



## Department of Energy

Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

FREEDOM OF INFORMATION ACT/PRIVACY PROGRAM

September 30, 2020

In reply refer to: FOIA #BPA-2019-00639-F

Theresa Hiesener

(b) (6)

Dear Ms. Hiesener,

This communication is the Bonneville Power Administration's (BPA) final response to your request for records made under the Freedom of Information Act, 5 U.S.C. § 552 (FOIA). BPA received your records request on March 22, 2019, and formally acknowledged your request on March 26, 2019.

### Request

Your original FOIA request was as follows: "All communications between BPA & HiTest Sands/PacWest Silicon and its affiliates between 2017-2019 [a]nd all communications between PUD and BPA pertaining to HiTest Sands/PacWest Silicon and its affiliates 2017-2019."

### Amended Request

FOIA office staff communicated with you via email exchanges following the submission of your original request. In those April 2019 email exchanges FOIA office staff inquired on the precise scope of what you were seeking. Based on that email exchange with you, the BPA FOIA office understands that your request is now stated and amended as follows. "All communications between BPA [and] HiTest Sands [or/and] PacWest Silicon [or/and] and its affiliates, [dated] between 2017-2019; and all communications between [Public Utility District No 1 of Pend Oreille County, Newport Washington, as operator of the Box Canyon Hydroelectric Project] and BPA pertaining to HiTest Sands [or/and] PacWest Silicon [or/and their] affiliates [dated between] 2017-2019." Also, you indicated that you seek "...all communications with the company as it all pertains... [to the smelter project you are interested in]". This amended request proposal was communicated to you on May 27, 2020.

Absent your objection, BPA moved forward with reviewing the records collected in response to the amended request. BPA proceeded with that review under the conclusion that you are only

interested in emails and communication records between BPA and Public Utility District No 1 of Pend Oreille County which pertain to or mention the specific smelter project or/and HiTest Sand (HTS) of Edmonton, Alberta, Canada, or/and PacWest Silicon (PWS) of Newport, Washington, or/and their affiliates. (BPA understands that HTS, as a corporate entity, is related PWS.) BPA will proceed with the records review under the assumption that “the company” you mentioned in your April 2019 emails with FOIA office staff, and which mention is included in the amended request language above, refers to HTS or/and PWS, and any corporate affiliates.

### **Response**

BPA searched for and gathered responsive email records from the following agency offices: Cyber Forensics & Intelligence, Transmission Sales, Eastern Customer Services, Eastern Engineering, and Regional Relations. Those office provided 258 pages of records responsive to your amended request. BPA is herein releasing those pages, with 12 of those pages containing redactions applied under 5 U.S.C. § 552(b)(2) (Exemption 2), and 1 of those pages fully withheld under 5 U.S.C. § 552(b)(4) (Exemption 4), and 65 of those pages containing redactions applied under 5 U.S.C. § 552(b)(6) (Exemption 6). An explanation of the applied exemptions follows.

### **Explanation of Exemptions**

The FOIA generally requires the release of all agency records upon request. However, the FOIA permits or requires withholding certain limited information that falls under one or more of nine statutory exemptions (5 U.S.C. §§ 552(b)(1-9)).

#### Exemption 2

Exemption 2 permits withholding of agency information, “related solely to the internal personnel rules and practices of an agency” (5 U.S.C. § 552(b)(2)). BPA here relies on Exemption 2 to protect internet portals, telephonic meeting call-in numbers and related passwords and passcodes found on the subject responsive records. Records protected by Exemption 2 may be discretionarily released. BPA considered a discretionary release and determined that the subject records should not be discretionarily released because a public release of the protected information would hinder agency operations.

#### Exemption 4

Exemption 4 permits withholding third party confidential commercial information found in agency records. (5 U.S.C. § 552(b)(4)). BPA here relies on Exemption 4 to protect one page of third party technical information contained in an engineering diagram.

#### Exemption 6

Exemption 6 serves to protect personally identifiable information contained in agency records when no overriding public interest in the information exists. BPA does not find an overriding public interest in a release of the information redacted under Exemption 6—specifically, personal telephone numbers, signatures, and landowner names. BPA cannot waive these redactions as the protections afforded by Exemption 6 belong to individuals and not to the agency.

**Fees**

There are no fees associated with the agency's response to your FOIA request.

**Certification**

Pursuant to 10 C.F.R. § 1004.7(b)(2), I am the individual responsible for the search and records release described above. Your FOIA request BPA-2019-00639F is now closed with the responsive agency records provided.

**Appeal**

The adequacy of the search may be appealed within 90 calendar days from your receipt of this letter pursuant to 10 C.F.R. § 1004.8. Appeals should be addressed to:

Director, Office of Hearings and Appeals  
HG-1, L'Enfant Plaza  
U.S. Department of Energy  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585-1615

The written appeal, including the envelope, must clearly indicate that a FOIA appeal is being made. You may also submit your appeal by e-mail to [OHA.filings@hq.doe.gov](mailto:OHA.filings@hq.doe.gov), including the phrase "Freedom of Information Appeal" in the subject line. (The Office of Hearings and Appeals prefers to receive appeals by email.) The appeal must contain all the elements required by 10 C.F.R. § 1004.8, including a copy of the determination letter. Thereafter, judicial review will be available to you in the Federal District Court either (1) in the district where you reside, (2) where you have your principal place of business, (3) where DOE's records are situated, or (4) in the District of Columbia.

You may contact BPA's FOIA Public Liaison, Jason Taylor, at 503.230.3537, [jetaylor@bpa.gov](mailto:jetaylor@bpa.gov), or at the address on this letter header, for any further assistance and to discuss any aspect of your request. Additionally you may contact the Office of Government Information Services (OGIS) at the National Archives and Records Administration to inquire about the FOIA mediation services they offer. The contact information for OGIS is as follows:

Office of Government Information Services  
National Archives and Records Administration  
8601 Adelphi Road-OGIS  
College Park, Maryland 20740-6001  
E-mail: [ogis@nara.gov](mailto:ogis@nara.gov)  
Phone: 202-741-5770  
Toll-free: 1-877-684-6448  
Fax: 202-741-5769

Questions about this communication may be directed to James King, CorSource Technology Group LLC, at [jjking@bpa.gov](mailto:jjking@bpa.gov) or 503.230.7621.

Sincerely,

A handwritten signature in black ink, appearing to read "Candice D. Palen". The signature is fluid and cursive, with the first name being the most prominent.

Candice D. Palen  
Freedom of Information/Privacy Act Officer

[Responsive agency records accompany this communication.](#)

## Knudson,Thanh (CONTR) - CGI-7

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**From:** Kimberly Gentle <[kgentle@popud.org](mailto:kgentle@popud.org)>  
**Sent:** Friday, December 15, 2017 9:33 AM  
**To:** [bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)  
**Subject:** [EXTERNAL] FW: BPA easement

What does your availability look like on Monday (the 18<sup>th</sup>) for a call with HiTest and the District?

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**From:** John Carlson [<mailto:jcarlson@hitestsand.com>]  
**Sent:** Friday, December 15, 2017 9:27 AM  
**To:** Kimberly Gentle  
**Cc:** Peter Sentell; [bcleslie@bpa.gov](mailto:bcleslie@bpa.gov); Jayson Tymko  
**Subject:** Re: BPA easement

Thanks Kim.

Could we organize a call on Monday to discuss with you, Brent and Peter?

Let me know.

Thanks,

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HiTest Sand  
John D. Carlson | Vice President

C (780) 935-9594  
5241 Calgary Trail Unit 601  
Edmonton, Alberta  
T6H 5G8  
[jcarlson@hitestsand.com](mailto:jcarlson@hitestsand.com)

On Dec 15, 2017, at 10:24 AM, Kimberly Gentle <[kgentle@popud.org](mailto:kgentle@popud.org)> wrote:

Good morning and happy Friday! This email is meant to serve as an introduction between HiTest executive (John Carlson, VP), Clark Construction (Peter Sentell, Project Executive) and BPA's easement specialist (Brent Leslie, Realty).

I have spoke to Brent Leslie from BPA and verified that he is your best point of contact at BPA regarding the road easement for the HiTest facility south of Newport. He has also said that he is happy to discuss your needs and he spoke a little bit regarding the process for approval to build out the road. Brent is cc'd on this email and his contact details can be found below. Brent is supportive of a call or an email directly from HiTest as your schedule permits. I am also happy to set up a conference call for all of us if you would prefer.

Feel free to call with any questions that may arise.

*Brent Leslie*

Realty Specialist  
Bonneville Power Administration | Department of Energy  
Real Property Field Services | TERR-BELL-1  
2410 E. Hawthorne Rd  
Mead, WA 99021  
Office: (509) 468-3081 Mobile: (b) (6)  
[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)  
[Landowner Use and Safety Information](#)  
<image001.png>

*Kimberly Gentle*

Director, Power and Risk Management

**Public Utility District No. 1 of Pend Oreille County**

<image003.png>P.O. Box 190 | 130 N. Washington  
Newport, Washington 99156  
509.447.6759 office | (b) (6) cell | [kgentle@popud.org](mailto:kgentle@popud.org) | [www.popud.org](http://www.popud.org)

*NOTICE: This email may contain confidential or privileged material, and is intended solely for use by the above referenced recipient. Any review, copying, printing, disclosure, distribution, or any other use, is strictly prohibited. If you are not the intended recipient, and believe that you have received this email in error, please notify the sender and delete the copy you received.*

## Kilyukh,Denis V (CONTR) - CGI-7

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**From:** Kimberly Gentle <[kgentle@popud.org](mailto:kgentle@popud.org)>  
**Sent:** Monday, December 18, 2017 10:01 AM  
**To:** John Carlson  
**Cc:** Peter Sentell; Leslie,Brent C (BPA) - TERR-REDMOND; Chris Jones  
**Subject:** [EXTERNAL] RE: BPA/HiTest road discussion

Try it again please. I was a little late.

---

**From:** John Carlson [<mailto:jcarlson@hitestsand.com>]  
**Sent:** Monday, December 18, 2017 10:00 AM  
**To:** Kimberly Gentle  
**Cc:** Peter Sentell; [bcleslie@bpa.gov](mailto:bcleslie@bpa.gov); Chris Jones  
**Subject:** Re: BPA/HiTest road discussion

Hi Kim,

I can't get through on this number you sent?

John

On Dec 15, 2017, at 3:51 PM, Kimberly Gentle <[kgentle@popud.org](mailto:kgentle@popud.org)> wrote:

Please dial 509-447-9019 – no password required.

Talk to you at 10 am PST/11 am Montain.

<Mail Attachment.ics>

**ATTACHMENT NOT AVAILABLE**

## Kilyukh, Denis V (CONTR) - CGI-7

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**From:** Leslie, Brent C (BPA) - TERR-BELL-1 <bcleslie@bpa.gov>  
**Sent:** Friday, January 05, 2018 8:21 AM  
**To:** John Carlson  
**Subject:** RE: [EXTERNAL] Re: [EXTERNAL] Re: [EXTERNAL] BPA Document attached.

Thank you John.

Sincerely,

*Brent Leslie*

Realty Specialist  
Bonneville Power Administration | Department of Energy  
Real Property Field Services | TERR-BELL-1  
2410 E. Hawthorne Rd  
Mead, WA 99021  
Office: (509) 468-3081 Mobile: (b) (6)  
[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)  
[Landowner Use and Safety Information](#)

**Bonneville**  
POWER ADMINISTRATION



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**From:** John Carlson [<mailto:jcarlson@hitestsand.com>]  
**Sent:** Friday, January 05, 2018 8:19 AM  
**To:** Leslie, Brent C (BPA) - TERR-BELL-1  
**Subject:** [EXTERNAL] Re: [EXTERNAL] Re: [EXTERNAL] BPA Document attached.

Brent my business partner is back from holiday late today so once he has had a chance to review we will submit this document along with the payment.

It will be either later today or Monday.

Thank you for your assistance.

John

Sent from my iPhone

On Jan 4, 2018, at 12:48 PM, Leslie, Brent C (BPA) - TERR-BELL-1 <[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)> wrote:

John,

See attachment.

Sincerely,

*Brent Leslie*

Realty Specialist  
Bonneville Power Administration | Department of Energy  
Real Property Field Services | TERR-BELL-1  
2410 E. Hawthorne Rd  
Mead, WA 99021  
Office: (509) 468-3081 Mobile: (b) (6)  
[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)  
[Landowner Use and Safety Information](#)  
<image001.png>

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**From:** Leslie,Brent C (BPA) - TERR-BELL-1  
**Sent:** Thursday, January 04, 2018 11:18 AM  
**To:** 'John Carlson'  
**Subject:** RE: [EXTERNAL] Re: [EXTERNAL] BPA Document attached.

Give me a call when you get this.

<image005.png>

Sincerely,

*Brent Leslie*

Realty Specialist  
Bonneville Power Administration | Department of Energy  
Real Property Field Services | TERR-BELL-1  
2410 E. Hawthorne Rd  
Mead, WA 99021  
Office: (509) 468-3081 Mobile: (b) (6)  
[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)  
[Landowner Use and Safety Information](#)  
<image006.png>

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**From:** John Carlson [<mailto:jcarlson@hitestsand.com>]  
**Sent:** Thursday, January 04, 2018 10:49 AM  
**To:** Leslie,Brent C (BPA) - TERR-BELL-1  
**Subject:** [EXTERNAL] Re: [EXTERNAL] BPA Document attached.

Here you go.

Parcel 1	(453125000005)
Parcel 2	(463130010001)
Parcel 3	(463130020001)
Parcel 4	(463130500001)

On Jan 4, 2018, at 11:35 AM, Leslie,Brent C (BPA) - TERR-BELL-1 <[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)> wrote:

John what are the parcel numbers of the HiTest owned property?

Sincerely,

*Brent Leslie*

Realty Specialist  
Bonneville Power Administration | Department of Energy  
Real Property Field Services | TERR-BELL-1  
2410 E. Hawthorne Rd  
Mead, WA 99021  
Office: (509) 468-3081 Mobile: (b) (6)  
[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)  
[Landowner Use and Safety Information](#)  
<image003.png>

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**From:** John Carlson [<mailto:jcarlson@hitestsand.com>]  
**Sent:** Thursday, January 04, 2018 10:11 AM  
**To:** Leslie, Brent C (BPA) - TERR-BELL-1  
**Subject:** [EXTERNAL] BPA Document attached.

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HiTest Sand  
John D. Carlson | Vice President

O (780) 328-6542  
5241 Calgary Trail Unit 601  
Edmonton, Alberta  
T6H 5G8  
[jcarlson@hitestsand.com](mailto:jcarlson@hitestsand.com)

<lusi-Application-for-Use-of-BPA-Right-of-Way (3).doc>

**U.S. DEPARTMENT OF ENERGY  
BONNEVILLE POWER ADMINISTRATION  
APPLICATION FOR PROPOSED USE OF BPA RIGHT-OF-WAY  
1-800-282-3713**

	<p align="center">Ask for Real Property Services or a contact person from web site. <a href="http://www.bpa.gov/goto/LandsCommunity">www.bpa.gov/goto/LandsCommunity</a></p> <p><b>Privacy Act Statement</b>  <b>Authority:</b> 42 USC § 7101 and 50 USC § 2401  <b>Purpose:</b> BPA will use this information to assess whether your proposed use of our right-of-way will interfere with BPA's land rights.  <b>Routine Uses:</b> This information is authorized to be maintained in Privacy Act system of records DOE-24, "Land Records System." Other routine uses for which this information may be disclosed are listed in the Privacy Act system of records notice for DOE-24, which is published in the Federal Register.  <b>Disclosure:</b> Voluntary; however, failure to provide complete information may result in a delay or denial of your application.</p>	<p><b>Date:</b> Jan 4 2018</p>
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<p align="center"><b>NO APPLICATION FEE</b></p> <p>For individual landowners requesting personal use of BPA Right-of-Way</p>	<p align="center"><b>\$250 APPLICATION FEE</b></p> <p>For developments or subdivisions. Application fee is non-refundable. <b>Checks will not be accepted.</b> To make payment, go to pay.gov, select make a pmt., enter BONNEVILLE in the search box (#2), select continue to form; select Realty Application Fee for pmt. type, enter pmt. info, review and submit. You should receive a confirmation.</p>	<p align="center"><b>\$2500 APPLICATION FEE</b></p> <p>For longitudinal occupancies that require multiple miles of BPA Right-of-Way. Application fee is non-refundable. <b>Checks will not be accepted.</b> To make payment, go to pay.gov, select make a pmt., enter BONNEVILLE in the search box (#2), select continue to form; select Realty Application Fee for pmt. type, enter pmt. info, review and submit. You should receive a confirmation.</p>
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<b>Applicant</b>	<b>Owner</b> (Complete only if the applicant is not the owner.)
1. NAME <b>HiTest Sand Inc</b>	4. NAME
2. ADDRESS, CITY, STATE, ZIP <b>5241 Calgary Trail Unit 601 Edmonton, Alberta, T6H 5G8 Canada</b>	5. ADDRESS, CITY, STATE, ZIP
3. TELEPHONE NO. <b>780-328-6542</b> EMAIL ADDRESS: <b>jcarlson@hitestsand.com</b> FAX NO: <b>780-328-6543</b>	6. TELEPHONE NO. EMAIL ADDRESS: FAX NO:

7. LOCATION OF PROPERTY (Legal description of the property. *This information is on your title, insurance policy, courthouse deed, or your tax statement.*)  
**(PROVIDE A COUNTY ASSESSOR'S MAP SHOWING THE OWNER'S BOUNDARY LINES AND THE LOCATION OF USE.)**  
**T31N R45E Section 26, T31N R45E Section 23, T31N R45E Section 25, and T31N R46E Section 30, W.M. Pend Oreille County Washington.**

QUARTER SECTION(S)	SECTION(S)	TOWNSHIP	RANGE	COUNTY	STATE
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8. PURPOSE FOR WHICH BPA RIGHT-OF-WAY/PROPERTY IS TO BE USED  
 Check all boxes that apply and complete the information on the following page. *(Include a map, plan or sketch if appropriate.)*

<input checked="" type="checkbox"/> <b>Driveway / Roadway Width</b>  Width _____  Material _____  <b>PLEASE ATTACH EXISTING AND PROPOSED GRADING PLANS.</b>	<input type="checkbox"/> <b>Pipelines</b>  Type: <input type="checkbox"/> Gas <input type="checkbox"/> Sewer <input type="checkbox"/> Water  Diameter    _____  Material      _____  Buried Depth _____	<input type="checkbox"/> <b>Electric Service Line</b>  Voltage      _____  Underground _____  Overhead     _____
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**Other Uses:** Temporary use of BPA Access Road AAB-11-AR-1 from Hwy 2 to the BPA Sacheen-Albeni Falls No 1 Right of Way (ROW) approximately 60' Ahead On Line (AOL) of structure 11/1. Then traveling AOL to BPA Access Road AAB-12-AR-1 located approximately 150' AOL of structure 12/1. Then traveling in an easterly direction on BPA Access Road AAB-12-AR-1 to Parcel ID: 463130010001, which is HiTest owned land.

Use of ROW is limited to existing roadway access to HiTest property for the purpose of performing geotechnical drilling program on HiTest land. Snow clearing as necessary to provide access. Equipment utilizing ROW access will be limited to passenger vehicles, snow plow, and track mounted drilling rig.

**Narrative:** Please describe your intended use in detail. In order to assure safe clearance, please describe any equipment that will be used for applied use (including equipment intended to construct and maintain the use). Space is provided on page 2 for a drawing. **IF GRADING, PLEASE ATTACH EXISTING AND PROPOSED GRADING PLANS**

9. APPLICANT NAME

**HiTest Sand Inc.**

10. APPLICANT SIGNATURE

11. APPLICANT TITLE

**V.P.**

BPA F 4300.03e  
(08-17)

**IF APPLICABLE, ATTACH NAME, COMPANY ADDRESS, AND A CONTACT PERSON FOR ALL UTILITIES INVOLVED IN PROJECT.**

12. RIGHT-OF-WAY Draw in space provided below the location of the proposed use. (**Identify structures and show distances and angles from BPA structures**). Diamonds on the line represent BPA structures on the right-of-way. Copy the series of letters and numbers from the lower half of each BPA structure (*see example below*) and enter in "BPA Structure Identification" block. Indicate which direction is "North" in relation to the right-of-way.

**BIG E – CHEM 1-81-2**

BPA STRUCTURE IDENTIFICATION

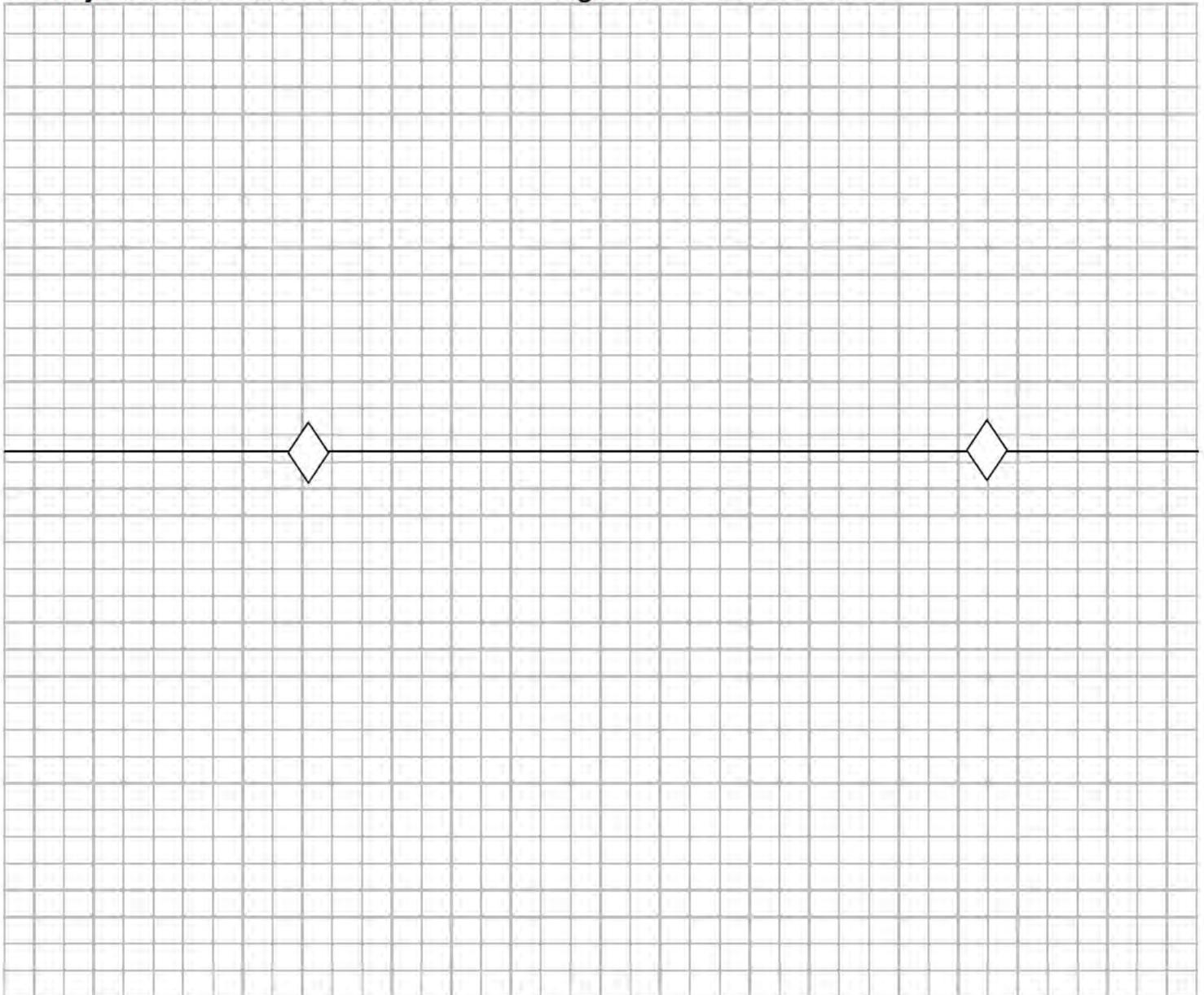


**PS2 1-2-A**

BPA STRUCTURE IDENTIFICATION



**Identify structures and show distances and angles from BPA structures**



BPA STRUCTURE IDENTIFICATION

BPA STRUCTURE IDENTIFICATION

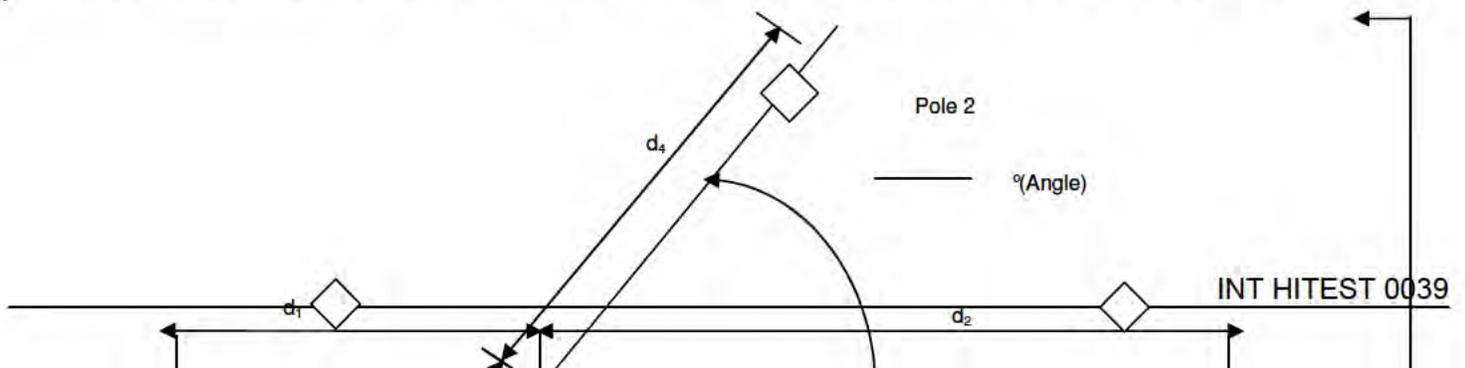
BPA F 4300.03  
(08-2017)

**U.S. DEPARTMENT OF ENERGY  
BONNEVILLE POWER ADMINISTRATION  
APPLICATION FOR PROPOSED USE OF BPA RIGHT-OF-WAY**

*Electronic Form Approved  
by Forms Mgmt.08/01/2017*

APPLICANT NAME

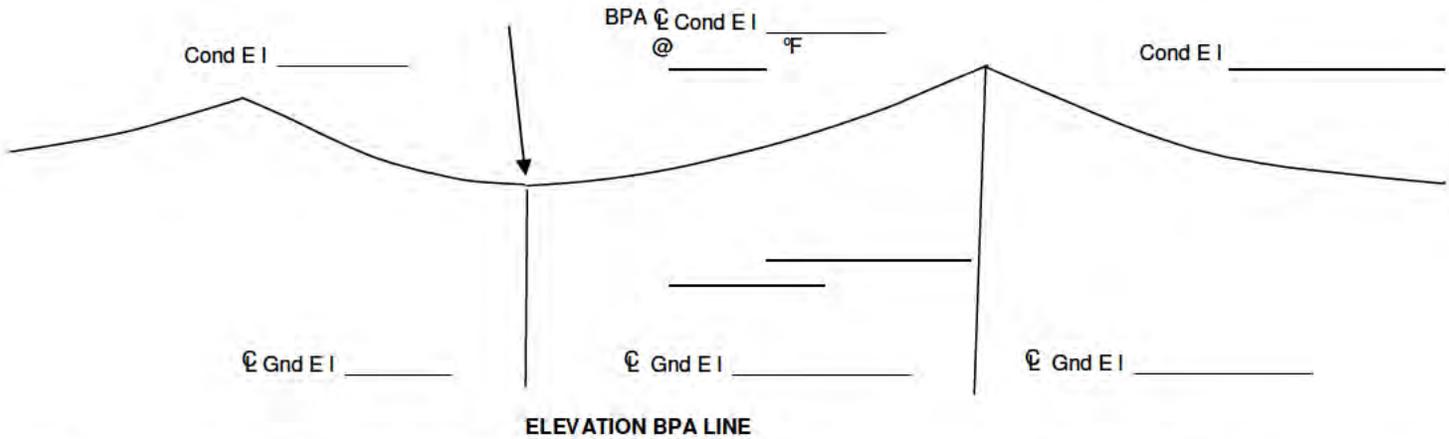
Complete **ONLY** if overhead or underground foreign line crosses an overhead BPA line. If the foreign line crosses more than one BPA line use additional sheets.



BPA \_\_\_\_\_  
 Str No. \_\_\_\_\_

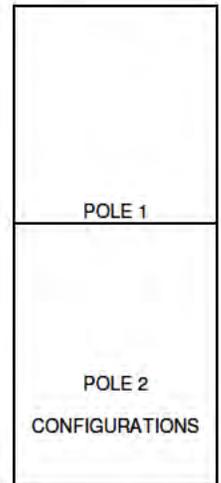
d<sub>1</sub> \_\_\_\_\_  
 d<sub>2</sub> \_\_\_\_\_  
 d<sub>3</sub> \_\_\_\_\_  
 d<sub>4</sub> \_\_\_\_\_

\_\_\_\_\_  
 PLAN



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POLES	LENGTH	DEPTH SET	CLASS POLE
POLE 1			
POLE 2			
F I X T U R E S	SIZE OF CROSSARMS		
	MAKE AND CATALOG NUMBER OF INSULATORS		
C O N D U C T O R S	NUMBER	SIZE	
	KIND	VOLTAGE	
	MWT	LOADING	
	COMMENTS		



BPA F 4300.03e  
 (08-2017)

**U.S. DEPARTMENT OF ENERGY  
 BONNEVILLE POWER ADMINISTRATION  
 APPLICATION FOR PROPOSED USE OF BPA RIGHT-OF-WAY  
 Mail your application to the location nearest to your project:**

*Electronic Form Approved  
 by Forms Mgmt. 08/01/2017*

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## WESTERN WASHINGTON

### Location and Address

### Phone Number

Snohomish District Office, 914 Ave D, Snohomish, WA 98290	360.563.3640
Covington District Office, 28401 Covington Way, Kent, WA 98042	253.631.9154
Olympia District Office, 5240 Trosper St SW, Olympia, WA 98512	360.570.4352, 360.570.4333 OR 360.570.4332

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## OREGON

### Location and Address

### Phone Number

Redmond District Office, 3655 SW Highland Ave. Redmond, OR 97756	541.548.4015 ext. 3263
Eugene District Office, 86000 Hwy 99S, Eugene, OR 97405	541.988.7432
Salem District Office, 2715 Tepper Lane, Keizer, OR 97303	503.393.8181
Portland Office P.O. Box 3621, Portland, Oregon 97266	800.836.6619
Hood River, <i>(see Portland for mailing address)</i>	
North Bend Area, <i>(see Eugene for mailing address)</i>	

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## EASTERN WASHINGTON, IDAHO AND MONTANA

### Location and Address

### Phone Number

Idaho Falls District Office, <i>(see Tri-Cities for mailing address)</i>	509.544.4747
Tri-Cities District Office, 2211 North Commercial Avenue, Pasco, WA 99301	509.544.4747
Spokane District Office, 2410 E. Hawthorne Rd., Mead, WA 99021-9594	877.417.9454
Grand Coulee Area & Ellensburg Area PO Box 24 Grand Coulee, WA 99133	509.378.7447
Kalispell Maintenance District Office, 2520 US Hwy 2 East, Kalispell, MT 59901	406.751.7824

## Knudson,Thanh (CONTR) - CGI-7

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**From:** Jim May <jmay@hitestsand.com>  
**Sent:** Monday, January 08, 2018 6:49 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** John Carlson (jcarlson@hitestsand.com); Jayson Tymko  
**Subject:** [EXTERNAL] Re: FW: L0428 and L0429 Pend Oreille PUD LLIRs - Kickoff Meeting

Looks good!

Our team will call in from our Engineering meeting in Pittsburgh.

Jim

On Mon, Jan 8, 2018 at 7:12 PM, Sundeen,Shari (BPA) - TPCC-TPP-4 <[slsundeen@bpa.gov](mailto:slsundeen@bpa.gov)> wrote:

-----Original Appointment-----

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4 [<mailto:slsundeen@bpa.gov>]

**Sent:** Monday, January 08, 2018 10:40 AM

**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Bustamante,Richard (BPA) - TPP-OPP-3; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Robertson,Angela D (BPA) - TSE-TPP-2; Witthaus,Christopher C (CONTR) - TPMC-OPP-3; Hindi,Hamody M (BPA) - TPPA-OPP-3; Adams,Nicole A (CONTR) - TSES-TPP-2; Amber E. Orr

**Subject:** L0428 and L0429 Pend Oreille PUD LLIRs - Kickoff Meeting

**When:** Wednesday, January 24, 2018 11:00 AM-12:00 PM (UTC-08:00) Pacific Time (US & Canada).

**Where:** Vancouver, TPP Lobby Conference Room

This kickoff meeting will be held to discuss both of Pend Oreille's LLIRs. Phone bridge information is in the attached agenda.

## Kilyukh, Denis V (CONTR) - CGI-7

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**From:** John Carlson <jcarlson@hitestsand.com>  
**Sent:** Wednesday, January 10, 2018 12:12 PM  
**To:** Leslie, Brent C (BPA) - TERR-REDMOND  
**Subject:** [EXTERNAL] Re: ROW App  
**Attachments:** HiTest Sand\_180110131329-0001.pdf

Here you go. Please see signed attached application

On Jan 10, 2018, at 1:06 PM, Leslie, Brent C (BPA) - TERR-BELL-1 <[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)> wrote:

See attachment.

Sincerely,

*Brent Leslie*

Realty Specialist  
Bonneville Power Administration | Department of Energy  
Real Property Field Services | TERR-BELL-1  
2410 E. Hawthorne Rd  
Mead, WA 99021  
Office: (509) 468-3081 Mobile: (b) (6)

[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)

[Landowner Use and Safety Information](#)

<image003.png>

<lusi-Application-for-Use-of-BPA-Right-of-Way (2).doc>

**U.S. DEPARTMENT OF ENERGY  
BONNEVILLE POWER ADMINISTRATION  
APPLICATION FOR PROPOSED USE OF BPA RIGHT-OF-WAY  
1-800-282-3713**

	Ask for Real Property Services or a contact person from web site. <a href="http://www.bpa.gov/goto/LandsCommunity">www.bpa.gov/goto/LandsCommunity</a>	<b>Date:</b> Jan 4 2018
<p><b>Privacy Act Statement</b>  <b>Authority:</b> 42 USC § 7101 and 50 USC § 2401  <b>Purpose:</b> BPA will use this information to assess whether your proposed use of our right-of-way will interfere with BPA's land rights.  <b>Routine Uses:</b> This information is authorized to be maintained in Privacy Act system of records DOE-24, "Land Records System." Other routine uses for which this information may be disclosed are listed in the Privacy Act system of records notice for DOE-24, which is published in the Federal Register.  <b>Disclosure:</b> Voluntary; however, failure to provide complete information may result in a delay or denial of your application.</p>		

<p><b>NO APPLICATION FEE</b>                  For individual landowners requesting personal use of BPA Right-of-Way</p>	<p><b>\$250 APPLICATION FEE</b>                  For developments or subdivisions. Application fee is non-refundable. <b>Checks will not be accepted.</b> To make payment, go to pay.gov, select make a pmt., enter BONNEVILLE in the search box (#2), select continue to form; select Realty Application Fee for pmt. type, enter pmt. info, review and submit. You should receive a confirmation.</p>	<p><b>\$2500 APPLICATION FEE</b>                  For longitudinal occupancies that require multiple miles of BPA Right-of-Way. Application fee is non-refundable. <b>Checks will not be accepted.</b> To make payment, go to pay.gov, select make a pmt., enter BONNEVILLE in the search box (#2), select continue to form; select Realty Application Fee for pmt. type, enter pmt. info, review and submit. You should receive a confirmation.</p>
---	---	--

<p><b>Applicant</b></p> <p>1. NAME  <b>HiTest Sand Inc</b></p> <p>2. ADDRESS, CITY, STATE, ZIP  <b>5241 Calgary Trail Unit 601                  Edmonton, Alberta, T6H 5G8                  Canada</b></p> <p>3. TELEPHONE NO. <b>780-328-6542</b>                  EMAIL ADDRESS: <b>jcarlson@hitestsand.com</b>                  FAX NO: <b>780-328-6543</b></p>	<p><b>Owner</b> (Complete only if the applicant is not the owner.)</p> <p>4. NAME</p> <p>5. ADDRESS, CITY, STATE, ZIP</p> <p>6. TELEPHONE NO.                  EMAIL ADDRESS:                  FAX NO:</p>
--	--

7. LOCATION OF PROPERTY (Legal description of the property. *This information is on your title, insurance policy, courthouse deed, or your tax statement.*)  
**(PROVIDE A COUNTY ASSESSOR'S MAP SHOWING THE OWNER'S BOUNDARY LINES AND THE LOCATION OF USE.)**  
**T31N R45E Section 26, T31N R45E Section 23, T31N R45E Section 25, and T31N R46E Section 30, W.M. Pend Oreille County Washington.**

QUARTER SECTION(S)	SECTION(S)	TOWNSHIP	RANGE	COUNTY	STATE
--------------------	------------	----------	-------	--------	-------

8. PURPOSE FOR WHICH BPA RIGHT-OF-WAY/PROPERTY IS TO BE USED  
 Check all boxes that apply and complete the information on the following page. (Include a map, plan or sketch if appropriate.)

<input checked="" type="checkbox"/> <b>Driveway / Roadway Width</b> Width _____ Material _____ <b>PLEASE ATTACH EXISTING AND PROPOSED GRADING PLANS.</b>	<input type="checkbox"/> <b>Pipelines</b> Type: <input type="checkbox"/> Gas <input type="checkbox"/> Sewer <input type="checkbox"/> Water Diameter _____ Material _____ Buried Depth _____	<input type="checkbox"/> <b>Electric Service Line</b> Voltage _____ Underground _____ Overhead _____
---	---	---

**Other Uses:** \_\_\_\_\_  
 Access alternative #1:

Temporary use of BPA Access Road AAB-11-AR-1 from Hwy 2, to the BPA Sacheen-Albeni Falls No 1 Right of Way (ROW), approximately 60' Ahead On Line (AOL) of structure 11/1. Then traveling AOL to BPA Access Road AAB-12-AR-1 located approximately 150' AOL of structure 12/1. Then traveling in an easterly direction on BPA Access Road AAB-12-AR-1 to Parcel ID: 463130010001, which is HiTest owned land.

Access alternative #2:

From the NE Temporary access across BPA Sacheen-Albeni Falls No. 1 Right of Way (ROW) from the NE, approximately 60' Back On Line (BOL) of structure 12/6, and then onto BPA Access Road AAB-12-AR-1, located on Parcel ID: 463130010001, which is HiTest owned land.

Use of ROW is limited to existing roadway access to HiTest property for the purpose of performing geotechnical drilling program on HiTest land. Snow clearing as necessary to provide access. Equipment utilizing ROW access will be limited to passenger vehicles, snow plow, and track mounted drilling rig.

**Narrative:** Please describe your intended use in detail. In order to assure safe clearance, please describe any equipment that will be used for applied use (including equipment intended to construct and maintain the use). Space is provided on page 2 for a drawing. **IF GRADING, PLEASE ATTACH EXISTING AND PROPOSED GRADING PLANS**

9. APPLICANT NAME  
HiTest Sand Inc.

10. APPLICANT SIGNATURE  
(b) (6)

11. APPLICANT TITLE  
V.P.

BPA F 4300.03e  
(08-17)

**IF APPLICABLE, ATTACH NAME, COMPANY ADDRESS, AND A CONTACT PERSON FOR ALL UTILITIES INVOLVED IN PROJECT.**

12. RIGHT-OF-WAY Draw in space provided below the location of the proposed use. (**Identify structures and show distances and angles from BPA structures**). Diamonds on the line represent BPA structures on the right-of-way. Copy the series of letters and numbers from the lower half of each BPA structure (*see example below*) and enter in "BPA Structure Identification" block. Indicate which direction is "North" in relation to the right-of-way.

**BIG E – CHEM 1-81-2**

BPA STRUCTURE IDENTIFICATION

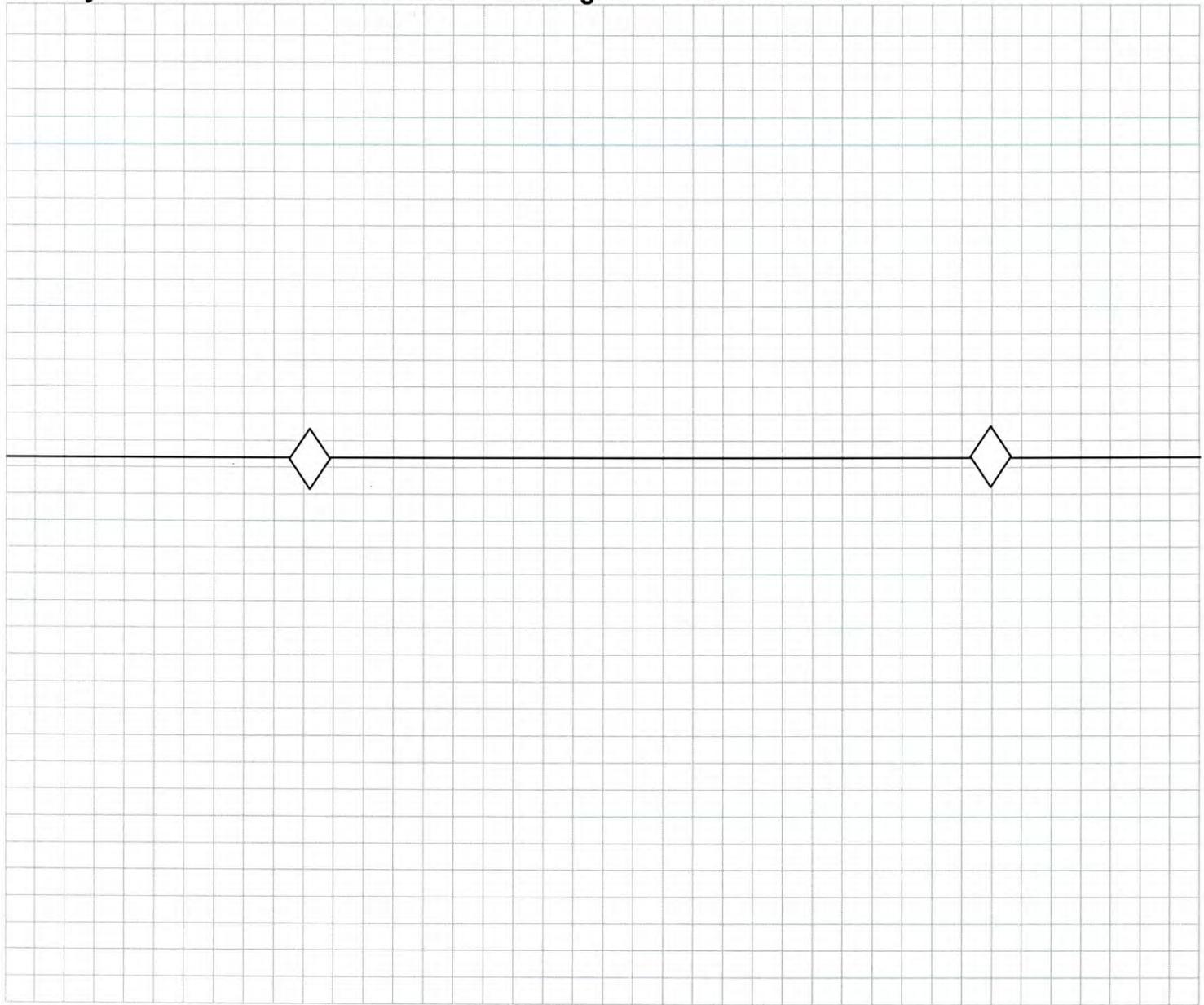


**PS2 1-2-A**

BPA STRUCTURE IDENTIFICATION



# Identify structures and show distances and angles from BPA structures



BPA STRUCTURE IDENTIFICATION

BPA STRUCTURE IDENTIFICATION

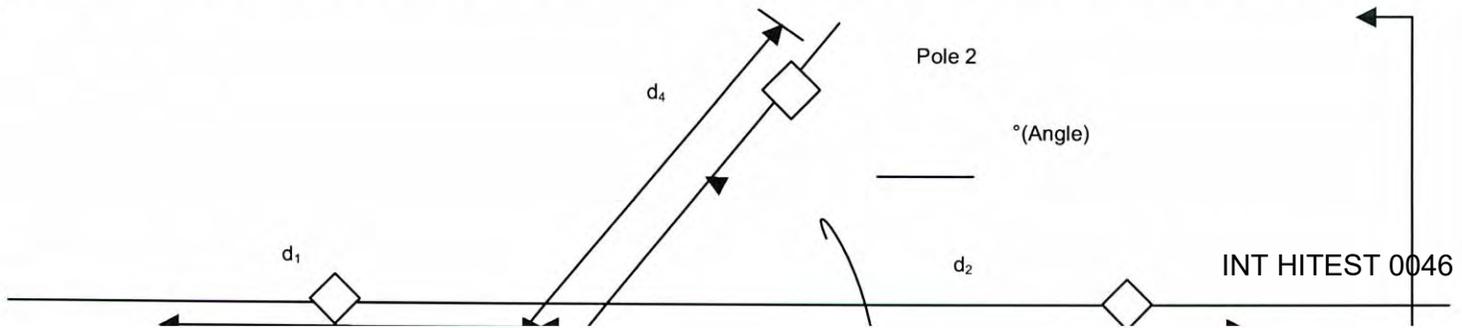
BPA F 4300.03  
(08-2017)

## U.S. DEPARTMENT OF ENERGY BONNEVILLE POWER ADMINISTRATION APPLICATION FOR PROPOSED USE OF BPA RIGHT-OF-WAY

*Electronic Form Approved  
by Forms Mgmt.08/01/2017*

APPLICANT NAME

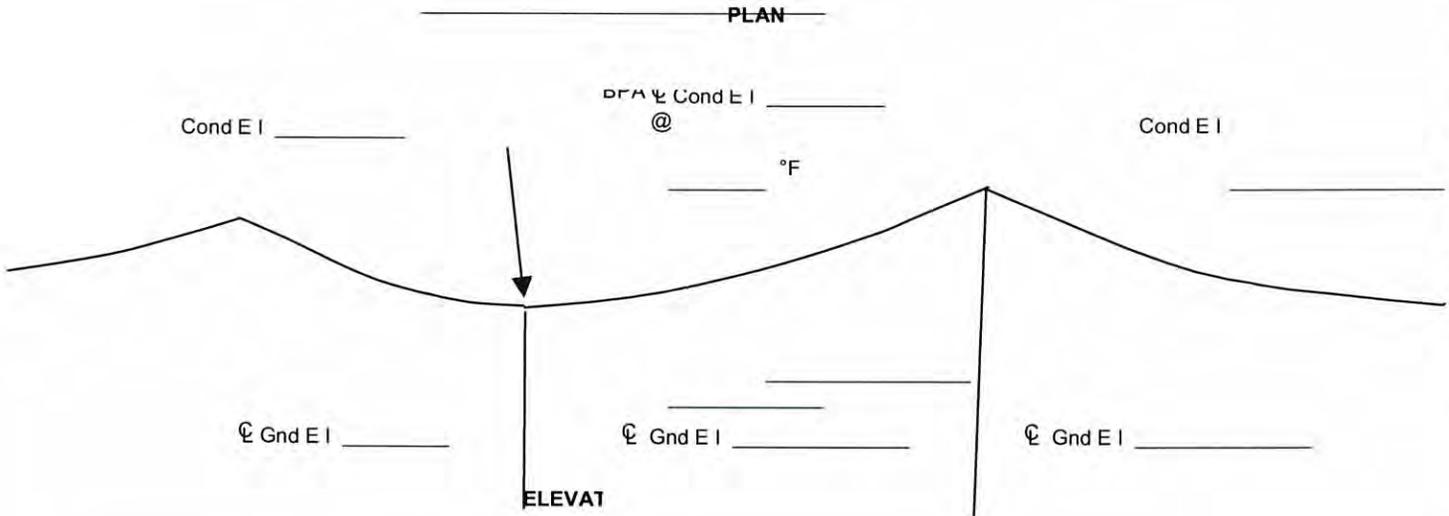
Complete **ONLY** if overhead or underground foreign line crosses an overhead BPA line. If the foreign line crosses more than one BPA line use additional sheets.



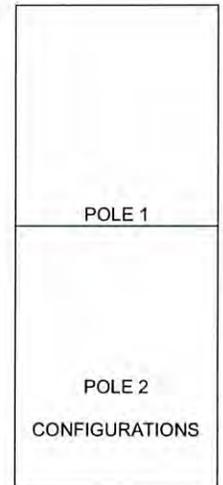
BPA \_\_\_\_\_  
 Str No. \_\_\_\_\_

$d_1$  \_\_\_\_\_  
 \_\_\_\_\_  
 $d_3$  \_\_\_\_\_  
 \_\_\_\_\_

A  
P  
P  
L  
I  
C  
A  
N  
T



POLES		LENGTH	DEPTH SET	CLASS POLE
POLE 1				
POLE 2				
F I X T U R E S	SIZE OF CROSSARMS			
	MAKE AND CATALOG NUMBER OF INSULATORS			
C O N D U C T O R S	NUMBER	SIZE		
	KIND	VOLTAGE		
	MWT	LOADING		
	COMMENTS			



BPA F 4300.03e  
 (08-2017)

**U.S. DEPARTMENT OF ENERGY  
 BONNEVILLE POWER ADMINISTRATION  
 APPLICATION FOR PROPOSED USE OF BPA RIGHT-OF-WAY  
 Mail your application to the location nearest to your project:**

*Electronic Form Approved  
 by Forms Mgmt. 08/01/2017*

**Kilyukh,Denis V (CONTR) - CGI-7**

---

**From:** John Carlson <jcarlson@hitestsand.com>  
**Sent:** Wednesday, January 10, 2018 11:17 AM  
**To:** Leslie,Brent C (BPA) - TERR-REDMOND  
**Subject:** [EXTERNAL] Fwd: Title Preliminary.pdf  
**Attachments:** Title Preliminary.pdf

Begin forwarded message:

**From:** HiTest <[jtymko@hitestsand.com](mailto:jtymko@hitestsand.com)>  
**Subject:** Title Preliminary.pdf  
**Date:** January 3, 2018 at 5:32:21 PM MST  
**To:** [jcarlson@hitestsand.com](mailto:jcarlson@hitestsand.com)

Our easements and right of ways are attached.

Sent from my iPhone



*First American Title*

# Commitment for Title Insurance

ISSUED BY

**First American Title Insurance Company**

## Commitment

**FIRST AMERICAN TITLE INSURANCE COMPANY**, a California corporation ("Company"), for a valuable consideration, commits to issue its policy or policies of title insurance, as identified in Schedule A, in favor of the Proposed Insured named in Schedule A, as owner or mortgagee of the estate or interest in the land described or referred to in Schedule A, upon payment of the premiums and charges and compliance with the Requirements; all subject to the provisions of Schedules A and B and to the Conditions of this Commitment.

This Commitment shall be effective only when the identity of the Proposed Insured and the amount of the policy or policies committed for have been inserted in Schedule A by the Company.

All liability and obligation under this Commitment shall cease and terminate 180 days after the Effective Date or when the policy or policies committed for shall issue, whichever first occurs, provided that the failure to issue the policy or policies is not the fault of the Company.

The Company will provide a sample of the policy form upon request.

In Witness Whereof, First American Title Insurance Company has caused its corporate name and seal to be affixed by its duly authorized officers on the date shown in Schedule A.

**First American Title Insurance Company**



(b) (6)

Dennis J. Glimore  
President

(b) (6)

Secretary

Issued By:

Frontier Title & Escrow Company  
121 N. Washington Ave.  
Newport, WA 99156

(This Commitment is valid only when Schedules A and B are attached)

This jacket was created electronically and constitutes an original document

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**FRONTIER TITLE & ESCROW COMPANY, INC**  
121 North Washington Ave, Newport WA, 99156  
(509) 447-4454 phone; (509) 447-3295 fax; (877) 784-8530 toll free  
newport@frontiertitle.biz

**PRELIMINARY COMMITMENT**

Prepared for: Frontier Escrow  
Attn: Laura Mahoney

Order No.: 9639-A  
Escrow No.: 2017-5608

For Questions Contact

(b) (6)

**RE: Seller/Owner:** PUD  
**Buyer/Borrower:** Hi Test

Cathy Stolarik, Title Officer

**SCHEDULE A**

**Effective Date: August 23, 2017 @ 8:00 a.m.**

1.	Policy or Policies to be issued		
	<b>Standard Owners Coverage</b>	Premium	\$ 1004.00
	<b>Amount: \$ 300,000.00</b>	Tax	\$ 76.30
		Total	\$ 1080.30

**Proposed Insured:**

**Hi Test Sand, Inc., a Canadian corporation**

2. **Frontier Title & Escrow Company, Inc.** as agent for **First American Title Insurance Company** agrees to issue on request and on recording of any appropriate documents, its policy or policies as applied for, with coverage as indicated, based on this preliminary commitment that fee simple title to the property described herein is vested on the date shown above in:

**Public Utility District No. 1 of Pend Oreille County**

Subject only to the exceptions shown herein and to the terms, conditions, and exceptions contained in the policy form. This report and commitment shall have no force or effect except as a basis for the coverage specified herein.

3. The land referred to in this Commitment is situated in the County of Pend Oreille, State of Washington, described as follows:

**Parcel 1** (453125000005)

The East Half of the Northeast Quarter of Section 25, Township 31 North, Range 45, E.W.M., Pend Oreille County, Washington.

**Parcel 2** (46313001<sup>0001</sup>001)

Government Lot 1, Section 30, Township 31 North, Range 46 E.W.M., Pend Oreille County, Washington.

**Parcel 3** (46313002<sup>0101</sup>001)

Government Lot 2, Section 30, Township 31 North, Range 46, E.W.M., Pend Oreille County, Washington.

**Parcel 4** (463130500001)

Government Lots 3 and 4 in Section 30, Township 31 North, Range 46, E.W.M., Pend Oreille County, Washington.

**END OF SCHEDULE A**

.....  
The following information is provided for convenience only:

[Abbreviated Description: E ½ NE ¼ 25-31-45 & GL1-4 30-31-46]

**SCHEDULE B  
GENERAL EXCEPTIONS**

- A. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
- B. Any facts, rights, interests, or claims which are not shown by the public records, but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
- C. Easements, claims of easement or encumbrances, not disclosed by public record.
- D. Discrepancies, conflicts in boundary lines, shortage in area, encroachment, or any other facts which an accurate survey may disclose, and which are not shown by public record.
- E. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in acts authorizing the issuance thereof; (c) water rights, claims or title to water; whether or not the matters excepted under (a), (b), or (c) are shown by public records; (d) Indian tribal codes or regulations, Indian treaty or aboriginal rights, including easements or equitable servitudes
- F. Any lien, or right to a lien, for services, labor, materials or medical assistance, theretofore or hereafter furnished, imposed by law and not shown by the public records.
- G. Any service, installation, or general connection, maintenance, construction, tap or reimbursement charges/costs for sewer, water, electricity, telephone, gas, or garbage.
- H. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the Public Records, or attaching subsequent to the effective date hereof but prior to the date the proposed Insured acquires of record for value the estate or interest or mortgage thereon covered by this Commitment.
- I. Any claim to (a) ownership of, or rights to, minerals and similar substances, including, but not limited to ores, metals, coal, lignite, oil, gas, uranium, clay, rock, sand, and gravel located in, on, or under the Land or produced from the Land, whether such ownership or rights arise by lease, grant, exception, conveyance, reservation, or otherwise; and (b) any rights, privileges, immunities, rights of way, and easements associated therewith or appurtenant thereto, whether or not the interests or rights excepted in (a) or (b) appear in the Public Records.

**SCHEDULE B PART 1  
SPECIAL EXCEPTIONS**

1. Lien of any real estate excise sales tax upon any sale of said property if unpaid.  
As of the date herein, the excise tax rate for 2017 is 0% according to the latest public notice issued by the County record section.
2. Easement, including the terms and provisions contained in document:  
  
Recorded: February 27, 1973  
Recording No.: 137661  
In favor of: United States of America  
For: Perpetual easement and right to enter and erect, maintain, repair, rebuild, operate and patrol one line of electric power transmission structures and appurtenant signal lines  
Affects: Parcels 2 & 3
3. Right-of-Way Deed recorded August 2, 1976 under recording No. 149440. Affects Parcel 2.
4. Easement, including the terms and provisions contained in document:  
  
Recorded: July 24, 1979  
Recording No.: 164200  
In favor of: (b) (6)  
For: Road access  
Affects: Parcel 2
5. Easement, including the terms and provisions contained in document:  
  
Recorded: August 13, 1996  
Recording No.: 234788  
In favor of: Crown Pacific Limited Partnership  
For: Non-exclusive road easement  
Affects: Parcel 3
6. Recital as contained in Statutory Warranty Deed recorded September 18, 1995, under Auditor's File No. 230357: 'SUBJECT TO': Remediation, treatment or cleanup of any hazardous waste, toxic substances or other contaminants, if any, contained in the soil and/ or ground water of the premises.

17. The requirement that satisfactory evidence be furnished to this company with applicable statutes, ordinances and charters governing the ownership and disposition of the herein described land.  
*in file*

8. The application is for a policy to insure Hi Test Sand, Inc., a corporation to be formed under the laws of the State of Washington. The proposed instrument should not be recorded until proof of issuance of certificate of incorporation by the Secretary of State has been submitted.

**END OF EXCEPTIONS**

**NOTES**

Note 1. This file is being underwritten by First American Title Insurance Company. In the event this transaction fails to close, a cancellation fee will be charged for services rendered pursuant to the Washington State Insurance Code and the filed rate schedule of the Company.

**Note 2. Pend Oreille County recording fees for the FIRST page of each document are: Deeds of Trust: \$76.00  
All other documents which contain a legal description: \$75.00  
The recording fee for each additional page is \$1.00.  
Our reconveyance fee is \$150.00**

Note 3. The County Assessor's records indicate that the general tax for the year 2017 is exempt due to a Senior Citizen exemption.

Amount Paid: \$26.40  
Assessed value of land: \$120,000  
Tax Account No.: 453125000005; affects Lot 1

Amount Paid: \$17.70  
Assessed value of land: \$27,660  
Tax Account No.: 463130010001; affects Lot 2

Amount Paid: \$17.70  
Assessed value of land: \$58,500  
Tax Account No.: 463130020001; affects Lot 3

Amount Paid: \$18.71  
Assessed value of land: \$80,205  
Tax Account No.: 463130500001; affects Lot 4

Contact the Pend Oreille County Assessor at (509) 447-4312 for cancellation of exemption due to sale.

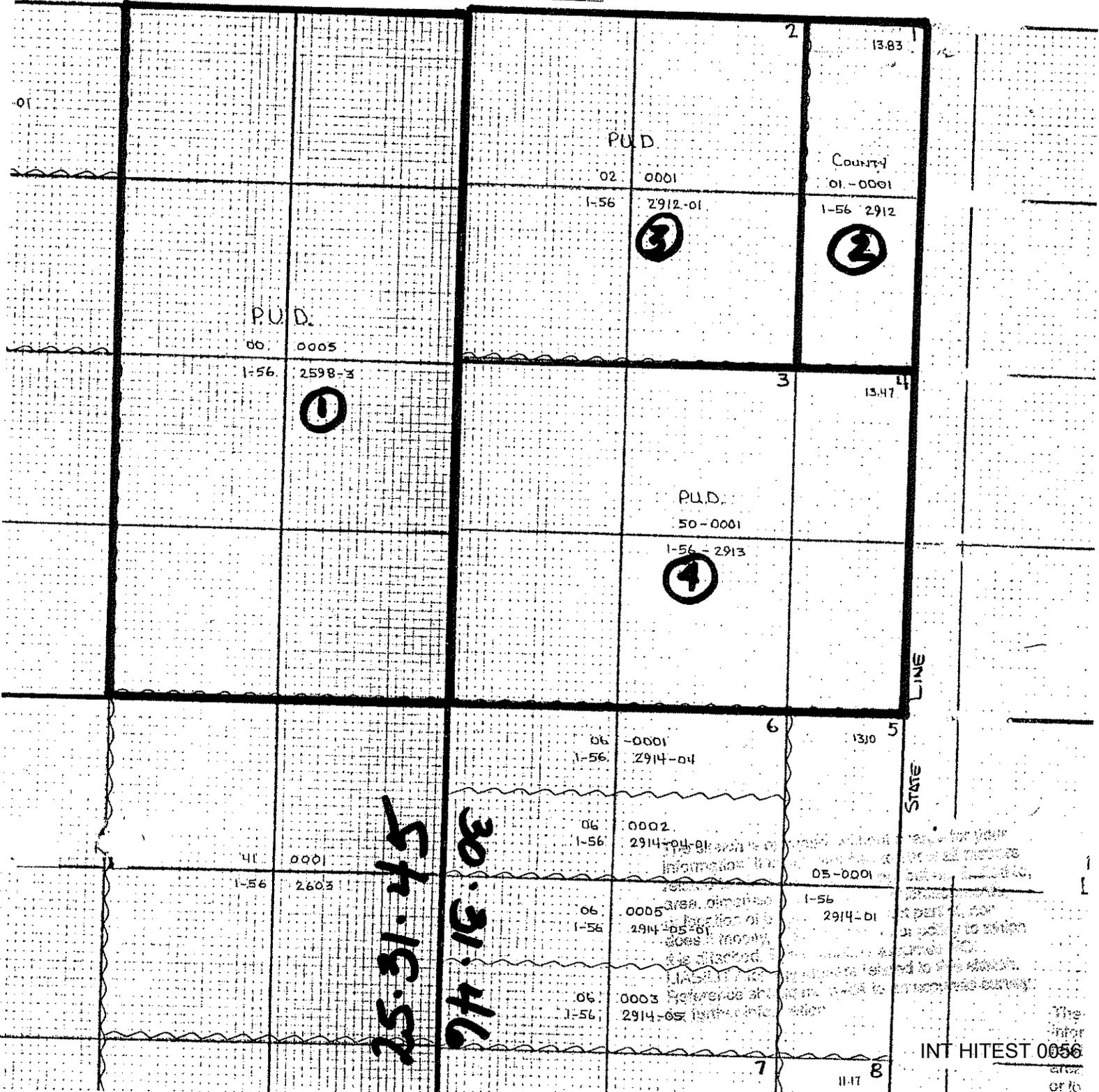
Note 4. Property Address: NKA Stateline Rd., Newport, WA 99156

RANGE 45

S.D. \_\_\_\_\_

SECT N 30

R.D. \_\_\_\_\_



TRANSMISSION LINE AND ACCESS ROAD EASEMENT

The GRANTOR, herein so styled whether one or more. PEND OREILLE COUNTY, WASHINGTON, a municipal corporation;

MADE AND SIGNED  
FOR THE GRANTOR  
[Signature]

for and in consideration of the sum of TWO THOUSAND ONE HUNDRED THIRTY Dollars (\$ 2,130.00 ),

in hand paid by the UNITED STATES OF AMERICA, receipt of which is hereby acknowledged, hereby grants, bargains, sells, and conveys to the UNITED STATES OF AMERICA and its assigns, a personal easement and right to enter and erect, maintain, repair, rebuild, operate, and patrol lines of electric power transmission structures and appurtenant signal lines, including the right to erect such poles, transmission structures, wires, cables, and appurtenances as are necessary thereto, in, over, upon, and across the following-described parcel of land in the County of Pend Oreille, in the State of Washington, to-wit:

The north 90 feet of Lots 1 and 2 of Section 30, Township 31 North, Range 46 East, Willamette Meridian, Pend Oreille County, Washington:

It is agreed that any damage to Grantor's agricultural crops, fences, or irrigation or drainage systems on the right-of-way resulting from and in the course of construction, reconstruction or maintenance of the transmission line or lines shall be repaired, replaced or paid for by Grantee or its contractor. Where payment is made, the amount of damages will be determined by an appraisal made by the Grantee.

Any use of the right-of-way by the Grantor, his heirs, successors, and assigns, other than the right to grow, cultivate, and harvest agricultural crops, shrubs, decorative plants, or to utilize as grazing lands, shall be by express permission of the Grantee. However, the Grantee shall have the right to grade, cultivate, plant, and maintain grass, shrubs, or other cover or ornamental plants upon the portion of the right-of-way not otherwise being utilized by Grantor.

For the purpose of preserving the natural appearance of the right-of-way, it is agreed by the Grantor and the United States of America that the right-of-way shall not be used for the accumulation or dumping of litter, trash or other foreign material. The Grantee agrees that any such accumulations resulting from its entry upon the right-of-way for construction or maintenance purposes will be removed or disposed of by Grantee or its contractor.

Access Road No. AAB-12-AR-1 may be used for ingress and egress to and from the Bonneville Power Administration's Sacben-Albeal Falls No. 1 transmission line and to and from any existing or future transmission lines which have been or may be constructed adjacent or nearly adjacent thereto.

FEB 27 1973

137661

7-518

tree") located on land owned by the Grantor adjacent to the above-described right of way, which could fall within 25 feet of ~~the electric transmission facilities hereinafter described~~; provided, however, it is agreed that compensation is included in the consideration stated above for trees or snags within strips of land ~~as shown outlined in green on Exhibit 1 attached hereto and made a part hereof,~~

INT HITEST 005

Adjacent contiguous to said right of way that (a) are danger trees on (hereinafter called "present danger trees"), ~~which are the property of the Grantor~~ The right to top, limb or fell danger trees outside of said strips (hereinafter called "additional danger trees") may only be exercised within 3 years after all present danger trees have been cut, and the UNITED STATES OF AMERICA shall pay the person who is the owner thereof at the date of cutting such additional danger trees the market value prevailing at the date of cutting under authority of the UNITED STATES OF AMERICA, such payment to be made within a reasonable period of time after they have been so cut; and Grantor also hereby grants, bargains, sells, and conveys unto the UNITED STATES OF AMERICA, and its assigns, a permanent easement and right of way for the construction, operation and maintenance of a road ~~approximately twenty (20) feet in width~~ ~~to be used for ingress and egress to and from the transmission line~~ on, over, and across the land of the Grantor in Lots 1 and 2 of Section 30, Township 31 North, Range 46 East, Willamette Meridian, Pend Oreille County, Washington,

for the following purposes, namely: the right to enter and to clear of timber, danger trees, and brush; ~~to~~ cut, fill, level, grade, drain, surface, ~~maintain, repair and rebuild a road and such culverts, bridges, turn-outs, retaining walls or other appurtenant structures as may be necessary, on, over, and across the land embraced within said right of way, as shown colored in red on drawing Serial No. 153312 DTR-B,~~

prepared by the United States Department of the Interior, Bonneville Power Administration, ~~attached hereto and by this reference, made a part hereof.~~

The Grantor reserves the right of ingress and egress over and across said road and the right to pass and repass along and on said road insofar as the same extends across the lands of the Grantor, said right to be exercised in a manner that will not interfere with the use of the road by the UNITED STATES OF AMERICA, its employees, contractors, ~~and its assigns.~~

It is understood and agreed that if said road is damaged by the UNITED STATES OF AMERICA, its employees, contractors, ~~or assigns~~, the UNITED STATES OF AMERICA, subject to the availability of appropriations, or its assigns, will repair such damage. It is further understood and agreed that the grantor may erect or maintain fences across such road, provided adequate gates of not less than ~~four~~ ~~feet~~ in width are installed, which may be kept locked, provided the UNITED STATES OF AMERICA is also permitted to install its own lock thereon.

TO HAVE AND TO HOLD said easement and rights unto the UNITED STATES OF AMERICA and its assigns, forever.

The Grantor covenants to and with the UNITED STATES OF AMERICA and its assigns that the title to all brush, timber or structures existing upon the right of way on January 15, 1973, and the title to all present danger trees shall vest in the UNITED STATES OF AMERICA on said date; and that title to any additional danger trees shall vest in the UNITED STATES OF AMERICA upon their being cut pursuant to the terms hereof; ~~and that the consideration stated herein is accepted by the Grantor as full compensation for all damages incidental to the exercise of said easement and danger tree rights, except payment for any additional danger trees as defined hereinabove which may be cut under authority of the UNITED STATES OF AMERICA as herein provided.~~

The Grantor also covenants to and with the UNITED STATES OF AMERICA that Grantor is lawfully seized and possessed of the lands aforesaid; has a good and lawful right and power to sell and convey same; that same are free and clear of encumbrances, except as above indicated; and that Grantor will forever warrant and defend the title to said easement and the quiet possession thereof against the lawful claims and demands of all persons whomsoever.

137661

Dated this 20th day of February, 1973

(b) (6)

Pend Oreille County, Washington

By: (b) (6)

By: [Signature]



and of County Commissioners

7-519



137661

Exhibit 1

BPA MON  
775+30.4  
Δ0°29'10" Rt  
T 4482680  
X 2923 936.7

PT IN AAB-12-AR-1E  
100' 770+70 L

771+

24  
19  
25  
30

PT IN AA  
754493

PT IN AAB-12-AR-1E  
775+67 "L"

3/4" P, 1 BT-SWAG  
Y 4483130  
X 2923934.9

SEC LINE  
780 N 87°49'20" E WASH = S 88°23'30" E IDA

AAB-12-AR-1

AREA A

AAB-12-AR-1

PARCEL A  
END AAB-12-AR-1  
PT IN COR'D

LOT 2

LOT 1

EXHIBIT 1  
Tract No. AAB-12-A-2  
Pend Oreille County, Washington  
Gov. Lqts 1 & 2, Sec. 30, T31N,  
R46E, WM  
Part of BPA Drawing No. 153312 DTM-D

5227.4

WASH S 1°43'40" E 793+42.9  
IDAHO S 2°03'30" W

To Hwy No 41

MP 120

137661

INT HITEST 0058

7521

Co. Rd.

149440

*[Handwritten signature]*

STATE OF WASHINGTON,  
COUNTY OF PEND OREILLE

SS.

RIGHT OF WAY DEED

For the County Road Purpose

STATE LINE MATERIALS SITE

KNOW ALL MEN BY THESE PRESENTS, That Pend Oreille County, a Municipal Corporation acting by and through its Board of Commissioners, grantor, for and in consideration of the benefits and other valuable consideration to the public in general, receipt thereof is hereby acknowledged the Grantor has granted and conveyed, and by these presents does grant, and convey unto said Pend Oreille County, the following described parcel of land, situated in Pend Oreille County, in the State of Washington, including any after acquired title therein, to-wit:

All of Government Lot 1, Section 30, Township 31 North, Range 46 E.W.M. comprised of approximately 13.83 acres more or less.

FILED FOR RECORD *Aug 21 1976 AT 1:15 P* M. OFFICIAL RECORD  
BOOK NO. *16* PAGE *167-169*. BETTYJANE HILLESTAD, PEND OREILLE COUNTY AUDITOR  
**(b) (6)** DEPUTY



*[Handwritten marks]*

164200

RIGHT OF WAY EASEMENT

This Easement, dated this 23<sup>rd</sup> day of July, 1979, from Pend Oreille County, a municipal corporation, hereinafter called the "Grantor" to "Harold Colburn" or his assignees, hereinafter called the "Grantee".

WITNESSETH:

Grantor, for and in consideration of mutual benefits, does hereby grant to the Grantee and his Assigns a right of way Easement for road access along and across a strip of land in the County of Pend Oreille, State of Washington, hereinafter more fully described:

A strip of land sixty (60) feet wide across Government Lot 1, Section 30, Township 31 North, Range 46 E.W.M. Said strip of land to be the South sixty (60) feet of the North one hundred fifty feet (150) of Lot 1, Section 30, Township 31 North, Range 46 E.W.M.

This Easement granted for use as road access and no other use of the land by the Grantee.

SEAL:



ATTEST:

(b) (6)

County Auditor and ex-officio Clerk of the Board

By \_\_\_\_\_  
Deputy Auditor

(b) (6)  
Chairman

(b) (6)  
Commissioner

(b) (6)  
Commissioner

Constituting the Board of County Commissioners Pend Oreille County, Washing

RECEIVED

Vol 30 pg. 284

79 JUL 24 AM 10:09

(b) (6)

164200

30-2

EXHIBIT B

RECEIVED  
PEND OREILLE COUNTY  
AUDITOR'S OFFICE

'96 AUG 13 PM 3 01

RECORDED AT THE REQUEST OF AND  
AFTER RECORDING RETURN TO:

VOL. 127 PAGE 587-590  
REC. NO. 5002 AMT. FD. 11<sup>00</sup>  
BY: J. J. [Signature] DEPUTY

**EASEMENT AGREEMENT**

THIS EASEMENT AGREEMENT ("Agreement") is made as of the 12th day of September, 1995, and is by and between PUBLIC UTILITY DISTRICT NO. 1 OF PEND OREILLE COUNTY, a municipal corporation of the State of Washington ("Grantor"), and CROWN PACIFIC LIMITED PARTNERSHIP, a Delaware limited partnership ("Grantee").

**A G R E E M E N T**

NOW, THEREFORE, Grantors and Grantee agree as follows:

1. Grant of Easement. For and in consideration of good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Grantor hereby conveys and quitclaims to Grantee, subject to the terms and conditions of this Agreement, a nonexclusive road easement across and over the existing road as presently located along the power line across Grantor's property, which property is legally described as:

Government Lot 2 of Section 30, T 31 N, R 46 E W.M. and the East half of the Northeast Quarter of Section 25, T 31 N, R 45 E W.M., situate in Pend Oreille County, Washington.

The easement is for the purpose for ingress and egress to Grantee's adjacent property legally described as:

[Insert Description of Grantee's Property]  
Land in Sections 25 and 26, Township 31 North, Range 45EWM.

2. Limitations on Use.

2.1 Except for the purposes described above, Grantee shall not enter upon Grantors' property or make any use thereof.

2.2 Grantee shall, at all times, exercise its easement rights in a manner so as to prevent bodily harm to persons (whomsoever) and damage to property (whatsoever). Grantors reserve the right to take reasonable measures to control speed along the road as necessary to prevent risk of harm.

2.3 At Grantor's request, Grantee shall cooperate and take reasonable steps to prevent use of the road by unauthorized third parties.

2.4 Grantee shall, at all times, exercise its easement rights in a manner which will not disturb, interfere with, or otherwise impair the safe, continuous and reliable operation of Grantor's electrical facilities.

3. Maintenance. Routine maintenance of the road will be performed solely by Grantee. The cost of repair and maintenance necessary to correct damage to the road in excess of normal wear and tear, shall be paid by party causing such damage.

4. Liability. Grantee shall defend, indemnify and hold harmless Grantor, Grantor's directors, officers, employees, agents, servants and representatives (and the respective successors and assigns of each and all of the foregoing) from and against any and all claims, liens, demands, actions, costs, losses, expenses, harm, damages and liability (including, but not limited to, attorneys' fees) of any kind or character asserted or arising from, on account of, or in connection with Grantee's exercise of the rights, benefits and privileges granted by this Agreement or any breach of this Agreement by Grantee, provided however, nothing herein shall require Grantee to so indemnify and hold harmless Grantor to the extent of the negligence or other fault on the part of Grantor, its agents, servants, and employees.

5. Reserved Rights, Title. All rights other than those specifically granted in this Agreement are reserved to Grantors. Grantors do not warrant title to the road and shall not be liable for defects thereto or failure thereof.

6. Compliance With Laws. The terms and conditions of this Agreement are subject to, and Grantee shall at all times comply with all applicable laws, rules, regulations and ordinances in the use of the road.

7. Notices. Any notice or other communication required or permitted to be given under this Agreement shall be in writing and shall be delivered in person or mailed, properly addressed and stamped with the required postage to the addresses specified following each party's signature at the end of this Agreement. Either party may, from time to time, change such address by giving the other party Notice of such change in accordance with this Section.

8. Termination. This Agreement and all Grantee's rights hereunder shall terminate and revert to Grantors upon:

8.1 abandonment of the road by Grantee. Grantee shall be presumed to have abandoned the road if Grantee ceases to use the road for a period of two (2) successive years for the purposes specified in Section 2,

8.2 Grantee acquires an alternate access to Grantee's property,

8.3 Grantee's continued breach or failure to observe any of the terms of this agreement after written notice from Grantors, or

9. Nonwaiver. The failure of Grantor to insist upon or enforce strict performance by Grantee of any of the provisions of this Agreement or to exercise any rights or remedies under this Agreement shall not be construed as a waiver or relinquishment to any extent of Grantor's right to assert or rely upon any such provisions or rights in that or any other instance; rather, the same shall be and remain in full force and effect.

10. Miscellaneous. This Agreement sets forth the entire agreement of the parties and supersedes any and all prior agreements with respect to the subject matter hereof. This Agreement shall be construed as a whole. All provisions of this Agreement are intended to be correlative and complementary. No amendment, change or modification of any provision of this Agreement shall be valid unless set forth in a written amendment to this Agreement signed by all parties. This Agreement shall be interpreted, construed and enforced in all respects in accordance with the laws of the State of Washington.

11. Successors. The rights and obligations of Grantors and Grantee shall run with their respective properties and shall inure to the benefit of and be binding upon their respective successors and assigns. Subject to the limitations herein, the easement shall be appurtenant to Grantee's property.

EXECUTED as of the date first written above.

Grantee:

CROWN PACIFIC LIMITED PARTNERSHIP

BY: CROWN PACIFIC MANAGEMENT LIMITED PARTNERSHIP, Its General Partner

By (b) (6)

Roger L. Krage  
Its Secretary

Address: 121 S.W. Morrison Street  
Suite 1500  
Portland, OR 97204

Phone: 503/274-2300  
Fax: 503/228-4875

Grantor:

PUBLIC UTILITY DISTRICT NO. 1 OF PEND OREILLE COUNTY

By (b) (6)

Its *Gaw Mg*

Address: P.O. Box 190  
Newport, WA 99156

Phone: (509) 447-9330  
Fax: (509) 447-5824

107-589

## CONDITIONS

1. The term mortgage, when used herein, shall include deed of trust, trust deed, or other security instrument.
2. If the proposed Insured has or acquired actual knowledge of any defect, lien, encumbrance, adverse claim or other matter affecting the estate or interest or mortgage thereon covered by this Commitment other than those shown in Schedule B hereof, and shall fail to disclose such knowledge to the Company in writing, the Company shall be relieved from liability for any loss or damage resulting from any act of reliance hereon to the extent the Company is prejudiced by failure to so disclose such knowledge. If the proposed Insured shall disclose such knowledge to the Company, or if the Company otherwise acquires actual knowledge of any such defect, lien, encumbrance, adverse claim or other matter, the Company at its option may amend Schedule B of this Commitment accordingly, but such amendment shall not relieve the Company from liability previously incurred pursuant to paragraph 3 of these Conditions.
3. Liability of the Company under this Commitment shall be only to the named proposed Insured and such parties included under the definition of Insured in the form of policy or policies committed for and only for actual loss incurred in reliance hereon in undertaking in good faith (a) to comply with the requirements hereof, or (b) to eliminate exceptions shown in Schedule B, or (c) to acquire or create the estate or interest or mortgage thereon covered by this Commitment. In no event shall such liability exceed the amount stated in Schedule A for the policy or policies committed for and such liability is subject to the insuring provisions and Conditions and the Exclusions from Coverage of the form of policy or policies committed for in favor of the proposed Insured which are hereby incorporated by reference and are made a part of this Commitment except as expressly modified herein.
4. This Commitment is a contract to issue one or more title insurance policies and is not an abstract of title or a report of the condition of title. Any action or actions or rights of action that the proposed Insured may have or may bring against the Company arising out of the status of the title to the estate or interest or the status of the mortgage thereon covered by this Commitment must be based on and are subject to the provisions of this Commitment.
5. *The policy to be issued contains an arbitration clause. All arbitrable matters when the Amount of Insurance is \$2,000,000 or less shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. You may review a copy of the arbitration rules at <http://www.alta.org>.*



# First American

## PRIVACY POLICY

### We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information – particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our parent company, The First American Corporation, we have adopted this Privacy Policy to govern the use and handling of your personal information.

### Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its *Fair Information Values*, a copy of which can be found on our website at [www.firstam.com](http://www.firstam.com).

### Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

### Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies, and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

### Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

### Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's *Fair Information Values*. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

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INT HITEST 0065

## Kilyukh, Denis V (CONTR) - CGI-7

---

**From:** Leslie, Brent C (BPA) - TERR-BELL-1 <bcleslie@bpa.gov>  
**Sent:** Thursday, January 18, 2018 11:02 AM  
**To:** John Carlson  
**Subject:** RE: [EXTERNAL] Fwd: Drill Rig Dimensions

Thank you John.

Sincerely,

*Brent Leslie*

Realty Specialist  
Bonneville Power Administration | Department of Energy  
Real Property Field Services | TERR-BELL-1  
2410 E. Hawthorne Rd  
Mead, WA 99021  
Office: (509) 468-3081 Mobile: (b) (6)  
[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)  
[Landowner Use and Safety Information](#)

**Bonneville**  
POWER ADMINISTRATION



---

**From:** John Carlson [<mailto:jcarlson@hitestsand.com>]  
**Sent:** Thursday, January 18, 2018 10:59 AM  
**To:** Leslie, Brent C (BPA) - TERR-BELL-1  
**Subject:** [EXTERNAL] Fwd: Drill Rig Dimensions

Begin forwarded message:

**From:** Aaron Lewis <[ALewis@stratageotech.com](mailto:ALewis@stratageotech.com)>  
**Subject:** Drill Rig Dimensions  
**Date:** January 18, 2018 at 11:58:33 AM MST  
**To:** "[jcarlson@hitestsand.com](mailto:jcarlson@hitestsand.com)" <[jcarlson@hitestsand.com](mailto:jcarlson@hitestsand.com)>  
**Cc:** "Paxton K. Anderson" <[PAAnderson@stratageotech.com](mailto:PAAnderson@stratageotech.com)>

Hi John,

I got in touch with our drillers to get the drill rig dimensions for the Bonneville Power permit. The dimensions are as follows:

While being trailered:

- 60 feet long (towing vehicle + trailer with drill rig)

- 8 feet wide
- **10 feet tall**

Drill rig while drilling:

- 18 feet long
- 8 feet wide
- **25 feet tall (with mast up)**

If you need any more information please let me know and I will track it down ASAP.

Regards,

**Aaron Lewis, P.E.**

**Strata, Inc. (STRATA)**

**Email** [alewis@stratageotech.com](mailto:alewis@stratageotech.com) | **Web** [www.StrataGeoTech.com](http://www.StrataGeoTech.com)



**Missoula, Montana** – 5653 Alloy S., Missoula, MT 59808

**Office** 406.829.1600 | (b) (6)

## Kilyukh,Denis V (CONTR) - CGI-7

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**From:** Jim May <jmay@hitestsand.com>  
**Sent:** Tuesday, January 30, 2018 5:00 PM  
**To:** Leslie,Brent C (BPA) - TERR-REDMOND  
**Subject:** [EXTERNAL] Re: [EXTERNAL] Re: BPA Application

Thanks Brent!  
I will review and get back to you ASAP,  
Jim

On Tue, Jan 30, 2018 at 4:43 PM, Leslie,Brent C (BPA) - TERR-BELL-1 <[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)> wrote:

Jim,

Give me a call regarding the attached agreement: [\(509\) 468-3081](tel:5094683081).

Thank you,

*Brent Leslie*

Realty Specialist

Bonneville Power Administration | Department of Energy

Real Property Field Services | TERR-BELL-1

2410 E. Hawthorne Rd

Mead, WA 99021

Office: [\(509\) 468-3081](tel:5094683081) Mobile: (b) (6)

[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)

[Landowner Use and Safety Information](#)

**Bonneville**  
POWER ADMINISTRATION



**From:** Jim May [mailto:[jmay@hitestsand.com](mailto:jmay@hitestsand.com)]  
**Sent:** Tuesday, January 30, 2018 6:09 AM  
**To:** Leslie, Brent C (BPA) - TERR-BELL-1  
**Subject:** [EXTERNAL] Re: BPA Application

Yes I am a US citizen Brent and you can work with me.

I will coordinate with John

Jim

On Jan 29, 2018 3:55 PM, "Leslie, Brent C (BPA) - TERR-BELL-1" <[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)> wrote:

Greetings Jim,

I have been working with John Carlson concerning an agreement to use BPA's right of way. However, I cannot contact John until BPA's foreign national request form is approved.

Are you a U.S. Citizen and if so, can I communicate with you?

Sincerely,

*Brent Leslie*

Realty Specialist

Bonneville Power Administration | Department of Energy

Real Property Field Services | TERR-BELL-1

[2410 E. Hawthorne Rd](#)

[Mead, WA 99021](#)

[Office: \(509\) 468-3081](#) Mobile: (b) (6)

[bcleslie@bpa.gov](mailto:bcleslie@bpa.gov)

**Bonneville**  
POWER ADMINISTRATION





**Department of Energy  
Bonneville Power Administration  
2410 E. Hawthorne Road  
Mead, WA 99021**

January 30, 2018

BPA Case No.: 20180103  
Tract No(s): AAB-12-A-2, AAB-12-AR-1  
Line Name: Sacheen-Albeni Falls No. 1  
ADNO: 6174  
Location: Str. No.: 12/5

**LAND USE AGREEMENT**

Consent to Use of BPA's Easement Area

This Land Use Agreement ("Agreement") is entered into by and between the United States of America, Department of Energy, Bonneville Power Administration ("BPA") and HiTest Sand, Inc. ("Holder").

BPA holds easement rights ("BPA Easement") over the following described property ("BPA Easement Area"):

Within Government Lot 1 and 2 of Section 30, Township 31N, Range 46E, SE1/4SE1/4 Section 24, Township 31N, Range 45E, and NE1/4NE1/4 Section 25, Township 31N, Range 45E, Willamette Meridian, Pend Oreille County, State of Washington, as shown on the attached segment of BPA Drawing No. 153312, marked as Exhibit A.

Holder has requested BPA's permission to use portions of the real property subject to the BPA Easement for a route of travel to access geotechnical drilling sites for subsurface investigations ("Holder's Facility").

Subject to the terms and conditions set forth in this Agreement, BPA consents to Holder's use of the BPA Easement Area for the purpose proposed by Holder, and concurs that such use will not interfere with the current operation and maintenance of BPA's transmission facilities, if constructed in the manner and at the location shown on Exhibit A, attached hereto and made a part hereof.

In consideration of BPA's concurrence, Holder agrees to the following:

1. This Agreement does not grant any right, privilege, or interest in land, and does not modify, change, or otherwise alter the rights BPA acquired by deed. Loss of the privileges granted by this Agreement is not compensable to Holder.
2. Holder is responsible for obtaining from the underlying landowner ("Landowner"), by good and sufficient legal instrument, all rights, interests and privileges for land use necessary and

incident to the ownership and maintenance of Holder's Facility. Holder must provide a copy of said legal instrument to BPA prior to execution of this Agreement.

3. There may be other uses of the property located within the same area as Holder's Facility. This Agreement is subject to such superior rights.
4. This Agreement is valid only if Holder's Facility is operated in conformance with the terms of this Agreement and all attached Exhibits. Relocations, changes or upgrades require BPA's prior written approval. Failure to obtain the written approval of BPA prior to making alterations to Holder's Facility shall result in the termination of this Agreement.
5. Holder acknowledges and agrees that Holder's use of the property is subordinate to BPA's easement rights. BPA reserves the right to trim or remove trees, brush or shrubs or to remove any other encroachment within the BPA Easement Area which might interfere with the operation, maintenance, construction, removal or relocation of BPA's facilities. Holder agrees to alter, relocate or remove Holder's Facility, at no cost to BPA, to correct an interference with BPA's easement rights or to accommodate future modifications of BPA's facilities.
6. Holder agrees to abide by and comply with all applicable Federal, State and local laws and regulations, including, but not limited to building and safety codes, rules issued by utility commissions, the National Electric Safety Code, entities that regulate Holder, and all applicable environmental regulations.
7. Induced voltages and currents may occur on structures or other items constructed or placed under or near high voltage transmission lines. BPA has no duty to inspect Holder's Facility or to warn of hazards. Holder shall have the continuing responsibility for the protection of personnel and equipment in the operation of Holder's Facility.
8. Holder shall notify BPA at least five (5) business days prior to commencing use of Holder's Facility. Contact: Brent Leslie, phone: (509) 468-3081 or by email: bceslie@bpa.gov.
9. This Agreement is entered into with the express understanding that it is not assignable or transferable to other parties without the prior written consent of BPA.
10. BPA may terminate this Agreement upon 48 hours written notice. Holder shall, within 48 hours of receiving such notice of termination, and at Holder's sole expense, vacate and restore the BPA Easement Area to a condition satisfactory to BPA. Upon Holder's failure to vacate and restore the BPA Easement Area within the above stated time period, BPA may remove Holder's equipment and restore the BPA Easement Area at Holder's expense.
11. A copy of this Agreement shall be physically located at Holder's project site during Holder's use. Holder's employees, contractors and representatives shall adhere to all conditions and requirements listed herein.
12. Additional terms and conditions specific to Holder's Facility may be included as part of this Agreement as Exhibit B, attached hereto and made a part hereof.
13. Holder agrees to assume risk of loss, damage, or injury which may result from Holder's use of the BPA Easement Area, except for such loss, damage, or injury for which BPA may be responsible under the provisions of the Federal Tort Claims Act, 62 Stat. 982, as amended.

14. Any damage to BPA's property caused by or resulting from Holder's use of the BPA Easement Area may be repaired by BPA, and the actual cost of such repair shall be charged against and be paid by Holder.

15. Holder's contact information:

NAME: HiTest Sand Inc.  
ADDRESS: 5241 Calgary Trail, Unit 601  
Edmonton, Alberta T6H 5G8

PHONE: John Carlson  
EMAIL: jcarlson@hitestsand.com

Holder agrees to notify BPA in writing of any changes to the above listed contact information.

**This Agreement becomes effective upon the signature of all parties.**

\_\_\_\_\_  
Holder

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title (if applicable)

**THIS AGREEMENT IS HEREBY AUTHORIZED:**

\_\_\_\_\_  
Realty Specialist  
Bonneville Power Administration

\_\_\_\_\_  
Date

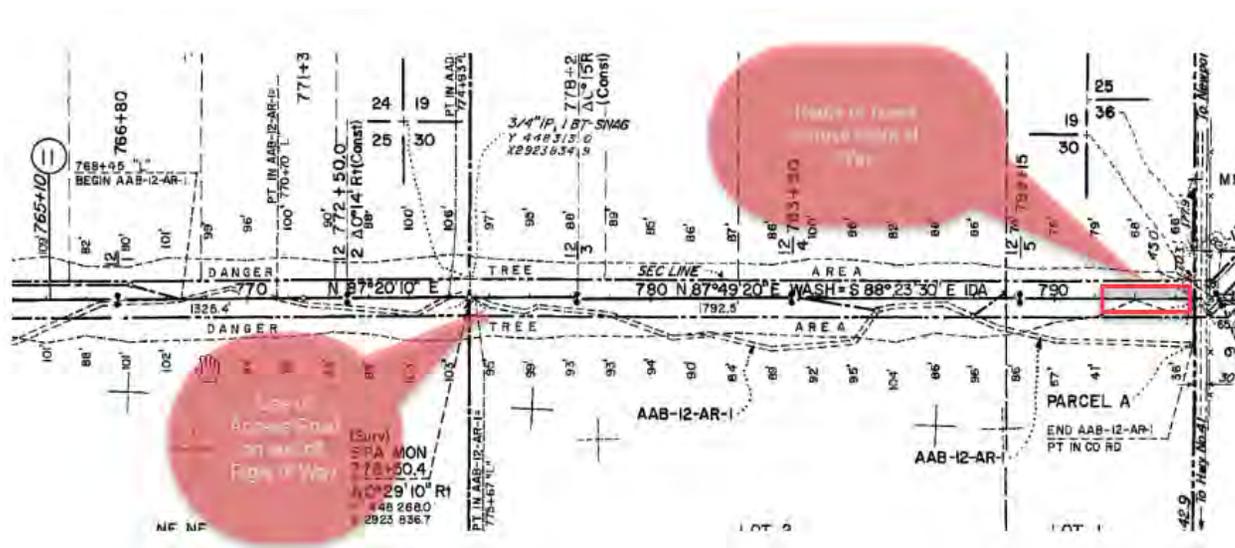
NOTE: BPA seeks help maintaining the integrity of the electrical transmission system. Please report any vandalism or theft to the BPA Crime Witness program at 1-800-437-2744. Cash rewards of up to \$25,000 will be paid should information lead to the arrest and conviction of persons committing a crime.

If you have any questions or concerns, please notify a BPA Realty Office. You may contact Brent Leslie ("BPA Representative") by telephone at (509) 468-3081 or send written correspondence to the address listed at the top of this Agreement.

## Exhibit B

### ADDITIONAL TERMS AND CONDITIONS

1. BPA has identified counterpoise (grounding wire) located in the vicinity identified for use by Holder. Holder must take care to ensure that counterpoise is not broken or damaged. Should counterpoise be dug up, exposed, or broken during Holder's use, Holder must immediately contact the BPA Representative listed at the bottom of Page 3 of the Agreement, so that arrangements can be made to have it repaired.
2. Inform BPA once the drilling is complete.
3. The use of Holder's Facility must be started by [REDACTED].
4. The use of Holder's Facility must be completed by [REDACTED].
5. Equipment, machinery, and vehicles traveling within BPA's Easement Area shall remain at least 25 feet away from any BPA structure or guy anchor ground attachment point.
6. Equipment, machinery and vehicles shall maintain a minimum distance of 15 feet between the equipment and transmission line conductors at all times. Do not measure this with measuring tape, pole, or other physical means.
7. To ensure the safety of workers and the uninterrupted operation of transmission lines, Holder shall employ a BPA-approved safety watcher during any activities occurring under the conductors (wires) when lifting equipment may come within 15 feet of the conductors (wires). Please contact the BPA Representative listed at the bottom of Page 3 of the Agreement for a current list of BPA approved Safety Watchers.
8. Holder shall not store flammable materials or refuel vehicles or equipment within BPA's Easement Area.
9. BPA right-of-way and access roads shall be returned to their original condition following use. No grade changes to facilitate use or disposal of overburden shall be allowed. Any damage to BPA property resulting from the proposed right-of-way or access road use shall be repaired at the applicant's expense.
10. Holder shall not obstruct access to BPA's transmission line system. BPA personnel and/or its contractors must have access the transmission line system at all times.
11. Brush piles or burning within BPA's Easement Area is prohibited. Smoke can conduct electricity. Electricity traveling down the smoke could potentially cause a deadly situation for anyone standing on or near the point where the electricity contacts the ground.
12. Holder is prohibited from placing dead man anchors or cables within BPA's Easement Area or under the line. For safety purposes, BPA highly recommends that cables placed adjacent to BPA's Easement Area be run parallel to the transmission line, not towards the transmission line.
13. Notice: Nuisance shocks may occur within BPA's Easement Area. Grounding metal objects helps to reduce the level of shock. It is suggested that equipment be grounded with a drag chain.
14. Notice: BPA's Easement Area is patrolled by helicopter and ground crews.



SECS 24, 25, 19 & 30 T31N R45E & R46E WM  
 PEND OREILLE COUNTY WASHINGTON  
 SECS 36 & 25 T 56 N R 6 W BM  
 BONNER COUNTY IDAHO

**EXHIBIT A**  
**HITEST SAND INC**  
**CASE NO. 20180103**  
**TRACT NO. AAB-12-A-1, AAB-12-A-2, & AAB-12-AR-1**

**ROUTE OF TRAVEL & Access Road**  
**PORTION OF GOVERNMENT LOT 1 and 2 IN S30 T31N**  
**R46E, SE1/4SE1/4 S24 T31N R45E, & NE1/4NE1/4 S25**  
**T31N R45E WM PEND OREILLE COUNTY, WA**

**PORTION OF BPA DRWG NO. 153312**  
**SACHEEN-ALBENI FALLS LINE**



4	ORIG DWG CHGD TO HYBRID	JAS	DDD		
3	LAND USE SPOT# ADDED	2008	PKRM	5/20/08	5/20/08
2	CONSTRUCTION FACTOR ADDED	8/1/08	004	8/1/08	8/1/08
1	STRUCTURES ADDED	8/1/08	004	8/1/08	8/1/08
<small>24 COUNTY NOT CHGD TO SEWER. DRAWING NOTE APPLIES TO AAB-12-A-2-SH CHG TO APPR NOTE CHG. 3-1-17</small>					
NO.	REVISION	DATE	BY	APP'D	
UNITED STATES DEPARTMENT OF THE INTERIOR BONNEVILLE POWER ADMINISTRATION HEADQUARTERS, PORTLAND, OREGON					
<b>SACHEEN - ALBENI FALLS NO 1</b> 115 KV TRANSMISSION LINE MILE 12 OF 14 MILES FROM SACHEEN (5280')					
<small>DATE OF WORK: 8/1/08</small>					
<small>DESIGN: JAS, DDD, PKRM, 8/1/08</small>					
<small>CONTRACT NO. 153312</small>					
<small>DATE: 8/1/08</small>					
<small>BY: JAS, DDD, PKRM, 8/1/08</small>					
<small>153312 DTM-D 004-301</small>					

**From:** [Amber E. Orr](#)  
**To:** [Hitchens.Victor P \(BPA\) - TPCF-MEAD-GOB](#)  
**Cc:** [Chris Jones](#); [Robertson.Angela D \(BPA\) - TSE-TPP-2](#)  
**Subject:** L0404 Pend Oreille Arc Furnace Load  
**Date:** Monday, November 14, 2016 10:28:24 AM  
**Attachments:** [image004.png](#)  
[image005.png](#)  
[image006.png](#)

---

Victor,

I am forwarding an updated one-line diagram for the HiTest Sand silica project at the Usk site. We should refer to this updated drawing for our discussion on the 22<sup>nd</sup> of this month.

*Amber Elise Orr, P.E.*

Engineering Manager

**Public Utility District No. 1 of Pend Oreille County**

P.O. Box 190 | 130 N. Washington

Newport, Washington 99156

509.447.3137 | [aorr@popud.org](mailto:aorr@popud.org) | [www.popud.org](http://www.popud.org)

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---

**From:** JIMMAYSILICON@aol.com [mailto:JIMMAYSILICON@aol.com]

**Sent:** Tuesday, November 08, 2016 6:06 AM

**To:** Amber E. Orr

**Cc:** Kimberly Gentle; [jcarlson@hitestsand.com](mailto:jcarlson@hitestsand.com)

**Subject:** Re: FW: FW: L0404 Pend Oreille Arc Furnace Load

Thanks Amber!

I have attached an updated SLD for the USK site. We can use this for the BPA discussions. Please share with them and advise any questions.

All the best

Jim

In a message dated 11/7/2016 12:17:23 P.M. Eastern Standard Time, [aorr@popud.org](mailto:aorr@popud.org) writes:

Jim,

Yes, of course. I have attached the agenda that BPA has prepared for us. Please let me know if there is anything else I can do to be of assistance.

*Amber Elise Orr, P.E.*

Engineering Manager

**Public Utility District No. 1 of Pend Oreille County**

P.O. Box 190 | 130 N. Washington

Newport, Washington 99156

509.447.3137 | [aorr@popud.org](mailto:aorr@popud.org) | [www.popud.org](http://www.popud.org)

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---

**From:** Chris Jones  
**Sent:** Monday, November 07, 2016 9:10 AM  
**To:** Amber E. Orr  
**Subject:** FW: FW: L0404 Pend Oreille Arc Furnace Load

Here is the email from Jim

*Chris Jones*

Director, Operations & Engineering

**Public Utility District No. 1 of Pend Oreille County**

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Newport, Washington 99156

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**From:** [JIMMAYSILICON@aol.com](mailto:JIMMAYSILICON@aol.com) [<mailto:JIMMAYSILICON@aol.com>]  
**Sent:** Friday, November 04, 2016 6:08 PM  
**To:** [slsundeen@bpa.gov](mailto:slsundeen@bpa.gov); Kimberly Gentle; Chris Jones; April Owen; Colin Willenbrock; [terrym@millcreeklaw.com](mailto:terrym@millcreeklaw.com)  
**Subject:** Re: FW: L0404 Pend Oreille Arc Furnace Load

I will attend for HTS Amber.  
Can you forward the agenda to me?  
Thanks  
Jim

In a message dated 11/4/2016 6:01:27 P.M. Eastern Daylight Time, [slsundeen@bpa.gov](mailto:slsundeen@bpa.gov) writes:

Please let me know who plans to attend in person (Vancouver) so that I can pass this information along.

-Amber Orr, PE

-----Original Appointment-----

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4 [<mailto:slsundeen@bpa.gov>]  
**Sent:** Thursday, November 03, 2016 2:27 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Jusupovic,Jana D (BPA) - TPCV-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2; McClory,Claire D (BPA) - ECT-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Adams,Nicole A (CONTR) - TSES-TPP-2; Amber E. Orr; Vlas,Jon (BPA) - TPMC-OPP-3

**Cc:** Hirsi, Sam (BPA) - TPPA-OPP-3

**Subject:** L0404 Pend Oreille Arc Furnace Load - UPDATE

**When:** Tuesday, November 22, 2016 10:00 AM-11:00 AM (UTC-08:00) Pacific Time (US & Canada).

**Where:** Vancouver, TPP 400

Attached is the agenda containing the phone bridge information for those of you that won't be traveling to Vancouver.

Thank you!



# Kickoff Meeting, 11-22-16

Tuesday, November 22, 2016

9:19 AM

## Attendees

BPA: Martin Wick, Hamody Hindi, Sam Hirsi, Jon Vlas, Shari Sundeen, Nicole Adams, Angela Robertson, Victor Hitchens

POPD: Amber Orr, Kim Gentle

Phone: Claire McClory (ECT), Terry Mundorf (attorney for POPD), Chris Jones (POPD), Jim May (COO Hi Test Sands)

## General Notes

Silicon smelter

Average load, 85MW; operating range 80-90 MW

98% load factor

Initial request was 230 kV, but no problem for Hi Test Sands to have 115 kV

Schedule:

- Start construction in Spring 2017, about 20 month process typically to complete construction
- Target startup April-June of 2019, commissioning process is about 3-6 months to get plant to full load

Construction power: 440V load, serve off existing lines? Think so temporarily (Hi Test Sands)

Silicon smelting process: submerged arc furnace, 50' diameter carbon lined bowl, 25' deep, three three-phase electrodes, electricity goes through electrodes, to hearth of furnace; smelted about 2000 degrees centigrade; CO2 gas and SiO

Very little harmonics, conform to IEEE load

No variable frequency drives (VFD)? Correct, main furnaces bring mass to operating level, couple weeks to start producing silicon

Take short outages, anything less than 4 hours is okay, but then starts to impact efficiency

BPA ECT: may be wetlands in area, but just need to ensure not exceeding permitting thresholds, but don't see impacts; CX

**POPD (Amber) Question:** RAS scheme impacts to 230 kV vs. 115 kV, and timing of project with either

Location on property for development? NE is preferred at this point, much more level; still need to do GeoTech, but best option

Customer will own transmission line to facility; from TPP, modeling point of view is 230 kV or 115 kV

Start at Feasibility Study, need to do transient study (plus thermal issues), complex; need 60 days and request \$25K for deposit; will contact POPD if getting close to dollar amount allocated

Feasibility: 60 day clock starts with signed agreement, review meeting within one month

System Impact (single plan of service selected): 90 days, possibly \$50K, apply funds from previous study, if available

Facility Study: 120 days, apply funds from previous studies, if available; 2-3 agreements at same time (FAS, Scoping, NEPA)

- Project Engineer assigned to start scoping, to lead into design; quicker for BPA to provide construction schedule, scope, costs
- NEPA: typically \$10K deposit

If integration, w/no BPA construction at Usk, it may be quicker turnaround; better defined in scoping process by PM group

**Action Item:** provide Hi Test with schedule, for studies, as well as design/construction timelines

# BPA/POPD Discussion, 10-24-16

Monday, October 24, 2016  
10:42 AM

## Attendees

In Person: Amber, Chris, Nancy, Brian, Angela Robertson, Kim  
Phone: Terry Mundorf (POPD), Dave, Sam (BPA)

## Notes

Active discussions with HiTest  
POPD provided power supply term sheet, no response yet  
Commencing load Spring-Fall of 2019  
HiTest working to get permits, hopes to break ground in Spring 2017  
Not a lot of background in working with US energy providers, somewhat foreign  
As of Friday the 21st, successful POPD/HiTest phone call

PNC, operations unknown at this point; in litigation with POPD

## Hurdles:

Chicken and egg, data vs. request  
Litigation w/POPD

No issues from HiTest with 230 or 115 kV  
Location of building site, now looking at NE corner of existing PNC property

ENVIRONMENTAL GROUP: stay with PNC property = benefit  
POPD leaning towards HiTest owning line

Connect to POPD 115 kV substation? Looking at all possibilities, further discussion/study required

\$300K from state to help with upfront cash, no real confidence of HiTest financing

HiTest kicking around idea of long-term lease instead of property purchase

## Administrative Questions

When need proof of ownership, or long-term lease? BPA shouldn't need anything

Currently, setup where new load will be purchasing from POPD, getting rights from PNC load  
POPD sees HiTest load as PNC, and PNC as new load moving forward

Worker Adjustment and Retraining Act, notification 60 days prior to shutdown?

Sell solar panel parts to Moses Lake, parts manufactured within state, carbon "reduction"

Resource is sand, coal and wood; wood chip facility on-site, and railroad

North county railroad may need improvements

## Discussion w/Amber, 10-12-16

Wednesday, October 12, 2016

10:26 AM

### **Ownership of Usk Substation, purchase from BPA? Is this an option? Ask internally during meeting next week**

Submerged arc furnace plant, similar to aluminum smelter, runs a little different

Similar in that electrical flow moves through material, how it is processed, but beyond that it is difference

Don't have extreme peaks in load, pretty constant; load factor 98%, power factor 0.95 with capacitors, w/o was 0.9 optimally

Peak load is 90 MW, lowest load is about 80 MW, average 85 MW; no seasonality; ramp pretty slowly (4 days to get everything running for long sustained outages, more than hours), no VFD (variable frequency drives)

Not really sensitive to short power outages like PNC, no real special requirements for power quality; only relative stability

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Thursday, January 19, 2017 5:00 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** Martinez,Geneva C (CONTR) - TSES-TPP-2; Kelly,Shanna M (CONTR) - TPC-TPP-4; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Subject:** RE: IMPORTANT: CONTRACT FOR E-SIGNATURE DUE BY 2/2/17: BPA/PEND OREILLE 17TP-11178, FES AGREEMENT

Shari,

Thank you for the communication. (And no worries about the "Sprint" typo.) I will review the documents and respond accordingly.

*Amber Elise Orr, P.E.*

Engineering Manager

### Public Utility District No. 1 of Pend Oreille County



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---

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4 [mailto:slsundeen@bpa.gov]  
**Sent:** Thursday, January 19, 2017 2:06 PM  
**To:** Amber E. Orr  
**Cc:** Martinez,Geneva C (CONTR) - TSES-TPP-2; Kelly,Shanna M (CONTR) - TPC-TPP-4  
**Subject:** FW: IMPORTANT: CONTRACT FOR E-SIGNATURE DUE BY 2/2/17: BPA/PEND OREILLE 17TP-11178, FES AGREEMENT  
**Importance:** High

Amber,

This email should have stated "Pend Oreille PUD" rather than Sprint. Apologies.

Shari

---

**From:** txsalescontracts  
**Sent:** Thursday, January 19, 2017 1:55 PM  
**To:** 'aorr@popud.org'  
**Subject:** IMPORTANT: CONTRACT FOR E-SIGNATURE DUE BY 2/2/17: BPA/PEND OREILLE 17TP-11178, FES AGREEMENT  
**Importance:** High

The attached contract document requires **Sprint's** electronic signature (E-signature) by Close of Business on **2/2/17**.

Please E-sign, type your title in the space provided and return to BPA by replying to this email and attaching the E-signed contract document.

**Instructions:**

- ✓ Click the flagged signature field throughout the contract document, insert your E-signature and type in your title.
- ✓ Save the PDF file for your records (saving is required prior to returning by email to capture your E-signature).
- ✓ Reply to this email ([tpcc\\_contracts@bpa.gov](mailto:tpcc_contracts@bpa.gov)) by the date stated above and attach your E-signed contract document.

The enclosed cover letter provides further instructions and alternatives. If you have any questions, please contact Angela Robertson at (360) 619-6192.

Geneva Martinez  
SalientCRGT  
Administrative Assistant II/TSES  
Bonneville Power Administration  
360-619-6693 P  
360-619-6940 F

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Chris Jones <cjones@popud.org>  
**Sent:** Monday, January 30, 2017 4:03 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Amber E. Orr; April Owen; Kimberly Gentle; Colin Willenbrock; Robertson,Angela D (TFE) (BPA) - TSE-TPP-2  
**Subject:** RE: HiTest-BPA Interconnection Study Withdrawal

Thanks Victor.

*Chris Jones*

Director, Operations & Engineering

Public Utility District No. 1 of Pend Oreille County



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Newport, Washington 99156

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---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Monday, January 30, 2017 4:02 PM  
**To:** Chris Jones  
**Cc:** Amber E. Orr; April Owen; Kimberly Gentle; Colin Willenbrock; Robertson,Angela D (BPA) - TSE-TPP-2  
**Subject:** RE: HiTest-BPA Interconnection Study Withdrawal

Chris,

Thank you for the notification and sorry to hear this load didn't work out for POPD at this time. We will leave the agreement in an un-executed status and can check back in on this subject in about six months to see if there has been any traction..

Regards,

**Victor Hitchens**

Bonneville Power Administration

TPCF-MEAD-GOB

Electrical Engineer | Customer Service Engineering

**Email:** [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | **Office:** 509.822.4602 | **Mobile:** (b) (6)

---

**From:** Chris Jones [<mailto:cjones@popud.org>]  
**Sent:** Monday, January 30, 2017 3:15 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Amber E. Orr; April Owen; Kimberly Gentle; Colin Willenbrock  
**Subject:** HiTest-BPA Interconnection Study Withdrawal

Victor,

We have just received word from Jim May with HiTest Sands that they will be focusing their efforts to secure an alternate site outside of Pend Oreille County. With that said we will not be moving forward with the needed interconnection studies requested by Pend Oreille. If at all possible, I would like our request to remain in the que for the next six months or so in the hopes that HiTest will reconsider our county.

Thanks you for all of the help we received on this project and we hope we get the opportunity to work on a similar one in the near future.

*Chris Jones*

Director, Operations & Engineering

**Public Utility District No. 1 of Pend Oreille County**



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## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Cicarelli,Andres A (BPA) - KSL-BELL-1  
**Sent:** Tuesday, July 11, 2017 11:59 AM  
**To:** Kimberly Gentle  
**Cc:** 'tsmith@popud.org'; Christy Parry (cparry@popud.org); Normandeau, Mike (BPA) - PSE-  
RONAN; Hitchens, Victor P (BPA) - TPCF-MEAD-GOB; Robertson, Angela D (TFE)(BPA) -  
TSE-TPP-2  
**Subject:** Pend Oreille FY17 Q3 Review-Revision 2017-7-3.xlsx  
**Attachments:** Pend Oreille FY17 Q3 Review-Revision 2017-7-3.xlsx

Hi Kimberly,

Attached is the 3<sup>rd</sup> quarter forecast review for FY 2017. As I've mentioned previously, the currently published forecast isn't tracking very well at all so I've focused on my latest updated forecast based on current Newsprint load levels, and assuming the Newsprint load is active for another couple of years. Note that the updated forecast is currently not the official forecast.

The updated forecast energy and peak amounts seem to be tracking pretty well with actuals for FY 2017.

Also attached are the updated forecast energy and peak values compared to historical actuals.

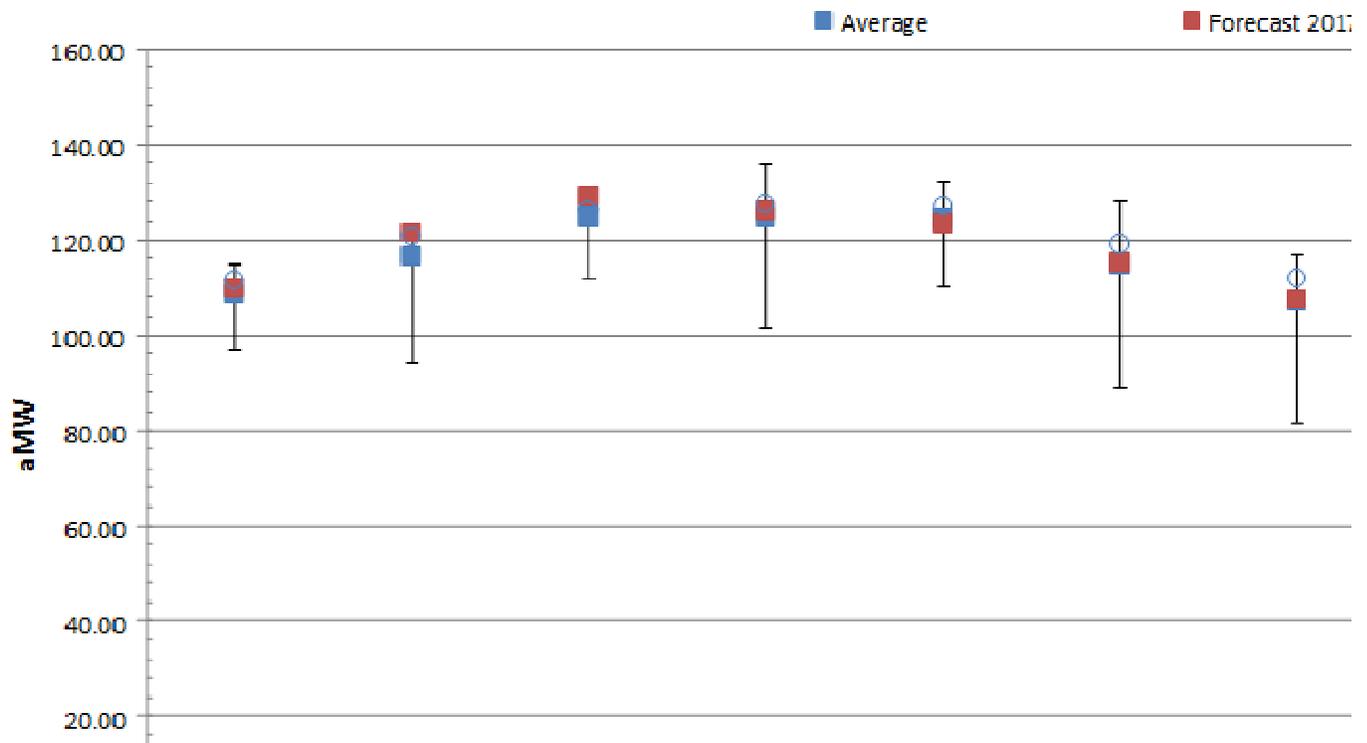
Talk to you later,

Andres

aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Forecast 2017	109.64	121.29	129.18	126.24	123.27	115.39	107.26
Max	114.91	122.32	130.47	135.56	132.51	127.97	116.94
Min	97.07	94.54	111.72	101.31	110.03	89.09	81.43
Median	111.68	120.51	126.09	127.51	127.07	118.98	111.94
Average	108.39	116.41	124.64	124.63	124.56	114.84	106.70
Max From Average	6.52	5.91	5.83	10.93	7.95	13.13	10.24
Min From Average	11.32	21.87	12.92	23.32	14.53	25.75	25.27

Actual aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2011	108.48	121.90	122.03	127.27	128.87	110.43	114.44
2012	113.41	122.09	126.09	127.61	123.63	120.83	115.76
2013	114.91	120.51	129.71	131.97	127.07	118.98	111.94
2014	113.36	122.32	130.47	127.51	132.51	127.97	102.84
2015	97.07	94.54	111.72	101.31	110.03	89.09	81.43
2016	99.80	115.63	124.61	121.19	122.07	119.36	103.56
2017	111.68	117.86	127.85	135.56	127.75	117.20	116.94
Q1/A	Q1/A	Q1/A	Q1/A	Q1/A	Q1/A	Q1/A	Q1/A
Q3/A	Q3/A	Q3/A	Q3/A	Q3/A	Q3/A	Q3/A	Q3/A
Q4/A	Q4/A	Q4/A	Q4/A	Q4/A	Q4/A	Q4/A	Q4/A

### 10306 - 2017 Forecast, Average (2011 Through 2017)

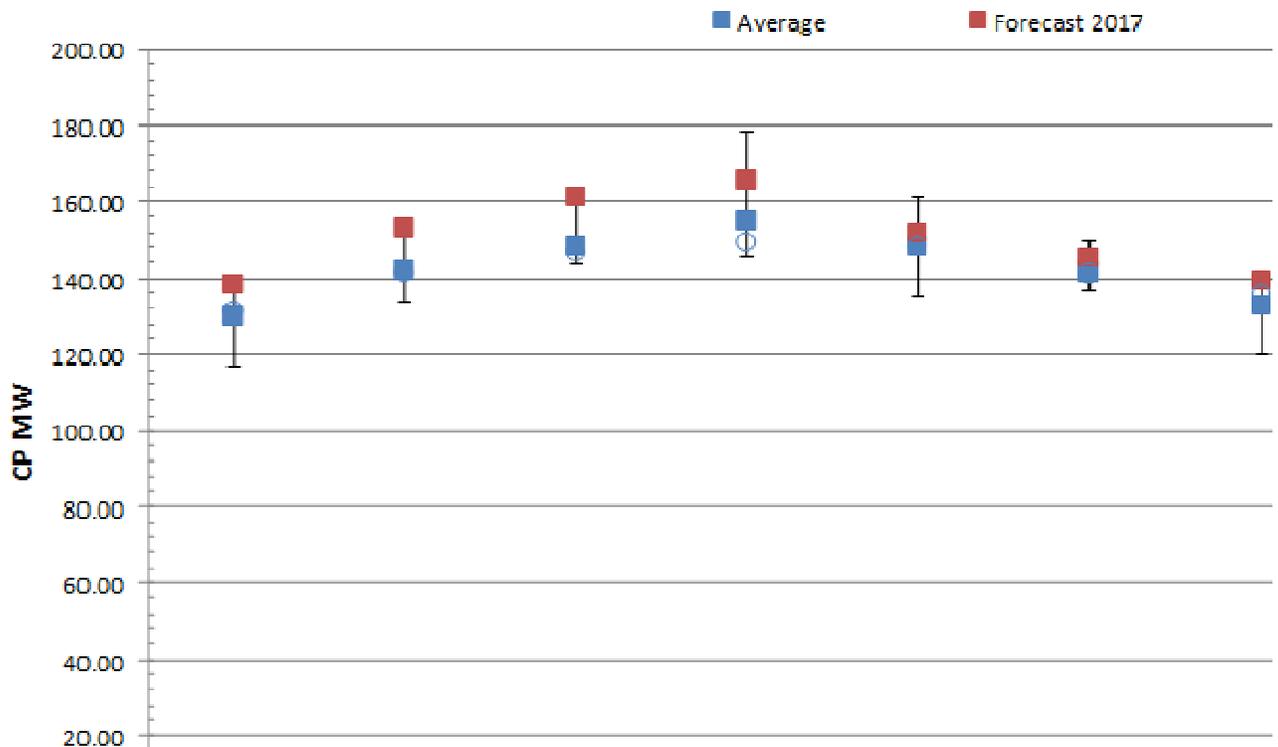




CP MW	Oct	Nov	Dec	Jan	Feb	Mar	Apr
<b>Forecast 2017</b>	138.14	152.84	161.18	165.65	151.86	145.31	139.55
Max	140.92	151.62	159.89	178.40	161.35	149.57	137.35
Min	116.78	133.85	143.62	145.75	135.01	136.66	120.30
Median	130.79	141.52	146.51	149.01	148.03	141.00	135.91
Average	129.72	141.79	148.32	154.82	148.38	141.67	132.53
Max From Average	11.20	9.83	11.57	23.58	12.96	7.89	4.82
Min From Average	12.94	7.94	4.70	9.07	13.37	5.02	12.23

Actual CP MW	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2011	130.79	151.62	146.95	178.40	158.69	136.66	136.57
2012	136.17	144.98	146.51	149.01	148.03	141.00	136.68
2013	133.00	139.69	143.62	151.97	144.37	144.19	135.91
2014	140.92	141.52	152.97	145.75	161.35	149.57	134.67
2015	116.78	136.20	143.85	146.04	135.01	137.51	120.30
2016	122.28	144.70	144.46	147.30	141.00	138.49	126.23
2017	128.10	133.85	159.89	165.27	150.23	144.29	137.35
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

### 10306 - 2017 Forecast, Average (2011 Through 2017)



Work Sheet Name	Data Update	Published
Actual Year To Date Load (aMW)	118.82	118.82
Actual Year To Date Weather Normalized Load (aMW)	117.48	117.48

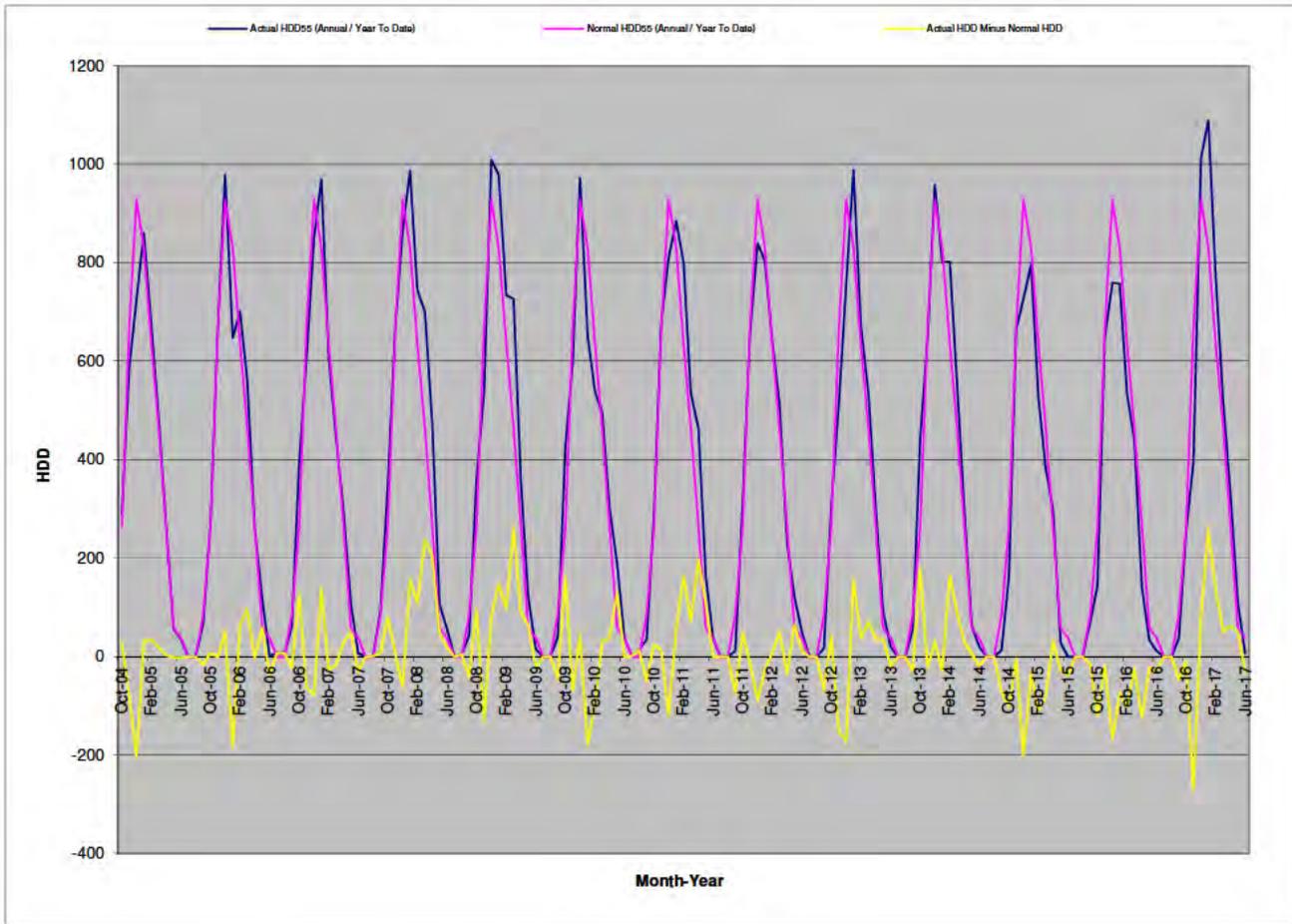
FY 2017 3rd Quarter Forecast Tracking Results	Updated Forecast (aMW)	Published Forecast (aMW)
Forecast Year To Date aMW Load	115.55	89.37
Forecast Minus W/hr Normalized Actual Year To Date % Difference	-1.7%	-31.5%
Forecast Minus W/hr Normalized Actual Year To Date aMW Difference	-1.92	-28.11

Detail Data Fiscal Year		2017
Detail Data		
<input checked="" type="radio"/> aMW Forecast	Monthly % Dif. Parameter	
<input type="radio"/> CP Forecast	<input type="radio"/> Published Forecast	
<input type="radio"/> Load Factor Forecast	<input checked="" type="radio"/> Updated Forecast	
		<input type="checkbox"/> -Year To Date

\* Weather Normalization from October Through March Only

Monthly Detail					
Mon-Yr	Updated aMW Forecast	Published aMW Forecast	aMW Actual	* Actual Weather Normalized Load (aMW)	Updated Minus W/hr Normalized Actual Monthly % Difference
Oct-16	109.64	84.10	111.68	111.88	-2.05%
Nov-16	121.29	92.12	117.86	122.72	-1.18%
Dec-16	129.18	100.55	127.85	125.85	2.57%
Jan-17	126.24	100.16	135.56	126.31	-0.06%
Feb-17	123.27	97.81	127.75	123.06	0.17%
Mar-17	115.39	90.87	117.20	115.94	-0.47%
Apr-17	107.26	85.27	116.94	116.94	-9.02%
May-17	105.91	78.34	109.02	109.02	-2.94%
Jun-17	102.04	75.43	105.89	105.89	-3.77%
Jul-17	102.58	75.94	Unavailable	Unavailable	Unavailable
Aug-17	101.41	75.17	Unavailable	Unavailable	Unavailable
Sep-17	100.98	76.92	Unavailable	Unavailable	Unavailable
<b>Annual</b>	<b>112.05</b>	<b>86.00</b>	<b>118.82</b>	<b>117.48</b>	

FY	Hrs/Yr	Number Of Months Of Actual Data	Updated Forecast (aMW)	Published Forecast (aMW)	Difference (aMW)	Actual (aMW)	Actual HDD65 (Annual / Year To Date)	Normal HDD65 (Annual / Year To Date)
2005	8760	12		Unavailable		112.00	4045.1	4234.9
2006	8760	12		Unavailable		111.43	4278.9	4234.9
2007	8760	12		Unavailable		107.90	4373.5	4234.9
2008	8784	12		Unavailable		113.42	5000.9	4234.9
2009	8760	12		Unavailable		110.58	4876.1	4234.9
2010	8760	12		Unavailable		113.00	4261.3	4234.9
2011	8760	12		112.85		113.11	4677.1	4234.9
2012	8784	12		115.47		114.69	4189.0	4234.9
2013	8760	12		113.68		115.90	4243.4	4234.9
2014	8760	12		115.93		110.50	4595.8	4234.9
2015	8760	12		116.34		92.90	3656.2	4234.9
2016	8784	12		92.34		109.08	3508.0	4234.9
2017	8760	9	112.05	86.00	26.05	118.82	4482.6	4150.3
2018	8760	0	112.28	86.00	26.28	Unavailable	0.0	0.0
2019	8760	0	75.84	30.03	45.81	Unavailable	0.0	0.0
2020	8784	0	33.99	26.84	7.15	Unavailable	0.0	0.0
2021	8760	0	27.97	25.72	2.25	Unavailable	0.0	0.0
2022	8760	0	28.20	25.72	2.47	Unavailable	0.0	0.0
2023	8760	0	28.42	25.72	2.70	Unavailable	0.0	0.0
2024	8784	0	28.65	25.75	2.90	Unavailable	0.0	0.0
2025	8760	0	28.88	25.72	3.15	Unavailable	0.0	0.0
2026	8760	0	29.11	25.72	3.38	Unavailable	0.0	0.0
2027	8760	0	29.33	25.72	3.61	Unavailable	0.0	0.0
2028	8784	0	29.56	25.75	3.81	Unavailable	0.0	0.0
2029	8760	0	29.79	25.72	4.06	Unavailable	0.0	0.0
2030	8760	0	30.01	25.72	4.29	Unavailable	0.0	0.0
Compound Growth Rate			-9.64%	-8.87%				



**Weather Station: Deer Park**

Monthly Hrs	Fiscal Year	Month	Actual HDD55 (Annual / Year To Date)	Normal HDD55 (Annual / Year To Date)	Actual HDD Minus Normal HDD
745	2005	10	290.95	263.3	27.7
720	2005	11	586.292	667.1	-80.8
744	2005	12	725	928.1	-203.1
744	2005	1	860.667	830.5	30.2
672	2005	2	671.167	636.3	34.9
744	2005	3	482.375	463.9	18.5
719	2005	4	268.792	265.5	3.3
744	2005	5	55.208	57.3	-2.1
720	2005	6	36.042	38.3	-2.3
744	2005	7	0	0	0.0
744	2005	8	0.042	0	0.0
720	2005	9	68.608	84.6	-16.0
745	2006	10	271.167	263.3	7.9
720	2006	11	666.542	667.1	-0.6
744	2006	12	978.68	928.1	50.6
744	2006	1	647.371	830.5	-183.1
672	2006	2	700.392	636.3	64.1
744	2006	3	559.042	463.9	95.1
719	2006	4	263.066	265.5	-2.4
744	2006	5	116.335	57.3	59.0
720	2006	6	0.917	38.3	-37.4
744	2006	7	7.375	0	7.4

744	2006	8	6.792	0	6.8
720	2006	9	61.182	84.6	-23.4
745	2007	10	391.137	263.3	127.8
720	2007	11	604.028	667.1	-63.1
744	2007	12	850.721	928.1	-77.4
744	2007	1	968.81	830.5	138.3
672	2007	2	609.333	636.3	-27.0
743	2007	3	446.589	463.9	-17.3
720	2007	4	294.833	265.5	29.3
744	2007	5	107.375	57.3	50.1
720	2007	6	7.167	38.3	-31.1
744	2007	7	0	0	0.0
744	2007	8	1.042	0	1.0
720	2007	9	92.417	84.6	7.8
744	2008	10	345.474	263.3	82.2
721	2008	11	671.875	667.1	4.8
744	2008	12	865.833	928.1	-62.3
744	2008	1	987.071	830.5	156.6
696	2008	2	745.468	636.3	109.2
743	2008	3	699.812	463.9	235.9
720	2008	4	473.208	265.5	207.7
744	2008	5	106.446	57.3	49.1
720	2008	6	57.542	38.3	19.2
744	2008	7	0	0	0.0
744	2008	8	4.75	0	4.8
720	2008	9	43.417	84.6	-41.2
744	2009	10	359.225	263.3	95.9
721	2009	11	537.255	667.1	-129.8
744	2009	12	1009.173	928.1	81.1
744	2009	1	978.309	830.5	147.8
672	2009	2	734.186	636.3	97.9
743	2009	3	726.368	463.9	262.5
720	2009	4	354.187	265.5	88.7
744	2009	5	121.481	57.3	64.2
720	2009	6	15.542	38.3	-22.8
744	2009	7	0	0	0.0
744	2009	8	0.667	0	0.7
720	2009	9	39.725	84.6	-44.9
744	2010	10	426.492	263.3	163.2
721	2010	11	596.964	667.1	-70.1
744	2010	12	972.658	928.1	44.6
744	2010	1	651.587	830.5	-178.9
672	2010	2	539.167	636.3	-97.1
743	2010	3	495.814	463.9	31.9
720	2010	4	302.63	265.5	37.1
744	2010	5	188.042	57.3	130.7
720	2010	6	37.5	38.3	-0.8
744	2010	7	1.375	0	1.4
744	2010	8	13.693	0	13.7
720	2010	9	35.417	84.6	-49.2
744	2011	10	289	263.3	25.6
721	2011	11	680	667.1	12.6
744	2011	12	810	928.1	-118.2
744	2011	1	884	830.5	53.9
672	2011	2	801	636.3	164.5
743	2011	3	535	463.9	71.4
720	2011	4	463	265.5	197.8
744	2011	5	165	57.3	107.2
720	2011	6	38	38.3	-0.8
744	2011	7	0	0	0.4
744	2011	8	0	0	0.0
720	2011	9	12.333	84.6	-72.3
744	2012	10	310.795	263.3	47.5
721	2012	11	654.542	667.1	-12.6
744	2012	12	839.571	928.1	-88.5
744	2012	1	803.708	830.5	-26.8
696	2012	2	643.986	636.3	7.7
743	2012	3	513.371	463.9	49.5

720	2012	4	231.932	265.5	-33.6
744	2012	5	122.282	57.3	65.0
720	2012	6	51.197	38.3	12.9
744	2012	7	0	0	0.0
744	2012	8	0	0	0.0
720	2012	9	17.616	84.6	-67.0
744	2013	10	304.931	263.3	41.6
721	2013	11	515.792	667.1	-151.3
744	2013	12	756.436	928.1	-171.7
744	2013	1	988.458	830.5	158.0
672	2013	2	673.81	636.3	37.5
743	2013	3	534.259	463.9	70.4
720	2013	4	302.175	265.5	36.7
744	2013	5	92.417	57.3	35.1
720	2013	6	19.582	38.3	-18.7
744	2013	7	0	0	0.0
744	2013	8	0	0	0.0
720	2013	9	55.542	84.6	-29.1
744	2014	10	443.15	263.3	179.9
721	2014	11	645.947	667.1	-21.2
744	2014	12	958.687	928.1	30.6
744	2014	1	801.121	830.5	-29.4
672	2014	2	801.929	636.3	165.6
743	2014	3	552.681	463.9	88.8
720	2014	4	295.625	265.5	30.1
744	2014	5	63.317	57.3	6.0
720	2014	6	19.917	38.3	-18.4
744	2014	7	0	0	0.0
744	2014	8	0	0	0.0
720	2014	9	13.417	84.6	-71.2
744	2015	10	161.708	263.3	-101.6
721	2015	11	664.382	667.1	-2.7
744	2015	12	726.819	928.1	-201.3
744	2015	1	796.146	830.5	-34.4
672	2015	2	526.75	636.3	-109.6
743	2015	3	383.053	463.9	-80.8
720	2015	4	298.559	265.5	33.1
744	2015	5	28.583	57.3	-28.7
720	2015	6	0	38.3	-38.3
744	2015	7	0	0	0.0
744	2015	8	0	0	0.0
720	2015	9	70.221	84.6	-14.4
744	2016	10	144.083	263.3	-119.2
721	2016	11	648.682	667.1	-18.4
744	2016	12	759.434	928.1	-168.7
744	2016	1	757.166	830.5	-73.3
696	2016	2	534.316	636.3	-102.0
743	2016	3	440.373	463.9	-23.5
720	2016	4	140.181	265.5	-125.3
744	2016	5	34.5	57.3	-22.8
720	2016	6	12.042	38.3	-26.3
744	2016	7	0	0	0.0
744	2016	8	0	0	0.0
720	2016	9	37.212	84.6	-47.4
744	2017	10	253.958	263.3	-9.3
721	2017	11	396.042	667.1	-271.1
744	2017	12	1012.763	928.1	84.7
744	2017	1	1089.339	830.5	258.8
672	2017	2	772.702	636.3	136.4
743	2017	3	515.437	463.9	51.5
720	2017	4	327.075	265.5	61.6
744	2017	5	108.625	57.3	51.3
720	2017	6	6.625	38.3	-31.7
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744	2017	8	0	0	0.0
720	2017	9	0	84.6	0.0
744	2018	10	0	263.3	0.0
721	2018	11	0	667.1	0.0

744	2018	12	928.1	0.0
744	2018	1	830.5	0.0
672	2018	2	636.3	0.0
743	2018	3	463.9	0.0
720	2018	4	265.5	0.0
744	2018	5	57.3	0.0
720	2018	6	38.3	0.0
744	2018	7	0	0.0
744	2018	8	0	0.0
720	2018	9	84.6	0.0
744	2019	10	263.3	0.0
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720	2019	6		0.0
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744	2020	12		0.0
744	2020	1		0.0
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743	2020	3		0.0
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720	2020	6		0.0
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744	2021	1		0.0
672	2021	2		0.0
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744	2021	8		0.0
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721	2022	11		0.0
744	2022	12		0.0
744	2022	1		0.0
672	2022	2		0.0
743	2022	3		0.0
720	2022	4		0.0
744	2022	5		0.0
720	2022	6		0.0
744	2022	7		0.0
744	2022	8		0.0
720	2022	9		0.0
744	2023	10		0.0
721	2023	11		0.0
744	2023	12		0.0
744	2023	1		0.0
672	2023	2		0.0
743	2023	3		0.0
720	2023	4		0.0
744	2023	5		0.0
720	2023	6		0.0
744	2023	7		0.0

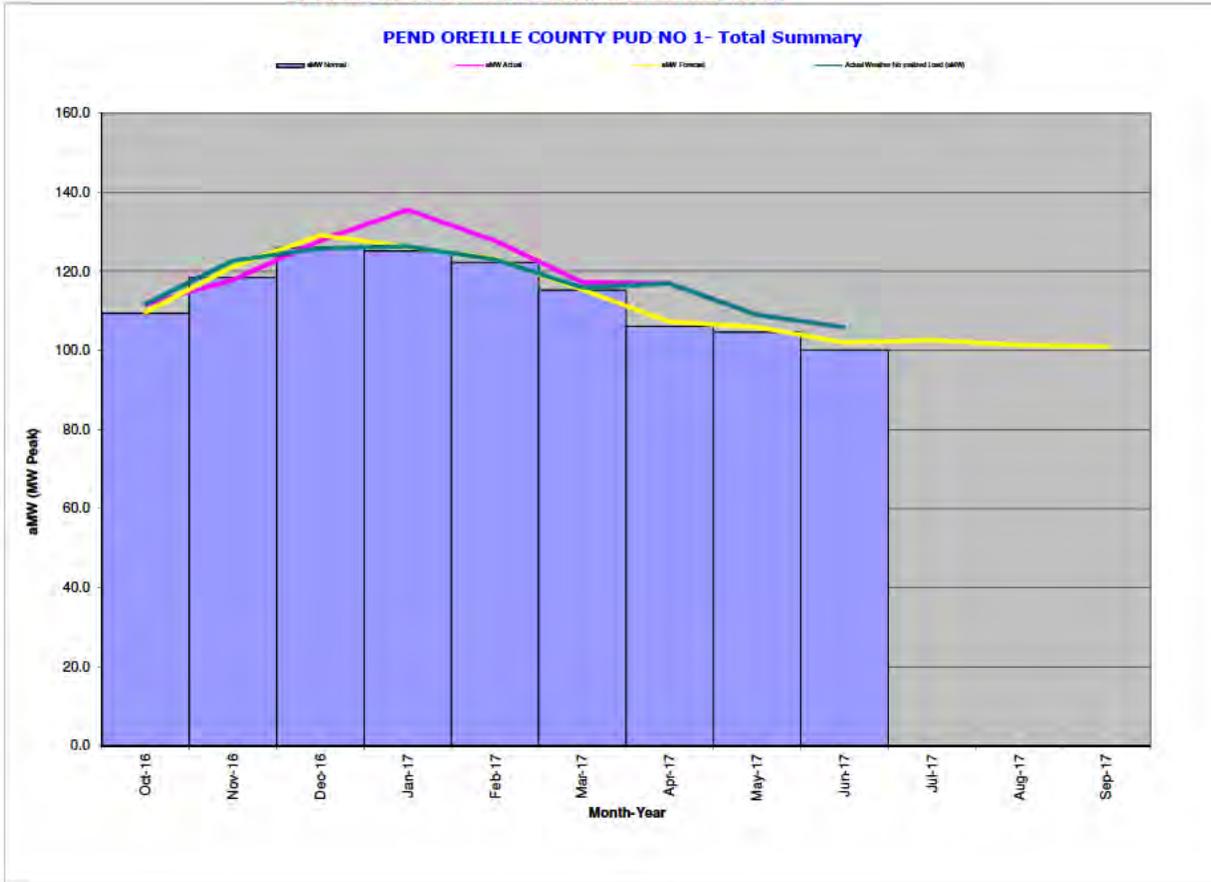
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721	2024	11	0.0
744	2024	12	0.0
744	2024	1	0.0
696	2024	2	0.0
743	2024	3	0.0
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743	2028	3	0.0
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744	2028	8	0.0
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721	2029	11	0.0
744	2029	12	0.0
744	2029	1	0.0
672	2029	2	0.0
743	2029	3	0.0

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720	2029	6	0.0
744	2029	7	0.0
744	2029	8	0.0
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744	2030	10	0.0
721	2030	11	0.0
744	2030	12	0.0
744	2030	1	0.0
672	2030	2	0.0
743	2030	3	0.0
720	2030	4	0.0
744	2030	5	0.0
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744	2030	8	0.0
720	2030	9	0.0
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721	2031	11	0.0
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744	2032	1	0.0
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Forecast Fiscal Start Year	Fiscal Plot Start Year	Fiscal Plot Stop Year	Year Type	Load Type	Peak Type	Peak Plot	Shaped System Load (SSL) Plot	Select Customer	Customer Number	HWM (aMW)	Percent System	CHWM Resources and NLSL (aMW)	HWM Version
2017	2017	2017	Fiscal	aMW	CP	Hide	Hide	PEND OREILLE COUNTY PUD NO 1	10306				

**\*Historical Load Values Do Not Include Meter Losses**



Monthly Hrs	Fiscal Year	Month	aMW Actual	aMW Normal	aMW Forecast	aMW HWM	aMW Above HWM	CP Actual Peak	CP Forecast Peak	CP Actual Load Factor	CP Forecast Load Factor
	2005	10	105.59	107.66				123.39		85.8%	
	2005	11	120.73	118.19				132.94		90.8%	
	2005	12	122.83	123.66				137.11		89.6%	
	2005	1	128.87	123.33				159.31		80.9%	
	2005	2	121.24	118.70				140.17		86.5%	
	2005	3	118.01	111.81				132.15		89.3%	
	2005	4	111.84	104.30				130.76		85.5%	
	2005	5	103.78	102.80				120.75		85.9%	
	2005	6	103.62	101.68				113.25		91.5%	
	2005	7	104.76	99.54				114.80		91.3%	
	2005	8	94.69	100.08				117.72		80.4%	
	2005	9	108.88	95.63				122.63		88.8%	
	2006	10	111.72	108.49				124.69		89.6%	
	2006	11	122.04	119.02				139.38		87.6%	
	2006	12	131.18	124.53				155.45		84.4%	
	2006	1	122.42	124.10				136.01		90.0%	
	2006	2	123.64	119.57				150.29		82.3%	
	2006	3	121.48	112.58				137.39		88.4%	
	2006	4	108.74	105.17				134.43		80.9%	
	2006	5	110.21	103.70				126.20		87.3%	
	2006	6	104.09	102.57				117.83		88.3%	
	2006	7	97.86	100.35				115.06		85.0%	
	2006	8	102.43	100.94				111.94		91.5%	
	2006	9	81.56	96.47				121.01		67.4%	
	2007	10	107.84	109.30				133.75		80.6%	
	2007	11	120.80	119.87				153.61		78.6%	
	2007	12	119.61	125.32				141.91		84.3%	
	2007	1	123.03	124.96				153.75		80.0%	
	2007	2	115.69	120.52				140.62		82.3%	
	2007	3	114.91	113.56				140.15		82.0%	
	2007	4	93.71	105.84				129.84		72.2%	
	2007	5	107.56	104.44				121.95		88.2%	
	2007	6	100.43	103.35				115.48		87.0%	
	2007	7	106.18	101.20				121.85		87.1%	
	2007	8	103.94	101.78				117.31		88.6%	
	2007	9	80.70	97.31				116.96		69.0%	
	2008	10	111.79	110.28				132.40		84.4%	
	2008	11	118.36	120.62				149.56		79.1%	
	2008	12	132.05	126.15				148.29		89.0%	
	2008	1	130.11	125.79				154.91		84.0%	
	2008	2	126.27	120.73				142.91		88.4%	
	2008	3	100.76	114.41				132.55		76.0%	
	2008	4	107.23	106.74				131.59		81.5%	
	2008	5	102.52	105.32				124.80		82.1%	
	2008	6	106.80	104.35				119.65		89.3%	
	2008	7	108.43	102.02				119.30		90.9%	
744	2008	8	107.31	102.54				123.50		86.9%	
720	2008	9	109.82	98.13				124.41		88.3%	
744	2009	10	113.72	111.08				141.64		80.3%	
721	2009	11	121.09	121.44				141.38		85.7%	
744	2009	12	133.05	127.00				162.00		82.1%	
744	2009	1	132.70	126.61				158.55		83.7%	
672	2009	2	124.59	122.35				147.20		84.6%	
743	2009	3	121.73	115.22				156.28		77.9%	
720	2009	4	106.19	107.58				132.18		80.3%	
744	2009	5	106.52	106.14				166.72		63.9%	
720	2009	6	100.34	105.19				115.21		87.1%	
744	2009	7	84.84	102.84				118.35		71.7%	
744	2009	8	100.19	103.36				111.22		90.1%	
720	2009	9	82.25	98.98				118.30		69.5%	
744	2010	10	114.03	111.89				138.72		82.2%	
721	2010	11	122.44	122.29				137.02		89.4%	
744	2010	12	131.85	127.82				158.69		83.1%	
744	2010	1	123.83	127.43				149.93		82.6%	
672	2010	2	117.04	123.25				136.11		86.0%	
743	2010	3	116.89	116.04				141.32		82.7%	
720	2010	4	111.63	108.42				133.61		83.5%	
744	2010	5	105.90	106.95				130.61		81.1%	
720	2010	6	103.64	106.03				121.25		85.5%	
744	2010	7	104.82	103.65				114.84		91.3%	
744	2010	8	102.00	104.17				114.97		88.7%	
720	2010	9	101.85	99.82				116.90		87.1%	
744	2011	10	108.48	112.71				130.79		82.9%	
721	2011	11	121.70	123.13				151.62		80.3%	
744	2011	12	122.03	128.63				146.95		83.0%	
744	2011	1	126.58	128.24				178.40		71.0%	
672	2011	2	128.87	124.16				158.69		81.2%	
743	2011	3	110.43	116.86				136.66		80.8%	
720	2011	4	114.44	109.27				136.57		83.8%	
744	2011	5	107.48	107.77				131.98		81.4%	
720	2011	6	106.55	106.88				121.77		87.5%	
744	2011	7	102.74	104.47				115.60		88.9%	
744	2011	8	104.84	104.99				117.31		89.4%	
720	2011	9	104.57	100.66				121.30		86.2%	
744	2012	10	113.41	113.52				136.17		83.3%	
721	2012	11	122.09	123.97				144.98		84.2%	
744	2012	12	126.09	129.45				146.51		86.1%	
744	2012	1	127.61	129.06				149.01		85.6%	
696	2012	2	123.63	124.22				148.03		83.5%	
743	2012	3	120.83	117.67				141.00		85.7%	
720	2012	4	115.76	110.11				136.68		84.7%	
744	2012	5	105.42	108.58				128.91		81.8%	
720	2012	6	104.56	107.72				123.53		84.6%	
744	2012	7	108.00	105.28				162.19		66.6%	
744	2012	8	105.15	105.80				121.56		86.5%	

720	2012	9	103.85	101.50			120.81	86.0%	
744	2013	10	114.91	112.26			133.00	86.4%	
721	2013	11	120.51	122.89			139.69	86.3%	
744	2013	12	129.71	129.22			143.62	90.3%	
744	2013	1	131.97	128.28			151.97	86.8%	
672	2013	2	127.07	123.93			144.37	88.0%	
743	2013	3	118.98	117.24			144.19	82.5%	
720	2013	4	111.94	110.25			135.91	82.4%	
744	2013	5	109.64	106.98			126.92	86.4%	
720	2013	6	105.84	105.91			122.00	86.8%	
744	2013	7	104.74	104.39			122.04	85.8%	
744	2013	8	105.34	104.54			119.90	87.9%	
720	2013	9	110.80	100.69			122.20	90.7%	
744	2014	10	113.36	112.85			140.92	80.4%	
721	2014	11	122.32	123.35			141.52	86.4%	
744	2014	12	130.47	129.73			152.97	85.3%	
744	2014	1	127.51	128.86			145.75	87.5%	
672	2014	2	132.51	124.59			161.35	82.1%	
743	2014	3	127.97	117.85			149.57	85.6%	
720	2014	4	102.84	110.88			134.67	76.4%	
744	2014	5	99.25	107.60			120.72	82.2%	
720	2014	6	92.98	106.50			107.43	86.5%	
744	2014	7	93.88	104.97			108.88	86.2%	
744	2014	8	90.45	105.12			105.52	85.7%	
720	2014	9	93.67	99.99			110.60	84.7%	
744	2015	10	97.24	113.26			141.73	68.6%	
721	2015	11	94.57	123.80			138.33	68.4%	
744	2015	12	111.00	130.15			143.85	77.2%	
744	2015	1	101.81	129.27			178.27	57.1%	
672	2015	2	110.03	125.04			135.01	81.5%	
743	2015	3	89.09	118.26			137.51	64.8%	
720	2015	4	81.43	111.31			120.30	67.7%	
744	2015	5	94.70	108.01			112.63	84.1%	
720	2015	6	75.90	106.93			107.39	70.7%	
744	2015	7	91.13	105.38			109.80	83.0%	
744	2015	8	73.84	105.54			101.16	73.0%	
720	2015	9	94.93	100.41			104.69	90.7%	
744	2016	10	99.80	111.07			122.28	81.6%	
721	2016	11	115.63	120.82			144.70	79.9%	
744	2016	12	124.61	126.98			144.46	86.3%	
744	2016	1	121.19	126.61			147.30	82.3%	
696	2016	2	122.07	122.06			141.00	86.6%	
743	2016	3	119.36	115.95			138.49	86.2%	
720	2016	4	103.56	108.56			126.23	82.0%	
744	2016	5	107.47	105.44			123.97	86.7%	
720	2016	6	90.86	103.67			119.56	76.0%	
744	2016	7	99.76	102.33			111.85	89.2%	
744	2016	8	101.76	102.49			116.97	87.0%	
720	2016	9	103.00	98.24			120.76	85.3%	
744	2017	10	111.68	109.47	109.64		128.10	138.14	79.4%
721	2017	11	117.86	118.47	121.29		133.85	152.84	79.4%
744	2017	12	127.85	126.04	129.18		159.89	161.18	80.1%
744	2017	1	135.56	125.22	126.24		165.27	165.65	82.0%
672	2017	2	127.75	122.33	123.27		150.23	151.86	85.0%
743	2017	3	117.20	115.27	115.39		144.29	145.31	81.2%
720	2017	4	116.94	106.10	107.26		137.35	139.55	85.1%
744	2017	5	109.02	104.71	105.91		129.38	136.32	84.3%
720	2017	6	105.89	100.17	102.04		121.10	124.54	87.4%
744	2017	7			102.58			125.17	82.0%
744	2017	8			101.41			120.66	84.0%
720	2017	9			100.98			128.32	78.7%
744	2018	10			109.86			138.42	79.4%
721	2018	11			121.52			153.13	79.4%
744	2018	12			129.40			161.47	80.1%
744	2018	1			126.46			165.94	76.2%
672	2018	2			123.51			152.14	81.2%
743	2018	3			115.62			145.60	79.4%
720	2018	4			107.49			139.84	76.9%
744	2018	5			106.13			136.60	77.7%
720	2018	6			102.27			124.83	81.9%
744	2018	7			102.80			125.45	81.9%
744	2018	8			101.63			120.94	84.0%
720	2018	9			101.21			128.60	78.7%
744	2019	10			110.08			138.71	79.4%
721	2019	11			121.75			153.41	79.4%
744	2019	12			129.62			161.75	80.1%
744	2019	1			86.37			119.48	72.3%
672	2019	2			82.74			105.85	78.2%
743	2019	3			75.71			98.68	76.7%
720	2019	4			68.84			93.54	73.6%
744	2019	5			65.37			89.88	72.7%
720	2019	6			42.45			54.75	77.5%
744	2019	7			42.36			55.22	76.7%
744	2019	8			41.82			51.01	82.0%
720	2019	9			42.63			58.81	72.5%
744	2020	10			48.64			68.03	71.5%
721	2020	11			60.37			82.69	73.0%
744	2020	12			68.47			91.83	74.6%
744	2020	1			41.97			67.77	61.9%
696	2020	2			37.40			54.31	68.9%
743	2020	3			31.50			46.52	67.7%
720	2020	4			25.88			42.00	61.6%
744	2020	5			20.31			37.92	53.6%
720	2020	6			18.35			26.33	69.7%
744	2020	7			18.06			26.75	67.5%
744	2020	8			17.73			22.64	78.3%

720	2020	9	18.96	30.50	62.2%
744	2021	10	24.01	39.41	60.9%
721	2021	11	35.77	55.28	64.7%
744	2021	12	43.92	64.53	68.1%
744	2021	1	42.20	68.06	62.0%
672	2021	2	37.91	54.60	69.4%
743	2021	3	31.72	46.80	67.8%
720	2021	4	26.11	42.28	61.8%
744	2021	5	20.53	38.21	53.7%
720	2021	6	18.58	26.61	69.8%
744	2021	7	18.29	27.04	67.6%
744	2021	8	17.95	22.92	78.3%
720	2021	9	19.19	30.78	62.3%
744	2022	10	24.24	39.70	61.1%
721	2022	11	36.00	55.57	64.8%
744	2022	12	44.15	64.82	68.1%
744	2022	1	42.42	68.34	62.1%
672	2022	2	38.16	54.88	69.5%
743	2022	3	31.95	47.09	67.8%
720	2022	4	26.34	42.57	61.9%
744	2022	5	20.75	38.49	53.9%
720	2022	6	18.82	26.90	69.9%
744	2022	7	18.51	27.33	67.7%
744	2022	8	18.18	23.21	78.3%
720	2022	9	19.42	31.07	62.5%
744	2023	10	24.46	39.98	61.2%
721	2023	11	36.23	55.86	64.9%
744	2023	12	44.37	65.11	68.2%
744	2023	1	42.64	68.63	62.1%
672	2023	2	38.41	55.17	69.6%
743	2023	3	32.17	47.37	67.9%
720	2023	4	26.57	42.86	62.0%
744	2023	5	20.98	38.78	54.1%
720	2023	6	19.05	27.19	70.1%
744	2023	7	18.73	27.61	67.8%
744	2023	8	18.40	23.50	78.3%
720	2023	9	19.65	31.35	62.7%
744	2024	10	24.68	40.27	61.3%
721	2024	11	36.46	56.14	64.9%
744	2024	12	44.59	65.39	68.2%
744	2024	1	42.87	68.91	62.2%
696	2024	2	38.36	55.46	69.2%
743	2024	3	32.39	47.66	68.0%
720	2024	4	26.81	43.14	62.1%
744	2024	5	21.20	39.06	54.3%
720	2024	6	19.28	27.47	70.2%
744	2024	7	18.95	27.90	67.9%
744	2024	8	18.62	23.78	78.3%
720	2024	9	19.88	31.64	62.8%
744	2025	10	24.90	40.55	61.4%
721	2025	11	36.69	56.43	65.0%
744	2025	12	44.82	65.68	68.2%
744	2025	1	43.09	69.20	62.3%
672	2025	2	38.90	55.74	69.8%
743	2025	3	32.62	47.95	68.0%
720	2025	4	27.04	43.43	62.3%
744	2025	5	21.42	39.35	54.4%
720	2025	6	19.51	27.76	70.3%
744	2025	7	19.18	28.18	68.0%
744	2025	8	18.84	24.07	78.3%
720	2025	9	20.11	31.93	63.0%
744	2026	10	25.13	40.84	61.5%
721	2026	11	36.92	56.71	65.1%
744	2026	12	45.04	65.96	68.3%
744	2026	1	43.31	69.48	62.3%
672	2026	2	39.15	56.03	69.9%
743	2026	3	32.84	48.23	68.1%
720	2026	4	27.27	43.71	62.4%
744	2026	5	21.65	39.64	54.6%
720	2026	6	19.74	28.04	70.4%
744	2026	7	19.40	28.47	68.1%
744	2026	8	19.07	24.35	78.3%
720	2026	9	20.34	32.21	63.1%
744	2027	10	25.35	41.12	61.6%
721	2027	11	37.15	57.00	65.2%
744	2027	12	45.26	66.25	68.3%
744	2027	1	43.53	69.77	62.4%
672	2027	2	39.39	56.31	70.0%
743	2027	3	33.06	48.52	68.1%
720	2027	4	27.50	44.00	62.5%
744	2027	5	21.87	39.92	54.8%
720	2027	6	19.97	28.33	70.5%
744	2027	7	19.62	28.76	68.2%
744	2027	8	19.29	24.64	78.3%
720	2027	9	20.57	32.50	63.3%
744	2028	10	25.57	41.41	61.8%
721	2028	11	37.38	57.29	65.2%
744	2028	12	45.49	66.54	68.4%
744	2028	1	43.76	70.06	62.5%
696	2028	2	39.31	56.60	69.4%
743	2028	3	33.29	48.80	68.2%
720	2028	4	27.73	44.29	62.6%
744	2028	5	22.09	40.21	54.9%
720	2028	6	20.20	28.62	70.6%
744	2028	7	19.85	29.04	68.3%
744	2028	8	19.51	24.93	78.3%
720	2028	9	20.80	32.78	63.5%
744	2029	10	25.80	41.70	61.9%

721	2029	11			37.61				57.57		65.3%
744	2029	12			45.71				66.82		68.4%
744	2029	1			43.98				70.34		62.5%
672	2029	2			39.89				56.89		70.1%
743	2029	3			33.51				49.09		68.3%
720	2029	4			27.96				44.57		62.7%
744	2029	5			22.31				40.49		55.1%
720	2029	6			20.43				28.90		70.7%
744	2029	7			20.07				29.33		68.4%
744	2029	8			19.74				25.21		78.3%
720	2029	9			21.03				33.07		63.6%
744	2030	10			26.02				41.98		62.0%
721	2030	11			37.84				57.86		65.4%
744	2030	12			45.93				67.11		68.4%
744	2030	1			44.20				70.63		62.6%
672	2030	2			40.14				57.17		70.2%
743	2030	3			33.73				49.38		68.3%
720	2030	4			28.19				44.86		62.8%
744	2030	5			22.54				40.78		55.3%
720	2030	6			20.66				29.19		70.8%
744	2030	7			20.29				29.61		68.5%
744	2030	8			19.96				25.50		78.3%
720	2030	9			21.26				33.36		63.7%
744	2031	10			26.24				42.27		62.1%
721	2031	11			38.07				58.14		65.5%
744	2031	12			46.15				67.40		68.5%
744	2031	1			44.43				70.92		62.6%
672	2031	2			40.38				57.46		70.3%
743	2031	3			33.96				49.66		68.4%
720	2031	4			28.42				45.14		62.9%
744	2031	5			22.76				41.06		55.4%
720	2031	6			20.89				29.47		70.9%
744	2031	7			20.51				29.90		68.6%
744	2031	8			20.18				25.78		78.3%
720	2031	9			21.49				33.64		63.9%
744	2032	10			26.46				42.55		62.2%
721	2032	11			38.30				58.43		65.5%
744	2032	12			46.38				67.68		68.5%
744	2032	1			44.65				71.20		62.7%
696	2032	2			40.26				57.74		69.7%
743	2032	3			34.18				49.95		68.4%
720	2032	4			28.65				45.43		63.1%
744	2032	5			22.98				41.35		55.6%
720	2032	6			21.12				29.76		71.0%
744	2032	7			20.74				30.19		68.7%
744	2032	8			20.40				26.07		78.3%
720	2032	9			21.72				33.93		64.0%
744	2033	10			26.69				42.84		62.3%
721	2033	11			38.53				58.72		65.6%
744	2033	12			46.60				67.97		68.6%
744	2033	1			44.87				71.49		62.8%
672	2033	2			40.88				58.03		70.4%
743	2033	3			34.40				50.23		68.5%
720	2033	4			28.88				45.72		63.2%
744	2033	5			23.21				41.64		55.7%
720	2033	6			21.35				30.05		71.1%
744	2033	7			20.96				30.47		68.8%
744	2033	8			20.63				26.35		78.3%
720	2033	9			21.95				34.21		64.2%
744	2034	10			26.91				43.13		62.4%
721	2034	11			38.76				59.00		65.7%
744	2034	12			46.82				68.25		68.6%
744	2034	1			45.09				71.77		62.8%
672	2034	2			41.12				58.32		70.5%
743	2034	3			34.63				50.52		68.5%
720	2034	4			29.11				46.00		63.3%
744	2034	5			23.43				41.92		55.9%
720	2034	6			21.58				30.33		71.1%
744	2034	7			21.18				30.76		68.9%
744	2034	8			20.85				26.64		78.3%
720	2034	9			22.18				34.50		64.3%
744	2035	10			27.13				43.41		62.5%
721	2035	11			38.98				59.29		65.8%
744	2035	12			47.05				68.54		68.6%
744	2035	1			45.32				72.06		62.9%
672	2035	2			41.37				58.60		70.6%
743	2035	3			34.85				50.81		68.6%
720	2035	4			29.34				46.29		63.4%
744	2035	5			23.65				42.21		56.0%
720	2035	6			21.81				30.62		71.2%
744	2035	7			21.41				31.04		69.0%
744	2035	8			21.07				26.93		78.3%
720	2035	9			22.41				34.79		64.4%
744	2036	10			27.35				43.70		62.6%
721	2036	11			39.21				59.57		65.8%
744	2036	12			47.27				68.83		68.7%
			#N/A	#N/A	45.5407157	#N/A	#N/A	#N/A	72.345245	#N/A	0.62949148
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			#N/A	#N/A	35.0719035	#N/A	#N/A	#N/A	51.092117	#N/A	0.68644451
			#N/A	#N/A	29.5681129	#N/A	#N/A	#N/A	46.573189	#N/A	0.63487413
			#N/A	#N/A	23.8748218	#N/A	#N/A	#N/A	42.494366	#N/A	0.561835
			#N/A	#N/A	22.0413798	#N/A	#N/A	#N/A	30.903957	#N/A	0.71322192
			#N/A	#N/A	21.6278874	#N/A	#N/A	#N/A	31.329733	#N/A	0.69033105
			#N/A	#N/A	21.2958006	#N/A	#N/A	#N/A	27.212816	#N/A	0.78256511
			#N/A	#N/A	22.6442006	#N/A	#N/A	#N/A	35.071159	#N/A	0.64566444



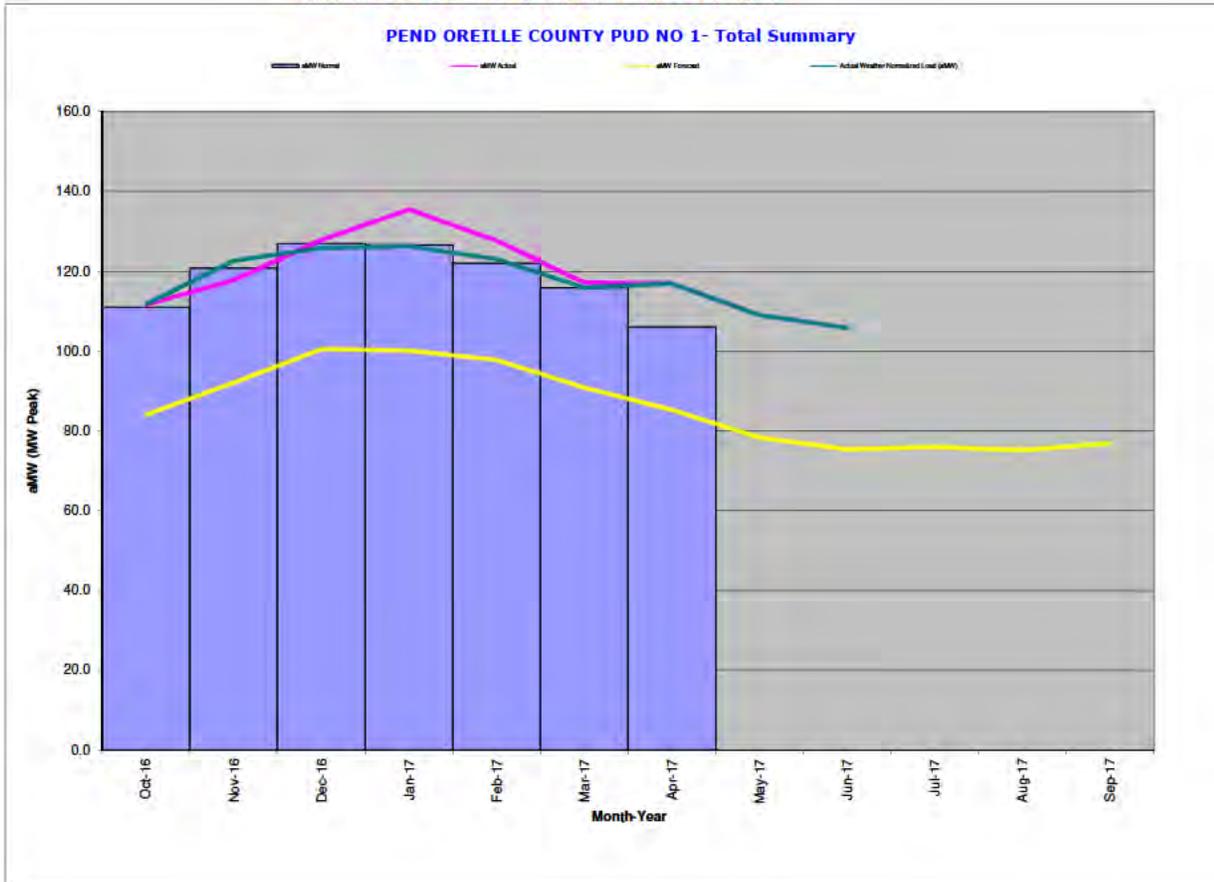
	Data Start Date	Data Stop Date
Customer Level Model Parameters:	1/1/03	3/31/17
Customer Level Energy forecast based on trend; R-Squared = N/A		
Customer Level Peak forecast based on trend; R-Squared = N/A		

Active Projects:	Project Start Date	POD	Peak kW	Load Factor
Cominco Load Loss	Ramps from 1/2015 through 5/2015. Full load through 12/2019.	10306_DP0443	7000	Variable monthly LF

Cominco Load Loss		
Month	Peak kW	Load Factor
1	7000	82.0
2	7000	82.0
3	7000	82.0
4	7000	82.0
5	7000	82.0
6	7000	82.0
7	7000	82.0
8	7000	82.0
9	7000	82.0
10	7000	82.0
11	7000	82.0
12	7000	82.0

Forecast Fiscal Start Year	Fiscal Plot Start Year	Fiscal Plot Stop Year	Year Type	Load Type	Peak Type	Peak Plot	Shaped System Load (SSL) Plot	Select Customer	Customer Number	HWM (aMW)	Percent System	CRWM Resources and NLSL (aMW)	HWM Version
2017	2017	2017	Fiscal	aMW	CP	Hide	Hide	PEND OREILLE COUNTY PUD NO 1	10306				

**\*Historical Load Values Do Not Include Meter Losses**



Monthly Hrs	Fiscal Year	Month	aMW Actual	aMW Normal	aMW Forecast	aMW HWM	aMW Above HWM	CP Actual Peak	CP Forecast Peak	CP Actual Load Factor	CP Forecast Load Factor
745	2005	10	105.59	108.16				123.39		85.6%	
720	2005	11	120.73	118.15				132.94		90.8%	
744	2005	12	122.83	124.11				137.11		89.6%	
744	2005	1	128.87	123.47				159.31		80.9%	
672	2005	2	121.24	118.36				140.17		86.5%	
744	2005	3	118.01	112.57				132.15		89.3%	
719	2005	4	111.84	104.05				130.76		85.5%	
744	2005	5	103.78	103.08				120.75		85.9%	
720	2005	6	103.62	101.93				113.25		91.5%	
744	2005	7	104.76	99.41				114.80		91.3%	
744	2005	8	94.69	100.33				117.72		80.4%	
720	2005	9	108.88	95.32				122.63		88.8%	
745	2006	10	111.72	109.11				124.69		89.6%	
720	2006	11	122.04	119.09				139.38		87.6%	
744	2006	12	131.18	125.10				155.45		84.4%	
744	2006	1	122.42	124.36				136.01		90.0%	
672	2006	2	123.64	119.35				150.29		82.3%	
744	2006	3	121.48	113.45				137.39		88.4%	
719	2006	4	108.74	105.03				134.43		80.9%	
744	2006	5	110.21	104.10				126.20		87.3%	
720	2006	6	104.09	102.94				117.83		88.3%	
744	2006	7	97.86	100.33				115.06		85.0%	
744	2006	8	102.43	101.31				111.94		91.5%	
720	2006	9	81.56	96.29				121.01		67.4%	
745	2007	10	107.84	110.03				133.75		80.6%	
720	2007	11	120.80	120.06				153.61		78.6%	
744	2007	12	119.61	126.00				141.91		84.3%	
744	2007	1	123.03	125.33				153.75		80.0%	
672	2007	2	115.89	120.43				140.62		82.3%	
743	2007	3	114.91	114.55				140.15		82.0%	
720	2007	4	93.71	105.82				129.84		72.2%	
744	2007	5	107.56	104.95				121.95		88.2%	
720	2007	6	100.43	103.83				115.48		87.0%	
744	2007	7	106.18	101.30				121.85		87.1%	
744	2007	8	103.94	102.26				117.31		88.6%	
720	2007	9	80.70	97.25				116.96		69.0%	
744	2008	10	111.79	111.13				132.40		84.4%	
721	2008	11	118.36	120.93				149.56		79.1%	
744	2008	12	132.05	126.95				148.29		89.0%	
744	2008	1	130.11	126.28				154.91		84.0%	
696	2008	2	126.27	120.73				142.91		88.4%	
743	2008	3	100.76	115.51				132.55		76.0%	
720	2008	4	107.23	106.84				131.59		81.5%	
744	2008	5	102.52	105.95				124.80		82.1%	
720	2008	6	106.80	104.95				119.65		89.3%	
744	2008	7	108.43	102.24				119.30		90.9%	
744	2008	8	107.31	103.14				123.50		86.9%	
720	2008	9	109.82	98.19				124.41		88.3%	
744	2009	10	113.72	112.04				141.64		80.3%	
721	2009	11	121.09	121.87				141.38		85.7%	
744	2009	12	133.05	127.92				162.00		82.1%	
744	2009	1	132.70	127.21				158.55		83.7%	
672	2009	2	124.59	122.52				147.20		84.6%	
743	2009	3	121.73	116.44				156.28		77.9%	
720	2009	4	106.19	107.80				132.18		80.3%	
744	2009	5	106.52	106.88				166.72		63.9%	
720	2009	6	100.34	105.91				115.21		87.1%	
744	2009	7	84.84	103.17				118.35		71.7%	
744	2009	8	100.19	104.07				111.22		90.1%	
720	2009	9	82.25	99.15				118.30		69.5%	
744	2010	10	114.03	112.97				138.72		82.2%	
721	2010	11	122.44	122.83				137.02		89.4%	
744	2010	12	131.85	128.85				158.69		83.1%	
744	2010	1	123.83	128.14				149.93		82.6%	
672	2010	2	117.04	123.55				136.11		86.0%	
743	2010	3	116.89	117.37				141.32		82.7%	
720	2010	4	111.63	108.76				133.61		83.5%	
744	2010	5	105.90	107.81				130.61		81.1%	
720	2010	6	103.64	106.87				121.25		85.5%	
744	2010	7	104.82	104.10				114.84		91.3%	
744	2010	8	102.00	105.00				114.97		88.7%	
720	2010	9	101.85	100.11				116.90		87.1%	
744	2011	10	108.48	112.71	111.99			130.79	134.21	82.9%	83.4%
721	2011	11	121.70	123.13	121.92			151.62	147.51	80.3%	82.7%
744	2011	12	122.03	128.63	127.96			146.95	153.51	83.0%	83.4%
744	2011	1	126.58	128.24	127.21			178.40	159.18	71.0%	79.9%
672	2011	2	128.87	124.16	122.67			158.69	147.11	81.2%	83.4%
743	2011	3	110.43	116.86	116.39			136.66	139.48	80.8%	83.4%
720	2011	4	114.44	109.27	107.73			136.57	132.08	83.8%	81.6%
744	2011	5	107.48	107.77	106.76			131.98	131.78	81.4%	81.0%
720	2011	6	106.55	106.88	105.85			121.77	122.12	87.5%	86.7%
744	2011	7	102.74	104.47	103.04			115.60	121.35	88.9%	84.9%
744	2011	8	104.84	104.99	104.16			117.31	120.69	89.4%	86.3%
720	2011	9	104.57	100.66	98.92			121.30	125.86	86.2%	78.6%
744	2012	10	113.41	113.52	106.08			136.17	131.56	83.3%	80.6%
721	2012	11	122.09	123.97	113.35			144.98	141.57	84.2%	80.1%
744	2012	12	126.09	129.45	118.99			146.51	148.48	86.1%	80.1%
744	2012	1	127.61	129.06	125.07			149.01	159.30	85.6%	78.5%
696	2012	2	123.63	124.22	132.14			148.03	169.39	83.5%	78.0%
743	2012	3	120.83	117.67	124.43			141.00	158.44	85.7%	78.5%
720	2012	4	115.76	110.11	122.04			136.68	157.71	84.7%	77.4%
744	2012	5	105.42	108.58	116.46			128.91	151.75	81.8%	76.7%
720	2012	6	104.56	107.72	112.20			123.53	139.49	84.6%	80.4%
744	2012	7	108.00	105.28	107.21			162.19	128.58	66.6%	83.4%
744	2012	8	105.15	105.80	104.30			121.56	124.72	86.5%	83.6%
720	2012	9	103.85	101.50	104.15			120.81	130.02	86.0%	80.1%

744	2013	10	114.91	114.34	112.43	133.00	137.27	86.4%	81.9%
721	2013	11	120.51	124.81	122.95	139.69	152.04	86.3%	80.9%
744	2013	12	129.71	130.26	128.45	143.62	157.39	90.3%	81.6%
744	2013	1	131.97	129.87	128.02	151.97	164.74	86.8%	77.7%
672	2013	2	127.07	125.96	124.07	144.37	151.41	88.0%	81.9%
743	2013	3	118.98	118.49	116.57	144.19	142.50	82.5%	81.8%
720	2013	4	111.94	110.95	108.97	135.91	135.72	82.4%	80.3%
744	2013	5	109.64	109.40	107.42	126.92	134.86	86.4%	79.7%
720	2013	6	105.84	108.56	106.59	122.00	125.72	86.8%	84.8%
744	2013	7	104.74	106.10	104.12	122.04	124.33	85.8%	83.7%
744	2013	8	105.34	106.62	104.86	119.90	123.71	87.9%	84.8%
720	2013	9	110.80	102.35	100.21	122.20	128.88	90.7%	77.8%
744	2014	10	113.36	112.64	114.28	140.92	132.37	80.4%	86.3%
721	2014	11	122.32	123.28	125.34	141.52	146.41	86.4%	85.6%
744	2014	12	130.47	129.60	131.91	152.97	152.46	85.3%	86.5%
744	2014	1	127.51	128.66	130.94	145.75	158.82	87.5%	82.4%
672	2014	2	132.51	124.35	126.46	161.35	145.04	82.1%	87.2%
743	2014	3	127.97	117.62	119.46	149.57	138.22	85.6%	86.4%
720	2014	4	102.84	110.64	112.20	134.67	131.86	76.4%	85.1%
744	2014	5	99.25	107.36	108.78	120.72	129.34	82.2%	84.1%
720	2014	6	92.98		107.68	107.43	120.21	86.5%	89.6%
744	2014	7	93.88		106.09	108.88	123.14	86.2%	86.2%
744	2014	8	90.45		106.25	105.52	118.17	85.7%	89.9%
720	2014	9	93.67		102.25	110.60	123.14	84.7%	83.0%
744	2015	10	97.24	113.26	105.97	141.73	133.80	68.6%	79.2%
721	2015	11	94.57	123.77	116.90	138.33	147.54	68.4%	79.2%
744	2015	12	111.00	130.14	123.52	143.85	153.68	77.2%	80.4%
744	2015	1	101.81	129.27	134.44	178.27	161.96	57.1%	83.0%
672	2015	2	110.03	125.04	130.04	135.01	148.15	81.5%	87.8%
743	2015	3	89.09	118.26	122.99	137.51	141.30	64.8%	87.0%
720	2015	4	81.43		115.76	120.30	134.87	67.7%	85.8%
744	2015	5	94.70		112.33	112.63	132.34	84.1%	84.9%
720	2015	6	75.90		111.20	107.39	123.28	70.7%	90.2%
744	2015	7	91.13		109.60	109.80	121.96	83.0%	89.9%
744	2015	8	73.84		109.75	101.16	121.23	73.0%	90.5%
720	2015	9	94.93		104.43	104.69	126.25	90.7%	82.7%
744	2016	10	99.80	113.67	86.01	122.28	136.30	81.6%	63.1%
721	2016	11	115.63	124.22	96.96	144.70	149.62	79.9%	64.8%
744	2016	12	124.61	130.55	103.54	144.46	155.81	86.3%	66.5%
744	2016	1	121.19	129.68	102.63	147.30	162.70	82.3%	63.1%
696	2016	2	122.07	125.07	97.85	141.00	148.90	86.6%	65.7%
743	2016	3	119.36	118.67	91.20	138.49	142.05	0.86	64.2%
720	2016	4	103.56		83.98	126.23	135.62	0.82	61.9%
744	2016	5	107.47		80.53	123.97	133.08	0.87	60.5%
720	2016	6	90.86		79.39	119.56	124.03	0.76	64.0%
744	2016	7	99.76		98.51	111.85	122.71	0.89	80.3%
744	2016	8	101.76		95.06	116.97	121.98	0.87	77.9%
720	2016	9	103.00		92.21	120.76	126.99	0.85	72.6%
744	2017	10	111.68	111.07	84.10	128.10	110.47	87.2%	76.1%
721	2017	11	117.86	120.82	92.12	133.85	116.92	88.1%	78.8%
744	2017	12	127.85	126.98	100.55	159.89	134.39	80.0%	74.8%
744	2017	1	135.56	126.61	100.16	165.27	137.82	82.0%	72.7%
672	2017	2	127.75	122.06	97.81	150.23	123.44	85.0%	79.2%
743	2017	3	117.20	115.95	90.87	144.29	119.06	81.2%	76.3%
720	2017	4	116.94	106.10	85.27	137.35	112.54	85.1%	75.8%
744	2017	5	109.02		78.34	129.38	116.50	84.3%	67.2%
720	2017	6	105.89		75.43	121.10	93.27	87.4%	80.9%
744	2017	7			75.94		88.92		85.4%
744	2017	8			75.17		89.01		84.5%
720	2017	9			76.92		95.20		80.8%
744	2018	10			84.10		110.47		76.1%
721	2018	11			92.12		116.92		78.8%
744	2018	12			100.55		134.39		74.8%
744	2018	1			100.16		137.82		72.7%
672	2018	2			97.81		123.44		79.2%
743	2018	3			90.87		119.06		76.3%
720	2018	4			85.27		112.54		75.8%
744	2018	5			78.34		116.50		67.2%
720	2018	6			75.43		93.27		80.9%
744	2018	7			75.94		88.92		85.4%
744	2018	8			75.17		89.01		84.5%
720	2018	9			76.92		95.20		80.8%
744	2019	10			27.23		46.75		58.2%
721	2019	11			36.41		54.26		67.1%
744	2019	12			44.21		71.52		61.8%
744	2019	1			44.42		76.39		58.1%
672	2019	2			40.92		59.25		69.1%
743	2019	3			35.72		55.36		64.5%
720	2019	4			29.45		51.36		57.3%
744	2019	5			23.17		53.18		43.6%
720	2019	6			20.04		29.11		68.9%
744	2019	7			19.88		24.75		80.3%
744	2019	8			19.39		24.79		78.2%
720	2019	9			20.08		32.03		62.7%
744	2020	10			27.23		46.75		58.2%
721	2020	11			36.41		54.26		67.1%
744	2020	12			44.21		71.52		61.8%
744	2020	1			40.11		71.14		56.4%
696	2020	2			36.61		54.00		67.8%
743	2020	3			31.42		50.11		62.7%
720	2020	4			25.15		46.11		54.5%
744	2020	5			18.87		47.93		39.4%
720	2020	6			15.74		23.86		66.0%
744	2020	7			15.58		19.50		79.9%
744	2020	8			15.09		19.54		77.2%
720	2020	9			15.77		26.78		58.9%
744	2021	10			22.93		41.51		55.2%
721	2021	11			32.11		50.24		63.9%

744	2021	12	39.91	67.35	59.3%
744	2021	1	40.11	71.14	56.4%
672	2021	2	36.61	54.00	67.8%
743	2021	3	31.42	50.11	62.7%
720	2021	4	25.15	46.11	54.5%
744	2021	5	18.87	47.93	39.4%
720	2021	6	15.74	23.86	66.0%
744	2021	7	15.58	19.50	79.9%
744	2021	8	15.09	19.54	77.2%
720	2021	9	15.77	26.78	58.9%
744	2022	10	22.93	41.51	55.2%
721	2022	11	32.11	50.24	63.9%
744	2022	12	39.91	67.35	59.3%
744	2022	1	40.11	71.14	56.4%
672	2022	2	36.61	54.00	67.8%
743	2022	3	31.42	50.11	62.7%
720	2022	4	25.15	46.11	54.5%
744	2022	5	18.87	47.93	39.4%
720	2022	6	15.74	23.86	66.0%
744	2022	7	15.58	19.50	79.9%
744	2022	8	15.09	19.54	77.2%
720	2022	9	15.77	26.78	58.9%
744	2023	10	22.93	41.51	55.2%
721	2023	11	32.11	50.24	63.9%
744	2023	12	39.91	67.35	59.3%
744	2023	1	40.11	71.14	56.4%
672	2023	2	36.61	54.00	67.8%
743	2023	3	31.42	50.11	62.7%
720	2023	4	25.15	46.11	54.5%
744	2023	5	18.87	47.93	39.4%
720	2023	6	15.74	23.86	66.0%
744	2023	7	15.58	19.50	79.9%
744	2023	8	15.09	19.54	77.2%
720	2023	9	15.77	26.78	58.9%
744	2024	10	22.93	41.51	55.2%
721	2024	11	32.11	50.24	63.9%
744	2024	12	39.91	67.35	59.3%
744	2024	1	40.11	71.14	56.4%
696	2024	2	36.61	54.00	67.8%
743	2024	3	31.42	50.11	62.7%
720	2024	4	25.15	46.11	54.5%
744	2024	5	18.87	47.93	39.4%
720	2024	6	15.74	23.86	66.0%
744	2024	7	15.58	19.50	79.9%
744	2024	8	15.09	19.54	77.2%
720	2024	9	15.77	26.78	58.9%
744	2025	10	22.93	41.51	55.2%
721	2025	11	32.11	50.24	63.9%
744	2025	12	39.91	67.35	59.3%
744	2025	1	40.11	71.14	56.4%
672	2025	2	36.61	54.00	67.8%
743	2025	3	31.42	50.11	62.7%
720	2025	4	25.15	46.11	54.5%
744	2025	5	18.87	47.93	39.4%
720	2025	6	15.74	23.86	66.0%
744	2025	7	15.58	19.50	79.9%
744	2025	8	15.09	19.54	77.2%
720	2025	9	15.77	26.78	58.9%
744	2026	10	22.93	41.51	55.2%
721	2026	11	32.11	50.24	63.9%
744	2026	12	39.91	67.35	59.3%
744	2026	1	40.11	71.14	56.4%
672	2026	2	36.61	54.00	67.8%
743	2026	3	31.42	50.11	62.7%
720	2026	4	25.15	46.11	54.5%
744	2026	5	18.87	47.93	39.4%
720	2026	6	15.74	23.86	66.0%
744	2026	7	15.58	19.50	79.9%
744	2026	8	15.09	19.54	77.2%
720	2026	9	15.77	26.78	58.9%
744	2027	10	22.93	41.51	55.2%
721	2027	11	32.11	50.24	63.9%
744	2027	12	39.91	67.35	59.3%
744	2027	1	40.11	71.14	56.4%
672	2027	2	36.61	54.00	67.8%
743	2027	3	31.42	50.11	62.7%
720	2027	4	25.15	46.11	54.5%
744	2027	5	18.87	47.93	39.4%
720	2027	6	15.74	23.86	66.0%
744	2027	7	15.58	19.50	79.9%
744	2027	8	15.09	19.54	77.2%
720	2027	9	15.77	26.78	58.9%
744	2028	10	22.93	41.51	55.2%
721	2028	11	32.11	50.24	63.9%
744	2028	12	39.91	67.35	59.3%
744	2028	1	40.11	71.14	56.4%
696	2028	2	36.61	54.00	67.8%
743	2028	3	31.42	50.11	62.7%
720	2028	4	25.15	46.11	54.5%
744	2028	5	18.87	47.93	39.4%
720	2028	6	15.74	23.86	66.0%
744	2028	7	15.58	19.50	79.9%
744	2028	8	15.09	19.54	77.2%
720	2028	9	15.77	26.78	58.9%
744	2029	10	22.93	41.51	55.2%
721	2029	11	32.11	50.24	63.9%
744	2029	12	39.91	67.35	59.3%
744	2029	1	40.11	71.14	56.4%
672	2029	2	36.61	54.00	67.8%

743	2029	3			31.42				50.11	62.7%	
720	2029	4			25.15				46.11	54.5%	
744	2029	5			18.87				47.93	39.4%	
720	2029	6			15.74				23.86	66.0%	
744	2029	7			15.58				19.50	79.9%	
744	2029	8			15.09				19.54	77.2%	
720	2029	9			15.77				26.78	58.9%	
744	2030	10			22.93				41.51	55.2%	
721	2030	11			32.11				50.24	63.9%	
744	2030	12			39.91				67.35	59.3%	
744	2030	1			40.11				71.14	56.4%	
672	2030	2			36.61				54.00	67.8%	
743	2030	3			31.42				50.11	62.7%	
720	2030	4			25.15				46.11	54.5%	
744	2030	5			18.87				47.93	39.4%	
720	2030	6			15.74				23.86	66.0%	
744	2030	7			15.58				19.50	79.9%	
744	2030	8			15.09				19.54	77.2%	
720	2030	9			15.77				26.78	58.9%	
744	2031	10			22.93				41.51	55.2%	
721	2031	11			32.11				50.24	63.9%	
744	2031	12			39.91				67.35	59.3%	
744	2031	1			40.11				71.14	56.4%	
672	2031	2			36.61				54.00	67.8%	
743	2031	3			31.42				50.11	62.7%	
720	2031	4			25.15				46.11	54.5%	
744	2031	5			18.87				47.93	39.4%	
720	2031	6			15.74				23.86	66.0%	
744	2031	7			15.58				19.50	79.9%	
744	2031	8			15.09				19.54	77.2%	
720	2031	9			15.77				26.78	58.9%	
744	2032	10			22.93				41.51	55.2%	
721	2032	11			32.11				50.24	63.9%	
744	2032	12			39.91				67.35	59.3%	
744	2032	1			40.11				71.14	56.4%	
696	2032	2			36.61				54.00	67.8%	
743	2032	3			31.42				50.11	62.7%	
720	2032	4			25.15				46.11	54.5%	
744	2032	5			18.87				47.93	39.4%	
720	2032	6			15.74				23.86	66.0%	
744	2032	7			15.58				19.50	79.9%	
744	2032	8			15.09				19.54	77.2%	
720	2032	9			15.77				26.78	58.9%	
744	2033	10			22.93				41.51	55.2%	
721	2033	11			32.11				50.24	63.9%	
744	2033	12			39.91				67.35	59.3%	
744	2033	1			40.11				71.14	56.4%	
672	2033	2			36.61				54.00	67.8%	
743	2033	3			31.42				50.11	62.7%	
720	2033	4			25.15				46.11	54.5%	
744	2033	5			18.87				47.93	39.4%	
720	2033	6			15.74				23.86	66.0%	
744	2033	7			15.58				19.50	79.9%	
744	2033	8			15.09				19.54	77.2%	
720	2033	9			15.77				26.78	58.9%	
744	2034	10			22.93				41.51	55.2%	
721	2034	11			32.11				50.24	63.9%	
744	2034	12			39.91				67.35	59.3%	
744	2034	1			40.11				71.14	56.4%	
672	2034	2			36.61				54.00	67.8%	
743	2034	3			31.42				50.11	62.7%	
720	2034	4			25.15				46.11	54.5%	
744	2034	5			18.87				47.93	39.4%	
720	2034	6			15.74				23.86	66.0%	
744	2034	7			15.58				19.50	79.9%	
744	2034	8			15.09				19.54	77.2%	
720	2034	9			15.77				26.78	58.9%	
744	2035	10			22.93				41.51	55.2%	
721	2035	11			32.11				50.24	63.9%	
744	2035	12			39.91				67.35	59.3%	
744	2035	1			40.11				71.14	56.4%	
672	2035	2			36.61				54.00	67.8%	
743	2035	3			31.42				50.11	62.7%	
720	2035	4			25.15				46.11	54.5%	
744	2035	5			18.87				47.93	39.4%	
720	2035	6			15.74				23.86	66.0%	
744	2035	7			15.58				19.50	79.9%	
744	2035	8			15.09				19.54	77.2%	
720	2035	9			15.77				26.78	58.9%	
			#/N/A	#/N/A	22.9276605	#/N/A	#/N/A	#/N/A	41.509513	#/N/A	0.55234713
			#/N/A	#/N/A	32.1093519	#/N/A	#/N/A	#/N/A	50.239799	#/N/A	0.63912182
			#/N/A	#/N/A	39.9105711	#/N/A	#/N/A	#/N/A	67.348273	#/N/A	0.59259977
			#/N/A	#/N/A	40.1134522	#/N/A	#/N/A	#/N/A	71.143526	#/N/A	0.56383841
			#/N/A	#/N/A	36.6124168	#/N/A	#/N/A	#/N/A	54.001435	#/N/A	0.6779897
			#/N/A	#/N/A	31.4220907	#/N/A	#/N/A	#/N/A	50.112651	#/N/A	0.62702911
			#/N/A	#/N/A	25.1506418	#/N/A	#/N/A	#/N/A	46.113485	#/N/A	0.54540753
			#/N/A	#/N/A	18.8688872	#/N/A	#/N/A	#/N/A	47.930192	#/N/A	0.39367435
			#/N/A	#/N/A	15.7368216	#/N/A	#/N/A	#/N/A	23.861474	#/N/A	0.65950752
			#/N/A	#/N/A	15.581683	#/N/A	#/N/A	#/N/A	19.500497	#/N/A	0.7990403
			#/N/A	#/N/A	15.0878922	#/N/A	#/N/A	#/N/A	19.540661	#/N/A	0.77212804
			#/N/A	#/N/A	15.77368	#/N/A	#/N/A	#/N/A	26.781086	#/N/A	0.58898582



	Data Start Date	Data Stop Date
Customer Level Model Parameters:	1/1/03	3/31/13
Customer Level Energy forecast based on trend; R-Squared = 0.804		
Customer Level Peak forecast based on trend; R-Squared = 0.811		

Per  
Kimberly  
4/2015  
Per  
Kimberly  
6/2015

Active Projects:	Project Start Date	POD	Peak kW	Load Factor
Cominco Load Loss	Ramps from 1/2015 through 5/2015. Full load through 12/2019.	10306_DP0443	7000	Variable monthly LF
<del>Newsprint Slowdown</del>	<del>1/2015 through 12/2016. Energy reduction only. Peak remains steady</del>	<del>10306_0927 (Usk)</del>	<del>Unchanged</del>	<del>Variable.</del>
Newsprint Slowdown	10/2016 through 9/2018. Load at 56 aMW. 0 aMW FY 2019 and beyond.	10306_0927 (Usk)	appx 63,000	Appx (90%)

Cominco Load Loss		
Month	Peak kW	Load Factor
1	7000	82.0
2	7000	82.0
3	7000	82.0
4	7000	82.0
5	7000	82.0
6	7000	82.0
7	7000	82.0
8	7000	82.0
9	7000	82.0
10	7000	82.0
11	7000	82.0
12	7000	82.0

## Knudson,Thanh (CONTR) - CGI-7

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**From:** Robertson,Angela D (BPA) - TSE-TPP-2 <adrobertson@bpa.gov>  
**Sent:** Tuesday, July 11, 2017 9:57 AM  
**To:** Amber E. Orr  
**Subject:** RE: 7/12 TOPIC Meeting

Oh no prob! Great – I'll see you tomorrow! Safe travels ☺

**Angela Robertson**

Transmission Account Executive | Transmission Sales

**BONNEVILLE POWER ADMINISTRATION**

[bpa.gov](http://bpa.gov) | P 360.619.6192 | M (b) (6) | F 360.619.6940

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**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Tuesday, July 11, 2017 9:56 AM  
**To:** Robertson,Angela D (BPA) - TSE-TPP-2; David Nichols  
**Subject:** [EXTERNAL] RE: 7/12 TOPIC Meeting

Angela,

I will be there in person. David will be otherwise occupied.

I did respond to the meeting organizer, but, you must not have been notified. I should have let you know as well. I apologize.

*Amber Elise Orr, P.E.*

Director of Engineering



**Public Utility District No. 1 of Pend Oreille County**

P.O. Box 190 | 130 N. Washington

Newport, Washington 99156

509.447.3137 | [aorr@popud.org](mailto:aorr@popud.org) | [www.popud.org](http://www.popud.org)

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**From:** Robertson,Angela D (BPA) - TSE-TPP-2 [<mailto:adrobertson@bpa.gov>]  
**Sent:** Tuesday, July 11, 2017 9:52 AM  
**To:** Amber E. Orr; David Nichols  
**Subject:** 7/12 TOPIC Meeting

Hi Amber and David -

Hope all is well and you're having a good summer so far (albeit busy I'm sure)!

Just curious whether you are planning to attend tomorrow's TOPIC Meeting via the WebEx or if you're planning to be here in Vancouver in person?

Thanks,

**Angela Robertson**

Transmission Account Executive | Transmission Sales



## Knudson,Thanh (CONTR) - CGI-7

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**From:** McNeill,Jamie L (BPA) - TOII-DITT-2 <jlmcNeill@bpa.gov>  
**Sent:** Tuesday, July 18, 2017 11:02 AM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Higgins,Christopher M (CONTR) - TPCR-TPP-4  
**Subject:** RE: TOP Services customers ICCP data sharing

Correct! No paperwork needed for this. THANK YOU for working with Ed to get this going. Must brainstorm special award for first CSE to the finish line 😊

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Tuesday, July 18, 2017 10:51 AM  
**To:** McNeill,Jamie L (BPA) - TOII-DITT-2  
**Cc:** Higgins,Christopher M (CONTR) - TPCR-TPP-4  
**Subject:** RE: TOP Services customers ICCP data sharing

Thanks, Jamie. Am I correct to assume that with Pend Oreille PUD, since we only need ICCP, BPA will implement any changes to our systems to bring in those data points at BPA's expense? I just want to make sure I don't need to develop a reimbursable agreement.

As you mentioned, I've been working with Ed recently to establish an ICCP connection with Pend Oreille PUD and provide requested data to them.

Regards,  
Victor

---

**From:** Largo,Jay (BPA) - TPCV-TPP-4  
**Sent:** Tuesday, July 18, 2017 10:20 AM  
**To:** McNeill,Jamie L (BPA) - TOII-DITT-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Higgins,Christopher M (CONTR) - TPCR-TPP-4  
**Subject:** RE: TOP Services customers ICCP data sharing

Excellent. Thanks Jamie, will do!

---

**From:** McNeill,Jamie L (BPA) - TOII-DITT-2  
**Sent:** Tuesday, July 18, 2017 10:17 AM  
**To:** Largo,Jay (BPA) - TPCV-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Higgins,Christopher M (CONTR) - TPCR-TPP-4  
**Subject:** RE: TOP Services customers ICCP data sharing

Looks like he worked directly with POPUD and is already bringing in their data, so probably worth sharing the final points list with him and letting him make it happen 😊

---

**From:** Largo,Jay (BPA) - TPCV-TPP-4  
**Sent:** Tuesday, July 18, 2017 10:16 AM  
**To:** McNeill,Jamie L (BPA) - TOII-DITT-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Higgins,Christopher M (CONTR) - TPCR-TPP-4  
**Subject:** RE: TOP Services customers ICCP data sharing

Great. Thanks Jamie! Yeah, he helped me out to identify what ICCP points we are currently reading from Cowlitz. Very helpful.

---

**From:** McNeill, Jamie L (BPA) - TOII-DITT-2  
**Sent:** Tuesday, July 18, 2017 9:51 AM  
**To:** Largo, Jay (BPA) - TPCV-TPP-4; Hitchens, Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Higgins, Christopher M (CONTR) - TPCR-TPP-4  
**Subject:** RE: TOP Services customers ICCP data sharing

Ed Stephens is the contact person, and now I know you've already both been working with him – you're all way ahead of me 😊 Thank you!!!!!!!

---

**From:** Largo, Jay (BPA) - TPCV-TPP-4  
**Sent:** Tuesday, July 18, 2017 8:48 AM  
**To:** McNeill, Jamie L (BPA) - TOII-DITT-2; Hitchens, Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Higgins, Christopher M (CONTR) - TPCR-TPP-4  
**Subject:** RE: TOP Services customers ICCP data sharing

Sure, who can we talk to? Thanks Jamie.

---

**From:** McNeill, Jamie L (BPA) - TOII-DITT-2  
**Sent:** Tuesday, July 18, 2017 8:45 AM  
**To:** Largo, Jay (BPA) - TPCV-TPP-4; Hitchens, Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Higgins, Christopher M (CONTR) - TPCR-TPP-4  
**Subject:** RE: TOP Services customers ICCP data sharing

Well, Stacen's staff do the actual detail work and coordinate with the person who does it on the customer side. I guess I was wondering if you needed that person's name yet or not. I'm only familiar with data sharing under the TOP-003 standard, where I put someone from Stacen's group in touch with someone at the other utility, and the magic happens. I'm not sure how this is done outside of TOP-003, so I thought I'd ask if you need anything from our side. Honestly, I think a coordination letter feels like more than we need, based on what I've seen under TOP-003, but if that makes folks more comfortable, that's ok with me.

---

**From:** Largo, Jay (BPA) - TPCV-TPP-4  
**Sent:** Tuesday, July 18, 2017 8:42 AM  
**To:** McNeill, Jamie L (BPA) - TOII-DITT-2; Hitchens, Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Higgins, Christopher M (CONTR) - TPCR-TPP-4  
**Subject:** RE: TOP Services customers ICCP data sharing

Hi Jamie,

It sounded from your previous email that we would be working with Stacen Tyskiewicz and both Kelly and Lorissa seemed to agree (email attached). Is that correct? From our end we would just create a coordination with our customer to spell out the expected process and timeline, at least that is my understanding.

-Jay

---

**From:** McNeill, Jamie L (BPA) - TOII-DITT-2  
**Sent:** Tuesday, July 18, 2017 8:31 AM  
**To:** Largo, Jay (BPA) - TPCV-TPP-4; Hitchens, Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Higgins, Christopher M (CONTR) - TPCR-TPP-4  
**Subject:** TOP Services customers ICCP data sharing

Hi guys.

I don't want to step on toes since I don't really know the process, but I wanted to check and see if you needed an internal contact person to work with your customers on receiving the ICCP data transfer we need for TOP services? If so, I'll get you a name ☺

Thanks!

Jamie McNeill  
Transmission Services  
Organizational Delivery and Performance - TOII  
Bonneville Power Administration  
503.230.3087

## Kilyukh, Denis V (CONTR) - CGI-7

---

**From:** Cicarelli, Andres A (BPA) - KSL-BELL-1 <aacicarelli@bpa.gov>  
**Sent:** Tuesday, July 11, 2017 12:21 PM  
**To:** Normandeau, Mike (BPA) - PSE-ROAN; Kimberly Gentle ; Schimmels, Nancy M (BPA) - PSE-MEAD-GOB  
**Cc:** 'tsmith@popud.org'; Christy Parry (cparry@popud.org); Hitchens, Victor P (BPA) - TPCF-MEAD-GOB; Robertson, Angela D (BPA) - TSE-TPP-2  
**Subject:** RE: Pend Oreille FY17 Q3 Review-Revision 2017-7-3.xlsx

Thanks Mike!

I have had discussions with Kimberly regarding Hi-Test as well. It is definitely on my wind screen.

Talk to you later,

Andres

---

**From:** Normandeau, Mike (BPA) - PSE-ROAN  
**Sent:** Tuesday, July 11, 2017 12:10 PM  
**To:** Cicarelli, Andres A (BPA) - KSL-BELL-1; Kimberly Gentle ; Schimmels, Nancy M (BPA) - PSE-MEAD-GOB  
**Cc:** 'tsmith@popud.org'; Christy Parry ([cparry@popud.org](mailto:cparry@popud.org)); Hitchens, Victor P (BPA) - TPCF-MEAD-GOB; Robertson, Angela D (BPA) - TSE-TPP-2  
**Subject:** RE: Pend Oreille FY17 Q3 Review-Revision 2017-7-3.xlsx

Andres,

Something to keep an eye on going forward will be the Hi-Test (Silica Manufacturer) NLSL south of Newport off/near the Pine Street Sub. Potential loads of 100 average, 105MW peak in 2019 and 2020. Doubling in 2021-2022. This would definitely constitute a NLSL. We had a call this morning with Kim to discuss. I will be sure to include you in future discussions. Probability is still less than 50% but Kim and the PUD will be working to firm this up over the coming months.

No new news on PNC at this time.

Mike

---

**From:** Cicarelli, Andres A (BPA) - KSL-BELL-1  
**Sent:** Tuesday, July 11, 2017 12:59 PM  
**To:** Kimberly Gentle  
**Cc:** 'tsmith@popud.org'; Christy Parry ([cparry@popud.org](mailto:cparry@popud.org)); Normandeau, Mike (BPA) - PSE-ROAN; Hitchens, Victor P (BPA) - TPCF-MEAD-GOB; Robertson, Angela D (BPA) - TSE-TPP-2  
**Subject:** Pend Oreille FY17 Q3 Review-Revision 2017-7-3.xlsx

Hi Kimberly,

Attached is the 3<sup>rd</sup> quarter forecast review for FY 2017. As I've mentioned previously, the currently published forecast isn't tracking very well at all so I've focused on my latest updated forecast based on current Newsprint load levels, and assuming the Newsprint load is active for another couple of years. Note that the updated forecast is currently not the official forecast.

The updated forecast energy and peak amounts seem to be tracking pretty well with actuals for FY 2017.

Also attached are the updated forecast energy and peak values compared to historical actuals.

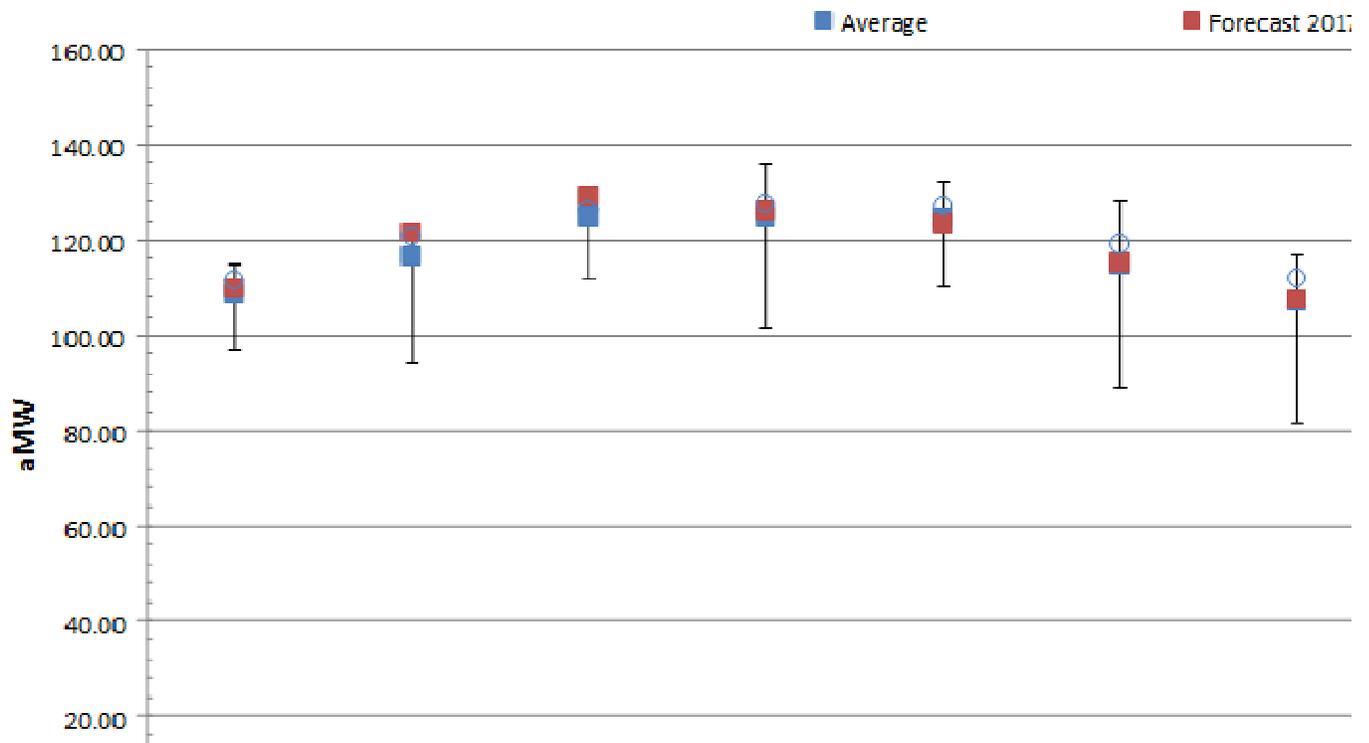
Talk to you later,

Andres

aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Forecast 2017	109.64	121.29	129.18	126.24	123.27	115.39	107.26
Max	114.91	122.32	130.47	135.56	132.51	127.97	116.94
Min	97.07	94.54	111.72	101.31	110.03	89.09	81.43
Median	111.68	120.51	126.09	127.51	127.07	118.98	111.94
Average	108.39	116.41	124.64	124.63	124.56	114.84	106.70
Max From Average	6.52	5.91	5.83	10.93	7.95	13.13	10.24
Min From Average	11.32	21.87	12.92	23.32	14.53	25.75	25.27

Actual aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2011	108.48	121.90	122.03	127.27	128.87	110.43	114.44
2012	113.41	122.09	126.09	127.61	123.63	120.83	115.76
2013	114.91	120.51	129.71	131.97	127.07	118.98	111.94
2014	113.36	122.32	130.47	127.51	132.51	127.97	102.84
2015	97.07	94.54	111.72	101.31	110.03	89.09	81.43
2016	99.80	115.63	124.61	121.19	122.07	119.36	103.56
2017	111.68	117.86	127.85	135.56	127.75	117.20	116.94
SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A
SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A
SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A

### 10306 - 2017 Forecast, Average (2011 Through 2017)

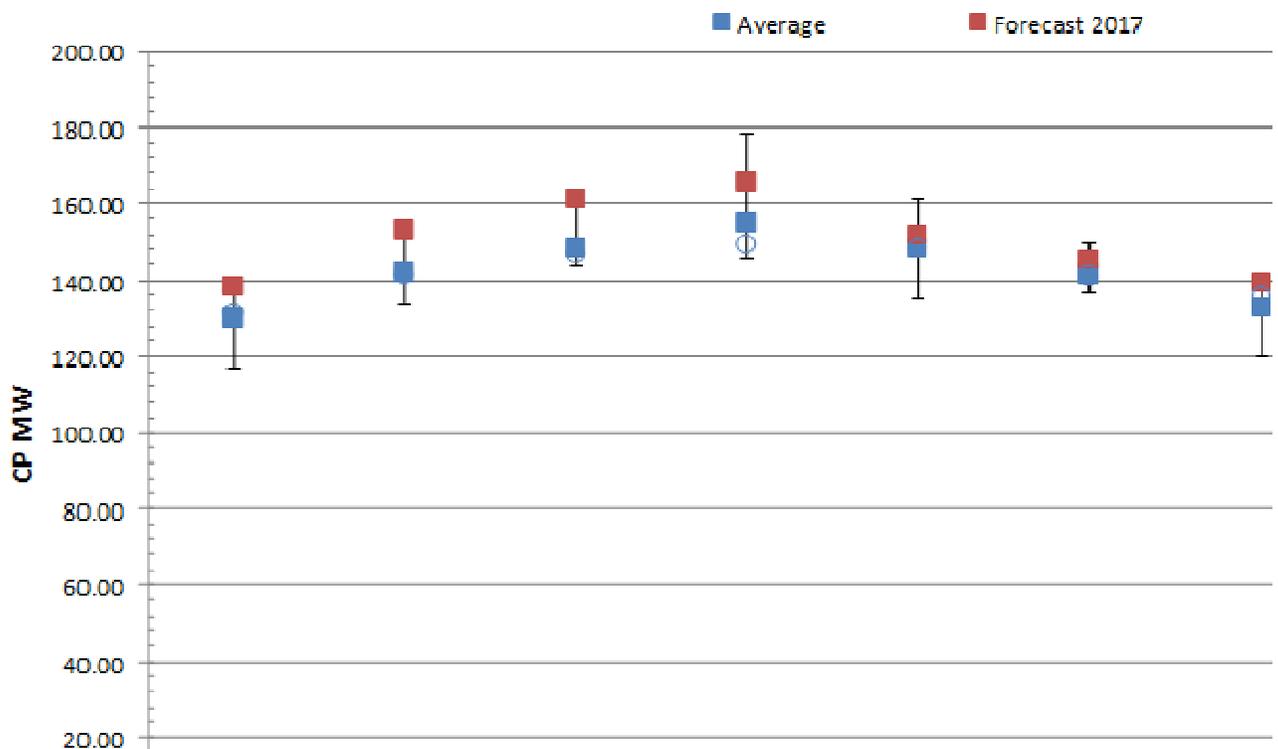




CP MW	Oct	Nov	Dec	Jan	Feb	Mar	Apr
<b>Forecast 2017</b>	<b>138.14</b>	<b>152.84</b>	<b>161.18</b>	<b>165.65</b>	<b>151.86</b>	<b>145.31</b>	<b>139.55</b>
Max	140.92	151.62	159.89	178.40	161.35	149.57	137.35
Min	116.78	133.85	143.62	145.75	135.01	136.66	120.30
Median	130.79	141.52	146.51	149.01	148.03	141.00	135.91
Average	129.72	141.79	148.32	154.82	148.38	141.67	132.53
Max From Average	11.20	9.83	11.57	23.58	12.96	7.89	4.82
Min From Average	12.94	7.94	4.70	9.07	13.37	5.02	12.23

Actual CP MW	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2011	130.79	151.62	146.95	178.40	158.69	136.66	136.57
2012	136.17	144.98	146.51	149.01	148.03	141.00	136.68
2013	133.00	139.69	143.62	151.97	144.37	144.19	135.91
2014	140.92	141.52	152.97	145.75	161.35	149.57	134.67
2015	116.78	136.20	143.85	146.04	135.01	137.51	120.30
2016	122.28	144.70	144.46	147.30	141.00	138.49	126.23
2017	128.10	133.85	159.89	165.27	150.23	144.29	137.35
SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A
SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A
SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A	SN/A

### 10306 - 2017 Forecast, Average (2011 Through 2017)



Work Sheet Name	Data Update	Published
Actual Year To Date Load (aMW)	118.82	118.82
Actual Year To Date Weather Normalized Load (aMW)	117.48	117.48

FY 2017 3rd Quarter Forecast Tracking Results	Updated Forecast (aMW)	Published Forecast (aMW)
Forecast Year To Date aMW Load	115.55	89.37
Forecast Minus W/hr Normalized Actual Year To Date % Difference	-1.7%	-31.5%
Forecast Minus W/hr Normalized Actual Year To Date aMW Difference	-1.92	-28.11

Detail Data Fiscal Year		2017
Detail Data		
<input checked="" type="radio"/> aMW Forecast	Monthly % Dif. Parameter	
<input type="radio"/> CP Forecast	<input type="radio"/> Published Forecast	
<input type="radio"/> Load Factor Forecast	<input checked="" type="radio"/> Updated Forecast	
	<input type="checkbox"/> -Year To Date	

Monthly Detail					
Mon-Yr	Updated aMW Forecast	Published aMW Forecast	aMW Actual	* Actual Weather Normalized Load (aMW)	Updated Minus W/hr Normalized Actual Monthly % Difference
Oct-16	109.64	84.10	111.68	111.88	-2.05%
Nov-16	121.29	92.12	117.86	122.72	-1.18%
Dec-16	129.18	100.55	127.85	125.85	2.57%
Jan-17	126.24	100.16	135.56	126.31	-0.06%
Feb-17	123.27	97.81	127.75	123.06	0.17%
Mar-17	115.39	90.87	117.20	115.94	-0.47%
Apr-17	107.26	85.27	116.94	116.94	-9.02%
May-17	105.91	78.34	109.02	109.02	-2.94%
Jun-17	102.04	75.43	105.89	105.89	-3.77%
Jul-17	102.58	75.94	Unavailable	Unavailable	Unavailable
Aug-17	101.41	75.17	Unavailable	Unavailable	Unavailable
Sep-17	100.98	76.92	Unavailable	Unavailable	Unavailable
<b>Annual</b>	<b>112.05</b>	<b>86.00</b>	<b>118.82</b>	<b>117.48</b>	

\* Weather Normalization from October Through March Only

FY	Hrs/Yr	Number Of Months Of Actual Data	Updated Forecast (aMW)	Published Forecast (aMW)	Difference (aMW)	Actual (aMW)	Actual HDD65 (Annual / Year To Date)	Normal HDD65 (Annual / Year To Date)
2005	8760	12		Unavailable		112.00	4045.1	4234.9
2006	8760	12		Unavailable		111.43	4278.9	4234.9
2007	8760	12		Unavailable		107.90	4373.5	4234.9
2008	8784	12		Unavailable		113.42	5000.9	4234.9
2009	8760	12		Unavailable		110.58	4876.1	4234.9
2010	8760	12		Unavailable		113.00	4261.3	4234.9
2011	8760	12		112.85		113.11	4677.1	4234.9
2012	8784	12		115.47		114.69	4189.0	4234.9
2013	8760	12		113.68		115.90	4243.4	4234.9
2014	8760	12		115.93		110.50	4595.8	4234.9
2015	8760	12		116.34		92.90	3656.2	4234.9
2016	8784	12		92.34		109.08	3508.0	4234.9
2017	8760	9	112.05	86.00	26.05	118.82	4482.6	4150.3
2018	8760	0	112.28	86.00	26.28	Unavailable	0.0	0.0
2019	8760	0	75.84	30.03	45.81	Unavailable	0.0	0.0
2020	8784	0	33.99	26.84	7.15	Unavailable	0.0	0.0
2021	8760	0	27.97	25.72	2.25	Unavailable	0.0	0.0
2022	8760	0	28.20	25.72	2.47	Unavailable	0.0	0.0
2023	8760	0	28.42	25.72	2.70	Unavailable	0.0	0.0
2024	8784	0	28.65	25.75	2.90	Unavailable	0.0	0.0
2025	8760	0	28.88	25.72	3.15	Unavailable	0.0	0.0
2026	8760	0	29.11	25.72	3.38	Unavailable	0.0	0.0
2027	8760	0	29.33	25.72	3.61	Unavailable	0.0	0.0
2028	8784	0	29.56	25.75	3.81	Unavailable	0.0	0.0
2029	8760	0	29.79	25.72	4.06	Unavailable	0.0	0.0
2030	8760	0	30.01	25.72	4.29	Unavailable	0.0	0.0
Compound Growth Rate			-9.64%	-8.87%				



**Weather Station: Deer Park**

Monthly Hrs	Fiscal Year	Month	Actual HDD55 (Annual / Year To Date)	Normal HDD55 (Annual / Year To Date)	Actual HDD Minus Normal HDD
745	2005	10	290.95	263.3	27.7
720	2005	11	586.292	667.1	-80.8
744	2005	12	725	928.1	-203.1
744	2005	1	860.667	830.5	30.2
672	2005	2	671.167	636.3	34.9
744	2005	3	482.375	463.9	18.5
719	2005	4	268.792	265.5	3.3
744	2005	5	55.208	57.3	-2.1
720	2005	6	36.042	38.3	-2.3
744	2005	7	0	0	0.0
744	2005	8	0.042	0	0.0
720	2005	9	68.608	84.6	-16.0
745	2006	10	271.167	263.3	7.9
720	2006	11	666.542	667.1	-0.6
744	2006	12	978.68	928.1	50.6
744	2006	1	647.371	830.5	-183.1
672	2006	2	700.392	636.3	64.1
744	2006	3	559.042	463.9	95.1
719	2006	4	263.066	265.5	-2.4
744	2006	5	116.335	57.3	59.0
720	2006	6	0.917	38.3	-37.4
744	2006	7	7.375	0	7.4

744	2006	8	6.792	0	6.8
720	2006	9	61.182	84.6	-23.4
745	2007	10	391.137	263.3	127.8
720	2007	11	604.028	667.1	-63.1
744	2007	12	850.721	928.1	-77.4
744	2007	1	968.81	830.5	138.3
672	2007	2	609.333	636.3	-27.0
743	2007	3	446.589	463.9	-17.3
720	2007	4	294.833	265.5	29.3
744	2007	5	107.375	57.3	50.1
720	2007	6	7.167	38.3	-31.1
744	2007	7	0	0	0.0
744	2007	8	1.042	0	1.0
720	2007	9	92.417	84.6	7.8
744	2008	10	345.474	263.3	82.2
721	2008	11	671.875	667.1	4.8
744	2008	12	865.833	928.1	-62.3
744	2008	1	987.071	830.5	156.6
696	2008	2	745.468	636.3	109.2
743	2008	3	699.812	463.9	235.9
720	2008	4	473.208	265.5	207.7
744	2008	5	106.446	57.3	49.1
720	2008	6	57.542	38.3	19.2
744	2008	7	0	0	0.0
744	2008	8	4.75	0	4.8
720	2008	9	43.417	84.6	-41.2
744	2009	10	359.225	263.3	95.9
721	2009	11	537.255	667.1	-129.8
744	2009	12	1009.173	928.1	81.1
744	2009	1	978.309	830.5	147.8
672	2009	2	734.186	636.3	97.9
743	2009	3	726.368	463.9	262.5
720	2009	4	354.187	265.5	88.7
744	2009	5	121.481	57.3	64.2
720	2009	6	15.542	38.3	-22.8
744	2009	7	0	0	0.0
744	2009	8	0.667	0	0.7
720	2009	9	39.725	84.6	-44.9
744	2010	10	426.492	263.3	163.2
721	2010	11	596.964	667.1	-70.1
744	2010	12	972.658	928.1	44.6
744	2010	1	651.587	830.5	-178.9
672	2010	2	539.167	636.3	-97.1
743	2010	3	495.814	463.9	31.9
720	2010	4	302.63	265.5	37.1
744	2010	5	188.042	57.3	130.7
720	2010	6	37.5	38.3	-0.8
744	2010	7	1.375	0	1.4
744	2010	8	13.693	0	13.7
720	2010	9	35.417	84.6	-49.2
744	2011	10	289	263.3	25.6
721	2011	11	680	667.1	12.6
744	2011	12	810	928.1	-118.2
744	2011	1	884	830.5	53.9
672	2011	2	801	636.3	164.5
743	2011	3	535	463.9	71.4
720	2011	4	463	265.5	197.8
744	2011	5	165	57.3	107.2
720	2011	6	38	38.3	-0.8
744	2011	7	0	0	0.4
744	2011	8	0	0	0.0
720	2011	9	12.333	84.6	-72.3
744	2012	10	310.795	263.3	47.5
721	2012	11	654.542	667.1	-12.6
744	2012	12	839.571	928.1	-88.5
744	2012	1	803.708	830.5	-26.8
696	2012	2	643.986	636.3	7.7
743	2012	3	513.371	463.9	49.5

720	2012	4	231.932	265.5	-33.6
744	2012	5	122.282	57.3	65.0
720	2012	6	51.197	38.3	12.9
744	2012	7	0	0	0.0
744	2012	8	0	0	0.0
720	2012	9	17.616	84.6	-67.0
744	2013	10	304.931	263.3	41.6
721	2013	11	515.792	667.1	-151.3
744	2013	12	756.436	928.1	-171.7
744	2013	1	988.458	830.5	158.0
672	2013	2	673.81	636.3	37.5
743	2013	3	534.259	463.9	70.4
720	2013	4	302.175	265.5	36.7
744	2013	5	92.417	57.3	35.1
720	2013	6	19.582	38.3	-18.7
744	2013	7	0	0	0.0
744	2013	8	0	0	0.0
720	2013	9	55.542	84.6	-29.1
744	2014	10	443.15	263.3	179.9
721	2014	11	645.947	667.1	-21.2
744	2014	12	958.687	928.1	30.6
744	2014	1	801.121	830.5	-29.4
672	2014	2	801.929	636.3	165.6
743	2014	3	552.681	463.9	88.8
720	2014	4	295.625	265.5	30.1
744	2014	5	63.317	57.3	6.0
720	2014	6	19.917	38.3	-18.4
744	2014	7	0	0	0.0
744	2014	8	0	0	0.0
720	2014	9	13.417	84.6	-71.2
744	2015	10	161.708	263.3	-101.6
721	2015	11	664.382	667.1	-2.7
744	2015	12	726.819	928.1	-201.3
744	2015	1	796.146	830.5	-34.4
672	2015	2	526.75	636.3	-109.6
743	2015	3	383.053	463.9	-80.8
720	2015	4	298.559	265.5	33.1
744	2015	5	28.583	57.3	-28.7
720	2015	6	0	38.3	-38.3
744	2015	7	0	0	0.0
744	2015	8	0	0	0.0
720	2015	9	70.221	84.6	-14.4
744	2016	10	144.083	263.3	-119.2
721	2016	11	648.682	667.1	-18.4
744	2016	12	759.434	928.1	-168.7
744	2016	1	757.166	830.5	-73.3
696	2016	2	534.316	636.3	-102.0
743	2016	3	440.373	463.9	-23.5
720	2016	4	140.181	265.5	-125.3
744	2016	5	34.5	57.3	-22.8
720	2016	6	12.042	38.3	-26.3
744	2016	7	0	0	0.0
744	2016	8	0	0	0.0
720	2016	9	37.212	84.6	-47.4
744	2017	10	253.958	263.3	-9.3
721	2017	11	396.042	667.1	-271.1
744	2017	12	1012.763	928.1	84.7
744	2017	1	1089.339	830.5	258.8
672	2017	2	772.702	636.3	136.4
743	2017	3	515.437	463.9	51.5
720	2017	4	327.075	265.5	61.6
744	2017	5	108.625	57.3	51.3
720	2017	6	6.625	38.3	-31.7
744	2017	7	0	0	0.0
744	2017	8	0	0	0.0
720	2017	9	0	84.6	0.0
744	2018	10	0	263.3	0.0
721	2018	11	0	667.1	0.0

744	2018	12	928.1	0.0
744	2018	1	830.5	0.0
672	2018	2	636.3	0.0
743	2018	3	463.9	0.0
720	2018	4	265.5	0.0
744	2018	5	57.3	0.0
720	2018	6	38.3	0.0
744	2018	7	0	0.0
744	2018	8	0	0.0
720	2018	9	84.6	0.0
744	2019	10	263.3	0.0
721	2019	11		0.0
744	2019	12		0.0
744	2019	1		0.0
672	2019	2		0.0
743	2019	3		0.0
720	2019	4		0.0
744	2019	5		0.0
720	2019	6		0.0
744	2019	7		0.0
744	2019	8		0.0
720	2019	9		0.0
744	2020	10		0.0
721	2020	11		0.0
744	2020	12		0.0
744	2020	1		0.0
696	2020	2		0.0
743	2020	3		0.0
720	2020	4		0.0
744	2020	5		0.0
720	2020	6		0.0
744	2020	7		0.0
744	2020	8		0.0
720	2020	9		0.0
744	2021	10		0.0
721	2021	11		0.0
744	2021	12		0.0
744	2021	1		0.0
672	2021	2		0.0
743	2021	3		0.0
720	2021	4		0.0
744	2021	5		0.0
720	2021	6		0.0
744	2021	7		0.0
744	2021	8		0.0
720	2021	9		0.0
744	2022	10		0.0
721	2022	11		0.0
744	2022	12		0.0
744	2022	1		0.0
672	2022	2		0.0
743	2022	3		0.0
720	2022	4		0.0
744	2022	5		0.0
720	2022	6		0.0
744	2022	7		0.0
744	2022	8		0.0
720	2022	9		0.0
744	2023	10		0.0
721	2023	11		0.0
744	2023	12		0.0
744	2023	1		0.0
672	2023	2		0.0
743	2023	3		0.0
720	2023	4		0.0
744	2023	5		0.0
720	2023	6		0.0
744	2023	7		0.0

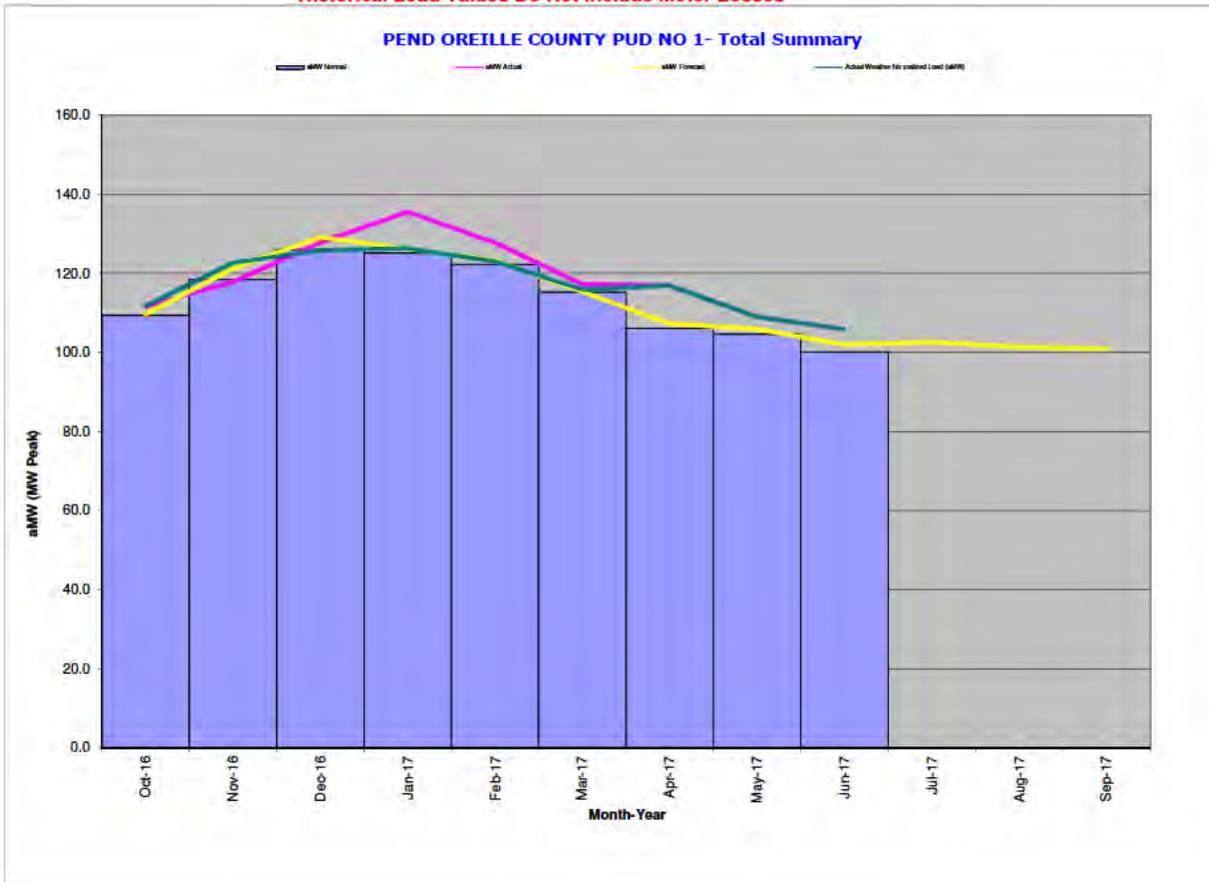
744	2023	8	0.0
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744	2024	10	0.0
721	2024	11	0.0
744	2024	12	0.0
744	2024	1	0.0
696	2024	2	0.0
743	2024	3	0.0
720	2024	4	0.0
744	2024	5	0.0
720	2024	6	0.0
744	2024	7	0.0
744	2024	8	0.0
720	2024	9	0.0
744	2025	10	0.0
721	2025	11	0.0
744	2025	12	0.0
744	2025	1	0.0
672	2025	2	0.0
743	2025	3	0.0
720	2025	4	0.0
744	2025	5	0.0
720	2025	6	0.0
744	2025	7	0.0
744	2025	8	0.0
720	2025	9	0.0
744	2026	10	0.0
721	2026	11	0.0
744	2026	12	0.0
744	2026	1	0.0
672	2026	2	0.0
743	2026	3	0.0
720	2026	4	0.0
744	2026	5	0.0
720	2026	6	0.0
744	2026	7	0.0
744	2026	8	0.0
720	2026	9	0.0
744	2027	10	0.0
721	2027	11	0.0
744	2027	12	0.0
744	2027	1	0.0
672	2027	2	0.0
743	2027	3	0.0
720	2027	4	0.0
744	2027	5	0.0
720	2027	6	0.0
744	2027	7	0.0
744	2027	8	0.0
720	2027	9	0.0
744	2028	10	0.0
721	2028	11	0.0
744	2028	12	0.0
744	2028	1	0.0
696	2028	2	0.0
743	2028	3	0.0
720	2028	4	0.0
744	2028	5	0.0
720	2028	6	0.0
744	2028	7	0.0
744	2028	8	0.0
720	2028	9	0.0
744	2029	10	0.0
721	2029	11	0.0
744	2029	12	0.0
744	2029	1	0.0
672	2029	2	0.0
743	2029	3	0.0

720	2029	4	0.0
744	2029	5	0.0
720	2029	6	0.0
744	2029	7	0.0
744	2029	8	0.0
720	2029	9	0.0
744	2030	10	0.0
721	2030	11	0.0
744	2030	12	0.0
744	2030	1	0.0
672	2030	2	0.0
743	2030	3	0.0
720	2030	4	0.0
744	2030	5	0.0
720	2030	6	0.0
744	2030	7	0.0
744	2030	8	0.0
720	2030	9	0.0
744	2031	10	0.0
721	2031	11	0.0
744	2031	12	0.0
744	2031	1	0.0
672	2031	2	0.0
743	2031	3	0.0
720	2031	4	0.0
744	2031	5	0.0
720	2031	6	0.0
744	2031	7	0.0
744	2031	8	0.0
720	2031	9	0.0
744	2032	10	0.0
721	2032	11	0.0
744	2032	12	0.0
744	2032	1	0.0
696	2032	2	0.0
743	2032	3	0.0
720	2032	4	0.0
744	2032	5	0.0
720	2032	6	0.0
744	2032	7	0.0
744	2032	8	0.0
720	2032	9	0.0
744	2033	10	0.0
721	2033	11	0.0
744	2033	12	0.0
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Forecast Fiscal Start Year	Fiscal Plot Start Year	Fiscal Plot Stop Year	Year Type	Load Type	Peak Type	Peak Plot	Shaped System Load (SSL) Plot	Select Customer	Customer Number	HWM (aMW)	Percent System	CHWM Resources and NLSL (aMW)	HWM Version
2017	2017	2017	Fiscal	aMW	CP	Hide	Hide	PEND OREILLE COUNTY PUD NO 1	10306				

**\*Historical Load Values Do Not Include Meter Losses**



Monthly Hrs	Fiscal Year	Month	aMW Actual	aMW Normal	aMW Forecast	aMW HWM	aMW Above HWM	CP Actual Peak	CP Forecast Peak	CP Actual Load Factor	CP Forecast Load Factor
	2005	10	105.59	107.66				123.39		85.8%	
	2005	11	120.73	118.19				132.94		90.8%	
	2005	12	122.83	123.66				137.11		89.6%	
	2005	1	128.87	123.33				159.31		80.9%	
	2005	2	121.24	118.70				140.17		86.5%	
	2005	3	118.01	111.81				132.15		89.3%	
	2005	4	111.84	104.30				130.76		85.5%	
	2005	5	103.78	102.80				120.75		85.9%	
	2005	6	103.62	101.68				113.25		91.5%	
	2005	7	104.76	99.54				114.80		91.3%	
	2005	8	94.69	100.08				117.72		80.4%	
	2005	9	108.88	95.63				122.63		88.8%	
	2006	10	111.72	108.49				124.69		89.6%	
	2006	11	122.04	119.02				139.38		87.6%	
	2006	12	131.18	124.53				155.45		84.4%	
	2006	1	122.42	124.10				136.01		90.0%	
	2006	2	123.64	119.57				150.29		82.3%	
	2006	3	121.48	112.58				137.39		88.4%	
	2006	4	108.74	105.17				134.43		80.9%	
	2006	5	110.21	103.70				126.20		87.3%	
	2006	6	104.09	102.57				117.83		88.3%	
	2006	7	97.86	100.35				115.06		85.0%	
	2006	8	102.43	100.94				111.94		91.5%	
	2006	9	81.56	96.47				121.01		67.4%	
	2007	10	107.84	109.30				133.75		80.6%	
	2007	11	120.80	119.87				153.61		78.6%	
	2007	12	119.61	125.32				141.91		84.3%	
	2007	1	123.03	124.96				153.75		80.0%	
	2007	2	115.69	120.52				140.62		82.3%	
	2007	3	114.91	113.56				140.15		82.0%	
	2007	4	93.71	105.84				129.84		72.2%	
	2007	5	107.56	104.44				121.95		88.2%	
	2007	6	100.43	103.35				115.48		87.0%	
	2007	7	106.18	101.20				121.85		87.1%	
	2007	8	103.94	101.78				117.31		88.6%	
	2007	9	80.70	97.31				116.96		69.0%	
	2008	10	111.79	110.28				132.40		84.4%	
	2008	11	118.36	120.62				149.56		79.1%	
	2008	12	132.05	126.15				148.29		89.0%	
	2008	1	130.11	125.79				154.91		84.0%	
	2008	2	126.27	120.73				142.91		88.4%	
	2008	3	100.76	114.41				132.55		76.0%	
	2008	4	107.23	106.74				131.59		81.5%	
	2008	5	102.52	105.32				124.80		82.1%	
	2008	6	106.80	104.35				119.65		89.3%	
	2008	7	108.43	102.02				119.30		90.9%	
744	2008	8	107.31	102.54				123.50		86.9%	
720	2008	9	109.82	98.13				124.41		88.3%	
744	2009	10	113.72	111.08				141.64		80.3%	
721	2009	11	121.09	121.44				141.38		85.7%	
744	2009	12	133.05	127.00				162.00		82.1%	
744	2009	1	132.70	126.61				158.55		83.7%	
672	2009	2	124.59	122.35				147.20		84.6%	
743	2009	3	121.73	115.22				156.28		77.9%	
720	2009	4	106.19	107.58				132.18		80.3%	
744	2009	5	106.52	106.14				166.72		63.9%	
720	2009	6	100.34	105.19				115.21		87.1%	
744	2009	7	84.84	102.84				118.35		71.7%	
744	2009	8	100.19	103.36				111.22		90.1%	
720	2009	9	82.25	98.98				118.30		69.5%	
744	2010	10	114.03	111.89				138.72		82.2%	
721	2010	11	122.44	122.29				137.02		89.4%	
744	2010	12	131.85	127.82				158.69		83.1%	
744	2010	1	123.83	127.43				149.93		82.6%	
672	2010	2	117.04	123.25				136.11		86.0%	
743	2010	3	116.89	116.04				141.32		82.7%	
720	2010	4	111.63	108.42				133.61		83.5%	
744	2010	5	105.90	106.95				130.61		81.1%	
720	2010	6	103.64	106.03				121.25		85.5%	
744	2010	7	104.82	103.65				114.84		91.3%	
744	2010	8	102.00	104.17				114.97		88.7%	
720	2010	9	101.85	99.82				116.90		87.1%	
744	2011	10	108.48	112.71				130.79		82.9%	
721	2011	11	121.70	123.13				151.62		80.3%	
744	2011	12	122.03	128.63				146.95		83.0%	
744	2011	1	126.58	128.24				178.40		71.0%	
672	2011	2	128.87	124.16				158.69		81.2%	
743	2011	3	110.43	116.86				136.66		80.8%	
720	2011	4	114.44	109.27				136.57		83.8%	
744	2011	5	107.48	107.77				131.98		81.4%	
720	2011	6	106.55	106.88				121.77		87.5%	
744	2011	7	102.74	104.47				115.60		88.9%	
744	2011	8	104.84	104.99				117.31		89.4%	
720	2011	9	104.57	100.66				121.30		86.2%	
744	2012	10	113.41	113.52				136.17		83.3%	
721	2012	11	122.09	123.97				144.98		84.2%	
744	2012	12	126.09	129.45				146.51		86.1%	
744	2012	1	127.61	129.06				149.01		85.6%	
696	2012	2	123.63	124.22				148.03		83.5%	
743	2012	3	120.83	117.67				141.00		85.7%	
720	2012	4	115.76	110.11				136.68		84.7%	
744	2012	5	105.42	108.58				128.91		81.8%	
720	2012	6	104.56	107.72				123.53		84.6%	
744	2012	7	108.00	105.28				162.19		66.6%	
744	2012	8	105.15	105.80				121.56		86.5%	

720	2012	9	103.85	101.50			120.81	86.0%		
744	2013	10	114.91	112.26			133.00	86.4%		
721	2013	11	120.51	122.89			139.69	86.3%		
744	2013	12	129.71	129.22			143.62	90.3%		
744	2013	1	131.97	128.28			151.97	86.8%		
672	2013	2	127.07	123.93			144.37	88.0%		
743	2013	3	118.98	117.24			144.19	82.5%		
720	2013	4	111.94	110.25			135.91	82.4%		
744	2013	5	109.64	106.98			126.92	86.4%		
720	2013	6	105.84	105.91			122.00	86.8%		
744	2013	7	104.74	104.39			122.04	85.8%		
744	2013	8	105.34	104.54			119.90	87.9%		
720	2013	9	110.80	100.69			122.20	90.7%		
744	2014	10	113.36	112.85			140.92	80.4%		
721	2014	11	122.32	123.35			141.52	86.4%		
744	2014	12	130.47	129.73			152.97	85.3%		
744	2014	1	127.51	128.86			145.75	87.5%		
672	2014	2	132.51	124.59			161.35	82.1%		
743	2014	3	127.97	117.85			149.57	85.6%		
720	2014	4	102.84	110.88			134.67	76.4%		
744	2014	5	99.25	107.60			120.72	82.2%		
720	2014	6	92.98	106.50			107.43	86.5%		
744	2014	7	93.88	104.97			108.88	86.2%		
744	2014	8	90.45	105.12			105.52	85.7%		
720	2014	9	93.67	99.99			110.60	84.7%		
744	2015	10	97.24	113.26			141.73	68.6%		
721	2015	11	94.57	123.80			138.33	68.4%		
744	2015	12	111.00	130.15			143.85	77.2%		
744	2015	1	101.81	129.27			178.27	57.1%		
672	2015	2	110.03	125.04			135.01	81.5%		
743	2015	3	89.09	118.26			137.51	64.8%		
720	2015	4	81.43	111.31			120.30	67.7%		
744	2015	5	94.70	108.01			112.63	84.1%		
720	2015	6	75.90	106.93			107.39	70.7%		
744	2015	7	91.13	105.38			109.80	83.0%		
744	2015	8	73.84	105.54			101.16	73.0%		
720	2015	9	94.93	100.41			104.69	90.7%		
744	2016	10	99.80	111.07			122.28	81.6%		
721	2016	11	115.63	120.82			144.70	79.9%		
744	2016	12	124.61	126.98			144.46	86.3%		
744	2016	1	121.19	126.61			147.30	82.3%		
696	2016	2	122.07	122.06			141.00	86.6%		
743	2016	3	119.36	115.95			138.49	86.2%		
720	2016	4	103.56	108.56			126.23	82.0%		
744	2016	5	107.47	105.44			123.97	86.7%		
720	2016	6	90.86	103.67			119.56	76.0%		
744	2016	7	99.76	102.33			111.85	89.2%		
744	2016	8	101.76	102.49			116.97	87.0%		
720	2016	9	103.00	98.24			120.76	85.3%		
744	2017	10	111.68	109.47	109.64		128.10	138.14	87.2%	79.4%
721	2017	11	117.86	118.47	121.29		133.85	152.84	88.1%	79.4%
744	2017	12	127.85	126.04	129.18		159.89	161.18	80.0%	80.1%
744	2017	1	135.56	125.22	126.24		165.27	165.65	82.0%	76.2%
672	2017	2	127.75	122.33	123.27		150.23	151.86	85.0%	81.2%
743	2017	3	117.20	115.27	115.39		144.29	145.31	81.2%	79.4%
720	2017	4	116.94	106.10	107.26		137.35	139.55	85.1%	76.9%
744	2017	5	109.02	104.71	105.91		129.38	136.32	84.3%	77.7%
720	2017	6	105.89	100.17	102.04		121.10	124.54	87.4%	81.9%
744	2017	7			102.58			125.17		82.0%
744	2017	8			101.41			120.66		84.0%
720	2017	9			100.98			128.32		78.7%
744	2018	10			109.86			138.42		79.4%
721	2018	11			121.52			153.13		79.4%
744	2018	12			129.40			161.47		80.1%
744	2018	1			126.46			165.94		76.2%
672	2018	2			123.51			152.14		81.2%
743	2018	3			115.62			145.60		79.4%
720	2018	4			107.49			139.84		76.9%
744	2018	5			106.13			136.60		77.7%
720	2018	6			102.27			124.83		81.9%
744	2018	7			102.80			125.45		81.9%
744	2018	8			101.63			120.94		84.0%
720	2018	9			101.21			128.60		78.7%
744	2019	10			110.08			138.71		79.4%
721	2019	11			121.75			153.41		79.4%
744	2019	12			129.62			161.75		80.1%
744	2019	1			86.37			119.48		72.3%
672	2019	2			82.74			105.85		78.2%
743	2019	3			75.71			98.68		76.7%
720	2019	4			68.84			93.54		73.6%
744	2019	5			65.37			89.88		72.7%
720	2019	6			42.45			54.75		77.5%
744	2019	7			42.36			55.22		76.7%
744	2019	8			41.82			51.01		82.0%
720	2019	9			42.63			58.81		72.5%
744	2020	10			48.64			68.03		71.5%
721	2020	11			60.37			82.69		73.0%
744	2020	12			68.47			91.83		74.6%
744	2020	1			41.97			67.77		61.9%
696	2020	2			37.40			54.31		68.9%
743	2020	3			31.50			46.52		67.7%
720	2020	4			25.88			42.00		61.6%
744	2020	5			20.31			37.92		53.6%
720	2020	6			18.35			26.33		69.7%
744	2020	7			18.06			26.75		67.5%
744	2020	8			17.73			22.64		78.3%

720	2020	9	18.96	30.50	62.2%
744	2021	10	24.01	39.41	60.9%
721	2021	11	35.77	55.28	64.7%
744	2021	12	43.92	64.53	68.1%
744	2021	1	42.20	68.06	62.0%
672	2021	2	37.91	54.60	69.4%
743	2021	3	31.72	46.80	67.8%
720	2021	4	26.11	42.28	61.8%
744	2021	5	20.53	38.21	53.7%
720	2021	6	18.58	26.61	69.8%
744	2021	7	18.29	27.04	67.6%
744	2021	8	17.95	22.92	78.3%
720	2021	9	19.19	30.78	62.3%
744	2022	10	24.24	39.70	61.1%
721	2022	11	36.00	55.57	64.8%
744	2022	12	44.15	64.82	68.1%
744	2022	1	42.42	68.34	62.1%
672	2022	2	38.16	54.88	69.5%
743	2022	3	31.95	47.09	67.8%
720	2022	4	26.34	42.57	61.9%
744	2022	5	20.75	38.49	53.9%
720	2022	6	18.82	26.90	69.9%
744	2022	7	18.51	27.33	67.7%
744	2022	8	18.18	23.21	78.3%
720	2022	9	19.42	31.07	62.5%
744	2023	10	24.46	39.98	61.2%
721	2023	11	36.23	55.86	64.9%
744	2023	12	44.37	65.11	68.2%
744	2023	1	42.64	68.63	62.1%
672	2023	2	38.41	55.17	69.6%
743	2023	3	32.17	47.37	67.9%
720	2023	4	26.57	42.86	62.0%
744	2023	5	20.98	38.78	54.1%
720	2023	6	19.05	27.19	70.1%
744	2023	7	18.73	27.61	67.8%
744	2023	8	18.40	23.50	78.3%
720	2023	9	19.65	31.35	62.7%
744	2024	10	24.68	40.27	61.3%
721	2024	11	36.46	56.14	64.9%
744	2024	12	44.59	65.39	68.2%
744	2024	1	42.87	68.91	62.2%
696	2024	2	38.36	55.46	69.2%
743	2024	3	32.39	47.66	68.0%
720	2024	4	26.81	43.14	62.1%
744	2024	5	21.20	39.06	54.3%
720	2024	6	19.28	27.47	70.2%
744	2024	7	18.95	27.90	67.9%
744	2024	8	18.62	23.78	78.3%
720	2024	9	19.88	31.64	62.8%
744	2025	10	24.90	40.55	61.4%
721	2025	11	36.69	56.43	65.0%
744	2025	12	44.82	65.68	68.2%
744	2025	1	43.09	69.20	62.3%
672	2025	2	38.90	55.74	69.8%
743	2025	3	32.62	47.95	68.0%
720	2025	4	27.04	43.43	62.3%
744	2025	5	21.42	39.35	54.4%
720	2025	6	19.51	27.76	70.3%
744	2025	7	19.18	28.18	68.0%
744	2025	8	18.84	24.07	78.3%
720	2025	9	20.11	31.93	63.0%
744	2026	10	25.13	40.84	61.5%
721	2026	11	36.92	56.71	65.1%
744	2026	12	45.04	65.96	68.3%
744	2026	1	43.31	69.48	62.3%
672	2026	2	39.15	56.03	69.9%
743	2026	3	32.84	48.23	68.1%
720	2026	4	27.27	43.71	62.4%
744	2026	5	21.65	39.64	54.6%
720	2026	6	19.74	28.04	70.4%
744	2026	7	19.40	28.47	68.1%
744	2026	8	19.07	24.35	78.3%
720	2026	9	20.34	32.21	63.1%
744	2027	10	25.35	41.12	61.6%
721	2027	11	37.15	57.00	65.2%
744	2027	12	45.26	66.25	68.3%
744	2027	1	43.53	69.77	62.4%
672	2027	2	39.39	56.31	70.0%
743	2027	3	33.06	48.52	68.1%
720	2027	4	27.50	44.00	62.5%
744	2027	5	21.87	39.92	54.8%
720	2027	6	19.97	28.33	70.5%
744	2027	7	19.62	28.76	68.2%
744	2027	8	19.29	24.64	78.3%
720	2027	9	20.57	32.50	63.3%
744	2028	10	25.57	41.41	61.8%
721	2028	11	37.38	57.29	65.2%
744	2028	12	45.49	66.54	68.4%
744	2028	1	43.76	70.06	62.5%
696	2028	2	39.31	56.60	69.4%
743	2028	3	33.29	48.80	68.2%
720	2028	4	27.73	44.29	62.6%
744	2028	5	22.09	40.21	54.9%
720	2028	6	20.20	28.62	70.6%
744	2028	7	19.85	29.04	68.3%
744	2028	8	19.51	24.93	78.3%
720	2028	9	20.80	32.78	63.5%
744	2029	10	25.80	41.70	61.9%

721	2029	11			37.61				57.57		65.3%
744	2029	12			45.71				66.82		68.4%
744	2029	1			43.98				70.34		62.5%
672	2029	2			39.89				56.89		70.1%
743	2029	3			33.51				49.09		68.3%
720	2029	4			27.96				44.57		62.7%
744	2029	5			22.31				40.49		55.1%
720	2029	6			20.43				28.90		70.7%
744	2029	7			20.07				29.33		68.4%
744	2029	8			19.74				25.21		78.3%
720	2029	9			21.03				33.07		63.6%
744	2030	10			26.02				41.98		62.0%
721	2030	11			37.84				57.86		65.4%
744	2030	12			45.93				67.11		68.4%
744	2030	1			44.20				70.63		62.6%
672	2030	2			40.14				57.17		70.2%
743	2030	3			33.73				49.38		68.3%
720	2030	4			28.19				44.86		62.8%
744	2030	5			22.54				40.78		55.3%
720	2030	6			20.66				29.19		70.8%
744	2030	7			20.29				29.61		68.5%
744	2030	8			19.96				25.50		78.3%
720	2030	9			21.26				33.36		63.7%
744	2031	10			26.24				42.27		62.1%
721	2031	11			38.07				58.14		65.5%
744	2031	12			46.15				67.40		68.5%
744	2031	1			44.43				70.92		62.6%
672	2031	2			40.38				57.46		70.3%
743	2031	3			33.96				49.66		68.4%
720	2031	4			28.42				45.14		62.9%
744	2031	5			22.76				41.06		55.4%
720	2031	6			20.89				29.47		70.9%
744	2031	7			20.51				29.90		68.6%
744	2031	8			20.18				25.78		78.3%
720	2031	9			21.49				33.64		63.9%
744	2032	10			26.46				42.55		62.2%
721	2032	11			38.30				58.43		65.5%
744	2032	12			46.38				67.68		68.5%
744	2032	1			44.65				71.20		62.7%
696	2032	2			40.26				57.74		69.7%
743	2032	3			34.18				49.95		68.4%
720	2032	4			28.65				45.43		63.1%
744	2032	5			22.98				41.35		55.6%
720	2032	6			21.12				29.76		71.0%
744	2032	7			20.74				30.19		68.7%
744	2032	8			20.40				26.07		78.3%
720	2032	9			21.72				33.93		64.0%
744	2033	10			26.69				42.84		62.3%
721	2033	11			38.53				58.72		65.6%
744	2033	12			46.60				67.97		68.6%
744	2033	1			44.87				71.49		62.8%
672	2033	2			40.88				58.03		70.4%
743	2033	3			34.40				50.23		68.5%
720	2033	4			28.88				45.72		63.2%
744	2033	5			23.21				41.64		55.7%
720	2033	6			21.35				30.05		71.1%
744	2033	7			20.96				30.47		68.8%
744	2033	8			20.63				26.35		78.3%
720	2033	9			21.95				34.21		64.2%
744	2034	10			26.91				43.13		62.4%
721	2034	11			38.76				59.00		65.7%
744	2034	12			46.82				68.25		68.6%
744	2034	1			45.09				71.77		62.8%
672	2034	2			41.12				58.32		70.5%
743	2034	3			34.63				50.52		68.5%
720	2034	4			29.11				46.00		63.3%
744	2034	5			23.43				41.92		55.9%
720	2034	6			21.58				30.33		71.1%
744	2034	7			21.18				30.76		68.9%
744	2034	8			20.85				26.64		78.3%
720	2034	9			22.18				34.50		64.3%
744	2035	10			27.13				43.41		62.5%
721	2035	11			38.98				59.29		65.8%
744	2035	12			47.05				68.54		68.6%
744	2035	1			45.32				72.06		62.9%
672	2035	2			41.37				58.60		70.6%
743	2035	3			34.85				50.81		68.6%
720	2035	4			29.34				46.29		63.4%
744	2035	5			23.65				42.21		56.0%
720	2035	6			21.81				30.62		71.2%
744	2035	7			21.41				31.04		69.0%
744	2035	8			21.07				26.93		78.3%
720	2035	9			22.41				34.79		64.4%
744	2036	10			27.35				43.70		62.6%
721	2036	11			39.21				59.57		65.8%
744	2036	12			47.27				68.83		68.7%
			#N/A	#N/A	45.5407157	#N/A	#N/A	#N/A	72.345245	#N/A	0.62949148
			#N/A	#N/A	41.2152507	#N/A	#N/A	#N/A	58.889477	#N/A	0.69987463
			#N/A	#N/A	35.0719035	#N/A	#N/A	#N/A	51.092117	#N/A	0.68644451
			#N/A	#N/A	29.5681129	#N/A	#N/A	#N/A	46.573189	#N/A	0.63487413
			#N/A	#N/A	23.8748218	#N/A	#N/A	#N/A	42.494366	#N/A	0.561835
			#N/A	#N/A	22.0413798	#N/A	#N/A	#N/A	30.903957	#N/A	0.71322192
			#N/A	#N/A	21.6278874	#N/A	#N/A	#N/A	31.329733	#N/A	0.69033105
			#N/A	#N/A	21.2958006	#N/A	#N/A	#N/A	27.212816	#N/A	0.78256511
			#N/A	#N/A	22.6442006	#N/A	#N/A	#N/A	35.071159	#N/A	0.64566444



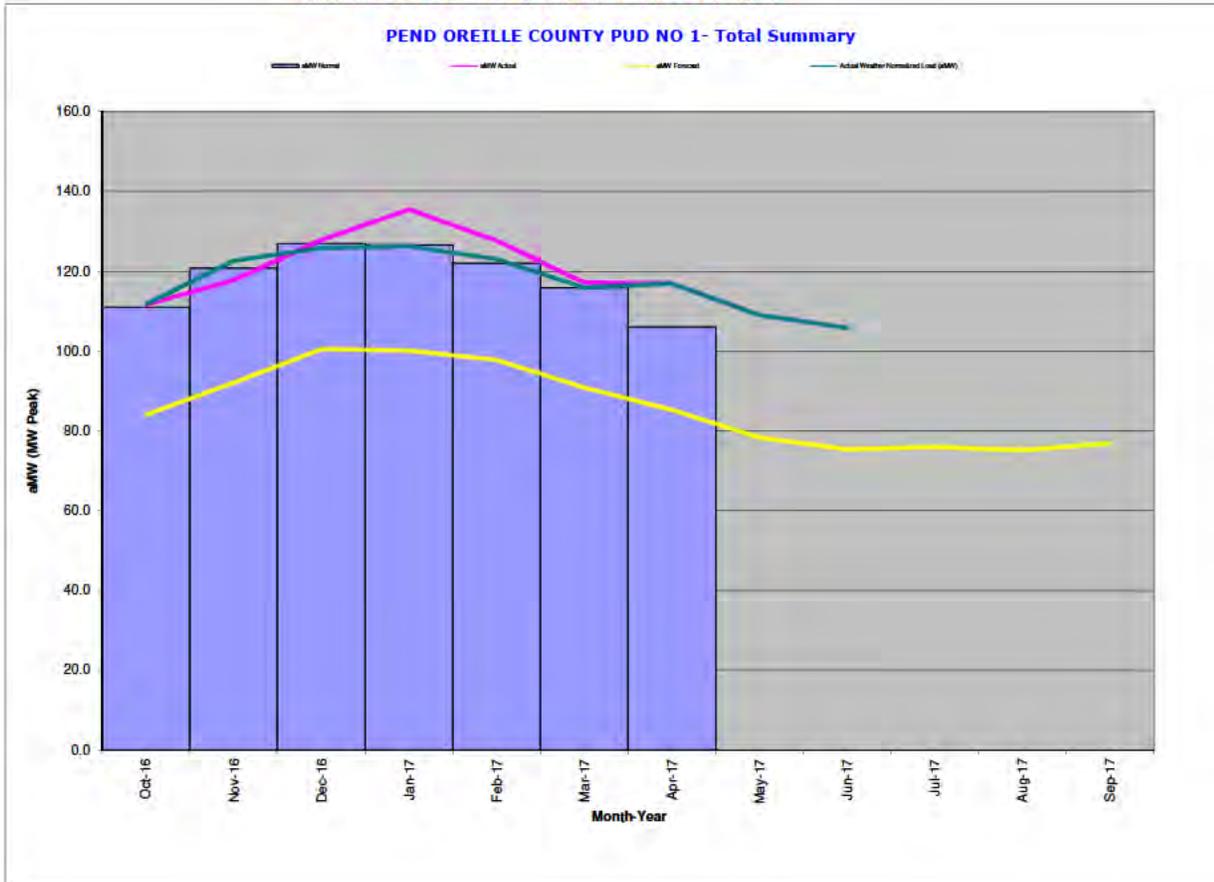
	Data Start Date	Data Stop Date
Customer Level Model Parameters:	1/1/03	3/31/17
Customer Level Energy forecast based on trend; R-Squared = N/A		
Customer Level Peak forecast based on trend; R-Squared = N/A		

Active Projects:	Project Start Date	POD	Peak kW	Load Factor
Cominco Load Loss	Ramps from 1/2015 through 5/2015. Full load through 12/2019.	10306_DP0443	7000	Variable monthly LF

Cominco Load Loss		
Month	Peak kW	Load Factor
1	7000	82.0
2	7000	82.0
3	7000	82.0
4	7000	82.0
5	7000	82.0
6	7000	82.0
7	7000	82.0
8	7000	82.0
9	7000	82.0
10	7000	82.0
11	7000	82.0
12	7000	82.0

Forecast Fiscal Start Year	Fiscal Plot Start Year	Fiscal Plot Stop Year	Year Type	Load Type	Peak Type	Peak Plot	Shaped System Load (SSL) Plot	Select Customer	Customer Number	HWM (aMW)	Percent System	CRWM Resources and NLSL (aMW)	HWM Version
2017	2017	2017	Fiscal	aMW	CP	Hide	Hide	PEND OREILLE COUNTY PUD NO 1	10306				

**\*Historical Load Values Do Not Include Meter Losses**



Monthly Hrs	Fiscal Year	Month	aMW Actual	aMW Normal	aMW Forecast	aMW HWM	aMW Above HWM	CP Actual Peak	CP Forecast Peak	CP Actual Load Factor	CP Forecast Load Factor
745	2005	10	105.59	108.16				123.39		85.6%	
720	2005	11	120.73	118.15				132.94		90.8%	
744	2005	12	122.83	124.11				137.11		89.6%	
744	2005	1	128.87	123.47				159.31		80.9%	
672	2005	2	121.24	118.36				140.17		86.5%	
744	2005	3	118.01	112.57				132.15		89.3%	
719	2005	4	111.84	104.05				130.76		85.5%	
744	2005	5	103.78	103.08				120.75		85.9%	
720	2005	6	103.62	101.93				113.25		91.5%	
744	2005	7	104.76	99.41				114.80		91.3%	
744	2005	8	94.69	100.33				117.72		80.4%	
720	2005	9	108.88	95.32				122.63		88.8%	
745	2006	10	111.72	109.11				124.69		89.6%	
720	2006	11	122.04	119.09				139.38		87.6%	
744	2006	12	131.18	125.10				155.45		84.4%	
744	2006	1	122.42	124.36				136.01		90.0%	
672	2006	2	123.64	119.35				150.29		82.3%	
744	2006	3	121.48	113.45				137.39		88.4%	
719	2006	4	108.74	105.03				134.43		80.9%	
744	2006	5	110.21	104.10				126.20		87.3%	
720	2006	6	104.09	102.94				117.83		88.3%	
744	2006	7	97.86	100.33				115.06		85.0%	
744	2006	8	102.43	101.31				111.94		91.5%	
720	2006	9	81.56	96.29				121.01		67.4%	
745	2007	10	107.84	110.03				133.75		80.6%	
720	2007	11	120.80	120.06				153.61		78.6%	
744	2007	12	119.61	126.00				141.91		84.3%	
744	2007	1	123.03	125.33				153.75		80.0%	
672	2007	2	115.89	120.43				140.62		82.3%	
743	2007	3	114.91	114.55				140.15		82.0%	
720	2007	4	93.71	105.82				129.84		72.2%	
744	2007	5	107.56	104.95				121.95		88.2%	
720	2007	6	100.43	103.83				115.48		87.0%	
744	2007	7	106.18	101.30				121.85		87.1%	
744	2007	8	103.94	102.26				117.31		88.6%	
720	2007	9	80.70	97.25				116.96		69.0%	
744	2008	10	111.79	111.13				132.40		84.4%	
721	2008	11	118.36	120.93				149.56		79.1%	
744	2008	12	132.05	126.95				148.29		89.0%	
744	2008	1	130.11	126.28				154.91		84.0%	
696	2008	2	126.27	120.73				142.91		88.4%	
743	2008	3	100.76	115.51				132.55		76.0%	
720	2008	4	107.23	106.84				131.59		81.5%	
744	2008	5	102.52	105.95				124.80		82.1%	
720	2008	6	106.80	104.95				119.65		89.3%	
744	2008	7	108.43	102.24				119.30		90.9%	
744	2008	8	107.31	103.14				123.50		86.9%	
720	2008	9	109.82	98.19				124.41		88.3%	
744	2009	10	113.72	112.04				141.64		80.3%	
721	2009	11	121.09	121.87				141.38		85.7%	
744	2009	12	133.05	127.92				162.00		82.1%	
744	2009	1	132.70	127.21				158.55		83.7%	
672	2009	2	124.59	122.52				147.20		84.6%	
743	2009	3	121.73	116.44				156.28		77.9%	
720	2009	4	106.19	107.80				132.18		80.3%	
744	2009	5	106.52	106.88				166.72		63.9%	
720	2009	6	100.34	105.91				115.21		87.1%	
744	2009	7	84.84	103.17				118.35		71.7%	
744	2009	8	100.19	104.07				111.22		90.1%	
720	2009	9	82.25	99.15				118.30		69.5%	
744	2010	10	114.03	112.97				138.72		82.2%	
721	2010	11	122.44	122.83				137.02		89.4%	
744	2010	12	131.85	128.85				158.69		83.1%	
744	2010	1	123.83	128.14				149.93		82.6%	
672	2010	2	117.04	123.55				136.11		86.0%	
743	2010	3	116.89	117.37				141.32		82.7%	
720	2010	4	111.63	108.76				133.61		83.5%	
744	2010	5	105.90	107.81				130.61		81.1%	
720	2010	6	103.64	106.87				121.25		85.5%	
744	2010	7	104.82	104.10				114.84		91.3%	
744	2010	8	102.00	105.00				114.97		88.7%	
720	2010	9	101.85	100.11				116.90		87.1%	
744	2011	10	108.48	112.71	111.99			130.79	134.21	82.9%	83.4%
721	2011	11	121.70	123.13	121.92			151.62	147.51	80.3%	82.7%
744	2011	12	122.03	128.63	127.96			146.95	153.51	83.0%	83.4%
744	2011	1	126.58	128.24	127.21			178.40	159.18	71.0%	79.9%
672	2011	2	128.87	124.16	122.67			158.69	147.11	81.2%	83.4%
743	2011	3	110.43	116.86	116.39			136.66	139.48	80.8%	83.4%
720	2011	4	114.44	109.27	107.73			136.57	132.08	83.8%	81.6%
744	2011	5	107.48	107.77	106.76			131.98	131.78	81.4%	81.0%
720	2011	6	106.55	106.88	105.85			121.77	122.12	87.5%	86.7%
744	2011	7	102.74	104.47	103.04			115.60	121.35	88.9%	84.9%
744	2011	8	104.84	104.99	104.16			117.31	120.69	89.4%	86.3%
720	2011	9	104.57	100.66	98.92			121.30	125.86	86.2%	78.6%
744	2012	10	113.41	113.52	106.08			136.17	131.56	83.3%	80.6%
721	2012	11	122.09	123.97	113.35			144.98	141.57	84.2%	80.1%
744	2012	12	126.09	129.45	118.99			146.51	148.48	86.1%	80.1%
744	2012	1	127.61	129.06	125.07			149.01	159.30	85.6%	78.5%
696	2012	2	123.63	124.22	132.14			148.03	169.39	83.5%	78.0%
743	2012	3	120.83	117.67	124.43			141.00	158.44	85.7%	78.5%
720	2012	4	115.76	110.11	122.04			136.68	157.71	84.7%	77.4%
744	2012	5	105.42	108.58	116.46			128.91	151.75	81.8%	76.7%
720	2012	6	104.56	107.72	112.20			123.53	139.49	84.6%	80.4%
744	2012	7	108.00	105.28	107.21			162.19	128.58	66.6%	83.4%
744	2012	8	105.15	105.80	104.30			121.56	124.72	86.5%	83.6%
720	2012	9	103.85	101.50	104.15			120.81	130.02	86.0%	80.1%

744	2013	10	114.91	114.34	112.43	133.00	137.27	86.4%	81.9%
721	2013	11	120.51	124.81	122.95	139.69	152.04	86.3%	80.9%
744	2013	12	129.71	130.26	128.45	143.62	157.39	90.3%	81.6%
744	2013	1	131.97	129.87	128.02	151.97	164.74	86.8%	77.7%
672	2013	2	127.07	125.96	124.07	144.37	151.41	88.0%	81.9%
743	2013	3	118.98	118.49	116.57	144.19	142.50	82.5%	81.8%
720	2013	4	111.94	110.95	108.97	135.91	135.72	82.4%	80.3%
744	2013	5	109.64	109.40	107.42	126.92	134.86	86.4%	79.7%
720	2013	6	105.84	108.56	106.59	122.00	125.72	86.8%	84.8%
744	2013	7	104.74	106.10	104.12	122.04	124.33	85.8%	83.7%
744	2013	8	105.34	106.62	104.86	119.90	123.71	87.9%	84.8%
720	2013	9	110.80	102.35	100.21	122.20	128.88	90.7%	77.8%
744	2014	10	113.36	112.64	114.28	140.92	132.37	80.4%	86.3%
721	2014	11	122.32	123.28	125.34	141.52	146.41	86.4%	85.6%
744	2014	12	130.47	129.60	131.91	152.97	152.46	85.3%	86.5%
744	2014	1	127.51	128.66	130.94	145.75	158.82	87.5%	82.4%
672	2014	2	132.51	124.35	126.46	161.35	145.04	82.1%	87.2%
743	2014	3	127.97	117.62	119.46	149.57	138.22	85.6%	86.4%
720	2014	4	102.84	110.64	112.20	134.67	131.86	76.4%	85.1%
744	2014	5	99.25	107.36	108.78	120.72	129.34	82.2%	84.1%
720	2014	6	92.98		107.68	107.43	120.21	86.5%	89.6%
744	2014	7	93.88		106.09	108.88	123.14	86.2%	86.2%
744	2014	8	90.45		106.25	105.52	118.17	85.7%	89.9%
720	2014	9	93.67		102.25	110.60	123.14	84.7%	83.0%
744	2015	10	97.24	113.26	105.97	141.73	133.80	68.6%	79.2%
721	2015	11	94.57	123.77	116.90	138.33	147.54	68.4%	79.2%
744	2015	12	111.00	130.14	123.52	143.85	153.68	77.2%	80.4%
744	2015	1	101.81	129.27	134.44	178.27	161.96	57.1%	83.0%
672	2015	2	110.03	125.04	130.04	135.01	148.15	81.5%	87.8%
743	2015	3	89.09	118.26	122.99	137.51	141.30	64.8%	87.0%
720	2015	4	81.43		115.76	120.30	134.87	67.7%	85.8%
744	2015	5	94.70		112.33	112.63	132.34	84.1%	84.9%
720	2015	6	75.90		111.20	107.39	123.28	70.7%	90.2%
744	2015	7	91.13		109.60	109.80	121.96	83.0%	89.9%
744	2015	8	73.84		109.75	101.16	121.23	73.0%	90.5%
720	2015	9	94.93		104.43	104.69	126.25	90.7%	82.7%
744	2016	10	99.80	113.67	86.01	122.28	136.30	81.6%	63.1%
721	2016	11	115.63	124.22	96.96	144.70	149.62	79.9%	64.8%
744	2016	12	124.61	130.55	103.54	144.46	155.81	86.3%	66.5%
744	2016	1	121.19	129.68	102.63	147.30	162.70	82.3%	63.1%
696	2016	2	122.07	125.07	97.85	141.00	148.90	86.6%	65.7%
743	2016	3	119.36	118.67	91.20	138.49	142.05	0.86	64.2%
720	2016	4	103.56		83.98	126.23	135.62	0.82	61.9%
744	2016	5	107.47		80.53	123.97	133.08	0.87	60.5%
720	2016	6	90.86		79.39	119.56	124.03	0.76	64.0%
744	2016	7	99.76		98.51	111.85	122.71	0.89	80.3%
744	2016	8	101.76		95.06	116.97	121.98	0.87	77.9%
720	2016	9	103.00		92.21	120.76	126.99	0.85	72.6%
744	2017	10	111.68	111.07	84.10	128.10	110.47	87.2%	76.1%
721	2017	11	117.86	120.82	92.12	133.85	116.92	88.1%	78.8%
744	2017	12	127.85	126.98	100.55	159.89	134.39	80.0%	74.8%
744	2017	1	135.56	126.61	100.16	165.27	137.82	82.0%	72.7%
672	2017	2	127.75	122.06	97.81	150.23	123.44	85.0%	79.2%
743	2017	3	117.20	115.95	90.87	144.29	119.06	81.2%	76.3%
720	2017	4	116.94	106.10	85.27	137.35	112.54	85.1%	75.8%
744	2017	5	109.02		78.34	129.38	116.50	84.3%	67.2%
720	2017	6	105.89		75.43	121.10	93.27	87.4%	80.9%
744	2017	7			75.94		88.92		85.4%
744	2017	8			75.17		89.01		84.5%
720	2017	9			76.92		95.20		80.8%
744	2018	10			84.10		110.47		76.1%
721	2018	11			92.12		116.92		78.8%
744	2018	12			100.55		134.39		74.8%
744	2018	1			100.16		137.82		72.7%
672	2018	2			97.81		123.44		79.2%
743	2018	3			90.87		119.06		76.3%
720	2018	4			85.27		112.54		75.8%
744	2018	5			78.34		116.50		67.2%
720	2018	6			75.43		93.27		80.9%
744	2018	7			75.94		88.92		85.4%
744	2018	8			75.17		89.01		84.5%
720	2018	9			76.92		95.20		80.8%
744	2019	10			27.23		46.75		58.2%
721	2019	11			36.41		54.26		67.1%
744	2019	12			44.21		71.52		61.8%
744	2019	1			44.42		76.39		58.1%
672	2019	2			40.92		59.25		69.1%
743	2019	3			35.72		55.36		64.5%
720	2019	4			29.45		51.36		57.3%
744	2019	5			23.17		53.18		43.6%
720	2019	6			20.04		29.11		68.9%
744	2019	7			19.88		24.75		80.3%
744	2019	8			19.39		24.79		78.2%
720	2019	9			20.08		32.03		62.7%
744	2020	10			27.23		46.75		58.2%
721	2020	11			36.41		54.26		67.1%
744	2020	12			44.21		71.52		61.8%
744	2020	1			40.11		71.14		56.4%
696	2020	2			36.61		54.00		67.8%
743	2020	3			31.42		50.11		62.7%
720	2020	4			25.15		46.11		54.5%
744	2020	5			18.87		47.93		39.4%
720	2020	6			15.74		23.86		66.0%
744	2020	7			15.58		19.50		79.9%
744	2020	8			15.09		19.54		77.2%
720	2020	9			15.77		26.78		58.9%
744	2021	10			22.93		41.51		55.2%
721	2021	11			32.11		50.24		63.9%

744	2021	12	39.91	67.35	59.3%
744	2021	1	40.11	71.14	56.4%
672	2021	2	36.61	54.00	67.8%
743	2021	3	31.42	50.11	62.7%
720	2021	4	25.15	46.11	54.5%
744	2021	5	18.87	47.93	39.4%
720	2021	6	15.74	23.86	66.0%
744	2021	7	15.58	19.50	79.9%
744	2021	8	15.09	19.54	77.2%
720	2021	9	15.77	26.78	58.9%
744	2022	10	22.93	41.51	55.2%
721	2022	11	32.11	50.24	63.9%
744	2022	12	39.91	67.35	59.3%
744	2022	1	40.11	71.14	56.4%
672	2022	2	36.61	54.00	67.8%
743	2022	3	31.42	50.11	62.7%
720	2022	4	25.15	46.11	54.5%
744	2022	5	18.87	47.93	39.4%
720	2022	6	15.74	23.86	66.0%
744	2022	7	15.58	19.50	79.9%
744	2022	8	15.09	19.54	77.2%
720	2022	9	15.77	26.78	58.9%
744	2023	10	22.93	41.51	55.2%
721	2023	11	32.11	50.24	63.9%
744	2023	12	39.91	67.35	59.3%
744	2023	1	40.11	71.14	56.4%
672	2023	2	36.61	54.00	67.8%
743	2023	3	31.42	50.11	62.7%
720	2023	4	25.15	46.11	54.5%
744	2023	5	18.87	47.93	39.4%
720	2023	6	15.74	23.86	66.0%
744	2023	7	15.58	19.50	79.9%
744	2023	8	15.09	19.54	77.2%
720	2023	9	15.77	26.78	58.9%
744	2024	10	22.93	41.51	55.2%
721	2024	11	32.11	50.24	63.9%
744	2024	12	39.91	67.35	59.3%
744	2024	1	40.11	71.14	56.4%
696	2024	2	36.61	54.00	67.8%
743	2024	3	31.42	50.11	62.7%
720	2024	4	25.15	46.11	54.5%
744	2024	5	18.87	47.93	39.4%
720	2024	6	15.74	23.86	66.0%
744	2024	7	15.58	19.50	79.9%
744	2024	8	15.09	19.54	77.2%
720	2024	9	15.77	26.78	58.9%
744	2025	10	22.93	41.51	55.2%
721	2025	11	32.11	50.24	63.9%
744	2025	12	39.91	67.35	59.3%
744	2025	1	40.11	71.14	56.4%
672	2025	2	36.61	54.00	67.8%
743	2025	3	31.42	50.11	62.7%
720	2025	4	25.15	46.11	54.5%
744	2025	5	18.87	47.93	39.4%
720	2025	6	15.74	23.86	66.0%
744	2025	7	15.58	19.50	79.9%
744	2025	8	15.09	19.54	77.2%
720	2025	9	15.77	26.78	58.9%
744	2026	10	22.93	41.51	55.2%
721	2026	11	32.11	50.24	63.9%
744	2026	12	39.91	67.35	59.3%
744	2026	1	40.11	71.14	56.4%
672	2026	2	36.61	54.00	67.8%
743	2026	3	31.42	50.11	62.7%
720	2026	4	25.15	46.11	54.5%
744	2026	5	18.87	47.93	39.4%
720	2026	6	15.74	23.86	66.0%
744	2026	7	15.58	19.50	79.9%
744	2026	8	15.09	19.54	77.2%
720	2026	9	15.77	26.78	58.9%
744	2027	10	22.93	41.51	55.2%
721	2027	11	32.11	50.24	63.9%
744	2027	12	39.91	67.35	59.3%
744	2027	1	40.11	71.14	56.4%
672	2027	2	36.61	54.00	67.8%
743	2027	3	31.42	50.11	62.7%
720	2027	4	25.15	46.11	54.5%
744	2027	5	18.87	47.93	39.4%
720	2027	6	15.74	23.86	66.0%
744	2027	7	15.58	19.50	79.9%
744	2027	8	15.09	19.54	77.2%
720	2027	9	15.77	26.78	58.9%
744	2028	10	22.93	41.51	55.2%
721	2028	11	32.11	50.24	63.9%
744	2028	12	39.91	67.35	59.3%
744	2028	1	40.11	71.14	56.4%
696	2028	2	36.61	54.00	67.8%
743	2028	3	31.42	50.11	62.7%
720	2028	4	25.15	46.11	54.5%
744	2028	5	18.87	47.93	39.4%
720	2028	6	15.74	23.86	66.0%
744	2028	7	15.58	19.50	79.9%
744	2028	8	15.09	19.54	77.2%
720	2028	9	15.77	26.78	58.9%
744	2029	10	22.93	41.51	55.2%
721	2029	11	32.11	50.24	63.9%
744	2029	12	39.91	67.35	59.3%
744	2029	1	40.11	71.14	56.4%
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744	2029	8			15.09				19.54	77.2%	
720	2029	9			15.77				26.78	58.9%	
744	2030	10			22.93				41.51	55.2%	
721	2030	11			32.11				50.24	63.9%	
744	2030	12			39.91				67.35	59.3%	
744	2030	1			40.11				71.14	56.4%	
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721	2031	11			32.11				50.24	63.9%	
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743	2031	3			31.42				50.11	62.7%	
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744	2035	7			15.58				19.50	79.9%	
744	2035	8			15.09				19.54	77.2%	
720	2035	9			15.77				26.78	58.9%	
			#/N/A	#/N/A	22.9276605	#/N/A	#/N/A	#/N/A	41.509513	#/N/A	0.55234713
			#/N/A	#/N/A	32.1093519	#/N/A	#/N/A	#/N/A	50.239799	#/N/A	0.63912182
			#/N/A	#/N/A	39.9105711	#/N/A	#/N/A	#/N/A	67.348273	#/N/A	0.59259977
			#/N/A	#/N/A	40.1134522	#/N/A	#/N/A	#/N/A	71.143526	#/N/A	0.56383841
			#/N/A	#/N/A	36.6124168	#/N/A	#/N/A	#/N/A	54.001435	#/N/A	0.6779897
			#/N/A	#/N/A	31.4220907	#/N/A	#/N/A	#/N/A	50.112651	#/N/A	0.62702911
			#/N/A	#/N/A	25.1506418	#/N/A	#/N/A	#/N/A	46.113485	#/N/A	0.54540753
			#/N/A	#/N/A	18.8688872	#/N/A	#/N/A	#/N/A	47.930192	#/N/A	0.39367435
			#/N/A	#/N/A	15.7368216	#/N/A	#/N/A	#/N/A	23.861474	#/N/A	0.65950752
			#/N/A	#/N/A	15.581683	#/N/A	#/N/A	#/N/A	19.500497	#/N/A	0.7990403
			#/N/A	#/N/A	15.0878922	#/N/A	#/N/A	#/N/A	19.540661	#/N/A	0.77212804
			#/N/A	#/N/A	15.77368	#/N/A	#/N/A	#/N/A	26.781086	#/N/A	0.58898582



	Data Start Date	Data Stop Date
Customer Level Model Parameters:	1/1/03	3/31/13
Customer Level Energy forecast based on trend; R-Squared =0.804		
Customer Level Peak forecast based on trend; R-Squared = 0.811		

Per  
Kimberly  
4/2015  
Per  
Kimberly  
6/2015

Active Projects:	Project Start Date	POD	Peak kW	Load Factor
Cominco Load Loss	Ramps from 1/2015 through 5/2015. Full load through 12/2019.	10306_DP0443	7000	Variable monthly LF
<del>Newsprint Slowdown</del>	<del>1/2015 through 12/2016. Energy reduction only. Peak remains steady</del>	<del>10306_0927 (Usk)</del>	<del>Unchanged</del>	<del>Variable.</del>
Newsprint Slowdown	10/2016 through 9/2018. Load at 56 aMW. 0 aMW FY 2019 and beyond.	10306_0927 (Usk)	appx 63,000	Appx (90%)

Cominco Load Loss		
Month	Peak kW	Load Factor
1	7000	82.0
2	7000	82.0
3	7000	82.0
4	7000	82.0
5	7000	82.0
6	7000	82.0
7	7000	82.0
8	7000	82.0
9	7000	82.0
10	7000	82.0
11	7000	82.0
12	7000	82.0

## Knudson,Thanh (CONTR) - CGI-7

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**From:** Kimberly Gentle <kgentle@popud.org>  
**Sent:** Wednesday, October 4, 2017 8:46 AM  
**To:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Normandeau, Mike (BPA) - PSE-ROANAN; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Amber E. Orr  
**Subject:** [EXTERNAL] HiTest sands

Good morning and happy Wednesday! I have attached a press release announcing HiTest has officially commenced with the permitting process to build a 105 mw facility here in Newport. As you know, they have indicated to us that they are actually looking at a two phase build with a total of 210 mw.

<http://pocedc.org/wp-content/uploads/2017/03/HiTestSilicon-PressRelease20171003.pdf>

At this point we do not yet have the deposits or the contracts necessary to commence with our system studies with BPA. We are meeting to discover more this week and I will be sharing with you as information becomes available. For now, I just wanted you to hear it from us and we will keep you updated.

Thank you for all your work to date and I am hoping we can start seeing some movement soon.

*Kimberly Gentle*

Director, Power and Risk Management

### Public Utility District No. 1 of Pend Oreille County



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**PRESS RELEASE**

**Date: October 3, 2017**

**From: Pend Oreille County Commissioners**

**Contact: Gregg Dohrn, Pend Oreille County Hi Test Project Manager**

**Phone: 206-679-7507**

**Email: [greggdohrn@comcast.net](mailto:greggdohrn@comcast.net)**

**Pre-construction permitting process for silicon production facility near Newport Washington begins**

**Newport, Wash.** – A Canadian company, HiTest Sand, Inc., formally started the application process for permits necessary to build a \$325 million silicon production facility south of Newport on Monday, October 2.

This milestone, along with their recent purchase of 192 acres a few miles south of Newport establishes their commitment to build here, announced the Pend Oreille County Commissioners.

Top HiTest executives began a week of meetings with state and local officials from Washington and Idaho.

Gregg Dohrn, Pend Oreille County's HiTest Project Manager, said that in the discussions leading up to this announcement they have identified the state and local permits and approvals that must be obtained before construction can begin. Dohrn said with this formal announcement the County will now determine more specifically what information must be submitted and when the opportunities for public review and comment will occur. He estimates the application and review process could take at least a year. Construction would require two more years.

During the past year, HiTest had explored several location options. They also hired a company to make air dispersion models for their facility that will be necessary during the permitting process.

"HiTest intentionally has kept a low profile," said Jayson Tymko, president of the Edmonton, Alberta, based company. "Our management's approach to business is not to create false expectations. Now that we have chosen a site, we have begun the necessary steps to incorporate a Washington state entity as well as open a local office."

John Carlson, vice president, said they plan to be part of the community for a long time. Part of the reason they have taken so long to begin specific discussions with the community about their plans was so they could complete studies to ensure the project's economic feasibility.

"We intend on having many public consultations and open houses to discuss our plans and listen to the resident's feedback," Carlson said. "We have completed preliminary layouts, and are now proceeding with validating these plans with recently completed geotechnical, access road and environmental studies.

The basic requirements will include compliance with the Washington State Environmental Policy Act (SEPA), Dohrn said. In addition, the Washington State Department of Ecology will require an extensive assessment of the emissions from the

facility. This is to determine whether the facility can meet the national air quality standards of the Clean Air Act.

Carlson said they are currently running dispersion models up to 350 miles from their site and are within the Washington State air emissions standards. They have studied the wind data over the past 3 years. The studies also analyze visibility of dispersion.

Pend Oreille County will require a conditional use permit for the development of the site as well as building permits. HiTest purchased the undeveloped 192 acres from the Pend Oreille County Public Utility District who had purchased most of the property in anticipation of building a gas powered electrical generating facility back in the 1980's. The site includes a 13-acre parcel that the County sold to the PUD so that the property could be marketed together.

These county permits will assess: how materials will be shipped in and out of the site; how employees will travel; and how services like sewer and water will be provided. They will also ensure that appropriate measures have been taken so that there is no threat to ground or surface waters.

Colin Willenbrock, PUD general manager, said, "Now that HiTest has officially purchased property in the County, we will work with them on a formal request for service at the site and the execution of a collateral agreement to fund the necessary engineering analysis for power delivery." He said the analysis is a multi-party process involving our staff, neighboring Avista and the Bonneville Power Administration.

The District will also need to begin negotiating a long-term power supply agreement with sufficient financial security, Willenbrock said.

"Economic development projects of this scale generally start with the PUD," Willenbrock said. "Our Commissioners and highly qualified staff take a lot of pride in helping any new customer."

HiTest has projected that the facility will require 105 megawatts of electricity a year.

HiTest said they plan to employ 150 at the facility with an estimated plant life that exceeds 50 years. They estimate up to 400 will be employed for construction.

Pend Oreille County Commissioner Mike Manus said the positive economic impact on the county would be significant especially at this time when it is struggling. He said he believes that HiTest will be a good member of the community.

"We need a diverse economic base that will support young families and give us a more sustainable future," said Karen Skoog, Pend Oreille County Commissioner. "I believe our community's commitment to a rural way of life and the environment will make additional development reasonable and low impact."

Pend Oreille County Commissioner Steve Kiss said that this project will have economic benefits throughout the region. "We look forward to working with our regional partners in Bonner, Stevens, Kootenai, and Spokane County to maximize the benefits from this unique opportunity," Kiss said.

At their Horse Creek Quartz mine, HiTest Sand Inc. currently operates a seasonal quarry for a variety of industrial uses. The company originally evaluated the deposit for an alternate industrial use.

They started plans for a silica metal plant in Golden, British Columbia, based on the high quality of the quartz discovered. The low electricity rates and business friendly Washington State enabled HiTest to move the plans for a production facility to Newport.

It is anticipated that the raw material will be transported to the Newport facility by rail and/or by truck on designated heavy load routes through Bonner County, Idaho.

Silicon metal is used in the production of many products in the growing “green” technology industries including the making of aluminum, the production of solar panels and computer chips and components. Silicon metal is made from the reaction of silica (silicon dioxide, SiO<sub>2</sub>) and carbon materials like charcoal, coal and wood chips.

This state-of-the art facility, which the company said they would be explaining in detail as the permitting process advances, is considered environmentally friendly without toxic chemicals or air quality issues.

“Our plans are to hire as many local residents as possible,” Tymko said.

But they will also have some of the top experts in the field. One of them is Jim May their chief operating officer. He was president and CEO of Dow Corning Silicon Energy Systems. Where he grew their silicon metal business from \$50 million to \$300 million over a five-year period. He will be a key member of their expert team during construction and startup.

The Washington Department of Commerce has designated this a Project of Statewide Significance and awarded HiTest a \$300,000 grant to offset study costs to date. The Governor’s office, Commerce staff and our state legislators have been involved and helpful from the beginning, said Dohrn.

“While we can see the potential for significant economic benefits, we understand that with tremendous opportunity comes tremendous responsibility, and we are ready to meet that challenge,” said Dohrn.

The County Commissioners have established an Executive Committee of local elected officials to provide coordination throughout the permitting process. Elected officials representing the City of Newport, the PUD, the Port of Pend Oreille, Bonner County, and the Kalispel Tribe, as well as the Chair of the Pend Oreille County Economic Development Council have been invited to participate.

The Commissioners have also established a staff coordinating committee to ensure that the staff from all of the local agencies that may be directly or indirectly involved are working closely together. This coordination is focused not only on permitting but also to make sure that the community will take full advantage of the economic development opportunities. This will include specific workgroups to address such topics as housing needs and opportunities, workforce development, and contracting opportunities.

For more information, please visit the Pend Oreille County Economic Development Council’s website at [www.pocedc.org](http://www.pocedc.org).

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## Knudson,Thanh (CONTR) - CGI-7

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**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Friday, October 6, 2017 2:45 PM  
**To:** Amber Orr (aorr@popud.org)  
**Subject:** LLIR for HiTest

Hi Amber,

Per my voicemail from this morning, I wanted to follow-up with you regarding our discussion yesterday. Hopefully the information below helps make your decision when it comes to the new LLIR for HiTest. I'll be out of the office until next Thursday, but if you would like to further discuss with BPA, please let me know and I'd be more than happy to setup a conference call prior to your submittal.

- 1) Submit request for 105 MW.
  - a. New request would be needed for incremental 105 MW in future.
- 2) Submit request for 210 MW.
  - a. If significant time elapses between initial 105 MW and incremental 105 MW, and/or the system changes significantly, a new request may be needed.
- 3) Submit request for 105 MW and request for 210 MW.
  - a. This would require two independent studies and require two separate payments.

Honestly, the best approach (and probably quickest) is option #1 for the 105 MW and just indicate potential future plans for incremental load, if expected, within the request itself. Unless there is a high likelihood of the incremental load soon after the project is energized, or if HiTest wants to know the costs of each alternative. Then you may want to consider one of the other options. Hopefully this helps.

Have a good weekend!

Thanks,

### Victor Hitchens

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

## Knudson,Thanh (CONTR) - CGI-7

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**From:** Kimberly Gentle <kgentle@popud.org>  
**Sent:** Wednesday, October 4, 2017 1:14 PM  
**To:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Cc:** Normandeau,Mike (BPA) - PSE-RONAN; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Amber E. Orr  
**Subject:** [EXTERNAL] Re: HiTest sands

I wouldn't say they have officially pushed the project back but they are hearing that the timing is very challenging. We are meeting with the department of ecology and other permitting agencies this afternoon.

I will shoot you a call after as I think we will probably want to touch base. You around this afternoon?

Sent from my iPhone

On Oct 4, 2017, at 11:17, Robertson,Angela D (BPA) - TSE-TPP-2 <[adrobertson@bpa.gov](mailto:adrobertson@bpa.gov)> wrote:

Thanks for the update Kim.

If I'm reading the statement from the Project Manager correctly, it looks like HiTest's timeline is currently allotting for 3+ years for permitting and construction prior to production? If that's correct, it's a relief to hear that they've pushed out their timeline a bit to adjust for the time we lost over this last year.

Feel free to give me a call or email if you have any questions about submitting the new Line and Load Interconnection Request.

Have a good one!

**Angela Robertson**

Transmission Account Executive | Transmission Sales

**BONNEVILLE POWER ADMINISTRATION**

[bpa.gov](http://bpa.gov) | P 360.619.6192 | M (b) (6) | F 360.619.6940

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**From:** Kimberly Gentle [<mailto:kgentle@popud.org>]  
**Sent:** Wednesday, October 04, 2017 8:46 AM  
**To:** Robertson,Angela D (BPA) - TSE-TPP-2; Normandeau,Mike (BPA) - PSE-RONAN; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Amber E. Orr  
**Subject:** [EXTERNAL] HiTest sands

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At this point we do not yet have the deposits or the contracts necessary to commence with our system studies with BPA. We are meeting to discover more this week and I will be sharing with you as

information becomes available. For now, I just wanted you to hear it from us and we will keep you updated.

Thank you for all your work to date and I am hoping we can start seeing some movement soon.

*Kimberly Gentle*

Director, Power and Risk Management

**Public Utility District No. 1 of Pend Oreille County**

<image002.png>P.O. Box 190 | 130 N. Washington

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## Knudson,Thanh (CONTR) - CGI-7

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**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Monday, October 16, 2017 2:47 PM  
**To:** Amber E. Orr  
**Subject:** RE: LLIR for HiTest

How about 8am or 10am? I'm still waiting to confirm 100% on our end, but those may be options.

Thanks,  
Victor

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Monday, October 16, 2017 2:18 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** [EXTERNAL] RE: LLIR for HiTest

Victor,

Really the best option for me is on Thursday morning or early afternoon sometime before 2:00 p.m. Does anything in that timeframe work for you?

*Amber Elise Orr, P.E.*  
Director of Engineering

### Public Utility District No. 1 of Pend Oreille County



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**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Monday, October 16, 2017 2:10 PM  
**To:** Amber E. Orr  
**Subject:** RE: LLIR for HiTest

Amber,  
Thanks for the update. Do you have a date/time that works better for you this week? Otherwise I can check our calendars and offer a suggestion or two.

Regards,  
Victor

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Monday, October 16, 2017 1:14 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** [EXTERNAL] RE: LLIR for HiTest

Victor,

After a fair amount of consideration and discussion with HiTest, I have decided to submit two (2) LLIRs (option number 3). This is based on their desire to know what kind of planning they can realistically begin now for incremental growth inside the next 5 to 10 year period. I will be happy to take you up on your offer to have a discussion before I submit the documents, but, I do plan to do so this week.

*Amber Elise Orr, P.E.*

Director of Engineering

Public Utility District No. 1 of Pend Oreille County



P.O. Box 190 | 130 N. Washington

Newport, Washington 99156

509.447-3137 | [aorr@popud.org](mailto:aorr@popud.org) | [www.popud.org](http://www.popud.org)

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---

**From:** Hitchens, Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]

**Sent:** Friday, October 06, 2017 2:45 PM

**To:** Amber E. Orr

**Subject:** LLIR for HiTest

Hi Amber,

Per my voicemail from this morning, I wanted to follow-up with you regarding our discussion yesterday. Hopefully the information below helps make your decision when it comes to the new LLIR for HiTest. I'll be out of the office until next Thursday, but if you would like to further discuss with BPA, please let me know and I'd be more than happy to setup a conference call prior to your submittal.

- 1) Submit request for 105 MW.
  - a. New request would be needed for incremental 105 MW in future.
- 2) Submit request for 210 MW.
  - a. If significant time elapses between initial 105 MW and incremental 105 MW, and/or the system changes significantly, a new request may be needed.
- 3) Submit request for 105 MW and request for 210 MW.
  - a. This would require two independent studies and require two separate payments.

Honestly, the best approach (and probably quickest) is option #1 for the 105 MW and just indicate potential future plans for incremental load, if expected, within the request itself. Unless there is a high likelihood of the incremental load soon after the project is energized, or if HiTest wants to know the costs of each alternative. Then you may want to consider one of the other options. Hopefully this helps.

Have a good weekend!

Thanks,

**Victor Hitchens**

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Thursday, October 19, 2017 7:58 AM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Subject:** [EXTERNAL] Map  
**Attachments:** April 17 2017 map products \_Page\_3 (1).png

Victor,

I don't believe I have ever sent over a map of the site that Hi-Test has proposed as a construction site. We have only described it to you in concept. So, I have attached a map that should give us some talking points.

*Amber Elise Orr, P.E.*

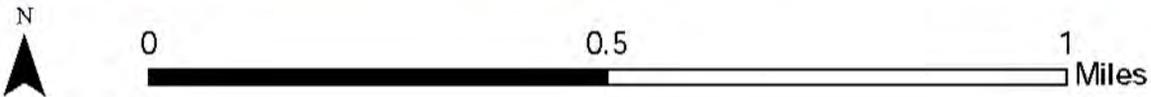
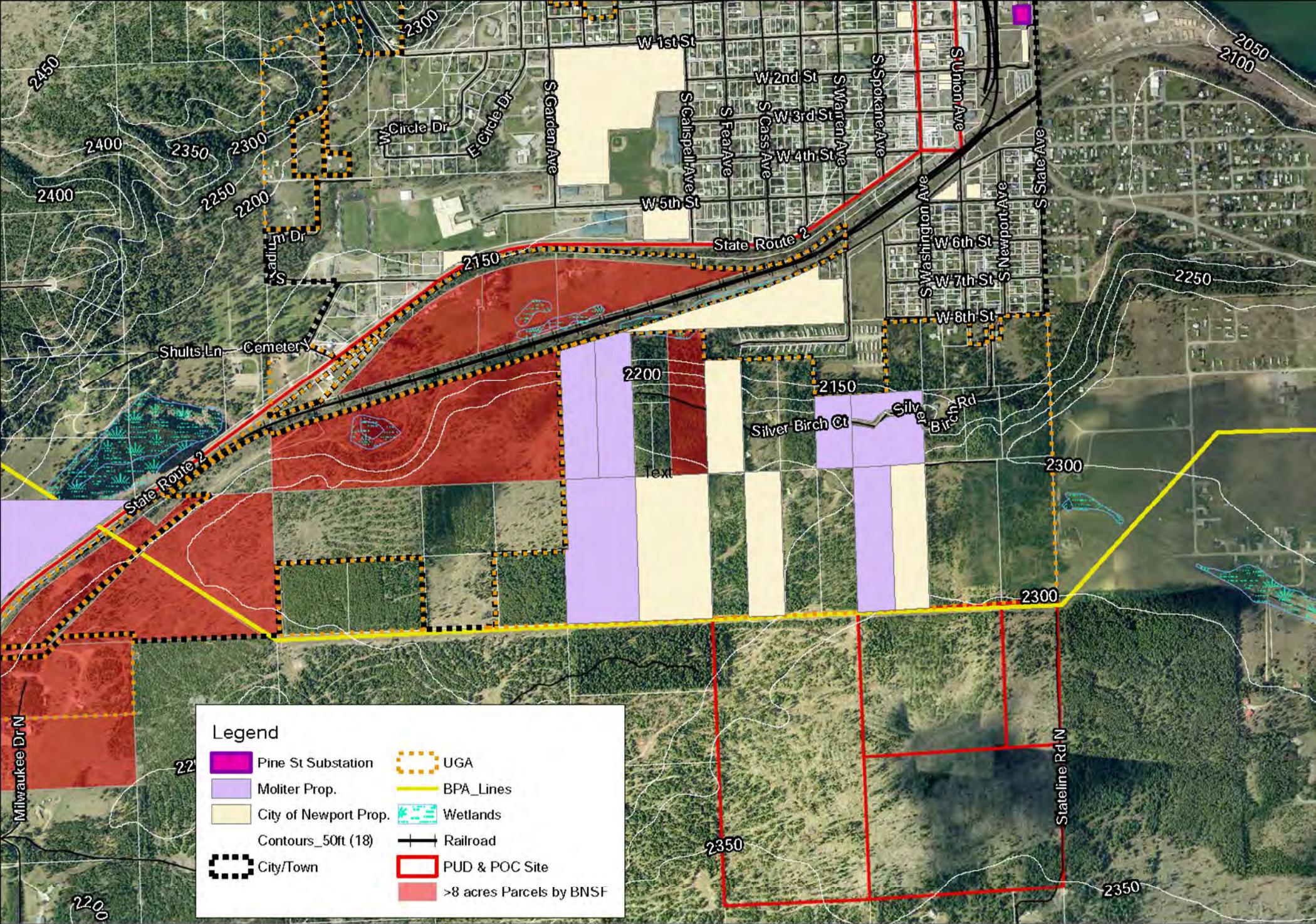
Director of Engineering

### Public Utility District No. 1 of Pend Oreille County



P.O. Box 190 | 130 N. Washington  
Newport, Washington 99156  
509.447.3137 | [aorr@popud.org](mailto:aorr@popud.org) | [www.popud.org](http://www.popud.org)

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## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Thursday, October 19, 2017 3:35 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Amber E. Orr  
**Cc:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Wick,Martin A (BPA) - TPCV-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Kimberly Gentle; Colin Willenbrock  
**Subject:** [EXTERNAL] RE: L0404 Pend Oreille PUD Arc Furnace Load Request - Acknowledgement

Shari,

As a follow up to our phone conference this morning, I would like to retract the referenced Load Request No. L0404 that was submitted on October 28, 2016. Pend Oreille P.U.D. will be submitting a new request in behalf of our customer that reflects the change in load requirement and proposed construction site location.

*Amber Elise Orr, P.E.*

Director of Engineering

Public Utility District No. 1 of Pend Oreille County



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---

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4 [mailto:slsundeen@bpa.gov]  
**Sent:** Monday, October 31, 2016 3:20 PM  
**To:** Amber E. Orr  
**Cc:** Robertson,Angela D (BPA) - TSES-TPP-2; Wick,Martin A (BPA) - TPCV-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** L0404 Pend Oreille PUD Arc Furnace Load Request - Acknowledgement

Ms. Orr,

This email acknowledges Bonneville Power Administration's (BPA) receipt of Pend Oreille Public Utility District No. 1 (Pend Oreille) Line and Load Interconnection Request (LLIR). The Request seeks interconnection at BPA's Usk Substation.

The LLIR was posted to BPA's Interconnection Queue as Request No. L0404, showing a queue date of October 28, 2016.

BPA has determined that there are no deficiencies.

BPA will be contacting Pend Oreille within 30 Business Days to arrange for a kickoff meeting. If you have a specific date/time in mind, please let me know and I'll do my best to accommodate you.

If you have any questions, please contact me at (360) 619-6045 or Victor Hitchens at (509) 822-4602.

Thank you,

*Shari Sundeen*  
*Line and Load Interconnection Administrator*  
*(360) 619-6045*

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Sent:** Thursday, October 19, 2017 3:37 PM  
**To:** Amber E. Orr  
**Cc:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Wick,Martin A (BPA) - TPCV-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Kimberly Gentle; Colin Willenbrock  
**Subject:** RE: L0404 Pend Oreille PUD Arc Furnace Load Request - Acknowledgement

Thank you Amber. I will take care of this.

Shari

---

**From:** Amber E. Orr [mailto:aorr@popud.org]  
**Sent:** Thursday, October 19, 2017 3:35 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Amber E. Orr  
**Cc:** Robertson,Angela D (BPA) - TSE-TPP-2; Wick,Martin A (BPA) - TPCV-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Kimberly Gentle; Colin Willenbrock  
**Subject:** [EXTERNAL] RE: L0404 Pend Oreille PUD Arc Furnace Load Request - Acknowledgement

Shari,

As a follow up to our phone conference this morning, I would like to retract the referenced Load Request No. L0404 that was submitted on October 28, 2016. Pend Oreille P.U.D. will be submitting a new request in behalf of our customer that reflects the change in load requirement and proposed construction site location.

*Amber Elise Orr, P.E.*

Director of Engineering

Public Utility District No. 1 of Pend Oreille County



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---

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4 [mailto:slsundeen@bpa.gov]  
**Sent:** Monday, October 31, 2016 3:20 PM  
**To:** Amber E. Orr  
**Cc:** Robertson,Angela D (BPA) - TSES-TPP-2; Wick,Martin A (BPA) - TPCV-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** L0404 Pend Oreille PUD Arc Furnace Load Request - Acknowledgement

Ms. Orr,

This email acknowledges Bonneville Power Administration's (BPA) receipt of Pend Oreille Public Utility District No. 1 (Pend Oreille) Line and Load Interconnection Request (LLIR). The Request seeks interconnection at BPA's Usk Substation.

The LLIR was posted to BPA's Interconnection Queue as Request No. L0404, showing a queue date of October 28, 2016.

BPA has determined that there are no deficiencies.

BPA will be contacting Pend Oreille within 30 Business Days to arrange for a kickoff meeting. If you have a specific date/time in mind, please let me know and I'll do my best to accommodate you.

If you have any questions, please contact me at (360) 619-6045 or Victor Hitchens at (509) 822-4602.

Thank you,

*Shari Sundeen*  
*Line and Load Interconnection Administrator*  
*(360) 619-6045*

**From:** [Sundeen,Shari \(BPA\) - TPCC-TPP-4](#)  
**To:** [Adams,Nicole A \(CONTR\) - TSES-TPP-2](#); [Hirsi,Sam \(BPA\) - TPPA-OPP-3](#); [Hitchens,Victor P \(BPA\) - TPCF-MEAD-GOB](#); [McClory,Claire D \(BPA\) - ECT-4](#); [Robertson,Angela D \(BPA\) - TSE-TPP-2](#); [Vlas,Jon \(BPA\) - TPMC-OPP-3](#); [Wick,Martin A \(BPA\) - TPCV-TPP-4](#); [Bustamante,Richard \(BPA\) - TPP-OPP-3](#); [Hammack,Debby \(BPA\) - TPPC-OPP-3](#); [Moyer,Robert B \(CONTR\) - TPCC-TPP-4](#); [Odegard,Erik R \(CONTR\) - TPCC-TPP-4](#)  
**Subject:** L0404 Pend Oreille PUD Arc Furnace Load Request - Withdrawn  
**Date:** Thursday, October 19, 2017 3:42:14 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)

---

L0404 has been officially withdrawn by Pend Oreille County PUD.

Shari

---

**From:** Amber E. Orr [mailto:[aorr@popud.org](mailto:aorr@popud.org)]  
**Sent:** Thursday, October 19, 2017 3:35 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Amber E. Orr  
**Cc:** Robertson,Angela D (BPA) - TSE-TPP-2; Wick,Martin A (BPA) - TPCV-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Kimberly Gentle; Colin Willenbrock  
**Subject:** [EXTERNAL] RE: L0404 Pend Oreille PUD Arc Furnace Load Request - Acknowledgement

Shari,

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*Amber Elise Orr, P.E.*

Director of Engineering

**Public Utility District No. 1 of Pend Oreille County**

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## **Knudson,Thanh (CONTR) - CGI-7**

---

**From:** Kimberly Gentle <kgentle@popud.org>  
**Sent:** Monday, December 11, 2017 3:09 PM  
**To:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Subject:** [EXTERNAL] AF# 137661.pdf  
**Attachments:** AF# 137661.pdf

This is the easement I was speaking to.

TRANSMISSION LINE AND ACCESS ROAD EASEMENT

The GRANTOR, herein so styled whether one or more, PEND OREILLE COUNTY, WASHINGTON, a municipal corporation;

Reviewed  
Approved  
Dated

for and in consideration of the sum of - TWO THOUSAND ONE HUNDRED THIRTY - - - - - Dollars (\$ 2,130.00 ),

in hand paid by the UNITED STATES OF AMERICA, receipt of which is hereby acknowledged, hereby grants, bargains, sells, and conveys to the UNITED STATES OF AMERICA and its assigns, a perpetual easement and right to enter and erect, maintain, repair, rebuild, operate, and patrol ~~one~~ line~~s~~ of electric power transmission structures and appurtenant signal lines, including the right to erect such poles, transmission structures, wires, cables, and appurtenances as are necessary thereto, in, over, upon, and across the following-described parcel of land in the County of Pend Oreille, in the State of Washington, to-wit:

The north 90 feet of Lots 1 and 2 of Section 30, Township 31 North, Range 46 East, Willamette Meridian, Pend Oreille County, Washington.

It is agreed that any damage to Grantor's agricultural crops, fences, or irrigation or drainage systems on the right-of-way resulting from and in the course of construction, reconstruction or maintenance of the transmission line or lines shall be repaired, replaced or paid for by Grantee or its contractor. Where payment is made, the amount of damages will be determined by an appraisal made by the Grantee.

Any use of the right-of-way by the Grantor, his heirs, successors, and assigns, other than the right to grow, cultivate, and harvest agricultural crops, shrubs, decorative plants, or to utilize as grazing lands, shall be by express permission of the Grantee. However, the Grantee shall have the right to grade, cultivate, plant, and maintain grass, shrubs, or other cover or ornamental plants upon the portion of the right-of-way not otherwise being utilized by Grantor.

For the purpose of preserving the natural appearance of the right-of-way, it is agreed by the Grantor and the United States of America that the right-of-way shall not be used for the accumulation or dumping of litter, trash or other foreign material. The Grantee agrees that any such accumulations resulting from its entry upon the right-of-way for construction or maintenance purposes will be removed or disposed of by Grantee or its contractor.

Access Road No. AAB-12-AR-1 may be used for ingress and egress to and from the Bonneville Power Administration's Sacheen-Albeni Falls No. 1 transmission line and to and from any existing or future transmission lines which have been or may be constructed adjacent or nearly adjacent thereto.

Together with the present and future right to clear said right of way and keep the same clear of brush, timber, structures, and fire hazards, provided that fire hazards shall not be interpreted to include any growing crops other than trees; and also the present ~~right to top, limb or fell all growing and dead trees and snags (collectively called "danger trees")~~ located on land owned by the Grantor adjacent to the above-described right of way, which could fall within 25 feet of ~~the electric transmission facilities hereinbefore described; provided,~~ however, it is agreed that compensation is included in the consideration stated above for trees or snags within strips of land ~~as shown outlined in green on Exhibit 1 attached hereto and made a part hereof,~~ as shown outlined in green on Exhibit 1 attached hereto and made a part hereof,

~~and~~ contiguous to said right of way that (a) are danger trees on (hereinafter called "present danger trees"), ~~and~~ ~~the right to top, limb or fell danger trees outside of said strips (hereinafter called "additional danger trees") may only be exercised within 3 years after all present danger trees have been cut, and the UNITED STATES OF AMERICA shall pay the person who is the owner thereof at the date of cutting such additional danger trees the market value prevailing at the date of cutting under authority of the UNITED STATES OF AMERICA, such payment to be made within a reasonable period of time after they have been so cut; and~~ Grantor also hereby grants, bargains, sells, and conveys unto the UNITED STATES OF AMERICA, and its assigns, a permanent easement and right of way for the construction, operation and maintenance of a road ~~approximately twenty (20) feet in width~~ <sup>sixteen</sup> feet in width ~~on, over, and across the land of the Grantor in Lots 1 and 2 of Section 30, Township 31 North, Range 46 East, Willamette Meridian, Pend Oreille County, Washington,~~

for the following purposes, namely: the right to enter and to clear of timber, danger trees, and brush; ~~to~~ cut, fill, level, grade, drain, surface, ~~maintain, repair and rebuild a road and such culverts, bridges, turn-outs, retaining walls or other appurtenant structures as may be necessary, on, over, and across the land embraced within said right of way, as shown colored in red on drawing Serial No. 153312 DIM-D,~~

prepared by the United States Department of the Interior, Bonneville Power Administration, attached hereto and by this reference, made a part hereof.

The Grantor reserves the right of ingress and egress over and across said road and the right to pass and repass along and on said road insofar as the same extends across the lands of the Grantor, said right to be exercised in a manner that will not interfere with the use of the road by the UNITED STATES OF AMERICA, its employees, contractors, ~~or~~ assigns.

It is understood and agreed that if said road is damaged by the UNITED STATES OF AMERICA, its employees, contractors, ~~or~~ assigns, the UNITED STATES OF AMERICA, subject to the availability of appropriations, or its assigns, will repair such damage. It is further understood and agreed that the grantor may erect or maintain fences across such road, provided adequate gates of not less than ~~ten~~ <sup>sixteen</sup> feet in width are installed, which may be kept locked, provided the UNITED STATES OF AMERICA is also permitted to install its own lock thereon.

TO HAVE AND TO HOLD said easement and rights unto the UNITED STATES OF AMERICA and its assigns, forever.

The Grantor covenants to and with the UNITED STATES OF AMERICA and its assigns that the title to all brush, timber or structures existing upon the rights of way on January 15, 1973, and the title to all present danger trees shall vest in the UNITED STATES OF AMERICA on said date; and that title to any additional danger trees shall vest in the UNITED STATES OF AMERICA upon their being cut pursuant to the terms hereof; ~~and that the~~ ~~consideration stated herein is accepted by the Grantor as full compensation for all damages incidental to the exercise of said easement and danger tree rights, except payment for any additional danger trees as defined hereinabove which may be cut under authority of the UNITED STATES OF AMERICA as herein provided.~~

The Grantor also covenants to and with the UNITED STATES OF AMERICA that Grantor is lawfully seized and possessed of the lands aforesaid; has a good and lawful right and power to sell and convey same; that same are free and clear of encumbrances, except as above indicated; and that Grantor will forever warrant and defend the title to said easement and the quiet possession thereof against the lawful claims and demands of all persons whomsoever.

137661

Dated this 15 day of February, 19 73

ATTEST:

(b) (6)

Pend Oreille County, Washington

By:

(b) (6)

By:

By:

[Redacted signature area]

Reverse side BPA 421C

Board of County Commissioners

7-519

STATE OF WASHINGTON )  
COUNTY OF PEND OREILLE ) ss:

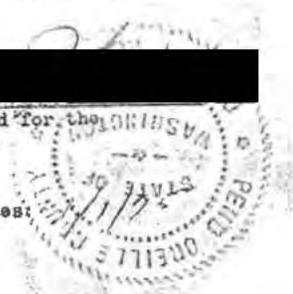
On the 26 day of February, 1973, before me personally appeared Joseph Berendt, Chairman, John Krogh, Commissioner, and Clifford Bockman, Commissioner, to me known to be County Commissioners of Pend Oreille County, State of Washington, that they executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Pend Oreille County, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument, and that the seal affixed is the corporate seal of said County.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

(b) (6)

(SEAL)

Notary Public in and for the State of Washington Residing at  
My commission expires:



The within instrument was received for the record on the 27 day of February, 1973, at 2:10 P M., and recorded in Volume 7, on page 518, Official records of Deeds, Pend Oreille County, Washington, under Auditor's File No. 137661.

(b) (6)

Deputy

After recordation, return to:  
Title Section, Branch of Land - ELF  
Bonneville Power Administration  
P. O. Box 3621  
Portland, Oregon 97208

137661



Exhibit 1

BPA MON  
775+50.4  
40°29'10" Rt  
X 448268.0  
Y 2923 836.7

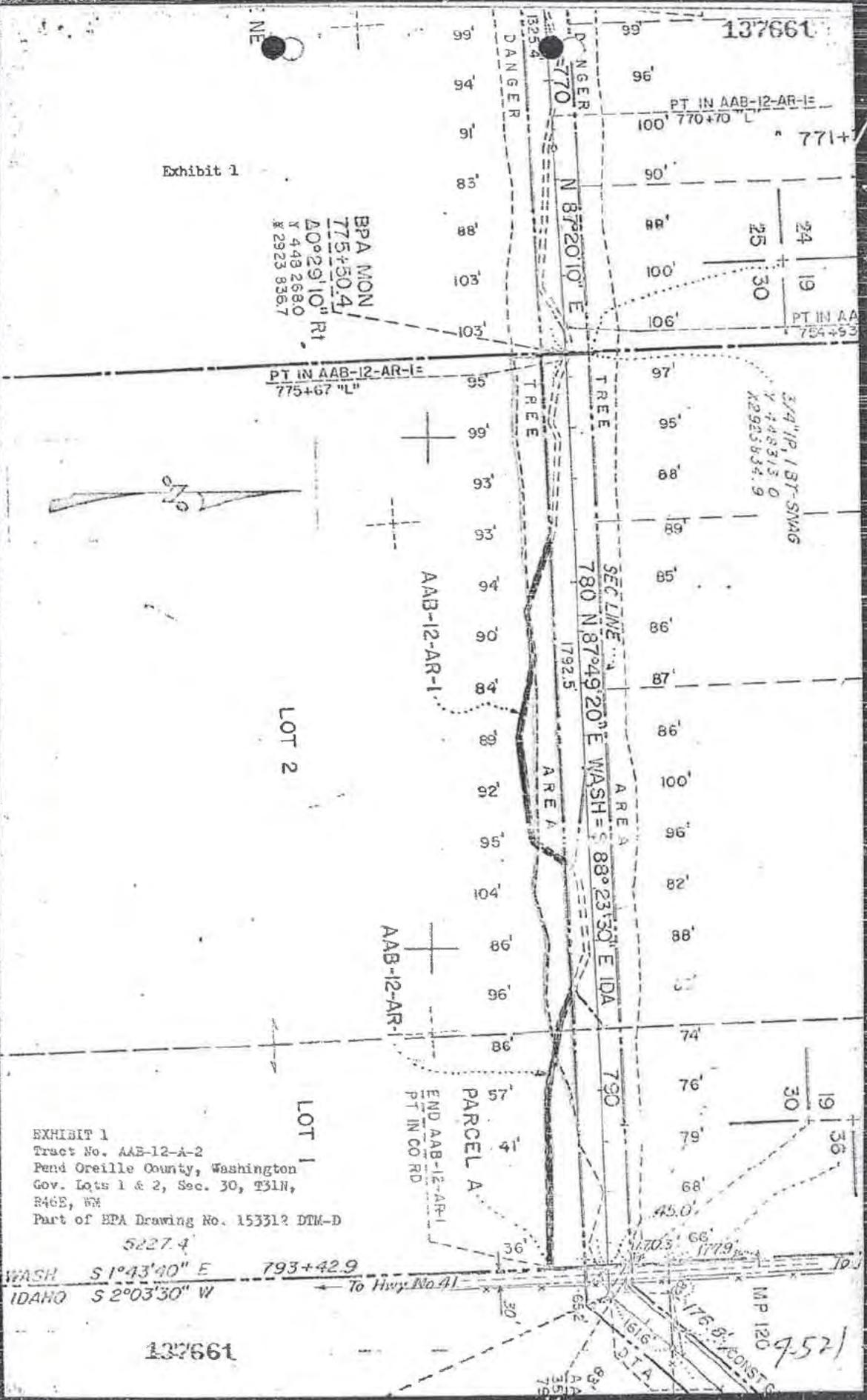


EXHIBIT 1  
Tract No. AAB-12-A-2  
Pend Oreille County, Washington  
Gov. Lots 1 & 2, Sec. 30, T31N,  
R46E, WM  
Part of BPA Drawing No. 153312 DTM-D

5227.4

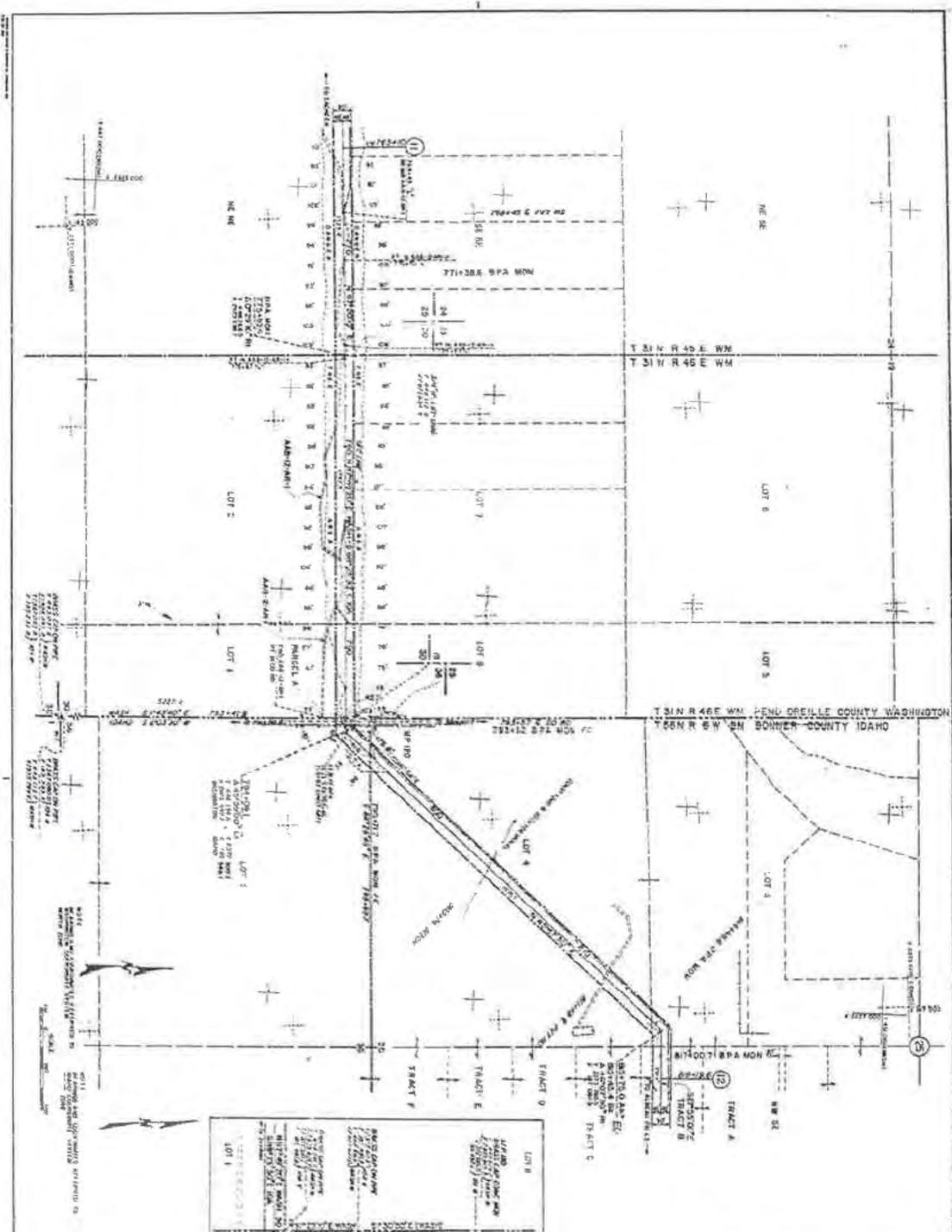
WASH S1°43'40" E 793+42.9  
IDAHO S 2°03'30" W

To Hwy No 91

137661

MP 120  
7.521

*Handwritten signature*



SECS 24, 25, 19 & 20 T31N R45E WM  
 SECS 26, 27, 28 & 29 T31N R45E WM  
 BOWSER COUNTY IDAHO

TRACT	OWNER	ACRES	REMARKS
TRACT A	...	...	...
TRACT B	...	...	...
TRACT C	...	...	...
TRACT D	...	...	...
TRACT E	...	...	...
TRACT F	...	...	...

137661

7-522

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Wednesday, December 13, 2017 2:56 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** [EXTERNAL] RE: Discuss LLIR Options w/POPD

Victor,

I just left you a message, but, wanted to let you know in writing as well that I will be submitting an LLIR for HiTest Sands in the form of 'option 3' in your original email dated 10-6-2017 outlined as:

- 3) Submit request for 105 MW and request for 210 MW.
  - a. This would require two independent studies and require two separate payments.

I will be working on the finer details with their German engineers in the morning and hope to have something completed and submitted to you before the end of the week.

*Amber Elise Orr, P.E.*

Director of Engineering

### Public Utility District No. 1 of Pend Oreille County



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---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [mailto:vphitchens@bpa.gov]  
**Sent:** Thursday, October 19, 2017 7:44 AM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2; Amber E. Orr  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** RE: Discuss LLIR Options w/POPD

Good morning,

(b) (6) Otherwise, please carry on without me. The BPA folks are familiar with the topic, as we had a separate discussion two weeks ago. Attached is what I sent to POPD after that meeting.

My apologies for the inconvenience.

Thanks!

Victor

-----Original Appointment-----

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Monday, October 16, 2017 2:22 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2 ([adroberson@bpa.gov](mailto:adroberson@bpa.gov)); Amber Orr ([aorr@popud.org](mailto:aorr@popud.org))

**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2

**Subject:** Discuss LLIR Options w/POPD

**When:** Thursday, October 19, 2017 8:00 AM-8:30 AM (UTC-08:00) Pacific Time (US & Canada).

**Where:** Phone: 503-230-4000, Code: 056073946 #

All set for Thursday morning at 0800!

(b) (2) [Redacted]

[Redacted]

[Redacted]

[Redacted]

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Wednesday, December 13, 2017 5:22 PM  
**To:** Amber E. Orr; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** RE: Discuss LLIR Options w/POPD

Amber,

Thank you again for the heads up. As mentioned in my voicemail, I will be out of the office tomorrow and Friday, returning on Monday the 18<sup>th</sup>. If you have any questions, please reach out to Shari or Angela in my absence.

Regards,

### Victor Hitchens

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Wednesday, December 13, 2017 3:02 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** [EXTERNAL] RE: Discuss LLIR Options w/POPD

There will be two.

*Amber Elise Orr, P.E.*

Director of Engineering

Public Utility District No. 1 of Pend Oreille County



P.O. Box 190 | 130 N. Washington  
Newport, Washington 99156

509.447-3137 | [aorr@popud.org](mailto:aorr@popud.org) | [www.popud.org](http://www.popud.org)

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**From:** Sundeen,Shari (BPA) - TPCC-TPP-4 [<mailto:slsundeen@bpa.gov>]  
**Sent:** Wednesday, December 13, 2017 3:01 PM  
**To:** Amber E. Orr; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** RE: Discuss LLIR Options w/POPD

Thank you Amber...I'll watch for it. Or are you submitting two?

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Wednesday, December 13, 2017 2:56 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4;

Robertson,Angela D (BPA) - TSE-TPP-2

**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2

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- 3) Submit request for 105 MW and request for 210 MW.
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I will be working on the finer details with their German engineers in the morning and hope to have something completed and submitted to you before the end of the week.

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Director of Engineering

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**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]

**Sent:** Thursday, October 19, 2017 7:44 AM

**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2; Amber E. Orr

**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2

**Subject:** RE: Discuss LLIR Options w/POPD

Good morning,

(b) (6) Otherwise, please carry on without me. The BPA folks are familiar with the topic, as we had a separate discussion two weeks ago. Attached is what I sent to POPD after that meeting.

My apologies for the inconvenience.

Thanks!

Victor

-----Original Appointment-----

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB

**Sent:** Monday, October 16, 2017 2:22 PM

**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2 ([adrobertson@bpa.gov](mailto:adrobertson@bpa.gov)); Amber Orr ([aorr@popud.org](mailto:aorr@popud.org))

**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2

**Subject:** Discuss LLIR Options w/POPD

**When:** Thursday, October 19, 2017 8:00 AM-8:30 AM (UTC-08:00) Pacific Time (US & Canada).

**Where:** Phone: 503-230-4000, Code: 056073946 #

All set for Thursday morning at 0800!

(b) (2) [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Wednesday, December 13, 2017 10:36 AM  
**To:** Kimberly Gentle (kgentle@popud.org)  
**Cc:** Leslie,Brent C (BPA) - TERR-BELL-1  
**Subject:** BPA Realty Contact for Spokane Area

Hi Kim,

Please contact Brent Leslie (Bell Realty Specialist) regarding the potential new load development (HiTest) south of Newport, WA and access road/easement inquiries from their end. Brent can be reached at (509) 468-3081, or via email.

Thanks!

### **Victor Hitchens**

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

## Knudson,Thanh (CONTR) - CGI-7

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**Sent:** Wednesday, December 13, 2017 5:22 PM  
**To:** Amber E. Orr; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2  
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**Subject:** RE: Discuss LLIR Options w/POPD

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*Amber Elise Orr, P.E.*

Director of Engineering

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**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2

**Subject:** RE: Discuss LLIR Options w/POPD

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**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2

**Subject:** Discuss LLIR Options w/POPD

**When:** Thursday, October 19, 2017 8:00 AM-8:30 AM (UTC-08:00) Pacific Time (US & Canada).

**Where:** Phone: 503-230-4000, Code: 056073946 #

All set for Thursday morning at 0800!

**PHONE BRIDGE**

(b) (2)

[REDACTED]

[REDACTED]

[REDACTED]

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Monday, December 18, 2017 7:54 AM  
**To:** Kimberly Gentle  
**Subject:** Tentative: FW: BPA/HiTest road discussion

I'll try to call in (b) (6)

Thanks,  
Victor

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Kimberly Gentle <kgentle@popud.org>  
**Sent:** Tuesday, December 19, 2017 12:23 PM  
**To:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Cc:** Fitzsimmons,David A (TFE)(BPA) - TS-TPP-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Kenna Tornow  
**Subject:** [EXTERNAL] RE: HiTest In the News

Thank you for the additional information. I will put together a draft email for distribution to HiTest, BPA and management here at the PUD for your review. Once you have had an opportunity to edit, then I will finalize and email out. Thank you Angie.

---

**From:** Robertson,Angela D (BPA) - TSE-TPP-2 [mailto:adrobertson@bpa.gov]  
**Sent:** Tuesday, December 19, 2017 12:18 PM  
**To:** Kimberly Gentle  
**Cc:** Fitzsimmons,David A (BPA) - TSE-TPP-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** RE: HiTest In the News

Hi Kim –

After our conversation on the phone I had a conversation with my manager, Dave Fitzsimmons, to determine how we would like to address concerns about the BPA timeline that was indicated in the Spokesman article. We concluded that a clarification provided to the major parties involved (POPUD, BPA and HiTest) should be sufficient to ensure that we're all of the same understanding, and that the article doesn't provide any false expectations for anyone involved.

Specifically, what we would like to see clarified is that BPA does not currently have an established timeline for enabling interconnection of HiTest's load. We will discuss a timeline at our initial scoping meeting, which will be scheduled after we receive the formal Line and Load Interconnection Request(s).

Please let me know if you have any questions.

Thanks so much for your willingness to help provide clarification!

**Angela Robertson**

Transmission Account Executive | Transmission Sales

**BONNEVILLE POWER ADMINISTRATION**

Mail Stop: TSE/TPP-2

P.O. Box 61409

Vancouver, WA 98666-1409

[bpa.gov](http://bpa.gov) | P 360.619.6192 | M (b) (6) | F 360.619.6940

---

**From:** Robertson,Angela D (BPA) - TSE-TPP-2  
**Sent:** Tuesday, December 19, 2017 11:11 AM  
**To:** Kimberly Gentle ([kgentle@popud.org](mailto:kgentle@popud.org))  
**Cc:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** HiTest In the News

Hi Kim –

I just left you a voicemail. I was wondering if you've seen the article published late yesterday in The Spokesman-Review regarding HiTest. I'm a bit concerned...especially with the following:

“For large loads, the Bonneville Power Administration requires studies to determine potential impacts on neighboring utilities and the power grid. The studies will take about six months and will include engineering work needed for delivering electricity to the proposed smelter site south of Newport.”

Here’s a link to the full article if you haven’t seen it: [HiTest Sand offers to pay \\$1 million for studies on electrical impact of proposed Newport smelter](#)

Considering that we have not received the new LLIR with their revised plans and we haven’t yet had a scoping meeting, I’m not even sure where they got that indication since it doesn’t match any of our timelines and there is no way it’s even feasible. Did they even reach out to Pend Oreille before publishing the article? I’m concerned that this article will set the stage for BPA looking like we failed to meet a timeline that we’ve never even established or committed to.

Feel free to give me a call!

**Angela Robertson**

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360.619.6840 Fax

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Kimberly Gentle <[kgentle@popud.org](mailto:kgentle@popud.org)>  
**Sent:** Tuesday, December 19, 2017 12:53 PM  
**To:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Cc:** Kenna Tornow  
**Subject:** [EXTERNAL] RE: HiTest In the News  
**Attachments:** BPA Studies clarification

I have attached a draft email for your review. Please let me know if this will address BPA's concerns....

And thank you for reaching out to me to discuss.

---

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**Cc:** Kenna Tornow

**Subject:** BPA Studies clarification

**Attachments:** BPA Line and Load Interconnection Procedures\_v10-25-16.doc

Good morning everyone and happy Tuesday. I am unsure if you have yet seen the article in the Spokesman Review regarding HiTest's formal request for power and the commencement of the BPA study process. Here is a link:

[HiTest Sand offers to pay \\$1 million for studies on electrical impact of proposed Newport smelter](#)

For clarification sake, I want to ensure the group understands the timing and process for BPA's study's. I have attached an outline of the BPA line and load interconnection procedures which walks through the expected timing and costs of each phase of the study.

I know that this is a document you are all familiar with but the article in the Spokesman could be read to assume that the entire process takes 6 months which is simply not the case. BPA will be scheduling a kick off meeting with the District and HiTest and we will be discussing timing and process in greater detail at that time, in the meantime, if you have any questions or concerns, please do not hesitate to reach out to me.

*Kimberly Gentle*

Director, Power and Risk Management

### Public Utility District No. 1 of Pend Oreille County



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**Subject:** [EXTERNAL] BPA Studies clarification

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[HiTest Sand offers to pay \\$1 million for studies on electrical impact of proposed Newport smelter](#)

For clarification sake, I want to ensure the group understands the timing and process for BPA's study's. Generally, BPA's study process and Preliminary Engineering timeline is as follows:

- Feasibility Study: 45-60 days
- System Impact Study: 60-90 days
- Facilities Study/Preliminary Engineering: 9 months (the Facilities Study Report gets written from the results of the Preliminary Engineering – this is a new process to provide a higher level of scope, costs, and schedule)

I know that this is a timeline you are all familiar with but the article in the Spokesman could be read to assume that the entire process takes 6 months which is simply not the case. After BPA's receipt of the formal Line and Load Interconnection request(s), BPA will be scheduling a kick off meeting with the District and HiTest and we will be discussing timing and process in greater detail at that time, in the meantime, if you have any questions or concerns, please do not hesitate to reach out to me.

*Kimberly Gentle*

Director, Power and Risk Management

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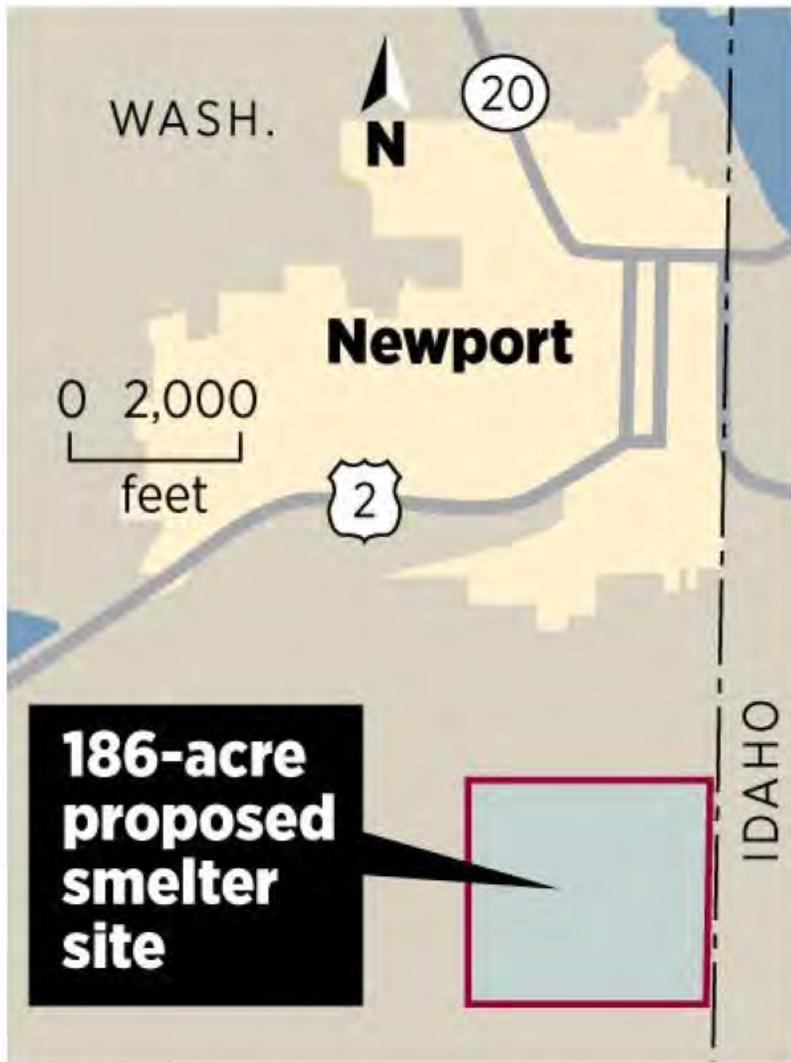
# THE SPOKESMAN-REVIEW

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## HiTest Sand offers to pay \$1 million for studies on electrical impact of proposed Newport smelter

UPDATED: Mon., Dec. 18, 2017



## THE SPOKESMAN-REVIEW



**By Becky Kramer**  
[beckyk@spokesman.com](mailto:beckyk@spokesman.com)  
(509) 459-5466

The company proposing to build a silicon smelter near Newport will pay \$1 million for studies about the smelter's effect on the electrical grid.

The \$325 million smelter would use about 105 megawatts of electricity on a continuous basis, according to the Pend Oreille Public Utility District, which would supply the power. The utility district's residential and small commercial customers use an average of 24 megawatts of electricity.

For large loads, the Bonneville Power Administration requires studies to determine potential impacts on neighboring utilities and the power grid. The studies will take about six months and will include engineering work needed for delivering electricity to the proposed smelter site south of Newport.

HiTest Sand Inc., the smelter's parent company, has paid a \$250,000 deposit to the utility district. A second \$250,000 payment is due Feb. 1 and a third payment of \$500,000 must be made before July 1, utility officials said.

The Pend Oreille County Public Utility District sold the company [the 186-acre smelter site](#). If the smelter is built, HiTest would become the utility's largest customer.

The smelter would create about 150 jobs in an economically depressed part of the state, but its proposed location near rural residences has been controversial. The Kalispel Tribe and others have raised concerns about air emissions from the smelter.

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## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Wednesday, December 20, 2017 3:49 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** [EXTERNAL] RE: Discuss LLIR Options w/POPD  
**Attachments:** HT1 Technical information rev A.PDF; LLIR 105MW HiTest.pdf; LLIR 210MW HiTest.pdf; Single line diagram nov 23.pdf

Shari and Angela,

I have attached two (2) LLIR documents as I had indicated I expected I would sometime this week. This is the express wish of our customer; they would like to have these studies executed in a somewhat parallel fashion in order that they may perform a cost benefit analysis of each option as it will affect their construction choices.

I have also attached a one-line document that outlines both the current design for a 2-furnace plant (105 MW) and a possible 4-furnace plant (210 MW), so, it may be referred to for both requests for the time being. In addition, there is a technical information document that provides some basic load characteristics for the plant.

I look forward to further discussion.

*Amber Elise Orr, P.E.*

Director of Engineering

Public Utility District No. 1 of Pend Oreille County



P.O. Box 190 | 130 N. Washington  
Newport, Washington 99156  
509.447.3137 | [aorr@popud.org](mailto:aorr@popud.org) | [www.popud.org](http://www.popud.org)

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**From:** Sundeen,Shari (BPA) - TPCC-TPP-4 [mailto:slsundeen@bpa.gov]  
**Sent:** Wednesday, December 13, 2017 3:01 PM  
**To:** Amber E. Orr; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** RE: Discuss LLIR Options w/POPD

Thank you Amber...I'll watch for it. Or are you submitting two?

---

**From:** Amber E. Orr [mailto:aorr@popud.org]  
**Sent:** Wednesday, December 13, 2017 2:56 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** [EXTERNAL] RE: Discuss LLIR Options w/POPD

Victor,

I just left you a message, but, wanted to let you know in writing as well that I will be submitting an LLIR for HiTest Sands in the form of 'option 3' in your original email dated 10-6-2017 outlined as:

- 3) Submit request for 105 MW and request for 210 MW.
  - a. This would require two independent studies and require two separate payments.

I will be working on the finer details with their German engineers in the morning and hope to have something completed and submitted to you before the end of the week.

*Amber Elise Orr, P.E.*

Director of Engineering

Public Utility District No. 1 of Pend Oreille County



P.O. Box 190 | 130 N. Washington  
Newport, Washington 99156  
509.447.3137 | [aorr@popud.org](mailto:aorr@popud.org) | [www.popud.org](http://www.popud.org)

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---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Thursday, October 19, 2017 7:44 AM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2; Amber E. Orr  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** RE: Discuss LLIR Options w/POPD

Good morning,

(b) (6) Otherwise, please carry on without me. The BPA folks are familiar with the topic, as we had a separate discussion two weeks ago. Attached is what I sent to POPD after that meeting.

My apologies for the inconvenience.

Thanks!  
Victor

-----Original Appointment-----

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Monday, October 16, 2017 2:22 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2 ([adrobertson@bpa.gov](mailto:adrobertson@bpa.gov)); Amber Orr ([aorr@popud.org](mailto:aorr@popud.org))  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** Discuss LLIR Options w/POPD  
**When:** Thursday, October 19, 2017 8:00 AM-8:30 AM (UTC-08:00) Pacific Time (US & Canada).  
**Where:** Phone: 503-230-4000, Code: 056073946 #

All set for Thursday morning at 0800!

(b) (2)  
[Redacted]  
[Redacted]

(b) (2)

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# TECHNICAL INFORMATION

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**HiTest Sands**

**FOR**

**Power consumption details for the Silicon Smelter  
complex**

**Rev A – 27 October 2017**

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## 1.0 PROJECT OVERVIEW

This document highlights the power requirements for the HiTest Silicon smelter complex. The plant loads are made up of two consumers:

1. Plant Auxiliary loads
2. Smelter loads

The plant auxiliary loads are made up of the supporting equipment around the furnace such as offices, HVAC, cooling water, off gas fans and various other equipment. These loads make up the base load that would be present at any time during plant operation.

The smelter load is the biggest consumer on the plant. Please refer to the single line diagram for the details.

## 2.0 PLANT POWER DISTRIBUTION CONFIGURATION

### 2.1 Power distribution

Tenova's scope of supply starts at the incoming terminals of the 23.5kV Medium Voltage (MV) distribution boards. The MV substation will supply power to the furnace transformers and the plant auxiliary transformers.

Plant auxiliary equipment will be supplied from auxiliary distribution transformers located close to the Motor Control Centres (MCC) in the various areas in the plant.

The Auxiliary loads are mostly made up of 3 phase induction motors.

The plant loads are summarised below:

Description	MWA	MVA	Power factor
Furnace 1 Load	40 MW	42.1 MVA	> 0.95
Furnace 2 Load	40 MW	42.1 MVA	> 0.95
Furnace 1 Auxiliaries	6.75 MW	7.11 MVA	> 0.95
Furnace 2 Auxiliaries	6.75 MW	7.11 MVA	> 0.95
Furnace 1 & 2 Common Auxiliary loads	2.7 MW	2.84 MVA	> 0.95
Total	96.2 MW	101.26 MVA	> 0.95

**Table 1 Plant Electrical Loads**

The variable speed drive loads are made up of the following:

Description	VSD – MW
Furnace 1 Auxiliaries	2.4 MW
Furnace 2 Auxiliaries	2.4MW
Furnace 1 & 2 Common Auxiliary loads	2 MW
Total	6.8 MW

**Table 2 Variable Speed drives**

## 2.2 Furnace PVI graph

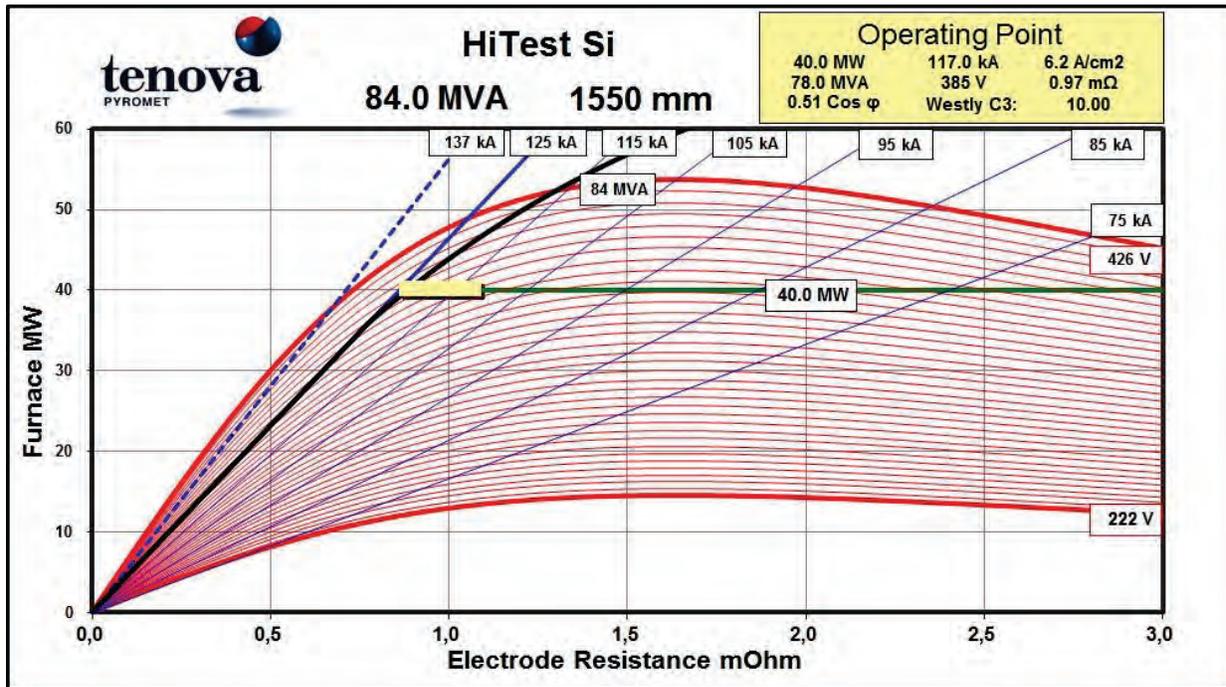


Figure 3 Furnace Load

The graph above details the electrical load of the Si Furnace. Operating point during normal operations will be 40MW.

## 2.3 Power factor correction

The furnace load will normally run at a calculated power factor of 0.51 lagging. Each furnace will have 6 x 10MVAR banks installed (To be confirmed during detailed Engineering) to ensure that the power factor is corrected to at least 0.95 lagging. This will include the Auxiliary loads.

Figure 4 shows the switching of the banks as the furnace power increases. With stable running load of 40MW, the power factor is expected to be 0.987 lagging.

During the furnace ramp up period, there will be some points where the furnace load will not be able to maintain the power factor of 0.95 lagging. These are however of short duration.

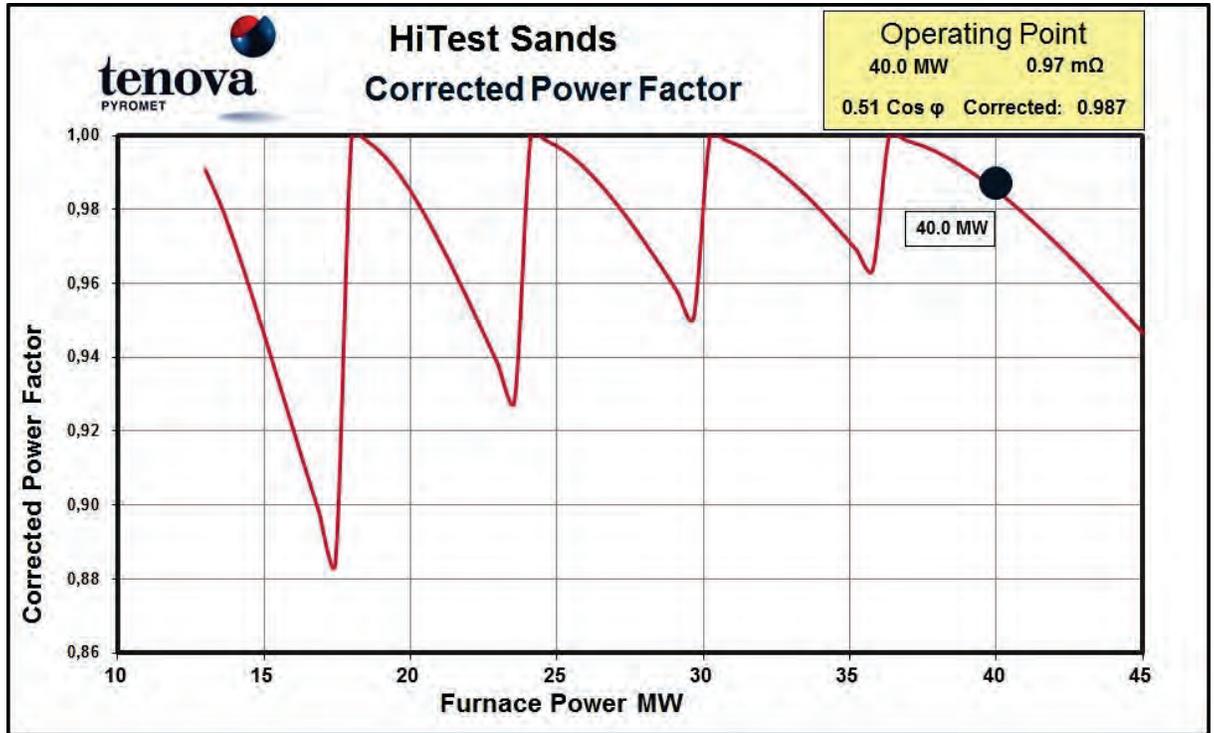


Figure 4 Furnace Load

## TECHNICAL REQUIREMENTS FOR INTERCONNECTION TRANSMISSION LINE AND LOADS CONNECTION INFORMATION

**WHO SHOULD FILE THIS FORM:** Any customer expressing an interest in connecting transmission line or loads to the Bonneville Power Administration's (BPA) Transmission Business Line System (TBL's). This application should be completed as soon as possible and returned to the BPA Transmission Account Executive in order to begin processing the request.

**INFORMATION:** This application will be used by BPA to determine if a System Impact and Facility Requirement Study are required. This study is used to determine the location (*Connection Point*), equipment requirements (*Requester and BPA TBL*), system modifications, etc. to connect transmission lines and/or loads. Sections 1 and 2 should be completed as soon as possible and returned to the BPA Transmission Account Executive. Section 3 must be completed if it is determined that a System Impact and Facility Requirement Study is required. Following completion of the study the Requester will receive a preliminary estimate for the utility interface requirements that may be used in calculating the overall project connection requirements.

### SECTION 1 – INTERCONNECTION REQUESTER AND CONTRACTORS

#### A. Requester/Owner Information

Company Name

**Pend Oreille Public Utility District #1**

Mailing Address

**130 N Washington**

City	State	9 Digit Zip Code
<b>Newport</b>	<b>WA</b>	<b>99156</b>

Phone Number	Email Address	Contact Name
<b>509 447-3137</b>	<b>aorr@popud.org</b>	<b>Amber E Orr</b>

#### B. Connection Design/Engineering Architect (*As applicable*)

Company Name

Mailing Address

City	State	9 Digit Zip Code
------	-------	------------------

Phone Number	Email Address	Contact Name
--------------	---------------	--------------

#### C. Electrical Contractor (*As Applicable*)

Company Name

Mailing Address

City	State	9 Digit Zip Code
------	-------	------------------

Phone Number	Email Address	Contact Name
--------------	---------------	--------------

## TECHNICAL REQUIREMENTS FOR INTERCONNECTION TRANSMISSION LINE AND LOADS CONNECTION INFORMATION

### Section 2 – General Specifications, Location, and Diagrams for Connection

#### Preliminary Review Information

##### A. Type of Connection

<input checked="" type="checkbox"/> Radial Load	Comments
<input type="checkbox"/> Network Connection with Other Sources Present Operating Voltage (kV):	

##### B. Connection Point Location – Identify the BPA TBL Line or Substation

Street Address

**The East Half of the Northeast Quarter of Section 25, Township 31 North, Range 45, E.W.M.**

State <b>Washington</b>	County <b>Pend Oreille</b>	Nearest community <b>Newport</b>
Township <b>31</b>	Range <b>45</b>	Section <b>25</b>

Identify the BPA TBL Line or Substation Connection Point

**Pine St Substation and/or Sacheen**

**C. Type of Load:** Identify the characteristics which best describe the type of load to be served. Include specific information for loads such as those associated with arc furnaces, large motor, etc.

**HiTest Silicon is a smelter complex consisting of submerged arc furnace(s) as the primary consumer of energy. The plant loads consist of two consumers categories:**

1. Plant Auxiliary loads
2. Smelter loads (4 furnaces)

The plant auxiliary loads are made up of the supporting equipment around the furnace such as offices, HVAC, cooling water, off gas fans and various other equipment. These loads make up the base load that would be present at any time during plant operation.

The smelter load is the biggest consumer at 40MW per furnace. Please refer to the single line diagram for the details.

##### D. Load Data (At the time of energization and every year for 10 years)

Value for Year:	1	2	3	4	5	6	7	8	9	10
Projected Peak Load [kW]	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000
Summer Peak Load [kW]	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000
Winter Peak Load [kW]	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000
Anticipated Power Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95

##### e. Quality of Service (Special Requirements such as power quality, frequency and duration of outages, etc.)

Customer indicates no need for special requirements for quality of service other than the provision of stable power supply over the contract period with minimal interruptions of supply.

##### F. Future Plans (Where known: Modification, changes, or additions affecting the connection or connected equipment)

At this time the customer expects the power usage to be approximately the same over a 10 year period of time and does not anticipate increasing capacity at the site during this time. There should be no change in load requirements that will change the connection needs during that time.

##### G. Attach Electrical One-Line Diagram of the project that includes proposed protective relaying, breaker and switching arrangements, ground sources (zero sequence), and assumed electrical equipment parameters for the connection.

Title <b>Director of Engineering</b>	Name (First, Last) (Please Print or Type) <b>Orr, Amber</b>
---	--

**TECHNICAL REQUIREMENTS FOR INTERCONNECTION TRANSMISSION LINE AND  
LOADS CONNECTION INFORMATION**

Signature

(b) (6)



Date

12-20-2017

## TECHNICAL REQUIREMENTS FOR INTERCONNECTION TRANSMISSION LINE AND LOADS CONNECTION INFORMATION

### Section 3 – Study Data Requirements

**A. Network Power Flow Model** (As required) (Enclose a model using approved WECC format)

**B. Interconnecting Transmission Line(s) or Cable** (Provide all parameters in physical units if applicable)

Nominal voltage [kV]	Length (Miles)
----------------------	----------------

#### Transmission Line Impedances

Quantity	Positive Sequences	Zero Sequence
Series Resistance, $R \Omega$		
Series Reactance $X \Omega$		
Shunt Susceptance, $B \mu S$ (or $\mu\Omega^{-1}$ )		
Will this line be built on common structures with other circuits? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Will this line be transformer-terminated at either end? If "yes", state which end(s) and the transformer identifier. <input type="checkbox"/> Yes <input type="checkbox"/> No	End:	Transformer:

#### C. Transformers

 (Provide parameters if applicable)

Identifier	Number of Windings	Autotransformer?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Winding	Nominal Voltage [kV]	Configuration ( $\Delta$ or YG)	Nameplate MVA	/ /
H:			H to X:	/ /
X:			H to Y:	/ /
Y:			X to Y:	/ /
<b>Tap Information</b>	Winding (H, X, or Y)	Values: Operational [kV]	Available Taps [kV]	/ / / /
<b>Transformer Impedance:</b>	Winding	H to X: % @ MVA	H to Y: % @ MVA	X to Y: % @ MVA

**D. System Data** – Only applicable where generation resources are present or if the connection includes another network source. Provide a system equivalent ( $R1, X1, R0, X0$  in per unit on a 100 MVA base) at the proposed Connection Point looking into the connecting system. These values should be determined such that the system model *does not* include the physical connection to the BPA System. Assuming there are no other connections to the BPA System at any other point, these quantities are available by computing a single line-to-ground "bus fault" at the proposed Connection Point.

**Generation** (If applicable), (Must follow the processes as described in this BPA form that are appropriate for a new generation interconnection.)

**E. Reactive Equipment** (Location, size, and rated voltage) More specific information is required for reactive with dynamic capability (SVC, TCSC, Sync Condensers, etc.)

#### To be filled out by the BPA Transmission Account Executive:

Transmission Account Executive (Name)	Internal Routing	Phone Number
Region	E-Mail Address	
Copy of Interconnection Study Request and Attachments to: Transmission Planning Manager – TPP; System Protection Manager – TECC; Customer Service Engineering - TPC		

## TECHNICAL REQUIREMENTS FOR INTERCONNECTION TRANSMISSION LINE AND LOADS CONNECTION INFORMATION

**WHO SHOULD FILE THIS FORM:** Any customer expressing an interest in connecting transmission line or loads to the Bonneville Power Administration's (BPA) Transmission Business Line System (TBL's). This application should be completed as soon as possible and returned to the BPA Transmission Account Executive in order to begin processing the request.

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Mailing Address

**130 N Washington**

City	State	9 Digit Zip Code
<b>Newport</b>	<b>WA</b>	<b>99156</b>

Phone Number	Email Address	Contact Name
<b>509 447-3137</b>	<b>aorr@popud.org</b>	<b>Amber E Orr</b>

#### B. Connection Design/Engineering Architect (*As applicable*)

Company Name

Mailing Address

City	State	9 Digit Zip Code
------	-------	------------------

Phone Number	Email Address	Contact Name
--------------	---------------	--------------

#### C. Electrical Contractor (*As Applicable*)

Company Name

Mailing Address

City	State	9 Digit Zip Code
------	-------	------------------

Phone Number	Email Address	Contact Name
--------------	---------------	--------------

## TECHNICAL REQUIREMENTS FOR INTERCONNECTION TRANSMISSION LINE AND LOADS CONNECTION INFORMATION

### Section 2 – General Specifications, Location, and Diagrams for Connection

#### Preliminary Review Information

##### A. Type of Connection

<input checked="" type="checkbox"/> Radial Load  <input type="checkbox"/> Network Connection with Other Sources Present Operating Voltage (kV):	Comments
--	----------

##### B. Connection Point Location – Identify the BPA TBL Line or Substation

Street Address

**The East Half of the Northeast Quarter of Section 25, Township 31 North, Range 45, E.W.M.**

State <b>Washington</b>	County <b>Pend Oreille</b>	Nearest community <b>Newport</b>
Township <b>31</b>	Range <b>45</b>	Section <b>25</b>

Identify the BPA TBL Line or Substation Connection Point

**Pine St Substation**

**C. Type of Load:** Identify the characteristics which best describe the type of load to be served. Include specific information for loads such as those associated with arc furnaces, large motor, etc.

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1. Plant Auxiliary loads
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The plant auxiliary loads are made up of the supporting equipment around the furnace such as offices, HVAC, cooling water, off gas fans and various other equipment. These loads make up the base load that would be present at any time during plant operation.

The smelter load is the biggest consumer at 40MW per furnace. Please refer to the single line diagram for the details.

##### D. Load Data (At the time of energization and every year for 10 years)

Value for Year:	1	2	3	4	5	6	7	8	9	10
Projected Peak Load [kW]	105000	105000	105000	105000	105000	105000	105000	105000	105000	105000
Summer Peak Load [kW]	105000	105000	105000	105000	105000	105000	105000	105000	105000	105000
Winter Peak Load [kW]	105000	105000	105000	105000	105000	105000	105000	105000	105000	105000
Anticipated Power Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95

##### e. Quality of Service (Special Requirements such as power quality, frequency and duration of outages, etc.)

Customer indicates no need for special requirements for quality of service other than the provision of stable power supply over the contract period with minimal interruptions of supply.

##### F. Future Plans (Where known: Modification, changes, or additions affecting the connection or connected equipment)

At this time the customer expects the power usage to be approximately the same over a 10 year period of time and does not anticipate increasing capacity at the site during this time. There should be no change in load requirements that will change the connection needs during that time.

##### G. Attach Electrical One-Line Diagram of the project that includes proposed protective relaying, breaker and switching arrangements, ground sources (zero sequence), and assumed electrical equipment parameters for the connection.

Title <b>Director of Engineering</b>	Name (First, Last) (Please Print or Type) <b>Orr, Amber</b>
---	--

**TECHNICAL REQUIREMENTS FOR INTERCONNECTION TRANSMISSION LINE AND  
LOADS CONNECTION INFORMATION**

Signature

(b) (6)



Date

12-20-2017

## TECHNICAL REQUIREMENTS FOR INTERCONNECTION TRANSMISSION LINE AND LOADS CONNECTION INFORMATION

### Section 3 – Study Data Requirements

**A. Network Power Flow Model** (As required) (Enclose a model using approved WECC format)

**B. Interconnecting Transmission Line(s) or Cable** (Provide all parameters in physical units if applicable)

Nominal voltage [kV]

Length (Miles)

#### Transmission Line Impedances

Quantity	Positive Sequences	Zero Sequence
Series Resistance, R $\Omega$		
Series Reactance X $\Omega$		
Shunt Susceptance, B $\mu S$ (or $\mu\Omega^{-1}$ )		
Will this line be built on common structures with other circuits? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Will this line be transformer-terminated at either end? If "yes", state which end(s) and the transformer identifier. <input type="checkbox"/> Yes <input type="checkbox"/> No	End:	Transformer:

#### C. Transformers (Provide parameters if applicable)

Identifier		Number of Windings	Autotransformer? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Winding	Nominal Voltage [kV]	Configuration ( $\Delta$ or YG)	Nameplate MVA	/ /
H:			H to X:	/ /
X:			H to Y:	/ /
Y:			X to Y:	/ /
<b>Tap Information</b> Winding (H, X, or Y)		Values: Operational [kV]	Available Taps [kV] / / / /	
<b>Transformer Impedance:</b> Winding		H to X: % @ MVA	H to Y: % @ MVA	X to Y: % @ MVA

**D. System Data** – Only applicable where generation resources are present or if the connection includes another network source. Provide a system equivalent (R1, X1, R0, X0 in per unit on a 100 MVA base) at the proposed Connection Point looking into the connecting system. These values should be determined such that the system model *does not* include the physical connection to the BPA System. Assuming there are no other connections to the BPA System at any other point, these quantities are available by computing a single line-to-ground "bus fault" at the proposed Connection Point.

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Region	E-Mail Address	
Copy of Interconnection Study Request and Attachments to: Transmission Planning Manager – TPP; System Protection Manager – TECC; Customer Service Engineering - TPC		

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Thursday, January 4, 2018 1:48 PM  
**To:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle  
**Subject:** [EXTERNAL] RE: Discuss LLIR Options w/POPD

Good afternoon Angela,

I just wanted to follow up on the LLIR(s) and make sure that there isn't anything else that I need to provide. I know that I sent everything right around the holidays and that slows things down, but, I also don't want to neglect something that I shouldn't be...

Happy new year!

*Amber Elise Orr, P.E.*

Director of Engineering

Public Utility District No. 1 of Pend Oreille County



P.O. Box 190 | 130 N. Washington  
Newport, Washington 99156  
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---

**From:** Robertson,Angela D (BPA) - TSE-TPP-2 [<mailto:adrobertson@bpa.gov>]  
**Sent:** Friday, December 22, 2017 10:58 AM  
**To:** Amber E. Orr  
**Cc:** Kimberly Gentle  
**Subject:** RE: Discuss LLIR Options w/POPD

Thank you Amber!

(b) (6) but  
wanted to confirm that we received the requests ☺ Sorry for the delay!

If she hasn't already, Shari should be emailing you soon with an official confirmation of receipt and interconnection queue numbers for the requests.

Merry Christmas!

**Angela Robertson**

Transmission Account Executive | Transmission Sales

**BONNEVILLE POWER ADMINISTRATION**

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Vancouver, WA 98666-1409

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---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Wednesday, December 20, 2017 3:49 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** [EXTERNAL] RE: Discuss LLIR Options w/POPD

Shari and Angela,

I have attached two (2) LLIR documents as I had indicated I expected I would sometime this week. This is the express wish of our customer; they would like to have these studies executed in a somewhat parallel fashion in order that they may perform a cost benefit analysis of each option as it will affect their construction choices.

I have also attached a one-line document that outlines both the current design for a 2-furnace plant (105 MW) and a possible 4-furnace plant (210 MW), so, it may be referred to for both requests for the time being. In addition, there is a technical information document that provides some basic load characteristics for the plant.

I look forward to further discussion.

*Amber Elise Orr, P.E.*

Director of Engineering

**Public Utility District No. 1 of Pend Oreille County**



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**From:** Sundeen,Shari (BPA) - TPCC-TPP-4 [<mailto:slsundeen@bpa.gov>]  
**Sent:** Wednesday, December 13, 2017 3:01 PM  
**To:** Amber E. Orr; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** RE: Discuss LLIR Options w/POPD

Thank you Amber...I'll watch for it. Or are you submitting two?

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Wednesday, December 13, 2017 2:56 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** [EXTERNAL] RE: Discuss LLIR Options w/POPD

Victor,

I just left you a message, but, wanted to let you know in writing as well that I will be submitting an LLIR for HiTest Sands in the form of 'option 3' in your original email dated 10-6-2017 outlined as:

- 3) Submit request for 105 MW and request for 210 MW.
  - a. This would require two independent studies and require two separate payments.

I will be working on the finer details with their German engineers in the morning and hope to have something completed and submitted to you before the end of the week.

*Amber Elise Orr, P.E.*  
Director of Engineering

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---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Thursday, October 19, 2017 7:44 AM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2; Amber E. Orr  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** RE: Discuss LLIR Options w/POPD

Good morning,

(b) (6) Otherwise, please carry on without me. The BPA folks are familiar with the topic, as we had a separate discussion two weeks ago. Attached is what I sent to POPD after that meeting.

My apologies for the inconvenience.

Thanks!  
Victor

-----Original Appointment-----

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Monday, October 16, 2017 2:22 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2 ([adrobotson@bpa.gov](mailto:adrobotson@bpa.gov)); Amber Orr ([aorr@popud.org](mailto:aorr@popud.org))  
**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** Discuss LLIR Options w/POPD  
**When:** Thursday, October 19, 2017 8:00 AM-8:30 AM (UTC-08:00) Pacific Time (US & Canada).  
**Where:** Phone: 503-230-4000, Code: 056073946 #

All set for Thursday morning at 0800!

(b) (2)

[Redacted content]

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Thursday, January 4, 2018 2:50 PM  
**To:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle  
**Subject:** [EXTERNAL] RE: Discuss LLIR Options w/POPD

Thank you, Angela! I just wanted to verify that information. I appreciate you following up for me.

Cheers!

*Amber Elise Orr, P.E.*  
Director of Engineering

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---

**From:** Robertson,Angela D (BPA) - TSE-TPP-2 [<mailto:adrobertson@bpa.gov>]  
**Sent:** Thursday, January 04, 2018 2:40 PM  
**To:** Amber E. Orr  
**Cc:** Kimberly Gentle  
**Subject:** RE: Discuss LLIR Options w/POPD

Happy New Year !

I just checked in with Shari, and she has everything she needs and will be posting your requests to the interconnection queue soon. She is currently working on scheduling several kick-off meetings (I think things have really ramped up now that the holidays are over), but she has yours on her list and one of us will be in touch soon to coordinate availability.

Be in touch soon!

### Angela Robertson

Transmission Account Executive | Transmission Sales

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Vancouver, WA 98666-1409

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---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Thursday, January 04, 2018 1:48 PM  
**To:** Robertson,Angela D (BPA) - TSE-TPP-2  
**Cc:** Kimberly Gentle  
**Subject:** [EXTERNAL] RE: Discuss LLIR Options w/POPD

Good afternoon Angela,

I just wanted to follow up on the LLIR(s) and make sure that there isn't anything else that I need to provide. I know that I sent everything right around the holidays and that slows things down, but, I also don't want to neglect something that I shouldn't be...

Happy new year!

*Amber Elise Orr, P.E.*

Director of Engineering

Public Utility District No. 1 of Pend Oreille County



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**Sent:** Friday, December 22, 2017 10:58 AM

**To:** Amber E. Orr

**Cc:** Kimberly Gentle

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(b) (6)

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If she hasn't already, Shari should be emailing you soon with an official confirmation of receipt and interconnection queue numbers for the requests.

Merry Christmas!

**Angela Robertson**

Transmission Account Executive | Transmission Sales

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**From:** Amber E. Orr [<mailto:aorr@popud.org>]

**Sent:** Wednesday, December 20, 2017 3:49 PM

**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Wick,Martin A (BPA) - TPCV-TPP-4;

Robertson,Angela D (BPA) - TSE-TPP-2

**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2

**Subject:** [EXTERNAL] RE: Discuss LLIR Options w/POPD

Shari and Angela,

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I look forward to further discussion.

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Director of Engineering

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**Cc:** Kimberly Gentle; Adams, Nicole A (CONTR) - TSES-TPP-2

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**Sent:** Wednesday, December 13, 2017 2:56 PM

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**Cc:** Kimberly Gentle; Adams, Nicole A (CONTR) - TSES-TPP-2

**Subject:** [EXTERNAL] RE: Discuss LLIR Options w/POPD

Victor,

I just left you a message, but, wanted to let you know in writing as well that I will be submitting an LLIR for HiTest Sands in the form of 'option 3' in your original email dated 10-6-2017 outlined as:

- 3) Submit request for 105 MW and request for 210 MW.
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I will be working on the finer details with their German engineers in the morning and hope to have something completed and submitted to you before the end of the week.

*Amber Elise Orr, P.E.*

Director of Engineering

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**To:** Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2; Amber E. Orr

**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2

**Subject:** RE: Discuss LLIR Options w/POPD

Good morning,

(b) (6) Otherwise, please carry on without me. The BPA folks are familiar with the topic, as we had a separate discussion two weeks ago. Attached is what I sent to POPD after that meeting.

My apologies for the inconvenience.

Thanks!

Victor

-----Original Appointment-----

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB

**Sent:** Monday, October 16, 2017 2:22 PM

**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (BPA) - TSE-TPP-2 ([adrobertson@bpa.gov](mailto:adrobertson@bpa.gov)); Amber Orr ([aorr@popud.org](mailto:aorr@popud.org))

**Cc:** Kimberly Gentle; Adams,Nicole A (CONTR) - TSES-TPP-2

**Subject:** Discuss LLIR Options w/POPD

**When:** Thursday, October 19, 2017 8:00 AM-8:30 AM (UTC-08:00) Pacific Time (US & Canada).

**Where:** Phone: 503-230-4000, Code: 056073946 #

All set for Thursday morning at 0800!

(b) (2)

[Redacted content]

## **Knudson,Thanh (CONTR) - CGI-7**

---

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Sent:** Thursday, January 4, 2018 3:22 PM  
**To:** aorr@popud.org  
**Cc:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Wick,Martin A (BPA) - TPCV-TPP-4; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** L0428 and L0429 Pend Oreille PUD LLIR Acknowledgement

Ms. Orr,

This email acknowledges Bonneville Power Administration's (BPA) receipt of Pend Oreille PUD's Line and Load Interconnection Request (LLIR). The Request seeks interconnection at/near Pend Oreille PUD's Pine Street Substation.

The LLIRs were posted to BPA's Interconnection Queue as Request No. L0428 and L0429, showing a queue date of December 20, 2017.

BPA has determined that there are no deficiencies.

BPA will be contacting Pend Oreille PUD within 30 Business Days to arrange for a kickoff meeting. If you have a specific date/time in mind, please let me know and I'll do my best to accommodate you.

If you have any questions, please contact me at (360) 619-6045 or Victor Hitchens at (509) 822-4602.

Thank you,

*Shari Sundeen*  
*Line and Load Interconnection Administrator*  
*(360) 619-6045*

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Monday, January 8, 2018 10:27 AM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Subject:** [EXTERNAL] RE: L0408 and L0409 Kickoff Meeting

Shari,

Thank you for sending the options. I have the NW BA/TOP discussion of RC services meeting on the 25<sup>th</sup>, so, let's book the 1/24 11-noon slot. Will we be at the Rates and Hearings room once again?

*Amber Elise Orr, P.E.*

Director of Engineering

### Public Utility District No. 1 of Pend Oreille County



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---

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4 [mailto:slsundeen@bpa.gov]  
**Sent:** Monday, January 08, 2018 10:22 AM  
**To:** Amber E. Orr  
**Cc:** Robertson,Angela D (BPA) - TSE-TPP-2  
**Subject:** RE: L0408 and L0409 Kickoff Meeting

We have the following dates/times available:

1/19, 1-2:00  
1/23, 10-11:00  
1/24, 11-noon

---

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Sent:** Monday, January 08, 2018 10:10 AM  
**To:** [aorr@popud.org](mailto:aorr@popud.org)  
**Cc:** Robertson,Angela D (BPA) - TSE-TPP-2  
**Subject:** L0408 and L0409 Kickoff Meeting

Good morning Amber,

Do you have any date/time preferences for this meeting?

Shari

## **Knudson,Thanh (CONTR) - CGI-7**

---

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Sent:** Monday, January 8, 2018 10:10 AM  
**To:** aorr@popud.org  
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## **Knudson,Thanh (CONTR) - CGI-7**

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**Sent:** Monday, January 8, 2018 10:22 AM  
**To:** aorr@popud.org  
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**Subject:** RE: L0408 and L0409 Kickoff Meeting

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1/19, 1-2:00  
1/23, 10-11:00  
1/24, 11-noon

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**Sent:** Monday, January 08, 2018 10:10 AM  
**To:** aorr@popud.org  
**Cc:** Robertson,Angela D (BPA) - TSE-TPP-2  
**Subject:** L0408 and L0409 Kickoff Meeting

Good morning Amber,

Do you have any date/time preferences for this meeting?

Shari

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Kimberly Gentle <kgentle@popud.org>  
**Sent:** Thursday, January 18, 2018 9:05 AM  
**To:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Cc:** Amber E. Orr; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** [EXTERNAL] RE: Shared load at PNC

Heya Angela! I hope all is well with you.

We will be in town for the LLIR along with other BPA meetings. We can add this to the list as well. Let me know if you have any questions or need anything regarding this meeting. At this point it is really just a high level Q&A and an opportunity for Mr Polsky to hear directly from BPA.

-----Original Message-----

**From:** Robertson,Angela D (BPA) - TSE-TPP-2 [mailto:adrobertson@bpa.gov]  
**Sent:** Thursday, January 18, 2018 9:02 AM  
**To:** Kimberly Gentle  
**Cc:** Amber E. Orr; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** RE: Shared load at PNC

Hi Kim -

We are going to touch base internally this afternoon based on the information that you discussed with Victor and we'll get back to you to confirm a date/time to schedule a conference call. Victor mentioned that you and Amber are travelling to Vancouver for the kick-off meeting next week as well as the Peak RC meeting. Will you have time while you're here to have the conference call?

Thanks,

Angela Robertson

Transmission Account Executive | Transmission Sales BONNEVILLE POWER ADMINISTRATION Mail Stop: TSE/TPP-2 P.O.  
Box 61409 Vancouver, WA 98666-1409 bpa.gov | P 360.619.6192 | M (b) (6) | F 360.619.6940

-----Original Message-----

**From:** Kimberly Gentle [mailto:kgentle@popud.org]  
**Sent:** Wednesday, January 17, 2018 2:36 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Robertson,Angela D (BPA) - TSE-TPP-2  
**Cc:** Alan Polsky; Amber E. Orr; greg.vaughn@resolutefp.com  
**Subject:** [EXTERNAL] Shared load at PNC

Good afternoon and happy Wednesday. I have spoken with BPA, Mr Polsky and PNC separately today regarding the potential of a shared load located at PNCs facilities in Usk.

There are several parties involved and I think it is probably time for a conference call in which we all can ask BPA our questions. I see this as an information gathering call more than anything as there are still many specifics left to be decided.

Does BPA have time for an informal information gathering conference call to discuss?

Sent from my iPhone

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Kimberly Gentle <kgentle@popud.org>  
**Sent:** Friday, January 19, 2018 9:31 AM  
**To:** Alan Polsky (alan@polskyfilms.com); greg.vaughn@resolutefp.com  
**Cc:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Subject:** [EXTERNAL] BPA/POPUD/PNC/Polsky

I have spoken with BPA and they are willing to join the group for a quick conference call on Wednesday the 24<sup>th</sup> in the afternoon. Would that work with both of your schedules?

*Kimberly Gentle*

Director, Power and Risk Management

### Public Utility District No. 1 of Pend Oreille County



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## Knudson,Thanh (CONTR) - CGI-7

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**From:** Kimberly Gentle <[kgentle@popud.org](mailto:kgentle@popud.org)>  
**Sent:** Friday, January 19, 2018 12:36 PM  
**To:** Alan Polsky  
**Cc:** [greg.vaughn@resolutefp.com](mailto:greg.vaughn@resolutefp.com); Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Subject:** [EXTERNAL] RE: BPA/POPUD/PNC/Polsky

Monday is not possible for me. Any alternatives?

---

**From:** Alan Polsky [<mailto:alan@polskyfilms.com>]  
**Sent:** Friday, January 19, 2018 10:32 AM  
**To:** Kimberly Gentle  
**Cc:** [greg.vaughn@resolutefp.com](mailto:greg.vaughn@resolutefp.com); [adrobertson@bpa.gov](mailto:adrobertson@bpa.gov)  
**Subject:** Re: BPA/POPUD/PNC/Polsky

Weds is not good the group is traveling. Any way to do monday??

Sent from my iPhone

On Jan 19, 2018, at 11:30 AM, Kimberly Gentle <[kgentle@popud.org](mailto:kgentle@popud.org)> wrote:

I have spoken with BPA and they are willing to join the group for a quick conference call on Wednesday the 24<sup>th</sup> in the afternoon. Would that work with both of your schedules?

*Kimberly Gentle*

Director, Power and Risk Management

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## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Wednesday, January 31, 2018 4:08 PM  
**To:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** David Nichols; Mike Boyle; Chris Jones; Kimberly Gentle  
**Subject:** [EXTERNAL] HiTest LLIR

Angela,

I have been thinking about the HiTest 230kV option and how we could possibly leverage that option for some system improvements at the same time. I drafted up some notes to this extent and ran it past the engineering team for some constructive feedback and we had a good discussion today. I don't think it changes anything I have submitted on the LLIR materially, but, we would like to suggest a possible option for system improvement to be studied as a 230 kV option. I have asked David Nichols (the District Transmission Planner) to refine the map I started and add some refinements. We would like to briefly discuss this with you and your team if possible. Would it be possible to schedule something in the near future?

*Amber Elise Orr, P.E.*

Director of Engineering

### Public Utility District No. 1 of Pend Oreille County



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## Knudson,Thanh (CONTR) - CGI-7

---

**Subject:** Placeholder: Discuss L0428/L0429 HiTest 230kV Option

**Location:** Conference Call TBD

**Start:** Tue 2/6/2018 8:00 AM

**End:** Tue 2/6/2018 9:00 AM

**Show Time As:** Tentative

**Recurrence:** (none)

**Meeting Status:** Not yet responded

**Organizer:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB

**Required Attendees:** Robertson,Angela D (BPA) - TSE-TPP-2 (ad Robertson@bpa.gov); Wick,Martin A (BPA) - TPCV-TPP-4; Hindi,Hamody M (BPA) - TPPA-OPP-3; Bustamante,Richard (BPA) - TPP-OPP-3; Adams,Nicole A (CONTR) - TSES-TPP-2 (naadams@bpa.gov); Sundeen,Shari (BPA) - TPCC-TPP-4; Amber Orr (aorr@popud.org); David Nichols (dnichols@popud.org)

Amber,

Please let me know if this date/time works for POPD. I know it is short notice, but since you will be on leave we wanted to see if this is an option. If not, I'll cancel and we'll shoot for something the Feb 20-23.

Thanks!

Victor

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Monday, February 5, 2018 3:59 PM  
**To:** Amber E. Orr  
**Subject:** RE: Placeholder: Discuss L0428/L0429 HiTest 230kV Option

Okay, sounds good. I'll update the invitation with the latest version.

Victor

---

**From:** Amber E. Orr [mailto:aorr@popud.org]  
**Sent:** Monday, February 05, 2018 3:58 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** [EXTERNAL] RE: Placeholder: Discuss L0428/L0429 HiTest 230kV Option

Victor,

I found a couple of small errors in Todd's map. He will send over a revision shortly.

*Amber Elise Orr, P.E.*

Director of Engineering

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---

**From:** Todd Swegle  
**Sent:** Monday, February 05, 2018 3:39 PM  
**To:** 'Hitchens,Victor P (BPA) - TPCF-MEAD-GOB'; Amber E. Orr  
**Subject:** RE: Placeholder: Discuss L0428/L0429 HiTest 230kV Option

Victor

Here is the map for the power options for Hi-Test.

Todd

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [mailto:vphitchens@bpa.gov]  
**Sent:** Monday, February 05, 2018 2:45 PM  
**To:** Amber E. Orr  
**Cc:** Todd Swegle  
**Subject:** RE: Placeholder: Discuss L0428/L0429 HiTest 230kV Option

You've peaked my interest. I'm looking at the Long Rang Plan (LRP) diagram for POPD right now. Look forward to discussing.

Thanks,  
Victor

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Monday, February 05, 2018 2:40 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Todd Swegle  
**Subject:** [EXTERNAL] RE: Placeholder: Discuss L0428/L0429 HiTest 230kV Option

Excellent. Just so you are aware, we are thinking of a proposal involving building our Bare Mountain Substation (finally). I have proposed 230kV based on the feedback at our meeting last month and the potential for a 4-furnace option for HiTest. I will have Todd send over a drawing shortly and we can talk thru it on the phone if you like.

*Amber Elise Orr, P.E.*

Director of Engineering

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---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Monday, February 05, 2018 2:21 PM  
**To:** Amber E. Orr  
**Subject:** RE: Placeholder: Discuss L0428/L0429 HiTest 230kV Option

Sounds great! Attached are a few items I've put together to help illustrate as well. Go ahead and sent me any attachments prior to the meeting you'd like to include in the meeting invitation.

Victor

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Monday, February 05, 2018 2:16 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** [EXTERNAL] RE: Placeholder: Discuss L0428/L0429 HiTest 230kV Option

Perfect. I am working on a visual aid for our discussion.

*Amber Elise Orr, P.E.*

Director of Engineering

**Public Utility District No. 1 of Pend Oreille County**



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---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Monday, February 05, 2018 2:14 PM

**To:** Amber E. Orr  
**Subject:** RE: Placeholder: Discuss L0428/L0429 HiTest 230kV Option

Okay, I'll see if we get adequate acceptance for first thing tomorrow. Otherwise, we'll plan for something when you return later this month.

Thanks,  
Victor

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Monday, February 05, 2018 2:12 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** [EXTERNAL] RE: Placeholder: Discuss L0428/L0429 HiTest 230kV Option

Yes, that works for me.

*Amber Elise Orr, P.E.*  
Director of Engineering

**Public Utility District No. 1 of Pend Oreille County**



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---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Monday, February 05, 2018 2:11 PM  
**To:** Amber E. Orr  
**Subject:** RE: Placeholder: Discuss L0428/L0429 HiTest 230kV Option

How about 0800? I'll have to see if that works for folks on our end.

-----Original Appointment-----

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Monday, February 05, 2018 2:06 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** [EXTERNAL] New Time Proposed: Placeholder: Discuss L0428/L0429 HiTest 230kV Option  
**When:** Tuesday, February 06, 2018 3:00 PM-4:00 PM (UTC-08:00) Pacific Time (US & Canada).  
**Where:** Conference Call TBD

Any chance we can try for earlier in the day? My afternoon is completely booked, but, my morning is open...

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Tuesday, February 6, 2018 4:11 PM  
**To:** Kimberly Gentle; Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** Amber E. Orr; Colin Willenbrock; Chris Jones; Mike Boyle; David Nichols; Jim May; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Wick,Martin A (BPA) - TPCV-TPP-4; Hindi,Hamody M (BPA) - TPPA-OPP-3; Bustamante,Richard (BPA) - TPP-OPP-3; Adams,Nicole A (CONTR) - TSES-TPP-2  
**Subject:** L0428/L0429 Pend Oreille PUD - HiTest 2/4 Furnace Plant

**Kim** – thank you for the confirmation. We’re glad the opportunity was available to discuss these options sooner rather than later.

**Shari** – per a discussion today with POPD, please change both L0428 and L0429 to Feasibility Studies. Martin will confirm with you soon regarding required deposit and estimated time to perform the studies.

Regards,

### Victor Hitchens

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C 5 (b) (6)

-----Original Message-----

**From:** Kimberly Gentle [mailto:kgentle@popud.org]  
**Sent:** Tuesday, February 06, 2018 1:24 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Amber E. Orr; Colin Willenbrock; Chris Jones; Mike Boyle; David Nichols; Jim May  
**Subject:** [EXTERNAL] HiTest LLIR

Good afternoon Victor. First of all I want to thank you for your push to get the team together to discuss the LLIR and interconnection scenarios for the new HiTest load this morning. (b) (6) I was glad to get some engineering consensus prior to losing her.

I have spoken to HiTest and all parties are in agreement that we are best to proceed with two feasibility studies (#428-115 feasibility and #429 - 230 feasibility). The parties recognize this will change the LLIR agreement, costs and timing.

Amber is gone so please let me know what else you need from me at this point. Please tell the BPA team how much we appreciate their time and expertise.

Sent from my iPhone

## Knudson,Thanh (CONTR) - CGI-7

---

**Subject:** Discuss L0428/L0429 HiTest 230kV Option  
**Location:** Phone: 503-230-4000, Code: 056073946 #

**Start:** Tue 2/6/2018 8:00 AM  
**End:** Tue 2/6/2018 9:00 AM  
**Show Time As:** Tentative

**Recurrence:** (none)

**Meeting Status:** Not yet responded

**Organizer:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB

**Required Attendees:** Robertson,Angela D (BPA) - TSE-TPP-2; Wick,Martin A (BPA) - TPCV-TPP-4; Hindi,Hamody M (BPA) - TPPA-OPP-3; Bustamante,Richard (BPA) - TPP-OPP-3; Adams,Nicole A (CONTR) - TSES-TPP-2; Sundeen,Shari (BPA) - TPCC-TPP-4; Amber Orr (aorr@popud.org); David Nichols (dnichols@popud.org)

**UPDATE 2/6/17:** added POPD drawing talking points.

This meeting is to discuss another potential 230kV option to serve the HiTest load. POPD would like to discuss with BPA before we get too far into the System Impact Studies.

### ATTACHMENTS

1) POPD Drawing & Talking Points



1 - POPD Drawing & Talking Points  
2 - POPD Drawing & Talking Points

2) BPA eGIS of Existing Transmission System Near Newport, WA



BPA eGIS of Existing Transmission System Near Newport, WA

3) One-Line of Existing Transmission in Project Vicinity



One-Line of Existing Transmission in Project Vicinity

(b) (2)

(b) (2)



### POPD Proposed Transmission Additions for HiTest Project

- A. 115 kV: Pine Street to HiTest
- B. 115 kV: HiTest tap/ring to Sacheen-Albeni Falls No 1 115 kV line
- C. 115 kV: POPD takes new 115 kV at Sacheen and runs parallel to BPA corridor to HiTest
- D. 230 kV: replace Sacheen-Albeni Falls No 1 115 kV line with 230 kV in same corridor. Move 115/230 auto to Albeni Falls. Tap/ring 230 for HiTest.
- E. 230 kV: add 230 kV from Sacheen to HiTest by adding to 115 kV circuit in corridor, then continue to Pine Street with 230 kV.
- F. 230 kV: Intercept Bell-Boundary No 1 230 kV line and/or Bell-Usk No 1 230 kV line at future POPD Bare Mountain sub and replace Bare Mountain-Diamond Lake 115 kV line with 230 kV, tap/ring to Diamond Lake, and run new line onward to Pine Street
- G. 230 kV: replace Usk Switchyard – Pine Street 115 kV line with 230 kV from Usk Substation to Pine Street. Run new 230 kV line from Pine Street to HiTest.

Pend Oreille PUD  
-Pine Street 115kV

Pend Oreille PUD  
Pine Street Substation

BPA Sacheen-  
Albeni Falls 115kV

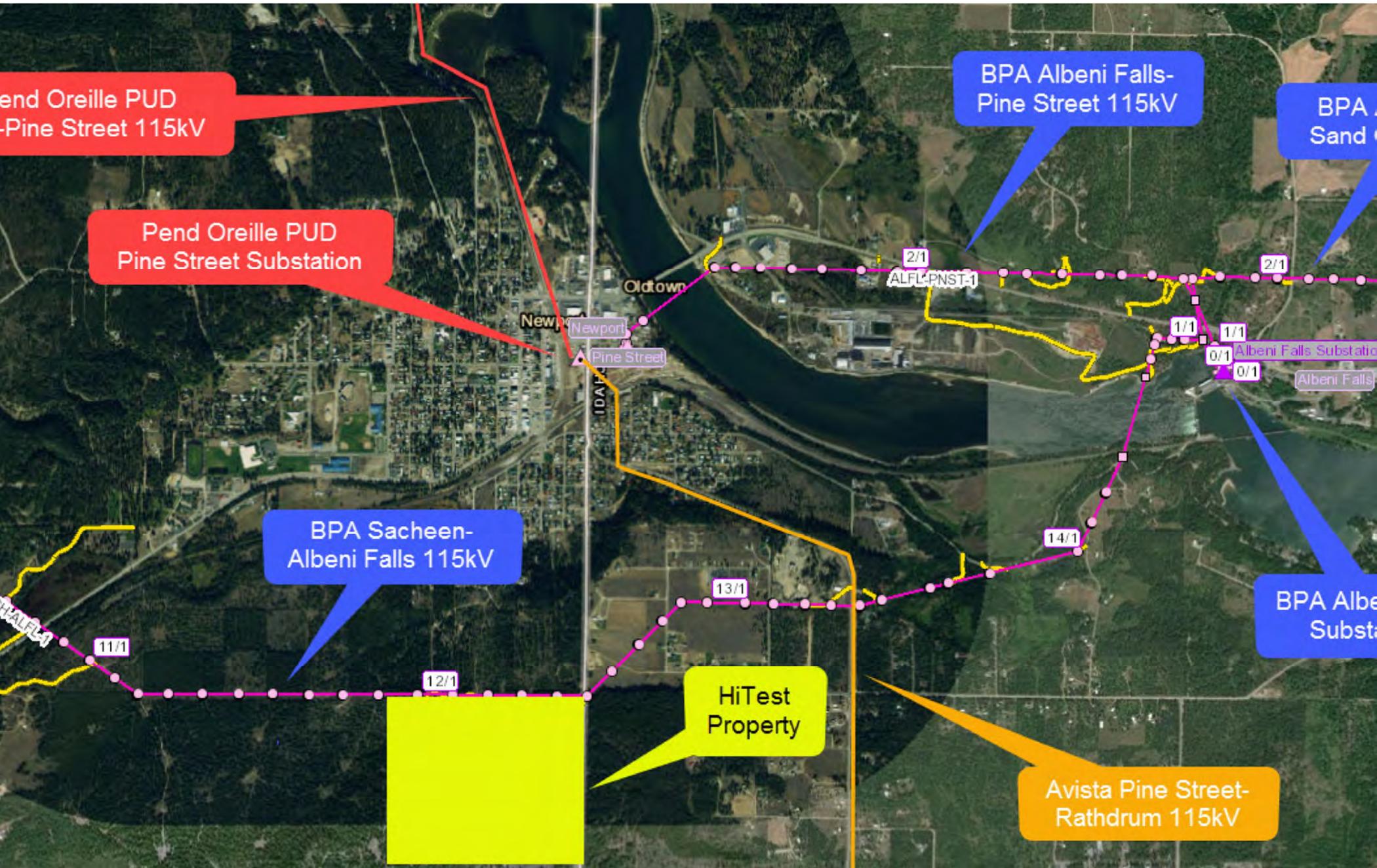
HiTest  
Property

BPA Albeni Falls-  
Pine Street 115kV

BPA  
Sand

BPA Albe  
Substa

Avista Pine Street-  
Rathdrum 115kV



## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Tuesday, February 6, 2018 4:11 PM  
**To:** Kimberly Gentle; Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** Amber E. Orr; Colin Willenbrock; Chris Jones; Mike Boyle; David Nichols; Jim May; Robertson,Angela D (BPA) - TSE-TPP-2 (adrobertson@bpa.gov); Wick,Martin A (BPA) - TPCV-TPP-4; Hindi,Hamody M (BPA) - TPPA-OPP-3; Bustamante,Richard (BPA) - TPP-OPP-3; Adams,Nicole A (CONTR) - TSES-TPP-2 (naadams@bpa.gov)  
**Subject:** L0428/L0429 Pend Oreille PUD - HiTest 2/4 Furnace Plant

**Kim** – thank you for the confirmation. We’re glad the opportunity was available to discuss these options sooner rather than later.

**Shari** – per a discussion today with POPD, please change both L0428 and L0429 to Feasibility Studies. Martin will confirm with you soon regarding required deposit and estimated time to perform the studies.

Regards,

### Victor Hitchens

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

-----Original Message-----

**From:** Kimberly Gentle [mailto:kgentle@popud.org]  
**Sent:** Tuesday, February 06, 2018 1:24 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Amber E. Orr; Colin Willenbrock; Chris Jones; Mike Boyle; David Nichols; Jim May  
**Subject:** [EXTERNAL] HiTest LLIR

Good afternoon Victor. First of all I want to thank you for your push to get the team together to discuss the LLIR and interconnection scenarios for the new HiTest load this morning. (b) (6) I was glad to get some engineering consensus prior to losing her.

I have spoken to HiTest and all parties are in agreement that we are best to proceed with two feasibility studies (#428-115 feasibility and #429 - 230 feasibility). The parties recognize this will change the LLIR agreement, costs and timing.

Amber is gone so please let me know what else you need from me at this point. Please tell the BPA team how much we appreciate their time and expertise.

Sent from my iPhone

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Kimberly Gentle <[kgentle@popud.org](mailto:kgentle@popud.org)>  
**Sent:** Thursday, February 15, 2018 1:00 PM  
**To:** Amber E. Orr; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** David Nichols; Mike Boyle; Chris Jones  
**Subject:** [EXTERNAL] RE: HiTest LLIR

I was looking to check on the status of the contract between the District and BPA to commence with the LLIR studies. (b) (6) I want to insure something isn't just sitting in her email.

Do you guys know if the agreements have been drawn up as of yet?

*Kimberly Gentle*

Director, Power and Risk Management

### Public Utility District No. 1 of Pend Oreille County



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---

**From:** Amber E. Orr [mailto:aorr@popud.org]  
**Sent:** Monday, May 21, 2018 2:10 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Subject:** [EXTERNAL] RE: L0428 and L0429 Pend Oreille FES Review Mtgs

That is a great question, because I think last time there was some question around that very subject it remained foggy (I am not sure that Kim had fully vetted everyone on the other end of the phone line, or, more accurately they may have told her one thing and then acted in another way...).

Is there any value in having this call with just the PUD to begin with and then scheduling a second call with the end user? Or would you prefer to schedule it all at once for efficiency sake? I can certainly understand respecting your time.

*Amber*

---

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4 [mailto:slsundeen@bpa.gov]  
**Sent:** Monday, May 21, 2018 2:05 PM  
**To:** Amber E. Orr <aorr@popud.org>  
**Subject:** RE: L0428 and L0429 Pend Oreille FES Review Mtgs

I'll see what I can do. Are your customers all US citizens? If not, I'll need to get some paperwork done.

---

**From:** Amber E. Orr [mailto:aorr@popud.org]  
**Sent:** Monday, May 21, 2018 1:46 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** Robertson,Angela D (BPA) - TSE-TPP-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Colin Willenbrock; Tyler Whitney  
**Subject:** [EXTERNAL] RE: L0428 and L0429 Pend Oreille FES Review Mtgs

Shari,

Great! I have been review the study since I received it on Thursday afternoon. I look forward to the discussion. I am thinking that perhaps we should schedule something for shortly after the holiday weekend, if that works for everyone else. I know that Colin is interested in sitting in for this discussion and I am sure there will be a few others, as well. But, let's start by setting a time/date and go from there.

How does Tuesday the 29<sup>th</sup> in the afternoon look? Perhaps between 2:00 and 4:00 sometime? Or Thursday the 31<sup>st</sup> in the afternoon between 2:00 and 5:00 sometime? It also looks like there may be some availability on Friday the 1<sup>st</sup> between 10:00 and 11:00 or in the afternoon after 2:30.

Let me know if any of those time will work for your team, because as I look at the combined calendars here, I don't see much availability for this week.

*Amber E. Orr, P.E.*

Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

---

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4 [<mailto:slsundeen@bpa.gov>]  
**Sent:** Monday, May 21, 2018 11:09 AM  
**To:** Amber E. Orr <[aorr@popud.org](mailto:aorr@popud.org)>  
**Cc:** Robertson,Angela D (BPA) - TSE-TPP-2 <[adrobertson@bpa.gov](mailto:adrobertson@bpa.gov)>; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB <[vphitchens@bpa.gov](mailto:vphitchens@bpa.gov)>  
**Subject:** L0428 and L0429 Pend Oreille FES Review Mtgs

Good morning,

I am scheduling the feasibility study review meetings now and am requesting a list of dates/times that you could be available. Also include any dates/times I should avoid. Thank you!

Shari

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[Pend Oreille County Public Utility District #1](#)

## **Knudson,Thanh (CONTR) - CGI-7**

---

**From:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Sent:** Monday, May 21, 2018 11:09 AM  
**To:** aorr@popud.org  
**Cc:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** L0428 and L0429 Pend Oreille FES Review Mtgs

Good morning,

I am scheduling the feasibility study review meetings now and am requesting a list of dates/times that you could be available. Also include any dates/times I should avoid. Thank you!

Shari

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Wednesday, August 8, 2018 11:54 AM  
**To:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; David Nichols; Kimberly Gentle  
**Subject:** [EXTERNAL] FW: BPA Meeting - Feasibility Study Questions

Angela,

I wanted to follow up with you after your email dated July 12<sup>th</sup>, 2018, in which you asked about a follow up call with PacWest (HiTest) and the Feasibility study. We were able to have an on-site meeting with them recently to discuss a litany of subjects and the feasibility study was one of them. We summarized the study and PacWest still has some questions that you may, or may not, be able to answer at this stage of the study process. However, we would like to set up the customer interface meeting so that we can move to the impact study. Jim May has suggested several dates in the email below. Do any of those dates work for you? And, if not, could you suggest some alternative dates?

*Amber E. Orr, P.E.*

Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

**From:** Jim May [mailto:jmay@hitestsand.com]  
**Sent:** Wednesday, August 8, 2018 11:45 AM  
**To:** Amber E. Orr <aorr@popud.org>  
**Cc:** Jim May <jmay@hitestsand.com>  
**Subject:** Re: BPA Meeting - Feasibility Study Questions

Hi Amber,  
I am open for a call with BPA all day on August 16, 20 - 22. 24. 28-31.

Let me know if any of these dates will work,  
All the best  
Jim

On Wed, Aug 8, 2018 at 2:28 PM, Amber E. Orr <[aorr@popud.org](mailto:aorr@popud.org)> wrote:

Jim,

I would like to get that meeting set up with BPA to answer any lingering questions you may have about the feasibility study before you can make you decision with regard to how you want to move forward with the impact study.

Would you like to send over some days/times that you are available over the next two weeks and I will try to get a mutually agreeable time set up with BPA for either an in person meeting or conference call (whichever is most convenience for you).

*Amber E. Orr, P.E.*

Director of Engineering

Pend Oreille P.U.D. #1

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Newport, WA 99156

Phone: 509.447.3137

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**[Pend Oreille County Public Utility District #1](#)**

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Tuesday, August 14, 2018 1:42 PM  
**To:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Cc:** David Nichols; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** [EXTERNAL] RE: BPA Meeting - Feasibility Study Questions  
**Attachments:** 20180726 Feasibility Summary Rev 0.docx; PacWest Silicon & BPA meeting on feasibility studies.docx

Angela,

Great inquiry, and, I had intended to follow up with you before our meeting to address these very items.

We definitely want to keep the conversation focused and probably develop an agenda or things will likely get a bit unorganized with our customer and we will not get everything covered in the 1-hour time slot. I have copied David Nichols on this email so that he can provide additional information if I leave anything significant out of this communication, but, for now I will start with some highlights.

1. We can probably dispense with much, if any, discussion around the 2-furnace feasibility study because PacWest is 99% certain they want to progress with plans around the 4-furnace design, even if they start with a 2-furnace initial install, pause, and then move forward with the 4-furnace completion.
2. A short summary of the two (2) BPA feasibility studies was written that only included the option(s) that was palatable to PacWest considering their short time lines and unwillingness to consider adding potential contingencies (for instance: additional impact studies required by Avista required by certain options, etc.). That summary is attached.

Additionally, I think that there is some interest by PacWest to know what the next steps are towards moving towards the impact study, which, have been communicated to them, but, I guess they would like to hear directly from you. We let them know that they essentially just need to make a choice and let us move forward in the study process – in the most basic terms. And that the longer they delay, the longer the project is delayed.

Also, I think it is fair to anticipate some questions that PacWest MAY ask. I am not sure I want to bring them up if they don't, but, I would like to give everyone the opportunity to be prepared if they come up. David has prepared a potential agenda that addresses some of these items and if you would like to talk ahead of time to address what the background was, we would be happy to do so.

*Amber E. Orr, P.E.*

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130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
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---

**From:** Robertson,Angela D (BPA) - TSE-TPP-2 [mailto:adrobertson@bpa.gov]  
**Sent:** Tuesday, August 14, 2018 10:48 AM

**To:** Amber E. Orr <aorr@popud.org>  
**Subject:** RE: BPA Meeting - Feasibility Study Questions

Hi Amber –

With the study follow up meeting now scheduled with PacWest for Aug. 30<sup>th</sup>, our Planning folks were wondering about how to frame the conversation itself. With there being so many options that were on the table for each study at our last meeting, and since it seems as though Pend Oreille had some initial leanings on those options, did you want us to focus the conversation specifically on those preferred options, or did you want to remain open to discussing them all with PacWest? Since Pend Oreille will be selecting which option we proceed with, we just want to make sure that we are not pursuing options that Pend Oreille doesn't deem feasible.

Your thoughts?

Thanks,

**Angela Robertson**

Transmission Account Executive | Transmission Sales

**BONNEVILLE POWER ADMINISTRATION**

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Vancouver, WA 98666-1409

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---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Wednesday, August 08, 2018 11:54 AM  
**To:** Robertson,Angela D (BPA) - TSE-TPP-2; Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; David Nichols; Kimberly Gentle  
**Subject:** [EXTERNAL] FW: BPA Meeting - Feasibility Study Questions

Angela,

I wanted to follow up with you after your email dated July 12<sup>th</sup>, 2018, in which you asked about a follow up call with PacWest (HiTest) and the Feasibility study. We were able to have an on-site meeting with them recently to discuss a litany of subjects and the feasibility study was one of them. We summarized the study and PacWest still has some questions that you may, or may not, be able to answer at this stage of the study process. However, we would like to set up the customer interface meeting so that we can move to the impact study. Jim May has suggested several dates in the email below. Do any of those dates work for you? And, if not, could you suggest some alternative dates?

*Amber E. Orr, P.E.*

Director of Engineering

Pend Oreille P.U.D. #1

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130 N. Washington

Newport, WA 99156

Phone: 509.447.3137

[aorr@popud.org](mailto:aorr@popud.org)

**From:** Jim May [<mailto:jmay@hitestsand.com>]  
**Sent:** Wednesday, August 8, 2018 11:45 AM  
**To:** Amber E. Orr <[aorr@popud.org](mailto:aorr@popud.org)>  
**Cc:** Jim May <[jmay@hitestsand.com](mailto:jmay@hitestsand.com)>  
**Subject:** Re: BPA Meeting - Feasibility Study Questions

Hi Amber,

I am open for a call with BPA all day on August 16, 20 - 22. 24. 28-31.

Let me know if any of these dates will work,

All the best

Jim

On Wed, Aug 8, 2018 at 2:28 PM, Amber E. Orr <[aorr@popud.org](mailto:aorr@popud.org)> wrote:

Jim,

I would like to get that meeting set up with BPA to answer any lingering questions you may have about the feasibility study before you can make your decision with regard to how you want to move forward with the impact study.

Would you like to send over some days/times that you are available over the next two weeks and I will try to get a mutually agreeable time set up with BPA for either an in person meeting or conference call (whichever is most convenient for you).

*Amber E. Orr, P.E.*

Director of Engineering

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[Pend Oreille County Public Utility District #1](#)





# Pend Oreille PUD #1 Feasibility Study Report for Electric Service for Proposed PacWest Silicon Plant

July 26, 2018

Prepared By:

David Nichols, Engineering Manager--System Operations & Planning

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## 1. Executive Summary

Provided within this Feasibility Study Report for Electric Service (Report) are two options for interconnecting the proposed PacWest Plant (Project) to Pend Oreille PUD #1 (POPUD). The Project is a silicon smelter located within the POPUD service territory, requiring interconnection to the POPUD transmission system. The configurations addressed within this Report include a 2-furnace plant as well as a 4-furnace plant based upon request by PacWest.

Although multiple points of interconnection (POI) were evaluated, two have been identified as feasible to POPUD. The cost estimates provided in this summary are good-faith estimates that include POPUD infrastructure additions as well as expenditures required by outside entities. However, both the cost and timeframe estimates contained in this Report are general in nature, are provided merely as a courtesy evaluation tool for PacWest, and are contingent upon factors that may be outside of POPUD control. The actual costs and timeframes for this Project may vary from the estimates provided in this Report.

The 2-furnace option includes a new 115 kV point of delivery substation near Bonneville Power Administration's (BPA's) Sacheen-Albeni Falls 115 kV line to create a loop. A non-binding cost range projection for this option is \$17 – 57 million. The timeframe for construction of interconnection is dependent upon final environmental approval, but is expected to be completed 30-36 months after the required environmental approvals and an executed agreement to proceed.

The 4-furnace option includes a new Bare Mountain 230 kV substation with a 230/115 kV transformer, the Bell-Usk 230 kV line looped, a new 115 kV line, and 115 kV point of delivery substation at the PacWest facility. A non-binding cost projection for this option is \$33 – 83 million. The timeframe for construction of interconnection is dependent upon final environmental approval, but is expected to be completed 30-36 months after the required environmental approvals and an executed agreement to proceed.

## 2. Introduction

This Feasibility Study Report for Electric Service examines the transmission system electrical viability of interconnecting the proposed PacWest silicon smelter plant (both 2-furnace and 4-furnace) to the Pend Oreille PUD #1. This Report identifies the best option for each plant configuration. The studies referred herein were conducted with the best available information at the time and may be based partly or solely on assumptions. If conditions or assumptions change, POPUD reserves the right to modify any content within this Report.

## 3. Facility Options

### a. 2-Furnace Plant (105 MW)

To supply electric service for a 2-furnace plant, BPA's existing Sacheen-Albeni Falls 115 kV line will be looped into a new 115 kV point of delivery substation near the new plant. BPA will own the 115 kV portion of the new substation and associated new 115 kV lines. POPUD will own the step down transformers and feeders to the PacWest facility. Avista is an impacted party in the nearby power grid, and POPUD would be required to work with Avista to resolve impacts.

#### i. Costs

<i>BPA infrastructure cost estimate</i>	\$13 – 51 million
<i>POPUD infrastructure cost estimate</i>	4 – 6 million
<i>Total project estimate</i>	\$17 – 57 million

#### ii. Schedule

The timeframe for construction of interconnection is dependent upon final environmental approval, but is expected to be completed 30-36 months after the required environmental approvals and an executed agreement to proceed. It is also dependent upon BPA's ability to fit the Project into a 3-year construction work plan.

## b. 4-Furnace Plant (210 MW)

To supply electric service for a 4-furnace plant, BPA's existing Bell-Usk 230 kV line will be looped into a new 230 kV substation near Bare Mountain, a new 230/115 kV transformer will be installed, and a new radial 115 kV line will be constructed to the plant location. There a new 115 kV point of delivery substation will feed the PacWest facility. BPA will own the Bare Mountain 230 kV substation. POPUD will own the 115 kV line as well as the point of delivery substation. POPUD will own the step down transformers and feeders to the PacWest facility. Some BPA power system configurations are impacted, and POPUD would be required to work with BPA to resolve impacts.

### i. Costs

<i>BPA infrastructure cost estimate</i>	\$13 – 53 million
<i>POPUD infrastructure cost estimate</i>	20 – 30 million
<i>Total project estimate</i>	\$33 – 83 million

### ii. Schedule

The timeframe for construction of interconnection is dependent upon final environmental approval, but is expected to be completed 30-36 months after the required environmental approvals and an executed agreement to proceed. It is also dependent upon BPA's ability to fit the Project into a 3-year construction work plan.

## 4. Project Team

The project team for this request is as follows:

Name:	Title:
Amber Orr	Director of Engineering
David Nichols	Engineering Manager, System Ops & Planning
Kimberly Gentle	Director, Power & Risk Management
Chris Jones	Director, Operations/Superintendent
TBD	Project Manager



# Pend Oreille County Public Utility District

---

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Box Canyon Hydro Project - P.O. Box 547 • Lone, WA 99139 • (509) 446-3137 • FAX (509) 447-6790

## PacWest Silicon / BPA / Pend Oreille PUD Meeting Agenda

### Questions on feasibility studies:

- Why such a wide cost range?
  - Would prefer at feasibility level +/- 50%
  - At next review +25 / -15 %
  - At final review +/- 10%
- Can the timeline be shortened?
  - Need power by 4Q20
- Which “required environmental approvals” are necessary so the timeline can start?
- How long will BPA’s environmental approvals take?
- Why was a design for 230 kV radial to the plant not as feasible?
- Are transmission credits available from BPA?

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Tuesday, September 11, 2018 12:43 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; 'scott.ross@powereng.com'; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Subject:** [EXTERNAL] RE: L0429 IFES

I said good morning.

Then I said, I am contacting you "this morning."

Ugh.

It's already been a long week.

*Amber*

---

**From:** Amber E. Orr  
**Sent:** Tuesday, September 11, 2018 12:42 PM  
**To:** 'Sundeen,Shari (BPA) - TPCC-TPP-4' <slsundeen@bpa.gov>  
**Cc:** 'Hitchens,Victor P (BPA) - TPCF-MEAD-GOB' <vpitchens@bpa.gov>; 'scott.ross@powereng.com' <scott.ross@powereng.com>; 'Robertson,Angela D (BPA) - TSE-TPP-2' <adrobertson@bpa.gov>  
**Subject:** RE: L0429 IFES

Shari,

Good afternoon.

I am contacting you this morning to authorize moving L0429 into the Impact Study phase. We spoke about several options and narrowed it down to 1 and 2D. I know it is out of the ordinary, but, is it possible to study both in parallel due to the uncertainty around option 1? There is a little hesitance by our customer to study option 1, even though it does seem to be the preferred choice, and lose time if we have to go back to option 2D. Please let me know your thoughts.

At this point, please feel free to withdraw L0428. The customer does not want to pursue the 2-furnace option (105MW).

One last thing: please feel free to speak freely and exchange information with Scott Ross of POWER Engineers, Inc. about this project. POWER has been selected to manage this project from this point forward and will be actively involved as an agent for the District as Engineering Professionals.

Thank you!

*Amber E. Orr, P.E.*  
Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington

Newport, WA 99156  
Phone: 509.447.3137  
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## Knudson,Thanh (CONTR) - CGI-7

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**To:** Amber E. Orr  
**Cc:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; 'scott.ross@powereng.com'; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Wick,Martin A (BPA) - TPCV-TPP-4  
**Subject:** RE: L0429 IFES

Thank you Amber. I'll be in touch.

---

**From:** Amber E. Orr [mailto:aorr@popud.org]  
**Sent:** Tuesday, September 11, 2018 12:42 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4  
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**[Pend Oreille County Public Utility District #1](#)**

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Thursday, September 13, 2018 3:17 PM  
**To:** Amber E. Orr  
**Cc:** 'scott.ross@powereng.com'; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4  
**Subject:** RE: L0429 IFES

Amber,

BPA discussed POPD's request below to perform a System Impact Study (SIS) for both options 1 and 2D in parallel. Unfortunately, only one SIS can be performed under a single Line and Load Interconnection Request (LLIR).

Therefore, if two SIS are desired, BPA's recommendation is for POPD to:

- Select option 1 for L0429.
  - o BPA will prepare and offer a SIS Agreement with a \$25K deposit and 90 day estimated completion.
  - o The deposit for existing Feasibility Study Agreement 18TP-11488 will be "rolled over" to the new SIS Agreement.
  - o FYI: to-date charges on this WO are approx. \$9,200 (deposit of \$10,000).
- Submit second LLIR with option 2D identified as plan of service.
  - o BPA will skip the Kickoff Meeting and jump right to offering a System Impact Study Agreement with an additional \$25K deposit and 90 day estimated completion.

BPA is expecting results from our as-built transmission line analysis in the next couple weeks, which will determine what is needed to increase the line rating on the Bell-Boundary No 1 230kV line. BPA anticipates a check-in meeting with POPD in the October timeframe to discuss the results.

Separately, BPA will initiate the process to withdraw request L0428. FYI: to-date charges on the WO associated with Feasibility Study Agreement 18TP-11487 are approx. \$11,400 (deposit of \$10,000).

Please let us know if you have any questions and/or how you would like to proceed.

Thanks!

### Victor Hitchens

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

---

**From:** Amber E. Orr [mailto:aorr@popud.org]  
**Sent:** Tuesday, September 11, 2018 12:42 PM  
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Director of Engineering

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**Subject:** [EXTERNAL] RE: L0429 IFES

Victor,

Thank you for your response. I believe that we will follow your recommendation and move forward in that vein. So, if Shari would prepare the estimate for costs and begin the process, I would appreciate it; our preference for service would be for option 1 due to the ease for obtaining easements by all appearances.

I will work on preparing the LLIR for option 2D (as I understand your communication) in the meantime as I will await a response.

Thank you, once again.

*Amber E. Orr, P.E.*

Director of Engineering  
Pend Oreille P.U.D. #1  
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Please let us know if you have any questions and/or how you would like to proceed.

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Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

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**To:** Sundeen, Shari (BPA) - TPCC-TPP-4

**Cc:** Hitchens, Victor P (BPA) - TPCF-MEAD-GOB; 'scott.ross@powereng.com'; Robertson, Angela D (BPA) - TSE-TPP-2

**Subject:** [EXTERNAL] RE: L0429 IFES

Shari,

Good afternoon.

I am contacting you this morning to authorize moving L0429 into the Impact Study phase. We spoke about several options and narrowed it down to 1 and 2D. I know it is out of the ordinary, but, is it possible to study both in parallel due to the uncertainty around option 1? There is a little hesitance by our customer to study option 1, even though it does seem to be the preferred choice, and lose time if we have to go back to option 2D. Please let me know your thoughts.

At this point, please feel free to withdraw L0428. The customer does not want to pursue the 2-furnace option (105MW).

One last thing: please feel free to speak freely and exchange information with Scott Ross of POWER Engineers, Inc. about this project. POWER has been selected to manage this project from this point forward and will be actively involved as an agent for the District as Engineering Professionals.

Thank you!

*Amber E. Orr, P.E.*

Director of Engineering

Pend Oreille P.U.D. #1

P.O. Box 190

130 N. Washington

Newport, WA 99156

Phone: 509.447.3137

[aorr@popud.org](mailto:aorr@popud.org)

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[Pend Oreille County Public Utility District #1](#)

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Friday, September 21, 2018 1:16 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** Kimberly Gentle; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Subject:** [EXTERNAL] FW: L0429 IFES

Shari,

I wanted to wrap Kimberly into this conversation since she is the project sponsor. She will be approving project expenses and I have informed her that we have authorized option 2D to move forward into the Impact Study phase as our preference for service.

We are happy to pay those expenses and move forward at any time. Thank you!

*Amber E. Orr, P.E.*

Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [mailto:vphitchens@bpa.gov]  
**Sent:** Thursday, September 20, 2018 4:17 PM  
**To:** Amber E. Orr <aorr@popud.org>  
**Cc:** Sundeen,Shari (BPA) - TPCC-TPP-4 <slsundeen@bpa.gov>; Wick,Martin A (BPA) - TPCV-TPP-4 <mawickjr@bpa.gov>; Hindi,Hamody M (BPA) - TPPA-OPP-3 <hmhindi@bpa.gov>; Bustamante,Richard (BPA) - TPP-OPP-3 <rxbustamante@bpa.gov>  
**Subject:** RE: L0429 IFES

Amber,  
I'm checking with our folks on this. I'll be out of the office tomorrow, but will touch base on Monday.

Thanks,

### Victor Hitchens

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB  
**BONNEVILLE POWER ADMINISTRATION**  
E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

---

**From:** Amber E. Orr [mailto:aorr@popud.org]  
**Sent:** Wednesday, September 19, 2018 6:42 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Subject:** [EXTERNAL] RE: L0429 IFES

Victor,

I want to confirm that that that, yes:

- Option 1 is a new radial interconnection to BPA's Sacheen Substation.
- Option 2D consists of a new Bare Mountain 230kV substation with the Bell-Usk 230kV line loop in

Although, I did notice that I did have a typo in my original email, in that, I said that our preference would be for option 1. That is incorrect. Our preference is for Option 2D. (I transposed the two.) So perhaps that should be selected for L0429 (Option 2D). And then I can submit an LLIR for option 1 that would go straight to impact study. Is that acceptable to BPA? In either case, our preference is to move forward with option 2D and complete the impact study for the Bare Mountain substation with the Bell-Usk 230kV line.

Thank you.

*Amber E. Orr, P.E.*

Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Wednesday, September 19, 2018 4:00 PM  
**To:** Amber E. Orr <[aorr@popud.org](mailto:aorr@popud.org)>  
**Subject:** RE: L0429 IFES

Hi Amber,

Just to confirm we are on the same page with option numbering:

- Option 1 is a new radial interconnection to BPA's Sacheen Substation.
- Option 2D consists of a new Bare Mountain 230kV substation with the Bell-Usk 230kV line loop in.

Thanks,  
Victor

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Wednesday, September 19, 2018 12:35 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** 'scott.ross@powereng.com'; Robertson,Angela D (BPA) - TSE-TPP-2; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4  
**Subject:** [EXTERNAL] RE: L0429 IFES

Victor,

Thank you for your response. I believe that we will follow your recommendation and move forward in that vein. So, if Shari would prepare the estimate for costs and begin the process, I would appreciate it; our preference for service would be for option 1 due to the ease for obtaining easements by all appearances.

I will work on preparing the LLIR for option 2D (as I understand your communication) in the meantime as I will await a response.

Thank you, once again.

*Amber E. Orr, P.E.*

Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]

**Sent:** Thursday, September 13, 2018 3:17 PM

**To:** Amber E. Orr <[aorr@popud.org](mailto:aorr@popud.org)>

**Cc:** 'scott.ross@powereng.com' <[scott.ross@powereng.com](mailto:scott.ross@powereng.com)>; Robertson,Angela D (BPA) - TSE-TPP-2 <[adrobertson@bpa.gov](mailto:adrobertson@bpa.gov)>; Sundeen,Shari (BPA) - TPCC-TPP-4 <[slsundeen@bpa.gov](mailto:slsundeen@bpa.gov)>; Wick,Martin A (BPA) - TPCV-TPP-4 <[mawickjr@bpa.gov](mailto:mawickjr@bpa.gov)>

**Subject:** RE: L0429 IFES

Amber,

BPA discussed POPD's request below to perform a System Impact Study (SIS) for both options 1 and 2D in parallel. Unfortunately, only one SIS can be performed under a single Line and Load Interconnection Request (LLIR).

Therefore, if two SIS are desired, BPA's recommendation is for POPD to:

- Select option 1 for L0429.
  - o BPA will prepare and offer a SIS Agreement with a \$25K deposit and 90 day estimated completion.
  - o The deposit for existing Feasibility Study Agreement 18TP-11488 will be "rolled over" to the new SIS Agreement.
  - o FYI: to-date charges on this WO are approx. \$9,200 (deposit of \$10,000).
- Submit second LLIR with option 2D identified as plan of service.
  - o BPA will skip the Kickoff Meeting and jump right to offering a System Impact Study Agreement with an additional \$25K deposit and 90 day estimated completion.

BPA is expecting results from our as-built transmission line analysis in the next couple weeks, which will determine what is needed to increase the line rating on the Bell-Boundary No 1 230kV line. BPA anticipates a check-in meeting with POPD in the October timeframe to discuss the results.

Separately, BPA will initiate the process to withdraw request L0428. FYI: to-date charges on the WO associated with Feasibility Study Agreement 18TP-11487 are approx. \$11,400 (deposit of \$10,000).

Please let us know if you have any questions and/or how you would like to proceed.

Thanks!

**Victor Hitchens**

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Tuesday, September 11, 2018 12:42 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; 'scott.ross@powereng.com'; Robertson,Angela D (BPA) - TSE-TPP-2  
**Subject:** [EXTERNAL] RE: L0429 IFES

Shari,

Good afternoon.

I am contacting you this morning to authorize moving L0429 into the Impact Study phase. We spoke about several options and narrowed it down to 1 and 2D. I know it is out of the ordinary, but, is it possible to study both in parallel due to the uncertainty around option 1? There is a little hesitance by our customer to study option 1, even though it does seem to be the preferred choice, and lose time if we have to go back to option 2D. Please let me know your thoughts.

At this point, please feel free to withdraw L0428. The customer does not want to pursue the 2-furnace option (105MW).

One last thing: please feel free to speak freely and exchange information with Scott Ross of POWER Engineers, Inc. about this project. POWER has been selected to manage this project from this point forward and will be actively involved as an agent for the District as Engineering Professionals.

Thank you!

*Amber E. Orr, P.E.*

Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

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**[Pend Oreille County Public Utility District #1](#)**

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Wednesday, September 26, 2018 12:00 PM  
**To:** Amber E. Orr  
**Cc:** Robertson,Angela D (TFE)(BPA) - TSE-TPP-2  
**Subject:** BPA Review of Potential New Loads in POPD Service Territory

Amber,

Per our recent discussion, you had indicated some potential new loads at Diamond Lake and Pine Street on POPD's distribution system. The recommendation received from BPA Transmission Planning was for POPD to submit "draft" LLIR for each of the locations where new load is expected, specifically any load that is outside what is already captured by the load forecast. This provides a good standardized form for BPA to evaluate the request and determine if an "official" request is warranted. The minimum information needed would be:

- 1) Approximate new load amount
- 2) Location/voltage
- 3) Anticipated energization date

A suggestion would be to submit the draft request for the load amount up to the installed transformer bank rating. During the BPA review, if we deem that amount would warrant an official LLIR, we could then provide a lesser "break even" load amount that could be energized without needing the official request. However, there should be an understanding with this idea that if there is a significant time gap between new loads, we'll need to re-check to ensure the initially provided acceptable load amount is still valid.

Hopefully this makes sense, but feel free to call if you have any questions.

Thanks,

### **Victor Hitchens**

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

## **Knudson,Thanh (CONTR) - CGI-7**

---

**Subject:** HOLD: Review Existing/Future POPD LLIR for PacWest  
**Location:** Conference Call TBD

**Start:** Thu 10/4/2018 1:00 PM  
**End:** Thu 10/4/2018 2:00 PM  
**Show Time As:** Tentative

**Recurrence:** (none)

**Meeting Status:** Not yet responded

**Organizer:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Required Attendees:** Bustamante,Richard (BPA) - TPP-OPP-3; Hindi,Hamody M (BPA) - TPPA-OPP-3;  
Robertson,Angela D (BPA) - TSE-TPP-2 (adrobotson@bpa.gov); Sundeen,Shari (BPA) -  
TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Amber E. Orr;  
'scott.ross@powereng.com'

Please let me know if this date/time is acceptable.

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Thursday, September 27, 2018 7:58 AM  
**To:** Amber E. Orr; 'scott.ross@powereng.com'  
**Subject:** RE: HOLD: Review Existing/Future POPD LLIR for PacWest

Would you both be available next Thursday from 1-2pm?

-----Original Message-----

From: Amber E. Orr [mailto:aorr@popud.org]  
Sent: Wednesday, September 26, 2018 3:49 PM  
To: 'scott.ross@powereng.com'; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
Subject: [EXTERNAL] RE: HOLD: Review Existing/Future POPD LLIR for PacWest

This works for me if it works for everyone else.

Amber E. Orr, P.E.  
Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
aorr@popud.org

-----Original Message-----

From: scott.ross@powereng.com [mailto:scott.ross@powereng.com]  
Sent: Wednesday, September 26, 2018 3:46 PM  
To: Hitchens,Victor P (BPA) - TPCF-MEAD-GOB <vpitchens@bpa.gov>  
Cc: Amber E. Orr <aorr@popud.org>  
Subject: Re: HOLD: Review Existing/Future POPD LLIR for PacWest

I have a meeting at 8:30 for 1/2 an hour if you could move yours to 9 would be good.

Thanks

Scott

Sent from my mobile device. Please excuse the brevity and any grammatical errors. If the intent of my message is not clear, please feel free to give me a call.

> On Sep 26, 2018, at 4:39 PM, Hitchens,Victor P (BPA) - TPCF-MEAD-GOB <vpitchens@bpa.gov> wrote:

>

> Please let me know if this date/time is acceptable.

>

> <meeting.ics>

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are not the intended recipient, and believe that you have received this email in error, please notify the sender and delete the copy you received.

Pend Oreille County Public Utility District #1 <<http://www.popud.org>>

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Tuesday, October 2, 2018 7:36 AM  
**To:** scott.ross@powereng.com  
**Cc:** Amber E. Orr  
**Subject:** RE: Review Existing/Future POPD LLIR for PacWest

Scott,

I have scheduled an internal BPA meeting tomorrow morning to discuss and will send out an updated invitation for our discussion on 10/4 tomorrow.

Thanks,

### Victor Hitchens

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

---

**From:** scott.ross@powereng.com [mailto:scott.ross@powereng.com]  
**Sent:** Tuesday, October 02, 2018 6:26 AM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Amber E. Orr  
**Subject:** [EXTERNAL] RE: Review Existing/Future POPD LLIR for PacWest

Victor,

Will you be providing some materials to speak to during this meeting e.g. a description of each option being looked at?

Thank You

SCOTT ROSS, P.E.\*  
PROJECT MANAGER

509-780-0045

(b) (6) cell

\*Registered in Idaho, Washington

**POWER Engineers, Inc.**

[www.powereng.com](http://www.powereng.com)

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-----Original Appointment-----

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Wednesday, September 26, 2018 3:39 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Bustamante,Richard (BPA) - TPP-OPP-3; Hindi,Hamody M (BPA) - TPPA-OPP-3; Robertson,Angela D (BPA) - TSE-TPP-2; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Amber E. Orr; Ross, Scott; Lincoln, Kevin  
**Subject:** Review Existing/Future POPD LLIR for PacWest  
**When:** Thursday, October 04, 2018 1:00 PM-2:00 PM (UTC-08:00) Pacific Time (US & Canada).  
**Where:** (b) (2)

(b) (2) [Redacted]

## Knudson,Thanh (CONTR) - CGI-7

---

**Subject:** Review Existing/Future POPD LLIR for PacWest  
**Location:** Phone: 503-230-4000, ID: 056073946 #

**Start:** Thu 10/4/2018 1:00 PM  
**End:** Thu 10/4/2018 2:00 PM  
**Show Time As:** Tentative

**Recurrence:** (none)

**Meeting Status:** Not yet responded

**Organizer:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Required Attendees:** Bustamante,Richard (BPA) - TPP-OPP-3; Hindi,Hamody M (BPA) - TPPA-OPP-3; Robertson,Angela D (BPA) - TSE-TPP-2 (adrobertson@bpa.gov); Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; 'Amber E. Orr'; 'scott.ross@powereng.com'  
**Optional Attendees:** kevin.lincoln@powereng.com; Adams,Nicole A (CONTR) - TSES-TPP-2

(b) (2)

[REDACTED]

[REDACTED]

[REDACTED]

### BPA Proposal

- Prepare L0429 SIS agreement for Option 2C
  - o \$25K deposit
  - o 90 day estimated completion
- In parallel, POPD submit 2<sup>nd</sup> LLIR for Option 1
  - o Upon receipt, BPA prepare 2<sup>nd</sup> SIS agreement (skip kickoff meeting)
  - o Additional \$25K deposit (\$50K total)
  - o Same 90 day estimated completion
- BPA to currently gathering more information related to the mitigation/upgrade to Sacheen-Boundary section required to increase rating needed for either option.

### Option Details

- 1) Option 1 – Expand Sacheen Substation, new 230kV breakers, new 230kV radial Line to POPD
  - a. Requires mitigation/upgrade of Sacheen-Boundary section of the Bell-Boundary No 1 230kV line
  - b. Provides the benefit of splitting up the Bell-Boundary No 1 230kV line
  - c. Existing facility, less O&M burden associated w/development of 2<sup>nd</sup> substation
- 2) Option 2C – New Bare Mountain Substation looped into the Bell-Boundary No 1 230kV line
  - a. POPD construct, own, operate and maintain Bare Mountain (including new 230kV breakers)
  - b. Requires upgrade of Sacheen-Boundary section of the Bell-Boundary No 1 230kV line
  - c. Requires BPA RAS equipment at Bare Mountain (additional agreements will be required + O&M burden)
  - d. Provides the benefit of splitting up the Bell-Boundary No 1 230kV line, similar to Option 1

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Zayac,Joleen M (CONTR) - TEBI-TPP-1  
**Sent:** Monday, October 15, 2018 11:59 AM  
**To:** aorr@popud.org  
**Cc:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Sundeen,Shari (BPA) - TPCC-TPP-4; PWASstudy; TEBI Reimbursable Team  
**Subject:** BPA Remittance Request to Pend Oreille County PUD No. 1 (18TP-11487)\_L0428: 2-ARC FURNACE STUDIES\_Invoice MSC-13824  
**Attachments:** 11487\_FINAL\_MSC-13824.pdf

Hi Amber,

Attached is an invoice for an amount due to Bonneville Power Administration for project costs incurred with the above referenced agreement.

The balance of Pend Oreille's amount of \$1,393.60 will need to be remitted by 11/14/2018.

Please forward on to anyone within your organization who may need this information. I will not be mailing a hard copy of the invoice.

Let me know if you have any questions.

Thanks,

Joleen

**Joleen Zayac**

(CONTR) Flux Resources, LLC

Reimbursable Project Analyst | TEPO-TPP-1

Transmission Project Management Analysis & Scheduling

**BONNEVILLE POWER ADMINISTRATION**

[jmzayac@bpa.gov](mailto:jmzayac@bpa.gov) | P 360.619.6916





ERROR: undefined  
OFFENDING COMMAND: get

STACK:

/quit  
-dictionary-  
-mark-

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Monday, October 15, 2018 12:07 PM  
**To:** Zayac,Joleen M (CONTR) - TEBI-TPP-1  
**Cc:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Sundeen,Shari (BPA) - TPCC-TPP-4; PWASstudy; TEBI Reimbursable Team  
**Subject:** [EXTERNAL] RE: BPA Remittance Request to Pend Oreille County PUD No. 1 (18TP-11487)\_L0428: 2-ARC FURNACE STUDIES\_Invoice MSC-13824

Joleen,

I have forwarded the final invoice on this agreement to our accounting department along with the deadline information for payment. Thank you.

*Amber E. Orr, P.E.*

Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

---

**From:** Zayac,Joleen M (CONTR) - TEPO-TPP-1 [mailto:jmzayac@bpa.gov]  
**Sent:** Monday, October 15, 2018 11:59 AM  
**To:** Amber E. Orr <aorr@popud.org>  
**Cc:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB <vphitchens@bpa.gov>; Robertson,Angela D (BPA) - TSE-TPP-2 <adrobertson@bpa.gov>; Sundeen,Shari (BPA) - TPCC-TPP-4 <slsundeen@bpa.gov>; PWASstudy <pwastudy@bpa.gov>; TEPO Reimbursable Team <TEPOReimbursableTeam@bpa.gov>  
**Subject:** BPA Remittance Request to Pend Oreille County PUD No. 1 (18TP-11487)\_L0428: 2-ARC FURNACE STUDIES\_Invoice MSC-13824

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The balance of Pend Oreille's amount of \$1,393.60 will need to be remitted by 11/14/2018.

Please forward on to anyone within your organization who may need this information. I will not be mailing a hard copy of the invoice.

Let me know if you have any questions.

Thanks,

Joleen

**Joleen Zayac**

(CONTR) Flux Resources, LLC

Reimbursable Project Analyst | TEPO-TPP-1

Transmission Project Management Analysis & Scheduling

**BONNEVILLE POWER ADMINISTRATION**

[jnzayac@bpa.gov](mailto:jnzayac@bpa.gov) | P 360.619.6916



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**Pend Oreille County Public Utility District #1**

## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Wednesday, October 24, 2018 11:42 AM  
**To:** 'Amber E. Orr'  
**Subject:** RE: L0429 IFES

Hi Amber,

Good timing! Shari just sent over the draft System Impact Study agreement for my review less than an hour ago. I will do that now.

Thanks,  
Victor

---

**From:** Amber E. Orr [mailto:aorr@popud.org]  
**Sent:** Wednesday, October 24, 2018 11:34 AM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** [EXTERNAL] FW: L0429 IFES

Hey Victor,

Do you know how we are coming on this request? I had an internal inquiry last week, so, I thought I would follow up.

*Amber E. Orr, P.E.*

Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

---

**From:** Amber E. Orr  
**Sent:** Friday, September 21, 2018 1:16 PM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4 <slsundeen@bpa.gov>  
**Cc:** Kimberly Gentle <kgentle@popud.org>; Robertson,Angela D (BPA) - TSE-TPP-2 <adrobertson@bpa.gov>  
**Subject:** FW: L0429 IFES

Shari,

I wanted to wrap Kimberly into this conversation since she is the project sponsor. She will be approving project expenses and I have informed her that we have authorized option 2D to move forward into the Impact Study phase as our preference for service.

We are happy to pay those expenses and move forward at any time. Thank you!

*Amber E. Orr, P.E.*

Director of Engineering  
Pend Oreille P.U.D. #1

P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Thursday, September 20, 2018 4:17 PM  
**To:** Amber E. Orr <[aorr@popud.org](mailto:aorr@popud.org)>  
**Cc:** Sundeen,Shari (BPA) - TPCC-TPP-4 <[slsundeen@bpa.gov](mailto:slsundeen@bpa.gov)>; Wick,Martin A (BPA) - TPCV-TPP-4 <[mawickjr@bpa.gov](mailto:mawickjr@bpa.gov)>; Hindi,Hamody M (BPA) - TPPA-OPP-3 <[hmhindi@bpa.gov](mailto:hmhindi@bpa.gov)>; Bustamante,Richard (BPA) - TPP-OPP-3 <[rxbustamante@bpa.gov](mailto:rxbustamante@bpa.gov)>  
**Subject:** RE: L0429 IFES

Amber,  
I'm checking with our folks on this. I'll be out of the office tomorrow, but will touch base on Monday.

Thanks,

**Victor Hitchens**

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB  
**BONNEVILLE POWER ADMINISTRATION**  
E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Wednesday, September 19, 2018 6:42 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Subject:** [EXTERNAL] RE: L0429 IFES

Victor,

I want to confirm that that that, yes:

- Option 1 is a new radial interconnection to BPA's Sacheen Substation.
- Option 2D consists of a new Bare Mountain 230kV substation with the Bell-Usk 230kV line loop in

Although, I did notice that I did have a typo in my original email, in that, I said that our preference would be for option 1. That is incorrect. Our preference is for Option 2D. (I transposed the two.) So perhaps that should be selected for L0429 (Option 2D). And then I can submit an LLIR for option 1 that would go straight to impact study. Is that acceptable to BPA? In either case, our preference is to move forward with option 2D and complete the impact study for the Bare Mountain substation with the Bell-Usk 230kV line.

Thank you.

*Amber E. Orr, P.E.*  
Director of Engineering  
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130 N. Washington

Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Wednesday, September 19, 2018 4:00 PM  
**To:** Amber E. Orr <[aorr@popud.org](mailto:aorr@popud.org)>  
**Subject:** RE: L0429 IFES

Hi Amber,

Just to confirm we are on the same page with option numbering:

- Option 1 is a new radial interconnection to BPA's Sacheen Substation.
- Option 2D consists of a new Bare Mountain 230kV substation with the Bell-Usk 230kV line loop in.

Thanks,  
Victor

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]  
**Sent:** Wednesday, September 19, 2018 12:35 PM  
**To:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Cc:** 'scott.ross@powereng.com'; Robertson,Angela D (BPA) - TSE-TPP-2; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4  
**Subject:** [EXTERNAL] RE: L0429 IFES

Victor,

Thank you for your response. I believe that we will follow your recommendation and move forward in that vein. So, if Shari would prepare the estimate for costs and begin the process, I would appreciate it; our preference for service would be for option 1 due to the ease for obtaining easements by all appearances.

I will work on preparing the LLIR for option 2D (as I understand your communication) in the meantime as I will await a response.

Thank you, once again.

*Amber E. Orr, P.E.*  
Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB [<mailto:vphitchens@bpa.gov>]  
**Sent:** Thursday, September 13, 2018 3:17 PM  
**To:** Amber E. Orr <[aorr@popud.org](mailto:aorr@popud.org)>  
**Cc:** 'scott.ross@powereng.com' <[scott.ross@powereng.com](mailto:scott.ross@powereng.com)>; Robertson,Angela D (BPA) - TSE-TPP-2 <[adrobertson@bpa.gov](mailto:adrobertson@bpa.gov)>; Sundeen,Shari (BPA) - TPCC-TPP-4 <[slsundeen@bpa.gov](mailto:slsundeen@bpa.gov)>; Wick,Martin A (BPA) - TPCV-TPP-4

<[mawickjr@bpa.gov](mailto:mawickjr@bpa.gov)>

**Subject:** RE: L0429 IFES

Amber,

BPA discussed POPD's request below to perform a System Impact Study (SIS) for both options 1 and 2D in parallel. Unfortunately, only one SIS can be performed under a single Line and Load Interconnection Request (LLIR).

Therefore, if two SIS are desired, BPA's recommendation is for POPD to:

- Select option 1 for L0429.
  - o BPA will prepare and offer a SIS Agreement with a \$25K deposit and 90 day estimated completion.
  - o The deposit for existing Feasibility Study Agreement 18TP-11488 will be "rolled over" to the new SIS Agreement.
  - o FYI: to-date charges on this WO are approx. \$9,200 (deposit of \$10,000).
- Submit second LLIR with option 2D identified as plan of service.
  - o BPA will skip the Kickoff Meeting and jump right to offering a System Impact Study Agreement with an additional \$25K deposit and 90 day estimated completion.

BPA is expecting results from our as-built transmission line analysis in the next couple weeks, which will determine what is needed to increase the line rating on the Bell-Boundary No 1 230kV line. BPA anticipates a check-in meeting with POPD in the October timeframe to discuss the results.

Separately, BPA will initiate the process to withdraw request L0428. FYI: to-date charges on the WO associated with Feasibility Study Agreement 18TP-11487 are approx. \$11,400 (deposit of \$10,000).

Please let us know if you have any questions and/or how you would like to proceed.

Thanks!

**Victor Hitchens**

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

---

**From:** Amber E. Orr [<mailto:aorr@popud.org>]

**Sent:** Tuesday, September 11, 2018 12:42 PM

**To:** Sundeen,Shari (BPA) - TPCC-TPP-4

**Cc:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; 'scott.ross@powereng.com'; Robertson,Angela D (BPA) - TSE-TPP-2

**Subject:** [EXTERNAL] RE: L0429 IFES

Shari,

Good afternoon.

I am contacting you this morning to authorize moving L0429 into the Impact Study phase. We spoke about several options and narrowed it down to 1 and 2D. I know it is out of the ordinary, but, is it possible to study both in parallel due to the uncertainty around option 1? There is a little hesitance by our customer to study option 1, even though it does seem to be the preferred choice, and lose time if we have to go back to option 2D. Please let me know your thoughts.

At this point, please feel free to withdraw L0428. The customer does not want to pursue the 2-furnace option (105MW).

One last thing: please feel free to speak freely and exchange information with Scott Ross of POWER Engineers, Inc. about this project. POWER has been selected to manage this project from this point forward and will be actively involved as an agent for the District as Engineering Professionals.

Thank you!

*Amber E. Orr, P.E.*

Director of Engineering

Pend Oreille P.U.D. #1

P.O. Box 190

130 N. Washington

Newport, WA 99156

Phone: 509.447.3137

[aorr@popud.org](mailto:aorr@popud.org)

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## Knudson,Thanh (CONTR) - CGI-7

---

**From:** Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Sent:** Wednesday, February 13, 2019 12:51 PM  
**To:** Kevin Conway (KConway@popud.org)  
**Cc:** Amber Orr (aorr@popud.org); Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Hindi,Hamody M (BPA) - TPPA-OPP-3  
**Subject:** RE: Status Update on PacWest Impact Study

Kevin,

Thanks for reaching out. Per our discussion, BPA is making good progress on the System Impact Study (SIS) for L0429 and we're not seeing anything alarming with the results so far.

However, additional study time is required to review changes to the South of Boundary RAS with the new system configuration.

BPA will be issuing a study delay notice soon and anticipate having the study completed by the end of March. Please let me know if you have additional questions.

Regards,

### Victor Hitchens

Electrical Engineer | Customer Service Engineering | TPCF-MEAD-GOB

**BONNEVILLE POWER ADMINISTRATION**

E [vphitchens@bpa.gov](mailto:vphitchens@bpa.gov) | O 509-822-4602 | C (b) (6)

---

**From:** Kevin Conway [mailto:KConway@popud.org]  
**Sent:** Monday, February 11, 2019 9:10 AM  
**To:** Sundeen,Shari (BPA) - TPCC-TPP-4  
**Cc:** Amber E. Orr; Jones,Lorissa J (BPA) - TPCR-TPP-4  
**Subject:** [EXTERNAL] Status Update on PacWest Impact Study

Ms. Sundeen,

Could you please provide me with a detailed update on where BPA is in completing an Impact Study related to the interconnection of PacWest in the Pend Oreille PUD service area? We interested in what has been completed so far, and the timeline going forward.

Your help on this is very appreciated. We continue to have discussions with PacWest on their project plans, and this is a key element of the process.

Best Regards,

Kevin

*Kevin J. Conway, PSP*

Chief Compliance, Engineering & Technology Officer

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington  
Newport, Washington 99156  
509.447.6783 Office | (b) (6) Cell | [kconway@popud.org](mailto:kconway@popud.org) | [www.popud.org](http://www.popud.org)

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## Knudson,Thanh (CONTR) - CGI-7

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**From:** Amber E. Orr <aorr@popud.org>  
**Sent:** Friday, February 15, 2019 12:40 PM  
**To:** Hindi,Hamody M (BPA) - TPPA-OPP-3  
**Cc:** Bustamante,Richard (BPA) - TPP-OPP-3; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; 'scott.ross@powereng.com'; 'Jayson Tymko'; Jim May  
**Subject:** [EXTERNAL] RE: L0429 PAC West System Impact Study Delay Notice

Thank you for the notification, Hamody. If there is anything you need from me, just let me know.

*Amber E. Orr, P.E.*

Director of Engineering  
Pend Oreille P.U.D. #1  
P.O. Box 190  
130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

---

**From:** Hindi,Hamody M (BPA) - TPPA-OPP-3 [mailto:hmhindi@bpa.gov]  
**Sent:** Friday, February 15, 2019 12:02 PM  
**To:** Amber E. Orr <aorr@popud.org>  
**Cc:** Bustamante,Richard (BPA) - TPP-OPP-3 <rxbustamante@bpa.gov>; Sundeen,Shari (BPA) - TPCC-TPP-4 <slsundeen@bpa.gov>; Wick,Martin A (BPA) - TPCV-TPP-4 <mawickjr@bpa.gov>; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2 <adrobertson@bpa.gov>; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB <vphitchens@bpa.gov>  
**Subject:** L0429 PAC West System Impact Study Delay Notice

**CAUTION:** This email originated from outside of the POPUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

This email serves as notice that additional time is required to complete the System Impact Study for Line and Load interconnection request L0429 PAC West load. Additional time is required to accommodate the RAS impacts and to refine the typical estimate. A new target due date for the System Impact Study is 03/26/2019.

Please let me know if you have any questions.

Thank You,

Hamody Hindi, M.S.E.E., P.E.  
Transmission Planning Engineer  
Bonneville Power Administration  
360-619-6852, [hmhindi@bpa.gov](mailto:hmhindi@bpa.gov)

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[Pend Oreille County Public Utility District #1](#)

## **Knudson,Thanh (CONTR) - CGI-7**

---

**From:** Hindi,Hamody M (BPA) - TPPA-OPP-3  
**Sent:** Friday, February 15, 2019 12:02 PM  
**To:** aorr@popud.org  
**Cc:** Bustamante,Richard (BPA) - TPP-OPP-3; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB  
**Subject:** L0429 PAC West System Impact Study Delay Notice

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Please let me know if you have any questions.

Thank You,

Hamody Hindi, M.S.E.E., P.E.  
Transmission Planning Engineer  
Bonneville Power Administration  
360-619-6852, [hmhindi@bpa.gov](mailto:hmhindi@bpa.gov)

## Knudson,Thanh (CONTR) - CGI-7

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**From:** Hindi,Hamody M (BPA) - TPPA-OPP-3  
**Sent:** Friday, February 15, 2019 12:47 PM  
**To:** Amber E. Orr  
**Cc:** Bustamante,Richard (BPA) - TPP-OPP-3; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; 'scott.ross@powereng.com'; 'Jayson Tymko'; Jim May  
**Subject:** RE: L0429 PAC West System Impact Study Delay Notice

Absolutely, we will do that, thank you.

---

**From:** Amber E. Orr [mailto:aorr@popud.org]  
**Sent:** Friday, February 15, 2019 12:40 PM  
**To:** Hindi,Hamody M (BPA) - TPPA-OPP-3  
**Cc:** Bustamante,Richard (BPA) - TPP-OPP-3; Sundeen,Shari (BPA) - TPCC-TPP-4; Wick,Martin A (BPA) - TPCV-TPP-4; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB; 'scott.ross@powereng.com'; 'Jayson Tymko'; Jim May  
**Subject:** [EXTERNAL] RE: L0429 PAC West System Impact Study Delay Notice

Thank you for the notification, Hamody. If there is anything you need from me, just let me know.

*Amber E. Orr, P.E.*

Director of Engineering  
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130 N. Washington  
Newport, WA 99156  
Phone: 509.447.3137  
[aorr@popud.org](mailto:aorr@popud.org)

---

**From:** Hindi,Hamody M (BPA) - TPPA-OPP-3 [mailto:hmhindi@bpa.gov]  
**Sent:** Friday, February 15, 2019 12:02 PM  
**To:** Amber E. Orr <aorr@popud.org>  
**Cc:** Bustamante,Richard (BPA) - TPP-OPP-3 <rbustamante@bpa.gov>; Sundeen,Shari (BPA) - TPCC-TPP-4 <slsundeen@bpa.gov>; Wick,Martin A (BPA) - TPCV-TPP-4 <mawickjr@bpa.gov>; Robertson,Angela D (TFE)(BPA) - TSE-TPP-2 <adrobertson@bpa.gov>; Hitchens,Victor P (BPA) - TPCF-MEAD-GOB <vphitchens@bpa.gov>  
**Subject:** L0429 PAC West System Impact Study Delay Notice

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Please let me know if you have any questions.

Thank You,

Hamody Hindi, M.S.E.E., P.E.  
Transmission Planning Engineer  
Bonneville Power Administration  
360-619-6852, [hmhindi@bpa.gov](mailto:hmhindi@bpa.gov)

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