

Department of Energy

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

FREEDOM OF INFORMATION ACT PROGRAM

August 11, 2023

In reply refer to: FOIA #BPA-2022-00786-F

SENT VIA EMAIL ONLY TO: nbell@advocates-nwea.org

Nina Bell Northwest Environmental Advocates P.O. Box 12187 Portland, OR 97212-0187

Dear Ms. Bell,

This communication is the Bonneville Power Administration's (BPA) second partial and final response to your request for agency records made under the Freedom of Information Act, 5 U.S.C. § 552 (FOIA). BPA received your records request on April 29, 2022, and formally acknowledged your request on May 16, 2022.

Request

"Communications between BPA and Grant Public Utility District, NuScale Power, X-energy, Energy Northwest, Utah Associated Municipal Power Systems (UAMPS), and/or any consultants, advisors, or contractors working with or for those entities (e.g., Mark Gendron, special advisor to UAMPS) regarding the potential development of new nuclear energy sources, including but not limited to small modular reactors (SMR), the 'Carbon Free Power Project' (CFPP), and transmission services for potential new nuclear facilities."

Clarification

Via email exchanges with the agency, from May 25, 2022 and June 3, 2022, you and agency agreed to a FOIA records search and response to include your original request language, and a date range of January 1, 2017, to June 3, 2022. You and agency also agreed to a FOIA records search and response limited to the results from a search of agency electronic records databases using the keywords, "nuclear energy" OR "small modular*" OR "SMR" OR "carbon Free Power Project" OR "CFPP" AND "transmission" — which keyword "transmission" must appear with at least any one of the other keywords.

Second Partial and Final Response

BPA searched for and gathered records responsive to your FOIA request from knowledgeable employees in the agency's Market Analysis & Policy, Long Term Power Planning, NW Requirements Marketing, Eastern Customer Services, Power Account Services, Long Term Sales

and Purchases, Power Services, Office of the Chief Operating Officer, and Eastern Customer Services offices. BPA's second partial response includes 129 pages of records. The records accompany this communication, with the following redactions applied:

• 24 redactions applied under 5 U.S.C. § 552(b)(6) (Exemption 6)

A detailed 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)). Further, section (b) of the FOIA, which contains the FOIA's nine statutory exemptions, also directs agencies to publicly release any reasonably segregable, non-exempt information that is contained in those records.

Exemption 6

Exemption 6 serves to protect Personally Identifiable Information (PII) 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, cell phone numbers, a signature, and a single personal comment unrelated to BPA business. BPA cannot waive these PII redactions, as the protections afforded by Exemption 6 belong to individuals and not to the agency.

Further, as required by 5 U.S.C. § 552(a)(8)(A), information has been withheld only in instances where (1) disclosure is prohibited by statute, or (2) BPA foresees that disclosure would harm an interest protected by the exemption cited for the record. When full disclosure of a record is not possible, the FOIA statute further requires that BPA take reasonable steps to segregate and release nonexempt information. The agency has determined that in certain instances partial disclosure is possible, and has accordingly segregated the records into exempt and non-exempt portions.

Certification

Pursuant to 10 C.F.R. § 1004.7(b)(2), I am the individual responsible for the records search and partial records release described above. Your FOIA request BPA-2022-00786-F is now closed with the responsive agency information provided.

Appeal

Note that the records release certified above is final. Pursuant to 10 C.F.R. § 1004.8, you may appeal the adequacy of the records search, and the completeness of this records release, within 90 calendar days from the date of this communication. 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 <u>OHA.filings@hq.doe.gov</u>, 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.

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 Phone: 202-741-5770 Toll-free: 1-877-684-6448 Fax: 202-741-5769

Questions about this communication may be directed to James King, FOIA Public Liaison, at <u>jjking@bpa.gov</u> or 503-230-7621. Questions may also be directed to E. Thanh Knudson, Case Coordinator (ACS Staffing Group), at 503-230-5221 or <u>etknudson@bpa.gov</u>.

Sincerely,

Candice D. Palen Freedom of Information/Privacy Act Officer

Responsive agency information accompanies this communication.

From: Rasmussen, Scott

Sent: Wed Mar 04 08:28:10 2020

To: ljhall@bpa.gov; dagoodrich@bpa.gov

Cc: Communications; tebrim@bpa.gov; mrsmith@bpa.gov

Subject: [EXTERNAL] RE: NuScale - Messages from Bonneville Power Administration

Importance: Normal

Lee,

Thank you for the response.

I completely understand that Jeff is booked this week. I will be back in my office next week and be a bit more available myself.

1

I look forward to hearing from Jeff so that we can connect.

Best regards, Scott

Scott Rasmussen

Director of Sales

email: srasmussen@nuscalepower.com

web: www.nuscalepower.com

cell: (b)(6)

office: <u>541-452-7820</u>

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Sent with BlackBerry Work - Please excuse any misspellings or grammatical errors. (www.blackberry.com)

Sent: Mar 4, 2020 8:08 AM

- **To:** "Rasmussen, Scott" <SRasmussen@nuscalepower.com>; "Goodrich,Daniel A (TFE)(BPA) TOOC-DITT-1" <dagoodrich@bpa.gov>
- Cc: Communications <communications@nuscalepower.com>; "Brim,Thomas E (CONTR) PES-6"
- <tebrim@bpa.gov>; "Smith,Melanie R (BPA) PES-6" <mrsmith@bpa.gov>

Subject: [Warning - Possible untrusted sender]RE: NuScale - Messages from Bonneville Power Administration

Good morning Scott – I checked our VP Jeff Cook's schedule for tomorrow afternoon, and he is fully "booked up" unfortunately.

I will pass on your contact information to Jeff – he had asked for a Point of Contact at NuScale, and I am sure he

From: "Hall,Lee J (BPA) - PES-6" hall@bpa.gov>

will be calling you sometime soon to arrange a meeting to discuss the SMR. I am sure he is interested in its capabilities, its financials, and its timeline for development (especially as it relates to grid transmission requirements).

Thanks very much – Lee

Lee J. Hall

Manager, Distributed Energy Resources

Bonneville Power Administration

US Department of Energy

503-230-5189

ljhall@bpa.gov

From: Rasmussen, Scott <SRasmussen@nuscalepower.com>
Sent: Tuesday, March 3, 2020 9:57 PM
To: Hall,Lee J (BPA) - PES-6 hall@bpa.gov>; Goodrich,Daniel A (TFE)(BPA) - TOOC-DITT-1
<dagoodrich@bpa.gov>
Cc: Communications <communications@nuscalepower.com>

Subject: [EXTERNAL] NuScale - Messages from Bonneville Power Administration

Messrs. Hall and Goodrich,

Allow me to introduce myself, I am Scott Rasmussen, Director of Sales for NuScale Power. I received both of your messages from our communications team via our web site or direct message

Message from Lee Hall:

I am contacting you on behalf of our BPA Transmission Planning Vice President Jeff Cook who would like to talk to a NuScale representative about the SMR. If you could please provide a POC (name email phone) who we can arrange a discussion with -- we would be most grateful. Lee Hall

Message from Daniel Goodrich:

I am the past president of the Oregon Chapter of IEEE PES, and I'm interested in having someone present on small scale nuclear generation at a future meeting in Portland. I spoke with Mark Gendron a few weeks ago, so he might be a good contact. Can you please connect me with someone? Thanks.

To ensure that I meet the intent of your requests, I'd like to better understand the depth of information and/or support that you are seeking. Perhaps a brief discussion would work best.

I am on the west coast this week with some availability on Thursday afternoon. Would you be available for a brief

discussion?

Best regards,

Scott

Scott Rasmussen

Director of Sales

email: srasmussen@nuscalepower.com

web: www.nuscalepower.com

cell: (b)(6)

office: 541.452.7820

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Not Responsive



From: Mark Gendron <<u>MGendron@uamps.com</u>> Sent: Monday, October 31, 2022 2:59 PM To: Bas,JoAnn L (BPA) - P-6 <<u>ilbas@bpa.gov</u>> Subject: [EXTERNAL] Would like to meet with Suzanne and Kim

Hi JoAnn

It has been a long time! I hope all is very well with you and the whole family. We are all doing great here in Portland. And my mostly-retired life is the best! Let's have lunch one day soon.

I would like to find time to meet with Suzanne and Kim regarding the Provider of Choice process. I am assuming that they are both leading or very involved in the effort. Specifically, we are interested in having a conversation about our Carbon Free Power Project (CFPP) and opportunities for BPA associated with the project. I am hoping we can find a couple hours of their time before Thanksgiving if at all possible. If it would be helpful, I would be happy to chat with either Suzanne or Kim before we schedule a meeting.

I appreciate your help on this!

My best always

Mark

From: Thompson, Kim T (BPA) - PS-6

Sent: Tue Nov 15 12:26:03 2022

To: Mark Gendron; Bas, JoAnn L (BPA) - P-6

Subject: RE: Agenda prep for 11/22 meeting

Importance: Normal

Attachments: image001.jpg; image002.jpg; image003.jpg; image004.jpg; image005.jpg; image006.jpg

Thanks Mark!

I'll share the draft agenda internally along with the proposed time allotments and will circle back if we ID any adjustments we'd like to request.

1

Looking forward to seeing you next week!

Best Regards,

Kim Thompson (she/her/hers)

Vice President | Northwest Requirements Marketing

Bonneville Power Administration

bpa.gov | P 503-230-3408 | C (b)(6)

https://twitter.com/bonnevillepower

From: Mark Gendron <MGendron@uamps.com> Sent: Tuesday, November 15, 2022 10:53 AM To: Thompson,Kim T (BPA) - PS-6 <ktthompson@bpa.gov>; Bas,JoAnn L (BPA) - P-6 <jlbas@bpa.gov> Subject: [EXTERNAL] RE: Agenda prep for 11/22 meeting

Kim

My apologies for not getting back yesterday. We are all in concurrence with the agenda as is. See below for my suggestions on time allocation. Notice that I suggest keeping significant time for the last agenda item, our open discussion. Hopefully you concur.

JoAnn, at this time it looks like I will attend at BPA HQ, as well as Mason Baker, our CEO. Mason is a US citizen, and we can get you any information you need from Mason. Also, it is possible that our Project Director, Shawn Hughes will attend as well. I will let you know by the end of the week on Shawn.

My best

Mark

From: Thompson,Kim T (BPA) - PS-6 <<u>ktthompson@bpa.gov</u>> Sent: Thursday, November 10, 2022 9:37 AM To: Mark Gendron <<u>MGendron@uamps.com</u>> Subject: RE: Agenda prep for 11/22 meeting

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Perfect, Mark.

We'll need to arrange the security side of things for the in-person attendees. I'll lean on JoAnn for that, so please let me know when you've firmed up who we should expect to see live, and I'll have JoAnn coordinate through you.

Best Regards,

Kim Thompson (she/her/hers)

Vice President | Northwest Requirements Marketing

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From: Mark Gendron <<u>MGendron@uamps.com</u>> Sent: Thursday, November 10, 2022 9:33 AM To: Thompson,Kim T (BPA) - PS-6 <<u>ktthompson@bpa.gov</u>> Subject: [EXTERNAL] RE: Agenda prep for 11/22 meeting

Hey Kim

Thanks for the note and for putting this suggested agenda together. It looks good to me. Give me a couple days to get back with any suggested modifications, additions etc, as well as thoughts on the time allocation for topics.

I expect that Mason Baker will be joining me in person for the meeting. It is possible that our project director, Shawn Hughes, will as well.

Thanks again Kim. I will get back to you on Monday at the latest.

My best

Mark

From: Thompson,Kim T (BPA) - PS-6 <<u>ktthompson@bpa.gov</u>>

Sent: Wednesday, November 9, 2022 1:07 PM To: Mark Gendron <<u>MGendron@uamps.com</u>> Subject: Agenda prep for 11/22 meeting

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Hi Mark – I'd like to coordinate with you on the agenda for our 11/22 meeting. We have a good two hour window, and I'm sure you have a sense of what you'd like to cover.

Here are a few starter thoughts for consideration:

Intros- 10 minutes

- CFPP technology overview 20 minutes
- Project status 30 minutes
 - Regulatory
 - Technical / construction
 - Commercial
- Post-build considerations: 30 minutes
 - Project use cases / flexibility
 - Anticipated cost profile
- Open discussion 25 minutes

• Resource application ideation: future BPA power sales; customer non-federal resourcing; exchange resource for Idaho load service

Wrap Up- 5 minutes

Are there other topic areas we should plan to cover? What is your sense of time allotment among these topics?

I will circulate inquiries internally to ensure we plan for any other specific topics/discussion points other BPA stakeholders have in mind.

Best Regards,

Kim Thompson (she/her/hers)

Vice President | Northwest Requirements Marketing

Bonneville Power Administration

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From: Mark Gendron

Sent: Tue Nov 22 13:21:41 2022

To: Thompson,Kim T (BPA) - PS-6

Subject: [EXTERNAL] RE: Late, but hopefully not *too* late a request

Importance: Normal

Attachments: image001.jpg; image002.jpg; image003.jpg; image004.jpg; image005.jpg; image006.jpg; UAMPS_CFPP_BPA_Nov 2022 _ Final..pptx

Here you go Kim. We hope to be at HQ by 1:40

From: Thompson,Kim T (BPA) - PS-6 <ktthompson@bpa.gov> Sent: Tuesday, November 22, 2022 12:40 PM To: Mark Gendron <MGendron@uamps.com> Subject: Late, but hopefully not *too* late a request

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Hi Mark – Since we are meeting at BPA, and not all participants will be live, could you please email any materials you'd like to share during the meeting to me? I can host the slides from Webex.

Alternately, if you have anyone participating remotely, they will also be able to present from their location to the Webex. We just won't be able to provide network connection at BPA HQ for external equipment.

Best Regards,

Kim Thompson (she/her/hers)

Vice President | Northwest Requirements Marketing

Bonneville Power Administration

bpa.gov | P 503-230-3408 | C(b)(6)

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7C%7C%7C&sdata=XyxMX5PmseFBwvQilWbkf89d8g5ZPj%2B3ZryXZOCdZF0%3D&reserved=0https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Ftwitter.com%2Fbonnevillepower&data=05%7C01%7C%7Cebd4771ac9bb4a3f892108dacc9c358%7C910bdc1cf8cc4408978a675c62b625d1%7C0%7C1%7C638047464214716542%7CUnknown%7CTWFpbGZsb3d8eyJWljoiMC4wLjAwMDAiLCJQljoiV2luMzliLCJBTil6lk1haWwiLCJXVCI6Mn0%3D%7C1000%7C%7C%7C&sdata=Jnz8mzp1SiKgLbUHRtXyM4C3KoFOrkpXFSHyVFFOZbg%3D&reserved=0https://nam10.safelinks.protection.outlook.com/?url=http%3A%2F%2Fyoutube.com%2Fuser%2FBonnevillePower&data=05%7C01%7C%7Cebd4771ac9bb4a3f892108daccc9c358%7C910bdc1cf8cc4408978a675c62b625d1%7C0%7C1%7C638047464214716542%7CUnknown%7CTWFpbGZsb3d8eyJWljoiMC4wLjAwMDAiLCJQljoiV2luMzliLCJBTil6lk1haWwiLCJXVCI6Mn0%3D%7C1000%7C%7C%7C&sdata=%2FfxPU1mHobbFr6r4FDTRzWpq2YWsFu1MK8mlbft1VrE%3D&reserved=0



Carbon Free Power Project

BONNEVILLE POWER ADMINISTRATION PRESENTATION November 22, 2022

BPA-2022-00786-F 0176

27510035

Topics for Discussion

- Introductions (5 min)
- CFPP Technology Overview (20 min)
- Project Status (30 min)
 - Regulatory
 - Technical / construction
 - Commercial
- Open Discussion (1 hour)
 - Post-Build Considerations, project use cases / flexibility, anticipated cost profile
 - Resource application ideation: future BPA power sales; customer non-federal resourcing; exchange resource for Idaho load service
- Next Steps (5 min)

Description of UAMPS

- UAMPS is a Joint Action Agency
 - 50 members in 7 western states
- UAMPS is project based and does not require its Members to:
 - Participate in projects, or
 - Purchase power from UAMPS
- UAMPS does allow its Members to:
 - To purchase power from whomever they desire, or
 - Develop their resources outside of UAMPS



UAMPS Projects

Generation Projects

Hunter Project – coal-fired San Juan Project – coal-fired (retired) IPP Project – coal fired (converting to natural gas)

Payson Project – natural gas

Natural Gas Project

CRSP Project – hydro

- Provo River hydro
- Olmsted hydro

Horse Butte Wind Project - wind

• Repowering and/or HBW 2 - (investigating)

Firm Power Supply Project

- Pleasant Valley wind
- Patua geothermal and solar
- Red Mesa Tapaha (2023) solar
- Steel IA and Steel IB (2023) solar

Veyo Project – waste heat

Carbon Free Power Project (Q4 2029) – small modular nuclear reactors

Transmission Projects

Central-St. George Project

Craig-Mona Project

Service Projects

Pool Project – dispatch and scheduling services Resource Project – investigation of new resources GPA Project Member Services Project



UAMPS Resources by Types: 2021

(includes member owned/contract resources)



Carbon Free Power Project

- NuScale Power technology
- 6 modules plant delivering 462 MWe total
- Sited at Idaho National Laboratory
- Project's participants are a coalition of public power agencies in the Western US
- Economic project life of 40 years
- DOE Cost Share support weighted to early years to support derisking
- Forecast Commercial Operation Date for the first module is 2029 with all modules on-line by November 2030



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Core Technology: NuScale Power Module

- A NuScale Power Module[™] (NPM) includes the reactor vessel, steam generators, pressurizer, and containment in an integral package
- Simple design that eliminates reactor coolant, pumps, large bore piping and other systems and components found in large conventional reactors
- Each module produces 250 MWt up to 77 MWe
 - Small enough to be factory built for easy transport and installation
 - Load following
 - Incrementally added to match load growth
 - I2 module plant up to 924 MWe gross
 - 6 module plant up to 462 MWe gross
 - 4 module plant up to 308 MWe gross



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NuScale Power Train



- Each module feeds one turbine generator train, eliminating single-shaft risk.
- 100% turbine bypass capability.
- Small, simple commercial grade. Components support short straightforward refueling outages.

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Site Layout: VOYGR[™]-6 Power Plant with Air-Cooled Condensers



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A New Approach to Construction and Operation

NuScale has revolutionized the nuclear supply chain with modular manufacturing of NPM units in-house that are shipped to sites



Repurposing Coal Power Plant Sites





- A NuScale plant can be built on an existing coal power plant site
 - 7 4 and 6 Module NuScale plants have an even smaller land footprint
- Some coal plant infrastructure can be repurposed and reused, such as:
 - Cooling water delivery systems, demineralized water, potable water, site fire protection, switchyard, and buildings (e.g., administrative, training, warehouse)
- Capital cost savings could be approximately \$100M depending on the site

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Simplicity Enhances Safety

Natural Convection for Cooling

 Passively safe - cooling water circulates through the nuclear core by natural convection eliminating the need for pumps.

Seismically Robust

 System submerged in a below-grade pool of water in an earthquake and aircraft impact resistant building.

Simple and Small

- Reactor core is 1/20th the size of large reactor cores.
- Integrated reactor design no large-break loss-ofcoolant accidents.

Defense-in-Depth

 Multiple additional barriers to protect against the release of radiation to the environment.



Conduction – the water heated by the nuclear reaction (primary water) transfers its heat through the walls of the tubes in the steam generator, heating the water inside the tubes (secondary water) and turning it to steam. This heat transfer cools the primary water.

Convection – energy from the nuclear reaction heats the primary water causing it to rise by convection and buoyancy through the riser, much like a chimney effect

Gravity | Buoyancy – colder (denser) primary water "falls" to bottom of reactor pressure vessel, and the natural circulation cycle continues

No Design Basis Events cause core uncovering or require Operator Action

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Innovative Advancements to Reactor Safety Nuclear fuel cooled indefinitely without AC or DC power or need to add water*



*Alternate 1E power system design eliminates the need for 1E qualified batteries to perform ESFAS protective functions - Patent Pending

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NuFuel-HTP2[™] Fuel Development

- NuFuel-HTP2[™] is a shorter version (~ 6 ft heated length) of existing Framatome HTP[™] fuel design (~12 ft heated length).
- Each component (grids, nozzles, fuel rods, pellet, cladding) in the NuFuel-HTP2[™] assembly is based on the existing Framatome 17x17 HTP[™] fuel assembly design.
- 20,000 Framatome 17x17 HTP™ assemblies have been deployed in 52 reactors supporting power generation in 11 countries.
- M5[®] cladding is used in the NuFuel-HTP2[™]. More than five million M5[®] clad fuel rods have been used in 84 reactors around the globe.
- Several prototypic NuFuel HTP2[™] fuel assemblies were manufactured and Framatome's standard suite of mechanical and hydraulic testing was conducted to characterize the fuel assembly to support US NRC licensing submittal.
- NuScale and Framatome have a definitive supply agreement for fabrication.

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NRC Review of Design Certification Application

<u>Review History</u>

- US600 Design Certification Application completed in December 2016
- Docketed for review by NRC in March 2017
- Final Safety Evaluation Report Issued August 2020
- US600 Standard Design Approval in September 2020





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Rulemaking

- Proposed Rule to Signature Authority: 1/14/2021 (Complete)
- Proposed Rule Publication Date: 7/1/2021 (Complete)
- NuScale submitted comments on the rulemaking 10/14/2021 (Complete)
- Final Rule to Signature Authority: 6/30/2022 (complete)
- Final Rule Publication: 11/25/2022

Emergency Planning Zone (EPZ)

- In October 2022, the NRC and ACRS (Advisory Committee on Reactor Safeguards) approved NuScale's Emergency Planning Zone Methodology, allowing the EPZ at the site boundary
 - Large Nuclear Power Plants have a 10-mile EPZ
- In its summary, NRC says: "The NuScale EPZ methodology is riskinformed, provides a technically consistent approach ... for EPZ sizing, and adequately considers seismic and multi-module impacts.



Licensing Timeline

2022	NRC Approval of NuScale EPZ Size Method Complete SDAA for VOYGR-6
2023	NRC Review of SDAA
2024	Complete CFPP COLA NRC Issues SDA
2024	NRC Review of CFPP COLA
2026	NRC Issues CFPP COL

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SITE CHARACTERIZATION PROGRESS

~

 \checkmark

- Site Plan Developed/Approved
- Core Boring Plans Developed/Approved
- Well Drilling Plans Developed/ /Approved
- Site Characterization Work Completed



Class 3 Analyses

Project maturation:

- PCE4 factored, PCE3 bottoms up w/vendor input
- SC wall enhancement
- Prepared time phased staffing plans
- Flat vs. terraced site /Importing structural fill
- Site Stabilization Agreement
- Detailed manufacturing & assembly plans
- Refined risk/contingency allowance
- Operator Stand-up
 - Xcel engagement (not present in PCE4)

- Facilities
 - Added ZLD facility & ISFSI Pad
 - 230kV transmission & Substation Upgrades
 - Includes turnkey building estimates
 - Admin building & warehouse are now 22,500ft2
 - Pre-engineered metal building costs up
 - Security facilities include 2 buildings & 2 shacks
 - Bottoms up home office engineering
- Soft Costs
 - Added performance bonding
 - Revised tax assumptions
 - Removed LPO Fees

Structured Project



- Development Cost Reimbursement Agreement (DCRA)
 - Provides guardrails until Final Notice to Proceed (FNTP)
- Engineering, Procurement & Construction Development Agreement (EPCDA)
 - Provides for detailed Site Specific Cost Estimate
- Department of Energy (DOE) Award
 - Represents 25% of CFPP costs (reduces development costs and capitalized interest during development)
- UAMPS' Power Sales Contract (PSC)
 - Provides guardrails for the current 27 UAMPS Participants and future UAMPS Participants
- Site Use Permit
 - Secure and under development



of Net Deve opment Costs

Economic Competitive Test (Price Target)

Class 3 Project Cost Estimate

- UAMPS and its owner's engineers are currently evaluating the Class 3 Project Cost Estimate (PCE) and updated financial model
- The updated costs from the Class 4 PCE are expected to show
 - An increase in capital expense, including the effects of recent extreme escalation of commodity costs
 - A significant increase in the life cycle financing costs driven by recent increases in the costs of borrowing money
 - Benefit from the clean energy investment tax credits in the recently passed Inflation Reduction Act
- An increased LCOE driven by the increased capital expense and increased financing costs, will likely
 exceed the project LCOE price target
- An Economic Competitive Test after all Class 3 inputs have been finalized by the parties

Timeline



CFPP Remains Cost-Competitive and Needed

- CFPP Life cycle cost of power is competitive in a decarbonized energy market
 - Confidence that cost increases causing a non-competitive outcome are unlikely
- Schedule for deployment aligns with member generation needs and dispatchable generation needs in the West
 - With confidence that schedule uncertainties and threats can and will be mitigated
- CFPP represents a long-term foundational resource that will enable decarbonization coupled with other variable energy resources
 - Energy density of CFPP is key feature given siting and transmission constraints

Transmission

- PAC Interconnection & Construction
 - On-going Engagement for Execution of Agreements
- Transmission Service Request Submissions (TSR) into the to-be-constructed Longhorn Substation
 - Provides a Corridor into Pacific NW Region (PAC/BPA)
 - 300 MW TSR on PAC first in line queue position
- Transmission Service Operating Agreement (TSOA)
 - Network Service to all UAMPS Participants on PAC East & potentially West systems
- Preliminary discussions with IPC
 - CFPP's ability to interconnect directly with Idaho Power at Antelope for delivery via a network agreement or point-topoint on their system.



CFPP and BPA Post 2028

- Project Attributes Favorable to BPA and their Customers
 - Clean-Carbon Free
 - Base load resource, dispatchable with load following flexibility
 - Commercially Ready: Resource COD in 2029/2030
 - Works with WA and OR clean energy requirements
 - Arguably consistent with NW Power and Conservation Council Power Plan
 - Cost competitive with alternative generation resources
 - Located in PNW and in BAAs with significant BPA customer load

CFPP and BPA Post 2028 (cont.)

- Uses for BPA
 - Source of Augmentation for existing Tier I System
 - BPA can also acquire and offer at Tier 2 rate
- What Process and Timeline of Participation Does BPA Envision?
 - Power Purchase Agreement?
 - Key terms?
 - Duration?
 - Quantity?
 - Pricing?
 - Process
 - NW Power Act 6(c) if greater than 50 aMW AND term greater than 5 years
- Power Exchange Discussion

QUESTIONS



NuScale is Well Suited for a Range of Applications Critical to the Energy Transition

Enhancing the Power Grid Energy Transition-Specific Opportunities 3 **Grid Resiliency Coal Plant Replacement**

- Adverse weather conditions do not impact operations for • a NuScale Plant
- · A single module can be black-started and can power the entire plant in case of loss of the utility grid
- On loss of offsite grid, all modules in a NuScale Plant can remain at power and be available to provide electricity upon grid restoration
- ~132 coal plants in the U.S., representing 140+ GW of capacity, are planned for retirement through 2050
- Opportunity to preserve 41,500 power plant jobs by repurposing this lost coal capacity with over 150 NuScale plants (12 NPM), and create or preserve nearly 37,000 manufacturing jobs per year

Carbon Capture & Sequestration (CCS)



- NPMs can power energy-intensive CCS facilities with 100% clean power
- · Many global decarbonization pathways anticipate significant CCS deployment
- Direct air capture

Mission Critical Facilities



- A NuScale Plant can provide highly reliable power to . mission critical micro-grids (e.g., hospitals, data centers) with 99.95% availability over the 60-yr life
- Off-grid operations enables a plant to supply power . without external grid connection

Support for Wind and Solar Development

- · NuScale's load-following capabilities well-suited to both solar and wind's intermittency
- · Provides critical ancillary services to support electric grid stability

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Hydrogen Production

- NuScale NPMs can produce cost effective, green hydrogen at scale
- · Hydrogen production by conventional renewables faces challenges of scale and cost

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Beyond Baseload Electricity



Reports for associated technical studies are available at: www.nuscalepower.com/technology/technical-publications

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Not Responsive



From: Mark Gendron <<u>MGendron@uamps.com</u>> Sent: Friday, December 2, 2022 1:33 PM To: Thompson,Kim T (BPA) - PS-6 <<u>ktthompson@bpa.gov</u>> Cc: Cook,Joel D (BPA) - K-7 <<u>idcook@bpa.gov</u>>; Cooper,Suzanne B (BPA) - P-6 <<u>sbcooper@bpa.gov</u>>; Leady

Jr,William J (BPA) - PG-5 <<u>wileady@bpa.gov</u>>; <u>rishaheen@bpa.gov</u>; Cook,Jeffrey W (BPA) - TP-DITT-2 <<u>jwcook@bpa.gov</u>>; Todd,Wayne A (BPA) - PGA-6 <<u>watodd@bpa.gov</u>> **Subject:** [EXTERNAL] CFPP and Post 2028; Follow Up from November 22 Meeting

Kim

All of us at UAMPS very much appreciated BPA leadership's time and engagement at our meeting last Tuesday, November 22. We hope that you found the information and discussion to be worthwhile. We most certainly did.

As we shared with you, the Carbon Free Power Project development effort continues to progress and we remain on schedule to complete the NRC license application, receive the construction and operating license, proceed to construction, and begin commercial operation in 2029. We believe the CFPP will be a resource that will meet the future needs of the Northwest, with favorable attributes that include clean and carbon-free energy, base load generation with load following flexibility, cost competitive, and located in the Pacific Northwest near many BPA customers.

The completion of the CFPP will be closely aligned with the Post 2028 period for BPA and its preference customers. We will continue to seek participation in the project from Northwest public utilities and believe that BPA may also ultimately have interest in the value and benefits the project will provide. We will also participate in the Post 2028 policy development process where appropriate.

At our meeting we discussed the possibility for a UAMPS (CFPP) and BPA (FCRPS) power exchange. Specifically, CFPP power could be delivered to BPA at the Antelope substation in exchange for FCRPS power delivered to CFPP participants at mid-C (or another POD mutually agreed to). Collectively we saw potential for transmission savings for all parties involved. We would like to further explore this concept and will reach out to you soon to further discuss.

Please let us know if there is additional information that would be helpful to BPA. I will keep in touch with you Kim, as our project development continues, and as you proceed through the Post 2028 policy process.

My best

Mark



Not Responsive

Not Responsive

From: Jackie Coombs <<u>jackie@uamps.com</u>> Sent: Wednesday, January 18, 2023 8:24 PM Cc: Mark Gendron <<u>MGendron@uamps.com</u>> Subject: [EXTERNAL] FW: You are Invited - CFPP Update Meeting - February 2

UAMPS welcomes the opportunity to update you and your colleagues on its Carbon Free Power Project (CFPP)) in Portland immediately following the PCC Executive Committee on February 2nd (see agenda below). Please RSVP to this email or Mark Gendron at <u>Mark@uamps.com</u>.

We look forward to seeing you in Portland.

Jackie Coombs

Manager of Corporate and Member Relations

Utah Associated Municipal Power Systems

155 North 400 West, Suite 480

Salt Lake City, Utah 84103

Phone: (801) 214-6402



From: Jackie CoombsSent: Friday, January 6, 2023 12:05 PMSubject: You are Invited - CFPP Update Meeting - February 2

You are invited to attend a UAMPS Carbon Free Power Project (CFPP) meeting on February 2nd at 1:00 – 2:30 pm at the Embassy Suites Portland Airport (immediately following the PPC Executive Committee meeting). Lunch will be provided at 12:30 pm.

The agenda includes:

- Development Status
- Cost Estimates
- Design and Engineering
- NRC Licensing
- Transmission

- Project Schedule
- Participation Status
- Q and A

Presenters are:

- Mark Gendron, CFPP Project Advisor
- Mason Baker, UAMPS CEO and General Manager of UAMPS
- Bob Coward, CFPP Owner's Engineer

We look forward to you joining us! Please RSVP to this email or to Mark Gendron at mgendron@uamps.com.

Jackie Coombs

Manager of Corporate and Member Relations

Utah Associated Municipal Power Systems

155 North 400 West, Suite 480

Salt Lake City, Utah 84103

Phone: (801) 214-6402



From: Mark Gendron

Sent: Mon Jan 30 07:35:10 2023

To: Thompson, Kim T (BPA) - PS-6

Cc: Cook, Joel D (BPA) - K-7; Mason Baker

Subject: [EXTERNAL] An exchange of CFPP for Federal Power

Importance: Normal

Attachments: Antelope Mid C Exchange clean.docx

Kim

We greatly appreciated the opportunity to meet with you, Suzanne, Joel and the BPA leadership team in November to discuss potential opportunities for BPA and UAMPS associated with our Carbon Free Power Project. Now, with the B2H and SILS effort taking shape and moving closer to a decision and implementation, we believe there is value in continuing our discussion. At our meeting, Joel offered that a federal power for CFPP power exchange could be beneficial for BPA once the BPA preference customer loads in Southern and Southeast Idaho are served through a network transmission agreements with Idaho Power Company. Frankly, we see an opportunity for UAMPS and CFPP participants to see very significant transmission benefits and savings through an exchange. An exchange would, in our opinion, remove the largest barrier that has kept Northwest public utilities from participating in the Project-transmission availability and cost.

To further a discussion on a CFPP-Federal Power exchange, we offer a rough draft of an exchange term sheet. We recognize that this term sheet was not requested by BPA, but we believe there is such significant

benefit for BPA, your customers, as well as UAMPS and the CFPP, that we wanted to put something forward now for your consideration. Please understand that this is only a draft, and really just a starting point for further discussion. Attached is the draft term sheet for your review and consideration.

We look forward to your reaction to this proposal and to further discussion in the near future.

My best

Mark

Antelope - Mid C (Midway) Exchange

Term Sheet

January 2023

Summary:

Power Exchange Between BPA and UAMPS

Background:

It is understood that:

UAMPS is developing the 462 MW Carbon Free Power Project (CFPP) located within the Idaho National Laboratory near Idaho Falls, Idaho.

CFPP is expected to be commercially operational in 2029/2030.

CFPP will be interconnected to the transmission system at the PACE and IPCo 230 kV Antelope Substation.

UAMPS CFPP participants are LSEs located in the Western states. Certain prospective participants are BPA preference customer utilities located in the BPA BAA, the IPCO BAA, and the PacifiCorp East BAA (subject to completion of the Asset Exchange between IPCO and PAC). These prospective participants are referred to as Prospective CFPP Participants in this term sheet.

BPA expects to enter into a Network Integration Transmission Service Agreements with IPCo for transmission service necessary to deliver Federal power to its preference customers in Southern and Southeast Idaho. BPA and UAMPS see potential mutual benefits to an exchange of CFPP power at Antelope Substation for Federal power at Mid C or Midway Substation.

Benefits of an Exchange:

Prospective CFPP Participants may avoid additional and unnecessary PTP transmission costs across Southern Idaho to deliver CFPP to their respective loads.

BPA may realize lower IPCo NITSA costs, primarily from a reduction in transmission losses.

The exchange promotes the efficient use of the transmission system, a benefit to all parties.

Transaction

Subject to the completion and commercial operation of CFPP, and one or more Prospective CFPP Participants are utilities located in the BPA BAA, and BPA is delivering Federal power to Southern Idaho utilities, Southeast Idaho utilities, or both under the IPCo NITSA, then

BPA and UAMPS shall exchange hourly energy as follows:

Hourly scheduled Prospective CFPP Participant power delivered to BPA at IPCo's Antelope Substation, and

Federal power of equal hourly quantity is delivered to Prospective CFPP Participants at Mid C or Midway Substation.

Deviation from Schedule and True Up is negotiable and TBD.

Term

Minimum 10 years, with renewal terms.

Start Date

Commercial Operation Date for CFPP

Environmental Attributes

Environmental, green, or carbon-free attributes remain with generation source, unless otherwise mutually agreed to. (i.e., CFPP attributes stay with Prospective CFPP Participants and Federal power attributes stay with BPA.)

Cost

No cost to either party for basic exchange is expected. Subject to negotiation.

From: Mark Gendron

Sent: Wed Feb 01 11:38:51 2023

To: Miller, Mark E (MFE)(BPA) - PTL-5

Subject: [EXTERNAL] Re: CFPP Update Meeting - February 2

Importance: Normal

Good to hear. See you tomorrow.

Get Outlook for iOS

From: Miller, Mark E (MFE)(BPA) - PTL-5 <memiller@bpa.gov>
Sent: Wednesday, February 1, 2023 11:02:29 AM
To: Mark Gendron <MGendron@uamps.com>
Subject: CFPP Update Meeting - February 2

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

1

Hey Mark, I am planning to attend your meeting tomorrow.

Take care,

Mark Miller

From: Jeff Atkinson

Sent: Sun Feb 05 14:23:30 2023

To: Rich Flanigan; Egerdahl,Ryan J (BPA) - PGPR-5

Subject: [EXTERNAL] Re: Hello from BPA

Importance: Normal

Attachments: image001.jpg; image002.png

I can make either one work, so why don't we schedule Wednesday? Then, if that falls through we can punt to Friday.

Get Outlook for iOS

From: Rich Flanigan <Rflanig@gcpud.org> Sent: Friday, February 3, 2023 3:31:46 PM To: Egerdahl,Ryan J (BPA) - PGPR-5 <rjegerdahl@bpa.gov> Cc: Jeff Atkinson <jeff@energywestllc.com> Subject: RE: Hello from BPA

Ryan, I can make the following dates/times work. I'll let Jeff weigh in on if these two dates/times work for him. Thanks.

1

Feb 8: 9-10am

Feb 10: 10:30 to 1pm

Rich Flanigan

Sr. Manager

Wholesale Marketing and Supply

OFFICE 509.793.1475

CELL (b)(6)

EMAIL rflanig@gcpud.org

grantpud.org

From: Egerdahl,Ryan J (BPA) - PGPR-5 <rjegerdahl@bpa.gov> **Sent:** Friday, February 3, 2023 3:21 PM **To:** Rich Flanigan <Rflanig@gcpud.org> **Cc:** Jeff Atkinson <jeff@energywestllc.com> **Subject:** RE: Hello from BPA

You don't often get email from riegerdahl@bpa.gov. Learn why this is important

Hi Rich. Hi Jeff. Yes, that sounds great to discuss further. Let me know if anytime between these blocks work for you both? Have a good weekend and talk to you soon.

Thanks,

Ryan

- Feb 8: 9-10am
- Feb 9: 9-10am
- Feb 10: 10:30 to 1pm
- Feb 16: 10-11am
- Feb 17: 9-11am

From: Rich Flanigan <<u>Rflanig@gcpud.org</u>> Sent: Thursday, February 2, 2023 10:18 AM To: Egerdahl,Ryan J (BPA) - PGPR-5 <<u>rjegerdahl@bpa.gov</u>> Cc: 'jeff@energywestllc.com' <<u>jeff@energywestllc.com</u>> Subject: [EXTERNAL] RE: Hello from BPA

Hello Ryan. Nice to virtually meet you, also. Jeff and I are currently working on a plan to re-engage potential SMR participants and are more then happy to include you on any communications. Maybe we could set up a call in the next few weeks to discuss?

Rich Flanigan

Sr. Manager

Wholesale Marketing and Supply

- **OFFICE** 509.793.1475
- CELL (b)(6)
- EMAIL <u>rflanig@gcpud.org</u>

grantpud.org
From: Egerdahl,Ryan J (BPA) - PGPR-5 <<u>riegerdahl@bpa.gov</u>> Sent: Wednesday, February 1, 2023 11:37 AM To: Andrew Munro <<u>Amunro@gcpud.org</u>> Cc: Rich Flanigan <<u>Rflanig@gcpud.org</u>>; Normandeau,Mike (BPA) - PSE-RONAN <<u>mrnormandeau@bpa.gov</u>> Subject: RE: Hello from BPA

You don't often get email from rjegerdahl@bpa.gov. Learn why this is important

Thanks Andrew. Hello Rich, nice to meet you virtually. I look forward to connecting on this. Emails are great and so is my cell number of (b)(6).

Thanks,

Ryan

Ryan Egerdahl Manager, Long Term Power Planning

Bonneville Power Administration rjegerdahl@bpa.gov | P 503.230.4732 | C (b)(6) From: Andrew Munro <<u>Amunro@gcpud.org</u>> Sent: Tuesday, January 31, 2023 2:34 PM To: Egerdahl,Ryan J (BPA) - PGPR-5 <<u>rjegerdahl@bpa.gov</u>> Cc: Rich Flanigan <<u>Rflanig@gcpud.org</u>>; Normandeau,Mike (BPA) - PSE-RONAN <<u>mrnormandeau@bpa.gov</u>> Subject: [EXTERNAL] RE: Hello from BPA

Hi Ryan – I would like to introduce you to Rich Flanagan (cc'd), our senior manager of wholesale marketing and supply. He will follow-up on this and get you introduced to Jeff Atkinson. Please keep me in the loop as things progress.

Thank you,

Andrew

From: Egerdahl,Ryan J (BPA) - PGPR-5 <<u>rjegerdahl@bpa.gov</u>> Sent: Friday, January 13, 2023 12:34 PM To: Andrew Munro <<u>Amunro@gcpud.org</u>> Cc: Normandeau,Mike (BPA) - PSE-RONAN <<u>mrnormandeau@bpa.gov</u>> Subject: RE: Hello from BPA

Hi Andrew. I hope your holidays turned out well. I finally made it up to Duluth the next day after our phone call

and walked right into the tail end of the blizzard. Good times. The next week had temps down to -15 and 60mph winds. I bet Mike had it worse in Ronan. He likes to show me up.

I'm just now following up to see if there's anything I can do to help get the wheels turning on potential access to the data library on SMRs. I enjoyed our chat and look forward to connecting again.

Thanks,

Ryan

From: Andrew Munro <<u>Amunro@gcpud.org</u>> Sent: Tuesday, December 13, 2022 12:53 PM To: Egerdahl,Ryan J (BPA) - PGPR-5 <<u>rjegerdahl@bpa.gov</u>> Cc: Normandeau,Mike (BPA) - PSE-RONAN <<u>mrnormandeau@bpa.gov</u>> Subject: [EXTERNAL] RE: Hello from BPA

Hi Ryan,

Would you be available this Thursday at 3:30 pm? Kevin will be back in the office.

Andrew

From: Egerdahl,Ryan J (BPA) - PGPR-5 <<u>rjegerdahl@bpa.gov</u>> Sent: Monday, December 12, 2022 9:07 AM To: Andrew Munro <<u>Amunro@gcpud.org</u>> Cc: Normandeau,Mike (BPA) - PSE-RONAN <<u>mrnormandeau@bpa.gov</u>> Subject: RE: Hello from BPA

Hi Andrew. I completely understand. Of course no worries at all. Let me know when you know; no rush. Thanks

Ryan

From: Andrew Munro <<u>Amunro@gcpud.org</u>> Sent: Monday, December 12, 2022 8:36 AM To: Egerdahl,Ryan J (BPA) - PGPR-5 <<u>rjegerdahl@bpa.gov</u>> Cc: Normandeau,Mike (BPA) - PSE-RONAN <<u>mrnormandeau@bpa.gov</u>> Subject: [EXTERNAL] RE: Hello from BPA

Good morning, Ryan -

I just learned that Kevin is out for a few days ⁽⁰⁾⁽⁶⁾. We will need to reschedule to either later this week or next week. Kevin is key for this discussion. I will need to speak with him regarding his availability. Thanks for your

understanding. I will get back to you in a couple days after Kevin is back in the office.

Andrew

From: Egerdahl,Ryan J (BPA) - PGPR-5 <rjegerdahl@bpa.gov>
Sent: Friday, December 9, 2022 3:34 PM
To: Andrew Munro <<u>Amunro@gcpud.org</u>>
Cc: Normandeau,Mike (BPA) - PSE-RONAN <<u>mrnormandeau@bpa.gov</u>>
Subject: RE: Hello from BPA

Hi Andrew. Tuesday at 11:30am looks great. I will send you an invite for then. I'm including Mike (if he wants to join) and Eric Graessley who models new resources for us. I really appreciate the willingness to chat. Take care and we'll talk soon.

Thanks,

Ryan

Ryan Egerdahl Manager, Long Term Power Planning

Bonneville Power Administration rjegerdahl@bpa.gov

| P 503.230.4732 | C<mark>(b)(6)</mark>

From: Andrew Munro <<u>Amunro@gcpud.org</u>> Sent: Friday, December 9, 2022 12:45 PM To: Egerdahl,Ryan J (BPA) - PGPR-5 <<u>rjegerdahl@bpa.gov</u>> Cc: Normandeau,Mike (BPA) - PSE-RONAN <<u>mrnormandeau@bpa.gov</u>> Subject: [EXTERNAL] RE: Hello from BPA

Hi Ryan,

Thanks for reaching out. How does your schedule look on Tuesday at 11:30 am? Kevin and I are both available then. Another option is Thursday at 3:30 pm.

Andrew Munro

Associate Chief Resource Officer



CELL



10

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From: Egerdahl,Ryan J (BPA) - PGPR-5 <<u>rjegerdahl@bpa.gov</u>> Sent: Friday, December 9, 2022 11:00 AM To: Andrew Munro <<u>Amunro@gcpud.org</u>> Cc: Normandeau,Mike (BPA) - PSE-RONAN <<u>mrnormandeau@bpa.gov</u>> Subject: Hello from BPA

Hello Mr. Munro. My name is Ryan Egerdahl and I'm the Long Term Power Planning manager at BPA. Nice to meet you. I got your email address from Mike and was hoping to chat with you or others about the SMR project that Grant is pursuing.

I was at the Power Council meeting where Kevin presented last month, but didn't get a chance to talk to him afterwards. We are looking for information on the gen4 technology (cost ranges, gen capabilities, etc.), but would appreciate seeing what information you might be able to share verbally or over email at some point.

I have a lot of open calendar space next week on Mon, Tues, Thurs, and Fri. Not sure how that happened, but I'll take it. J

Let me know if you or others are open to this and we can try to set up a short call when it works for you. We'd be happy to share anything that we can with you as well from a BPA long term planning pov.

Thanks,

Ryan

Ryan Egerdahl Manager, Long Term Power Planning

Bonneville Power Administration rjegerdahl@bpa.gov | P 503.230.4732 | C (b)(6)

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From: Rich Flanigan

Sent: Mon Feb 06 07:41:38 2023

Required: Graessley, Eric W (BPA) - PTM-5

Subject: FW: Call with BPA on SMR

Location: Microsoft Teams Meeting

Start time: Wed Feb 08 09:00:00 2023

End time: Wed Feb 08 10:00:00 2023

Importance: Normal

-----Original Appointment-----From: Rich Flanigan <Rflanig@gcpud.org> Sent: Sunday, February 5, 2023 4:30 PM To: Rich Flanigan; Egerdahl,Ryan J (BPA) - PGPR-5; Jeff Atkinson Subject: Call with BPA on SMR When: Wednesday, February 8, 2023 9:00 AM-10:00 AM (UTC-08:00) Pacific Time (US & Canada). Where: Microsoft Teams Meeting

Ryan, please forward this meeting invite to anyone else at BPA that you would like to have at the meeting. Thanks.

Microsoft Teams meeting

Join on your computer, mobile app or room device

Click here to join the meeting

Meeting ID: 238 102 902 901 Passcode: z8aXAr

Download Teams | Join on the web

Or call in (audio only)

+1 509-703-5291,,320956973# United States, Spokane

Phone Conference ID: 320 956 973#

Find a local number | Reset PIN

If you are having a technology issue, please visit the GCPUD IT Service Desk portal at https: <u>\\servicedesk.gcpud.org</u> or call x2206 internally. Externally please call 509-754-2206 for assistance.

Learn More | Meeting options

From: Graessley, Eric W (BPA) - PTM-5

Sent: Wed Feb 08 08:29:57 2023

To: Egerdahl,Ryan J (BPA) - PGPR-5

Subject: RE: Call with BPA on SMR

Importance: Normal

Good morning,

Will aim to be on for the first half, thank you!

-----Original Appointment-----From: Rich Flanigan <Rflanig@gcpud.org> Sent: Monday, February 6, 2023 7:42 AM To: Rich Flanigan; Graessley,Eric W (BPA) - PTM-5; Egerdahl,Ryan J (BPA) - PGPR-5; Jeff Atkinson Subject: Call with BPA on SMR When: Wednesday, February 8, 2023 9:00 AM-10:00 AM (UTC-08:00) Pacific Time (US & Canada). Where: Microsoft Teams Meeting -----Original Appointment-----From: Rich Flanigan <<u>Rflanig@gcpud.org</u>> Sent: Sunday, February 5, 2023 4:30 PM To: Rich Flanigan; Egerdahl,Ryan J (BPA) - PGPR-5; Jeff Atkinson Subject: Call with BPA on SMR When: Wednesday, February 8, 2023 9:00 AM-10:00 AM (UTC-08:00) Pacific Time (US & Canada). Where: Microsoft Teams Meeting

Ryan, please forward this meeting invite to anyone else at BPA that you would like to have at the meeting. Thanks.

Microsoft Teams meeting

Join on your computer, mobile app or room device

Click here to join the meeting

Meeting ID: 238 102 902 901 Passcode: z8aXAr

Download Teams | Join on the web

Or call in (audio only)

+1 509-703-5291,,320956973# United States, Spokane

Phone Conference ID: 320 956 973#

Find a local number | Reset PIN

If you are having a technology issue, please visit the GCPUD IT Service Desk portal at https: <u>\\servicedesk.gcpud.org</u> or call x2206 internally. Externally please call 509-754-2206 for assistance.

Learn More | Meeting options

Powering Our Way of Life.



February 7, 2023

Bonneville Power Administration 905 NE 11th Ave. Portland, OR 97232

Submitted electronically: Post2028@bpa.gov

RE: January 24-25 Provider of Choice Post-2028 Workshop Comments

Public Utility District No. 2 of Grant County (Grant PUD) commends the Bonneville Power Administration (BPA) for its thoughtful proposal and model that was presented at the Provider of Choice (PoC) Workshop on January 24-25, 2023. BPA's foundational policy elements and building blocks are a solid start and illustrates BPA's careful consideration of the comments it received from customers. Grant suggests the following enhancements that we believe are consistent with BPA's intent of achieving fairness and balance in the PoC Draft Policy. These enhancements are consistent with those presented by the Public Power Council (PPC), of which Grant PUD is an active member. These include:

- System Size: Range 7000 to 7500 aMW (7000 + EPU 158 + Augmentation 0-342)
 - Broadest acceptance may be for 7,150 7,250 aMW
 - Tier 1 Rate neutral
 - Include EPU in Tier 1
- BPA's allocation proposal is generally acceptable and provides consideration for differently situated utilities.
 - o 100% Headroom adjustment
 - o 50% conservation adjustment
 - o 25% load growth adjustment
- Augmentation Allocated Pro-Rata Equal sharing of costs and risks.
- Fair and equitable base year
 - FY 2023 Base Year is workable with normalizing adjustments for industrial/commercial loads, weather, irrigation, etc.
- Consideration for small utilities.
- Set aside for Tribal utilities: BPA proposal of 40 aMW and for length of contract.
- DOE Richland Potential service by Grant PUD with new Small Modular Reactor (SMR) backed by U.S. Department of Energy – currently 36.5 aMW, up to 70 aMW in TRM.

ADDRESS PO Box 878 Ephrata, WA 98823 PHONE 509 766 2505 FAX 509 754 6770

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- Transfer service Comparable treatment for federal and non-federal resources.
- Explore potential for comparable treatment of generating resources and conservation.
- Ensure public power receives full value of secondary sales.
- Asset Management and cost control commitments.

Thank you for your consideration of these comments. We look forward to the continued discussion on these topics in the PoC process.

Sincerely,



Andrew D. Munro Associate Chief Resource Officer

ADDRESS PO Box 878 Ephrata, WA 98823 PHONE 509 766 2505 FAX 509 754 6770

grantpud.org

From: Egerdahl,Ryan J (BPA) - PGPR-5

Sent: Tue Feb 14 15:39:14 2023

To: Jeff Atkinson

Subject: RE: Hi Ryan, Jeff Atkinson here

Importance: Normal

Hi Jeff. Good to hear from you. I will check around with others that want to meet you both and hear more about this. I'll let you know soon so we can set up the logistics. I'll check out the site as well. J

Talk to you soon.

Thanks, Ryan

From: Jeff Atkinson <jeff@energywestllc.com>
Sent: Tuesday, February 14, 2023 2:09 PM
To: Egerdahl,Ryan J (BPA) - PGPR-5 <rjegerdahl@bpa.gov>
Subject: [EXTERNAL] Hi Ryan, Jeff Atkinson here

I was on the SMR call with you and Rich the other day.

1

So as mentioned, Rich and I will be swinging through the NW on March 22, 23, and 24 and would love to stop in and talk with you/your team. Happy to meet at HQ or anywhere else if you are so inclined. A meal perhaps.

Ok let me know if any of those dates work for you.

BTW – my little firm now has a website – energywestllc.com

Best, Jeff

From: Jeff Atkinson

Sent: Wed Feb 22 10:22:43 2023

To: Egerdahl,Ryan J (BPA) - PGPR-5

Cc: Rich Flanigan

Subject: [EXTERNAL] RE: Grant PUD and SMR

Importance: Normal

Thanks Ryan, appreciate the flexibility, though my heavy preference is to have you there.

Will get with Rich (copied) and get back to you.

From: Egerdahl,Ryan J (BPA) - PGPR-5 <rjegerdahl@bpa.gov> Sent: Wednesday, February 22, 2023 6:41 AM To: Jeff Atkinson <jeff@energywestllc.com> Subject: Grant PUD and SMR

Hi Jeff. How do any of these time slots work for you and Rich? March 22 and 23 times are somewhat preferred since I am out of the office on March 24, but the other BPA attendees are open that day if March 24 works with your schedule better. We can either meet at the BPA HQ or a nearby spot to avoid the background check/entry small hassle. We can nail that down once we get a time set. Let me know if these work or if we have to dig deeper. J

Thanks again,

Ryan

- March 22 1 2pm
- March 23 2:30 3:30pm
- March 24 1 3pm

From: Jeff Atkinson <<u>jeff@energywestllc.com</u>> Sent: Tuesday, February 14, 2023 2:09 PM To: Egerdahl,Ryan J (BPA) - PGPR-5 <<u>rjegerdahl@bpa.gov</u>> Subject: [EXTERNAL] Hi Ryan, Jeff Atkinson here

I was on the SMR call with you and Rich the other day.

So as mentioned, Rich and I will be swinging through the NW on March 22, 23, and 24 and would love to stop in

and talk with you/your team. Happy to meet at HQ or anywhere else if you are so inclined. A meal perhaps.

Ok let me know if any of those dates work for you.

BTW – my little firm now has a website – energywestllc.com

Best, Jeff

From: Normandeau, Mike (BPA) - PSE-RONAN

Sent: Tue Mar 14 09:59:32 2023

To: Andrew Munro

Cc: Burczak, Sarah E (BPA) - PS-6

Subject: RE: 13049 Net Req Process/NDA DRAFTFINAL

Importance: Normal

Andrew:

I received guidance yesterday and am working on formulating questions for our discussion today. The main issue we are grappling with is more or less the same I described to you a while back. What amount of power is BPA authorized (Under 9(d) of the Power Act and 3(c) of the Preference Act) to sell to Grant considering Grant has significant existing hydro available? What is the correct number? How and where do we make this determination?

BPA's initial interpretation is that energy recalled from Cowlitz, Seattle, Tacoma and EWEB, all which were granted a loss of contract resource for Regional Dialogue, should be included as firm energy available to serve district load. And further, that the PRP relicensing allows Grant to grow into the resource up to 70%. This was never was not fully vetted in Regional Dialogue, because Grant chose not to pursue a contract. It will have to be done in a transparent manner for Provider of Choice.

We also need to assess existing in-region/out of region firm, surplus hydro sales. Out of region sales may reduce the Administrator's obligation under 3(C) of the 1964 Preference Act. There is interest/need to better understand Grant's current agreement with Shell.

As far as agenda goes, I'd hope to cover the following:

- 1. Discussion on Hydro Resources, Administrator's Obligation to Serve next steps
- 2. NDA Alt. Letter is this adequate/helpful?

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- 3. And if the letter works, begin sharing load/NLSL data in the near future
- 4. SMR comments from Public Power

Hope this helps.

Mike

From: Andrew Munro <Amunro@gcpud.org> Sent: Monday, March 13, 2023 4:42 PM To: Normandeau,Mike (BPA) - PSE-RONAN <mrnormandeau@bpa.gov> Subject: [EXTERNAL] RE: 13049 Net Req Process/NDA DRAFTFINAL

Thanks, Mike. I appreciate you sending this draft to me. I will review and provide feedback tomorrow.

Do you know of any specific questions Sarah may have tomorrow?

Best, Andrew

From: Normandeau,Mike (BPA) - PSE-RONAN <<u>mrnormandeau@bpa.gov</u>> Sent: Monday, March 13, 2023 3:05 PM To: Andrew Munro <<u>Amunro@gcpud.org</u>> Subject: 13049 Net Req Process/NDA DRAFTFINAL

Andrew- gearing up for our discussion tomorrow. I wanted to share the draft letter prepared in response to your NDA request. Would love to get any feedback you have tomorrow so I can get this out with a signature.

Thanks.

Mike

***Please take care when opening links, attachments, or responding to this email as it originated outside of Grant.

From: Egerdahl,Ryan J (BPA) - PGPR-5

Sent: Mon Mar 20 13:37:17 2023

Required: Jeff Atkinson

Subject: Meeting Forward Notification: Discuss Grant PUD Nuclear project

Start time: Mon Mar 20 14:00:00 2023

End time: Mon Mar 20 14:30:00 2023

Importance: Normal

Your meeting was forwarded

Egerdahl,Ryan J (BPA) - PGPR-5 has forwarded your meeting request to additional people.

1

Meeting

Discuss Grant PUD Nuclear project

Meeting Time

27560103

Wednesday, March 22, 2023 1:00 PM - Wednesday, March 22, 2023 2:30 PM

Recipients

<u>Mace,Allison R (BPA) - PTM-5,Federovitch,Eric C (BPA) - PTL-5,Miller,Mark E (MFE)(BPA) - PTL-5,Johnson,Tim</u> <u>A (BPA) - LP-7</u>

All times listed are in the following time zone: (UTC-08:00) Pacific Time (US & Canada)

From: Jeff Atkinson

Sent: Mon Mar 20 14:02:24 2023

To: Egerdahl,Ryan J (BPA) - PGPR-5

Subject: [EXTERNAL] RE: Wed meeting

Importance: Normal

That's excellent Ryan. The more the better.

From: Egerdahl,Ryan J (BPA) - PGPR-5 <rjegerdahl@bpa.gov> Sent: Monday, March 20, 2023 1:35 PM To: Rich Flanigan <Rflanig@gcpud.org>; Jeff Atkinson <jeff@energywestllc.com> Subject: Wed meeting

Hi guys. This may turn out to be more well attended than I had thought. J There could be 4-6 BPA folks joining in total. We might need a slightly bigger table just in case. We are looking forward to connecting again. Drive/fly safely.

1

See ya soon.

Ryan Egerdahl

BPA-2022-00786-F 0251

27560135

Manager, Long Term Power Planning

Bonneville Power Administration

rjegerdahl@bpa.gov | P 503.230.4732 | C<mark>(b)(6)</mark> From: Jeff Atkinson

Sent: Tue Mar 21 11:40:04 2023

To: Egerdahl,Ryan J (BPA) - PGPR-5

Subject: [EXTERNAL] Re: [EXTERNAL] Morning Ryan, hey I don't suppose you have a definitive head count?par Importance: Normal

Excellent. Thx Ryan

Get Outlook for iOS

From: Egerdahl,Ryan J (BPA) - PGPR-5 <rjegerdahl@bpa.gov>
Sent: Tuesday, March 21, 2023 11:39:04 AM
To: Jeff Atkinson <jeff@energywestllc.com>
Subject: RE: [EXTERNAL] Morning Ryan, hey I don't suppose you have a definitive head count?

Hi. I meant to email you this anyways. Yes, the back might be nice. Likely us five below from BPA:

Allie Mace: Wholesale Power Pricing Manager

Eric Federovitch: Long Term Bulk Marketing Manager (his group buys/sells forward more than 1 year out)

Mark Miller: Long Term Bulk Marketing Account Executive (long term trader that works for Eric)

Me: Long Term Power Planning Manager

Tim Johnson: Office of General Counsel (Lead for supporting Power Services)

We have a diverse mix. J

From: Jeff Atkinson <jeff@energywestllc.com>
Sent: Tuesday, March 21, 2023 10:19 AM
To: Egerdahl,Ryan J (BPA) - PGPR-5 <rjegerdahl@bpa.gov>
Subject: [EXTERNAL] Morning Ryan, hey I don't suppose you have a definitive head count?

If you are 6 or more I was thinking about renting the back room at the restaurant. If you don't know no worries.

Thanks, Jeff

Grant County PUD Advanced Small Modular Reactor

Status Update



March, 2022

Summary of Opportunity

Total Project Size	320 MW, plus multiples of 80 MW, based on total subscriptions.				
Term	Commensurate with NRC license.				
Project Locations	Grant County				
Projected C.O.D.	2030 - 2032				
Financing	Grant PUD will issue bonds secured by slice sales, or PUDs issue bonds for equity.				
Development risk	Grant has chosen not to adopt the accelerated timeline X-Energy was requesting and is now a fast follower.				
	Grant and Participants take on risk pro-rata according to their percentage slices. Those joining early get slices at-cost. Those joining late will be charged a cost-adder.				
Cost and pricing structure	Price: actual levelized cost.				
	Structure: Debt service coverage plus O&M plus fuel plus premium.				
	Possible cost subsidization via D.O.E. funding.				
Project Benefits	Modular (reduces overbuild risk)				
	Carbon free (CETA compliant, Cap and Trade)				
	Dispatchable				
	Favorable financing environment				
	Near commercial trading hub				
	Favorable political environment				
End of life/remediation	End of life remediation costs have been factored into levelized cost calculations.				

X-Energy Small Modular Reactor

Unique Design	Xe-100, High-Temperature Gas-cooled Reactors (HTGC)			
	Triso-X fuel technology			
	100% self-contained fuel pebbles			
	Pebbles cycle through			
	60-year plant life			
	Awardee of DOE Advanced Reactor Demonstration Program			
Project traits	Power products provided:			
	Capacity (100% of rated capacity for RA compliance)			
	Energy			
	Load following			
	Load Shaping			
	Voltage Control			
	Reactive Supply			
	Frequency Response			
	Reserves			
	Imbalance			
	Renewables Integration			
Other Benefits	Low land usage compared to wind and solar			
	Small size allows for geographic flexibility			

X-Energy Small Modular Reactor

Current Estimated Projected LCOE	\$58/MWh				
	Estimates based on multi-level, peer reviewed estimates				
	Updated LCOEs will be made throughout the Pre-construction period				
Four time periods	1. Review Period (now through November 30, 2023) to review all confidential materials, including timeline and projected costs. Must sign Option and Development Agreement by November 30, 2023 to receive Option for slice at cost.				
	2. Pre-construction Period (now through NRC construction permit, approx. Dec 2027).				
	3. Option Election Window (NRC issuance of construction permit, plus 90 days)				
	4. Construction Period (FID through COD).				

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Jan-28 Feb-28 Mar-28 Apr-28 Jun-28 Jul-28 Aug-28 Sep-28 Oct-28 Nov-28 Dec-28 Jan-29 Feb-29		If the Particiant's Committee approves ex who: Must reir	Oct-22 Nov-22 Dec-22 Jan-23 Feb-23 Mar-23 Apr-23 Jun-23 Jun-23 Jul-23 Aug-23 Sep-23 Oct-23 Nov-23		Development Phase 1	Grant builds data room and negotiates NDAs. Parties perform due diligence. Those who sign LOI may sit in on update meetings. Must make decision on Option and Development Agreement by November 30, 2023.
Mar-29 Apr-29 Jun-29 Jul-29 Aug-29 Sep-29 Oct-29 Nov-29 Dec-29 Jan-30 Feb-30 Mar-30 Apr-30	Cons	ee approves expansion beyond initial subscription level, they may open the opportun who: Must reimburse proportionate preconstruction costs. Receives a cost plus PPA.	Jan-24 Feb-24 Mar-24 Apr-24 Jun-24 Jul-24 Aug-24 Sep-24 Oct-24 Nov-24 Dec-24 Jan-25	Feb-24 Mar-24 Apr-24 May-24 Jul-24 Aug-24 Sep-24 Oct-24	Development Phase 2	Parties who sign Option and Developmen for slice (ownership or PPA) at cost. Signe
May-30 Jun-30 Jul-30 Aug-30 Sep-30 Oct-30 Nov-30	Construction Period	hey may open the opp s. Receives a cost plu	Feb-25 Mar-25 Apr-25 May-25 Jun-25 Jul-25 Aug-25	Pre-construction Pe	Development Phase 3	nt Agreement prior to rs may terminate pari No fi
Dec-30 Jan-31 Feb-31 Mar-31 Apr-31 Jun-31 Jun-31 Jul-31 Aug-31 Sep-31 Oct-31 Dec-31 Jan-32 Feb-32 Mar-32 Apr-32 May-32	ā	If the Particiant's Committee approves expansion beyond initial subscription level, they may open the opportunity to outsiders if expansion exceeds max requests. Such a party is a latecomer who: Must reimburse proportionate preconstruction costs. Receives a cost plus PPA. No party may terminate participation in this Period.	Sep-25 Oct-25 Dec-25 Jan-26 Feb-26 Mar-26 Apr-26 Jun-26 Jul-26 Aug-26 Sep-26 Oct-26 Nov-26 Dec-26 Jan-27 Feb-27	Period	Development Phase 4	Parties who sign Option and Development Agreement prior to November 30, 2023: pay proportionate precontruction costs and get Option for slice (ownership or PPA) at cost. Signers may terminate participation at the end of any discrete phase, so long as commitments fulfilled No further obligation.
Jun-32 Jul-32 Aug-32 Sep-32 Oct-32 Nov-32 Dec-32	All units operational	ts. Such a party is a lat od.	Mar-27 Apr-27 Jun-27 Jul-27 Aug-27 Sep-27		Development Phase	costs and get Option mmitments fulfilled.
	All units perational	ecomer	Oct-27 Nov-27 Dec-27		hase 5	Option Election Window

Proposed Data Room Items

- Overview of X-Energy
 - History
 - Bio of Kam Ghaffarian
 - Corporate structure
 - Assessment of financial viability
- LCOE estimates (pro-forma with ranges).
- Estimated monthly spend, by line item, for both preconstruction phase, and post FID.
- Description of X-Energy Technology
 - Safety
 - Triso-fuel
 - Power products (capacity, energy, following, shaping, regulation, voltage control, frequency response, etc.)
 - Configuration (turbines/reactors/redundancy)
 - Dispatchability characteristics
 - Estimated capacity factor
 - Ramping
- Gantt charts/timeline:
 - Construction (including major milestones, regulatory hurdles, EIS, EFSEC, NRC, etc)
 - Commercial (Due diligence period, early signer period, latecomer period)
- Description of potential sites
- Description of proposed interconnection and transmission plan
- Description of projected transmission rights and costs to reach Mid-C
- Description of possible environmental impacts

Proposed Data Room Items

- Regulatory/Permitting
 - State/local
 - EFSEC
 - Description of Process
 - Public Involvement
 - Document Repository
 - Application
 - Land use
 - EIS
 - SEPA/NEPA
 - Adjudicative proceedings
 - County
 - Public Interest Groups
 - Federal
 - NRC
 - Description of Process
 - Public Involvement
 - Document repository
 - Construction application
 - Licensing application
 - ACRS process
 - FEIS process
 - ASLB process
Proposed Data Room Items

- Public Relations plan
 - Results of ENW poll
 - Strategy
- Sketch of physical plant components
- End of life remediation plan/cost
- Description of commercial arrangements including dispatch rights, mins, maxs, request allocation, etc.

- The initial Project configuration is 4 x 80MW = 320 MW of capacity. This may be increased during the Pre-construction Period, the Construction Period, or after.
- Grant will be owning a minimum of 50.3%, up to a maximum of 100% of the Project.
- Grant will be taking 81 MW to load, and offering 239 MW of capacity to Option Holders through a combination of ownership shares or PPAs. Option Holders may oversubscribe, in the ODA, up to a maximum of 320 additional MW.

REPRESENTATION OF AVAILABLE CAPACITY

The graphic below shows the allocation of capacity available to off-takers.



Total capacity available to non-Grant parties is 80 MW (via Purchased Power Agreement) plus 159 MW (via Joint Ownership Agreement) equals 239 MW.

Upon signing the Option and Development Agreement, Option Holders have the following obligations and rights:

- Obligations
 - Paying their proportionate share of preconstruction costs. These costs include all outlays incurred during the period leading up to NRC construction permit issuance (estimated date 10/1/2027). The definition of preconstruction costs is tied to the timing of the payment, not its classification. This means all capital and non-capital outlays that occur before NRC permit are considered preconstruction.
- Rights
 - Option to buy slices at cost (via PPA or ownership share) provided they have participated in all pre-construction costs up to the day that NRC issues a construction permit. The Option Election Window begins once NRC issues a construction permit and lasts for 90 days. Option Holder must exercise during this window. Option holders get continued participation in Project Development Committee, access to data room, and voting rights commensurate with Owned shares. (Advisory voting rights only, commensurate with PPA shares.)

- Option Holder can terminate ODA at any time by issuing notice 90 days prior to any Development Phase, otherwise they are obligated to such Development Phase expenditures.
- If Option Holder terminates, their capacity is allocated to those who have indicated a desire for more than their current Option Quantity. Option Holders who have selected this are obligated to take such capacity, up to the maximum they have indicated.
- Option Holder can reduce Option Quantity down to 10 MW under the following conditions:
 - They have found an Option Holder to take the quantity they do not want, or
 - They have found a new counterparty who will take it (Grant must approve), or
 - There are Option Holders who have indicated they are willing to take more via their max share indication

- At any time an Option Holder can novate their position to another entity with Grant permission.
- Any party that signs an ODA after November 30, 2023 is a Latecomer, and will face a PPA/Ownership share at cost plus 5%.
- Grant may entertain an option for swapping nuclear for PRP.

Specific Opportunity

	How can I participate?
What are my	Prior to November 30, 2023, sign the NDA and LOI and
commitments?	perform due diligence. Data room and Grant/Energy West
	personnel available to answer questions. We will also
	have periodic update meetings to discuss the project and
	how many potential signers are investigating.
	After November 30, 2023, pay your portion of ongoing
	Phases of preconstruction. You have the option at each
	Phase to discontinue, so long as you pay for the current
	Phase.
	Ownership agreements and PPAs will be developed
	Ownership agreements and PPAs will be offered just prior
	to Final Investment Decision.
What's next?	For those who indicate interest, Grant will be sending an
	NDA and an LOI in the next month. And an Option and
	Development Agreement for consideration in April/May.
	Feedback?

From: Rich Flanigan

Sent: Wed Mar 29 09:48:57 2023

To: Egerdahl,Ryan J (BPA) - PGPR-5; Mace,Allison R (BPA) - PTM-5; Jeff Atkinson

1

Subject: RE: [EXTERNAL] RE: Slide Deck Request

Importance: Normal

Attachments: image001.jpg

LOL. Sounds good. Hope to talk with you soon.

Rich Flanigan

Sr. Manager

Wholesale Marketing and Supply

- **OFFICE** 509.793.1475
- CELL (b)(6)
- EMAIL rflanig@gcpud.org

grantpud.org

From: Egerdahl,Ryan J (BPA) - PGPR-5 <rjegerdahl@bpa.gov>
Sent: Wednesday, March 29, 2023 9:48 AM
To: Rich Flanigan <Rflanig@gcpud.org>; Mace,Allison R (BPA) - PTM-5 <armace@bpa.gov>; Jeff Atkinson <jeff@energywestllc.com>
Subject: RE: [EXTERNAL] RE: Slide Deck Request

Thanks Rich. The only thing better than enjoying your company is the speed of your response on this. J We super appreciate it. We may check back on verifying some things prior to Monday. Thanks so much.

Ryan

From: Rich Flanigan <<u>Rflanig@gcpud.org</u>> Sent: Wednesday, March 29, 2023 9:44 AM To: Mace,Allison R (BPA) - PTM-5 <<u>armace@bpa.gov</u>>; Jeff Atkinson <<u>jeff@energywestllc.com</u>> Cc: Egerdahl,Ryan J (BPA) - PGPR-5 <<u>rjegerdahl@bpa.gov</u>> Subject: [EXTERNAL] RE: Slide Deck Request

Allison, it was very nice to meet you also. I've attached our slide deck for your review. Please feel free to reach out to me or Jeff with any questions you may have. Thanks.

Rich Flanigan

Sr. Manager

Wholesale Marketing and Supply

- OFFICE
 509.793.1475

 CELL
 (b)(6)
- EMAIL rflanig@gcpud.org

grantpud.org

From: Mace,Allison R (BPA) - PTM-5 <armace@bpa.gov Sent: Wednesday, March 29, 2023 8:26 AM To: Jeff Atkinson <jeff@energywestllc.com Cc: Egerdahl,Ryan J (BPA) - PGPR-5 <rjegerdahl@bpa.gov Subject: Slide Deck Request You don't often get email from armace@bpa.gov. Learn why this is important

Rich and Jeff,

It was nice to meet you both last week and to learn more about Grant's plans for SMR development. Would you be able to send us the file for the slide deck that you provided in our meeting? We are doing an internal briefing on the topic on Monday and we would like to use some of your slides that show the process and timelines for decisions and project development.

Thank you,

Allie

Allison Robbins Mace (she/her)

Manager, Market Analysis & Policy | Bulk Marketing

Bonneville Power Administration <u>bpa.gov</u> | P 503-230-5871 | C (b)(6)

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***Please take care when opening links, attachments, or responding to this email as it originated outside of Grant.

From: Miller, Mark E (MFE)(BPA) - PTL-5

Sent: Mon Apr 03 14:58:47 2023

To: Mark Gendron

Cc: Dibble,Rachel L (BPA) - PT-5; Federovitch,Eric C (BPA) - PTL-5; Pedersen Mainzer,Margaret E (BPA) - PTL-5

Subject: RE: Illustration of Exchange impacts

Importance: Normal

Mark, we just got out of a meeting with the executives and we got a clear message that the NuScale project is really only something BPA would entertain if B2H was no longer viable. I thought it would be good to pass that info on to you as soon as I could.

BPA does have interest in SMR technology in general and plans to follow its development closely. We hope you will keep us apprised of your project's progress as it develops.

1

Take care,

Mark

From: Mark Gendron <MGendron@uamps.com>

Sent: Friday, March 3, 2023 2:46 PM To: Miller,Mark E (MFE)(BPA) - PTL-5 <memiller@bpa.gov> Cc: Federovitch,Eric C (BPA) - PTL-5 <ecfederovitch@bpa.gov>; Pedersen Mainzer,Margaret E (BPA) - PTL-5 <mepedersen@bpa.gov>; Marshall Empey <marshall@uamps.com> Subject: [EXTERNAL] RE: Illustration of Exchange impacts

Mark

Thank you, Eric and Margaret for your evaluation of our exchange proposal. I understand that conversations between you and Marshall Empey have resulted in a better understanding of the potential benefits and value to BPA.

First, it is understood that our proposal for exchange energy being delivered to Mid C would impose a wheeling cost on BPA. We therefore suggest modifying the term sheet to replace Mid C with the POD's for CFPP participating utilities in the BPA BAA. We understand that change will eliminate the wheeling cost for BPA.

We also understand that there is no potential for transmission losses savings with IPCo, as the losses under the NTSA would be under a postage type rate.

We continue to believe that this exchange will be of great value to BPA customers who are interested in the CFPP, and would not impose costs on BPA. We would like to understand your perspective on this exchange and discuss what next steps might be.

My best

Mark

From: Miller,Mark E (MFE)(BPA) - PTL-5 <<u>memiller@bpa.gov</u>> Sent: Thursday, February 16, 2023 4:28 PM To: Mark Gendron <<u>MGendron@uamps.com</u>> Cc: Federovitch,Eric C (BPA) - PTL-5 <<u>ecfederovitch@bpa.gov</u>>; Pedersen Mainzer,Margaret E (BPA) - PTL-5 <<u>mepedersen@bpa.gov</u>> Subject: Illustration of Exchange impacts

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Mark, we have been trying to work through the scenarios round an exchange and how that might create a benefit to BPA. I have attached a set of slides that Margaret put together. One slide shows a world without an exchange, pre-B2H and post-B2H. The second slide attempts to show the impact of an exchange with and without B2H.

We're wondering if we are missing something. As far as we can see, in both scenarios of the exchange, we see incremental cost given our need to wheel our energy to Mid-C. In the footnotes Margaret also explained that she really doesn't see and loss savings. We would be interested to know if there is something we aren't see or thinking about.

Take care,

Mark

From: Mace, Allison R (BPA) - PTM-5

Sent: Wed Apr 05 08:33:15 2023

To: Rflanig@gcpud.org; Jeff Atkinson

Subject: Grant PUD SMR NDA

Importance: Normal

Rich and Jeff,

We have had further internal discussions and we are interested in reviewing Grant's NDA for the SMR project to consider if we would sign it. Is the template language for the NDA available yet? If it is, could you please send a copy for us to review?

Thank you,

Allie

Allison Robbins Mace (she/her)

Manager, Market Analysis & Policy | Bulk Marketing

Bonneville Power Administration

<u>bpa.gov</u> | P 503-230-5871 | C (b)(6)

From: Mace, Allison R (BPA) - PTM-5

Sent: Wed Apr 05 09:34:40 2023

To: Jeff Atkinson; Rflanig@gcpud.org

Subject: RE: [EXTERNAL] RE: Grant PUD SMR NDA

Importance: Normal

Hi Jeff

Thank you for the quick response and update. We will stand by and look for the NDA and LOI around April 11th.

Thanks,

Allie

From: Jeff Atkinson <jeff@energywestllc.com>
Sent: Wednesday, April 5, 2023 8:53 AM
To: Mace,Allison R (BPA) - PTM-5 <armace@bpa.gov>; Rflanig@gcpud.org
Subject: [EXTERNAL] RE: Grant PUD SMR NDA

Hello Allison, let me reply for Rich as he is on vacation this week. We are targeting April 11, or shortly thereafter,

to have both the NDA and the LOI ready to send to the interested parties. So stand by!

We are happy you are interested and Rich and I appreciated the great turnout and good questions from your team in Portland.

Thanks Allison,

-Jeff

From: Mace,Allison R (BPA) - PTM-5 <<u>armace@bpa.gov</u>> Sent: Wednesday, April 5, 2023 8:33 AM To: <u>Rflanig@gcpud.org</u>; Jeff Atkinson <<u>jeff@energywestllc.com</u>> Subject: Grant PUD SMR NDA

Rich and Jeff,

We have had further internal discussions and we are interested in reviewing Grant's NDA for the SMR project to consider if we would sign it. Is the template language for the NDA available yet? If it is, could you please send a copy for us to review?

Thank you,

Allie

Allison Robbins Mace (she/her)

Manager, Market Analysis & Policy | Bulk Marketing

Bonneville Power Administration bpa.gov | P 503-230-5871 | C (b)(6)

From: Egerdahl,Ryan J (BPA) - PGPR-5

Sent: Mon May 01 10:21:52 2023

To: Egerdahl,Ryan J (BPA) - PGPR-5

Subject: FW: Wed meeting

Importance: Normal

From: Egerdahl,Ryan J (BPA) - PGPR-5
Sent: Monday, March 20, 2023 1:35 PM
To: Rich Flanigan <Rflanig@gcpud.org>; Jeff Atkinson <jeff@energywestllc.com>
Subject: Wed meeting

Hi guys. This may turn out to be more well attended than I had thought. J There could be 4-6 BPA folks joining in total. We might need a slightly bigger table just in case. We are looking forward to connecting again. Drive/fly safely.

1

See ya soon.

Ryan Egerdahl

27560007

Manager, Long Term Power Planning

Bonneville Power Administration

rjegerdahl@bpa.gov | P 503.230.4732 | C (b)(6) From: Egerdahl,Ryan J (BPA) - PGPR-5

Sent: Mon Mar 20 13:28:44 2023

To: Jeff Atkinson

Subject: Accepted: Discuss Grant PUD Nuclear project

1

Importance: Normal