aesthetics, and other resources could be adversely affected by project construction and operation.

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[7] FFP's Application for Preliminary Permit, at Attachment B. Washington DOE has informed Commission staff that it cannot formally certify that cleanup of only a portion of a RCRA site is complete; however, as stated above, Washington DOE has indicated it is supportive of the proposal and FFP has demonstrated that its proposed project does not overlap any areas identified by Washington DOE as being subject to future cleanup activities.

[8] FFP's December 1, 2017 Response to Commission Staff's November 2, 2017 Additional Information Request.

9. A preliminary permit does not authorize a permittee to undertake construction of the proposed project. The purpose of a preliminary permit is to study the feasibility of the project, including studying potential impacts. The concerns raised in the comments are premature at the preliminary permit stage, in that they address the potential effects of constructing and operating the proposed project. Should the permittee file a license application, these issues will be addressed in the licensing process.

D. Consultation and Study Requirements under the Permit

10. Interior recommends that while performing project feasibility studies during the term of the permit, the applicant should ensure that damage to habitat and resources, particularly aquatic habitat, wetlands, and riparian vegetation, is avoided or minimized. Interior also recommends that the applicant coordinate with the U.S. Fish and Wildlife Service (FWS) prior to undertaking any scientific study, investigation, or other work required by the preliminary permit. Because listed species are likely to occur in the project area, Interior recommends that the Commission (or its designated non-Federal representative) enter into informal consultation with FWS to determine if ongoing and future effects of the project to listed species warrant formal consultation.

11. The Commission has not sought to place all relevant study requirements in preliminary permits.[9] Rather, the studies to be undertaken by a permittee are shaped by the Commission's filing requirements for development applications. Potential development applicants are required to consult with appropriate state and federal resource agencies and affected Indian tribes, conduct all reasonable studies requested by the agencies, and solicit comments on the application before it is filed.[10] As noted above, the permit does not authorize construction: the permittee must satisfy any applicable legal requirements before conducting studies that may affect the environment. Any necessary Endangered Species Act consultation would occur during the licensing process.

IV. Permit Information

12. Section 4(f) of the FPA authorizes the Commission to issue preliminary permits for the purpose of enabling prospective applicants for a hydropower license to secure the data and perform the acts required by section 9 of the FPA,[11] which in turn sets forth the material that must accompany an application for license. The purpose of a preliminary permit is to preserve the right of the permit holder to have the first priority in applying for

[9] *See, e.g.*, *Continental Lands, Inc.*, 90 FERC ¶ 61,355, at 62,177 (2000).

[10] *See* 18 C.F.R. § 4.38 (2017).

[11] 16 U.S.C. § 802 (2012).

a license for the project that is being studied.[12] Because a permit is issued only to allow the permit holder to investigate the feasibility of a project while the permittee conducts investigations and secures necessary data to determine the feasibility of the proposed project and to prepare a license application, it grants no land-disturbing or other property rights.[13]

13. Article 4 of this permit requires the permittee to submit a progress report no later than the last day of each six-month period from the effective date of this permit. The late filing of a report or the supplementation of an earlier report in response to a notice of probable cancellation will not necessarily excuse the failure to comply with the requirements of this article.

14. During the course of the permit, the Commission expects that the permittee will carry out prefiling consultation and study development leading to the possible development of a license application. The prefiling process begins with preparation of a Notice of Intent (NOI) and Pre-Application Document (PAD) pursuant to sections 5.5 and 5.6 of the Commission's regulations.[14] The permittee must use the Integrated Licensing Process unless the Commission grants a request to use an alternative process (Alternative or Traditional Licensing Process). Such a request must accompany the NOI and PAD and set forth specific information justifying the request.[15] Should the permittee file a development application, notice of the application will be published, and interested persons and agencies will have an opportunity to intervene and to present their views concerning the project and the effects of its construction and operation.

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

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

[14] 18 C.F.R. §§ 5.5 and 5.6 (2017).

[15] *See* 18 C.F.R. § 5.3 (2017).

15. A preliminary permit is not transferable. The named permittee is the only party entitled to the priority of the application for license afforded by this preliminary permit. In order to invoke permit-based priority in any subsequent licensing competition, the named permittee must file an application for license as the sole applicant, thereby evidencing its intent to be the sole licensee and to hold all proprietary rights necessary to construct, operate, and maintain the proposed project. Should any other parties intend to hold during the term of any license issued any of these proprietary rights necessary for project purposes, they must be included as joint applicants in any application for license filed. In such an instance, where parties other than the permittee are added as joint applicants for license, the joint application will not be eligible for any permit-based priority.[16]

The Director orders:

(A) A preliminary permit is issued for the Goldendale Energy Storage Project No. 14861 to FFP Project 101, LLC, for a period effective the first day of the month in which this permit is issued, and ending either 36 months from the effective date or on the date that a development application submitted by the permittee has been accepted for filing, whichever occurs first.

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

(C) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days of the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825*l* (2012), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2017).

David Turner, Chief
Northwest Branch
Division of Hydropower Licensing

[16] *See City of Fayetteville Public Works Commission*, 16 FERC ¶ 61,209 (1981).

Form P-1 (Revised April 2011)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF PRELIMINARY PERMIT

Article 1. The purpose of the permit is to maintain priority of application for a license during the term of the permit while the permittee conducts investigations and secures data necessary to determine the feasibility of the proposed project and, if the project is found to be feasible, prepares an acceptable application for license. In the course of whatever field studies the permittee undertakes, the permittee shall at all times exercise appropriate measures to prevent irreparable damage to the environment of the proposed project. This permit does not authorize the permittee to conduct any ground-disturbing activities or grant a right of entry onto any lands. The permittee must obtain any necessary authorizations and comply with any applicable laws and regulations to conduct any field studies.

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

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

Article 4. No later than the last day of each six-month period from the effective date of this permit, the permittee shall file a progress report. Each progress report must describe, for that reporting period, the nature and timing of what the permittee has done under the pre-filing requirements of 18 C.F.R. sections 4.38 and 5.1-5.31 and other applicable regulations; and, where studies require access to and use of land not owned by the permittee, the status of the permittee's efforts to obtain permission to access and use the land. Progress reports may be filed electronically via the Internet, and the Commission strongly encourages e-filing. Instructions for e-filing are on the Commission's website at http://www.ferc.gov/docs-filing/efiling.asp. To paper-file instead, mail four copies of the progress report to the Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426.

Document Content(s)

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

August 15, 2018

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

Re: Goldendale Energy Storage Project (FERC No. 14861)-**FIRST SIXTH MONTH PROGRESS REPORT**

Dear Secretary Bose,

On March 8, 2018, the Goldendale Energy Storage Project in Klicitat County, Washington (the "Project") was issued a preliminary permit by the Federal Energy Regulatory Commission (the "Commission"):

Project Number	Project Name	Permittee
P-14861	Goldendale Energy Storage Project	FFP Project 101, LLC

As a condition of permit issuance, the Commission requires the permittee file progress reports every six months. Rye Development, LLC, on behalf of the permittee (collectively, "Rye Development" or "Rye"), is submitting the following Six-Month Progress Report.

Project Activities

- On March 8, 2018 the Commission issued a preliminary permit for the Goldendale Energy Storage Project
- On May 15, 2018 Rye Development hosted an introductory project meeting and site visit for elected officials, the Washington Department of Ecology, Klickitat Public Utility District, and other stakeholders.

Engineering and Cost Analysis

- Over the last six months Rye has continued to refine the preliminary design of the proposed facility and update project costs. Over the next six months, the permittee intends to further refine the design of the project features to support the preparation of a preliminary application document (PAD).

Consultation

- Rye Development is continuing to consult with stakeholders and intends to prepare a PAD in the fall of 2018. An initial meeting discussing the proposed project with the Yakama Nation Tribal Council is scheduled for September 6, 2018.

Please do not hesitate to contact me if you require any additional information about this proposed Project.

Sincerely,

Erik Steimle

Document Content(s)

Sherman County Response to Nov 19 RFI

From: Jenine McDermid <countyclerk@shermancounty.net>
Sent: Monday, November 26, 2018 11:43 AM
To: Erik Steimle <erik@ryedevelopment.com>
Subject: Sherman County: Proposed Goldendale Energy Storage Project (FERC Project No. 14861)

Erik,
Today we received your request for information for the proposed Goldendale Energy Storage Project. I found nothing in our filed records pertaining to this project. County Judge Gary Thompson suggested I refer you to the Klickitat County planning office in Goldendale for further information.
Thank you.

Jenine McDermid, c.c.c.
Sherman County Clerk
500 Court Street
PO Box 365
Moro, OR 97039
Phone: 541-565-3606
Fax: 541-565-3771
countyclerk@shermancounty.net
http://www.co.sherman.or.us

Register to vote or check your registration status online at: http://sos.oregon.gov/voting-elections/Pages/default.aspx

Visit Sherman County's website! https://www.co.sherman.or.us

Confederated Tribes of the Umatilla Indian Reservation Response to Nov 19 FRI

From: Shawn Steinmetz <ShawnSteinmetz@ctuir.org>
Sent: Tuesday, November 27, 2018 2:26 PM
To: Erik Steimle <erik@ryedevelopment.com>
Cc: Audie Huber <AudieHuber@ctuir.org>; Teara Farrow Ferman <TearaFarrowFerman@ctuir.org>; Kristen Tiede <KristenTiede@ctuir.org>
Subject: Rye Development - Golden Energy Storage Project

Erik:
Thanks for the emailed letter dated November 19, 2018 concerning Rye Development's Golden Energy Storage Project. This appears to be essential the same project that was called the John Day Pumped Storage Hydro project that the Confederated Tribes of the Umatilla Indian Reservation received notice of in a letter from dated September 29, 2014 from Klickitat County PUD. It is also has been presented to us by Environmental Resources Management as the John Day Pumped Storage Project (FERC No. 13333) on March 31, 2015. As the Confederated Tribes of the Umatilla Indian Reservation's Cultural Resources Protection Program stated in the past, the proposed undertaking is within a historic property of religious and cultural significance to the Confederated Tribes of the Umatilla Indian Reservation that has been recommended as eligible for inclusion in the National Register of Historic Places. This project would adversely affect this historic property. The Cultural Resources Protection Program would like to work with you and the appropriate representative from FERC, the lead federal agency for the undertaking, to consider resolution of the adverse effects to the historic property.

Please let me know if you have any questions, my contact information is attached below.

Respectfully,
Shawn

Shawn Steinmetz
Archaeologist
Confederated Tribes of the Umatilla Indian Reservation
Cultural Resources Protection Program
46411 Timine Way
Pendleton, Oregon 97801
(541) 429-7963
shawnsteinmetz@ctuir.org

BLM Response to Nov 19 RFI

From: Heppler, Lenore <lheppler@blm.gov>
Sent: Wednesday, November 28, 2018 10:45 AM
To: Erik Steimle <erik@ryedevelopment.com>
Subject: Re: [EXTERNAL] RE: Proposed project

Erik: Thank you. It appears we have no role in this project.

Good luck!

Lenore

On Tue, Nov 27, 2018 at 3:42 PM Erik Steimle <erik@ryedevelopment.com> wrote:

Lenore,

I have attached the files you requested. The project is not in the vicinity of any BLM lands and I am happy to clarify any additional project questions you may have.

Sincerely,

Erik Steimle

From: Heppler, Lenore <lheppler@blm.gov>
Sent: Monday, November 26, 2018 2:23 PM
To: Erik Steimle <erik@ryedevelopment.com>
Cc: Marcus Tobey <mtobey@blm.gov>
Subject: Proposed project

Erik: I received your letter today requesting information to support preliminary application for the Goldendale Energy Storage Project. The first thing for us is to figure out if this proposed project is on any BLM- managed lands. Do you have a shape file of the project area you can send? With that, we could easily determine if BLM is even involved in this project

Lenore

Lenore Heppler

Branch Chief, Land, Mineral and Energy Resources

Oregon-Washington State Office

Bureau of Land Management

lheppler@blm.gov

503-808-6154

--
Lenore Heppler
Branch Chief, Land, Mineral and Energy Resources
Oregon-Washington State Office
Bureau of Land Management

lheppler@blm.gov
503-808-6154

WA Dept of Ecology Response to Nov 19 RFI

From: Schrieve, Garin D (ECY) <gasc461@ECY.WA.GOV>
Sent: Thursday, November 29, 2018 11:16 AM
To: Erik Steimle <erik@ryedevelopment.com>
Subject: Your letter dated November 19, 2018

Mr. Steimle:

I'm the Department of Ecology's project manager for the cleanup of the Columbia Gorge Aluminum Site near Goldendale. This email is in regard to your letter dated November 19th to James DeMay of the Department of Ecology's Industrial Section concerning the proposed Goldendale Energy Storage Project. It appears that this is a request to provide information regarding environmental resources in the project area.

Ecology's Industrial Section is the regulatory authority for the cleanup, water discharge permit, and hazardous waste management for the Columbia Gorge Aluminum Smelter. As such, we are in possession of extensive files concerning the site, many of which include information on environmental resources.

What I'm trying to understand about your letter is whether you are:

1. intending to make a public disclosure request for all our records concerning environmental resources at the site; or
2. offering us the opportunity to provide information we think you should consider for your project.

If your intent is to make a public disclosure request it will be extensive and likely take longer than 30 days to fulfill unless you choose to narrow it. There will also be fees associated with fulfilling the request.

Please give me a call at your convenience to discuss. We want to be of assistance, but are looking to better understand your intent so we can respond appropriately.

Thanks,

Garin Schrieve, P.E.
Cleanup Project Manager
Washington State Dept. of Ecology
PO Box 47600
Olympia, WA 98504-7600
(360) 407-6999

NOAA Response to Nov 19 RFI

From: Diane Melancon - NOAA Federal <diane.melancon@noaa.gov>
Sent: Friday, November 30, 2018 10:23 AM
To: Erik Steimle <erik@ryedevelopment.com>
Cc: NDB Communications - NOAA Service Account <ndb.communications@noaa.gov>; Lance Roddy <Lance.Roddy@noaa.gov>; OCS NDB <OCS.NDB@noaa.gov>; Tara Wallace <Tara.Wallace@noaa.gov>
Subject: Proposed Goldendale Energy Storage Project (FERC Project No. 14861)

Mr. Steimle,
Yesterday I received your November 19, 2018 letter via USPS Certified Mail. Perhaps another section of NOAA would have information regarding the environmental resources in the project area, but the Marine Chart Division does not. The Marine Chart Division mainly produces nautical charts whose features focus on those important for navigation. For your reference, I am attaching a PDF with our largest-scaled nautical charts that cover the project area, charts 18533 and 18535.

Although we don't have the information you currently seek, the proposed high voltage transmission line is of interest to us because it crosses the navigable waters of the Columbia River. For that reason, should the project be constructed, please send the Marine Chart Division - Nautical Data Branch the project's as-builts - most importantly, the high voltage transmission line's U.S. Army Corps of Engineers permit and as-built information. Although we accept hard copy documents at the address to which you sent the letter, digital communication and documents are preferred via the Nautical Data Branch's email address: ocs.ndb@noaa.gov.

Many thanks for contacting us and all the best for the project,
Diane

Diane Melançon, Cartographer
Nautical Data Branch
NOAA's Marine Chart Division

Charts_18533_18535
.pdf

UNITED STATES - WEST COAST

OREGON - WASHINGTON

COLUMBIA RIVER

LAKE CELILO

Mercator Projection
Scale 1:20,000 at Lat 45° 40'

North American Datum of 1983
(World Geodetic System 1984)

Additional information can be obtained at nauticalcharts.noaa.gov.

Formerly C&GS 6158, 1st Ed., Mar. 1961

NOAA encourages users to submit inquiries, discrepancies or comments about this chart at http://www.nauticalcharts.noaa.gov/staff/contact.htm.

SOUNDINGS IN FEET

Soundings and clearances of bridges and overhead cables refer to normal pool elevation, which is 160 feet above mean sea level in the upper pool above The Dalles Dam.

SOUNDINGS IN FEET

18533

KAPP 1757

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)
Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical
Al alternating
B black
Bn beacon
C can
DIA diaphone
F fixed
Fl flashing
G green
IQ interrupted quick
Iso isophase
LT HO lighthouse
M nautical mile
m minutes
MICRO TR microwave tower
Mkr marker
Mo morse code
N nun
OBSC obscured
Oc occulting
Or orange
Q quick
R red
Ra Ref radar reflector
R Bn radiobeacon
R TR radio tower
Rot rotating
s seconds
SEC sector
St M statute miles
VQ very quick
W white
WHIS whistle
Y yellow

Bottom characteristics:

Bldr boulders
bk broken
Cy clay
Co coral
G gravel
Grs grass
gr gray
h hard
M mud
Oys oysters
Pk rock
S sand
so soft
Sh shells
sy sticky

Miscellaneous:

AUTH authorized
ED existence doubtful
Obstn obstruction
PA position approximate
PD position doubtful
Rep reported
Subm submerged

Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, and U.S. Coast Guard.

PLANE COORDINATE GRID
(based on NAD 1927)

Oregon State Grid, north zone, is indicated by dashed ticks at 5,000 foot intervals. The last three digits are omitted.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Washington, or at the Office of the District Engineer, Corps of Engineers in Portland, Oregon.

Refer to charted regulation section numbers.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

HEIGHTS

Heights in feet

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.

STATUTE MILES
COLUMBIA RIVER

Mileage distances along the Columbia River are in Statute Miles. Distances along the Columbia River are eastward from the mouth, and are indicated thus: →

Tables for converting Statute Miles to International Nautical Miles are given in Coast Pilot 7.

CAUTION

The depths of water within the pool area have been determined from conditions existing prior to the filling of the pool. Shoaler depths than charted may exist within the blue tint area particularly near the shoreline. The areas outlined by the dotted curve and tinted green indicate depths of 1 foot or less when the pool elevation is 160 feet at the Dalles dam forebay.

CAUTION

Mariners are warned to stay clear of the protective riprap surrounding navigational light structures shown thus: ⊗

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System of 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.554" southward and 4.244" westward to agree with this chart.

SCALE 1:20,000
Nautical Miles
Statute Miles
Yards
Meters
LATITUDE
LONGITUDE

SOURCE

B3	1940-1969	NOS Surveys	partial bottom coverage

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

CONTINUED ON CHART 18532
JOINS PANEL BELOW
JOINS PANEL ABOVE
CONTINUED ON CHART 18535

18533

CAUTION
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

12th Ed., Sep. 2004. Last Correction: 5/26/2016. Cleared through:
LNM: 4618 (11/13/2018), NM: 4718 (11/24/2018), CHS: 1018 (10/26/2018)

To ensure that this chart was printed at the proper scale, the line below should measure six inches (152 millimeters).
If the line does not measure six inches (152 millimeters), this copy is not certified safe for navigation.

SOUNDINGS IN FEET

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

This chart was distributed as a PDF (Portable Document Format). Printing PDFs may alter the chart scale, color, or legibility that may impact suitability for navigation. Printed charts provided by NOAA certified Print on Demand (POD) providers fulfill a vessel's requirement to carry a navigational chart "published by the National Ocean Service" in accordance with federal regulations, including but not limited to 33 C.F.R. 164.33(a), 33 C.F.R. 164.72(b), and 46 C.F.R. 28.225(a). POD charts meet stringent print standards and can be recognized by an official certification of authenticity printed on the chart. A list of POD providers can be found at: nauticalcharts.noaa.gov/pod

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102
METERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Columbia River, Lake Celilo
SOUNDINGS IN FEET - SCALE 1:20,000

18533

Formerly C&GS 6159, 1st Ed., Jan. 1961

18535

KAPP 1759

PROVISIONAL CHART

UNITED STATES - WEST COAST

OREGON - WASHINGTON

COLUMBIA RIVER - JOHN DAY DAM TO BLALOCK

Mercator Projection
Scale 1:20,000 at Lat 45°43'N
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FEET
Additional information can be obtained at nauticalcharts.noaa.gov.

Soundings and clearances of bridges and overhead cables refer to the respective normal pool elevations, which are 160 feet above mean sea level in Lake Celilo below John Day Dam and 265 feet above mean sea level in Lake Umatilla above John Day Dam.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION

The depths of water have been determined from conditions existing prior to the filling of the pool. Shallower depths than charted may exist, particularly near the shoreline.
No soundings are available in areas depicted by depth curves except in isolated cases.

SCALE 1:20,000
Nautical Miles
Statute Miles
Yards

L A K E U M A T I L L A

J O H N D A Y R I V E R

Towal

Tank

Hook

Trailer Park

Ramp

TANK

TOWER

Fl G 2.5s 208 5M "1"

Fl R 4s

LOCK WIDTH 86 FT LENGTH 675 FT

John Day Lock Navigation Regulations 207.718 (see note A)

STARBOARD

Fl Y "A" Piv

Iso G 6s 37ft

Fl R 2.5s Piv

GG 196

OVERHEAD PWR CABLES AUTH CL 83 FT

RESTRICTED AREA 207.718 (see note A)

John Day Dam

Cliffs

Preachers Eddy

C E L I L O

Fl R 2.5s 264 14M

OVHD PWR CABLES CL 82 FT MHW

Interstate Hy No 84

Helms Canyon

Barricade

Ramp

Boys

FIXED BRIDGES VERT CL 19 FT

Fl R 2.5s 61ft 4M "6"

Tank

Cy silo

Fl R 4s

Barricade

OVHD PWR CAB

Quinton

Fl R 4s

Interstate Hy No 84

JOHNS CHART 18533

JOHNS PANEL BELOW

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Bldrs boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized — Obstn obstruction — PO position doubtful — Subm submerged
ED existence doubtful — PA position approximate — Rep reported
(21) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(12) Rocks that cover and uncover, with heights in feet above datum of soundings.

HEIGHTS
Heights in feet.

AUTHORITIES
Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U.S. Coast Guard, Geological Survey, and National Geospatial-Intelligence Agency.

PLANE COORDINATE GRID
(based on NAD 1927)
Oregon State Grid, north zone, is indicated by dashed ticks at 5,000 foot intervals. The last three digits are omitted.

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 7 for important supplemental information.

AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

HORIZONTAL DATUM
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NOTE A
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Refer to charted regulation section numbers.

MAGNETIC
VAR 17°15'E (2004)
ANNUAL DECREASE 6'

Goodnoe

Rock Creek

OVHD PWR CABS

Fl G 4s 22ft 4M "9"

Fl G 6s 55ft 4M "11"

Fl R 2.5s 15ft 4M "12"

Fl G 2.5s 15ft 4M "13"

Fl G 4s 28ft 4M "15"

Fl G 6s 69ft 4M "17"

FIXED BRIDGES VERT CL 34 FT

Blalock

Blalock Canyon

GRAIN ELEVATOR

JOHNS PANEL ABOVE

JOHNS CHART 18536

COLUMBIA RIVER
Mileage distances along the Columbia River are in Statute Miles eastward from the mouth and are indicated thus: ——
Tables for converting statute miles to International Nautical miles are given in Coast Pilot 7.

FATHOMS / FEET / METERS

SCALE 1:20,000
Nautical Miles
Statute Miles
Yards

KAPP 1760

18535

CAUTION
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12th Ed., Aug. 2004. Last Correction: 5/26/2016. Cleared through:
LNM: 4618 (11/13/2018), NM: 4718 (11/24/2018), CHS: 1018 (10/26/2018)

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If the line does not measure six inches (152 millimeters), this copy is not certified safe for navigation.

LOGARITHMIC SPEED SCALE
To find SPEED, place one point of dividers on distance run (in any unit) and the other on minutes run. Without changing divider spread, place right point on 60 and left point will then indicate speed in units per hour. Example: with 4.0 nautical miles run in 15 minutes, the speed is 16.0 knots.

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

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SOUNDINGS IN FEET

COLUMBIA RIVER - JOHN DAY DAM TO BLALOCK
SOUNDINGS IN FEET - SCALE 1:20,000

18535

Oregon Department of Justice response to Nov 20 RFI

From: Rowe Patrick G <Patrick.G.Rowe@doj.state.or.us>
Sent: Friday, November 30, 2018 12:06 PM
To: Erik Steimle <erik@ryedevelopment.com>
Subject: FW: Rye Development 11.19.18 letter to AG Rosenblum re: Request for Information re: Proposed Goldendale Energy Storage Project

Mr. Steimle,

The Oregon Department of Justice recently received your letter re: the Rye Development energy storage project (attached). The letter was forwarded to me, as I am the contact attorney (general counsel) for the Oregon Department of Energy. I have shared your letter with the Director of the Department of Energy and the head of its Siting Division. In the letter, you request any information regarding environmental resources in the project area. I'd appreciate it if you could further describe what type of information you are seeking.

Thank you.

Patrick G. Rowe
Senior Assistant Attorney General | General Counsel | Natural Resources Section
Oregon Department of Justice
503.947.4583

From: Seeley Jeffery
Sent: Friday, November 30, 2018 11:50 AM
To: Rowe Patrick G
Subject: Rye Development 11.19.18 letter to AG Rosenblum re: Request for Information re: Proposed Goldendale Energy Storage Project

Attached.

Jeffery R. Seeley
Legal Secretary
General Counsel Division | Natural Resources Section
Oregon Department of Justice
1162 Court Street NE, Salem, OR 97301-4096
503-947-4520 (Main line) | 503-947-4590 (Direct) | FAX: 503-378-3784

****

WDFW Response to Nov 19 RFI and RYE Response

From: Erik Steimle
Sent: Tuesday, December 4, 2018 5:02 PM
To: 'Verhey, Patrick M (DFW)' <Patrick.Verhey@dfw.wa.gov>
Cc: Steve Lewis <Stephen_Lewis@fws.gov>
Subject: RE: Your request for Existing Information to Support Preliminary Application Document for the Proposed Goldendale Energy Storage Project (FERC Project No. 14861)

Patrick,

Thank you for your prompt response and providing us with the information. Rye is taking a different approach to the project design, than the previous proposal. We are proposing a facility with a smaller project footprint and will be incorporating a number of protective measures for wildlife in the application. We too look forward to working with you on this project.

Sincerely,

Erik Steimle

Rye Development

Erik Steimle
Vice President
220 NW 8th Ave
Portland, OR 97209
(503) 998-0230
erik@ryedevelopment.com
www.ryedevelopment.com

From: Verhey, Patrick M (DFW)
Sent: Tuesday, December 04, 2018 4:44 PM
To: 'Eric@ryedevelopment.com' <Eric@ryedevelopment.com>
Cc: Steve Lewis <Stephen_Lewis@fws.gov>
Subject: Your request for Existing Information to Support Preliminary Application Document for the Proposed Goldendale Energy Storage Project (FERC Project No. 14861)

Hi Eric.
Once again I am excited to work with you on this Project. In October of 2014 the WDFW provided information on the Klickitat PUD Pumped Storage Project (FERC # P-13333), which was remarkably similar to the current proposal for the Goldendale Energy Storage Project (FERC # P-14861). I have attached that correspondence to this e-mail. I certainly can go through my files and resend all of the information I provided previously and information that identified WDFW's concerns with the Klickitat PUD Pumped Storage Project. But, it seems it would be a duplication of efforts and waste time that

could be spend discovering any new available information that may be helpful to you. Let me know if you would like me to duplicate my previous efforts. My preference is to spend this time working on potentially updating information that was provided on the Klickitat Project, which you were the primary contact. Let me know.

Also, after reviewing the November 19, 2018 correspondence from you the thought occurred to me as to why the project is being activated, with no modification from previous designs to address wildlife conservation issues. The WDFW and to my knowledge USFWS had significant concerns in regards to increasing the potential of raptor blade strikes at the Windy Ridge/Windy Point Wind Project, portions of which are located within the Klickitat PUD Pumped Storage Project and now within or at least immediately adjacent to the Goldendale Energy Storage Project. If you recall the WDFW provided information on the location of a Golden Eagle nest located immediately adjacent to the Project and provided comment on the attractive nature of the open reservoirs to waterfowl, which would in turn attract raptors to the wind turbines in the vicinity of the reservoirs to prey upon the waterfowl. Has Rye Development engineered a solution to this issue?

Please direct any future correspondence in regards the Goldendale Energy Project to me. Per the WDFW intervention notice, I am the WDFW lead on the Project. I look forward to a continued good working relationship with you and Rye Development.

Patrick Verhey
WDFW Habitat Program
Energy and Major Projects Division Biologist
1550 Alder St N.W.
Ephrata, WA 98823
Office (509) 754-4624 ex. 213
Cell (509) 431-8296
Patrick.Verhey@dfw.wa.gov
Work schedule is M-Th

STATE OF WASHINGTON

DEPARTMENT OF FISH AND WILDLIFE

1550 Alder St. N.W. • Ephrata, Washington 98823 • (509) 754-4624 FAX (509) 754-5257

October 28, 2014

Mr. Brian Skeahan
Project Consultant
Klickitat PUD
1313 South Columbus Ave.
Goldendale, WA 98620

RE: Request for Information Relevant to Proposed John Day Pumped Storage Hydroelectric Project, FERC No. 13333.

Dear Mr. Skeahan:

The Washington Department of Fish and Wildlife (DFW) have reviewed your preliminary permit for the John Day Pump Storage Project (Project), FERC Project No. 13333. The DFW is particularly interested in the Project's effect on fish and wildlife. On September 29, 2014 Klickitat County PUD requested any information the DFW may have regarding environmental resources in the Project area. We have included information available to DFW regarding environmental resources that may be impacted by the Project in this correspondence in addition to outlining our initial concerns. In addition we recommend reviewing the February 2006 Windy Point Wind Farm Environmental Report, which contains a great deal of environmental information that may pertain to your Project. Notably, in section 2.5.1 of the report the Project area is included as part of the regional IBA (important bird area) as designated by Audubon Washington.

Project Description

The Project would operate as a closed loop pumped storage project, where water is recycled between two man-made reservoirs in an off-channel and closed system. Water for the initial fill of the lower reservoir and periodic make-up water to account for seasonal evaporative losses would be provided through an existing water intake in the John Day pool through use of an existing water right owned by Klickitat PUD. The Project would require the construction of an underground powerhouse and waterway, an overhead transmission line spanning across the Columbia River into Oregon, and two reservoirs of just over 100 surface acres each, one in the

vicinity of John Day Dam on lands of the former Columbia Gorge Aluminum plant and the second located in the Columbia Hills north of John Day Dam.

WDFW environmental resources in the Project area

WDFW Priority Habitat Species list can be found at http://wdfw.wa.gov/conservation/phs/list/. A search of the PHS list of species that reside within or immediately adjacent to the project resulted in the following list of species:

Bald Eagle-State sensitive species/Federal species of concern
Golden Eagle-State candidate species
Prairie Falcon-state monitored
Little Brown Myotis Bat
Canyon Bat-state monitored
Night Snake-state monitored
Common Garter Snake
Western Fence Lizard

WDFW Environmental Concerns

Habitat

Environmental impacts due to construction of the upper and lower reservoirs and transmission line should be limited to the extent possible and mitigation should be developed to address unavoidable impacts to Oregon white oak habitat, oak/pine woodlands, grassland habitat, lithosol habitat, juniper woodlands and shrub steppe habitat.

Avian

The DFW recommend following the Suggested Practices for Avian Protection On Power Lines, The State of the Art in 2006 to protect avian species from electrocution as a result of landing or perching on transmission lines and distribution lines.

As of August 9, 2007, the bald eagle is no longer included on the list of federal threatened and endangered species. However, the golden eagle is a resident in the project area and a state candidate species. Bald eagles are potential residents. Both are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

The DFW has conducted extensive studies of associated golden eagle territory, as well as bald eagle and other raptor use of the Project area. To date, it is unknown if any nesting bald eagles are in close proximity to the Project. The bald eagles we see wintering (i.e., primarily migrants) are associated with the John Day Hydroelectric Project on the Columbia River, located immediately adjacent to the Project area, and along Rock Creek. We anticipate these birds will be attracted to the proposed reservoirs to forage for waterfowl and fish. Ospreys and waterfowl have a high likelihood to be drawn to the Project area as well. Increase in numbers of these birds would increase their presence at the adjacent wind projects and potential for mortality events.

The proposed project is the third major project or activity in the area. Cumulative impacts of the Windy Point II Wind Energy Project, Tuolume Wind Project, and the proposed Project may result in mortality, nest abandonment, and a loss of eagle habitat. Since the wind power projects were developed at least 3 adults eagles have died or disappeared on this territory. Although younger birds have been seen on the territory, none have re-established as a nesting pair. No young have been produced since the wind projects were developed. The attached map (Fig. 1) illustrates the home range of the adult male golden eagle DFW radio tagged in 2007 with respect to turbines and approximate locations of the proposed reservoir. Because it is only based on an 8-month time period it is not representative of the entire use area of eagles likely to nest on this territory in the future.

Specific eagle concerns:

1) Loss of prime foraging habitat - much of the foraging habitat for these eagles to the west of the nest has already been compromised by wind turbines. If the proposed Project is built, foraging for the golden eagle pair would be limited along the entirety of the slope and lower terrace down to the aluminum plant.

2) Human disturbance resulting from reservoir construction and activities associated with maintenance may stress the birds and cause them to abandon the nest. The west nest, figure 1, is essentially located on the cliff face above the lower reservoir.

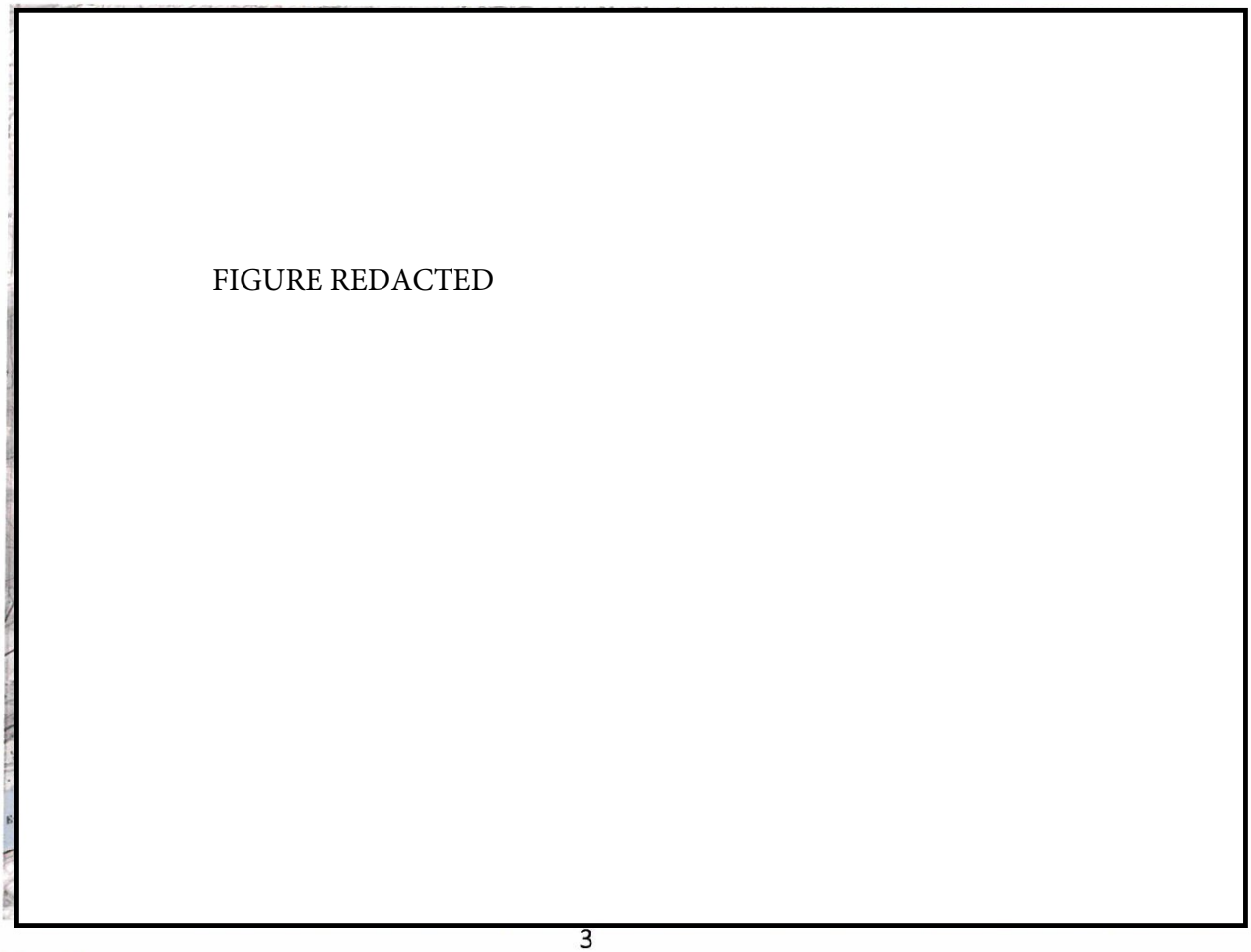


Figure 1

3) Construction and maintenance of the Project can potentially increase bald eagle and osprey activity near both reservoirs due to the reservoirs potentially providing a food source (fish and waterfowl) that did not previously exist. The potential increase in presence of bald eagles may increase the need for nest/territory defense by the golden eagles during nesting, which would contribute to increase energy demands of the birds and increased stress.

4) Potentially increased bald eagle activity in the wind project turbine zones (upper reservoir especially) due to the attraction of eagles to the reservoirs to forage.

Fish

The pumping of large volumes of water between the Columbia River and the proposed lower and upper reservoir has the potential to entrain and kill adult and juvenile fish resulting from the passage of fish through the project's turbines and pumps. WDFW recommends the installation of a fish screen or juvenile bypass system to prevent entrainment of fish. In addition, DFW is concerned in regards to toxic wastes accumulated in the vicinity of the Columbia Gorge Aluminum Plant and the potential impacts these materials may have on fish life.

According to WDFW's SalmonScape, http://apps.wdfw.wa.gov/salmonscape/map.html, the following fish may be present in the Project area: Upper Columbia River Summer Chinook, Upper Columbia River Spring Chinook, Fall Chinook, Coho, summer steelhead, sockeye, and bull trout, mountain whitefish, lamprey, smelt, and resident fish.

Thank you for this opportunity to provide WDFW initial concerns and available information for the proposed John Day Pump Storage Project. Please contact me at (509) 754-4624 ex. 13 or by e-mail at Patrick.Verhey@dfw.wa.gov if you have any questions.

Sincerely,

Patrick Verhey, WDFW Hydroelectric Mitigation Biologist

Cc:

Pat Irle, Ecology, Yakima, WA
Stephen Lewis, USFWS, Wenatchee, WA
Bob Rose, Yakama Nation, Toppenish, WA

Oregon PUC Response to Nov 19 RFI

From: DAVIS Diane <diane.davis@state.or.us>
Sent: Thursday, December 13, 2018 9:13 AM
To: Erik Steimle <erik@ryedevelopment.com>
Subject: RE: Request for Existing Information - FERC Project No. 14861

Dear Erik Steimle,

I've contacted the Oregon PUC Staff, and we do not have any information regarding the environmental resources in the Goldendale Energy Storage Project.

If I can be of further assistance, please contact me.

Thank you.

Diane Davis

PUC Administrative Hearings Division

From: DAVIS Diane
Sent: Tuesday, November 27, 2018 11:43 AM
To: 'erik@ryedevelopment.com' <erik@ryedevelopment.com>
Subject: Request for Existing Information - FERC Project No. 14861

Hello,

I received your request today and forwarded it on to the PUC Staff. I'll keep you posted as to whether or not we have responsive information, and if we do, whether or not there will be a cost to provide.

Thank you.

Diane Davis

Oregon PUC Administrative Hearings Division

US Hang Gliding & Paragliding Response to Nov 19 RFI and Applicant's Response

-----Original Message-----
From: Kelly Kellar <wordpress@ryedevelopment.com>
Sent: Wednesday, December 19, 2018 2:37 PM
To: Rye Development <info@ryedevelopment.com>
Subject: "Goldendale Hydropowered energy storage prodject ?" - Rye Contact Form

From: Kelly Kellar <Info@maxroc.com>
Subject: Goldendale Hydropowered energy storage prodject ?

Message Body:
Hello,
I'm wondering how this Goldendale Hydropowered energy storage project will impact the paraglidng and hang gliding community that have been flying this site sense 1995 ? It is the only east wind flying site we have in the pacific northwest.
We always had a good relationship with the golden aluminum plant.
It is our highest hopes that we will continue to be able to fly here.
From Reed Gleason's property that he had purchased from the goldendale aluminum plant. Solely for the purpose of preserving it as a flying site .
Please let us know what we can expect or who we can talk to so we can get a clear picture of how we can all have a great future together complimenting your power project and our passion for paragliding and hang gliding.
Thanks
United States Hang Gliding & Paragliding instructor.
Kelly Kellar
1(503)464-6140
info@maxroc.com

-----Original Message-----
From: Erik Steimle <erik@ryedevelopment.com>
Sent: Thursday, December 20, 2018 1:45 PM
To: info@maxroc.com
Cc: Sandy Slayton <sandy.slayton@erm.com>; Suzanne Adkins <Suzanne.Adkins@erm.com>
Subject: RE: "Goldendale Hydropowered energy storage prodject ?" - Rye Contact Form

Kelly,

Thank you for taking the time to meet with me and discuss the proposed Goldendale Energy Storage Project. It was good to get a detailed understanding of where you and fellow paragliders takeoff and land in this area of the county, as well as understand that the project as we are proposing will not interfere with flights in the area. As requested I have attached a number of high quality renderings of the project including the ones we looked at today. Please let me know if you have any trouble downloading them. I will keep you posted on the timing of our upcoming public meeting in Goldendale.

Sincerely,

Erik Steimle
Vice President
220 NW 8th Ave
Portland, OR 97209
(503) 998-0230
erik@ryedevelopment.com
www.ryedevelopment.com

Oregon SHPO Response to Nov 19 RFI

-----Original Message-----
From: FRENCH Jamie * OPRD <Jamie.French@oregon.gov>
Sent: Thursday, December 20, 2018 8:47 AM
To: Erik Steimle <erik@ryedevelopment.com>
Subject: SHPO Case Nbr SHPO Case No.: 18-1856, FERC 14861, Rye Development, Goldendale Energy Storage Project

Please find the SHPO's response to your request for comment on cultural resources at the above-identified project. This attachment serves as your file copy. If you have any questions, please feel free to contact me.

Oregon
Kate Brown, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St NE Ste C
Salem, OR 97301-1266
Phone (503) 986-0690
Fax (503) 986-0793
www.oregonheritage.org

December 20, 2018

Mr. Erik Steimle
Rye Development, LLC
Oregon Offices
220 NW 8th Ave
Portland, OR 97209

RE: SHPO Case No. 18-1856
FERC 14861, Rye Development, Goldendale Energy Storage Project
5 mile transmission line to BPA John Day Substation

Dear Mr. Steimle:

A search through the SHPO archaeological database has revealed that thereare several cultural resources in the area of the project referenced above. It is important that a cultural resource survey be conducted to identify the location, boundaries and significance of any cultural remains within the project area prior to any ground disturbing activities.

We recommend that the area be examined by a professional archaeologist, prior to development, to determine if cultural materials are present. A list of archaeological consultants can be found at our website (www.oregonheritage.org) by clicking on the Archaeological Services web page and highlighting the section marked Archaeological Consultants Directory.

The recommendations above are intended to help the applicant avoid damaging any archaeological sites in the project area. If you have not already done so, be sure to consult with all appropriate Indian tribes regarding your proposed project. If you have any questions regarding the applicant's need to hire an archaeologist, or wish any additional information about the above comments, feel free to contact the SHPO office. In order to help us track your project accurately, please be sure to reference the SHPO case number above in all correspondence.

Sincerely,

Jamie French, M.A.
SHPO Archaeologist
(503) 986-0729
Jamie.French@oregon.gov

ODFW Response to Nov 19 RFI

From: Elizabeth A OsierMoats <Elizabeth.A.OsierMoats@state.or.us>
Sent: Thursday, December 20, 2018 12:26 PM
To: Erik Steimle <erik@ryedevelopment.com>
Cc: Elizabeth A OsierMoats <Elizabeth.A.OsierMoats@state.or.us>; Ken Homolka <Ken.Homolka@state.or.us>
Subject: Goldendale Energy Storage Project (P-14861)

Erik Steimle,

Oregon Department of Fish and Wildlife (ODFW) received your letter, dated November 19, 2018, requesting existing information related to the proposed Goldendale Energy Storage Project (P-14861).

ODFW's concerns remain unchanged since we provided comments on the John Day Pumped Storage Hydroelectric Project (P-13333), which was proposed at the same site, with a similar footprint, and would have similar impacts.

Attached are those comments, dated October 30, 2014, and comments from the National Marine Fisheries Service, which we referenced in our comments.

Please feel free to contact me if you have any further questions.

Thank you,

Elizabeth A.O. Moats
East Region Hydropower Coordinator
Oregon Department of Fish and Wildlife
East Region Office
107 20th Street
La Grande, OR 97850
Office: 541-962-1832
Cell: 541-805-4559

Oregon
John A. Kitzhaber, MD, Governor

Department of Fish and Wildlife
Northeast Region
107 20th Street
La Grande, OR 97850
(541) 963-2138
FAX (541) 963-6670

October 30, 2014

Brian Skeahan
Project Consultant
Klickitat PUD
1313 South Columbus Ave
Goldendale, WA 98620

RE: Request for information relevant to proposed John Day Pumped Storage Hydroelectric Project, FERC No P-13333

Dear Mr. Skeahan:

The Oregon Department of Fish and Wildlife (ODFW) received your letter, dated September 29, 2014, in which you request information relevant to the Proposed John Day Pumped Storage Hydroelectric Project (P-13333). According to the letter, the project water intake is located in the Columbia River upstream of the John Day Dam on the Washington shore. In addition, an overhead transmission line will be constructed across the Columbia River and into Oregon to deliver electricity to Bonneville Power Administration's John Day Substation.

ODFW is the state agency with jurisdiction over fish and wildlife in Oregon. The Project would obtain water from the Columbia River. The Columbia River at the proposed intake location is the state boundary to Oregon and Washington and both states are deemed to have concurrent jurisdiction for regulating, protecting, or preserving fish (Oregon Revised Statute (ORS) 507.101 and ORS 507.020). Further, the proposed transmission lines will connect to Bonneville Power Administration's existing John Day Substation, located in Sherman County, Oregon. ODFW possesses management expertise regarding the natural resources in the Columbia River and manages Oregon's fish and wildlife resources that may be affected by the Project.

Wildlife Resources

A portion of the proposed transmission line will be located in Oregon approximately 5 miles south of the project. Attached is a map of the project vicinity showing ODFW's general areas of concern for terrestrial species. This data is publicly available on Compass, the Centralized Oregon Mapping Products and Analysis Support System (http://www.dfw.state.or.us/maps/compass/index.asp). Additionally, ODFW is aware of a peregrine falcon nesting site in the vicinity of the proposed transmission line.

Fish and Aquatic Resources

ODFW supports the National Marine Fisheries Service (NMFS) comments, dated October 29, 2014, regarding screening required on the project intake and the design criteria thereof and the potential for impacts to Columbia River water quantity and quality during project operation.

ODFW shares management responsibility for fisheries resources in the Columbia River with Washington. ODFW's policy is to require screening on any diversion where fish are present (ORS 498.306) and to require mitigation for any fish and wildlife habitat losses resulting from development actions (Oregon Administrative Rule 635-415-0010). While the intake will be under the jurisdiction of the State of Washington, ODFW's responsibility to protect and preserve fisheries resources in the Columbia River remains. Risks to fish and aquatic resources in the Columbia River should be investigated and site specific mitigation should be developed to minimize any potential impacts.

ODFW appreciates the opportunity to provide information and comments in the development of the proposed John Day Pumped Storage Hydroelectric Project. Please feel free to contact me if you have any questions (541-962-1832 or elizabeth.a.osiermoats@state.or.us).

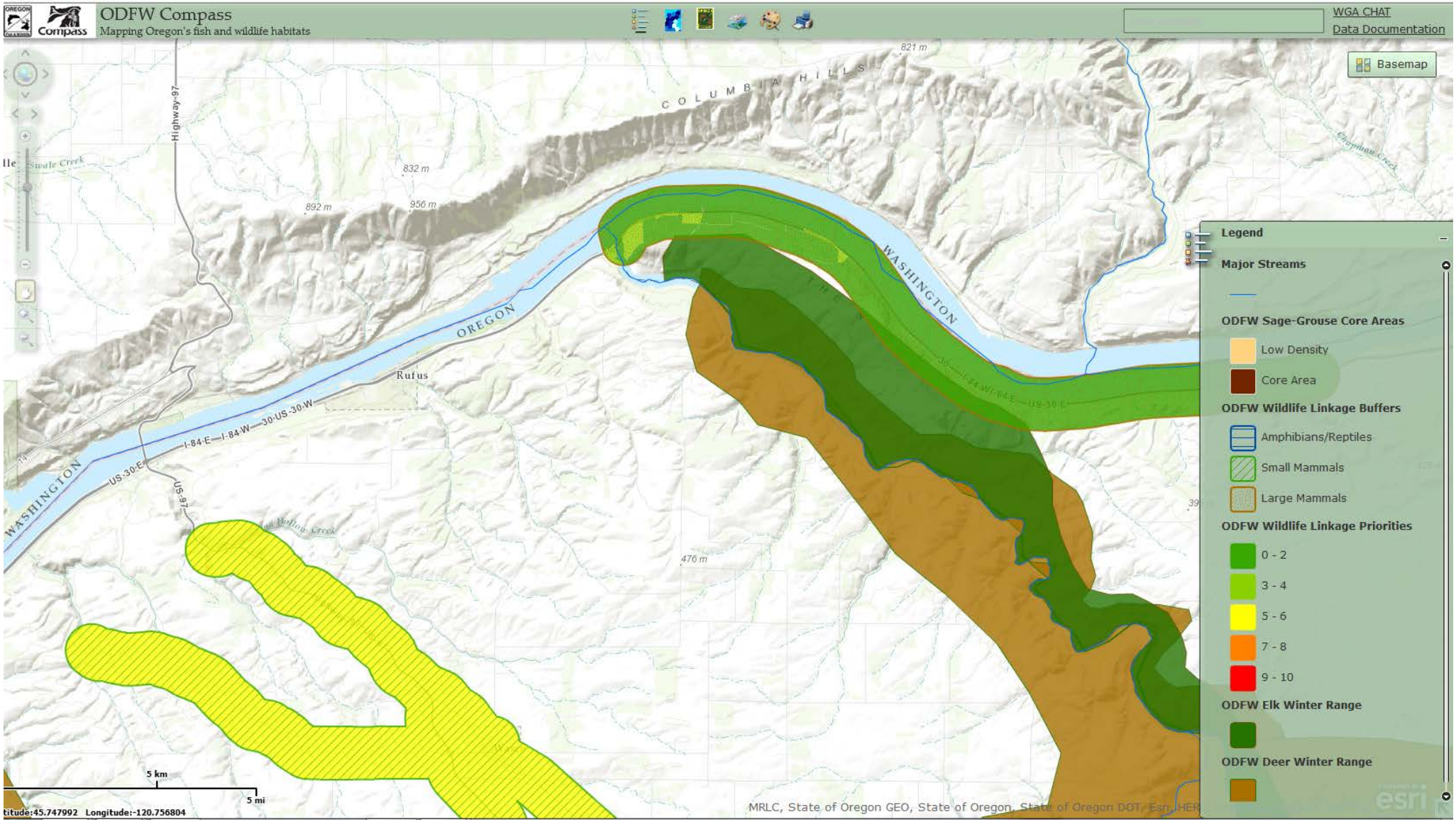
Sincerely,

Elizabeth A. O. Moats
East Region Hydropower Coordinator

C:
Ken Homolka – ODFW
Rebecca O'Neil – ODOE
Mary Grainey – OWRD
Marilyn Fonseca - ODEQ

Attachment: John Day Pool Pumped Storage Hydroelectric Project (P-13333) Vicinity Terrestrial Habitat – Areas of Concern

John Day Pool Pumped Storage Hydroelectric Project (P-13333) Vicinity
Terrestrial Habitat – Areas of Concern



October 30, 2014

USGS Washington Science Center Response to Nov 19 RFI

From: Dinicola, Richard <dinicola@usgs.gov>
Sent: Friday, December 21, 2018 9:50 AM
To: Erik Steimle <erik@ryedevelopment.com>
Cc: Joseph Jones <jljones@usgs.gov>; Cynthia Barton <cbarton@usgs.gov>; Marijke Van Heeswijk <heeswijk@usgs.gov>
Subject: Re: REQUEST FOR EXISTING INFORMATION...FERC Project No. 14861

Mr. Steimle,

My Center (The USGS Washington Water Science Center) was asked to respond to your letter to the USGS Regional Director in Menlo Park, CA dated Nov. 19, 2018:

Re: REQUEST FOR EXISTING INFORMATION TO SUPPORT PRELIMINARY APPLICATION DOCUMENT FOR THE PROPOSED GOLDENDALE ENERGY STORAGE PROJECT (FERC Project No. 14861)

In that regard, we assembled our available information on the Water Resources of the Klickitat River near Goldendale (attached).

Best Regards

Rick Dinicola, Associate Director

U.S. Geological Survey, Washington Water Science Center

934 Broadway, Suite 300, Tacoma, WA 98402

Office 253 552 1603 | Mobile 253 355 6337 | http://wa.water.usgs.gov

WDFW Email January 14, 2019

NOTE: GOLDEN EAGLE SURVEY INFORMATION NOT INCLUDED

From: Erik Steimle
Sent: Monday, January 14, 2019 2:43 PM
To: 'Verhey, Patrick M (DFW)' <Patrick.Verhey@dfw.wa.gov>
Subject: RE: raptor survey information for Goldendale Energy Storage Project P-14861

Thank you Patrick,

This is helpful.

Erik

From: Verhey, Patrick M (DFW) <Patrick.Verhey@dfw.wa.gov>
Sent: Monday, January 14, 2019 2:41 PM
To: Erik Steimle <erik@ryedevelopment.com>
Subject: raptor survey information for Goldendale Energy Storage Project P-14861

Erik,

unfortunately we don't have updated information on the John Day GOEA territory (it was last surveyed in 2014, also see attached), but it's on the list for surveying in 2019. The attached information may be useful to you during the Project development phase.

Patrick Verhey
WDFW Habitat Program
Energy and Major Projects Division Biologist
1550 Alder St N.W.
Ephrata, WA 98823
Office (509) 754-4624 ex. 213
Cell (509) 431-8296
Patrick.Verhey@dfw.wa.gov
Work schedule is M-Th

Rye Development

ORIGINAL

745 Atlantic Ave. 8th Floor, Boston, MA 02111

January 28, 2018

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

Re: NOTIFICATION OF INTENT AND PRE-APPLICATION DOCUMENT FOR THE GOLDENDALE ENERGY STORAGE PROJECT, FERC NO. 14861

Honorable Kimberly D. Bose,

This notice is provided to inform you that FFP Project 101, LLC (Applicant) intends to file for an original license for the proposed Goldendale Energy Storage Project FERC No. 14861 (Project).

The Notification of Intent (NOI) and the Pre-Application Document (PAD) filed with the Federal Energy Regulatory Commission (FERC) are available for download at the following web address:

http://www.ryedevelopment.com/projectstor/goldendale-washington/

The Applicant has petitioned the FERC to license the Project using the Traditional Licensing Process (TLP).

FERC issued a Preliminary Permit on March 8, 2018 for the purpose of allowing the Applicant to investigate the feasibility of the Project, conduct investigations, consult with appropriate state and federal resource agencies and secure the necessary data to determine the feasibility of the Project, and to prepare a license application. Since filing for the permit, the Applicant has maintained steady progress on the Project by conducting outreach to local stakeholders, entering into agreements for site access with the majority landowner and water rights holder, continuing dialog with Bonneville Power Administration regarding interconnection initiating discussions interested parties regarding the purchase of energy output, and evaluating the feasibility and economic potential for the Project.

The initial stage for seeking a license was the preparation of the PAD, which is included with this submittal to the FERC and is also being supplied to stakeholders. The applicant has continued to make a good faith effort to reach out to numerous state agencies and interested stakeholders to obtain existing resource information, as well as understand potential impacts associated with the project. Based on these efforts, as well as other facts and circumstances, the Applicant believes that the default Integrated Licensing Process (ILP) would not serve the stakeholders' best interests and that the TLP would instead be a more appropriate, cost-effective, and efficient method for proceeding.

Pursuant to Section 5.3(c)(1)(i) and (ii), the following considerations are being addressed:

(A) Likelihood of timely issuance;

The ILP is an intensive, front-loaded process that involves scoping under the National Environmental Policy Act (NEPA), study plan development, dispute resolution, study plan implementation, and application development. The ILP imposes a stringent timeline on the licensing process, thereby placing

significant demands on all parties involved—including already strained resource agencies—to meet rigid deadlines. Any one failure in this regard could set the project back months to years and even jeopardize the project completely; because of this, the Applicant believes the TLP would allow both the applicant and resource agencies to complete all requirements necessary for issuance of a license in a more timely manner.

(B) Complexity of the resource issues;

The Applicant believes that, while significant and obviously important, the resource issues of the Project are both simple and minimal compared to other projects of this scale. Concomitantly, the likelihood of significant dispute over studies is also minimal. Given the Applicant's willingness to adequately address these issues, the Applicant believes that the TLP would better facilitate moving the licensing process forward. It would allow the Applicant and agencies to focus immediately on the issue resolution without being burdened with additional pre-resolution requirements under the ILP.

(C) Level of anticipated controversy;

Based on communications with stakeholders and their responses, the applicant expects that licensing of the Project will elicit a low level of controversy. While the licensing participants will thoroughly study and examine issues identified in the PAD, the Applicant believes requirements can be met in a timely manner and meet the requirements of the FPA.

(D) Relative costs of the TLP compared to the ILP;

The Applicant believes that the TLP would be more economical for this project than the ILP. In bypassing labor-intensive scoping and study plan development, the licensing process would proceed at significantly reduced costs and alleviate undue burden on resource agencies.

(E) The amount of available information and potential for significant disputes over studies;

The Applicant plans to collaboratively work with the agencies and stakeholders to develop appropriate study scopes to analyze identified issues. The Applicant is committed to conducting necessary studies in order to effectively evaluate the issues and anticipates no significant disputes over studies.

(F) Other factors believed by the applicant to be pertinent:

i. The Applicant has made a good faith effort to reach out to numerous state agencies and interested stakeholders to ascertain potential impacts associated with the project. Based on these efforts as well as other facts and circumstances, the Applicant believes that the default ILP would not serve the stakeholders best interests and that the TLP would instead be more appropriate, cost-effective and efficient method for proceeding.

ii. The Applicant has reached out to many agencies and tribes and is continuing to work collaboratively with all interested parties in defining the Project features in a manner most compatible with the management plans and priorities for the area.

iii. As required by FERC regulation, the Applicant is providing a copy of this request to all affected resource agencies, Indian tribes and other stakeholders likely to be interested in the proceeding, as set forth in Section 8 of the attached NOI.

The applicant respectfully submits that these considerations, as mentioned above, weigh in favor the FERC granting its request to utilize the TLP. For these reasons, the Applicant respectfully requests that the FERC authorize it to utilize the TLP in the licensing of this Project.

As provided in Section 5.3(d)(1) of the FERC's regulations, all comments on this request must be filed with the FERC within 30 days of the filing date (February 28, 2018) and must reference FERC Project No. 14861. Respondents may submit comments electronically (www.ferc.gov) or by sending an original and eight copies to the following address:

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St NE
Washington, DC 20426

Finally, as required under Section 5.3(d)(2) of the FERC's regulations, the applicant will publish the notice of this request in the appropriate newspaper and file a copy of this notice with the FERC upon publication.

Washington State has aggressive greenhouse gas reduction and clean energy goals. Oregon and California have recently passed 50 percent RPS legislation, each of which also includes targets for reducing greenhouse gas emissions that limit the types of resources that can be used to provide flexibility services. Additionally, California is considering a 100% RPS and the City of Los Angeles recently passed a 100% renewable energy resolution. Load growth and increasing RPSs will require approximately double the number of renewable energy projects that are currently on the Pacific Northwest system by the year 2035. With the California 50% RPS, it is expected that nearly 40GW of solar will be built, creating massive over-generation and negatively priced mid-day solar dump energy that can be exported and stored in the Pacific Northwest.

Integrating California in-state solar at this scale will require net load ramping flexible capacity during peak hours of use when solar falls off to ensure grid reliability and economic use of this oversupply. Intermittent renewables on the grid already have the potential to create gigawatts of overgeneration and are being curtailed due to the existing system's limited flexibility and storage. Without utility-scale storage to solve the operational challenges of integration, Washington, Oregon, and California cannot achieve carbon reduction and environmental policy goals reliably and cost-effectively. Based on economic modeling of the Project by Energy and Environmental Economics Inc. (E3), the Goldendale Energy Storage Project could save regional ratepayers hundreds of millions of dollars annually in cost savings and revenue.

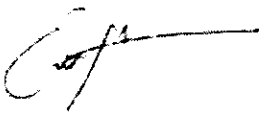
Of the viable, least-cost energy storage options available, pumped storage is the best proven, least-cost energy storage technology at scale. We are studying the idea of constructing two new sealed or "closed" reservoirs near the former Columbia Gorge Aluminum Smelter. The reservoirs would not be connected to the Columbia River and would not impact any existing aquatic environments. The project would store energy by letting water leased from Klickitat Public Utility District flow downhill through turbines during the day, producing electricity at peak times, and then being pumped back uphill at night, renewing the energy source during low use times. The project would be effectively "recharged" and the same water is reused to generate and store new energy. The process does not use consume water to recharge and has no carbon emissions, making it an environmentally responsible source of energy storage.

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

A dedicated off-river or "closed loop" pumped storage project such as the proposed Goldendale Energy Storage Project does not have the operational and environmental restrictions imposed on the conventional hydropower projects located on the Columbia River where there are often non-generation uses of the river system that are prioritized over the production of electricity. Therefore, the project can freely start, stop, reverse, and fluctuate as needed by the power system without impacting non-generation objectives such as aquatic species protection, flood control, navigation, irrigation, and recreation. In addition, the potential energy project being studied by Rye Development and National Grid would assist with the cleanup of a portion of the former Goldendale Aluminum Smelter site and create more than 3,000 jobs during construction of the facility and 100 local jobs during operation.

Sincerely,



Erik Steimle
Vice President
Portland, Oregon
erik@ryedevelopment.com

Document Content(s)

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

February 26, 2019

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

Re: Goldendale Energy Storage Project (FERC No. 14861)- **SECOND SIXTH MONTH PROGRESS REPORT**

Dear Secretary Bose,

On March 8, 2018, the Goldendale Energy Storage Project in Klicitat County, Washington (the "Project") was issued a preliminary permit by the Federal Energy Regulatory Commission (the "Commission"):

Project Number	Project Name	Permittee
P-14861	Goldendale Energy Storage Project	FFP Project 101, LLC

As a condition of permit issuance, the Commission requires the permittee file progress reports every six months. Rye Development, LLC, on behalf of the permittee (collectively, "Rye Development" or "Rye"), is submitting the following Six-Month Progress Report.

Project Activities

- On January 25, 2019 Rye Development filed a notice of intent (NOI), preliminary application document (PAD), and a request to use FERC's traditional licensing process (TLP) for the Goldendale Energy Storage Project

Engineering and Cost Analysis

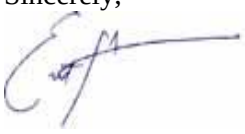
- Over the last six months Rye has continued to refine the preliminary design of the proposed facility and updated project costs to support the filing of a PAD. Over the next six months, the permittee intends to further refine the design of the project features.

Consultation

- Rye Development is continuing to consult with stakeholders including resource agencies, the Yakama Tribe, residents, and others about the PAD and project activities moving forward.

Please do not hesitate to contact me if you require any additional information about this proposed Project.

Sincerely,



Erik Steimle

Columbia Riverkeeper
407 Portway Ave, Suite 301
Hood River, OR 97031

phone 541.387.3030
www.columbiariverkeeper.org

February 28, 2019

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

RE: Rye Development's request to use the Traditional Licensing Process for the Goldendale Energy Storage Project, FERC No. P-14861

Dear Ms. Bose,

Columbia Riverkeeper is a 501(c)(3) non-profit organization whose mission is to protect and restore the water quality of the Columbia River and all life connected to it from the headwaters to the Pacific Ocean. The organization's strategy for protecting the Columbia River and its tributaries includes working in river communities and enforcing laws that protect public health, salmon, and other fish and wildlife. We have been actively engaged in Rye Development's proposed Goldendale Energy Storage Project (Project) since 2017.

We ask that FERC reject the request by Rye Development to use the Traditional Licensing Process (TLP) for its proposed Project and require Rye Development to follow the preferred Integrated Licensing Process (ILP). FERC regulations state that the ILP is to be used as the default process unless good cause is shown for use of the TLP using the following criteria:

A. Likelihood of timely license issuance;
B. Complexity of the resource issues;
C. Level of anticipated controversy;
D. Relative cost of the traditional process compared to the integrated process;
E. The amount of available information and potential for significant disputes over studies; and
F. Other factors believed by the applicant to be pertinent. 18 CFR §5.3(c)-(d).

We do not believe that Rye Development has clearly demonstrated good cause.

The likelihood of timely license issuance remains minimal based on the level of controversy that exists around this Project. In its Notification of Intent and Pre-Application Document (NOI/PAD) for the Project, Rye Development failed to provide any tangible reassurance of the likelihood of timely license issuance. Instead, Rye Development noted only that the ILP is an "intensive front-loaded process," meaning that a failure to meet any step could set the project back. The nature of the ILP does not constitute good cause for not using it for this Project. Rye Development failed to provide any other evidence of the likelihood of timely license issuance. The history of opposition to pump storage at this particular location--taken together with comments and motions to intervene in this iteration of the Project from various organizations and governmental entities, including tribes--indicates the strong level of

controversy that exists around this Project. The high level of controversy indicates the unreasonable likelihood of timely license issuance.

The Project's resource issues are complex, and an expedited licensing process will not facilitate their resolution. The Confederated Tribes and Bands of the Yakama Nation (Yakama) and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) intervened and commented, respectively, in this matter citing the Project's potential detrimental effects to significant cultural resources. Rye Development's NOI/PAD indicates that it contracted with Yakama's cultural resources management group to perform cultural resource studies in the Project area. The need for cultural resource studies indicates the complexity of the resources at issue. Expediting the licensing project will not allow these studies the proper time to be fully conducted and the harm alleviated and avoided. Further, Rye Development has not indicated that it has met with or is working with CTUIR. One tribe's participation does not negate the need to engage with the other, as cultural resources may and most likely differ. Rye Development has not demonstrated good cause supporting its contention that "the resource issues of the Project are both simple and minimal."

Rye Development's bold assertion that "licensing of the Project will elicit a low level of controversy" is wrong and either uninformed or disingenuous. The Project's proposed location has already been identified as potentially affecting and disturbing both cultural and environmental resources and as such should be subject to the integrated requirements of the ILP, including scoping under the National Environmental Policy Act (NEPA). Rye Development has offered nothing, except its assertions, to suggest that there is good cause to not conduct the ILP. The NOI/PAD lists Yakama Nation (spelled incorrectly) as the only affected tribe and fails to include CTUIR, despite CTUIR's concern for cultural resources in the area. Furthermore, several agencies and organizations have already expressed concerns via comments and/or motions to intervene over this Project.

Rye Development has also failed to indicate why it anticipates "no significant disputes over studies." For example, in letters and comments, the Washington Department of Fish and Wildlife (WDFW) flagged the Project's potential to disturb golden and bald eagles, protected under Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act, through the loss of foraging habitat and construction disturbances. Golden eagles nest in the vicinity of the proposed Project, and bald eagles also frequent the area. While Rye Development offered information on how they plan to mitigate effects to these protected species, it is not clear that WDFW will agree with Rye Development's mitigation strategy and studies. The NOI/PAD also uses several studies conducted on other, similar projects to bolster Rye Development's preferred eagle mitigation strategy, yet fails to use studies on this area specifically. The limited studies conducted, and the use of other projects' studies, are inadequate to support any serious analysis of the Project and its proposed mitigation. Rye Development's assertions that the Project is an "environmentally responsible source of energy storage" do not negate the need for detailed studies of the impacts of this Project.

Rye Development's letter requesting permission for the TLP is grossly misleading. The ILP process was created so that controversial issues could be dealt with and addressed at the beginning of the project, prior to submittal of the Final License Application. Rye Development's simple prognosis of the impacts of this Project overlooks real and unanswered concerns. This is not the first time a pump storage project has been proposed for development at this site, and the potential environmental upsides from pump storage

generally should not outweigh the need for adequate analysis through the ILP and proper consideration of whether this particular site is suitable for a pump storage project.

Given the continuing high level of controversy, the complexity of the resource issues, and significant disputes over studies, FERC should deny the TLP request.

Thank you for the opportunity to comment,

Sincerely,

Simone Anter, Staff Attorney
Columbia Riverkeeper
407 Portway Ave. Suit 301,
Hood River, OR 97031
simone@columbiariverkeeper

Confederated Tribes and Bands
of the Yakama Nation

Established by the
Treaty of June 9, 1855

February 21, 2019

Kimberly Bose
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426

Re: Notification of Intent and Pre-Application Document for the Goldendale Energy Storage Project, FERC No. 14861

Ms. Bose,

The Confederated Tribes and Bands of the Yakama Nation (Yakama Nation) have reviewed a letter and Pre-Application Document sent to the Federal Energy Regulatory Commission from Rye Development under FERC No. 14861. The proposed project Area of Potential Effect (APE) is within the Ceded Area of the Yakama Nation pursuant to the Treaty of 1855 (12 stat., 951) and is the Supreme Law of the Land pursuant to Article 6 of the U.S. Constitution (i.e. Supremacy Clause). The FERC has a Federal Trust Responsibility to preserve and protect resources significant to the Yakama Nation. Only the Yakama Nation can determine what is significant to the Tribe. Based on review of the letter and pre-application, the Yakama Nation has several concerns with this project.

The Yakama Nation Cultural Resources Program filed a letter of opposition to this project on February 14, 2018. This letter of opposition was regarding the detrimental impact this project will have on a previously recorded Traditional Cultural Property (TCP). Based on review of the pre-application packet, there is mention of a cultural resources survey conducted by the Yakama Nation within the APE in 2013, however neither the results of this investigation nor the Traditional Cultural Property recorded were mentioned in the packet. Rye Development visited the Yakama Nation Tribal Council on September 4, 2018. Concerns were raised regarding the letter of opposition from the Yakama Nation Cultural Resources Program, however no resolution was provided aside from stating the desire to contract with the Program. Hiring a Yakama Nation program to provide technical expertise is not a resolution to the concerns brought forth by the Tribe to date. While it will provide the Program's expertise to further elaborate on the significant of the TCP, it has not resolved the issue that there will be detrimental impacts to this resource.

After reading the letter, it appears that Rye Development finds that pursuant to Section 5.3(c)(1)(i) and (ii) under item (B) it reads:

> The Applicant believes that, while significant and obviously important, the resource issues of the Project are both simple and minimal compared to other projects of this scale. Concomitantly, the likelihood of significant dispute over studies is also minimal.

The Yakama Nation strongly disagrees with that statement. The resource issues involving this project are not minimal and are not simple, they are all encompassing and unavoidable. Furthermore, the likelihood of a significant dispute over studies is expected due to the significance of the sacred site and associated resources.

The Yakama Nation does not believe that Rye Development conducted the pre-application in a good faith effort. This is the first time that the Yakama Nation has been afforded the opportunity to read any preliminary studies conducted by Rye Development. Nor were we aware that a draft Historic Properties Management Plan was being drafted as part of the document. Had the Yakama Nation been afforded the opportunity to review and comment on these documents, further information could have been brought forth to inform the application process. The Yakama Nation has informed the applicant and previous applicants under Docket P-1333, that this is project is within a TCP that was recorded in 2013. Therefore, the Yakama Nations questions the accuracy of the letter and corresponding application document.

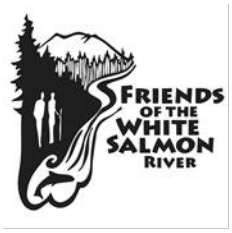
The method of how this application process continues to progress is going in a direction where the Yakama Nation will inevitably be required to mitigate a sacred site. At no time has FERC provided a stop-gap measure that would allow for consideration of its Federal Trust Responsibility to protect this TCP. Rye Development's execution of the National Environmental Policy Act and 18 CFR Subchapter B, Part B has not been a process in concert with our Nation's concerns and documented facts, but rather has been moving forward despite them.

For these reasons, the Yakama Nation is formally opposed to this project as it will damage a sacred TCP and will cause significant impacts to the Yakama way of life.

Sincerely,

JoDe Goudy
Yakama Nation Tribal Chairman

Cc: YN Cultural Committee
Jerry Meninick, YN Culture Division Deputy Director
Rob Whitlam, State Archaeologist, DAHP
Dennis Griffin, State Archaeologist, Oregon SHPO



February 28, 2019

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

RE: Rye Development's request to use the Traditional Licensing Process for the Goldendale Energy Storage Project, FERC No. P-14861

Dear Ms. Bose:

American Rivers is a 501(c)(3) non-profit organization whose mission is to protect wild rivers, restored damaged rivers and conserve water for people and nature. Headquartered in Washington, DC, American Rivers has offices across the country and more than 275,000 members, supporters, and volunteers, including many of whom live in the Columbia River Basin states of in Washington, Oregon, Idaho and Montana. We have been working in the Pacific Northwest for over 25 years and we have a strong interest in protecting and restoring the Columbia River and its tributaries for the benefit of healthy fish and wildlife populations and human communities.

Friends of the White Salmon River is a non-profit 501(c)(3) organization that has worked since 1976 to protect and restore naturally-reproducing anadromous fish populations, and to protect the shorelines, water resources, and habitat areas that affect wild salmonid populations within Klickitat County. Friends of the White Salmon River has an interest in protecting and conserving water resources affecting wild salmonid populations.

Center for Environmental Law and Policy (CELP) is a non-profit organization dedicated to protecting the public's interest in the rivers and aquifers of Washington State. CELP has extensive experience with Washington's water rights, water supply, and instream flow protection processes, and has participated in much of the key litigation relating to streamflow protection. We have members throughout the Columbia River watershed, and have a long-standing interest in protection of the Columbia's streamflows in particular. CELP's interest in this project stems from its potential to increase consumptive water use from the Columbia, as well as our longstanding work to protect Columbia River instream flows and the salmon and other wildlife that depend on them.

Our organizations have been engaged in Rye Development's proposed Goldendale Energy Storage Project (Project) since 2018.

We ask that the Federal Energy Regulatory Commission (Commission) reject the request by Rye Development to use the Traditional Licensing Process (TLP) for its proposed Project and require Rye Development to follow the preferred Integrated Licensing Process (ILP). As stated on the Commission website, the "Integrated Licensing Process is intended to streamline the Commission's licensing process by providing a predictable, efficient, and timely licensing process that continues to ensure adequate resource protections."[1] This process provides an improved mechanism and framework for early identification of issues and resolution of study needs and avoids the costly and cumbersome process of post-filing studies, integrates Commission review with other stakeholder permitting needs, and establishes clear time frames providing a level of certainty for project management that benefits all stakeholders.

The Project's natural and cultural resource issues are complex, and an expedited licensing process will not facilitate their resolution. In its Notification of Intent and Pre-Application Document (NOI/PAD) for the Project, Rye Development claims that "licensing of the Project will elicit a low level of controversy." However, the proposed location for the Project has already been identified as potentially affecting and disturbing both cultural and environmental resources and has already elicited a high level of controversy. We believe that the ILP is much better suited to situations such as the current one where significant resource issues need to be addressed and the process ultimately leads to overall cost and time efficiencies that reduce the expense of licensing for all stakeholders.

As such, the Project should be subject to the integrated requirements of the ILP, and we respectfully request that FERC deny Rye Development's TLP request.

Sincerely,

Wendy D. McDermott
Director, Rivers of Puget Sound and the Columbia Basin
American Rivers
P.O. Box 1234
Bellingham, WA 98225
wmcdermott@americanrivers.org

Trish Rolfe
Executive Director
Center For Environmental Law and Policy
85 S. Washington Street, Suite 301
Seattle, WA 98104
trolfe@celp.org

Patricia L. Arnold
President
Friends of the White Salmon River
P.O. Box 802
White Salmon, WA 98672
pat.arnold@friendsofthewhitesalmon.org

[1] <https://www.ferc.gov/industries/hydropower/gen-info/licensing/ilp.asp>

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON D.C. 20426
(March 1, 2019)

OFFICE OF ENERGY PROJECTS

Project No. P-14861-001 – WA/OR
Goldendale Energy Storage
Hydroelectric Project
FFP Project 101, LLC

Reference: Consultation with Tribes for the Goldendale Energy Storage Hydroelectric Project No. 14861-000

To the Tribal Leaders Addressed:

The Federal Energy Regulatory Commission (Commission) invites your participation in the licensing process for the proposed Goldendale Energy Storage Hydroelectric Project No. 14861 (Goldendale Project). The Commission's licensing process is an opportunity for both the applicant and interested agencies, tribes, and other stakeholders to consider the project's proposed operation, and the need for protection, mitigation, and enhancement measures that may be implemented over the term of any license issued for the project. The 1,200-megawatt (MW) Goldendale Project would be located off-stream of the Columbia River in Klickitat County, Washington and Sherman County, Oregon. FFP Project 101, LLC (FFP) has requested to use the Commission's Traditional Licensing Process to license the project. A Notice of Intent and Pre-Application Document were filed with the Commission on January 28, 2019.

The project facilities would include: (1) a 50-acre upper reservoir formed by a 170-foot high, 8,000 foot-long rockfill embankment dam at an elevation of 2,940 feet mean sea level (MSL); (2) a 62-acre lower reservoir formed by a 170-foot high, 7,400-foot long embankment at an elevation of 580 feet MSL; (3) an underground conveyance tunnel (4) an underground powerhouse located between the upper and lower reservoir; (5) 230-kilovolt transmission line(s); and (6) appurtenant facilities.

The water used to initially fill the lower reservoir as well as make-up water would be purchased from Klickitat Public Utility District and would come from an existing intake pond on the Columbia River. The initial volume of water necessary to fill the lower reservoir is estimated to be 9,000 acre-feet and would be filled over about 6.5 months. It is estimated that the project would need 270 acre-feet of water each year to replenish water lost through evaporation. The estimated annual generation for 8 hours a day, 7 days a week is 3,400 gigawatt-hours per year.

It is very important that a tribe whose interests could be affected by the proposed

Goldendale Project participate early in the process so that tribal issues are addressed. For this reason, please inform us if you have an interest in participating in the licensing process for the project.

In addition, please indicate if you would like to meet with Commission staff to discuss the Commission's licensing process, how your Tribe can participate to the fullest extent possible, your interests and concerns in the affected area, and how to establish procedures to ensure appropriate communication between Commission and tribal staffs. The meeting can be limited to Commission and your Tribal staff, or can be open to other tribes or FFP.

If at all possible, we would appreciate your response by (April 1, 2019). Our regulations require that we hold a meeting with your tribe no later than thirty days from the filing of FFP's Notice of Intent if a meeting is desired;[1] however, we are waiving that timeframe to ensure that, if your tribe desires a meeting, we will be able to conduct it at a mutually agreeable time.

The Commission strongly encourages electronic filing. Please file your response using the Commission's eFiling system at http://www.ferc.gov/docs-filing/efiling.asp. Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at http://www.ferc.gov/docs-filing/ecomment.asp. You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY). In lieu of electronic filing, please send a paper copy to: Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Washington, D.C. 20426. The first page of any filing should include docket number P-14861-001.

[1] 18 C.F.R. § 5.7.

If you have any questions or comments, please contact Suzanne Novak at (202) 502-6665 or Suzanne.novak@ferc.gov. Suzanne Novak will contact you shortly to follow-up on this letter.

Sincerely,

David Turner, Chief
Northwest Branch
Division of Hydropower Licensing

Addressees:

William Sigo IV, Chairman
Confederated Tribes of the
Umatilla Indian Reservation
P.O. Box 638
Pendleton, Oregon 97801-0638

Austin Greene, Jr., Chairman
Confederated Tribes of the
Warm Springs
1233 Veterans Street
Warm Springs, Oregon 97761

JoDe L. Goudy, Chairman
Confederated Tribes and Bands of
The Yakama Nation
401 Fort Road
P.O. Box 151
Toppenish, Washington 98948

cc:

Erik Steimle
Vice President, Development
Rye Development
220 NW 8th Ave.,
Portland, Oregon 97209

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

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

February 28, 2019

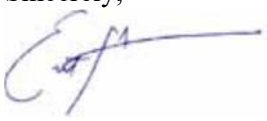
Re: Washington Department of Fish and Wildlife Comments (WDFW) comments on the Preliminary Application Document (PAD) for the Goldendale Energy Storage Project (FERC No. 14861)

Dear Secretary Bose:

Included with this cover letter are comments we received from the Washington Department of Fish and Wildlife (WDFW) in response to Preliminary Application Document (PAD) for the Goldendale Energy Storage Project (FERC NO. 14861).

Please contact me with any questions you may have.

Sincerely,



Erik Steimle
Vice President
erik@ryedevelopment.com

From: Verhey, Patrick M (DFW) <Patrick.Verhey@dfw.wa.gov>
Sent: Tuesday, February 26, 2019 9:17 AM
To: Erik Steimle <erik@ryedevelopment.com>
Subject: Goldendale Energy Storage PAD P-14861

Erik,

I noticed there are no mention of addressing permanent habitat impacts of the Goldendale Energy Storage Project within the PAD. As a starting point for the discussion I recommend we take a look at the 2009 Wind Power Guidelines as a reference to develop mitigation ratios (see section 5.2) for property acquisition or the development of a mitigation by fee to address permanent and temporary impacts of the Project on existing habitat. Table 4.5-6 in the Goldendale Energy Storage PAD indicates approximately 81+- acres of permanently impacted habitat on the Washington State side of the Columbia River will occur if the Project is constructed. The WDFW recommends no loss of habitat function or value, or populations. Mitigation should provide equal or better biological function and values. We appreciate the prevention, mitigation, and enhancement measure proposed in the PAD; however, there is a need for mitigating permanent impacts of the Project on habitat.

Consistent with the October 28, 2014 WDFW letter in which the WDFW provided comments on the John Day Pumped Storage Hydroelectric Project (FERC No. 13333). The WDFW continues to have concerns in regards to loss of prime foraging habitat for the eagles. The Goldendale Energy Storage Project is the third major project or activity developed in the area. Cumulative impacts of the Windy Point II Wind Energy Project, Tuolume Wind Project, and the proposed Project may result in mortality , nest abandonment, and loss of eagle habitat. Since the wind power projects were developed at least three adult eagles have died or disappeared from the territory.

Also, my contact information in Appendix A of the PAD should be updated to 1550 Alder St. N.W. Ephrata, WA 98823. Thank you for providing me with this opportunity to comment on the Goldendale Energy Storage PAD, FERC Project P-14861.

Patrick Verhey

WDFW Habitat Program

Energy and Major Projects Division Biologist

1550 Alder St N.W.

Ephrata, WA 98823

Office (509) 754-4624 ex. 213

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

Cell (509) 431-8296

Patrick.Verhey@dfw.wa.gov

Work schedule is M-Th

From: Erik Steimle <erik@ryedevelopment.com>
Sent: Thursday, February 28, 2019 11:19 AM
To: Verhey, Patrick M (DFW) <Patrick.Verhey@dfw.wa.gov>
Subject: RE: Goldendale Energy Storage PAD P-14861

Patrick,

Thank you for providing comments on the PAD for the Goldendale Energy Storage Project. I have reviewed the attached mitigation guidance and suggest that we meet after our environmental consultants have completed spring/early summer vegetation/habitat surveys in the project area. This will allow us to more accurately describe habitat that would be temporarily or permanently impacted by the project.

Sincerely,

Rye Development

Erik Steimle

Vice President

220 NW 8th Ave

Portland, OR 97209

(503) 998-0230

erik@ryedevelopment.com

www.ryedevelopment.com

From: Verhey, Patrick M (DFW) <Patrick.Verhey@dfw.wa.gov>
Sent: Thursday, February 28, 2019 11:31 AM
To: Erik Steimle <erik@ryedevelopment.com>
Subject: RE: Goldendale Energy Storage PAD P-14861

Erik,

I look forward to meeting with you to discuss mitigation for permanent and temporary impact of the Goldendale Energy Storage Project once the environmental consultants have completed spring/early summer vegetation/habitat surveys in the project area.

Patrick Verhey

WDFW Habitat Program

Energy and Major Projects Division Biologist

1550 Alder St N.W.

Ephrata, WA 98823

Office (509) 754-4624 ex. 213

Cell (509) 431-8296

Patrick.Verhey@dfw.wa.gov

Work schedule is M-Th

USDA United States Department of Agriculture | Forest Service | Columbia River Gorge National Scenic Area | 902 Wasco Avenue Suite 200
Hood River, OR 97031
541-308-1700
Fax: 541-386-1916

File Code: 1900; 2170
Date: February 28, 2019

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

Re: USDA FOREST SERVICE RESPONSE TO "Notification of Intent and Pre-application Document for the Goldendale Energy Storage Project, FERC No. 14861."

Dear Secretary Bose,

Thank you for the opportunity to respond to Rye Development's "Notification of Intent and Pre-application Document for the Goldendale Energy Storage Project, FERC No. 14861" filed on January 28, 2019, with the Federal Energy Regulatory Commission (Commission).

The eastern boundary of the Congressionally-designated Columbia River Gorge National Scenic Area is located approximately 9.5 miles west (downriver) of the proposed project site. The USDA Forest Service, in coordination with the Columbia River Gorge Commission, manages the National Scenic Area to provide for the protection and enhancement of scenic, natural, cultural and recreational resources, and to protect and support the economy of the Columbia River Gorge area.

The USDA Forest Service supports development of sustainable alternative energy sources where mitigation commensurate with Project impacts is provided. While the proposed Goldendale Energy Storage Project is located outside of the National Scenic Area boundary, the USDA Forest Service has an interest in assuring that the resources and communities of the Gorge area, including tribal communities, are represented during the planning and development phases of projects that have the potential to effect natural resources and the local economy.

Based on the complexity of the resource issues and the potential economic effects of the project, the USDA Forest Service's interest in collaborative processes, and the positive experiences the USDA Forest Service has had with the ILP process, the USDA Forest Service believes that Rye Development would benefit from following the Integrated Licensing Process (ILP), rather than the Traditional Licensing Process (TLP), as requested by Rye Development.

In our experience, the ILP provides for frequent and early stakeholder involvement and enhanced interaction between project applicants, the Commission, and stakeholders. In contrast, the TLP relies almost exclusively on written communications. Our experience with other projects of similar complexity has been that early and open discussions with partners, agencies, and other stakeholders with regard to project design has invariably led to more successful and more

environmentally appropriate projects. It is our desire that this Project have the same opportunity to benefit from the collaborative interaction afforded by the ILP approach.

According to 18 CFR 5.3(d)(2)(v)(A), USDA Forest Service comments on PGP's request to follow the TLP process must address the following issues:

(A) likelihood of timely license issuance;
(B) complexity of the resource issues;
(C) level of anticipated controversy;
(D) relative cost of the traditional process compared to the integrated process;
(E) the amount of available information and potential for significant disputes over studies; and
(F) other factors believed by the commenter to be pertinent

In response, the USDA Forest Service offers the following response to those issues:

(A) Likelihood of timely license issuance: The coordination required by the ILP promotes stakeholder participation that encourages early identification and resolution of issues, builds relationships necessary to resolve concerns, develops study information more upfront in the process and creates efficiencies in the process which leads to a greater likelihood of a timely license issuance.

Specially, the USDA Forest Service believes that early involvement of all interested stakeholders in the ILP will result in a more coordinated and timely completion of licensing documents such as Section 106 consultation and biological opinions from National Marine Fisheries Service and US Fish and Wildlife Service that could otherwise delay license issuance.

(B) Complexity of the resource issues: The USDA Forest Service believes that the environmental issues associated with the Project may be more complex than Rye Development has indicated. Presence of federally listed endangered species and habitat for these species alone significantly increase the complexity of the resource issues and ensure that consultation regarding potential Project impacts to anadromous fish habitat will be required with the respective federal agencies.

(C) Level of anticipated controversy: It is our belief that the level of anticipated controversy may be higher than Rye Development has indicated. Stakeholders in the Pacific Northwest are generally very experienced in the licensing of hydroelectric and other energy projects, and have significant resources to participate in these processes. Given that this Project is proposed to be built immediately adjacent to the Columbia River, which is already heavily impacted by energy infrastructure and other land uses, a certain amount of controversy is to be expected in this proceeding.

This expected controversy can be effectively managed through open, extensive and ongoing communication with all stakeholders, which is built into the ILP process. The ILP process typically creates long lasting relationships between the stakeholders that promote local solutions

and positive outcomes in these types of projects. The ILP better promotes the kind of communication that causes these projects to be successful than the TLP.

(D) Relative cost of the traditional process compared to the integrated process: According to the Commission's final ILP rule making (July 23, 2003), annualized cost is less for the ILP process ($350,000) for a typical application than the TLP ($550,000), page 136. Furthermore, while the ILP requires more meetings, this upfront coordination will in fact be more efficient in providing for timely and effective communication, early identification of issues which leads to less process delays and efficient use of limited resources by all involved stakeholders.

(E) The amount of available information and potential for significant disputes over studies: Any significant disputes over studies can be minimized or avoided altogether through the ILP process which provides for early engagement and ongoing conversations with the stakeholders about necessary studies. Multiple federal, state, and tribal agencies in the area have natural and cultural resource information that would be extremely useful to inform the project.

(F) Other factors believed by the commenter to be pertinent: The USDA Forest Service supports the ILP process because of the early and frequent stakeholder involvement in the identification of interests, the day-lighting of issues surrounding those interests, and the development of studies to address, and facilitate resolution of those issues.

Thank you for the opportunity to provide these comments. Please contact Robin Shoal, Planning and Natural Resources Staff Officer, at 541-308-1716, if you have any questions or need any additional information.

Sincerely,

LYNN BURDITT
Area Manager

GREATER GOLDENDALE AREA Chamber of Commerce

903 East Broadway, Goldendale, WA 98620 • (509) 773-3400 •
www.goldendalechamber.org

March 4, 2019

Ms. Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 First St. NE
Washington, DC 20426

Dear Ms. Bose,

On behalf of the Goldendale Chamber of Commerce, I am writing to express my support for Rye Development and National Grid's efforts to obtain a FERC License using the Traditional Licensing Process for the proposed Goldendale Energy Storage Project located in Klickitat County, WA.

Our Chamber covers approximately 80% of Klickitat County, including the City of Goldendale and the proposed Goldendale Energy Storage Project site. The Chamber, on behalf of its membership, has a long history of supporting energy projects in the area, including Klickitat County's energy overlay zone and related comprehensive plan sections which actively promote clean energy project development and related facilities.

As the third-largest wind producing area in the US, the Goldendale Chamber membership is familiar with and supportive of large-scale energy project construction and operation. Integration of the area's existing and proposed renewable energy generation is a key limiting factor to expansion of clean energy resources in achieving carbon reduction goals and enhancing electric system reliability, issues the proposed project resolves.

The Goldendale Chamber's support for the Traditional Licensing Process is also based on the closed-loop, off-channel, limited nature of the Goldendale Energy Storage Project, which is on private land that has seen an aluminum smelter, grazing, and wind project development.

Taken together, these characteristics support the utilization of the Traditional Licensing Process in pursuing the necessary license for the project as the most appropriate, cost effective, and efficient means of licensing the Goldendale Energy Storage Project.

Thank you for your consideration of the Goldendale Chamber of Commerce position on this matter.

Sincerely,

Dana Peck

Dana Peck
Executive Director

Board of County Commissioners, Goldendale, WA.
March 5, 2019

Ms. Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 First St. NE
Washington, DC 20426

RE: Comments on the Notification of Intent and Pre-Application Document for the Goldendale Energy Storage Project, FERC No 14861

Dear Secretary Bose,

Thank you for the opportunity to comment on the Notification of Intent and Pre-Application Document for the Goldendale Energy Storage Project, FERC No. 14861. The Goldendale Energy Project (Project) is located in Klickitat County. Klickitat County filed a timely motion to intervene in March 2018.

We, the Board of County Commissioners of Klickitat County, write in support of FERC granting the Project applicant's request to use the Traditional Licensing Process. We appreciate the applicant's desire for an expeditious licensing process and share the applicant's sense of urgency, in part, because we fully expect Senate Bill 5116 (companion House Bill 1211) will be passed by Washington State Legislature and signed by Governor Inslee this session. The bill, which has already passed in the Senate, requires all electric utilities to eliminate use of coal-fired resources by December 2025 and make all retail sales of electricity greenhouse neutral by January 2030, and requires all utilities to meet 100% of their retail electric load using non-emitting and renewable resources by January 2045. Utility-scale storage will be needed to meet these aggressive standards without sacrificing reliability. We submit that it is important for the Project to be on an expeditious path towards licensing so that utilities can plan their resource needs.

We are familiar with the Project. The lower portion of the Project site is zoned Industrial Park and has over a 30-year history of heavy industrial use. The Project's upper reservoir is located among several operating wind energy projects and in an area used for livestock grazing. The Project is within Klickitat County's Energy Overlay Zone, an area that has been subject to extensive environmental review under Washington State's State Environmental Policy Act (SEPA) in association with promulgation of Klickitat County's Energy Overlay Zone Ordinance and in association with the permitting processes for several wind energy projects in the immediate vicinity of the Project. The Environmental Impact Statement (EIS) that was prepared for the Energy Overlay Zone Ordinance and the EIS's and other environmental studies prepared for individual wind energy projects comprise a significant body of available information regarding the resources and potential mitigation options.

Much of this information was incorporated into the applicant's Pre-Application Document.

Thank you for considering our letter of support.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
Klickitat County, Washington

Document Content(s)

USGS Comments to PAD Filing

From: Rolland, Jill <jrolland@usgs.gov>
Sent: Friday, March 8, 2019 8:38 AM
To: Erik Steimle <erik@ryedevelopment.com>
Cc: Curtis Hoesing <choesing@usgs.gov>
Subject: Re:Goldendale energy storage project

Dear Erik,

Please be advised that the U.S. Geological Survey does not need to be included as a stakeholder in regards to the Broadwater hydroelectric project FERC relicensing process.

Thank you for your attention to this matter.

Best Regards,

Jill

Jill Rolland, Sc.D.
Deputy Regional Director (Acting)
Center Director, Western Fisheries Research Center
USGS Northwest Regional Office
909 First Avenue, Suite 800
Seattle, WA 98104
206.526.6291 (WFRC office)
206.225.6643 (mobile)

CITY OF GOLDENDALE

1103 SOUTH COLUMBUS
GOLDENDALE, WASHINGTON 98620
509-773-3771

March 8, 2019

ORIGINAL

Ms. Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 First St. NE
Washington, D.C. 20426

Dear Ms. Bose, P-14861-001

On behalf of the City of Goldendale, WA, I am writing to express this city's support of the Rye Development and National Grid's efforts to obtain a FERC License for the proposed Goldendale Energy Storage Project located in Klickitat County. WA. We further support the utilization of the Traditional Licensing Process in pursuing the necessary license for the project as the most appropriate cost effective and efficient means of licensing the Goldendale Energy Storage Project. The proposed project is for a closed loop, off-channel, pumped storage project on private land that has seen an aluminum smelter, cattle grazing and wind project development. The site has limited geographic scope.

Our community recognizes the substantial economic benefit of having this project near our city, County Seat of Klickitat County. Construction of the Goldendale Energy Storage Project will enable the Pacific Northwest to integrate more renewable energy thus advancing Klickitat County's renewable energy development goals. Klickitat County has long supported large scale energy projects through its energy overlay zone. As a result of this innovative and supportive approach to clean energy, Klickitat County is the third largest wind producing area in the United States. Integration of the area's existing and proposed renewable clean energy generation is a key limiting factor to expansion of clean energy resources.

We appreciate your consideration of our expression of support for the Rye Development and National Grid's application for a FERC License using the Traditional Licensing Process.

Sincerely,

Michael Canon, Mayor

City of Goldendale

Document Content(s)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

FFP Project 101, LLC Project No. 14861-001

NOTICE OF INTENT TO FILE LICENSE APPLICATION, FILING OF PRE-APPLICATION DOCUMENT, AND APPROVING USE OF THE TRADITIONAL LICENSING PROCESS

(March 21, 2019)

a. Type of Filing: Notice of Intent to File License Application and Request to Use the Traditional Licensing Process.

b. Project No.: 14861-001

c. Date Filed: January 28, 2019

d. Submitted By: Rye Development on behalf of FFP Project 101, LLC

e. Name of Project: Goldendale Pumped Storage Project

f. Location: Off-stream (north side) of the Columbia River at River Mile 215.6 in Klickitat County, Washington and Sherman County, Oregon, approximately 8 miles southeast of the City of Goldendale. The project would occupy 16.1 acres of lands administered by the Bonneville Power Administration.

g. Filed Pursuant to: 18 CFR 5.3 of the Commission's regulations

h. Potential Applicant Contact: Erik Steimle, Rye Development, 220 NW 8th Avenue Portland, Oregon 97209; (503) 998-0230; e-mail – erik@ryedevelopment.com.

i. FERC Contact: Michael Tust at (202) 502-6522; or e-mail at michael.tust@ferc.gov.

j. FFP Project 101, LLC (FFP) filed its request to use the Traditional Licensing Process on January 28, 2019. FFP provided public notice of its request on January 30, 2019 and January 31, 2019. In a letter dated March 21, 2019, the Director of the Division of Hydropower Licensing approved FFP's request to use the Traditional Licensing Process.

k. With this notice, we are initiating informal consultation with the U.S. Fish and Wildlife Service and/or NOAA Fisheries under section 7 of the Endangered Species Act and the joint agency regulations thereunder at 50 CFR Part 402; and NOAA Fisheries under section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and implementing regulations at 50 CFR 600.920. We are also initiating consultation with the Washington State Historic Preservation Officer and the Oregon State Historic Preservation Officer, as required by section 106, National Historic Preservation Act, and the implementing regulations of the Advisory Council on Historic Preservation at 36 CFR 800.2.

l. With this notice, we are designating FFP as the Commission's non-federal representative for carrying out informal consultation pursuant to section 7 of the Endangered Species Act and section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act; and consultation pursuant to section 106 of the National Historic Preservation Act.

m. FFP filed a Pre-Application Document (PAD; including a proposed process plan and schedule) with the Commission, pursuant to 18 CFR 5.6 of the Commission's regulations.

n. A copy of the PAD is available for review at the Commission in the Public Reference Room or may be viewed on the Commission's website (http://www.ferc.gov), using the "eLibrary" link. Enter the docket number, excluding the last three digits in the docket number field to access the document. For assistance, contact FERC Online Support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY). A copy is also available for inspection and reproduction at the address in paragraph h.

o. Register online at http://www.ferc.gov/docs-filing/esubscription.asp to be notified via e-mail of new filing and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

Kimberly D. Bose,
Secretary.

Document Content(s)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

FFP Project 101, LLC Project No. 14861-001

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(March 21, 2019)

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b. Project No.: 14861-001

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o. Register online at http://www.ferc.gov/docs-filing/esubscription.asp to be notified via e-mail of new filing and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

Kimberly D. Bose,
Secretary.

Document Content(s)

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

FFP Project 101, LLC	)	Project No. 14861-000

MOTION TO INTERVENE OUT-OF-TIME AND COMMENT OF THE TURLOCK IRRIGATION DISTRICT

The Turlock Irrigation District ("TID") moves, pursuant to Rules 212 and 214 of the Federal Energy Regulatory Commission's ("Commission") Rules of Practice and Procedure (18 C.F.R. §§ 385.212 and 385.214) and the Commission's "Notice of Preliminary Permit Application Accepted for Filing and Soliciting Comments, Motions to Intervene, and Competing Applications," issued December 15, 2017, for leave to intervene out-of-time in this proceeding. TID is requesting leave to intervene in the proceeding because it has learned the FFP Project 101, LLC ("FFP") is proposing to build the Goldendale Energy Storage Project ("GES Project") on land that is leased by the Tuolumne Wind Project ("TWP") and contains TWPA's wind turbines, which TWPA uses to supply energy and capacity to TID. TID relies on this generation to meet is load and its California State mandated Renewable Portfolio Standard ("RPS") obligations. TID is concerned the GES Project could interfere with the operations of, and the energy output from, TWPA's turbines.

I. COMMUNICATIONS

Pleadings and other communications concerning this proceeding should be addressed to the following persons on behalf of TID:

Brad A. Koehn
Assistant General Manager
Power Supply
Turlock Irrigation District
P.O. Box 949
333 East Canal Drive
Turlock, CA 95381-0949
Telephone: (209) 883-8203
Facsimile: (209) 656-2148
E-mail: bakoehn@tid.org

Jon R. Stickman
Kenneth Holmboe
Duncan & Allen
1730 Rhode Island Avenue, NW
Suite 700
Washington, D.C. 20036
Telephone: (202) 289-8400
Facsimile: (202) 289-8450
E-mail: jrs@duncanallen.com
kh@duncanallen.com

Dan B. Severson
Analyst
Turlock Irrigation District
P.O. Box 949
333 East Canal Drive
Turlock, CA 95381-0949
Telephone: (209) 883-8603
Facsimile: (209) 656-2148
E-mail: dbseverson@tid.org

TID requests waiver of Rule 203(b)(3) of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.203(b)(3)) to permit inclusion of all the foregoing persons on the Official Service List, and further requests that these persons be included as representatives of TID on any restricted service list that may be established in these proceedings.

I. MOTION FOR LEAVE TO INTERVENE

A. TID's Interest in the Proceeding

TID is an irrigation district organized under the laws of the State of California (California Water Code §§ 20500-29978). TID supplies electric power and energy to

the residents and businesses within its service area. It serves approximately 100,000 electric retail customers and has annual electric sales of approximately 2 million MWhs. TID operates its own NERC- and WECC-approved Balancing Authority ("BA"), which is interconnected to the California Independent System Operator ("CAISO") BA and the Balancing Authority of Northern California ("BANC"). TID's BA incorporates 668 MW of generation and served a 2013 peak load of 621 MW. TID is also a member of the Transmission Agency of Northern California ("TANC"), through which it owns capacity on the California-Oregon Transmission Project ("COTP"), which it uses for delivery of resources owned and located in the Pacific Northwest. These resources are a vital component of TID's ability to meet its electric load in the TID BA reliably and economically.

Among the resources that TID uses to meet its electric load is a 62 turbine, 136.6 MW wind farm, owned by TWPA and located in Klickitat County, Washington. TWPA is a California Joint Powers Agency formed in 2008 by TID and the Walnut Energy Center Authority. TID purchases all the capacity and energy from the wind farm and pays all its costs. The TWPA wind farm represents a $400 million investment by TID.[1] TWPA leases the land upon which the 62 turbines have been constructed ("Leased Premises") from several landowners. Under each of these land lease agreements, the landlords have agreed, among other things, not to currently or prospectively, unreasonably interfere with the construction, installation,

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[1/] In addition to the TWP, TID's renewable resource portfolio currently includes wind, hydro, solar and biomass. These renewable resources cumulatively account for approximately 25% of TID's generation.

maintenance, operation or removal of Turbines located on the Leased Premises; access over the Leased Premises to such turbines; or the undertaking of any other activities permitted under the leases. The landlords expressly agree not to lease or grant easements/licenses over the Leased Premises that in any way would unreasonably interfere with the wind speed or wind direction over the Leased Premises, by placing Wind Turbines, planting trees or constructing buildings or other structures, or by engaging in any other activity on the Leased Premises that might cause a decrease in the output or efficiency of the turbines.

TID has recently learned that FFP has proposed to construct the GES Project on land leased by TWPA and located immediately adjacent to at least 16 of TWPA's 62 wind turbines. The remaining 46 turbines will be between 2.5 and 7.5 miles from the GES Project. TID learned of the close proximity of the GES Project site to TWPA's wind turbines, when FFP requested that TWPA agree to FFP getting access over the roads TWPA uses to maintain the its turbines. Specifically, TID learned that FFP has proposed "Agreement #G18032 Between Tuolumne Wind Project Authority And FFP Project 101, LLC," ("Access Agreement"), which if finalized, would grant FFP the ability to use certain roads on land leased by TWPA "for purposes of investigating, stakeholder outreach and surveying activities related to the feasibility studies for possible construction of a dam and reservoir on adjacent property." *See* Access Agreement at Art. 1.

Because FFP's GES Project related activities could have significant impacts on TWPA's operations that interfere with or reduce the output of TWPA's turbines,

which TID purchases, TID has an interest in these proceedings that cannot be adequately represented by any other party or potential party to this proceeding and therefore, satisfies the requirements of Rule 214 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.214). Accordingly, TID should be granted intervenor status.

B. Good Cause for Intervention Out-of-Time

Rule 214(b)(3) of the Commission's Rules of Practice and Procedure (18 C.F.R. §385.214(b)(3)) requires that TID demonstrate, in addition to the interests that would be affected by the outcome of this proceeding, "good cause why the time limitation [for filing a motion to intervene] should be waived." Rule 214(d) of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.214(d)) identifies specific factors that the decisional authority "may consider" in deciding whether to grant leave to intervene out of time. These factors are whether (*id.*):

> (i) The movant had good cause for failing to file the motion within the time prescribed;
>
> (ii) Any disruption of the proceeding might result from permitting intervention;
>
> (iii) The movant's interest is not adequately represented by other parties in the proceeding;
>
> (iv) Any prejudice to, or additional burdens upon, the existing parties might result from permitting the intervention;
>
> (v) The motion conforms to the requirements of paragraph (b) of this section [establishing requirements for contents of all motions to intervene].

The Commission "has generally adopted a liberal approach to late intervention ..., if doing so will not delay the proceeding or result in prejudice to other parties.... In doing so, the Commission has not found that the movants are entitled to intervene late, or that they have demonstrated compliance with all the discretionary factors mentioned in the rule. Rather, the Commission has simply exercised its discretion to allow the late intervention."[2] The Commission's practice with respect to requests for late intervention differentiates between cases such as this one, in which no dispositive action has yet occurred, and those in which either a dispositive order has been issued or a settlement reached. In the former class of situations, the Commission liberally grants intervention out of time; in the latter types of cases, the Commission takes a far more restrictive approach.[3]

TID's motion satisfies the requirements of Rules 214(b) and 214(d)(v). TID was never provided notice of FFP's FERC filings in this proceeding. In addition, TID was not aware of the exact location of the proposed GES Project or its potential impacts on TWPA's operations until TID received the Access Agreement and asked for more detail on the project's location, which was only recently provided.

The remaining Rule 214(d) factors also favor granting intervention out-of-time. TID's participation in this proceeding cannot be represented by anyone else because

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[2] *Alaska Power & Telephone Co.*, 98 FERC ¶ 61,092 at p. 61,276 (2002). *Accord*: *Liberty Energy (Midstates) Corp.*, 138 FERC ¶ 61,249 at P 17 (2012).

[3] *See, e.g.*, *Southern Co. Servs., Inc.*, 92 FERC ¶ 61,167 at p. 61,565 (2000) ("To permit Calpine's late intervention after the issuance of the Commission's order in Southern Company, in order to challenge that order, would result in unjustified delay and disruption of the proceeding and undue burden on other parties"); *Black Marlin Pipeline Co.*, 67 FERC ¶ 61,205 at p. 61,638 (1994).

without TID's consent the GES Project cannot go forward on any land leased by TWPA. There is no undue delay here. TID has acted as expeditiously as possible to pursue intervention. In any event, the mere lapse of time from the issuance of a notice of filing is not an obstacle to granting late intervention.[4] There is no claim of prejudice resulting from TID's request for late intervention. To the contrary, TID understands that FFP does not oppose TID's motion. Moreover, the GES Project is only in the preliminary permit stage. The licensing process has not even begun. Accordingly, the Commission should make and enter an order granting TID intervenor status with full rights of participation as a party to this proceeding, and such other and further relief as may be necessary, just and appropriate in the circumstances.

II. COMMENTS

Because FFP proposes to construct the GES Project in close proximity to TWPA's turbines, TID is concerned the GES Project could interfere with TWPA's operations or the energy output of its turbines. Specifically, TID is concerned the GES Project could: (1) redirect the wind used by the turbines, which would reduce their energy output; (2) increase wind turbidity, which would reduce their energy output and increase wear and tear on the turbines; (3) saturate and thereby weaken the foundations of some of the turbines; (4) increase the wildlife around the turbines, which will increase animal strikes and interfere with TWPA's operations and output;

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[4] *Tennessee Gas Pipeline Co.*, 47 FERC ¶ 61,227 at p. 61,795 (1989) ("While these motions were filed more than one year beyond the due date for filing motions to intervene, we find that granting the late motions will not prejudice the interests of any other party and good cause exists to permit the late interventions").

and (5) interfere with the operations of the turbines' underground power lines when constructing the GES Project's underground components. The following is a detailed discussion of each of these issues.

A. TID is concerned the GES Project could cause wind redirection that reduces the output of the turbines

TID is concerned the operation of the GES Project could redirect the wind used by TWPA's turbines, which would disrupt the winds laminar flow[5] through the turbines' blades, prevent the turbines from fully exploiting the available wind energy, reduce their output and reduce the turbines' value to TID. When the rotor spins, the power is transferred via the drive shaft and gearbox. Then, the generator converts the kinetic energy from the turbine into electrical energy. Most of the time the wind turbines are not generating at 100%. During the times the wind speed is less than full production levels it is critically important that the wind not be diverted up and over or in a direction that reduces the turbines ability to generate. Here, the concern is that when the GES Project is spilling water and generating power it will act much like a dam and generate lateral air flows that will emanate from the inside of the upper and lower reservoirs and interfere with the horizontal air flows (*i.e.,* the wind) used by the turbines. If these vertical air flows are significant, and wind speeds are low, the vertical air flows could block the wind entirely, redirecting it up and over the turbines, thereby reducing their output to zero. FFP must locate and design the GES

[5] Laminar flows occur when a wind flows in parallel layers, with no disruption between those layers

Project so that it does not cause redirect wind flows or cause any other interruption in the operations or output of TWPA's turbines.

B. TID is concerned the GES Project could cause increased wind turbidity that damages the turbines and reduces their output

Similarly, when wind speeds are higher, the aforementioned vertical air flows emanating from the GES Project's upper reservoir could cause increased wind turbulence,[6] by disrupting the winds laminar flow through the turbine blades, which would also prevent TWPA's turbines from fully exploiting the available wind energy.[7] In addition, when the wind becomes more turbulent, it causes the turbine blades to be have unequal wind energy on each blade, which causes increased wear and tear on the blades and ultimately will cause the turbine to fail. The turbines are spaced apart to have a minimum of initial wind turbulence so that the wind that goes through one turbine blade stabilizes before the wind gets to the next turbine. Avoiding such wind turbulence is so important that there is a feature on each turbine that shuts the turbine off when turbulence causes the turbine blades to vibrate excessively. FFP must locate and design the GES Project so that it does not cause this wind turbulence or any other impacts that damage the turbines or interrupt their operations or output.

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[6] In fluid dynamics turbulence or turbulent flow is any pattern of fluid motion characterized by chaotic changes in pressure and flow velocity.

[7] The turbulent flow causes uneven blade pressures which can result in less efficient wind generation reducing the value of the turbine.

C. TID is concerned the GES Project could cause the foundations of TWPA's turbines to be saturated and unstable

TID is concerned that the GES Project's reservoir(s) or underground water shaft(s) could cause water to seep into the ground around the foundations of the turbines or alters these foundations' drainage systems (both constructed and natural). The foundations in TWPA's turbines are filled with backfill and may be susceptible to seepage resulting from the increased water in the area. If a turbine's foundation is compromised, it could become unstable causing the turbine to be derated or removed from production. FFP must design the GES Project so that water does not seep from the reservoirs or any other part of the project into the turbines' foundations.

D. TID is concerned the GES Project could cause an increase in wildlife near the turbines, which could increase the number of animals that fly into and damage turbines

Currently, TWPA has a very low animal strike rate because there is no water ponds or reservoirs immediately adjacent to the TWPA's turbines. TID is concerned that the addition of the proposed two new large reservoirs could increase the wildlife population near the turbines causing an increase in animal strikes. Each strike could damage the turbine blades causing potential loss in generation efficiency and repairs to the blades. Moreover, if the damage is significant enough, it could cause the turbine to be taken out of service for an extended period of time, which would reduce its output to zero, significantly reducing TID's ability to use the unit to meet its energy needs. The environmental impact and public concern could be an even greater cost to the site. FFP must explain how it will design the project so that it will not

increase the number animal strikes and the associated damages to the turbines and the turbines' operations.

E. TID is concerned the underground drilling in the construction of the GES Project could disrupt TWPA's operations and output

The proposed GES Project will require a significant amount of underground drilling. There will be a large diameter, underground water shaft that connects the two reservoirs and underground cables between the reservoirs. TID is concerned that this drilling could damage, or interrupt TWPA's use of, its underground 34.5 KV distribution system that interconnects each of the turbines to the grid. Depending on how the drilling is accomplished, one or more of the turbines may have to shut down while this drilling occurs, for safety reasons. Drilling vibration or drilling too close to the underground conductors could pose a serious safety hazard to the personnel drilling, on the site and the equipment. In order to prevent such a hazard from occurring, it is likely TWPA will have to de-electrify these underground lines during the drilling process. If this occurs, it would dramatically reduce the energy output from TWPA's turbines they would no longer be interconnected to the grid. FFP must explain how it will ensure that the operations and output of TWPA's turbines are not impacted when it is constructing the underground components of the GES Project.

F. FFP must take certain actions to ensure that TWPA is held harmless from are not adversely impacted by the construction of the GES Project

Because the proposed GES Project is supposed to be constructed immediately adjacent to TWPA's turbines, this project could adversely impact TWPA's operations and the output of its generators. The only way to ensure that FFP's construction of

the GES Project will not adversely impact TWPA's operations or output is for: (1) FFP to conduct one or more GES Studies to analyze any potential adverse impacts that the GES Project may have on TWPA's operations and output; (2) FFP to provide TWPA and TID the ability to participate in and review the results of the aforementioned studies; and (3) FFP to resolve any disputes with TWPA and TID regarding any adverse impacts that result from the construction of the GES Project before FFP being construction of the GES Project.

If FFP fails to address any adverse impacts caused by the construction of the GES Project, to TID's and TWPA's satisfaction, TWPA will block the construction of the GES Project on any land TWPA has under lease, as these land leases expressly prohibit the landlord from allowing the construction of any structure or facility that interferes in anyway with the operations or out output of TWPA's turbines.

III. CONCLUSION

For the foregoing reasons, TID requests that the Commission issue an order:

(1) Granting TID's motion to intervene, and making TID a party to this proceeding with full rights of participation;

(2) Ordering: (a) FFP to conduct one or more GES Studies to analyze any potential adverse impacts that the GES Project may have on TWPA's operations and output; (b) FFP to provide TWPA and TID the ability to participate in and review the results of the aforementioned studies; (c) FFP to resolve any disputes with TWPA and TID regarding any adverse impacts that result from the construction of the GES Project; and (d) that the Commission approval of the construction of the GES Project

is contingent on FFP mitigating or agreeing to mitigate any and all material, adverse impacts that are determined to result from the construction of the GES Project; and

(3) Granting TID such other relief as may be necessary, just and appropriate in the circumstances.

Respectfully submitted,

/s/ Jon R. Stickman

Jon Stickman
Kenneth Holmboe
Duncan & Allen
1730 Rhode Island Avenue, NW
Suite 700
Washington, D.C. 20036

Counsel to the Turlock Irrigation District

Dated: April 8, 2019

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

/s/ Kenneth Holmboe
Kenneth Holmboe
Duncan & Allen
1730 Rhode Island Avenue, NW
Suite 700
Washington, D.C. 20036

Counsel to the Turlock Irrigation District

Dated: April 8, 2019

Document Content(s)

Rye Development

745 Atlantic Ave. 8th Floor Boston, MA

April 5, 2019 ORIGINAL

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

Re: DATE AND LOCATION OF PUBLIC MEETINGS FOR THE GOLDENDALE ENERGY STORAGE PROJECT, FERC NO. 14861

Honorable Kimberly D. Bose,

On behalf of FFP Project 101, LLC (Applicant), Rye Development and National Grid will be hosting meetings to discuss the Goldendale Energy Storage Project, as required by 18 CFR 4.38(b)(3). The meetings will be held on May 1, 2019 and are open to resource agencies, tribes, local residents, and other stakeholders.

The schedule is as follows:

1:00 pm - 2:30 pm	Initial meeting at the Goldendale Grange Hall
3:00 pm - 4:00 pm	Site Visit, meet at the Goldendale Grange Hall
7:00 pm - 9:00 pm	Second meeting at the Goldendale Grange Hall

Meeting Location Details
Both meetings are open to resource agencies, tribes, local residents, and other stakeholders. The same project information will be presented by the developers and their consultants at both meetings. The meetings will be held at the Goldendale Grange Hall, which is located at 228 East Darland Street in Goldendale, Washington.

Site Visit Details
Individuals will need to provide their own transportation from the Goldendale Grange Hall to the project area, and carpooling is encouraged.

Notice of the public meetings will run in The Goldendale Sentinel newspaper in Goldendale, Washington, and in the Enterprise newspaper in White Salmon, Washington, during the week of April 15th. Copies of this public meetings notice are being mailed to entities listed in Attachment 1 of the NOI with point of contact (POC) adjustments made based on comments received in response to the NOI/PAD. A copy of this list has been appended to this letter.

Sincerely,

Erik Steimle
Vice President
Portland, Oregon
erik@ryedevelopment.com

Attachment 1: Goldendale Distribution List, April 2019

		Agency	
Ellen Rosenblum		Office of the Attorney General, Justice Building	1162 Court Street NE Salem, OR 97301
Jay Inslee		Office of the Governor	P.O. Box 40002 Olympia, WA 98504-0002
Kate Brown		Office of the Governor	900 Court Street NE, Room 254 Salem, OR 97301-4047
Bruce Pokarney		Oregon Department of Agriculture	635 Capitol Street NE Salem, OR 97301-2532
Janine Benner	Director	Oregon Department of Energy	550 Capitol St. NE, 1st Floor Salem, OR 97301
Director		Oregon Department of Environmental Quality	700 NE Multnomah Street, Ste 600 Portland, OR 97232
Elizabeth Moats	Northeast Regional Hydropower	Oregon Department of Fish and Wildlife	107 20th Street La Grande, OR 97850
Director		Oregon Department of Forestry	2600 State Street Salem, OR 97310
Director		Oregon Dept. of Land Conservation and Development	635 Capitol Street NE, Suite 150 Salem, OR 97310-2540
Administrator		Oregon Natural Resources Council	5825 N. Greely Avenue Portland, OR 97217
Assistant Director	Heritage	Oregon Parks & Recreation Department State Historic Preservation Office	725 Summer Street NE, Suite C Salem, OR 97301
Diane Davis		Oregon Public Utility Commission, Administrative Hearings Division	550 Capitol St NE, #215 Salem, OR 97310
		Oregon State Chamber of Commerce	6075 Ulali Dr, Suite 102 Keizer, OR 97303
Director		Oregon State Marine Board	PO Box 14145 Salem, OR 97309-5065
Director		Oregon State Parks and Recreation Department, Office of the Director	725 Summer Street NE, Suite C Salem, OR 97301
Mary Grainey		Oregon Water Resources Department, Hydroelectric Section	725 Summer Street NE, Suite A Salem, OR 97301
Conservation Director		Oregon Wild	5825 North Greeley Portland, OR 97217-4145
Northwest Regional Director		Pacific Coast Federation of Fishermen's Associations	P.O. Box 11170 Eugene, OR 97440
Scott Corwin		Public Power Council	825 NE Multnomah Street Portland, OR 97232
		SEPA Center, Washington Department of Natural Resources	P.O. Box 47015 Olympia, WA 98504-7015
Jenine McDermid		Sherman County Clerk's Office	PO Box 365, 500 Court Street Moro, OR 97039
Program Director		The Institute for Fisheries Resources	PO Box 11170 Eugene, OR 97440-3370
		The Nature Conservancy, Washington Program	74 Wall Street Seattle, WA 98121
Sverre Bakke	Editor	The White Salmon Enterprise	220 Jewett Blvd, White Salmon, WA 98672
		Trout Unlimited - Oregon	PO Box 740 Gladstone, OR 97027
Kevin Brice		U.S. Army Corps of Engineers, Deputy District Engineer for Project	P.O. Box 2946 Portland, OR 97208
Colonel Aguilar		U.S. Army Corps of Engineers, Portland District	P.O. Box 2946 Portland, OR 97208-2946

Attachment 1: Goldendale Distribution List, April 2019

District Engineer		U.S. Army Corps of Engineers, Wetlands Regulatory Program	P.O. Box 2946 Portland, OR 97208
State Director		U.S. Bureau of Land Management, Lands and Minerals Adjudication	P.O. Box 2965 Portland, OR 97208
Director		U.S. Bureau of Land Management, U.S. Department of the Interior	1849 C Street NW, MIB 5655 Washington, DC 20240
Commissioner		U.S. Bureau of Land Management, U.S. Department of the Interior	1849 C Street NW Washington, DC 20240
Regional Director		U.S. Bureau of Reclamation, U.S. Department of the Interior	2800 Cottage Way Sacramento, CA 95825
Commandant	(CG-5533)	U.S. Coast Guard, Navigation Standards Division	2703 Martin Luther King Jr Ave, Stop 7418 Washington, DC 20593-7418
Chief		U.S. Department of Agriculture - Forest Service	1400 Independence Ave SW Washington, DC 20228
Lynn Burditt		U.S. Department of Agriculture - Forest Service, Columbia River Gorge	P.O. Box 3623 Portland, OR 97208-3623
Secretary		U.S. Department of Commerce, Office of the Secretary	1401 Constitution Avenue NW Washington, DC 20230
Administrator		U.S. Environmental Protection Agency, Ariel Rios Building	1200 Pennsylvania Ave NW Washington, DC 20460
Regional Administrator		U.S. Environmental Protection Agency, Region 10	1200 Sixth Avenue, Suite 155 Seattle, WA 98101
Environmental Protection Specialist		U.S. Environmental Protection Agency, Region 10	1200 Sixth Avenue, Suite 155 Seattle, WA 98101
Regional Director		U.S. Fish and Wildlife Service	911 NE 11th Avenue Portland, OR 97232-4181
Regional Director		U.S. Fish and Wildlife Service	2800 Cottage Way Sacramento, CA 95825
Jessica Gonzales		U.S. Fish and Wildlife Service, Central Washington Field Office	215 Melody Lane, Suite 119 Wenatchee, WA 98801
Field Supervisor		U.S. Fish and Wildlife Service, Oregon Field Office	2600 Southeast 98th Avenue, Suite 100 Portland, OR 97266
Director		U.S. Fish and Wildlife Service, U.S. Department of the Interior	1849 C Street NW, Room 3238 Washington, DC 20240
Field Supervisor		U.S. Fish and Wildlife Service, Upper Columbia River Field Office	11103 East Montgomery Drive Spokane, WA 99206-4779
Field Supervisor		U.S. Fish and Wildlife Service, Western Washington Field Office	510 Desmond Drive SE, Suite 102 Lacey, WA 98503
Regional Forester		U.S. Forest Service, Pacific Northwest Region	P.O. Box 3623 Portland, OR
Army Secretary		United States Army	101 Army Pentagon Washington, DC 20310
Regional Director		United States Geological Survey	345 Middlefield Road Menlo Park, CA 94025
Director		United States Geological Survey, U.S. Department of the Interior	12201 Sunrise Valley Dr. Reston, VA 20192
		US Army Corps of Engineers Portland District	PO Box 2946 Portland, OR 97208
Brigadier General Kem	Commander	USACE, Northwest Division	PO Box 2870 Portland, OR 97208-2870
Evan G. Carnes	Senior Project Manager	USACE, Northwest Division, Regulatory Branch, SW WA Field Office	P.O. Box 3755 Seattle, WA 98124-3755
Glen Smith	Operations Project	USACE, The Dalles-John Day-Willow Creek Projects	PO Box 564 The Dalles, OR 97058-9998

Attachment 1: Goldendale Distribution List, April 2019

Tom Tebb		Washington Department of Ecology, Central Region Office	1250 West Alder Street Union Gap, WA 98903
Sage Park	Regional Director	Washington Department of Ecology, Headquarters	1250 W. Alder Street Union Gap, WA 98903-0009
James Demay		Washington Department of Ecology, Water 2 Resources Program	PO Box 47706 Olympia, WA 98504
Peter Goldmark		Washington Department of Natural Resources	PO Box 47000 Olympia, WA 98504
		Washington Office of Archeology and Historic Preservation State Historic Preservation Office	PO Box 48343 Olympia, WA 98504-8343
Bill Frymire	Senior Counsel	Washington Office of Attorney General	PO Box 40100 Olympia, WA 98504-0100
		Washington State Department of Agriculture	1111 Washington St SE, PO Box 4256 Olympia, WA 98504-2560
Tony Usibelli		Washington State Department of Commerce, State Energy Office	Plum St. SE Olympia, WA 98501
Patrick Verhey		Washington State Department of Fish & Wildlife, Renewable Energy Section	600 Capitol Way N. Olympia, WA 98501
Kessina Lee	Regional Director	Washington State Department of Fish & Wildlife, Southwest - Region 5	5525 South 11th Street Ridgefield, WA 98642
James Robb		Western Electricity Coordinating Council	155 North 400 West, Suite 200 Salt Lake City, UT 94103
Denny Granstrand		Yakima Valley Audubon Society	PO Box 2832 Yakima, WA 98903
Executive Director		Advisory Council on Historic Preservation, Old Post Office Building	401 F Street NW, Suite 308 Washington, DC 20001
Executive Director		American Canoe Association	503 Sophia Street, Suite 100 Fredericksburg, VA 22401
Tom Weirich		American Council On Renewable Energy	1600 K Street NW, Suite 650 Washington, DC 20006
Wendy McDermott		American Rivers	PO Box 1234 Bellingham, WA 98227
Executive Director		American Whitewater	P.O. Box 1540 Cullowhee, NC 28723
Vladimir Koritarov		Argonne National Laboratory	9700 S Cass Ave., B109 Lemont, IL 60439
		Association of WA Business	1414 Cherry St SE Olympia, WA 98501
Diane Henkels		Attorney and Consultant	621 SW Morrison St, Ste 1025 Portland, OR 97205
Conservation Director		Audubon Society	1200 18th Street NW, Suite 500 Washington, DC 20036
Dick Wanderscheid		Bonneville Environmental Foundation	240 SW 1st Avenue Portland, OR 97204
Elliot Mainzer	Administrator	Bonneville Power Administration	PO Box 3621 Portland, OR 97208-3621
Regional Director		Bureau of Indian Affairs, U.S. Department of the Interior	911 NE 11th Avenue Portland, OR 97132
Director		Bureau of Indian Affairs, U.S. Department of the Interior	1849 C Street NW, MS 2624 MIB Washington, DC 20240
Dan Von Seggern	Staff Attorney	Center for Environmental Law & Policy	85 S Washington St. Suite 301 Seattle, WA 98104
Jeff Bissonette		Citizens' Utility Board of Oregon	610 SW Broadway Portland, OR 97205

Attachment 1: Goldendale Distribution List, April 2019

Larry Bellamy		City of Goldendale	1103 S. Columbus Ave Goldendale, WA 98620
Terry Cullen		Columbia River Gorge Commission	NE Wauna Ave, P.O. Box 730 White Salmon, WA 98672-0730
Executive Director		Columbia River Gorge Commission	NE Wauna Ave, P.O. Box 730 White Salmon, WA 98672-0730
Paul Lumley		Columbia River Inter-Tribal Fish Commission	700 NE Multnomah Street, #1200 Portland, OR 97232
Simone Anter		Columbia Riverkeeper	111 3rd St. Hood River, OR 97031
Ed Sienkiewicz		ColumbiaGrid	8338 NE Alderwood Road, Suite 140 Portland, OR 97220
Brady Kent		Confederated Tribes and Bands of the Yakima Nation	P.O. Box 151 Toppenish, WA 98948-0151
Chairman		Confederated Tribes of the Umatilla Indian Reservation	P.O. Box 638 Pendleton, OR 97801-0638
		Confederated Tribes of the Umatilla Indian Reservation	46411 Timíne Way Pendleton, OR 97801
Chairman		Confederated Tribes of Warm Springs	1233 Veterans Street Warm Springs, OR 97761
Congressman		Congressman Greg Walden	14 N. Central Ave. #112 Medford, OR 97501
Congresswoman		Congresswoman Jaime Herrera Beutler	750 Anderson Street, Suite B Vancouver, WA 98661
Theo Mbabaliye	Ph.D.	Environmental Protection Agency (EPA), Region 10	1200 6th Ave, Suite 900, ETPA-202-3 Seattle, WA 98101-3140
Director		Federal Emergency Management Agency	500 C Street SW Washington, DC 20472
Honorable Kimberly D. Bose		Federal Energy Regulatory Commission	888 First Street NE Washington, DC 20426
Douglas Johnson		Federal Energy Regulatory Commission, Division of Dam Safety and Inspections	805 SW Broadway Portland, OR 97205
Andy Dunau		Foundation for Water and Energy Education	2206 S. Sherman Spokane, WA 99203
		Friends of the Columbia Gorge, Portland Office	522 SW Fifth Avenue, Suite 720 Portland, OR 97204
Patricia Arnold		Friends of the White Salmon River	472 Sunnyside Road Trout Lake, WA 98650
Lou Marzeles	Editor	Goldendale Sentinel	117 W Main St. Goldendale, WA 98620
		Greater Goldendale Area Chamber of Commerce	903 E Broadway St. Goldendale, WA 98620
National Coordinator		Hydropower Reform Coalition	1101 14th St. NW, Suite 1400 Washington, DC 20005
Northwest Coordinator		Hydropower Reform Coalition	428 NW Sisemore St. #2 Bend, Oregon 97703
Nancy Johnson		Kiwanis Club of Goldendale	PO BOX 993 Goldendale, WA 98620
Chairman		Klamath General Council	P.O. Box 436 Chiloquin, OR 97624-0436
Renea Campbell		Klickitat County Clerk's Office	205 S. Columbus Ave, Room 204, MS-CH-3 Goldendale, WA 98620
Dave McLure		Klickitat County Economic Development Association, Annex 5	127 West Court Street, MS-CH-26 Goldendale, WA 98620

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David Quesnel		Klickitat County, Prosecuting Attorney's Office	205 S. Columbus Ave., Room 106 Goldendale, WA 98620
Rebecca Sells		Klickitat County, Prosecuting Attorney's Office	205 S. Columbus Ave., Room 106 Goldendale, WA 98620
Administrator		National Oceanic and Atmospheric Administration	1401 Constitution Ave NW, Room 6217 Washington, DC 20230
		National Oceanic and Atmospheric Administration National Marine Fisheries Service	1201 NE Lloyd Blvd, Ste 1100 Portland, OR 97232-1274
Diane Melancon		National Oceanic and Atmospheric Administration, Marine Chart Division - Nautical Data Branch	N/CS26 Station 7331, 1315 E-W Highway Silver Spring, MD 20910
Director		National Oceanic and Atmospheric Administration, Northwest Fisheries Science Center	2725 Montlake Boulevard East Seattle, WA 98112
Regional Administrator		National Oceanic and Atmospheric Administration, Regional Fisheries Office	7600 Sand Point Way NE Seattle, WA 98115
Stan Austin	Regional Director	National Park Service, Pacific West Region	333 Bush Street, Suite 500 San Francisco, CA 94104-2828
Director		National Park Service, U.S. Department of the Interior	1849 C Street NW Washington, DC 20240
Washington, D.C. Office		National Renewable Energy Laboratory	901 D. Street, S.W., Suite 930 Washington, DC 20024-2157
NAVFAC-OFP/C		Naval Seafloor Cable Protection Office, Naval Facilities Engineering	1322 Patterson Ave SE, Suite 1000 Washington, DC 20374-5065
Robert Kahn		Northwest & Intermountain Power Producers Coalition	P.O.BOX 504 Mercer Island, WA 98040
Robert Grott		Northwest Environmental Business Council	620 SW 5th Ave., #1008 Portland, OR 97204
Council Member		Northwest Power and Conservation Council	851 S.W. Sixth Avenue, Suite 1020 Portland, OR 97204
Terry Flores		Northwest River Partners	101 SW Main St. Portland, OR 97204
Jeff Bissonnette		NW Energy Coalition	811 1st Ave., Suite 305 Seattle, WA 98104
	SHPO	Office of Archeology & Historic Preservation	P.O. Box 48343 Olympia, WA 98504-8343
		Office of Environmental Affairs, U.S. Department of the Interior	1849 C Street NW, Room 2340 MIB Washington, DC 20240
		Office of Environmental Policy, U.S. Department of the Interior	911 NE 11th Avenue Portland, OR 97232
Senator Cantwell		Office of Senator Cantwell	511 Dirksen Senate Office Building Washington, DC 20510
Senator Merkley		Office of Senator Merkley	313 Hart Senate Office Building Washington, DC 20510
Senator Murray		Office of Senator Murray	173 Russell Senate Office Building Washington, DC 20510
Senator Wyden		Office of Senator Wyden	221 Dirksen Senate Office Building Washington, DC 20510
Bob Ferguson		Office of the Attorney General	1125 Washington Street SE, P.O. Box 40100 Olympia, WA 98504-0100

Document Content(s)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

FFP Project 101, LLC Project No. 14861-000

NOTICE DENYING LATE INTERVENTION

(April 30, 2019)

On March 8, 2018, Commission staff issued a preliminary permit to FFP Project 101, LLC (FFP) to study the feasibility of its proposed Goldendale Energy Storage Project No. 14861, to be located near Goldendale in Klickitat County, Washington and Sherman County, Oregon.[1] On April 8, 2019, the Turlock Irrigation District (TID) filed a late motion to intervene.

FFP's permit was issued and became administratively final 13 months before TID filed its motion to intervene. FFP has not filed a development application for its proposed Goldendale Energy Storage Project. Therefore, there is no proceeding open for intervention, and TID's motion to intervene must be dismissed.[2]

This notice constitutes final agency action. Requests for rehearing of this notice must be filed within 30 days of the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. 825*l*(a) (2012), and section 385.713 of the Commission's regulations, 18 CFR 385.713 (2018).

Kimberly D. Bose,
Secretary.

[1] *FFP Project 101, LLC*, 162 FERC ¶ 62,144 (2018). The permit was issued for a term of 36 months. Therefore, the permit will expire on February 29, 2020, or on the date FFP files an acceptable development application, whichever occurs first.

[2] Should FFP file a development application for its proposed project, notice of the application will be published, and interested entities, including TID, will have an opportunity to intervene and present their views concerning the proposed project. If TID seeks information of any activities during the issued preliminary permit term, it may register and eSubscribe at https://ferconline.ferc.gov/eSubscription.aspx.

Document Content(s)

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office

Central Washington Field Office
215 Melody Lane, Suite 119
Wenatchee, WA 98801

In Reply Refer To:
01EWFW00-2019-CPA-0014

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

Dear Ms. Bose:

Re: U.S. Fish and Wildlife Service Comments on the Goldendale Pumped Storage Hydroelectric Project (FERC Project No. 14861).

On January 25, 2019, the FFP Project 101, LLC (Applicant) filed its *Notification of Intent and Pre-Application Document (PAD) for the Goldendale Energy Storage Project, FERC No. 14861* (Goldendale Project), a closed-loop pumped storage hydroelectric system in Washington State off the Columbia River near the John Day Dam on the Columbia River. In accordance with Federal Energy Regulatory Commission (Commission) regulations under the Traditional Licensing Process (TLP), Rye Development and National Grid hosted joint agency/public meetings on behalf of the Applicant on May 1, 2019 for resource agencies, tribes, and other interested parties to discuss the proposed Goldendale Project (18 CFR 4.38(b)(3)). Rye Development and National Grid requested comments on additional studies and the PAD by May 30, 2019

As background, the U.S. Fish and Wildlife Service (Service) filed its response to a *Request for Additional Studies for the Proposed John Day Pumped Storage Hydroelectric Project, FERC Project No. 13333-000* (JD Project) with Public Utility District No. 1 of Klickitat County (Klickitat PUD) and the Commission on April 7, 2015. The Goldendale Project is similar to the JD Project since it is being proposed at the same location and has many of the same infrastructure components. In our April 7, 2015 letter, the Service provided numerous recommendations for aquatic and terrestrial studies, and highlighted the potential for project impacts on migratory birds. On June 26, 2015, Klickitat PUD ceased work on the JD Project licensing effort due to the scope of the required studies and financial considerations.

Since both projects have numerous similarities, we believe that many of our comments regarding the JD Project are applicable to the Goldendale Project and request that our April 7, 2015 comments (Attachment A) be included in the record as an official statement of the Service's position regarding the matters addressed herein for the proceeding at hand. We base this filing on several reasons. Our review of the PAD has discovered no relevant studies to assess the impacts of the Goldendale Project on water use in the Columbia River near the project location. Initial fill water and periodic make-up water would be purchased from Klickitat PUD using a

KPUD-owned conveyance system and municipal water right; however, the PAD does not specify how and when the reservoirs would be filled and drained for operation and maintenance purposes and any resulting water quality effects due to the adjacent Columbia Gorge Aluminum Smelter. It is also our understanding that the information the Applicant relies upon in the PAD is outdated and many of the proposed wildlife studies in the PAD entail a single year of study and may not result in an accurate depiction of project effects on wildlife resources. These types of effects and concerns are outlined in the Service's April 7, 2015 comments. We would like to work with the Applicant as study plans and project designs reach their final stages to ensure a proper assessment and characterization of any relevant effects associated with the Goldendale Project.

In the event that the Applicant or Rye Development and National Grid has technical questions or concerns regarding these comments, please contact Steve Lewis at (509) 665-3508 extension 2002.

Sincerely,

for Brad Thompson, Acting State Supervisor
Washington Fish and Wildlife Office

cc:

USFWS, Leavenworth (J. Craig)
USFWS, Portland (K. Freund)
NOAA-Fisheries, Ellensburg (R. Pittman)
WDFW, Ephrata (P. Verhey)
Rye Development, Portland (E. Steimle)

Attachment

Attachment A

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office
215 Melody Lane, Suite 103
Wenatchee, Washington 98801

In Reply Refer To:
13260-2015-CPA-0002
X Ref. 13260-2012-CPA-0031

April 7, 2015

Klickitat PUD
ATTN: Brian Skeahan
1313 South Columbus Ave.
Goldendale, Washington 98620

Dear Mr. Skeahan:

Subject: FWS Response to the Request for Additional Studies for the Proposed John Day Pumped Storage Hydroelectric Project FERC Project No. P13333-000

The U.S. Fish and Wildlife Service (Service) has reviewed Public Utility District No. 1 of Klickitat County's (Klickitat PUD) request for additional studies for the proposed John Day Pumped Storage Hydroelectric Project (Project), in accordance with the Federal Energy Regulatory Commission (Commission) guidelines for the Traditional Licensing Process (TLP). Each resource agency and Indian tribe must provide a potential applicant, in this instance Klickitat PUD, with written comments explaining the need for additional studies within 60 days of Klickitat PUD's joint meeting that occurred in January 2015. The purpose of this joint meeting was to have an opportunity for a site visit, with all pertinent agencies, Indian tribes, and members of the public to explain Klickitat PUD's proposal and its potential environmental impacts.

As you are aware the Project would entail a closed-loop pumped storage project, where water is recycled between two man-made reservoirs in an off-channel and closed system. Water for the initial fill of the lower reservoir and periodic make-up water to account for seasonal evaporative losses during operation would be provided through an existing water intake in the John Day pool (Lake Umatilla), through use of an existing water right owned by Klickitat PUD. We directed you to many sources of existing information to assist Klickitat PUD in assessing how the proposed Project would impact aquatic and terrestrial resources, in our November 24, 2014 correspondence letter filed with you and the Commission.

Prior to filing this correspondence, we met with you via conference call on January 26, 2015, to discuss our agency's concerns pertaining to the proposed Project. We highlighted numerous concerns about the Project; however, we would like to highlight the importance of protecting migratory birds in the proposed project area, specifically golden eagles and bald eagles, and recommend conducting fish and wildlife studies, if the proposed Project proceeds onto the development of a license application.

Migratory Birds

While we believe additional fish and wildlife studies may be needed to assess the potential impact of the proposed Project, it is premature to make those recommendations at this stage of project development. In your *Notification of Intent and Pre-application Document for the J.D. Pool Pumped Storage Hydroelectric Project, FERC No. 13333* dated October 31, 2014; you state the follow as part of your rationale to use the TLP for the proposed Project:

> *"The applicant believes that, while significant and obviously important, the resource issues of the Project are both simple and minimal compared to other projects of this scale. Concomitantly, the likelihood of significant dispute over studies is also minimal. Given the Applicant's willingness to adequately address these issues, the Applicant believes the TLP would better facilitate moving the licensing process forward. It would allow the Applicant and agencies to focus immediately on the issue resolution without being burdened with additional pre-resolution requirements under the ILP."*

We understand the simplistic approach of this statement and do not oppose the use of the TLP in this instance; however, it appears that Klickitat PUD does not truly understand the scope and nature of existing hydroelectric and wind energy development and its associated impacts in the project area. There are numerous Project impacts pertaining to aquatic and terrestrial resources that we emphasized in our November 24, 2014, correspondence. However for the purposes of this correspondence, we would like to provide further detail to Klickitat PUD and the Commission regarding migratory birds (i.e., golden eagle and bald eagle activity) in the proposed project area and surrounding vicinity. This discussion will assist Klickitat PUD and the Commission in assessing whether or not the proposed project area is suitable for this pumped storage proposal and develop a pathway for the development of additional studies, if applicable. At this time, we believe it may be premature to discuss additional studies until a determination is made whether or not other sites may be available to develop and construct the proposed Project. Nevertheless, we do provide fish and wildlife studies for your consideration within the context of this correspondence.

Golden eagle nests occur within close proximity to the proposed project in an area known as Windy Flats/Windy Ridge. This area is known for its expansive wind development and associated impacts to migratory birds (Watson *et al.* 2014). Over the past several years, golden eagle injuries have occurred and conventional thinking appears to link these injuries to wind development. Based on preliminary estimates derived from Washington Department of Fish and Wildlife staff (J. Watson, Washington Department of Fish and Wildlife, pers.

comm., March 2015), golden eagle reproduction has been reduced by nearly 50% in the Wind Flats/Windy Ridge area. Existing effects to migratory birds are not solely limited to golden eagles. Breeding and wintering bald eagles frequently forage in significant numbers along the Columbia River near the proposed project area and their interactions with existing wind power projects have occurred in the past. It is reasonable to assume that the proposed Project will likely have a negative effect on migratory bird resources in the area for several reasons.

The creation of two reservoirs, as specified in the Project description, has numerous cascading effects to migratory birds. These include the loss of habitat where bird species such as golden eagles forage within close proximity to existing nest locations. Secondly, the creation of large bodies of water as contemplated through the proposed reservoirs, will attract migratory birds (i.e., bald eagles) to these resting or loafing areas. Some of these migratory birds will become food resources for large predatory birds such as bald eagles. As a result, bald eagles and golden eagles may become more numerous in this area, thereby increasing the risk of wind turbine eagle strikes.

As of now, there is no evidence presented by Klickitat PUD in its Pre-Application Document that calls for the development of a rigorous Avian Protection Plan (APP) to minimize impacts to migratory birds such as bald eagles and golden eagles. After discussions of reasonable siting of the proposed Project have been concluded, we would like to coordinate with Klickitat PUD in the development of this APP for the proposed Project. We also suggest contacting Washington Department of Fish and Wildlife, to obtain specific raptor monitoring reports associated with the Windy Point/Windy Flats area and associated raptor use, to assess whether or not the proposed Project is compatible with migratory birds in the surrounding landscape. We recommend against further development in this area as contemplated by the proposed Project; however, if Klickitat PUD decides to move forward with subsequent phases of this Project, we recommend obtaining the appropriate eagle permits depending on the level of eagle and other raptor disturbance anticipated with this proposed Project. Information on how to obtain these permits can be found at the following address: http://www.fws.gov/migratorybirds/mbpermits.html.

Fish and Wildlife Studies

At this time, the Service is providing general recommendations and protective measures, until more specific information concerning the proposed Project is developed by the Permittee. Should an application for license be filed for this project, the Permittee should include in the application a plan to avoid, minimize, and compensate for adverse impacts to fish and wildlife resources resulting from project construction, operation, and maintenance. To support the preparation of an acceptable application, the Service recommends that the Permittee arrange for and fund the studies described below. These studies should assist the Commission, the Klickitat PUD, and reviewing agencies in evaluating and assessing potential project impacts and alternatives, and to develop measures to protect, mitigate damages to, and enhance fish and wildlife and their habitats.

Aquatic Studies

The Service is concerned about project effects on existing populations of fish, amphibians, and other aquatic fauna and flora and the habitat that supports them. Klickitat PUD should identify the existing aquatic species in the study area and the effects of project construction, operation, and maintenance on the aquatic ecosystem. We are also concerned about potential project effects on geomorphology, substrate, sediment transport, woody debris transport, streamflow regimes, flow release timing, flow fluctuation, water quality, water temperature, nutrients, and fish passage in the study area.

The effects of project construction, operation, and maintenance on streamflow regimes, timing, and flow fluctuation should be evaluated. Klickitat PUD should evaluate the impacts of project operation on streamflow in the Columbia River both upstream and downstream of the project's water intake/discharge structure. Any modified streamflow regime should protect and maintain existing aquatic habitat. The magnitude of flow recommendations should be based on site-specific hydrologic and biological information. Application of the Service's Instream Flow Incremental Methodology should be used to determine an appropriate minimum instream flow regime (https://fortress.wa.gov/ecy/publications/publications/qwr95104.pdf).

The effects of project operations on the timing, quantity, quality, and effectiveness of downstream flow releases from John Day Dam should be evaluated. Klickitat PUD should also study and evaluate the impacts of rapidly fluctuating flows, if applicable. If it is determined that aquatic organisms would be significantly affected by changes in flow that are outside the normal range of variability, then appropriate compensation should be provided.

The effects of project construction, operation, and maintenance on water quality and water temperature in the Columbia River should be evaluated. Diverted flows could affect chemical constituents such as dissolved oxygen, pH, salinity, turbidity, and others. A study should be conducted to characterize water quality at different flow levels to detect changes in water chemistry that may be caused by project construction and operation. Altered instream water temperatures can also affect oxygen concentration and availability for fish and aquatic organisms. Any changes in water temperature should also be evaluated to determine effects on aquatic organisms.

Klickitat PUD should identify and evaluate the project's effects on fish movement and the movement of other aquatic organisms at the John Day Dam and project area. Adverse effects could include: (1) entrainment of fish; (2) delay, injury or mortality of upstream moving fish caused by project construction and operation; (3) injury or mortality of downstream moving fish caused by the project turbines or other project works; (4) reduced streamflow and available fish habitat below the project; and (5) blocked or impaired movement of fish populations. The status of existing or proposed fishways and how the project would facilitate the effectiveness of such fishways should be studied. The construction, operation, and maintenance of the proposed John Day Pumped Storage Hydroelectric Project should not in any way interfere with or compromise the U.S. Army Corps of Engineers' efforts to effectively operate and maintain safe and timely fish passage at the John Day Dam.

The cumulative effects of the project should also be addressed. Cumulative effects are defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions (40 CFR 1508.7). Cumulative effects should be analyzed and described for the key interactions between this project and any other projects or factors not considered in this application that could have a cumulative effect on water quantity, water quality, fisheries and aquatic species, and related water resources management issues in the region. Klickitat PUD should identify how actions of this proposed project are related to ongoing or anticipated actions of other projects or activities that could have cumulative effects on the Columbia River ecosystem.

Terrestrial Studies

Klickitat PUD should identify the wildlife that is present and evaluate the effects the Project may have on wildlife and their habitats. Appropriate avoidance and mitigation measures should be proposed. Transmission and distribution lines should be buried, if practical, or otherwise designed according to guidelines provided by the Avian Power Line Interaction Committee and the Service.[1] This would help reduce the loss of wildlife habitat and prevent electrocution of perching birds, particularly hawks and eagles as previously discussed in this letter. Special attention should be given to measures designed to avoid and minimize the impacts of project and transmission line construction, operation, and maintenance on sage grouse in Oregon and Washington, if applicable. The effects of changes in downstream flow releases on riparian vegetation should be evaluated. Erosion control measures should be identified to prevent the loss of or damage to wildlife habitat in and downstream from the project area.

Klickitat PUD should evaluate the impacts, if any, of project construction and operation on migratory birds, including migratory waterfowl, and their habitat. Klickitat PUD should develop and include in any future license application plans to protect, mitigate, and enhance waterfowl resting, feeding, and nesting habitat that may be adversely affected by Project construction, operation, and maintenance.

Summary Comments

We appreciate the opportunity to assist Klickitat PUD in the development of additional studies for the proposed pumped storage hydroelectric project. Klickitat PUD should understand that the Service is interested in seeing this information utilized in the creation of an environmentally acceptable project. After all pertinent existing information is compiled for the proposed hydroelectric project; Klickitat PUD should contact the Service to discuss this information in more detail. Consultation and technical assistance requests, questions,

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[1] Avian Power Line Interaction Committee (APLIC) and the U.S. Fish and Wildlife Service. 2005. Avian Protection Plan. Edison Electric Institute and U.S. Fish and Wildlife Service. Washington, D.C. These guidelines are to be used in conjunction with Suggested Practices for Raptors Protection on Power lines: The State of the Art in 1996, Avian Power Line Interaction Committee (APLIC), Edison Electric Institute/Raptors Research Foundation, Washington, DC, and Mitigating Bird Collisions with Power lines: The State of the Art in 1994, Avian Power Line Interaction Committee (APLIC), Edison Electric Institute, Washington, DC.

comments, documents, and required progress reports related to the proposed project should be directed to Stephen Lewis at the Service's Central Washington Field Office, by mail to the address listed on the front page; telephone: (509) 665-3508, extension 2002; or via e-mail: Stephen_Lewis@fws.gov.

Sincerely,

Jessica L Gonzales for

Eric Rickerson, Project Leader
Washington Fish and Wildlife Office

cc:
USFWS, Portland, OR (D. Young)
USFWS, Boise, ID (M. Stuber)
WDFW, Ephrata, WA (P. Verhey)
Yakama Nation, Toppenish, WA, (B. Rose)
FERC, Washington, D.C., (K. Bose)

LITERATURE CITED

In Litteris REFERENCES

Watson, J.W., Duff, A., and Davies, R. 2014. Home Range and Resource Selection by GPS-Monitored Adult Golden Eagles in the Columbia Plateau Ecoregion: Implications for Wind Power Development. The Journal of Wildlife Management. 78(6):1012-1021.

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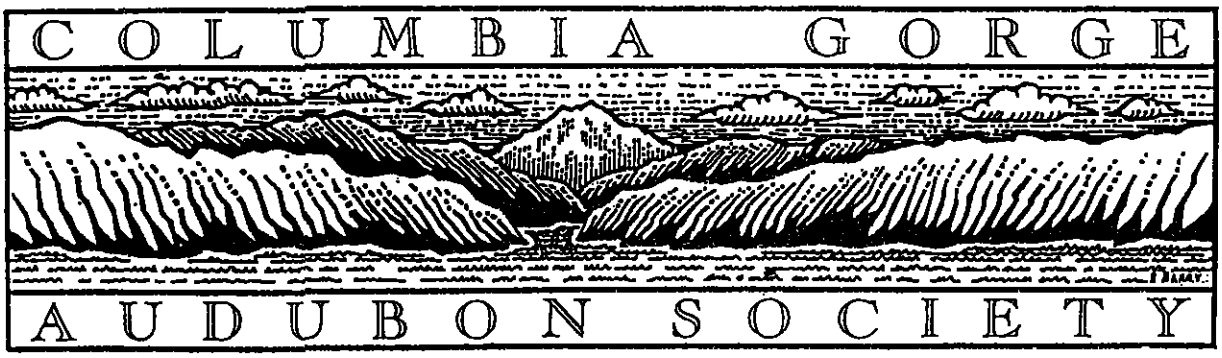

To: Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St., NE
Washington, DC 20426

ORIGINAL

From: Columbia Gorge Audubon Society
PO Box 1393
White Salmon, WA 98672

May 4, 2019

Re: FERC P-14861, a proposed Pumped Storage Hydro project in Klickitat County, Washington, locally termed "the damn pump project."

Ms. Kimberly D. Bose:

Our county has had a rather cavalier attitude toward public notices for quite some time now, and we must have missed the most recent notice for this proposal. We trust that it will not be held against us if we do not regularly read the newspaper of record for our county, but we gave up buying that paper after the editor identified our Audubon chapter members as "environmental terrorists," and then, not so subtly, suggested that we be shot. But, I assure you that we are only "birders" and not terrorists; that claim, made in the 1990's, may have been one of the first "alt-facts" generated by the extreme right.

Since the proponents have probably failed to mention it, we wish to bring to your attention the fact that the National Audubon Society has designated the Columbia Hills (where this project would be located) as the "Columbia Hills Important Bird Area." This designation is not handed out willy-nilly. Nominations are extensively reviewed by expert avian biologists, and only the most significant landscapes are designated as Important Bird Areas. This speaks to the significance of these Hills for birds, especially hawks and eagles.

Of course, recognition by National Audubon Society of the importance of the Hills and its designation as an Important Bird Area was completely ignored by the wind power developers who have covered the Hills with wind turbines. (One wildlife biologist told

us that the only mitigation he was able to get over the entire Columbia Hills was to move one turbine a couple hundred feet from it's proposed location.) The consequences of the ruthless decision to develop the Hills are classified as "proprietary information" by the wind power corporations, and are not readily available to the public. We have heard from "for hire" wildlife biologists who worked in the area for the companies involved, and they were disgusted by how the preliminary studies were designed and tweaked to minimize the predicted bird kill rate, and were "sick at heart" when follow-up studies revealed a bird kill rate approximately 17 times what had been predicted. The actual bird kill rate was so high, in fact, that the projects would not legally have been allowed if the truth were known and revealed during the proposal stage. But the project was built, and the blades still spin. We call this "science on a leash."

While the public is unable to access bird kill rates, we believe that you can. You could keep that information confidential so that competitors could not access it, couldn't you? Also, there is a nearby wind power project that the Klickitat Public Utility District partially owns. Since there is public ownership involved, we believe that you could access their bird kill information. We believe that birds are being decimated by wind turbines on and around the Columbia Hills, and we urge you to seek out this information to establish whether or not there is already a bird kill problem there, because, let's face it, a huge holding pond behind an earthen dam will only attract more birds into the turbine kill zone. Among these will be water birds, birds that now have little reason to frequent the area. Water birds would, of course, attract even more raptors to the area, raising their death toll even more.

Early project proposals described several dams, not just one. Since several dams and multiple holding ponds would undoubtedly result in even more bird deaths and perhaps kill the project, we wonder if the developers are now trying to withhold the full extent of their project. Segmenting projects is standard operating procedure in our county, as this often avoids enhanced environmental review, and sometimes results in tax benefits. We urge that you seek out those earlier plans, which include about five dams totaling approximately 7 miles in length, one of which was to be 500 feet high. Those plans may show you the developers' future intentions.

We are told that during a recent public hearing, one citizen told the proponents that their proposed dam would be built on a geological fault. The reaction of the responding proponent was not to deny this fact, but to dismiss it. His facial expression reflected "we sure didn't want this issue brought up," and his response was, "Did you know that the John Day Dam is built on a fault?" As if to suggest that one dam built on a fault justifies building another dam on a fault. The "faulty" logic of this is, of course, that when the John Day Dam was built, the geology of the area was not as well known as it now is, and it probably was not known that there was a fault there. But proponents of this project do know that there is a fault - an active fault - under their proposed dam on the Columbia Hills, and they also likely know that the dirt of the Hills is known to liquefy. You owe it to the public to research this critical safety issue.

Another related issue that you - and the public - needs to know, is where will the water and mud go if there is a dam failure? We asked this question early on, and received no reply. There is also a question of over-flow in the event of sudden run-off from slopes surrounding the proposed dam. Sudden drastic run-off has been known to occur to an astonishing extent in this area.

Speaking of faults and dam failure, it needs to be pointed out that The John Day Dam is mostly concrete, rebar and rock, whereas the proposed Columbia Hills dam would be earthen, a type of structure known to be susceptible to failure.

An electrical engineer has told us that wind power energy is about twice as expensive as hydropower to produce, and that dam pump project energy would cost about four times the cost of hydropower (which is also a renewable resource, it should be noted). Of course, mandates supporting switching to renewable energy production such as wind power will force the public to purchase their power at exorbitant rates. But for how long? When will the rate paying public rebel and reverse those mandates? That time is coming, and when it does, the developers will already be gone with their profits and the investors will be left holding the bag. But perhaps the economic aspects of this project do not fall under your area of purview, but if they do, your eyes should be open when you review the numbers.

Wind power on the Columbia Hill was a terrible mistake to begin with, and it was only allowed through deception. Adding one or more holding ponds on the Hills among all those spinning blades would result in a holocaust for birds, and a threat to public safety. We seldom oppose projects, but when we have, and those projects have been built, our warnings have always proven to be justified. We are tired of being proven right. We request that you reject this proposal.

Dave Thies

Dave Thies, President
Columbia Gorge Audubon Society

Document Content(s)

STATE OF WASHINGTON

DEPARTMENT OF FISH AND WILDLIFE

1550 Alder St. N.W. • Ephrata, Washington 98823 • (509) 754-4624 FAX (509) 754-5257

May 28, 2019

FILED ELECTRONICALLY

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

RE: Additional Study Requests and comments on the PAD for the Goldendale Energy Storage Project, FERC Project No. 14861

Dear Secretary Bose:

The Washington Department of Fish and Wildlife (DFW) has reviewed the pre application document (PAD) for the Goldendale Energy Storage Project (Project), FERC Project No. 14861 and is providing the following comments on the PAD and recommendations for additional studies.

The DFW continues to be concerned with the addition of the upper reservoir in close proximity to wind turbines, previously mentioned in the DFW October 28, 2014 letter in reference to the John Day Pumped Storage Hydroelectric Project. This letter was included in the PAD. The new source of water will attract waterfowl, bats and bald eagles (*Haliaeetus leucocephalus*), putting them at a high risk of negatively interacting with wind turbines; consequently, increasing wind turbine mortality rates on them. We appreciate the development of a Draft Wildlife Management Plan (WMP) and the inclusion of studies to determine Project impacts on raptors. These studies will aid in guiding the determination of the need for mitigation. However, we are concerned in regards to the lack of mitigation options. In addition to the installation of plastic shade balls on the open water areas to dissuade water fowl from using it and other waterfowl dissuasion methods to be developed in the WMP. Wind generation curtailment should be included as an option to help prevent avian/bat mortality, especially during the spring and fall migration periods.

Project Description

According to the PAD the Project is a closed-loop pumped storage hydropower facility located off stream of the Columbia River at John Day Dam, located on the Washington side of the Columbia River at River Mile 215.6. The proposed Project will involve no river or stream impoundments. Initial fill water and periodic make-up water will be purchased from Public utility District No. 1 of Klickitat County, Washington (KPUD) using a KPUD-owned conveyance system and municipal water right.

Project Facilities include: An upper reservoir consisting of a rock fill embankment dam approximately 170 feet high, 8,000 feet long, a surface area of about 59 acres, storage of 7,100 acre-feet, at an elevation of 2,940 feet above mean sea level; A lower reservoir consisting of an embankment approximately 170 feet high, 7,400 feet long, a surface area of about 62 acres, storage of 7,100 AF, and an elevation of 580 average mean sea level. An underground water conveyance tunnel and underground powerhouse; and 23-kilovolt transmission line(s). The rated (average) gross head of the Project is 2,400 feet, and the rated total installed capacity is 1,200 megawatts.

DFW Fish and Wildlife Management

The DFW is an agency of the State of Washington with jurisdiction over fish, shellfish, and wildlife resources and charged with the duty of protecting, conserving, managing, and enhancing those resources. (Washington Revised code, Title 77) The DFW mission statement is to preserve, protect and perpetuate fish, wildlife and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities.

PAD comments

There will be temporary and permanent reduction of habitat as a result of the construction of the Project that should be addressed through compensatory mitigation. Since the impacts of the removal of habitat to construct the two reservoirs and the approximately 18,200 ft. (3.4 miles) of new access roads cannot be addressed through the development of best management practices. We recommend developing mitigation in the form of land acquisition for conservation of wildlife resources to compensate for environmental and natural resource impacts of the Project.

The need for compensatory mitigation is supported by the evidence of the large amount of diversity of wildlife species that potentially reside in the Project described in section 4.7.1.3 of the PAD. Species that have the potential to exist within the Project and are listed as either federally-listed (endangered, threatened, species of concern, or candidate) and or state listed (endangered, threatened, sensitive, or candidate) within Klickitat County, Washington and Sherman County, Oregon include four species of amphibians, seven species of reptiles, 30 species of birds and raptors, 19 mammals (including bats) and four invertebrates. Based on existing golden eagle (*Aquila chrysaetos*) GPS data, which indicates frequent use of the Project area by golden eagles, it is anticipated that there will be significant impacts due to habitat conversion resulting in loss of foraging habitat on this species. In addition, impacts to wintering mule deer (*Odocoileus hemionus hemionus*), and impacts to species that use talus slopes will occur due to direct loss of habitat. Also, according to table 4.7-3 of the PAD there are 14 federal

and state-listed endangered, threatened, and sensitive plant species with the potential to occur in the Project vicinity. Although we appreciate the development of best management practices to protect these species, permanent impact due to construction of the reservoirs and roads will occur.

It is important to consider compensatory mitigation in terms of the temporal scope of the Project, which could be up to fifty-years. Mitigation measures put in place to mitigate for permanent impacts, including habitat losses, need to have the means in place for maintaining these measures, throughout the time frame of the license. The DFW habitat mitigation policy goal is no net loss of habitat function and value.

Raptor Surveys:

We support the development of Pre Construction Raptor Nest Surveys, Monitoring Golden Eagle Use, and Bald Eagle Monitoring surveys included Appendix C: WMP of the PAD. We do however offer the following recommendation:

We recommend conducting pre-construction raptor nest surveys for three consecutive years in order to capture the variability of eagle use of nests. Capturing nesting behavior for birds like golden eagles that may not nest in the same nest every year with a single year or two of survey information can be extremely biased.

Bird carcass are subject to removal by coyotes and other animal, making it difficult to get accurate information on bird mortalities. For this reason we recommend at least two years of pre-construction bald eagle monitoring, including fatality survey to be conducted under wind turbines in the vicinity of the upper reservoir. In addition it may take some time for the upper reservoir to be discovered by waterfowl and for the bald eagles to key in on this new source of food. We recommend at a minimum three years of post-construction survey to provide pre and post construction eagle fatality information. The USFWS (2003; Interim guidelines to avoid and minimize wildlife impacts from wind turbines http://www.fws.gov/habitatconservation/wind.pdf) recommends 3 years of surveys to capture seasonal and annual changes in avian abundance.

DFW Recommendations for Additional Environmental Studies

Wildlife

Proposal Title: Update Wildlife Data

Justification and Purpose: Up to date wildlife studies are needed. The PAD relies heavily on data collected by Ecology and Environment Incorporated during the development of the Windy Point Wind Farm, which included land adjacent to the proposed upper reservoir. The data in the PAD table 4.5-2 and 4.5-3 is not specific to the Project. It was collected in 2005 prior to the construction of the Windy Point Wind Farm and is fourteen years old. In addition, information from the DFW Priority Habitat Species (PHS) database was used. The PHS data provides insight to the possible species diversity of the Project area, but the database is incomplete. The absence of wildlife species in the PHS database is not necessarily an indication that they do not occur there, but that survey information for that specific area does not exist.

As a priority, wildlife surveys should be conducted in the Project area that will be permanently and temporarily impacted (reservoir areas and new roads) in order to aid in the determination of the impacts of the removal or temporary removal of the habitat on wildlife. This information will be used to develop impact avoidance and minimization measures, including best management practices that should be incorporated into planning and design; construction; and operational phases of the Project.

Study Plan: Scientifically-based wildlife surveys should be conducted monthly for an entire calendar year in order to detect species that are only present and/or detectable during certain times of the year. Surveys should be conducted by walking transects and recording observations of birds, mammals and reptiles. A written report which includes species observed, location, nest location, den site or burrow location should occur. If species are identifiable via scat or tracks, they should also be noted.

Proposal Title: Literature Review of Similar Project Effects on Migratory Birds

The DFW recommends conducting a literature review to gather information that will provide information on impacts and use of pump storage projects where new reservoirs were constructed adjacent to wind turbines. This information will be useful in determining the potential for new wind turbine impacts to migratory birds as a result of the construction of the Project. The DFW anticipates waterfowl will utilize the new Project reservoirs for resting, loafing and as a safe haven.

Proposal Title: Pre and Post Upper Reservoir Construction Bat Surveys

Justification and Purpose: Table 4.7-4 of the PAD lists federal and state listed species for Klickitat County, Washington, and Sherman County, Oregon in which the hoary bat (*Lasiurus cinereus)*, long-legged myotis (*Myotis volans*), Pacific Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), silver-haired bat (*Lasionycteris noctivagans*) and the spotted bat (*Euderma maculatum*) have the potential to occur in the Project boundary. Data is not available to determine if the pallid Townsend's big-eared bat (*Corynorhinus townsendii pallescens*) has the potential to be present in the Project.

The construction of a new body of water at the upper reservoir, will likely provide habitat for and attract insects in close proximity to wind turbines. In turn, the insect will attract foraging bats to the area, putting them in close proximity to the wind turbines. Bats are also attracted to water features to drink from. Bat fatalities have been found to be caused by wind turbine blade strikes and bats flying close to the turbine blades in an effort to avoid them resulting in barotrauma. There are no available bat survey data specific to the Project upper reservoir site. Bats are known to have a long life span and slow reproductive rate. Loss of large numbers of bats may have significant impacts to local or regional populations.

Study Plan: Pre construction and post construction studies should occur during the spring, summer, and fall. Prior to construction mortality survey should occur for two consecutive years to determine current existing bat mortality rates. Post reservoir construction bat mortality surveys should occur for two consecutive years to determine fatality rates.

The survey protocol should include: estimates of carcass removal and carcass detection bias likely to influence those rates; duration and frequency of monitoring; monitoring of wind turbines immediately adjacent to the reservoir; general transect search protocol; field bias and error assessment; and estimates of fatality. Per the USFWS Land-Based Wind Energy Guidelines (2012) a more detailed description of fatality search protocols can be found in the California (California Energy Commission 2007) and Pennsylvania (Pennsylvania Game Commission 2007) state guidelines and in Kunz et al. (2007), Smallwood (2007), and Strickland et al. (2011).

Proposal Title: Upper Reservoir Acoustic Bat Surveys

Justification and Purpose: Conducting acoustic bat surveys will provide current information on the use of the upper reservoir area by bats and aid in the determination of the presence of state and federal endangered bat species. This information will aid in determining whether future bat studies are warranted.

Study Plan: Acoustic bat detectors should be placed on the wind turbine adjacent to the proposed location of the upper reservoir. Detectors should be situated to sample as much of the rotor swept zone as possible, or at least 150 feet above ground surface (NY State Department of Environmental Conservation 2009). Monitoring should cover periods of migration as well as periods of known high activity for resident species (USFWS Guidelines 2012). Sampling should occur April through October to capture potential highly pulsed migration events. Data should correspond with bat foraging activity, daily from ½ hour prior to sunset until ½ hour after sunrise. Climatological data should be collected so weather data can be used in the analysis of bat activity levels. Data should be downloaded weekly and units inspected to ensure they are working properly to prevent data loss.

Thank you for this opportunity to provide the DFW comments on the PAD and additional study recommendations for the proposed Goldendale Energy Storage Project. Please contact me at (509) 754-4624 ex. 13 or by e-mail at Patrick.Verhey@dfw.wa.gov if you have any questions.

Sincerely,

Patrick Verhey, WDFW Biologist

Literature Cited

California Energy Commission and California Department of Fish and Game. 2007. California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development.

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USFWS March 2012 U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines. P. 35

Telephone Memo

To: Public Files
From: Suzanne Novak - OEP
Date: June 19, 2019
Dockets: P-14861-000
Project: Goldendale Hydroelectric Project

Subject: Tribal Consultation Contact with the Confederated Tribes of the Umatilla Indian Reservation Regarding the Proposed licensing of the Goldendale Hydroelectric Project

On April 4, 2019, I called the Chairman's office for the Confederated Tribes of the Umatilla Indian Reservation (Tribes) to follow up on our March 1, 2019, letter we sent to Chairman William Sigo IV inviting to him have government to government consultations with the Commission regarding the Goldendale Project. There was no answer so I left a message on the office's voicemail asking for someone in the office to contact me if the Chairman was interested in having such a meeting. Since I did not hear back, on May 7, 2019, I called the Chairman's office again and left a similar voice message because there was no answer. Since I still had not heard back from the Tribes, I sent a follow-up email with a link to the March 1, 2019 letter and asked for someone to contact me if the Chairman was interested in having a meeting. Since then I have not heard back from any member of the Tribes.

Document Content(s)

Rye Development

745 Atlantic Avenue, 8th Floor, Boston, MA 02111
erik@ryedevelopment.com

June 27, 2019

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

Re: **Response to May 29, 2019 Comments and Additional Study Requests from United States Fish and Wildlife Service (USFWS) for the Goldendale Energy Storage Project, FERC No 14861**

FFP 101 (Applicant) has reviewed comment received on May 29, 2019 from USFWS in response to the pre-application document (PAD) for the Goldendale Energy Storage Project (Goldendale Project) located in Klickitat County, Washington. This letter is a response to comments and requests for additional studies from USFWS based on their review of the PAD submitted to FERC on January 25, 2019.

General Comments

The comments from USFWS reference their letter from April 2015 when a similar project was under development with a different applicant and FERC Number (P-13333). USFWS indicates in the May 2019 letter that because the project is similar, their 2015 comments are relevant.

The Applicant disagrees with this assumption as it oversimplifies the significant project re-design and relationship to the existing water right for the project. Much of the new design evolved specifically to help minimize concerns raised by agencies in 2015. The current project design has a significantly smaller footprint, one less reservoir, and does not extend to the Columbia River, but will purchase water from the Klickitat Public Utility District. Because of these modifications, the applicant does not believe there will be project impacts to aquatics species or water quality.

Avian Impacts

Some of USFWS's comments center on impacts to avian species due to the proximity of the project to nearby wind turbines. The wind projects are not associated with the Goldendale Project and therefore any impacts to avian species due to injury or mortality from wind turbines is the responsibility of the owners and operators of the wind turbines. The Goldendale Project consists of a closed-loop pumped storage hydro project and does not include construction or operation of any wind turbines. The Applicant has no authority, jurisdiction, or operational

influence over those projects, and protection from wind turbines should fall to those owners and the appropriate regulatory agencies, including USFWS.

Aquatic Species and Water Quality

USFWS makes multiple comments in their 2015 letter related to impacts to water quality, riparian habitat, and aquatics species. The Applicant believes that these comments from 2015 are not relevant to the current project design, which does not extend to the Columbia River, and that USFWS comments show lack of clarity and understanding of the current project design regarding water intake. Specific comments and responses are itemized below.

- *USFWS Comment*: the PAD does not specify how and when the reservoirs would be filled and drained for operation and maintenance purposes and any resulting water quality effects due to the adjacent Columbia Gorge Aluminum Smelter.

Applicant Response: Operational details will be presented in the license application. However, because the project is a closed loop system with no outfall to any surface water body, the project would not have any water quality effect. If drainage of the lower reservoir were needed for maintenance, the water would be pumped into the upper reservoir and vice versa. Only one reservoir will be filled to capacity at any given time.

- *USFWS 2015 Comment:* The Service is concerned about project effects on existing populations of fish, amphibians, and other aquatic fauna and flora and the habitat that supports them. We are also concerned about potential project effects on geomorphology, substrate, sediment transport, woody debris transport, streamflow regimes, flow release timing, flow fluctuation, water quality, water temperature, nutrients, and fish passage in the study area. The effects of project construction, operation, and maintenance on streamflow regimes, timing, and flow fluctuation should be evaluated. Applicant should evaluate the impacts of project operation on streamflow in the Columbia River both upstream and downstream of the project's water intake/discharge structure. Any modified streamflow regime should protect and maintain existing aquatic habitat. The magnitude of flow recommendations should be based on site-specific hydrologic and biological information. Application of the Service's Instream Flow Incremental Methodology should be used to determine an appropriate minimum instream flow regime

Applicant Response: Klickitat Public Utility District's (KPUD) water right was historically used by the aluminum smelter and had a withdrawal rate greater than what would be used by the project. There are no new impacts associated with KPUD maintaining the existing right.

- *USFWS 2015 Comment*: The effects of project operations on the timing, quantity, quality, and effectiveness of downstream flow releases from John Day Dam should be evaluated. Klickitat PUD should also study and evaluate the impacts of rapidly fluctuating flows, if applicable. Klickitat PUD should identify and evaluate the project's effects on fish movement and the movement of other aquatic organisms at the John Day Dam and project area. Adverse effects could include: (1) entrainment of

fish; (2) delay, injury or mortality of upstream moving fish caused by project construction and operation; (3) injury or mortality of downstream moving fish caused by the project turbines or other project works; (4) reduced streamflow and available fish habitat below the project; and (5) blocked or impaired movement of fish populations.

Applicant Response: The project design does not extend to the Columbia River. The project will purchase water from KPUD.

- *USFWS 2015 Comment*: The status of existing or proposed fishways and how the project would facilitate the effectiveness of such fishways should be studied. The construction, operation, and maintenance of the proposed John Day Pumped Storage Hydroelectric Project should not in any way interfere with or compromise the U.S. Army Corps of Engineers' efforts to effectively operate and maintain safe and timely fish passage at the John Day Dam.

Applicant Response: Klickitat Public Utility District's (KPUD) water right was historically used by the aluminum smelter and had a withdrawal rate greater than what would be used by the project. There are no impacts to the fishways at the John Day dam associated with KPUD maintaining the existing right.

- *USFWS 2015 Comment*: The effects of changes in downstream flow releases on riparian vegetation should be evaluated. Erosion control measures should be identified to prevent the loss of or damage to wildlife habitat in and downstream from the project area.

Applicant Response: As stated above, there are no downstream releases.

Attraction to Reservoirs

USFS comments that the proposed Project will likely have a negative effect on migratory bird resources due to loss of habitat where bird species such as golden eagles forage within close proximity to existing nest locations, and that the creation of large bodies will attract migratory birds (i.e., bald eagles) to these resting or loafing areas. As a result, bald eagles and golden eagles may become more numerous in this area, thereby increasing the risk of wind turbine eagle strikes.

The Applicant does believe that the reservoirs will be an attraction to waterfowl and other wildlife species from existing higher quality habitat within and near the Columbia River. The general idea when designing and constructing the reservoirs will be to avoid creating any suitable wildlife habitat. Due to the proximity of the project to the John Day and Columbia Rivers, waterfowl, wildlife and other species will be attracted to that nearby superior habitat.

The Applicant looks forward to collaboration with USFWS as the license application is developed to include measures to avoid creation of habitat and reduce attraction of waterfowl and other species. The Applicant is also continuing to research options and measures to reduce

attraction to the reservoirs including looking to how this issue is addressed at airport storm water detention basins. There are a number of measures included in the Wildlife Management and Avian Protection plans, which have been and will continue to be developed in close collaboration with USFWS and other appropriate agencies. These include:

- Fencing the reservoir to exclude wildlife;
- No construction of riparian habitat or in-water habitat;
- No development of terrestrial habitat conducive to wildlife, including bats and birds;
- Proposing the use of shade balls to deter wildlife presence/use.
- Researching other methods to further deter wildlife, including birds and bats, from using reservoir ponds.
- The operational regime of the project will result in both upper and lower reservoirs being drained approximately once per day, further reducing the potential for riparian or aquatic habitat.

Golden Eagle Foraging & Raptor Monitoring

USFWS suggests contacting Washington Department of Fish and Wildlife (WDFW), to obtain specific raptor monitoring reports associated with the Windy Point/Windy Flats area and associated raptor use. They also recommend obtaining the appropriate eagle permits depending on the level of eagle and other raptor disturbance.

Applicant is in close communication and coordination with WDFW regarding golden eagle and other raptor use in the area and has requested the 2019 survey and monitoring data. We will also obtain any necessary disturbance permits.

The Applicant does not believe that there would be significant impacts on golden eagles (GOEA) because of habitat conversion and loss of foraging habitat. Golden eagle prime habitat in some western states has been defined as having high population densities consisting of a mixture of cliffs and trees and open habitat with an abundance and diversity of prey (WDFW, 2004). Important foraging habitat for golden eagles includes shrub-steppe and native grassland communities (WDFW, 2004).

The Project site does not contain prime foraging or nesting habitat. The Project does not overlap WDFW priority habitat for GOEA, only cliff habitat is priority mapped, and the Project would not be impacting cliff habitat. The existing wind farm and decommissioned aluminum plant makes this area already developed, industrial land. The Project site contains a small percentage of marginal foraging habitat (biologists in 2019 observed several yellow-bellied marmots in smelter area and manicured lawn present there), and the proposed Project would not impact this habitat to the extent of causing significant impacts on GOEAs. Based on agency communication and plans for 2019 aerial raptor surveys, we plan to continue to collaborate with agencies for current research on golden eagle use of habitat in or near the Project.

The Applicant would conduct surveys of bald and golden eagle nests within the buffer distances required by BGEPA prior to initiating construction and would implement avoidance measures as appropriate depending on the results of the surveys.

Wildlife Data

USFWS suggests that the information the Applicant relies upon in the PAD is outdated and many of the proposed wildlife studies in the PAD entail a single year of study and may not result in an accurate depiction of project effects on wildlife resources.

The Applicant does not believe that additional wildlife studies will provide useful data that will further our understanding of project impacts. Our assumptions about the presence of wildlife species are based on the pre-construction studies conducted prior to construction of nearby wind projects and further assume presence of all the species listed in those studies. Project biologists have indicated that habitat for wildlife species has likely degraded since that time, and new studies would only provide less protective data than relying on the pre-wind construction studies.

Transmission

USFWS suggests that Applicant should bury transmission and distribution lines, or otherwise designed according to guidelines provided by the Avian Power Line Interaction Committee (APLIC) and the Service. They also ask that special attention be given to measures designed to avoid and minimize the impacts of project and transmission line construction, operation, and maintenance on sage grouse in Oregon and Washington, if applicable.

The Applicant intends design and construct all transmission or distribution lines according to APLIC criteria.

Summary

The Applicant looks forward to continued collaboration with USFWS and other Agencies during the development of the Avian and Wildlife Management plans to address concerns regarding attraction to the new reservoirs and providing clarification to USFWS regarding the details of the project design and construction. We do reiterate, however, that the study and mitigation of impacts from nearby wind farms are not appropriate to the Goldendale Project beyond reservoir attraction or documented loss of habitat.

Please contact me with any questions you may have.

Sincerely,

Erik Steimle
erik@ryedevelopment.com

Rye Development

745 Atlantic Avenue, 8th Floor, Boston, MA 02111
erik@ryedevelopment.com

June 27, 2019

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

Re: **Response to May 29, 2019 Comments and Additional Study Requests from United States Fish and Wildlife Service (USFWS) for the Goldendale Energy Storage Project, FERC No 14861**

FFP 101 (Applicant) has reviewed comment received on May 29, 2019 from USFWS in response to the pre-application document (PAD) for the Goldendale Energy Storage Project (Goldendale Project) located in Klickitat County, Washington. This letter is a response to comments and requests for additional studies from USFWS based on their review of the PAD submitted to FERC on January 25, 2019.

General Comments

The comments from USFWS reference their letter from April 2015 when a similar project was under development with a different applicant and FERC Number (P-13333). USFWS indicates in the May 2019 letter that because the project is similar, their 2015 comments are relevant.

The Applicant disagrees with this assumption as it oversimplifies the significant project re-design and relationship to the existing water right for the project. Much of the new design evolved specifically to help minimize concerns raised by agencies in 2015. The current project design has a significantly smaller footprint, one less reservoir, and does not extend to the Columbia River, but will purchase water from the Klickitat Public Utility District. Because of these modifications, the applicant does not believe there will be project impacts to aquatics species or water quality.

Avian Impacts

Some of USFWS's comments center on impacts to avian species due to the proximity of the project to nearby wind turbines. The wind projects are not associated with the Goldendale Project and therefore any impacts to avian species due to injury or mortality from wind turbines is the responsibility of the owners and operators of the wind turbines. The Goldendale Project consists of a closed-loop pumped storage hydro project and does not include construction or operation of any wind turbines. The Applicant has no authority, jurisdiction, or operational

influence over those projects, and protection from wind turbines should fall to those owners and the appropriate regulatory agencies, including USFWS.

Aquatic Species and Water Quality

USFWS makes multiple comments in their 2015 letter related to impacts to water quality, riparian habitat, and aquatics species. The Applicant believes that these comments from 2015 are not relevant to the current project design, which does not extend to the Columbia River, and that USFWS comments show lack of clarity and understanding of the current project design regarding water intake. Specific comments and responses are itemized below.

- *USFWS Comment*: the PAD does not specify how and when the reservoirs would be filled and drained for operation and maintenance purposes and any resulting water quality effects due to the adjacent Columbia Gorge Aluminum Smelter.

Applicant Response: Operational details will be presented in the license application. However, because the project is a closed loop system with no outfall to any surface water body, the project would not have any water quality effect. If drainage of the lower reservoir were needed for maintenance, the water would be pumped into the upper reservoir and vice versa. Only one reservoir will be filled to capacity at any given time.

- *USFWS 2015 Comment:* The Service is concerned about project effects on existing populations of fish, amphibians, and other aquatic fauna and flora and the habitat that supports them. We are also concerned about potential project effects on geomorphology, substrate, sediment transport, woody debris transport, streamflow regimes, flow release timing, flow fluctuation, water quality, water temperature, nutrients, and fish passage in the study area. The effects of project construction, operation, and maintenance on streamflow regimes, timing, and flow fluctuation should be evaluated. Applicant should evaluate the impacts of project operation on streamflow in the Columbia River both upstream and downstream of the project's water intake/discharge structure. Any modified streamflow regime should protect and maintain existing aquatic habitat. The magnitude of flow recommendations should be based on site-specific hydrologic and biological information. Application of the Service's Instream Flow Incremental Methodology should be used to determine an appropriate minimum instream flow regime

Applicant Response: Klickitat Public Utility District's (KPUD) water right was historically used by the aluminum smelter and had a withdrawal rate greater than what would be used by the project. There are no new impacts associated with KPUD maintaining the existing right.

- *USFWS 2015 Comment*: The effects of project operations on the timing, quantity, quality, and effectiveness of downstream flow releases from John Day Dam should be evaluated. Klickitat PUD should also study and evaluate the impacts of rapidly fluctuating flows, if applicable. Klickitat PUD should identify and evaluate the project's effects on fish movement and the movement of other aquatic organisms at the John Day Dam and project area. Adverse effects could include: (1) entrainment of

fish; (2) delay, injury or mortality of upstream moving fish caused by project construction and operation; (3) injury or mortality of downstream moving fish caused by the project turbines or other project works; (4) reduced streamflow and available fish habitat below the project; and (5) blocked or impaired movement of fish populations.

Applicant Response: The project design does not extend to the Columbia River. The project will purchase water from KPUD.

- *USFWS 2015 Comment*: The status of existing or proposed fishways and how the project would facilitate the effectiveness of such fishways should be studied. The construction, operation, and maintenance of the proposed John Day Pumped Storage Hydroelectric Project should not in any way interfere with or compromise the U.S. Army Corps of Engineers' efforts to effectively operate and maintain safe and timely fish passage at the John Day Dam.

Applicant Response: Klickitat Public Utility District's (KPUD) water right was historically used by the aluminum smelter and had a withdrawal rate greater than what would be used by the project. There are no impacts to the fishways at the John Day dam associated with KPUD maintaining the existing right.

- *USFWS 2015 Comment*: The effects of changes in downstream flow releases on riparian vegetation should be evaluated. Erosion control measures should be identified to prevent the loss of or damage to wildlife habitat in and downstream from the project area.

Applicant Response: As stated above, there are no downstream releases.

Attraction to Reservoirs

USFS comments that the proposed Project will likely have a negative effect on migratory bird resources due to loss of habitat where bird species such as golden eagles forage within close proximity to existing nest locations, and that the creation of large bodies will attract migratory birds (i.e., bald eagles) to these resting or loafing areas. As a result, bald eagles and golden eagles may become more numerous in this area, thereby increasing the risk of wind turbine eagle strikes.

The Applicant does believe that the reservoirs will be an attraction to waterfowl and other wildlife species from existing higher quality habitat within and near the Columbia River. The general idea when designing and constructing the reservoirs will be to avoid creating any suitable wildlife habitat. Due to the proximity of the project to the John Day and Columbia Rivers, waterfowl, wildlife and other species will be attracted to that nearby superior habitat.

The Applicant looks forward to collaboration with USFWS as the license application is developed to include measures to avoid creation of habitat and reduce attraction of waterfowl and other species. The Applicant is also continuing to research options and measures to reduce

attraction to the reservoirs including looking to how this issue is addressed at airport storm water detention basins. There are a number of measures included in the Wildlife Management and Avian Protection plans, which have been and will continue to be developed in close collaboration with USFWS and other appropriate agencies. These include:

- Fencing the reservoir to exclude wildlife;
- No construction of riparian habitat or in-water habitat;
- No development of terrestrial habitat conducive to wildlife, including bats and birds;
- Proposing the use of shade balls to deter wildlife presence/use.
- Researching other methods to further deter wildlife, including birds and bats, from using reservoir ponds.
- The operational regime of the project will result in both upper and lower reservoirs being drained approximately once per day, further reducing the potential for riparian or aquatic habitat.

Golden Eagle Foraging & Raptor Monitoring

USFWS suggests contacting Washington Department of Fish and Wildlife (WDFW), to obtain specific raptor monitoring reports associated with the Windy Point/Windy Flats area and associated raptor use. They also recommend obtaining the appropriate eagle permits depending on the level of eagle and other raptor disturbance.

Applicant is in close communication and coordination with WDFW regarding golden eagle and other raptor use in the area and has requested the 2019 survey and monitoring data. We will also obtain any necessary disturbance permits.

The Applicant does not believe that there would be significant impacts on golden eagles (GOEA) because of habitat conversion and loss of foraging habitat. Golden eagle prime habitat in some western states has been defined as having high population densities consisting of a mixture of cliffs and trees and open habitat with an abundance and diversity of prey (WDFW, 2004). Important foraging habitat for golden eagles includes shrub-steppe and native grassland communities (WDFW, 2004).

The Project site does not contain prime foraging or nesting habitat. The Project does not overlap WDFW priority habitat for GOEA, only cliff habitat is priority mapped, and the Project would not be impacting cliff habitat. The existing wind farm and decommissioned aluminum plant makes this area already developed, industrial land. The Project site contains a small percentage of marginal foraging habitat (biologists in 2019 observed several yellow-bellied marmots in smelter area and manicured lawn present there), and the proposed Project would not impact this habitat to the extent of causing significant impacts on GOEAs. Based on agency communication and plans for 2019 aerial raptor surveys, we plan to continue to collaborate with agencies for current research on golden eagle use of habitat in or near the Project.

The Applicant would conduct surveys of bald and golden eagle nests within the buffer distances required by BGEPA prior to initiating construction and would implement avoidance measures as appropriate depending on the results of the surveys.

Wildlife Data

USFWS suggests that the information the Applicant relies upon in the PAD is outdated and many of the proposed wildlife studies in the PAD entail a single year of study and may not result in an accurate depiction of project effects on wildlife resources.

The Applicant does not believe that additional wildlife studies will provide useful data that will further our understanding of project impacts. Our assumptions about the presence of wildlife species are based on the pre-construction studies conducted prior to construction of nearby wind projects and further assume presence of all the species listed in those studies. Project biologists have indicated that habitat for wildlife species has likely degraded since that time, and new studies would only provide less protective data than relying on the pre-wind construction studies.

Transmission

USFWS suggests that Applicant should bury transmission and distribution lines, or otherwise designed according to guidelines provided by the Avian Power Line Interaction Committee (APLIC) and the Service. They also ask that special attention be given to measures designed to avoid and minimize the impacts of project and transmission line construction, operation, and maintenance on sage grouse in Oregon and Washington, if applicable.

The Applicant intends design and construct all transmission or distribution lines according to APLIC criteria.

Summary

The Applicant looks forward to continued collaboration with USFWS and other Agencies during the development of the Avian and Wildlife Management plans to address concerns regarding attraction to the new reservoirs and providing clarification to USFWS regarding the details of the project design and construction. We do reiterate, however, that the study and mitigation of impacts from nearby wind farms are not appropriate to the Goldendale Project beyond reservoir attraction or documented loss of habitat.

Please contact me with any questions you may have.

Sincerely,

Erik Steimle
erik@ryedevelopment.com

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT
PO BOX 2946
PORTLAND, OR 97208-2946

ORIGINAL

Subject: FERC P-14861 Rye Development Pump Storage Facility in Goldendale, Washington

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

Dear Ms. Bose:

This letter is Portland District Corps of Engineers (Corps) response to the request for public comments for the above named project.

The Corps is responsible for evaluating any projects that may impacted or be injurious to the public interest on Corps lands or on Federally authorized projects per 33 USC 408. The Rye development project, while near Corps lands in Goldendale Washington and under the current proposed plan, will not occupy Corps lands. If the proposed project alignment should change, then we would ask that Rye development inform the Corps of the change to determine if any Corps lands will be impacted.

The proposed project description states that Rye Development is proposing to use an existing Bonneville Power Administration (BPA) electrical line that crosses over the federally authorized Columbia River channel, and an existing water line owned by Klickitat Public Utility District (KPUD) to initially fill and recharge the storage pond. It is the Corps understanding that at this time, Rye Development is requesting that they be allowed to use the existing BPA and KPUD lines, but that no official agreements have been entered into. If those agreements should not be approved and another electric line will need to cross the Columbia River, or if any work will occur on lands of the John Day Lock and Dam Project (administered by the Corps), then we would request that Rye Development inform the Corps so that we may evaluate if the new proposal will impact the federal project.

Finally, the Corps has concerns regarding a failure of the storage pond and if it fails will the material wash into the river. If material does wash into the river, has Rye Development evaluated the impacts of the material to impact or stop navigation in the river or use of the John Day Lock and Dam? We would request that such a failure be analyzed and addressed to ensure no impacts to either the John Day Lock and Dam or federal navigation channel.

The Corps appreciates the opportunity to comment on this project and would request that we continue to be informed of any actions related to the project, or if any changes are made to the proposed project.

Sincerely,

Kevin J. Brice, P.E., PMP
Deputy District Engineer
for Project Management

Document Content(s)

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

August 26, 2019

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

Re: Goldendale Energy Storage Project (FERC No. 14861)- **THIRD SIXTH MONTH PROGRESS REPORT**

Dear Secretary Bose,

On March 8, 2018, the Goldendale Energy Storage Project in Klicitat County, Washington (the "Project") was issued a preliminary permit by the Federal Energy Regulatory Commission (the "Commission"):

Project Number	Project Name	Permittee
P-14861	Goldendale Energy Storage Project	FFP Project 101, LLC

As a condition of permit issuance, the Commission requires the permittee file progress reports every six months. Rye Development, LLC, on behalf of the permittee (collectively, "Rye Development" or "Rye"), is submitting the following Six-Month Progress Report.

Project Activities

- On January 25, 2019 Rye Development filed a notice of intent (NOI), preliminary application document (PAD), and a request to use FERC's traditional licensing process (TLP) for the Goldendale Energy Storage Project.
- On March 21, 2019 the Commission approved the applicant's request to use the Traditional Licensing Process for the Goldendale Energy Storage Project.
- On May 1, 2019 the applicant hosted joint agency/public meetings to discuss the proposed Goldendale Energy Storage Project and requested comments on the proposed resource studies to support a License Application.
- May-September of 2019 Completion of environmental, cultural, socioeconomic, and engineering studies to support a Draft License Application (DLA).

Engineering and Cost Analysis

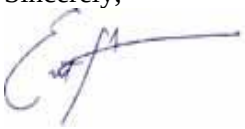
- Over the last six months Rye has continued to refine the preliminary design of the proposed facility and updated project costs to support the filing of a Draft License Application (DLA). Over the next six months, the permittee intends to further refine the design of the project features.
- Ongoing coordination with the US Department of Energy (USDOE). USDOE has selected the Goldendale Energy Storage Project for 1 of 2 pumped storage projects in the US to complete comprehensive techno-economic studies.

Consultation

- Rye Development is continuing to consult with stakeholders including resource agencies, the Yakama Tribe, residents, and others about the PAD, resource studies, and other project activities moving forward.

Please do not hesitate to contact me if you require any additional information about this proposed Project.

Sincerely,



Erik Steimle

Document Content(s)

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

November 7, 2019

JoDe L. Goudy, Chairman
Yakama Nation Tribal Council
401 Fort Road
PO Box 151
Toppenish, WA 98948

Re: REQUEST FOR A MEETING WITH YAKAMA NATION TRIBAL COUNCIL TO DISCUSS THE PROPOSED GOLDENDALE ENERGY STORAGE PROJECT

Chairman Goudy,

Representatives of Rye Development and National Grid wish to meet with Yakama Nation Tribal Council to provide an update on the energy storage project we are studying near Goldendale, Washington (the Project).

As we described in our meeting with you in 2018, we are exploring the idea of developing a closed-loop pumped storage hydroelectric generating facility at the former Columbia Gorge Aluminum Smelter near Goldendale. The Project would be the cornerstone of a 100% clean, carbon free electrical grid in the Pacific Northwest and a catalyst for thousands of new jobs. Decarbonization of our electrical grid is a critical component of combating climate change. Since our meeting with you last summer, we have completed a number of engineering and resource studies to support the preparation of a project application for review by the Federal Energy Regulatory Commission. We sincerely appreciate the opportunity this past year to retain Yakama Nation archaeologists and botanists to complete some of these studies.

As you are aware, Washington State has aggressive greenhouse gas reduction and clean energy goals. Load growth and increasing renewable energy targets will require approximately double the number of renewable energy projects that are currently on the Pacific Northwest system by the year 2035. Intermittent renewables on the grid such as wind and solar already have the potential to create gigawatts of overgeneration and are being curtailed due to the existing system's limited flexibility and storage. Without utility-scale storage to solve the operational challenges of integration, Washington, Oregon, and California cannot achieve carbon reduction and environmental policy goals reliably and cost-effectively. Based on economic modeling of the Project by Energy and Environmental Economics Inc. (E3), the Project could save regional ratepayers hundreds of millions of dollars annually.

Of the viable energy storage options available, pumped storage is the best proven, least-cost energy storage technology at scale. We are continuing to studying the idea of constructing two new lined or "closed" reservoirs for the Project. The reservoirs would not be connected to the Columbia River and would not impact any existing aquatic environments. The Project would store energy by letting water purchased from Klickitat Public Utility District flow downhill through turbines during the day, producing electricity at peak times, and then being pumped back uphill at night, renewing the energy source during low electricity use times. The same water would be used to recharge the Project and store new energy each day. Once the reservoir is filled, the closed loop process does not consume additional water to recharge and has no carbon emissions, making it an environmentally responsible source of energy storage.

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

The Project can freely start, stop, reverse, and fluctuate as needed by the power system without impacting aquatic species, flood control, navigation, irrigation, and recreation. In addition, the Project would assist with the cleanup of a portion of the former Goldendale Aluminum Smelter site and create more than 3,000 jobs during construction over a five-year construction period and 100 long term local jobs during operation over several decades.

We kindly request the opportunity to meet with Yakama Nation Tribal Council again to discuss an update on the project.

Sincerely,

Erik Steimle
Vice President
Portland, Oregon
erik@ryedevelopment.com

Filed as Privileged with Appendix H

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

March 2, 2020

Shawn Steinmetz
Archaeologist
Confederated Tribes of the Umatilla Indian Reservation
Cultural Resources Protection Program
46411 Timine Way
Pendleton, Oregon 97801
(541) 429-7963
shawnsteinmetz@ctuir.org

RE: Draft License and Notice of Intent for the Goldendale Energy Storage Hydroelectric Project No.14861, Goldendale, Washington, Klickitat County, Washington

Dear Shawn:

Thank you for your emailed comments on February 10, 2020 regarding the Confederated Tribes of the Umatilla Indian Reservation's (CTUIR's) concerns with the proposed Goldendale Energy Storage Project (FERC ID 14861). I want to personally assure you that we take the CTUIR's concerns seriously and intend to help facilitate consultation between FERC (as the lead agency) and the CTUIR by providing you with information and working with you to identify and consider historic properties of religious and cultural significance to the CTUIR.

The Yakama Nation's cultural resources report (draft Sept 5, 2019, and the final on Oct 28) identifies archaeological resources within the area of potential effects (APE), as well as traditional cultural properties (TCPs) that are significant to the Yakama Nation. We recognize that it does not necessarily include information about properties of religious and cultural significance specific to the CTUIR. Unfortunately, we do not have access to the full text of your January 31, 2018 letter to FERC as it was filed under "Privileged and Confidential". As you know, we have requested the full letter and look forward to reviewing its contents. We will continue to work with you to solicit information on important resources to the CTUIR and focus on resolving significant issues or concerns.

We acknowledge that Section 106 is not complete at this point in time. In practice FERC will meet its obligations under Section 106 throughout the life of the project by requiring the Licensee to implement the HPMP through execution of an MOU between FERC and Rye. We intend to work with the CTUIR to ensure that this document appropriately consider properties of religious and cultural significance to the CTUIR.

We would like to set up a meeting(s) to provide you with additional project information and learn more about your concerns. Specifically we would like to develop a plan for identifying and addressing properties of significance to the CTUIR and collaborate on appropriate language for HPMP and Historic/Cultural section of the FLA. We will be in touch soon to schedule meeting times.

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

Sincerely,

Erik Steimle
Vice President
Portland, Oregon
erik@ryedevelopment.com

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Central Washington Field Office
215 Melody Lane, Suite 103
Wenatchee, Washington 98801

MAR 0 3 2020

In Reply Refer to:
01EWFW00-2020-CPA-0009

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

Subject: U.S. Fish and Wildlife Service Comments on the Draft License Application Goldendale Energy Storage Project, FERC Project No. 14861

Dear Ms. Bose:

Thank you for the opportunity to provide comments on the Goldendale Energy Storage Project (Project). The U.S. Fish and Wildlife Service (Service) has reviewed the Draft License Application (DLA) for the Project, FERC Project No. 14861, filed on December 16, 2019. FFP Project 101, LLC (Applicant) would be the owner and operator of the proposed Project. We are providing the following comments in accordance with the Federal Power Act (16 U.S.C. 791-828c *et seq.*), as amended; Migratory Bird Treaty Act (16 U.S.C. 703-712), as amended; and the Endangered Species Act (16 U.S.C. 1531 *et seq.*), as amended.

Project Description

According to the DLA, the Project is a closed-loop pumped storage hydropower facility located off stream of the Columbia River at John Day Dam, located on the Washington side of the Columbia River at River Mile 215.6. The proposed Project will involve no river or stream impoundments. Initial fill water and periodic make-up water will be purchased from Public utility District No. 1 of Klickitat County, Washington (KPUD) using a KPUD-owned conveyance system and municipal water right.

Project facilities include: 1.) an upper reservoir consisting of a rock fill embankment dam approximately 175 feet high, 8,000 feet long, a surface area of about 61 acres, storage of 7,100 acre-feet, at an elevation of 2,940 feet above mean sea level; 2.) a lower reservoir consisting of an embankment approximately 205 feet high, 6,100 feet long, a surface area of about 63 acres,

storage of 7,100 AF, and an elevation of 590 average mean sea level; and 3.) an underground water conveyance tunnel and underground powerhouse and 23-kilovolt transmission line(s). The rated (average) gross head of the Project is 2,400 feet, and the rated total installed capacity is 1,200 megawatts.

General Comments

As background, the Applicant has been approved by the Federal Energy Regulatory Commission (Commission) to construct the Swan Lake North Pumped Storage Hydroelectric Project (FERC Project No. 13318-003) (Swan Lake Project), eleven miles north of Klamath Falls, Oregon. This project would move water between two 60-plus-acre reservoirs separated by more than 1,600 vertical feet, pumping the water uphill when energy is available and sending it downhill through generating turbines when energy is needed. By comparison, the Applicant's Project would be even larger than the Swan Lake Project resulting in a significantly larger environmental footprint on the landscape. Our comments below on the Project's DLA discuss these environmental effects.

On May 30, 2019, the Service filed comments with the Commission on the issuance of the Pre-application Document for the Project, and these same comments can be found in the DLA. These comments predominantly centered on the impacts to avian species due to the proximity of the Project to nearby wind turbines, in addition to requests for further studies to minimize impacts of the Project on aquatic and terrestrial species. The Applicant filed comments with the Commission on June 27, 2019, attempting to address these potential impacts. The Service would like to address these comments in further detail and provide additional information regarding the significance of the project area for avian species.

While we agree with the Applicant's assertion, "The wind projects are not associated with the Goldendale Project and therefore any impacts to avian species due to injury or mortality from wind turbines is the responsibility of the owners and operators of the wind turbines," the proposed Project would disrupt current laminar wind flow patterns in the project area. Turlock Irrigation District (TID), owner and operator of wind turbines adjacent to the proposed Project, discussed the negative effects of this disruption in laminar wind flow in their April 4, 2019 filing with the Commission for this proceeding. These negative effects include: 1.) reduced operations and output of wind turbines; 2.) increased damage to wind turbines resulting from a higher level of wind turbidity; 3.) reduced stability of wind turbine foundations; and 4.) increased interactions with wildlife, including avian strikes. TID highlighted these issues in its April 8, 2019 Motion to Intervene filing with the Commission. All of these potential effects are valid, but we would like to focus specifically on item #4.

The Applicant claims incorrectly in Appendix D, Wildlife Management Plan Section 2.3.5 of the DLA that the habitat near the upper reservoir is not unique or uncommon. Exhibit E, page 32 of the DLA explains, "Detailed analysis of home range use of a male golden eagle showed use largely within remaining open habitats including the proposed lower reservoir Project area" (WDFW 2015). The uniqueness of the habitat in the project area is linked to the close proximity of golden eagle nesting habitat. The Washington Department of Fish and Wildlife provides further evidence for this claim in its October 28, 2014 filing with the Commission. Golden eagle radio telemetry data collected in 2007 for eight months indicates significant use of the entire

project area. Since prey availability is a primary factor in governing habitat selection of golden eagles (Marzluff et al. [1997], Hunt [2002], and Fernandez et al. [2009]), the habitat in the area of the proposed upper reservoir is a determining factor in golden eagle nesting preference for the area.

Figure 1 below also demonstrates the history of golden eagle strikes with wind turbines near the proposed Project. As recently as early January 2020, a golden eagle wind turbine strike mortality occurred southwest of the proposed Project (Figure 1). Five additional golden eagle mortalities have been documented to the northeast of the proposed Project. Two golden eagle nests also occur within close proximity to the proposed Project. This history of mortalities shows a landscape already compromised by wind power infrastructure. Currently golden eagles appear to have a difficult time navigating the wind currents affected by existing wind power infrastructure near the project area. The potential of the proposed Project to further alter the remaining laminar wind currents lends credence that resulting impacts to avian species would not be exclusive to wind power production in the area. That said, the Service would like to provide specific comments on the DLA to ensure specific and enforceable protection, mitigation, and enhancement measures designed to minimize the potential impacts to wildlife resources resulting from the proposed Project are contained in any license to be issued by the Commission. We also want to highlight the importance of initiating ESA Section 7 consultation early in the licensing process to prevent any undue delays in the development of the Project.

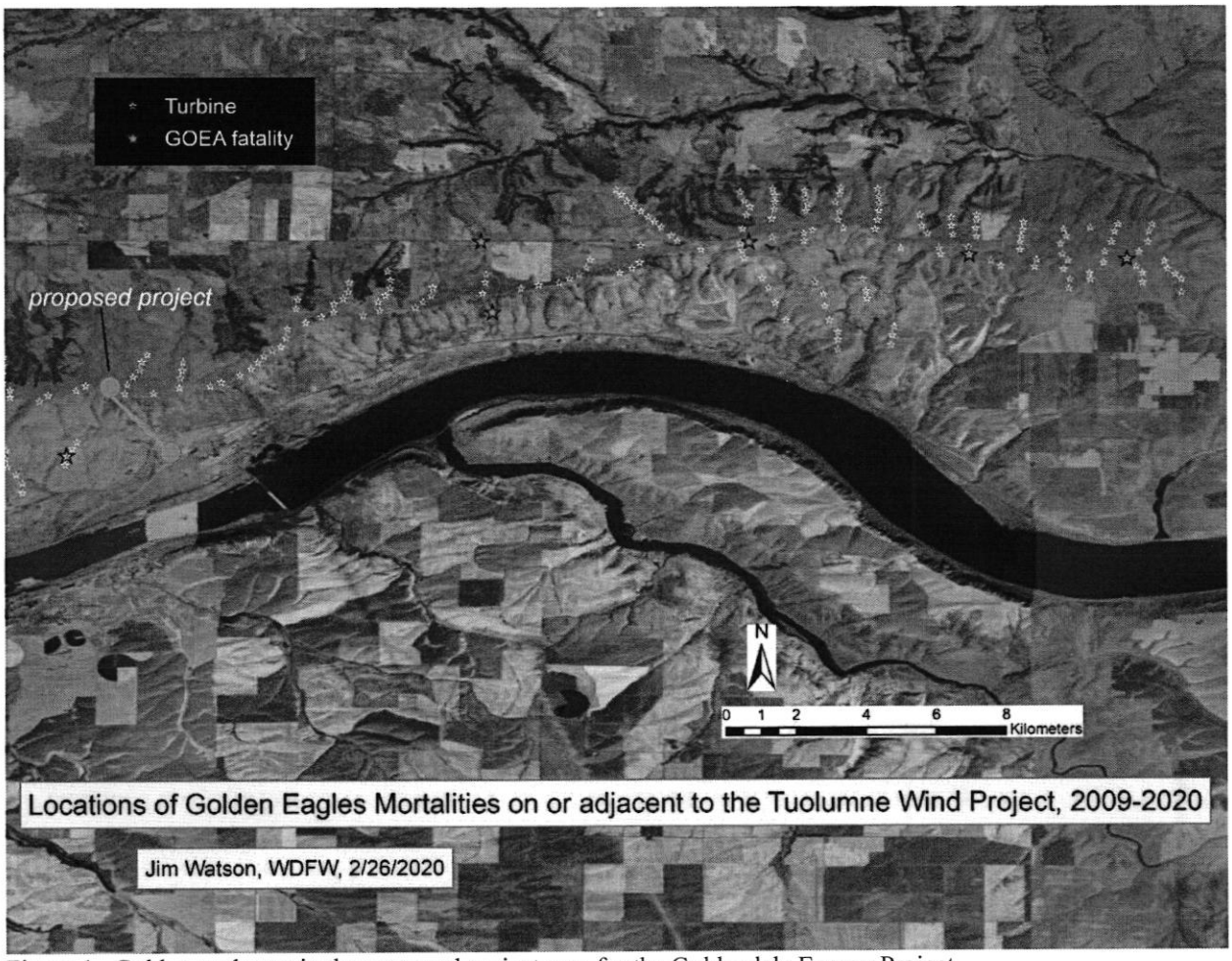


Figure 1. Golden eagle use in the proposed project area for the Goldendale Energy Project.

Threatened and Endangered Species Consultation

As of the filing of the DLA for the Project, the Service has received no coordination from the Commission or the Applicant for the development of a biological assessment (BA) for the purposes of ESA Section 7 consultation. As a reminder, Section 7 of the ESA and its implementing regulations (at 50 CFR Part 402) require Federal agencies to review their actions at the earliest possible time to determine whether any action may affect listed species or critical habitat. If so, formal consultation with the Service is required unless the exceptions at 50 CFR 402.14(b) apply.

Under 50 CFR 402.08, the Commission may designate the Applicant as its non-Federal representative to conduct informal consultation or prepare a BA to determine if the proposed Project may affect listed species.

Because listed species, but no critical habitat, are likely to occur in the Project area, we recommend the Commission (or its designated non-Federal representative) enter into informal consultation with the Service to determine if ongoing and future effects of the Project to listed species warrant formal consultation. At this stage, the purpose of informal consultation is to

ensure that the Applicant understands any potential impacts of the Project on listed species and what studies may be necessary to inform that determination if they decide to file for a license.

We recommend that the Commission obtain a current list of ESA species in the project area, once the NEPA scoping process has been completed. A list of threatened and endangered species likely to occur in Klickitat County and under the purview of the Service can be found at: http://www.fws.gov/wafwo/species_EW.html. If formal consultation is warranted and a BA is prepared by the designated non-federal representative, the Commission must furnish guidance and supervision, and must independently review and evaluate the scope and contents of the BA. The ultimate responsibility for compliance with ESA section 7 remains with the Commission.

Licenses must remain flexible and open to adaptive management to ensure that measures to protect fish and wildlife, including listed species, remain adequate and effective. Although we work collaboratively to resolve issues and concerns regarding changing status and/or new information on listed and proposed species, re-initiation of consultation under section 7 of the ESA may be necessary at some time during the term of the new license if one or more of the reinitiation criteria at 50 CFR 402.16 apply.

Specific Comments on the Draft License Application

1.) *Exhibit B, Table 3.3-1, Statement of Project Operation and Resource Utilization*: The annual loss of water from the reservoir due to evaporation is 420-acre ft. per year. Evaporation over extended periods of time may concentrate any solutes present in the water source, potentially causing the reservoir to become toxic to terrestrial and avian wildlife utilizing the Project waters. The Applicant proposes an operational adaptive water quality monitoring and management program and yet there is no apparent implementing plan in the DLA containing specific, enforceable measures. We recommend the development and implementation of a reservoir water quality monitoring and management plan to ensure the water is safe for wildlife resources. This plan should include specific methods to annually monitor levels of dissolved solids, nutrients, and heavy metals in the project reservoirs and a schedule for annually reporting the monitoring results and any proposed measure for addressing deteriorating water quality based on monitoring results should be developed.

2.) *Appendix D, Goals and Objectives, Section 1.1, Wildlife Management Plan*: Goal 2 of this plan states, "Work in concert with existing developments in the Project area to reduce Project impacts to wildlife, including avian species." It further states, "Nearby wind turbines pose a threat to raptors and other birds; therefore, habitat for raptors and their prey will not be improved in the Project area, so as to not encourage their use of these habitat areas." The final version of the DLA needs to specify how the Applicant will coordinate pumped storage hydroelectric operations and wind turbine operations with adjacent wind project operators to minimize impacts of the proposed Project on migratory birds.

3.) *Exhibit E, Section 2.3 Applicant Recommendations:* The Applicant proposes, "…development of an operational adaptive water quality monitoring and management program to monitor the gradual process of solute concentration in the proposed reservoirs due to the closed-loop nature of the system." There are currently no specific measures

contained in this program to decipher its effectiveness and we recommend the Applicant develop water quality thresholds in coordination with the Washington Department of Ecology to minimize the effects of solute concentrations in the two reservoirs.

4.) *Exhibit E, Section 3.2.3.1, Environmental Report*: In addition to monitoring golden eagle and bald eagle nests, we recommend monitoring all prairie falcon nests in the project area. In 2019, WDFW surveys documented two adult prairie falcons displaying courtship behavior and confirmed an occupied nest. Prairie falcons are also migratory birds and subject to the terms of the Migratory Bird Treaty Act.

5.) *Exhibit E, Section 10.3.1 Water Quality and Wetlands*: The following statement needs clarification: "Nearly all Project-related precipitation losses will be due to precipitation collected within each reservoir." We are not clear if this is a reference to evaporative losses from the two reservoirs or precipitation overflow from the reservoirs. If this is a reference to precipitation overflow, the Applicant needs to specify how such occurrences will be minimized through flow releases at the Project.

6.) *Exhibit E Section 6.2.1 Former Smelter Site*: The DLA discusses how "continued monitoring has shown that the material in the impoundment is not designated as hazardous material, and therefore may be removed to a solid waste landfill when construction of the Project commences. The proposed Project design includes removal of all of the WSI (West Surface Impoundment) material because it is unsuitable for reservoir construction. Additional testing, sampling, and characterization will occur to confirm proper disposal at the time of removal." Please specify which entity will confirm this proper disposal.

7.) *Appendix D Section 2.3.5 Address Habitat Loss, Wildlife Management Plan*: To address habitat loss, the Applicant proposes to utilize existing access roads for the majority of the Project features as a form of protection, mitigation, and enhancement for anticipated effects to terrestrial resources. Since existing roads were designed for other non-Project related purposes, we view this measure as a form of minimization rather than mitigation for Project-related effects. This plan should be revised to reflect this measure. The Applicant also incorrectly assumes the habitat near the upper reservoir is not unique or uncommon and does not provide opportunities for foraging, but is not quality nesting or rearing habitat. We provided information above in this letter, which refutes this conclusion. The Applicant further discusses that it will mitigate these losses with habitat of similar quality. We request that the Applicant provide further detail regarding the purchase of these mitigation lands.

8.) *Appendix D, Section 2.4.2, Wildlife Management Plan*: It is not clear what a "bird exclusion fence" is and how it would deter the use of the reservoirs by migratory birds (potential eagle prey species, particularly for bald eagles). We do agree that a monitoring program to identify bird usage of the reservoirs and measure the effectiveness of bird deterrents should be developed. The monitoring program should count and compare eagle numbers at the reservoir prior to deployment of deterrents, and after. Then, after using this information, decide to maintain, increase, modify or explore other options of deterrents.

9.) *Appendix E, Vegetation Management and Monitoring Plan (VMMP), Section 2.1 Noxious Weed Management*: The Applicant refers to, "Revegetation with a native plant seed mix after ground disturbing activities" as a best management practice in its VMMP and to use Benson et al. 2011 as a guideline for these revegetation efforts. While we advocate the practices outlined in Benson et al. 2011, we recommend the Applicant provide specific, enforceable measures in the VMMP that include, but not limited to, criteria for measuring the success of revegetation efforts.

Additional Protection, Mitigation, and Enhancement Measures for the Project

Water Resources

- Modify the proposed operational adaptive water quality monitoring program to include: 1.) methods to annually monitor levels of dissolved solids, nutrients, and heavy metals in the project reservoirs and a schedule for annually reporting the monitoring results; 2.) threshold criteria and proposed measures that would be taken if water quality in the Project reservoirs deteriorates to below the threshold criteria as demonstrated by monitoring results; and 3.) reporting measures.

Terrestrial Resources

- Modify the proposed Wildlife Management Plan as follows: (1) include an additional preconstruction survey in February to ensure that early nesting raptors are identified; (2) expand the preconstruction survey area for nesting raptors from 0.25 mile to 1 mile and include nests within the line of sight of Project features; (3) adjust the proposed spatial and temporal restrictions on construction activities as needed, based on site-specific environmental conditions and nesting status; (4) install flight diverters on the transmission lines if these lines are not feasible to be buried; and (5) include quantifiable thresholds for determining when additional measures would be needed to address high-mortality areas based on the proposed transmission line monitoring.

- Modify the VMMP to specify the specific seed mixes and plant species to be used; planting densities and methods, fertilization and irrigation requirements, monitoring protocols, and criteria for measuring the success of revegetation efforts, and expand the VMMP to cover vegetation management during Project operations.

- Develop a management plan for conservation lands that identifies the parcels to be acquired, the criteria used to select the parcels, and habitat improvements that would be implemented on each parcel.

- Consider the feasibility of burying any applicable transmissions lines proposed for the Project to minimize effects to migratory birds.

- Consider the feasibility of retrofitting adjacent power poles in the vicinity of the Project to mitigate for eagle effects.

- Include in the proposed eagle conservation plan the following additional measures: 1.)

conduct two, preconstruction winter roost surveys for two winter seasons, and 2.) include helicopter flight paths in preconstruction surveys for eagle nests and winter roosts.

Thank you for requesting technical assistance in the development of the proposed Project. If you have any questions or comments regarding this letter, please contact Steve Lewis at the Central Washington Field Office in Wenatchee at (509) 665-3508, extension 2002, or via e-mail at Stephen_Lewis@fws.gov.

Sincerely,

for

Brad Thompson, State Supervisor
Washington Fish and Wildlife Office

cc:

USFWS, Portland, OR (K. Freund)
USFWS, Portland, OR (M. Stuber)
WDFW, Ephrata, WA (P. Verhey)
Rye Development, Boston, MA (E. Steimle)

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CLEAN, FLOWING WATERS FOR WASHINGTON

The Center for Environmental Law & Policy

March 10, 2020

FILED ELECTRONICALLY

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

RE: Center for Environmental Law & Policy's Comments on the Draft License Application for the Goldendale Energy Storage Project, FERC Project No. 14861

Dear Secretary Bose:

Thank you for the opportunity to provide FERC with comments on the proposed Goldendale Energy Storage Project (the "Project"). CELP has two primary concerns: first, that the best and most up-to-date studies be used in evaluating the Project's potential effects on wildlife, and second, that the concerns of the Yakama Nation regarding cultural resources be fully addressed and that the Project be constructed so as not to threaten areas important to the Nation.

The Fish, Wildlife, and Botanical section of Appendix E (Environmental Report) refers to studies reporting a large number of terrestrial and bird species in the Project area. Many of the studies cited for presence or location of these species are more than a decade old. For purposes of avoiding impacts to wildlife during construction, or mitigating for unavoidable impacts, the best and most recent scientific data available should be used. For species such as raptors, it may be prudent to conduct a new survey of nesting sites before beginning construction.

CELP also concurs with the Washington Department of Fish and Wildlife that mitigation for compromised habitat should be provided at more than a 1:1 ratio. There are numerous problems associated with providing compensatory habitat, including possible failure of a project or failure to ensure that a project can be maintained for the life of the impact (in this case, CELP believes that the impact of Project construction should be considered essentially permanent). The 2:1 ratio suggested by WDFW would be a prudent approach to ensuring effective mitigation.

Because this Project potentially implicates sites that are important culturally or historically to the Yakama Nation, it is critical that the Tribe be consulted on an ongoing, government-to-government basis. As the Yakama Nation has stated, "only the Yakama Nation can determine what is significant to the Tribe."[1] The Washington Legislature has also recognized the importance of such consultation; the bill recently passed designating the Project as a "project of statewide significance" requires that the

[1] Letter from Lonnie Selam, Yakama Nation to Erik Steimle, Rye Development, February 14, 2018.

85 S Washington Street #301, Seattle, WA 98104 / 206-829-8299 / www.celp.org

Project include a “plan for consultation with affected tribes.” The fact that the cultural resources Report (Appendix H) was filed as “privileged” does not allow CELP and other commenters to determine exactly what resources are present. This should not diminish the attention given to this issue by regulatory agencies. Given that the exact nature of the cultural resources at stake have not been publicly identified, FERC and the Project proponents should also consider the possibility that impacts on cultural resources that cannot be mitigated or avoided might arise, perhaps even presenting a fatal flaw in project implementation.

Thank you again for the opportunity to provide comments.

Sincerely,

Trish Rolfe
Executive Director
Center for Environmental Law & Policy

State of Washington
DEPARTMENT OF FISH AND WILDLIFE
Southwest Region 5 • 5525 South 11th St Ridgefield, WA 98642
Telephone: (360) 696-6211 • Fax: (360) 906-6776

March 10, 2020

FILED ELECTRONICALLY

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

RE: The WDFW Comments on the Draft License Application for the Goldendale Energy Storage Project, FERC Project No. 14861

Dear Secretary Bose:

Thank you for the opportunity to provide comments on the Goldendale Energy Storage Project (Project). The Washington Department of Fish and Wildlife (WDFW) has reviewed the Draft License Application (DLA) for the Project, FERC Project No. 14861, filed on December 16, 2019. The project is an important step toward utilities better managing the energy grid to accommodate fluctuations in wind and solar energy, consistent with the Governor's decarbonization goals for the state. While we understand the need for this facility, we offer the following comments to compensate for the anticipated impacts to wildlife habitat and associated species.

Consistent with the WDFW comment letter on the Pre-Application Document filed with the Commission on May 30, 2019, WDFW is concerned with the lack of compensatory mitigation for temporary and permanent impacts of the project to wildlife habitat discussed in the DLA and the Wildlife Management Plan (WMP) found in Appendix D of the DLA. Compensatory mitigation should be in the form of land acquisition and management of the land for wildlife resources. WDFW recommends no net loss of habitat function or values, consistent with our state's Growth Management Act.

Rye Development (Applicant), has indicated they will continue working with the Federal and State agencies to develop a more comprehensive WMP to address Project impacts (section 2.0 WMP). WDFW looks forward to this effort of working with the Applicant to realize an acceptable written mitigation plan for the Project as part of the Final License Application (FLA).

Our primary concern is the need for deterrence measures to prevent wildlife attraction to the upper reservoir for foraging. This foraging activity will increase the risk of bird or bat strikes at nearby wind farms. Some of these species are state listed as threatened, sensitive, or candidate species for listing. We recommend as many deterrence measures as prudent be employed to discourage wildlife use of the upper reservoir.

The plan should include the number of acres of land to be purchased as compensatory mitigation, quality of the habitat of the mitigation lands, and how the land will be managed to benefit wildlife resources impacted by the Project. Mitigation should provide equal or better biological function and values. The final WMP should be included in the FLA. The FLA is the foundation for Federal Energy Regulatory Commission's commencement of the National Environmental Policy Act process and therefore, should fully address the mitigation issue.

WDFW mitigation policy identifies a mitigation ratio greater than 1:1 to account for uncertainty in performance of the mitigation site, temporal losses, and differences in functions and values. Based on our experience in negotiating mitigation agreements for shrub-steppe habitats impacted by development, a 2:1 ratio provides habitat or funding that results in no net loss of ecological functions and values. Additionally, our mitigation policy provides flexibility in determining a final mitigation ratio. A strategically located and/or high value site could result in a final ratio of less than 2:1.

It is important to consider compensatory mitigation in terms of the temporal scope of the Project, which could be up to fifty-years. Mitigation measures put in place to mitigate for permanent impacts, including habitat losses, need to have the means in place for maintaining these measures throughout the time frame of the license.

Project Description

According to the DLA the Project is a closed-loop pumped storage hydropower facility located off stream of the Columbia River at John Day Dam, located on the Washington side of the Columbia River at River Mile 215.6. The proposed Project will involve no river or stream impoundments. Initial fill water and periodic make-up water will be purchased from Public utility District No. 1 of Klickitat County, Washington (KPUD) using a KPUD-owned conveyance system and municipal water right.

Project Facilities include: An upper reservoir consisting of a rock fill embankment dam approximately 175 feet high, 8,000 feet long, a surface area of about 61 acres, storage of 7,100 acre-feet, at an elevation of 2,940 feet above mean sea level; A lower reservoir consisting of an embankment approximately 205 feet high, 6,100 feet long, a surface area of about 63 acres, storage of 7,100 AF, and an elevation of 590 feet average mean sea level; An underground water conveyance tunnel and underground powerhouse; and 23-kilovolt transmission line(s). The rated (average) gross head of the Project is 2,400 feet, and the rated total installed capacity is 1,200 megawatts.

WDFW Fish and Wildlife Management

The WDFW is an agency of the State of Washington with jurisdiction over fish, shellfish, and wildlife resources and charged with the duty of protecting, conserving, managing, and enhancing those resources. (Washington Revised code, Title 77) The WDFW mission statement is to preserve, protect and perpetuate fish, wildlife and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities.

DLA comments

There is inconsistency in how the Project boundary is represented in various figures throughout the DLA. The preferred alternative 2 Project boundary (Exhibit A, fig. 1.5-2) is not consistent with subsequent figures within Exhibit E that illustrate the Project boundary. This should be corrected to allow for an accurate review of the Project boundary and environmental impacts.

Also, the preferred alternative includes an unknown number of acres that will be utilized as a construction laydown area to the Northeast of the upper reservoir. There is no description of environmental impacts to the laydown area. Whether or not grading and the construction of new roads and impermeable surface will occur is important to know when determining if the impact is permanent or temporary. For example, grading is considered a permanent impact because it permanently alters the landscape.

Exhibit B, Fig. 3.3-1: The annual loss of water from the reservoir due to evaporation is 420-acre ft. per year. Evaporation over extended periods of time may concentrate any solutes present in the water source, potentially causing the reservoir to become toxic to terrestrial and avian wildlife utilizing the Project waters. We recommend the development of a reservoir water quality monitoring and management plan to ensure the water is safe for wildlife resources. Specific methods to annually monitor levels of dissolved solids, nutrients, and heavy metals should be developed. A schedule for annually reporting the monitoring results and any proposed measure for addressing deteriorating water quality based on monitoring results should be developed.

Exhibit E, Section 3.2.2.4: It is stated "Given adequate protection and mitigation measures, no Project-related effects are anticipated on bat populations in the Project vicinity." We recommend verification of this assertion and the development of protection and mitigation measures specific to bats that are in addition to minimizing lighting and restricting construction to daylight hours.

Exhibit E, Section 3.2.3.1: In addition to monitoring golden eagle and bald eagle nests, we recommend monitoring prairie falcon nests. In 2019 WDFW surveys documented two adults displaying courtship behavior and confirmed an occupied territory. Prairie falcons are also migratory birds and subject to the Migratory Bird Treaty Act. This survey information has been provided to the applicant.

Exhibit E, Section 3.2.3.3: Due to the attractive nature of a waterbody to wildlife, we recommend fencing the reservoirs to prevent all access (including small mammals, deer, and elk) to the reservoirs. Monitoring measures should be included to allow assessment of any entrapment or mortality of animals and the need for fence repair. The fence should be designed to minimize

injury to wildlife and be well maintained. Escape ramps or other methods should be provided to allow animals to get out of the reservoirs.

Exhibit E, Fig. 3.3: 1 Information included in This figure would be improved by including a legend and title.

Appendix D, Section 2.1.1: Goal 2 of this plan states, "Work in concert with existing developments in the Project area to reduce Project impacts to wildlife, including avian species." Further stated in the WMP, "Nearby wind turbines pose a threat to raptors and other birds; therefore, habitat for raptors and their prey will not be improved in the Project area, so as to not encourage their use of these habitat areas." The final version of the license application needs to specify how the applicant will coordinate pumped storage hydroelectric operations and wind turbine operations with adjacent wind project operators to minimize impacts of the proposed Project on migratory birds.

Appendix D, Section 2.1.1: We recommend not only conducting nest surveys for golden eagles, but also specifically conduct nest surveys for prairie falcons. A historic prairie falcon eyrie within territory FAME 289 (John Day Dam Substation; previously provided to the applicant) is located within the Project boundary. The historic prairie falcon eyrie within territory FAME 288 (John Day Dam; previously provided to the applicant) is also in close proximity to the Project boundary.

Appendix D, Section 2.1.1: **Location:** "Surveys will be conducted within and near the Project area. The three historic nest locations near the Project area range from approximately 50 to 300 feet from the Project boundary to the west/southwest of the lower reservoir. These historic nest locations will be included in the raptor survey area." In addition to those three golden eagle historic nest locations there are four historic nest locations to the east of project boundary and just below the access road. Since these nest locations are within the golden eagle territory and within line of sight of the project, they should also be surveyed. There is also a historic prairie falcon nest within the project area near the access tunnel shown on Exhibit E Figure 6.2-1 and two other historic prairie falcon nests to the east of the project boundary that should be surveyed. The area should be surveyed for any new nest locations as well in order to support the development of appropriate mitigation measures (e.g., buffer distances, seasonal timing restrictions). The WDFW previously provided the Golden Eagle # 413 John Day Dam 2019 and Prairie falcon #288 John Day Dam 2019 survey data sheets for your reference.

We recommend modifying the proposed WMP as follows: (1) include an additional preconstruction survey in February to ensure that early nesting raptors are identified; (2) expand the pre-construction survey area for nesting raptors from 0.25 mile to 1.0 mile and include nests within the line of sight of Project features, where no blasting would occur; (3) adjust the proposed spatial and temporal restrictions on construction activities as needed, based on site-specific environmental conditions and nesting status; (4) install flight diverters on the transmission lines if these lines are not feasible to be buried; and (5) include quantifiable thresholds for determining when additional measures would be needed to address high-mortality areas based on proposed transmission line monitoring.

Appendix D, Section 2.1.1: We recommend deleting "if deemed necessary" from the sentence "In areas where nests are determined to be active by monitoring studies, eagle-specific conservation measures and general nest protection measures will be developed in consultation with the USFWS and WDFW, if deemed necessary."

Appendix D, Section 2.3.5: We disagree with the applicant's opinion that the habitat near the upper reservoir is not unique or uncommon. The uniqueness of the habitat is linked to the close proximity to golden eagle and prairie falcon nesting habitat. In our October 28, 2014 correspondence filed with the FERC, we provided golden eagle radio telemetry data collected in 2007 for eight months that indicate use of the entire Project area. Prey availability is a primary factor in governing habitat selection of Aquila eagles (Marzluff et al. 1997, Hunt 2002, Ferna´ndez et al. 2009), the habitat in the area of the upper reservoir is a determining factor in golden eagle nesting preference for the area. We provided information on golden eagle nest location previously.

In addition, a golden eagle mortality was reported in January of 2020 under a wind turbine located immediately to the west of the Project on the lower bench above the location of the cliff nest. Five other golden eagle mortalities have been reported since 2009 (Figure 1). Since there are no regular searches conducted for bird mortalities and discoveries are happenstance, the five documented mortality events should be considered a minimum number. Some birds were breeders, some potentially migrants, but regardless it is obvious the poor occupancy of the John Day territory in the past ten years is at least partly a result of continuous kill of territorial birds (personal communication, James Watson January 2020).

Figure 1. Golden Eagle mortalities on or adjacent to the Tuolumne Wind Project, 2009-2020

Unfortunately, these mortality events suggest eagles will continue to be impacted by the high density of wind projects in the area.

Golden eagles appear to have a difficult time navigating the wind currents affected by existing wind power infrastructure near the project area. The potential of the proposed Project to further alter the remaining laminar wind currents due to the presence of the one hundred and seventy-five-foot-tall upper reservoir built in close proximity to wind turbines may result in additional impacts to avian species. To address impacts on raptors due to the removal of habitat and construction of a reservoir, the preferred compensatory mitigation property should be located in an area of known golden eagle and prairie falcon nesting habitat; and should provide forage species that benefit these birds (mule deer fawns, coyote pups, small mammals, yellow-bellied marmots, jackrabbits, and ground squirrels).

We recommend the development of a management plan for the compensatory mitigation property to be developed that identifies the parcels to be acquired, the criteria used to select the parcels, habitat improvements that would be implemented on each parcel and management to provide resilient habitat that mitigates for Project impacts.

Appendix D, Wildlife Management Plan 2.4.2: It is not clear what a "bird exclusion fence" is and how it would deter the use of the reservoirs by migratory birds (potential eagle prey species, particularly for bald eagles). We strongly agree that a monitoring program to identify bird usage of the reservoirs and measure the effectiveness of bird deterrents should be developed. The monitoring program should count and compare eagle and bat numbers at the reservoir prior to deployment of deterrents, and after. Then, using this information decide to maintain, increase, modify or explore other options of deterrents.

Appendix D, Wildlife Management Plan Section 2.4.2: One item that has not been addressed relating to Project operation is the potential for water birds to be entrained in the intake structures of both the lower and upper reservoir power intake structures.

We recommend the Applicant address this issue within the FLA by proposing an WDFW approved exclusion device or proposing to develop a monitoring plan for bird entrainment.

Appendix D, Wildlife Management Plan Section 2.4.3: We recommend including a section on deterrence measures for bats' use of the reservoirs since they are also subject to turbine strike.

Appendix D, Section 2.4.4: We recommend providing the information collected in the Wildlife Information Reporting System and eagle injury or mortalities to the WDFW in addition to the USFWS.

Appendix E, Vegetation Management and Monitoring Plan (VMMP) p. 2 section 2.0: Further elaboration is requested on how impacts to vegetation will generally be minimized by burying features? Are these Project features?

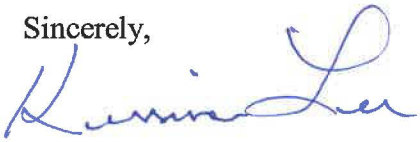
Appendix E, Section 2.1: The Applicant refers to, "Revegetation with a native plant seed mix after ground disturbing activities" as a best management practice in its VMMP and to use Benson et al. 2011 as a guideline for these revegetation efforts. While we advocate the practices

outlined in Benson et al. 2011, we recommend the Applicant provide specific, enforceable measures in the VMMP that include, but not limited to, criteria for measuring the success of revegetation efforts. We recommend 80% survival within three years of planting. We recommend providing the specific seed mixes and plant species to be used.

Exhibit E, Figure 3.3-7: The acreage of temporary and permanent impact on vegetation type from proposed project infrastructure is provided. A total of 54.4 acres will be temporarily impacted and 90.5 will be permanently impacted. Of the permanently impacted acreage, 56.7 are grassland and 24.1 are shrub-steppe. This information will be useful in determining how much land is to be purchased for compensatory habitat mitigation. Permanent impact of the equipment lay down area due to grading and other yet to be determined permanent impacts should also be considered.

Thank you for this opportunity to provide the WDFW comments on the DLA for the Goldendale Energy Storage Project. We are interested in working together on this important project. If there are any future meetings planned with the project proponent, we would like to collaborate in this effort. Please contact Patrick Verhey at (509) 754-4624 ex. 213 or by e-mail at Patrick.Verhey@dfw.wa.gov if you have any questions.

Sincerely,



Kessina Lee, Regional Director
Southwest Washington/Region 5
Washington Department of Fish and Wildlife

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Filed as Privileged with Appendix H

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333 East Canal Drive • P O Box 949 • Turlock, CA 95381-0949

March 11, 2020

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

RE: Comments of the Turlock Irrigation District on the Draft License Application for the Goldendale Energy Storage Project – FERC Project No. 14861

Dear Secretary Bose:

The Turlock Irrigation District ("TID") herein provides comments on the Draft License Application filed with the Federal Energy Regulatory Commission ("FERC") on December 16, 2019 by FFP Project 101, LLC's ("FFP") for the Goldendale Energy Storage Project ("GES Project") (FERC No. 14861). FFP is proposing to build the GES Project on land that is leased by the Tuolumne Wind Project Authority ("TWPA") and contains TWPA's wind turbines, which TWPA uses to supply energy and capacity to TID. TID relies on this generation to meet its load and its California State mandated Renewable Portfolio Standard ("RPS") obligations. TID is concerned the GES Project could interfere with the operations of, and the energy output from, TWPA's turbines.

BACKGROUND

TID is an irrigation district organized under the laws of the State of California (California Water Code §§ 20500-29978). TID supplies electric power and energy to the residents and businesses within its service area. It serves approximately 100,000 electric retail customers and has annual electric sales of approximately 2 million MWhs. TID operates its own NERC- and WECC-approved Balancing Authority ("BA"), which is interconnected to the California Independent System Operator ("CAISO") BA and the Balancing Authority of Northern California ("BANC"). TID's BA incorporates 668 MW of generation and served a 2013 peak load of 621 MW. TID is also a member of the Transmission Agency of Northern California ("TANC"), through which it owns capacity on the California-Oregon Transmission Project ("COTP"), which it uses for delivery of resources owned and located in the Pacific Northwest. These resources are a vital component of TID's ability to meet its electric load in the TID BA reliably and economically.

Among the resources that TID uses to meet its electric load is a 62 turbine, 136.6 MW wind farm, owned by TWPA and located in Klickitat County, Washington.

TWPA is a California Joint Powers Agency formed in 2008 by TID and the Walnut Energy Center Authority. TID purchases all the capacity and energy from the wind farm and pays all its costs. The TWPA wind farm represents a $400 million investment by TID.[1] TWPA leases the land upon which the 62 turbines have been constructed ("Leased Premises") from several landowners. Under each of these land lease agreements, the landlords have agreed, among other things, not to currently or prospectively, unreasonably interfere with the construction, installation, maintenance, operation or removal of Turbines located on the Leased Premises; access over the Leased Premises to such turbines; or the undertaking of any other activities permitted under the leases. The landlords expressly agree not to lease or grant easements/licenses over the Leased Premises that in any way would unreasonably interfere with the wind speed or wind direction over the Leased Premises, by placing Wind Turbines, planting trees or constructing buildings or other structures, or by engaging in any other activity on the Leased Premises that might cause a decrease in the output or efficiency of the turbines.

TID understands that FFP proposes to construct the GES Project on land leased by TWPA and located immediately adjacent to at least 16 of TWPA's 62 wind turbines. The remaining 46 turbines will be between 2.5 and 7.5 miles from the GES Project. TID learned of the close proximity of the GES Project site to TWPA's wind turbines, when FFP requested that TWPA agree to FFP getting access over the roads TWPA uses to maintain the turbines. Specifically, TID learned that FFP has proposed "Agreement #G18032 Between Tuolumne Wind Project Authority And FFP Project 101, LLC," ("Access Agreement"), which if finalized, would grant FFP the ability to use certain roads on land leased by TWPA "for purposes of investigating, stakeholder outreach and surveying activities related to the feasibility studies for possible construction of a dam and reservoir on adjacent property." See Access Agreement at Art. 1.

COMMENTS

Concerned by FFP's proposal, on April 8, 2019, TID filed a Motion to Intervene Out-of-Time and Comment ("TID's Motion and Comment"). TID's Motion and Comment raised five concerns regarding the GES Project: (1) redirect the wind used by the turbines, which would reduce their energy output; (2) increase wind turbidity, which would reduce their energy output and increase wear and tear on the turbines; (3) saturate and thereby weaken the foundations of some of the turbines; (4) increase the wildlife around the turbines, which will increase animal strikes and interfere with TWPA's operations and output; and (5) interfere with the operations of the turbines'

[1] In addition to the TWP, TID's renewable resource portfolio currently includes wind, hydro, solar and biomass. These renewable resources cumulatively account for approximately 25% of TID's generation.

underground power lines when constructing the GES Project's underground components.

On April 30, 2019, FERC issued a Notice denying TID's Motion and Comment. FERC explained that "Should FFP file a development application for its proposed project, notice of the application will be published, and interested entities, including TID, will have an opportunity to intervene and present their views concerning the proposed project."[2]

Despite FFP including TID's Motion and Comment in its Draft License Application,[3] it does not directly address the concerns expressed by TID. Accordingly, TID submits the following comments to reiterate the five initial concerns it raised in TID's Motion and Comment.

A. TID is concerned the GES Project could cause wind redirection that reduces the output of the turbines

TID continues to be concerned the operation of the GES Project could redirect the wind used by TWPA's turbines, which would disrupt the wind's laminar flow[4] through the turbines' blades, prevent the turbines from fully exploiting the available wind energy, reduce their output and reduce the turbines' value to TID. When the rotor spins, the power is transferred via the drive shaft and gearbox. Then, the generator converts the kinetic energy from the turbine into electrical energy. Most of the time the wind turbines are not generating at 100%. During the times the wind speed is less than full production levels it is critically important that the wind not be diverted up and over or in a direction that reduces the turbines ability to generate. Here, the concern is that when the GES Project is spilling water and generating power it will act much like a dam and generate lateral air flows that will emanate from the inside of the reservoir(s) and interfere with the horizontal air flows (*i.e.,* the wind) used by the turbines. If these vertical air flows are significant, and wind speeds are low, the vertical air flows could block the wind entirely, redirecting it up and over the turbines, thereby reducing their output to zero.

FPP's Draft Application does recognize two wind turbines are inside the Project Boundary but claims the turbines will not be affected by the Project.[5] This is insufficient. Accordingly, TID requests FFP conduct one or more studies to ensure

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[2] Notice Denying Late Intervention, FERC Project No. 14861-000, at 1 n. 2 (April, 30, 2019).

[3] FFP Draft License, Appendix F: Correspondence.

[4] Laminar flows occur when a wind flows in parallel layers, with no disruption between those layers.

[5] FFP Draft License, Exhibit A, at 3.

the GES Project does not redirect wind flows or cause any other interruption in the operations or output of TWPA's turbines.

B. TID is concerned the GES Project could cause increased wind turbidity that damages the turbines and reduces their output

Similarly, when wind speeds are higher, the aforementioned vertical air flows emanating from the GES Project's upper reservoir could cause increased wind turbulence,[6] by disrupting the laminar flow of the wind through the turbine blades. This prevents TWPA's turbines from fully exploiting the available wind energy.[7] Increased wind turbulence also causes the turbine blades to be have unequal wind energy on each blade, leading to increased wear and tear on the blades and ultimately turbine failure. Avoiding such wind turbulence is so important that there is a feature on each turbine that shuts the turbine off when turbulence causes the turbine blades to vibrate excessively. The turbines are spaced apart to have a minimum of initial wind turbulence so that the wind that goes through one turbine blade stabilizes before the wind gets to the next turbine.

Again, FFP's Draft License Application does not address this concern. TID requests FFP conduct one or more studies to ensure the GES Project does not compromise this layout and cause wind turbulence or any other impacts that damage the turbines or interrupt their operations or output.

C. TID is concerned the GES Project could cause the foundations of TWPA's turbines to be saturated and unstable

TID is concerned that the GES Project's reservoir(s) or underground water shaft(s) could cause water to seep into the ground around the foundations of the turbines or alters these foundations' drainage systems (both constructed and natural). The foundations in TWPA's turbines are filled with backfill and may be susceptible to seepage resulting from the increased water in the area. If a turbine's foundation is compromised, it could become unstable causing the turbine to be derated or removed from production.

FFP's Draft License Application also does not address this concern. TID requests FFP examine how it can design the GES Project so that water does not seep from the reservoir(s) or any other part of the project into the turbines' foundations.

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[6] In fluid dynamics turbulence or turbulent flow is any pattern of fluid motion characterized by chaotic changes in pressure and flow velocity.

[7] The turbulent flow causes uneven blade pressures which can result in less efficient wind generation reducing the value of the turbine.

D. TID is concerned the GES Project could cause an increase in wildlife near the turbines, which could increase the number of animals that fly into and damage turbines

Currently, TWPA has a very low animal strike rate because there is no water ponds or reservoirs immediately adjacent to the TWPA's turbines. TID is concerned that the addition of the proposed newlarge reservoir(s) could increase the wildlife population near the turbines causing an increase in animal strikes. Each strike could damage the turbine blades causing potential loss in generation efficiency and repairs to the blades. Moreover, if the damage is significant enough, it could cause the turbine to be taken out of service for an extended period of time, which would reduce its output to zero, significantly reducing TID's ability to use the unit to meet its energy needs. The environmental impact and public concern could be an even greater cost to the site.

The United States Fish and Wildlife Service ("FWS") reiterated TID's concerns in comments it submitted on FFP's Draft License Application on March 3, 2020. The FWS explained "The potential of the proposed Project to further alter the remaining laminar wind currents lends credence that resulting impacts to avian species would not be exclusive to wind power production in the area."[8] The FWS required that FFS "specify how [it] will coordinate pumped storage hydroelectric operations and wind turbine operations with adjacent wind project operators to minimize impacts of the proposed Project on migratory birds."[9]

Accordingly, consistent with the findings of the FWS, TID requests FFP coordinate with TID to design the project in a manner that (1) does not alter laminar wind currents and (2) prevents an increase in the number animal strikes and the associated damages to the turbines and the turbines' operations.

E. TID is concerned the underground drilling in the construction of the GES Project could disrupt TWPA's operations and output

The proposed GES Project will require a significant amount of underground drilling. There will be a large diameter underground water shaft used to transport water from the upper reservoir and underground cables from this reservoir to the spillway. TID is concerned that this drilling could damage, or interrupt TWPA's use of, its underground 34.5 KV distribution system that interconnects each of the

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[8] FWS Comments on Draft License Application, at 3 (Mar. 3, 2020); *See also* Washington State Dept. of Fish and Wildlife Comments on Draft License Application, at 6 (March 10, 2020) ("The potential of the proposed Project to further alter the remaining laminar wind currents due to the presence of the one hundred and seventy-five-foot-tall upper reservoir built in close proximity to wind turbines may result in additional impacts to avian species.").

[9] FWS Comments on Draft License Application, at 3.

turbines to the grid. Depending on how the drilling is accomplished, one or more of the turbines may have to shut down while this drilling occurs, for safety reasons. Drilling vibration or drilling too close to the underground conductors could pose a serious safety hazard to the personnel drilling on the site and to the equipment. In order to prevent such a hazard from occurring, it is likely TWPA will have to de-electrify these underground lines during the drilling process. If this occurs, it would dramatically reduce the energy output from TWPA's turbines because they would no longer be interconnected to the grid.

FFP does not address TID's concerns in the Draft License Application. FFP only states "There appears to be sufficient real estate within the proposed Project Boundary to construct a single upper reservoir having an active storage capacity of approximately 11,800 AF and yet avoid the existing wind turbines."[10] This statement does not sufficiently detail what precautions FFP will take when constructing the GES Project to ensure it does not impact TWPA's turbines. FFP must explain how it will ensure that the operations and output of TWPA's turbines are not affected by the construction of the GES Project.

F. FFP must take certain actions to ensure that TWPA is held harmless from are not adversely impacted by the construction of the GES Project

Because the proposed GES Project is supposed to be constructed immediately adjacent to TWPA's turbines, this project could adversely impact TWPA's operations and the output of its generators. FFP has not provided any information in its Draft Application on what actions it plans to take to ensure TWPA is held harmless. The only way to ensure that FFP's construction of the GES Project will not adversely impact TWPA's operations or output is for: (1) FFP to conduct one or more studies that fully address each of the issues raised in these comments and analyze any potential adverse impacts that the GES Project may have on TWPA's operations and output; (2) FFP to provide TWPA and TID the ability to participate in and review the results of the aforementioned studies; and (3) FFP to resolve any disputes with TWPA and TID regarding any adverse impacts that result from the construction of the GES Project before FFP being construction of the GES Project.

As TID explained in its Motion and Comment, if FFP fails to address any adverse impacts caused by the construction of the GES Project to TID's and TWPA's satisfaction, TWPA will block the construction of the GES Project on any land TWPA has under lease. These land leases expressly prohibit the landlord from allowing the construction of any structure or facility that interferes in anyway with the operations or out output of TWPA's turbines.

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[10] FFP Draft License, Exhibit B, at 5.

PROPOSAL

For the foregoing reasons, TID requests FFP amend its Draft License Application to (a) conduct one or more studies that address the issues raised in these comments and fully analyze any potential adverse impacts that the GES Project may have on TWPA's operations and output; (b) provide TWPA and TID the ability to participate in and review the results of the aforementioned studies; and (c) resolve any disputes with TWPA and TID regarding any adverse impacts that result from the construction of the GES Project.

Respectfully submitted,

BRADLEY KOLLIN 03/11/2020

Chief Operating Officer
Turlock Irrigation District

March 12, 2020

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

RE: Rye Development's request for comments on Draft License Application for Goldendale Energy Storage Project, FERC No. P-14861

Dear Ms. Bose:

American Rivers, Friends of the White Salmon and the Washington State Chapter of the Sierra Club appreciates the opportunity to provide the Federal Energy Regulatory Commission (FERC) with comments on the Draft Licensing Application (DLA) for Goldendale Energy Storage Project (Project), which was submitted to FERC by Rye Development on December 13, 2019. Our organizations have serious concerns that the issues with the Project are more complex than the claims made by Rye Development and discussed in the DLA.

American Rivers is a 501(c)(3) nonprofit organization whose mission is to protect wild rivers, restored damaged rivers, and conserve water for people and nature. Headquartered in Washington, DC, American Rivers has offices across the country and more than 300,000 members, supporters, and volunteers, including many of whom live in the Columbia River Basin states of Washington, Oregon, Idaho, and Montana. We have been working in the Pacific Northwest for over 25 years, and we have a strong interest in protecting and restoring the Columbia River and its tributaries for the benefit of healthy fish and wildlife populations, and human communities.

Friends of the White Salmon River is a non-profit 501(c)(3) organization that has worked since 1976 to protect and restore naturally reproducing anadromous fish populations, and to protect the shorelines, water resources, and habitat areas that affect wild salmonid populations within Klickitat County. Friends of the White Salmon River has an interest in protecting and conserving water resources affecting wild salmonid populations.

The Washington State Chapter of the Sierra Club is a 501(c)(4) non-profit organization with over 100,000 members and supporters in Washington State and over 3.8 million nationally. Headquartered in Seattle, the Washington State Chapter has members and supporters living throughout the state of Washington. The Sierra Club works to protect communities and the planet.

Wildlife Management Plan

As requested by the Washington Department of Fish and Wildlife (WDFW), we support the recommendations laid out for pre- and post-construction raptor nest surveys, monitoring of golden eagle use, and bald eagle monitoring surveys found in the Wildlife Management Plan (WMP) in Appendix D of the DLA. However, we were unable to find any mention of a measurable period to conduct these surveys within the DLA, and based on the recommendations from WDFW, we strongly believe single year studies do not accurately capture the variability of species use of habitat and nests, annual changes in avian abundance, with results that can be biased in nature.

Similarly, the WDFW, in the same letter, also recommended pre- and post-construction surveys over a period of two years each to better understand current species presence of known bat species and the most current mortality rates post-construction. With the new reservoirs that will inherently attract insects and foraging bats that follow, it is necessary to get a new baseline for presence of bat species both pre- and post-construction, and not rely upon the old studies conducted during the construction of the Windy Point Wind Farm project from 2005, currently located at the site. We disagree with the presupposition by Rye Development that these new studies will provide less protective data, especially post-construction of the reservoirs, when abundance of populations of bats could increase.

While we appreciate the recognition by Rye Development of the potential for increased activity and usage to the area by raptors and migratory waterfowl following construction of new reservoirs, we believe that a more comprehensive plan needs to be detailed within the Wildlife Management Plan, Exhibit D. The Protection, Mitigation, and Enhancement (PME) measures and Best Management Practices (BMP), such as bird exclusion fencing and floating plastic shade balls to discourage migratory bird use of the reservoirs are helpful, but we would like to see more detailed plans for the monitoring program, including frequency and time frame, and not just a statement that a monitoring plan will be developed.

Historic and Cultural Considerations

We have serious concerns with the lack of good faith by Rye Development for the overall considerations of the resource and cultural impacts at the proposed site as described by the Yakama Nation in a letter to FERC sent on February 21, 2019. While additional steps were taken during the development of the DLA, including Rye contracting with Yakama Nation to survey the Area of Potential Effect (APE) in July 2019, the recommendation put forth is that avoidance should occur for all historic tribal sites within the proposed project area.

We understand that that Rye Development intends to consult with the Yakama Nation in developing the final APE, as stated in Exhibit E, Section 10.3.6; it is imperative that Rye Development takes the Yakama Nation's recommendations of avoidance for all historic sites seriously. Avoidance could be accomplished by shifting the footprint away from the resource,

limiting activities in the vicinity of the resource, monitoring construction activities near the resource to inform whether additional actions are warranted, or through any combination of these techniques. We do not believe that non-avoidance measures like minimization or mitigation are appropriate for these culturally historic sites. We agree that "only the Yakama Nation can determine what is significant to the Tribe," and we support the issues brought forth by them. Further, it is our expectation that Rye Development has a legal and moral responsibility for full consultation with the Yakama Nation and that it be done in such a manner that is satisfactory to the Nation.

Financial Viability of Proposal

We have grave concerns about the financial viability of the project and how the proposed hydropower project fits into the West Coast wholesale energy markets. With data in the Notice Of Intent/Pre-Application Document (NOI/PAD) and DLA mostly provided by the energy developers as sourced from various agencies and utilities, we felt it was necessary to have a third-party evaluate whether or not a project of this scope is economically viable and worth the various impacts that inherently come with this type of development. Due to a combination of rising construction costs, decreasing open-market energy prices, and as a way to ground-truth the forecast of project generation value, we believe that this independent report provides the necessary outside analysis of whether or not this project can provide renewable energy integration and replacement capacity to support regional decarbonization goals affordably and reliably.

Anthony Jones of Rocky Mountain Econometrics (RME) developed a model of the market forces and financial viability of the project going forward based on the data provided in the NOI/PAD. The final critique is attached to this letter and contains the following findings:

I. While Rye Development's description of project operations are preliminary in nature and not overly detailed in the NOI/PAD, the parameters of pump storage project operations are well understood, the Goldendale Energy Storage Project's construction costs are sufficiently well defined, and the wholesale energy environment in which it will operate are clear. As a result, RME concluded that the Goldendale project is very unlikely to operate profitably given the state of current and future West Coast and Northwest energy pricing.
II. Traditionally, pump storage facilities are built in conjunction with other specific energy generation projects to extend the generating plant's efficiency range. Goldendale would be a free-standing, independent operation buying and selling power on the Western transmission grid, from and to the West Coast wholesale energy markets. Based on the overall costs and power generating capabilities, the project would be a price taker in most cases rather than a price setter.
III. Based on the proposed integration into the current West Coast energy market, and using the figures provided by Rye Development in the NOI/PAD, one could surmise It is possible that the Goldendale Pump Storage Project is being proposed with full knowledge that it will fail. Further, bankruptcy may be an unstated but integral part of

the Goldendale business plan as a means of shedding sufficient debt to survive in the current wholesale power market. These results, as detailed in the report's Appendix – Alternative Debt Structures, give us pause as to whether any adverse impacts to public values such as water quality, water quantity, flow regime, fish and wildlife, tribal and cultural resources, surrounding communities, and/or recreation are worth the risk and generated energy storage.

Our organizations appreciate the opportunity to provide feedback in this FERC process on the DLA submitted by Rye Development and are available to answer any specific questions about these comments.

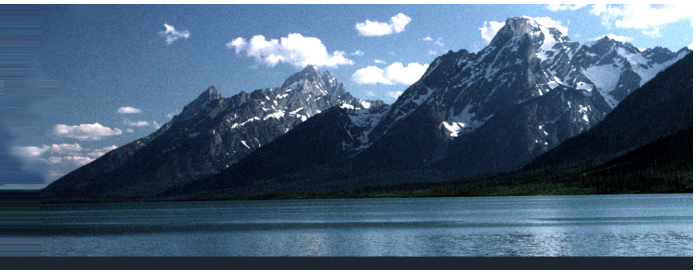
Sincerely,

Wendy D. McDermott
Director, Rivers of Puget Sound and the Columbia Basin
American Rivers
P.O. Box 1234, Bellingham, WA 98225
wmcdermott@americanrivers.org

Patricia L. Arnold
President, Friends of the White Salmon
P.O. Box 802, White Salmon, Washington 98672
pat.arnold@friendsofthewhitesalmon.org

Margie Van Cleve
Conservation Chair, Washington State Chapter of the Sierra Club
180 Nickerson Street, Suite 202, Seattle, WA 98109
margie.vancleve@washington.sierraclub.org

Rocky Mountain Econometrics
208-344-0809
208-631-4334 Cell
P.O. Box 1914
Boise, ID. 83701
tjones@design4000.net
www.rmecon.com
Anthony Jones - Principal



CRITIQUE OF THE Goldendale Energy Storage Hydroelectric Project (FERC No. 14861) NOTIFICATION OF INTENT

Prepared for

American Rivers

December 3, 2019

Anthony Jones
ROCKY MOUNTAIN ECONOMETRICS
www.rmecon.com

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY

- On January of this year, 2019, FFP Project 101, LLC, notified FERC of its intent to file an application for an original license for the Goldendale Energy Storage Project No. 14861 (Goldendale), a closed-loop pump storage project, in Washington State close to the Columbia River near to the John Day Dam.[1]

- In the Notice of Intent (NOI) Goldendale's stated purpose for the project is that:
  - "Within the region, renewable energy development is growing, primarily through wind power generation. The Project would provide necessary ancillary services and energy storage to the Northwest region, and allow for more reliable management and integration of disparate renewable energy sources into the grid. The Project would provide additional ramping capacity (both up and down) as well as firming for wind energy regulation, coordination, and scheduling services, automatic generation control, and support of system integrity and security (reactive power, spinning, and operating reserves)."[2]
  -
- Rocky Mountain Econometrics (RME) finds that while the project may be technically able to serve in the stated capacity for a portion of each day, it will not be able to serve in that capacity for a large portion of each day when its upper reservoir has been partially or wholly used for power production and needs to be refilled. It is also extremely unlikely that Goldendale will be financially viable.

- While Goldendale's description of project operations are preliminary in nature and not overly detailed, the parameters of pump storage project operations are well understood, Goldendale's construction costs are sufficiently well defined, and the wholesale energy environment in which it will operate are clear. As a result RME is able to conclude that the Goldendale project is very unlikely to operate profitably given the state of current and future west coast and northwest energy pricing.

- As briefly as possible, Goldendale's challenge is that to service its debt and cover the cost of M&O, as well as the cost of filling its supply reservoir as a prerequisite to generate power, Goldendale will have to charge almost double the going rate of peak hour open market (NP15) energy. Worse, since pump storage project sales hours are necessarily restricted to the portion of the day when the upper reservoir is not being filled, the opportunity to absorb overhead by operating more than about eight hours per day is precluded. Finally, while Goldendale's costs of operation will likely increase with inflation over time, NW energy prices for the past two decades have been flat or declining as the market transforms to accommodate proportionally larger and larger amounts of solar power, a trend that is destined to continue.

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[1] Goldendale Energy Storage Hydroelectric Project, (FERC No. 14861), Klickitat County, Washington, NOTIFICATION OF INTENT, Prepared for FFP Project 101, LLC.

[2] Ibid., pp. 2.

II. PROJECT DESCRIPTION

From Goldendale's NOI: Goldendale Energy Storage Project FFP Project 101, LLC, FERC Project No. 14861 Page 4 January 2019

> The Project area has the suitable geography for a closed-loop pumped storage facility and is strategically located at the northern terminus of the Pacific AC and DC Interties operated by BPA, Los Angeles Department of Water & Power, and the California Independent System Operator (CA-ISO).
>
> The interties allow for the bulk seasonal exchanges of power between British Columbia, Canada, the Northwest, and California and provide benefits of coordinated markets to the regions.
>
> The Project is also located in close proximity to substantial existing, 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 the daily inter-regional exchanges of California massive mid-day solar oversupply and the significant power generation ramping needed by CA-ISO.3
>
> The proposed Project is a closed-loop pumped storage hydropower facility located off-stream of the Columbia River at John Day Dam, located on the Washington (north) side of the Columbia River at River Mile 215.6. The Project will be located approximately 8 miles southeast of the City of Goldendale in Klickitat County, Washington.
>
> The proposed Project will involve no river or stream impoundments, allowing for minimal potential environmental impact. Initial fill water and periodic make-up water will be purchased from Public Utility District No. 1 of Klickitat County, Washington (KPUD) using a KPUD-owned conveyance system and municipal water right.
>
> The Project facilities include:
> • _An upper reservoir consisting of a rockfill embankment dam approximately170 feet high, 8,000 feet long, a surface area of about 59 acres, storage of 7,100 acre-feet (AF), at an elevation of 2,940 feet above mean sea level (AMSL);
> • _A lower reservoir consisting of an embankment approximately 170 feet high, 7,400 feet long, a surface area of about 62 acres, storage of 7,100 AF, and an elevation of 580 feet AMSL.
> • _An underground water conveyance tunnel and underground powerhouse; and
> • _230-kilovolt (kV) transmission line(s).
>
> The rated (average) gross head of the Project is 2,400 feet, and the rated total installed capacity is 1,200 megawatts (MW).

[3] Ibid., pp. 4.

Project Characteristics

Approximate Installed Capacity	1,200 MW
Assumed Number of Units (Variable Speed)	3
Assumed Average Static Head	2,360 feet
Assumed Usable Storage Volume	7,100 AF
Approximate Energy Storage	14,745 MWh
Approximate Hours of Storage @ 1,200 MW	12 hours

Underground Powerhouse

Rated Head (Gross)	Approximately 2400 feet
Max Flow Generating Mode	8,280 cfs
Max Flow Pumping Mode	6,700 cfs
Generating Capacity	Up to 1,200 MW
Number of Units	3 x 400 MW units

III. MARKET PRICES

Understanding Goldendale requires understanding the west coast wholesale energy market with which it will interface.

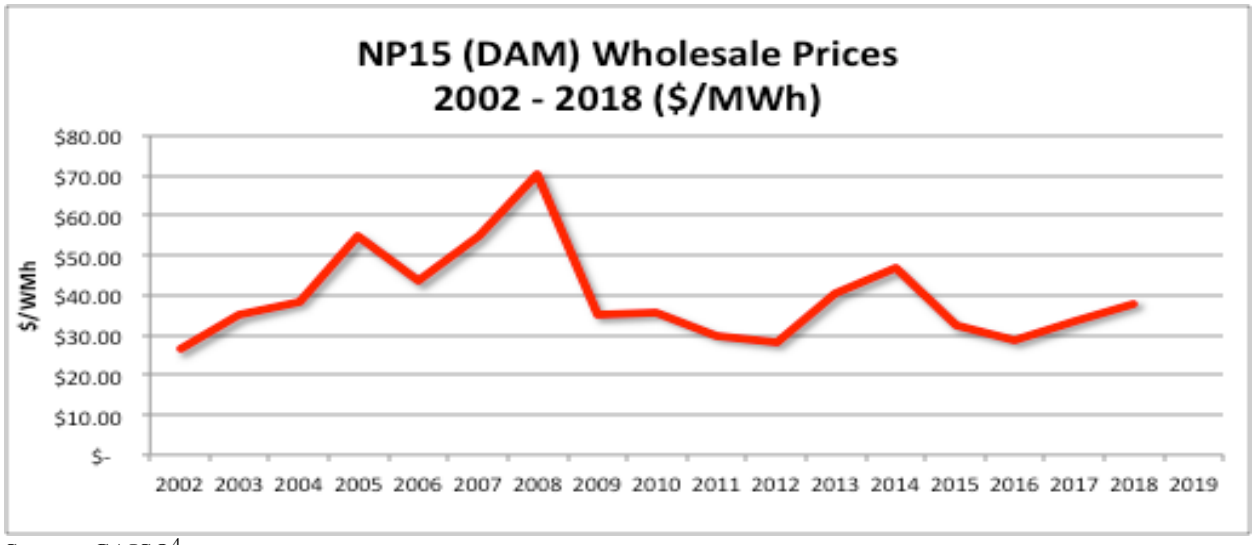
Unlike many, perhaps most, pump storage projects that are built in conjunction with a relatively fixed output, often thermal, generating station, Goldendale will be a free standing, independent operation buying and selling power on the western transmission grid, from and to the west coast wholesale energy markets.

The NOI talks broadly about supporting other regional power producers but makes no mention of contracting with any of them. For the purposes of this analysis RME assumes Goldendale will be a freelance operation, attempting to buy low and sell high on the wholesale market, to the extent of their ability, at their discretion. In the absence of contractual requirements for energy used to fill their upper reservoir or sell their production, it is to market prices that we must look to understand the forces that will shape Goldendale's potential for success or failure.

Pre 2009, Prelude to a Crash

In the years leading up to 2009, west coast and northwest wholesale energy prices were escalating rapidly. From 2002 through 2008, NP15 prices climbed from about $25/MWh to over $70/MWh, a 180 percent increase in a scant six years. In 2008, FERC, BPA, and most NW utilities were predicting energy prices to continue escalating, at a somewhat slower rate, on upward toward $80, $90, and $100/MWh within 10 years.

Chart 1



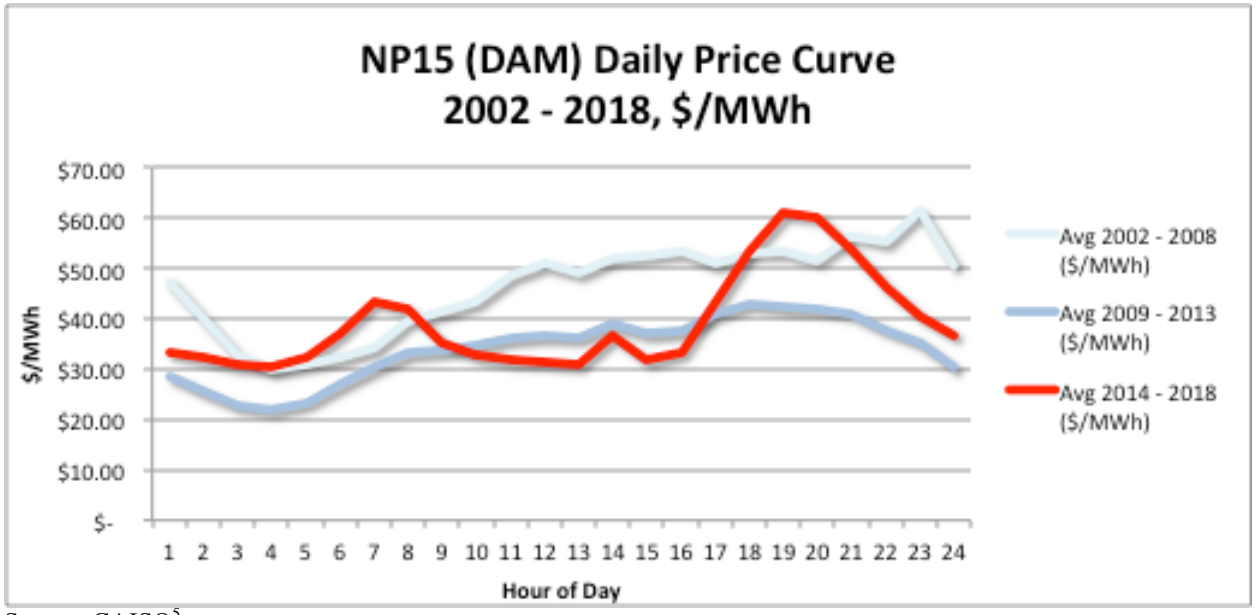
Source: CAISO[4]

[4] http://oasis.caiso.com/mrioasis/logon.do

That line of thinking collapsed in 2009, the first year of the Great Recession. That year saw the collapse of gas prices (a major factor in the price of power produced by gas generating plants) and the point where solar capacity in California started gaining traction. In one year, from 2008 to 2009, NP15 prices dropped by 50 percent and have never recovered to any substantive degree for more than a year or two. Nine years after the 2009 price collapse 2018 prices averaged about $38/MWh, roughly half of price levels ten years previous. And, the 2018 number would likely have been lower still if not for the effect of the Camp Fire in California that took several major PG&E generating plants offline for several months of the year, thus reducing supply and driving prices higher. Please refer to Chart 1, above.

Prices from 2009 to 2013 followed a daily price curve similar to but lower than the daily price curve prior to 2009. Daily prices continued to bottom out in the hours from midnight to about 6:00 AM and then began climbing to a peak in the late afternoon or early evening. Where pre 2009 prices bottomed out at about $30/MWh, post 2008 prices bottomed out about $10 lower at $20/MWh. Where pre 2009 prices topped out as high as $60/MWh in the late evening, post 2008 prices topped out about $20 lower at about $42/MWh as early as 6:00 PM.

Chart 2



Source: CAISO[5]

Prior to 2009 the range from minimum to maximum price for the day averaged a little more than $30/MWh. From 2009 - 2014 the daily average price range from minimum to maximum was about $8 less, at roughly $22/MWh. Please see Chart 2, above.

[5] http://oasis.caiso.com/mrioasis/logon.do

The lower overall prices and the narrowing of total price range after 2008 was probably due to a combination of factors including reduced demand due to the recession, lower gas prices used by thermal generating plants, and the beginnings of the solar power revolution associated with California investing in renewable energy.

High Spot Market Prices May Not Be Enough

If Goldendale would have made this proposal back in 2008, the year before market prices collapsed from the $70/MWh range or higher, it would be more difficult to find fault with the proposal. Even the most respected forecaster has difficulty selling an audience on the likelihood of $30 market prices when they looking at prices averaging as much as $80/MWh for months at a time.

But this is not 2008 and prices have not averaged greater than $50/MWh on an annual basis in ten years. In fact, the price collapse was fully expected. The precipitousness of the decline might seem a little severe but the price correction was completely normal. High prices, while inconvenient, are the mechanism that triggers innovation and investment in the market. They lead to new construction that results in more capacity, greater supply, and ultimately lower prices.

The run-up to 2008 was not the first of its kind and is unlikely to be the last. Similarly, price corrections such as the one in 2009 are equally as normal as the preceding price spike. It is for that reason that RME cautions against any prophesy that market prices will return to pre 2009 levels for anything more than brief periods. As Chart 1 demonstrates, 2013-2014 looked like prices were once again heading towards pre 2009 $60 and $70 levels. But, again, price changes of that nature are the events that trigger new investment, more construction, and more supply that drives prices back down to $30/MWh and lower.

One final point before leaving the subject of pre-2009 high market prices. As we will see, high prices are a necessary condition for Goldendale to cover their costs construction costs, but not a sufficient condition for to cover their operating costs.

High peak hour prices are little benefit to pump storage projects if it means similarly high off-peak hour prices. Projects of this nature also need situations that increase the spread between high and low daily prices. Years like 2008 when average prices were much higher than after 2009 present a situation in which the daily price spread is potentially higher, but not necessarily as high as needed.

Emergence Of The Duck Curve

Even more significant for this discussion is the transformation of the western energy market that started in about 2014. That year marked the emergence of the "Duck Curve". The Duck Curve, named for the curve's late in the day resemblance to the profile of a duck's head, is the result of solar power becoming a major force in the California energy market.

Starting in 2014 prices from about 3:00 AM to about 8:00 AM returned to or even exceeded pre 2008 price levels, the difference being that by about 9:00 solar energy sources stared producing in sufficient volume that prices, instead of continuing to increase, dropped back to pre-dawn levels of about $30/MWh where they remained until about 5:00 PM when the late in the day peak begins. As with the morning peak, the late day peak is as high or higher than the pre 2009 peak but it is much shorter in duration. Again, please refer to Chart 2, above.

Dual Daily Supply Curves

Classical economic theory holds that as demand increases, it shifts the demand curve to the right and the equilibrium price increases. At first glance that result would seen to be violated in the western wholesale energy markets where midday prices are now typically lower than earlier in the day even though the amount of energy demanded is substantially higher. However, the west coast currently operates with, effectively, two supply curves, a nighttime curve and a daytime curve.

Early in the day, in the first few hours of peak demand before sun-up, energy load begins to ramp up and, with the nighttime supply curve in play, prices begin to rise in response. Later in the morning, with load ramping up even further, the supply curve begins to shift to the right as solar generation comes online. This process not only counters the earlier increase in prices but also typically over-compensates and drives prices lower than they were before the sun rises.

It is this price environment in which Goldendale proposes to operate. In an effort to recharge the upper reservoir during the 10 lowest cost hours of the day, Goldendale will have to pump for five hours from about midnight to 5:00 AM, for another four hours from about 10:00 AM to about 1:00 PM, and finally for one hour at 3:00 PM.

About half of Goldendale's pumping will occur during the relatively low priced but high load middle of the day.

In an effort to sell power during the 8 highest hourly prices of the daily load and price cycle, Goldendale will need to run its generators for an hour during the morning price peak at about 7:00 AM, and for 7 hours from about 5:00 PM through 11:00 PM. Please see Chart 3 below.

One final takeaway for the post 2008 open market price history is that inflation has been outpacing NP15 prices and that the difference between peak prices and off peak prices, as

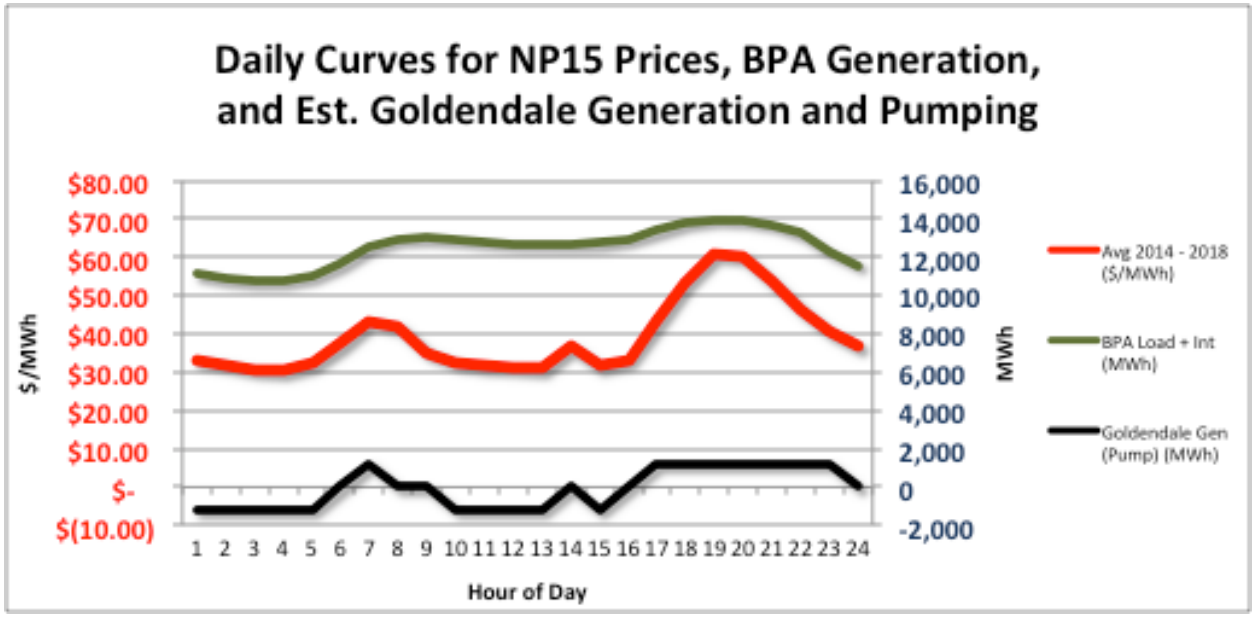
constrained by Goldendale's profit maximizing operation curve, is a relatively stable $16 - $18/MWh.

For the purpose of this analysis of Goldendale's finances, RME will use the 2014 – 2018 minimum and maximum prices of $32.0475 and $50.2530 respectively. The reason for using these two numbers is that it provides a slightly greater range in prices than the full 2009 – 2018 record provides, a factor that gives the benefit of doubt to Goldendale in recognition that they may bring more sophisticated modeling to the operation than RME has at its disposal.

NP15 Prices

	Avg. Minimum Prices	Avg. Minimum Prices	Avg. Price Spread
2014 - 2018	$32.0475	$50.2530	$18.2055
2009 - 2018	$29.5999	$45.9677	$16.3679

Chart 3



IV. GOLDENDALE FINANCIALS

The Goldendale NOI estimates that the project will cost $2.2 billion. The inclusion of Washington State sales tax and capitalized pre-completion interest will bring the startup cost of the project to about $2.6 billion. Servicing the interest on $2.6 billion will cost Goldendale about $208 million per year.

The NOI indicates that M&O costs will come to about 8.5 million per year, bringing the total for debt service and M&O to about $216 million per year, roughly $62/MWh without accounting for pumping costs.

Goldendale - With Amortization

Capital Cost		
PAD Cost Estimate	$2,200,000,000	1
WSST @ 6.5%	$143,000,000	2
Total Estimated Direct Cost	$2,343,000,000	
Pre Cost Interest (60 Months)	$246,310,804	3
Installed Cost	$2,589,310,804	
Maintenance and Plant Cost		
Cost	$2,589,310,804	
Interest Rate	5.0%	5
Term (Yrs.)	20	6
Annual Interest Pmt.	$207,772,998	
Wages	$3,860,000	1
Other	$4,620,000	
M&O	$8,480,000	1
Total	$216,252,998	

Based on Goldendale's estimates in the NOI, the project will produce about 3.5 million MWh of energy. At an estimated peak-hours average price of $50/MWh for the 8 highest NP15 daily prices, Goldendale will see revenues of about $175 million per year.

Also from the NOI, Goldendale will use about 4.4 million MWh each year to power its pumps to fill the upper reservoir. At average market prices for the 10 lowest priced NP15 daily hours Goldendale will have to pay an average of about $32/MWh and will spend about $140 million in pumping costs each year.

The relatively narrow differential between peak and off peak market prices, combined with the 20 percent efficiency penalty associated with pumping, Goldendale will net about $35 million per year at the cash flow level. However, M&O costs and debt service will lead to Goldendale losing about $181 million per year, a loss of $52/MWh of production.

Cash Flow From Operations[6]

Generation		
Capacity	1,200	4
Hrs / Day	8	4
Days /Yr.	365	4
Annual Prod (MWh)	3,504,000	4
Generation $/MWh	$50	3
Revenue from Generation	175,200,000	
Pumping		
Pumping Rate	1,200	4
Hrs / Day	10	4
Days /Yr.	365	4
Annual Pumping (MWh)	4,380,000	4
Pumping $/MWh	$32	3
Annual Pumping Cost	140,160,000	
Net Cash Flow from Operation	$35,040,000	
Profit (Loss)	**($181,212,998)**	
Cost of Production ($/MWh)	$101.72	
Profit (Loss) $/MWh	($51.72)	

[6] Goldendale, PAD, pp 182; ttp://www.salestaxstates.com/sales-tax-calculator-washington;' RME; and Goldendale, PAD, pp 18.

To summarize, the minimum cost to cover debt service and O&M is about $61/MWh. The minimum market price spread for Goldendale to cover its pumping costs is 20 percent above the price Goldendale pays to fill the upper reservoir. Combined, for Goldendale to operate profitably it needs to see market prices of $61/MWh plus a price spread of about $8/MWh on top of the $32/MWh[7] estimate for the lowest cost 10 hours of pumping. Thus, with the lowest 10 hours of a typical day averaging about $32/MWh, efficiency losses will increase the value of water in the upper reservoir to about $40/MWh. Adding the $61.72/MWh necessary to cover debt service and O&M means Goldendale will need to see average prices for the 8 highest priced hours of the day of $102/MWh or higher.

[7] With efficiency losses of 20% $32/MWh pumping costs equate to $40/MWh at the generating level.

V. GENERAL DISCUSSION

Large Producer

Unlike many hydro type power producers that typically only run at full capacity during spring runoff or brief moments to match peaking demand, Goldendale can be expected to run at or near full capacity for most of its daily 8-hour operation as it attempts to maximize revenue.

When generating, Goldendale output will be one of the larger single-plant power sources in the northwest. It will be capable of out producing Bonneville Dam for the eight hours per day it generates. In terms of nameplate capacity it will be larger than McNary Dam. In terms of average production, when running, it will be on par with Chief Joseph dam and second only to Grand Coulee in the NW.

Larger Consumer

During the 10 hours per day that Goldendale will be pumping, it will be a major load center. When pumping, Goldendale will have the load equivalent of about 720,000 households, about the same as the all the residential households in Idaho![8]

Net Consumer of Electricity

Goldendale estimates that the project is 20 percent less efficient in pumping mode than it is in generating mode. The result is that to produce 3.5 million MWh of electricity Goldendale will consume about 4.4 million MWh, an annual loss to the system of about 877,000 MWh.

General Operating Characteristics

Goldendale combines some of the features of a hydro project and some of the features of a thermal project and some features unique to pump storage projects.

Like any substantial hydroelectric generating plant, Goldendale's will be a major capital investment. Servicing the interest payment on its debt will be a major challenge. In the absence of high prices in the wholesale energy market, the alternative method for absorbing overhead is

[8] Goldendale will consume 1,200 aMW in pumping mode. Idaho has about 720,000 residential electrical customers who consume an average of about 1,200 KWh per month. (720,000 Residents X 1.2 MWh/month = 864,000 MWh. 864,000 MWh / 30 Days / 24 Hours = 1,200 MWh

to operate as many hours per year as possible. That, combined with minimal marginal operating costs, is the reason most hydro facilities operate as close to 24/7 as possible.

However, a 24/7 generating schedule will not be possible in Goldendale's case.

The requirement to spend more time filling the upper reservoir than time generating energy, plus potentially waiting out shoulder hours when the price differential is insufficient to cover pumping losses, tends to limit Goldendale's capacity utilization rate to about 33 percent. If Goldendale could generate power 16 hours per day it could double its overhead absorption and cut its pre-pumping cost of production by half. However, again, that will not be possible.

Like a thermal project, the water in the upper reservoir has value in that it costs money to pump the water the 2360 vertical feet up from lower reservoir. Like a thermal project, Goldendale cannot generate electricity profitably unless it receives at least as much per MWh as the water in the upper reservoir cost to pump it up there, plus the 20 percent efficiency penalty.

If it cost $40/MWh to fill the reservoir ($32/MWh plus a 20 percent efficiency penalty for a total of about $40 /MWh generating equivalent.), that tends to suggest that the cost minimizing operation level is when sales prices are $40/MWh or higher. That logic works well enough until about 5:00 in the afternoon when the need to absorb overhead starts to conflict with the need to cover pumping costs. In other words, just because it cost $40/MWh to fill the reservoir on one day does not mean the same water will be worth the same amount the next day. If, having paid $40/MWh to fill the reservoir there is no guarantee peak prices the next day (or the day after that, ad infinitum) will not be even lower. In that event Goldendale would be smarter, toward the end of the day, to treat the pumping costs as sunk costs and produce as much power as possible during the late afternoon / evening peak price period in an effort to absorb overhead cost, to the extent possible.

In that manner, Goldendale would cover some of its overhead and recoup at least a portion of the day's pumping cost prior to beginning the next day of operation.

Clearly, no project of this type can profitably operate in that manner on a continuing basis, but it serves to illustrate the complex nature of Goldendale's business model as it attempts to minimize losses and maximize profits.

Finally, unlike the vast majority of both thermal and hydro projects, Goldendale will never be more than about 12 hours from running out of "fuel", exhausting the water in the upper reservoir, and having to stop generating electricity.

Emergency Generating Capability

Goldendale's data table claims that the plant's approximate hours of storage @ 1,200 MW is 12 hours. The implication seems to be that Goldendale will provide 12 hours of backup for a variety of ancillary services including emergency generation in the event some other project fails.

This claim fails for a variety of reasons. First, if 1,200 MW generation requires 8,280 cfs of water flow, the 7,100 acre foot reservoir will be exhausted in a little over 10 and hours, not 12. But that misses the second and broader point, the assumption that any event triggering the need for 12 hours, or 10.5 hours, of Goldendale production will occur when the upper reservoir is at full capacity.

Barring the unlikely event that Goldendale is paid to sit patiently, 24/7, with a full upper reservoir laying in wait for a moment when its services are needed, it seems far more likely that any emergency calling for Goldendale's services will happen when the project has already been generating for some period of time. Clearly, the length of time that Goldendale can provide backup is directly proportional to the amount of water remaining in the upper reservoir.

Assuming Goldendale operates a daily pumping and generating schedule consistent with maximizing revenue from the daily price swings, any emergency calling for Goldendale's production is most likely to occur when the upper reservoir is substantially depleted. If any emergency happens after Goldendale is more than 4 hours into its daily generating cycle, or fewer than 5 hours into its daily pumping cycle, the upper reservoir will be half empty. In that manner, if emergencies happen at random times of day, the expectation is that Goldendale's ability to respond to emergencies is only about 6 hours, not 12.

Finally, if some other power plant were to go offline and need backup while Goldendale is already in generating mode as part of its daily production schedule, it is not clear that there will be a benefit to the system if Goldendale ceases putting power onto the grid under its own name to begin putting power onto the grid in the name of some other power producer. This scenario results in a zero net increase in production.

Market Price Impacts

Classical economics suggests that, at the margin, Goldendale will drive off-peak prices up and peak prices down.

Traditionally, pump-storage projects have been built in conjunction with other specific generation projects in an attempt to extend the efficiency range of the main generating plant into other parts of the day, week, month, or year.

That description does not apply to Goldendale as presented in the NOI.

Goldendale, as currently proposed, is not linked to any individual power producer, or group of power producers. It will be a parasitic operation in that it will attempt to purchase power from other existing regional suppliers during the lower cost portions of the daily price curve in an effort to resell the energy later in the day when prices are relatively higher.

Regional power producers will hope the potential for higher off-peak prices they receive when Goldendale operates its pumps will be enough to offset the potentially lower peak prices they will see later in the day when Goldendale is producing power.

On the other side of the equation, Goldendale will hope its potential to drive up off-peak prices and the potential amount it will drive down peak-prices will not narrow the price spread to the point that they cannot operate profitably.

Finally, retail consumers will hope that the net reduction in supply and the resulting potential increase in energy costs will not adversely affect their retail rates.

Minimal Price Impact

Goldendale will be one of the regions larger power producers when generating and one of the regions larger load center when pumping. As mentioned in previous sections, that tends to suggest that Goldendale will depress market prices when generating and increase wholesale prices when pumping, at least at the margin. The amount of these effects is hard to predict but will probably be fairly small.

The reason the effect will likely be small is that, while Goldendale will be a major northwest load center when pumping and a large northwest power producer when generating it will not be a large producer or load center by California standards, and it is the California wholesale markets that are the price setters.

People in the northwest tend to forget that California utilities are sized to supply the peak needs of about 40 million people while northwest utilities are sized to serve the peak needs of about 13 million people.

Goldendale may be as much as five percent of northwest capacity when generating but it will be only about one percent of California capacity. Since Goldendale will be directly connected to the west coast wholesale markets by way of the west coast power grid Goldendale will be a price taker in most cases rather than a price setter.

Self-Defeating Market Price Impact

While any market price impact resulting from Goldendale's operation will likely be small, any effect will be self-defeating for Goldendale's needs.

For example, in its analysis of Goldendale's potential profitability RME estimated peak hour and off-peak hour prices would average $50/ MWh and $32/MWh respectively. If Goldendale's operation reduces peak hour prices by $1 and raises off-peak hour prices by $1, to $49 and $33/MWh respectively, the resulting $2/MWh narrowing of the daily price spread will reduce Goldendale's annual net revenue by nearly $8 million and increase its per MWh loss by over $2/MWh to $53.97/MWh.[9]

"Quick Response" May Not Mean Lower Rates.

Goldendale lists "quick response time" as one of the project's assets. It is not clear to RME that this is a net benefit to the region.

From Goldendale's perspective, its proposed ability to supply power in response to "emergency" changes in load and or reduce the supply of power as necessary to help balance system load, is a benefit to the system.

However, quick response time can just as easily be used to respond, pumping or generating, in efforts to grasp low cost pumping opportunities or switch to generating mode to take advantage of fleeting moments of high wholesale prices. Responding to emergencies may be a benefit to the system but chasing momentary price changes can increase chaos, uncertain, and risk, and be detrimental to the system.

For instance, Goldendale has the potential to switch from consuming 1,200 MW per hour in pumping mode to producing 1,200 MW per hour in generating mode, and vice versa, in an unspecified but presumably brief period of time, perhaps as quickly as a few minutes or even quicker. To other entities on the grid, power producers, energy aggregators, and consumers, this would be seen as a 2,400 MW swing in load volume, the equivalent of a substantial western city suddenly going off line, or Grand Coulee switching arbitrarily off and on, with little or no warning!

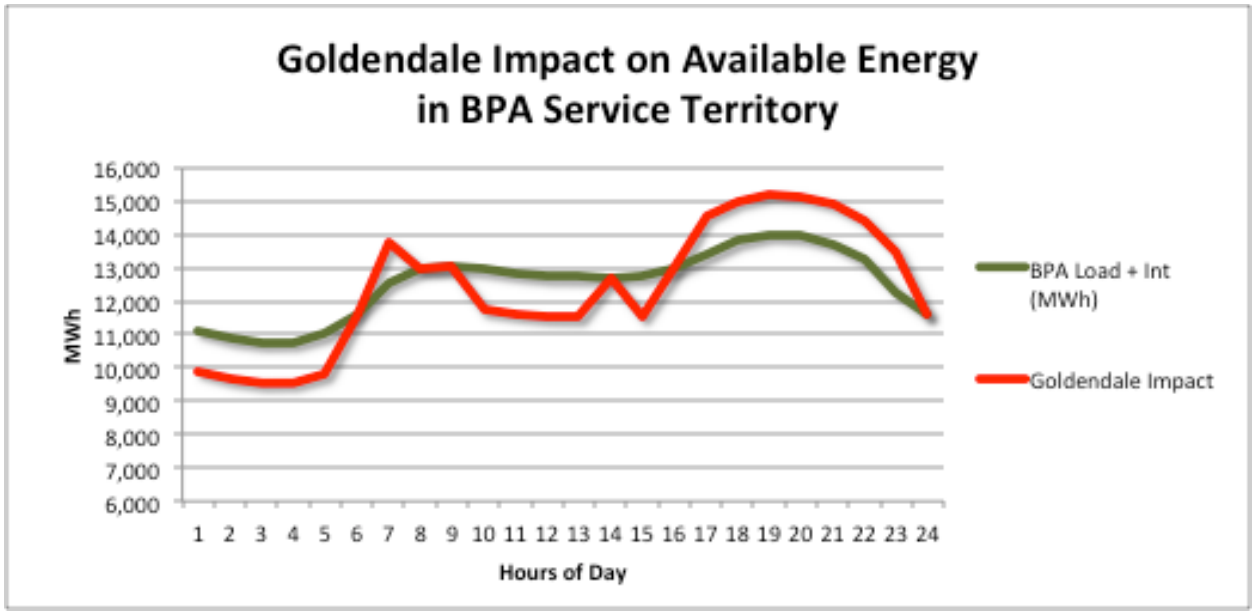
Given Goldendale's precarious financial situation, and in the absence of regulatory or contractual operational constraints, increased wholesale market chaos appears to be the most likely result of Goldendale's operation.

[9] RME is highly skeptical of Goldendale's potential to operate profitably. However, by choosing options and assumptions that tilt the scale in Goldendale's direction, and not including price impacts such as this, RME generally gives the benefit of the doubt to Goldendale.

Chart 4 below provides a graphical example of this discussion. If Goldendale's operation were grafted onto BPA's load curve[10] it would make BPA's available power curve substantially less "smooth" and it would make the spread, the range of power, from low point to high point, available to consumers broader by about 2,400 aMW. The power currently available to contract customers exemplified by the green line, would instead follow the red line.

Would NW producers modify their production in recognition that Goldendale is operating in that fashion? The answer is undoubtedly yes, to at least some degree. However, it is important to remember that the curve shown by the green line is the result of BPA servicing load as well as chasing the same daily price curves in search of higher revenues as Goldendale will be chasing. In other words, yes, Goldendale's operation will cause changes in the operations of other NW utilities, but it is not clear that the result will smoother or less chaotic. Absent any regulatory or contractual mandate, the opposite seems most likely.

Chart 4



As hinted at in the preceding paragraph, regulating the manner and the degree, the when and the how much if you will, to which Goldendale can enter the market could conceivably alleviate the potential for Goldendale to increase market uncertainty. That, of course, would reduce Goldendale's ability to profit from swings in market demand and prices, and make their already precarious financial picture look even worse.

[10] BPA is used here because their production numbers are roughly half of the NW, they are readily available and transparent. The inclusion of the remaining NW producers would tend to minimize this impact to some degree, but not eliminate it.

Contracting

As mentioned above, Goldendale is not directly linked to any one, or any group, of generating entities. As currently configured, it is a freelance operation.

To that end power producers in need of load shaping services may look to Goldendale for assistance. The question then becomes whether or not Goldendale can compete with other regional load shaping service providers. The evidence suggests not.

Again, Goldendale's breakeven production cost exceeds $100/MWh.

Competing with Goldendale will be most of the other NW entities with excess capacity, particularly utilities with hydro power plants that have some potential to shift their time of day production schedules. This will include BPA that touts its load shaping ability for around $40/MWh. Other hydro intensive utilities such as Idaho Power and Avista offer similar services for roughly similar prices.[11]

For companies looking for load shaping services but hoping to avoid fixed contracts there is always the option of playing the same wholesale market as Goldendale. Here, the prices may be more volatile than would be seen with a fixed contract, but with average daily prices of around $30/MWh it is hard to find justification for $100 Goldendale power.

Finally, Goldendale will have to compete with new power producers that are increasingly entering the market with rates as low as $20/MWh, including battery backup. This might seem especially galling to Goldendale since Goldendale will have trouble filling its upper reservoir for $20/MWh, let alone generating power that inexpensively.

[11] And, those prices may be a bit high. CAISO staff concludes load shaping in California only adds about $0.85/MWh to market prices. For this analysis that means Goldendale, with its $100+ / MWh cost structure trying to compete with $33/MWh market prices.

VI. APPENDIX – ALTERNATIVE DEBT STRUCTURES

Goldendale Without Amortization

In recognition that it is fairly common for utilities to not amortize debt on major projects, RME looked at the affect of Goldendale limiting its debt service to paying only the interest on the $2.6 billion startup cost. This has the benefit of reducing the debt service charge by $75 million from $219 million to about $144 million per year. Carrying the $75 million annual cost reduction through to the bottom line reduces Goldendale's losses from $192 million to $117 million per year, a loss of $33/MWh of production.

Goldendale With Bankruptcy

In the forgoing analysis RME used assumptions generally favorable to Goldendale. For example, for the market price spread, RME used the 2014 – 2018 spread of $18/MWh. The 2009 – 2018 spread is perhaps more relevant, but with a spread of only $16/MWh would have made the project look still worse. The same is true for interest rates. RME chose to use the lowest prime rate on record at the time of writing. Prime plus one or two is perhaps more accurate, especially given the speculative nature of this project, but that too would have made the project look even worse.[12]

Given that in this analysis RME made assumptions generally favorable to Goldendale and the financial results are still abysmal, RME is left to speculate on what it is that the project's sponsors see that RME does not.

Looking at the reports produced to date, and the resources at Goldendale's disposal, RME must assume the sponsors are intelligent, successful people. They must see all the same market forces and interest charges that RME sees. At the same time, the project as currently proposed appears from all angles to be destined to fail, in short order. RME is hesitant to make the following statement but feels it may be true and must be addressed: It is possible that the Goldendale Pump Storage Project is being proposed with full knowledge that it will fail. Further, bankruptcy may be an unstated but integral part of the Goldendale business plan as a means of shedding sufficient debt to survive in the current wholesale power market.

If we look at bankruptcy as an unstated but intended method of shedding the bulk of the construction cost, the project begins to make financial sense. If, in the course of a bankruptcy proceeding, the tunnels and reservoirs are declared sunk costs, and total debt is reduced to a hypothetical $75 million by salvaging the turbines and generators ($25 million apiece for three used turbines and control structures) annual debt service drops to a very reasonable $4.9 million.

[12] At the time of this writing, November 28, 2019, the prime rate is 4.75% and RME in this analysis is using a rate of Prime plus 0.25%.

Adding M&O only brings the total up to about $13.4 million. Using the same cash flow stream as in the previous examples, but with the restructured debt, Goldendale might see an annual profit of about $6.18/MWh, $21.7 million per year. Its cost of production would be about $44/MWh, comfortably lower than the average peak wholesale prices of $50/MWh.[13]

Goldendale - Without Amortization

Capital Cost	
NOI Cost Estimate	$2,200,000,000
WSST @ 6.5%	$143,000,000
Total Estimated Direct Cost	$2,343,000,000
Pre Const Interest (60 Months)	$246,310,804
Installed Cost	$2,589,310,804
Maintenance and Plant Cost	
Cost	$2,589,310,804
Interest Rate	5.0%
Term (Yrs.)	1000
Annual Interest Pmt.	$129,465,540
Wages	$3,860,000
Other	$4,620,000
M&O	$8,480,000
Total	$137,945,540

Goldendale - With Bankruptcy

Capital Cost	
NOI Cost Estimate	$75,000,000
WSST @ 6.5%	$4,875,000
Total Estimated Direct Cost	$79,875,000
Pre Const Interest (60 Months)	$8,396,959
Installed Cost	$88,271,959
Maintenance and Plant Cost	
Cost	$88,271,959
Interest Rate	5.0%
Term (Yrs.)	1000
Annual Interest Pmt.	$4,413,598
Wages	$3,860,000
Other	$4,620,000
M&O	$8,480,000
Total	$12,893,598

[13] One simple waty to eleimiante the possibliity of bankruptcy as an unstated but integral part of Goldendale's business plan is to include a clause in any regulatory approval of the project requiring Goldendale to set aside funding to remove the turbines and destroy the tunnel in the event the project fails.

Cash Flow From Operations	
Generation	
Capacity	1,200
Hrs. / Day	8
Days /Yr.	365
Annual Prod (MWh)	3,504,000
Generation $/MWh	$50
Revenue from Generation	175,200,000
Pumping	
Pumping Rate	1,200
Hrs. / Day	10
Days /Yr.	365
Annual Pumping (MWh)	4,380,000
Pumping $/MWh	$32
Annual Pumping Cost	140,160,000
Net Cash Flow from Operation	$35,040,000
Profit (Loss)	**($102,905,540)**
Cost of Production ($/MWh)	$79.37
Profit (Loss) $/MWh	($29.37)

Cash Flow From Operations	
Generation	
Capacity	1,200
Hrs. / Day	8
Days /Yr.	365
Annual Prod (MWh)	3,504,000
Generation $/MWh	$50
Revenue from Generation	175,200,000
Pumping	
Pumping Rate	1,200
Hrs. / Day	10
Days /Yr.	365
Annual Pumping (MWh)	4,380,000
Pumping $/Who	$32
Annual Pumping Cost	140,160,000
Net Cash Flow from Operation	$35,040,000
Profit (Loss)	**$22,146,402**
Cost of Production ($/MWh)	$43.68
Profit (Loss) $/MWh	**$6.32**

March 12, 2020

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

RE: Goldendale Energy Storage Project, FERC No. 14861
Comments by Columbia Riverkeeper and Friends of the White Salmon River on the Draft License Application dated December 13, 2019.

Dear Secretary Bose,

Columbia Riverkeeper (Riverkeeper) is a 501(c)(3) non-profit organization whose mission is to protect and restore the water quality of the Columbia River and all life connected to it from the headwaters to the Pacific Ocean. The organization's strategy for protecting the Columbia River and its tributaries includes working in river communities and enforcing laws that protect health, salmon, and other fish and wildlife. We have actively engaged in Rye Development's (Applicant) proposed Goldendale Energy Storage Project (Project) since 2017.

Friends of the White Salmon River[1] is a non-profit 501(c)(3) organization that has worked since 1976 to protect and restore naturally-reproducing anadromous fish populations, and to protect the shorelines, water resources, and habitat areas that affect wild salmonid populations within Klickitat County. Friends of the White Salmon River has an interest in protecting and conserving water resources affecting wild salmonid populations.

Riverkeeper would like to incorporate by reference the following comments submitted by the U.S. Fish and Wildlife Service (USFWS) on March 3, 2020, and American Rivers, et al on March 12, 2020. Please find both comments attached as Appendix 1 and 2 for reference.

Riverkeeper provides the following comments in response to Applicant's December 13, 2019, filing of the Project's (FERC No. 14861) Draft License Application for an Original License (DLA).

[1] Commenters will be referred to as "Riverkeeper" throughout this comment.

The DLA is incomplete and precludes any meaningful comment. To the extent that it can, Riverkeeper submits the following comments pursuant to 18 C.F.R. § 5.16(e).

1. The DLA is patently incomplete and undermines the ILP; it should be rejected.

Riverkeeper requests that FERC reject the Applicant's Project DLA as deficient or patently deficient. 18 C.F.R. § 5.20, *See* §§ 5.16(e) (comment on DLA), § 5.18(a)(4)(i)-(ii)) (DLA must be notarized), § 5.18(a)(5)(ii) and § 4.41(e) (license for a major unconstructed project and a major modified project, § 5.21 (additional information), § 5.27(amendment of application).

The DLA is patently incomplete because it fails to include certain "Application Requirements" pursuant to § 5.18. The Applicant elected to file a draft license application in lieu of a preliminary license proposal. § 5.16(c) ("A potential applicant may elect to file a draft license application which includes the contents of a license application required by §5.18 instead of the Preliminary Licensing Proposal."). A draft license must include all application requirements as delineated in § 5.18.

a. The DLA is not Notarized as Required by § 5.18(a)(4)(i)-(ii).

The Project's DLA fails to contain a notarized signature as required by § 5.18(a)(4)(i)-(ii). The purpose of this requirement is to verify that the person filing the application verified under oath, to the best of their knowledge that the facts alleged in the application are true. Failure to contain a notarized signature puts little faith into the trustworthiness of the application as a whole. This combined with the misspelling of one of the tribes that the applicant is "consulting" with, further exacerbates the overall lack of transparency and trustworthiness surrounding the project as a whole. [2] Riverkeeper cannot comment on a project application that fails to verify that the facts contained in the application are true.

b. Exhibit A lacks Substantive Information about System and Regional Power Needs.

Exhibit A of the DLA is a description of the project. § 4.4.1(b). As part of this description, the Applicant must include "a statement of system and regional power needs and the manner in which the power generated at the project is to be utilized, including the amount of power to be used on-site, if any." § 4.4.1(b)(5). The applicant provides the Project's estimated "annual generation for 8 hours a day, 7 days a week" as 3,500gigawatt-hours."[3] It also provides the estimates for the maximum discharge of water within the project. However, this section does not discuss: (1) the regional power needs, (2) how the power produced by the project will be utilized, (3) if any of that power will be used on site, and (4) the amount of power estimated to be sold and who potential purchasers are. Such

[2] *See*, DLA Initial Statement P. iv (spelling Confederated Bands and Tribes of the Yakama Nation, as "Yakima."). Riverkeeper pointed out this misspelling in our February 28, 2019, comments and Rye Development still failed to correct it, showing little respect for the tribal nation they are supposed to consult with.

[3] DLA, Exhibit A, P. 11, section 6.

information is required to be included in the description of the project. § 4.4.1(b)(5)(i)-(iii). Generalized estimates of maximum capacity, mean little without a detailed discussion of regional power needs. Therefore, Exhibit A is insufficient.

c. The DLA is Missing Exhibit D as Required by § 5.18(a)(5)(ii) and § 4.41(e).

The Project DLA fails to contain an Exhibit D as required by § 5.18(a)(5)(ii) and § 4.41(e). "Exhibit D is a statement of project costs and financing," and must include all requirements in § 4.41(e)(1)-(10). The Applicant does not present the required Project costs and financing for the project, yet their application claims that "the Goldendale Energy Storage Project could save regional ratepayers hundreds of millions of dollars annually in cost savings and revenue."[4] Without the information required in Exhibit D, it is nearly impossible for stakeholders to provide meaningful and comprehensive comments. Riverkeeper and other stakeholders have serious concerns about the financial viability of the Project and how the proposed hydropower project fits into the West Coast wholesale energy markets, which will be discussed in more detail in Section 4.b of this comment. The Applicant's failure to include a statement of Project costs and financing further exacerbates these concerns.

2. Accepting the Current DLA Undermines the Integrated License Application Process.

Failure to allow meaningful comment on a complete DLA undermines the Integrated Licensing Process (ILP). Section 5.16(c) provides the right to comment on the DLA. Such comment is the ultimate step of the pre-filing process. Through commenting, stakeholders' input substantively shapes the final application and its proposed environmental measures and narrows or resolves issues for the post-application process. Of even greater importance, the DLA comment is the final opportunity for stakeholders to comment directly to the application, and where the applicant must respond to stakeholder comments. This critical step of the ILP will be lost if stakeholders are not provided the opportunity to file supplemental comments on a complete DLA.

When applicants elect to file a DLA it may help expedite Commission processing of the final license application by identifying application deficiencies early. However, this process is undermined when the DLA is missing required components.[5] The inability to comment on a complete DLA sets the stage for dispute over whether a final application would be complete.

3. The DLA Should Be Rejected

FERC should reject the Applicant's Project DLA based on a number of deficiencies. Section 5.20. Section 5.20(a)(1) states:

> If an applicant believes that its application conforms adequately to the pre-filing consultation and filing requirements of this part without

[4] *See* DLA Cover Letter.

[5] *Protection, Mitigation, and Enhancement Measures, Settlements and Draft License Application,* https://www.ferc.gov/industries/hydropower/gen-info/licensing/ilp/ilp-tutorial/prepare/draft-license/protect-app.asp.

> containing certain required materials or information, it must explain in detail why the material or information is not being submitted and what steps were taken by the applicant to provide the material or information.

The DLA does not state why it did not include a notarized signature, why it failed to include Exhibit D, nor why the Project description lacks information. Failure to allege under oath to the accuracy of facts contained in the application, failure to include a statement on Project costs and financing, and a failure to adequately discuss the system and region power needs disallows meaningful comment on the DLA and undermines the ILP process. As such the process cannot move forward in any meaningful way. Section 5.20 provides a process for assuring timely correction of the definicenices and should be applied here.

4. Riverkeeper General Comments

a. Comments on Specific Exhibits and Appendices in the DLA.

Exhibit A—Description of the Project § 4.41(b) and Exhibit B—Project Operation and Resource Utilization § 4.41(c). The DLA describes the Project as a closed-loop pumped storage hydropower facility utilizing initial fill water and periodic make-up water purchased from Public Utility District No. 1 of Klickitat County, Washington (KPUD) using a KPUD-owned conveyance system and municipal water right.[6] The KPUD water right draws water directly from the Columbia River. The DLA estimates that the initial fill for the Project will be 9,000 Acre Foot (AF) with the total annual refill volume (make up water due to evaporation and leakage) of 370 AF. These estimates seriously question the basic assertion that this Project is closed-loop. One-acre foot of water equals 326,000 gallons of water.[7] This means that the initial fill for this project will use 2.93 million gallons of water and periodic make-up is estimated to use over 1.2 million gallons of water per year from the Columbia River. Depending on over 1.2 million gallons of water per year from the Columbia seems to contradict the Project being an entirely closed-loop project, it seems dependent on the River to account for evaporation and leakage. Failure to account for the massive amounts of water needed from the Columbia for this project fails to adequately consider the stresses this project will place on an already impaired river with multiple Endangered Species Act (ESA) listed species.

In addition to questioning the claim that this Project is closed-loop, the reservoirs have other water quality issues that the DLA fails to address. For example, Table 3.3-1 in the DLA, estimates the annual loss of water from the reservoir due to evaporation as 420 AF. per year. As the USFWS Comment points out, “evaporation over extended periods of time may concentrate any solutes present in the water source, potentially causing the reservoir to become toxic to terrestrial and avian wildlife utilizing the Project waters.”[8] Another issue left unexplored in the DLA is the impacts of the Project’s turbines on water quality within the reservoir. The DLA states that water in the reservoirs

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[6] *See* DLA, Exhibit A, p. 3-4, Section 1.3.
[7] *See* Water Education Foundation, What’s An Acre Foot, available at https://www.watereducation.org/general-information/whats-acre-foot.
[8] U.S. Fish and Wildlife Services Comment on the draft License Application Goldendale Energy Storage Project, FERC Project No. 14861 (2020) p. 5.

will be pumped through Francis type turbines in order to generate energy. Typical Francis type turbines contain wicket gates to control the amount of water flow. The wicket gate bearings are lubricated with grease or another lubricant which is continuously fed into bearings and discharged into water passing through the turbines. The DLA does not discuss the greases, oils, and other lubricants used in the Project's turbines or the effects that these substances could have on reservoir water quality. The DLA also fails to discuss a plan or process for re-lubricating wicket gates in the turbines, how many wicket gates there are, or a spill plan if oil spills either into the reservoirs or onto the soil.

While the Applicant has proposed an operational adaptive water quality monitoring and management program, there is no apparent implementing plan in the DLA containing specific, enforceable measures. Riverkeeper echoes the USFWS's recommendation that the applicant develop and implement a reservoir water quality monitoring and management plan to ensure the water is safe for wildlife resources.

Exhibit E—Environmental Report; Report on water use and quality § 4.41(f)(2)(iv), (v). Threats facing the Columbia River are severe by any measure.[9] In fact, the vast majority of rivers and streams in Washington fail to meet basic state water quality standards for pollutants such as toxics and temperature.[10] Water quality standards are designed to protect designated uses, including aquatic life, fishing, swimming, and drinking water.

The Applicant fails to discuss the impacts to water quality expected during construction and operation as required by this section. The arid temperature of the Project area means that large quantities of dust can be reasonably expected during construction and operation from sources such as: excavation and digging equipment operation, construction and employee vehicles, etc. The applicant fails to discuss how these activities may increase turbidity in the Columbia River as a result. Turbidity, caused by high sediment levels in the water can lead to harmful bacterial growth that impair recreational activities like swimming and water sports. Turbidity can also block sunlight reaching lower parts of the creek thereby reducing the amount of dissolved oxygen in the water, harming salmon and other aquatic life. This section of the DLA also fails to provide a description of Best Management Practices (BMPs) and measures recommended by Federal and State agencies and the applicant to prevent increases to turbidity or an explanation as to why the applicant rejects these measures. Riverkeeper recommends that these be added.

Exhibit E—Environmental Report; Report on fish, wildlife, and botanical resources § 4.41(f)(3). This section must include a description of the anticipated impacts on fish, wildlife, and botanical resources and any impacts on the human utilization of these resources. § 4.41(f)(3)(ii). The

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[9] *See Columbia River Basin State of the River Report for Toxics,* Environmental Protection Agency, Region 10 (January 2009) (available online at: https://www.epa.gov/columbiariver/2009-state-river-report-toxics).

[10] *See* State of Washington 303(d) List (available online at: https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d).

Confederated Tribes and Bands of the Yakama Nation's (Yakama Nation) comments on the Applicants' Notification of Intent and Pre-Application Document for the Project, filed on February 21, 2019, states: "the proposed project Area of Potential Effect (APE) is within the Ceded Area of the Yakama Nation pursuant to the Treaty of 1855 (12 stat., 951) and is the Supreme Law of the Land pursuant to Article 6 of the U.S. Constitution (i.e. Supremacy Clause)."[11] Yet, the DLA does not discuss how the proposed project will impact Treaty-guaranteed tribal hunting, fishing, and gathering rights in the area, in fact, the DLA fails to make any mention of the Treaty of 1855. Riverkeeper recommends the Applicant conduct additional consultation with tribal resource agencies to determine the effects of this Project on treaty guaranteed rights in the proposed Project area and include them in the DLA or explain that there are no Treaty-guaranteed rights in this area.

Riverkeeper also echoes USFWS' recommendation that, in addition to monitoring golden eagle and bald eagle nests, the Applicant monitors all prairie falcon nests in the project area.[12]

The DLA provides that "all temporarily distrubed areas will be revegetated as outlined in the VMMP."[13] The applicant however fails to provide "a map or drawing showing, by the use of shading or crosshatching or other symbols, the identity and location of any proposed measures," as required by § 4.41(f)(3)(iv)(F). A visual map of proposed mitigation measures would greatly assist stakeholders in seeing the areas of potential disruption and get a better sense for size and scale of the environmental impacts, Riverkeeper recommends that such a map be added.

Exhibit E—Environmental Report and Appendix G; Report on Historic and Archaeological Resources §4.41(f)(4) and Historic Properties Management Plan. Riverkeeper has serious concerns with: (1) the lack of good faith exhibited by the Applicant in "consultation" with tribal nations, and (2) the overall disregard for the cultural resource issues impacted by the Project, as described by the Yakama Nation in a letter to FERC sent on February 21, 2019, in the Cultural Resources Survey Report, and in other archaeological resources studies conducted at the site.[14] Riverkeeper also has concerns over the DLA's Historic Properties Management Plan's ability to (1) adequately protect cultural resources prior to them being damaged and (2) protect cultural resources once they are discovered. As such, Riverkeeper finds the Plan grossly insufficient.

Contracting with Yakama Nation to survey the Area of Potential Effect (APE) in July 2019 resulted in the recommendation that avoidance should occur for all historic tribal sites within the proposed project area. As Yakama Nation clearly stated in their comment, "Only the

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[11] *See* Yakama Nation Comment on Notification of Intent and Pre-Application Document for the Goldendale Energy Storage Project, FERC No. 14861. Filed on February 21, 2019. P. 1.
[12] U.S. Fish and Wildlife Services Comment on the draft License Application Goldendale Energy Storage Project, FERC Project No. 14861 (2020) p. 6.
[13] *See* DLA, Exhibit E, p. 67, Section 3.3.3.
[14] *See generally* Yakama Nation Comment on Notification of Intent and Pre-Application Document for the Goldendale Energy Storage Project, FERC No. 14861. Filed on February 21, 2019.

Yakama Nation can determine what is significant to the Tribe."[15] Yet, the DLA fails to include a "description of the likely direct and indirect impacts of proposed project construction or operation on sites," and "a management plan for the avoidance of, or mitigation of, impacts on historic or archaeological sites and resources based on recommendations." § 4.41(f)(4)(iv)(v). The DLA itself states that, "the potential for impacts to archaeological resources and TCPs [Traditional Cultural Properties] will be further defined during the licensing process and tribal consultation."[16] This is not sufficient. The Applicant has been made aware of TCPs and archaeological sites in the area, the presence of multiple sites in the area combined with Yakama Nation's recommendation to avoid all historical tribal sites should be indication enough that this site is not appropriate for this project. Riverkeeper further echos American Rivers' comment and sentiment that:

> We do not believe that non-avoidance measures like minimization or mitigation are appropriate for these culturally historic sites. We agree that 'only the Yakama Nation can determine what is significant to the Tribe,' and we support the issues brought forth by them and hope that Rye will work toward a resolution with Yakama Nation about the potential detrimental impacts to these important resources.

Consultation without taking additional and appropriate action is not consultation and "hiring a Yakama Nation program to provide technical expertise is not a resolution to concerns brought forth by the Tribe."[17] Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies such as FERC to take into account the effect of their undertakings on historic properties and "FERC has a Federal Trust Responsibility to preserve and protect resources significant to the Yakama Nation."[18] The DLA states in its Historic Properties Management Plan (HPMP) that:

> There are known archaeological resources and TCPs within the proposed Project APE and Project footprint in the vicinity of the upper reservoir. However, there are no existing structures (new or historic) within the Project Boundary or APE including both the upper and lower reservoir areas. As a result, impacts are limited to known and unknown archaeological resources including damage during construction activities and/or permanent loss through land use conversion (e.g., constructing permanent structures over cultural resources)....Construction and/or operation activities could have the potential to disrupt (via visual or auditory effects)

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[15] *Id.* at 1.
[16] *See* DLA, Exhibit E, p. 75, Section 4.2.
[17] *See* Yakama Nation Comment on Notification of Intent and Pre-Application Document for the Goldendale Energy Storage Project, FERC No. 14861. Filed on February 21, 2019. P. 1.
[18] *Id.*

> traditional cultural use associated with cultural resources within the Project APE. **The potential for impacts to archaeological resources and TCPs will be further defined during the licensing process and Tribal consultation**.

The Applicant has been made well aware that construction of this project has the high likelihood of causing serious and permanent damage to archaeological and cultural resources, a wait and see approach is insufficient to protect these resources. The Applicant must address the potential for impacts now prior to the Project moving forward.

Additionally, the DLA's HPMP states that:

> The Licensee is committed to properly managing cultural resources that have been determined through the evaluation process established in this HPMP to be historic properties affected by the Project, through consultation with Commission staff, the SHPOs, and affected Indian Tribes.[19]

However, nothing in the Applicant's actions demonstrate the above statement. Riverkeeper has serious and well-founded concerns about the Applicant's willingness to properly manage cultural resources given their lack of appropriate action so far. For example, part of the HPMP's response plan includes designating a Cultural Resource Coordinator (CRC) to: review activities that may impact cultural resources, provide employees with information and training on appropriate protection measures, coordinate with tribes, prepare annual reports, and maintain confidentiality of sensitive cultural and archaeological information.[20] Yet, the plan fails to mention what qualifications this CRC must possess, when they will be hired, and whether interested tribes will be consulted on who to hire. Riverkeeper recommends that this section be updated to include the qualifications necessary to be hired, a timeline for hiring, and that interested tribe's have the power to veto the hire. Adding the job title of Cultural Resource Coordinator onto an employee with little to no experience with cultural resources, tribes, or relevant history of the area does make for an adequate management plan.

Riverkeeper also has serious concerns about the HPMP's "Discovery of Archaeological Resources and Unanticipated Discovery Plans" procedures.[21] Pursuant to Oregon and Washington state laws, it is illegal to excavate, remove, damage, or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological material found on lands in Oregon or Washington.[22] The Applicant has been made aware that this area where the they intend to build the Project has been used by tribes since time immemorial,

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[19] *Id.* at p. 14, Section 4.1.
[20] *Id.* at p. 15, Section 4.2.
[21] *Id.* at p. 18-19, Section 4.5, 4.5.1.
[22] Indian Graves and Protected Objects [Oregon Revised Statutes 97.740-97.760] and Indian Graves & Records [RCW 27.44; Human Remains RCW 68.50].

surveys conducted by the Yakama Nation in 2019 further confirmed and re-identified several archeological sites in the Project area. The likelihood of disturbing archeological material during construction of the project is very high. Typically, when one knows that there is a high likelihood of breaking the law with certain actions, those actions are avoided. The HPMP's procedures for "unanticipated discoveries" in the event that the construction crew finds archaeological material, heavily underestimates the likelihood of this occurring.[23]

The HPMP fails to meet the bare legal requirements. Specifically, the HPMP has little to no:

- enforceable provisions for a failure to follow the HPMP,
- oversight of how tribes and appropriate stakeholders can ensure that archaeological material is being treated appropriately in accordance with the law, or
- assurances of confidentiality in the case of a discovery of cultural materials.

For example, part the HPMP states that a "professional archeologist" will be called to examine any archaeological material, but fails to explain who this archeologist is, what ability they will have to remove the material, and where such material will go.[24] All of this is extremely problematic given the history of Native American grave robbery, cultural property theft, and hardship of repatriation of such items and ancestors. In discussing the bitter tension between science and cultural property, Tasneem Raja writes:

> None of these clashes exists in a vacuum; they often come on the heels of decades, if not centuries, of genocide and erasure aimed at indigenous peoples and their ways of life. And so an object of scientific interest, be it a bone or a mountain, can come to stand for an entire civilization.[25]

The applicant must address these issues in order to move forward with the project.

The DLA and the HPMP fail to characterize the historical context surrounding the treatment of Indian remains and cultural property in the United States, so this comment will take a moment to include some context as to why this is such a serious issue that FERC and the

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[23] *See* DLA, Appendix G, P. 18, Section 4.5.1

[24] *Id.* at p. 19, Section 4.5.1.

[25] Tasneem Raja, *A Long, Complicated Battle Over 9,000-Year-Old Bones is Finally Over,* NPR (May 5, 2016, 11:47 AM), https://www.npr.org/sections/codeswitch/2016/05/05/476631934/a-long-complicated-battle-over-9-000-year-old-bones-is-finally-over.

applicant may not simply gloss over in a veneer of greenwashing and consultation.[26] University of California Los Angeles School of Law Professor Angela R. Riley writes:

> Some of the earliest writings by colonists reveal European fascination with Native American remains and funerary objects...To accommodate this morbid curiosity with Indian dead during the early periods of forced assimilation and extermination, museums were created to serve as repositories for Indian artifacts, thus contributing to the fetishism of Indians by Europeans and capturing colonists' love affair with the romantic West.'[27] With Western expansion, Indians were viewed as a vanishing people, and Indian "trinkets" and bodies were coveted out of blatant curiosity.[28] In congressional debates over NAGPRA [Native American Grave Protection and Repatriation Act], Congress found that during much of the history of the United States digging and removing the contents of Native American graves for reasons of profit or curiosity had been common practice.[29]
>
> The mistreatment of Indian dead extended beyond individual curiosity, becoming formal federal policy in 1868, when the Surgeon General ordered all U.S. Army field officers to send Indian skulls and other body parts to the Army Medical Museum for studies comparing the sizes of Indian and White crania."[30] Pursuant to this order, the heads of thousands of Indians, many of whom died during infamous massacres by the federal government, were cut off their bodies and sent to museums for display or study.[31] Then, in 1906 Congress passed the Antiquities Act, intended to protect "archaeological resources" located on federal lands.[32] The Antiquities Act, however, considered Indian remains on federal lands "archeological resources," thus converting them into federal property and allowing them to be kept

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[26] For a more thorough account of this history, see, for example, “Jack F. Trope & Walter R. Echo-Hawk, *The Native American Graves Protection and Repatriation Act: Background and Legislative History,* in Repatriation Reader: Who Owns American Indian Remains? 123, 126 (Devon A. Mihesuah ed., 2000). See also Mary Lynn Murphy, *Assessing NAGPRA: An Analysis of Its Success from a Historical Perspective*, 25 Seton Hall Legis. J. 499, 502 (2001) (“discussing colonial views of Indians as inferior, and the disregard of Indian religion, culture, and property norms during the development of America's legal system”).”

[27] *See,* Murphy, *supra* note 18 at 126.

[28] *Id.*

[29] Trope & Echo-Hawk, *supra* note 18, at 126.

[30] *Id.*

[31] *Id.*

[32] Antiquities Act of 1906, Pub. L. No. 209, 34 Stat. 225 (codified as amended at 16 U.S.C. §§ 431-433 (2000)).

> and displayed in public museums.'[33] These and other federal policies led to the mass excavation of Indian bodies and the looting of Indian graves. By 1986, the Smithsonian Institution alone held the remains of over 18,000 American Indians in its collections.[34]
>
> The unlawful excavation of Indian bodies and the looting of graves was, in part, a result of racism, with a belief in Indians' racial inferiority certainly contributing to the epidemic.[35] But perhaps even more invidious was the complete devaluation of indigenous perspectives and cultures in American jurisprudence that set the stage for mass theft of Indian cultural property.[36]

This short, and by no means complete, historical accounting exemplifies the decades of practice and policy which resulted in the abhorrent treatment of Native American burial sites and archeological resources, which by no means is limited to historical examples and continues to this day.[37] This history and practice should, at the very least, give pause to licensing this Project because of the identified threats to cultural and archaeological resources that have been identified by the Yakama Nation. Quickly pushing this project through the FERC licensing process and State licensing processes[38] because it is an alleged "green energy project" should not be done on the backs of Native communities.

Riverkeeper recommends that FERC and the Applicant defer building this massive Project in this culturally sensitive location indefinitely or until affected and interested tribal nations fully approve of the plans and process.

Appendix D Wildlife Management Plan: Riverkeeper incorporates by reference the USFWS' and American Rivers' comments regarding the Wildlife Management Plan presented in the DLA.[39]

b. Financial Viability of Project

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[33] Trope & Echo-Hawk, *supra* note 18, at 127.
[34] *Id.* at 136.
[35] See, e.g., Robert E. Bieder, A Brief Historical Survey of the Expropriation of American Indians (1990).
[36] Angela R. Riley, *Indian Remains, Human Rights: Reconsidering Entitlement Under the Native American Graves Protection and Repatriation Act,"* 34 Columbia Human Rights Law Review 49, 52-54 (2002). *See* Appendix 3 for full article text.
[37] Construction of the Ruby Pipeline has sparked major controversy and critics point to its serious impacts on Native American sacred sites and cultural resources *See* Don Gentry and Emma Marris, *The Next Standing Rock? A Pipeline Battle Looms in Oregon*, The New York Times (Mar. 8, 2018 https://www.nytimes.com/2018/03/08/opinion/standing-rock-pipeline-oregon.html). *See also* Klamath News Mar. 2018 (http://klamathtribes.org/news/wp-content/uploads/Klamath%20Newsletter%201st%20Qtr%202018.pdf).
[38] *See* House Bill 2819 and Senate Bill 6578.
[39] *See* Appendix 1 & 2 for USFWS and American Rivers' comments.

Riverkeeper has serious concerns about the financial viability of the Project. *See* American Rivers' Comment on Rye Development's Request for Comments on Draft License Application for Goldendale Energy Storage Project, FERC No. P-14861, March 12, 2020 (incorporated by reference).[40] Specifically, Riverkeeper wants to reiterate,

> It is possible that the Goldendale Pump Storage Project is being **proposed with full knowledge that it will fail**. Further, bankruptcy may be an unstated but integral part of the Goldendale business plan as a means of shedding sufficient debt to survive in the current wholesale power market. These results, as detailed in the report's Appendix – Alternative Debt Structures, give us pause as to whether any adverse impacts to public values such as water quality, water quantity, flow regime, fish and wildlife, tribal and cultural resources, surrounding communities, and/or recreation are worth the risk and generated energy storage.[41]

Given the identified cultural and archaeological resources in the area, pushing a project through that in all likelihood will fail economically is absurd.

5. An EIS is Required.

Rule 5.16(e) provides that comments on a DLA may include recommendations on whether the Commission should prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS). An EA is a concise review document that takes into account: the purpose and need of the proposal, alternatives, and a brief review of the impacted environment.[42] The EA results in either a Finding of No Significant Impact (FONSI) or, if significant environmental impacts appear likely, an EIS.[43] Importantly, the FONSI determination is made without consideration of any cumulative impacts or geographic context.[44] In comparison, an EIS requires everything an EA requires in addition to the inclusion of a much more comprehensive discussion of the reasonable alternatives, and a "hard look" at the cumulative impacts of the proposal, along with all existing and foreseeable future development within the project area.[45] Given the extraordinary cultural and archeological resource issues of the project, limited information regarding effects to water quality and other environmental factors, the proliferation

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[40] *See* Appendix 2 for American Rivers' comment.
[41] *Id.* at p. 3.
[42] *See* Environmental Protection Agency, National Environmental Policy Act Review Process, https://www.epa.gov/nepa/national-environmental-policy-act-review-process
[43] *Id.*
[44] *Id.*
[45] *Id.*

of pump storage projects regionally, and the piecemeal planning of EAs,[46] Riverkeeper recommends that the Commission conduct an EIS for the Project that addresses cumulative impacts and geographic context.

6. Conclusion

Riverkeeper appreciates the opportunity to provide comments to FERC on the DLA submitted by Rye Development. Riverkeeper reiterates that the DLA's deficiencies preclude comment and that comment should be allowed on a complete DLA. Riverkeeper reserves the right to submit comments and amend these comments once complete information is provided.

Sincerely,

Simone Anter, Staff Attorney
Columbia Riverkeeper
407 Portway Avenue Suite 301
Hood River, Oregon 97031
(541) 399-5312
simone@columbiariverkeeper.org

Patricia L. Arnold, President
Friends of the White Salmon
P.O. Box 802, White Salmon, Washington 98672
pat.arnold@friendsofthewhitesalmon.org

Cc: Jennifer Hennessey, Gov. Inslee Senior Policy Advisor, Ocean Health & Water Quality
JT Austin, Gov. Inslee Senior Policy Advisor, Natural Resources & Environment
Delano Saluskin, YN Chairman
Paul Ward, YN Fisheries Program Manager

[46] *See* USFWS Comment, Appendix 1 (explaining that "Applicant has been approved by the Federal Energy Regulatory Commission to construct the Swan Lake North PUmped Storage Hydroelectric Project (Project No. 13318-003, eleven miles north of Klamath Falls, Oregon.)

Jerry Meninick, YN Cultural Division Deputy Director
Carl Merkle, Salmon Recovery Policy Analyst, CTUIR Department of Natural Resources
Jaime Pinkham, Executive Director CRITFC
Rob Lathrop, Policy Development/Litigation Support Manager, CRITFC

APPENDIX 1

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Central Washington Field Office
215 Melody Lane, Suite 103
Wenatchee, Washington 98801

MAR 0 3 2020

In Reply Refer to:
01EWFW00-2020-CPA-0009

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

Subject: U.S. Fish and Wildlife Service Comments on the Draft License Application Goldendale Energy Storage Project, FERC Project No. 14861

Dear Ms. Bose:

Thank you for the opportunity to provide comments on the Goldendale Energy Storage Project (Project). The U.S. Fish and Wildlife Service (Service) has reviewed the Draft License Application (DLA) for the Project, FERC Project No. 14861, filed on December 16, 2019. FFP Project 101, LLC (Applicant) would be the owner and operator of the proposed Project. We are providing the following comments in accordance with the Federal Power Act (16 U.S.C. 791-828c *et seq.*), as amended; Migratory Bird Treaty Act (16 U.S.C. 703-712), as amended; and the Endangered Species Act (16 U.S.C. 1531 *et seq.*), as amended.

Project Description

According to the DLA, the Project is a closed-loop pumped storage hydropower facility located off stream of the Columbia River at John Day Dam, located on the Washington side of the Columbia River at River Mile 215.6. The proposed Project will involve no river or stream impoundments. Initial fill water and periodic make-up water will be purchased from Public utility District No. 1 of Klickitat County, Washington (KPUD) using a KPUD-owned conveyance system and municipal water right.

Project facilities include: 1.) an upper reservoir consisting of a rock fill embankment dam approximately 175 feet high, 8,000 feet long, a surface area of about 61 acres, storage of 7,100 acre-feet, at an elevation of 2,940 feet above mean sea level; 2.) a lower reservoir consisting of an embankment approximately 205 feet high, 6,100 feet long, a surface area of about 63 acres,

storage of 7,100 AF, and an elevation of 590 average mean sea level; and 3.) an underground water conveyance tunnel and underground powerhouse and 23-kilovolt transmission line(s). The rated (average) gross head of the Project is 2,400 feet, and the rated total installed capacity is 1,200 megawatts.

General Comments

As background, the Applicant has been approved by the Federal Energy Regulatory Commission (Commission) to construct the Swan Lake North Pumped Storage Hydroelectric Project (FERC Project No. 13318-003) (Swan Lake Project), eleven miles north of Klamath Falls, Oregon. This project would move water between two 60-plus-acre reservoirs separated by more than 1,600 vertical feet, pumping the water uphill when energy is available and sending it downhill through generating turbines when energy is needed. By comparison, the Applicant's Project would be even larger than the Swan Lake Project resulting in a significantly larger environmental footprint on the landscape. Our comments below on the Project's DLA discuss these environmental effects.

On May 30, 2019, the Service filed comments with the Commission on the issuance of the Pre-application Document for the Project, and these same comments can be found in the DLA. These comments predominantly centered on the impacts to avian species due to the proximity of the Project to nearby wind turbines, in addition to requests for further studies to minimize impacts of the Project on aquatic and terrestrial species. The Applicant filed comments with the Commission on June 27, 2019, attempting to address these potential impacts. The Service would like to address these comments in further detail and provide additional information regarding the significance of the project area for avian species.

While we agree with the Applicant's assertion, "The wind projects are not associated with the Goldendale Project and therefore any impacts to avian species due to injury or mortality from wind turbines is the responsibility of the owners and operators of the wind turbines," the proposed Project would disrupt current laminar wind flow patterns in the project area. Turlock Irrigation District (TID), owner and operator of wind turbines adjacent to the proposed Project, discussed the negative effects of this disruption in laminar wind flow in their April 4, 2019 filing with the Commission for this proceeding. These negative effects include: 1.) reduced operations and output of wind turbines; 2.) increased damage to wind turbines resulting from a higher level of wind turbidity; 3.) reduced stability of wind turbine foundations; and 4.) increased interactions with wildlife, including avian strikes. TID highlighted these issues in its April 8, 2019 Motion to Intervene filing with the Commission. All of these potential effects are valid, but we would like to focus specifically on item #4.

The Applicant claims incorrectly in Appendix D, Wildlife Management Plan Section 2.3.5 of the DLA that the habitat near the upper reservoir is not unique or uncommon. Exhibit E, page 32 of the DLA explains, "Detailed analysis of home range use of a male golden eagle showed use largely within remaining open habitats including the proposed lower reservoir Project area" (WDFW 2015). The uniqueness of the habitat in the project area is linked to the close proximity of golden eagle nesting habitat. The Washington Department of Fish and Wildlife provides further evidence for this claim in its October 28, 2014 filing with the Commission. Golden eagle radio telemetry data collected in 2007 for eight months indicates significant use of the entire

project area. Since prey availability is a primary factor in governing habitat selection of golden eagles (Marzluff et al. [1997], Hunt [2002], and Fernandez et al. [2009]), the habitat in the area of the proposed upper reservoir is a determining factor in golden eagle nesting preference for the area.

Figure 1 below also demonstrates the history of golden eagle strikes with wind turbines near the proposed Project. As recently as early January 2020, a golden eagle wind turbine strike mortality occurred southwest of the proposed Project (Figure 1). Five additional golden eagle mortalities have been documented to the northeast of the proposed Project. Two golden eagle nests also occur within close proximity to the proposed Project. This history of mortalities shows a landscape already compromised by wind power infrastructure. Currently golden eagles appear to have a difficult time navigating the wind currents affected by existing wind power infrastructure near the project area. The potential of the proposed Project to further alter the remaining laminar wind currents lends credence that resulting impacts to avian species would not be exclusive to wind power production in the area. That said, the Service would like to provide specific comments on the DLA to ensure specific and enforceable protection, mitigation, and enhancement measures designed to minimize the potential impacts to wildlife resources resulting from the proposed Project are contained in any license to be issued by the Commission. We also want to highlight the importance of initiating ESA Section 7 consultation early in the licensing process to prevent any undue delays in the development of the Project.

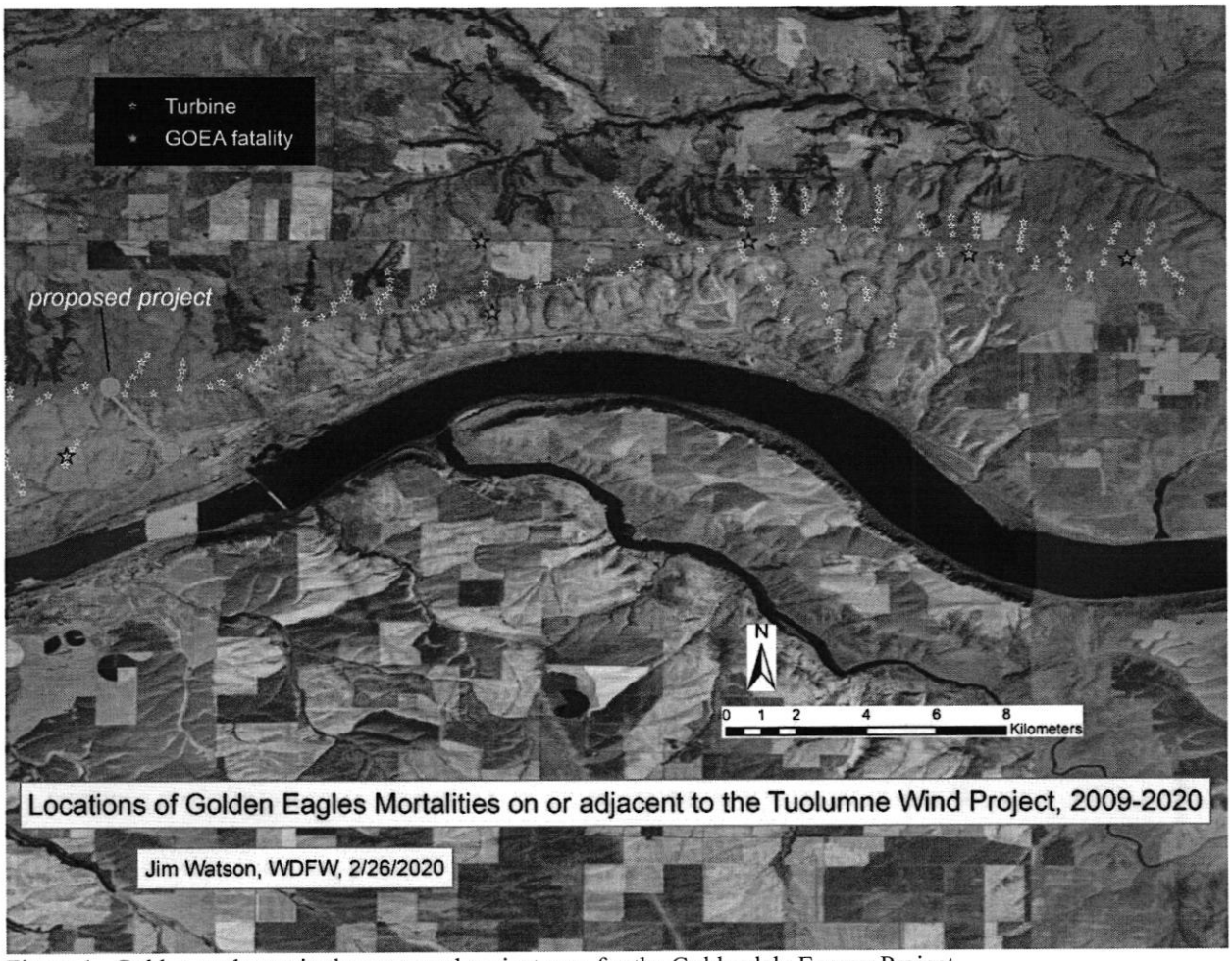

Figure 1. Golden eagle use in the proposed project area for the Goldendale Energy Project.

Threatened and Endangered Species Consultation

As of the filing of the DLA for the Project, the Service has received no coordination from the Commission or the Applicant for the development of a biological assessment (BA) for the purposes of ESA Section 7 consultation. As a reminder, Section 7 of the ESA and its implementing regulations (at 50 CFR Part 402) require Federal agencies to review their actions at the earliest possible time to determine whether any action may affect listed species or critical habitat. If so, formal consultation with the Service is required unless the exceptions at 50 CFR 402.14(b) apply.

Under 50 CFR 402.08, the Commission may designate the Applicant as its non-Federal representative to conduct informal consultation or prepare a BA to determine if the proposed Project may affect listed species.

Because listed species, but no critical habitat, are likely to occur in the Project area, we recommend the Commission (or its designated non-Federal representative) enter into informal consultation with the Service to determine if ongoing and future effects of the Project to listed species warrant formal consultation. At this stage, the purpose of informal consultation is to

ensure that the Applicant understands any potential impacts of the Project on listed species and what studies may be necessary to inform that determination if they decide to file for a license.

We recommend that the Commission obtain a current list of ESA species in the project area, once the NEPA scoping process has been completed. A list of threatened and endangered species likely to occur in Klickitat County and under the purview of the Service can be found at: http://www.fws.gov/wafwo/species_EW.html. If formal consultation is warranted and a BA is prepared by the designated non-federal representative, the Commission must furnish guidance and supervision, and must independently review and evaluate the scope and contents of the BA. The ultimate responsibility for compliance with ESA section 7 remains with the Commission.

Licenses must remain flexible and open to adaptive management to ensure that measures to protect fish and wildlife, including listed species, remain adequate and effective. Although we work collaboratively to resolve issues and concerns regarding changing status and/or new information on listed and proposed species, re-initiation of consultation under section 7 of the ESA may be necessary at some time during the term of the new license if one or more of the reinitiation criteria at 50 CFR 402.16 apply.

Specific Comments on the Draft License Application

1.) *Exhibit B, Table 3.3-1, Statement of Project Operation and Resource Utilization*: The annual loss of water from the reservoir due to evaporation is 420-acre ft. per year. Evaporation over extended periods of time may concentrate any solutes present in the water source, potentially causing the reservoir to become toxic to terrestrial and avian wildlife utilizing the Project waters. The Applicant proposes an operational adaptive water quality monitoring and management program and yet there is no apparent implementing plan in the DLA containing specific, enforceable measures. We recommend the development and implementation of a reservoir water quality monitoring and management plan to ensure the water is safe for wildlife resources. This plan should include specific methods to annually monitor levels of dissolved solids, nutrients, and heavy metals in the project reservoirs and a schedule for annually reporting the monitoring results and any proposed measure for addressing deteriorating water quality based on monitoring results should be developed.

2.) *Appendix D, Goals and Objectives, Section 1.1, Wildlife Management Plan*: Goal 2 of this plan states, "Work in concert with existing developments in the Project area to reduce Project impacts to wildlife, including avian species." It further states, "Nearby wind turbines pose a threat to raptors and other birds; therefore, habitat for raptors and their prey will not be improved in the Project area, so as to not encourage their use of these habitat areas." The final version of the DLA needs to specify how the Applicant will coordinate pumped storage hydroelectric operations and wind turbine operations with adjacent wind project operators to minimize impacts of the proposed Project on migratory birds.

3.) *Exhibit E, Section 2.3 Applicant Recommendations:* The Applicant proposes, "…development of an operational adaptive water quality monitoring and management program to monitor the gradual process of solute concentration in the proposed reservoirs due to the closed-loop nature of the system." There are currently no specific measures

contained in this program to decipher its effectiveness and we recommend the Applicant develop water quality thresholds in coordination with the Washington Department of Ecology to minimize the effects of solute concentrations in the two reservoirs.

4.) *Exhibit E, Section 3.2.3.1, Environmental Report*: In addition to monitoring golden eagle and bald eagle nests, we recommend monitoring all prairie falcon nests in the project area. In 2019, WDFW surveys documented two adult prairie falcons displaying courtship behavior and confirmed an occupied nest. Prairie falcons are also migratory birds and subject to the terms of the Migratory Bird Treaty Act.

5.) *Exhibit E, Section 10.3.1 Water Quality and Wetlands*: The following statement needs clarification: "Nearly all Project-related precipitation losses will be due to precipitation collected within each reservoir." We are not clear if this is a reference to evaporative losses from the two reservoirs or precipitation overflow from the reservoirs. If this is a reference to precipitation overflow, the Applicant needs to specify how such occurrences will be minimized through flow releases at the Project.

6.) *Exhibit E Section 6.2.1 Former Smelter Site*: The DLA discusses how "continued monitoring has shown that the material in the impoundment is not designated as hazardous material, and therefore may be removed to a solid waste landfill when construction of the Project commences. The proposed Project design includes removal of all of the WSI (West Surface Impoundment) material because it is unsuitable for reservoir construction. Additional testing, sampling, and characterization will occur to confirm proper disposal at the time of removal." Please specify which entity will confirm this proper disposal.

7.) *Appendix D Section 2.3.5 Address Habitat Loss, Wildlife Management Plan*: To address habitat loss, the Applicant proposes to utilize existing access roads for the majority of the Project features as a form of protection, mitigation, and enhancement for anticipated effects to terrestrial resources. Since existing roads were designed for other non-Project related purposes, we view this measure as a form of minimization rather than mitigation for Project-related effects. This plan should be revised to reflect this measure. The Applicant also incorrectly assumes the habitat near the upper reservoir is not unique or uncommon and does not provide opportunities for foraging, but is not quality nesting or rearing habitat. We provided information above in this letter, which refutes this conclusion. The Applicant further discusses that it will mitigate these losses with habitat of similar quality. We request that the Applicant provide further detail regarding the purchase of these mitigation lands.

8.) *Appendix D, Section 2.4.2, Wildlife Management Plan*: It is not clear what a "bird exclusion fence" is and how it would deter the use of the reservoirs by migratory birds (potential eagle prey species, particularly for bald eagles). We do agree that a monitoring program to identify bird usage of the reservoirs and measure the effectiveness of bird deterrents should be developed. The monitoring program should count and compare eagle numbers at the reservoir prior to deployment of deterrents, and after. Then, after using this information, decide to maintain, increase, modify or explore other options of deterrents.

9.) *Appendix E, Vegetation Management and Monitoring Plan (VMMP), Section 2.1 Noxious Weed Management*: The Applicant refers to, "Revegetation with a native plant seed mix after ground disturbing activities" as a best management practice in its VMMP and to use Benson et al. 2011 as a guideline for these revegetation efforts. While we advocate the practices outlined in Benson et al. 2011, we recommend the Applicant provide specific, enforceable measures in the VMMP that include, but not limited to, criteria for measuring the success of revegetation efforts.

Additional Protection, Mitigation, and Enhancement Measures for the Project

Water Resources

- Modify the proposed operational adaptive water quality monitoring program to include: 1.) methods to annually monitor levels of dissolved solids, nutrients, and heavy metals in the project reservoirs and a schedule for annually reporting the monitoring results; 2.) threshold criteria and proposed measures that would be taken if water quality in the Project reservoirs deteriorates to below the threshold criteria as demonstrated by monitoring results; and 3.) reporting measures.

Terrestrial Resources

- Modify the proposed Wildlife Management Plan as follows: (1) include an additional preconstruction survey in February to ensure that early nesting raptors are identified; (2) expand the preconstruction survey area for nesting raptors from 0.25 mile to 1 mile and include nests within the line of sight of Project features; (3) adjust the proposed spatial and temporal restrictions on construction activities as needed, based on site-specific environmental conditions and nesting status; (4) install flight diverters on the transmission lines if these lines are not feasible to be buried; and (5) include quantifiable thresholds for determining when additional measures would be needed to address high-mortality areas based on the proposed transmission line monitoring.

- Modify the VMMP to specify the specific seed mixes and plant species to be used; planting densities and methods, fertilization and irrigation requirements, monitoring protocols, and criteria for measuring the success of revegetation efforts, and expand the VMMP to cover vegetation management during Project operations.

- Develop a management plan for conservation lands that identifies the parcels to be acquired, the criteria used to select the parcels, and habitat improvements that would be implemented on each parcel.

- Consider the feasibility of burying any applicable transmissions lines proposed for the Project to minimize effects to migratory birds.

- Consider the feasibility of retrofitting adjacent power poles in the vicinity of the Project to mitigate for eagle effects.

- Include in the proposed eagle conservation plan the following additional measures: 1.)

conduct two, preconstruction winter roost surveys for two winter seasons, and 2.) include helicopter flight paths in preconstruction surveys for eagle nests and winter roosts.

Thank you for requesting technical assistance in the development of the proposed Project. If you have any questions or comments regarding this letter, please contact Steve Lewis at the Central Washington Field Office in Wenatchee at (509) 665-3508, extension 2002, or via e-mail at Stephen_Lewis@fws.gov.

Sincerely,

for

Brad Thompson, State Supervisor
Washington Fish and Wildlife Office

cc:

USFWS, Portland, OR (K. Freund)
USFWS, Portland, OR (M. Stuber)
WDFW, Ephrata, WA (P. Verhey)
Rye Development, Boston, MA (E. Steimle)

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[2020-03-03]SignedFWSCommentsGoldendaleDLA.PDF.....1-8

APPENDIX 2

March 12, 2020

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

RE: Rye Development's request for comments on Draft License Application for Goldendale Energy Storage Project, FERC No. P-14861

Dear Ms. Bose:

American Rivers, Friends of the White Salmon and the Washington State Chapter of the Sierra Club appreciates the opportunity to provide the Federal Energy Regulatory Commission (FERC) with comments on the Draft Licensing Application (DLA) for Goldendale Energy Storage Project (Project), which was submitted to FERC by Rye Development on December 13, 2019. Our organizations have serious concerns that the issues with the Project are more complex than the claims made by Rye Development and discussed in the DLA.

American Rivers is a 501(c)(3) nonprofit organization whose mission is to protect wild rivers, restored damaged rivers, and conserve water for people and nature. Headquartered in Washington, DC, American Rivers has offices across the country and more than 300,000 members, supporters, and volunteers, including many of whom live in the Columbia River Basin states of Washington, Oregon, Idaho, and Montana. We have been working in the Pacific Northwest for over 25 years, and we have a strong interest in protecting and restoring the Columbia River and its tributaries for the benefit of healthy fish and wildlife populations, and human communities.

Friends of the White Salmon River is a non-profit 501(c)(3) organization that has worked since 1976 to protect and restore naturally reproducing anadromous fish populations, and to protect the shorelines, water resources, and habitat areas that affect wild salmonid populations within Klickitat County. Friends of the White Salmon River has an interest in protecting and conserving water resources affecting wild salmonid populations.

The Washington State Chapter of the Sierra Club is a 501(c)(4) non-profit organization with over 100,000 members and supporters in Washington State and over 3.8 million nationally. Headquartered in Seattle, the Washington State Chapter has members and supporters living throughout the state of Washington. The Sierra Club works to protect communities and the planet.

Wildlife Management Plan

As requested by the Washington Department of Fish and Wildlife (WDFW), we support the recommendations laid out for pre- and post-construction raptor nest surveys, monitoring of golden eagle use, and bald eagle monitoring surveys found in the Wildlife Management Plan (WMP) in Appendix D of the DLA. However, we were unable to find any mention of a measurable period to conduct these surveys within the DLA, and based on the recommendations from WDFW, we strongly believe single year studies do not accurately capture the variability of species use of habitat and nests, annual changes in avian abundance, with results that can be biased in nature.

Similarly, the WDFW, in the same letter, also recommended pre- and post-construction surveys over a period of two years each to better understand current species presence of known bat species and the most current mortality rates post-construction. With the new reservoirs that will inherently attract insects and foraging bats that follow, it is necessary to get a new baseline for presence of bat species both pre- and post-construction, and not rely upon the old studies conducted during the construction of the Windy Point Wind Farm project from 2005, currently located at the site. We disagree with the presupposition by Rye Development that these new studies will provide less protective data, especially post-construction of the reservoirs, when abundance of populations of bats could increase.

While we appreciate the recognition by Rye Development of the potential for increased activity and usage to the area by raptors and migratory waterfowl following construction of new reservoirs, we believe that a more comprehensive plan needs to be detailed within the Wildlife Management Plan, Exhibit D. The Protection, Mitigation, and Enhancement (PME) measures and Best Management Practices (BMP), such as bird exclusion fencing and floating plastic shade balls to discourage migratory bird use of the reservoirs are helpful, but we would like to see more detailed plans for the monitoring program, including frequency and time frame, and not just a statement that a monitoring plan will be developed.

Historic and Cultural Considerations

We have serious concerns with the lack of good faith by Rye Development for the overall considerations of the resource and cultural impacts at the proposed site as described by the Yakama Nation in a letter to FERC sent on February 21, 2019. While additional steps were taken during the development of the DLA, including Rye contracting with Yakama Nation to survey the Area of Potential Effect (APE) in July 2019, the recommendation put forth is that avoidance should occur for all historic tribal sites within the proposed project area.

We understand that that Rye Development intends to consult with the Yakama Nation in developing the final APE, as stated in Exhibit E, Section 10.3.6; it is imperative that Rye Development takes the Yakama Nation's recommendations of avoidance for all historic sites seriously. Avoidance could be accomplished by shifting the footprint away from the resource,

limiting activities in the vicinity of the resource, monitoring construction activities near the resource to inform whether additional actions are warranted, or through any combination of these techniques. We do not believe that non-avoidance measures like minimization or mitigation are appropriate for these culturally historic sites. We agree that "only the Yakama Nation can determine what is significant to the Tribe," and we support the issues brought forth by them. Further, it is our expectation that Rye Development has a legal and moral responsibility for full consultation with the Yakama Nation and that it be done in such a manner that is satisfactory to the Nation.

Financial Viability of Proposal

We have grave concerns about the financial viability of the project and how the proposed hydropower project fits into the West Coast wholesale energy markets. With data in the Notice Of Intent/Pre-Application Document (NOI/PAD) and DLA mostly provided by the energy developers as sourced from various agencies and utilities, we felt it was necessary to have a third-party evaluate whether or not a project of this scope is economically viable and worth the various impacts that inherently come with this type of development. Due to a combination of rising construction costs, decreasing open-market energy prices, and as a way to ground-truth the forecast of project generation value, we believe that this independent report provides the necessary outside analysis of whether or not this project can provide renewable energy integration and replacement capacity to support regional decarbonization goals affordably and reliably.

Anthony Jones of Rocky Mountain Econometrics (RME) developed a model of the market forces and financial viability of the project going forward based on the data provided in the NOI/PAD. The final critique is attached to this letter and contains the following findings:

I. While Rye Development's description of project operations are preliminary in nature and not overly detailed in the NOI/PAD, the parameters of pump storage project operations are well understood, the Goldendale Energy Storage Project's construction costs are sufficiently well defined, and the wholesale energy environment in which it will operate are clear. As a result, RME concluded that the Goldendale project is very unlikely to operate profitably given the state of current and future West Coast and Northwest energy pricing.
II. Traditionally, pump storage facilities are built in conjunction with other specific energy generation projects to extend the generating plant's efficiency range. Goldendale would be a free-standing, independent operation buying and selling power on the Western transmission grid, from and to the West Coast wholesale energy markets. Based on the overall costs and power generating capabilities, the project would be a price taker in most cases rather than a price setter.
III. Based on the proposed integration into the current West Coast energy market, and using the figures provided by Rye Development in the NOI/PAD, one could surmise It is possible that the Goldendale Pump Storage Project is being proposed with full knowledge that it will fail. Further, bankruptcy may be an unstated but integral part of

the Goldendale business plan as a means of shedding sufficient debt to survive in the current wholesale power market. These results, as detailed in the report's Appendix – Alternative Debt Structures, give us pause as to whether any adverse impacts to public values such as water quality, water quantity, flow regime, fish and wildlife, tribal and cultural resources, surrounding communities, and/or recreation are worth the risk and generated energy storage.

Our organizations appreciate the opportunity to provide feedback in this FERC process on the DLA submitted by Rye Development and are available to answer any specific questions about these comments.

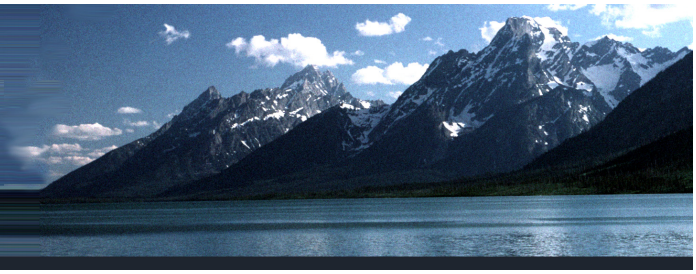
Sincerely,

Wendy D. McDermott
Director, Rivers of Puget Sound and the Columbia Basin
American Rivers
P.O. Box 1234, Bellingham, WA 98225
wmcdermott@americanrivers.org

Patricia L. Arnold
President, Friends of the White Salmon
P.O. Box 802, White Salmon, Washington 98672
pat.arnold@friendsofthewhitesalmon.org

Margie Van Cleve
Conservation Chair, Washington State Chapter of the Sierra Club
180 Nickerson Street, Suite 202, Seattle, WA 98109
margie.vancleve@washington.sierraclub.org

Rocky Mountain Econometrics
208-344-0809 P.O. Box 1914 tjones@design4000.net
208-631-4334 Cell Boise, ID. 83701 www.rmecon.com
Anthony Jones - Principal



CRITIQUE OF THE Goldendale Energy Storage Hydroelectric Project (FERC No. 14861) NOTIFICATION OF INTENT

Prepared for

American Rivers

December 3, 2019

Anthony Jones
ROCKY MOUNTAIN ECONOMETRICS
www.rmecon.com

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY

- On January of this year, 2019, FFP Project 101, LLC, notified FERC of its intent to file an application for an original license for the Goldendale Energy Storage Project No. 14861 (Goldendale), a closed-loop pump storage project, in Washington State close to the Columbia River near to the John Day Dam.[1]

- In the Notice of Intent (NOI) Goldendale's stated purpose for the project is that:
  - "Within the region, renewable energy development is growing, primarily through wind power generation. The Project would provide necessary ancillary services and energy storage to the Northwest region, and allow for more reliable management and integration of disparate renewable energy sources into the grid. The Project would provide additional ramping capacity (both up and down) as well as firming for wind energy regulation, coordination, and scheduling services, automatic generation control, and support of system integrity and security (reactive power, spinning, and operating reserves)."[2]
  -
- Rocky Mountain Econometrics (RME) finds that while the project may be technically able to serve in the stated capacity for a portion of each day, it will not be able to serve in that capacity for a large portion of each day when its upper reservoir has been partially or wholly used for power production and needs to be refilled. It is also extremely unlikely that Goldendale will be financially viable.

- While Goldendale's description of project operations are preliminary in nature and not overly detailed, the parameters of pump storage project operations are well understood, Goldendale's construction costs are sufficiently well defined, and the wholesale energy environment in which it will operate are clear. As a result RME is able to conclude that the Goldendale project is very unlikely to operate profitably given the state of current and future west coast and northwest energy pricing.

- As briefly as possible, Goldendale's challenge is that to service its debt and cover the cost of M&O, as well as the cost of filling its supply reservoir as a prerequisite to generate power, Goldendale will have to charge almost double the going rate of peak hour open market (NP15) energy. Worse, since pump storage project sales hours are necessarily restricted to the portion of the day when the upper reservoir is not being filled, the opportunity to absorb overhead by operating more than about eight hours per day is precluded. Finally, while Goldendale's costs of operation will likely increase with inflation over time, NW energy prices for the past two decades have been flat or declining as the market transforms to accommodate proportionally larger and larger amounts of solar power, a trend that is destined to continue.

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[1] Goldendale Energy Storage Hydroelectric Project, (FERC No. 14861), Klickitat County, Washington, NOTIFICATION OF INTENT, Prepared for FFP Project 101, LLC.

[2] Ibid., pp. 2.

II. PROJECT DESCRIPTION

From Goldendale's NOI: Goldendale Energy Storage Project FFP Project 101, LLC, FERC Project No. 14861 Page 4 January 2019

> The Project area has the suitable geography for a closed-loop pumped storage facility and is strategically located at the northern terminus of the Pacific AC and DC Interties operated by BPA, Los Angeles Department of Water & Power, and the California Independent System Operator (CA-ISO).
>
> The interties allow for the bulk seasonal exchanges of power between British Columbia, Canada, the Northwest, and California and provide benefits of coordinated markets to the regions.
>
> The Project is also located in close proximity to substantial existing, 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 the daily inter-regional exchanges of California massive mid-day solar oversupply and the significant power generation ramping needed by CA-ISO.3
>
> The proposed Project is a closed-loop pumped storage hydropower facility located off-stream of the Columbia River at John Day Dam, located on the Washington (north) side of the Columbia River at River Mile 215.6. The Project will be located approximately 8 miles southeast of the City of Goldendale in Klickitat County, Washington.
>
> The proposed Project will involve no river or stream impoundments, allowing for minimal potential environmental impact. Initial fill water and periodic make-up water will be purchased from Public Utility District No. 1 of Klickitat County, Washington (KPUD) using a KPUD-owned conveyance system and municipal water right.
>
> The Project facilities include:
> • _An upper reservoir consisting of a rockfill embankment dam approximately170 feet high, 8,000 feet long, a surface area of about 59 acres, storage of 7,100 acre-feet (AF), at an elevation of 2,940 feet above mean sea level (AMSL);
> • _A lower reservoir consisting of an embankment approximately 170 feet high, 7,400 feet long, a surface area of about 62 acres, storage of 7,100 AF, and an elevation of 580 feet AMSL.
> • _An underground water conveyance tunnel and underground powerhouse; and
> • _230-kilovolt (kV) transmission line(s).
>
> The rated (average) gross head of the Project is 2,400 feet, and the rated total installed capacity is 1,200 megawatts (MW).

[3] Ibid., pp. 4.

Project Characteristics

Approximate Installed Capacity	1,200 MW
Assumed Number of Units (Variable Speed)	3
Assumed Average Static Head	2,360 feet
Assumed Usable Storage Volume	7,100 AF
Approximate Energy Storage	14,745 MWh
Approximate Hours of Storage @ 1,200 MW	12 hours

Underground Powerhouse

Rated Head (Gross)	Approximately 2400 feet
Max Flow Generating Mode	8,280 cfs
Max Flow Pumping Mode	6,700 cfs
Generating Capacity	Up to 1,200 MW
Number of Units	3 x 400 MW units

III. MARKET PRICES

Understanding Goldendale requires understanding the west coast wholesale energy market with which it will interface.

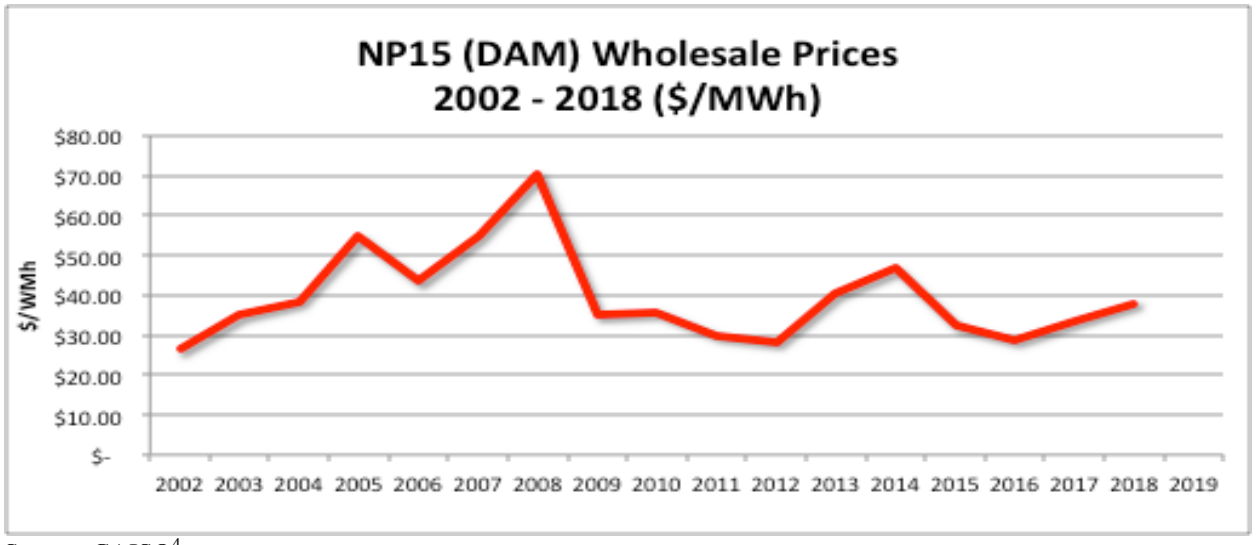
Unlike many, perhaps most, pump storage projects that are built in conjunction with a relatively fixed output, often thermal, generating station, Goldendale will be a free standing, independent operation buying and selling power on the western transmission grid, from and to the west coast wholesale energy markets.

The NOI talks broadly about supporting other regional power producers but makes no mention of contracting with any of them. For the purposes of this analysis RME assumes Goldendale will be a freelance operation, attempting to buy low and sell high on the wholesale market, to the extent of their ability, at their discretion. In the absence of contractual requirements for energy used to fill their upper reservoir or sell their production, it is to market prices that we must look to understand the forces that will shape Goldendale's potential for success or failure.

Pre 2009, Prelude to a Crash

In the years leading up to 2009, west coast and northwest wholesale energy prices were escalating rapidly. From 2002 through 2008, NP15 prices climbed from about $25/MWh to over $70/MWh, a 180 percent increase in a scant six years. In 2008, FERC, BPA, and most NW utilities were predicting energy prices to continue escalating, at a somewhat slower rate, on upward toward $80, $90, and $100/MWh within 10 years.

Chart 1



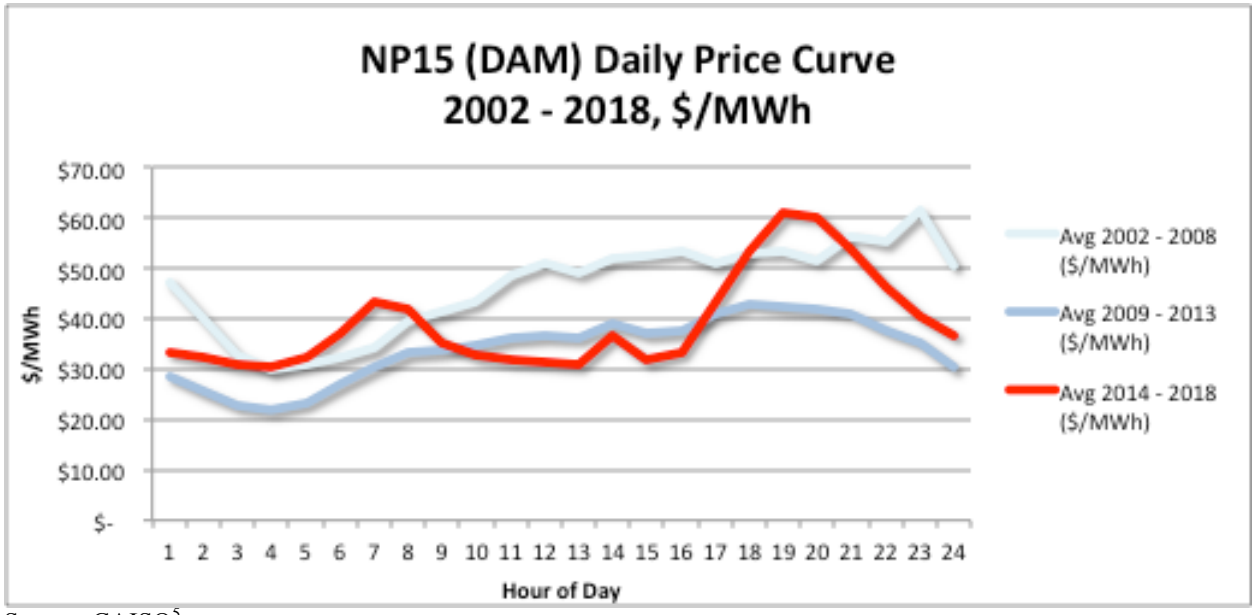
Source: CAISO[4]

[4] http://oasis.caiso.com/mrioasis/logon.do

That line of thinking collapsed in 2009, the first year of the Great Recession. That year saw the collapse of gas prices (a major factor in the price of power produced by gas generating plants) and the point where solar capacity in California started gaining traction. In one year, from 2008 to 2009, NP15 prices dropped by 50 percent and have never recovered to any substantive degree for more than a year or two. Nine years after the 2009 price collapse 2018 prices averaged about $38/MWh, roughly half of price levels ten years previous. And, the 2018 number would likely have been lower still if not for the effect of the Camp Fire in California that took several major PG&E generating plants offline for several months of the year, thus reducing supply and driving prices higher. Please refer to Chart 1, above.

Prices from 2009 to 2013 followed a daily price curve similar to but lower than the daily price curve prior to 2009. Daily prices continued to bottom out in the hours from midnight to about 6:00 AM and then began climbing to a peak in the late afternoon or early evening. Where pre 2009 prices bottomed out at about $30/MWh, post 2008 prices bottomed out about $10 lower at $20/MWh. Where pre 2009 prices topped out as high as $60/MWh in the late evening, post 2008 prices topped out about $20 lower at about $42/MWh as early as 6:00 PM.

Chart 2



Source: CAISO[5]

Prior to 2009 the range from minimum to maximum price for the day averaged a little more than $30/MWh. From 2009 - 2014 the daily average price range from minimum to maximum was about $8 less, at roughly $22/MWh. Please see Chart 2, above.

[5] http://oasis.caiso.com/mrioasis/logon.do

The lower overall prices and the narrowing of total price range after 2008 was probably due to a combination of factors including reduced demand due to the recession, lower gas prices used by thermal generating plants, and the beginnings of the solar power revolution associated with California investing in renewable energy.

High Spot Market Prices May Not Be Enough

If Goldendale would have made this proposal back in 2008, the year before market prices collapsed from the $70/MWh range or higher, it would be more difficult to find fault with the proposal. Even the most respected forecaster has difficulty selling an audience on the likelihood of $30 market prices when they looking at prices averaging as much as $80/MWh for months at a time.

But this is not 2008 and prices have not averaged greater than $50/MWh on an annual basis in ten years. In fact, the price collapse was fully expected. The precipitousness of the decline might seem a little severe but the price correction was completely normal. High prices, while inconvenient, are the mechanism that triggers innovation and investment in the market. They lead to new construction that results in more capacity, greater supply, and ultimately lower prices.

The run-up to 2008 was not the first of its kind and is unlikely to be the last. Similarly, price corrections such as the one in 2009 are equally as normal as the preceding price spike. It is for that reason that RME cautions against any prophesy that market prices will return to pre 2009 levels for anything more than brief periods. As Chart 1 demonstrates, 2013-2014 looked like prices were once again heading towards pre 2009 $60 and $70 levels. But, again, price changes of that nature are the events that trigger new investment, more construction, and more supply that drives prices back down to $30/MWh and lower.

One final point before leaving the subject of pre-2009 high market prices. As we will see, high prices are a necessary condition for Goldendale to cover their costs construction costs, but not a sufficient condition for to cover their operating costs.

High peak hour prices are little benefit to pump storage projects if it means similarly high off-peak hour prices. Projects of this nature also need situations that increase the spread between high and low daily prices. Years like 2008 when average prices were much higher than after 2009 present a situation in which the daily price spread is potentially higher, but not necessarily as high as needed.

Emergence Of The Duck Curve

Even more significant for this discussion is the transformation of the western energy market that started in about 2014. That year marked the emergence of the "Duck Curve". The Duck Curve, named for the curve's late in the day resemblance to the profile of a duck's head, is the result of solar power becoming a major force in the California energy market.

Starting in 2014 prices from about 3:00 AM to about 8:00 AM returned to or even exceeded pre 2008 price levels, the difference being that by about 9:00 solar energy sources stared producing in sufficient volume that prices, instead of continuing to increase, dropped back to pre-dawn levels of about $30/MWh where they remained until about 5:00 PM when the late in the day peak begins. As with the morning peak, the late day peak is as high or higher than the pre 2009 peak but it is much shorter in duration. Again, please refer to Chart 2, above.

Dual Daily Supply Curves

Classical economic theory holds that as demand increases, it shifts the demand curve to the right and the equilibrium price increases. At first glance that result would seen to be violated in the western wholesale energy markets where midday prices are now typically lower than earlier in the day even though the amount of energy demanded is substantially higher. However, the west coast currently operates with, effectively, two supply curves, a nighttime curve and a daytime curve.

Early in the day, in the first few hours of peak demand before sun-up, energy load begins to ramp up and, with the nighttime supply curve in play, prices begin to rise in response. Later in the morning, with load ramping up even further, the supply curve begins to shift to the right as solar generation comes online. This process not only counters the earlier increase in prices but also typically over-compensates and drives prices lower than they were before the sun rises.

It is this price environment in which Goldendale proposes to operate. In an effort to recharge the upper reservoir during the 10 lowest cost hours of the day, Goldendale will have to pump for five hours from about midnight to 5:00 AM, for another four hours from about 10:00 AM to about 1:00 PM, and finally for one hour at 3:00 PM.

About half of Goldendale's pumping will occur during the relatively low priced but high load middle of the day.

In an effort to sell power during the 8 highest hourly prices of the daily load and price cycle, Goldendale will need to run its generators for an hour during the morning price peak at about 7:00 AM, and for 7 hours from about 5:00 PM through 11:00 PM. Please see Chart 3 below.

One final takeaway for the post 2008 open market price history is that inflation has been outpacing NP15 prices and that the difference between peak prices and off peak prices, as

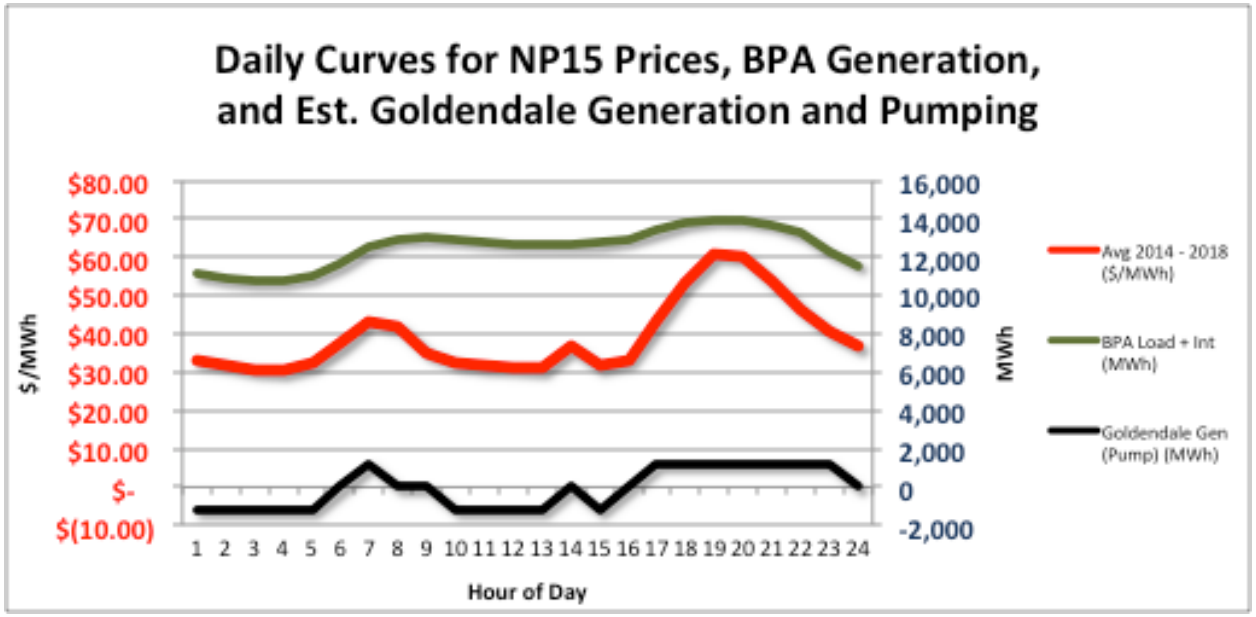
constrained by Goldendale's profit maximizing operation curve, is a relatively stable $16 - $18/MWh.

For the purpose of this analysis of Goldendale's finances, RME will use the 2014 – 2018 minimum and maximum prices of $32.0475 and $50.2530 respectively. The reason for using these two numbers is that it provides a slightly greater range in prices than the full 2009 – 2018 record provides, a factor that gives the benefit of doubt to Goldendale in recognition that they may bring more sophisticated modeling to the operation than RME has at its disposal.

NP15 Prices

	Avg. Minimum Prices	Avg. Minimum Prices	Avg. Price Spread
2014 - 2018	$32.0475	$50.2530	$18.2055
2009 - 2018	$29.5999	$45.9677	$16.3679

Chart 3



IV. GOLDENDALE FINANCIALS

The Goldendale NOI estimates that the project will cost $2.2 billion. The inclusion of Washington State sales tax and capitalized pre-completion interest will bring the startup cost of the project to about $2.6 billion. Servicing the interest on $2.6 billion will cost Goldendale about $208 million per year.

The NOI indicates that M&O costs will come to about 8.5 million per year, bringing the total for debt service and M&O to about $216 million per year, roughly $62/MWh without accounting for pumping costs.

Goldendale - With Amortization

Capital Cost		
PAD Cost Estimate	$2,200,000,000	1
WSST @ 6.5%	$143,000,000	2
Total Estimated Direct Cost	$2,343,000,000	
Pre Cost Interest (60 Months)	$246,310,804	3
Installed Cost	$2,589,310,804	
Maintenance and Plant Cost		
Cost	$2,589,310,804	
Interest Rate	5.0%	5
Term (Yrs.)	20	6
Annual Interest Pmt.	$207,772,998	
Wages	$3,860,000	1
Other	$4,620,000	
M&O	$8,480,000	1
Total	$216,252,998	

Based on Goldendale's estimates in the NOI, the project will produce about 3.5 million MWh of energy. At an estimated peak-hours average price of $50/MWh for the 8 highest NP15 daily prices, Goldendale will see revenues of about $175 million per year.

Also from the NOI, Goldendale will use about 4.4 million MWh each year to power its pumps to fill the upper reservoir. At average market prices for the 10 lowest priced NP15 daily hours Goldendale will have to pay an average of about $32/MWh and will spend about $140 million in pumping costs each year.

The relatively narrow differential between peak and off peak market prices, combined with the 20 percent efficiency penalty associated with pumping, Goldendale will net about $35 million per year at the cash flow level. However, M&O costs and debt service will lead to Goldendale losing about $181 million per year, a loss of $52/MWh of production.

Cash Flow From Operations[6]

Generation		
Capacity	1,200	4
Hrs / Day	8	4
Days /Yr.	365	4
Annual Prod (MWh)	3,504,000	4
Generation $/MWh	$50	3
Revenue from Generation	175,200,000	
Pumping		
Pumping Rate	1,200	4
Hrs / Day	10	4
Days /Yr.	365	4
Annual Pumping (MWh)	4,380,000	4
Pumping $/MWh	$32	3
Annual Pumping Cost	140,160,000	
Net Cash Flow from Operation	$35,040,000	
Profit (Loss)	**($181,212,998)**	
Cost of Production ($/MWh)	$101.72	
Profit (Loss) $/MWh	($51.72)	

[6] Goldendale, PAD, pp 182; ttp://www.salestaxstates.com/sales-tax-calculator-washington;' RME; and Goldendale, PAD, pp 18.

To summarize, the minimum cost to cover debt service and O&M is about $61/MWh. The minimum market price spread for Goldendale to cover its pumping costs is 20 percent above the price Goldendale pays to fill the upper reservoir. Combined, for Goldendale to operate profitably it needs to see market prices of $61/MWh plus a price spread of about $8/MWh on top of the $32/MWh[7] estimate for the lowest cost 10 hours of pumping. Thus, with the lowest 10 hours of a typical day averaging about $32/MWh, efficiency losses will increase the value of water in the upper reservoir to about $40/MWh. Adding the $61.72/MWh necessary to cover debt service and O&M means Goldendale will need to see average prices for the 8 highest priced hours of the day of $102/MWh or higher.

[7] With efficiency losses of 20% $32/MWh pumping costs equate to $40/MWh at the generating level.

V. GENERAL DISCUSSION

Large Producer

Unlike many hydro type power producers that typically only run at full capacity during spring runoff or brief moments to match peaking demand, Goldendale can be expected to run at or near full capacity for most of its daily 8-hour operation as it attempts to maximize revenue.

When generating, Goldendale output will be one of the larger single-plant power sources in the northwest. It will be capable of out producing Bonneville Dam for the eight hours per day it generates. In terms of nameplate capacity it will be larger than McNary Dam. In terms of average production, when running, it will be on par with Chief Joseph dam and second only to Grand Coulee in the NW.

Larger Consumer

During the 10 hours per day that Goldendale will be pumping, it will be a major load center. When pumping, Goldendale will have the load equivalent of about 720,000 households, about the same as the all the residential households in Idaho![8]

Net Consumer of Electricity

Goldendale estimates that the project is 20 percent less efficient in pumping mode than it is in generating mode. The result is that to produce 3.5 million MWh of electricity Goldendale will consume about 4.4 million MWh, an annual loss to the system of about 877,000 MWh.

General Operating Characteristics

Goldendale combines some of the features of a hydro project and some of the features of a thermal project and some features unique to pump storage projects.

Like any substantial hydroelectric generating plant, Goldendale's will be a major capital investment. Servicing the interest payment on its debt will be a major challenge. In the absence of high prices in the wholesale energy market, the alternative method for absorbing overhead is

[8] Goldendale will consume 1,200 aMW in pumping mode. Idaho has about 720,000 residential electrical customers who consume an average of about 1,200 KWh per month. (720,000 Residents X 1.2 MWh/month = 864,000 MWh. 864,000 MWh / 30 Days / 24 Hours = 1,200 MWh

to operate as many hours per year as possible. That, combined with minimal marginal operating costs, is the reason most hydro facilities operate as close to 24/7 as possible.

However, a 24/7 generating schedule will not be possible in Goldendale's case.

The requirement to spend more time filling the upper reservoir than time generating energy, plus potentially waiting out shoulder hours when the price differential is insufficient to cover pumping losses, tends to limit Goldendale's capacity utilization rate to about 33 percent. If Goldendale could generate power 16 hours per day it could double its overhead absorption and cut its pre-pumping cost of production by half. However, again, that will not be possible.

Like a thermal project, the water in the upper reservoir has value in that it costs money to pump the water the 2360 vertical feet up from lower reservoir. Like a thermal project, Goldendale cannot generate electricity profitably unless it receives at least as much per MWh as the water in the upper reservoir cost to pump it up there, plus the 20 percent efficiency penalty.

If it cost $40/MWh to fill the reservoir ($32/MWh plus a 20 percent efficiency penalty for a total of about $40 /MWh generating equivalent.), that tends to suggest that the cost minimizing operation level is when sales prices are $40/MWh or higher. That logic works well enough until about 5:00 in the afternoon when the need to absorb overhead starts to conflict with the need to cover pumping costs. In other words, just because it cost $40/MWh to fill the reservoir on one day does not mean the same water will be worth the same amount the next day. If, having paid $40/MWh to fill the reservoir there is no guarantee peak prices the next day (or the day after that, ad infinitum) will not be even lower. In that event Goldendale would be smarter, toward the end of the day, to treat the pumping costs as sunk costs and produce as much power as possible during the late afternoon / evening peak price period in an effort to absorb overhead cost, to the extent possible.

In that manner, Goldendale would cover some of its overhead and recoup at least a portion of the day's pumping cost prior to beginning the next day of operation.

Clearly, no project of this type can profitably operate in that manner on a continuing basis, but it serves to illustrate the complex nature of Goldendale's business model as it attempts to minimize losses and maximize profits.

Finally, unlike the vast majority of both thermal and hydro projects, Goldendale will never be more than about 12 hours from running out of "fuel", exhausting the water in the upper reservoir, and having to stop generating electricity.

Emergency Generating Capability

Goldendale's data table claims that the plant's approximate hours of storage @ 1,200 MW is 12 hours. The implication seems to be that Goldendale will provide 12 hours of backup for a variety of ancillary services including emergency generation in the event some other project fails.

This claim fails for a variety of reasons. First, if 1,200 MW generation requires 8,280 cfs of water flow, the 7,100 acre foot reservoir will be exhausted in a little over 10 and hours, not 12. But that misses the second and broader point, the assumption that any event triggering the need for 12 hours, or 10.5 hours, of Goldendale production will occur when the upper reservoir is at full capacity.

Barring the unlikely event that Goldendale is paid to sit patiently, 24/7, with a full upper reservoir laying in wait for a moment when its services are needed, it seems far more likely that any emergency calling for Goldendale's services will happen when the project has already been generating for some period of time. Clearly, the length of time that Goldendale can provide backup is directly proportional to the amount of water remaining in the upper reservoir.

Assuming Goldendale operates a daily pumping and generating schedule consistent with maximizing revenue from the daily price swings, any emergency calling for Goldendale's production is most likely to occur when the upper reservoir is substantially depleted. If any emergency happens after Goldendale is more than 4 hours into its daily generating cycle, or fewer than 5 hours into its daily pumping cycle, the upper reservoir will be half empty. In that manner, if emergencies happen at random times of day, the expectation is that Goldendale's ability to respond to emergencies is only about 6 hours, not 12.

Finally, if some other power plant were to go offline and need backup while Goldendale is already in generating mode as part of its daily production schedule, it is not clear that there will be a benefit to the system if Goldendale ceases putting power onto the grid under its own name to begin putting power onto the grid in the name of some other power producer. This scenario results in a zero net increase in production.

Market Price Impacts

Classical economics suggests that, at the margin, Goldendale will drive off-peak prices up and peak prices down.

Traditionally, pump-storage projects have been built in conjunction with other specific generation projects in an attempt to extend the efficiency range of the main generating plant into other parts of the day, week, month, or year.

That description does not apply to Goldendale as presented in the NOI.

Goldendale, as currently proposed, is not linked to any individual power producer, or group of power producers. It will be a parasitic operation in that it will attempt to purchase power from other existing regional suppliers during the lower cost portions of the daily price curve in an effort to resell the energy later in the day when prices are relatively higher.

Regional power producers will hope the potential for higher off-peak prices they receive when Goldendale operates its pumps will be enough to offset the potentially lower peak prices they will see later in the day when Goldendale is producing power.

On the other side of the equation, Goldendale will hope its potential to drive up off-peak prices and the potential amount it will drive down peak-prices will not narrow the price spread to the point that they cannot operate profitably.

Finally, retail consumers will hope that the net reduction in supply and the resulting potential increase in energy costs will not adversely affect their retail rates.

Minimal Price Impact

Goldendale will be one of the regions larger power producers when generating and one of the regions larger load center when pumping. As mentioned in previous sections, that tends to suggest that Goldendale will depress market prices when generating and increase wholesale prices when pumping, at least at the margin. The amount of these effects is hard to predict but will probably be fairly small.

The reason the effect will likely be small is that, while Goldendale will be a major northwest load center when pumping and a large northwest power producer when generating it will not be a large producer or load center by California standards, and it is the California wholesale markets that are the price setters.

People in the northwest tend to forget that California utilities are sized to supply the peak needs of about 40 million people while northwest utilities are sized to serve the peak needs of about 13 million people.

Goldendale may be as much as five percent of northwest capacity when generating but it will be only about one percent of California capacity. Since Goldendale will be directly connected to the west coast wholesale markets by way of the west coast power grid Goldendale will be a price taker in most cases rather than a price setter.

Self-Defeating Market Price Impact

While any market price impact resulting from Goldendale's operation will likely be small, any effect will be self-defeating for Goldendale's needs.

For example, in its analysis of Goldendale's potential profitability RME estimated peak hour and off-peak hour prices would average $50/ MWh and $32/MWh respectively. If Goldendale's operation reduces peak hour prices by $1 and raises off-peak hour prices by $1, to $49 and $33/MWh respectively, the resulting $2/MWh narrowing of the daily price spread will reduce Goldendale's annual net revenue by nearly $8 million and increase its per MWh loss by over $2/MWh to $53.97/MWh.[9]

"Quick Response" May Not Mean Lower Rates.

Goldendale lists "quick response time" as one of the project's assets. It is not clear to RME that this is a net benefit to the region.

From Goldendale's perspective, its proposed ability to supply power in response to "emergency" changes in load and or reduce the supply of power as necessary to help balance system load, is a benefit to the system.

However, quick response time can just as easily be used to respond, pumping or generating, in efforts to grasp low cost pumping opportunities or switch to generating mode to take advantage of fleeting moments of high wholesale prices. Responding to emergencies may be a benefit to the system but chasing momentary price changes can increase chaos, uncertain, and risk, and be detrimental to the system.

For instance, Goldendale has the potential to switch from consuming 1,200 MW per hour in pumping mode to producing 1,200 MW per hour in generating mode, and vice versa, in an unspecified but presumably brief period of time, perhaps as quickly as a few minutes or even quicker. To other entities on the grid, power producers, energy aggregators, and consumers, this would be seen as a 2,400 MW swing in load volume, the equivalent of a substantial western city suddenly going off line, or Grand Coulee switching arbitrarily off and on, with little or no warning!

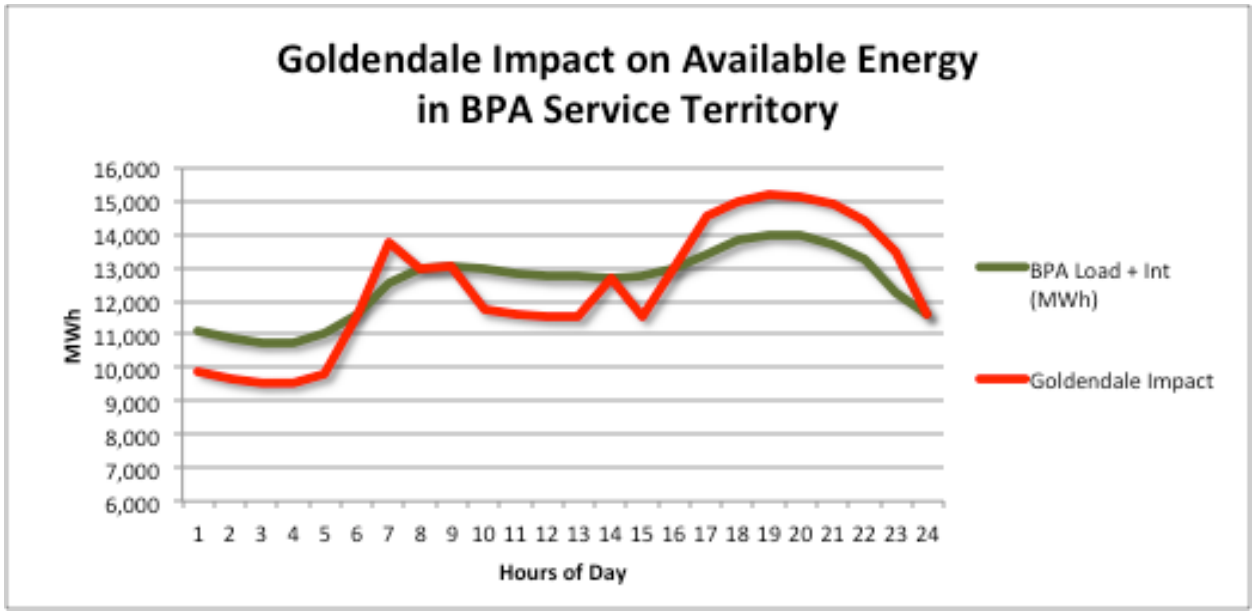
Given Goldendale's precarious financial situation, and in the absence of regulatory or contractual operational constraints, increased wholesale market chaos appears to be the most likely result of Goldendale's operation.

[9] RME is highly skeptical of Goldendale's potential to operate profitably. However, by choosing options and assumptions that tilt the scale in Goldendale's direction, and not including price impacts such as this, RME generally gives the benefit of the doubt to Goldendale.

Chart 4 below provides a graphical example of this discussion. If Goldendale's operation were grafted onto BPA's load curve[10] it would make BPA's available power curve substantially less "smooth" and it would make the spread, the range of power, from low point to high point, available to consumers broader by about 2,400 aMW. The power currently available to contract customers exemplified by the green line, would instead follow the red line.

Would NW producers modify their production in recognition that Goldendale is operating in that fashion? The answer is undoubtedly yes, to at least some degree. However, it is important to remember that the curve shown by the green line is the result of BPA servicing load as well as chasing the same daily price curves in search of higher revenues as Goldendale will be chasing. In other words, yes, Goldendale's operation will cause changes in the operations of other NW utilities, but it is not clear that the result will smoother or less chaotic. Absent any regulatory or contractual mandate, the opposite seems most likely.

Chart 4



As hinted at in the preceding paragraph, regulating the manner and the degree, the when and the how much if you will, to which Goldendale can enter the market could conceivably alleviate the potential for Goldendale to increase market uncertainty. That, of course, would reduce Goldendale's ability to profit from swings in market demand and prices, and make their already precarious financial picture look even worse.

[10] BPA is used here because their production numbers are roughly half of the NW, they are readily available and transparent. The inclusion of the remaining NW producers would tend to minimize this impact to some degree, but not eliminate it.

Contracting

As mentioned above, Goldendale is not directly linked to any one, or any group, of generating entities. As currently configured, it is a freelance operation.

To that end power producers in need of load shaping services may look to Goldendale for assistance. The question then becomes whether or not Goldendale can compete with other regional load shaping service providers. The evidence suggests not.

Again, Goldendale's breakeven production cost exceeds $100/MWh.

Competing with Goldendale will be most of the other NW entities with excess capacity, particularly utilities with hydro power plants that have some potential to shift their time of day production schedules. This will include BPA that touts its load shaping ability for around $40/MWh. Other hydro intensive utilities such as Idaho Power and Avista offer similar services for roughly similar prices.[11]

For companies looking for load shaping services but hoping to avoid fixed contracts there is always the option of playing the same wholesale market as Goldendale. Here, the prices may be more volatile than would be seen with a fixed contract, but with average daily prices of around $30/MWh it is hard to find justification for $100 Goldendale power.

Finally, Goldendale will have to compete with new power producers that are increasingly entering the market with rates as low as $20/MWh, including battery backup. This might seem especially galling to Goldendale since Goldendale will have trouble filling its upper reservoir for $20/MWh, let alone generating power that inexpensively.

[11] And, those prices may be a bit high. CAISO staff concludes load shaping in California only adds about $0.85/MWh to market prices. For this analysis that means Goldendale, with its $100+ / MWh cost structure trying to compete with $33/MWh market prices.

VI. APPENDIX – ALTERNATIVE DEBT STRUCTURES

Goldendale Without Amortization

In recognition that it is fairly common for utilities to not amortize debt on major projects, RME looked at the affect of Goldendale limiting its debt service to paying only the interest on the $2.6 billion startup cost. This has the benefit of reducing the debt service charge by $75 million from $219 million to about $144 million per year. Carrying the $75 million annual cost reduction through to the bottom line reduces Goldendale's losses from $192 million to $117 million per year, a loss of $33/MWh of production.

Goldendale With Bankruptcy

In the forgoing analysis RME used assumptions generally favorable to Goldendale. For example, for the market price spread, RME used the 2014 – 2018 spread of $18/MWh. The 2009 – 2018 spread is perhaps more relevant, but with a spread of only $16/MWh would have made the project look still worse. The same is true for interest rates. RME chose to use the lowest prime rate on record at the time of writing. Prime plus one or two is perhaps more accurate, especially given the speculative nature of this project, but that too would have made the project look even worse.[12]

Given that in this analysis RME made assumptions generally favorable to Goldendale and the financial results are still abysmal, RME is left to speculate on what it is that the project's sponsors see that RME does not.

Looking at the reports produced to date, and the resources at Goldendale's disposal, RME must assume the sponsors are intelligent, successful people. They must see all the same market forces and interest charges that RME sees. At the same time, the project as currently proposed appears from all angles to be destined to fail, in short order. RME is hesitant to make the following statement but feels it may be true and must be addressed: It is possible that the Goldendale Pump Storage Project is being proposed with full knowledge that it will fail. Further, bankruptcy may be an unstated but integral part of the Goldendale business plan as a means of shedding sufficient debt to survive in the current wholesale power market.

If we look at bankruptcy as an unstated but intended method of shedding the bulk of the construction cost, the project begins to make financial sense. If, in the course of a bankruptcy proceeding, the tunnels and reservoirs are declared sunk costs, and total debt is reduced to a hypothetical $75 million by salvaging the turbines and generators ($25 million apiece for three used turbines and control structures) annual debt service drops to a very reasonable $4.9 million.

[12] At the time of this writing, November 28, 2019, the prime rate is 4.75% and RME in this analysis is using a rate of Prime plus 0.25%.

Adding M&O only brings the total up to about $13.4 million. Using the same cash flow stream as in the previous examples, but with the restructured debt, Goldendale might see an annual profit of about $6.18/MWh, $21.7 million per year. Its cost of production would be about $44/MWh, comfortably lower than the average peak wholesale prices of $50/MWh.[13]

Goldendale - Without Amortization

Capital Cost	
NOI Cost Estimate	$2,200,000,000
WSST @ 6.5%	$143,000,000
Total Estimated Direct Cost	$2,343,000,000
Pre Const Interest (60 Months)	$246,310,804
Installed Cost	$2,589,310,804
Maintenance and Plant Cost	
Cost	$2,589,310,804
Interest Rate	5.0%
Term (Yrs.)	1000
Annual Interest Pmt.	$129,465,540
Wages	$3,860,000
Other	$4,620,000
M&O	$8,480,000
Total	$137,945,540

Goldendale - With Bankruptcy

Capital Cost	
NOI Cost Estimate	$75,000,000
WSST @ 6.5%	$4,875,000
Total Estimated Direct Cost	$79,875,000
Pre Const Interest (60 Months)	$8,396,959
Installed Cost	$88,271,959
Maintenance and Plant Cost	
Cost	$88,271,959
Interest Rate	5.0%
Term (Yrs.)	1000
Annual Interest Pmt.	$4,413,598
Wages	$3,860,000
Other	$4,620,000
M&O	$8,480,000
Total	$12,893,598

[13] One simple waty to eleimiante the possibliity of bankruptcy as an unstated but integral part of Goldendale's business plan is to include a clause in any regulatory approval of the project requiring Goldendale to set aside funding to remove the turbines and destroy the tunnel in the event the project fails.

Cash Flow From Operations	
Generation	
Capacity	1,200
Hrs. / Day	8
Days /Yr.	365
Annual Prod (MWh)	3,504,000
Generation $/MWh	$50
Revenue from Generation	175,200,000
Pumping	
Pumping Rate	1,200
Hrs. / Day	10
Days /Yr.	365
Annual Pumping (MWh)	4,380,000
Pumping $/MWh	$32
Annual Pumping Cost	140,160,000
Net Cash Flow from Operation	$35,040,000
Profit (Loss)	**($102,905,540)**
Cost of Production ($/MWh)	$79.37
Profit (Loss) $/MWh	($29.37)

Cash Flow From Operations	
Generation	
Capacity	1,200
Hrs. / Day	8
Days /Yr.	365
Annual Prod (MWh)	3,504,000
Generation $/MWh	$50
Revenue from Generation	175,200,000
Pumping	
Pumping Rate	1,200
Hrs. / Day	10
Days /Yr.	365
Annual Pumping (MWh)	4,380,000
Pumping $/Who	$32
Annual Pumping Cost	140,160,000
Net Cash Flow from Operation	$35,040,000
Profit (Loss)	**$22,146,402**
Cost of Production ($/MWh)	$43.68
Profit (Loss) $/MWh	**$6.32**

APPENDIX 3

INDIAN REMAINS, HUMAN RIGHTS: RECONSIDERING ENTITLEMENT UNDER THE NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT

by Angela R. Riley*

I. INTRODUCTION

> Tribal representatives described a gruesome scene where pieces of caskets, the outlines of additional graves, and parts of human burials were exposed and lying on the surface of the drawdown zone.[1]

When the federal government undertook to build Fort Randall Dam in 1949, it was known that the Indian cemetery downstream would become the site of Lake Francis Case. According to the government's relocation plan, the bodies in the cemetery would be exhumed and reburied in a new location. But, decades later, as the U.S. Army Corps of Engineers (the Corps) raised and lowered the lake's water levels, the remains of dead Indians began to emerge in the tide. By the time the Yankton Sioux Tribe was notified, caskets, bones, pots, and burial shrouds had floated to the surface of Lake Francis Case.[2]

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* J.D., Harvard Law School (1998); B.A., *summa cum laude*, University of Oklahoma (1995). Angela Riley is a Teaching Scholar at Santa Clara University School of Law. The author would like to thank Kristen Carpenter and Kal Raustiala for their invaluable comments on drafts of this Article. Special thanks go to Josh Swartz for his insightful intellectual contribution and for his unfailing support.

1. *See* South Dakota: Drawdown of Francis Case Reservoir, *at* http://www.achp.gov/casearchive/cases6-00Sd1.html (last visited Nov. 14, 2002).

2. *See infra* Part III.B.4.

Burial practices exist in almost every human society. They embody cultural traditions and spiritual beliefs, linking the living to the dead, and the present to the past. As evidence of their significance, grave preservation laws have been developed in almost every state in the United States. However, most have proven incapable of protecting Indian burial grounds and accommodating the unique mortuary practices and distinct historical context of American Indians.[3]

In order to remedy this social injustice, Congress enacted the Native American Graves Protection and Repatriation Act (NAGPRA, or the Act) in 1990.[4] Intended to protect Indian cultural property, NAGPRA established guidelines for repatriation, criminalized trafficking of Indian cultural property, and set forth consultation procedures to govern future excavations of Indian human remains and funerary objects. Since its enactment, however, NAGPRA has been applied almost exclusively in the context of repatriation. In contrast, significantly less attention has been devoted to NAGPRA's provisions designed to prevent future excavations of Indian burial grounds.[5] The few published judicial opinions that do address this aspect of NAGPRA, however, demonstrate that, while NAGPRA undoubtedly marked a major victory for indigenous peoples in regards to repatriation, traditional property models continue to thwart the human rights objectives that NAGPRA was enacted to preserve.

This article posits that human rights and property rights are inextricably linked. The ability to hold property and wield power is essential to the exercise of other basic human rights.[6] Thus, the

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3. This Article uses the terms "Indian" and "American Indian" interchangeably to refer to the indigenous peoples of the United States.

4. Native American Graves Protection and Repatriation Act, 25 U.S.C. §§ 3001–3013 (2000).

5. *See* Hartman Lomawaima, *NAGPRA at 10: Examining a Decade of the Native American Graves Protection and Repatriation Act*, *in* Implementing the Native American Graves Protection and Repatriation Act 1, 2 (Roxana Adams ed., 2001) ("The legislation seems to have less to do with graves protection, though that's in its title, than it does with repatriation. Graves protection is something that has been on the minds of Native people for a very long time. I would like to see that emphasized as equally as repatriation.").

6. Leslie Kurshan, *Rethinking Property Rights As Human Rights: Acquiring Equal Property Rights For Women Using International Human Rights Treaties*, 8 Am. U. J. Gender Soc. Pol'y & L. 353, 357 (2000); *see* Yoram Barzel,

recognition of property rights is critical, as it allows groups to function as "economic actors" in society.[7] Because classical property models operate to deprive indigenous peoples of the right to control their own property—tangible and intangible—they are often powerless to exercise their human rights. This article contends that the human rights goals of NAGPRA will only be realized through a fundamental shift in thinking from an individual rights-oriented property model to one capable of accommodating both the rights and responsibilities inherent in property ownership.[8]

Part II briefly sets forth the history and goals of NAGPRA, providing a background to the Act and detailing the human rights initiatives at its core. Part II also discusses the significance of cultural property to indigenous communities and its role in the cultural survival of indigenous groups. Part III describes NAGPRA's excavation provisions and explains the process through which either lineal descendents or culturally affiliated Indian tribes are to proceed under the Act to achieve, first, a right of consultation, and, second, an opportunity to take possession of the subject human remains and/or funerary objects. Part III further demonstrates how the interpretation and application of NAGPRA by the courts—operating pursuant to limited conceptions of traditional property models—has resulted in the deprivation of indigenous peoples' property rights and human rights. Part IV explores the role of international human rights instruments and norms in securing the rights of indigenous peoples, and focuses, specifically, on the groundbreaking case of *The Mayagna (Sumo) Indigenous Community of Awas Tingni v. Nicaragua* (*Awas Tingni*) decided by the Inter-American Court on Human Rights.[9] Part IV uses *Awas Tingni* as an example of the

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Economic Analysis of Property Rights 4 n.3 (James E. Alt & Douglass C. North eds., 2d ed. 1997) ("The distinction sometimes made between property rights and human rights is spurious. Human rights are simply part of a person's property rights.").

7. Kurshan, *supra* note 6, at 357.

8. *See* Deborah L. Nichols et al., *Ancestral Sites, Shrines, and Graves; Native American Perspectives on the Ethics of Collecting Cultural Properties, in* The Ethics of Collecting Cultural Property 27, 37 (Phyllis Mauch Messenger ed., 1989) ("But most important is the need for a change in attitudes. Archaeologists and museums have a special responsibility to broaden public awareness and knowledge of Native Americans, which includes a responsibility to respect Native American values.").

9. The Mayagna (Sumo) Indigenous Community of Awas Tingni v.

increasingly prevalent shift in international law towards more fluid conceptions of property and ownership that are better suited to ensure the continued survival of indigenous peoples. Finally, Part V suggests new property models capable of accommodating individual property rights in the classical sense, while making room for the protection of indigenous peoples' human rights. Part V discusses the possible consequences of new property models as applied to the NAGPRA cases discussed herein, as well as their effect on other struggles of indigenous peoples in Western legal systems. This article concludes that it is necessary to move beyond the classical property model—one which considers the rights but not the obligations of individual property owners—to new models of property capable of reconceptualizing ownership and entitlement for the protection of indigenous peoples' human rights and continued existence.

II. NAGPRA: ITS HISTORY AND AIMS

The history of the deplorable treatment of Indian remains and cultural property in the United States is a sad and sickening tale.[10] Some of the earliest writings by colonists reveal European fascination with Native American remains and funerary objects. An early example is recorded in the journal of a Mayflower Pilgrim who wrote about uncovering an Indian grave: "We brought sundry of the prettiest things away with us, and covered the corpse up again."[11] To accommodate this morbid curiosity with Indian dead during the early periods of forced assimilation and extermination, museums were created to serve as repositories for Indian artifacts, thus contributing to the fetishism of Indians by Europeans and capturing colonists' love

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Nicaragua, 79 Inter-Am. Ct. H.R. (ser. C) (Aug. 31, 2001), *available at* http://www.corteidh.or.cr/seriecing/serie_c_79_ing.doc.

10. Because the history of the treatment of Indian graves in America is well documented and easily accessible, I will not recount it here in detail. For a more thorough account of this history, see, for example, Jack F. Trope & Walter R. Echo-Hawk, *The Native American Graves Protection and Repatriation Act: Background and Legislative History*, *in* Repatriation Reader: Who Owns American Indian Remains? 123, 126 (Devon A. Mihesuah ed., 2000). *See also* Mary Lynn Murphy, *Assessing NAGPRA: An Analysis of Its Success from a Historical Perspective*, 25 Seton Hall Legis. J. 499, 502 (2001) (discussing colonial views of Indians as inferior, and the disregard of Indian religion, culture, and property norms during the development of America's legal system).

11. Mourt's Relation: A Journal of the Pilgrims at Plymouth 28 (Dwight B. Heath ed., 1963).

affair with the romantic West.[12] With Western expansion, Indians were viewed as a vanishing people, and Indian "trinkets" and bodies were coveted out of blatant curiosity.[13] In congressional debates over NAGPRA, Congress found that during much of the history of the United States digging and removing the contents of Native American graves for reasons of profit or curiosity had been common practice.[14]

The mistreatment of Indian dead extended beyond individual curiosity, becoming formal federal policy in 1868, when the Surgeon General ordered all U.S. Army field officers to send Indian skulls and other body parts to the Army Medical Museum for studies comparing the sizes of Indian and White crania.[15] Pursuant to this order, the heads of thousands of Indians, many of whom died during infamous massacres by the federal government, were cut off their bodies and sent to museums for display or study.[16] Then, in 1906 Congress passed the Antiquities Act, intended to protect "archaeological resources" located on federal lands.[17] The Antiquities Act, however, considered Indian remains on federal lands "archeological resources," thus converting them into federal property and allowing them to be kept and displayed in public museums.[18] These and other federal policies led to the mass excavation of Indian bodies and the looting of Indian graves. By 1986, the Smithsonian Institution alone held the remains of over 18,000 American Indians in its collections.[19]

The unlawful excavation of Indian bodies and the looting of graves was, in part, a result of racism, with a belief in Indians' racial inferiority certainly contributing to the epidemic.[20] But perhaps even

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12. *See* Murphy, *supra* note 10, at 500–01.

13. *Id.*

14. Trope & Echo-Hawk, *supra* note 10, at 126.

15. *Id.*

16. *Id.* ("Government headhunters decapitated Natives who had never been buried, such as slain Pawnee warriors from a western Kansas battleground, Cheyenne and Arapaho victims of Colorado's Sand Creek Massacre, and defeated Modoc leaders who were hanged and then shipped to the Army Medical Museum.").

17. Antiquities Act of 1906, Pub. L. No. 209, 34 Stat. 225 (codified as amended at 16 U.S.C. §§ 431–433 (2000)).

18. Trope & Echo-Hawk, *supra* note 10, at 127.

19. *Id.* at 136.

20. *See, e.g.*, Robert E. Bieder, A Brief Historical Survey of the Expropriation of American Indians (1990) (recounting the goal of Dr. Samuel

more invidious was the complete devaluation of indigenous perspectives and cultures in American jurisprudence that set the stage for mass theft of Indian cultural property. Eurocentric property conceptions, which contemplated property rights as individual rights, regarded ownership as an individual safeguarding his or her own goods.[21] As such, the vast majority of White graves were marked and walled off from society, whereas Native peoples maintained traditional practices of storing items in open areas or caves. The Eurocentric point of view thus diminished Indian burial traditions and did not respect unique Native mortuary practices, such as scaffold, canoe, or tree burials.[22] Nor did it protect unmarked graves, treating them as abandoned, even though many of the graves were left behind by tribes that were forcibly removed from their ancestral homelands by the government.[23] Native burial practices, which were so unlike European burials, deterred government officials from prosecuting cases of theft of Native cultural property, since such property was kept in the open and was free for the taking by whomever "discovered" it.[24] As such, the private property values of Western law contributed not only to the displacement of Indian peoples but also to the "abandonment" by Indians of their own burial grounds.[25] It was not until the 1980s that state burial laws were extended to protect unmarked graves or those outside of specifically designated cemeteries.[26]

Morton, a physical anthropologist, who sought to prove that the American Indian was a racially inferior "savage" doomed to extinction).

21. Sherry Hutt & C. Timothy McKeown, *Control of Cultural Property as Human Rights Law*, 31 Ariz. St. L.J. 363, 365 (1999).

22. Trope & Echo-Hawk, *supra* note 10, at 130.

23. *Id.*

24. Hutt & McKeown, *supra* note 21, at 369.

25. *See* Murphy, *supra* note 10, at 506–07.

26. Current cases nevertheless indicate that many jurists still do not understand the differences between Western and Indian property values. *See, e.g.*, Castro Romero v. Becken, 256 F.3d 349 (5th Cir. 2001). In *Castro Romero v. Becken*, the Fifth Circuit rejected the claim of the lineal descendant of the Lipan Apache Chief dealing with the protection of cemeteries, holding that Castro's allegation that "the oral history of the Lipan Apache establishes the Universal City land as a burial ground is not sufficient to convert the land into a 'cemetery' for purposes of the statute" because the plaintiff had not alleged that the land "was publicly dedicated as a cemetery, that the land was enclosed for use as a cemetery, or that the land even if once used for burial purposes has not been abandoned." *Id.* at 355.

In response to the mistreatment of Indian dead and the continued devaluation of Indian cultural property, NAGPRA was finally enacted in 1990.[27] Perhaps most significantly, the passage of NAGPRA symbolized the tacit recognition that cultural property rights have been obstructed by the disparity between Eurocentric views of personal private property, which dominate American jurisprudence, and the less formalized system of property rights seen in Native communities.[28] In this regard, NAGPRA is significant as it stands as one of the first American statutes which incorporates indigenous peoples' perspectives and confirms the belief that indigenous peoples' right to control the fate and integrity of their cultural property is a valuable tool of self-determination and a necessary component of cultural survival.[29]

Similarly, international legal doctrines contemplate and recognize the right to maintain group culture and identity and place particular emphasis on the rights of indigenous peoples.[30] As such,

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27. 25 U.S.C. §§ 3001–3013 (2000).

28. Sherry Hutt, *Native American Cultural Property*, 34 Ariz. Att'y 18, 20 (1998).

29. *See, e.g.*, Rosemary J. Coombe, *Intellectual Property, Human Rights & Sovereignty: New Dilemmas in International Law Posed by the Recognition of Indigenous Knowledge and the Conservation of Biodiversity*, 6 Ind. J. Global Legal Stud. 59, 87 (1998). Rosemary J. Coombe notes that:

> [I]f human rights were to be "recognized as truly interdependent and individual, then [intellectual property rights] would also have to be compatible with the rights enshrined in the International Covenant on Civil and Political Rights. Civil and political rights may, in many circumstances, come into conflict with the exercise of [intellectual property rights].

Id.

30. *See* International Covenant on Civil and Political Rights, *opened for signature* Dec. 16, 1966, art. 27, S. Exec. Doc. E, 95-2, at 31 (1978), 999 U.N.T.S. 171, 179 (entered into force Mar. 23, 1976) [hereinafter ICCPR] (affirming the right of persons belonging to minorities to enjoy their own culture in community with the other members of their group); *id.* art. 1 (defining indigenous groups as "peoples" within the meaning of Article 1, which holds that "all people have the right to self determination"). The right to self-determination through cultural integrity for groups is also a generally accepted principal of customary international law. *See* S. James Anaya, *Environmentalism, Human Rights and Indigenous Peoples: A Tale of Converging and Diverging Interests*, 7 Buff. Envtl. L.J. 1, 9 (2000).

these doctrines capture and acknowledge the importance of group cultural property in giving meaning to human existence.[31] Cultural property situates indigenous peoples in time, linking them to their place of origin. For a tribe, controlling collective cultural property, particularly that which is sacred and intended solely for use and practice within the group, is a crucial element of self-determination. As with other forms of collective ownership seen in indigenous communities, objects of cultural property derive their status from community use and recognition rather than individual ownership.[32] Legal enforcement of group ownership of cultural property supports self-determination principles by placing the destiny of tribal cultural property into the hands of indigenous peoples, affirming their ability to determine themselves as a people through their culture. When a group has exclusive authority to prescribe the employment of its most valuable creations, the entire community benefits.[33] As Sarah Harding argues, "[c]ultural property takes on a life and meaning of its own; it acquires something like a soul and it is this soul, not a specific human end, which shapes our relationship with cultural property."[34]

Because recognition of indigenous peoples' property rights—to a traditional land base, preservation of the environment, and communal intangible knowledge—is essential for cultural survival, battles are now waged on every front to ensure the continued existence of indigenous peoples worldwide.[35] Conflicts over land have long been a hallmark of Indian-White relations in this country, and Indians' struggle to maintain or recover a traditional land base or right of occupation seems never-ending.[36] Similarly, because of the

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31. Hutt, *supra* note 28, at 19.

32. Susan Scafidi, *Intellectual Property and Cultural Projects*, 81 B.U. L. Rev. 793, 811 (2001).

33. Angela R. Riley, *Recovering Collectivity: Group Rights to Intellectual Property in Indigenous Communities*, 18 Cardozo Arts & Ent. L.J. 175 (2000).

34. Sarah Harding, *Justifying Repatriation of Native American Cultural Property*, 72 Ind. L.J. 723, 760 (1997).

35. *See, e.g.*, Anaya, *supra* note 30, at 8 (discussing indigenous peoples' property interest in land as also linked to their cultural integrity, "insofar as these cultures are connected with land tenure"); Rebecca Tsosie, *Land, Culture, and Community: Reflections on Native Sovereignty and Property in America*, 34 Ind. L. Rev. 1291, 1306 (2001) (arguing that to "[n]ative peoples, land is vital to political ideology . . . self-sufficiency, and also to cultural identity").

36. *See, e.g.*, United States v. Dann, 470 U.S. 39 (1985) (discussing the

unique cultural relationship of indigenous peoples to the land, many scholars now claim indigenous peoples possess a human right to preservation of the environment.[37] For indigenous groups whose existence depends on and is identified through their relationship to the land and nature, it is impossible to differentiate between environmental injustice and human rights abuses.[38]

In addition, arguments are being made, both domestically and internationally, for the recognition of group rights to intellectual property in indigenous communities as a mechanism to "allocate rights over knowledge."[39] Recognizing some form of intellectual property rights for indigenous peoples "could be a valuable tool for

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viability of a claim of tribal title by Shoshones, where compensation for the land had been paid into a trust for, but not yet disbursed to, a Shoshone tribe); United States v. Sioux Nation of Indians, 448 U.S. 371 (1980) (holding that the 1877 act that relinquished the Sioux Nation's rights to the Black Hills amounted to a taking of tribal land for which just compensation was required); The Mayagna (Sumo) Indigenous Community of Awas Tingni v. Nicaragua, 79 Inter-Am. Ct. H.R. (ser. C) (Aug. 31, 2001), ¶ 4, *available at* http://www.corteidh.or.cr/seriecing/serie_c_79_ing.doc (ordering Nicaragua to recognize and protect tribal lands).

37. *See, e.g.*, Anaya, *supra* note 30, at 3 (commenting that related to the discourse that joins human rights and environmentalism is a discourse "that focuses directly on the human rights of indigenous peoples. This discourse views indigenous groups and their cultures as valuable, and it constructs a series of rights and entitlements that are deemed to pertain to these communities and their members on the basis of broadly applicable human rights standards.").

38. *See* Arctic Refuge: A Circle of Testimony 5 (Hank Lentfer and Carolyn Servid eds., 2001) (quoting Sarah James, member of the Gwich'in Nation, discussing her opposition to plans to drill for oil in the Arctic National Wildlife Reserve: "But our fight is not just for the caribou . . . . [O]ur fight is a human rights struggle—a struggle for our rights to be Gwich'in, to be who we are, a part of this land."); Sevine Ercmann, *Linking Human Rights*, 7 Buff. Envtl. L.J. 15, 17 (2000).

39. David R. Downes, *How Intellectual Property Could Be A Tool to Protect Traditional Knowledge*, 25 Colum. J. Envtl. L. 253, 256 (2000); *see* Rosemary J. Coombe, *The Recognition of Indigenous Peoples' and Community Traditional Knowledge in International Law*, 14 St. Thomas L. Rev. 275, 284 (2001) ("Intellectual property rights are not merely technical matters. They increasingly involve crucial questions not only of economic interest, competitiveness, and market power, but also of environmental sustainability, human development, ethics and international human rights."); James D. Nason, *Traditional Property and Modern Laws: The Need for Native American Community Intellectual Property Rights Legislation*, 12 Stan. L. & Pol'y Rev. 255, 260–63 (2001) (asserting the need for "new legal approaches to intellectual property that would protect intangible Native American cultural property").

communities to use to control their traditional knowledge and to gain a greater share of the benefits."[40] In this respect, intellectual property rights are significant insofar as the protection of traditional knowledge is integral to cultural heritage and ensures "the right to maintain and take part in cultural life."[41]

But no cultural practice is more fundamental to group identity and survival than treatment of the dead. Burial practices are, in almost all cultures, indicative of religious beliefs, value for human life, reverence for the land, and relationships with nature.[42] This is particularly true for indigenous peoples, who are forever linked to their dead, as they define themselves through their history and place as connected to ancestors, the environment, and the earth.[43] For indigenous peoples, "[h]uman remains generally hold great religious significance, both for present day descendants and for the spiritual well-being of deceased ancestors."[44] For example, many

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40. Downes, *supra* note 39, at 256. David R. Downes states that:

> An international human rights perspective on the protection of indigenous knowledge through [intellectual property rights] would presuppose that State governments not only have obligations to indigenous peoples subject to their own jurisdictions, but also that these obligations involve respect for and protection of the indigenous knowledge of indigenous peoples . . . globally.

Id. See also Coombe, *supra* note 29, at 90; Riley, *supra* note 33, at 215 (noting that the "communal approach to entitlements in cultural property will not only preserve group property generally, but it will secure the work in the cultural context from which it arose, ensuring that the creation endures through time to be enjoyed by individuals whose identity is inextricably bound to the cultural work").

41. Downes, *supra* note 39, at 255.

42. *See, e.g.*, Trope & Echo-Hawk, *supra* note 10, at 124 (arguing that "respect for the dead is a mark of humanity and is as old as religion itself").

43. When Geronimo, the famous Apache leader and warrior was held prisoner at Fort Sill, he was approached by a school teacher to give his life story and he began by recounting the Apache tribal creation story. Robert J. Conley, The Witch of Goingsnake and Other Stories, at xii (1988).

44. Dean B. Suagee, *Tribal Voices In Historical Preservation: Sacred Landscapes, Cross-Cultural Bridges, and Common Ground*, 21 Vt. L. Rev. 145, 203 (1996); *see* Harding, *supra* note 34, at 765 ("[G]rant[ing] Native Americans the same legal rights as other Americans have concerning their ancestral remains is pivotal to cultural integrity and pride and thus the preservation of

Indian people are buried with pottery or other goods because it is believed they will need these items in the afterlife. As Tessie Naranjo, a Santa Clara Pueblo tribal member, stated:

> Traditional Native Americans see an essential relationship between humans and the objects they create. A pot is not just a pot. In our community, the pots we create are seen as vital, breathing entities that must be respected as all other living beings. Respect of all life elements—rocks, trees, clay—is necessary because we understand our inseparable relationship with every part of our world.[45]

A tribe may pursue repatriation of a pot or beaded belt buried with the dead not because of the tribe's appreciation for its physical dimensions per se, but for what it symbolizes metaphysically. While indigenous peoples revere land and earth and all that it embodies, human remains are valued not only because they represent physical property that belongs to the tribe but because human remains connect living Indians to their past and to their future.

For Indian peoples, burial ceremonies and burial sites are sacred. Although the philosophical and religious ideas of Native peoples are diverse, the vast majority of Indians hold one core belief: that the dead remain connected to the living and to the physical remains they left behind.[46] For example, when the Tennessee Valley Authority threatened to flood the Little Tennessee Valley in the late 1970s, Eastern Cherokees mounted fierce resistance to the project based on the threat that it posed to their cultural heritage and religious beliefs.[47] The Cherokees believed that the knowledge of the deceased was placed in the ground with them at the time of burial.[48] Exhumation of an Indian grave would destroy the knowledge and beliefs of the deceased and everything they have taught, including, in

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cultural identity, regardless of particular Native American beliefs about the spiritual afterlife of their ancestors.").

45. Tessie Naranjo, *Thoughts On Two World Views*, *in* Implementing the Native American Graves Protection and Repatriation Act 22 (Roxana Adams ed., 2001).

46. *See* Trope & Echo-Hawk, *supra* note 10, at 151.

47. *See* Sequoyah v. Tenn. Valley Auth., 620 F.2d 1159, 1160 (6th Cir. 1980).

48. Sequoyah, 620 F.2d at 1162, *cited in* Laurie Anne Whitt et al., *Belonging to Land: Indigenous Knowledge Systems and the Natural World*, 26 Okla. City U. L. Rev. 701, 701–02 (2001).

the case of the Eastern Cherokee, their spiritual leader's knowledge of medicine.[49] Thus, for many Indians, the looting of a grave goes beyond legal transgression and is treated as "an act of desecration that violates deeply held religious beliefs that are essential to the spiritual well-being of Native Americans."[50]

NAGPRA's role in the preservation of cultural property, and thus, cultural survival, has designated it, first and foremost, a human rights law.[51] A triumph for Indian peoples, NAGPRA represents the culmination of "decades of struggle by Native American tribal governments and people to protect against grave desecration, to repatriate thousands of dead relatives or ancestors, and to retrieve stolen or improperly acquired religious and cultural property."[52] As such, NAGPRA is "one of the most significant pieces of human rights legislation since the Bill of Rights."[53] NAGPRA is recognized as having created the opportunity to allay the breach between living and dead by restoring bones and possessions to the earth from which they were torn in the name of science, profit, or idle curiosity.[54]

NAGPRA has undoubtedly produced major successes in the repatriation context. According to C. Timothy McKeown, NAGPRA Program Leader for the National Park Service Archeological Assistance Program, by 1998 over 1000 NAGPRA summaries were received from federal agencies and institutions receiving federal funding. Approximately 700 of these institutions had completed inventories, some 400 of which included human remains. It is estimated that up to 200,000 individual remains will eventually be accounted for through the NAGPRA process.[55]

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49. *Id.*

50. Nichols et al., *supra* note 8, at 37.

51. *See, e.g.*, Trope & Echo-Hawk, *supra* note 10, at 123 ("On November 23, 1990, President Bush signed into law important human rights legislation.").

52. *Id.*

53. David Hurst Thomas, Skull Wars: Kennewick Man, Archaeology, and the Battle For Native American Identity 214 (2000).

54. John W. Ragsdale, Jr., *Some Philosophical, Political and Legal Implications of American Archeological and Anthropological Theory*, 70 U. Mo. Kan. City L. Rev. 1, 46 (2001).

55. Nichols et al., *supra* note 8, at 256.

However, NAGPRA's role in preventing future excavations of human remains and/or funerary objects remains uncertain.[56] In practice, when courts apply NAGPRA in the excavation context, they consistently do so within the traditional paradigm of Anglo-American law. This approach fails to consider indigenous perspectives, resulting in the diminishment of indigenous peoples' human rights and the rejection of non-Western, community-based property conceptions. As a result, NAGPRA's human rights objectives remain unsatisfied, and the cultural survival of indigenous peoples is threatened.

III. RAISING THE DEAD

A. NAGPRA's Excavation Procedures

NAGPRA establishes three mechanisms to ensure the protection of Indian cultural property.[57] First, it creates procedures through which culturally affiliated Indian tribes can recover human remains and funerary objects from federally funded museums.[58] Secondly, NAGPRA criminalizes the trafficking of Indian human

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56. *See, infra* Part III.B; Thomas, *supra* note 53, at 214. David Hurst Thomas quotes the late Northern Cheyenne Elder William Tallbull:

> How would you feel if your grandmother's grave were opened and the contents were shipped back east to be boxed and warehoused with 31,000 others and itinerant pothunters were allowed to ransack her house in search of 'artifacts' with the blessing of the U.S. government? It is sick behavior. It is un-Christian. It is [now] punishable by law.

Id. Brian Patterson writes:

> In many ways, [NAGPRA] is a wonderful law because it has helped many Indian nations protect their sacred sites and restore the artifacts of their heritage. However, this law worries me because of what it says about our society. I have three children, and I do not have to tell them that it is wrong to go into a cemetery and dig people up. They know it is wrong. No one would consider building a parking garage on top of Arlington National Cemetery. Congress does not have to pass a law saying that would be wrong. Everybody knows it is wrong.

Brian Patterson, *Preserving the Oneida Nation Culture*, 13 St. Thomas L. Rev. 121, 123 (2000).

57. 25 U.S.C. §§ 3000–3013 (2000).

58. *Id.* § 3005.

remains and cultural items.[59] Finally, it sets forth notification and consultation procedures for intentional or inadvertent excavation of Native American human remains and cultural objects on tribal and federal lands.[60] It is this final portion of the Act that is the subject of this article.

NAGPRA creates mandatory excavation procedures that govern ownership and control of cultural items discovered in the future on tribal or federal lands. The procedures vary, depending on whether the artifacts are to be intentionally excavated or have been inadvertently discovered.[61] Because NAGPRA applies only on tribal and federal lands, it functions solely within these geographical limitations. Under the Act, "tribal lands" are defined as: "(A) all lands within the exterior boundaries of any Indian Reservation; (B) all dependent Indian communities; (C) any lands administered for the benefit of Native Hawaiians pursuant to the Hawaiian Homes Commission Act, 1920, and section 4 of Public Law 86-3."[62] Allotted Indian trust lands outside reservation boundaries do not fit the statutory definition of "tribal lands" unless they also are within a dependent Indian community.[63] However, because such lands are held in trust by the United States and are subject to federal control, they are treated as "federal lands" for purposes of NAGPRA.[64]

The statute defines "federal lands" as "any land other than tribal lands which are *controlled or owned* by the United States."[65] The implementing regulations state, further, that "United States'

59. *Id.* § 3007.

60. *Id.* § 3011.

61. *Id.* § 3002.

62. *Id.* § 3001(15).

63. This limited definition raises problems not addressed by this Article, but that are a major subject of concern for Native Alaskans in light of the Supreme Court's decision in *State of Alaska v. Native Village of Venetie*, 522 U.S. 520 (1998), wherein the Court found that Congress intended the Alaska Native Claims Settlement Act to divest Alaskan Native tribes of their jurisdiction over remaining territories, determining that the land was not "Indian Country." This makes application of NAGPRA's excavation procedures in the State of Alaska, insofar as applied to "tribal lands," highly uncertain. For a thorough discussion of the Court's decision, see Kristen A. Carpenter, *Interpreting Indian Country In* State of Alaska v. Native Village of Venetie, 35 Tulsa L.J. 73 (1999).

64. *See* 25 U.S.C. § 3001(15) (2000); 43 C.F.R. § 10.2(f)(1) (2002); Suagee, *supra* note 44, at 205.

65. 25 U.S.C. § 3001 (2000) (emphasis added).

'control,' as used in this definition, refers to those lands *not owned by the United States* but in which the United States has a legal interest sufficient to permit it to apply these regulations without abrogating the otherwise existing legal rights of a person."[66] Additionally, with respect to the amount of federal "control" necessary to bring lands within the purview of NAGPRA, the Department of the Interior has taken the following position: "Such determinations must necessarily be made on a case-by-case basis. Generally, however, a federal agency will only have sufficient legal interest to 'control' lands it does not own when it has some other form of property interest in the land such as a lease or an easement."[67]

Future excavations of cultural items only fall within the purview of NAGPRA if they are embedded in either tribal or federal lands. Accordingly, lands owned by individual states, municipal governments, corporations, or other private owners do not fall within the NAGPRA rubric. Though the Southwestern United States contains Indian reservations that are expansive in size, most reservations in the United States are small, and are surrounded by non-Indian towns, farms, and commercial forests. Additionally, many tribes in the U.S. were forcibly removed from their ancestral homelands—and, thus, ancestral burial grounds—by the government, leaving many Indian graves on land that was intentionally opened up for White settlement.[68] Discoveries on these lands are outside of NAGPRA's protections as well.[69]

1. Intentional Excavation

In the case of a planned, intentional excavation on tribal lands, NAGPRA requires both notification and consent of the appropriate Indian tribe prior to excavation.[70] If the intentional

66. 43 C.F.R. § 10.2(f) (2002) (emphasis added).

67. *Id.*; *see* Suagee, *supra* note 44, at 205.

68. Trope & Echo-Hawk, *supra* note 10, at 130.

69. *See* Russell L. Barsh, *Grounded Visions: Native American Conceptions of Landscapes and Ceremony*, 13 St. Thomas L. Rev. 127, 140 (2000). Indian burial grounds continue to be discovered on state and municipally owned lands. *See, e.g.*, Don Behm, *Bridge Foes Cite Indian Remains*, JSOnline, Apr. 8, 2002, *at* http://www.jsonline.com/news/OzWash/apr02/33691.asp (noting that a plan to widen a state-owned road met opposition due to the discovery of Indian human remains).

70. 25 U.S.C. § 3002(c)(2) (2000).

excavation is set to take place on federal lands, NAGPRA calls for prior consultation with the appropriate Indian tribe, but consent is not required.[71] Procedures regarding consultation with Indian tribes are set forth in detail in the Act's implementing regulations.[72] Responsibility for compliance with consultation procedures on federal lands lies with the appropriate land managing agency.[73] The federal agency in charge of administering the excavation must also complete a written plan of action with the appropriate tribe regarding the disposition of the remains. Once the agency has complied with the consultation procedures, the process of allowing the tribe to exhume human remains and cultural items from the site begins.[74]

Intentional excavations of cultural items are also subject to the permit requirements of the Archeological Resources Protection Act of 1979 (ARPA).[75] ARPA provides, in pertinent part:

> If a permit issued under this section may result in harm to, or destruction of, any religious or cultural site, as determined by the federal land manager, before issuing such permit the federal land manager shall notify any Indian tribe which may consider the site as having religious cultural importance.[76]

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71. *Id.* § 3002(c)(2), (c)(4).

72. 43 C.F.R. §§ 10.3(b), 10.5 (2002).

73. Charles Carroll, *Administering Federal Laws and Regulations Relating to Native Americans: Practical Processes and Paradoxes*, *in* Implementing the Native American Graves Protection and Repatriation Act 34 (Roxana Adams ed., 2001).

74. The implementation of the Native American Graves Protection and Repatriation Act (NAGPRA, or, the Act) to the excavation context has not always been smooth. The consultation and notification procedures have, at times, proven confusing to both tribes and the federal government. *See, e.g.*, Yankton Sioux Tribe v. U.S. Army Corps of Eng'rs, 83 F. Supp. 2d 1047, 1058 (D.S.D. 2000) (holding that, where there was a conflict within the statute, the Act's provisions protecting Native American cultural items take precedence over its provisions requiring consultation with Indian tribes).

75. 16 U.S.C. § 470aa–mm (2000); 25 U.S.C. § 3002(c)(1) (2000); *see also* Trope & Echo-Hawk, *supra* note 10, at 126.

76. 16 U.S.C. § 470cc(c) (2000); *see* Carroll, *supra* note 73 (discussing five federal laws that prompt consultations between federal agencies and Indian tribes, including: the National Environmental Policy Act of 1969; the National Historic Preservation Act of 1966; the American Indian Religious Freedom Act of 1978; Archeological Resources Protection Act of 1979; and the Native American Graves Protection and Repatriation Act of 1990).

A permit may be issued pursuant to ARPA upon a showing that the applicant is qualified, the resources will remain the property of the United States and be preserved in an appropriate institution (this provision has been modified by NAGPRA), the activity is undertaken to further archaeological knowledge, and the activity is consistent with the applicable land management plan.[77]

2. Inadvertent Discovery

In cases where cultural items or remains have been inadvertently discovered as part of another activity, such as construction, mining, logging, or agriculture, the person who has discovered the items must temporarily cease activity and notify the responsible federal agency (in the case of federal land) or the appropriate tribe (in the case of tribal land).[78] If notice is provided to the federal agency, that agency, in turn, has the responsibility to promptly notify the appropriate tribe.[79] The purpose of this provision is to "provide a process whereby Indian tribes and Native Hawaiian organizations have an opportunity to intervene in development activity on Federal or tribal lands in order to safeguard Native American human remains, funerary objects, sacred objects or objects of cultural patrimony."[80]

In cases of inadvertent discovery, the tribe is afforded thirty days to make a determination as to the appropriate disposition of the human remains and objects.[81] Activity may resume thirty days after the secretary for the appropriate federal department or the Indian tribe certifies that notice has been received, provided that resumption of the activity does not require excavation or removal of human remains or cultural items.[82] If human remains or cultural items must be excavated or removed, then the permit procedures for intentional excavations apply.[83]

77. 16 U.S.C. § 470cc(b) (2000).

78. 25 U.S.C. § 3002(d) (2000).

79. *Id.*

80. S. Rep. No. 101-473, at 10 (1990).

81. 25 U.S.C. § 3002(d) (2000).

82. *Id.*

83. *Id.* § 3002(d)(1).

While NAGPRA indisputably affords tribes greater rights in the preservation of Indian remains and funerary objects than has ever existed under American law, vast portions of land in the United States contain Indian remains and/or cultural items, but are not covered by the Act.[84] When discoveries are made on such lands, tribes have no right to notification or consultation under NAGPRA.[85] This gap in the Act is exacerbated by the limitations imposed by courts applying NAGPRA within the unyielding parameters of the classical property model. The following cases, which address future excavations of Indian remains and/or cultural items pursuant to NAGPRA, further illustrate this point.

B. Excavation Cases

1. *Castro Romero v. Becken*[86]

In 2000, Daniel Castro Romero, Jr. (Castro), General Council Chairman of the Lipan Apache Band of Texas, lineal descendent of the great Lipan Apache Chief, Cuelgas de Castro, sued the City of Universal City (the City) over the construction of a golf course on the ancient burial grounds of the Lipan Apache.[87]

Through gifts from private landowners, the City acquired enough land to build an eighteen-hole golf course.[88] The U.S. Army

84. At the time of this Article, there were thirteen published cases addressing NAGPRA claims, of which at least three, or twenty-three percent, addressed the issue of "federal control" under NAGPRA, but declined to apply the Act. *See infra* Part III.B.

85. Although some other federal statutes provide for consultation with tribes in some similar circumstances, they are also inapplicable on state or privately owned lands. *See, e.g.*, National Historic Preservation Act, 16 U.S.C. § 470 (2000) (requiring consultation with tribes as well as local governments and the public in assessing adverse effects of federal undertakings upon historic properties); National Environmental Policy Act, 42 U.S.C. § 4321 (2000) (requiring the federal agency to consider whether a proposal to conduct some action on federal lands or with federal funds will have a significant effect upon the environment).

86. Castro Romero v. Becken, 256 F.3d 349 (5th Cir. 2001).

87. The court of appeals indicated in dicta that Castro did not have standing to bring the NAGPRA claim because "the Lipan Apache Band of Texas is not a federally-recognized tribe." *Id.* at 354. However, the court did not base its decision to dismiss Castro's claims on this ground. *Id.* at 354–55.

88. *Id.* at 352.

Corps of Engineers surveyed the proposed site, as required by the Clean Water Act. In the course of the survey, human remains were found in one section of the site thought to be a prehistoric campsite.[89]

Shortly after the discovery of the remains, Castro sent a letter to the U.S. Army Corps of Engineers, demanding the return of the remains to the Lipan Apache Band of Texas, Inc. for reburial.[90] Castro received a written response from the Texas Historical Commission, informing him that the Corps agreed with its decision to turn the remains over to the City for reburial. Castro then filed suit, alleging violations of various state burial laws and federal statutes, including NAGPRA. The district court dismissed his case for failure to state a claim. Castro appealed.[91]

As to Castro's NAGPRA claim, the Court of Appeals for the Fifth Circuit acknowledged NAGPRA's broad enforcement procedures, stating that the Act "grants the district courts 'the authority to use such orders as may be necessary to enforce the provisions of the Act.'"[92] The court determined, however, that "[b]y its plain terms, the reach of the NAGPRA is limited to 'federal or tribal lands.'"[93] Thus, the court held that, "the district court correctly held that Castro's claims suffer from a fundamental flaw—that the human remains were found on municipal rather than federal or tribal land."[94] Specifically, the court asserted that, even though the U.S. Army Corps of Engineers, a federal agency, held a supervisory role with regards to construction of the golf course, this did not convert the property into "federal land" within the meaning of the statute.[95]

Accordingly, the court upheld the district court's dismissal of Castro's complaint, and the remains of the Lipan Apache were turned over to the City for reburial in a state cemetery.[96]

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89. *Id.*

90. *Id.* at 352–53.

91. *Id.* at 353.

92. *Id.* at 354 (citing 25 U.S.C. § 3013 (1994)).

93. *Id.* (citing 25 U.S.C. § 3002(a) (1994)).

94. *Id.*

95. *Id.*

96. *Id.* at 355.

2. *Abenaki Nation of Mississquoi v. Hughes*[97]

The Village of Swanton, Vermont (the Village) has operated a hydroelectric facility since 1928. In 1979, a proposal was created to upgrade the facility. In order to proceed with the project, the Village was required to apply for a license from the Federal Energy Regulatory Commission pursuant to the Federal Power Act.[98] It also needed to procure a permit from the U.S. Army Corps of Engineers for the discharge of dredged material into the Mississquoi River.[99] In 1992, after various phases of the project were considered and approved, the Corps issued a conditional authorization for the proposed project.[100]

Immediately after the Corps issued its authorization, the Abenaki Nation sought to enjoin defendants from all actions associated with the Corps's authorization for the Village to raise the spillway elevation of the hydroelectric facility. The tribe sued under a variety of statutes, including NAGPRA.[101] The tribe contended that the Corps's plan violated NAGPRA by leaving the fate of unearthed Indian remains and artifacts in the hands of the Corps, the State, and the Village.[102]

In assessing the Abenaki Nation's claims, the court noted that the Tribe's proposed construction of "federal control" would include the regulatory powers of the Corps, as well as its involvement in devising and supervising the construction plan.[103] Although the

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97. Abenaki Nation of Mississquoi v. Hughes, 805 F. Supp. 234 (D. Vt. 1992).

98. *Id.* at 237.

99. *Id.*

100. *Id.* at 239.

101. This court also questioned the standing of the Abenaki Nation because it "is not an 'Indian tribe' recognized by the Secretary of the Interior," but determined that it did "fall within the class protected by NAGPRA." *Id.* at 251. This case was decided prior to the promulgation of final rules implementing NAGPRA. In the preamble to the final rules, the Department of the Interior has taken the position that the term "Indian tribe" includes only federally recognized tribes, but that recognition may be through a federal agency other than the Bureau of Indian Affairs. 43 C.F.R. § 10.4 (2002).

102. *Abenaki Nation*, 805 F. Supp. at 251; *see* William A. Haviland & Marjory W. Power, The Original Vermonters: Native Inhabitants, Past and Present 264 (2d ed. 1994).

103. *Abenaki Nation*, 805 F. Supp. at 251–52.

court conceded that the possibility of unearthing cultural or funerary items at the site was "extremely high," it ruled against the Tribe on its NAGPRA claim.[104] In so doing, the court held that, because the project was intended to take place on state-owned land,

> [s]uch a broad reading [of "under federal control"] is not consistent with the statute, which exhibits no intent to apply the Act to situations where federal involvement is limited as it is here to the issuance of a permit. To adopt such a broad reading of the Act would invoke its provisions whenever the government issued permits or provided federal funding pursuant to statutory obligations.[105]

Thus, in the State of Vermont, which has no reservations and where the amount of federally owned land is quite small, the court declined to apply NAGPRA, depriving the Abenakis of any legal avenue to seek recovery of the remains.[106]

3. *Western Mohegan Tribe and Nation of New York v. New York*[107]

In 1986, the State of New York decided to turn Schodack Island, a series of connected peninsulas located on the eastern shore of the Hudson River, into a state park for recreational activities. From 1986 to 1989, the New York State Office of Parks, Recreation and Historic Preservation (OPRHP), the state agency with jurisdiction over the island, developed a master plan for the park that balanced recreational needs with concerns for environmental and cultural resources. The project was not active from 1989 to 1996, at which point the State renewed its interest in the park.[108] In 1999, OPRHP began construction of a bridge and a roadway for public access to the Park.

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104. *Id.* at 252.

105. *Id.*

106. Nichols et al., *supra* note 8, at 34.

107. 100 F. Supp. 2d 122 (N.D.N.Y. 2000), *rev'd in part by* W. Mohegan Tribe & Nation of N.Y. v. New York, 246 F.3d 230 (2d Cir. 2001). The appeals court did not reach the issue of NAGPRA's applicability, as the Tribe had abandoned its NAGPRA claim on appeal. 246 F.3d at 232 n.1.

108. 100 F. Supp. 2d at 124.

In 2000, the Western Mohegan Tribe and Nation commenced a lawsuit against various defendants, including the State of New York, contending that Schodack Island held religious and cultural significance to the Tribe and that it should not be converted into a park. In particular, the Tribe objected because of its belief that one area of the island, south of the planned park site, was the location of a former Mahican village.[109] The Tribe alleged various claims, including violations of NAGPRA, and sought both to enjoin construction of the bridge connecting the mainland to the island and to order the OPRHP to conduct a new archeological survey.[110]

In assessing the Tribe's NAGPRA claim, the district court reiterated NAGPRA's geographical limitations, concluding, "the Island does not fall within the scope of NAGPRA's jurisdiction since it is neither federal nor tribal land within the statute's meaning."[111] The court did acknowledge the possibility of a broader construction of the Act, noting that, "[f]ederal lands are defined in relevant part as 'land other than tribal lands which are controlled or owned by the United States.'"[112] Though the court recognized that "the Corps did issue a permit to Defendants to permit construction," it nevertheless found that the "permit does not transform the Island into federal property or place it under the United States' 'control.'" In conclusion, the court held that "[p]laintiffs' broad reading of the statute is inconsistent with NAGPRA's plain meaning and its legislative history where the language 'federal lands' denotes a level of dominion commonly associated with ownership, not funding pursuant to statutory obligations or regulatory permits."[113] Accordingly, the court denied the Tribe's claim.[114]

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109. The Tribe's status as a non-federally recognized Indian tribe played some role in the Court's reasoning. *Id.* at 128.

110. *Id.* at 125.

111. *Id.*

112. *Id.* (citing 25 U.S.C. § 3001(5) (2000)).

113. *Id.* at 125–26. The court denied the Tribe's claim under the National Historic Preservation Act on similar grounds, holding that the issuance of a permit by the Corps "is insufficient to transform the Park into a federal project." *Id.* at 127.

114. The court also found that there had been no discovery of human remains or funerary objects at that time, so the NAGPRA claim, even if it were to apply, was premature. *Id.* at 126.

4. *Yankton Sioux*:[115] Measured Success

Since the enactment of NAGPRA over twelve years ago, only one published decision applying the Act to the future excavation of Indian remains and/or funerary objects has resulted in success for the tribe bringing suit.[116] But, as this case illustrates, even when a tribe is afforded all possible relief under the Act, NAGPRA's human rights aims remain unsatisfied.

Marked graves in the cemetery of White Swan Church date back as far as 1869. But the oral history of the Yankton Sioux describes the land near the church, including but not limited to the demarked cemetery, as being used as a burial ground for tribal members at least since the late 1800s.[117] Some tribal members claim that the Tribe's oral tradition traces Sioux burials around the Church's landscape to prehistoric times.[118]

Though aware of the existence of the Indian cemetery, the United States filed a petition in 1949 to begin construction of Fort Randall Dam and Lake Francis Case on the site of the cemetery of White Swan Church. As part of the condemnation proceedings, the bodies were to be removed and reburied by the Corps pursuant to a Relocation Plan. However, the Corps failed to effect the removal and reburial of all the bodies in the cemetery.[119] In 1966, after Fort Randall Dam created the lake, a Corps memorandum indicated that a deer hunter reported that graves containing bones had been uncovered at the cemetery and the alternate flooding and drying of the cemetery site had made the outline of the graves easily discernable. As a result, thirty to forty of the graves had been unearthed, and bones were scattered on the ground around them.

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115. Yankton Sioux Tribe v. U.S. Army Corps of Eng'rs, 83 F. Supp. 2d 1047 (D.S.D. 2000).

116. At the time this Article was published, the Yankton Sioux had initiated a separate lawsuit to enjoin construction activities that it contended violated NAGPRA. Though the case has not been fully resolved, the District Court granted a preliminary injunction in favor of the Tribe based on its NAGPRA claim. *See* Yankton Sioux Tribe v. United States Army Corps of Eng'rs, 194 F. Supp. 2d 977, 986 (D.S.D. 2002).

117. *Yankton Sioux Tribe*, 83 F. Supp. 2d at 1048–49.

118. *Id.* at 1049.

119. *Id.*

The Corps removed the bones and reburied them in a new cemetery, but the partially revealed remaining bodies were not removed.[120]

Again in October of 1990, a Corps park ranger investigated the site based on reports from local fishermen that they had observed bones and casket parts along the shoreline. The ranger confirmed the fishermen's report, but the remains were merely covered with white fabric and were not removed. In December 1991, Corps personnel again visited the cemetery where they verified burials that had been missed by the contractor responsible for removal. Some new bones had been exposed since the investigation in 1990. The Yankton Sioux Tribe was apparently notified regarding the remains at that time but no action was taken.[121]

In 1999, another Corps park ranger observed remains and notified the Tribe. Shortly thereafter, the Tribal Council of the Yankton Sioux voted to file suit to stop the excavation of the bodies. Relying on NAGPRA, the Tribe sought time to remove the remains in accordance with its own traditions and customs. Further, the Tribe requested an injunction to prevent the Corps from raising the water level until the Tribe had enough time to complete religious ceremonies, consult with anthropologists, and determine the appropriate method for disposing of the remains. The Corps opposed all of the Tribe's requests for relief.[122]

The district court first considered whether the Corps had appropriately consulted with the Yankton Sioux regarding the intentional discovery and subsequently planned excavation of human remains on federal lands. Although tribal consent was not required for excavation, the Corps had a duty under NAGPRA to: (1) certify receipt of notification of the discovery; (2) take immediate steps, if necessary, to further protect the cultural items, including, as appropriate, stabilization or covering; (3) notify Indian tribes that might be entitled to ownership or control of the items under the Act; (4) initiate consultation with the appropriate tribe(s) regarding the inadvertent discovery; (5) follow the required procedures for excavation which includes refraining from raising and lowering the water levels of the lake over the cemetery for at least thirty days

120. *Id.* at 1050–51.

121. *Id.*

122. *Id.* at 1051–53.

from the date of certification; and (6) ensure that proper disposition of the cultural items was carried out.[123]

The court found the Corps had fulfilled its duties in every respect. Although the Corps did not supply the Tribe with written notice of the discovery, the court nevertheless found that the Tribe had not been prejudiced and refused to grant additional time to protect and collect the remains. The court also determined that the thirty day cessation of activity dates from the time of certification of the discovery of the remains, not thirty days from the time the Tribe actually received notice. Accordingly, the tribe was afforded less time than the thirty days allotted by NAGPRA to devise a plan for disposition of the remains.[124] Because of the difficulty in exhuming some of the bodies, due to frozen ground and uncertain water levels, at the time the court's opinion was published, the Tribe and the government were participating in ongoing negotiations regarding removal of the remains.[125]

C. Analyzing the Excavation Cases

In the first three cases discussed—*Castro Romero v. Becken*, *Abenaki Nation of Mississquoi v. Hughes*, and *Western Mohegan Tribe of New York v. New York*—the tribes were not even consulted regarding the fate of the embedded human remains. As a result, in *Castro Romero*, the Lipan Apache remains and funerary items exhumed during the building of a golf course were turned over to the City for reburial in a state cemetery.[126] And in *Abenaki Nation*,

123. *Id.* at 1055.

124. *Id.* at 1057–58.

125. Kay Humphrey, *Efforts To Preserve Exposed Burial Sites Fuel Court Action*, Indian Country Today, Nov. 1, 2000, at 1. Following the court's decision, the U.S. Army Corps of Engineers (the Corps) filed a motion to dismiss the Tribe's claims for lack of subject matter jurisdiction or for summary judgment. The Corps argued that all of the relief available under NAGPRA had been granted to the Tribe because NAGPRA does not give the court the authority to address long-term protection of remains that may be exposed in the future. In its March 2002 opinion, the court denied the Corps's motions, holding that the Tribe had standing to pursue its claims under NAGPRA because there existed a "live case and controversy" in this action. The court held, further, that the Corps had not clearly satisfied its duty to protect the remains upon the lapse of the thirty day cessation of activity period. Yankton Sioux Tribe v. U.S. Army Corps of Eng'rs, 194 F. Supp. 2d 977, 985–86 (D.S.D. 2002).

126. Castro Romero v. Becken, 256 F.3d 349, 353 (5th Cir. 2001).

although the court admitted the likelihood of uncovering remains was "extremely high," the Tribe was not allowed to participate in decisions concerning their disposition. Instead, any remains, if found, would become property of the State of Vermont, with their fate completely out of the Tribe's hands.[127]

From one standpoint, the respective courts applied NAGPRA correctly in each case. After all, NAGPRA applies only to excavations on federal and tribal lands, and the courts found that there was insufficient federal control to bring the lands within the purview of the Act. Thus, the state and municipal governments were free to dispose of the remains according to their own devices, and without consideration for the tribes' wishes. In light of current American legal principles, the results in these cases do not represent a departure from well-settled legal doctrine.

On the other hand, in each case, the courts had the opportunity to make choices as to the application of NAGPRA and the disposition of the remains, but opted, instead, to construe the Act as narrowly as possible, affording the tribes the least possible protection available under NAGPRA. Curiously, each court examined the tribes' claims without regard for the historical context in which the violations arose. Federal Indian law is informed by and, in fact, can only be understood in the context of the turbulent relationship between Indian tribes and the U.S. government. This relationship is defined by a history of oppression, genocide, and reparations. This historical link has given rise to the judicially-constructed trust responsibility owed by the federal government to Indian nations, which has defined Indian-government relations for the past 200 years.[128] The trust doctrine, in essence, creates a fiduciary duty owed by the government to Indian tribes.[129]

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127. Abenaki Nation of Mississquoi v. Hughes, 805 F. Supp. 234 (D. Vt. 1992).

128. The concept of a federal trust responsibility to Indians evolved judicially. It first appeared in *Cherokee Nation v. Georgia*, 30 U.S. (5 Pet.) 1 (1831). For a complete history of the trust doctrine, see, for example, Mary Christina Wood, *Indian Land and the Promise of Native Sovereignty: The Trust Doctrine Revisited*, 1994 Utah L. Rev. 1471.

129. *See* United States v. Mitchell, 445 U.S. 535 (1980) (applying the trust doctrine to question of the government's liability for its management of Indian natural resources); Seminole Nation v. United States, 316 U.S. 286 (1942) (invoking the trust doctrine in a case involving the application of fiduciary principles to the government in the administration of Indian affairs); Menominee

The *Abenaki Nation* court was the only one to even mention the trust doctrine, and, from the opinion, it would appear that its inclusion was almost inadvertent. In a brief footnote, the court summarily dismissed the Tribe's trust cause of action, holding that the Abenaki Nation's "violation of fiduciary duty claim is extremely nebulous and rehashes arguments that have been previously addressed."[130] The court did so without undertaking even a cursory examination of the historical relationship between the federal government and Indian tribes or of previous applications of the trust doctrine. Nor did the court even contemplate the possibility that the trust doctrine would necessarily be implicated where a federal agency was responsible for facilitating, supervising, and authorizing the project that resulted in the excavation of Indian human remains.

Also conspicuously absent from the three opinions is any discussion of the Indian canons of statutory construction. An extension of the trust doctrine, the Indian canons of construction require that enactments pertaining to Indian affairs are to be liberally construed for the benefit of Indian peoples and tribes.[131] Pursuant to this doctrine, ambiguous terms in federal laws are construed in favor of Indians, which results in broader statutory construction.[132] Construing NAGPRA consistent with the Indian canons has the potential to accommodate many claims by tribes to human remains.[133] Not surprisingly, however, none of the three

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Tribe v. United States, 101 Ct. Cl. 22 (1944) (applying the trust doctrine to the manner in which the United States has managed Indian property).

130. *Abenaki Nation*, 805 F. Supp. at 252 n.26.

131. Trope & Echo-Hawk, *supra* note 10, at 140.

132. The primary canons of construction in Indian law were first developed in cases involving treaties. For a recent application, see *Menominee Tribe v. United States*, 391 U.S. 404 (1968), which held that a 1954 statute terminating the federal trust relationship with the Menominee Tribe did not nullify the treaty rights of tribal members to hunt and fish on the reservation free from state regulation.

133. Because of unequal bargaining power between Indian nations and the federal government, canons of construction have evolved which favor the Indian tribes and by which treaties must be interpreted. The three canons by which all treaties are interpreted are (1) ambiguous expressions must be resolved in favor of the Indian parties concerned; (2) Indian treaties must be interpreted as the Indians themselves would have understood them; and (3) Indian treaties must be liberally construed in favor of Indians. *See, e.g.*, Carpenter, *supra* note 63; Larry Echo-Hawk & Tessa Meyer Santiago, *Idaho Indian Treaty Rights: Historical Roots and Modern Applications*, Advocate (Idaho State Bar), Oct. 2001, at 15.

courts construing NAGPRA and interpreting the phrase "under federal control" even mentioned the Indian canons. In fact, when considering the Act in light of its implementing regulations, the courts found no ambiguity existed at all, and quickly dismissed the tribes' NAGPRA claims.[134]

Even without reference to the trust doctrine or application of the Indian canons, however, due to the unique ownership status of the lands at issue, as well as the role of the federal government in approving the respective projects, each court could have found the lands to be "under federal control."[135] In fact, determining that the lands met this definition would not have been inconsistent with the statute's implementing regulations defining "control" as "lands not owned by the United States but in which the United States has a legal interest sufficient to permit it to apply these regulations without abrogating the otherwise existing legal rights of a person." Nor would such a finding constitute a major departure from the U.S. Department of the Interior's standard for application. Although the Department of the Interior's definition focuses on lands in which the federal government either possesses title or holds a monetary stake, the Department of the Interior nevertheless made clear that each decision regarding "federal control" is to be made on a "case-by-case basis."[136] But, instead of taking a broader view of ownership, each court confined itself to the strictest construction of the Act, as is so

134. A resurgence of judicial activism has brought the viability of the Indian canons into question. In fact, recent Supreme Court decisions indicate that the country's highest court may have abandoned the Indian canons altogether. *See* Chickasaw Nation v. United States, 534 U.S. 84 (2001). As esteemed Indian law scholar David Getches argues, in the past the Supreme Court "regularly employed canons of construction to give the benefit of doubt to Indians, and it deferred to the political branches whenever congressional policy was not clear. Now, these legal traditions are being almost totally disregarded." David H. Getches, *Beyond Indian Law: The Rehnquist Court's Pursuit of States' Rights, Color-Blind Justice and Mainstream Values*, 86 Minn. L. Rev. 267, 268 (2001).

135. To the extent this Article raises issues that implicate the Fifth Amendment's Takings Clause, those arguments are not fully considered here. However, a recent Supreme Court opinion on the subject indicates that application of NAGPRA, even on private land, likely would not violate the Takings Clause. *See* Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency, 533 U.S. 948 (2002).

136. *See* Suagee, *supra* note 44, at 205 (citing Native American Graves Protection and Repatriation Act Regulations, 60 Fed. Reg. 62,134-01, 62,139 (Dec. 4, 1995)).

aptly captured in the court's opinion in *Mohegan Tribe*, where the court held that "'federal lands' denotes a level of dominion commonly associated with ownership, not funding pursuant to statutory obligations or regulatory permits."[137]

While NAGPRA's shortcomings are evident in the first three cases, *Yankton Sioux Tribe v. United States Army Corps of Engineers* raises other concerns. After all, insofar as *Yankton Sioux* was a case about NAGPRA, it represents a victory for the Tribe. Full execution and utilization of the Act's enforcement mechanisms allowed the Tribe all possible relief at the district court level. The Yankton Sioux received notification of the discovery as well as an opportunity to remove the remains of their ancestors who had floated to the water's surface during the government's flooding of Lake Francis Case. They were allowed to rebury their dead with dignity pursuant to their own religious ceremonies and traditions and accompanied by essential funerary objects.[138] Yet, from a human rights perspective, even the victory in *Yankton Sioux* rings hollow.

If *Yankton Sioux* is understood as the watermark for all possible relief allowed under NAGPRA, the question persists: why are courts, when given an opportunity to protect human rights, so reluctant to apply NAGPRA to future excavations? If nothing else, *Yankton Sioux* proves that, even where a tribe is granted relief under the Act, the most significant obstacle a project will face is a thirty day cessation of activity for tribes and federal agencies to devise a plan for recovery of remains. In light of the fact that the projects at issue in both *Abenaki Nation* and *Mohegan Tribe* had been pending for over ten years, the imposition of a thirty day wait appears negligible. And NAGPRA imposes no consent requirement, even in cases involving federal lands. Thus, while the burden on the land owners would have been minimal, the relief for the Tribe, even though clearly less than ideal, would have been significant.

Yet courts consistently reason around NAGPRA's application in the excavation context, despite the overwhelmingly negative

137. W. Mohegan Tribe & Nation of N.Y. v. New York, 100 F. Supp. 2d 122, 125 (N.D.N.Y. 2000). The court denied the Tribe's claim under the National Historic Preservation Act on similar grounds, holding that the issuance of a permit by the Corps "is insufficient to transform the Park into a federal project." *Id.* at 127.

138. *But see* Humphrey, *supra* note 125 (discussing the U.S. Army Corps of Engineers's efforts to avoid its responsibilities pursuant to NAGPRA).

cultural consequences for the tribes. It seems that when Indian cultural survival or political sovereignty is at issue, courts neglect to recount the many instances in American law that reflect the willingness of our judicial system to restructure and overhaul traditional property regimes to avoid undesirable social consequences.[139] For example, when Americans finally rejected racial segregation as a form of social life, Congress enacted public accommodations statutes that limited property owners' power to exclude.[140] Similarly, efforts to bar unreasonable restraints on alienation of property resulted in the emergence of common law property doctrines, such as the rule against perpetuities.[141] And zoning laws demonstrate that, in some situations, the full enjoyment of property rights is only possible by agreeing to certain property limitations.[142]

Property regimes, like all other social spheres of life, are regulated and defined in accordance with society's values.[143] The courts' treatment of NAGPRA in these cases reflects the elevated status of individual property rights that exists in the classical property model. The courts parsed out entitlements and granted to the individual property owners possession of, and title to, all embedded property.[144] But, as these cases demonstrate, particularly when the property rights and human rights of indigenous communities are at stake, entitlement cannot and should not always be defined by reference to ownership alone.[145]

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139. *See* Jane B. Baron, Review Essay, *The Expressive Transparency of Property*, 102 Colum. L. Rev. 208 (2002).

140. *Id.* at 209.

141. *Id.* at 208–09, 215–16.

142. *See* Tsosie, *supra* note 35, at 1301.

143. *See* Joseph William Singer, The Edges of the Field: Lessons on the Obligations of Ownership 10 (Beacon Press, 2000) (2000) [hereinafter Singer, Edges of the Field]; Joseph William Singer, *Property and Social Relations*, *in* Property and Values: Alternatives to Public and Private Ownership 20 (Charles Geisler & Gail Daneker eds., 2000) [hereinafter Singer, *Property and Social Relations*].

144. Patty Gerstenblith, *The Public Interest in the Restitution of Cultural Objects*, 16 Conn. J. Int'l L. 197, 229 (2001).

145. *See* Baron, *supra* note 139, at 217.

IV. HUMAN RIGHTS AND PROPERTY RIGHTS: LEARNING FROM *AWAS TINGNI*

While often perceived as too remote or inaccessible to protect tribes' interests in cultural survival effectively, international law, in fact, provides a workable framework for the protection of indigenous peoples' rights.[146] For example, under most major international instruments that address human rights, property ownership is often identified as a basic human right.[147] Article 21 of the American Convention on Human Rights guarantees the right to use and enjoy one's property free from deprivation of property without compensation, and the Universal Declaration on Human Rights enumerates rights to property ownership. Other international human rights documents are in accord.[148]

Property rights are intimately tied to human rights. Thus, the deprivation of property rights has come to be seen, in itself, as a serious human rights abuse.[149] The ability to hold property and wield power is essential to the exercise of other basic human rights.[150] Property rights empower groups to function as "economic actors," which is essential to self-determination and sovereignty.[151] This

146. Rebecca Tsosie, Preserving Tribal Cultural Heritage Through Cultural Property Laws 239 (2002) (draft conference paper presented at the Federal Bar Conference on Indian Law, on file with author).

147. American Convention on Human Rights, *opened for signature*, Nov. 22, 1969, art. 21, O.A.S.T.S. No. 36, at 7, 1144 U.N.T.S. 143, 150 (entered into force July 18, 1978); *Universal Declaration on Human Rights*, G.A. Res. 217A, U.N. GAOR, 3d Sess., art. 2, U.N. Doc. A/810 (1948).

148. *See e.g.*, American Declaration of the Rights and Duties of Man, O.A.S. Res. XXX, 9th Int'l Conference of American States, art. 23, O.A.S. Official Record, OEA/Ser.L/V./II.23, doc.21 rev.6 (1948), *reprinted in* Basic Documents on Human Rights 488, 492 (Ian Brownlie ed., 3d ed. 1992) (asserting the right of every person "to own such private property as meets the essential needs of decent living and helps to maintain the dignity of the individual and the home"); Lara L. Manzione, *Human Rights in the Kingdom of Nepal: Do They Only Exist On Paper?*, 27 Brook. J. Int'l L. 193, 196 (2001).

149. Kurshan, *supra* note 6, at 355; *see* Jay M. Vogelson, *Women's Human Rights*, 30 Int'l Law. 209, 210 (1996) ("Generally, the right of an individual to own some property and not be deprived of it arbitrarily is recognized as a human right.").

150. Kurshan, *supra* note 6, at 357; *see* Barzel, *supra* note 6, at 4 ("The distinction sometimes made between property rights and human rights is spurious. Human rights are simply part of a person's property rights.").

151. Kurshan, *supra* note 6, at 357.

phenomenon operates even more significantly with regards to indigenous peoples, whose culture, religion, and political autonomy are particularly linked to the preservation of communal property and a traditional tribal land base. International instruments, too, reflect the unique status of indigenous peoples in relation to the land. The International Labor Organization's Convention on Indigenous and Tribal Peoples of 1989, for example, affirms the specific right of ownership and possession of indigenous peoples to the lands they have traditionally occupied.[152] In this regard, the contemporary international human rights movement has recognized indigenous peoples as special subjects of concern.[153]

Although the battle to maintain a traditional land base differs in some respects from efforts to preserve cultural property, in both cases indigenous peoples have struggled with Western legal systems, which devalue, if not completely ignore, communal ownership. Both areas of collective tribal ownership serve as a source of Indian cultural integrity, self-determination, and sovereignty. But indigenous peoples have had difficulty with communal property claims because Western law often fails to acknowledge the common ownership of property.[154] Additionally, communal ownership and collective tribal power have long been viewed as a threat to mainstream society.[155] In fact, many of the destructive assimilationist policies imposed on Indians in the United States were the result of the government's desire to destroy collective Indian ownership and group identity.[156]

Rights to cultural property and a traditional land base are similar in another important respect as well. In regards to indigenous peoples, property rights are often sought—such as in the NAGPRA excavation cases—in circumstances in which indigenous peoples do not hold title to the property they seek to obtain. Because ownership in Western law is virtually always determined according

152. *See* Anaya, *supra* note 30, at 7.

153. S. James Anaya & Robert A. Williams, Jr., *The Protection of Indigenous Peoples' Rights Over Land and Natural Resources Under the Inter-American Human Rights System*, 14 Harv. Hum. Rts. J. 33 (2001).

154. Hutt, *supra* note 28, at 39.

155. *See* Anaya & Williams, *supra* note 153, at 44 ("[T]raditional [indigenous] land tenure generally is understood as establishing the collective property of the indigenous community and derivative rights among community members.").

156. *See* Tsosie, *supra* note 35, at 1294–96.

to title, this has been a great source of mass divestiture of property from Indian peoples since the point of European contact.[157]

Accordingly, indigenous peoples' efforts to protect their traditional lands provide a constructive and informative paradigm in the struggle to preserve cultural property. Despite facing great challenges in this regard under American law, a communal right to indigenous peoples' traditional lands is now finding recognition in international law. In the Fall of 2001, the Inter-American Court on Human Rights decided the groundbreaking *Case of the Mayagna (Sumo) Awas Tingni Community v. Nicaragua*. The case revolved around efforts by the Awas Tingni and other indigenous communities of Nicaragua's Atlantic Coast to demarcate their traditional lands and to prevent logging in their territories by a Korean company under a government-granted concession.[158] The Awas Tingni filed a petition with the Inter-American Commission on Human Rights (Commission), charging Nicaragua with failure to take steps necessary to secure the land rights of the Mayagna (Sumo) indigenous community of Awas Tingni and of other Mayagna and Miskito indigenous communities in Nicaragua's Atlantic Coast region.[159]

Evidence presented before the court included the oral testimony of members of the Awas Tingni community. Jaime Castillo Felipe, member of the Mayagna ethnic group, and lifetime resident of Awas Tingni, testified regarding the Tribe's ownership of the disputed territories. In explaining why he believed that the Tribe owned the land, he stated that they "have lived in the territory for over 300 years and this can be proven because they have historical places and because their work takes place in that territory."[160] Felipe explained that the community, as with most traditional indigenous societies, held land and resources in common and are occupied and utilized by the entire community.[161] Other tribal members testified similarly regarding the significance of the land to the religion and

157. *See id.*

158. Anaya & Williams, *supra* note 153, at 37–38.

159. *Id.*

160. The Mayagna (Sumo) Indigenous Community of Awas Tingni v. Nicaragua, 79 Inter-Am. Ct. H.R. (ser. C) (Aug. 31, 2001), ¶ 83(a), *available at* http://www.corteidh.or.cr/seriecing/serie_c_79_ing.doc.

161. *Id.* ("Nobody owns the land individually; the land's resources are collective.").

cultural survival of the Awas Tingni people and their conceptions of collective ownership of the land and all the resources it encompasses:

> The territory of the Mayagna is vital for their cultural, religious, and family development, and for their very subsistence, as they carry out hunting activities (they hunt wild boar) and they fish (moving along the Wawa River), and they also cultivate the land. It is a right of all members of the Community to farm the land, hunt, fish, and gather medicinal plants; however, sale and privatization of those resources is forbidden.[162]

Despite the Tribe's intimate relationship with the land—which evidence demonstrated is sacred and beautifully symbiotic—it was up to the court to determine who owned the lands on which the Tribe resided. The Awas Tingni claimed they had occupied and, thus, quasi-owned the lands for hundreds of years, but could only present oral history as evidence of their presence on those lands prior to 1990.[163] In its factual findings, the Inter-American Commission had determined that the community had "no formal title nor any other instrument recognizing its right " to the lands it claimed.[164]

Nevertheless, in an unprecedented decision, the court ruled that the State violated, among others, the right to property as contained in Article 21 of the American Convention on Human Rights to the detriment of the members of the Mayagna (Sumo) community of Awas Tingni, and required the State to adopt measures to create an effective mechanism for official recognition, demarcation and titling of the indigenous community's properties.[165] In particular, the Court acknowledged the Awas Tingni's communal form of property in the land and recognized the importance of the protection of this right to ensure the Community's cultural survival:

> Indigenous groups, by the fact of their very existence, have the right to live freely in their own territory; the close ties of indigenous people with the land must be recognized and understood as the fundamental basis of their cultures, their spiritual life, their integrity, and their economic survival.

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162. *See, e.g.*, Starr v. Starr, 1999 WL 1610554 (Scot. O.H. Apr. 8, 1998).

163. The Mayagna (Sumo) Indigenous Community of Awas Tingni v. Nicaragua, 79 Inter-Am. Ct. H.R. (ser. C) (Aug. 31, 2001), ¶ 83(c), *available at* http://www.corteidh.or.cr/seriecing/serie_c_79_ing.doc.

164. *Id.* ¶ 104(*l*).

165. *Id.* ¶ 153.

> For indigenous communities, relations to the land are not merely a matter of possession and production but a material and spiritual element which they must fully enjoy, even to preserve their cultural legacy and transmit it to future generations.[166]

Virtually every aspect of *Awas Tingni* is remarkable. While it may be dismissed as an aberration insofar as it deviated from Western property ideals in granting the community the right to their continued existence on their traditional lands as tribal peoples, it serves as a model of possibilities. Drawing from oral history and demonstrating a belief in the right of indigenous peoples to exist, *Awas Tingni* proves that well-settled legal principles can give way to indigenous peoples' fight for survival, even when human rights and Western property regimes conflict.

V. ENTITLEMENT, PROPERTY, AND OWNERSHIP

A. Considering New Models

The "traditional" or "classical" model of property upon which Anglo-American property law is based rests on the notion "that property rights identify a private owner who has title to a set of valued resources with a presumption of full power over those resources."[167] The classical view assumes consolidated rights and a single, identifiable owner of those rights who is identifiable by formal title rather than by information relations or moral claims. It also assumes rigid, permanent rights of absolute control conceptualized in terms of boundaries that protect the owner from non-owners by granting the owner the absolute power to exclude non-owners, and the full power to transfer those rights completely or partially on such terms as the owner may choose.[168] As such, the current property system is designed only to protect those with property, not those without it.[169]

Judicial application of the classical model of property is responsible for a myriad of legal decisions that either devalue or

166. *Id.* ¶ 104(n).

167. Singer, *Property and Social Relations*, *supra* note 143, at 4.

168. *Id.* at 5.

169. *Id.*

altogether disregard the rights of indigenous peoples.[170] In this respect, many judicial opinions concerning Indians that have diminished tribal rights, particularly in regards to Indian efforts to prevent the destruction of sacred sites or thwart intrusive land development, might be explained as the application of the historically austere Anglo-American right of private property, which includes a belief in the owner's right to control property uses as the owner wishes.[171] Courts adhering strictly to this model grant legal preference to private property owners above all other interests, often equating "title" with "entitlement." This has been the case even when the federal government holds title, and ostensibly, has a greater obligation to consider the interests of society's members.[172]

The application of a traditional property model by courts is illustrated by NAGPRA. For example, the Department of the Interior's definition of "federal control," as it is applied in the context of NAGPRA, operates within a very narrow framework, one obviously rooted in the Anglo-American system. Under the guidelines promulgated by the Department of the Interior, "control" is equated with title, ownership, or evidence of some other form of pecuniary stake.[173]

The classical property model is not without criticism. Contemporary scholarship posits that the classical property model is distorted and misleading because it is descriptively inaccurate and normatively flawed.[174] In particular, because state regulation and state recognition actually give rise to property rights, it is wrong, some scholars argue, to envision property and regulation as

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170. *See, e.g.*, Lyng v. N.W. Indian Cemetery Prot. Ass'n, 485 U.S. 439 (1988) (holding that the Free Exercise Clause did not prohibit the government from certain kinds of land development despite tribal interests); Howard J. Vogel, *The Clash of Stories At Chimney Rock: A Narrative Approach to Cultural Conflict over Native American Sacred Sites on Public Land*, 41 Santa Clara L. Rev. 757, 789 (2001) ("*Lyng* is the most recent case in a very old story about the coercive transformation of Native American understandings of land to conform to the Anglo-American understanding of land familiar to students of property law.").

171. *See* Tsosie, *supra* note 35, at 1304–05.

172. *See Lyng*, 485 U.S. at 453 (concluding "[w]hatever rights the Indians may have to the use of the area, however, those rights do not divest the Government of its right to use what is, after all, its land"); Vogel, *supra* note 170, at 789.

173. 43 C.F.R. § 10.12 (2002); *see* Suagee, *supra* note 44, at 205.

174. Singer, *Property and Social Relations*, *supra* note 143, at 5.

opposites, rather than interrelated components of society's recognition of ownership.[175] In practice, an owner's use of property is limited (or should be) when such use may adversely affect others or society at large.[176] Property has always been, then, not "a domain of freedom into which regulation intrudes. Rather, property is constituted by and suffused with regulation."[177]

In response to perceived social injustice fueled by the classical model of property, modern scholars and critics of the classical system have devised new theories of property and entitlement, which exemplify a renewed interest in the obligations of owners.[178] From this perspective, "[e]ach stick in the bundle of rights that describes property ownership is defined, directly or indirectly, in terms of the relationship between the owner and others."[179] Because only the recognition of property rights by society gives property meaning and definition, this scholarship seeks to reconceptualize property as a system of social relations.[180]

Although variations on this property model are evidenced throughout modern legal scholarship, property rights theorist Joseph Singer first articulated and advocated for the social relations theory of property. Singer's theory asserts that property is not merely an individual right, but is, in fact, "an intensely social institution."[181] As such, under the social relations model, strict individualism is tempered by significant communal responsibility.[182] The model requires balance between the rights and obligations of property owners. According to Singer, property rights must not be viewed alone in a vacuum, but must achieve a delicate balance: "On one side are claims of property; on the other side are claims of humanity. On

175. Baron, *supra* note 139, at 217–18.

176. *See* Scafidi, *supra* note 32.

177. Baron, *supra* note 139, at 211.

178. *See, e.g.*, Tsosie, *supra* note 35, at 1308–09 (arguing for the application of an "intercultural understanding of property" which would accommodate indigenous worldviews and values).

179. Scafidi, *supra* note 32, at 797.

180. *See* Tsosie, *supra* note 35, at 1301.

181. *See* Singer, Edges of the Field, *supra* note 143, at 20.

182. *Id.* at 3.

one side are claims to rights; on the other side are acknowledgments of responsibilities."[183]

It is through the imposition of obligations, Singer argues, that balance is created in the social system. If property systems grant ownership rights to individuals but do not impose corresponding obligations and limitations, relationships among rights holders are skewed and unbalanced. Because the exercise of rights by one affects others, Singer's theory maintains that legal rights:

> must be shaped to create an environment that will allow individuals both to obtain access to property and to enjoy their legal rights without unreasonable interference by others. This means that the rights of each must be curtailed to ensure an environment that allows all others to exercise their rights fully. Rights must be limited to protect rights.[184]

Singer contends that property is necessary to exercise liberty and freedom. Thus, property systems should be designed to protect both those who have property and those who do not.[185]

Rather than envisioning the imposition of obligations on property owners as inhibiting freedom, Singer's model functions on the premise that greater restrictions and limitations on property owners actually promote liberty. Singer posits that possession of property is essential for individuals and groups to become economic actors and fully participate in society because the recognition of property, even if through regulation, promotes liberty and equality for all peoples.[186]

Thus, Singer concludes, the "paradox" of property is the tenuous relationship between ownership and obligation. As people living together in communities, the fate of every person is tied to the fate of others.[187] It is this relationship among people within the

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183. *Id.* at 10.

184. Singer, *Property and Social Relations*, *supra* note 143, at 20.

185. Singer, Edges of the Field, *supra* note 143, at 27 (quoting Jeremy Waldron as stating that "[p]eople need private property for the development and exercise of their liberty; that is why it is wrong to take all of a person's private property away from him, and that is why it is wrong that some individuals should have no private property at all").

186. *Id.* at 17.

187. *Id.* at 20.

context of laws that gives property value.[188] Singer's model "reconceptualizes property as a social system composed of entitlements that shape the contours of social relationships. It involves, not relations between people and things, but among people."[189]

B. NAGPRA Excavation Redux—Possibilities in Light of New Models

Models that balance property owners' rights with their obligations facilitate a shift towards less rigid property conceptions necessary to protect the human rights of indigenous peoples. If property is, in essence, a social system, then it creates a "web of communal rights and responsibilities."[190] In such a system, title does not always give rise to entitlement.[191] At a minimum, obligations accompany ownership, and responsibilities arise out of the exercise of rights.

Mistakenly, a common response to NAGPRA is the assumption that application of more fluid property conceptions will result in Tribe's having "veto-power" over any project, even those occurring on private land, if Indian remains are discovered. As this paper has demonstrated, particularly in light of the court's holding in *Yankton Sioux*, that is certainly not the case. Construction on the dam and the lake at issue in *Yankton Sioux Tribe v. United States Army Corps of Engineers* began in 1950. In addition to flood control and generation of hydroelectric power, the project provides navigation support and irrigation, while subsidizing the municipal water supply.[192] Moreover, the Indian cemetery had been under water for over forty years by the time the Tribe filed the lawsuit. Thus, abandoning the project would be illogical, if not impossible. Nor is that result mandated by application of the social relations theory of property. On the contrary, Singer's theory is meant only to encourage a reconsideration of entitlement when allocating the rights and

188. *Id.* at 82.

189. Singer, *Property and Social Relations*, supra note 143, at 8.

190. Scafidi, *supra* note 32, at 797.

191. Baron, *supra* note 139, at 217.

192. *See* U.S. Army Corps of Engineers, Fort Randall Dam/Lake Francis Case, *at* http://www.nwo.usace.army.mil/html/Lake_Proj/fortrandall/welcome.html (last visited Oct. 10, 2002).

responsibilities of ownership. Thus, in *Yankton Sioux*, application of Singer's theory would merely have required a contemplation of the rights and responsibilities of the real property holders vis-à-vis the Tribe's claim to the human remains and other embedded property. One possible result, then, would have been the creation of an excavation plan that allowed the Yankton Sioux sufficient time to exhume the bodies and funerary objects in a manner consistent with their own customs and tribal beliefs.[193]

Accordingly, the social relations theory of property, which is meant only to provide an alternative framework through which rights, ownership, and entitlements are viewed, is not intended to redistribute property or trample on the rights of title holders. To the contrary, as Singer explains: "This model suggests that property which is used in a way that affects the interests of non-owners or the community at large can be regulated in a way that responds to public policy concerns without impinging illegitimately on the owner's property rights."[194]

In this regard, even if courts were to contemplate the social relations theory when considering NAGPRA's applicability, it would be possible to do so while preserving the title holder's property rights. After all, in the excavation context, NAGPRA, at best, allows for notification, consultation, and the right of Tribes to remove their ancestors properly and prepare them for reburial. It does not serve as a trump card for tribes to exercise control over lands to which they do not possess title.

Even with these limitations in mind, however, because the social relations theory of property envisions property rights beyond those which are dictated by a strict adherence to legal title analysis, its contemplation by the courts in deciding the excavation cases would have allowed them greater latitude to apply NAGPRA. Undoubtedly, had the courts contemplated non-traditional models of property, they would have had greater flexibility in considering factors other than legal title in allocating rights to the embedded human remains and funerary objects. As this Article has demonstrated, a finding that the land was, in fact, "under federal control" was plausible in each case. But the courts' failure to consider

193. Sadly, even though NAGPRA was applied, that result was not reached. *See* Humphrey, *supra* note 125, at 1.

194. Singer, *Property and Social Relations*, *supra* note 143, at 7.

the responsibilities—rather than merely the rights—of the property owners facilitated a finding that NAGPRA did not apply.

Of the excavation cases, *Castro Romero v. Becken* demonstrates the most extreme departure from the social relations theory of property. There, the court looked only at the rights of the title holders, and a finding that the land was "municipal rather than federal or tribal" allowed the court to ignore the responsibilities that necessarily followed from the real property owner's rights. Had the court viewed the plaintiff's claims through the lens of the social relations model, perhaps it would have more thoughtfully contemplated the title holder's responsibility to the Lipan Apache as a people, the living descendants of those who had died, and the rights of the deceased themselves.[195] Ironically, the court allowed the City—based solely on its title to the land—to exhume the bodies and rebury the remains in its own cemetery. In so doing, the court confirmed the City's rights, but not responsibilities, to the human remains.

Awas Tingni is instructive here as well. Although the court did not expressly apply the social relations theory, it rejected a strictly title-based analysis in determining the respective rights of the *Awas Tingni* Community vis-à-vis the State. The Court expressly held that the Community's own conceptions of ownership must be taken into account in determining whether a violation of the right to property existed, and, in so doing, concluded that the Community's lack of real title to the property did not preclude the Community's continued right of occupancy.[196] The Court's willingness to look beyond the issue of title and consider other factors—such as the ambiguous ownership status of the lands occupied by but not "owned" in the traditional sense by the Awas Tingni Community—allowed it the flexibility to accommodate the property rights and human rights of the Community. Had the Court taken the same strict title-based approach as the courts in the excavation cases, it likely would have found no ambiguity existed at all, and the Awas Tingni's lack of proof of ownership over their ancestral lands would have precluded the

195. Although the Fifth Circuit's opinion does not fully discuss the issue, it is clear that the federal district court denied Castro Romero's attempt to bring this suit on behalf of the Lipan Apache people. Accordingly, this suit was brought by Castro individually. Castro Romero v. Becken, 256 F.3d 349, 354 (5th Cir. 2001).

196. The Mayagna (Sumo) Indigenous Community of Awas Tingni v. Nicaragua, 79 Inter-Am. Ct. H.R. (ser. C) (Aug. 31, 2001), ¶ 151, *available at* http://www.corteidh.or.cr/seriecing/serie_c_79_ing.doc.

Tribe's claims to the land and their continued existence.

Likewise, the courts in the excavation cases could have taken the Department of the Interior's mandate that each situation be treated on a case-by-case basis and recognized the ambiguous ownership status of the lands and property at issue. Instead, the courts failed to thoughtfully question the level of control exerted by the federal government, and U.S. Army Corps of Engineers in particular, over the projects. In so doing, they failed to undertake the more thorough and, indeed, more complicated analysis that would have been required to conclude that NAGPRA was applicable.

I do not mean to suggest, however, that consideration of new property models will ensure NAGPRA's applicability in every circumstance. To the contrary, the U.S. Army Corps of Engineers had various levels of participation in the three projects at issue in the excavation cases and unique facts existed as to each of the tribes' claims. While the facts of each case likely could have supported a finding that the lands were "under federal control" and, therefore, subject to NAGPRA, that analysis is one that must be undertaken by the trial court. Nevertheless, the courts' decisions indicate an unwillingness to view the claims of the tribes, and the status of the lands at issue, beyond the confines of the classical property model. Consideration of new models, then, while not guaranteeing different outcomes, would have at least opened up new possibilities for creating a greater balance between the obligations of property owners and the rights of indigenous peoples.

C. Broader Applications: Beyond the Excavation Cases

Disputes over property between non-Indians and Indians rage on in the modern United States. Indigenous property claims—often based on conceptions of communal ownership, preexisting occupation, or political sovereignty—are foreign to non-Whites, and, thus, are often diminished or disregarded when contested by individual owners. Conflicts arise almost daily as indigenous peoples attempt to reclaim ancestral homelands or preserve sacred sites. These struggles are particularly compelling in a time in which Americans are increasingly driven to acquire more and greater material goods, an ethos signified by popular culture's quasi-deification of individual property rights.

For example, Congress recently enacted the Sand Creek Massacre National Historical Site Establishment Act of 2000, which

will establish a permanent memorial at the site of the 1864 massacre of the Cheyenne and Arapaho Indians near Eads, Colorado, by members of the local government's militia. The legislation contemplates the demarcation of an area of approximately 12,480 acres along Sand Creek in Kiowa County, Colorado, to serve as the boundary of the historic site. As part of the Sand Creek Massacre National Historical Site Establishment Act, the National Park Service is authorized to negotiate with "willing settlers" for property within the boundary.[197]

Completion of the memorial requires acquisition of 1400 acres containing numerous cultural and historic sites that are currently held by a private land owner. The owner, although claiming he would like to see the land be used for the memorial, has placed his land up for public sale because he was not able to strike a deal with the National Park Service, which offered $332,000 for the property. The rancher has requested $1.5 million for the property, five times the offered price and more than five times the average per-acre land value in Kiowa County.[198] Thus, completion of the memorial was stymied as the tribes and the National Park Service negotiated for acquisition of the sacred lands.[199]

In another land dispute, the Eight Northern Pueblo Council (the Council) is fighting to block expansion of a new, unplanned road that was built along the boundaries of the Petroglyph National Monument, a site considered sacred to dozens of tribes in the Southwest.[200] The 3000-year-old petroglyphs are the work of the Anasazi people, ancestors of the nineteen Indian Pueblos in New Mexico, and represent visions and messages to the spirit world left by indigenous ancestors. The area has long been used for prayers, offerings, and gathering medicinal plants. The road, which is being funded by a private land developer, was built without the knowledge

197. Bryan Stockes, *Sand Creek Historic Landmark a Reality*, Indian Country Today, Nov. 8, 2000, at 1.

198. David Melmer, *Owner Stalls Sand Creek Historic Site*, Indian Country Today, Mar. 19, 2002, at B1.

199. Before publication of this Article, a private donor bought the land needed for completion of the Sand Creek Massacre Memorial and turned it over to the Tribe. David Melmer, *Sand Creek Returned to Rightful Owners*, Indian Country Today, May 6, 2002, at B1.

200. Valerie Taliman, *Mayor "Sneaks" In Petroglyph Road*, Indian Country Today, Sept. 16, 2002, at 1.

or input of local tribes and a variety of other interested groups, including the National Park Service, which manages the site. The road was quietly authorized by the Mayor of Albuquerque, New Mexico and was, literally, built overnight. Though initially claiming the road was to be used temporarily to ease traffic delays, the Mayor now concedes the current plan is to expand the road to a full artery with bike lanes that will run right near the sacred site. Many fear additional traffic will lead to further defacement and desecration of the ancient petroglyphs.

The Council is considering legal action to protect the area. The private development company that owns the land has no legal duty to protect or preserve the adjacent sacred site. As a result, those opposing further development will likely find no relief in the courts.

The battle for completion of the Sand Creek Massacre Memorial and the struggle to protect the sacred petroglyphs of the Anasazi signify the types of contemporary property conflicts that persist between Indians and non-Indians. The disputes are complicated, and satisfactory resolutions are not easily achieved. It is clear, however, that Indians must attempt to build public awareness of the "profound historical meanings, and wider cultural and artistic significance of Native American cultural landscapes."[201] Several Indian scholars have suggested that storytelling may be the best way to convey basic Indian values and help close the gap between Anglo-American law and the Indian worldview.[202] However that goal is reached, it is clear that indigenous peoples' perspectives regarding conceptions of entitlement, property, and ownership must be addressed if there are to be any remedies daring enough to encompass the complex history and claims of indigenous peoples.

VI. CONCLUSION

> All the laws and armies in the world cannot protect the earth as fully as the joy people take in discovering and honoring what is sacred. All of the laws and armies in the

201. Suagee, *supra* note 44, at 224 ("There is a resonance in our stories that I believe will come back to us in a good way. Our stories may be some of the best means we have to animate federal agency land management decisionmaking processes so that federal decisions reflect some of our values.").

202. Barsh, *supra* note 69, at 153–54.

> world cannot protect the earth fully if humans are empty and believe that nothing is sacred.[203]

The human rights of indigenous peoples will never be fully recognized or restored as long as individual property rights are exalted and analyzed in a vacuum where they exist only as "entitlements," without the imposition of duties in the social system. As this article demonstrates, without incorporation of indigenous perspectives in the construction of property paradigms, non-traditional property conceptions will never inform the legal regimes responsible for recognition and protection of the property rights of Indian peoples.

It may be impossible for indigenous peoples to ever fully convey to non-Indians the historical power and cultural meaning inherent in Indian cultural property. Communal, land-based peoples conceive of and interpret ownership in ways that are foreign to, and diminished by, Anglo-American property regimes. Nevertheless, NAGPRA provides a framework for a dialogue between Indians and non-Indians in the protection of cultural property.[204] Although limitations on NAGPRA, both in its construction and application, are readily apparent, NAGPRA has at least begun to address complex issues of self-determination and the survival of political sovereignty through the preservation of cultural identity. In many ways, NAGPRA marks the inception of a genuine, ongoing dialogue between Indian tribes and governmental entities.[205]

Moreover, NAGPRA has served as an invaluable tool in educating non-Indians in the brutal history of Indian peoples, the significance of cultural property to Indian cultural survival, and the importance of reconsidering entitlement as it relates to indigenous peoples' continued existence. As Elizabeth Tatar, Vice President of the Bishop Museum in Honolulu, Hawaii, explained regarding the enactment of NAGPRA:

> We were fearful of Native Hawaiians and Native Americans, and of spirituality. We did not truly understand that the human remains and objects in our collections were living to those that claimed them and that Native

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203. Erica-Irene A. Daes, *The Indispensable Function of the Sacred*, 13 St. Thomas L. Rev. 29, 31 (2000).

204. Hutt & McKeown, *supra* note 21, at 379.

205. Nichols et al., *supra* note 8, at 257.

> Hawaiians and Native Americans know how to take care of these remains and objects better than we could. Above all it was difficult for us to let go. We saw the loss of knowledge and history, but not the loss of spiritual balance and wellbeing Hawaiians saw. . . . We are indeed ready to face the present head-on by acknowledging the past in order to clear the way for a bright, productive future.[206]

NAGPRA has laid the groundwork for recognition of, respect for, and preservation of indigenous peoples' cultural property and their continued existence. But law, like people, must be open to new possibilities and innovative thinking to ensure the human rights and cultural survival of all of society's groups.

206. Elizabeth Tatar, *Introduction* to Implementing the Native American Graves Protection and Repatriation Act, at ix, ix (Roxanna Adams ed., 2001).

Document Content(s)

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, DC 20426
March 19, 2020

OFFICE OF ENERGY PROJECTS

Project No. 14861-001 – Washington
and Oregon
Goldendale Energy Storage Project
FFP Project 101, LLC

VIA FERC Service

Erik Steimle
Rye Development
220 NW 8th Ave.
Portland, OR 97209

Subject: Staff Comments on the Draft License Application for the Goldendale Energy Storage Project

Dear Mr. Steimle:

On December 16, 2019, FFP Project 101, LLC filed a draft license application with the Federal Energy Regulatory Commission for the Goldendale Energy Storage Project No. 14861-001. We provide our comments in the attached Appendix A. When you prepare your final license application, please provide the information we request in Appendix A.

If you have any questions regarding this letter or the contents of the final license application, please contact Mike Tust at (202) 502-6522, or via email at michael.tust@ferc.gov.

Sincerely,

David Turner, Chief
Northwest Branch
Division of Hydropower Licensing

Attachment: Appendix A – Comments on the Draft License Application for the Goldendale Energy Storage Project No. 14861-001

APPENDIX A

COMMENTS ON THE DRAFT LICENSE APPLICATION FOR THE GOLDENDALE ENERGY STORAGE PROJECT NO. 14861-001

Exhibit A

1. Per section 4.41(b)(1) of the Commission's regulations, please include in your Exhibit A the dimensions and acreage for the proposed powerhouse, step-up transformer caverns, powerhouse substation and switchyard, and interconnection substation.

2. Per section 4.41(b)(4) of the Commission's regulations, please include in your Exhibit A the number, length, voltage, and interconnections of any primary transmission lines and indicate whether they are existing, modified, or newly constructed segments. For any modified segments (such as the proposed relocated route around the south side of the lower reservoir), please provide details on the number, location, length, and voltage of transmission lines and the number and type of transmission towers to be relocated. For the transmission line segment that would aerially cross the Columbia River as part of the Bonneville Power Administration (BPA) existing right-of-way, please clarify whether you intend to construct a new transmission line or use the existing BPA towers.

3. Page 10 of Exhibit A states that of the three project alternative configurations described on page 5 of the Exhibit A, you propose alternative 2 which includes an active storage volume of 7,100 acre-feet (AF) allowing for approximately 12 hours of continuous run time at full generating output. However, the description of alternative 2 on page 10 does not match the description of alternative 2 on page 5 which indicates 11,800 AF of active storage and approximately 20 hours of continuous run time. In your final license application, please correct this discrepancy.

4. It is unclear from the information presented in your draft license application whether any new access roads are proposed for the project. The Pre-Application Document included a proposal to construct a total of 18,200 feet of new permanent access roads, including a new 10,000-foot road to access the upper reservoir site and a new 7,000-foot road to access the lower reservoir site. Exhibit A of the draft license application does not describe any access roads; however, section 2.10 of the supporting design report (Appendix F of the draft license application) suggests that existing roads (rather than new roads) would be utilized for accessing the upper and lower reservoir sites. The supporting design report also states that access roads would be improved as necessary to accommodate construction vehicles (i.e., making sure roads are 30 feet wide to allow for two construction vehicles to travel in opposite directions, ensuring maximum grade of 10 percent, and ensuring minimum curve radius of 100 feet, etc). Further, your Exhibit F design drawings identify access roads leading to the upper and lower reservoir

sites (both labeled as non-project features on Exhibit F-1) as well as certain other roads labeled as a "perimeter road along toe of embankment" in your Exhibit F-4 drawing of the upper reservoir site and another road labeled as "access road to the top of the dam" in your Exhibit F-6 drawing showing the lower reservoir site. Both roads appear to be enclosed within the project boundary. In your final license application, please clearly indicate the length and easement width of all existing, modified, and new road segments that would be used to access project facilities and construction laydown areas and how these roads would be modified as well as how they would be maintained over the term of any license issued. If you propose any existing, modified, or new access road segments as project features, please clearly describe these segments in your Exhibit A and ensure they are enclosed within the project boundary in your Exhibit G maps and accurately labeled in your Exhibit F design drawings. For roads that are to be utilized for project purposes but are not currently proposed as project features, please explain why these facilities should remain outside the project boundary (e.g., mixed use roads not specifically utilized for project access, etc.). Remember, any roads, except public roads that serve multiple uses, that are needed for project operation and maintenance should be identified as project roads and included in the project boundary.

5. Page 4 of Exhibit A states that water for initial fill and periodic refills would be purchased from Klickitat Public Utility District (KPUD) using a KPUD-owned conveyance system and municipal water right but provides no further details on these facilities. Page 14 of Exhibit E states that KPUD's existing conveyance system withdraws surface water from KPUD's intake pool which is hydrologically-connected to the Columbia River and page 26 of the supporting design report in Exhibit F states that "a new project water conveyance line will connect to an existing KPUD water distribution line, which will supply water to the project with sufficient pressure and flow rate." However, you do not provide any details about this new water conveyance line. We need to identify all facilities that are necessary for operation and maintenance, including those needed to convey water for reservoir filling. Therefore, please include in your final license application a description of all water conveyance facilities that would be used to convey water from the Columbia River to the lower reservoir (e.g., existing culverts, existing intake pool, existing pumps, and the length, dimensions, and physical configurations of all existing and proposed pipes and valves, etc.). Please describe your methods for installing your new project water conveyance line and how those facilities would connect to the existing KPUD-owned conveyance system. Please also include a map of all these features in relation to your proposed project boundary. Are there other uses of the existing water conveyance structures beyond conveying water for project purposes? If so, please describe these other uses in your final license application and explain why these water conveyance facilities should remain outside of the project boundary.

Exhibit B

6. Section 3.2 of Exhibit B states that the volume of water needed for the initial fill is estimated to be 9,000 AF and section 3.3 of Exhibit B estimates annual refill to be 370 AF per year. Page 26 of the supporting design report in Exhibit F states that initial fill would be 7,640 AF and annual refill would be 390 AF per year. Please correct this discrepancy in your final license application.

7. Section 3.2 of Exhibit B states that the initial fill of the lower reservoir would be completed over a period of 6-12 months and would depend on the timing of construction activities, particularly completion of the lower reservoir and the reservoir fill pipeline. However, your proposed construction schedule in Exhibit C states that initial fill would last approximately 150 days (i.e., 5 months) while page 26 of your supporting design report in Exhibit F states that initial fill would be completed "no faster than 6.5 months." Please correct this discrepancy and provide more details on the limiting factors that will dictate the timing and duration of reservoir filling operations.

Exhibit D

8. Section 4.41(e) of the Commission's regulations requires filing with the Commission a statement of project costs and financing (i.e., Exhibit D) that includes, in general, construction costs for major project works and personnel, estimates of taxes, and annual operation and maintenance costs. Commission staff requires the information contained in Exhibit D to support decisions made in our environmental analysis and to publish that information in the Commission's environmental document. Because we must disclose the economic bases of our decisions, the documents required in Exhibit D must be publicly available and should not be filed with a claim of privileged treatment. The Exhibit D that you filed with your draft license application was submitted as privileged information. In accordance with section 4.41(e), please file your Exhibit D as a publicly available document with your final license application.

Exhibit E

Aquatic Resources

9. Section 2.2.2 of Exhibit E states that annual refills of the reservoir would be conducted during periods when excess water is available. Please identify the periods of the year when this would likely occur and indicate whether these seasonal or water use limitations would also apply to your initial fill.

10. You propose to develop several plans to minimize potential effects of proposed construction, operation, and maintenance activities on aquatic resources and soils in the project area. These plans include:

(a) a soil erosion control plan that would identify best management practices (BMPs) and erosion control measures to minimize effects of construction, operation, and maintenance on soils and waterways including measures to reduce the potential for generating windblown dust during project activities;
(b) a stormwater pollution prevention plan that would identify BMPs to prevent contamination of surface waters from project activities;
(c) a hazardous substances spill prevention and cleanup plan that addresses potential spills of hazardous substances that may occur as a result of project activities including specifying materials handling procedures and storage requirements and identifying spill cleanup procedures; and
(d) an operational adaptive water quality monitoring and management program plan to monitor solute concentrations in the proposed reservoirs during project operation.

You propose to develop the hazardous substances spill prevention and cleanup plan within one year of license issuance. You do not propose a date for developing and filing the other plans listed above. While we understand it may be your preference to finalize these plans post-licensing when project design is better developed, we cannot evaluate the adequacy of your proposals at minimizing project effects on aquatic and soil resources at the project, the relationship of the measures to project effects, or the estimated costs of implementing each of these plans without knowing what measures would likely be included in each of these plans.

For instance, pages 22-23 of Exhibit E includes a list of measures that may be included in your proposed soil erosion control plan and/or stormwater pollution prevention plan (i.e., avoid construction in aquatic habitat wherever possible, use water diversion structures to direct dirty water from the work zone to a sediment control area, install silt fencing or other sediment control structures near waterbodies, store materials away from waterbodies, stabilize excavated materials using temporary erosion control blankets and other control techniques, conduct environmental monitoring, repair areas identified as potential sediment sources, and adhere to appropriate construction operating windows for instream work, etc.). However, the erosion and sediment control measures do not describe how you would control windblown dust.

Unlike the erosion control plan, the draft license application does not explain what measures might be implemented as part of your proposed hazardous substances spill prevention and cleanup plan or the operational adaptive water quality monitoring program plan. Please include this information in your license application along with a discussion of how those measures would minimize project effects on aquatic, terrestrial, and soil resources at the project, and the estimated costs for developing and implementing each of your proposed plans. Also be sure that your updated costs for developing and

implementing each plan are accurately reflected in your Exhibit D cost table as necessary (Table 1-2 of Exhibit D).

11. Section 3.1.2 of Exhibit E states that the existing intake pool from which the project would withdraw water to fill the project reservoirs would be screened to National Marine Fisheries Service criteria, but no further details are provided. The same section also references "Figure 3.1-1" but this figure appears to be missing from the draft license application and is not included in the list of figures in the table of contents for Exhibit E. Please clarify whether there is an existing fish screen on the intake structure within the existing intake pool or whether you propose to modify or install a new screen to prevent fish from being entrained in the project reservoirs during reservoir filling. If the fish screen is already installed and operating, please include a description of the fish screen facility and include any functional design drawings as appropriate. If you are proposing to modify an existing fish screen or propose to install a new fish screen, please provide in your final license application a conceptual screen design (or design alternatives) that you are considering, a plan and schedule for evaluating and finalizing the screen design, and the breakdown of the estimated costs for installing and operating the fish screens. Please also include documentation of consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, Washington Department of Ecology (Washington DOE), Washington Department of Fish and Wildlife (Washington DFW), Oregon Department of Environmental Quality, and Oregon Department of Fish and Wildlife on any conceptual fish screen design(s) you are considering. Also, please revise your Exhibit E to include Figure 3.1-1 or delete all references to that figure if that figure is no longer relevant.

12. Portions of the project's proposed infrastructure would be located on the site of the former Columbia Gorge Aluminum smelter, which is now a Resource Conservation and Recovery Act (RCRA) contaminated site. The site, currently owned by NSC Smelter, LLC, is the subject of ongoing clean-up by Washington DOE.[1] The Commission has

[1] Past smelter operations contaminated the soil and groundwater with fluoride, polycyclic aromatic hydrocarbons, cyanide, and polychlorinated biphenyls. The site was added to the State of Washington's Hazardous Sites list in 1990. The Washington DOE is currently working with the potentially liable persons (i.e., NSC Smelter, Inc. and Lockheed Martin Corporation) to investigate and cleanup the site. The requirements of the 2014 Agreed Order No. DE 10483 issued by Washington DOE requires development of a Remedial Investigation Work Plan to screen and select potential sites for further investigation (i.e., identify and delineate Solid Waste Management Units and Areas of Concern), conduct a Remedial Investigation/Feasibility Study to determine the nature and extent of contamination at the selected sites and develop a range of cleanup alternatives, and develop a Draft Cleanup Action Plan to identify preferred cleanup action steps for the site. Once Washington DOE finalizes the Cleanup Action Plan, it would work with the

previously stated that it will only consider development applications for sites undergoing a RCRA or Superfund cleanup process once the relevant state or federal agency certifies that cleanup is complete. As part of your preliminary permit application, FFP Project 101, LLC provided evidence that Washington DOE supported the project and believed that its construction and operation would not hinder the cleanup process.[2] Likewise, in a March 8, 2018, order issuing a permit for the project, Commission staff found that FFP Project 101, LLC had sufficiently demonstrated that the project area—including all lands needed for project construction and operation—did not include any lands subject to further cleanup by Washington DOE. Nonetheless, Commission staff required that FFP Project 101, LLC pursue progress during the permit term and in any future licensing process without adversely impacting ongoing cleanup activities by Washington DOE and provided that should FFP Project 101, LLC begin the process of developing a license application for the project, it would be required to demonstrate that licensing would not result in any issues arising from contamination in the project area.

Section 6.2.1 of Exhibit E states that within the proposed project boundary, the lower reservoir would be located within the footprint of Solid Waste Management Unit (SWMU) number 4 also known as the West Surface Impoundment.[3] In 2004, the West Surface Impoundment was closed under RCRA and in 2005 Washington DOE accepted certification for the closure of the site. The site contains approximately 89,000 cubic yards of sludge comprised primarily of alumina, dust, and particulates from wastewater and residual waste generated by plant emission control systems. Closure of the West Surface Impoundment included placement of an engineered RCRA cap consisting of soil and geosynthetic materials and development of a post-closure maintenance and groundwater monitoring plan[4] which requires quarterly sampling beginning in 2005 for

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responsible parties to implement the plan to clean up and remove sources of contamination and eventually de-list the smelter site from the Hazardous Sites List after it meets cleanup standards and requirements. The Remedial Investigation Work Plan was completed in August of 2015 and the Draft Remedial Investigation Report was published in January of 2019. As of the date of this letter, the Remedial Feasibility Study to identify cleanup alternatives and Draft Cleanup Plan have yet to be completed.

[2] Washington DOE informed Commission staff that it cannot formally certify that cleanup of only a portion of a RCRA site is complete. *FFP Project 101, LLC*, 162 FERC ¶ 62,144, at P 6 n.7 (2018).

[3] While the aluminum smelter was in operation, the West Surface Impoundment was used to concentrate emission control wastewater through evaporation and for storage and disposal of air emission control sludge.

[4] GeoPro, LLC, Groundwater Monitoring Report: West Surface Impoundment

two years, followed by semi-annual sampling for years 3 through 7, and annual sampling thereafter until concentrations drop below groundwater protection standards, or for a maximum of 30 years.[5] According to the most recent available groundwater monitoring report for the site, chloride and total cyanide concentrations were below groundwater protection standards while sulfate and fluoride remain above protection standards suggesting that the West Surface Impoundment is continuing to contribute these contaminates to groundwater albeit at a much lower rate than concentrations observed prior to closure of the site.[6]

The Exhibit E also states that the West Surface Impoundment site is known to contain non-hazardous waste materials that would be permanently removed and disposed of offsite during construction of the lower reservoir. To guide this effort, you propose to negotiate a scope of work and consent decree with Washington DOE to govern the removal and off-site disposal of the West Surface Impoundment materials, including the liner and cover system once all other materials are removed from the site during construction of the lower reservoir. Section 6.2.1 of Exhibit E further suggests that removal and offsite disposal of the contents associated with the West Surface Impoundment would require the decommissioning of eight groundwater monitoring wells, which would be replaced following construction.

The West Surface Impoundment is the only site mentioned in the draft license application with monitoring pursuant to the RCRA cleanup. However, the most recent report concerning the cleanup effort[7] states the following regarding the project:

> "Some of the pumped storage facilities (including the lower reservoir, power plant, water supply lines, and transmission lines) have previously been proposed in the areas of SWMUs and [Area of Concerns] being investigated as part of the [Remedial Investigation]. Of particular potential concern from a site cleanup perspective, the following sites are in the vicinity of the lower reservoir in prior

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Columbia Gorge Aluminum Smelter Site (September 8, 2017) at p. 4. https://apps.ecology.wa.gov/gsp/CleanupSiteDocuments.aspx?csid=11797 (accessed Mar. 13, 2020).

[5] *Id.* at p. 6 to 7.

[6] *Id.* at p. 12.

[7] Wash. Dep't of Ecology, Draft Remedial Investigation Report (Jan. 24, 2019) at Vol. 1 p. 4-3, available at https://apps.ecology.wa.gov/gsp/CleanupSiteDocuments.aspx?csid=11797 (accessed Mar. 12, 2020).

> proposals for the pumped storage project including: l) the [West Surface Impoundment] (SWMU 4), which has already been closed under RCRA; 2) the West SPL Storage Area (SWMU 13), which has been closed under Washington State Solid Waste Regulations, and; 3) the Plant Construction Landfill (SWMU 19). Construction of the lower reservoir could also potentially significantly affect groundwater recharge and flow."

In addition to the SWMUs located near the lower reservoir site, the report states that a ditch on the southern end of SWMU 13 and adjacent to the lower reservoir contains elevated levels of polycyclic aromatic hydrocarbon (PAH) soil concentrations (see table 34-1 in Volume 2 of the report) and that multiple groundwater monitoring wells near the lower reservoir site contained elevated levels of total cyanide in addition to fluoride and sulfate (see figures 2-26, 2-29, 2-32, and 2-33 of Volume 3 of the 2019 report). The report recommended both the ditch on the southern end of West SPL Storage Area and groundwater in the uppermost aquifer[8] undergo further testing and evaluation as part of the next phase of the feasibility study which would form the basis for a draft cleanup action plan.

Your draft application fails to demonstrate that construction and operation of the project would not adversely impact ongoing cleanup activities by Washington DOE and would not result in any issues arising from contamination in the project area. For example, you defer to post-licensing efforts that could demonstrate that clean-up efforts would proceed unencumbered by project development (e.g., negotiating a scope of work and consent decree with Washington DOE to govern the removal and off-site disposal of the contents of the West Surface Impoundment materials and development of procedures for decommissioning and relocating groundwater monitoring wells). Further, the draft license application does not describe how project construction and operation would affect the following Washington DOE-monitored sites near the project: (1) SWMU 13 – West SPL Storage Area; (2) the ditch on the southern end of SWMU 13; (3) SWMU 19 – Plant Construction Landfill; and (4) specific groundwater wells near the lower reservoir site that are undergoing additional evaluations by Washington DOE.

In your final license application, you must explain in greater detail how construction and operation of the project would not adversely impact ongoing cleanup activities and would not result in any issues arising from contamination in the project area. Specifically, you must include a detailed plan for the removal and disposal of materials from the West Surface Impoundment (SWMU 4) and any other site that you

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[8] The drainage ditch is considered an "additional area of investigation" that was added to the Remedial Investigation Work Plan in 2015 and the groundwater wells located in the project area near the site of the lower reservoir are a subset of the larger site-wide effort investigating potential contamination of groundwater in the uppermost aquifer.

determine would be affected by construction; a description of how you would avoid disturbing other sites containing hazardous material still subject to clean-up efforts (particularly during construction of the proposed lower reservoir and new water conveyance line, etc.); and a monitoring well decommission and relocation plan that includes specific steps and procedures you propose for both removal and/or relocation of certain existing monitoring wells in order to construct the lower reservoir and other ancillary facilities. Further you must consult with Washington DOE concerning your proposed plans and measures prior to filing them with the Commission. Your filing should include the results of such consultation, including any agreements with Washington DOE or, recommendations from the agency that you have considered but rejected and the basis for such rejection. Your final license application should also include an updated map showing the location of CGA smelter contamination sites in relation to the project boundary (please show all SWMUs and any additional sites subject to further study). The map should also show the locations of the sites in relation to all water conveyance facilities (both new and existing) that would be used to convey water from the Columbia River to the lower reservoir for initial fill and annual refills and also identify all groundwater monitoring wells that are proposed for relocation.

Terrestrial Resources

13. Section 2.0 of the draft Wildlife Management Plan (WMP) states that wildlife protection and eagle conservation measures may include identification and implementation of potential compensatory mitigation approaches. Section 2.3.5, *Address Habitat Loss*, states that you would "mitigate these (wildlife habitat) losses with habitat of similar quality" but you provide no further information about this proposal. The Washington DFW in its comments filed May 28, 2019, recommends mitigation for project impacts in the form of land acquisition for conservation of wildlife resources. Please clarify that your proposal is to acquire lands that would provide similar habitat quality as those that are lost or altered by project construction and operation.

If so, to evaluate the efficacy of your proposal, we need additional information about the parcels that would be acquired. For example, are there parcels of land of similar habitat quality that could be acquired? Where are those lands relative to the project? How would those lands be selected and managed following acquisition? Are those lands subject to threats such that they would potentially be lost or altered if not acquired and managed by the project? Please revise Exhibit E and the WMP to describe any land acquisition proposed to mitigate wildlife resource impacts, including the number of acres to be acquired, their likely location and habitat quality, and how you would manage the lands. You should consult with Washington DFW and U.S. Fish and Wildlife Service in revising your license application and the WMP.

14. Exhibit A, section 1.2, states that two existing non-project wind turbines would be located within the project boundary; Exhibit G-2 shows those two turbines and additional

wind turbines east of the project boundary belonging to an existing wind farm. Washington DFW comments that, although no regular searches have been conducted for bird mortalities, six golden eagle mortalities have been observed since 2009 on or adjacent to the wind farm and that the presence of the reservoirs may increase the likelihood of mortality events by attracting raptors and other migratory birds in the vicinity of the turbines. Section 2.4.2 of Exhibit E states that the licensee will assess the use of reservoir deterrents such as bird exclusion fencing and floating plastic shade balls to discourage migratory bird use of the reservoirs. Section 2.4.2 of the WMP states that edge habitat around the reservoirs may be modified or blocked with fences, rip-rap, or cement to make it less desirable for migratory birds. The draft license application does not contain any information on the effectiveness and costs of the possible reservoir deterrents. Like the U.S. Fish and Wildlife Service we are not familiar with the use of bird exclusion fencing and the other measures you suggest for deterring bird use of the project reservoir. Please revise Exhibits E and D to include a discussion and support of possible reservoir deterrents, their effectiveness, how you would choose which deterrents would be deployed, when you would implement the measures, and costs for each potential deterrent as required by section 4.41(f)(3)(iv)(E) of our regulations.

15. Raptors may also suffer turbine-induced injury or mortality while seeking mammalian prey in and around the reservoirs. Section 2.4.3 of the WMP states that the licensee will assess the use of deterrents such as physical barriers to discourage mammals from using the reservoirs. Section 7.3 of Exhibit E, *Recreation*, proposes a fencing plan to, among other goals, prevent wildlife from entering the project reservoirs and other features and becoming entrained or otherwise harmed. No fencing or fencing plan preparation costs are included in Exhibit D. Please revise the WMP and Exhibit E to clarify whether you propose to install fencing to reduce wildlife use of the reservoirs and the type of fencing that you would install. Also, please revise Exhibit D to include the costs of the fencing as required by section 4.41(f)(3)(iv)(E) of our regulations.

16. Section 3.2.3.2 of Exhibit E states that dust palliatives may be applied to unpaved roads to reduce dust. However, Exhibit D estimates a cost of $20,000 for dust palliatives. If you intend to use dust palliatives, as Exhibit D suggests, please revise section 3.2.3.2 of Exhibit E to indicate that you propose to use them, not that you may use them. In the alternative, explain how you would determine if dust palliatives would be needed.

17. Section 2.2 of the WMP, *Risk Assessment of Activity and Timeline*, proposes conducting a risk assessment "to determine the impacts of construction and operations and maintenance during the breeding season and non-breeding seasons." The purpose of the post-licensing assessment of project impacts is unclear. Please revise the WMP to clarify (1) how and when the assessment(s) would be conducted, (2) what species would be targeted; and (3) what you would do with the assessment results.

Recreation Resources

18. Page 8 of your WMP states that you propose to develop a traffic management plan to reduce construction-related traffic impacts on wildlife. In addition, to minimize project impacts on recreational access during construction, you propose to coordinate your construction schedule and road closures with the Washington State Department of Transportation; however, you do not propose a traffic management plan to address these impacts. To adequately evaluate your proposal, please describe what measures may be included your traffic management plan to minimize impacts on wildlife, recreation and the public, when the plan would be developed, and the cost of developing and implementing the plan as required by section 4.41(f)(3)(iv)(E) of our regulations.

Aesthetic Resources

19. While the draft license application addresses noise impacts on recreationists and cultural properties from construction activities and vehicle use or maintenance activities during operation, it does not address noise impacts from the operation of the pumped storage facilities. In your final license application, please include a discussion of expected noise impacts from operation of the project, including the weighted decibel levels (dbA) expected at different distances from the project and their effects on recreationists and those using the project area for tribal purposes.

Cultural Resources

20. The cultural resources study (Appendix H) conducted for you by the Confederated Tribes and Bands of the Yakama Nation (Yakama Nation) within the project's Area of Potential Effect (APE) shows that two archaeological sites (45KL746 and 45KL744) would overlap with the footprints for both the proposed lower reservoir and associated laydown areas. At the upper reservoir site, three sites (45KL567, 45KL566 and LS-3) would overlap with the reservoir footprint and one site (45KL570) with a construction laydown area. The study also finds that the project APE is located within three National-Register-eligible cultural areas - the Push-Pum Traditional Cultural Property (Push-Pum TCP), the Columbia Hills Multiple Property District (Columbia Hills MPD), and the Columbia Hills Archaeological District. Except for site 45KL566 which, according to the study, was found ineligible for listing on the National Register of Historic Places (National Register) in 1994, none of the individual sites mentioned above have been evaluated for National Register eligibility. The study recommends that all sites be avoided or, if avoidance is not possible, evaluated for National Register eligibility as individual sites and for their contribution to the Push-Pum TCP, Columbia Hills MPD, and Columbia Hills Archaeological District.

While you discuss possible project effects and mitigation measures on cultural resources in a general sense in the draft license application and your draft Historic

Properties Management Plan (HPMP), you do not specify how each cultural site would be affected or propose specific protective or mitigation measures (i.e., avoidance, data recovery, etc). In addition, it's not apparent whether you propose to evaluate the National Register-eligibility of archaeological sites 45KL744, 45KL747, 45KL567, 45KL570 or LS-3. This information is needed for Commission staff to fulfill its responsibilities under section 106 of the National Historic Preservation Act which requires that National Register-eligible sites be identified so that potential impacts can be determined. Further, section 4.41(f)(4) of the Commission's regulations, requires a final license application to include a description of adverse effects to cultural resources and any proposed mitigation measures.

Therefore, please include the following in your final license application and final HPMP: (1) the results of National Register eligibility determinations of all cultural sites that cannot be avoided during project construction, operation, or maintenance activities, including their contribution to the Push-Pum TCP, Columbia Hills MPD, and Columbia Hills Archaeological District; (2) a description of specific project impacts on these sites; (3) proposed mitigation measures; and (4) documentation of Washington State Historic Preservation Officer (SHPO) concurrence on your eligibility determinations and finding of effects.

21. Page 76 of Exhibit E states that a Programmatic Agreement (PA) will be developed between the Commission and the applicant. In the final license application, please revise this wording to instead state that the Programmatic Agreement will be developed between the Commission, the Washington State Historic Preservation Officer (SHPO), the Oregon SHPO (depending on whether project effects on cultural resources extend into Oregon), and if appropriate, the Advisory Council on Historic Preservation. Only the Commission, SHPOs, and the Advisory Council can be signatories to a PA. The applicant and other stakeholders can be concurring parties, but not signatories.

22. Page 72 of Exhibit E indicates that the Yakama Nation, which was contracted to complete the cultural resource survey, consulted with other tribes in conducting the survey but there is no documentation in the either the *Cultural Resources Report* (Appendix H) or elsewhere in the draft license application providing evidence that such consultation occurred. Further, in a November 18, 2018, e-mail contained in Appendix F, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) states that the project is within a "historic property of religious and cultural significance" to CTUIR and that the project would adversely affect this property. We cannot discern from the *Cultural Resources Report* whether the cultural sites identified in the report include the cultural properties CTUIR refers to in its email. To ensure that resources important to all tribes have been identified and evaluated, please clarify which tribes were consulted during the cultural resource survey and whether the cultural properties identified by CTUIR in the November 18, 2018, e-mail in Appendix F are addressed in the *Cultural Resources Report* in Appendix H. If there are additional resources within the project

APE important to the CTUIR that have not been addressed in the study, then the final license application and HPMP should include: (1) a description of these resources; (2) the results of any National Register evaluation of these resources; (3) a description of potential impacts and any proposed mitigation, as required by section 4.41(f)(4); and (4) documentation of all consultation with CTUIR. In addition, we recommend that you continue to keep other tribes with interests in the project area (i.e., the Confederated Tribes of the Warm Springs Reservation and the Confederated Tribes of the Colville Reservation, etc.) informed of project-related cultural resource concerns.

23. The *Cultural Resources Report* refers to an Appendix A, where updated cultural resource site forms are located, and Appendix B, where a 1997 Programmatic Agreement between BPA, the Washington Department of Historic Preservation, the Advisory Council for Historic Preservation, and the Yakama Nation is located. However, Appendices A and B to the report are labeled as containing site forms but do not contain any documents. Also, Appendix C to the report is labeled "Programmatic Agreement" but also contains no document. Please include the relevant forms and the Programmatic Agreement in the appropriate attachments to the *Cultural Resources Report* in the final license application.

Comprehensive Plans

24. Section 4.38(f)(6) of the Commission's regulations requires applicants to identify relevant comprehensive plans and provide explanations of how and why the project would, would not, or should not, comply with any relevant comprehensive plan and a description of any relevant resource agency or Indian tribe determination regarding the consistency of the project with any such comprehensive plan. In the draft license application, you list several comprehensive plans that you identify as relevant to the project; however, you did not explain how or why the proposed project is consistent with the plans. In the final license application, please provide this explanation for each relevant comprehensive plan.

Also, because the project would be located in the Columbia River Basin, we need to understand how the project would or would not be consistent with the Columbia River Basin Fish and Wildlife Program as required by the Pacific Northwest Electric Power Planning and Conservation Act. The draft license application does not discuss how the project would be consistent with the program or include any evidence that you consulted with the Northwest Power and Conservation Council (Council). Therefore, please provide a copy of your draft license application to the Council and allow them 30 days to respond to your request for comments. Please provide evidence of this consultation in your final license application along with a description of how the proposed project would or would not be consistent with the Columbia River Basin Fish and Wildlife Program set forth by the Council.

Exhibit F

25. Exhibit F includes conceptual design drawings for the proposed project. However, it does not contain drawings for the facilities involved with initial fill water and long-term refill systems. Please provide conceptual design drawings for these facilities in your final license application.

Exhibit G

26. The Exhibit G maps filed with the draft license application are in black and white with very little contrast. This coloration makes it difficult to distinguish between project features and to identify the lines demarcating the project boundary. In your final license application, please file updated Exhibit G maps that are in color or otherwise show a higher contrast to make it easier to identify the project features and project boundary lines.

27. Per section 4.39(a) of the Commission's regulations, please ensure all Exhibit G maps filed with the final license application are stamped by a registered land surveyor.

28. Section 4.41(h) requires that the Exhibit G identify all federal and non-federal lands within the project boundary. The Exhibit G maps contain one polygon feature that is defined as "federal & state lands." Please separate these two features so that all federal lands are contained within one polygon while state lands are contained in a separate polygon and identify which federal or state agency is responsible for maintaining/managing each of these lands.

29. Remember, section 4.41(h) of the Commission's regulations requires that all applications for licenses include the project boundary data in a georeferenced electronic file format and that Exhibit G maps must conform to the specifications of section 4.39 of the Commission's regulations.

Georeferenced electronic file format includes ArcView shape files, GeoMedia files, MapInfo files, or a similar GIS format. The filing must include both polygon data and all reference points shown on the individual project boundary drawings. An electronic boundary polygon data file(s) is required for each project development. Depending on the electronic file format, the polygon and point data can be included in single files with multiple layers. The georeferenced electronic boundary data file must be positionally accurate to ±40 feet in order to comply with National Map Accuracy Standards for maps at a 1:24,000 scale. The file name(s) must include: FERC Project Number, data description, date of this License, and file extension in the following format [P-1234, boundary polygon/or point data, MM-DD-YYYY.SHP]. The data must be accompanied by a separate text file describing the spatial reference for the georeferenced data: map projection used (i.e., UTM, State Plane, Decimal Degrees, etc.), the map datum

(i.e., North American 27, North American 83, etc.), and the units of measurement (i.e., feet, meters, miles, etc.). The text file name must include: FERC Project Number, data description, date of this License, and file extension in the following format [P-1234, project boundary metadata, MM-DD-YYYY.TXT]. Each map sheet must contain a minimum of three known reference points. The latitude and longitude coordinates, or state plane coordinates, of each reference point must be shown. Guidance for the preparation of exhibit drawings and maps is available on the Commission's website at: https://www.ferc.gov/industries/hydropower/gen-info/guidelines/drawings-guide.pdf.

30. Exhibit A, section 1.2, states that two existing non-project wind turbines would be located within the project boundary, and Exhibit G-2 shows the two turbines inside the project boundary near the upper reservoir. The project boundary should only include facilities necessary for project purposes. Exhibit G-2 indicates that the proposed buried penstock would run under one of the two wind turbines. It is unclear, however, why the second wind turbine is within the project boundary. Please explain why the two wind turbines are within the project boundary, and if appropriate, revise Exhibit G-2 to exclude them.

Conflicts with Wind Turbine Operation

31. On March 12, 2020, the Turlock Irrigation District ("TID") filed comments raising concerns that construction and operation of the upper reservoir could interfere with and disrupt operations of the existing Tuolumne Wind Project Authority ("TWPA") wind farm. TID asserts that the proposed project could: (1) redirect the wind used by the existing wind turbines, which would reduce their energy output; (2) increase wind turbidity, which would reduce their energy output and increase wear and tear on the turbines; (3) saturate and thereby weaken the foundations of some of the turbines; (4) increase the wildlife around the turbines, which could increase animal strikes and interfere with TWPA's operations and output; and (5) interfere with the operation of the turbines' underground power lines when underground drilling is performed.

There is insufficient information in the draft license application to address the above issues. Therefore, you should conduct studies (e.g., modeling) necessary to demonstrate how project construction and operation would influence air flow above the upper reservoir and around the wind turbines and how it would affect wind turbine operation and generation and include the modeling results in your final license application. You should also include a detailed discussion, with supporting information, as to how the project would be designed and constructed to prevent leakage from affecting the wind turbine foundations and disrupting the operation of the turbines' underground powerlines.

This information should be developed in consultation with the U.S. Fish and Wildlife Service, Washington DFW, TID, and TWPA. Your response should include

documentation of the consultation, any recommendations and comments provided by the above entities on your proposal, and any recommendations from these entities that you have considered but rejected and the basis for such rejection.

Document Content(s)

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

March 24, 2020

Brad Thompson
State Supervisor
Washington Fish and Wildlife Office
Central Washington Field Office
US Fish and Wildlife Service
215 Melody Lane, Suite 103
Wenatchee, WA 98801

RE: USFWS Comments on the Goldendale Energy Storage Hydroelectric Project No.14861, Goldendale, Washington, Klickitat County, Washington Draft License Application Regarding Purchase of Lands for Compensatory Habitat Mitigation

Dear Ms. Lee:

Thank you for your comments on March 10, 2020 regarding the proposed Goldendale Energy Storage Project (FERC ID 14861). This letter is to provide further detail on Rye Development's plans for compensatory mitigation in the form of lands purchase for impacts to habitat, and to ask for concurrence and/or comments on our approach.

Appendix D, Wildlife Management Plan, of the Draft License Application stated that the Licensee will mitigate for losses of habitat values from project construction using habitat of similar quality. Commenting agencies have indicated that additional information is needed regarding Rye Development's plans for purchasing mitigation lands. Specifically, FERC has asked for Rye Development to clarify that the proposal is to acquire lands that would provide similar habitat quality as those that are lost or altered by project construction and operation.

Habitat impacts anticipated by the project are foraging habitat in the area of the upper reservoir. Very limited areas of habitat impact are possible in the area of the lower reservoir; the majority of the land impacted in the lower reservoir area are of developed or disturbed land cover with primarily introduced vegetation types and are not eligible for mitigation.

Rye Development intends to purchase mitigation lands at a 2:1 ratio representing habitat values that are impacted by the project (upper reservoir area). Mitigation lands will need to be identified for purchase or lease that provide appropriate habitat value and that can be protected under an ownership agreement or structure. Rye Development is looking to local wildlife management agencies for assistance in selection of appropriate parcels for mitigation. Ideally, these parcels would be:

- Available for purchase
- Provide compensatory or greater habitat values

Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

Rye is requesting additional feedback from WDFW and the USFWS on private lands they have identified with appropriate value and are/will be available for purchase in 2022-2025. Please provide this additional feedback by April 24, 2020.

Sincerely,

Erik Steimle
Vice President
Portland, Oregon
erik@ryedevelopment.com

Rye
Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

March 24, 2020

Kessina Lee
Regional Director
Southwest Washington/Region 5
Washington Department of Fish and Wildlife
5525 South 11th Street
Ridgefield, WA 98642
(360) 696-6211

RE: WDFW Comments on the Goldendale Energy Storage Hydroelectric Project No.14861, Goldendale, Washington, Klickitat County, Washington Draft License Application Regarding Purchase of Lands for Compensatory Habitat Mitigation

Dear Ms. Lee:

Thank you for your comments on March 10, 2020 regarding the proposed Goldendale Energy Storage Project (FERC ID 14861). This letter is to provide further detail on Rye Development's plans for compensatory mitigation in the form of lands purchase for impacts to habitat, and to ask for concurrence and/or comments on our approach.

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Rye Development

745 Atlantic Ave. 8th Floor, Boston, MA 02111

Rye is requesting additional feedback from WDFW and the USFWS on private lands they have identified with appropriate value and are/will be available for purchase in 2022-2025. Please provide this additional feedback by April 24, 2020.

Sincerely,

Erik Steimle
Vice President
Portland, Oregon
erik@ryedevelopment.com

State of Washington
DEPARTMENT OF FISH AND WILDLIFE
Southwest Region 5 • 5525 South 11th St Ridgefield, WA 98642
Telephone: (360) 696-6211 • Fax: (360) 906-6776

April 13, 2020

Mr. Erik Steimle
Vice President
Rye Development
220 NW 8th Ave
Portland, OR 97209

RE: Washington Department of Fish and Wildlife (WDFW) Comments on Compensatory Mitigation, Goldendale Energy Storage Hydroelectric Project No.14861, Goldendale, Klickitat County, Washington

Dear Mr. Steimle:

Thank you for the opportunity to provide WDFW recommendations for compensatory mitigation for impacts to habitat as a result of the construction of the Goldendale Energy Storage Project (Project). In your March 24, 2020 letter to WDFW, you presented your compensatory mitigation proposal and approach and requested WDFW review and comment on:

- mitigating with habitat of equal quality to that being impacted;
- a description of the habitat as foraging habitat;
- a statement of limited habitat impacted at the lower reservoir area;
- purchase of compensatory mitigation lands at a 2:1 ratio and protection of these lands under a lease or ownership agreement; and
- a request for information on lands that WDFW has identified with appropriate habitat value and are/will be available for purchase in 2022-2025.

We support your proposal to mitigate at a 2:1 ratio of lands of equal quality and to purchase and/or lease land for compensatory mitigation for habitat impacts from the Project. Due to the potential lack of availability of land for sale, we recommend considering conservation easement agreements as well.

In terms of characterizing impacted and mitigation land, we believe it would be more appropriate and precise to identify and protect golden eagle foraging habitat, rather than the more general "foraging habitat." WDFW addressed this in the March 11, 2020 comment letter we provided on the Goldendale Energy Storage Draft License Application and stated:

> "The uniqueness of the habitat is linked to the close proximity to golden eagle and prairie falcon nesting habitat. In our October 28, 2014 correspondence filed with the FERC, we provided golden eagle radio telemetry data collected in 2007 for eight months that indicate use of the entire Project area. Prey availability is a primary factor in governing habitat selection of Aquila eagles (Marzluff et al. 1997, Hunt 2002, Ferna´ndez et al. 2009), the habitat in the area of the upper reservoir is a determining factor in golden eagle nesting preference for the area. We provided information on golden eagle nest location previously."

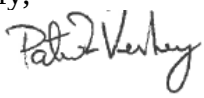
We recommend protecting a parcel that includes a golden eagle nesting area and associated foraging habitat. If this is not possible a lower elevation parcel intermixed with ponderosa pine and variable topography (e.g., cliffside) may be appropriate. Ideally, the parcel would be contiguous to property that is managed for wildlife resources, which will provide additive benefits to wildlife. A wildlife/habitat management plan should be developed as part of your mitigation to ensure long term stewardship of the natural resources within the parcel.

In order to help you identify suitable mitigation parcels, WDFW is requesting additional time for us to conduct additional collaboration both within and outside our agency. Based on a preliminary discussion, we are hopeful that we can identify potentially available property that meets the requirements for acceptable compensatory habitat mitigation. We hope to have some information to share with you by June 1. Since we are currently partially shutdown by the COVID-19 restrictions until May 4, the additional time post May 4 will provide us with time to make site visits to finalize our evaluations of potential mitigation parcels.

At this stage of Project development, the actual number of acres that will be permanently impacted is not clear. Permanent impacts to habitat can occur due to grading, clearing, road construction, stock piling of spoil material and transmission line installation. These types of impacts should be mitigated at a 2:1 ratio. Permanent impacts to degraded habitats associated with the lower reservoir should be mitigated at a 1:1 ratio. Once these permanent impacts have been quantified, a compensatory mitigation acreage can be calculated for the Project and will aid in our exploration of potential mitigation parcels.

Thank you for your consideration of our comments and compensatory mitigation recommendations, and we look forward to working with you on this important project. Please contact me with questions and notice of future relevant meetings at (509) 754-4624 ex. 213 or by e-mail at Patrick.Verhey@dfw.wa.gov.

Sincerely,



Patrick Verhey, WDFW Major Projects Biologist

CC: Steve Lewis, USFWS

Literature Cited

Ferna´ndez, M., J. Oria, R. Sa´nchez, L. M. Gonzalez, and A. Margalida. 2009. Space use of adult Spanish imperial eagles Aquila adalberti. Acta Ornithologica 44:17–26.

Hunt, W. G. 2002. Golden eagles in a perilous landscape: predicting the effects of mitigation for wind turbine bladestrike mortality. California Energy Commission Report P50,-02-043F,Sacramento, California,USA.

Marzluff, J. M., S. T. Knick, M. S. Vekasy, L. S. Schueck, and T. J. Zarriello. 1997. Spatial use and habitat selection of golden eagles in southwestern Idaho. Auk 114:673–687.

Filed as Privileged with Appendix H

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, DC 20426
April 30, 2020

OFFICE OF ENERGY PROJECTS

Project No. 14861-001 – Washington
and Oregon
Goldendale Energy Storage Project
FFP Project 101, LLC

VIA FERC Service

Erik Steimle
Rye Development
220 NW 8th Ave.
Portland, OR 97209

Subject: Additional Staff Comments on the Draft License Application for the Goldendale Energy Storage Project

Dear Mr. Steimle:

On March 19, 2019, we issued a letter providing staff comments on FFP Project, LLC's Draft License Application for the Goldendale Energy Storage Project No. 14861-001. The Commission's Division of Dam Safety and Inspections has also reviewed the Draft License Application. Unfortunately, their schedule for review did not permit them to include their comments in our March 19 letter. Their comments are provided in the attached Appendix A. When you prepare your final license application, please provide the information requested in Appendix A in addition to the information requested in our March 19 letter.

If you have any questions regarding this letter or the contents of the final license application, please contact Mike Tust at (202) 502-6522, or via email at michael.tust@ferc.gov.

Sincerely,

David Turner, Chief
Northwest Branch
Division of Hydropower Licensing

Attachment: Appendix A – Additional Staff Comments on the Draft License Application for the Goldendale Energy Storage Project No. 14861-001

APPENDIX A

ADDITIONAL STAFF COMMENTS ON THE DRAFT LICENSE APPLICATION FOR THE GOLDENDALE ENERGY STORAGE PROJECT NO. 14861-001

Exhibit A

1. Your Exhibit A project description should be revised to include descriptions of your proposed draft tubes, lower reservoir slide gates, and intake and outlet structures.

2. You describe your proposed lower and upper embankment dams in your supporting design report as consisting of homogenous rockfill dams with an exposed liner system covering the embankment dams and reservoir floors; however, this detail is not reflected in your Exhibit A project description. Please ensure that all project features described in your Exhibit A match their descriptions in your supporting design report and vice versa.

3. Table 1.4-1 describes the reservoir embankments as "ring dikes". The term "ring dikes" should be revised considering that the upper and lower reservoirs are proposed to be constructed in fill and excavation sections; thus, there would not be a continuous embankment dam around the reservoir.

Exhibit F

4. Your supporting design report should be revised to include the following:

    a. Assessment of suitability of the project site for the proposed surface and underground structures based on site specific geology and hydrogeology. The supporting documentation should include mapping and evaluation of structure geology, existing landslides and surface soil deposits, and mapping and investigation of existing hillside seepage and springs.

    b. Stability and stress analyses for all major water retaining structures and permanent excavations under all probable loading conditions, including seismic and hydrostatic forces induced by water loads varying from the minimum to the maximum reservoir operation levels. Please include the basis for the determination of seismic loading. Refer to FERC Engineering Guidelines for guidance.

    c. Identify all borrow areas and quarry sites and an estimate of required quantities of suitable construction material.

Steven D. Kramer, The Dalles, OR.

RE: Comments on the Notification of Intent and Pre-Application Document for the Goldendale Energy Storage Project, FERC No 14861

Dear Secretary Bose,

Although the Goldendale Energy Project (Project) is located in Klickitat County, it will have multiple beneficial effects within the five-county region of the Columbia River Gorge. In the short term, the Project is estimated to employ up to 3,000 workers for a period up to five years. The Dalles, largest city in the Gorge area, would likely house many of those workers and benefit from the infusion of funds they will spend on food, housing, gasoline, entertainment, etc.

In the long-term, the Project will provide steady load balancing which will allow the expansion of wind and solar projects throughout the Gorge; this is of significant benefit to counties on both sides of the Columbia River.

As a County Commissioner, I am in support of the Goldendale Energy Storage Project and urge approval.

Thank you for your consideration,

Steven D. Kramer, Wasco County Commissioner